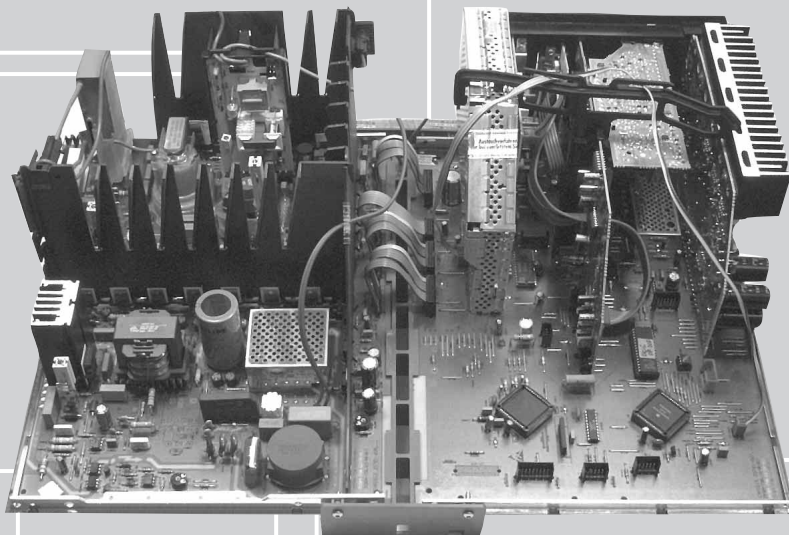


# Service Manual

## TV

CUC 1952/1984/  
1983/1842/  
1894  
(Digi 6)

M 70-269/9 Reference  
Trento SE 7016/9 Ref. PIP  
M 82-269/9 Reference  
Denver SE 8216/9 Ref./PIP  
M 82-269 PALplus/LOG  
M 72-410 Reference  
M 72-410/9 Reference  
M 72-410 Reference/PIP  
M 95-410/9 Reference/PIP



MEGA LOGIC®

**DOLBY SURROUND**  
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Zusätzlich erforderliche  
Unterlagen für den Komplettservice

Additionally required  
Service Manuals for the Complete Service

**Service  
Manual**

**Digi 6**

Sach-Nr./Part No.  
72010-019.90

**Service  
Manual**

**Sicherheit  
Safety**

Sach-Nr./Part No.  
72010-800.00

**Service  
Training**

**Digi 6**

Sach-Nr./Part No.  
① 72010-350.30  
② 72010-350.31



TP 800

TP 900

Btx \* 32700 #

Sachnummer  
Part Number 72010-019.90

Änderungen vorbehalten  
Subject to alteration

Printed in Germany  
VK22 0197

Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Sach-Nummer 72010-800.00, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!



The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 72010-800.00, as well as the respective national deviations.

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## Allgemeiner Teil

### Meßgeräte / Meßmittel

|                 |                   |
|-----------------|-------------------|
| Regeltrenntrafo | Meß-/Wobbelsender |
| Farbgenerator   | Oszilloskop       |
| DC-Voltmeter    | NF-Voltmeter      |
| NF-Generator    | Frequenzzähler    |

Beachten Sie bitte das Grundig Meßtechnik-Programm, das Sie unter folgender Adresse erhalten:

**Grundig electronics GmbH**  
Würzburger Str. 150  
D-90766 Fürth/Bay.  
Tel.0911/703-0  
Telefax 0911/703-4479

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## General Part

### Test Equipment / Aids

|                                |                      |
|--------------------------------|----------------------|
| Variable isolating transformer | Test/Sweep Generator |
| Colour Generator               | Oscilloscope         |
| DC Voltmeter                   | AF Voltmeter         |
| AF Generator                   | Frequency counter    |

Please note the Grundig Catalog "Test and Measuring Equipment" obtainable from:

**Grundig electronics GmbH**  
Würzburger Str. 150  
D-90766 Fürth/Bay.  
Tel.0911/703-0  
Telefax 0911/703-4479

## Modulübersicht / Module List

|                                                  | Sachnummer<br>Part Number | M 70-269/9<br>Reference<br>(CUC1952) | M 82-269/9<br>Reference<br>(CUC 1984) | M 82-269/9<br>Reference (Phil.)<br>(CUC 1984) | M 82-269<br>PALPLUS/LOG<br>(CUC1983) | Denver SE 8216/9<br>Ref./PIP<br>(CUC 1984) | Denver SE 8216/9<br>Ref./PIP (Phil.)<br>(CUC 1984) |
|--------------------------------------------------|---------------------------|--------------------------------------|---------------------------------------|-----------------------------------------------|--------------------------------------|--------------------------------------------|----------------------------------------------------|
| Tuner                                            | 29504-201.21              | ●                                    | ●                                     | ●                                             | ●                                    | ●                                          | ●                                                  |
| Signal-Baustein                                  | 29504-102.35              | —                                    | —                                     | —                                             | —                                    | —                                          | —                                                  |
| Signal Module                                    | 29504-162.35              | ●                                    | ●                                     | ●                                             | ●                                    | ●                                          | ●                                                  |
| Bedieneinheit                                    | 29501-082.56              | —                                    | —                                     | —                                             | —                                    | —                                          | —                                                  |
| Control Unit                                     | 29501-082.55              | —                                    | —                                     | —                                             | —                                    | —                                          | —                                                  |
|                                                  | 29501-082.54              | —                                    | —                                     | —                                             | —                                    | —                                          | —                                                  |
|                                                  | 29501-082.38              | —                                    | ●                                     | ●                                             | ●                                    | ●                                          | ●                                                  |
|                                                  | 29501-082.26              | ●                                    | —                                     | —                                             | —                                    | —                                          | —                                                  |
| Buchsenplatte<br>Socket Board                    | 29305-008.33              | —                                    | —                                     | —                                             | —                                    | —                                          | —                                                  |
| Bildrohrplatte                                   | 29305-122.07              | ●                                    | ●                                     | —                                             | ●                                    | ●                                          | —                                                  |
| CRT Panel                                        | 29305-122.14              | —                                    | —                                     | —                                             | —                                    | —                                          | —                                                  |
|                                                  | 29305-122.15              | —                                    | —                                     | ●                                             | —                                    | —                                          | ●                                                  |
| Feature Box                                      | 29504-103.38              | —                                    | —                                     | —                                             | ●                                    | —                                          | —                                                  |
|                                                  | 29504-103.41              | ●                                    | ●                                     | ●                                             | —                                    | ●                                          | ●                                                  |
| NF-Verstärker                                    | 29504-104.71              | —                                    | —                                     | —                                             | ●                                    | —                                          | —                                                  |
| AF Amplifier                                     | 29504-104.72              | ●                                    | ●                                     | ●                                             | —                                    | ●                                          | ●                                                  |
|                                                  | 29504-104.73              | —                                    | —                                     | —                                             | —                                    | —                                          | —                                                  |
| Fokussierungsplatte<br>Focusing Board            | 29305-025.24              | ●                                    | ●                                     | ●                                             | ●                                    | ●                                          | ●                                                  |
| VGA-Baustein<br>VGA Module                       | 29305-160.35              | —                                    | ●                                     | ●                                             | ●                                    | ●                                          | ●                                                  |
| EURO-AV                                          | 29305-160.34              | ●                                    | ●                                     | ●                                             | ●                                    | ●                                          | ●                                                  |
| PIP Baustein                                     | 29504-165.96              | —                                    | —                                     | —                                             | —                                    | ●                                          | —                                                  |
| PIP Module                                       | 29504-165.97              | —                                    | —                                     | —                                             | —                                    | —                                          | —                                                  |
| Netzschalterplatte<br>Main Switch Panel          | 29305-165.59              | ●                                    | —                                     | —                                             | —                                    | —                                          | —                                                  |
| Aktive Antennenweiche<br>Active Antenna Diplexer | 29620-013.01              | —                                    | —                                     | —                                             | —                                    | —                                          | ●                                                  |
| TP 800                                           | 29642-061.01              | ●                                    | ●                                     | ●                                             | ●                                    | —                                          | —                                                  |
| TP 900                                           | 29642-061.11              | —                                    | —                                     | —                                             | —                                    | ●                                          | ●                                                  |
| Speicherplatte<br>Memory Board                   | 29305-119.21              | ●                                    | ●                                     | ●                                             | ●                                    | ●                                          | ●                                                  |

## Modulübersicht / Module List

|                                                  | Sachnummer<br>Part Number | Trento<br>SE 7016/9<br>Ref./PIP<br>(CUC 1952) | M 72-410<br>Reference<br>(CUC 1842) | M 72-410<br>Reference/PIP<br>(CUC 1842) | M 72-410/9<br>Reference<br>(CUC 1842) | M 95-410/9<br>Reference/PIP<br>(CUC 1894) |
|--------------------------------------------------|---------------------------|-----------------------------------------------|-------------------------------------|-----------------------------------------|---------------------------------------|-------------------------------------------|
| Tuner                                            | 29504-201.21              | ●                                             | ●                                   | ●                                       | ●                                     | ●                                         |
| Signal-Baustein                                  | 29504-102.35              | —                                             | ●                                   | ●                                       | —                                     | —                                         |
| Signal Module                                    | 29504-162.35              | ●                                             | —                                   | —                                       | ●                                     | ●                                         |
| Bedieneinheit                                    | 29501-082.56              | —                                             | ●                                   | ●                                       | ●                                     | —                                         |
| Control Unit                                     | 29501-082.55              | —                                             | —                                   | —                                       | —                                     | ●                                         |
|                                                  | 29501-082.54              | ●                                             | —                                   | —                                       | —                                     | —                                         |
|                                                  | 29501-082.38              | —                                             | —                                   | —                                       | —                                     | —                                         |
|                                                  | 29501-082.26              | —                                             | —                                   | —                                       | —                                     | —                                         |
| Buchsenplatte<br>Socket Board                    | 29305-008.33              | —                                             | ●                                   | ●                                       | ●                                     | —                                         |
| Bildrohrplatte                                   | 29305-122.07              | ●                                             | ●                                   | ●                                       | ●                                     | ●                                         |
| CRT Panel                                        | 29305-122.14              | —                                             | —                                   | —                                       | —                                     | —                                         |
|                                                  | 29305-122.15              | —                                             | —                                   | —                                       | —                                     | —                                         |
| Feature Box                                      | 29504-103.38              | —                                             | —                                   | —                                       | —                                     | —                                         |
|                                                  | 29504-103.41              | ●                                             | ●                                   | ●                                       | ●                                     | ●                                         |
| NF-Verstärker                                    | 29504-104.71              | —                                             | —                                   | —                                       | —                                     | —                                         |
| AF Amplifier                                     | 29504-104.72              | ●                                             | —                                   | —                                       | —                                     | ●                                         |
|                                                  | 29504-104.73              | —                                             | ●                                   | ●                                       | ●                                     | —                                         |
| Fokussierungsplatte<br>Focusing Board            | 29305-025.24              | ●                                             | ●                                   | ●                                       | ●                                     | ●                                         |
| VGA-Baustein<br>VGA Module                       | 29305-160.35              | —                                             | —                                   | ●                                       | ●                                     | ●                                         |
| EURO-AV                                          | 29305-160.34              | ●                                             | ●                                   | ●                                       | ●                                     | ●                                         |
| PIP Baustein                                     | 29504-165.96              | ●                                             | —                                   | —                                       | —                                     | ●                                         |
| PIP Module                                       | 29504-165.97              | —                                             | —                                   | —                                       | ●                                     | —                                         |
| Netzschalterplatte<br>Main Switch Panel          | 29305-165.59              | —                                             | —                                   | —                                       | —                                     | —                                         |
| Aktive Antennenweiche<br>Active Antenna Diplexer | 29620-013.01              | —                                             | —                                   | —                                       | —                                     | —                                         |
| TP 800                                           | 29642-061.01              | —                                             | ●                                   | ●                                       | ●                                     | ●                                         |
| TP 900                                           | 29642-061.11              | ●                                             | —                                   | —                                       | —                                     | —                                         |
| Speicherplatte<br>Memory Board                   | 29305-119.21              | ●                                             | —                                   | ●                                       | ●                                     | ●                                         |

Technische Daten / Technical Data

|                                                      | M 70-269/9<br>Reference<br>(CUC1952)                                                              | M 82-269/9<br>Reference<br>(CUC 1984)                                             | M 82-269/9<br>Reference (Phil.)<br>(CUC 1984)                                     | M 82-269<br>PALPLUS/LOG<br>(CUC1983)                                              | Denver SE 8216/9<br>Ref./PIP<br>(CUC 1984)                                        | Denver SE 8216/9<br>Ref./PIP (Phil.)<br>(CUC 1984)                                | Trento SE 7016/9<br>Ref./PIP<br>(CUC 1952)                                        | M 72-410<br>Reference<br>(CUC 1842)                                               | M 72-410<br>Reference/PIP<br>(CUC 1842)                                           | M 72-410/9<br>Reference<br>(CUC 1842)                                             | M 95-410/9<br>Reference/PIP<br>(CUC 1894)                                         |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Bildröhre / Picture Tube                             |                                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Sichtbares Bild<br>Visible picture                   | 66cm                                                                                              | 76cm                                                                              | 76cm                                                                              | 76cm                                                                              | 76cm                                                                              | 76cm                                                                              | 66cm                                                                              | 68cm                                                                              | 68cm                                                                              | 68cm                                                                              | 89cm                                                                              |
| Bildschirmdiagonale<br>Screen diagonale              | 70cm (28")<br>Black Matrix, CCS                                                                   | 82cm (32")<br>Black Matrix, CCS                                                   | 82cm (32")<br>Black Matrix, CCS                                                   | 82cm (32")<br>Black Matrix, CCS                                                   | 82cm (32")<br>Black Matrix, CCS                                                   | 82cm (32")<br>Black Matrix, CCS                                                   | 70cm (28")<br>Black Matrix, CCS                                                   | 72cm (29")<br>Black Matrix, CCS                                                   | 72cm (29")<br>Black Matrix, CCS                                                   | 72cm (29")<br>Black Matrix, CCS                                                   | 95cm (37")<br>Black Matrix, CCS                                                   |
| Ablenkwinkel<br>Deflection angle                     | 105°                                                                                              | 106°                                                                              | 106°                                                                              | 106°                                                                              | 106°                                                                              | 106°                                                                              | 105°                                                                              | 108°                                                                              | 108°                                                                              | 108°                                                                              | 110°                                                                              |
| Bildwechselfrequenz<br>Vertical frequency            | 100Hz                                                                                             | 100Hz                                                                             | 100Hz                                                                             | 100Hz                                                                             | 100Hz                                                                             | 100Hz                                                                             | 100Hz                                                                             | 100Hz                                                                             | 100Hz                                                                             | 100Hz                                                                             | 100Hz                                                                             |
| Elektronik / Electronic                              |                                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Programmspeicherplätze<br>Programme positions        | 99 TV + 4 AV                                                                                      | 99 TV + 5 AV                                                                      | 99 TV + 5 AV                                                                      | 99 TV + 5 AV                                                                      | 99 TV + 5 AV                                                                      | 99 TV + 5 AV                                                                      | 99 TV + 4 AV                                                                      | 99 TV + 5 AV                                                                      | 99 TV + 5 AV                                                                      | 99 TV + 5 AV                                                                      | 99 TV + 5 AV                                                                      |
| Perfect clear, Blue stretch,<br>Gamma adjustment     | ja/yes                                                                                            | ja/yes                                                                            | ja/yes                                                                            | ja/yes                                                                            | ja/yes                                                                            | ja/yes                                                                            | ja/yes                                                                            | ja/yes                                                                            | ja/yes                                                                            | ja/yes                                                                            | ja/yes                                                                            |
| AV-Auswertung<br>AV evaluation                       | auf jeden Programmplatz programmierbar / programmable for every programme position                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Tuner                                                | Kabeltuner-Raster 8MHz für Hyperband / cable tuner - 8MHz spacing for hyperband                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| TV-Normen<br>TV-Standard                             | PAL/SECAM/<br>NTSC4.43MHz+3.58MHz<br>B/G, I, DK/K/D, M, L/L',                                     | PAL/SECAM/<br>NTSC4.43MHz+3.58MHz<br>B/G, I, DK/K/D, M, L/L',                     | PAL/SECAM/<br>NTSC4.43MHz+3.58MHz<br>B/G, I, DK/K/D, M, L/L',                     | PAL/SECAM/<br>NTSC4.43MHz+3.58MHz<br>B/G, I, DK/K/D, M, L/L',                     | PAL/SECAM/<br>NTSC4.43MHz+3.58MHz<br>B/G, I, DK/K/D, M, L/L',                     | PAL/SECAM/<br>NTSC4.43MHz+3.58MHz<br>B/G, I, DK/K/D, M, L/L',                     | PAL/SECAM/<br>NTSC4.43MHz+3.58MHz<br>B/G, I, DK/K/D, M, L/L',                     | PAL/SECAM/<br>NTSC4.43MHz+3.58MHz<br>über/via AV 3,58MHz                          | PAL/SECAM/<br>NTSC4.43MHz+3.58MHz<br>über/via AV 3,58MHz                          | PAL/SECAM/<br>NTSC4.43MHz+3.58MHz<br>B/G, I, DK/K/D, M, L/L',                     | PAL/SECAM/<br>NTSC4.43MHz+3.58MHz<br>B/G, I, DK/K/D, M, L/L',                     |
| Stereo Systeme<br>Stereo systems                     | Deutsch A2 für B/G<br>German A2 for B/G<br>DK, Nicam 5,85+6,52                                    | Deutsch A2 für B/G<br>German A2 for B/G<br>DK, Nicam 5,85+6,52                    | Deutsch A2 für B/G<br>German A2 for B/G<br>DK, Nicam 5,85+6,52                    | Deutsch A2 für B/G<br>German A2 for B/G<br>DK, Nicam 5,85+6,52                    | Deutsch A2 für B/G<br>German A2 for B/G<br>DK, Nicam 5,85+6,52                    | Deutsch A2 für B/G<br>German A2 for B/G<br>DK, Nicam 5,85+6,52                    | Deutsch A2 für B/G<br>German A2 for B/G<br>DK, Nicam 5,85+6,52                    | Deutsch A2<br>German A2                                                           | Deutsch A2<br>German A2                                                           | Deutsch A2 für B/G<br>German A2 for B/G<br>DK, Nicam 5,85+6,52                    | Deutsch A2 für B/G<br>German A2 for B/G<br>DK, Nicam 5,85+6,52                    |
| Videotext<br>Teletext                                | Mega Text , VPS,<br>512 Seiten<br>Mega Text , VPS,<br>512 pages                                   | Mega Text , VPS,<br>512 Seiten<br>Mega Text , VPS,<br>512 pages                   | Mega Text , VPS,<br>512 Seiten<br>Mega Text , VPS,<br>512 pages                   | Mega Text , VPS,<br>512 Seiten<br>Mega Text , VPS,<br>512 pages                   | Mega Text , VPS,<br>512 Seiten<br>Mega Text , VPS,<br>512 pages                   | Mega Text , VPS,<br>512 Seiten<br>Mega Text , VPS,<br>512 pages                   | Mega Text , VPS,<br>512 Seiten<br>Mega Text , VPS,<br>512 pages                   | Mega Text , VPS,<br>512 Seiten<br>Mega Text , VPS,<br>512 pages                   | Mega Text , VPS,<br>512 Seiten<br>Mega Text , VPS,<br>512 pages                   | Mega Text , VPS,<br>512 Seiten<br>Mega Text , VPS,<br>512 pages                   | Mega Text , VPS,<br>512 Seiten<br>Mega Text , VPS,<br>512 pages                   |
| Musikleistung<br>Music power                         | Stereo 3-Kanal 80W<br>Stereo 3-channel 80W                                                        | Stereo 3-Kanal 80W<br>Stereo 3-channel 80W                                        | Stereo 3-Kanal 80W<br>Stereo 3-channel 80W                                        | Stereo 5-Kanal 120W<br>Stereo 5-channel 120W                                      | Stereo 3-Kanal 80W<br>Stereo 3-channel 80W                                        | Stereo 3-Kanal 80W<br>Stereo 3-channel 80W                                        | Stereo 3-Kanal 80W<br>Stereo 3-channel 80W                                        | Stereo 2 x 40W                                                                    | Stereo 2 x 40W                                                                    | Stereo 2 x 40W                                                                    | Stereo 3-Kanal 80W<br>Stereo 3-channel 80W                                        |
| Anschlüsse Front / Connections Front                 |                                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Kopfhörer<br>Headphones                              | Stereo 3,5mm Klinkenbuchse, Lautstärke einstellbar / Stereo 3.5mm jacksocket, volume controllable |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Video IN                                             | 1 x Cinch                                                                                         | 1 x Cinch                                                                         | 1 x Cinch                                                                         | 1 x Cinch                                                                         | 1 x Cinch                                                                         | 1 x Cinch                                                                         | 1 x Cinch                                                                         | 1 x Cinch                                                                         | 1 x Cinch                                                                         | 1 x Cinch                                                                         | 1 x Cinch                                                                         |
| Audio IN                                             | 2 x Cinch                                                                                         | 2 x Cinch                                                                         | 2 x Cinch                                                                         | 2 x Cinch                                                                         | 2 x Cinch                                                                         | 2 x Cinch                                                                         | 2 x Cinch                                                                         | 2 x Cinch                                                                         | 2 x Cinch                                                                         | 2 x Cinch                                                                         | 2 x Cinch                                                                         |
| S-Video                                              | Hosiden                                                                                           | Hosiden                                                                           | Hosiden                                                                           | Hosiden                                                                           | Hosiden                                                                           | Hosiden                                                                           | —                                                                                 | Hosiden                                                                           | Hosiden                                                                           | Hosiden                                                                           | Hosiden                                                                           |
| Anschlüsse Rückwand / Connections Rear Panel         |                                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Euro AV 1(schwarz/black)                             | FBAS in-/output, RGB input,<br>S-Video in/output, Megallogic<br>-> D2-Mac Decoder                 | FBAS in-/output, RGB input,<br>S-Video in/output, Megallogic<br>-> D2-Mac Decoder | FBAS in-/output, RGB input,<br>S-Video in/output, Megallogic<br>-> D2-Mac Decoder | FBAS in-/output, RGB input,<br>S-Video in/output, Megallogic<br>-> D2-Mac Decoder | FBAS in-/output, RGB input,<br>S-Video in/output, Megallogic<br>-> D2-Mac Decoder | FBAS in-/output, RGB input,<br>S-Video in/output, Megallogic<br>-> D2-Mac Decoder | FBAS in-/output, RGB input,<br>S-Video in/output, Megallogic<br>-> D2-Mac Decoder | FBAS in-/output, RGB input,<br>S-Video in/output, Megallogic<br>-> D2-Mac Decoder | FBAS in-/output, RGB input,<br>S-Video in/output, Megallogic<br>-> D2-Mac Decoder | FBAS in-/output, RGB input,<br>S-Video in/output, Megallogic<br>-> D2-Mac Decoder | FBAS in-/output, RGB input,<br>S-Video in/output, Megallogic<br>-> D2-Mac Decoder |
| Euro AV 2 (orange)                                   | FBAS in-/output, RGB input,<br>S-Video input                                                      | FBAS in-/output, RGB input,<br>S-Video input                                      | FBAS in-/output, RGB input,<br>S-Video input                                      | FBAS in-/output, RGB input,<br>S-Video input                                      | FBAS in-/output, RGB input,<br>S-Video input                                      | FBAS in-/output, RGB input,<br>S-Video input                                      | FBAS in-/output, RGB input,<br>S-Video input                                      | FBAS in-/output, RGB input,<br>S-Video input                                      | FBAS in-/output, RGB input,<br>S-Video input                                      | FBAS in-/output, RGB input,<br>S-Video input                                      | FBAS in-/output, RGB input,<br>S-Video input                                      |
| Euro AV 3 (blue)                                     | FBAS in-/output                                                                                   | FBAS in-/output                                                                   | FBAS in-/output                                                                   | FBAS in-/output                                                                   | FBAS in-/output                                                                   | FBAS in-/output                                                                   | FBAS in-/output                                                                   | FBAS in-/output                                                                   | FBAS in-/output                                                                   | FBAS in-/output                                                                   | FBAS in-/output                                                                   |
| Standart VGA<br>2 x Cinch NF/in                      | nachrüstbar Modul VGA 1<br>retrofitting possible module<br>VGA 1                                  | Bildaufföslung/resolution<br>640x480, 31,5 kHz/60Hz<br>Textmode 31,5 kHz/70Hz     | Bildaufföslung/resolution<br>640x480, 31,5 kHz/60Hz<br>Textmode 31,5 kHz/70Hz     | Bildaufföslung/resolution<br>640x480, 31,5 kHz/60Hz<br>Textmode 31,5 kHz/70Hz     | Bildaufföslung/resolution<br>640x480, 31,5 kHz/60Hz<br>Textmode 31,5 kHz/70Hz     | Bildaufföslung/resolution<br>640x480, 31,5 kHz/60Hz<br>Textmode 31,5 kHz/70Hz     | Bildaufföslung/resolution<br>640x480, 31,5 kHz/60Hz<br>Textmode 31,5 kHz/70Hz     | nachrüstbar Modul VGA 1<br>retrofitting possible module<br>VGA 1                  | Bildaufföslung/resolution<br>640x480, 31,5 kHz/60Hz<br>Textmode 31,5 kHz/70Hz     | Bildaufföslung/resolution<br>640x480, 31,5 kHz/60Hz<br>Textmode 31,5 kHz/70Hz     | Bildaufföslung/resolution<br>640x480, 31,5 kHz/60Hz<br>Textmode 31,5 kHz/70Hz     |
| Audio OUT stereo                                     | 2 x Cinch                                                                                         | 2 x Cinch                                                                         | 2 x Cinch                                                                         | 2 x Cinch                                                                         | 2 x Cinch                                                                         | 2 x Cinch                                                                         | 2 x Cinch                                                                         | 2 x Cinch                                                                         | 2 x Cinch                                                                         | 2 x Cinch                                                                         | 2 x Cinch                                                                         |
| Lautsprecherbuchsen<br>Loudspeaker socket            | —                                                                                                 | —                                                                                 | —                                                                                 | 4 x DIN                                                                           | —                                                                                 | —                                                                                 | —                                                                                 | —                                                                                 | —                                                                                 | —                                                                                 | —                                                                                 |
| Netzteil / Mains Stage                               |                                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Netzspannung (Regelber.)<br>Mains voltage (variable) | 165...264V                                                                                        | 165...264V                                                                        | 165...264V                                                                        | 165...264V                                                                        | 165...264V                                                                        | 165...264V                                                                        | 165...264V                                                                        | 165...264V                                                                        | 165...264V                                                                        | 165...264V                                                                        | 165...264V                                                                        |
| Netzfrequenz<br>Mains frequency                      | 50 / 60Hz                                                                                         | 50 / 60Hz                                                                         | 50 / 60Hz                                                                         | 50 / 60Hz                                                                         | 50 / 60Hz                                                                         | 50 / 60Hz                                                                         | 50 / 60Hz                                                                         | 50 / 60Hz                                                                         | 50 / 60Hz                                                                         | 50 / 60Hz                                                                         | 50 / 60Hz                                                                         |
| Leistungsaufnahme<br>Power consumption               | ca. 165W                                                                                          | ca. 175W                                                                          | ca. 175W                                                                          | ca. 185W                                                                          | ca. 175W                                                                          | ca. 175W                                                                          | ca. 160W                                                                          | ca. 170W                                                                          | ca. 170W                                                                          | ca. 170W                                                                          | ca. 180W                                                                          |
| Standby                                              | ca. 6W                                                                                            | ca. 7W                                                                            | ca. 7W                                                                            | ca. 7W                                                                            | ca. 7W                                                                            | ca. 7W                                                                            | ca. 6W                                                                            | ca. 6W                                                                            | ca. 6W                                                                            | ca. 6W                                                                            | ca. 6W                                                                            |

## Hinweise zu den Oszillogrammen / Hints to the Oscillograms / Note relative agli Oscillogr./ Indicazioni pour les Oscillogrammes / Observaciones con respecto a los Oscilogramas

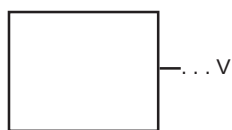
(D)      (GB)      (I)      (F)      (E)

Die Spannungswerte an den Oszillogrammen entsprechen Näherungswerten!  
The voltages indicated in the oscillograms are approximates!

I valori delle tensioni indicati sugli oscillogrammi sono approssimativi !

Les valeurs de tension indiquées pour les oscillogrammes sont des valeurs approximatives!

Los valores de tensión en los oscilogramas son aproximados!



Gleichspannungswert / DC voltage / Valore tensione continua / Tension continue / Valor de tensión continua

... V<sub>ss</sub>

Spitze-Spitze - Wert / Peak to peak value / Valore picco-picco / Crête-crête / Valor pico a pico

... ms/cm

Zeitbasis des Oszilloskops / Time base of the oscilloscope / Base del tempo dell'oscilloscopio / Base de temps de l'oscilloscope/ Base de tiempo del osciloscopio

... Hz

Frequenz / Frequency / Frequenza / Fréquence / Frecuencia

## Hinweise zu den Bauteilen / Hints to Components / Istruzioni sui Componenti / Observaciones sobre los Componentes / Precautions a observer

Metallschichtwiderstände  
Metal film resistors  
Resistenza a strato metallico  
Resistencia de capa metálica  
Film métallique

DIN 0204      DIN 0414  
 DIN 0207

Kohleschichtwiderstände  
Carbon film resistors  
Resistenza a strato di carbone  
Resistencia de capa de carbón  
Film carbonique

DIN 0204      DIN 0414  
 DIN 0207      DIN 0617

Metalloxidwiderstand  
Metal oxid resistor  
Resistenza ad ossido metallico  
Resistencia de óxido metálico  
Métaloxide

Schwer entflammbarer Widerstand  
Flame resistant resistor  
Resistenza anti-inflammabile  
Resistencia ininflamable  
Ininflamable

SI-R Sicherungswiderstand  
Safety resistor  
Resistenza di sicurezza  
 SI-R Resistencia con resorte de seguridad  
Rés. fusible

Drahtwiderstand m. Wattangabe  
Wire wound resistor w. wattage  
Resistenza a filo  
Resistencia bobinada (Disipación)  
Bobinée avec ind. puissance

NTC Heißeiter / NTC resistor  
Termistore NTC / Resistencia CNT  
Varistor (CTN)

PTC Kaltleiter / PTC resistor  
Termistore PTC / Resistencia CPT  
Varistor (CTP)

K Keramikkondensator  
Ceramic capacitor  
Condensatore ceramico  
Condensador cerámico  
Céramique

Kondensator, Capacitor  
Condensatore, Condensador  
Condensador, 250 V=

Kondensator, Capacitor  
Condensatore, Condensador  
Condensador, 630 V=

Elektrolytkondensator  
Electrolytic capacitor  
Condensatore elettrolitico  
Condensador electrolitico  
Electrolytique

Tantal-Elektrolytkondensator  
Tantalum electrolytic capacitor  
Condensatore elettro. al tantalio  
Condensador de tantalio  
Tantale

bipolarer Elektrolytkondensator  
bipolar electrolytic capacitor  
Condensatore elettrolitico bipolare  
Condensador electrolitico bipolar  
Electrolytique bipolaissé

Kondensator, Capacitor  
Condensatore, Condensador  
Condensador, 400 V=

Kondensator, Capacitor  
Condensatore, Condensador  
Condensador, 1000 V=

## Sicherheits-Hinweise

Die in den Fernsehgeräten auftretende Röntgenstrahlung entspricht den Bestimmungen der Physikalisch-Technischen Bundesanstalt vom 8. Januar 1987.

Die Hochspannung für die Bildröhre und die damit auftretende Röntgenstrahlung ist abhängig von der exakten Einstellung der Netzteilspannung +A.

Nach jeder Reparatur im Netzteil oder in der Horizontalablenkung ist die Hochspannung zu messen und ggf. einzustellen.

Schutzschaltungen im Gerät dürfen nur kurzzeitig außer Betrieb gesetzt werden, um Folgeschäden am Chassis oder an der Bildröhre zu vermeiden.

Beim Austausch der Bildröhre dürfen nur die in den Ersatzteillisten vorgeschriebenen Typen verwendet werden.

## Safety Advices

The X-radiation developing in the sets conforms to the X-radiation Regulations (January 8, 1987), issued by the Physikalisch-Technische Bundesanstalt (federal physio-technical institution).

The high tension for the picture tube and thus the developing X-radiation depends on the precise adjustment of the +A power supply. After every repair of the power supply unit or the horizontal deflection stage it is imperative that the EHT for the picture tube is checked and re-adjusted if necessary.

To avoid consequential damages to the chassis or the picture tube the integrated protective circuits are allowed to be put out of operation only for a short time.

When replacing the picture tube use only the types specified in the spare parts lists.

## D

### Servicehinweise

#### Chassisausbau

Bevor Sie die Chassis-Verbindungsleitungen lösen, muß die Leitungsverlegung zu den einzelnen Baugruppen wie Netzschalterplatte, Bedieneinheit, Bildrohrplatte, Ablenkeinheit oder Lautsprecher beachtet werden.

Nach erfolgter Reparatur ist es notwendig, die Leitungsführung wieder in den werksseitigen Zustand zu versetzen, um evtl. spätere Ausfälle oder Störungen zu vermeiden.

#### Netzkabel

Diese Geräte dürfen nur mit dem Original-Netzanschlußkabel mit integrierter Entstördrossel betrieben werden. Dieses Netzkabel verhindert Störungen aus dem Netz und ist Bestandteil der Gerätezulassung. Im Ersatzfall bestellen Sie bitte ausschließlich das Netzkabel laut Ersatzteilliste.

## GB

### Service Notes

#### Disassembly of the chassis

Before disconnecting the chassis connecting leads observe the way they are routed to the individual assemblies like the mains switch panel, keyboard control panel, picture tube panel, deflection unit or loudspeaker.

On completion of the repairs the leads must be laid out as originally fitted at the factory to avoid later failures or disturbances.

#### Mains cable

The TV receiver must only be operated with an original mains connecting cable with an interference suppressor choke integrated in the mains plug. This mains cable prevents interference from the mains supply and is part of the product approval. For replacement please order exclusively the mains connecting cable specified in the spare parts list.

## F

### Information pour la maintenance

#### Démontage de chassis

Avant de défaire les connecteurs du châssis princip, il y a lieu de repérer auparavant les liaisons correspondant à chaque platine comme par exemple le C.I. Inter secteur, le C.I. Commande, le C.I. Tube, le bloc déviation ou les haut-parleurs.

A la fin de l'intervention, les connexions doivent être remises dans leur position d'origine afin d'éviter par après d'éventuelles défaillances ou perturbations.

#### Cable dereseau

Ces appareils ne peuvent être utilisés qu'avec un câble de connexion original de réseau avec bobine antiparasite intégré dans la fiche de secteur. Ce câble de réseau empêche des perturbations de réseau et est partie de l'autorisation d'appareil. Si nécessaire commandez uniquement le câble de réseau selon la liste de pièces détachées.

## I

### Nota di servizio

#### Smontaggio del telaio

Prima di sfilare i cavi di collegamento col telaio è necessario osservare la disposizione originaria degli stessi verso le singole parti come la piastra alimentazione, l'unità comandi, la piastra cinescopio, il giogo o l'altoparlante.

Dopo la riparazione è necessario che gli ancoraggi e le guide garantiscano la disposizione dei cavi analogamente a quella data in fabbrica e ciò per evitare disturbi o danni nel tempo.

#### Cavo rete

Gli apparecchi devono essere messi in funzione solo con il cavo originale il collegamento di rete e la sua spina di rete deve essere munita di una bobina d'induttanza. In causa di sostituzione ordinate solo il cavo di alimentatore che corrisponde alla lista degli accessori.

## E

### Nota de servicio

#### Desmontaje del chassis

Antes de desconectar las conexiones del Chassis hay que observar la dirección de dichas conexiones a los distintos grupos de construcción como la placa de conmutación de red, unidad de control, placa del zócalo del tubo de imagen, unidad de deflexión o altavoces.

Después de haber realizado la reparación y para evitar fallos o perturbaciones posteriores es necesario reponer las conexiones tal como fueron instaladas originalmente en fábrica.

#### Cable de red

El aparato solo se puede usar con el cable de red original con choque antiparásito integrado en el enchufe de red. Este cable de red evita perturbaciones de la red y es parte de la autorización del aparato. En caso necesario puede pedir el cable de red según lista de piezas de repuestos.

# D Schaltplansymbole GB Circuit Diagram Symbols F Symboles schéma I Simboli sullo schema E Simbolos en los esquemas

|  |                                                                                                                                                                                                             |  |                                                                                                                                                                                                                                                                                                                                               |
|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Feinabst. + / Fine tuning + / Réglage fine + / Sint. fine + / Sint. fina +                                                                                                                                  |  | Kanalwahl / Channel selection / Sélection de canaux / Selez. canale / Seleccion canal                                                                                                                                                                                                                                                         |
|  | Feinabst. - / Fine tuning - / Réglage fine - / Sint. fine - / Sint. fina -                                                                                                                                  |  | Mittelpunkt-Lautsprecher / Center loudspeaker / Haut-parleur de centre / Alto parlante punto centrale / Altavoz del centro                                                                                                                                                                                                                    |
|  | Lautstärke / Volume / Volume / Volume sonore / Volumen                                                                                                                                                      |  | Chip Adresse / Chip adress / Chip direction / Indiri. del chip / Direccion chip                                                                                                                                                                                                                                                               |
|  | Referenz Lautstärke / Volume ref. volt. / Tens. de réf. vol. sonore / Tens di rif. volume / Tens. ref. volumen                                                                                              |  | Ton-Signal Cinch links / Audio signal cinch left / Signal audio cinch gauche / Segnale audio cinch sinistra / Señal audio cinch izquierda                                                                                                                                                                                                     |
|  | Balance / Balance / Balance / Balanciam. / Balance                                                                                                                                                          |  | Ton-Signal Cinch rechts / Audio signal cinch right / Signal audio cinch droit / Segnale audio cinch destra / Señal audio cinch derecha                                                                                                                                                                                                        |
|  | Suchlauf / Self seek / Recherche autom. / Sint. autom. / Sintonia automatica                                                                                                                                |  | Chroma Signal / Chroma signal / Signal degré / Croma segnale / Señal croma                                                                                                                                                                                                                                                                    |
|  | Farbton / Tint / Teinte / Tinta / Tinte                                                                                                                                                                     |  | Chroma S-VHS-Signal / Chroma S-VHS-Signal / Signal degré de S-VHS / Croma segnale S-VHS / Señal croma S-VHS                                                                                                                                                                                                                                   |
|  | Helligkeit / Brightness / Luminosité / Luminosita / Brillo                                                                                                                                                  |  |                                                                                                                                                                                                                                                                                                                                               |
|  | Kontrast / Contrast / Contraste / Contrasto / Contraste                                                                                                                                                     |  | Clock                                                                                                                                                                                                                                                                                                                                         |
|  | Farbkontrast / Colour contrast / Contraste des couleurs / Contrasto colore / Contraste de color                                                                                                             |  |                                                                                                                                                                                                                                                                                                                                               |
|  | Schutzschaltung / Protection circuit / Circuit de sécurité / Circuito di protezione / Circuito de protección                                                                                                |  | Composite Sync. Imp. für VT / Composite sync pulse for TT / Imp. de sync. vidéo-composite pour TXT / Imp. hor. para Video Comp.                                                                                                                                                                                                               |
|  | (Burst Key): Burstaustastimpuls / Burst blanking pulse / Impulsion de suppress. de burst / Imp. di soppress. del burst / Imp. supresion burst                                                               |  | Kombiniertes Hor./vert. Sync. Signal 31250Hz/100Hz (Composite Sync.) / Combined hor./vert. sync signal 31250Hz/100Hz (Composite Sync) / Signal synchr. hor./vert. combiné 31250Hz/100Hz (Synchr. composité) / Segnale sincr. orizz./vert. 31250Hz/100Hz (Sincr. Composito) / Señal combinada sincr. hor./vert. 31250/100Hz (Sincr. compuesto) |
|  | Ton-Signal / Audio signal / Signal audio / segnale audio / Señal audio                                                                                                                                      |  | Daten / Data / Données / Dati / Datos                                                                                                                                                                                                                                                                                                         |
|  | Ton-Signal links / Audio signal left / Signal audio gauche / Segnale audio sinistra / Señal audio izquierda                                                                                                 |  | Verzögerungsleitung / Delay line / Ligne à retard / Linea di ritardo / Linea de retardo                                                                                                                                                                                                                                                       |
|  | Ton-Signal rechts / Audio signal right / Signal audio droit / Segnale audio destra / Señal audio derecha                                                                                                    |  | Freigabe / Enable / Autorisation / Consenso / Habilitacion                                                                                                                                                                                                                                                                                    |
|  | Tonsignal D2 Mac / Audio signal D2MAC / Signal audio D2MAC / Segnale audio D2MAC / Señal de sonido D2MAC /                                                                                                  |  | Freigabe ZF / IF Enable / Validation FI / Consenso FI / Autorización FI                                                                                                                                                                                                                                                                       |
|  | Tonsignal links D2 Mac / Audio signal left D2MAC / Signal audio gauche D2MAC / Segnale audio sinistro D2MAC / Señal de sonido izquierdo D2MAC /                                                             |  | Freigabe FT / Finetuning enable / Autorisation Réglage fin / Abilitaz. Sintonia fine / Habilitation Sintonia fina                                                                                                                                                                                                                             |
|  | Tonsignal rechts D2 MAC / Audio signal right D2MAC / Signal audio droit D2MAC / Segnale audio destro D2MAC / Señal de sonido derecho D2MAC /                                                                |  | Freigabe LED / LED enable / Autorisation LED / Abilitaz. LED / Habilitation LED                                                                                                                                                                                                                                                               |
|  | Audio-Signal FS Gerät / Audio signal TV set / Signal audio téléviseur / Segnale audio TV / Señal audio TV                                                                                                   |  | Freigabe Ton / Sound enable / Autorisation son / Abilitaz. audio / Habilitation sonido                                                                                                                                                                                                                                                        |
|  | Tonsignal VCR Gerät / Audio signal VCR unit / Signal audio magnétoscope / Segnale audio VCR / Señal audio VCR                                                                                               |  | Audio-Signal EURO-AV links / Audio signal EURO-AV left / Signal audio EURO-AV gauche / Segnale audio EURO-AV sinistra / Señal audio izquierda EURO-AV                                                                                                                                                                                         |
|  | Blau-Signal / Blue signal / Signal bleu / Segnale blu / Señal azul                                                                                                                                          |  | Audio-Signal EURO-AV rechts / Signal audio EURO-AV right / Signal audio EURO-AV droit / Segnale audio EURO-AV destra / Señal audio derecha EURO-AV                                                                                                                                                                                            |
|  | Rechner Stop I²C Bus frei / Computer Stop I²C Bus is free / Microprocesseur stop I²C Bus disponible / Calcol. stop I²C Bus libero / Stop micropr. disponible                                                |  | Video-Signal EURO-AV / Video signal EURO-AV / Signal video EURO-AV / Segnale video EURO-AV / Señal video EURO-AV                                                                                                                                                                                                                              |
|  | Basisband / Baseband / Bande de base / Banda base / Banda base                                                                                                                                              |  | Farb-Signal / Chroma signal / Signal chroma / Segnale chroma / Señal croma                                                                                                                                                                                                                                                                    |
|  | Blau-Signal extern / Signal blue external / Signal bleu externe / Segnale blu esterno / Señal azul externa                                                                                                  |  | FBAS-Signal / CCVS signal / Signal vidéo composite / Segnale video composito / señal video compuesta                                                                                                                                                                                                                                          |
|  | OSD-Einblendung blau / OSD blue / Eblouissement OSD bleu / Visualizzazione OSD blu / Visualisacione OSD azul                                                                                                |  | FBAS-D2 MAC / D2MAC CCVS signal / Signal vidéo composite-D2MAC / FBAS-D2MAC / FBAS-D2MAC                                                                                                                                                                                                                                                      |
|  | Blau-Signal PIP / PIP Blue signal / Signal bleu PIP / Segnale blu PIP / Señal azul PIP                                                                                                                      |  | Basisband / Baseband / Bande de base / Banda base / Banda base                                                                                                                                                                                                                                                                                |
|  | Blau - Signal - 50Hz vert., 15625Hz hor. / Blue signal - 50Hz vert., 15625Hz hor. / Signal bleu - 50Hz vert., 15625Hz hor. / Segnale blu - 50Hz vert., 15625Hz hor. / Señal azul - 50Hz vert., 15625Hz hor. |  | FBAS-Video text / CCVS videotext / Signal vidéo composite-Télétexte / FBAS-Televideo / FBAS-Teletexto                                                                                                                                                                                                                                         |
|  | Blau-Signal -100Hz vert., 31250Hz hor. / Blue signal -100Hz vert., 31250Hz hor. / Signal bleu -100Hz vert., 31250Hz hor. / Segnale blu -100Hz vert., 31250Hz hor. / Señal azul -100Hz vert., 31250Hz hor.   |  | FBAS Sync. Signal / CCVS sync signal / Signal sync. vidéo col. comp. / Segnal sincr. video col. comp. / Señal sincr. video compuesta                                                                                                                                                                                                          |
|  | B-Y -Signal - 50Hz vert., 15625Hz hor. / B-Y-Signal - 50Hz vert., 15625Hz hor. / Signal B-Y - 50Hz vert., 15625Hz hor. / Segnale B-Y - 50Hz vert., 15625Hz hor. / Señal B-Y - 50Hz vert., 15625Hz hor.      |  | FBAS Signal S-VHS / CCVS signal S-VHS / Signal vidéo col. comp. S-VHS / Segnal video col. comp. S-VHS / Señal video compuesta S-VHS                                                                                                                                                                                                           |
|  | B-Y -Signal - 100Hz vert., 31250Hz hor. / B-Y-Signal - 100Hz vert., 31250Hz hor. / Signal B-Y - 100Hz vert., 31250Hz hor. / Segnale B-Y - 100Hz vert., 31250Hz hor. / Señal B-Y - 100Hz vert., 31250Hz hor. |  |                                                                                                                                                                                                                                                                                                                                               |

|                                                                                                     |                                                                                                                                                                                                               |                    |                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>F<sub>H</sub> ⚡</b>                                                                              | Hochspg. / EHT voltage / Haute tens. / Alta tens. / MAT                                                                                                                                                       | <b>MEGA LOGIC</b>  | Megalogic Daten / Megalogic data / Megalogic dates / Dati Megalogic / Megalogic datas                                                                                                                                                                                                                                                      |
| <b>FRM</b>                                                                                          | Rahmensignal / Frame signal / Signal d'encadrement / Segnale cornice / Señal de marco                                                                                                                         | <b>MODE</b>        | Modus / Mode / Mode / Modo / Modo                                                                                                                                                                                                                                                                                                          |
| <b>FT</b>                                                                                           | Feinabstimmung / Fine tuning / Reglage fin / Sint. fine / Sint. fina                                                                                                                                          | <b>NIC CLK</b>     | NICAM Clock / Clock NICAM / Horloge NICAM / Clock NICAM / Clock NICAM                                                                                                                                                                                                                                                                      |
| <b>F<sub>U</sub></b>                                                                                | FU-Signal / FU-signal / Signal FU / Segnale FU / Senal FU                                                                                                                                                     | <b>NORM</b>        | Norm Taste / TV standard select button / touche de norme / Tasto norma / Puls. de norma                                                                                                                                                                                                                                                    |
| <b>F<sub>V</sub></b>                                                                                | FV-Signal / FV-signal / Signal FV / Segnale FV / Senal FV                                                                                                                                                     | <b>OWA</b>         | Ost-West Ansteuerimpuls / East-west drive impuls / Impulsion de commande Est-Ouest / Impulso comando Est-Ovest / Impulso de control Este-Oeste                                                                                                                                                                                             |
| <b>G</b>                                                                                            | Grün-Signal / Green signal / Signal green external / Signal vert / Segnale verde / Señal verde                                                                                                                | <b>P</b>           | Programm / Program / Programme / Programma / Programa                                                                                                                                                                                                                                                                                      |
| <b>G OSD</b>                                                                                        | OSD-Einblendung grün / OSD green / Eblouissement OSD vert / Visualizzazione OSD verde / Visualisacione OSD verde                                                                                              | <b>P/C</b>         | Programm-Kanalwahl / Program channel selection / Progr. sélection de canaux / Progr. selez.canale / Progr. selec. canal                                                                                                                                                                                                                    |
| <b>G PIP</b>                                                                                        | Grün-Signal PIP / Green signal PIP / Signal green PIP / Signal vert PIP / Segnale verde PIP / Señal verde PIP                                                                                                 | <b>PIP</b>         | Bild im Bild / Picture in picture / Image dans l'image / PIP / Imagen en la imagen                                                                                                                                                                                                                                                         |
| <b>GEXT</b>                                                                                         | Grün-Signal extern / Green signal vertical / Signal vert externe / Segnale verde esterno / Señal verde externa                                                                                                | <b>P1</b>          | Progr. Taste / Progr. button / Touche Progr. / Tasto Progr. / Puls. Progr.                                                                                                                                                                                                                                                                 |
| <b>G/50</b>                                                                                         | Grün-Signal - 50Hz vert., 15625Hz hor. / Green signal - 50Hz vert., 15625Hz hor. / Signal vert - 50Hz vert., 15625Hz hor. / Segnale verde - 50Hz vert., 15625Hz hor. / Señal verde - 50Hz vert., 15625Hz hor. | <b>R</b>           | Rot-Signal / Red signal / Signal rouge / Segnale rosso / Señal rojo                                                                                                                                                                                                                                                                        |
| <b>G/100</b>                                                                                        | Grün-Signal -100Hz vert., 31250Hz hor. / Green signal -100Hz vert., 31250Hz hor. / Signal vert -100Hz vert., 31250Hz hor. / Segnale verde -100Hz vert., 31250Hz hor. / Señal verde -100Hz vert., 31250Hz hor. | <b>REMOTE</b>      | Fernbedienung / Remote control / Telecommande / Telecomando / Mando a distancia                                                                                                                                                                                                                                                            |
| <b>GND - H</b><br> | Nullpunkt Heizung / Ground filament / Point neutre-Chauffage / Punto zero-Filamento / Punto medio filamento                                                                                                   | <b>R OSD</b>       | OSD-Einblendung rot / OSD red / Eblouissement OSD rouge / Visualizzazione OSD rosso / Visualisacione OSD rojo                                                                                                                                                                                                                              |
| <b>HA</b>                                                                                           | Horiz. Sync. Impuls / Horiz. Sync pulse / Impulsion synchro. horiz. / Impulso sincro orizzontale / Impulso de sinc. horiz.                                                                                    | <b>R PIP</b>       | Rot-Signal PIP / Red signal PIP / Signal rouge PIP / Segnale rosso PIP / Señal rojo PIP                                                                                                                                                                                                                                                    |
| <b>HDR</b>                                                                                          | Horiz. Ansteuerimpuls / Horiz. drive pulse / Impulsion de commande horiz. / Impulso comando orizzontale / Impulso de control horiz.                                                                           | <b>REXT</b>        | Rot-Signal extern / Signal red external / Signal rouge externe / Segnale rosso esterno / Señal rojo externa                                                                                                                                                                                                                                |
| <b>HC</b>                                                                                           | Horiz. Klemmimpuls / Horiz. clamp pulse / Impulsion de serrage horiz. / Impulso comando orizzontale / Impulso de garras horiz.                                                                                | <b>R-Y / 50</b>    | R-Y -Signal - 50Hz vert., 15625Hz hor. / R-Y -Signal - 50Hz vert., 15625Hz hor. / Signal R-Y - 50Hz vert., 15625Hz hor. / Segnale R-Y - 50Hz vert., 15625Hz hor. / Señal R-Y - 50Hz vert., 15625Hz hor.                                                                                                                                    |
| <b>HFB</b>                                                                                          | Horiz. Rückschlagimpuls / Horiz. flyback / Impulsion de retour horiz. / Impulso ritorno orizzontale / Impulso de retroceso horiz.                                                                             | <b>R-Y / 100</b>   | R-Y -Signal - 100Hz vert., 31250Hz hor. / R-Y -Signal - 100Hz vert., 31250Hz hor. / Signal R-Y - 100Hz vert., 31250Hz hor. / Segnale R-Y - 100Hz vert., 31250Hz hor. / Señal R-Y - 100Hz vert., 31250Hz hor.                                                                                                                               |
| <b>HS</b>                                                                                           | Hor. Sync. Implus für VT / Hor. sync pulse for TT / Imp. de sync. hor. pour TXT / Imp. sincr. oriz. per Televideo / Imp. hor. para Video Comp.                                                                | <b>S</b>           | Sonderkanal / Special channel / Canal special / Canale speciale / Canal especial                                                                                                                                                                                                                                                           |
| <b>I BEAM</b>                                                                                       | Strahlstrom / Current beam / Current rayon / Corrente del irradiare / Corriente de haz                                                                                                                        | <b>SB</b>          | Strahlstrombegrenzung / Beam current lim. / Lim. cour. de faisceau / Lim. corr. di raggio / Corriente media de haz                                                                                                                                                                                                                         |
| <b>ICL</b>                                                                                          | I <sup>2</sup> C Bus -Clock                                                                                                                                                                                   | <b>SCL</b>         | I <sup>2</sup> C-Bus Clock                                                                                                                                                                                                                                                                                                                 |
| <b>IR</b>                                                                                           | Infrarot-Signal / Signal infrared / Signal infra-rouge / Segnale infrarosso / Señal infrarojo.                                                                                                                | <b>SCL 100</b>     | Schneller I <sup>2</sup> C-Bus Clock / I <sup>2</sup> C-Bus clock high speed / I <sup>2</sup> C-Bus grande vitesse / I <sup>2</sup> C-Bus veloce / Clock del I <sup>2</sup> C-Bus de alta velocidad                                                                                                                                        |
| <b>IM CLOCK</b>                                                                                     | I <sup>2</sup> C Bus -Clock                                                                                                                                                                                   | <b>SDA</b>         | I <sup>2</sup> C-Bus Daten / I <sup>2</sup> C-Bus data / I <sup>2</sup> C-Bus données / I <sup>2</sup> C-Bus dati / I <sup>2</sup> C-Bus datos                                                                                                                                                                                             |
| <b>IM IDENT</b>                                                                                     | I <sup>2</sup> C Bus -Kennung / I <sup>2</sup> C-Bus Identification / Identification I <sup>2</sup> C-Bus / Ident. I <sup>2</sup> C-Bus, Identification I <sup>2</sup> C-Bus                                  | <b>SHIFT VIDEO</b> | Dynamische vert. Versch. 25Hz, aktiv bei Video u. Mix Betrieb / Dynam. vert. shift 25Hz, active on video and mix operation / Decal dynam. de l'image 25Hz, actif sur video et fonction. mixte / Spostam. vert. dinam. 25Hz, attivo con video e. funzionam. misto / Desplaz. dinamico vert. 25Hz, activo con video Y funciones mixtas       |
| <b>IM RESET</b>                                                                                     | I <sup>2</sup> C Bus -Reset                                                                                                                                                                                   | <b>SHIFT TEXT</b>  | Dynamische vert. Versch. 25Hz, aktiv bei Standbild u. VT / Dyn. vert. shift 25Hz, active on freeze-frame and Teletext / Decal dynam. de l'image 25Hz, actif sur arret image et Vidéotext (Antiope) / Spostam. vert. dinam. 25Hz, attivo con fermo immag. e Televideo / Desplaz. dinamico vert. 25Hz, activo con imagen parada Y Videotexto |
| <b>IR CLK</b>                                                                                       | Infrarot Clock / Infrared clock / Signal I.R. horloge / Clock segnale R.I. / Clock infrarojos                                                                                                                 | <b>SS</b>          | Schutzschaltung / Protection circuit / Cablage protecteur / Pot. de prot. / Circuito de proteccion                                                                                                                                                                                                                                         |
| <b>IR DATA</b>                                                                                      | Infrarot Signal / Infrared signal / Signal I.R. / Segnale infrarosso / Data infrarojos                                                                                                                        | <b>SSB</b>         | Spitzenstrahlstrombegrenzung / Peak beam current limiting / Lim. de faisceau crete / Lim. corr. catod. di pico / Corrente pico de haz                                                                                                                                                                                                      |
| <b>IR VIDEO</b>                                                                                     | Infrarot Signal Video / Infrared signal video / Signal I.R. video / Segnale infrarosso video / Data infrarojos video                                                                                          | <b>SSC</b>         | Supersandcastle                                                                                                                                                                                                                                                                                                                            |
| <b>KB</b>                                                                                           | Keyboard                                                                                                                                                                                                      | <b>SSC PIP</b>     | Supersandcastle PIP                                                                                                                                                                                                                                                                                                                        |
| <b>KH AUDIO-L</b>                                                                                   | Tonsignal Kopfhörer links / Audio signal headphone left / Signal audio gauche de casque / Segnale audio sinistra cuffia / Señal audio izquierda auriculares                                                   | <b>SSC / 100</b>   | Supersandcastle 100Hz vert., 31250Hz hor.                                                                                                                                                                                                                                                                                                  |
| <b>KH AUDIO-R</b>                                                                                   | Tonsignal Kopfhörer rechts / Audio signal headphone right / Signal audio droit de casque / Segnale audio sinistra cuffia / Señal audio derecha auriculares                                                    | <b>SSC / 50</b>    | Supersandcastle 50Hz vert., 15625Hz hor.                                                                                                                                                                                                                                                                                                   |
| <b>L</b>                                                                                            | Lautstärke / Volume / Volume / Volume sonore / Volumen                                                                                                                                                        | <b>SUR-ROUND</b>   | Surround                                                                                                                                                                                                                                                                                                                                   |
| <b>LED</b>                                                                                          | Leuchtdiode / Light emitting diode / Diode lumineuse / Diodo luminoso / Diodo luminescente                                                                                                                    |                    |                                                                                                                                                                                                                                                                                                                                            |
| <b>M</b>                                                                                            | Speicher Taste / Memory button / Touche mémoire / Tasto di memoria / Puls. memoria                                                                                                                            |                    |                                                                                                                                                                                                                                                                                                                                            |

