

NOKIA GRAETZ GmbH
Service
D-7530 Pforzheim

Service-Manual

ITT NOKIA

IDEAL COLOR 4030

Ident-No. 5136 74 20 / 5435 21 70

IDEAL COLOR 4210

Ident-No. 5435 73 00 / 5435 72 11 / 5435 72 10

IDEAL COLOR 5110

Ident-No. 5435 78 40 / 5435 78 30

FX 4030 UK*

Ident-No. 5436 73 80

CT 5110 UK*

Ident-No. 5435 35 60

Graetz

21 C 60

Ident-No. 5437 38 70

SALORA

21 C 60

Ident-No. 5137 38 80

Eine Kurzbedienungsanleitung finden Sie auf dem Manualblatt **A 23.2**.
You will find a short set of operating instructions on the manual sheet **A 23.2**.
Brevi istruzioni per l'uso si trovano sul foglio **A 23.2** del manuale.

Zur Reparatur sind folgende Unterlagen erforderlich:
For service, the following circuit documents are required:
Per la riparazione sono necessari i seguenti documenti:

A23

Chassis Core 90°

Netzteil, Ablenkung, Decoder
Bildröhrenanschluß,
IR-Sender + Empf.

Power supply, deflection
circuits, decoder, picture tube
connecting, operating unit,
transmitter

Sezione di rete, deviazione
uniforme del campo, decoder,
collegamento cinescopio,
unità di comando, trasmettitore

Ersatzteile
Replacement parts
Ricambi

6611 79 43

B25

HF-ZF Modul
RF-IF module
Modulo MF-BF
5827 01 11
5827 01 51

Ersatzteile
Replacement parts
Ricambi

6611 79 44

D8

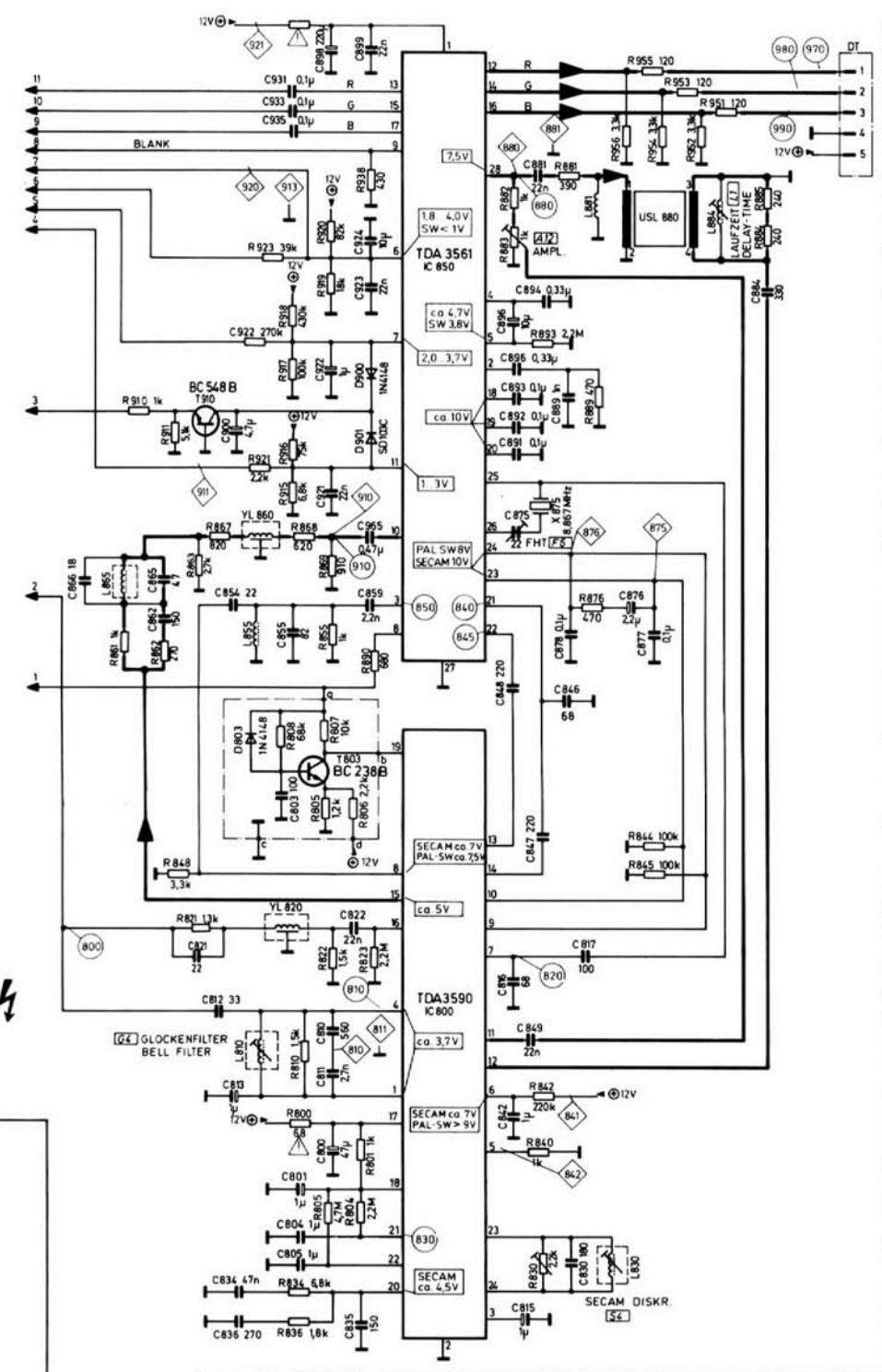
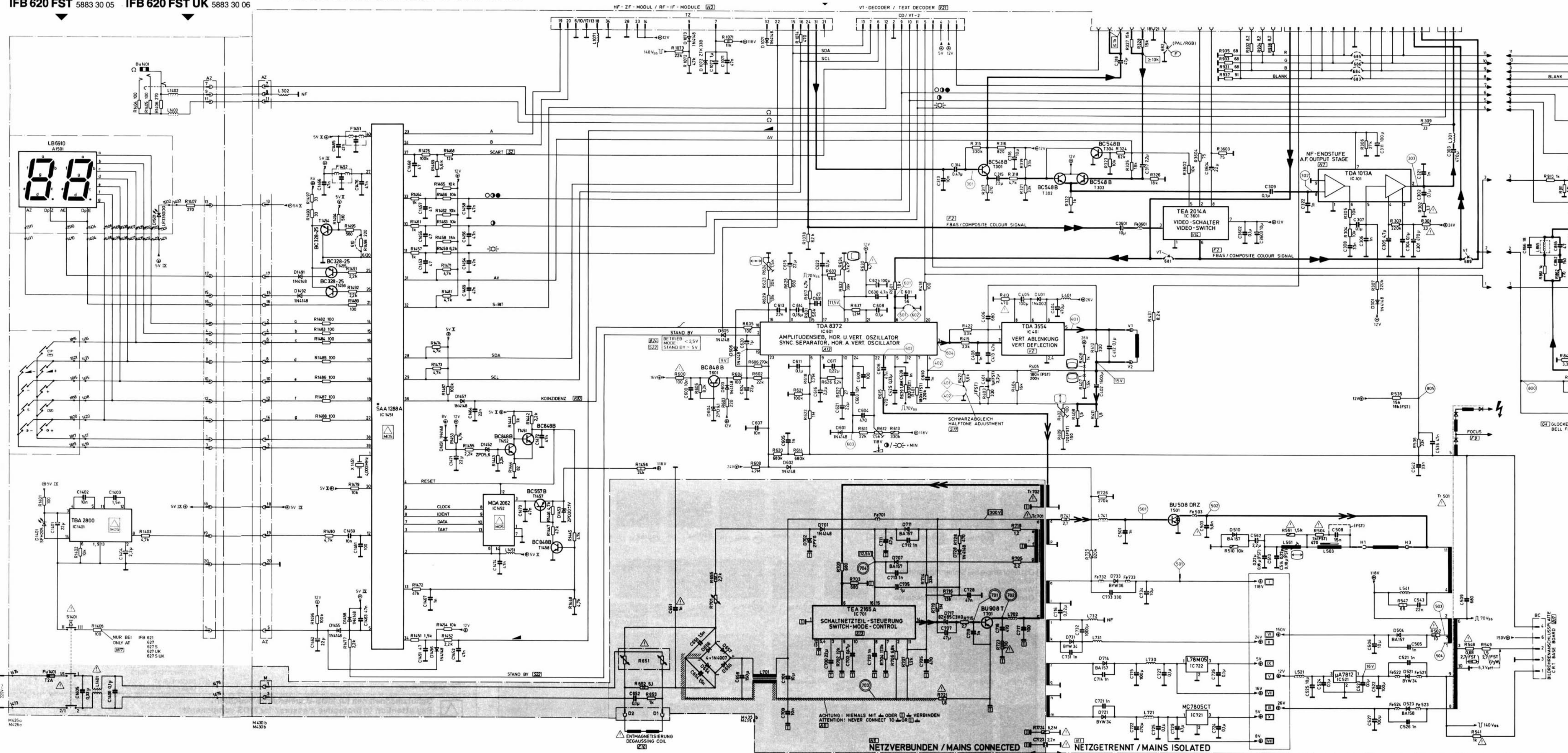
VIDEOTEXT-Decoder, Core
VIDEOTEXT decoder, Core
Decodificatore TELEVIDEO,
Core
6911 11 61