|                                                                                    |                                                                                                                                                                                                                                                                          |                                                                                     |                                                                                                                                                                                                                                              |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | Sync.-Signal / Sync.-Signal / Signal sync / Segnale sync. / Señal de sync.                                                                                                                                                                                               |    | Schaltspg. Camera Wiedergabe / Switching volt. camera playback / Tens. commut. reprod. camera / Tens. commut. riproduz. telecam / Tens. con. reprod. camara                                                                                  |
|    | Sync. BTX / Viewdata Sync / Sync. Télétex / Sincr. Videotel / Sincr. Videotexto                                                                                                                                                                                          |    | Schaltspg. Datenbetr. / Switching volt. data mode / Tens. de commut. fonct. données / Tens. di commut. dati / Tens commut. datos                                                                                                             |
|    | Sync. VT / Sync. Teletext / Sync Vidéotexte / Sincr. Televideo / Sincr. Videotexto                                                                                                                                                                                       |    | Schaltspg. U Data extern / Switching volt Data ext. / Tension de commutation U Data externe / Tens. di commutazione U-Data esterno / Tensión de conmutación externa U                                                                        |
|    | Schwarzwert / Black level / Niveau du noir / Livello del nero / Nivel de negro                                                                                                                                                                                           |    | Schaltspg. Deemphasis / Switching volt. deemphasis / Tens. commut. desaccent. / Tens. commut. deenfasi / Tens. commut. deenfasis                                                                                                             |
|    | TEXT-Freigabe / TEXT enable / Autorisation TEXTE / Abilitaz. TELEVIDEO / Habilitation TEXTE                                                                                                                                                                              |    | Schaltspg. Dolby-Surround / Switching volt. Dolby-Surround / Tens. commut. Dolby-Surround / Tens. commut. di Dolby-Surround / Tens. de conmut. Dolby-Surround                                                                                |
|    | Bei Zweitton, Ton 1 / On two channel sound, sound 1 / Pour double son, son 1 / In bicanale, audio 1 / En dual, sonido 1                                                                                                                                                  |    | Schaltspg. D2MAC / Switching volt. D2MAC / Tension de commutation D2MAC / Tens. di commutazione D2MAC / Tensión de conmutación D2MAC                                                                                                         |
|    | Bei Zweitton, Ton 2 / On two channel sound, sound 2 / Pour double son, son 2 / In bicanale, audio 2 / En dual, sonido 2                                                                                                                                                  |    | Schaltspg. EURO-AV / Switching volt. EURO-AV / Tens. de commut. EURO-AV / Tens. di commut. EURO-AV / Tens. commut. EURO-AV                                                                                                                   |
|    | Tieftöner / Woofer / Haut-parleur pour les frequences basses / Toni bassi / Sonido bajo                                                                                                                                                                                  |    | Schaltspg. EURO-AV-Cinch-Buchse / Switching volt. EURO-AV-Cinch socket / Tens. commut. prise Scart - Cinch / Tens. commut. presa Scart - Cinch / Tens. con. EURO-AV - Cinch                                                                  |
|    | Fokusspg. / Focussing volt. / Tens. de focalis. / Tens di focalizz. / Tens focalizacion                                                                                                                                                                                  |    | Schaltspannung für Video-Ausgang EURO-AV Buchse / Switch. voltage for video output EURO-AV socket / Tension de commut. pour sortie vidéo EURO-AV / Tension commut. per presa d'uscita video EURO-AV / Tension de commut. para salida EURO-AV |
|    | Spg. Gitter 1 / Volt. grid 1 / Tens grille G 1 / Tens. griglia 1 / Tens. rejillas G 1                                                                                                                                                                                    |    | Schaltspg. HiFi / Switching voltage HiFi / Tens. de commut. HiFi / Tens di commut. HiFi / Tens. commut. HiFi                                                                                                                                 |
|    | Hochspannung / High voltage / Haute tension / EAT / Alte tension                                                                                                                                                                                                         |    | Stummschaltung HiFi / Muting volt. HiFi / Commutation de silence HiFi / Silenzametro HiFi / Muting HiFi                                                                                                                                      |
|    | Schirmgitter Spg. / Screen-grid volt. / Tens. de grille - écran / Tens. di griglia schermo / Tens. de rejilla                                                                                                                                                            |    | Schaltspg. HUB / Switching volt. deviation / Tens. commut. déviation / Tens. commut. deviazione / Tens. commut. deviación                                                                                                                    |
|    |                                                                                                                                                                                                                                                                          |    | Schaltspg. Signalkennung AV 3 / Switching volt. signal identification AV 3 / Tens de commut. identification de signal AV3 / Tens. commut. identificazione segnale / Tens. commut. identifí. señal AV3                                        |
|    | Vertikaler Ansteuerimpuls / Vert. drive pulse / Impulsion de commande verticale / Impulso di comando verticale / Impulso de control vertical                                                                                                                             |    | Stummschaltung Kopfhörer / Muting volt. headphone / Commutation de silence casque / Silenzamento cuffia / Muting auriculares                                                                                                                 |
|    |                                                                                                                                                                                                                                                                          |    | Gleichspannung für SAT-Basissignal / DC for SAT basic signal / Tens. continue pour SAT base signal / Tens continua per segnale SAT base / Tens. continua para señal SAT base                                                                 |
|    | VCR - Clock                                                                                                                                                                                                                                                              |    | Schaltspg. Koinz. / Switching volt. coinc. / Tens de commut. coinc. / Tens di commut. coinc. / Tens. commut. coinc.                                                                                                                          |
|    | Freigabe Anzeigebaustein / Display enable / Autorisation pour module indicateur / Modulo indicazione / Habilitacion modulo indicacion                                                                                                                                    |    | Schaltspg. Koinz. mit Videoquelle verknüpft / Coinc. switching volt. linked with video source / Signal de coincid. combiné avec source video / Tens. di commut. a coinc. combinata con sorg video señal de coincidencia combinada con video  |
|    | Vert. Gegenkopplung / Vert. feedback / Contre-reaction verticale / Controreazione vert. / Aliment. neg. vert.                                                                                                                                                            |    | Schaltspg. LED / Switching volt. LED / Tens de commut. LED / Tens. commut. LED / Conmut. LED                                                                                                                                                 |
|    | Video Signal / Video signal / Signal vidéo / Segnale video / Señal video                                                                                                                                                                                                 |    | Schaltspg. Leuchtpunktunterdrückung / Switching volt. beam spot suppression / Tens. de commut. suppress. du spot lumineux / Tens. soppr. punto luminoso / Tens. de commut. filtro supresor del punto luz                                     |
|   | VT Daten / Teletext data / Données Teletexte / Linea dati Televideo / Data Teletexto                                                                                                                                                                                     |   | Schaltspg. LNC "Aus" / Switching volt. LNC "OFF" / Tens. de commut. LNC "OFF" / Tensione di commut. "Spento" LNC / Tension LNC "OFF"                                                                                                         |
|  | Videotext Clock / Teletext clock / Signal horloge Vidéotext / Clock Televideo / Clock Teletexto                                                                                                                                                                          |  | Stummschaltung / Muting / Silencieux / Silenziamento / Muting                                                                                                                                                                                |
|  | I²C Bus: VT Daten / Teletext data / Données Vidéotext / Dati Televideo / Data Teletexto                                                                                                                                                                                  |  | Schaltspg. NF 1 / Switching volt. AF 1 / Tension commut. BF 1 / Tens. commut BF 1 / Tens. con. BF 1                                                                                                                                          |
|  | Y-Signal / Y Signal / Signal Y / Segnale Y / Señal Y                                                                                                                                                                                                                     |  | Schaltspg. NF 2 / Switching volt. AF 2 / Tension commut. BF 2 / Tens. commut BF 2 / Tens. con. BF 2                                                                                                                                          |
|  | Y -Signal - 50Hz vert., 15625Hz hor. / Y -Signal - 50Hz vert., 15625Hz hor. / Signal Y - 50Hz vert., 15625Hz hor. / Segnale Y - 50Hz vert., 15625Hz hor. / Señal Y - 50Hz vert., 15625Hz hor.                                                                            |  | Schaltspg. NICAM / Switching volt. NICAM / Tens. de commut. NICAM / Tens. commut. NICAM / Tens. de commut. NICAM                                                                                                                             |
|  | Y - Signal - 100Hz vert., 31250Hz hor. / Y -Signal - 100Hz vert., 31250Hz hor. / Signal Y - 100Hz vert., 31250Hz hor. / Segnale Y - 100Hz vert., 31250Hz hor. / Señal Y - 100Hz vert., 31250Hz hor.                                                                      |  | Schaltspg. Norm / Switching volt. Norm / Tens. de commut. standard / Tens. di commut. Norma / Tens. commut. Norma                                                                                                                            |
|  | Zwischenfrequenz / IF / FI / FI / FI                                                                                                                                                                                                                                     |  | Schaltspg. PAL / Switching volt. PAL / Tens. de commut. PAL / Tens                                                                                                                                                                           |
|  | Schaltspg. AFC / AFC switching volt. / Tens. de commut. AFC / Tens. di commut. AFC / Tens. commut. CAF                                                                                                                                                                   |  | Schaltspg. Polarität / Switching volt. polarity / Tension commut. polarite / Tens. commut. polarita / Tens. conmut polarizacion                                                                                                              |
|  | Schaltspg. AV / Switching volt. AV / Tens. de commut. AV / Tens. di commut. AV / Tens. commut. AV                                                                                                                                                                        |                                                                                     |                                                                                                                                                                                                                                              |
|  | Schaltspg. Bildamplitude / Switching voltage vertical amplitude / Tension de coupure amplitude d'image / Tensione di commutaz. ampiezza d'immagine / Tension de con. amplitude de imagen di commut. PAL / Tens. commut. PAL                                              |                                                                                     |                                                                                                                                                                                                                                              |
|  | Schaltspg. BTX / Switching volt. BTX (Viewdata) / Tens. commut. Télétex / Tens. commut. VIDEOTEL / Tens. commut. Teletexto                                                                                                                                               |                                                                                     |                                                                                                                                                                                                                                              |
|  | Schaltspg. Camera Wiederg. über C-AV Eingang / Switching volt. cam. playback via C-AV input / Tens de commut pour lec. de camera par l'entree C-AV / Tens. de commut. in riproduz. cam tramite ingresso C-AV / Tens. de serv. reprod. camera a traves de la entrada C-AV |                                                                                     |                                                                                                                                                                                                                                              |

|                                                                                     |                                                                                                                                                                  |                                                                                     |                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | Schaltspg. Ökoschalter / Switching volt. eco switch / Tens. de commut. interr. eco. / Tens. commut. interr. ecologico / Tens. conmut. interr. ecol.              |    | Regelspg. AFC Satellitentuner / AFC contr. volt. SAT tuner / Tens. de regul. AFC tuner SAT / Tens. di contr. AFC Tuner SAT / Tens. regul. CAF Tuner SAT                                                                                            |
|    | Schaltspg. Reset / Switching volt. Reset / Tens. commut. Reset / Tens. conmut. Reset                                                                             |    | Feldstärkeabhängige Spg. / Fieldstrength-depent volt. / Contr. automatique de gain / Tens. dipent. intens. campo / Contr. autom. de gain tens. CAG                                                                                                 |
|    | Schaltspg. RGB1 - RGB2 / Switching volt. RGB1 - RGB2 / Tens. de commut. RGB1 - RGB2 / Tens. di commut. RGB1 - RGB2 / Tens. conmut. RGB1 - RGB2                   |    | Regelspg. / Contr. volt. / Tens. de regul. / Tens. di contr. / Tens. regul.                                                                                                                                                                        |
|    | Schaltspg.-Schutzfunktion / Switching volt.-protective func. / Tens. de commut.-sécurité / Tens. di commut.-funz di protez. / Tens. conmut.-proteccion           |    | Abstimmungspg. Tuner / Tuning volt. tuner / Tens. d'accord tuner / Tens. di sintonia tuner / Tens. sintonia tuner                                                                                                                                  |
|    | Schaltspg. SECAM / Switching volt. SECAM / Tens. de commut. SECAM / Tens. di commut. SECAM / Tens. conmut. SECAM                                                 |    | Regelspg. Verzög. / Delayed contr. volt. / Tens. de regul. retardee / Tens. regul. retardada                                                                                                                                                       |
|    | Schaltspg. Standby / Switching volt. Standby / Tens. commut. Veille / Tens. commut. Standby / Tens. conmut. Standby                                              |    | Horizontale Ansteuerung / Horiz. drive / Synchr. lignes / Pilotaggio orizz. / Exitación horiz.                                                                                                                                                     |
|    | Schaltspg. S-VHS / Switching volt. S-VHS / Tens. de commut. S-VHS / Tens. di commut. S-VHS / Tens. conmut. S-VHS                                                 |    | 31250Hz Ansteuerimp. für Zeilenendstufe / 31250Hz Triggering pulse for horiz. output / 31250Hz commande pour l'étage final lignes / Imp. Pilotaggio di 31250Hz per stadio finale di riga / Impulso de excitación 31250Hz para paso final de líneas |
|    | Schaltspg. Ton1-2 / Switching volt. sound 1-2 / Tens. commut. audio 1-2 / Tens. di commut. son 1-2 / Tens. conmut. son 1-2                                       |    | Vert. Parabel / Vert. parabolic signal / Signal parabolique vert. / Segnale parab. vert. / Senal parabolica vert.                                                                                                                                  |
|    | Schaltspg. UHF / UHF switching volt. / Tens. de commut. UHF / Tens. di commut. UHF / Tens. conmut. UHF                                                           |    | Vert. Tastimpuls / Vert. Gating pulse / Imp. trame / Imp. a cadenza vert. / Imp. cuadro                                                                                                                                                            |
|    | Schaltspg. VHF / VHF switching volt. / Tens. de commut. VHF / Tens. di commut. VHF / Tens. conmut. VHF                                                           |    | Vert. Tastimpuls 100Hz / Vert. Gating pulse 100Hz / Imp. trame 100Hz / Imp. a cadenza vert. 100Hz / Imp. cuadro 100Hz                                                                                                                              |
|    | Schaltspg. Videoquelle / Switching volt. video source / Tens. de commut. source video / Tens. di commut. sorg. video / Tens. conmut. video                       |    | Vert. Sägezahn / Vert. saw tooth / Signal dent de scie / Dente di sega vert. / Dientede sierra vert.                                                                                                                                               |
|    | Schaltspg. Wischerkontakt / Switching voltage temp. contact / Tens. de commut. contact fugitif / Tens. commut. contatto / Contacto supresor tens. de commut.     |    | Vert. Tastimpuls / Vert. Gating pulse / Imp. trame / Imp. a cadenza vert. / Imp. cuadro                                                                                                                                                            |
|    | Schaltspg. ZF breit - schmal / IF switching volt. wide - narrow / Tens. commut. FI large - etroit / Tens. commut. FI larga - stretta / Tens. FI ancho - estrecho |    | Vert Sägezahn 100Hz / Vert saw tooth 100Hz / Signal dent de scie 100Hz / Dente di sega vert. 100Hz / Dientede sierra vert. 100Hz                                                                                                                   |
|  | Schaltspg. Bandwahl / Band sel. switching volt. / Tens. de commut. select. bande / Tens. di commut. selez. banda / Tens. conmut. selec. banda                    |  | Vert. Parabel 100Hz / Vert. parabolic 100Hz signal / Signal parabolique 100Hz vert. / Segnale parab. vert. 100Hz / Senal parabolica vert. 100Hz                                                                                                    |
|  | 14V Schaltspg. / 14V switching volt. / Tens. commut. 14V / Tens. conmut. 14V / Tens. de conmut. 14V                                                              |  | Tastimpuls / Gating pulse / Impuls de declenchement / Impulso a cadenza / Imp. puerta                                                                                                                                                              |
|  | 22kHz Schaltspg. / 22kHz switching volt. / Tens. commut. 22kHz / Tens. conmut. 22kHz / Tens. de conmut. 22kHz                                                    |  | Ref. Impuls hor. / Reference impulse hor. / Imp. de refer. hor. / Imp. di rifer. hor. / Imp. refer. horiz.                                                                                                                                         |
|  | 0/3/6/9V Schaltspg. / 0/3/6/9V switching volt. / Tens. commut. 0/3/6/9V / Tens. conmut. 0/3/6/9V / Tens. de conmut. 0/3/6/9V                                     |  | Klemmung Ein-Aus / Clamping On-Off / Clampage Marche-Arrêt / Clamping Ins.-Disins. / Clamping Enc.-Apag.                                                                                                                                           |
|  | Schaltspg. 4,5MHz / Switching volt. 4.5MHz / Tens. de commut. 4,5MHz / Tens. di commut. 4,5MHz / Tens. conmut. 4,5MHz                                            |  | Pulse für Polarotor / Pulses for Polar-Rotor / Impulsions Rotor de Polariation / Impulsi per Rotore Polarizzazione / Impulsos para Polarrotor                                                                                                      |
|  | Schaltspg. 50-60Hz / Switching volt. 50-60Hz / Tens. de commut. 50-60Hz / Tens. di commut. 50-60Hz / Tens. conmut. 50-60Hz                                       |  | O-W Amplitude / E-W amplitude / Amplitude E-O / Ampiezza E-O / Amplitud E-O                                                                                                                                                                        |
|  | Regelspg. AFC / AFC contr. volt. / Tens. de regul. AFC / Tens. di contr. AFC / Tens. regul. CAF                                                                  |                                                                                     |                                                                                                                                                                                                                                                    |

# Bedienhinweise

**Hinweis:** Dieses Kapitel enthält Auszüge aus der Bedienungsanleitung. Weitergehende Informationen entnehmen Sie bitte der gerätespezifischen Bedienungsanleitung, deren Sachnummer Sie in der entsprechenden Ersatzteilliste finden.

## Programmplätze belegen

Das Gerät ist mit dem automatischen Programmschlauf ATS euro plus ausgestattet, der Ihnen die Programmplatzbelegung abnimmt.

Nach dem Einschalten des Gerätes bestätigen Sie die Dialogsprache »Deutsch« mit der Taste **OK**.

Wenn die Seite »Dialogsprache wählen« nicht erscheint, drücken Sie die Taste **1** und anschließend die Taste **OK**.

Das Dialogcenter blendet sich ein. Wählen Sie mit den Tasten **Δ** oder **▽** die Zeile »Automatische Programmierung« an.

Drücken Sie die Taste **OK**.

Wählen Sie mit den Tasten **Δ** oder **▽** die Zeile »Komplette Neuprogrammierung« an und drücken Sie die Taste **OK**.

Bestätigen Sie den Gerätestandort mit der Taste **OK**.

Nach Beenden der automatischen Programmplatzbelegung erhalten Sie Hinweise zum Easy Dialog System.

## Das Easy Dialog System

Ihr Fernsehgerät ist mit einem »Easy Dialog System« ausgestattet.

Das heißt, alle Bedienhinweise sind nicht wie sonst in einer gedruckten Anleitung, sondern in Dialogfeldern enthalten, die in das Bild eingeblendet werden können.

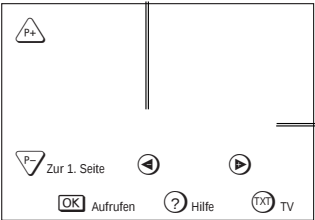
## Das Dialogcenter

Das **Dialogcenter** ist die Steuerzentrale Ihres Fernsehgerätes. Durch Drücken der Taste **1** und anschließendes Bestätigen mit der Taste **OK** rufen Sie das Dialogcenter auf. Hier können Sie vielfältige Einstellungen vornehmen, Informationen abrufen und gezielt Hilfen zur Bedienung Ihres Fernsehgerätes (z.B. Erklärung der Fernbedienung, Stichwortverzeichnis, Tips und Tricks) erhalten.

Probieren Sie es einfach aus. Sie können nichts falsch machen

## Die Grundbedienung

Die Dialogzeichen zeigen bei jedem Bedienschritt an, mit welchen Tasten bestimmte Funktionen ausgeführt werden können.



**Δ/▽** Bewegen des gelben Balkens nach oben/unten.  
Bei zweiseitigen Menüs wird auf die zweite Seite »umgeblättert«.

**◀▶** Einstellen von Werten.

**OK** Aufrufen oder bestätigen der angewählten Funktion.

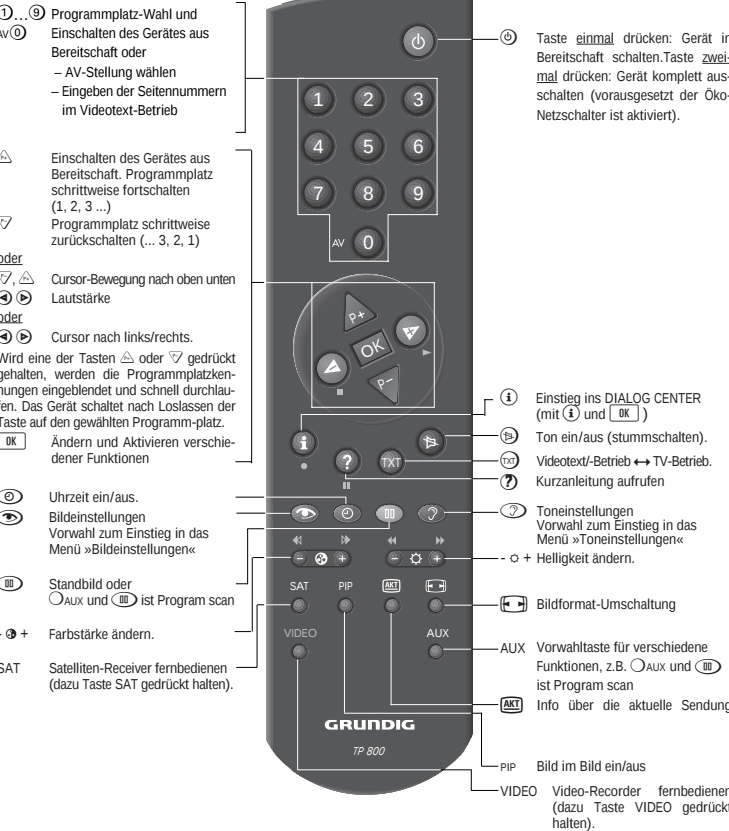
**TV** Zurück zum Fernsehbild.

**?** Aufrufen der aktuellen Hilfe.

## Easy Dialog System

## Die Tasten der Fernbedienung

Auf dieser Seite sind die Tasten der Fernbedienung kurz erklärt.  
Im Dialogcenter sind unter »Fernbedienung« alle Funktionen der Fernbedienung erklärt.  
Probieren Sie die Funktionen einfach aus.



## Operating Hints

**Note:** This chapter contains excerpts from the operating instructions. For further particulars please refer to the appropriate user instructions the part number of which is indicated in the relevant spare parts list.

### Assigning programme positions

This set is equipped with the automatic tuning system ATS euro plus which performs the programme assignment for you.

After switching on the set, confirm the »English« dialogue language by pressing the **OK** button.

If the »Select dialog language« page does not appear, press the **1** button and then the **OK** button.

The dialogcenter appears on the screen.

Use the **▲** or **▼** button to select the »Automatic programming« menu line.

Press the **OK** button.

Use the **▲** or **▼** button to select the »Completely new programming« line and then press the **OK** button.

Confirm your country with the **OK** button.

When the automatic programme allocation is completed, hints to the Easy Dialog System are displayed.

### The Easy Dialog System

Your television is provided with the »Easy Dialog System«.

With this system, all hints on operating the TV set are no longer to be found in a printed instructions manual but in dialog boxes which can be displayed on the picture screen.

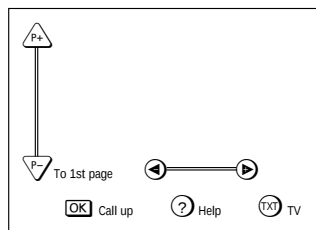
### The Dialogcenter

The **Dialogcenter** is the control centre of your TV set. It is called up by pressing the **1** and then the **OK** button. Via the displayed menu, you can make settings, call up information and select precise help for operating your TV set (for example an explanation of the remote control handset, an index, tips and tricks, etc.).

Simply try it out. You can do no harm!

### Basic operation

The dialogue symbols indicate for each operating step with which buttons the different functions can be carried out.



- ▲/▼** Yellow bar up/down  
In two-page menus, selection of the second page.
- ◀▶** Set values.
- OK** Confirm selected function.
- TV** Return to TV picture.
- ?** Help.

## Easy Dialog System

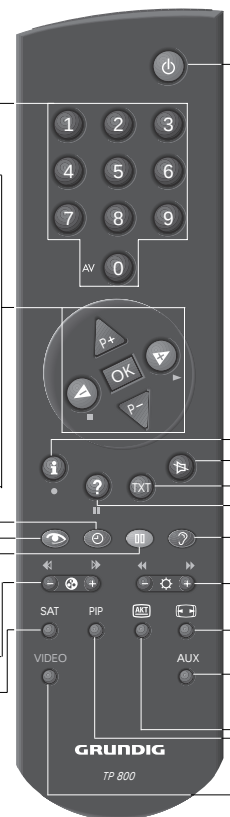
## The Buttons on the Remote Control Handset

This is a brief explanation of the remote control buttons.

All functions will be explained in detail under »Remote control« in the Dialogcenter.

Simply try out the functions.

- 1...9** Select programme position and switch on the TV set from standby, or  
– select AV position, – enter page numbers in Teletext mode.
- ▲** Switch on from standby. Select programme positions step by step (1, 2, 3 ...)
- ▼** Select programme positions step by step (... 3, 2, 1)
- OR**  
**▲/▼** Move cursor up / down.  
Volume
- OR**  
**◀▶** Move cursor to the left / right.  
When holding down the **▲** or **▼** button, the programme position identifications will scroll on the screen. When releasing the pressed button, the TV set switches to the selected programme position.
- OK** Modify and activate certain functions.
- 1** Time display on/off.  
**2** Picture adjustments.  
Access to the »Picture settings« menu.
- 3** Still picture, or **AUX plus** **4** Program scan
- 5** Colour contrast.
- SAT** Satellite receiver remote control (press and hold down the SAT button).
- 6** Access to the DIALOG CENTER
- 7** Sound on/off (mute).
- 8** Teletext mode ↔ TV mode
- 9** Call up brief instructions.
- 0** Sound adjustments.  
Access to the »Sound settings« menu.
- +** Brightness
- Picture format switching**
- AUX** Preselect button for certain functions, e.g. **AUX plus** **4** Program scan
- AKT** Info about current broadcast
- PIP** Picture-in-picture on/off.
- VIDEO** Video recorder remote control (press and hold down the VIDEO button).



## Service- und Sonderfunktionen

### 1. Einschaltfunktionen

#### 1.1 ATS-Reset und Demo-Mode

Netzschalter "EIN" mit gedrückter Nahbedientaste "L+".

1x Netz ein: Demo-Mode wird aktiviert. Mit der Taste "P-" kann kurzzeitig deaktiviert und mit Taste "P+" aktiviert werden.

2x Netz ein: Demo-Mode ("Demo off") wird ausgeschaltet und ATS mit "L+": aktiviert (Einblendung "ATS Reset").

Das ATS sucht mit aufsteigender Frequenz, angezeigt wird der Kanal. Bei der Ländereinstellung "F" und "übrige" kann wahlweise auf Kanal- oder Frequenzanzeige umgeschaltet werden.

Das ATS-System ermittelt das ATS-Signal oder das ACI-Signal für die Senderkennung.

Wird ein ACI-Sender gefunden, bricht der ATS-Suchlauf ab und die ACI-Daten werden übernommen und in der Programmtabelle gespeichert. Beim Wechsel von ATS auf ACI ist für 30sec ein ACI-Abbruch mit der Taste "i" möglich (zurück zu ATS).

Tastendruck "TXT" bricht den ATS-Lauf ab ohne zu speichern.

Weiterhin wird für die Programme 1...99 bzw. 1...179 (bei SAT-Baustein) der Lautstärkeoffset zurückgesetzt und die Grundwerte für "Lumadelay" und "Peaking", sowie das länderbezogene Peribit vorgelegt.

#### 1.2 Prozessor-Initialisierung

Pin 10 und 12 der schwarzen Scartbuchse verbinden. Durch diesen Vorgang wird nach Austausch des Prozessors das interne EEPROM geladen und damit der Prozessor initialisiert.

#### 1.3 Mittelwerte / Notdatensatz laden (ROM-Daten)

Dies ist nur einmal nach NVM- oder  $\mu$ P-Wechsel möglich.

Nahbedientaste "P-" gedrückt halten und das Gerät mit dem Netzschalter einschalten. Dadurch wird nach Austausch des IC87080 (NVM) das Gerät mit dem Notdatensatz gestartet.

Durch diesen Vorgang werden die nachfolgenden Daten aus dem EPROM IC87030 in den NVM IC87080 kopiert:

**IC87080:** (gerätespezifische Daten, über das Dialog Center einstellbar)

- Rauschreduktion
- Lautstärkeoffset
- Kammfilter
- Decoder, Peri
- Analog- und Digitalton Decoder
- Analogwerte (Lautstärke, Helligkeit usw.)
- Farbdeckung und Bildschärfe
- Programmdatei (Kanal- Feinabstimmung, Senderkennung)
- SAT-Daten (Frequenz, Ebene, Kennung, Audiohub usw.) nur bei eingebautem SAT-Nachrüstatz
- DSP-Daten (nur bei eingebautem DSP-Baustein)

#### 1.4 Service - Mode Programm (zur Fehlersuche im I<sup>2</sup>C-Bus)

Nahbedientaste **P+** gedrückt halten und das Gerät mit dem Netzschalter einschalten.

Mit der Nahbedientaste "L+" können evtl. weitere fehlerhafte Schnittstellen ermittelt werden. Werden keine weiteren fehlerhaften Schnittstellen erkannt, versucht die Software das Gerät zu starten.

**Achtung:** Die Fehlermeldungen des DSP-, SAT- und PIP-Bausteins werden nur angezeigt, wenn diese Module auch bestückt sind und mindestens eine I<sup>2</sup>C-Bus-Adresse auf dem fehlerhaften Baustein erkannt wurde.

Diese Fehlermeldungen beziehen sich nur auf Störungen im I<sup>2</sup>C-Bus, also auf Bausteine oder Schaltkreise bei denen keine Rückmeldung (Acknowledge) über den I<sup>2</sup>C-Bus erfolgt. Beispielsweise keine Betriebsspannung am Baustein, Unterbrechung der Leiterbahn oder I<sup>2</sup>C-Schnittstelle defekt.

| Schnittstelle            | Fehler-Code | fehlerhafter Baustein/Schaltkreis |
|--------------------------|-------------|-----------------------------------|
| S-DDC                    | E1          | CIC1410, Feature-Box              |
| Display-Prozessor        | E4          | CIC1640, Feature-Box              |
| Comb Filter Video -Proz. | E5          | CIC1350, Feature-Box              |
| Component Interf.-Proz.  | E6          | CIC1360, Feature-Box              |
| Megatext                 | -           | IC46010, Signal-Chassis           |
| RGB-Prozessor            | E7          | IC34510, Signal-Chassis           |
| Audio-Prozessor          | E8          | IC32300, Signal-Chassis           |

## Service and Special Functions

### 1. Switching-on Options

#### 1.1 ATS Reset and Demo Mode

Press and hold button "L+" on the TV and switch the mains button "ON".

1x mains on: Demo Mode is activated. Short-time deactivation is possible with "L+": ible with "P-" and reactivation with "P+".

2x mains on: Demo Mode ("Demo off") is switched off and ATS is activated (indication "ATS Reset" appears).

The ATS system scans the ascending frequencies indicating the channel. When setting the country "F" and "others", the display mode can be changed optionally to indicate either the channel or the frequency.

The ATS system searches for the ATS or ACI signal for the station identification.

When finding an ACI station, ATS search is stopped, the ACI data are taken over and entered into the station table. When changing from ATS to ACI it is possible during a period of 30sec to stop the ACI function with button "i" (back to ATS).

Pressing the "TXT" button stops the ATS function without storing any data. Additionally, for the programmes 1...99 or 1...179 (with SAT Module), the volume offset is reset and the default values for "Lumadelay" and "Peaking" are stored together with the Peri-bit for the respective country.

#### 1.2 Initialising the Processor

By connecting pin 10 and pin 12 of the Scart socket after replacement of the processor, the internal EEPROM is loaded thus initialising the processor.

#### 1.3 Loading the Average Values / Emergency Data Set (ROM Data)

**This is only possible once on replacement of the NVM or  $\mu$ P.**

By pressing and holding the "P-" button on the TV and switching on with the mains button after replacement of IC87080 (NVM) the TV set is started with the emergency data set.

In doing so, the following data is read out from EPROM IC 87030 and loaded into the non-volatile memories IC87070:

**IC87080:** (data specific to the TV, can be set via the Dialog Center):

- noise reduction
- volume offset
- comb filter
- decoder, Peri
- analog and digital sound decoder
- analog values (volume, brightness etc.)
- colour match and peaking
- programme data (channel fine tuning, station ident)
- SAT data (frequency, level, identification, audio deviation etc.) only with built-in SAT retrofit kit
- DSP data (only with built-in DSP module)

#### 1.4 Service Mode Programme (for fault finding in the I<sup>2</sup>C bus)

Press and hold the **P+** button on the TV set and switch on with the mains button.

The "L+" button on the TV set allows to discover other potentially defective interfaces. If there are no other defective interfaces the software tries to start the TV set.

**Attention:** The error messages for the DSP, SAT and PIP modules are only indicated if these modules are actually fitted and at least one I<sup>2</sup>C bus address on the defective module has been identified.

These error messages refer only to interferences in the I<sup>2</sup>C bus, that is to those modules or integrated circuits which do not return an Acknowledge bit via the I<sup>2</sup>C bus, for example to indicate that there is no operating voltage present on the module, that there is a break in the circuit path or that the I<sup>2</sup>C interface is defective.

| Interface               | Error Code | Defective Module / Integrated Circuit |
|-------------------------|------------|---------------------------------------|
| S-DDC                   | E1         | CIC1410, Feature Box                  |
| Display Processor       | E4         | CIC1640, Feature Box                  |
| Comb Filter Video Proc. | E5         | CIC1350, Feature Box                  |
| Component Interf. Proc. | E6         | CIC1360, Feature Box                  |
| Megatext                | -          | IC46010, Signal-Chassis               |
| RGB Processor           | E7         | IC34510, Signal-Chassis               |
| Audio Processor         | E8         | IC32300, Signal-Chassis               |

| NVM                     | E9/EA/<br>EC/EE | IC87080, Signal-Chassis    |
|-------------------------|-----------------|----------------------------|
| Video Matrix            | EH              | IC43150, Signal-Chassis    |
| Video Matrix            | EL              | IC43200, Signal-Chassis    |
| Tuner, NVM              | EP              | CIC2120, Signal-Chassis    |
| Tuner, PLL              | Eb              | CIC2161, Signal-Chassis    |
| Audio Matrix (optional) | EF              | IC43210, Signal-Chassis    |
| Memory Sync Controller  | E2              | CIC1600, Feat-Box -103.41  |
| Picture-Prozessor       | E3              | CIC1600, Feat-Box -103.41  |
| Line Flicker Reduction  | Eh              | CIC1700, Feat-Box -103.41  |
| Scan Videoprozessor     | En              | CIC70270, Feat-Box -103.38 |
| Audio-Prozessor (DSP)   | Ec              | IC40010, Dolby-Platte      |
| Dolby Prozessor         | Ed              | CIC40040, Dolby-Platte     |
| NVM                     | ER              | CIC3830, SAT-Baustein      |
| PLL                     | Eo              | CIC9170, SAT-Tuner         |
| PIP-Prozessor           | EU              | CIC29040, PIP-Baustein     |
| PIP-Tuner PLL           | Er              | CIC2161, PIP-Baustein      |

**1.5 SAT-Modul-Programmierung** (nur mit bestücktem SAT-Baustein)  
Fernbedientaste "i" gedrückt halten und das Gerät mit dem Netzschalter einschalten. Dadurch wird z.B. nach EEPROM Wechsel des SAT-Bausteins aus dem EPROM IC87030 die gespeicherte Sender-tabelle übertragen.

### 1.6 PIP-Abgleich

Fernbedientaste "PIP" gedrückt halten und das Gerät mit dem Netzschalter einschalten. Dadurch werden bei eingebautem PIP-Baustein der PIP-Abgleich-Mode aufgerufen. Über die Menüführung können Sie mit den Tasten ► ◀ ▼ ▲ die PIP-Position verändern und mit "OK" speichern.

### 1.7 Programmsperre aufheben

(nicht das Menü Sperrung "Kindergefährdende Sendungen")  
Die Tastenfolge ► ◀ ▼ ▲ hebt die persönliche Kennzahl auf.

### 1.8 EPROM-Versionsnummer

Mit Taste "i" das Menü "DIALOGCENTER" aufrufen. Taste "AUX" zeigt die Versionsnummer an. Der Index 07 in der Sachnummer (19798-311.07) ergibt den EPROM-Stand.

## 2. Sonderfunktionen im Dialogcenter

### 2.1 Öko-Netzschalter aktivieren bzw. deaktivieren

Mit Taste "i" das Menü "Ökonetzschalter" über "DIALOGCENTER" → "SONDERFUNKTIONEN" aufrufen. Mit den Tasten ► ◀ auf "aus" oder "1h...4h" stellen.

Bei aktiviertem "Öko-Netzschalter" trennt der Netzschalter das Gerät durch zweimaligen Tastendruck der Taste ⏻ vom Netz.

### 2.2 Einschalten mit Programm "1" oder "AV"

Mit Taste "i" das Menü "Einschalten mit" über "DIALOGCENTER" → "SONDERFUNKTIONEN" aufrufen. Mit den Tasten ► ◀ auf "Programm" oder "AV" stellen.

### 2.3 "Bild-/Ton-Skala" ein oder aus für alle Programme

Mit Taste "i" das Menü "Bild-/Ton-Skala" über "DIALOGCENTER" → "SONDERFUNKTIONEN" aufrufen. Bei "unsichtbar" erscheinen keine Balkenanzeigen für die Analogwerte.

### 2.4 "Megalogic-Info"

Mit Taste "i" das Menü "Megalogic-Info" über "DIALOGCENTER" → "SONDERFUNKTIONEN" aufrufen. Bei "ohne" wird keine Megalogic-Information (z.B. Wiedergabe oder Stop) angezeigt.

## 3. Service-Einstellungen für den Fachhandel

### 3.1 Blauen Bildschirmhintergrund abschalten

Mit Taste "i" das Menü "Nur für den Fachhändler" über "DIALOGCENTER" → "SERVICE FÜR DEN FACHHANDEL" → Kennzahl 8500 → aufrufen. Gelbe Taste drücken. Nach der Programmschaltung ist der blaue Hintergrund abgeschaltet.

Mit Ausschalten des Gerätes wird diese Funktion wieder aufgehoben.

### 3.2 Farbdeckung (Luma-Delay) für Groß- und PIP-Bild

Mit Taste "i" das Menü "Farbdeckung P." über "DIALOGCENTER" → "SERVICE FÜR DEN FACHHANDEL" aufrufen. Mit den Tasten ► ◀ wird die Farbdeckung programmplatzbezogen eingestellt.

### 3.3 COLORplus-Menü (nur bei PALplus-Geräten)

Mit Taste "i" das Menü "COLORplus" über "DIALOGCENTER" → "SERVICE FÜR DEN FACHHANDEL" aufrufen. Mit den Tasten ► ◀ wird die COLORplus-Erkennung auf "aus" oder "autom." gestellt. In der Stellung "aus" schaltet das Gerät bei schlechten PALplus-Sendungen (Empfang) auf Standard-PAL.

| NVM                    | E9/EA/<br>EC/EE | IC87080, Signal-Chassis    |
|------------------------|-----------------|----------------------------|
| Video Matrix           | EH              | IC43150, Signal-Chassis    |
| Video Matrix           | EL              | IC43200, Signal-Chassis    |
| Tuner, NVM             | EP              | CIC2120, Signal-Chassis    |
| Tuner, PLL             | Eb              | CIC2161, Signal-Chassis    |
| Audio Matrix (option)  | EF              | IC43210, Signal-Chassis    |
| Memory Sync Controller | E2              | CIC1600, Feat Box -103.41  |
| Picture Processor      | E3              | CIC1600, Feat Box -103.41  |
| Line Flicker Reduction | Eh              | CIC1700, Feat Box -103.41  |
| Scan Video Processor   | En              | CIC70270, Feat Box -103.38 |
| Audio Processor (DSP)  | Ec              | IC40010, Dolby Board       |
| Dolby Processor        | Ed              | CIC40040, Dolby Board      |
| NVM                    | ER              | CIC3830, SAT Module        |
| PLL                    | Eo              | CIC9170, SAT Tuner         |
| PIP Processor          | EU              | CIC29040, PIP Module       |
| PIP Tuner PLL          | Er              | CIC2161, PIP Module        |

**1.5 SAT Module Programmierung** (only with built-in SAT Module)  
Press and hold the "i" button on the remote control and switch the TV on with the mains switch. Consequently, on replacement of the EEPROM on the SAT Module for example, the stored station table is read out from EPROM IC87030.

### 1.6 PIP Adjustment

Press and hold the "PIP" button on the remote control and switch the TV on with the mains switch. In doing so, with built-in PIP Module, the PIP Adjustment Mode is called up. Using the ► ◀ ▼ ▲ buttons the PIP position can be changed via the menu and stored with "OK".

### 1.7 Cancelling the Parental Lock

(not Lock programme menu, "unfit for children")  
To cancel your personal code number press the buttons ► ◀ ▼ ▲ in this order.

### 1.8 EPROM Version Number

Press button "i" to call up the "DIALOGCENTER" menu. The version number is shown by pressing the "AUX" button. The index 07 of the part number (19798-311.07) indicates the EPROM version.

## 2. Special Functions in the Dialog Center

### 2.1 Activating or Disactivating the Economy Mains Switch

Reach the "Economy mains switch" menu with button "i" via "DIALOGCENTER" → "SPECIAL FUNCTIONS". With the buttons ► ◀ select "off" or "1h...4h".

On activation of "Economy mains switch" the mains switch disconnects the TV from the mains by pressing the button ⏻ twice.

### 2.2 Switching on with Programme "1" or "AV"

Reach "Switch on with" menu with button "i" via "DIALOGCENTER" → "SPECIAL FUNCTIONS". With the buttons ► ◀ select "Prog" or "AV".

### 2.3 Picture/Sound Options On or Off for all Programmes

Reach the "Pict./sound scales" menu via "DIALOGCENTER" → "SPECIAL FUNCTIONS" by pressing button "i". When selecting "invisible" the scales indicating of the analog values do not appear.

### 2.4 "Megalogic-Info"

Reach the "Megalogic-Info" menu via "DIALOGCENTER" → "SPECIAL FUNCTIONS" by pressing button "i". When selecting "Without" the Megalogic information (e.g. playback or stop) is not indicated.

## 3. Service Settings for the Dealer

### 3.1 Switching off the Blue Screen Background

Reach "Only for the retailer" via "DIALOGCENTER" → "SERVICE" → Code Number 8500 pressing button "i". Press the yellow button. After switching over the programme, the blue background is switched off.

Switching off the TV set cancels this function.

### 3.2 Colour Match (Luma Delay) for Normal and PIP picture

Reach the "Colour match" menu via "DIALOGCENTER" → "SERVICE" pressing button "i". With the buttons ► ◀ the luma delay is set on a per-programme basis.

### 3.3 COLORplus-Menü (only PALplus models)

Reach the "COLORplus" menu via "DIALOGCENTER" → "SERVICE" pressing button "i". Use the ► ◀ buttons to change the COLORplus identification to "Off" or "Auto". When selecting "Off" the TV receiver switches to Standard PAL on poor reception of PALplus broadcasts.

### 3.4 Blackline Detektor (nur bei PALplus- und 16:9 Geräten)

Mit Taste "I" das Menü "Blackline-Detect." über "DIALOGCENTER" → "SERVICE FÜR DEN FACHHANDEL" aufrufen. Mit den Tasten ► ◀ stellen Sie den "Blackline-Detect." auf "aus" oder "autom.". In Stellung "autom." werden Cinemascope-Filme (schwarze Streifen am oberen und unteren Bildrand) selbsttätig erkannt und die Bildamplitude vergrößert.

### 3.5 PALplus-Menü (nur bei PALplus-Geräten)

Mit Taste "I" das "PALplus-Menü" über "DIALOGCENTER" → "SERVICE FÜR DEN FACHHANDEL" → "Nur für den Fachhändler" aufrufen. Mit den Tasten ► ◀ ▼ ▲ können Sie die Einstellungen im PALplus-Menü nur temporär verändern. Auslieferungszustand "ein".

### 3.6 Rauschreduktion 1...99 bzw. 1...179 (bei SAT-Baustein)

Mit Taste "I" das Menü "Rauschredukt." über "DIALOGCENTER" → "SERVICE FÜR DEN FACHHANDEL" aufrufen. Mit den Tasten ► ◀ können Sie die Rauschreduktion für die **Programme 1...99, bzw. 1...179** (bei SAT-Baustein) auf "aus", "schwach" oder "autom." stellen. In Stellung "manuell" kann die Rauschreduktion für die einzelnen Programme auf unterschiedlicher Eingabe, wie "aus", "schwach" oder "autom." stehen.

### 3.7 Decoder P1...99 bzw. 1...179 (bei SAT-Baustein)

Mit Taste "I" das Menü "Decoder" über "DIALOGCENTER" → "SERVICE FÜR DEN FACHHANDEL" aufrufen. Mit den Tasten ► ◀ können Sie den Decoder für alle Programme auf "aus" oder "ein" stellen. In Stellung "manuell" kann die Decoderumschaltung für die einzelnen Programme auf unterschiedlicher Eingabe, wie "aus" oder "ein" stehen.

### 3.8 Decoder P X für verschlüsselte Sendungen

Mit Taste "I" das Menü "Decoder-Ton P." über "DIALOGCENTER" → "SERVICE FÜR DEN FACHHANDEL" aufrufen. Mit den Tasten ► ◀ können Sie programmplatzbezogen für verschlüsselte Sendungen einen analogen oder digitalen Decoder auf interne oder externe Umschaltung stellen.

### 3.9 Service AV-Anschlüsse

Mit Taste "I" das Menü "Service AV-Anschlüsse." über "DIALOGCENTER" → "SERVICE FÜR DEN FACHHANDEL" aufrufen. Mit den Tasten ► ◀ und ▲ ▼ können Sie die Signalart lt. Menüführung umschalten.

Mit den Tasten ► ◀ kann die Decoder-Priorität auf "niedrig", "hoch" oder "aus" eingestellt werden.

Wird die Decoder-Priorität AV 1 auf "hoch" gestellt, schaltet Decoder-Priorität AV 2 automatisch auf niedrig.

Der Decoder mit der Priorität "hoch" wird durch Anlegen einer Schaltungsspannung (z.B. VCR-Wiedergabe) nicht abgeschaltet.

**TV-Zeitkonstante** = langsame Zeitkonstante

**AV-Zeitkonstante** = schnelle Zeitkonstante

Tabelle der Zeitkonstanten- und Kammfilterumschaltung:

| TV-Mode                                                                                                             | Zeitkonstante | Kammfilter |
|---------------------------------------------------------------------------------------------------------------------|---------------|------------|
| AV                                                                                                                  | AV            | aus        |
| Terr./SAT/Decoder                                                                                                   | TV            | aktiv      |
| AV1+ML-Videoplayer                                                                                                  | TV            | aus        |
| Terr./SAT/Decoder + xxx,"AV"-Senderkennung                                                                          | AV            | aus        |
| "Ext. Receiver" einstellen (Service für den Fachhandel → Service AV-Anschlüsse → AV x: → Signalart "Ext. Receiver") | TV            | aktiv      |
| AV x → keine Koinzidenz + Einblendung                                                                               | TV            | aktiv      |

### 3.10 Automatische Präsentation

Mit Taste "I" das Menü "Automatische Präsentation" über "DIALOGCENTER" → "SERVICE FÜR DEN FACHHANDEL" aufrufen. Mit der Taste "OK" läuft die automatische Geräte-Präsentation an. Ausschalten des Gerätes mit dem Netzschalter, oder den Nahbedientasten "P+" oder "P-". Deaktivieren über ATS-Reset 1.1.

### 3.11 IR-Dataprogrammer (nicht bei bestücktem SAT-Modul)

Mit Taste "I" das Menü "IR-Dataprogrammer" über "DIALOGCENTER" → "SERVICE FÜR DEN FACHHANDEL" aufrufen. Mit der Taste "OK" können mit dem IR-Dataprogrammer 2 max. 99 Programmplätze mit Daten für Kanal, Norm, Peri, 4-stellige Sendereinblendung, Finetuning-Mitte und Lautstärke-Offset "0" abgespeichert werden.

Der Programmer AP überträgt nur Kanäle und die 4-stelligen Senderkennzeichen mit Finetuning Mitte und Lautstärke-Offset "0".

**Achtung:** Die Datenübertragung kann durch Störfelder elektrischer Beleuchtungskörper beeinflusst werden.

### 3.4 Blackline Detektor (only PALplus and 16:9 models)

Reach the "Blackline-Detect." menu via "DIALOGCENTER" → "SERVICE" pressing the "I" button. Use the ► ◀ buttons to set "Blackline-Detect." to "Off" or "Auto". When selecting "Auto" the TV set can automatically identify cinemascope films (black bars on the upper and lower edge of the picture) and increase the vertical amplitude.

### 3.5 PALplus Menu (only PALplus-sets)

Call up the "PALplus-Menu" with button "I" via "DIALOGCENTER" → "SERVICE" → "Only for the retailer". The buttons ► ◀ ▼ ▲ allow to change the PALplus-Menu only temporarily. PALplus receivers are delivered with "On" as a standard setting.

### 3.6 Noise Reduction P1...99 or 1...179 (with SAT Module)

Reach the "Noise reduct." menu via "DIALOGCENTER" → "SERVICE" pressing button "I". With the buttons ► ◀ the noise reduction can be set to "Off", "weak", or "Auto" for all of the **programmes 1...99 or 1...179** (with SAT module). With "Manual" the noise reduction setting for the individual programmes can be different, that is "Off", "weak" or "Auto" stehen.

### 3.7 Decoder P1...99 or 1...179 (with SAT Module)

Call up the "Decoder" menu with the "I" button via "DIALOGCENTER" → "SERVICE". With the buttons ► ◀ it is possible to switch the decoder to "Off" or "On" for all programmes. With "Manual", the decoder can be switched "on" or "off" for the individual programme positions.

### 3.8 Decoder P X for Coded Transmissions

Call up the "Decoder Sound P." menu with button "I" via "DIALOGCENTER" → "SERVICE". With the ► ◀ buttons it is possible to set an analog or digital decoder for coded transmissions to internal or external on a per-programme basis.

### 3.9 Service AV Connections

Call up the "Service AV connections." menu with button "I" via "DIALOGCENTER" → "SERVICE". With the ► ◀ and ▲ ▼ buttons it is possible to switch over the signal type according to the menu guide. With the ► ◀ buttons the decoder priority can be changed to "low", "high" or "Off".

When setting the AV 1 decoder priority to "high", the AV 2 decoder priority is automatically changed to low.

The decoder with "high" priority is not switched off on application of a switching voltage (e.g. VCR playback).

**TV time constant** = slow time constant

**AV time constant** = fast time constant

Table: Time constant and comb filter switch-over

| TV Mode                                                                                          | Time Constant | Comb Filter |
|--------------------------------------------------------------------------------------------------|---------------|-------------|
| AV                                                                                               | AV            | off         |
| Terr./SAT/Decoder                                                                                | TV            | active      |
| AV1+ML-Videoplayer                                                                               | TV            | off         |
| Terr./SAT/Decoder + xxx,"AV"-station identification                                              | AV            | off         |
| Setting "Ext. Receiver" (Service → Service AV Connections → AV x: → Signal type "Ext. Receiver") | TV            | active      |
| AV x → no coincidence + display on screen                                                        | TV            | active      |

### 3.10 Automatic Presentation

Call up the "Automatic presentation" menu with button "I" via "DIALOGCENTER" → "SERVICE". Start the automatic presentation of the TV set with the "OK" button. Switch the TV set off with the mains button or the local "P+" or "P-" button. Deactivate with ATS Reset 1.1.

### 3.11 IR Data Programmer (SAT Module not fitted)

Reach the "IR-Dataprogrammer" menu via "DIALOGCENTER" → "SERVICE" pressing button "I". The IR Data Programmer 2 makes it possible to store a maximum of 99 programme positions with the data for channel, TV standard, Peri, 4-place station identification, fine tuning center frequency, and the volume offset "0" using the "OK" button.

The Programmer AP transfers only the channels and 4-place station identifications with fine tuning center frequency and volume offset "0".

**Attention:** The data transfer can be affected by interferences from electrical lighting fixtures.

### 3.12 Einschalten mit Testbild oder TV

Mit Taste "I" das Menü "Einschalten mit Testbild oder TV" über "DIALOGCENTER" → "SERVICE FÜR DEN FACHHANDEL" aufrufen. In Stellung "Testbild" erscheint nach dem Wiedereinschalten am Bildschirm ein geräteeigenes Testbild. Mit der Taste "TXT" schalten Sie das Gerät in den Programm-Mode zurück (wird ca. 20s keine Taste gedrückt, erscheint das Testbild wieder).

Abschalten des Testbild-Modes wieder über das Menü.

### 3.13 Nur für den Fachhändler

Mit Taste "I" das Menü "Nur für den Fachhändler" über "DIALOGCENTER" → "SERVICE FÜR DEN FACHHANDEL" aufrufen und mit Taste "OK" bestätigen. Nach Eingabe der Codezahl "8500" kann der Fachhandel den Geräteabgleich lt. Menüführung durchführen. (Siehe Abgleich Kap. Abgleich, Seite 2-5).

## 4. Ton-Einstellungen

### 4.1 Tonumschaltung

Mit der blauen Taste das Menü "TON EINSTELLUNGEN" aufrufen. Je nach Sender-Norm sind für die Tonumschaltung verschiedene Einstellungen anwählbar:

- "Mono": bei reinen Mono-Sendungen
- "Mono A / Mono B": bei 2-Ton-Sendungen
- "Stereo / Mono": bei schlechtem Stereo-Ton kann auf Mono geschaltet werden
- "Nicam / FM"
- "Nicam A / Nicam B / FM"
- "Nicam Stereo / FM"

### 4.2 Kopfhörer-Tonumschaltung

Mit der blauen Taste das Menü "TON EINSTELLUNGEN" aufrufen. Je nach Sender-Norm sind für "Kopfhörer" verschiedene Einstellungen anwählbar:

- "Mono A / B", unabhängig von den Lautsprechern
- "Nicam A / Nicam B / FM", unabhängig von den Lautsprechern

Bei allen anderen Einstellungen ist der Kopfhörerton mit dem Lautsprecherton fest gekoppelt.