Ersatzteile
Replacement parts
Ricambi

6611 79 45

Bei Reparaturen gültige Sicherheitsvorschriften beachten!
Service and repair work to be performed only in accordance with existing safety regulations.
Osservare le norme di sicurezza vigenti in caso di riparazioni.

* SL Consumer Electronic (UK) Ltd.
Paycocke Road, Basildon, Essex, 5514 3 DR
Basildon 27788 Code 0268



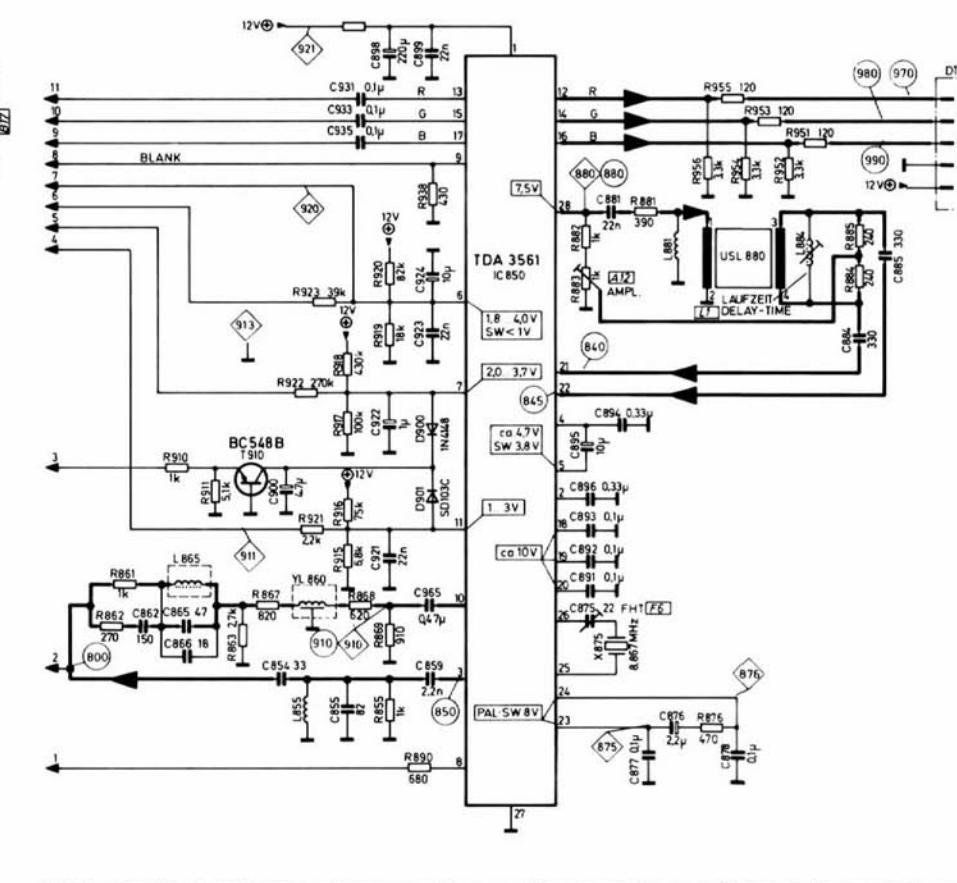
Achtung!
Bei Austausch von T 701 muß auch IC 701 ausgetauscht werden.

Important!
When exchanging T 701, IC 701 must likewise be exchanged.

Attention!
En changeant le T 701 il faut remplacer aussi le CI 701.

Attenzione!
Durante la sostituzione di T 701 deve essere
sostituito anche IC 701.

Im Stand-by-Betrieb führen Schaltzeitteil und Hor. Endstufe verringerte Spannungswerte.
With the equipment switched to stand-by, the voltages of the switched-mode power supply and the horizontal output stage are below nominal values.
En mode de fonctionnement standby, les blocs secteur de commutation et l'étage finale hor. délivrent des valeurs de tension diminuées.
Durante il funzionamento standby, il blocco di comando della rete e lo stadio finale orizzontale eliminano valori della tensione ridotti.



Alle Decoderoszillogramme sind unter folgenden Bedingungen aufgenommen: Normfarbbalken PAL bzw. SECAM, maximale Kontrast, ca. Nennhelligkeit und nominale Sättigung.

The decoder waveforms are taken under following conditions: Standard PAL that is, SECAM colour par pattern, contrast at maximum and brightness and colour saturation at nominale value.

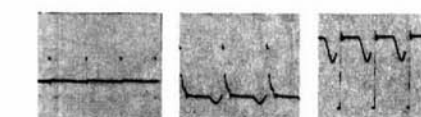
Tous les oscillogrammes mesurés sur le décodeur sont pris sous les conditions suivantes: Norme de mire de barre PAL, respectivement SECAM, contraste au maximum, luminosité et intensité couleur aux valeurs nominales.

Tutti gli oscillogrammi decoder sono stati fatti nelle seguenti condizioni: generatore di barre PAL oppure SECAM, massimo contrasto, approssimativamente luminosità e saturazione normali.

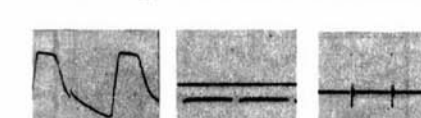
Belastbarkeit der Widerstände
Power rating of resistors
Wattage des résistances
Carico ammissibile per le resistenze

	1/8W		4W
	1/3W		5W
	1/2W		7W
	1W		9W
	2W		11W
	3W		17W

Ⓐ Oszillogramme bei Stand-by-Betrieb
Waveforms at stand-by mode
Oscillogrammi in modo «stand-by»



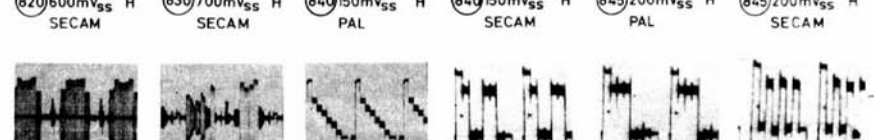
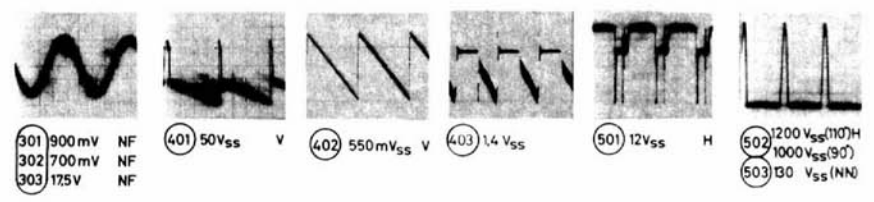
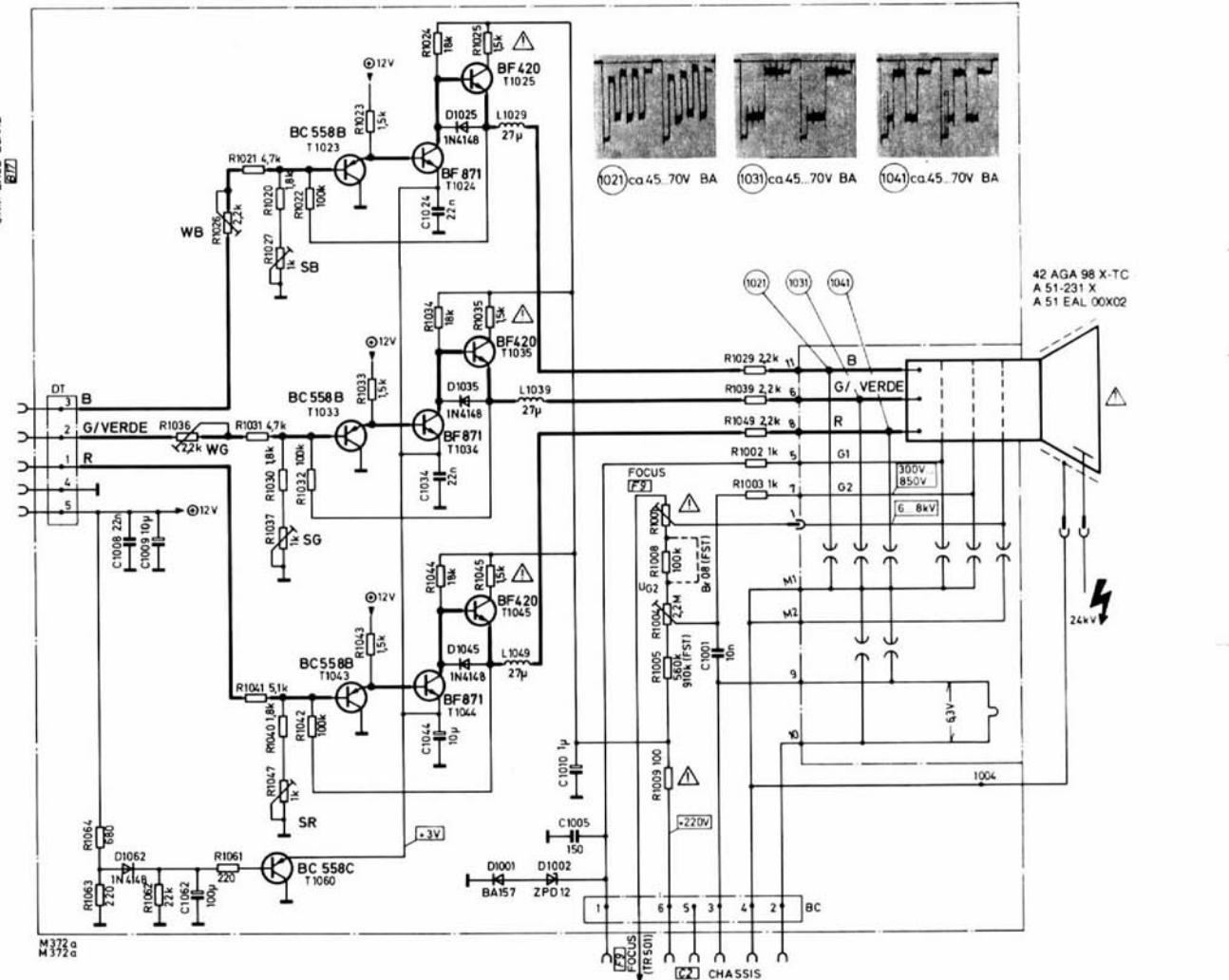
(B) Oscillogramme bei Sicherungsbetrieb
 (Überlast)
 Waveforms at overload mode
 Oscillogrammi in modo di sovraccarico