### 4.3 Programmplatzbezogene Lautstärkeeinstellung

Mit der blauen Taste das Menü "TON EINSTELLUNGEN" aufrufen. Über "Lautstärke P." wird mit den Tasten ► ◀ die Lautstärke programmplatzbezogen eingestellt (Lautstärke-Offset).

### 4.4 Ton-Effekte Pro Logic Phantom (nur mit Dolby Surround-Baustein)

Mit der blauen Taste das Menü "TON-EINSTELLUNGEN" aufrufen. Unter "Toneffekte" sind mit den Tasten ► ◀ und ▲ ▼ unterschiedliche Dolby-Toneffekte und Lautsprechereinstellungen über das Menü anwählbar.

Die Einstellungen "Toneffekte" werden nur gespeichert, wenn eine manuelle Dolby-Umschaltung erfolgte. Nach automatischer Dolby-Umschaltung (Sendung mit Dolby Surround wurde erkannt) werden die Ton-Effekte nur temporär eingestellt.

Nach manueller Umschaltung geben "Netz aus" oder "Standby" die automatische Dolby-Umschaltung wieder frei.

## 5. Bild-Einstellungen

### 5.1 Grundeinstellung

Mit der roten Taste das Menü "BILD-EINSTELLUNGEN" aufrufen. Über die Menüführung sind die Einstellungen "Persönliche Werte", "Am Tag", "Am Abend" und "Soft" anwählbar. Die "Persönliche Werte"-Einstellung läßt eine Regulierung von Kontrast, Bildschärfe und Weißbalance zu. Die Bildschärfe-Einstellung wird programmplatzbezogen verändert. In den anderen Einstellungen sind diese Werte fest vorgegeben.

Abweichungen der Einstellungen gegenüber "Normal":

- "Am Tag": Vollkontrast und geänderte Weißbalance
- "Am Abend": reduzierter Kontrast und geänderte Weißbalance
- "Soft": veränderte Bildschärfe, Rauschreduktion und Kontrast

### 5.2. Bildschärfe

Mit der roten Taste das Menü "BILD-EINSTELLUNGEN" aufrufen und "Bildschärfe P." anwählen.

Mit den Tasten ► ◀ können Sie die Bildschärfe in drei Schritten verändern.

### 5.3 Perfect Clear

Mit der roten Taste das Menü "BILD-EINSTELLUNGEN" aufrufen und "Perfect Clear" anwählen.

Mit den Tasten ► ◀ können Sie "Perfect Clear" ein- bzw. ausschalten.

### 3.12 Switching on with the Test Pattern or TV Mode

Call up the menu "Switch on with test pattern or TV", with the "I" button via "DIALOGCENTER" → "SERVICE". On selection of "Test pattern" an integrated test pattern will appear on the screen when switching the TV on again. The "TXT" button is used to switch the TV back to Programme Mode (if no other button is pressed during a period of ca. 20s the test pattern reappears).

The Test Pattern Mode can be switched off via the menu.

### 3.13 Only for the Retailer

Call up the menu "Only for the retailer" with the "I" button via "DIALOGCENTER" → "SERVICE" and confirm with the "OK" button. When entering the code number "8500" the dealer can adjust the TV set according to the menu.

(See chap. Alignment, page 2-7).

## 4. Sound Settings

### 4.1 Sound Switching:

Call up the "SOUND SETTINGS" menu with the blue button. Different types of "Sound" are available dependent on the TV standard:

- "Mono": in the case of pure mono transmissions
- "Mono A / Mono B": in the case of 2-channel sound transmissions
- "Stereo / Mono": in the case of poor stereo sound quality, the sound can be switched over to mono
- "Nicam / FM"
- "Nicam A / Nicam B / FM"
- "Nicam Stereo / FM"

### 4.2 Headphone Sound Switching

Call up the "SOUND SETTINGS" menu with the blue button. Dependent on the TV standard, different settings are possible under "HP-sound change over":

- "Mono A / B", independent of the loudspeakers
- "Nicam A / Nicam B / FM", independent of the loudspeakers

With all other options, separate selection of the sound for the headphones and loudspeakers is not possible.

### 4.3 Setting the Volume on a Per-Programme Basis

Call up the "SOUND SETTINGS" menu with the blue button. The volume can be set for each individual programme position with "Volume P." (volume offset).

### 4.4 Sound Effects Pro Logic Phantom (only with Dolby Surround Module)

Call up the "SOUND SETTINGS" menu with the blue button.

Under "Sound effects" different Dolby sound effects and loudspeaker settings can be selected with the buttons ► ◀ and ▲ ▼ via the menu. The settings under "Sound effects" are stored only on manual selection of Dolby. When switching over to Dolby is effected automatically (on identification of a transmission with Dolby Surround) the sound effects are set only temporarily.

After manual selection of Dolby, the automatic Dolby switching mode is reactivated when entering "Mains off" or "Standby".

## 5. Picture Settings

### 5.1 Basic Adjustment

Call up the "PICTURE SETTINGS" menu with the red button. Via the menu guide, the following options can be selected: "Personal", "During the day", "In the evening" and "Soft". The "Personal" option allows to change the contrast, picture sharpness, and white balance. The picture sharpness can be changed on a per-programme basis. The values for the other options are fixed.

Differences between these options and "Personal":

- "During the day": maximum contrast and changed white balance
- "In the evening": reduced contrast and changed white balance
- "Soft": changed picture sharpness, noise reduction and contrast

### 5.2 Picture Sharpness

Call up the "PICTURE SETTINGS" menu with the red button and select "Sharpness P."

The picture sharpness can be changed in three steps with the ► ◀ buttons.

### 5.3 Perfect Clear

With the red button call up the "PICTURE SETTINGS" menu and select "Perfect Clear".

With the ► ◀ buttons this function can be switched on or off.

#### 5.4 Kammfilter

Mit der roten Taste das Menü "BILD-EINSTELLUNGEN" aufrufen und "Kammfilter" anwählen.

Mit den Tasten ► ◀ können Sie das Kammfilter programmplatzbezogen auf "aus" oder "autom." stellen.

#### 5.5 Zeilenflimmer-Reduktion

Mit der roten Taste das Menü "BILD-EINSTELLUNGEN" aufrufen und "Zeilenflimmer-Redukt." anwählen.

Mit den Tasten ► ◀ können Sie die Einstellungen auf "aus" oder "autom." stellen.

#### 5.6 Rauschreduktion P. (programmplatzbezogen)

Mit der roten Taste das Menü "BILD-EINSTELLUNGEN" aufrufen und Rauschreduktion anwählen.

Mit den Tasten ► ◀ können Sie die Rauschreduktion programmplatzbezogen zwischen "aus", "autom.", "stark!" und "schwach" stellen. Der µP speichert nur die Einstellungen "aus", "schwach" und "automatisch" beim Verlassen des Menüs. Die Option "stark!" ist nur vorübergehend anwählbar.

### 6. Einstellungen über die Senderkennung

Programmbezogene Einstellungen über die Senderkennung schalten das Gerät in einen Zwangsmodus, dadurch wird die automatische Auswertung unterdrückt.

#### 6.1 Maximale Programmnummer (Umkehrpunkt)

Mit Taste "I" das Menü "TV-Programm-Tabelle" über "DIALOG-CENTER" aufrufen.

Nach Eingabe der Kanalnummer "00" auf einem beliebigen Programmplatz über die TV-Kanal-Tabelle, können mit den Tasten ▲ ▼ die nachfolgenden Programme nicht mehr fortgeschaltet werden. Liegt der Umkehrpunkt ≤ 10 ist nur eine einstellige Programmplatzanwahl möglich.

#### 6.2 Einstellungen über die Senderkennung

Mit Taste "I" das Menü "TV-PROGRAMM-TABELLE" über "DIALOG-CENTER" → "OK" aufrufen und gewünschten Sender aktivieren.

Die programmbezogenen Zwangseinstellungen werden in der Senderkennung auf den letzten drei Stellen programmiert, mit dem Komma am Anfang. Es stehen dann noch die ersten drei Stellen "X" für die eigentliche Senderkennung zur Verfügung.

Beispiel: xxx,MO nur Monoton

Bei richtiger Einstellung werden als Senderkennung nur die ersten drei Stellen angezeigt, die Schaltinformation wird unterdrückt.

Anzeige: xxx

Mögliche Schaltstellungen:

- Senderkennung xxx,MO -> Zwangsmono bei Stereosend.
- Senderkennung xxx,2T -> Selektion 2. Tonträger bei Zweitonsendungen
- Senderkennung xxx,PB -> PAL B/G/H/I mit 50Hz
- Senderkennung xxx,PM -> PAL M mit 60Hz
- Senderkennung xxx,PN -> PAL N mit 50Hz
- Senderkennung xxx,P6 -> PAL mit 60Hz
- Senderkennung xxx,SE -> SECAM mit 50Hz
- Senderkennung xxx,NM -> NTSC M mit 60Hz
- Senderkennung xxx,N4 -> NTSC 4,43 mit 60Hz
- Senderkennung xxx,AF -> AFC-Regelung aktiv
- Senderkennung xxx,AV -> VCR-Zeitkonstante aktiv
- Senderkennung AVxxxx -> VCR-Zeitkonstante aktiv

#### 6.3 Zwangseinstellungen im AV-Mode (AV1...AV4)

Mit Taste "I" das Menü "TV-PROGRAMM-TABELLE" über "DIALOG-CENTER" aufrufen. Mit der Taste ◀ die AV-Ebene anwählen, gewünschtes AV-Programm aufrufen und mit "blauer Taste" aktivieren. Die Eingaben bedeuten:

|       |                                             |
|-------|---------------------------------------------|
| AV,NM | NTSC mit 60Hz                               |
| AV,N4 | NTSC 4,43 mit 60Hz                          |
| AV,PB | PAL B/G/H/I mit 50Hz                        |
| AV,PM | PAL M mit 60Hz                              |
| AV,PN | PAL N mit 60Hz                              |
| AV,P6 | PAL mit 60Hz                                |
| AV,SE | SECAM mit 50Hz                              |
| AV,2T | Selektion 2. Tonträger bei Zweitonsendungen |

#### 5.4 Comb Filter

Call up the "PICTURE SETTINGS" menu with the red button and select "Comb filter".

The comb filter can be set to "Off" or "Auto" on each programme position using the ► ◀ buttons.

#### 5.5 Line Flicker Reduction

Call up the "PICTURE SETTINGS" menu with the red button and select "Line flicker reduct."

With the ► ◀ buttons the setting can be changed to "Off" or "Auto".

#### 5.6 Noise Reduction P. (on individual programme positions)

With the red button call up the "PICTURE SETTINGS" menu and select "Noise reduct."

With the ► ◀ buttons it is possible to select the settings "Off", "Auto", "High!" and "weak" for each individual programme position. The µP stores the settings "Off", "weak" and "Auto" when leaving the menu. The option "High!" can be selected only temporarily.

### 6. Settings via the Station Ident

Settings entered in the station identification for an individual programme position cause the TV set to switch to a forced operating mode; as a result, the automatic evaluation function is suppressed.

#### 6.1 Maximum Programme Number (reversing point)

Call up the "TV-PROGRAMME-CHART" menu via "DIALOGCENTER" pressing the "I" button.

When entering the channel number "00" on any programme position of the TV programme chart and entering "00", programme selection with the buttons ▲ ▼ is limited to the numbers lower than this position. If the reversing point is ≤ 10, only single-digit programme selection is possible.

#### 6.2 Settings via the Station Ident

Call up the "TV-PROGRAMME-CHART" menu via "DIALOGCENTER" → "OK" using button "I" and activate the desired TV station.

The forced operating modes for the individual programme positions must be entered into the last 3 places of the station identification beginning with a comma so that the first three places "X" are still left for the actual station identification.

Example: xxx,MO only mono sound

The correct setting of the station ident shows only the first three places, the switching information will not be displayed.

Indication: xxx

Possible switch settings:

- Station ident xxx,MO -> forced mono on stereo transm.
- Station ident xxx,2T -> selection of 2nd sound carrier of dual sound transmissions
- Station ident xxx,PB -> PAL B/G/H/I with 50Hz
- Station ident xxx,PM -> PAL M with 60Hz
- Station ident xxx,PN -> PAL N with 50Hz
- Station ident xxx,P6 -> PAL with 60Hz
- Station ident xxx,SE -> SECAM with 50Hz
- Station ident xxx,NM -> NTSC M with 60Hz
- Station ident xxx,N4 -> NTSC 4.43 with 60Hz
- Station ident xxx,AF -> AFC active
- Station ident xxx,AV -> VCR time constant active
- Station ident AVxxxx -> VCR time constant active

#### 6.3 Forced Settings in AV Mode (AV1...AV4)

Press the "I" button to call up the "TV-PROGRAMME-CHART" menu via "DIALOGCENTER". Select the AV level with button ◀, call up the desired AV programme and activate with the "blue button".

The entries mean:

|       |                                                            |
|-------|------------------------------------------------------------|
| AV,NM | NTSC with 60Hz                                             |
| AV,N4 | NTSC 4.43 with 60Hz                                        |
| AV,PB | PAL B/G/H/I with 50Hz                                      |
| AV,PM | PAL M with 60Hz                                            |
| AV,PN | PAL N with 60Hz                                            |
| AV,P6 | PAL with 60Hz                                              |
| AV,SE | SECAM with 50Hz                                            |
| AV,2T | selection of 2nd sound carrier on dual sound transmissions |

## 7. Einstellung der Analogwerte

Auslieferungszustand nach ATS (Optimalwert).

Unterschreiten Sie für die nachfolgenden Analogwerte (Maximalwert 63) den Minimalwert lt. Tabelle, wird beim Einschalten des Gerätes oder Wechsel von HF → AV der Optimalwert initialisiert.

|                    | Minimalwert | Optimalwert |
|--------------------|-------------|-------------|
| Helligkeit         | 15          | 32          |
| Farbkontrast       | 11          | 30          |
| SW-Kontrast        | 15          | 57          |
| Lautstärke         | -           | 21          |
| Kopfhörer. Lautst. | -           | 20          |
| Tint               | -           | 30          |
| Bässe              | -           | +3          |
| Höhen              | -           | +5          |
| Bildschärfe        | -           | 1           |

Bei der Lautstärke-Einstellung < 8, erscheint beim Einschalten des Gerätes der Lautstärkebalken.

Mit "AUX" → "OK" können die werksseitigen analogen Auslieferungswerte für die Ton- und Bildeinstellungen und, falls vorhanden, die Anzeigehelligkeit des VFD-Display wiederhergestellt werden.

Die Optimalwerte stammen bei einem Start mit dem Notdatensatz aus dem EPROM IC87030. Bei Normalstart werden die Optimalwerte aus dem EEPROM IC87080 geladen.

## 8. PIP-Betrieb

Je nach Gerätekonfiguration unterscheidet sich die Bedienung.

- a: ohne PIP-Baustein mit PIP-Bild der Feature-Box.
- b: PIP-Baustein ohne PIP-Tuner und ohne Megalogic-Videorecorder
- c: PIP-Baustein ohne PIP-Tuner und mit Megalogic-Videorecorder
- d: PIP-Baustein mit PIP-Tuner (PAL, SECAM, NTSC).

Die Taste "PIP" ruft das PIP-Menü auf.

- Der AV-Monitor startet mit dem AV- bzw. Programmplatz der zuletzt als PIP-Bild eingestellt war.
- Mit den Tasten ▲ ▼ wird die PIP-Quelle angewählt. Zeigt das Großbild einen AV-Platz, sind alle Programm- (evtl. nur bis zum Umkehrpunkt C 00) und AV-Plätze anwählbar. In der Konfiguration a. und b. sind bei der SAT-Aufnahme alle AV-Plätze und der SAT-Aufnahmeplatz anwählbar, jedoch keine terrestrischen Programme.
- Mit der Format- und "AKT"-Taste können Sie die PIP-Position bzw. die PIP-Bildgröße verändern.
- PIP-Positionsabgleich siehe Seite 1-4, Kapitel 1.5.

**Hinweis:** VGA kann nicht als PIP-Bild eingeblendet werden.

## 9. Audio-/Video-Anschlüsse

**Überspielmöglichkeiten:**

- AV 1 → AV 2 oder AV 3
- AV 2 → AV 1 oder AV 3
- AV 3 → AV 1 oder AV 2
- AV 4 → AV 1, AV 2 oder AV 3

**Hinweise:**

- Es ist nicht möglich über die Hosiden- und Cinch-Anschlußbuchsen (AV 4) gleichzeitig Signale einzuspeisen.
- Sind bei AV- bzw. PIP-Anwahl schon alle Videowege belegt, z.B. weil Copy aktiv ist, wird dies erkannt und auf die nächste technisch mögliche AV-Stellung geschaltet.
- Bei Ländereinstellung Italien hat eine AV-RGB-Einspeisung mit Austastsignal (Pin 16) Vorrang.
- Bei allen AV-Stellungen erscheint kein blauer Bildschirm

## 7. Setting the Analog Values

State of delivery is after execution of ATS (optimum value).

When exceeding the minimum possible analog values (maximum value is 63) as specified in the table below, the optimum value is initialised when switching the TV on or changing from RF → AV.

|            | Minimum Value | Optimum Value |
|------------|---------------|---------------|
| Brightness | 15            | 32            |
| Colour     | 11            | 30            |
| Contrast   | 15            | 57            |
| Volume     | -             | 21            |
| Headphones | -             | 20            |
| Tint       | -             | 30            |
| Bass       | -             | +3            |
| Treble     | -             | +5            |
| Sharpness  | -             | 1             |

If the volume is set to a value < 8, the volume scale appears on the screen when switching the TV on.

The factory default analog values for the picture and sound settings and the brightness of the VFD display, as far as provided, can be recalled by pressing the "AUX" → "OK" buttons.

The optimum values are read out from EPROM IC87030 when starting the TV with the emergency data set. On normal start, the optimum values from EEPROM IC87080 are loaded.

## 8. PIP Operation

The operation differs with the configuration of the TV set.

- a: without PIP module with PIP picture from the Feature Box.
- b: PIP module without PIP tuner and without Megalogic video recorder
- c: PIP module without PIP tuner and with Megalogic video recorder
- d: PIP module with PIP tuner (PAL, SECAM, NTSC).

The "PIP" button calls up the PIP menu.

- The AV monitor starts with the AV or programme position last used in PIP mode.
- The ▲ ▼ buttons are used to select the PIP source. When the normal picture shows an AV position, all programme positions (or else only up to the reversing point C 00) and AV positions are selectable. With the configurations a. and b., on SAT recording, all AV positions as well as the SAT position being recorded can be selected but terrestrial programmes cannot.
- The PIP position and PIP size can be changed with the format and "AKT" button.
- Instructions for adjusting the PIP position are given on page 1-4,, chapter 1.5.

**Note:** VGA cannot be inserted as a PIP picture.

## 9. Audio Video Connectors

**Rerecording is possible from**

- AV 1 → AV 2 or AV 3
- AV 2 → AV 1 or AV 3
- AV 3 → AV 1 or AV 2
- AV 4 → AV 1, AV 2 or AV 3

**Notes:**

- It is not possible to feed in signals at the same time via the Hosiden and Cinch connecting sockets (AV 4).
- Should all video signal paths be in use on selection of AV or PIP because Copy is active for example, this situation is identified and the TV switches over to the next technically possible AV position.
- On selection of the country Italy in the menu, an AV-RGB signal with blanking signal (Pin 16) has priority
- The blue screen background does not appear in all AV settings.

**Buchsenbelegung / Socket Configuration**

| AV-Buchse<br>AV socket | FBAS In/Out<br>CCVS In/Out | SVHS In/Out | RGB In | Decoder | Megalogic<br>Scart Pin 8 | VGA In | 6/12V-Idendifikation<br>6/12V-Idendification |
|------------------------|----------------------------|-------------|--------|---------|--------------------------|--------|----------------------------------------------|
| AV 1 schwarz/black     | x/x                        | x/x         | x**    | x       | x                        | -      | x                                            |
| AV 2 orange            | x/x                        | x/-         | x**    | x       | -                        | -      | x                                            |
| AV 3 blau/blue         | x/x*                       | -/-         | -      | -       | -                        | -      | x                                            |
| AV 4 Camera<br>Cinch   | x/-                        | -/-         | -      | -       | -                        | -      | -                                            |
| AV 4 Camera<br>Hosiden | -/-                        | x/-         | -      | -       | -                        | -      | -                                            |
| AV 5 VGA               | -/-                        | -/-         | -      | -       | -                        | x      | -                                            |

\* Keine Ausgabe von Terr.- bzw. Sat-FBAS möglich. Nur FBAS der schwarzen, orangen Scart-, Cinch- oder Hosidenbuchse.

\*\* RGB-Einspeisung ist nur an der schwarzen oder orangen Scartbuchse möglich (nicht gleichzeitig).

\* Output of terrestrial or SAT CCVS signal is not possible. CCVS signal only from the black, orange Scart, Cinch or Hosiden socket.

\*\* RGB input is only possible at the black or orange Scart socket (not simultaneously).

**10. Bildformat-Umschaltung**

Mit der Fernbedientaste "⏏" kann das Bildformat in Abhängigkeit von der Bildschirmgrößen umgeschaltet werden. PALplus erscheint nur, wenn es bereits automatisch erkannt wurde!

In der Stellung "auto" wird bei jedem Statuswechsel in Abhängigkeit von der Sender-Information (WSS) automatisch auf das entsprechende Format geschaltet.

Das Gerät paßt in Abhängigkeit von der an Pin 8 der aktiven Scart-Buchse anstehenden Spannung das Bildformat an. Die Bildformat-Umschaltung ist bei AV-Betrieb für die schwarze, orange und blaue AV-Buchse (AV1, AV 2, AV 3), bei Peribetrieb für die schwarze und orange Scart-Buchse aktiv.

bei 16:9-Bildröhren

| Bildformat vor dem<br>Spannungswechsel | neues Bildformat nach<br>Pin 8: 0/12V → 6V | neues Bildformat nach<br>Pin 8: 6V → 0/12V |
|----------------------------------------|--------------------------------------------|--------------------------------------------|
| 16:9                                   | -                                          | altes Format *                             |
| Cinema Zoom                            | 16:9                                       | -                                          |
| Panorama Zoom                          | 16:9                                       | -                                          |
| 4:3                                    | 16:9                                       | -                                          |

bei 4:3-Bildröhren

| Bildformat vor dem<br>Spannungswechsel | neues Bildformat nach<br>Pin 8: 0/12V → 6V | neues Bildformat nach<br>Pin 8: 6V → 0/12V |
|----------------------------------------|--------------------------------------------|--------------------------------------------|
| 16:9                                   | -                                          | altes Format *                             |
| 4:3                                    | 16:9                                       | -                                          |
| Panorama Zoom                          | 16:9                                       | -                                          |

\* unter altem Format wird das letzte vor dem Spannungswechsel manuell eingestellte Bildformat verstanden.

**10. Changing the Picture Format**

The picture format can be switched over with remote control button "⏏" in dependence of the size of the picture tube. PALplus appears only if it was previously identified automatically.

In "auto" mode, the format is automatical changed accordingly with every change of the status in dependence of the transmitter information (WSS).

The TV set selects the picture format in dependence of the voltage applied to Pin 8 of the active Scart socket. On AV operation, the format switching function is active for the black, orange, and blue AV socket (AV1, AV 2, AV 3), on Peri operation it is active for the black and orange Scart sockets.

for 16:9 picture tubes

| Picture format<br>before voltage<br>change | New picture format<br>after voltage change<br>Pin 8: 0/12V → 6V | New picture format<br>after voltage change<br>Pin 8: 6V → 0/12V |
|--------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|
| 16:9                                       | -                                                               | old format *                                                    |
| Cinema Zoom                                | 16:9                                                            | -                                                               |
| Panorama Zoom                              | 16:9                                                            | -                                                               |
| 4:3                                        | 16:9                                                            | -                                                               |

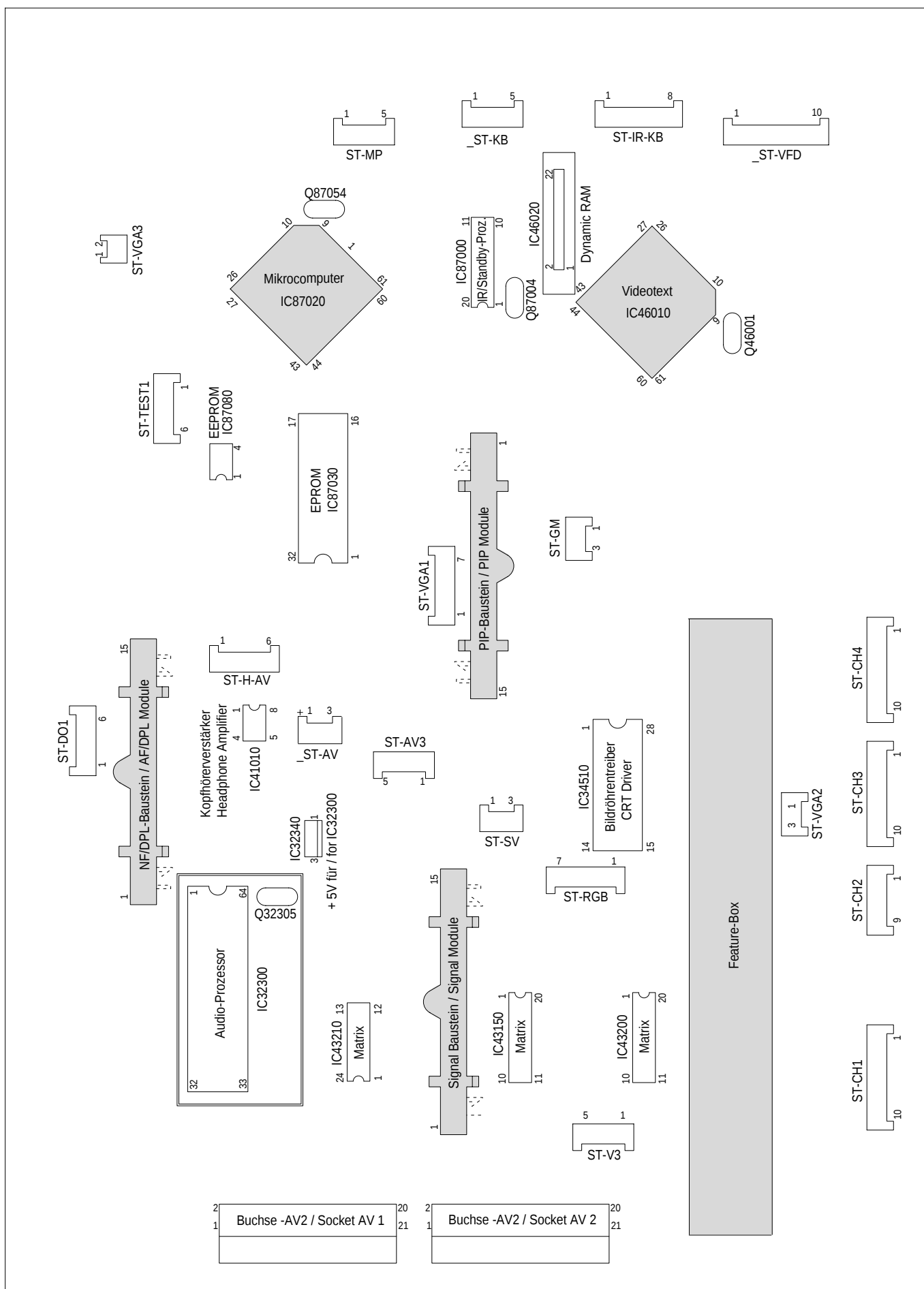
for 4:3 picture tubes

| Picture format<br>before voltage<br>change | New picture format<br>after voltage change<br>Pin 8: 0/12V → 6V | New picture format<br>after voltage change<br>Pin 8: 6V → 0/12V |
|--------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|
| 16:9                                       | -                                                               | old format *                                                    |
| 4:3                                        | 16:9                                                            | -                                                               |
| Panorama Zoom                              | 16:9                                                            | -                                                               |

\* the expression "old format" means the picture format last selected manually before the voltage is switched over.

# Abgleich / Alignment

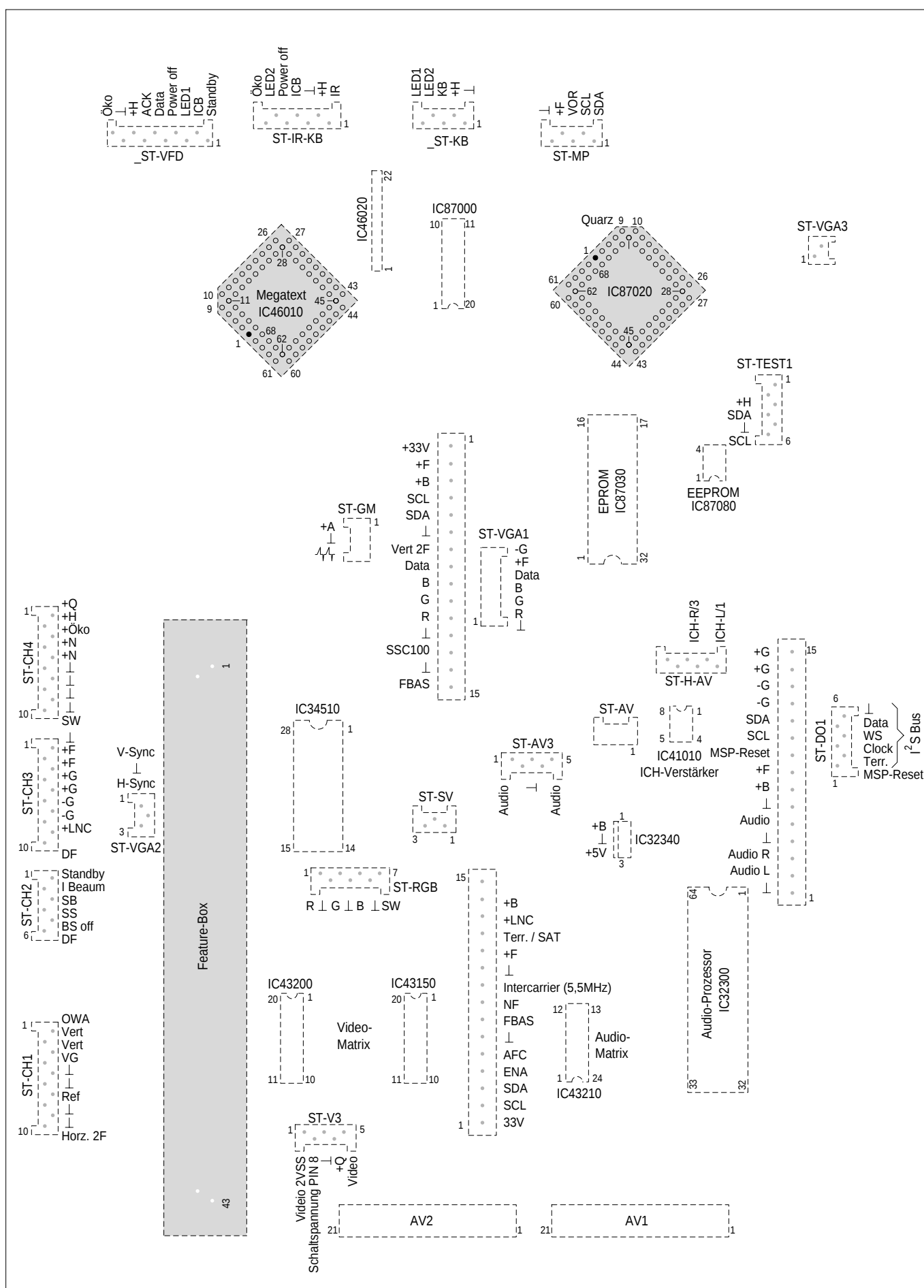
## Abgleichlageplan Signalchassis Bestückungsseite / Alignment Layout Signal Chassis Components Side



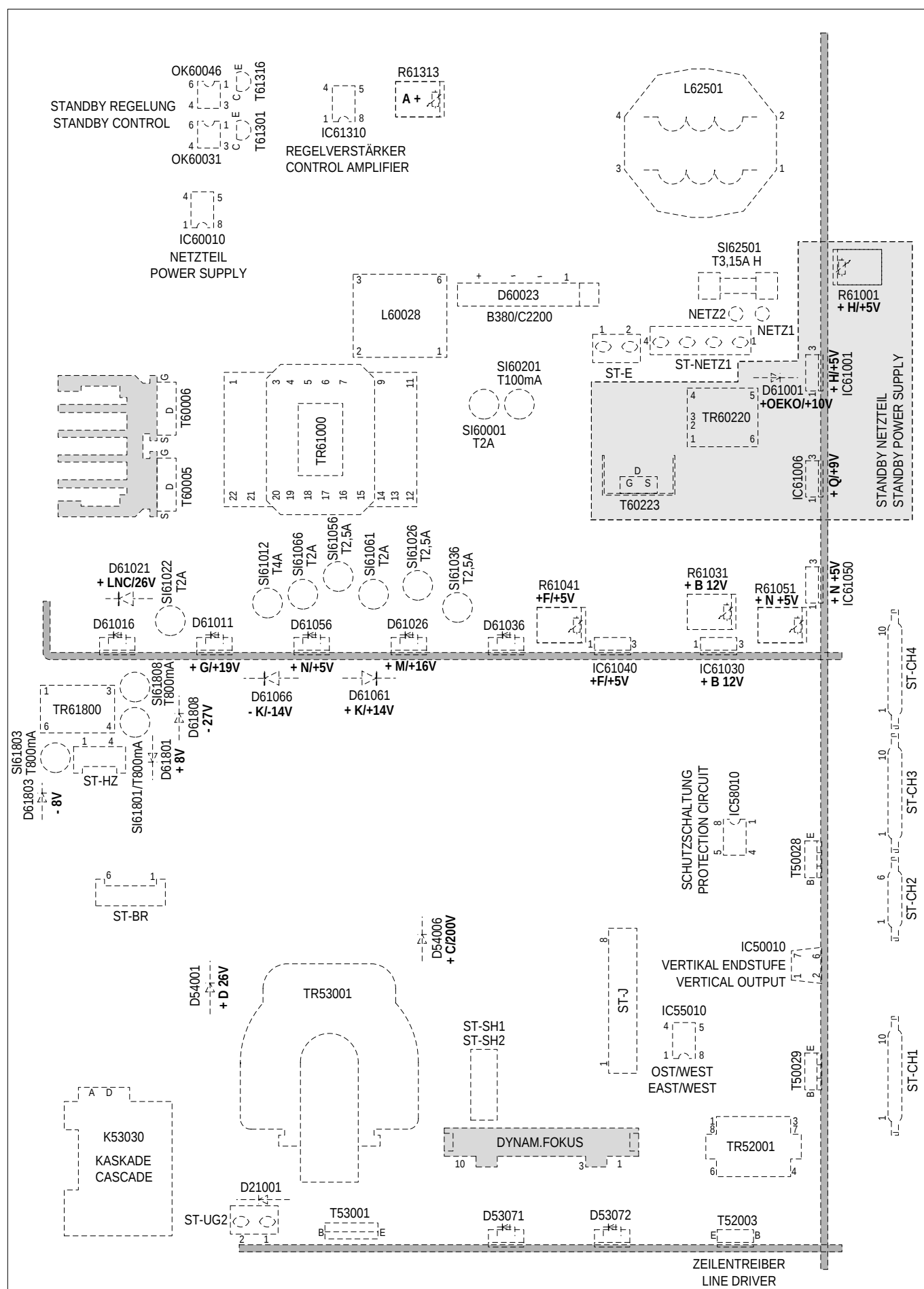
The diagram illustrates the power supply section of a Philips 4500 monitor, detailing the following components and their functions:

- STANDBY NETZTEIL (STANDBY POWER SUPPLY):** Includes components like R61001 (+H/+5V), IC61001 (+H/+5V), IC61006 (+Q/+9V), and transformer T60223.
- STANDBY REGELUNG (STANDBY CONTROL):** Includes R61313 (+A), IC61310, and IC60004/60031.
- NETZTEIL (POWER SUPPLY):** Includes transformer T60005, diodes D61001, D61002, D61003, D61004, D61005, D61006, D61007, D61008, D61009, D61010, D61011, D61012, D61013, D61014, D61015, D61016, D61017, D61018, D61019, D61020, D61021, D61022, D61023, D61024, D61025, D61026, D61027, D61028, D61029, D61030, D61031, D61032, D61033, D61034, D61035, D61036, D61037, D61038, D61039, D61040, D61041, D61042, D61043, D61044, D61045, D61046, D61047, D61048, D61049, D61050, D61051, D61052, D61053, D61054, D61055, D61056, D61057, D61058, D61059, D61060, D61061, D61062, D61063, D61064, D61065, D61066, D61067, D61068, D61069, D61070, D61071, D61072, D61073, D61074, D61075, D61076, D61077, D61078, D61079, D61080, D61081, D61082, D61083, D61084, D61085, D61086, D61087, D61088, D61089, D61090, D61091, D61092, D61093, D61094, D61095, D61096, D61097, D61098, D61099, D61100, D61101, D61102, D61103, D61104, D61105, D61106, D61107, D61108, D61109, D61110, D61111, D61112, D61113, D61114, D61115, D61116, D61117, D61118, D61119, D61120, D61121, D61122, D61123, D61124, D61125, D61126, D61127, D61128, D61129, D61130, D61131, D61132, D61133, D61134, D61135, D61136, D61137, D61138, D61139, D61140, D61141, D61142, D61143, D61144, D61145, D61146, D61147, D61148, D61149, D61150, D61151, D61152, D61153, D61154, D61155, D61156, D61157, D61158, D61159, D61160, D61161, D61162, D61163, D61164, D61165, D61166, D61167, D61168, D61169, D61170, D61171, D61172, D61173, D61174, D61175, D61176, D61177, D61178, D61179, D61180, D61181, D61182, D61183, D61184, D61185, D61186, D61187, D61188, D61189, D61190, D61191, D61192, D61193, D61194, D61195, D61196, D61197, D61198, D61199, D61200, D61201, D61202, D61203, D61204, D61205, D61206, D61207, D61208, D61209, D61210, D61211, D61212, D61213, D61214, D61215, D61216, D61217, D61218, D61219, D61220, D61221, D61222, D61223, D61224, D61225, D61226, D61227, D61228, D61229, D61230, D61231, D61232, D61233, D61234, D61235, D61236, D61237, D61238, D61239, D61240, D61241, D61242, D61243, D61244, D61245, D61246, D61247, D61248, D61249, D61250, D61251, D61252, D61253, D61254, D61255, D61256, D61257, D61258, D61259, D61260, D61261, D61262, D61263, D61264, D61265, D61266, D61267, D61268, D61269, D61270, D61271, D61272, D61273, D61274, D61275, D61276, D61277, D61278, D61279, D61280, D61281, D61282, D61283, D61284, D61285, D61286, D61287, D61288, D61289, D61290, D61291, D61292, D61293, D61294, D61295, D61296, D61297, D61298, D61299, D61300, D61301, D61302, D61303, D61304, D61305, D61306, D61307, D61308, D61309, D61310, D61311, D61312, D61313, D61314, D61315, D61316, D61317, D61318, D61319, D61320, D61321, D61322, D61323, D61324, D61325, D61326, D61327, D61328, D61329, D61330, D61331, D61332, D61333, D61334, D61335, D61336, D61337, D61338, D61339, D61340, D61341, D61342, D61343, D61344, D61345, D61346, D61347, D61348, D61349, D61350, D61351, D61352, D61353, D61354, D61355, D61356, D61357, D61358, D61359, D61360, D61361, D61362, D61363, D61364, D61365, D61366, D61367, D61368, D61369, D61370, D61371, D61372, D61373, D61374, D61375, D61376, D61377, D61378, D61379, D61380, D61381, D61382, D61383, D61384, D61385, D61386, D61387, D61388, D61389, D61390, D61391, D61392, D61393, D61394, D61395, D61396, D61397, D61398, D61399, D61400, D61401, D61402, D61403, D61404, D61405, D61406, D61407, D61408, D61409, D61410, D61411, D61412, D61413, D61414, D61415, D61416, D61417, D61418, D61419, D61420, D61421, D61422, D61423, D61424, D61425, D61426, D61427, D61428, D61429, D61430, D61431, D61432, D61433, D61434, D61435, D61436, D61437, D61438, D61439, D61440, D61441, D61442, D61443, D61444, D61445, D61446, D61447, D61448, D61449, D61450, D61451, D61452, D61453, D61454, D61455, D61456, D61457, D61458, D61459, D61460, D61461, D61462, D61463, D61464, D61465, D61466, D61467, D61468, D61469, D61470, D61471, D61472, D61473, D61474, D61475, D61476, D61477, D61478, D61479, D61480, D61481, D61482, D61483, D61484, D61485, D61486, D61487, D61488, D61489, D61490, D61491, D61492, D61493, D61494, D61495, D61496, D61497, D61498, D61499, D61500, D61501, D61502, D61503, D61504, D61505, D61506, D61507, D61508, D61509, D61510, D61511, D61512, D61513, D61514, D61515, D61516, D61517, D61518, D61519, D61520, D61521, D61522, D61523, D61524, D61525, D61526, D61527, D61528, D61529, D61530, D61531, D61532, D61533, D61534, D61535, D61536, D61537, D61538, D61539, D61540, D61541, D61542, D61543, D61544, D61545, D61546, D61547, D61548, D61549, D61550, D61551, D61552

## Abgleichlageplan Signalchassis Lötseite / Alignment Layout Signal Chassis Solder Side



## Abgleichlageplan Netzchassis Lötseite / Alignment Layout Mains Chassis Solder Side



# Abgleich

Alle nicht beschriebenen Einstellelemente sind werkseitig abgeglichen und dürfen im Service-Fall nicht verstellt werden.

## 1. Chassisplatte

**Meßgeräte:** Zweikanal-Oszilloskop, Tastkopf 10:1, Digitalvoltmeter, Farbbildgenerator

**Servicearbeiten nach Austausch bzw. Reparatur:**

- Chassis Abgl. 1.1
- Tuner, ZF-Verstärker Abgl. 1.2, 1.3, 1.4.1 bzw. 1.4.2
- IC87080, Abgl. 1.5...1.10
- Zeilen- und Bildablenkung Abgl. 1.11...1.13 und 2.2
- IC87020, Abgl. 1.10...1.13

| Abgleich                                                                    | Vorbereitung                                                                                                                                                                                                                                                                                                                                                                                                                                           | Abgleichvorgang                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.1 +A Spannung<br>+B Spannung<br>+F Spannung<br>+H Spannung<br>+N Spannung | <b>Nach jeder Reparatur und vor jedem Abgleich unbedingt kontrollieren und gegebenenfalls einstellen.</b><br><br>Helligkeit: Minimum                                                                                                                                                                                                                                                                                                                   | Mit Regler <b>R61313</b> nach Tabelle im Schaltbild Netz-Chassis.<br>Mit Regler <b>R61031</b> auf 12V an Kontakt 36 der Feature-Box.<br>Mit Regler <b>R61041</b> auf 5V an Kontakt 9/10 der Feature-Box.<br>Mit Regler <b>R61001</b> auf 5V an Kontakt 8 der Feature-Box.<br>Mit Regler <b>R61051</b> auf 5V an Kontakt 32/33 der Feature-Box.                                              |
| 1.2 Tuner-AGC                                                               | Normtestbild auf Kanal 60 (UHF) einspeisen; HF=1,5mV (64dBµV). Bei Zwei-Tuner PIP-Geräten ohne Antennen-Splitter. Voltmeter: Tunerkontakt 2.                                                                                                                                                                                                                                                                                                           | <b>3,3V ± 0,1V</b> mit <b>R32033</b> (Signalbaustein) einstellen.                                                                                                                                                                                                                                                                                                                           |
| 1.3 AFC-Referenz                                                            | Sender mit genormten Kanalaraster ohne Finetuning im Band 1 (Kanal 2...4) einspeisen.<br><br>Mit Taste "I" das Menü "AFC-Referenz" über "Dialog Center" → "OK" → "SERVICE FÜR DEN FACHHANDEL" → "OK" → "Nur für den Fachhändler" → "OK" → Kennzahl "8500" → aufrufen (Menüführung).                                                                                                                                                                    | Mit der Aktivierung der AFC-Referenz (automatisch) wird eine ZF-Richtspannung vom AFC-Ausgang des IC32010 an der Steckerleiste des Signalbausteins, Kontakt 5 gemessen und als Vergleichswert beim Sendersuchlauf bzw. für die Videowiedergabe über den Antenneneingang (Senderkennung "AV") zur Nachregelung der Modulatordrift herangezogen (typ. 127±10). Einstellung mit OK aktivieren. |
| 1.4.1 PLL-Demodulatorkreis für Bildträger 38,9MHz                           | - Sender mit genormtem Kanalaraster, Band 3 mit dazugehöriger Norm einspeisen.<br>- Voltmeter an Steckerleiste Kontakt 5 Signalbaustein.                                                                                                                                                                                                                                                                                                               | <b>2,5V</b> mit <b>F132043</b> auf dem Signalbaustein einstellen.                                                                                                                                                                                                                                                                                                                           |
| 1.4.2 PLL-Demodulatorkreis für Bildträger 33,4MHz (Multi-ZF/IF)             | - <b>1.4.1 überprüfen, bzw. abgleichen.</b><br>- Sender mit genormten Kanalaraster, Band 1 in Frankreich-Norm einspeisen.<br>- Voltmeter an Steckerleiste Kontakt 5 Signalbaustein.                                                                                                                                                                                                                                                                    | <b>2,5V</b> mit <b>R32057</b> auf dem Signalbaustein einstellen.                                                                                                                                                                                                                                                                                                                            |
| 1.5 Text RGB-Pegel                                                          | Mit Taste "I" das Menü "RGB-Pegel" über "Dialog Center" → "OK" → "SERVICE FÜR DEN FACHHANDEL" → "OK" → "Nur für den Fachhändler" → "OK" → Kennzahl "8500" → aufrufen (Menüführung).                                                                                                                                                                                                                                                                    | Bei RGB-Einblendung kann bei Zeilenreißen mit den Tasten ◀ ▶ durch die Einstellung "halbe Pegel" oder "volle Pegel" die Anzeigeintensität angepaßt werden. Der eingestellte Wert wird beim Verlassen des Menüs gespeichert.                                                                                                                                                                 |
| 1.6 Weißabgleich                                                            | Schwarzweiß-Grautreppe mit Burst einspeisen.<br>Weißbalance Mittenstellung.<br>Kontrast (ⓘ) Maximum.<br>Farbkontrast (Ⓢ) Mittelwert.<br>Bildschirmhelligkeit (☼) Mittelwert.<br>"Perfect Clear" ausschalten<br>("rote Taste" → "BILD-EINSTELLUNGEN" → "OK").<br>Mit Taste "I" das Menü "Weißabgleich" über "Dialog Center" → "OK" → "SERVICE FÜR DEN FACHHANDEL" → "OK" → "Nur für den Fachhändler" → "OK" → Kennzahl "8500" → aufrufen (Menüführung). | Mit den Tasten ◀ ▶ die Werte für <b>VG</b> und <b>VB</b> so einstellen, daß das Bild unbunt wird.<br>Mit "OK" speichern.<br><br>Die Taste "2" Grundwerte stellt den zuletzt gespeicherten Weißwert ein.                                                                                                                                                                                     |
| 1.7 Bildröhrentyp                                                           | Mit Taste "I" das Menü "Bildröhrentyp" über "Dialog Center" → "OK" → "SERVICE FÜR DEN FACHHANDEL" → "OK" → "Nur für den Fachhändler" → "OK" → Kennzahl "8500" → aufrufen (Menüführung).                                                                                                                                                                                                                                                                | Mit den Tasten ◀ ▶ P55, T70/16:9, T82/16:9, T63, P63, P63 BLS, T72, P72, T82, T95, P70 einstellen<br>(T = Toshiba Bildröhre, P = Philips Bildröhre).<br>Der eingestellte Wert wird beim Verlassen des Menüs gespeichert.                                                                                                                                                                    |
| 1.8 GM (Geschwindigkeitsmodulation)                                         | Mit Taste "I" das Menü "GM" über "Dialog Center" → "OK" → "SERVICE FÜR DEN FACHHANDEL" → "OK" → "Nur für den Fachhändler" → "OK" → Kennzahl "8500" → aufrufen (Menüführung).                                                                                                                                                                                                                                                                           | Mit den Tasten ◀ ▶ die Geschwindigkeitsmodulation ein- oder ausschalten.                                                                                                                                                                                                                                                                                                                    |
| 1.9 CIP 3250A                                                               | Mit Taste "I" das Menü "CIP 3250A" über "Dialog Center" → "OK" → "SERVICE FÜR DEN FACHHANDEL" → "OK" → "Nur für den Fachhändler" → "OK" → Kennzahl "8500" → aufrufen (Menüführung).                                                                                                                                                                                                                                                                    | Mit den Tasten ◀ ▶ A1 oder B1 einstellen.<br>Diese Festlegung ist vom CIC1360 in der Feature-Box abhängig. Nach dem Wiedereinschalten des Gerätes sind bei unrichtiger Einstellung die Farben falsch.                                                                                                                                                                                       |
| 1.10 PIP-Position                                                           | Sender- und AV-Bild einspeisen.<br>Fernbedientaste "I" gedrückt halten und mit dem Netzschalter einschalten.                                                                                                                                                                                                                                                                                                                                           | Mit den Tasten ◀ ▶ und ▲ ▼ die PIP-Position verändern und mit "OK" speichern.                                                                                                                                                                                                                                                                                                               |

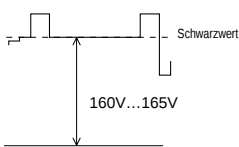
| Abgleich                                | Vorbereitung                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Abgleichvorgang                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.11 Bildgeometrie                      | <p>Geometriebild einspeisen, oder internes Testbild einschalten. Mit Taste "I" das Menü "Geometrie" über "Dialog Center" → "OK" → "SERVICE FÜR DEN FACHHANDEL" → "OK" → "Nur für den Fachhändler" → "OK" → Kennzahl "8500" → aufrufen (Menüführung).</p> <p><b>Achtung:</b> Der Abgleich "Line shift" beeinflusst die Zeilenphase. Vor dieser Einstellung die Bildbreite auf Minimum stellen und evtl. die Rasterlage mit dem Stecker "H-Shift" korrigieren.</p> <p><b>Reset:</b> Das Feld "Reset" enthält:</p> <ul style="list-style-type: none"> <li>- entweder die optimalen Bildgeometriedaten des Gerätes aus der Fertigung</li> <li>- oder einen mittleren Datensatz aus dem ROM, wenn das Gerät mit dem Notdatensatz gestartet wurde.</li> </ul> <p>Nach einem Fehlabbgleich können Sie diese Grundwerte jederzeit wieder laden über:</p> <p>Mit Taste "I" das Menü "Geometrie" über "Dialog Center" → "OK" → "SERVICE FÜR DEN FACHHANDEL" → "OK" → "Nur für den Fachhändler" → "OK" → Kennzahl "8500" → aufrufen (Menüführung).</p> | <p>Über die Menüführung Geometrie überprüfen und gegebenenfalls einstellen.</p> <p>Erst danach mit den Tasten ◀ oder ▶ Bildinhalt mittig ins Raster stellen. Bildbreite wieder nach Testbild einstellen.</p> <p><b>Speichern:</b></p> <p>"Without memory" aufrufen und mit den Tasten ◀ oder ▶ auf "With memory" ändern.</p> <p>Taste "OK" speichert die Einstellung.</p> <p>Die Bildgeometrie stellt sich nach jedem Einschalten auf den zuletzt abgespeicherten Wert ein.</p> |
| 1.11.1 Bildgeometrie VGA                | <p>Gerät in Programmstellung "A 5" schalten und Geometriebild über PC einspeisen.</p> <p>Mit Taste "I" das Menü "Geometrie" über "Dialog Center" → "OK" → "SERVICE FÜR DEN FACHHANDEL" → "OK" → "Nur für den Fachhändler" → "OK" → Kennzahl "8500" → aufrufen (Menüführung).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p>Über die Menüführung Geometrie überprüfen und gegebenenfalls abgleichen.</p> <p>Im IC87030 ist für die Stellung A 5 ein eigener Geometriedatensatz abgelegt.</p>                                                                                                                                                                                                                                                                                                             |
| 1.12 Brückenspule L53074 (Netz-Chassis) | <p>Die Brückenspule L53074 wird in der Fertigung abgeglichen und sollte nicht verdreht werden.</p> <p>Mit Taste "I" das Menü "Geometrie" über "Dialog Center" → "OK" → "SERVICE FÜR DEN FACHHANDEL" → "OK" → "Nur für den Fachhändler" → "OK" → Kennzahl "8500" → aufrufen (Menüführung).</p> <p>Bildbreite (Width) auf Minimum stellen.</p> <p>Oszilloskop Kanal 1: Kollektor T53001.</p> <p>Oszilloskop Kanal 2: Kathode D53072.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>Gleiche Impulsbreite der Oszillogramme kontrollieren und gegebenenfalls mit Spule <b>L53074</b> abgleichen.</p> <p>Bildbreite wieder nach Testbild einstellen.</p>                                                                                                                                                                                                                                                                                                           |
| 1.13 Zeilenschärfe                      | <p>Konvergenztestbild einspeisen:</p> <p>Kontrast (●) Maximum</p> <p>Helligkeit (☉) so einstellen, daß sich der schwarze Testbildhintergrund gerade aufhellt.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p>Mit dem Focusregler ☒ an der Kaskade die horizontalen Linien auf maximale Schärfe einstellen.</p> <p>Anschließend mit dem dyn. Focusregler ☒ (dyn. Focussierungsplatte) die vertikalen Linien auf maximale Schärfe abgleichen. Einstellungen wechselseitig wiederholen.</p>                                                                                                                                                                                                  |

## 2. Bildrohrplatte

**Meßgeräte:** hochohmiges Voltmeter, Zweikanal-Oszilloskop mit Tastkopf 10:1.

**Servicearbeiten nach Austausch bzw. Reparatur:**

- **Bildröhre, Bildrohrplatte** Abgl. 2.1 und 2.2

| Abgleich                                                                                                           | Vorbereitung                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Abgleichvorgang                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.1 Weißabgleich siehe 1.6                                                                                         | <p>Schwarzweiß-Grautreppe mit Burst einspeisen.</p> <p>Weißbalance Mittenstellung.</p> <p>Kontrast (●) Maximum.</p> <p>Farbkontrast (☉) Mittelwert.</p> <p>Bildschirmhelligkeit (☉) Mittelwert.</p> <p>"Perfect Clear" ausschalten</p> <p>("rote Taste" → "BILD-EINSTELLUNGEN" → "OK").</p> <p>Mit Taste "I" das Menü "Weißabgleich" über "Dialog Center" → "OK" → "SERVICE FÜR DEN FACHHANDEL" → "OK" → "Nur für den Fachhändler" → "OK" → Kennzahl "8500" → aufrufen (Menüführung).</p> | <p>Mit den Tasten ◀▶ die Werte für <b>VG</b> und <b>VB</b> so einstellen, daß das Bild unbunt wird.</p> <p>Mit "OK" speichern.</p> <p>Die Taste "?" Grundwerte stellt den zuletzt gespeicherten Weißwert ein.</p>                                                      |
| 2.2 Schirmgitterspannung $U_{G2}$ , $U_{SG}$<br><br>Reglereinheit sitzt bei der Philips Bildröhre auf dem Chassis. | <p>"Perfect Clear" ausschalten.</p> <p>("rote Taste" → "BILD-EINSTELLUNGEN" → "OK").</p> <p>Gerät in AV-Stellung.</p> <p>Schwarzbild einspeisen.</p> <p>Bildschirmhelligkeit: Graufäche gerade dunkel.</p> <p>Voltmeter über 220kΩ an Testpunkt R, G und B.</p> <p>Höchsten Spannungswert ermitteln.</p>                                                                                                                                                                                  | <p>Mit dem Einstellregler <math>U_{G2}</math>, <math>U_{SG}</math> auf der Bildrohrplatte den Testpunkt mit den höchsten Spannungswert auf ca. <b>162,5V±2,5V</b> abgleichen.</p>  |

## Alignment

All adjustment controls not mentioned in this description are pre-set at the factory and must not be re-adjusted in the case of repairs.