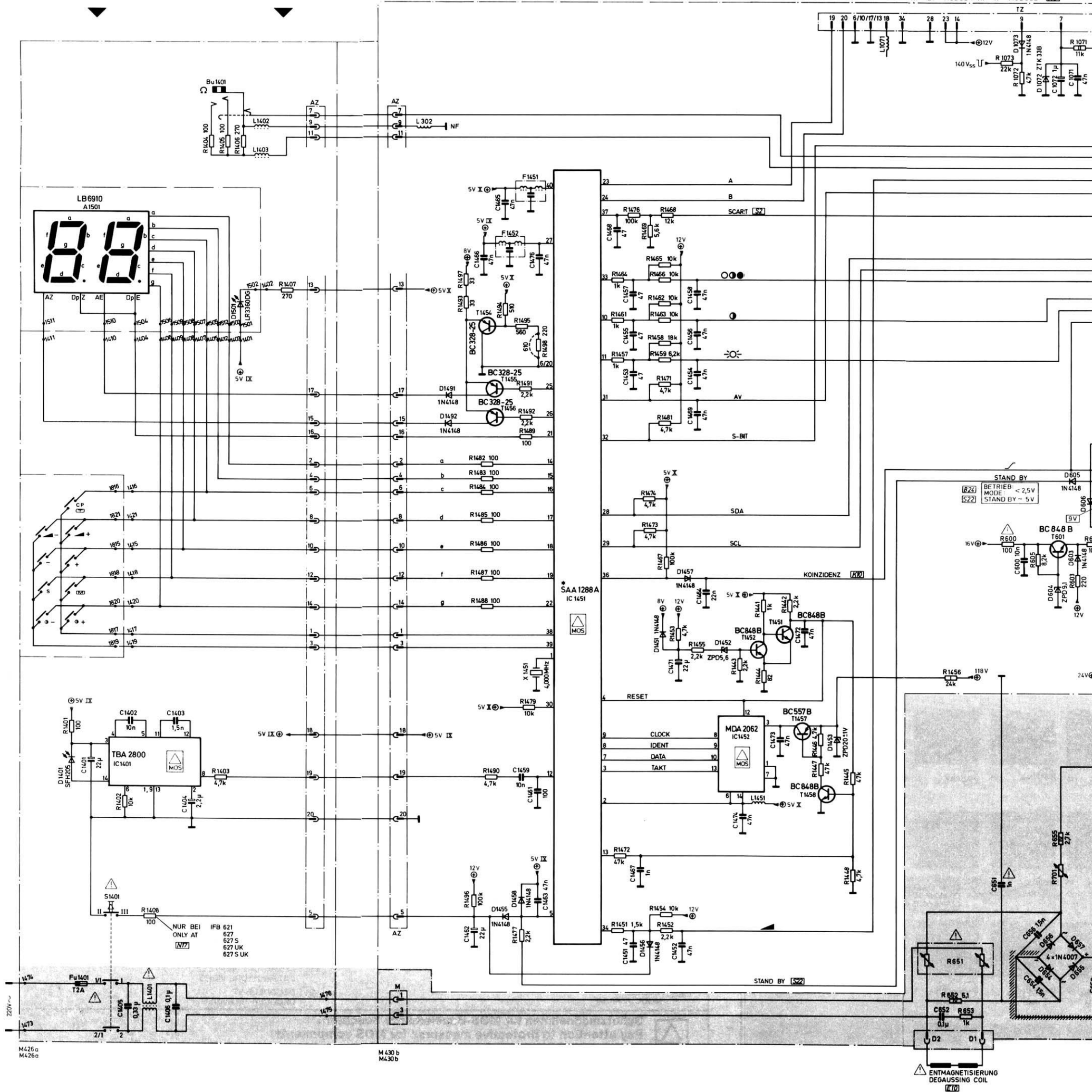


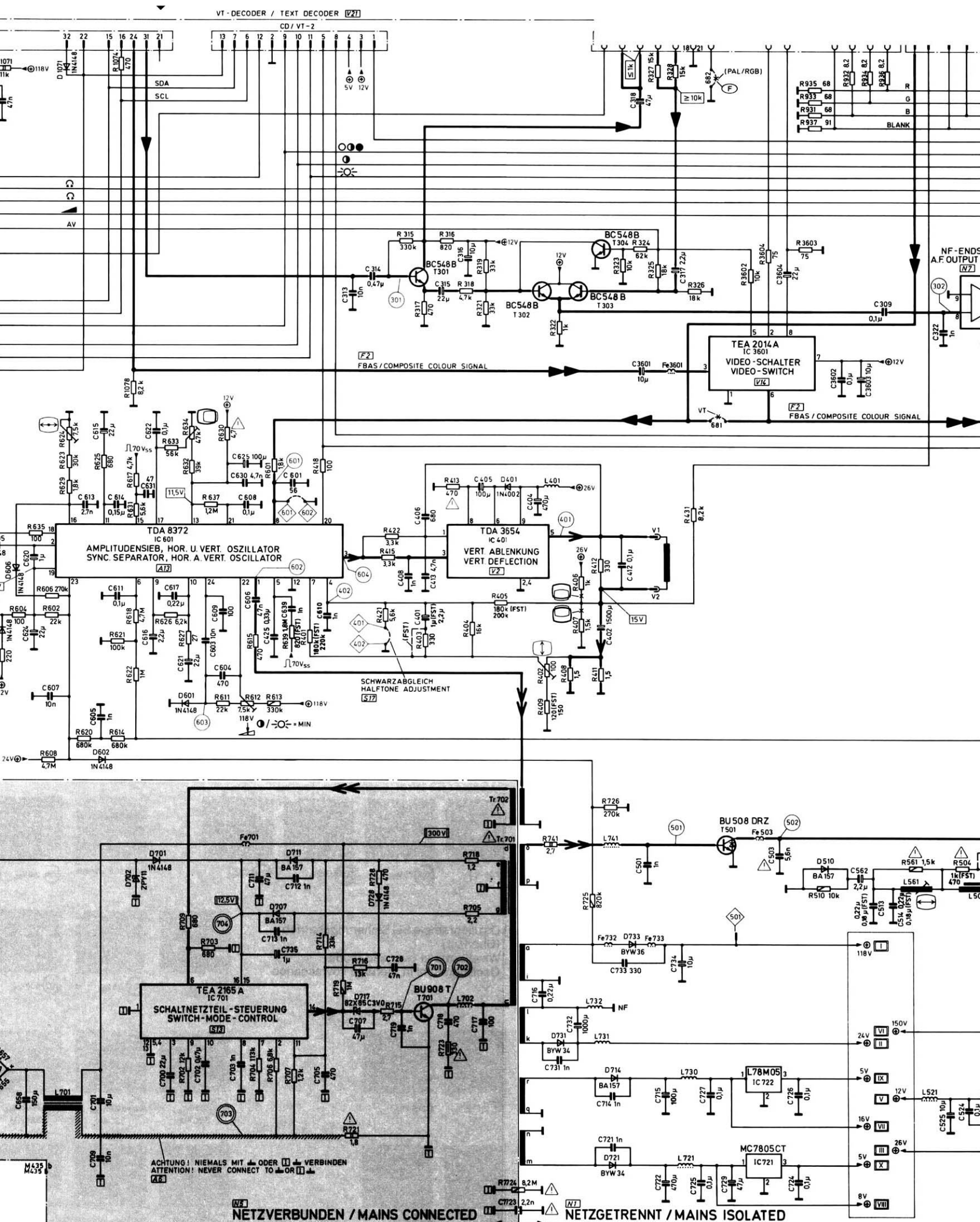
© Oscillogramme bei fehlenden Horizontal-Impulsen an IC 601, Pin 1
Waveforms when horizontal pulse is deficient, at IC 601, Pin 1
Oscillogrammi misurati dall'IC 601, pin 1
al mancare degli impulsi orizzontali.