### 1. Chassis Board

**Measuring instruments:** Dual-channel oscilloscope, 10:1 test probe, digital voltmeter, colour video generator.

**Service works after replacement or repair of the following modules:**

- **Chassis:** alignment 1.1
- **Tuner, IF amplifier:** alignment 1.2, 1.3, 1.4.1 or 1.4.2
- **IC80070:** alignment 1.5 ...1.10
- **horizontal and field deflection:** alignment 1.11...1.13 and 2.2
- **IC87020:** alignment 1.10...1.13

| Alignment                                                              | Preparations                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Alignment Process                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.1 +A voltage<br>+B voltage<br>+F voltage<br>+H voltage<br>+N voltage | <b>These voltages must strictly be checked and re-adjusted if necessary after every repair and before every alignment.</b><br><br>Brightness: Minimum                                                                                                                                                                                                                                                                                                                 | With <b>R61313</b> acc. to the table on power supply chassis pcb.<br>With <b>R61031</b> set 12V on contact 36 of the Feature Box.<br>With <b>R61041</b> set 5V on contact 9/10 of the Feature Box.<br>With <b>R61001</b> set 5V on contact 8 of the Feature Box.<br>With <b>R61051</b> set 5V on contact 32/33 of the Feature Box.           |
| 1.2 Tuner AGC                                                          | Feed in a standard test pattern at channel 60 (UHF); RF =1.5mV (64dBµV). PIP receivers with two tuners without antenna splitter.<br>Voltmeter: tuner contact 2.                                                                                                                                                                                                                                                                                                       | Set <b>3.3V ± 0.1V</b> with <b>R32033 (Signal Module)</b> .                                                                                                                                                                                                                                                                                  |
| 1.3 AFC Reference                                                      | Tune to a station in band I (channel 2...4) with standardized channel spacing and without fine tuning.<br><br>With button " <b>I</b> " call up the "AFC reference" menu via DIALOGCENTER → "OK" → "SERVICE" → "OK" → "Only for the retailer" → "OK" → Code Number "8500" → (menu guide).                                                                                                                                                                              | On activation of AFC Reference a rectified IF-voltage from the AFC output of IC32010 is measured at the multipoint connector, contact 5, of the signal module which is used on station search or for VCR-RF playback (station identification "AV") as a comparative value to readjust the modulator drift (typ. 127±10). Activate with "OK". |
| 1.4.1 PLL demodulator circuit for 38.9MHz vision carrier               | - Feed in a standard test pattern with standardized channel spacing, band 3, with the respective TV standard.<br>- Voltmeter to multipoint connector contact 5 of signal module.                                                                                                                                                                                                                                                                                      | Set <b>2.5V</b> with <b>F132043</b> on the signal module.                                                                                                                                                                                                                                                                                    |
| 1.4.2 PLL demodulator circuit for 33.4 MHz vision carrier (Multi-IF)   | - <b>Check and if necessary readjust 1.4.1.</b><br>- Feed in a standard test pattern with standardized channel spacing, band 1, French TV standard.<br>- Voltmeter to multipoint connector contact 5 of the signal module.                                                                                                                                                                                                                                            | Set <b>2.5V</b> with <b>R32057</b> on the signal module.                                                                                                                                                                                                                                                                                     |
| 1.5 Text RGB level                                                     | With button " <b>I</b> " call up the "Text RGB level" menu via DIALOGCENTER → "OK" → "SERVICE" → "OK" → "Only for the retailer" → "OK" → Code Number "8500" → (menu guide).                                                                                                                                                                                                                                                                                           | In RGB operation it is possible to set the RGB level to "Half level" or "Full level" with the buttons ◀ ▶ to eliminate line tearing in this mode and to adjust the display intensity. The setting is stored when terminating the menu.                                                                                                       |
| 1.6 White balance                                                      | Feed in a grey scale black/white test pattern with burst.<br>Set white balance to mid-position.<br>Contrast (ⓘ) to maximum.<br>Colour contrast (Ⓢ) to mid-position.<br>Screen brightness (☼) to mid-position.<br>Switch off "Perfect Clear".<br>("red key" → "PICTURE SETTINGS" → "OK")<br>With button " <b>I</b> " call up the "White balance" menu via DIALOGCENTER → "OK" → "SERVICE" → "OK" → "Only for the retailer" → "OK" → Code Number "8500" → (menu guide). | With the ◀ ▶ buttons set the values for <b>VG</b> and <b>VB</b> so that the picture becomes achromatic.<br>Store with "OK".<br><br>The "?" key, default values, is used to call up the last stored white value.                                                                                                                              |
| 1.7 Type of picture tube                                               | With button " <b>I</b> " call up the "Tube type" menu via "DIALOGCENTER" → "OK" → "SERVICE" → "OK" → "Only for the retailer" → "OK" → Code Number "8500" → (menu guide).                                                                                                                                                                                                                                                                                              | With the ◀ ▶ buttons set P55, T70/16:9, T82/16:9, T63, P63, P63 BLS, T72, P72, T82, T95, P70 (T = Toshiba tube, P = Philips tube).<br>The selected type is stored when terminating the menu.                                                                                                                                                 |
| 1.8 VM (Velocity Modulation)                                           | With button " <b>I</b> " call up the "GM" menu via "DIALOGCENTER" → "OK" → "SERVICE" → "OK" → "Only for the retailer" → "OK" → Code Number "8500" → (menu guide).                                                                                                                                                                                                                                                                                                     | With the ◀ ▶ buttons switch the velocity modulation on or off.                                                                                                                                                                                                                                                                               |
| 1.9 CIP 3250A                                                          | With button " <b>I</b> " call up the "CIP 3250A" menu via "DIALOGCENTER" → "OK" → "SERVICE" → "OK" → "Only for the retailer" → "OK" → Code Number "8500" → (menu guide).                                                                                                                                                                                                                                                                                              | With the ◀ ▶ buttons select A1 or B1.<br>This definition depends on CIC1360 in the Feature Box. On selection of the wrong setting, the colours are not correct when switching the TV set on again.                                                                                                                                           |
| 1.10 PIP position                                                      | Feed in the transmitter and AV picture.<br>Press and hold the " <b>I</b> " button on the remote control while switching on with the mains button.                                                                                                                                                                                                                                                                                                                     | Change the PIP position with the ◀ ▶ and ▲ ▼ buttons and store with "OK".                                                                                                                                                                                                                                                                    |

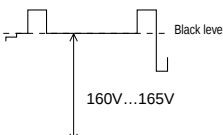
| Alignment                               | Preparations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Alignment Process                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.11 Picture geometry                   | <p>Feed in the geometry test pattern or switch on the internal test pattern.<br/>Call up the menu "Geometry" with button "I" via "DIALOG-CENTER" → "OK" → "SERVICE" → "OK" → "Only for the retailer" → "OK" → Code Number "8500"(menu guide).</p> <p><b>Attention:</b> The "Line shift" alignment influences the line phase. Before this adjustment, set the horizontal amplitude to minimum and if necessary correct the raster position with the "H-Shift" plug.</p> <p><b>Reset:</b><br/>The "Reset" menu contains:<br/>- either the optimum picture geometry data entered in the factory<br/>- or the average data set read out from the ROM if the TV has been switched on with the emergency data set.</p> <p>On misalignment, these basic values can be re-loaded at any time as follows:<br/>With button "I" call up the "Geometry" menu via "DIALOG-CENTER" → "OK" → "SERVICE" → "OK" → "Only for the retailer" → "OK" → Code Number "8500"(menu guide).</p> | <p>Check the geometry via the menu guide and correct the setting if necessary.</p> <p>With ◀ or ▶ button, move the picture into the centre of the raster. Re-adjust the horizontal amplitude according to the test pattern.</p> <p><b>Store:</b><br/>Call up "End without memory" and change to "End with memory" with the ◀ or ▶ button .<br/>Store the setting with "OK".</p> <p>Whenever the TV is switched on the picture geometry is set to the value stored last.</p> |
| 1.11.1 Picture geometry VGA             | <p>Switch the TV to "A 5" programme position and feed in a geometry pattern via PC.</p> <p>With the "I" button call up the "Geometry" menu via "DIALOG-CENTER" → "OK" → "SERVICE" → "OK" → "Only for the retailer" → "OK" → Code Number "8500"(menu guide).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <p>Check the geometry via the menu guide and correct the setting if necessary.</p> <p>A separate geometry data set for programme position A5 is stored in IC87030 .</p>                                                                                                                                                                                                                                                                                                     |
| 1.12 Bridge coil L53074 (Mains Chassis) | <p>The bridge coil L53074 is adjusted in the factory and should not be readjusted any more.<br/>With button "I" call up the "Geometry" menu via "DIALOG-CENTER" → "OK" → "SERVICE" → "OK" → "Only for the retailer" → "OK" → Code Number "8500"(menu guide).<br/>Set the horizontal amplitude (width) to minimum.<br/>Oscilloscope channel 1: collector T53001.<br/>Oscilloscope channel 2: cathode D53072.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <p>Check the pulse width of the oscillograms and correct it if necessary with coil <b>L53074</b> so that it is the same for both oscillograms.<br/>Re-adjust the horizontal amplitude according to the test pattern.</p>                                                                                                                                                                                                                                                    |
| 1.13 Line sharpness                     | <ul style="list-style-type: none"> <li>- Select the convergence test pattern:</li> <li>- Contrast (●) to maximum.</li> <li>- Set the brightness (☉) so that the black background of the test pattern is just brightening.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <p>With the focus control ☒ on the cascade adjust the horizontal lines for maximum sharpness.<br/>Subsequently, adjust the vertical lines for maximum sharpness using the dynamic focus control ☒ (dynamic focusing board). Repeat alternately.</p>                                                                                                                                                                                                                         |

## 2. Picture Tube Board

**Measuring instruments:** High-resistance voltmeter, Dual -channel oscilloscope with test probe 10:1.

**Service works after replacement or repair of:**

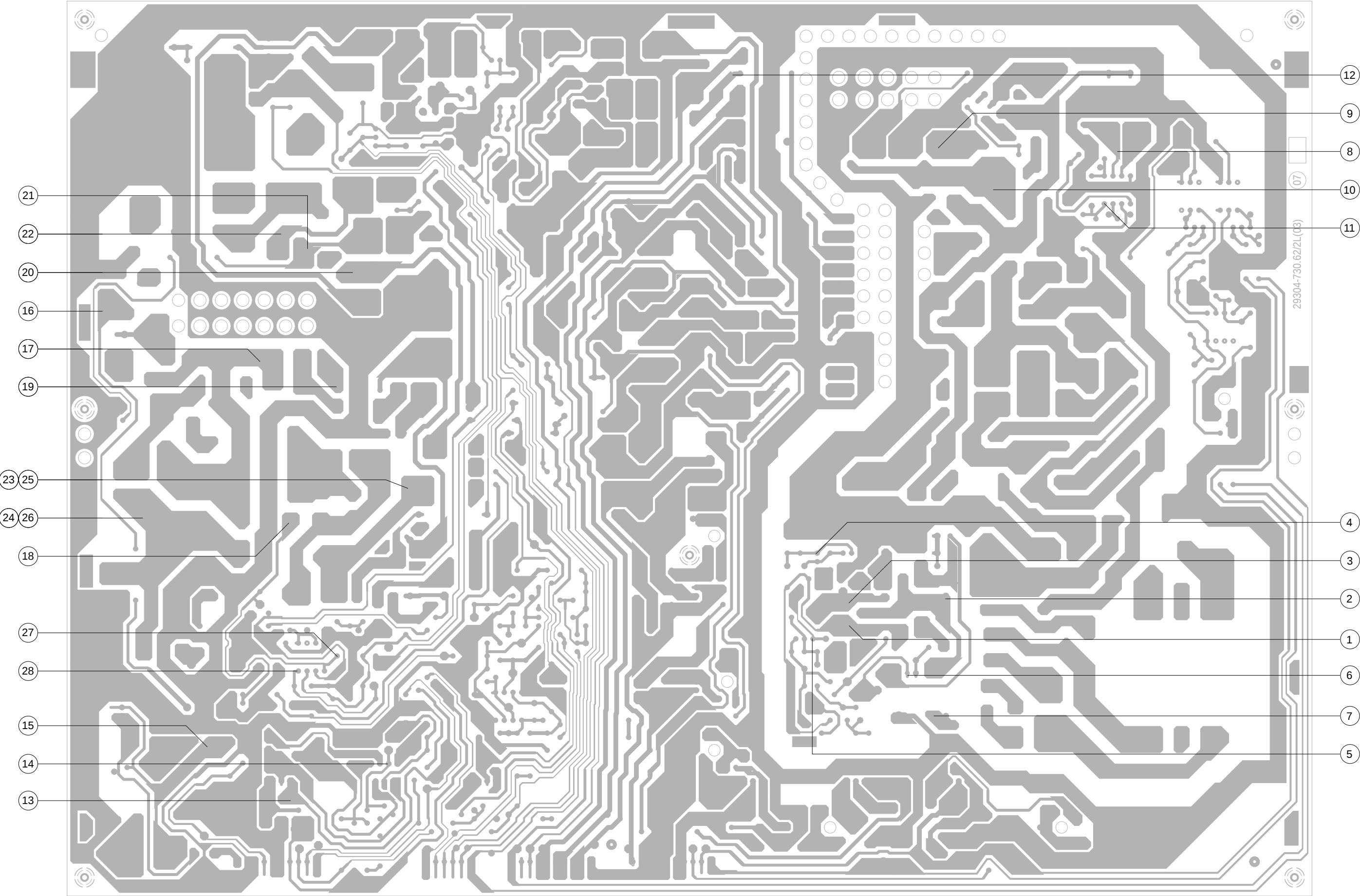
- **picture tube, picture tube board:** Alignment no. 2.1 and 2.2

| Alignment                                                                                                                  | Preparations                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Alignment Process                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.1. White balance<br>see 1.6                                                                                              | <p>Feed in a grey scale black/white test pattern with burst.<br/>Set white balance to mid-position.<br/>Contrast (●) to maximum.<br/>Colour contrast (⊗) to mid-position.<br/>Screen brightness (☉) to mid-position.<br/>Switch off "Perfect Clear"<br/>("red key" → "PICTURE SETTINGS" → "OK" Personal values).<br/>With button "I" call up the "White balance" menu via "DIALOGCENTER" → "OK" → "SERVICE" → "OK" → "Only for the retailer" → "OK" → Code Number "8500"(menu guide).</p> | <p>With the ◀ ▶ buttons set the values for <b>VG</b> and <b>VB</b> so that the picture becomes achromatic.<br/>Store with "OK".</p> <p>The "?" key, default values, is used to call up the last stored white value.</p>                                            |
| 2.2. Screen grid voltage $U_{G2}$ , $U_{SG}$<br><br>The control unit of the Philips picture tube is fitted on the chassis. | <p>Switch off "Perfect Clear"<br/>("red key" → "PICTURE SETTINGS" → "OK" Personal values).<br/>TV receiver to AV mode.<br/>Feed in a black raster.<br/>Screen brightness: grey area just becomes dark.<br/>Voltmeter via 220 kΩ to R, G, and B test point.<br/>Determine highest voltage level.</p>                                                                                                                                                                                       | <p>With the control <math>U_{G2}</math> or <math>U_{SG}</math> on the picture tube panel set the test point with the highest voltage level to approx. <b>162.5V±2.5V</b>.</p>  |

Platinenabbildungen und Schaltpläne / Layout of the PCBs and Circuit Diagrams

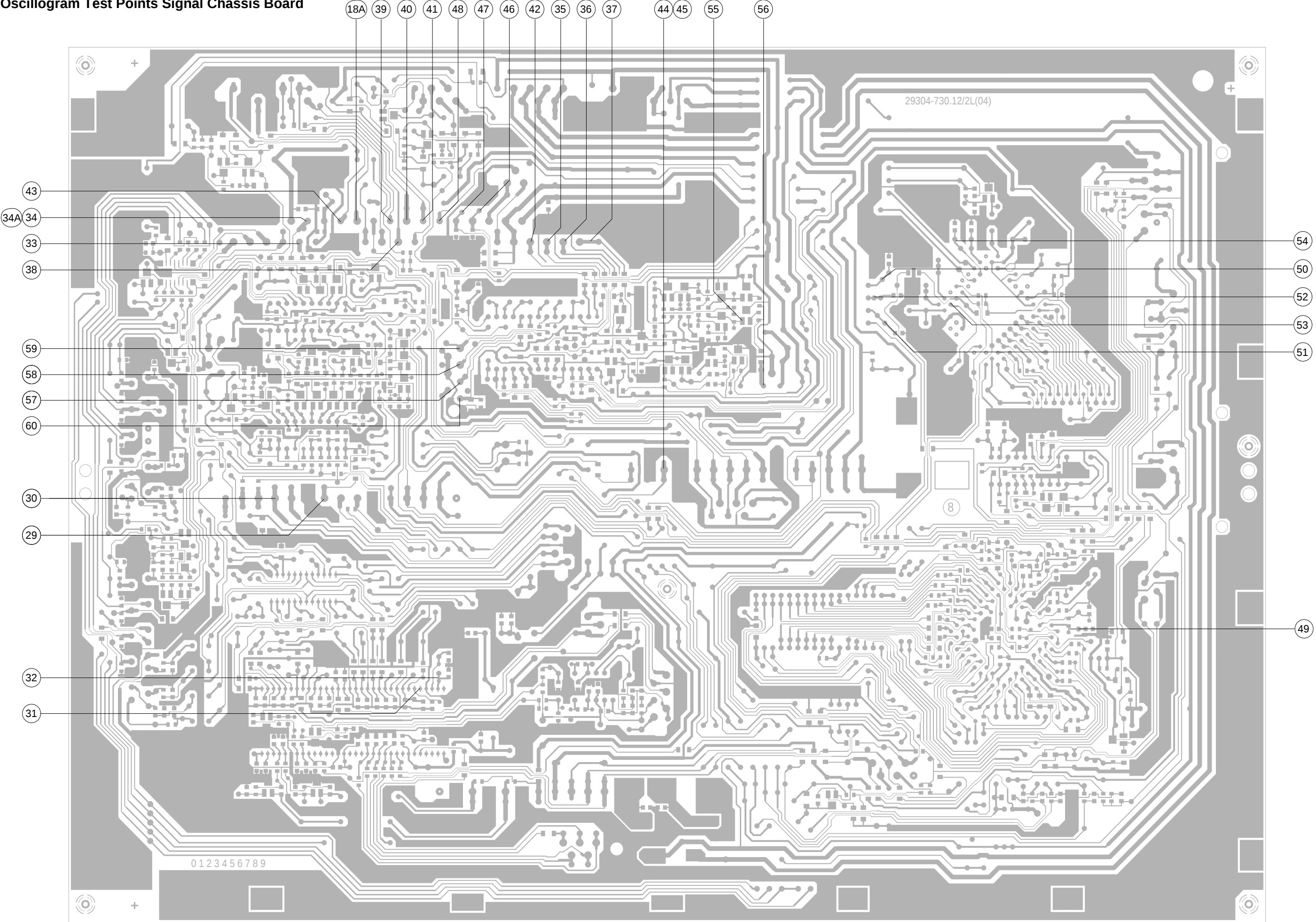
Lötseite, Ansicht von unten  
Solder side, bottom view

Oszillogramm-Meßpunkte Netz Chassisplatte / Oscillogram Test Points Mains Chassis Board



Oszillogramm-Meßpunkte Signal Chassisplatte  
Oscillogram Test Points Signal Chassis Board

Lötseite, Ansicht von unten  
Solder side, bottom view



## Bestückungskordinaten der Bauteile auf dem Netz-Chassis

- Die Koordinaten X und Y sind sowohl als metrische Koordinaten für die Originalplatine in Millimeter, als auch als absolute Koordinaten für die vergrößerten Abbildungen der Platinen verwendbar.

C --> Kondensator  
D --> Diode  
IC --> Integrierter Schaltkreis  
L --> Spule  
R --> Widerstand  
T --> Transistor

CC --> Chip-Kondensator  
CD --> Chip-Diode  
CIC--> Chip-IC  
CL --> Chip-Spule  
CR --> Chip-Widerstand  
CT --> Chip-Transistor

## Assembly coordinates of the components at the Mains Chassis

- The X and Y coordinates can be used as both metric coordinates in mm for the original circuit board and absolute coordinates for the enlarged diagrams of the circuit boards.

C --> Capacitor  
D --> Diode  
IC --> Integrated Circuit  
L --> Coil  
R --> Resistor  
T --> Transistor

CC --> Chip Capacitor  
CD --> Chip Diode  
CIC--> Chip IC  
CL --> Chip Coil  
CR --> Chip Resistor  
CT --> Chip Transistor

## Chassisplatte

### Koordinaten für die Bauteile der Bestückungsseite (Oberseite)

| Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates<br>X Y |     | Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates<br>X Y |     | Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates<br>X Y |     |
|-----------------------|------------------------------------|-----|-----------------------|------------------------------------|-----|-----------------------|------------------------------------|-----|
| C21001                | 18                                 | 203 |                       |                                    |     | C61028                | 173                                | 36  |
| C21202                | 125                                | 210 |                       |                                    |     |                       |                                    |     |
| C21206                | 119                                | 211 | C58014                | 138                                | 93  | C61031                | 173                                | 43  |
| C21212                | 112                                | 244 | C58021                | 126                                | 45  | C61032                | 166                                | 59  |
| C21221                | 148                                | 84  | C58023                | 140                                | 45  | C61036                | 190                                | 120 |
|                       |                                    |     | C60001                | 255                                | 204 | C61037                | 164                                | 111 |
|                       |                                    |     | C60002                | 296                                | 228 | C61038                | 170                                | 99  |
| C21231                | 129                                | 95  |                       |                                    |     |                       |                                    |     |
| C21232                | 129                                | 175 | C60007                | 279                                | 241 | C61041                | 170                                | 75  |
| C21233                | 83                                 | 220 | C60009                | 240                                | 208 | C61042                | 166                                | 88  |
| C50004                | 94                                 | 9   | C60011                | 288                                | 203 | C61051                | 191                                | 20  |
| C50011                | 67                                 | 44  | C60012                | 284                                | 185 | C61052                | 201                                | 17  |
|                       |                                    |     | C60013                | 306                                | 195 | C61056                | 191                                | 170 |
| C50012                | 77                                 | 45  |                       |                                    |     |                       |                                    |     |
| C50013                | 91                                 | 20  | C60014                | 325                                | 228 | C61057                | 164                                | 173 |
| C50014                | 59                                 | 45  | C60016                | 308                                | 177 | C61058                | 210                                | 18  |
| C50016                | 105                                | 53  | C60017                | 300                                | 195 | C61061                | 167                                | 159 |
| C50024                | 105                                | 40  | C60018                | 275                                | 195 | C61062                | 164                                | 145 |
|                       |                                    |     | C60019                | 299                                | 145 | C61063                | 157                                | 160 |
| C50026                | 92                                 | 48  |                       |                                    |     |                       |                                    |     |
| C50027                | 40                                 | 24  | C60021                | 311                                | 150 | C61064                | 134                                | 108 |
| C52001                | 59                                 | 66  | C60022                | 228                                | 121 | C61066                | 167                                | 185 |
| C52002                | 40                                 | 13  | C60023                | 272                                | 114 | C61301                | 328                                | 181 |
| C52003                | 18                                 | 40  | C60024                | 299                                | 129 | C61311                | 335                                | 177 |
|                       |                                    |     | C60026                | 272                                | 125 | C61801                | 150                                | 225 |
| C52004                | 18                                 | 23  |                       |                                    |     |                       |                                    |     |
| C53006                | 59                                 | 117 | C60027                | 291                                | 129 | C61802                | 138                                | 223 |
| C53007                | 59                                 | 135 | C60028                | 262                                | 117 | C61803                | 138                                | 246 |
| C53012                | 59                                 | 109 | C60031                | 329                                | 216 | C61806                | 135                                | 208 |
| C53013                | 54                                 | 89  | C60201                | 225                                | 51  | C61808                | 166                                | 219 |
|                       |                                    |     | C60202                | 214                                | 57  | C61809                | 147                                | 210 |
| C53016                | 110                                | 165 |                       |                                    |     |                       |                                    |     |
| C53017                | 100                                | 165 | C60203                | 211                                | 84  | C62021                | 314                                | 110 |
| C53031                | 65                                 | 247 | C60204                | 214                                | 50  | C62022                | 314                                | 116 |
| C53032                | 59                                 | 247 | C60221                | 226                                | 59  | C62048                | 206                                | 108 |
| C53033                | 79                                 | 239 | C60224                | 244                                | 85  | C62501                | 295                                | 56  |
|                       |                                    |     | C61001                | 254                                | 15  | C62502                | 328                                | 95  |
| C53036                | 38                                 | 194 |                       |                                    |     |                       |                                    |     |
| C53037                | 60                                 | 201 | C61002                | 265                                | 23  | C62505                | 297                                | 84  |
| C53038                | 40                                 | 201 | C61003                | 265                                | 13  |                       |                                    |     |
| C53071                | 29                                 | 117 | C61004                | 276                                | 14  | D21001                | 26                                 | 189 |
| C53072                | 30                                 | 91  | C61006                | 245                                | 23  | D21201                | 126                                | 235 |
|                       |                                    |     | C61007                | 245                                | 13  | D21202                | 126                                | 199 |
| C53073                | 65                                 | 99  |                       |                                    |     | D21203                | 130                                | 235 |
| C54001                | 89                                 | 209 | C61008                | 235                                | 12  | D21206                | 113                                | 203 |
| C54002                | 112                                | 192 | C61011                | 190                                | 196 |                       |                                    |     |
| C54006                | 99                                 | 149 | C61012                | 154                                | 171 | D21212                | 124                                | 251 |
| C54007                | 95                                 | 135 | C61013                | 163                                | 199 | D21221                | 115                                | 19  |
|                       |                                    |     | C61014                | 214                                | 199 | D21222                | 108                                | 21  |
| C55003                | 69                                 | 61  |                       |                                    |     | D21231                | 139                                | 58  |
| C55004                | 80                                 | 58  | C61015                | 160                                | 185 | D21232                | 141                                | 59  |
| C55011                | 83                                 | 76  | C61016                | 210                                | 213 |                       |                                    |     |
| C55012                | 56                                 | 83  | C61017                | 142                                | 191 | D50013                | 76                                 | 34  |
| C55013                | 82                                 | 66  | C61017A142            | 191                                |     | D52003                | 20                                 | 53  |
|                       |                                    |     | C61018                | 189                                | 242 | D52006                | 30                                 | 48  |
| C58001                | 118                                | 56  |                       |                                    |     | D53039                | 119                                | 181 |
| C58004                | 138                                | 70  | C61021                | 190                                | 225 | D53071                | 16                                 | 120 |
| C58011                | 130                                | 85  | C61022                | 141                                | 167 |                       |                                    |     |
| C58012                | 123                                | 81  | C61026                | 190                                | 145 | D53072                | 16                                 | 90  |
| C58013                | 127                                | 71  | C61027                | 164                                | 127 |                       |                                    |     |

## Chassis Board

### Coordinates of the components on the components side (top side)

| Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates<br>X Y |     | Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates<br>X Y |  | Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates<br>X Y |     |
|-----------------------|------------------------------------|-----|-----------------------|------------------------------------|--|-----------------------|------------------------------------|-----|
| D54001                | 86                                 | 204 |                       |                                    |  | IC55010               | 71                                 | 70  |
| D54006                | 100                                | 144 |                       |                                    |  | IC58010               | 129                                | 55  |
| D55003                | 90                                 | 75  |                       |                                    |  | IC60010               | 306                                | 206 |
| D55004                | 90                                 | 63  |                       |                                    |  | IC61001               | 260                                | 33  |
|                       |                                    |     |                       |                                    |  |                       |                                    |     |
| D55012                | 45                                 | 66  |                       |                                    |  | IC61006               | 230                                | 33  |
| D58001                | 117                                | 70  |                       |                                    |  | IC61030               | 183                                | 60  |
| D58003                | 43                                 | 35  |                       |                                    |  | IC61040               | 183                                | 90  |
| D58004                | 117                                | 66  |                       |                                    |  | IC61050               | 200                                | 33  |
| D58007                | 117                                | 63  |                       |                                    |  | IC61310               | 336                                | 166 |
|                       |                                    |     |                       |                                    |  |                       |                                    |     |
| D58011                | 126                                | 84  |                       |                                    |  | K53030                | 37                                 | 230 |
| D58012                | 130                                | 74  |                       |                                    |  |                       |                                    |     |
| D58021                | 131                                | 41  |                       |                                    |  | L53001                | 16                                 | 149 |
| D58022                | 135                                | 41  |                       |                                    |  | L53002                | 36                                 | 144 |
| D60006                | 275                                | 213 |                       |                                    |  | L53003                | 24                                 | 158 |
|                       |                                    |     |                       |                                    |  | L53012                | 115                                | 96  |
| D60007                | 283                                | 228 |                       |                                    |  | L53021                | 79                                 | 114 |
| D60012                | 289                                | 186 |                       |                                    |  |                       |                                    |     |
| D60014                | 305                                | 186 |                       |                                    |  | L53074                | 113                                | 125 |
| D60019                | 292                                | 149 |                       |                                    |  | L55014                | 28                                 | 71  |
| D60021                | 305                                | 149 |                       |                                    |  | L60006                | 265                                | 199 |
|                       |                                    |     |                       |                                    |  | L60021                | 260                                | 134 |
| D60023                | 282                                | 114 |                       |                                    |  | L60028                | 276                                | 150 |
| D60201                | 225                                | 48  |                       |                                    |  |                       |                                    |     |
| D60202                | 228                                | 63  |                       |                                    |  | L61011                | 213                                | 183 |
| D60203                | 211                                | 66  |                       |                                    |  | L61014                | 213                                | 188 |
| D60204                | 219                                | 66  |                       |                                    |  | L61016                | 204                                | 240 |
|                       |                                    |     |                       |                                    |  | L61021                | 213                                | 192 |
| D60207                | 246                                | 105 |                       |                                    |  | L61026                | 216                                | 152 |
| D60208                | 246                                | 100 |                       |                                    |  |                       |                                    |     |
| D60223                | 216                                | 88  |                       |                                    |  | L61036                | 216                                | 148 |
| D60224                | 256                                | 80  |                       |                                    |  | L61037                | 216                                | 173 |
| D60225                | 253                                | 84  |                       |                                    |  | L61056                | 216                                | 167 |
|                       |                                    |     |                       |                                    |  | L61061                | 216                                | 163 |
| D60226                | 250                                | 88  |                       |                                    |  | L61066                | 215                                | 177 |
| D61001                | 259                                | 44  |                       |                                    |  |                       |                                    |     |
| D61011                | 184                                | 203 |                       |                                    |  | L62501                | 325                                | 65  |
| D61016                | 184                                | 230 |                       |                                    |  | OK60031328            | 204                                |     |
| D61021                | 196                                | 228 |                       |                                    |  | OK60046               | 339                                | 204 |
|                       |                                    |     |                       |                                    |  | R21001                | 24                                 | 174 |
| D61026                | 184                                | 148 |                       |                                    |  | R21101                | 94                                 | 249 |
| D61033                | 124                                | 139 |                       |                                    |  |                       |                                    |     |
| D61036                | 184                                | 120 |                       |                                    |  | R21102                | 99                                 | 234 |
| D61056                | 184                                | 175 |                       |                                    |  | R21102A               | 95                                 | 233 |
| D61061                | 174                                | 159 |                       |                                    |  | R21201                | 126                                | 222 |
|                       |                                    |     |                       |                                    |  | R21202                | 130                                | 221 |
| D61062                | 149                                | 138 |                       |                                    |  | R21203                | 123                                | 228 |
| D61063                | 136                                | 135 |                       |                                    |  |                       |                                    |     |
| D61066                | 174                                | 186 |                       |                                    |  | R21206                | 91                                 | 200 |
| D61067                | 147                                | 151 |                       |                                    |  | R21211                | 106                                | 236 |
| D61068                | 137                                | 144 |                       |                                    |  | R21212                | 110                                | 251 |
|                       |                                    |     |                       |                                    |  | R21213                | 119                                | 235 |
| D61801                | 151                                | 220 |                       |                                    |  | R21214                | 126                                | 247 |
| D61803                | 140                                | 251 |                       |                                    |  |                       |                                    |     |
| D61807                | 156                                | 236 |                       |                                    |  | R21221                | 144                                | 81  |
| D61808                | 163                                | 214 |                       |                                    |  | R21222                | 146                                | 91  |
|                       |                                    |     |                       |                                    |  | R21223                | 151                                | 84  |
| IC50010               | 93                                 | 35  |                       |                                    |  | R21224                | 145                                | 95  |

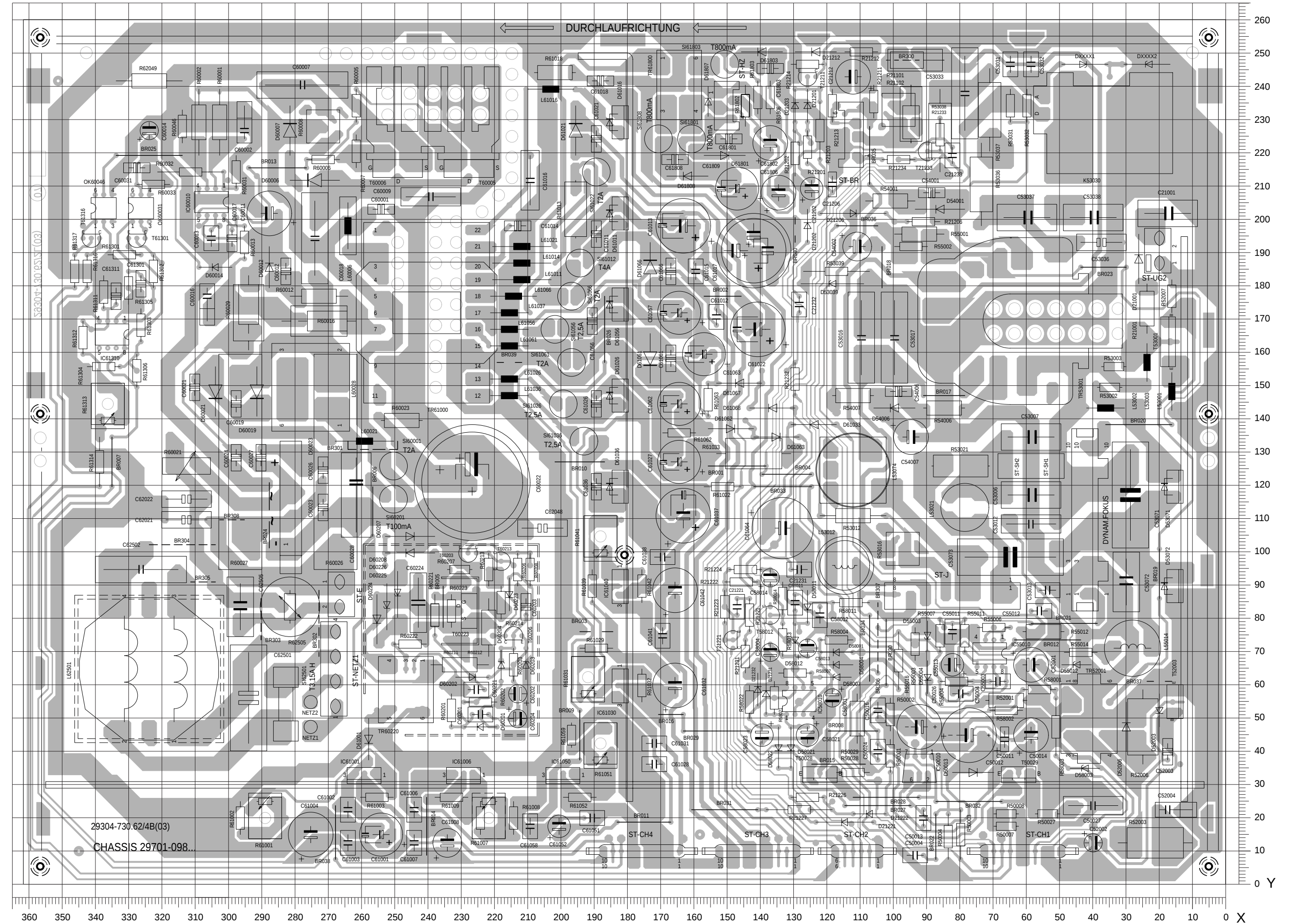
| Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates<br>X Y |     | Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates<br>X Y |  |
|-----------------------|------------------------------------|-----|-----------------------|------------------------------------|--|
| R21226                | 126                                | 26  |                       |                                    |  |
|                       |                                    |     |                       |                                    |  |
| R21227                | 129                                | 23  |                       |                                    |  |
| R21231                | 145                                | 69  |                       |                                    |  |
| R21232                | 130                                | 152 |                       |                                    |  |
| R21233                | 86                                 | 226 |                       |                                    |  |
| R21234                | 99                                 | 219 |                       |                                    |  |
|                       |                                    |     |                       |                                    |  |
| R50001                | 101                                | 39  |                       |                                    |  |
| R50002                | 101                                | 51  |                       |                                    |  |
| R50003                | 80                                 | 15  |                       |                                    |  |
| R50004                | 84                                 | 14  |                       |                                    |  |
| R50007                | 66                                 | 18  |                       |                                    |  |
|                       |                                    |     |                       |                                    |  |
| R50008                | 66                                 | 21  |                       |                                    |  |
| R50027                | 54                                 | 21  |                       |                                    |  |
| R50028                | 113                                | 34  |                       |                                    |  |
| R50029                | 111                                | 50  |                       |                                    |  |
| R52001                | 66                                 | 56  |                       |                                    |  |
|                       |                                    |     |                       |                                    |  |
| R52003                | 21                                 | 13  |                       |                                    |  |
| R52006                | 25                                 | 48  |                       |                                    |  |
| R52007                | 16                                 | 177 |                       |                                    |  |
| R53002                | 35                                 | 150 |                       |                                    |  |
| R53003                | 34                                 | 156 |                       |                                    |  |
|                       |                                    |     |                       |                                    |  |
| R53012                | 113                                | 111 |                       |                                    |  |
| R53016                | 98                                 | 101 |                       |                                    |  |
| R53021                | 80                                 | 126 |                       |                                    |  |
| R53031                | 65                                 | 235 |                       |                                    |  |
| R53032                | 60                                 | 235 |                       |                                    |  |
|                       |                                    |     |                       |                                    |  |
| R53036                | 74                                 | 211 |                       |                                    |  |
| R53037                | 71                                 | 234 |                       |                                    |  |
| R53038                | 86                                 | 228 |                       |                                    |  |
| R53039                | 117                                | 185 |                       |                                    |  |
| R54001                | 101                                | 206 |                       |                                    |  |
|                       |                                    |     |                       |                                    |  |
| R54006                | 85                                 | 144 |                       |                                    |  |
| R54007                | 113                                | 148 |                       |                                    |  |
| R55001                | 93                                 | 196 |                       |                                    |  |
| R55002                | 95                                 | 192 |                       |                                    |  |
| R55003                | 94                                 | 73  |                       |                                    |  |
|                       |                                    |     |                       |                                    |  |
| R55004                | 81                                 | 61  |                       |                                    |  |
| R55006                | 70                                 | 78  |                       |                                    |  |
| R55007                | 86                                 | 75  |                       |                                    |  |
| R55011                | 79                                 | 75  |                       |                                    |  |
| R55012                | 55                                 | 76  |                       |                                    |  |
|                       |                                    |     |                       |                                    |  |
| R55014                | 44                                 | 70  |                       |                                    |  |
| R55016                | 99                                 | 68  |                       |                                    |  |
| R58001                | 56                                 | 59  |                       |                                    |  |
| R58002                | 66                                 | 53  |                       |                                    |  |
| R58003                | 51                                 | 48  |                       |                                    |  |
|                       |                                    |     |                       |                                    |  |
| R58004                | 117                                | 74  |                       |                                    |  |
| R58007                | 130                                | 64  |                       |                                    |  |
| R58011                | 113                                | 85  |                       |                                    |  |

**Koordinaten für die Bauteile der Bestückungsseite  
(Oberseite)**
**Coordinates of the Components on the Components Side  
(Top Side)**

| Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates |     | Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates |     | Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates |     | Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates |     | Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates |     | Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates |     |
|-----------------------|-----------------------------|-----|-----------------------|-----------------------------|-----|-----------------------|-----------------------------|-----|-----------------------|-----------------------------|-----|-----------------------|-----------------------------|-----|-----------------------|-----------------------------|-----|
|                       | X                           | Y   |                       | X                           | Y   |                       | X                           | Y   |                       | X                           | Y   |                       | X                           | Y   |                       | X                           | Y   |
| R58013                | 134                         | 74  | R60033                | 324                         | 211 | R61009                | 234                         | 26  | R61305                | 331                         | 180 | SI61056               | 203                         | 167 | T50028                | 123                         | 33  |
| R58014                | 134                         | 86  | R60046                | 315                         | 229 | R61013                | 196                         | 204 | R61306                | 329                         | 155 | SI61061               | 198                         | 158 | T50029                | 63                          | 33  |
|                       |                             |     |                       |                             |     |                       |                             |     |                       |                             |     | SI61066               | 198                         | 177 |                       |                             |     |
| R58021                | 136                         | 56  | R60201                | 234                         | 53  | R61018                | 203                         | 245 | R61311                | 339                         | 179 | SI61801               | 161                         | 225 | T52003                | 15                          | 55  |
| R58022                | 144                         | 55  | R60202                | 225                         | 55  | R61022                | 152                         | 120 | R61312                | 345                         | 165 |                       |                             |     | T53001                | 17                          | 164 |
| R60001                | 304                         | 230 | R60203                | 215                         | 66  | R61029                | 190                         | 71  | R61313                | 338                         | 145 | SI61803               | 151                         | 247 | T58012                | 137                         | 81  |
| R60002                | 310                         | 230 | R60206                | 214                         | 95  | R61031                | 192                         | 62  | R61314                | 340                         | 127 | SI61808               | 171                         | 225 | T60005                | 228                         | 216 |
| R60005                | 263                         | 235 | R60207                | 231                         | 95  | R61032                | 176                         | 60  | R61316                | 344                         | 185 | SI62501               | 284                         | 54  | T60006                | 239                         | 230 |
|                       |                             |     |                       |                             |     |                       |                             |     |                       |                             |     |                       |                             |     |                       |                             |     |
| R60006                | 272                         | 219 | R60208                | 210                         | 95  | R61033                | 142                         | 130 | R61317                | 347                         | 185 | ST-BR                 | 113                         | 226 | T60203                | 229                         | 99  |
| R60007                | 263                         | 221 | R60211                | 231                         | 66  | R61039                | 191                         | 90  | R61802                | 145                         | 235 | ST-CH01               | 61                          | 10  | T60206                | 215                         | 76  |
| R60008                | 272                         | 229 | R60212                | 222                         | 78  | R61041                | 189                         | 105 | R61803                | 141                         | 238 | ST-CH02               | 111                         | 10  | T60213                | 218                         | 98  |
| R60012                | 274                         | 177 | R60213                | 222                         | 95  | R61042                | 176                         | 90  | R61806                | 138                         | 238 | ST-CH03               | 141                         | 10  | T60223                | 228                         | 83  |
| R60013                | 296                         | 194 | R60214                | 219                         | 85  | R61051                | 189                         | 42  | R62049                | 325                         | 242 | ST-CH04               | 176                         | 10  | T61301                | 329                         | 194 |
|                       |                             |     |                       |                             |     |                       |                             |     |                       |                             |     |                       |                             |     |                       |                             |     |
| R60016                | 274                         | 170 | R60221                | 239                         | 81  | R61052                | 195                         | 26  | R62505                | 283                         | 84  | ST-E                  | 267                         | 88  | T61316                | 342                         | 194 |
| R60021                | 314                         | 126 | R60222                | 246                         | 73  | R61059                | 198                         | 45  |                       |                             |     | ST-HZ                 | 151                         | 235 |                       |                             |     |
| R60023                | 249                         | 140 | R60223                | 234                         | 83  | R61062                | 165                         | 136 | SI60001               | 251                         | 126 | ST-J                  | 83                          | 87  | TR52001               | 41                          | 50  |
| R60026                | 269                         | 127 | R61001                | 290                         | 20  | R61063                | 156                         | 146 | SI60201               | 251                         | 116 | ST-NETZ               | 269                         | 65  | TR53001               | 62                          | 170 |
| R60027                | 297                         | 127 | R61002                | 297                         | 20  | R61301                | 333                         | 190 | SI61012               | 195                         | 188 | ST-UG02               | 21                          | 191 | TR60220               | 247                         | 59  |
|                       |                             |     |                       |                             |     |                       |                             |     | SI61022               | 190                         | 215 |                       |                             |     | TR61000               | 241                         | 173 |
| R60029                | 295                         | 173 | R61003                | 256                         | 26  | R61302                | 324                         | 185 | SI61026               | 200                         | 145 | T21211                | 126                         | 243 | TR61800               | 165                         | 241 |
| R60031                | 299                         | 215 | R61007                | 225                         | 20  | R61303                | 328                         | 169 |                       |                             |     | T21221                | 149                         | 74  |                       |                             |     |
| R60032                | 313                         | 215 | R61008                | 215                         | 20  | R61304                | 339                         | 156 | SI61036               | 194                         | 134 | T21233                | 91                          | 221 |                       |                             |     |

Netz Chassisplatte / Mains Chassis Board

Bestückungsseite, Ansicht von oben  
Component side, top view



**Lötseite, Ansicht von unten**  
**Solder side, bottom view**



## Signal-Chassisplatte

## Koordinaten für die Bauteile der Bestückungsseite (Oberseite)

| Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates |     | Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates |     | Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates |     |
|-----------------------|-----------------------------|-----|-----------------------|-----------------------------|-----|-----------------------|-----------------------------|-----|
|                       | X                           | Y   |                       | X                           | Y   |                       | X                           | Y   |
| BU-AV01               | 14                          | 85  | C43127                | 98                          | 102 | D40010                | 155                         | 48  |
| BU-AV02               | 14                          | 145 |                       |                             |     | D41011                | 179                         | 88  |
|                       |                             |     | C43151                | 92                          | 148 | D87091                | 281                         | 28  |
| C32327                | 79                          | 76  | C43157                | 64                          | 161 |                       |                             |     |
| C32332                | 98                          | 76  | C43158                | 55                          | 142 | IC32300               | 86                          | 60  |
| C32343                | 61                          | 79  | C43179                | 61                          | 170 | IC32340               | 129                         | 87  |
| C32346                | 72                          | 79  | C43181                | 66                          | 170 | IC34510               | 144                         | 173 |
| C32355                | 134                         | 54  |                       |                             |     | IC41010               | 161                         | 70  |
|                       |                             |     | C43187                | 80                          | 170 | IC43150               | 73                          | 145 |
| C32360                | 67                          | 76  | C43199                | 90                          | 175 |                       |                             |     |
| C32364                | 105                         | 76  | C43202                | 51                          | 182 | IC43200               | 73                          | 181 |
| C34500                | 173                         | 161 | C43208                | 92                          | 181 | IC43210               | 71                          | 100 |
| C34501                | 140                         | 188 | C43221                | 60                          | 110 | IC46010               | 280                         | 183 |
| C34506                | 146                         | 160 |                       |                             |     | IC46020               | 303                         | 156 |
|                       |                             |     | C43223                | 68                          | 110 | IC87000               | 291                         | 135 |
| C34509                | 128                         | 188 | C43224                | 58                          | 89  |                       |                             |     |
| C34510                | 134                         | 188 | C43225                | 73                          | 89  | IC87020               | 284                         | 85  |
| C34511                | 122                         | 188 | C43226                | 51                          | 89  | IC87030               | 228                         | 90  |
| C34521                | 153                         | 188 | C43227                | 66                          | 89  | IC87080               | 235                         | 61  |
| C34522                | 149                         | 188 |                       |                             |     | IC87090               | 313                         | 80  |
|                       |                             |     | C43228                | 88                          | 89  |                       |                             |     |
| C34523                | 145                         | 188 | C43229                | 81                          | 89  | L32341                | 95                          | 46  |
| C40011                | 170                         | 28  | C46004                | 280                         | 209 | L32342                | 129                         | 63  |
| C40012                | 196                         | 28  | C46005                | 294                         | 208 | L32359                | 106                         | 180 |
| C41006                | 151                         | 74  | C46006                | 290                         | 201 | L40010                | 183                         | 25  |
| C41007                | 151                         | 66  |                       |                             |     | L46001                | 286                         | 211 |
|                       |                             |     | C46007                | 297                         | 197 |                       |                             |     |
| C41012                | 167                         | 80  | C46008                | 301                         | 190 | L46002                | 256                         | 194 |
| C41014                | 159                         | 59  | C46011                | 261                         | 198 | L46003                | 254                         | 179 |
| C43022                | 23                          | 115 | C46012                | 253                         | 183 | L46004                | 253                         | 186 |
| C43023                | 91                          | 189 | C46013                | 258                         | 190 | L70508                | 82                          | 238 |
| C43045                | 44                          | 152 |                       |                             |     | L87052                | 203                         | 79  |
|                       |                             |     | C46016                | 276                         | 159 |                       |                             |     |
| C43049                | 28                          | 174 | C46017                | 301                         | 150 | Q32305                | 112                         | 77  |
| C43051                | 38                          | 144 | C65533                | 205                         | 196 | Q46001                | 271                         | 204 |
| C43058                | 48                          | 97  | C65542                | 209                         | 176 | Q87004                | 281                         | 144 |
| C43059                | 48                          | 104 | C70509                | 66                          | 228 | Q87054                | 306                         | 90  |
| C43061                | 76                          | 108 |                       |                             |     |                       |                             |     |
|                       |                             |     | C70511                | 105                         | 233 | R32315                | 255                         | 141 |
| C43062                | 48                          | 112 | C70516                | 119                         | 225 | R32342                | 161                         | 108 |
| C43078                | 46                          | 140 | C70527                | 33                          | 238 | R32359                | 141                         | 83  |
| C43089                | 40                          | 83  | C70541                | 96                          | 251 | R34501                | 217                         | 115 |
| C43091                | 40                          | 75  | C87055                | 303                         | 100 | R34546                | 234                         | 186 |
| C43092                | 40                          | 60  |                       |                             |     |                       |                             |     |
|                       |                             |     | C87057                | 320                         | 59  | R34547                | 234                         | 183 |
| C43093                | 40                          | 68  | C87111                | 314                         | 45  | R34548                | 234                         | 190 |
| C43122                | 89                          | 98  |                       |                             |     | R41011                | 179                         | 84  |
| C43123                | 98                          | 95  | D32342                | 147                         | 100 | R41016                | 144                         | 57  |
| C43126                | 88                          | 106 | D32343                | 136                         | 92  | R43021                | 54                          | 190 |

## Signal Chassis Board

## Coordinates of the components on the components side (top side)

| Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates |     | Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates |     |
|-----------------------|-----------------------------|-----|-----------------------|-----------------------------|-----|
|                       | X                           | Y   |                       | X                           | Y   |
| R43031                | 16                          | 188 | ST-VFD                | 328                         | 217 |
| R46001                | 242                         | 221 | ST-VGA1               | 200                         | 123 |
| R46003                | 233                         | 245 | ST-VGA2               | 135                         | 222 |
| R46009                | 238                         | 213 | ST-VGA3               | 295                         | 31  |
| R46010                | 239                         | 217 |                       |                             |     |
|                       |                             |     |                       |                             |     |
| R46014                | 234                         | 165 |                       |                             |     |
| R65501                | 189                         | 156 |                       |                             |     |
| R65541                | 215                         | 195 |                       |                             |     |
| R65542                | 218                         | 180 |                       |                             |     |
| R80007                | 315                         | 84  |                       |                             |     |
|                       |                             |     |                       |                             |     |
| R87013                | 314                         | 219 |                       |                             |     |
| R87022                | 260                         | 66  |                       |                             |     |
| R87022                | 259                         | 69  |                       |                             |     |
| R87023                | 264                         | 64  |                       |                             |     |
| R87067                | 305                         | 57  |                       |                             |     |
|                       |                             |     |                       |                             |     |
| R87069                | 303                         | 57  |                       |                             |     |
| R87070                | 329                         | 114 |                       |                             |     |
| R87085                | 213                         | 36  |                       |                             |     |
| R87086                | 284                         | 28  |                       |                             |     |
| R87090                | 225                         | 19  |                       |                             |     |
|                       |                             |     |                       |                             |     |
| R87091                | 286                         | 28  |                       |                             |     |
| R87098                | 198                         | 93  |                       |                             |     |
| R87102                | 317                         | 139 |                       |                             |     |
| R87111                | 309                         | 55  |                       |                             |     |
|                       |                             |     |                       |                             |     |
| ST-AV                 | 159                         | 89  |                       |                             |     |
| ST-AV03               | 149                         | 113 |                       |                             |     |
| ST-CH01               | 61                          | 247 |                       |                             |     |
| ST-CH02               | 111                         | 247 |                       |                             |     |
| ST-CH03               | 141                         | 247 |                       |                             |     |
|                       |                             |     |                       |                             |     |
| ST-CH04               | 176                         | 247 |                       |                             |     |
| ST-DO01               | 156                         | 22  |                       |                             |     |
| ST-GM                 | 213                         | 162 |                       |                             |     |
| ST-H-AV               | 179                         | 68  |                       |                             |     |
| ST-IR-KB              | 333                         | 179 |                       |                             |     |
|                       |                             |     |                       |                             |     |
| ST-KB                 | 333                         | 138 |                       |                             |     |
| ST-MP                 | 328                         | 101 |                       |                             |     |
| ST-RGB                | 117                         | 164 |                       |                             |     |
| ST-SV                 | 134                         | 140 |                       |                             |     |
| ST-TEST               | 250                         | 46  |                       |                             |     |
|                       |                             |     |                       |                             |     |
| ST-V03                | 44                          | 169 |                       |                             |     |

Koordinaten für die Bauteile der Lötseite  
(Unterseite)

| Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates |     | Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates |     | Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates |     |
|-----------------------|-----------------------------|-----|-----------------------|-----------------------------|-----|-----------------------|-----------------------------|-----|
|                       | X                           | Y   |                       | X                           | Y   |                       | X                           | Y   |
| CBR01                 | 168                         | 192 | CBR42                 | 252                         | 38  | CC32314               | 65                          | 54  |
| CBR02                 | 170                         | 175 | CBR43                 | 226                         | 49  | CC32315               | 62                          | 54  |
| CBR03                 | 69                          | 79  | CBR44                 | 229                         | 49  | CC32316               | 69                          | 39  |
| CBR04                 | 163                         | 175 |                       |                             |     | CC32317               | 65                          | 39  |
| CBR05                 | 166                         | 192 | CBR45                 | 308                         | 115 |                       |                             |     |
|                       |                             |     | CBR46                 | 310                         | 115 | CC32318               | 54                          | 39  |
| CBR06                 | 65                          | 197 | CBR48                 | 242                         | 113 | CC32321               | 99                          | 54  |
| CBR07                 | 71                          | 65  | CBR49                 | 167                         | 175 | CC32322               | 96                          | 54  |
| CBR08                 | 101                         | 76  | CBR52                 | 316                         | 120 | CC32323               | 93                          | 54  |
| CBR09                 | 120                         | 46  |                       |                             |     | CC32324               | 91                          | 54  |
| CBR10                 | 142                         | 44  | CBR53                 | 228                         | 61  |                       |                             |     |
|                       |                             |     | CBR54                 | 210                         | 169 | CC32326               | 60                          | 46  |
| CBR11                 | 36                          | 174 | CBR55                 | 10                          | 86  | CC32328               | 73                          | 66  |
| CBR12                 | 30                          | 91  | CBR56                 | 266                         | 110 | CC32331               | 57                          | 46  |
| CBR13                 | 163                         | 192 | CBR58                 | 285                         | 121 | CC32333               | 99                          | 65  |
| CBR14                 | 13                          | 136 |                       |                             |     | CC32336               | 81                          | 73  |
| CBR15                 | 167                         | 158 | CBR60                 | 264                         | 45  |                       |                             |     |
|                       |                             |     | CBR61                 | 314                         | 37  | CC32337               | 84                          | 73  |
| CBR16                 | 87                          | 134 | CBR62                 | 117                         | 52  | CC32338               | 79                          | 66  |
| CBR17                 | 94                          | 162 | CBR63                 | 33                          | 178 | CC32339               | 76                          | 66  |
| CBR18                 | 78                          | 46  | CBR64                 | 167                         | 89  | CC32340               | 134                         | 90  |
| CBR19                 | 37                          | 102 |                       |                             |     | CC32341               | 81                          | 46  |
| CBR20                 | 81                          | 134 | CBR65                 | 167                         | 92  |                       |                             |     |
|                       |                             |     | CBR66                 | 321                         | 122 | CC32342               | 122                         | 86  |
| CBR21                 | 179                         | 122 | CBR67                 | 328                         | 122 | CC32343               | 131                         | 90  |
| CBR23                 | 186                         | 52  | CBR68                 | 324                         | 122 | CC32345               | 75                          | 46  |
| CBR24                 | 176                         | 122 | CBR69                 | 61                          | 197 | CC32347               | 68                          | 66  |
| CBR25                 | 112                         | 193 |                       |                             |     | CC32348               | 108                         | 65  |
| CBR28                 | 131                         | 192 | CBR70                 | 61                          | 233 |                       |                             |     |
|                       |                             |     | CBR71                 | 66                          | 180 | CC32350               | 88                          | 54  |
| CBR29                 | 98                          | 236 |                       |                             |     | CC32354               | 108                         | 56  |
| CBR30                 | 290                         | 165 | CC32301               | 108                         | 76  | CC32359               | 125                         | 55  |
| CBR31                 | 304                         | 115 | CC32302               | 110                         | 65  | CC32365               | 102                         | 65  |
| CBR33                 | 242                         | 38  | CC32303               | 115                         | 79  | CC34502               | 158                         | 160 |
| CBR34                 | 260                         | 141 | CC32306               | 115                         | 74  |                       |                             |     |
|                       |                             |     | CC32307               | 81                          | 57  | CC34503               | 156                         | 161 |
| CBR35                 | 305                         | 109 |                       |                             |     | CC34504               | 153                         | 161 |
| CBR36                 | 256                         | 194 | CC32308               | 88                          | 58  | CC34506               | 139                         | 158 |
| CBR37                 | 272                         | 114 | CC32309               | 72                          | 46  | CC34507               | 146                         | 163 |
| CBR38                 | 245                         | 113 | CC32310               | 69                          | 46  | CC34508               | 135                         | 158 |
| CBR39                 | 248                         | 113 | CC32311               | 56                          | 61  |                       |                             |     |
|                       |                             |     | CC32312               | 67                          | 60  | CC34509               | 132                         | 158 |
| CBR40                 | 251                         | 113 |                       |                             |     | CC34517               | 122                         | 154 |
| CBR41                 | 246                         | 38  | CC32313               | 79                          | 39  | CC34518               | 142                         | 169 |