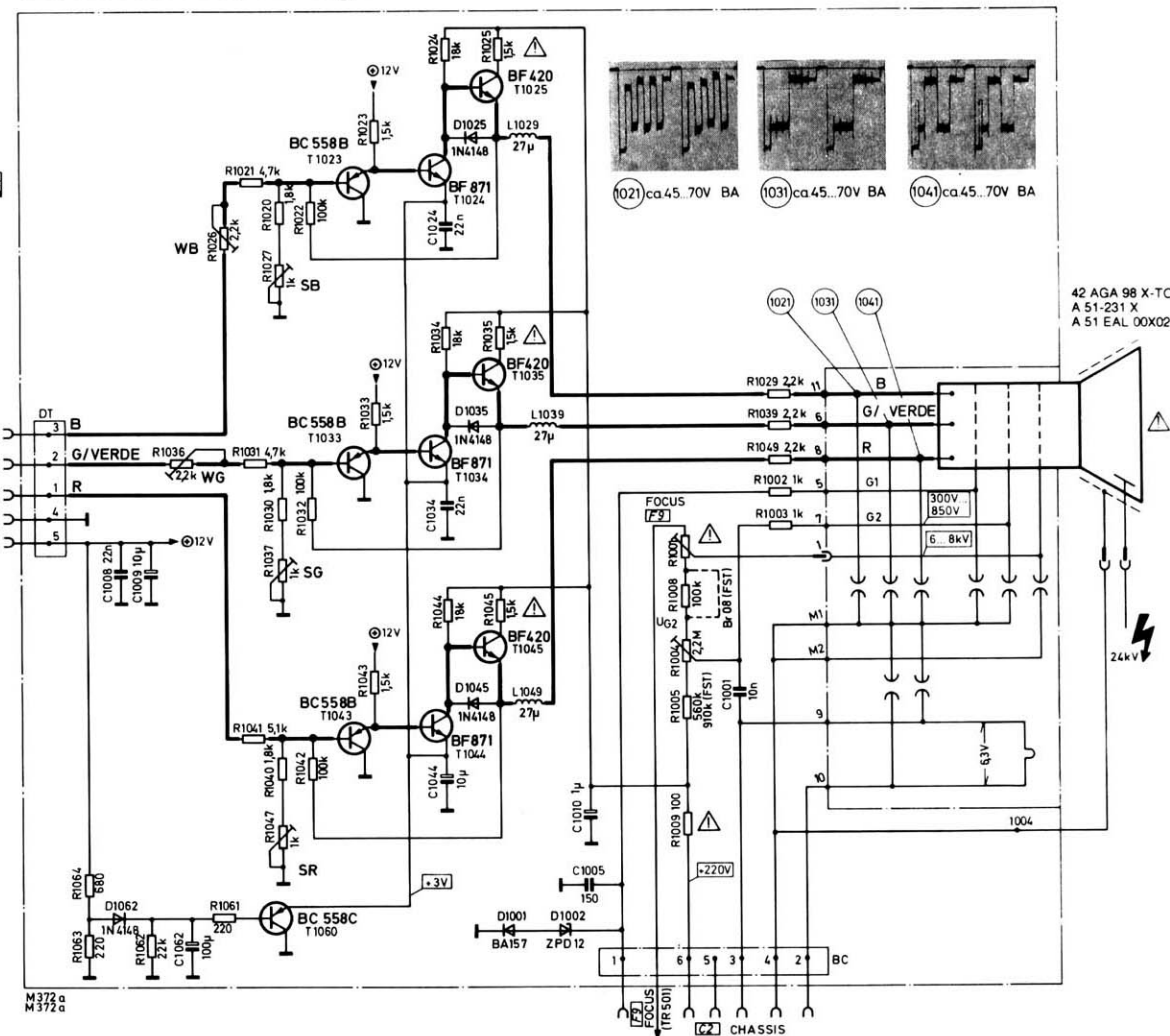


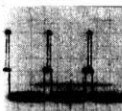
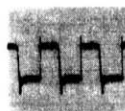
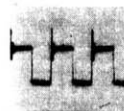
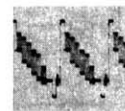
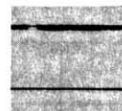
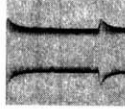
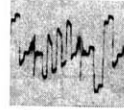
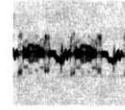
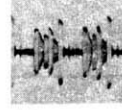
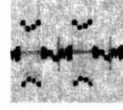
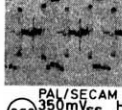
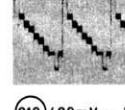
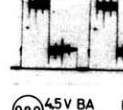
Connexion tube image



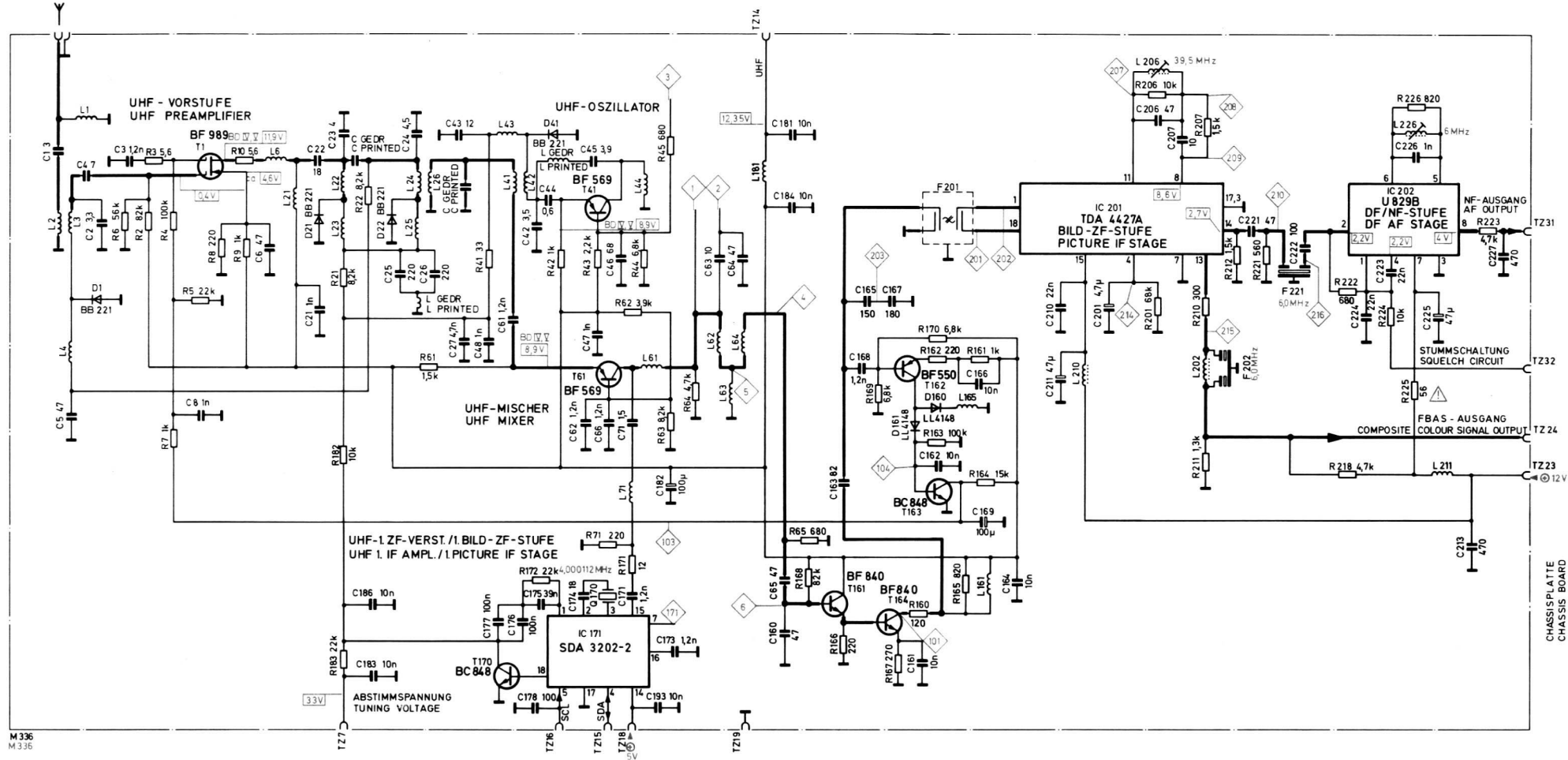




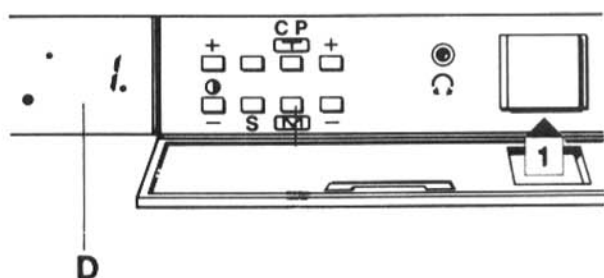
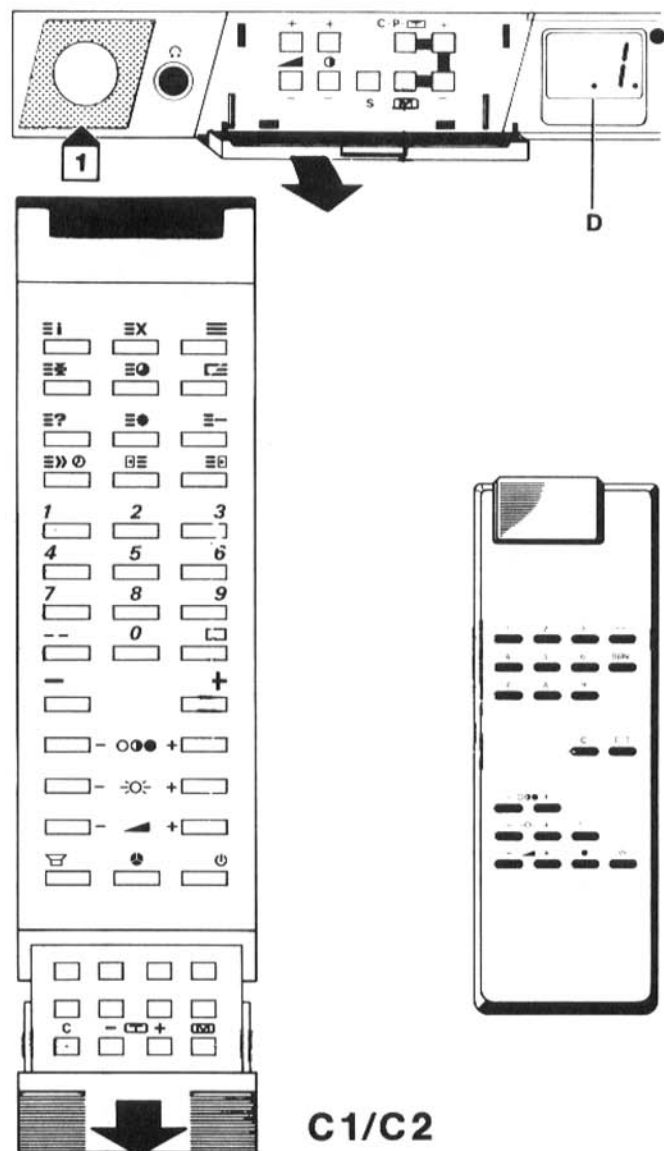


					
605 11V _{ss} H	701 3.5V _{ss} V	702 500V _{ss} H	800 2V _{ss} H PAL+SECAM	805 STRAHLSTROM min. V BEAM CURRENT COURANT DE FAISCEAU CORRENTE DI FASCIO CORRIENTE DE HAZ	805 STRAHLSTROM max. V BEAM CURRENT COURANT DE FAISCEAU CORRENTE DI FASCIO CORRIENTE DE HAZ
					
810 300mV _{ss} H SECAM	820 600mV _{ss} H SECAM	830 700mV _{ss} H SECAM	840 150mV _{ss} H PAL	840 150mV _{ss} H SECAM	845 200mV _{ss} H PAL
					
850 PAL/SECAM 350mV _{ss} H 500mV _{ss} PAL	880 800mV _{ss} H PAL	880 800mV _{ss} H SECAM	910 400mV _{ss} H PAL+SECAM	970 45V BA H PAL, ROT	980 45V BA H PAL, GRUN
					
990 45V BA H PAL, BLAU					

Le Spannungswerte.
 mode power supply and the horizontal output stage are below nominal values.
 n et l'étage finale hor. délivrent des valeurs de tension diminuées.
 stadio finale orizzontale eliminano valori della tensione ridotti.