Coordinates of the Components on the Solder Side  
(Bottom Side)

| Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates |     | Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates |     | Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates |     |
|-----------------------|-----------------------------|-----|-----------------------|-----------------------------|-----|-----------------------|-----------------------------|-----|
|                       | X                           | Y   |                       | X                           | Y   |                       | X                           | Y   |
| CC34519               | 145                         | 169 | CC43136               | 94                          | 155 | CC70506               | 128                         | 200 |
| CC34520               | 148                         | 169 | CC43141               | 38                          | 147 | CC70507               | 128                         | 197 |
| CC34524               | 159                         | 174 | CC43143               | 48                          | 136 | CC70508               | 71                          | 213 |
| CC34525               | 166                         | 170 | CC43147               | 92                          | 139 | CC70511               | 102                         | 194 |
| CC34526               | 157                         | 176 | CC43148               | 87                          | 139 |                       |                             |     |
| CC40013               | 175                         | 34  |                       |                             |     | CC70512               | 123                         | 206 |
| CC40014               | 180                         | 34  | CC43152               | 79                          | 145 | CC70513               | 117                         | 206 |
|                       |                             |     | CC43153               | 89                          | 150 | CC70528               | 43                          | 232 |
| CC41008               | 155                         | 71  | CC43156               | 64                          | 145 | CC87001               | 282                         | 134 |
| CC41009               | 158                         | 70  | CC43166               | 56                          | 164 | CC87002               | 328                         | 173 |
| CC41013               | 160                         | 70  | CC43178               | 93                          | 167 |                       |                             |     |
| CC41017               | 163                         | 63  |                       |                             |     | CC87003               | 279                         | 148 |
| CC41018               | 171                         | 63  | CC43183               | 63                          | 170 | CC87004               | 284                         | 148 |
|                       |                             |     | CC43196               | 92                          | 172 | CC87005               | 281                         | 88  |
| CC41021               | 168                         | 63  | CC43201               | 63                          | 181 | CC87006               | 300                         | 135 |
| CC41022               | 174                         | 68  | CC43202               | 85                          | 195 | CC87007               | 292                         | 144 |
| CC41029               | 171                         | 68  | CC43206               | 69                          | 180 |                       |                             |     |
| CC43001               | 88                          | 65  |                       |                             |     | CC87008               | 295                         | 144 |
| CC43002               | 94                          | 65  | CC43222               | 65                          | 110 | CC87009               | 298                         | 144 |
|                       |                             |     | CC46002               | 275                         | 213 | CC87052               | 208                         | 87  |
| CC43006               | 91                          | 65  | CC46003               | 275                         | 218 | CC87053               | 310                         | 93  |
| CC43007               | 96                          | 65  | CC46014               | 269                         | 208 | CC87054               | 310                         | 88  |
| CC43011               | 57                          | 66  | CC46015               | 274                         | 208 |                       |                             |     |
| CC43012               | 62                          | 66  |                       |                             |     | CC87056               | 281                         | 85  |
| CC43016               | 59                          | 66  | CC46021               | 252                         | 176 | CC87062               | 301                         | 37  |
|                       |                             |     | CC46022               | 249                         | 198 | CC87064               | 311                         | 37  |
| CC43017               | 65                          | 66  | CC46023               | 251                         | 187 | CC87067               | 296                         | 48  |
| CC43026               | 41                          | 192 | CC65505               | 195                         | 164 | CC87069               | 299                         | 48  |
| CC43028               | 25                          | 203 | CC65506               | 178                         | 179 |                       |                             |     |
| CC43052               | 33                          | 139 |                       |                             |     | CC87071               | 292                         | 106 |
| CC43053               | 31                          | 128 | CC65507               | 178                         | 188 | CC87073               | 299                         | 104 |
|                       |                             |     | CC65508               | 195                         | 160 | CC87074               | 288                         | 106 |
| CC43056               | 15                          | 123 | CC65517               | 191                         | 187 | CC87077               | 319                         | 37  |
| CC43057               | 29                          | 123 | CC65518               | 191                         | 182 | CC87078               | 297                         | 106 |
| CC43083               | 32                          | 76  | CC65527               | 198                         | 174 |                       |                             |     |
| CC43086               | 32                          | 68  |                       |                             |     | CC87079               | 290                         | 103 |
| CC43087               | 32                          | 63  | CC65528               | 194                         | 182 | CC87081               | 290                         | 37  |
|                       |                             |     | CC65531               | 184                         | 174 | CC87082               | 295                         | 37  |
| CC43088               | 29                          | 63  | CC65532               | 206                         | 193 | CC87084               | 241                         | 33  |
| CC43095               | 28                          | 106 | CC70501               | 145                         | 214 | CC87087               | 227                         | 37  |
| CC43101               | 26                          | 111 | CC70502               | 77                          | 213 |                       |                             |     |
| CC43131               | 98                          | 168 |                       |                             |     | CC87088               | 258                         | 51  |
| CC43134               | 100                         | 155 | CC70503               | 77                          | 206 | CC87093               | 315                         | 83  |
|                       |                             |     |                       |                             |     | CC87094               | 224                         | 61  |

**Koordinaten für die Bauteile der Lötseite  
(Unterseite)**

| Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates<br>X Y |     | Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates<br>X Y |     |
|-----------------------|------------------------------------|-----|-----------------------|------------------------------------|-----|
| CD32315               | 59                                 | 119 | CR41003               | 144                                | 74  |
| CD34513               | 118                                | 193 | CR41004               | 149                                | 71  |
| CD34517               | 137                                | 170 | CR41006               | 156                                | 77  |
| CD43026               | 30                                 | 202 | CR41007               | 156                                | 63  |
| CD43208               | 98                                 | 185 |                       |                                    |     |
| CD65521               | 190                                | 173 | CR40011               | 222                                | 49  |
| CD70506               | 108                                | 226 | CR40012               | 145                                | 27  |
| CD70507               | 124                                | 233 | CR41021               | 168                                | 68  |
| CD70508               | 120                                | 233 | CR41022               | 174                                | 63  |
| CD70517               | 113                                | 233 | CR43001               | 86                                 | 76  |
| CD70521               | 51                                 | 233 | CR43002               | 92                                 | 76  |
| CD70522               | 47                                 | 233 | CR43006               | 89                                 | 76  |
| CD70523               | 58                                 | 220 | CR43007               | 95                                 | 76  |
| CD70541               | 85                                 | 244 | CR43011               | 53                                 | 70  |
| CD70543               | 124                                | 254 | CR43012               | 55                                 | 79  |
|                       |                                    |     |                       |                                    |     |
| CD87087               | 224                                | 37  | CR43016               | 53                                 | 73  |
| CD87090               | 285                                | 37  | CR43017               | 58                                 | 79  |
| CD87093               | 304                                | 58  | CR43022               | 23                                 | 117 |
| CD87113               | 319                                | 72  | CR43023               | 89                                 | 192 |
|                       |                                    |     | CR43024               | 46                                 | 144 |
| CIC43020              | 33                                 | 194 |                       |                                    |     |
|                       |                                    |     | CR43027               | 27                                 | 206 |
| CR32301               | 86                                 | 123 | CR43028               | 25                                 | 200 |
| CR32307               | 84                                 | 57  | CR43032               | 27                                 | 187 |
| CR32308               | 144                                | 64  | CR43036               | 37                                 | 187 |
| CR32309               | 71                                 | 54  | CR43037               | 32                                 | 187 |
| CR32310               | 68                                 | 54  |                       |                                    |     |
|                       |                                    |     | CR43038               | 39                                 | 202 |
| CR32311               | 64                                 | 60  | CR43039               | 34                                 | 202 |
| CR32312               | 144                                | 70  | CR43040               | 50                                 | 150 |
| CR32313               | 72                                 | 39  | CR43041               | 16                                 | 151 |
| CR32314               | 66                                 | 46  | CR43042               | 16                                 | 143 |
| CR32315               | 63                                 | 46  |                       |                                    |     |
|                       |                                    |     | CR43043               | 16                                 | 136 |
| CR32316               | 124                                | 42  | CR43045               | 66                                 | 138 |
| CR32317               | 57                                 | 39  | CR43046               | 16                                 | 168 |
| CR32318               | 134                                | 42  | CR43047               | 16                                 | 163 |
| CR32319               | 53                                 | 131 | CR43048               | 16                                 | 157 |
| CR32320               | 58                                 | 131 |                       |                                    |     |
|                       |                                    |     | CR43049               | 38                                 | 165 |
| CR32331               | 82                                 | 65  | CR43050               | 35                                 | 168 |
| CR32332               | 84                                 | 65  | CR43051               | 26                                 | 166 |
| CR32334               | 100                                | 45  | CR43052               | 29                                 | 136 |
| CR32335               | 98                                 | 45  | CR43053               | 28                                 | 128 |
| CR32336               | 96                                 | 45  |                       |                                    |     |
|                       |                                    |     | CR43056               | 18                                 | 123 |
| CR32337               | 93                                 | 45  | CR43057               | 26                                 | 123 |
| CR32338               | 91                                 | 45  | CR43066               | 34                                 | 187 |
| CR32339               | 88                                 | 42  | CR43067               | 36                                 | 202 |
| CR32364               | 101                                | 54  | CR43068               | 29                                 | 187 |
| CR34501               | 168                                | 166 |                       |                                    |     |
|                       |                                    |     | CR43069               | 41                                 | 202 |
| CR34502               | 166                                | 161 | CR43071               | 16                                 | 91  |
| CR34503               | 171                                | 166 | CR43072               | 16                                 | 84  |
| CR34504               | 160                                | 135 | CR43073               | 16                                 | 76  |
| CR34505               | 148                                | 155 | CR43074               | 16                                 | 96  |
| CR34506               | 155                                | 150 |                       |                                    |     |
|                       |                                    |     | CR43075               | 30                                 | 115 |
| CR34507               | 150                                | 155 | CR43076               | 16                                 | 108 |
| CR34508               | 152                                | 150 | CR43077               | 15                                 | 104 |
| CR34509               | 159                                | 192 | CR43078               | 26                                 | 106 |
| CR34510               | 157                                | 192 | CR43080               | 71                                 | 138 |
| CR34511               | 118                                | 180 |                       |                                    |     |
|                       |                                    |     | CR43083               | 29                                 | 76  |
| CR34512               | 124                                | 189 | CR43086               | 29                                 | 68  |
| CR34513               | 118                                | 185 | CR43087               | 31                                 | 59  |
| CR34514               | 117                                | 233 | CR43088               | 26                                 | 63  |
| CR34515               | 125                                | 155 | CR43095               | 28                                 | 102 |
| CR34516               | 111                                | 228 |                       |                                    |     |
|                       |                                    |     | CR43096               | 34                                 | 102 |
| CR34517               | 137                                | 176 | CR43097               | 31                                 | 106 |
| CR34518               | 156                                | 172 | CR43098               | 31                                 | 102 |
| CR34519               | 151                                | 176 | CR43099               | 31                                 | 111 |
| CR34521               | 140                                | 176 | CR43101               | 28                                 | 111 |
| CR34522               | 143                                | 176 |                       |                                    |     |
|                       |                                    |     | CR43131               | 98                                 | 173 |
| CR34523               | 145                                | 177 | CR43132               | 98                                 | 164 |
| CR34524               | 148                                | 174 | CR43133               | 98                                 | 159 |
| CR34525               | 160                                | 170 | CR43134               | 98                                 | 155 |
| CR34526               | 153                                | 176 | CR43136               | 103                                | 155 |
| CR34531               | 164                                | 187 |                       |                                    |     |
|                       |                                    |     | CR43137               | 138                                | 143 |
| CR34532               | 169                                | 187 | CR43140               | 58                                 | 139 |
| CR34541               | 160                                | 156 | CR43141               | 58                                 | 145 |
| CR34542               | 156                                | 157 | CR43142               | 61                                 | 145 |
| CR34543               | 153                                | 157 | CR43143               | 76                                 | 145 |
| CR41001               | 144                                | 66  |                       |                                    |     |
|                       |                                    |     | CR43144               | 74                                 | 138 |
| CR41002               | 149                                | 61  | CR43145               | 90                                 | 139 |
|                       |                                    |     | CR43146               | 73                                 | 145 |
|                       |                                    |     | CR43147               | 84                                 | 138 |

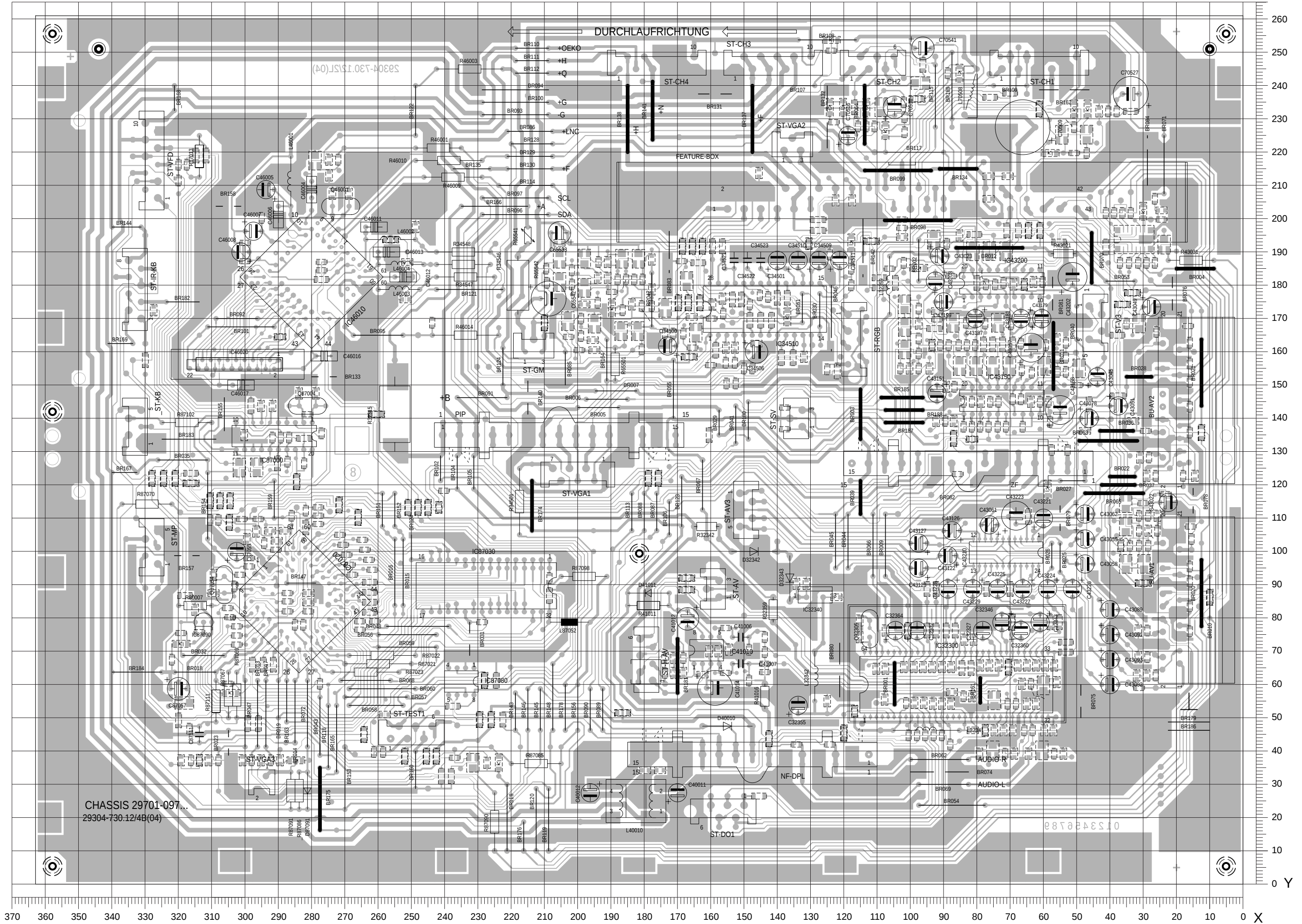
**Coordinates of the Components on the Solder Side  
(Bottom Side)**

| Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates<br>X Y |     | Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates<br>X Y |     |
|-----------------------|------------------------------------|-----|-----------------------|------------------------------------|-----|
| CR70502               | 76                                 | 237 | CR43148               | 84                                 | 145 |
| CR70504               | 71                                 | 197 |                       |                                    |     |
| CR70506               | 102                                | 231 | CR43149               | 138                                | 137 |
| CR70507               | 102                                | 235 | CR43151               | 87                                 | 150 |
|                       |                                    |     | CR43152               | 81                                 | 145 |
| CR70508               | 102                                | 226 | CR43153               | 79                                 | 138 |
| CR70509               | 68                                 | 197 | CR43161               | 53                                 | 163 |
| CR70511               | 102                                | 197 |                       |                                    |     |
| CR70512               | 123                                | 229 | CR43162               | 59                                 | 162 |
| CR70513               | 116                                | 228 | CR43163               | 53                                 | 158 |
|                       |                                    |     | CR43166               | 56                                 | 158 |
| CR70516               | 113                                | 228 | CR43167               | 56                                 | 154 |
| CR70521               | 102                                | 200 | CR43168               | 53                                 | 154 |
| CR70522               | 47                                 | 220 |                       |                                    |     |
| CR70523               | 34                                 | 232 | CR43169               | 67                                 | 155 |
| CR70524               | 51                                 | 220 | CR43171               | 63                                 | 154 |
|                       |                                    |     | CR43172               | 67                                 | 146 |
| CR70526               | 51                                 | 228 | CR43173               | 69                                 | 146 |
| CR70527               | 38                                 | 232 | CR43176               | 75                                 | 162 |
| CR70528               | 41                                 | 232 |                       |                                    |     |
| CR70541               | 96                                 | 246 | CR43177               | 72                                 | 162 |
| CR70542               | 89                                 | 244 | CR43178               | 69                                 | 162 |
|                       |                                    |     | CR43179               | 67                                 | 163 |
| CR70543               | 124                                | 251 | CR43181               | 70                                 | 168 |
| CR83006               | 318                                | 87  | CR43182               | 78                                 | 162 |
| CR87001               | 277                                | 135 |                       |                                    |     |
| CR87002               | 330                                | 158 | CR43183               | 78                                 | 168 |
| CR87003               | 282                                | 126 | CR43186               | 83                                 | 162 |
|                       |                                    |     | CR43187               | 83                                 | 169 |
| CR87004               | 281                                | 141 | CR43188               | 74                                 | 180 |
| CR87007               | 315                                | 219 | CR43189               | 72                                 | 181 |
| CR87008               | 320                                | 216 |                       |                                    |     |
| CR87009               | 317                                | 216 | CR43191               | 86                                 | 162 |
| CR87010               | 292                                | 134 | CR43192               | 89                                 | 162 |
|                       |                                    |     | CR43193               | 91                                 | 162 |
| CR87011               | 312                                | 219 | CR43196               | 92                                 | 170 |
| CR87012               | 320                                | 212 | CR43197               | 77                                 | 180 |
| CR87014               | 285                                | 78  |                       |                                    |     |
| CR87016               | 281                                | 82  | CR43198               | 80                                 | 181 |
| CR87017               | 283                                | 78  | CR43199               | 81                                 | 162 |
|                       |                                    |     | CR43201               | 60                                 | 181 |
| CR87024               | 265                                | 77  | CR43202               | 55                                 | 193 |
| CR87026               | 263                                | 88  | CR43203               | 81                                 | 195 |
| CR87027               | 263                                | 85  |                       |                                    |     |
| CR87028               | 263                                | 91  | CR43204               | 106                                | 185 |
| CR87029               | 265                                | 79  | CR43208               | 88                                 | 183 |
|                       |                                    |     | CR43209               | 102                                | 187 |
| CR87030               | 229                                | 79  | CR43210               | 105                                | 181 |
| CR87031               | 261                                | 79  | CR43222               | 77                                 | 89  |
| CR87032               | 263                                | 82  |                       |                                    |     |
| CR87033               | 268                                | 93  | CR43223               | 70                                 | 89  |
| CR87034               | 262                                | 94  | CR43224               | 95                                 | 89  |
|                       |                                    |     | CR43225               | 92                                 | 89  |
| CR87036               | 269                                | 96  | CR43226               | 81                                 | 138 |
| CR87037               | 263                                | 98  | CR43227               | 77                                 | 138 |
| CR87038               | 269                                | 99  |                       |                                    |     |
| CR87039               | 264                                | 100 | CR43228               | 109                                | 179 |
| CR87041               | 271                                | 102 | CR43229               | 109                                | 182 |
|                       |                                    |     | CR46002               | 272                                | 218 |
| CR87042               | 265                                | 103 | CR46011               | 295                                | 200 |
| CR87043               | 272                                | 105 | CR46012               | 300                                | 187 |
| CR87044               | 303                                | 72  |                       |                                    |     |
| CR87046               | 303                                | 75  | CR46013               | 300                                | 193 |
| CR87047               | 303                                | 78  | CR46015               | 244                                | 169 |
|                       |                                    |     | CR46016               | 277                                | 184 |
| CR87048               | 304                                | 80  | CR46017               | 277                                | 187 |
| CR87049               | 305                                | 83  | CR46018               | 277                                | 182 |
| CR87051               | 287                                | 82  |                       |                                    |     |
| CR87052               | 287                                | 85  | CR65500               | 199                                | 170 |
| CR87053               | 287                                | 88  | CR65502               | 181                                | 161 |
|                       |                                    |     | CR65503               | 181                                | 174 |
| CR87054               | 303                                | 90  | CR65505               | 199                                | 165 |
| CR87056               | 299                                | 98  | CR65506               | 178                                | 174 |
| CR87057               | 299                                | 96  |                       |                                    |     |
| CR87058               | 301                                | 93  | CR65507               | 174                                | 166 |
| CR87061               | 278                                | 60  | CR65508               | 200                                | 160 |
|                       |                                    |     | CR65509               | 203                                | 165 |
| CR87062               | 298                                | 37  | CR65511               | 194                                | 187 |
| CR87063               | 292                                | 66  | CR65513               | 183                                | 182 |
| CR87064               | 308                                | 37  |                       |                                    |     |
| CR87065               | 310                                | 109 | CR65516               | 185                                | 182 |
| CR87066               | 298                                | 66  | CR65517               | 188                                | 182 |
|                       |                                    |     | CR65518               | 190                                | 178 |
| CR87068               | 294                                | 66  | CR65521               | 186                                | 173 |
| CR87071               | 296                                | 110 | CR65526               | 181                                | 182 |
| CR87072               | 301                                | 110 |                       |                                    |     |
| CR87073               | 308                                | 109 | CR65527               | 194                                | 175 |
| CR87074               | 286                                | 111 | CR65528               | 202                                | 180 |
|                       |                                    |     | CR65531               | 202                                | 184 |
| CR87075               | 282                                | 112 | CR65536               | 209                                | 181 |
| CR87076               | 316                                | 37  | CR65537               | 210                                | 185 |
| CR87077               | 240                                | 118 |                       |                                    |     |
| CR87078               | 291                                | 100 | CR70501               | 70                                 | 238 |

| Pos.-Nr./<br>Pos. No. | Koordinaten/<br>Coordinates |     |
|-----------------------|-----------------------------|-----|
|                       | X                           | Y   |
| CR87079               | 294                         | 102 |
| CR87080               | 278                         | 108 |
| CR87081               | 292                         | 37  |
| CR87082               | 305                         | 60  |
| CR87083               | 238                         | 53  |
| CR87084               | 237                         | 38  |
| CR87087               | 261                         | 40  |
| CR87088               | 258                         | 40  |
| CR87089               | 238                         | 33  |
| CR87092               | 278                         | 111 |
| CR87093               | 314                         | 76  |
| CR87094               | 278                         | 113 |
| CR87096               | 282                         | 107 |
| CR87097               | 208                         | 92  |
| CR87101               | 316                         | 124 |
| CR87103               | 289                         | 134 |
| CR87104               | 290                         | 126 |
| CR87106               | 287                         | 127 |
| CR87107               | 287                         | 134 |
| CR87112               | 322                         | 68  |
| CR87113               | 319                         | 76  |
| CR87114               | 320                         | 49  |
| CR87116               | 317                         | 47  |
| CT32308               | 75                          | 55  |
| CT32310               | 60                          | 60  |
| CT32312               | 75                          | 40  |
| CT32315               | 61                          | 40  |
| CT34500               | 165                         | 166 |
| CT34530               | 167                         | 181 |
| CT43020               | 93                          | 194 |
| CT43030               | 24                          | 192 |
| CT43050               | 31                          | 168 |
| CT43075               | 35                          | 115 |
| CT43080               | 75                          | 156 |
| CT43090               | 30                          | 96  |
| CT43095               | 35                          | 96  |
| CT43100               | 35                          | 108 |
| CT43130               | 102                         | 174 |
| CT43135               | 102                         | 167 |
| CT43140               | 102                         | 161 |
| CT43160               | 49                          | 155 |
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| CT43170               | 70                          | 156 |
| CT43175               | 74                          | 169 |
| CT43185               | 80                          | 156 |
| CT43190               | 85                          | 156 |
| CT43195               | 87                          | 169 |
| CT43200               | 71                          | 190 |
| CT43205               | 76                          | 190 |
| CT43210               | 81                          | 190 |
| CT46005               | 279                         | 217 |
| CT65502               | 195                         | 168 |
| CT65503               | 187                         | 166 |
| CT65504               | 182                         | 166 |
| CT65505               | 174                         | 173 |
| CT65506               | 203                         | 169 |
| CT65508               | 182                         | 188 |
| CT65510               | 187                         | 188 |
| CT65525               | 198                         | 179 |
| CT65530               | 198                         | 188 |
| CT65535               | 206                         | 188 |
| CT65536               | 206                         | 181 |
| CT70505               | 109                         | 233 |
| CT70520               | 47                          | 225 |
| CT70525               | 54                          | 225 |
| CT70540               | 97                          | 241 |
| CT87090               | 231                         | 37  |
| CT87100               | 302                         | 125 |
| CT87105               | 297                         | 125 |
| CT87115               | 318                         | 54  |
| OM01                  | 20                          | 5   |
| OM02                  | 20                          | 256 |
| OM03                  | 353                         | 249 |
| OM30                  | 14                          | 5   |
| OM31                  | 14                          | 256 |
| OM32                  | 358                         | 249 |

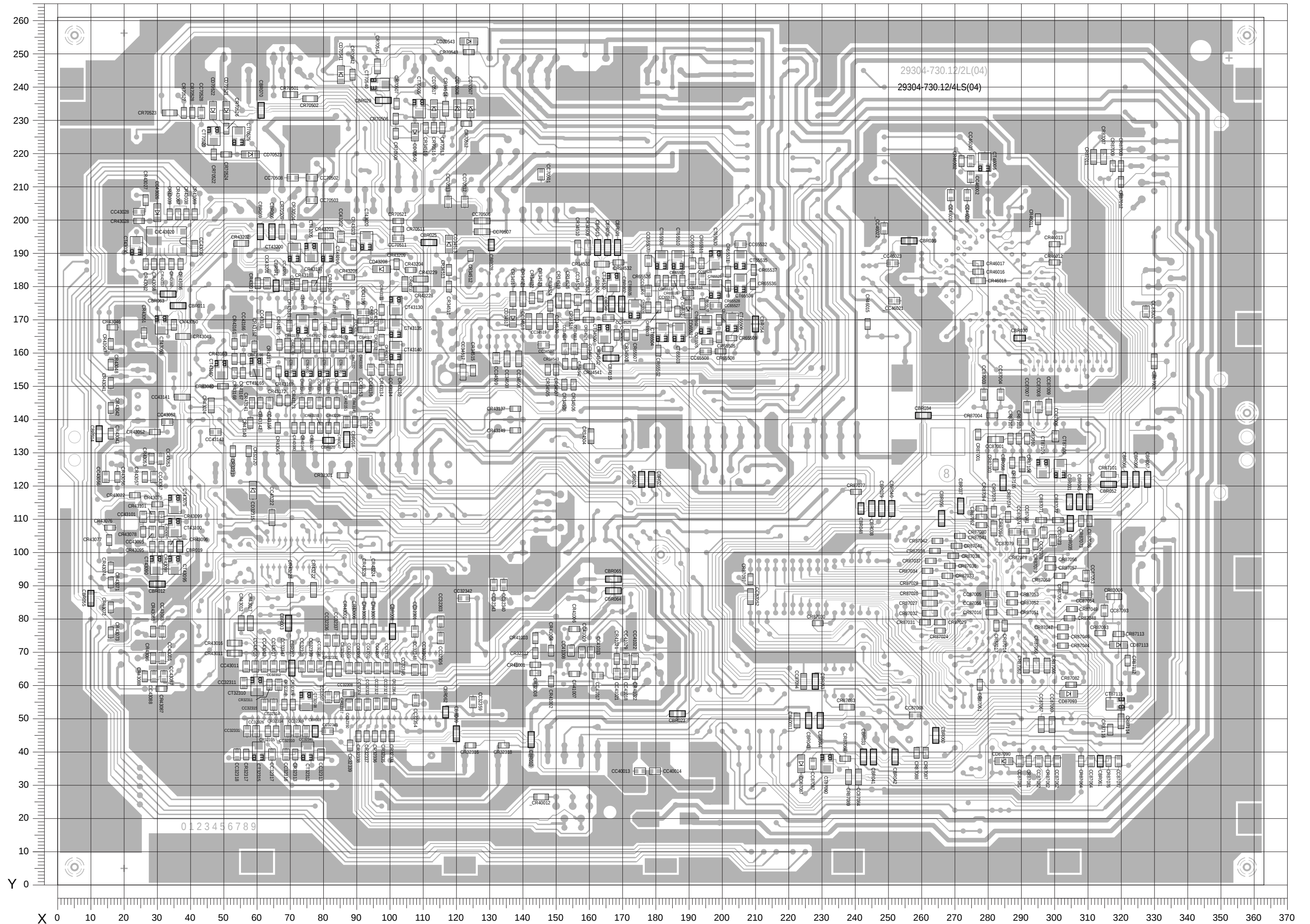
Signal Chassisplatte / Signal Chassis Board

Bestückungsseite, Ansicht von oben  
Component side, top view

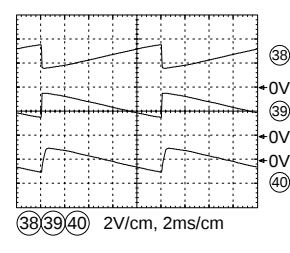
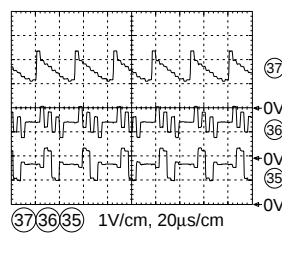
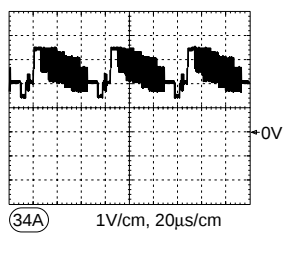
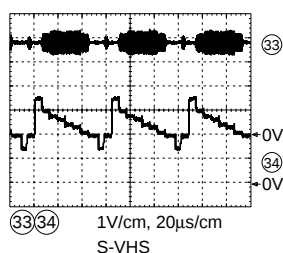
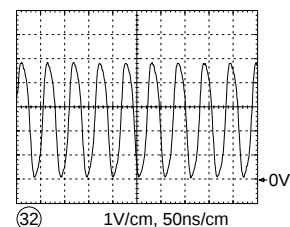
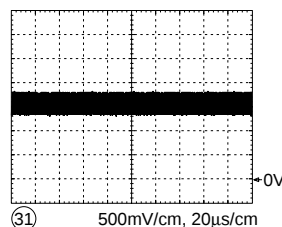
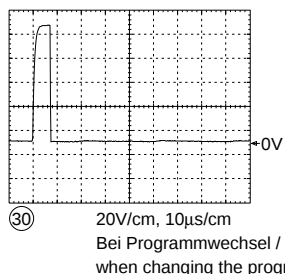
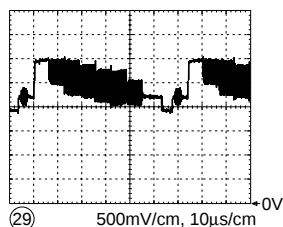
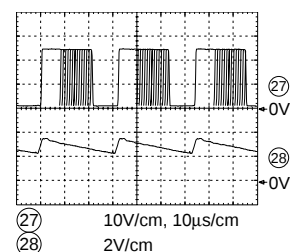
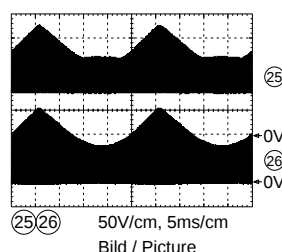
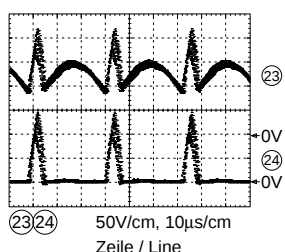
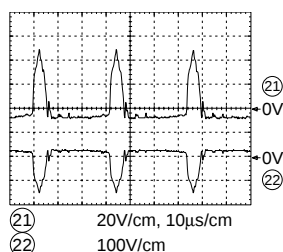
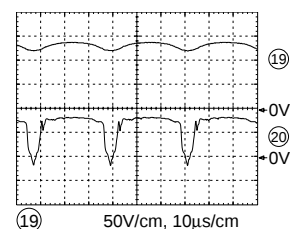
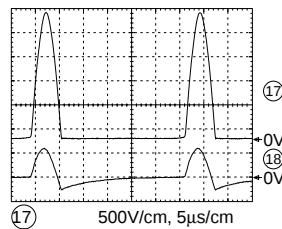
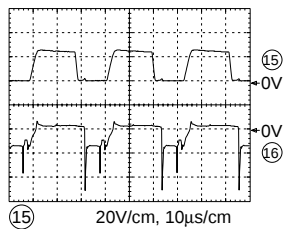
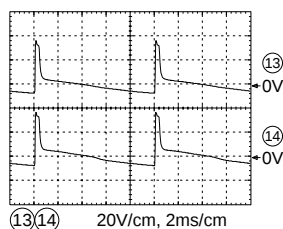
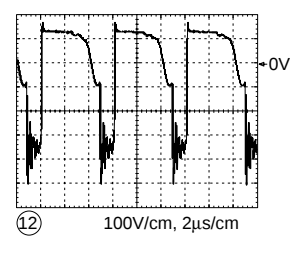
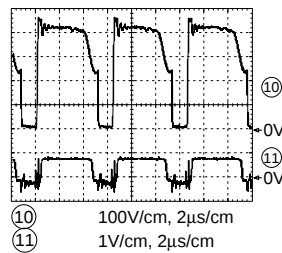
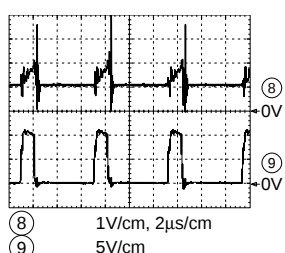
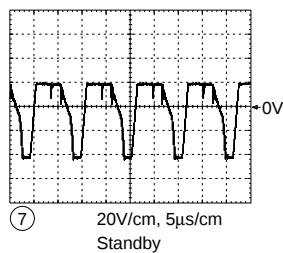
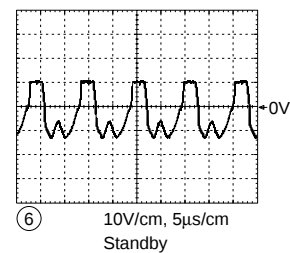
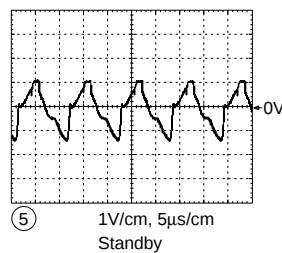
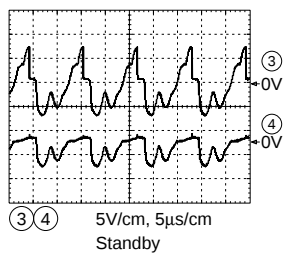
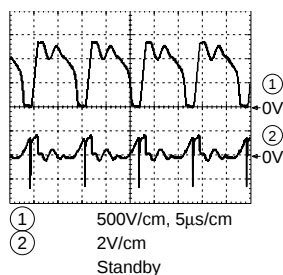


## Signal Chassisplatte / Signal Chassis Board

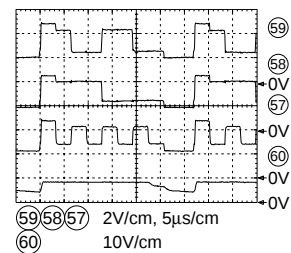
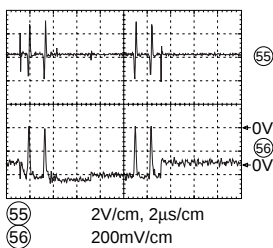
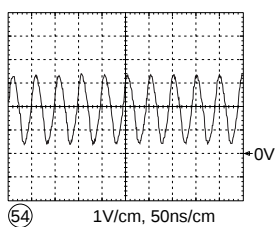
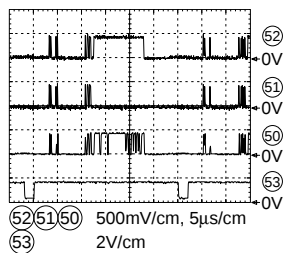
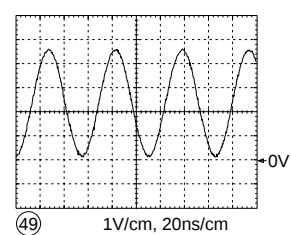
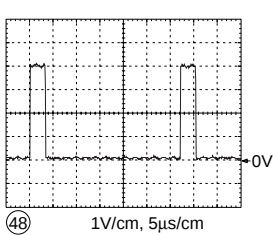
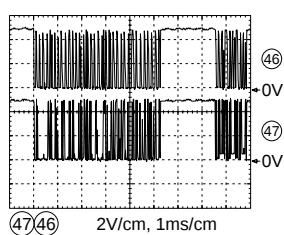
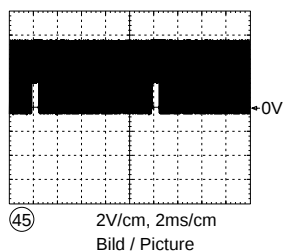
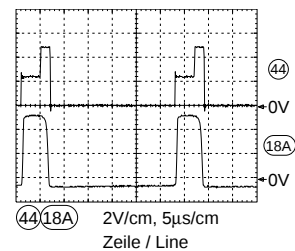
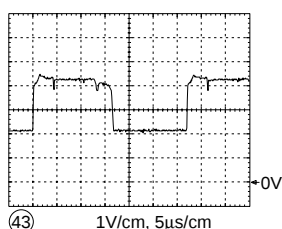
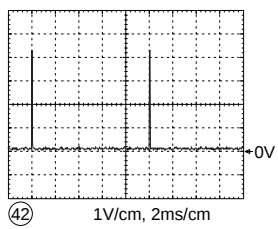
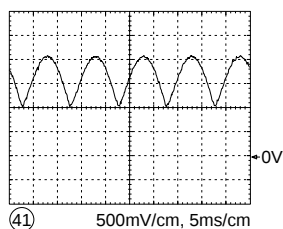
**Lötseite, Ansicht von unten**  
**Solder side, bottom view**



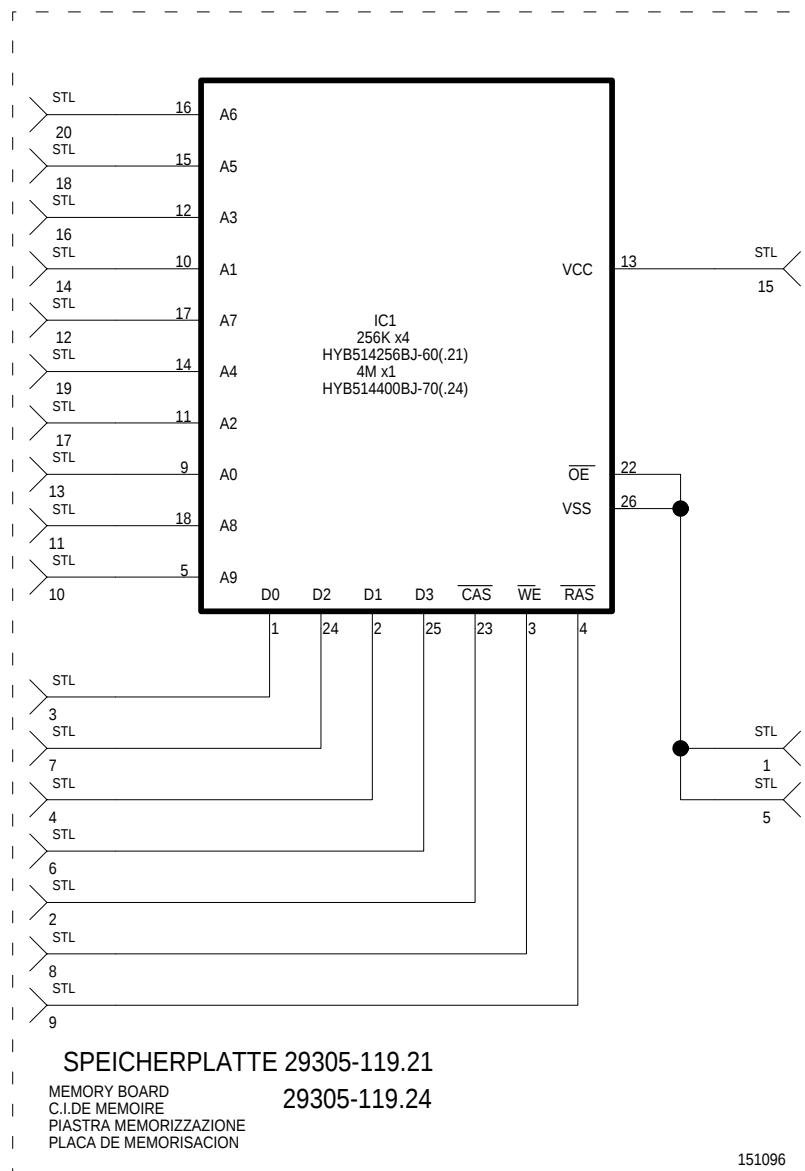
## Chassis Oszillogramme / Chassis Oscillograms



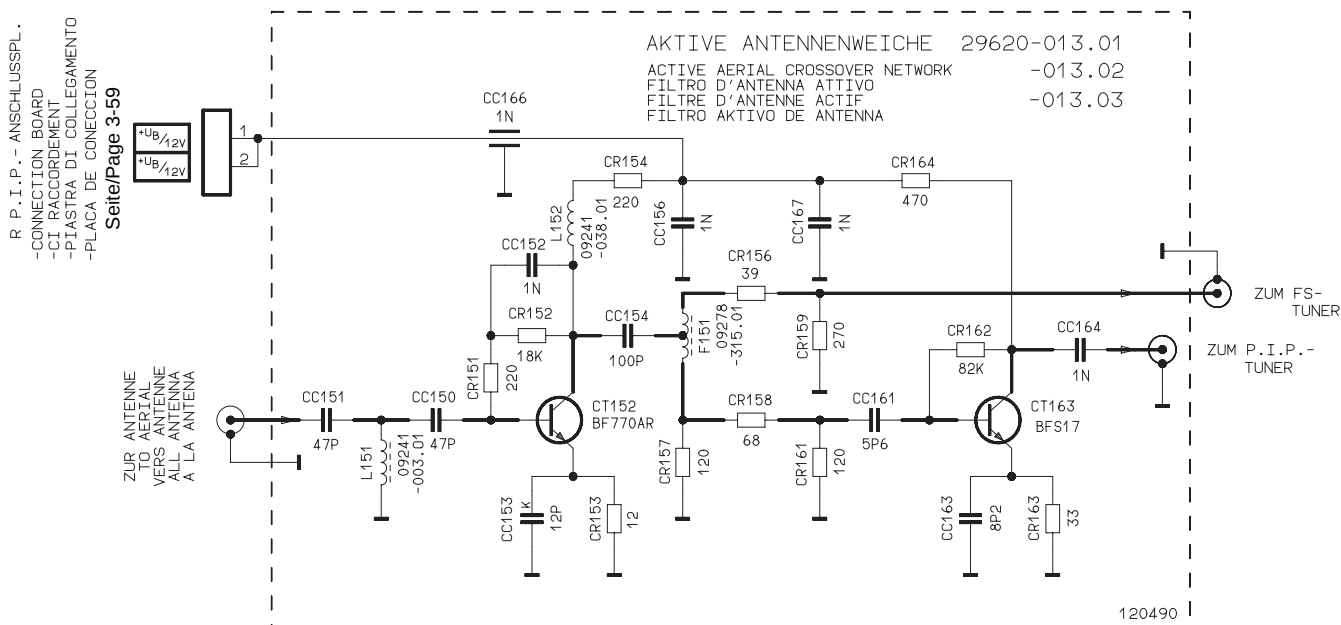
## Chassis Oszillogramme / Chassis Oscillograms

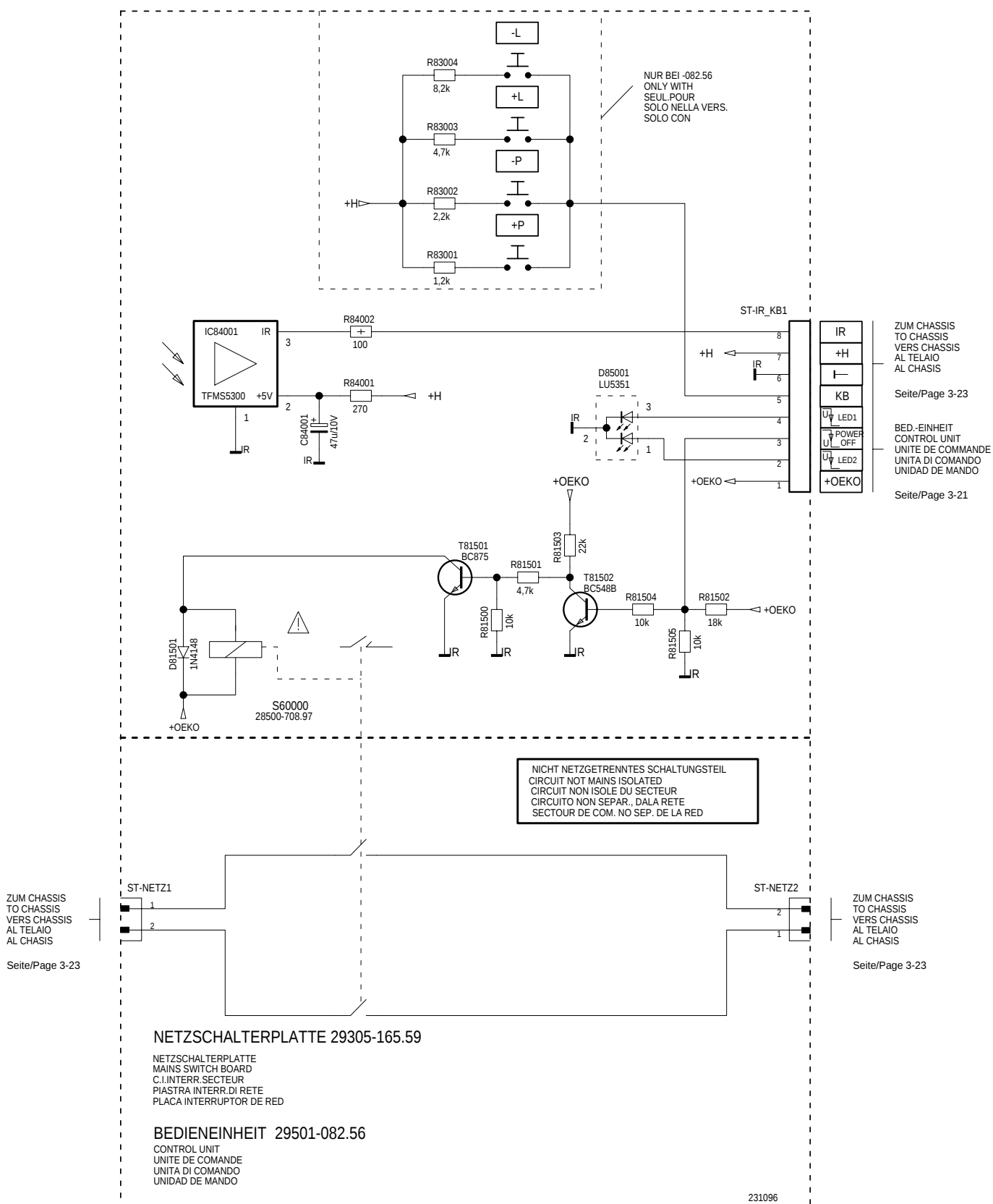


## Speicherplatte / Memory Board 29305-119.21/.24

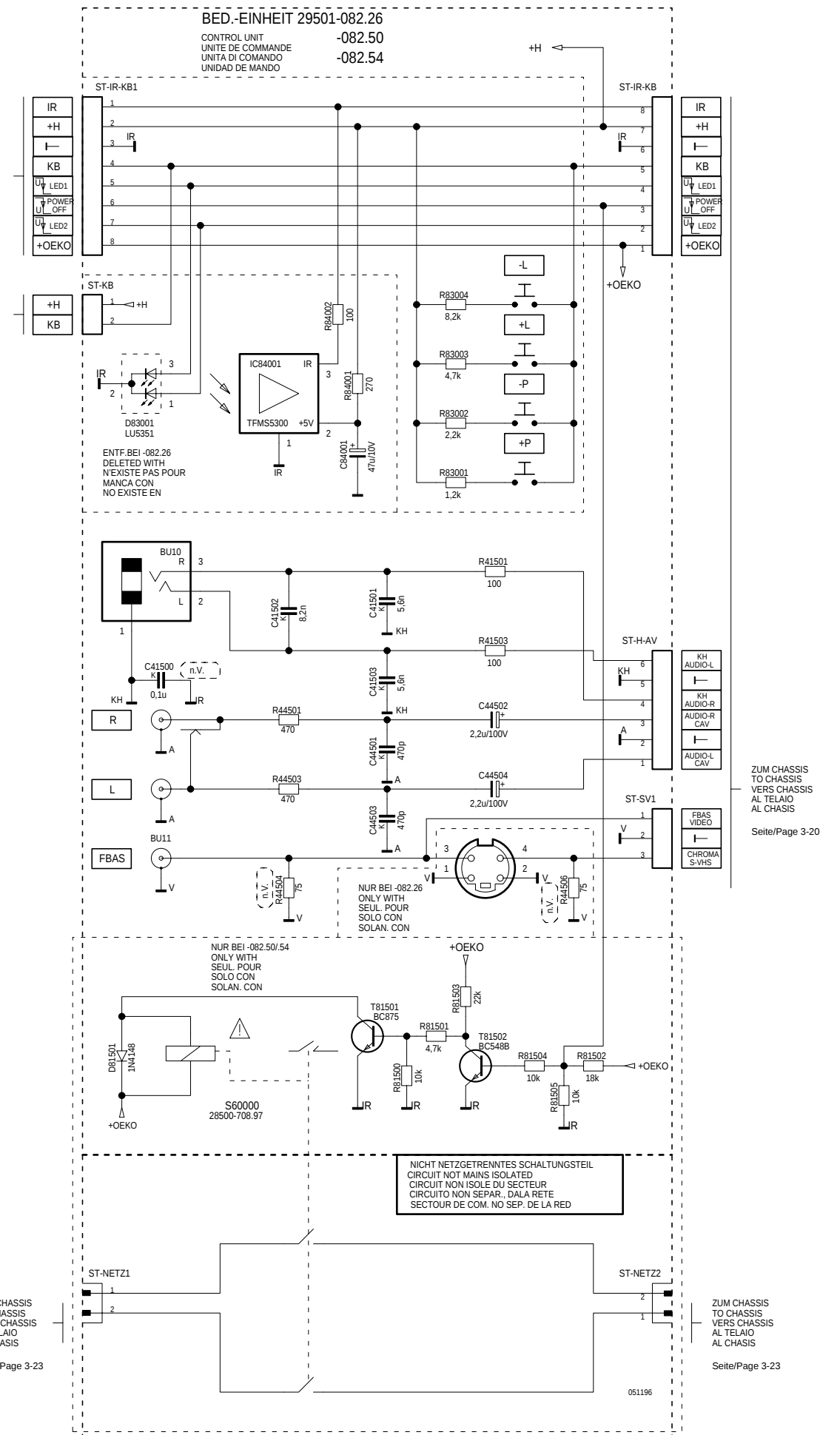


## Aktive Antennenweiche / Active Aerial Crossover Network 29620-013.01/.02/.03

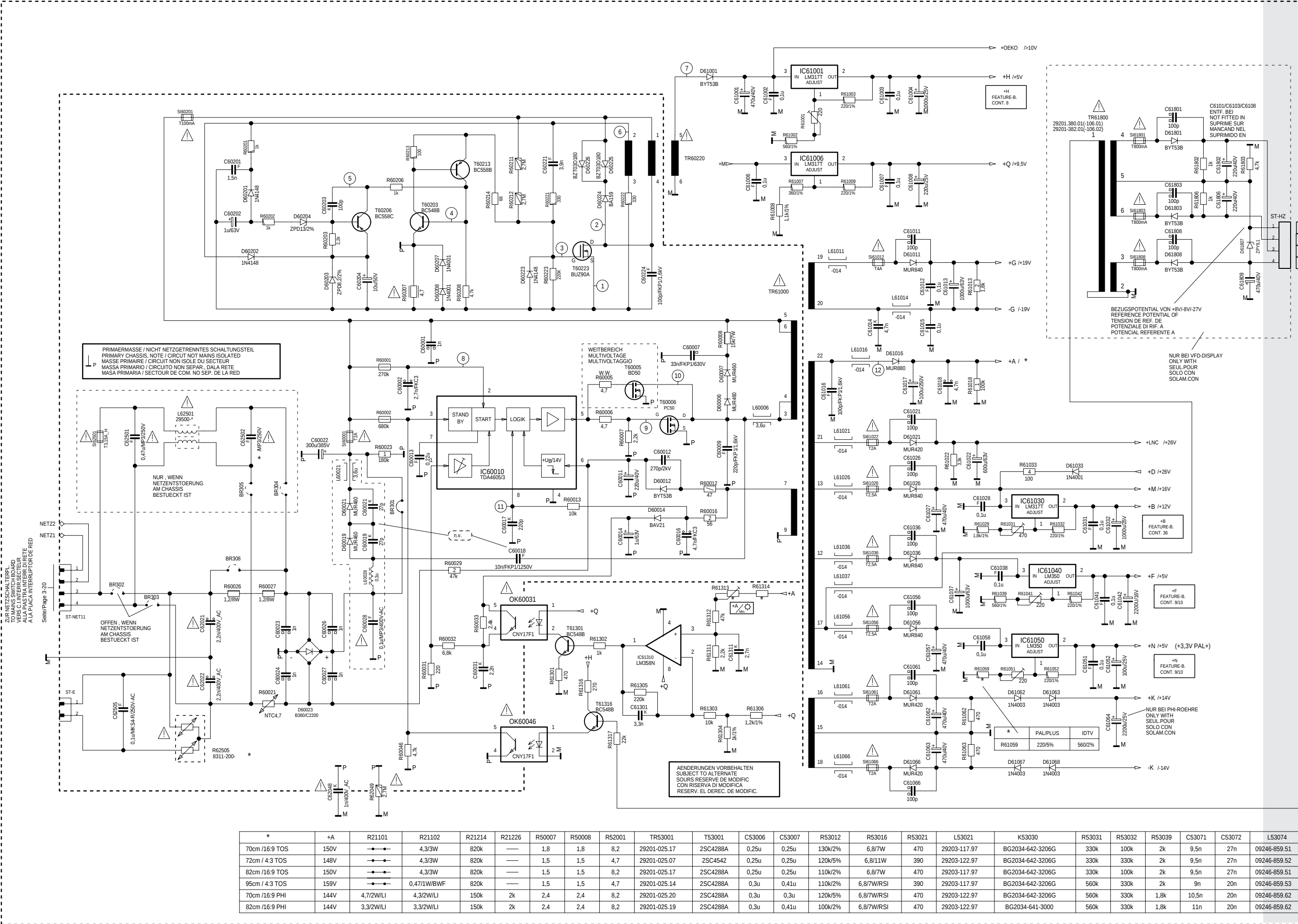


**Netzschalterplatte / Mains Switch Board 29305-165.59****Bedieneinheit / Control Unit 29501-082.56**

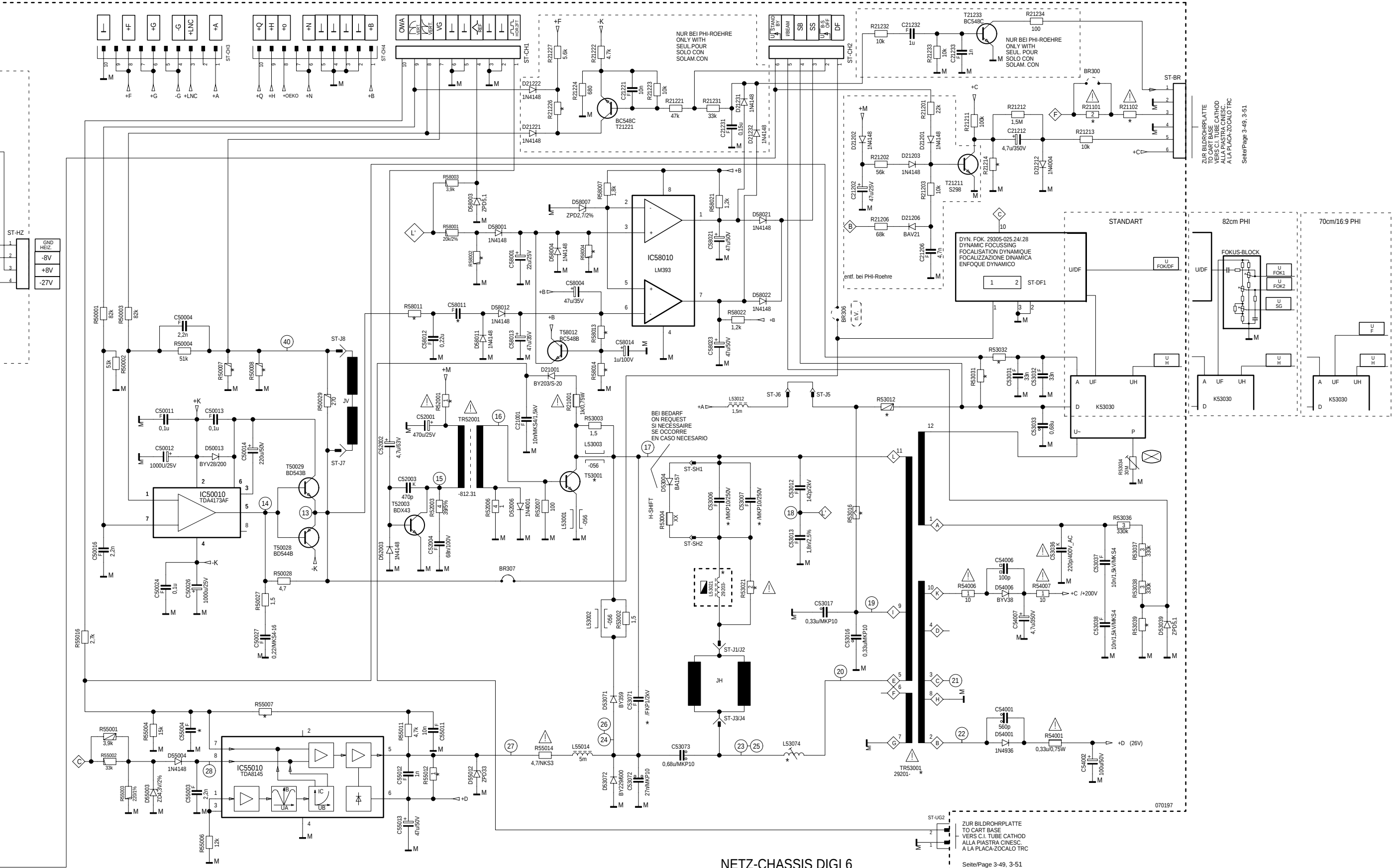
## Bedieneinheit / Control Unit 29501-082.26/.50/.54