- | | |
|-----|--|
| C2 | PLATINE DE CHASSIS
PIASTRA CHASSIS |
| S34 | RAM STAT.
RAM STATICA |
| V29 | TRAITEMENT DE DONNER VIDEOTEXT ET GENERATEUR DE CARACTERES
ELABORAZIONE DATI TELEVIDEO E GENERATORE DI CARATTERI |
| V30 | PROCESSEUR VIDEO POUR LA SEPARATION DES SIGNAUX VIDEOTEXT
PROCESSORE VIDEO PER LA SEPARAZIONE DEI SEGNALE TELEVIDEO |

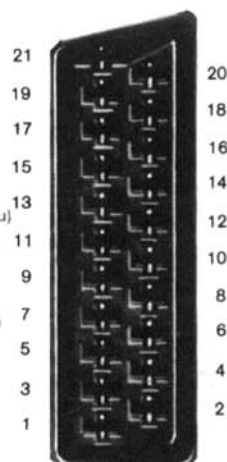


VFS 4/1

C1/C2

SCART-Buchsenbelegung / Connections socket Occupation des connexions de la priseperitel (SCART) / Occupazione delle prese

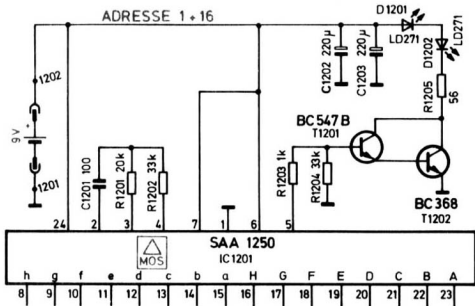
- Kontakt / Pin / Contact / Contatto 1 : Audio-Ausgang Kanal B / Audio output channel B / sortie audio canal B / uscita audio canale B
0,5 V-2 V an / on / sur / su $Z \leq 1 \text{ k}\Omega$ (20 Hz-20 kHz)
- Kontakt / Pin / Contact / Contatto 2 : Audio-Eingang Kanal B / Audio input channel B / entrée audio canal B / entrata audio canale B
0,2 V-2 V an / on / sur / su $Z \geq 10 \text{ k}\Omega$
- Kontakt / Pin / Contact / Contatto 3 : Audio-Ausgang Kanal A / Audio output channel A / sortie audio canal A / uscita audio canale A
0,5 V-2 V an / on / sur / su $Z \leq 1 \text{ k}\Omega$ (20 Hz-20 kHz)
- Kontakt / Pin / Contact / Contatto 4 : Audio-Masse / Earth / masse audio / audio-massa
- Kontakt / Pin / Contact / Contatto 5 : Blau-Masse / Blue earth / masse bleu / blu-massa
- Kontakt / Pin / Contact / Contatto 6 : Audio-Eingang A / Audio input A / entrée audio A / entrata audio A
- Kontakt / Pin / Contact / Contatto 7 : Blau-Signal / Blue signal / signal bleu / segnale blu
0,7 V ($\pm 3 \text{ dB}$) an / on / su $Z = 75 \Omega$
überlagerte DC = 0 V bis 2 V
superimposed DC = 0 V to 2 V
c.c. superposé = de 0 V à 2 V
c.c. sovrapposta = da 0 V a 2 V
- Kontakt / Pin / Contact / Contatto 8 : Schaltspannung / Switch voltage / tension de commutation / tensione di commutazione
0 V bis / with / à / a 2 V logisch / logique / logico 0 $\triangleq$ FS/RF-Empfang / Receif / réception / ricezione
9,5 V bis / with / à / a 12 V logisch / logique / logico 1 $\triangleq$ PPT-Empfang / Receif / réception / ricezione
 $Z_e = \geq 10 \text{ k}\Omega / \leq 2 \text{ nF}$
- Kontakt / Pin / Contact / Contatto 9 : Grün-Masse / Green earth / masse verte / verde-massa
- Kontakt / Pin / Contact / Contatto 10 : Datenleitung 1 / Data line 1 / Ligne de données 1 / Non collegato 1
- Kontakt / Pin / Contact / Contatto 11 : Grün-Signal (siehe Blau-Signal) / Green signal (see blue signal) / signal vert (cf. signal bleu) / segnale verde (vedi segnale blu)
- Kontakt / Pin / Contact / Contatto 12 : Datenleitung 2 / Data line 2 / Ligne de données 2 / Non collegato 2
- Kontakt / Pin / Contact / Contatto 13 : Rot-Masse / Red earth / masse rouge / rosso-massa
- Kontakt / Pin / Contact / Contatto 14 : Austastsignal Masse / Blanking signal earth / Signal de suppression / Libero
- Kontakt / Pin / Contact / Contatto 15 : Rot-Signal (siehe Blau-Signal) / Red signal (see blue signal) / signal rouge (cf. signal bleu) / segnale rosso (vedi segnale blu)
- Kontakt / Pin / Contact / Contatto 16 : Austast-Signal (Status) / Blanking signal / signal de suppression (état) / segnale di eliminazione (stato)
0 V bis / with / à / a 0,4 V logisch / logique / logico 0 an / on / sur / su $Z = 75 \Omega$
1 V bis / with / à / a 3 V logisch / logique / logico 1 an / on / sur / su $Z = 75 \Omega$
- Kontakt / Pin / Contact / Contatto 17 : Video-Masse / earth / masse vidéo / video-massa
- Kontakt / Pin / Contact / Contatto 18 : Austast-Signal-Masse / Blanking signal earth / signal de suppression masse / segnale di eliminazione-massa
- Kontakt / Pin / Contact / Contatto 19 : Video-Ausgang / output / sortie vidéo / uscita video
1 V ($\pm 3 \text{ dB}$) an / on / sur / su $Z = 75 \Omega$
- Kontakt / Pin / Contact / Contatto 20 : Video-Eingang / input / entrée vidéo / entrata video
1 V ($\pm 3 \text{ dB}$) an / on / sur / su $Z = 75 \Omega$
- Kontakt / Pin / Contact / Contatto 21 : Steckerabschirmung und/oder Masse / Plug shielding and/or earth / blindage de fiches et/ou masse / schermatura presa e/o massa



C2