Gesamtschaltplan Netz-Chassis / General Circuit Diagram Mains Chassis



Gesamtschaltplan Netz-Chassis / General Circuit Diagram Mains Chassis

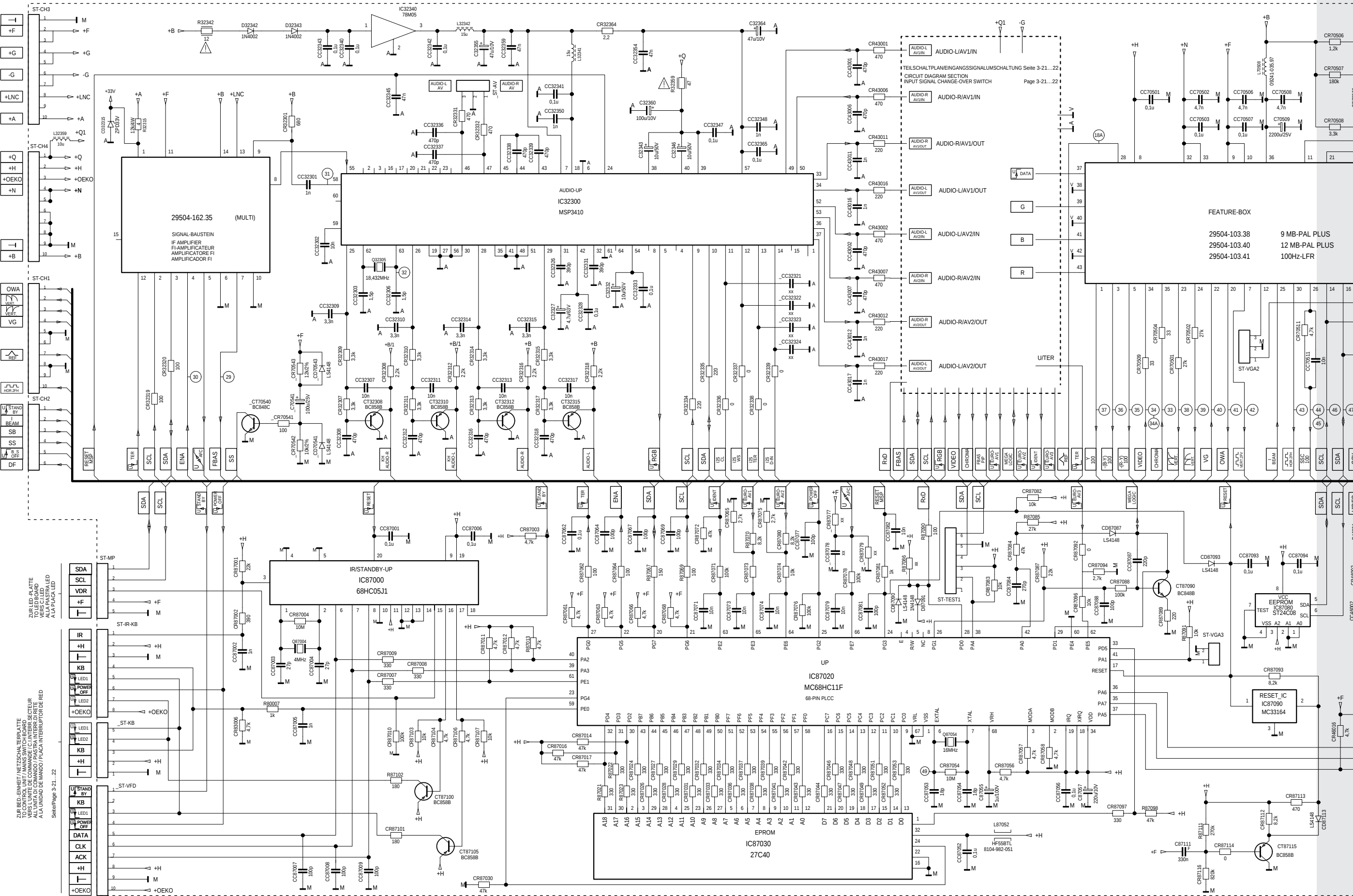


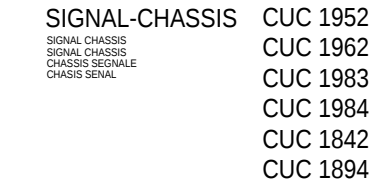
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|-----------|--------|--------|-----------|---------|--------|--------|--------|--------|--------|--------------|--------|--------|--------|--------|--------|
| 46-859.51 | 0,33u  | 39k    | —         | 3k      | 13k    | 3,3k   | 0,47u  | 10k    | 8,2k   | 29201-567.97 | 22k    | 15k    | 832.97 | 0,33u  | -010   |
| 46-859.52 | 22n    | 39k    | —         | 3,3k    | 13k    | 4,7k   | 0,47u  | 10k    | 8,2k   | 29201-567.97 | 22k    | 15k    | 834.97 | 0,1u   | -010   |
| 46-859.51 | 0,33u  | 39k    | —         | 3k      | 13k    | 2,7k   | 0,47u  | 11k    | 7,5k   | 29201-567.97 | 22k    | 15k    | 832.97 | 0,33u  | -010   |
| 46-859.53 | 0,1u   | 82k    | 820/1W/LI | 3,3k    | 11k/2% | 2,7k   | 0,47u  | 10k    | 8,2k   | 29201-571.97 | 10k    | 27k    | 832.97 | 0,33u  | -012   |
| 46-859.62 | 22n    | 82k    | 820/1W/LI | 3,3k/2% | 13k/1% | 2,7k   | 0,56u  | 10k    | 8,2k   | 29201-572.97 | 22k    | 15k    | 832.97 | 0,33u  | -010   |
| 46-859.62 | 22n    | 82k    | 820/1W/LI | 3,3k/2% | 13k/2% | 2,7k   | 0,47u  | 11k    | 7,5k   | 29201-572.97 | 22k    | 15k    | 832.97 | 0,33u  | -010   |

NETZ-CHASSIS DIGI 6

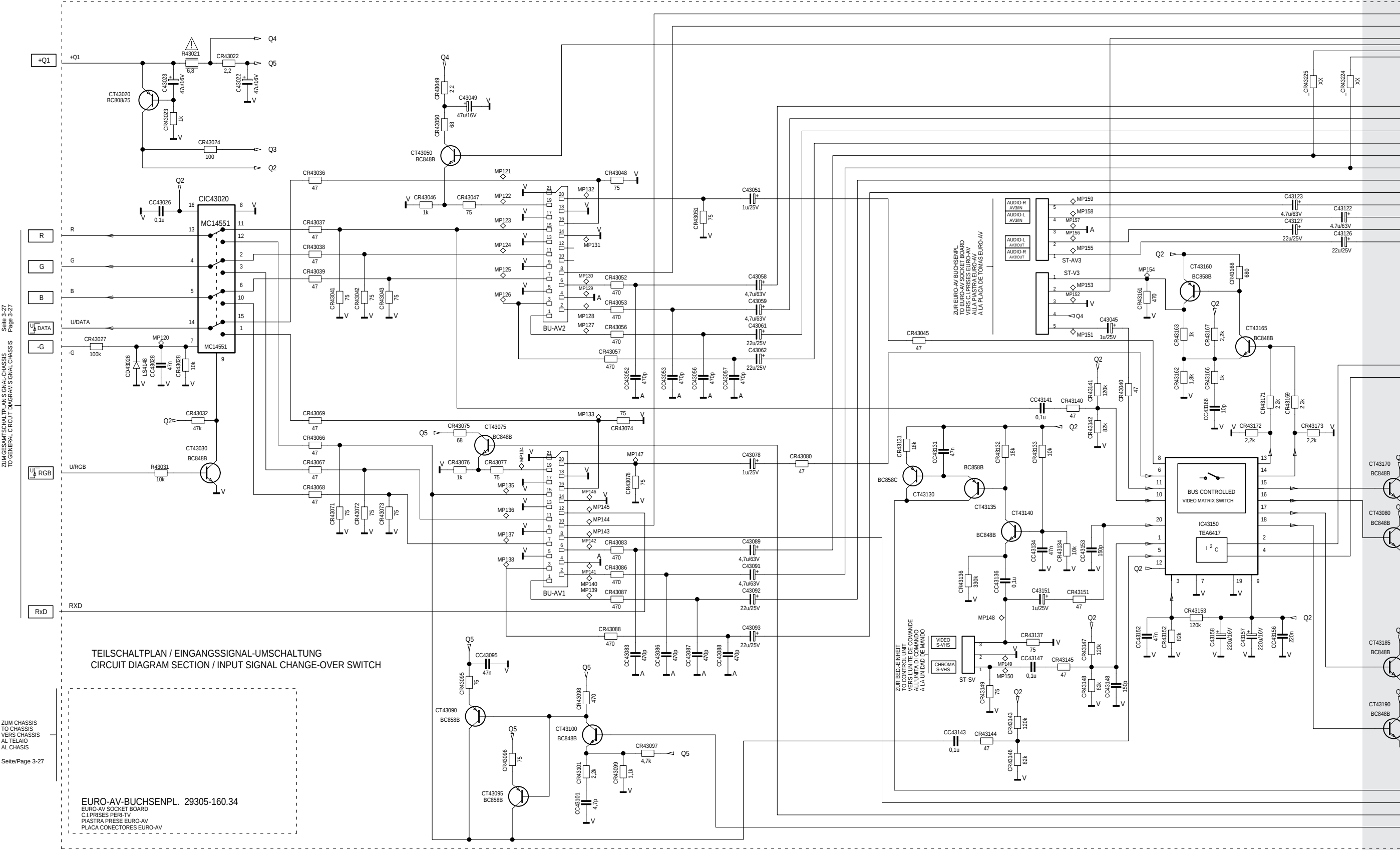
MAINS CHASSIS  
CHASSIS DI SECTEUR  
CHASSIS DI RETE  
CHASSIS INTERR. RED  
CUC 1842  
CUC 1894  
CUC 1952  
CUC 1962  
CUC 1983  
CUC 1984

Gesamtschaltplan Signal-Chassis / General Circuit Diagram Signal Chassis

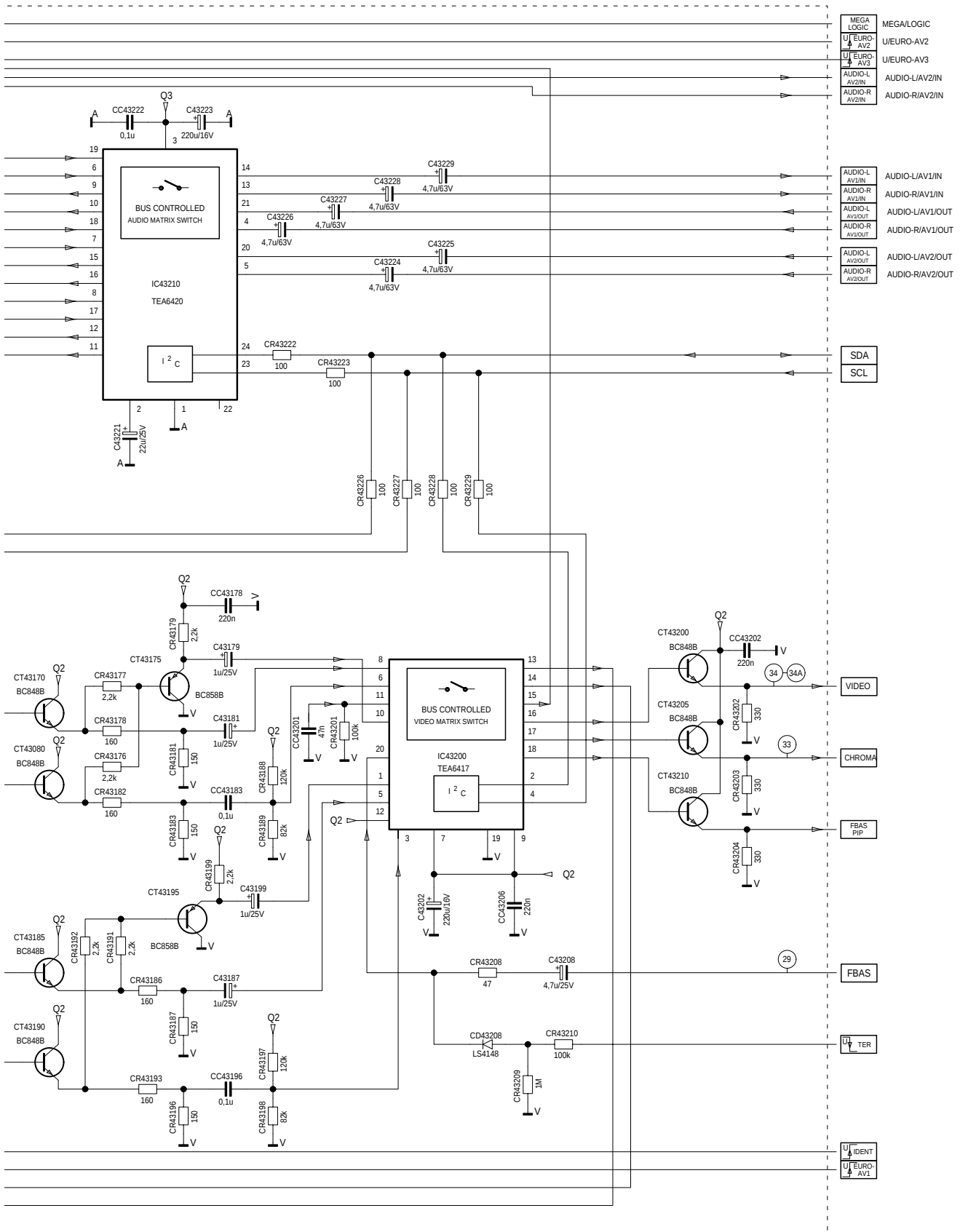




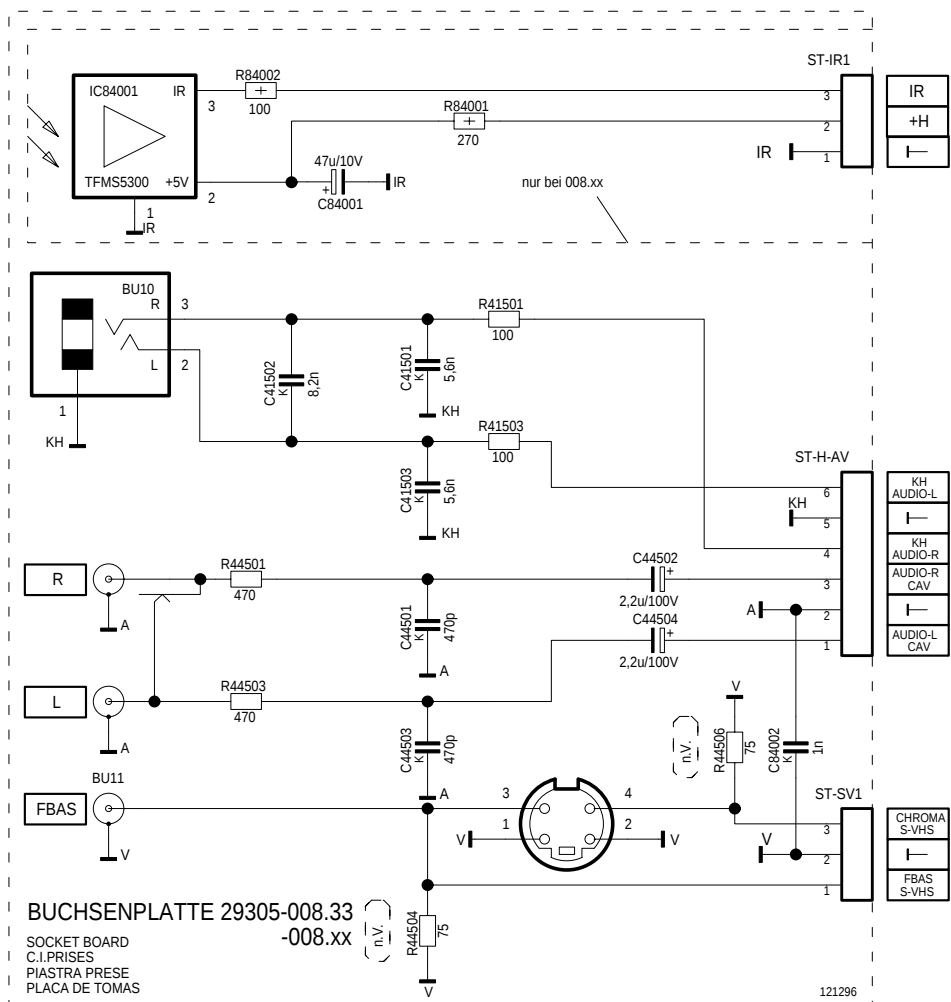
Gesamtschaltplan Signal-Chassis / General Circuit Diagram Signal Chassis



## Gesamtschaltplan Signal-Chassis / General Circuit Diagram Signal Chassis



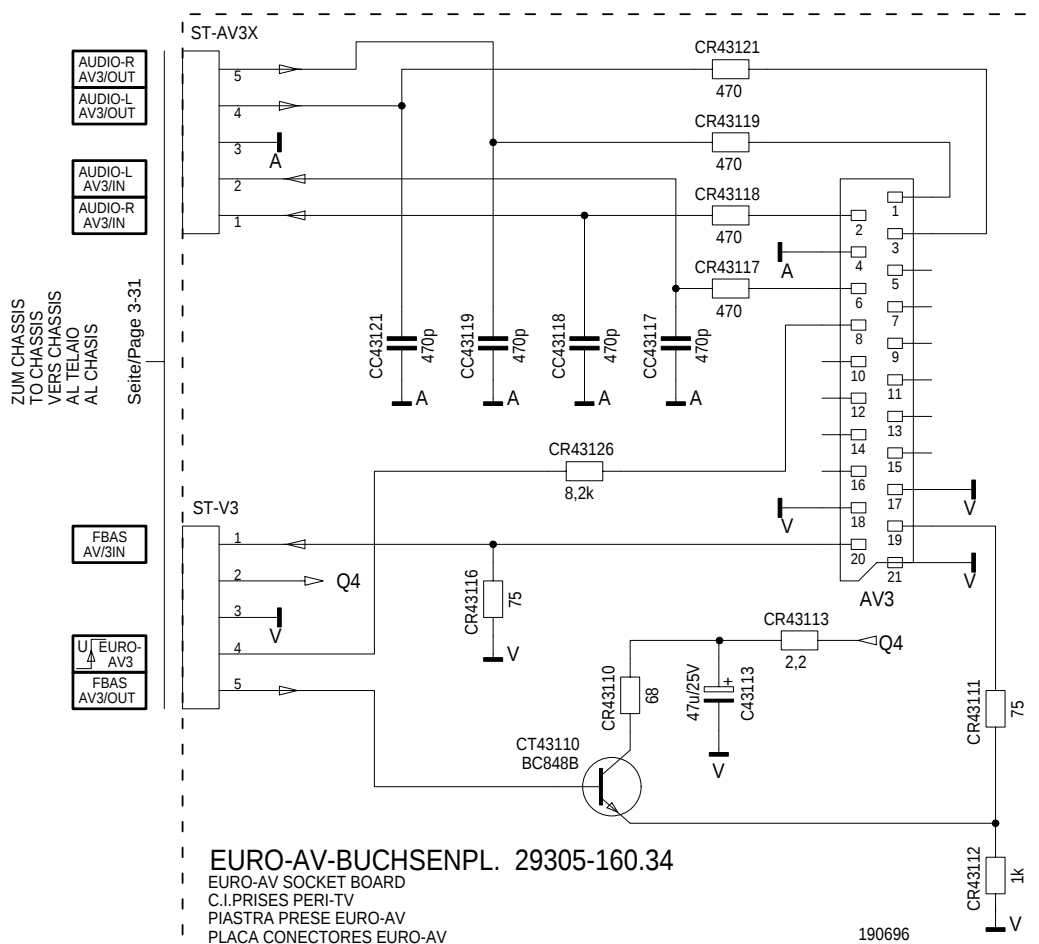
# Buchsen-Platte Socket Board 29305-008.33



ZUM SIGNAL-CHASSIS  
TO SIGNAL CHASSIS  
VERS CHASSIS SIGNAL  
AL CHASSIS SEGNALE  
AL CHASSIS SENAL

Seite/Page 3-27

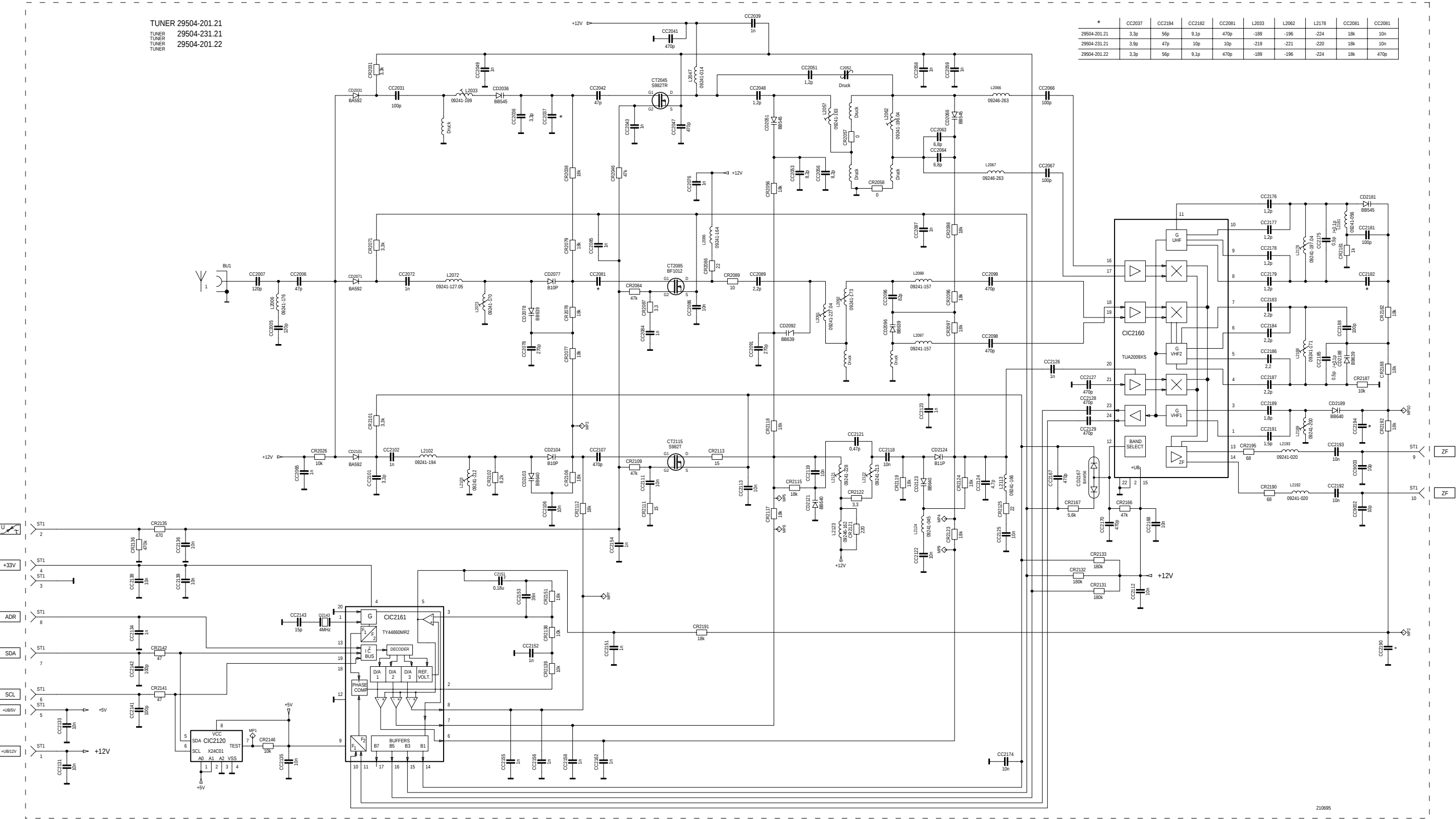
## Euro-AV Buchsen-Platte / Euro-AV Socket Board 29305-160.34



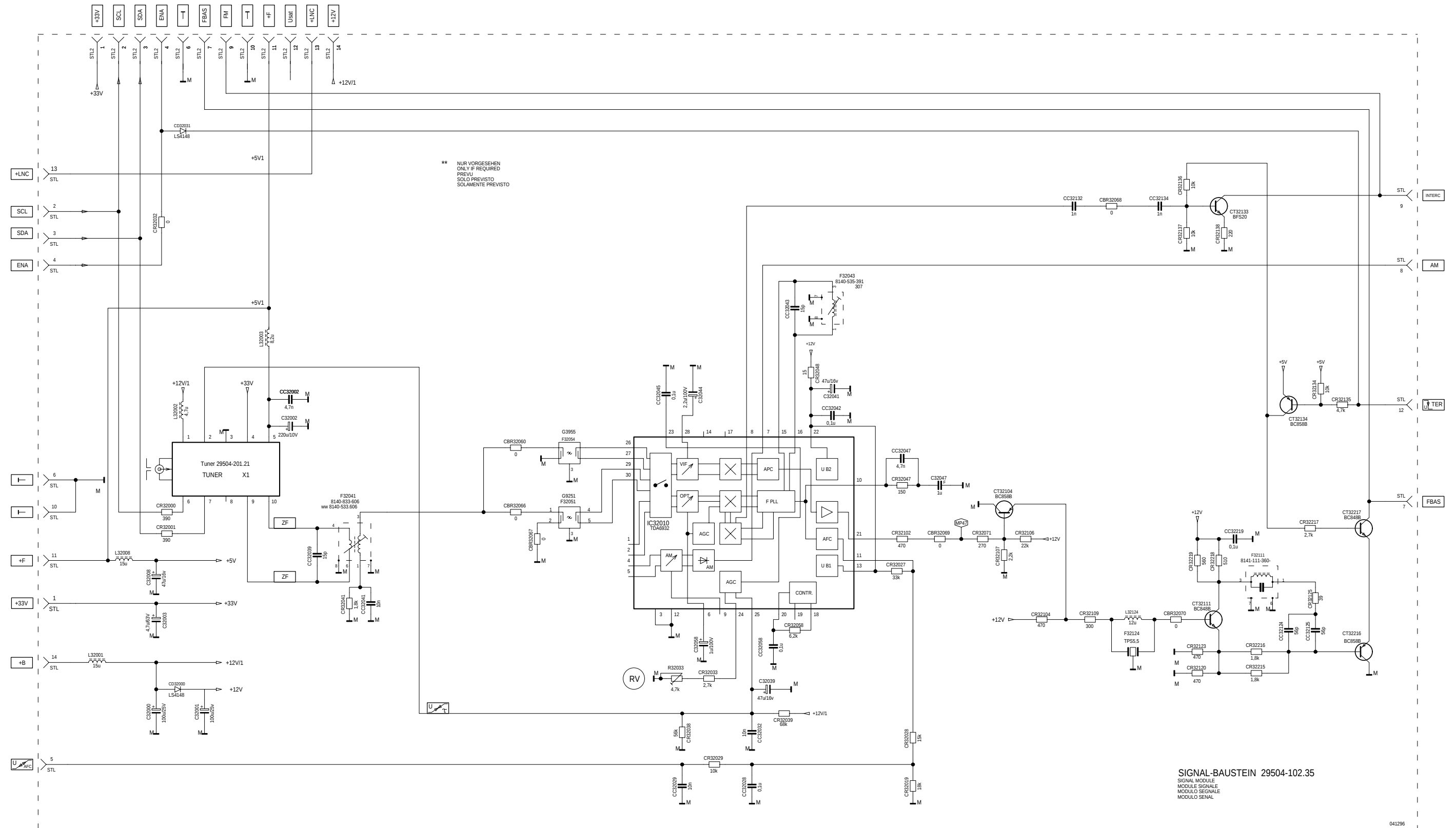
ZUM CHASSIS  
TO CHASSIS  
VERS CHASSIS  
AL TELAIO  
AL CHASSIS

Seite/Page 3-31

Tuner 29504-201.21/22/-231.21

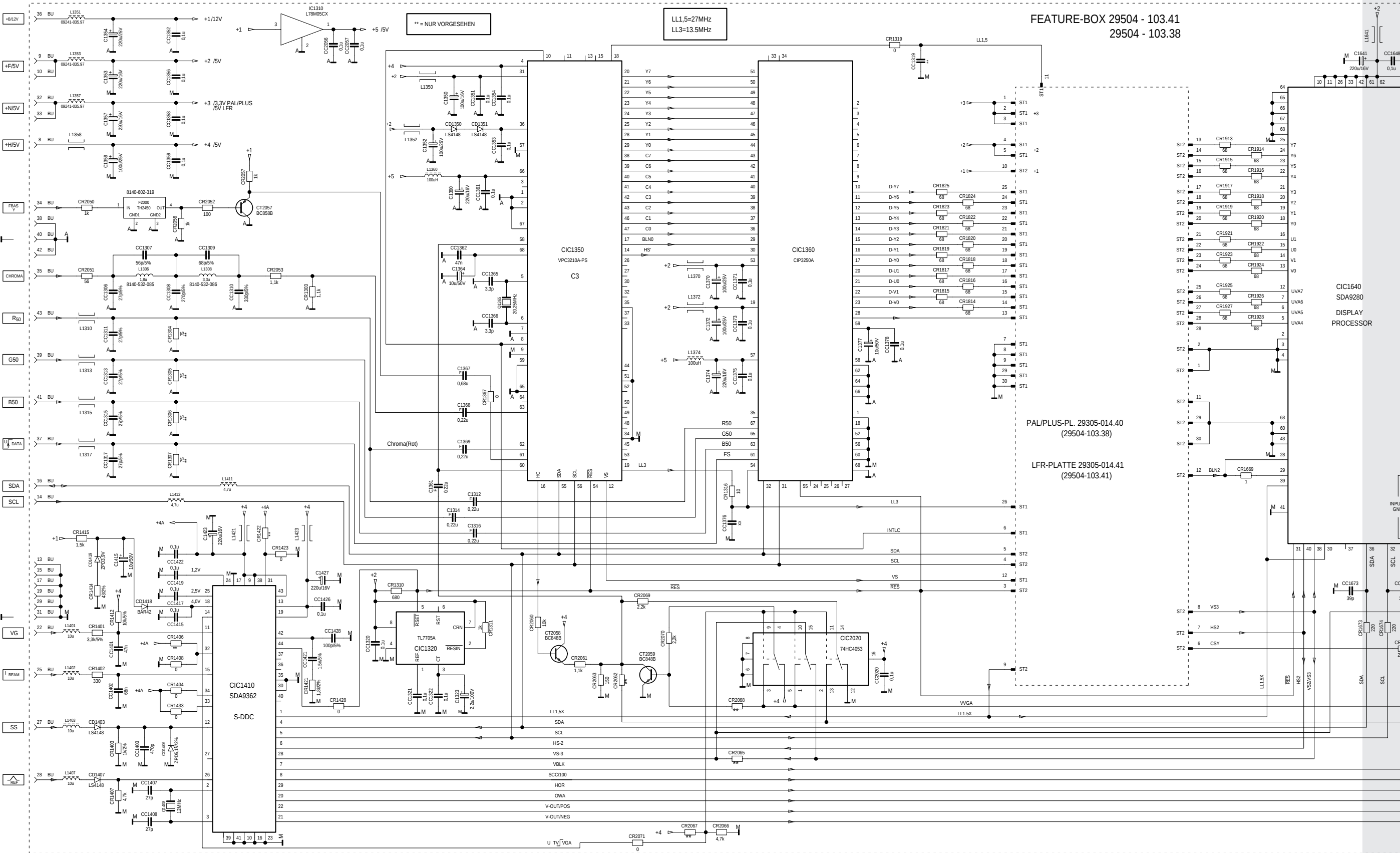


## Signal-Baustein / Signal Module 29504-102.35

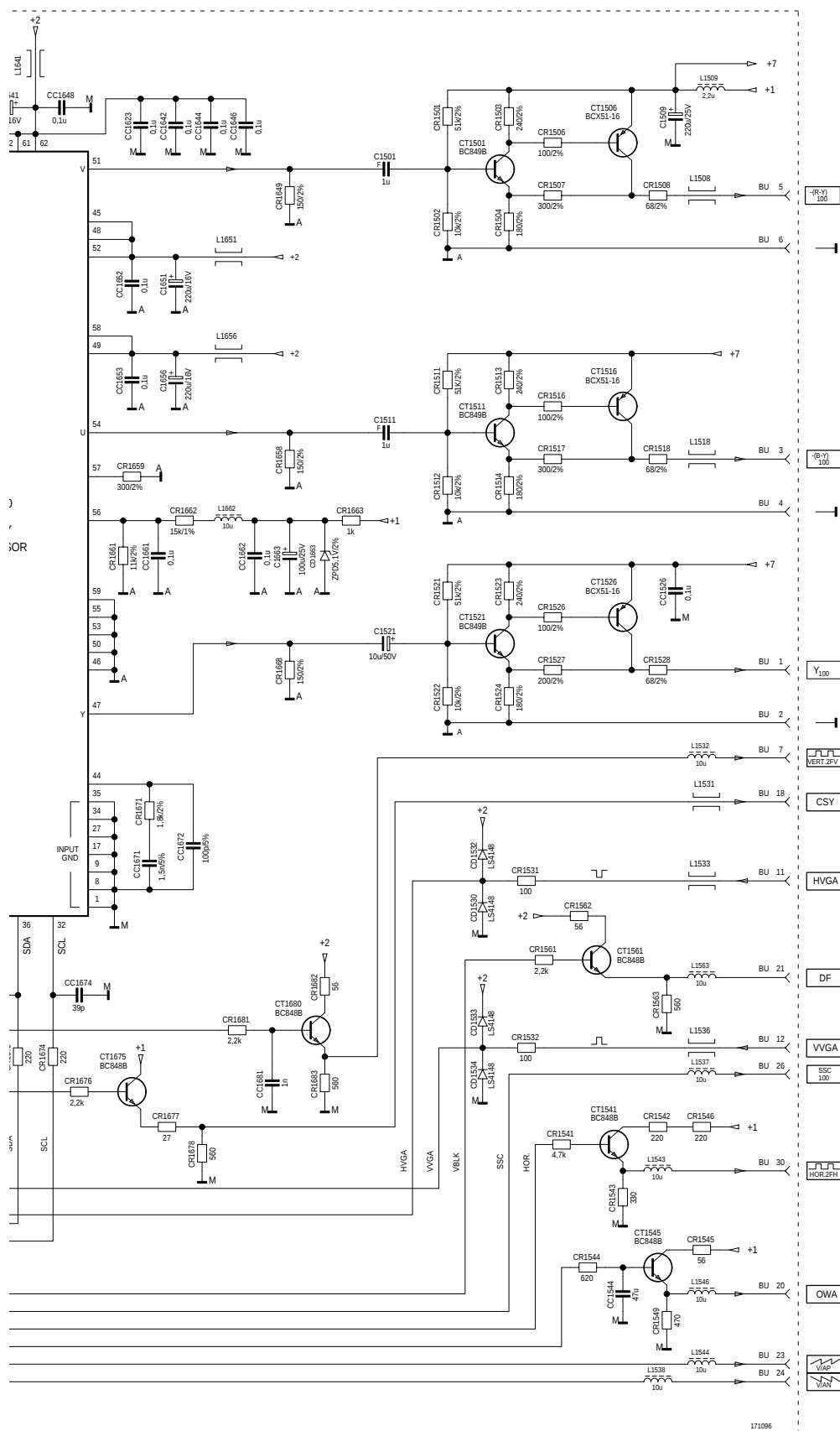


3 - 40

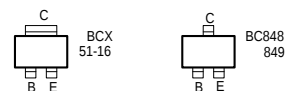
Feature-Box 29504-103.38/41



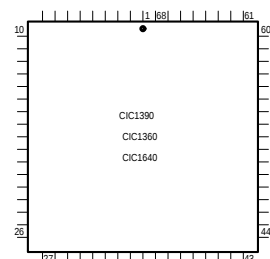
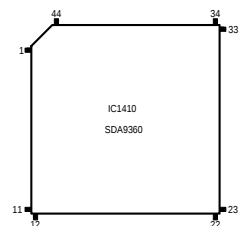
## Feature-Box 29504-103.38/41



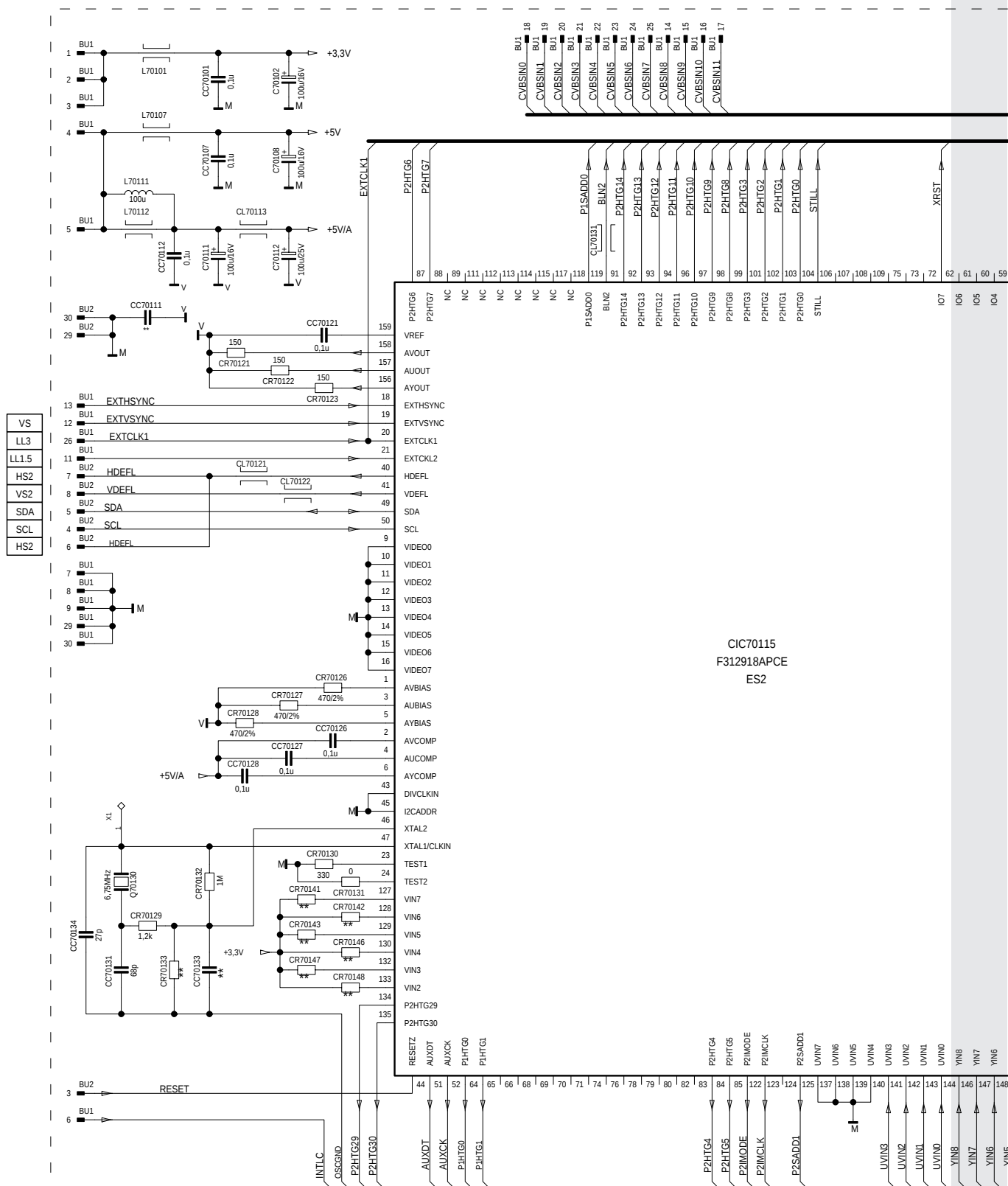
|    |              |
|----|--------------|
|    | BU-          |
| 01 | Y100         |
| 02 | MASSE        |
| 03 | -(B-Y)100    |
| 04 | MASSE        |
| 05 | -(R-Y)100    |
| 06 | MASSE        |
| 07 | VERT.2FV     |
| 08 | → H (+4/5V)  |
| 09 | → F (+2/5V)  |
| 10 | → F (+2/5V)  |
| 11 | → HVGA       |
| 12 | → VVGA       |
| 13 | MASSE        |
| 14 | → SCL        |
| 15 | MASSE        |
| 16 | → SDA        |
| 17 | MASSE        |
| 18 | CSY          |
| 19 | MASSE        |
| 20 | OWA          |
| 21 | DF           |
| 22 | → VG         |
| 23 | → VIAP       |
| 24 | → VIAN       |
| 25 | → IBEAM      |
| 26 | SSC100       |
| 27 | → SS         |
| 28 | → REF        |
| 29 | MASSE        |
| 30 | HOR.2FH      |
| 31 | MASSE        |
| 32 | → +N (+3/5V) |
| 33 | → +N (+3/5V) |
| 34 | → FBAS       |
| 35 | CHROMA       |
| 36 | → +B(+1/12V) |
| 37 | → DATA 50    |
| 38 | MASSE ANALOG |
| 39 | → RS0        |
| 40 | MASSE ANALOG |
| 41 | → GS0        |
| 42 | MASSE ANALOG |
| 43 | → B50        |



IC VON OBEN  
IC TOP VIEW  
IC VUES DE DESSOUS  
IC VEDUTO DA SOPRA  
IC VISTO DESDE ARRIBA

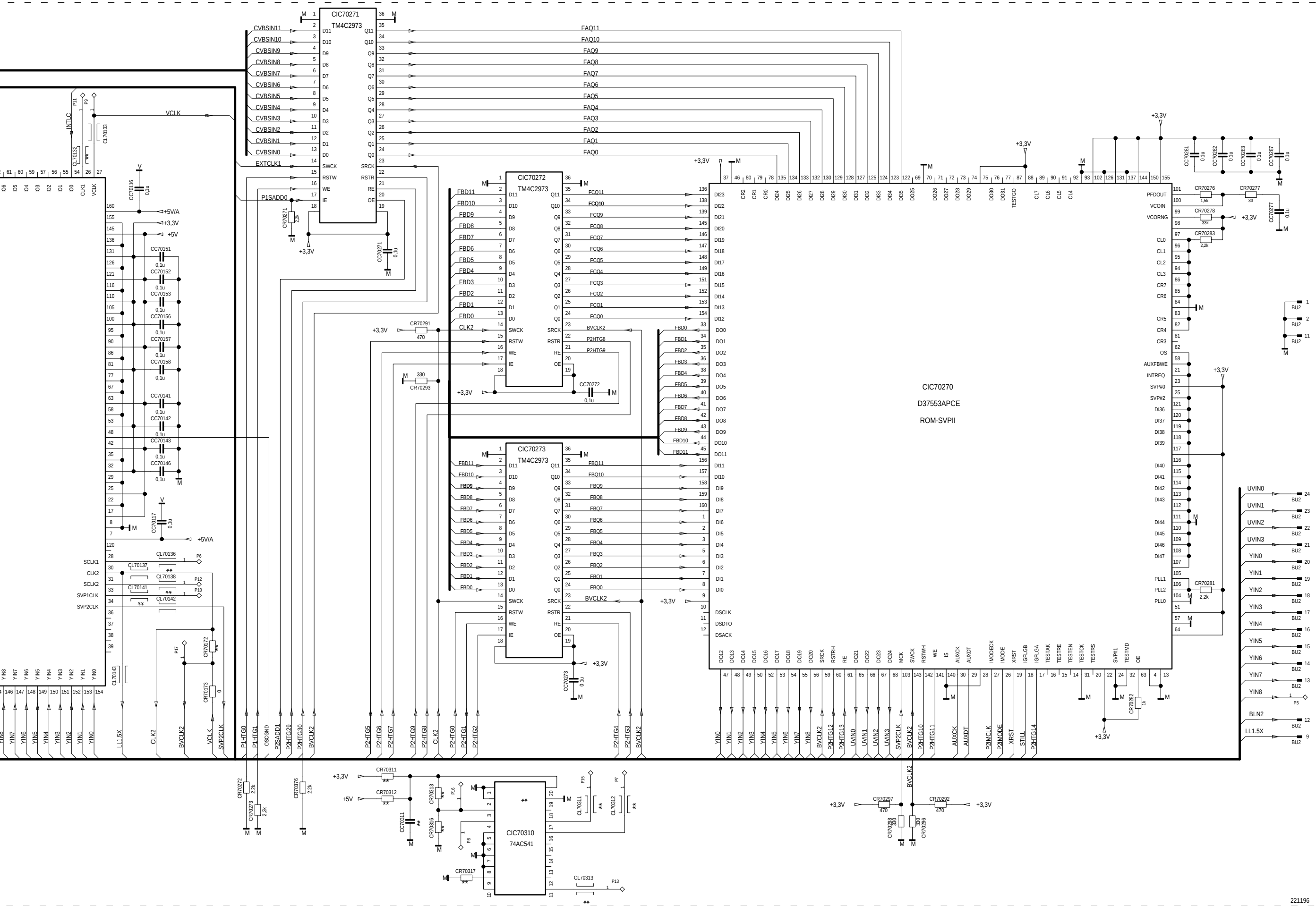


## PALplus Platte 9M-Bit / PALplus Board 9M-Bit 29305-014.40

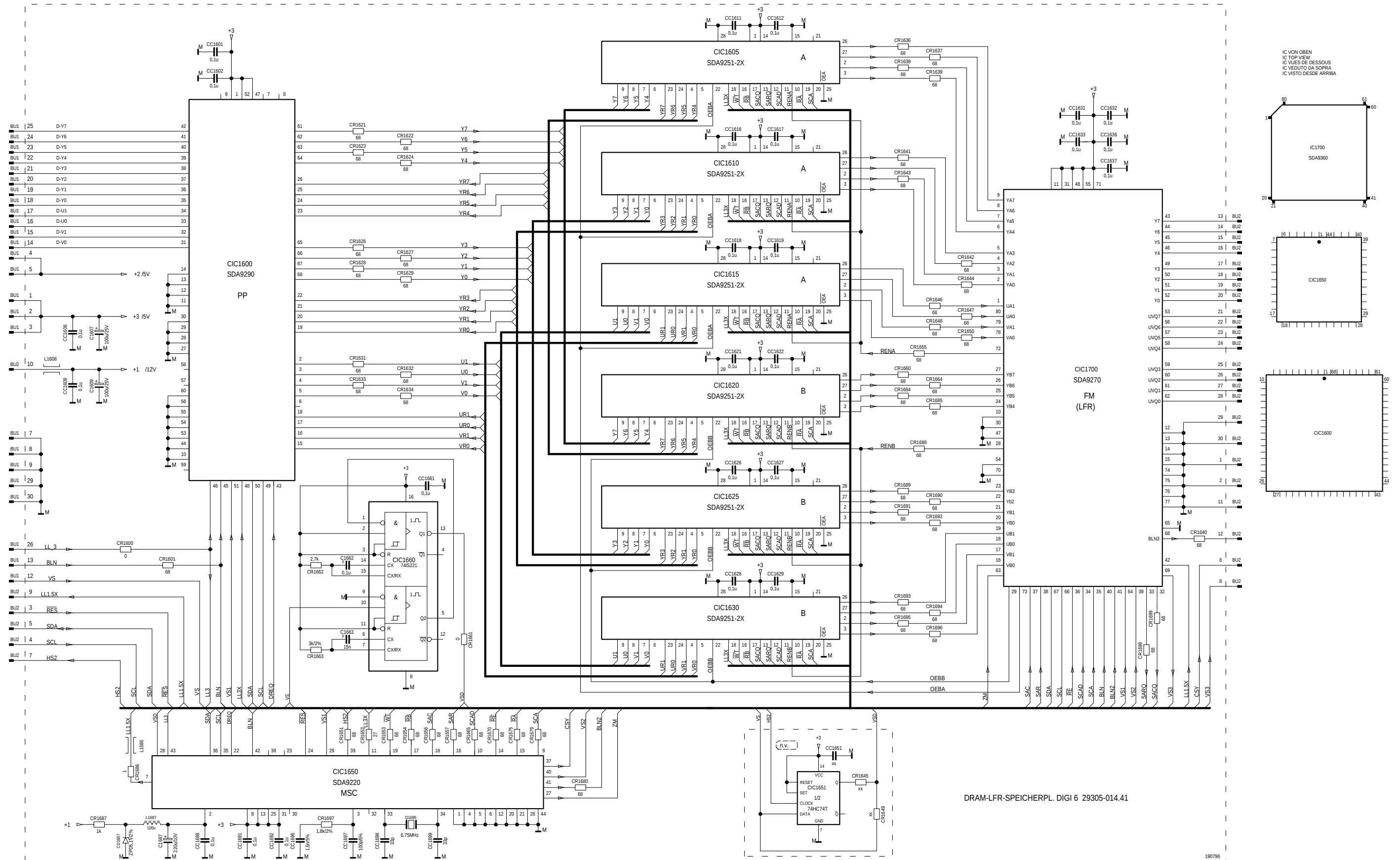


\*\* NUR VORGESEHEN!

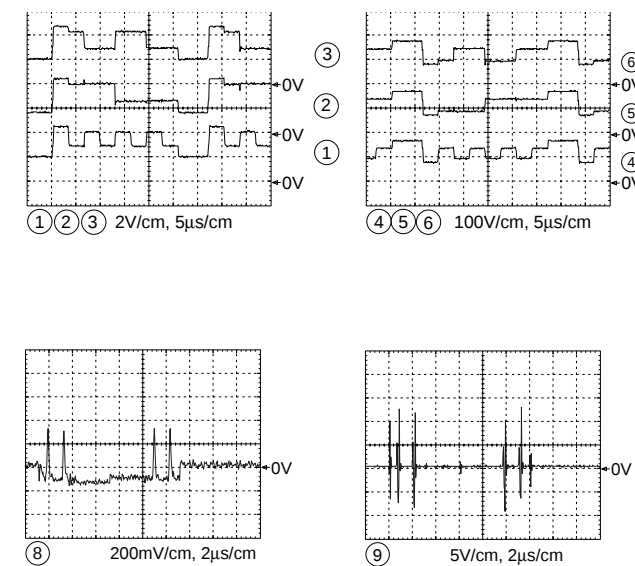
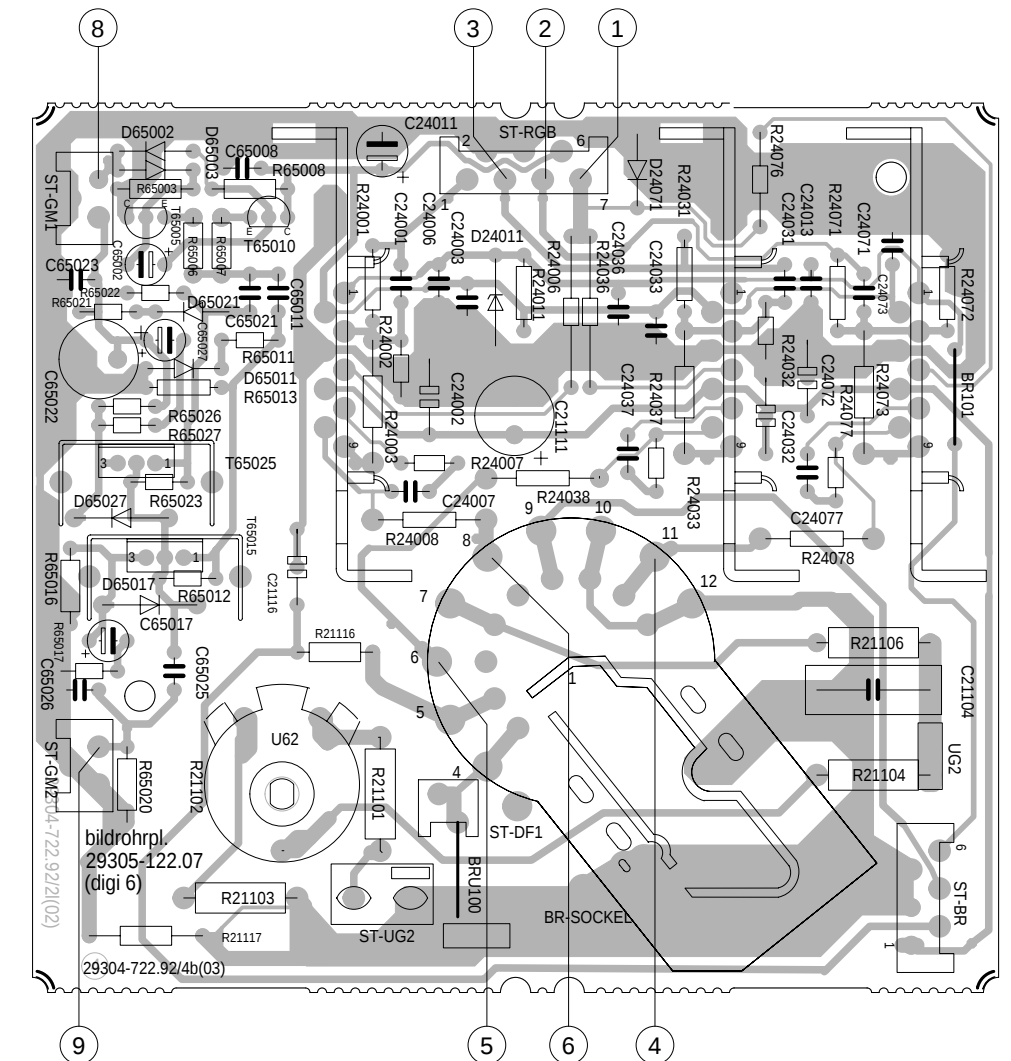
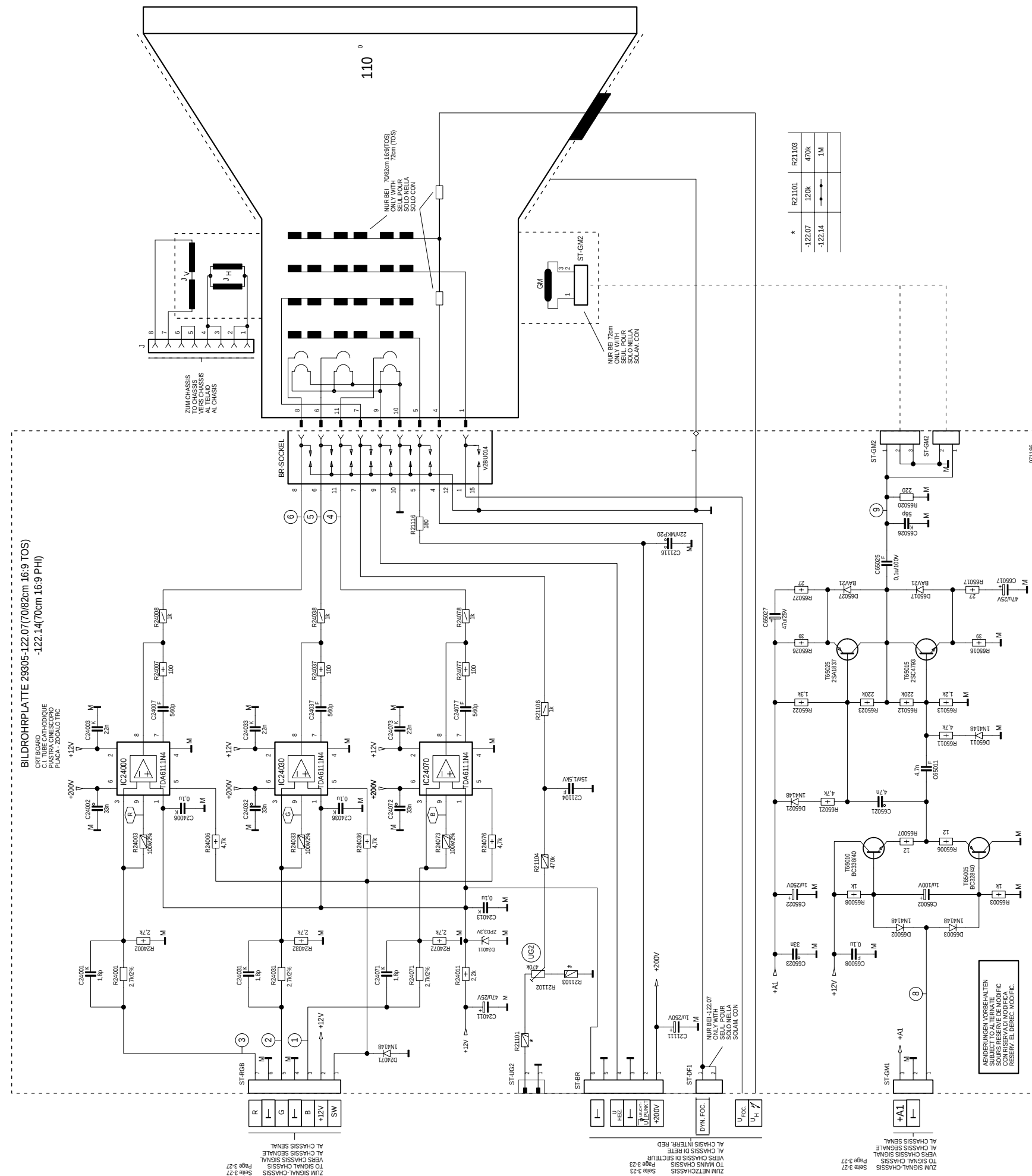
PALplus Platte 9M-Bit / PALplus Board 9M-Bit 29305-014.40



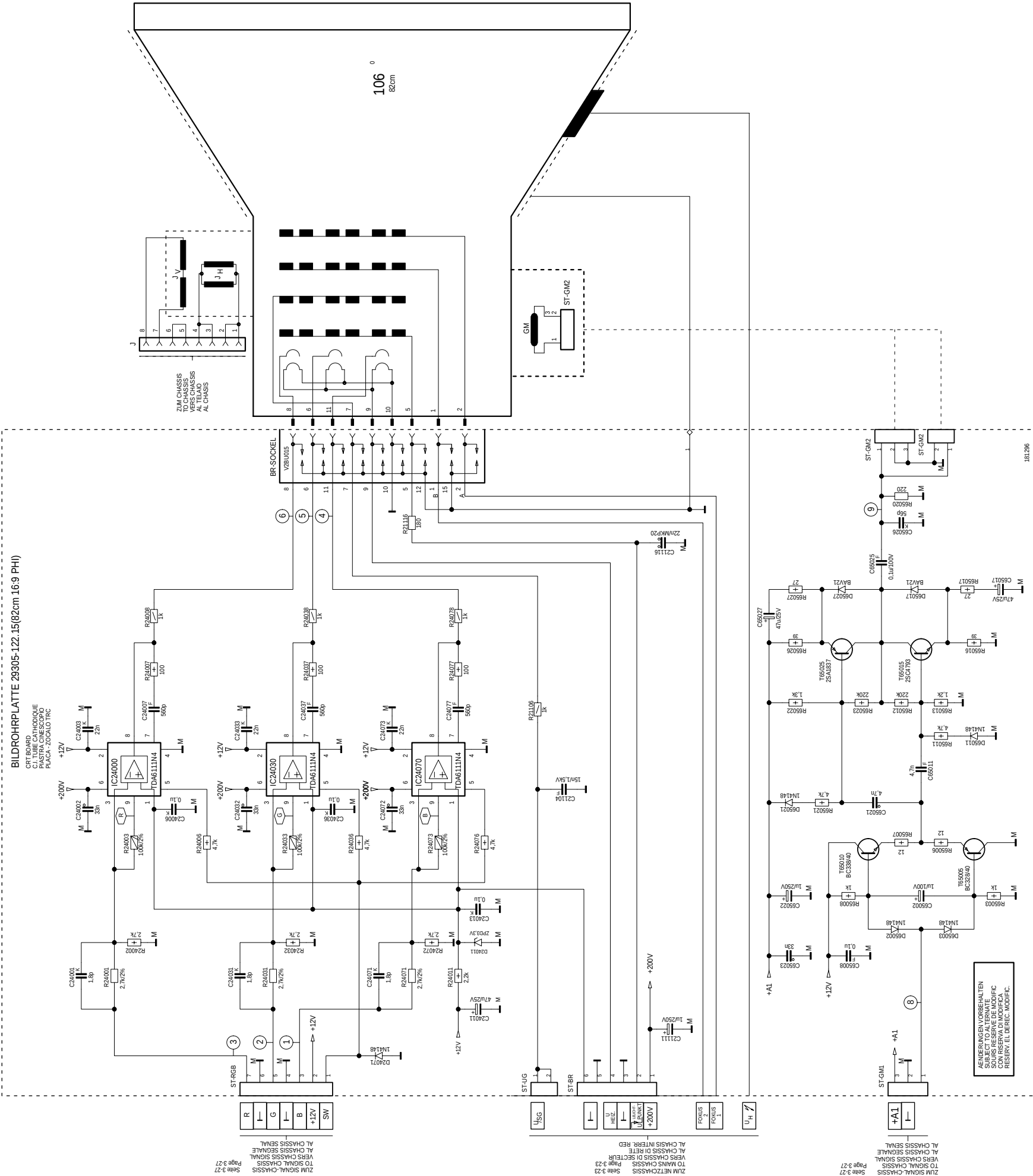
## Dram-LFR-Speicherplatte / Dram-LFR-Memory Board 29305-014.41



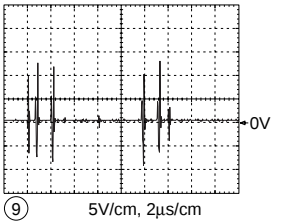
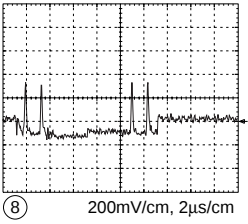
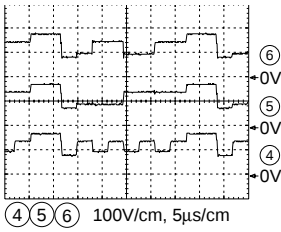
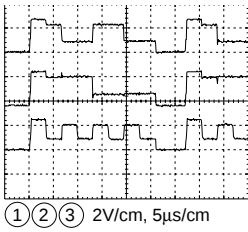
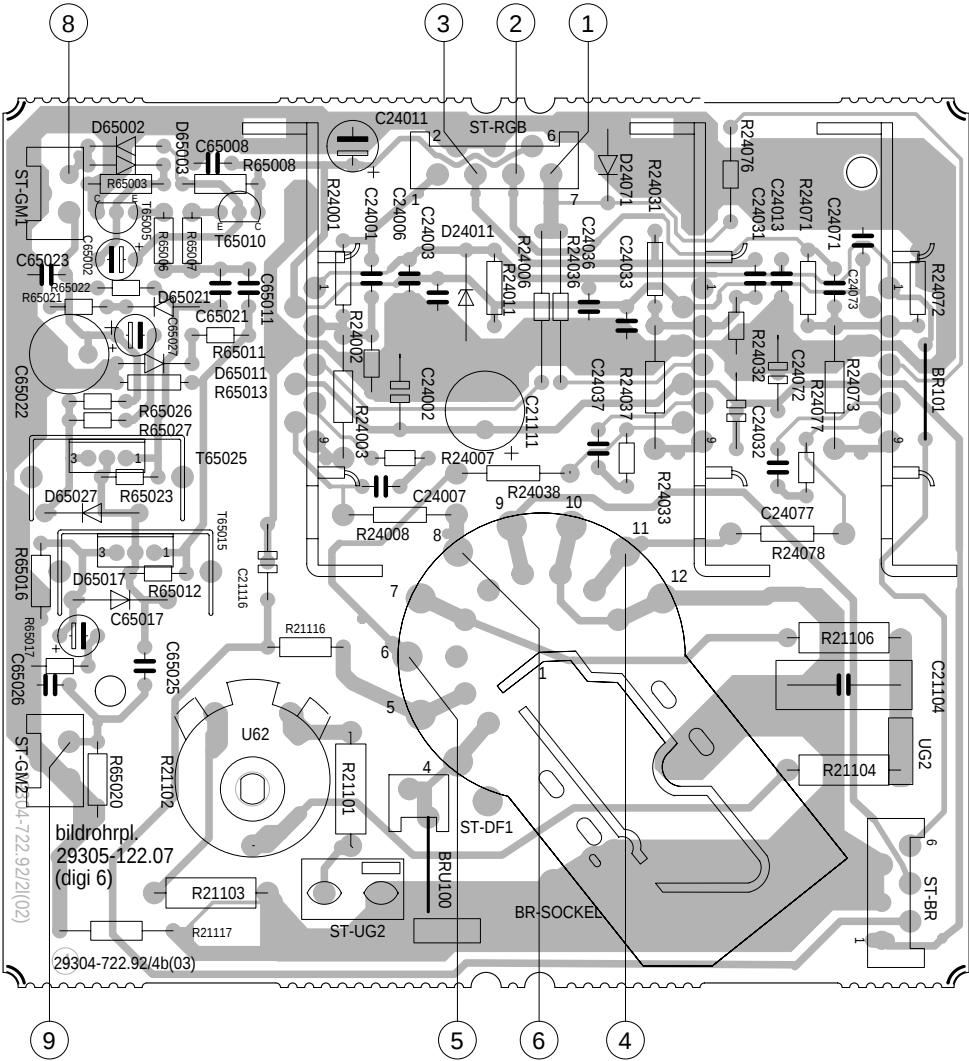
**Bestückungsseite, Ansicht von oben**  
**Component side, top view**



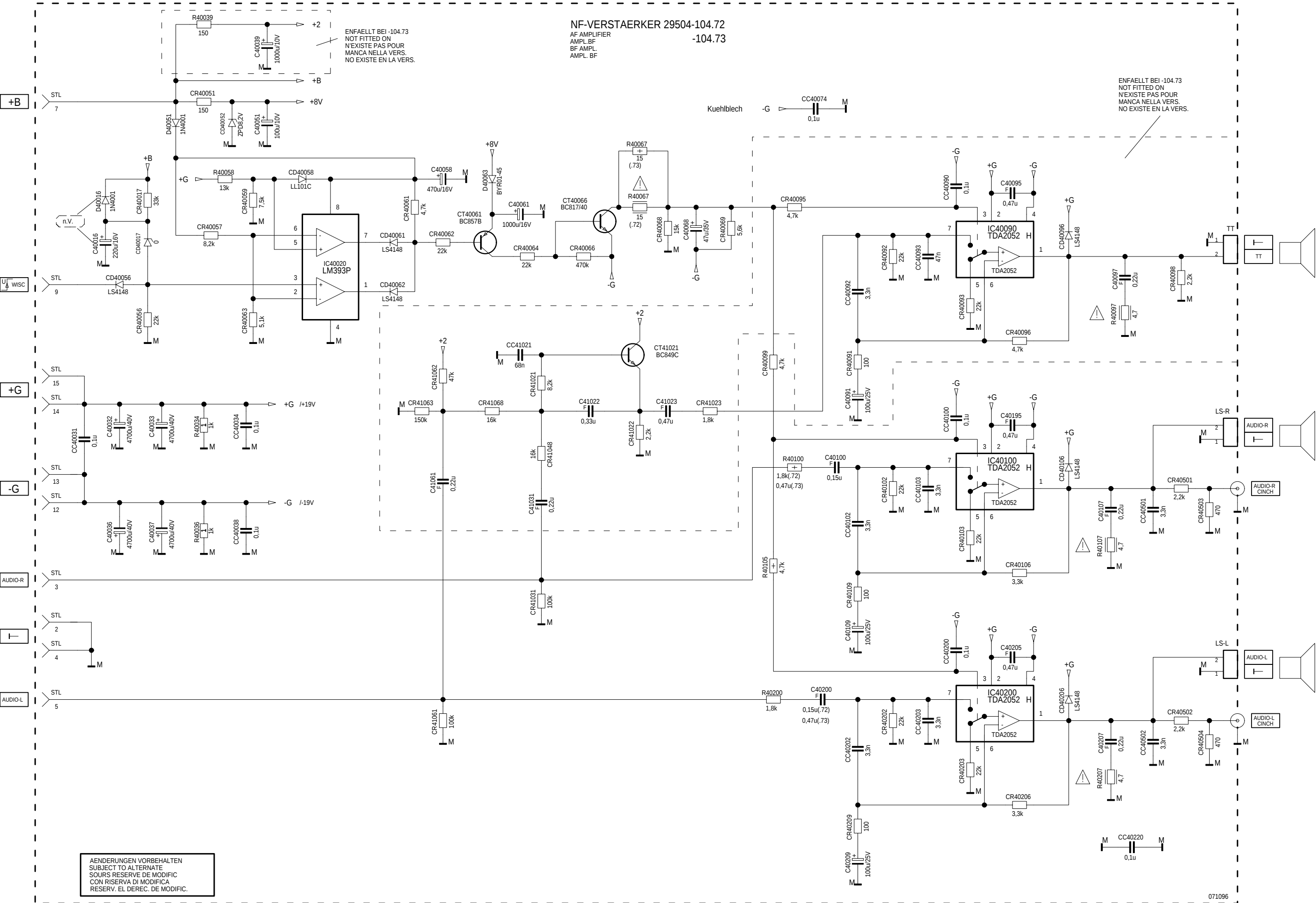
Bildrohrplatte / CRT Panel 29305-122.15



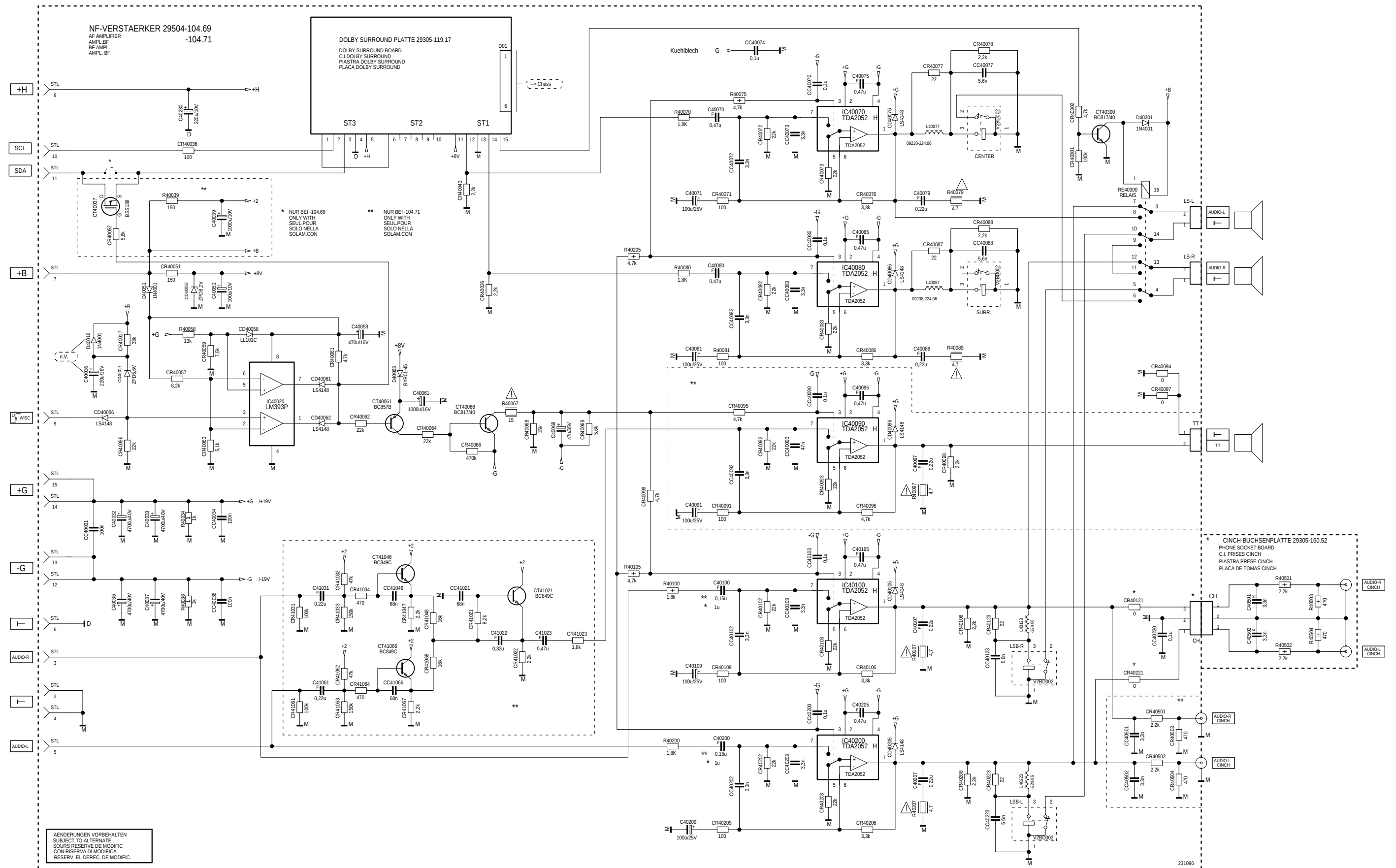
Bestückungsseite, Ansicht von oben  
Component side, top view



NF-Verstärker / AF Amplifier 29504-104.72/73



## NF-Verstärker / AF Amplifier 29504-104.69/71



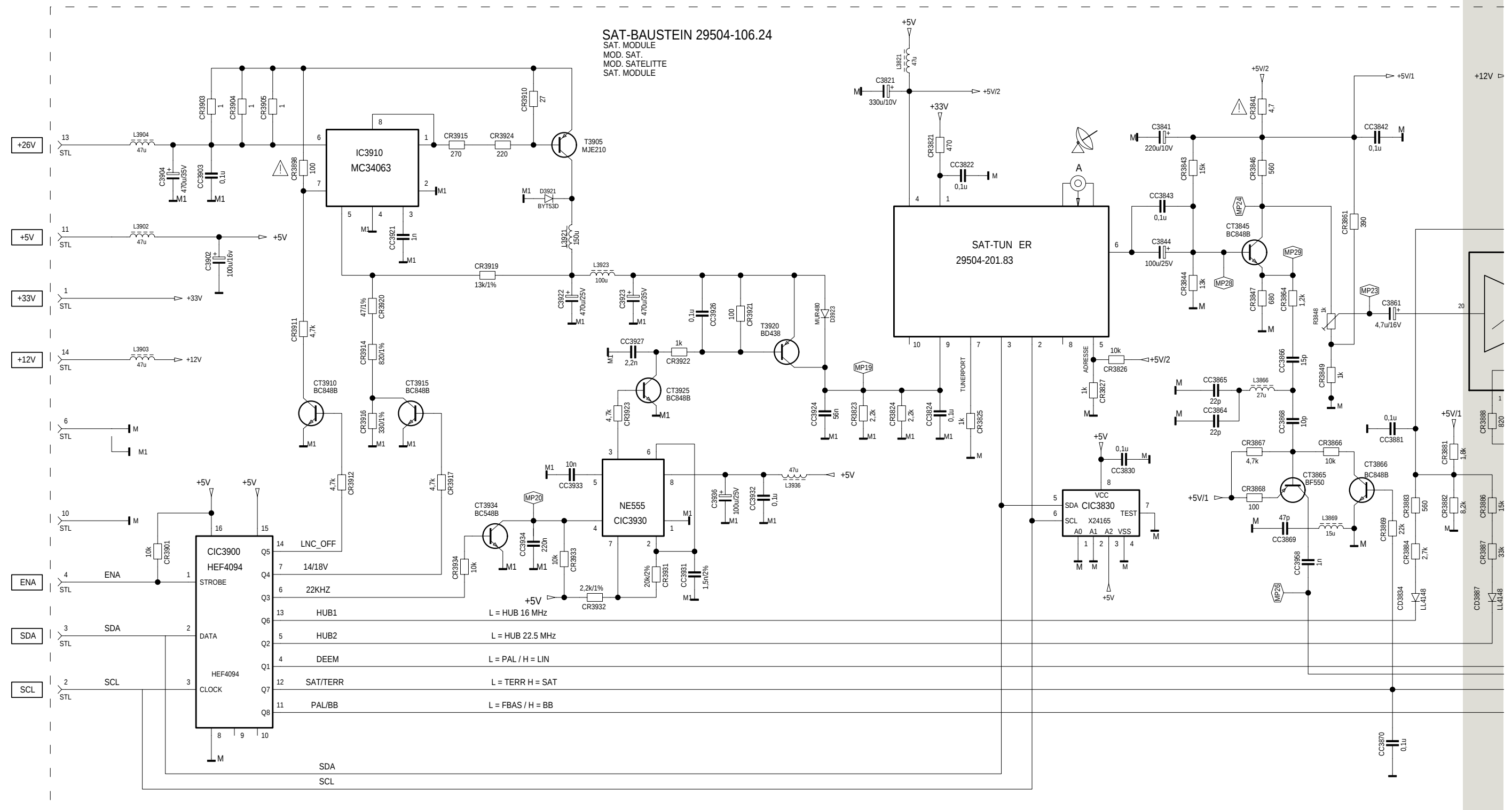


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*GRUNDIG Service*

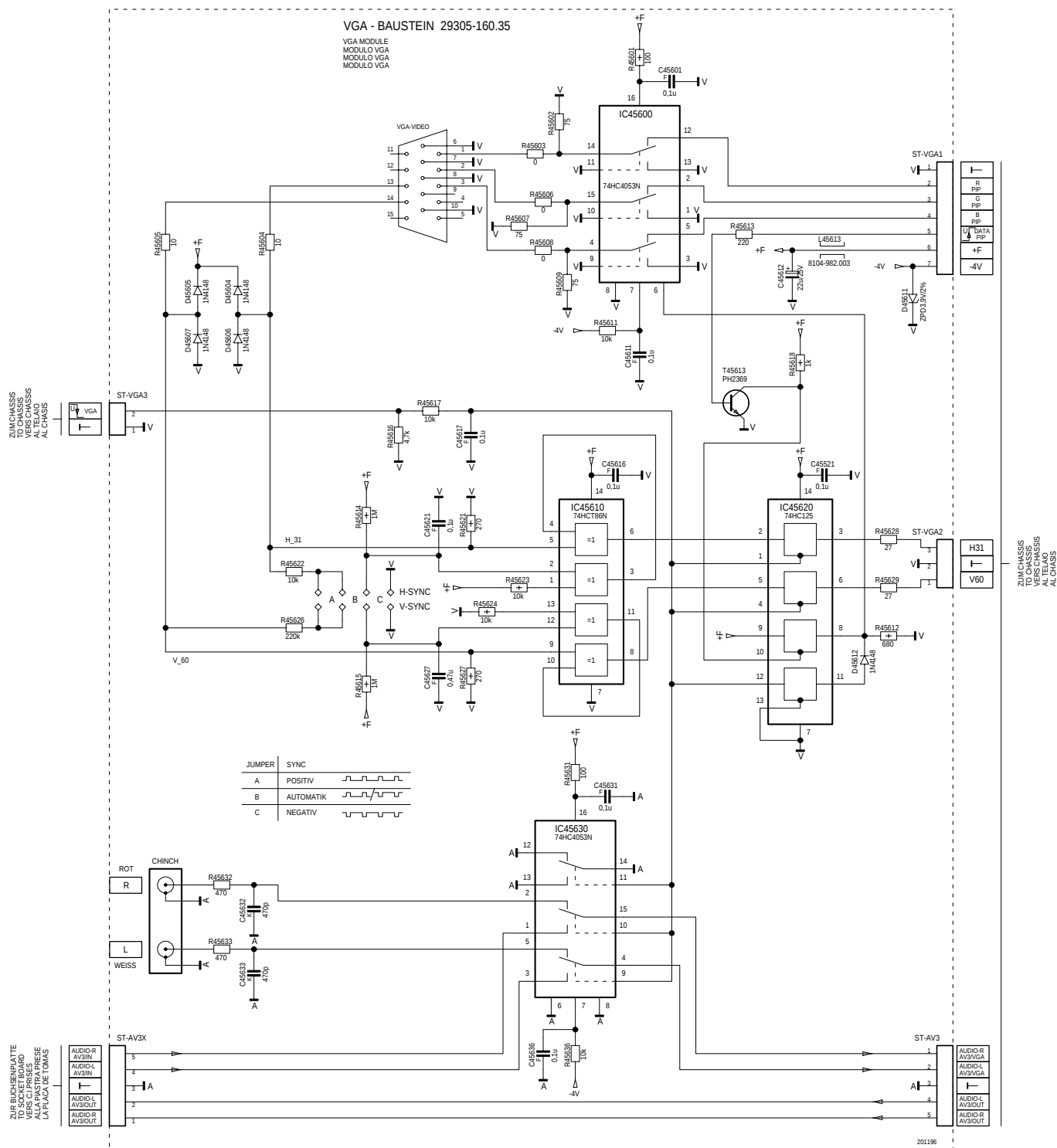


## SAT-Baustein / SAT Module 29504-106.24



The schematic diagram illustrates a radio receiver circuit, likely a portable FM/STL receiver. The circuit is powered by a +12V supply and includes a +5V/1 regulator. Key components include a TDA6151 IC (CIC3860), an F202004 IC (F3892), and various transistors (CT3982, CT3988, CT3989, CT3990, CT3994, CT3995, CT3997, CT3999). The circuit features a variable capacitor (C3862) and a variable inductor (L3864) for tuning. It also includes a speaker (MP36) and a microphone (MP37). The output is connected to an FM CHASSIS (9 STL) and an FBAS CHASSIS (7 STL).

## VGA-Baustein / VGA Module 29305-160.35



**GRUNDIG**Ersatzteilliste  
Spare Parts List

D Btx \* 32700 #

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## M 70-269/9 REFERENCE

SACH-NR. / PART NO.: 9.21608-0275 BESTELL-NR. / ORDER NO.: G.CE 9875 COSMOS-SCHWARZ/COSMOS BLACK  
SACH-NR. / PART NO.: 9.21608-2275 BESTELL-NR. / ORDER NO.: G.CF 3875 COSMOS-SCHWARZ/COSMOS BLACK

| POS. NR.<br>POS. NO. | ABB.<br>FIG. | SACHNUMMER<br>PART NUMBER | ANZ.<br>QTY. | BEZEICHNUNG<br>(D)                                   | DESCRIPTION<br>(GB)                                            |
|----------------------|--------------|---------------------------|--------------|------------------------------------------------------|----------------------------------------------------------------|
| 0001.000             |              | 29635-150.02              |              | GEHAEUSE LACKIERT KPL                                | HOUSING LACQUERED CPL.                                         |
| 0001.100             |              | 29602-603.51              |              | GRUNDIG-EMBLEM                                       | GRUNDIG EMBLEM                                                 |
| 0001.200             |              | 29633-592.80              |              | GITTER RECHTS                                        | GRILLE RIGHT                                                   |
| 0001.300             |              | 29633-593.80              |              | GITTER LINKS                                         | GRILLE LEFT                                                    |
| 0004.000             |              | 29636-071.01              |              | KLAPPE DRUCK KPL                                     | FLAP PRESSURE CPL.                                             |
| 0006.000             |              | 19126-025.97              | 2            | LAUTSPRECHER                                         | LOUDSPEAKER                                                    |
| 0009.000             |              | 29631-883.13              |              | GEHAEUSERUECKTEIL LACKIERT                           | REAR PANEL LACQUERED                                           |
| 0010.000             |              | 29618-311.04              |              | AUFKLEBER TYPE 02                                    | ADHESIVE LABEL 02                                              |
| 0010.000             |              | 29618-384.04              |              | AUFKLEBER TYPE 22                                    | ADHESIVE LABEL 22                                              |
|                      |              | 29656-003.81              |              | MONTAGEZUBEHOER F.BILDROHR 02<br>KEIN E-TEIL         | MOUNTING ACCESSORIES FOR CRT 02<br>NO SPARE PART               |
|                      |              | 29656-004.11              |              | MONTAGEZUBEHOER F.BILDROHR 22<br>KEIN E-TEIL         | MOUNTING ACCESSORIES FOR CRT 22<br>NO SPARE PART               |
| 0021.000             |              | 29607-219.01              | 10           | SPULENHAKEN 02                                       | COIL HOOK 02                                                   |
| 0024.000             | △            | 09246-188.71              |              | ENTMAGNETISIERUNGSSPULE 02                           | DEGAUSSING COIL 02                                             |
| 0024.000             | △            | 09246-151.75              |              | ENTMAGNETISIERUNGSSPULE 22                           | DEGAUSSING COIL 22                                             |
| 0025.000             | △            | 8300-066-697              |              | BILDR.W66KZA696X98 (B) 02                            | PICT.TUBE W66KZA696X99 (B) 02                                  |
| 0025.000             | △            | 8300-066-203              |              | BILDR.W66ESF202X44 PHI 22                            | PICT.TUBE W66ESF202X44 PHI 22                                  |
| 0029.000             | △            | 8290-991-316              |              | NETZKABEL KPL.                                       | POWER CABLE CPL                                                |
| 0030.000             |              | 29501-082.26              |              | BEDIENEINHEIT                                        | CONTROL UNIT                                                   |
| 0030.200             |              | 29303-168.05              |              | CINCHBUCHSE 3-FACH                                   | CINCH SOCKET 3 FOLD                                            |
| 0030.300             |              | 29303-390.42              |              | KOPFHOERERBUCHSE STEREO                              | HEADPHONE SOCKET STEREO                                        |
| 0030.400             |              | 29703-357.01              | 4            | TASTSCHALTER                                         | TACT SWITCH                                                    |
| 0030.500             |              | 29303-522.06              |              | S-VHS-BUCHSE                                         | S-VHS-SOCKET                                                   |
| 0031.000             |              | 29501-643.01              |              | TASTENKNOPF NETZ                                     | KEY BUTTON MAINS                                               |
| 0033.000             | △            | 29305-165.59              |              | NETZSCHALTERPLATTE                                   | POWER SWITCH BOARD                                             |
| 0033.100             | △            | 29703-291.71              |              | NETZSCHALTER ECO O.W.                                | POWER SWITCH                                                   |
| 0035.100             |              | 19154-031.97              |              | LAUTSPRECHER BASS-BOX                                | LOUDSPEAKER BASS-BOX                                           |
| 0038.000             |              | 29642-061.01              |              | TELEPILOT TP 800                                     | REMOTE CONTROL TP 800                                          |
|                      |              | 29305-122.07              | X            | BILDROHRPLATTE 02                                    | PICTURE TUBE BOARD 02                                          |
|                      |              | 29305-122.14              | X            | BILDROHRPLATTE 22                                    | PICTURE TUBE BOARD 22                                          |
|                      |              | 72010-019.90              |              | SERVICE MANUAL                                       | SERVICE MANUAL                                                 |
|                      |              | 21608-941.01              |              | BEDIENUNGSANLEITUNG                                  | OPERATING INSTRUCTIONS                                         |
|                      |              | 29701-097.03              | X            | CUC-FS-STEREO HF 02<br>KEIN E-TEIL                   | CUC TV STEREO HF 02<br>NO SPARE PART                           |
|                      |              | 29701-097.15              | X            | CHASSIS-FS-STEREO HF 22<br>CUC 1952<br>KEIN E-TEIL   | CHASSIS TV STEREO HF 22<br>CUC 1952<br>NO SPARE PART           |
|                      |              | 29701-098.03              | X            | CUC-FS-STEREO NETZ 02<br>KEIN E-TEIL                 | CUC TV STEREO MAINS SUPPLY 02<br>NO SPARE PART                 |
|                      |              | 29701-098.14              | X            | CHASSIS-FS-STEREO NETZ 22<br>CUC 1952<br>KEIN E-TEIL | CHASSIS TV STEREO MAINS SUPPLY 22<br>CUC 1952<br>NO SPARE PART |
|                      |              |                           |              | X = SIEHE GESONDERTE E-LISTE                         | X = SEE SEPARATE PARTS LIST                                    |

| POS. NR.<br>POS. NO.                                                                                                                                                                                                                                                                                                                                                                        | SACHNUMMER<br>PART NUMBER | BEZEICHNUNG<br>DESCRIPTION | POS. NR.<br>POS. NO. | SACHNUMMER<br>PART NUMBER | BEZEICHNUNG<br>DESCRIPTION |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------------------|----------------------|---------------------------|----------------------------|
| D 81501                                                                                                                                                                                                                                                                                                                                                                                     | 8309-215-045              | DIODE 1N4148               |                      |                           |                            |
| IC 84001                                                                                                                                                                                                                                                                                                                                                                                    | 8305-367-530              | IC TFMS 5300               |                      |                           |                            |
| T 81501                                                                                                                                                                                                                                                                                                                                                                                     | 8303-295-875              | TRANS.BC 875/877/879 SIE   |                      |                           |                            |
| T 81502                                                                                                                                                                                                                                                                                                                                                                                     | 8303-205-548              | TRANS BC548B               |                      |                           |                            |
|                                                                                                                                                                                                                                                                                                                                                                                             |                           |                            |                      |                           |                            |
| <p>Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Sach-Nummer 72010-800.00, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!</p> <p>The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 72010-800.00, as well as the respective national deviations.</p> |                           |                            |                      |                           |                            |

**GRUNDIG**Ersatzteilliste  
Spare Parts List

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TRENTO SE 7016/9 PIP REFERENCE

 SACH-NR. / PART NO.: 9.21621-0275 BESTELL-NR. / ORDER NO.: G.CF 0975 COSMOS-SCHWARZ/COSMOS BLACK  
 SACH-NR. / PART NO.: 9.21621-2275 BESTELL-NR. / ORDER NO.: G.CF 3975 COSMOS-SCHWARZ/COSMOS BLACK

| POS. NR.<br>POS. NO. | ABB.<br>FIG. | SACHNUMMER<br>PART NUMBER | ANZ.<br>QTY. | BEZEICHNUNG<br>(D)            | DESCRIPTION<br>(GB)               |
|----------------------|--------------|---------------------------|--------------|-------------------------------|-----------------------------------|
| 0001.000             |              | 29625-731.02              |              | GEHAEUSEVORDERTEIL OFB        | CABINET FRONT                     |
| 0001.100             |              | 29632-148.01              |              | EMBLEM GRUNDIG                | EMBLEM GRUNDIG                    |
| 0001.200             |              | 29628-834.02              |              | GITTER LINKS KPL.             | GRILLE LEFT CPL.                  |
| 0001.300             |              | 29628-835.02              |              | GITTER RECHTS KPL.            | GRILLE RIGHT CPL.                 |
| 0001.400             |              | 29636-094.51              |              | ABDECKUNG DRUCK KPL.          | COVER PRESSURE CPL.               |
| 0006.000             |              | 19126-025.97              | 2            | LAUTSPRECHER                  | LOUDSPEAKER                       |
| 0010.000             |              | 29631-883.13              |              | GEHAEUSERUECKTEIL LACKIERT    | REAR PANEL LACQUERED              |
| 0011.000             |              | 29618-319.04              |              | TYPENAUFKLEBER 02             | ADHESIVE LABEL TYPE 02            |
| 0011.000             |              | 29618-383.04              |              | TYPENAUFKLEBER 22             | ADHESIVE LABEL TYPE 22            |
|                      |              | 29656-003.81              |              | MONTAGEZUBEHOER F.BILDROHR 02 | MOUNTING ACCESSORIES FOR CRT 02   |
|                      |              |                           |              | KEIN E-TEIL                   | NO SPARE PART                     |
|                      |              | 29656-004.11              |              | MONTAGEZUBEHOER F.BILDROHR 22 | MOUNTING ACCESSORIES FOR CRT 22   |
|                      |              |                           |              | KEIN E-TEIL                   | NO SPARE PART                     |
| 0021.000             |              | 29607-219.01              | 10           | SPULENHAKEN 02                | COIL HOOK 02                      |
| 0024.000             |              | 09246-188.71              |              | ENTMAGNETISIERUNGSSPULE 02    | DEGAUSSING COIL 02                |
| 0024.000             |              | 09246-151.75              |              | ENTMAGNETISIERUNGSSPULE 22    | DEGAUSSING COIL 22                |
| 0025.000             |              | 8300-066-697              |              | BILDR.W66KZA696X98 (B) 02     | PICT.TUBE W66KZA696X98 (B) 02     |
| 0025.000             |              | 8300-066-203              |              | BILDR.W66ESF202X44 PHI 22     | BILDR.W66ESF202X44 PHI 22         |
| 0027.000             |              | 29633-684.01              |              | ABDECKUNG BUCHSEN             | COVER SOCKET                      |
|                      |              | 29501-083.54              |              | KEYBOARD                      | KEYBOARD                          |
|                      |              |                           |              | KEIN E-TEIL                   | NO SPARE PART                     |
| 0030.000             |              | 29501-082.54              |              | BEDIENEINHEIT                 | CONTROL UNIT                      |
| 0030.100             |              | 29303-168.05              |              | CINCHBUCHSE 3-FACH            | CINCH SOCKET 3 FOLD               |
| 0030.200             |              | 29303-390.42              |              | KOPFHOERERBUCHSE 3,5 O.SC     | HEADPHONE SOCKET STEREO 3,5 O.SC  |
| 0030.300             |              | 29703-291.71              |              | NETZSCHALTER ECO O.WISCHER    | POWER SWITCH ECO W/O WIPER        |
| 0030.400             |              | 29703-357.01              | 4            | TASTSCHALTER                  | KEY SWITCH                        |
| 0031.000             |              | 29501-648.02              |              | TASTENKNOPF NETZ GRUEN        | KEY BUTTON MAINS SUPPLY GREEN     |
| 0032.000             |              | 29501-685.06              |              | TASTEN-SATZ                   | KEY SET                           |
| 0047.000             |              | 8290-991-316              |              | NETZKABEL KPL.                | POWER CABLE CPL GWN9.22           |
| 0048.100             |              | 19154-031.97              |              | LAUTSPRECHER BASS-BOX         | LOUDSPEAKER BASS-BOX              |
| 0049.000             |              | 29642-061.11              |              | TELEPILOT TP 900              | REMOTE CONTROL TP 900             |
|                      |              | 29305-122.07              | X            | BILDROHRPLATTE 02             | PICTURE TUBE BOARD 02             |
|                      |              | 29305-122.14              | X            | BILDROHRPLATTE 22             | PICTURE TUBE BOARD 22             |
|                      |              | 72010-019.90              |              | SERVICE MANUAL                | SERVICE MANUAL                    |
|                      |              | 21621-941.01              |              | BEDIENUNGSANLEITUNG           | INSTRUCTION MANUAL                |
|                      |              | 29701-097.09              | X            | CHASSIS-FS-STEREO HF 02       | CHASSIS TV STEREO HF 02           |
|                      |              |                           |              | CUC 1952                      | CUC 1952                          |
|                      |              |                           |              | KEIN E-TEIL                   | NO SPARE PART                     |
|                      |              | 29701-097.14              | X            | CHASSIS-FS-STEREO HF 22       | CHASSIS TV STEREO HF 22           |
|                      |              |                           |              | CUC 1952                      | CUC 1952                          |
|                      |              |                           |              | KEIN E-TEIL                   | NO SPARE PART                     |
|                      |              | 29701-098.03              | X            | CHASSIS-FS-STEREO NETZ 02     | CHASSIS TV STEREO MAINS SUPPLY 02 |
|                      |              |                           |              | CUC 1952                      | CUC 1952                          |
|                      |              |                           |              | KEIN E-TEIL                   | NO SPARE PART                     |
|                      |              | 29701-098.14              | X            | CHASSIS-FS-STEREO NETZ 22     | CHASSIS TV STEREO MAINS SUPPLY 22 |
|                      |              |                           |              | CUC 1952                      | CUC 1952                          |
|                      |              |                           |              | KEIN E-TEIL                   | NO SPARE PART                     |
|                      |              |                           |              | X = SIEHE GESONDERTE E-LISTE  | X = SEE SEPARATE PARTS LIST       |

| POS. NR.<br>POS. NO.                                                                                                                                                                                                                                                                                                                                                                        | SACHNUMMER<br>PART NUMBER | BEZEICHNUNG<br>DESCRIPTION | POS. NR.<br>POS. NO. | SACHNUMMER<br>PART NUMBER | BEZEICHNUNG<br>DESCRIPTION |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------------------|----------------------|---------------------------|----------------------------|
| D 81501                                                                                                                                                                                                                                                                                                                                                                                     | 8309-215-045              | DIODE 1N4148               |                      |                           |                            |
| IC 84001                                                                                                                                                                                                                                                                                                                                                                                    | 8305-367-530              | IC TFMS 5300               |                      |                           |                            |
| T 81501                                                                                                                                                                                                                                                                                                                                                                                     | 8303-295-875              | TRANS.BC 875/877/879 SIE   |                      |                           |                            |
| T 81502                                                                                                                                                                                                                                                                                                                                                                                     | 8303-205-548              | TRANS BC548B               |                      |                           |                            |
| <p>1 29625-731.02</p> <p>1.3 29628-835.02</p> <p>1.1 29632-148.01</p> <p>1.2 29628-834.02</p>                                                                                                                                                                                                                                                                                               |                           |                            |                      |                           |                            |
| <p>Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Sach-Nummer 72010-800.00, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!</p> <p>The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 72010-800.00, as well as the respective national deviations.</p> |                           |                            |                      |                           |                            |

**GRUNDIG**Ersatzteilliste  
Spare Parts List

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M 82-269/9 REFERENCE  
M 82-269 PAL-PLUS/LOGSACH-NR. / PART NO.: 9.21535-0290 BESTELL-NR. / ORDER NO.: G.CC 7390 ANTHRACIT SOFT  
SACH-NR. / PART NO.: 9.21534-0290 BESTELL-NR. / ORDER NO.: G.CC 7290 ANTHRACIT SOFT

| POS. NR.<br>POS. NO.                                                                                                                                                             | ABB.<br>FIG.                                                            | SACHNUMMER<br>PART NUMBER                                                                                                                                                                                                                                    | ANZ.<br>QUA. | BEZEICHNUNG<br>D                                                                                                                                                                                                                                                                                                                                         | DESCRIPTION<br>GB                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0001.000<br>0001.100<br>0001.200<br>0004.000<br>0005.000<br>0006.000<br>0008.000<br>0010.000<br>0010.000<br>0010.200<br>0010.300<br>0011.000<br>0011.000                         |                                                                         | 29625-690.01<br>29602-603.51<br>29628-073.01<br>29628-277.01<br>29633-504.57<br>19126-025.97<br>29501-593.01<br>29631-883.12<br>29631-883.11<br>19154-031.97<br>29633-505.01<br>29618-195.04<br>29618-189.04                                                 | 4<br>2<br>6  | GEHAEUSEVORDERTEIL<br>GRUNDIG-EMBLEM<br>FUSS<br>MONTAGEPLATTE<br>ABDECKUNG M.STOFF KPL. GCC7390<br>LAUTSPRECHER<br>RAHMEN MIT TASTEN<br>GEHAEUSERUECKTEIL LACKIERT GCC7390<br>GEHAEUSERUECKTEIL LACKIERT GCC7290<br>LAUTSPRECHER BASS-BOX<br>ZWISCHENSTUECK RUCKWANDBEFESTIG.<br>AUFKLEBER TYP GCC7390<br>AUFKLEBER TYP GCC7290                          | CABINET FRONT<br>GRUNDIG EMBLEM<br>FOOT<br>MOUNTING PANEL<br>COVER GCC7390<br>LOUDSPEAKER<br>FRAME<br>REAR PANEL LACQUERED GCC7390<br>REAR PANEL LACQUERED GCC7290<br>LOUDSPEAKER BASS-BOX<br>INTERMEDIATE PIECE REAR PANEL FIXING<br>ADHESIVE LABEL GCC7390<br>ADHESIVE LABEL GCC7290                                                             |
|                                                                                                                                                                                  |                                                                         | 29656-003.66                                                                                                                                                                                                                                                 |              | MONTAGE ZUBEHOER F.BILDROHR<br>KEIN E-TEIL                                                                                                                                                                                                                                                                                                               | MOUNTING ACCESSORIES FOR CRT<br>NO SPARE PART                                                                                                                                                                                                                                                                                                      |
| 0021.000<br>0024.000<br>0025.000<br>0030.000<br>0030.100<br>0030.200<br>0030.300<br>0030.400<br>0030.600<br>0031.000<br>0045.000<br>0045.100<br>0046.000<br>0048.000<br>0049.000 | Δ<br>Δ<br>Δ<br>Δ<br>Δ<br>Δ<br>Δ<br>Δ<br>Δ<br>Δ<br>Δ<br>Δ<br>Δ<br>Δ<br>Δ | 29607-219.01<br>09246-120.71<br>8300-076-690<br>29501-082.38<br>29303-390.42<br>29303-522.06<br>29703-291.71<br>29703-357.01<br>29303-168.05<br>29633-504.51<br>29633-875.01<br>29210-435.01<br>8290-991-316<br>29633-435.01<br>29642-061.01<br>29305-122.07 | 10<br>4<br>X | SPULENHAKEN<br>ENTMAGNETISIERUNGSSPULE<br>BILDR.W76LHS690X96 TOS<br>BEDIENEINHEIT<br>KOPFHÖRERBUCHSE STEREO<br>S-VHS-BUCHSE<br>NETZSCHALTER ECO O.W.<br>TASTSCHALTER<br>CINCHBUCHSE 3-FACH<br>ABDECKUNG M. STOFF KPL GCC7290<br>ABDECKUNG BUCHSEN<br>HF-ANTENNENKABEL GCC7290<br>NETZKABEL KPL<br>TASTENKNOPF NETZ<br>TELEPILOT TP 800<br>BILDROHRPLATTE | COIL HOOK<br>DEGAUSSING COIL<br>PICT.TUBE W76LHS690X96 TOS<br>CONTROL UNIT<br>HEADPHONE SOCKET STEREO<br>S-VHS-SOCKET<br>POWER SWITCH<br>KEY SWITCH<br>CINCH SOCKET 3-FOLD<br>COVER WITH CLOTH CPL. GCC7290<br>COVER SOCKET<br>ANTENNA CABLE GCC7290<br>POWER CABLE CPL GWN9.22<br>KEY BUTTON MAINS<br>REMOTE CONTROL TP 800<br>PICTURE TUBE BOARD |
|                                                                                                                                                                                  |                                                                         | 72010-019.90<br>21535-941.01<br>21534-941.01                                                                                                                                                                                                                 |              | SERVICE MANUAL<br>BEDIENUNGSANLEITUNG GCC7390<br>BEDIENUNGSANLEITUNG GCC7290                                                                                                                                                                                                                                                                             | SERVICE MANUAL<br>OPERATING INSTRUCTIONS GCC7390<br>OPERATING INSTRUCTIONS GCC7290                                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                  |                                                                         | 29701-097.04<br>CUC 1984 DIGI 6<br>KEIN E-TEIL                                                                                                                                                                                                               | X            | CHASSIS-FS HF GCC7390<br>CUC 1984 DIGI 6<br>NO SPARE PART                                                                                                                                                                                                                                                                                                | CHASSIS TV HF GCC7390<br>CUC 1984 DIGI 6<br>NO SPARE PART                                                                                                                                                                                                                                                                                          |
|                                                                                                                                                                                  |                                                                         | 29701-097.01<br>CHASSIS-FS STEREO HF GCC7290<br>KEIN E-TEIL                                                                                                                                                                                                  | X            | CHASSIS-FS STEREO HF GCC7290<br>NO SPARE PART                                                                                                                                                                                                                                                                                                            | CHASSIS TV STEREO HF GCC7290<br>NO SPARE PART                                                                                                                                                                                                                                                                                                      |
|                                                                                                                                                                                  |                                                                         | 29701-098.04<br>CHASSIS-FS NETZ GCC7390<br>CUC 1984 DIGI 6<br>KEIN E-TEIL                                                                                                                                                                                    | X            | CHASSIS-FS NETZ GCC7390<br>CUC 1984 DIGI 6<br>NO SPARE PART                                                                                                                                                                                                                                                                                              | CHASSIS TV MAINS SUPPLY GCC7390<br>CUC 1984 DIGI 6<br>NO SPARE PART                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                  |                                                                         | 29701-098.02<br>CHASSIS-FS STEREO NETZ GCC7290<br>KEIN E-TEIL                                                                                                                                                                                                | X            | CHASSIS-FS STEREO NETZ GCC7290<br>NO SPARE PART                                                                                                                                                                                                                                                                                                          | CHASSIS TV MAINS SUPPLY GCC7290<br>NO SPARE PART                                                                                                                                                                                                                                                                                                   |
|                                                                                                                                                                                  |                                                                         |                                                                                                                                                                                                                                                              |              | X = SIEHE GESONDERTE E-LISTE                                                                                                                                                                                                                                                                                                                             | X = SEE SEPARATE PARTS LIST                                                                                                                                                                                                                                                                                                                        |

| POS. NR.<br>POS. NO.                     | SACHNUMMER<br>PART NUMBER                                    | BEZEICHNUNG<br>DESCRIPTION                                                                     |
|------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| C 84002<br>D 81501<br>DP 1841<br>DP 1871 | 8668-203-023<br>8309-215-045<br>8309-953-150<br>8309-953-150 | ABBLOCK-C 0,1 UF -GR<br>DIODE 1N4148<br>LED DISPLAY TDSG 3150 TFK<br>LED DISPLAY TDSG 3150 TFK |

| POS. NR.<br>POS. NO.                      | SACHNUMMER<br>PART NUMBER                                    | BEZEICHNUNG<br>DESCRIPTION                                                  |
|-------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------|
| IC 1870<br>IC 84001<br>T 81501<br>T 81502 | 8305-202-242<br>8305-367-530<br>8303-295-875<br>8303-205-548 | IC UAA 2022 MOT<br>IC TFMS 5300<br>TRANS.BC 875/877/879 SIE<br>TRANS BC548B |

1 29625-690.01  
1.1 29602-603.51

Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Sach-Nummer 72010-800.00, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!

The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 72010-800.00, as well as the respective national deviations.

**GRUNDIG**Ersatzteilliste  
Spare Parts List

D Btx \* 32700 #

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## DENVER SE 8216/9 REFERENCE /PIP

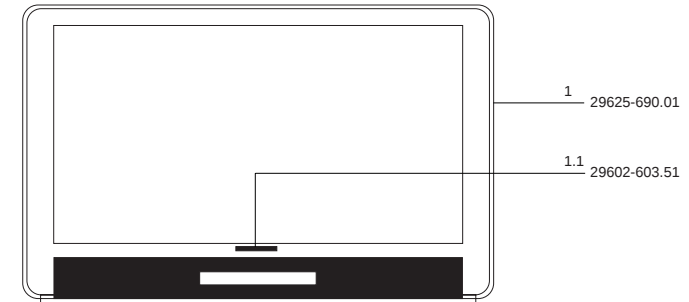
SACH-NR. / PART NO.: 9.21620-2290

BESTELL-NR. / ORDER NO.: G.CF 4190 ANTHRAZIT SOFT

| POS. NR.<br>POS. NO. | ABB.<br>FIG. | SACHNUMMER<br>PART NUMBER | ANZ.<br>QTY. | BEZEICHNUNG<br>(D)                                | DESCRIPTION<br>(GB)                                         |
|----------------------|--------------|---------------------------|--------------|---------------------------------------------------|-------------------------------------------------------------|
| 0001.000             |              | 29625-690.01              |              | GEHAEUSEVORDERTEIL                                | CABINET FRONT                                               |
| 0001.100             |              | 29602-603.51              |              | EMBLEM GRUNDIG                                    | EMBLEM GRUNDIG                                              |
| 0001.200             |              | 29628-073.01              | 4            | FUSS                                              | FOOT                                                        |
| 0005.000             |              | 29628-277.01              |              | MONTAGEPLATTE                                     | MOUNTING PANEL                                              |
| 0006.000             |              | 19126-025.97              | 2            | LAUTSPRECHER                                      | LOUDSPEAKER                                                 |
| 0007.000             |              | 29633-504.61              |              | ABDECKUNG M.STOFF KPL                             | COVER                                                       |
| 0010.000             |              | 29631-883.12              |              | GEHAEUSERUECKTEIL LACKIERT                        | REAR PANEL VARNISHED                                        |
| 0011.000             |              | 29618-391.04              |              | TYPENAUFKLEBER                                    | TYPE LABEL                                                  |
|                      |              | 29656-004.12              |              | MONTAGEZUBEHOE, R.F.BILDROHR<br>KEIN E-TEIL       | MOUNTING ACCESSORIES FOR CRT<br>NO SPARE PART               |
| 0024.000             | △            | 09246-152.75              |              | SPULE ENTMAGNETISIERUNG                           | DEGAUSSING COIL                                             |
| 0025.000             | △            | 8300-076-231              |              | BILDR.W76ESF231X44 PHI                            | PICT.TUBE W76ESF231X44 PHI                                  |
| 0027.000             |              | 29633-875.01              |              | ABDECKUNG BUCHSEN                                 | COVER SOCKET                                                |
| 0030.000             |              | 29501-082.38              |              | BEDIENEINHEIT                                     | CONTROL UNIT                                                |
| 0030.100             |              | 29303-168.05              |              | CINCHBUCHSE 3-FACH                                | CINCH SOCKET 3 FOLD                                         |
| 0030.200             |              | 29303-390.42              |              | KOPFHOERERBUCHSE 3,5 O.SC                         | HEADPHONE SOCKET STEREO 3,5                                 |
| 0030.300             |              | 29303-522.06              |              | S-VHS-BUCHSE                                      | S-VHS-SOCKET                                                |
| 0030.400             | △            | 29703-291.71              |              | NETZSCHALTER ECO O.WISCHER                        | POWER SWITCH ECO W/O WIPER                                  |
| 0030.500             |              | 29703-357.01              | 4            | TASTSCHALTER                                      | KEY SWITCH                                                  |
| 0032.000             |              | 29633-435.11              |              | TASTENKNOPF NETZ                                  | KEY BUTTON MAINS SUPPLY                                     |
| 0047.000             | △            | 8290-991-316              |              | NETZKABEL KPL.                                    | POWER CABLE CPL GWN9.22                                     |
| 0048.000             |              | 19154-031.97              |              | LAUTSPRECHER BASS-BOX                             | LOUDSPEAKER BASS-BOX                                        |
| 0049.000             |              | 29642-061.11              |              | TELEPILOT TP 900                                  | REMOTE CONTROL TP 900                                       |
| 0999.915             |              | 29305-122.15              | X            | BILDROHRPLATTE                                    | PICTURE TUBE BOARD                                          |
|                      |              | 72010-019.90              |              | SERVICE MANUAL                                    | SERVICE MANUAL                                              |
|                      |              | 21620-941.01              |              | BEDIENUNGSANLEITUNG                               | OPERATING INSTRUCTIONS                                      |
|                      |              | 29701-097.17              | X            | CHASSIS-FS-STEREO HF<br>CUC 1984<br>KEIN E-TEIL   | CHASSIS TV STEREO HF<br>CUC 1984<br>NO SPARE PART           |
|                      |              | 29701-098.16              | X            | CHASSIS-FS-STEREO NETZ<br>CUC 1984<br>KEIN E-TEIL | CHASSIS TV STEREO MAINS SUPPLY<br>CUC 1984<br>NO SPARE PART |
|                      |              |                           |              | X = SIEHE GESONDERTE E-LISTE                      | X = SEE SEPARATE PARTS LIST                                 |

| POS. NR.<br>POS. NO. | SACHNUMMER<br>PART NUMBER | BEZEICHNUNG<br>DESCRIPTION |
|----------------------|---------------------------|----------------------------|
| D 81501              | 8309-215-045              | DIODE 1N4148               |
| DP 1841              | 8309-953-150              | LED DISPLAY TD5G 3150 TFK  |
| DP 1871              | 8309-953-150              | LED DISPLAY TD5G 3150 TFK  |
| IC 1870              | 8305-202-242              | IC UAA 2022 MOT            |
| IC 84001             | 8305-367-530              | IC TFMS 5300               |
| T 81501              | 8303-295-875              | TRANS.BC 875/877/879 SIE   |
| T 81502              | 8303-205-548              | TRANS BC548B               |

| POS. NR.<br>POS. NO. | SACHNUMMER<br>PART NUMBER | BEZEICHNUNG<br>DESCRIPTION |
|----------------------|---------------------------|----------------------------|
|                      |                           |                            |



Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Sach-Nummer 72010-800.00, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!



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**GRUNDIG**Ersatzteilliste  
Spare Parts List

D Btx \* 32700 #

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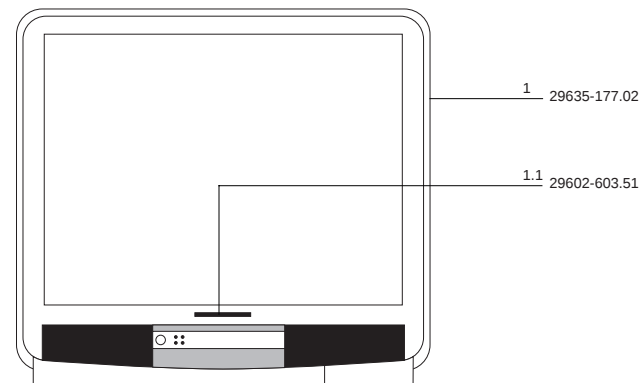
M 72-410 REFERENCE  
M 72-410/9 REFERENCE  
M 72-410 REFERENCE/PIP

SACH-NR. / PART NO.: 9.21626-0175 BESTELL-NR. / ORDER NO.: G.CE 6175 COSMOS-SCHWARZ/COSMOS BLACK  
 SACH-NR. / PART NO.: 9.21626-0275 BESTELL-NR. / ORDER NO.: G.CE 6275 COSMOS-SCHWARZ/COSMOS BLACK  
 SACH-NR. / PART NO.: 9.21626-2175 BESTELL-NR. / ORDER NO.: G.CF 6075 COSMOS-SCHWARZ/COSMOS BLACK

| POS. NR.<br>POS. NO. | ABB.<br>FIG. | SACHNUMMER<br>PART NUMBER | ANZ.<br>QTY. | BEZEICHNUNG<br>D                                          | DESCRIPTION<br>GB                                                  |
|----------------------|--------------|---------------------------|--------------|-----------------------------------------------------------|--------------------------------------------------------------------|
| 0001.000             |              | 29635-177.02              |              | GEHAEUSEVORDERTEIL KPL.                                   | CABINET FRONT CPL.                                                 |
| 0001.100             |              | 29602-603.51              |              | GRUNDIG-EMBLEM                                            | GRUNDIG EMBLEM                                                     |
| 0001.200             |              | 29633-850.01              |              | IR-FENSTER DRUCK KPL.                                     | IR WINDOW PRINT CPL                                                |
| 0001.300             |              | 29633-810.01              |              | GITTER M.STOFF KPL.                                       | GRILLE WITH CLOTH CPL.                                             |
| 0001.400             |              | 29633-811.01              |              | GITTER M.STOFF KPL.                                       | GRILLE WITH CLOTH CPL.                                             |
| 0004.000             |              | 19115-007.97              | 2            | HOCHTON-LAUTSPRECHER                                      | TWEETER LOUDSPEAKER                                                |
| 0006.000             |              | 29633-780.01              |              | ABDECKUNG BUCHSEN                                         | COVER SOCKET                                                       |
| 0010.000             |              | 29636-121.02              |              | RUECKTEIL LACKIERT KPL.                                   | REAR PANEL LACQUERED CPL.                                          |
| 0010.100             |              | 19154-043.61              | 2            | LAUTSPRECHER RUND DMR130                                  | LOUDSPEAKER ROUND DIAM.130                                         |
| 0011.000             |              | 29618-325.04              |              | TYPENAUFKLEBER 01                                         | TYPE LABEL 01                                                      |
| 0011.000             |              | 29618-326.04              |              | TYPENAUFKLEBER 02                                         | TYPE LABEL 02                                                      |
| 0011.000             |              | 29618-388.04              |              | TYPENAUFKLEBER 21                                         | TYPE LABEL 21                                                      |
|                      |              | 29656-004.08              |              | MONTAGEZUBEHOER F.BILDROHR<br>KEIN E-TEIL                 | MOUNTING ACCESSORIES FOR CRT<br>NO SPARE PART                      |
| 0024.000             | △            | 09246-135.76              |              | SPULE ENTMAGNETISIERUNG                                   | DEGAUSSING COIL                                                    |
| 0025.000             | △            | 8300-068-695              |              | BILDR.A68LBT696X99                                        | PICT.TUBE A68LBT696X99                                             |
| 0029.000             |              | 29305-008.33              |              | BUCHSENPLATTE                                             | SOCKET BOARD                                                       |
| 0030.000             |              | 29501-082.56              |              | BEDIENEINHEIT                                             | CONTROL UNIT                                                       |
| 0030.100             |              | 29303-168.05              |              | CINCHBUCHSE 3-FACH                                        | CINCH SOCKET 3 FOLD                                                |
| 0030.200             |              | 29303-390.42              |              | KOPFHOERERBUCHSE 3,5 O.SC                                 | HEADPHONE SOCKET STEREO 3 O.SC                                     |
| 0030.300             |              | 29303-522.06              |              | S-VHS-BUCHSE                                              | S-VHS-SOCKET                                                       |
| 0030.400             |              | 29501-665.01              |              | HALTER BUCHSENPLATTE                                      | HOLDER SOCKET BOARD                                                |
| 0030.500             | △            | 29703-291.71              |              | NETZSCHALTER ECO O.WISCHER                                | POWER SWITCH ECO W/O WIPE                                          |
| 0030.600             |              | 29703-357.01              | 4            | TASTSCHALTER                                              | KEY SWITCH                                                         |
| 0032.000             |              | 29501-643.01              |              | TASTENKNOPF NETZ                                          | KEY BUTTON MAINS SUPPLY                                            |
| 0033.000             |              | 29501-668.01              |              | TASTENSATZ                                                | KEY SET                                                            |
| 0044.000             | △            | 8290-991-316              |              | NETZKABEL KPL.                                            | POWER CABLE CPL GWN9.22                                            |
| 0045.000             |              | 29642-061.01              |              | TELEPILOT TP 800                                          | REMOTE CONTROL TP 800                                              |
|                      |              | 29305-122.07              | X            | BILDROHRPLATTE                                            | PICTURE TUBE BOARD                                                 |
|                      |              | 72010-019.90              |              | SERVICE MANUAL                                            | SERVICE MANUAL                                                     |
|                      |              | 21626-941.01              |              | BEDIENUNGSANLEITUNG 01                                    | INSTRUCTION MANUAL 01                                              |
|                      |              | 21626-941.02              |              | BEDIENUNGSANLEITUNG 02                                    | INSTRUCTION MANUAL 02                                              |
|                      |              | 21626-941.03              |              | BEDIENUNGSANLEITUNG 21                                    | INSTRUCTION MANUAL 21                                              |
|                      |              | 29701-097.10              | X            | CHASSIS-FS-STEREO HF 01<br>CUC 1842 DIGI 6<br>KEIN E-TEIL | CHASSIS TV STEREO HF 01<br>CUC 1842 DIGI 6<br>NO SPARE PART        |
|                      |              | 29701-097.11              | X            | CHASSIS-FS-STEREO HF 02<br>CUC 1842 DIGI 6<br>KEIN E-TEIL | CHASSIS TV STEREO HF 02<br>CUC 1842 DIGI 6<br>NO SPARE PART        |
|                      |              | 29701-097.13              | X            | CHASSIS-FS-STEREO HF 21<br>CUC 1842 DIGI 6<br>KEIN E-TEIL | CHASSIS TV STEREO HF 21<br>CUC 1842 DIGI 6<br>NO SPARE PART        |
|                      |              | 29701-098.10              | X            | CHASSIS-FS-STEREO NETZ<br>CUC 1842 DIGI 6<br>KEIN E-TEIL  | CHASSIS TV STEREO MAINS SUPPLY<br>CUC 1842 DIGI 6<br>NO SPARE PART |
|                      |              |                           |              | X = SIEHE GESONDERTE E-LISTE                              | X = SEE SEPARATE PARTS LIST                                        |

| POS. NR.<br>POS. NO. | SACHNUMMER<br>PART NUMBER | BEZEICHNUNG<br>DESCRIPTION |
|----------------------|---------------------------|----------------------------|
| D 81501              | 8309-215-045              | DIODE 1N4148               |
| D 85001              | 8309-978-371              | LE-DIODE LUB371GK SIE/ L   |
| IC 84001             | 8305-367-530              | IC TFMS 5300               |
| T 81501              | 8303-295-875              | TRANS.BC 875/877/879 SIE   |
| T 81502              | 8303-205-548              | TRANS BC548B               |

| POS. NR.<br>POS. NO. | SACHNUMMER<br>PART NUMBER | BEZEICHNUNG<br>DESCRIPTION |
|----------------------|---------------------------|----------------------------|
|                      |                           |                            |



Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Sach-Nummer 72010-800.00, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!



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Ersatzteilliste  
Spare Parts List





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M 95-410/9 REFERENCE/PIP

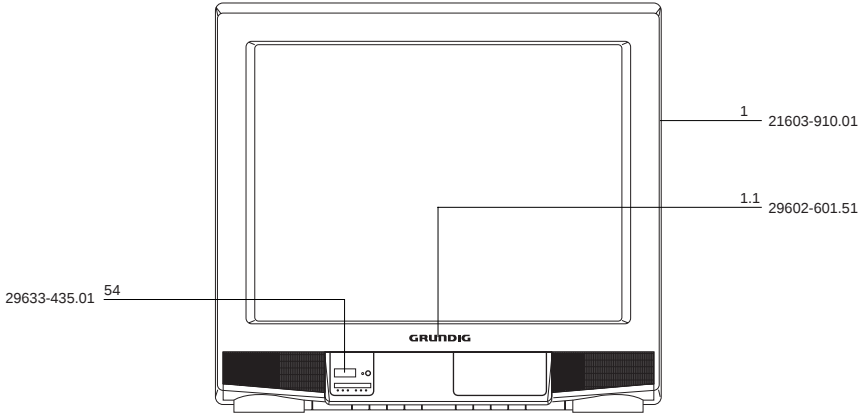
ERSETZT AUSGABE 11/96  
SUBSTITUTE EDITION 11/96

SACH-NR. / PART NO.: 9.21603-0290  
BESTELL-NR. / ORDER NO.: G.CE 6390 ANTHRAZIT-SOFT

| POS. NR.<br>POS. NO. | ABB.<br>FIG. | SACHNUMMER<br>PART NUMBER | ANZ.<br>QTY. | BEZEICHNUNG<br>D                                         | DESCRIPTION<br>GB                                                  |
|----------------------|--------------|---------------------------|--------------|----------------------------------------------------------|--------------------------------------------------------------------|
| 0001.000             |              | 21603-910.01              |              | GEHAEUSE LACKIERT KPL.                                   | HOUSING VARNISHED CPL                                              |
| 0001.100             |              | 29602-601.51              |              | GRUNDIG-EMBLEM                                           | GRUNDIG EMBLEM                                                     |
| 0001.200             |              | 29602-861.01              |              | PLAKETTE MONOLITH                                        | PLAQUETTE MONOLITH                                                 |
| 0002.000             |              | 29636-092.51              |              | BEDIENEINSATZ MIT STOFF KPL.                             | CONTROL INSERT WITH PLUG CPL.                                      |
| 0010.000             |              | 29636-029.01              |              | GEHAEUSERUECKTEIL OFB                                    | REAR PANEL                                                         |
| 0011.000             |              | 29618-320.04              |              | TYPENAUFKLEBER                                           | TYPE LABEL                                                         |
| 0013.000             |              | 19126-025.97              | 2            | LAUTSPRECHER                                             | LOUDSPEAKER                                                        |
|                      |              | 29656-003.83              |              | MONTAGE ZUBEHOER F.BILDROHR<br>KEIN E-TEIL               | MOUNTING ACCESSORIES FOR CRT<br>NO SPARE PART                      |
| 0021.000             |              | 29607-277.01              | 2            | SPULENLASCHE                                             | COIL STRAP                                                         |
| 0022.000             |              | 29607-198.01              | 14           | SPULENHAKEN                                              | COIL HOOK                                                          |
| 0024.000             | Δ            | 09246-126.71              |              | SPULE ENTMAGNETISIERUNG                                  | DEGAUSSING COIL                                                    |
| 0025.000             | Δ            | 8300-020-895              |              | BILDRA 89 KQF 96X98 (ZK)                                 | PICT.TUBE A 89 KQF 96X98 (ZK)                                      |
| 0030.000             |              | 29501-082.55              |              | BEDIENEINHEIT                                            | CONTROL UNIT                                                       |
| 0030.100             |              | 29303-168.05              |              | CINCHBUCHSE 3-FACH                                       | CINCH SOCKET 3 FOLD                                                |
| 0030.200             |              | 29303-390.42              |              | KOPFHÖRERBUCHSE 3,5 O.SC                                 | HEADPHONE SOCKET STEREO 3,5 O.SC                                   |
| 0030.300             |              | 29303-522.06              |              | S-VHS-BUCHSE                                             | S-VHS-SOCKET                                                       |
| 0030.400             | Δ            | 29703-291.71              |              | NETZSCHALTER ECO O.WISCHER                               | POWER SWITCH ECO W/O WIPER                                         |
| 0030.500             |              | 29703-357.01              | 4            | TASTSCHALTER                                             | KEY SWITCH                                                         |
| 0042.000             | Δ            | 8290-991-316              |              | NETZKABEL KPL.                                           | POWER CABLE CPL GWN9.22                                            |
| 0048.000             |              | 19144-117.97              |              | RUNDLAUTSPRECHER BASS-BOX                                | ROUND LOUDSPEAKER BASS-BOX                                         |
| 0049.000             |              | 29501-593.01              |              | RAHMEN MIT TASTEN                                        | FRAME                                                              |
| 0054.000             |              | 29633-435.01              |              | TASTENKNOPF NETZ                                         | KEY BUTTON MAINS SUPPLY                                            |
| 0056.000             |              | 29642-061.01              |              | TELEPILOT TP 800                                         | REMOTE CONTROL TP 800                                              |
|                      |              | 29305-122.07              | X            | BILDROHRPLATTE                                           | PICTURE TUBE BOARD                                                 |
|                      |              | 72010-019.90              |              | SERVICE MANUAL                                           | SERVICE MANUAL                                                     |
|                      |              | 21603-941.01              |              | BEDIENUNGSANLEITUNG                                      | INSTRUCTION MANUAL                                                 |
|                      |              | 29701-097.08              | X            | CHASSIS-FS-STEREO HF<br>CUC 1894 DIGI 6<br>KEIN E-TEIL   | CHASSIS TV STEREO HF<br>CUC 1894 DIGI 6<br>NO SPARE PART           |
|                      |              | 29701-098.12              | X            | CHASSIS-FS-STEREO NETZ<br>CUC 1894 DIGI 6<br>KEIN E-TEIL | CHASSIS TV STEREO MAINS SUPPLY<br>CUC 1894 DIGI 6<br>NO SPARE PART |
|                      |              |                           |              | X = SIEHE GESONDERTE E-LISTE<br>WW. = WAHLWEISE          | X = SEE SEPARATE PARTS LIST<br>WW. = OPTIONAL                      |

| POS. NR.<br>POS. NO. | SACHNUMMER<br>PART NUMBER | BEZEICHNUNG<br>DESCRIPTION |
|----------------------|---------------------------|----------------------------|
| D 81501              | 8309-215-045              | DIODE 1N4148               |
| IC 84001             | 8305-367-530              | IC TFMS 5300               |
| T 81501              | 8303-295-875              | TRANS.BC 875/877/879 SIE   |
| T 81502              | 8303-205-548              | TRANS BC548B               |

| POS. NR.<br>POS. NO. | SACHNUMMER<br>PART NUMBER | BEZEICHNUNG<br>DESCRIPTION |
|----------------------|---------------------------|----------------------------|
|----------------------|---------------------------|----------------------------|



Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Sach-Nummer 72010-800.00, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!

The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 72010-800.00, as well as the respective national deviations.

**GRUNDIG**Ersatzteilliste  
Spare Parts List

D Btx \* 32700 #

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**CUC 1962 Signal DIGI 6 Palplus**

SACH-NR. / PART NO.: 29701-097.01

**CUC 1952 Signal DIGI 6**

SACH-NR. / PART NO.: 29701-097.03

**CUC 1984 Signal DIGI 6**

SACH-NR. / PART NO.: 29701-097.04

**CUC 1952 Signal**

SACH-NR. / PART NO.: 29701-097.09

**CUC 1842 Signal**

SACH-NR. / PART NO.: 29701-097.10

**CUC 1842 Signal DIGI 6**

SACH-NR. / PART NO.: 29701-097.11/13

| POS. NR.<br>POS. NO. | ABB.<br>FIG. | SACHNUMMER<br>PART NUMBER | ANZ.<br>QTY. | BEZEICHNUNG<br>D                          | DESCRIPTION<br>GB                       |
|----------------------|--------------|---------------------------|--------------|-------------------------------------------|-----------------------------------------|
| 0001.000             |              | 29504-104.73              | X            | BAUSTEIN NF-VERSTAERKER 10/11/13          | MODULE AF-AMPLIFIER 10/11/13            |
| 0001.000             |              | 29504-104.72              | X            | BAUSTEIN NF-VERSTAERKER 04/09/03          | MODULE AF-AMPLIFIER 04/09/03            |
| 0001.000             |              | 29504-104.71              | X            | BAUSTEIN NF-VERSTAERKER 01                | MODULE AF-AMPLIFIER 01                  |
| 0002.000             |              | 29504-162.35              | X            | BAUSTEIN SIGNAL / ZF+TUNER 11/04/09/03/01 | MODULE SIGNAL / IF+TUNER 11/04/09/03/01 |
| 0002.000             |              | 29504-102.35              | X            | BAUSTEIN SIGNAL / ZF+TUNER 10/12/13       | MODULE SIGNAL / IF+TUNER 10/12/13       |
| 0003.000             |              | 29504-103.41              | X            | FEATURE-BOX 10/11/04/13/09/03             | FEATURE BOX 10/11/04/13/09/03           |
| 0003.000             |              | 29504-103.38              | X            | FEATURE-BOX 01                            | FEATURE BOX 01                          |
| 0004.000             |              | 29700-631.04              |              | ABDECKUNG EURO-AV+TUNER 11                | COVER EURO-AV+TUNER 11                  |
| 0005.000             |              | 29700-636.02              |              | BAUSTEINHALTER 10/11/09/03/01             | MODULE HOLDER 10/11/09/03/01            |
| 0005.000             |              | 29700-636.01              |              | BAUSTEINHALTER 04                         | MODULE HOLDER 04                        |
| 0006.000             |              | 29504-165.97              | X            | BAUSTEIN PIP 13                           | MODULE PIP 13                           |
| 0006.000             |              | 29504-165.96              | X            | BAUSTEIN PIP 09                           | MODULE PIP 09                           |
| 0007.000             |              | 29620-013.01              |              | AKTIVE-ANTENNENWEICHE 13                  | ACTIVE-AERIAL 13                        |
| 0007.100             |              | 29700-631.07              |              | ABDECKUNG 13                              | COVER 13                                |
| 0007.100             |              | 29700-631.06              |              | ABDECKUNG 04                              | COVER 04                                |
| 0007.100             |              | 29700-631.02              |              | ABDECKUNG 01                              | COVER 01                                |
| 0007.100             |              | 29700-631.03              |              | ABDECKUNG 10/09/03                        | COVER 10/09/03                          |
| 0008.000             |              | 29303-119.66              |              | EURO-AV BUCHSENLEISTE 21-POL.             | EURO-AV SOCKET STRIP 21 P.              |
| 0009.000             |              | 29303-119.68              |              | EURO-AV BUCHSENLEISTE 21-POL.             | EURO-AV SOCKET STRIP 21 P.              |
| 0012.000             |              | 29305-160.34              |              | BAUSTEIN EURO-AV 11/04/13/09/01           | MODULE EURO-AV 11/04/13/09/01           |
| 0012.100             |              | 29303-119.71              |              | EURO-AV BUCHSE BL                         | EURO-AV SOCKET BU                       |
|                      |              | 29305-160.35              |              | BAUSTEIN VGA 11/04/01                     | MODULE VGA 11/04/01                     |
|                      |              |                           |              | KEIN E-TEIL                               | NO SPARE PART                           |
| 0013.100             |              | 29303-119.18              |              | D-SUB BUCHSENLEISTE 15-POL. 11/04/13/01   | D-SUB SOCKET STRIP 15 P. 11/04/13/01    |
| 0013.200             |              | 29303-168.71              |              | CINCHBUCHSE 2-FACH RT-WS 11/04/13/01      | CINCH SOCKET 2 FOLD RT-WS 11/04/13/01   |
|                      |              | 72010-019.90              |              | SERVICE MANUAL                            | SERVICE MANUAL                          |
|                      |              |                           |              | X = SIEHE GESONDERTE E-LISTE              | X = SEE SEPARATE PARTS LIST             |

| POS. NR.<br>POS. NO. | SACHNUMMER<br>PART NUMBER | BEZEICHNUNG<br>DESCRIPTION                |
|----------------------|---------------------------|-------------------------------------------|
| C 46004              | 8668-203-023              | ABBLOCK-C 0,1 UF -GR 13/03                |
| C 46006              | 8668-203-023              | ABBLOCK-C 0,1 UF -GR 13/03                |
| C 46017              | 8668-203-023              | ABBLOCK-C 0,1 UF -GR 13/03                |
| C 70509              | 8452-996-150              | CLOCKING CAPACITOR<br>ELKO 2200UF 20% 25V |
| CD 32315             | 8309-455-330              | MELF Z-DIODE 33C 0,5W                     |
| CD 34513             | 8325-004-148              | SMD DIODE LS 4148                         |
| CD 34517             | 8325-004-148              | SMD DIODE LS 4148                         |
| CD 43026             | 8325-004-148              | SMD DIODE LS 4148                         |
| CD 43208             | 8325-004-148              | SMD DIODE LS 4148                         |
| CD 65521             | 8325-004-148              | SMD DIODE LS 4148                         |
| CD 70506             | 8325-004-148              | SMD DIODE LS 4148                         |
| CD 70507             | 8325-004-148              | SMD DIODE LS 4148                         |
| CD 70508             | 8309-455-121              | MELF-Z DIODE 12 B 0,5W                    |
| CD 70517             | 8325-004-148              | SMD DIODE LS 4148                         |
| CD 87087             | 8325-004-148              | SMD DIODE LS 4148                         |

| POS. NR.<br>POS. NO. | SACHNUMMER<br>PART NUMBER | BEZEICHNUNG<br>DESCRIPTION |
|----------------------|---------------------------|----------------------------|
| CD 87090             | 8325-004-148              | SMD DIODE LS 4148          |
| CD 87093             | 8325-004-148              | SMD DIODE LS 4148          |
| CD 87113             | 8325-004-148              | SMD DIODE LS 4148          |
| CIC 43020            | 8305-814-551              | SMD IC MC14551BD/R2 MOT    |
| CT 152               | 8301-181-093              | SMD-TRANS.BFR93AR PH/TE 13 |
| CT 163               | 8301-188-017              | SMD-TRANS.BFS 17 SIE 13    |
| CT 32308             | 8301-003-858              | SMD-TRANS.BC 858 B         |
| CT 32310             | 8301-003-858              | SMD-TRANS.BC 858 B         |
| CT 32312             | 8301-003-858              | SMD-TRANS.BC 858 B         |
| CT 32315             | 8301-003-858              | SMD-TRANS.BC 858 B         |
| CT 34500             | 8301-006-848              | SMD-TRANS.BC 848 C         |
| CT 34530             | 8301-004-848              | SMD-TRANS.BC 848 B         |
| CT 43020             | 8301-005-808              | SMD-TRANS.BC 808-25        |
| CT 43030             | 8301-004-848              | SMD-TRANS.BC 848 B         |
| CT 43050             | 8301-004-848              | SMD-TRANS.BC 848 B         |

| POS. NR.<br>POS. NO. | SACHNUMMER<br>PART NUMBER | BEZEICHNUNG<br>DESCRIPTION    |
|----------------------|---------------------------|-------------------------------|
| CT 43075             | 8301-004-848              | SMD-TRANS.BC 848 B            |
| CT 43080             | 8301-004-848              | SMD-TRANS.BC 848 B            |
| CT 43090             | 8301-003-858              | SMD-TRANS.BC 858 B            |
| CT 43095             | 8301-003-858              | SMD-TRANS.BC 858 B            |
| CT 43100             | 8301-004-848              | SMD-TRANS.BC 848 B            |
| CT 43110             | 8301-004-848              | SMD-TRANS.BC 848 B            |
| CT 43130             | 8301-006-858              | SMD-TRANS.BC 858 C            |
| CT 43135             | 8301-003-858              | SMD-TRANS.BC 858 B            |
| CT 43140             | 8301-004-848              | SMD-TRANS.BC 848 B            |
| CT 43160             | 8301-003-858              | SMD-TRANS.BC 858 B            |
| CT 43165             | 8301-004-848              | SMD-TRANS.BC 848 B            |
| CT 43170             | 8301-004-848              | SMD-TRANS.BC 848 B            |
| CT 43175             | 8301-003-858              | SMD-TRANS.BC 858 B            |
| CT 43185             | 8301-004-848              | SMD-TRANS.BC 848 B            |
| CT 43190             | 8301-004-848              | SMD-TRANS.BC 848 B            |
| CT 43195             | 8301-003-858              | SMD-TRANS.BC 858 B            |
| CT 43200             | 8301-004-848              | SMD-TRANS.BC 848 B            |
| CT 43205             | 8301-004-848              | SMD-TRANS.BC 848 B            |
| CT 43210             | 8301-004-848              | SMD-TRANS.BC 848 B            |
| CT 46005             | 8301-003-858              | SMD-TRANS.BC 858 B            |
| CT 65502             | 8301-003-858              | SMD-TRANS.BC 858 B            |
| CT 65503             | 8301-006-818              | SMD-TRANS.BC 818-40           |
| CT 65504             | 8301-006-818              | SMD-TRANS.BC 818-40           |
| CT 65505             | 8301-003-858              | SMD-TRANS.BC 858 B            |
| CT 65506             | 8301-003-858              | SMD-TRANS.BC 858 B            |
| CT 65508             | 8301-006-848              | SMD-TRANS.BC 848 C            |
| CT 65510             | 8301-006-848              | SMD-TRANS.BC 848 C            |
| CT 65525             | 8301-006-848              | SMD-TRANS.BC 848 C            |
| CT 65530             | 8301-006-858              | SMD-TRANS.BC 858 C            |
| CT 65535             | 8301-004-848              | SMD-TRANS.BC 848 B            |
| CT 65536             | 8301-003-858              | SMD-TRANS.BC 858 B            |
| CT 70505             | 8301-004-848              | SMD-TRANS.BC 848 B            |
| CT 87090             | 8301-004-848              | SMD-TRANS.BC 848 B            |
| CT 87100             | 8301-003-858              | SMD-TRANS.BC 858 B            |
| CT 87105             | 8301-003-858              | SMD-TRANS.BC 858 B            |
| CT 87115             | 8301-003-858              | SMD-TRANS.BC 858 B            |
| D 6000               | 8680-115-025              | BUBQ5-00 5X6 1000PF 13        |
| D 32342              | 8309-215-104              | DIODE 1 N 4002 -GA            |
| D 32343              | 8309-215-104              | DIODE 1 N 4002 -GA            |
| D 40010              | 8309-215-006              | DIODE 1 N 4001 -GA            |
| D 41011              | 8309-215-045              | DIODE 1N4148                  |
| D 45604              | 8309-215-045              | DIODE 1N4148 11/13            |
| D 45605              | 8309-215-045              | DIODE 1N4148 11/13            |
| D 45606              | 8309-215-045              | DIODE 1N4148 11/13            |
| D 45607              | 8309-215-045              | DIODE 1N4148 11/13            |
| D 45611              | 8309-720-038              | Z DIODE 3,9 B 0,5W 11/13      |
| D 45612              | 8309-215-045              | DIODE 1N4148 11/13            |
| D 87091              | 8309-215-045              | DIODE 1N4148                  |
| F 151                | 09278-315.01              | UEBERTRAGER 13<br>TRANSFORMER |
| IC 32300             | 8305-433-410              | IC MSP 3410-15                |
| IC 32340             | 8305-205-701              | IC 78 M 05 MOT                |
| IC 34510             | 8305-334-780              | IC TDA 4780 V3                |
| IC 41010             | 8305-333-006              | IC TDA3006 SMI                |
| IC 43150             | 8305-366-415              | IC TEA6415B/ TEA6415C         |
| IC 43200             | 8305-366-415              | IC TEA6415B/ TEA6415C         |
| IC 43210             | 8305-366-420              | IC TEA6420 SGS                |
| IC 45600             | 8305-181-053              | IC 74 HC 4053 N TID/PH/ 11/13 |
| IC 45610             | 8305-182-086              | IC 74HCT86N 11/13             |
| IC 45620             | 8305-180-125              | IC 74HC125 11/13              |

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Spare Parts List



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CUC 1842 NETZ DIGI 6

SACH-NR. / PART NO.: 29701-098.10

CUC 1952 NETZ DIGI 6

SACH-NR. / PART NO.: 29701-098.03

CUC 1983 NETZ DIGI 6 Palplus

SACH-NR. / PART NO.: 29701-098.02

CUC 1984 NETZ IDTV DIGI 6

SACH-NR. / PART NO.: 29701-098.04

| POS. NR.<br>POS. NO.                         | ABB.<br>FIG. | SACHNUMMER<br>PART NUMBER                                    | ANZ.<br>QTY. | BEZEICHNUNG<br>ⓓ                                                                                                                                                                                             | DESCRIPTION<br>ⓖⓔ                                                                                                                                                                                                  |
|----------------------------------------------|--------------|--------------------------------------------------------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0001.000<br>0003.000<br>0004.000             | △            | 29303-399.51<br>29303-153.13<br>29303-153.12                 |              | NETZ EINBAUGERAETESTECKER<br>MONTAGECLIP T644<br>MONTAGECLIP D61011/61016/61056/<br>IC61001/61006/61050/T50028/IC50010/<br>T50029/D53072/53071/IC61030/D61036/61026                                          | POWER BUILT-IN APPLIANCE<br>MOUNTING CLIP T644<br>MOUNTING CLIP D61011/61016/61056/<br>IC61001/61006/61050/T50028/IC50010/<br>T50029/D53072/53071/IC61030/D61036/61026                                             |
| 0005.000<br>0006.000<br>0007.000<br>0008.000 |              | 29303-153.01<br>29303-153.16<br>29303-156.18<br>29303-156.20 |              | MONTAGECLIP T53001<br>MONTAGECLIP T52003<br>FOLIE WAERMELEITEND T644<br>FOLIE WAERMELEITEND IC61001/61006/<br>61050/T50028/IC50010/T50029/52003/<br>D53072/53071/IC61030/D61036/61026/<br>D61011/61016/61056 | MOUNTING CLIP T53001<br>MOUNTING CLIP T52003<br>FOIL HEAT CONDUCTING T644<br>FOIL HEAT CONDUCTING IC61001/61006/<br>61050/T50028/IC50010/T50029/52003/<br>D53072/53071/IC61030/D61036/61026/<br>D61011/61016/61056 |
| 0009.000<br>0010.000<br>0011.000             |              | 29303-156.23<br>29303-230.02<br>09621-113.02                 |              | FOLIE WAERMELEITEND T53001<br>FUNKENSTRECKE 1,6KV<br>SICHERUNGSHALTER                                                                                                                                        | FOIL HEAT CONDUCTING T53001<br>SPARK GAP 1.6KV<br>FUSE HOLDER                                                                                                                                                      |
|                                              |              | 29305-025.24                                                 | 2            | DYNAMISCHE FOKUSIERUNG<br>KEIN E-TEIL                                                                                                                                                                        | DYNAMIC FOCUSING<br>NO SPARE PART                                                                                                                                                                                  |

| POS. NR.<br>POS. NO.                                                                                                                                                                                                                                                                                                                                                                          | SACHNUMMER<br>PART NUMBER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | BEZEICHNUNG<br>DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C 21001<br>C 50012<br>C 50026<br>C 53012<br>C 53036<br>C 53037<br>C 53038<br>C 53071<br>C 54006<br>C 60001<br>C 60009<br>C 60012<br>C 60023<br>C 60024<br>C 60026<br>C 60027<br>C 60224<br>C 61004<br>C 61011<br>C 61013<br>C 61016<br>C 61021<br>C 61026<br>C 61032<br>C 61036<br>C 61037<br>C 61042<br>C 61056<br>C 61061<br>C 61066<br>C 62021<br>C 62022<br>C 62048<br>C 62501<br>C 62502 | 8563-731-613<br>8452-996-147<br>8452-996-147<br>8515-911-602<br>8660-098-219<br>8563-731-613<br>8563-731-613<br>8515-911-696<br>8650-067-046<br>8650-081-125<br>8515-911-040<br>8650-081-111<br>8650-081-125<br>8650-081-125<br>8650-081-125<br>8650-081-125<br>8650-081-125<br>8515-911-038<br>8452-996-147<br>8650-067-046<br>8452-097-057<br>8515-911-038<br>8650-067-046<br>8650-067-046<br>8452-996-147<br>8650-067-046<br>8452-097-057<br>8452-996-107<br>8650-067-046<br>8650-067-046<br>8650-067-046<br>8660-098-238<br>8660-098-238<br>8660-098-234<br>8511-793-047<br>8511-793-045 | MKS 4 (100) 0,01 UF 10%<br>ELKO 1000UF 20% 25V<br>ELKO 1000UF 20% 25V<br>FKP1 142PF 2,5% 2000V<br>SI-KERKO B-SS 220PF 20%<br>MKS 4 (100) 0,01 UF 10%<br>MKS 4 (100) 0,01 UF 10%<br>FKP1 9500PF 3,5% 2000V<br>HV-KERKO 100PF 20% 1KV<br>HV-KERKO 1000PF 20% 1KV<br>FKP1 220PF 10% 1600V<br>HV-KERKO 270PF 20% 2KV<br>HV-KERKO 1000PF 20% 1KV<br>HV-KERKO 1000PF 20% 1KV<br>HV-KERKO 1000PF 20% 1KV<br>HV-KERKO 1000PF 20% 1KV<br>FKP1 100PF 10% 1600V<br>ELKO 1000UF 20% 25V<br>HV-KERKO 100PF 20% 1KV<br>FKP1 100PF 10% 1600V<br>ELKO 28 1000UF 63V<br>FKP1 100PF 10% 1600V<br>HV-KERKO 100PF 20% 1KV<br>HV-KERKO 100PF 20% 1KV<br>ELKO 1000UF 20% 25V<br>HV-KERKO 100PF 20% 1KV<br>ELKO 28 1000UF 63V<br>ELKO 2200UF 20% 16V<br>HV-KERKO 100PF 20% 1KV<br>HV-KERKO 100PF 20% 1KV<br>HV-KERKO 100PF 20% 1KV<br>SI-KERKO B-SS 2200PF 20%<br>SI-KERKO B-SS 2200PF 20%<br>SI-KERKO B-SS 1000PF 20%<br>MP 3 0,47 UF 20% 250VW<br>MP 3 0,33 UF 20% 250VW |

| POS. NR.<br>POS. NO.                                                                                                                                                                                                                                                                                                                              | SACHNUMMER<br>PART NUMBER                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | BEZEICHNUNG<br>DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C 64001<br>C 64002<br>C 64006                                                                                                                                                                                                                                                                                                                     | △ 8502-200-066<br>△ 8502-200-066<br>8515-911-600                                                                                                                                                                                                                                                                                                                                                                                                                                             | FOKO WIMADUR 1500PF 20% 6<br>FOKO WIMADUR 1500PF 20% 6<br>FKP1 100PF 5% 2000V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| D 21001<br>D 21201<br>D 21202<br>D 21203<br>D 21206<br>D 21212<br>D 50013<br>D 52003<br>D 52006<br>D 53039<br>D 53071<br>D 53072<br>D 54001<br>D 54006<br>D 55004<br>D 55012<br>D 58001<br>D 58003<br>D 58004<br>D 58007<br>D 58011<br>D 58012<br>D 58021<br>D 58022<br>D 60006<br>D 60007<br>D 60012<br>D 60014<br>D 60023<br>D 60201<br>D 60202 | 8309-204-015<br>8309-215-045<br>8309-215-045<br>8309-215-045<br>8309-200-021<br>8309-215-020<br>8309-516-283<br>8309-215-045<br>8309-215-006<br>8309-720-052<br>8309-204-359<br>8309-204-230<br>8309-215-466<br>8309-516-038<br>8309-215-045<br>8309-720-333<br>8309-215-045<br>8309-720-052<br>8309-215-045<br>8309-720-028<br>8309-215-045<br>8309-215-045<br>8309-215-045<br>8309-820-460<br>8309-820-460<br>8309-516-754<br>8309-200-021<br>8309-560-520<br>8309-215-045<br>8309-215-045 | DIODE BY203S-20 TFK<br>DIODE 1N4148<br>DIODE 1N4148<br>DIODE 1N4148<br>DIODE BAV21 ITT/ TFK<br>DIODE 1 N 4004 -GA<br>DIODE BYV 28-200 RA 12,5/<br>DIODE 1N4148<br>DIODE 1 N 4001 -GA<br>Z DIODE 5,1 C 0,5W<br>DIODE BY 359<br>DIODE BY 229-600<br>DIODE 1 N 4936<br>DIODE BYV38 TFK<br>DIODE 1N4148<br>Z DIODE 33 C 0,5W<br>DIODE 1N4148<br>Z DIODE 5,1 C 0,5W<br>DIODE 1N4148<br>Z DIODE 2,7 B 0,5W<br>DIODE 1N4148<br>DIODE 1N4148<br>DIODE 1N4148<br>DIODE 1N4148<br>DIODE MUR460<br>DIODE MUR460<br>DIODE BYT53B TFK/ EGP10B<br>DIODE BAV21 ITT/ TFK<br>GLR.B 380 C 3700/2200<br>DIODE 1N4148<br>DIODE 1N4148 |

| POS. NR.<br>POS. NO.                                                                                                                                                                                                                                                 | SACHNUMMER<br>PART NUMBER                                                                                                                                                                                                                                                                                                                                                                                    | BEZEICHNUNG<br>DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| D 60204<br>D 60207<br>D 60208<br>D 60223<br>D 60224<br>D 60225<br>D 61001<br>D 61011<br>D 61016<br>D 61021<br>D 61026<br>D 61033<br>D 61036<br>D 61056<br>D 61061<br>D 61062<br>D 61063<br>D 61066<br>D 61067<br>D 61068<br>D 64011<br>D 64012<br>D 64013<br>D 64014 | 8309-720-131<br>8309-215-006<br>8309-215-006<br>8309-215-045<br>8309-201-159<br>8309-663-180<br>8309-516-754<br>8309-820-840<br>8309-820-880<br>8309-820-420<br>8309-820-840<br>8309-215-006<br>8309-820-840<br>8309-820-840<br>8309-820-420<br>8309-215-010<br>8309-215-010<br>8309-820-420<br>8309-215-010<br>8309-215-010<br>8309-215-010<br>8309-200-021<br>8309-200-021<br>8309-200-021<br>8309-200-021 | Z DIODE 13 B 0,5W<br>DIODE 1 N 4001 -GA<br>DIODE 1 N 4001 -GA<br>DIODE 1N4148<br>DIODE BA159<br>Z-DIODE BZT03D180<br>DIODE BYT53B TFK/ EGP10B<br>DIODE MUR 840/BYV 29-400/<br>DIODE MUR 880<br>DIODE MUR420<br>DIODE MUR 840/BYV 29-400/<br>DIODE 1 N 4001 -GA<br>DIODE MUR 840/BYV 29-400/<br>DIODE MUR 840/BYV 29-400/<br>DIODE MUR420<br>DIODE 1 N 4003 -GA<br>DIODE 1 N 4003 -GA<br>DIODE MUR420<br>DIODE 1 N 4003 -GA<br>DIODE 1 N 4003 -GA<br>DIODE 1 N 4003 -GA<br>DIODE BAV21 ITT/ TFK<br>DIODE BAV21 ITT/ TFK<br>DIODE BAV21 ITT/ TFK<br>DIODE BAV21 ITT/ TFK |
| IC 50010<br>IC 55010<br>IC 58010<br>IC 60010<br>IC 61001<br>IC 61006<br>IC 61030<br>IC 61040<br>IC 61050<br>IC 61310                                                                                                                                                 | 8305-344-173<br>8305-338-145<br>8305-204-393<br>8305-354-605<br>8305-204-317<br>8305-204-317<br>8305-204-317<br>8305-204-350<br>8305-204-350<br>8305-204-357                                                                                                                                                                                                                                                 | IC TDA 4173 AF<br>IC TDA 8145<br>IC LM 393P TID/393N RAY/<br>IC TDA 4605/3<br>IC LM 317 T NSC/MOT/<br>IC LM 317 T NSC/MOT/<br>IC LM 317 T NSC/MOT/<br>IC LM 350 T<br>IC LM 350 T<br>IC LM 358 N NSC/TID/MOT/                                                                                                                                                                                                                                                                                                                                                           |
| K 53030                                                                                                                                                                                                                                                              | △ 8324-800-326                                                                                                                                                                                                                                                                                                                                                                                               | KASKADE BG 2034 642 3206                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| L 53001<br>L 53002<br>L 53003                                                                                                                                                                                                                                        | 8104-982-056<br>8104-982-056<br>8104-982-056                                                                                                                                                                                                                                                                                                                                                                 | FERRITPERLE HF 70 BTL<br>FERRITPERLE HF 70 BTL<br>FERRITPERLE HF 70 BTL/                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| L 53012                                                                                                                                                                                                                                                              | 09240-114.04                                                                                                                                                                                                                                                                                                                                                                                                 | FERRITE BEAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| L 53021                                                                                                                                                                                                                                                              | 29203-117.97                                                                                                                                                                                                                                                                                                                                                                                                 | DROSSEL 1,5 MH/<br>CHOKE COILS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| L 53074                                                                                                                                                                                                                                                              | 09246-859.51                                                                                                                                                                                                                                                                                                                                                                                                 | LINEARITAETSREGLER/<br>LINEARITY CONTROL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| L 55014                                                                                                                                                                                                                                                              | 09245-816.01                                                                                                                                                                                                                                                                                                                                                                                                 | BRUECKENSPULE MIT KERN/<br>BRIDGE COIL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| L 60006<br>L 61011<br>L 61014<br>L 61016<br>L 61021<br>L 61026<br>L 61036<br>L 61037<br>L 61056<br>L 61061<br>L 61066                                                                                                                                                | 29701-739.08<br>8104-982-014<br>8104-982-014<br>8104-982-014<br>8104-982-014<br>8104-982-014<br>8104-982-014<br>8104-982-014<br>8104-982-014<br>8104-982-014<br>8104-982-014                                                                                                                                                                                                                                 | O/W AUSKOPPELSPULE/<br>E/W DECOUPLING COIL<br>DAEMPFUNGSERLE<br>DAEMPFUNGSERLE<br>DAEMPFUNGSERLE<br>DAEMPFUNGSERLE<br>DAEMPFUNGSERLE<br>DAEMPFUNGSERLE<br>DAEMPFUNGSERLE<br>DAEMPFUNGSERLE<br>DAEMPFUNGSERLE/<br>DAMPING BEAD                                                                                                                                                                                                                                                                                                                                          |
| L 62501                                                                                                                                                                                                                                                              | △ 29500-832.97                                                                                                                                                                                                                                                                                                                                                                                               | FUNKENTSTOERDROSSEL/<br>INTERFERENCE SUPPR. COIL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| L 62501                                                                                                                                                                                                                                                              | △ 29500-834.97                                                                                                                                                                                                                                                                                                                                                                                               | FUNKENTSTOERDROSSEL/<br>INTERFERENCE SUPPR.COIL 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| OK 60031<br>OK 60046                                                                                                                                                                                                                                                 | △ 8306-000-012<br>△ 8306-000-012                                                                                                                                                                                                                                                                                                                                                                             | OPTOKOPPLER CNY17F1/ CNY1<br>OPTOKOPPLER CNY17F1/ CNY1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| R 21001<br>R 21102<br>R 50007                                                                                                                                                                                                                                        | △ 8735-003-273<br>△ 8730-239-216<br>△ 8766-327-405                                                                                                                                                                                                                                                                                                                                                           | DRW 0,75W 1 KOHM 10% BWF<br>DRW SI S7T 3W 4,3 OHM 5%<br>MSW 0207 1,5 OHM 1% TK50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| POS. NR.<br>POS. NO.                                                                                                                                                                                                                                                                                                                                                                                     | SACHNUMMER<br>PART NUMBER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | BEZEICHNUNG<br>DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| R 50008<br>R 50027<br>R 50029<br>R 52001<br>R 52003<br>R 52006<br>R 53002<br>R 53003<br>R 53016<br>R 53021<br>R 53036<br>R 53037<br>R 53038<br>R 54001<br>R 54006<br>R 54007<br>R 55001<br>R 55014<br>R 58003<br>R 60016<br>R 60023<br>R 60029<br>R 60207<br>R 60211<br>R 60212<br>R 61001<br>R 61013<br>R 61018<br>R 61031<br>R 61033<br>R 61041<br>R 61051<br>R 61313<br>R 62049<br>R 62505<br>R 64006 | △ 8766-327-206<br>△ 8700-121-209<br>△ 8766-357-059<br>△ 8705-321-223<br>△ 8705-370-039<br>△ 8705-370-001<br>△ 8700-121-205<br>△ 8700-121-205<br>△ 8730-280-021<br>△ 8705-369-065<br>△ 8760-503-133<br>△ 8760-503-133<br>△ 8760-503-133<br>△ 8735-003-033<br>△ 8705-329-025<br>△ 8705-329-025<br>△ 8766-357-287<br>△ 8701-230-817<br>△ 8766-302-087<br>△ 8705-369-043<br>△ 8705-329-127<br>△ 8705-369-113<br>△ 8700-329-017<br>△ 8765-049-155<br>△ 8765-049-155<br>8790-050-017<br>△ 8705-369-079<br>△ 8705-329-321<br>8790-050-025<br>△ 8705-370-058<br>8790-050-017<br>8790-050-017<br>8790-050-017<br>8790-050-017<br>△ 8765-049-155<br>△ 8311-200-010<br>8799-999-621 | MSW 0207 1,6 OHM 2% TK100<br>KSW 0207 2,2 OHM 5%<br>MSW 0414 270 OHM 5% TK100<br>MOW 0411 8,2 OHM 10% SXS<br>MOW 0922 39 OHM 5%<br>MOW 0922 1 OHM 5%<br>KSW 0207 1,5 OHM 5%<br>KSW 0207 1,5 OHM 5%<br>DRW SI S11 7W 6,8 OHM 5%<br>MOW 0617 470 OHM 5%<br>MSW 330 KOHM 5% PR03 2322<br>MSW 330 KOHM 5% PR03 2322<br>MSW 330 KOHM 5% PR03 2322<br>DW 0,75W 0,33 OHM 10%<br>MOW 0411 10 OHM 5% DRA<br>MOW 0411 10 OHM 5% DRA<br>MSW 0414 3,9 KOHM 2% TK10<br>NKS 3 4,7 OHM 5% ROE<br>MSW 0207 3,9 KOHM FP<br>MOW 0617 56 OHM 5%<br>MOW 0411 180 KOHM 5%<br>MOW 0617 47 KOHM 5%<br>KSW NB 0207 4,7 OHM 5%<br>MSW 0414 2,7 MOHM VDE B<br>MSW 0414 2,7 MOHM VDE B<br>ESTR.SK10-A 220 OHM LIN<br>MOW 0617 1,8 KOHM 5%<br>MOW 0411 100 KOHM 10%<br>ESTR.SK10-A 470 OHM LIN<br>MOW 0922 100 OHM 10%<br>ESTR.SK10-A 220 OHM LIN<br>ESTR.SK10-A 220 OHM LIN<br>ESTR.SK10-A 10 KOHM LIN<br>MSW 0414 2,7 MOHM VDE B<br>PTC #1 DUO<br>FOKUSREG.90/120 MOHM1887N |
| SI 60001<br>SI 60201<br>SI 61012<br>SI 61022<br>SI 61026<br>SI 61036<br>SI 61056<br>SI 61061<br>SI 61066<br>SI 62501                                                                                                                                                                                                                                                                                     | △ 8315-620-225<br>△ 8315-607-026<br>△ 8315-623-008<br>△ 8315-620-225<br>△ 8315-621-027<br>△ 8315-621-027<br>△ 8315-621-027<br>△ 8315-620-225<br>△ 8315-620-225<br>△ 8315-620-225<br>△ 8315-622-603                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | LOET-SI.-GR 2 A/T<br>LOET-SI.-GR 100 M/A/T<br>LOET-SI.-GR 4 A/T<br>LOET-SI.-GR 2 A/T<br>LOET-SI.-GR 2,5 A/T<br>LOET-SI.-GR 2,5 A/T<br>LOET-SI.-GR 2,5 A/T<br>LOET-SI.-GR 2 A/T<br>LOET-SI.-GR 2 A/T<br>LOET-SI.-GR 2 A/T<br>SI 5X20 T3,15A H 250V/FUSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| T 644<br>T 21211<br>T 50028<br>T 50029<br>T 52003<br>T 53001<br>T 58012<br>T 60203<br>T 60206<br>T 60213<br>T 60223<br>T 61301<br>T 61316<br>T 64016                                                                                                                                                                                                                                                     | 8302-805-050<br>8303-401-299<br>8302-210-544<br>8302-210-543<br>8302-218-043<br>8302-624-288<br>8303-205-548<br>8303-205-548<br>8303-207-558<br>8303-205-558<br>8302-269-091<br>8303-205-548<br>8303-205-548<br>8303-287-639                                                                                                                                                                                                                                                                                                                                                                                                                                             | TRANS.IRF PC 50<br>TRANS.S 298 T TFK/PBF 259<br>TRANS.BD 538<br>TRANS.BD 537 SGS<br>TRANS.BDX 43<br>TRANS.2 SC 4288 A<br>TRANS BC548B<br>TRANS BC548B<br>TRANS.BC 558 C<br>TRANS BC558B<br>TRANS.BUZ 90 A TYP 2/3<br>TRANS BC548B<br>TRANS BC548B<br>TRANS.BC 639                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| TR 52001<br>TR 53001<br>TR 60220<br>TR 61000<br>TR 64001                                                                                                                                                                                                                                                                                                                                                 | 09245-812.31<br>△ 29201-025.17<br>△ 29201-701.97<br>△ 29201-567.97<br>△ 29201-447.97                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | TREIBER-UEBERTRAGER/<br>TRANSFORMER<br>ZEILENTRAFO KPL./<br>LINE TRANSFORMER<br>TRAFO STAND-BY/<br>TRANSFORMER STAND-BY<br>TRAFO SPERRWANDLER/<br>B.O.-TYPE CONVERTER<br>TRANSFORMER<br>FOKUSIERUEBERTRAGER/<br>TRANSFORMER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |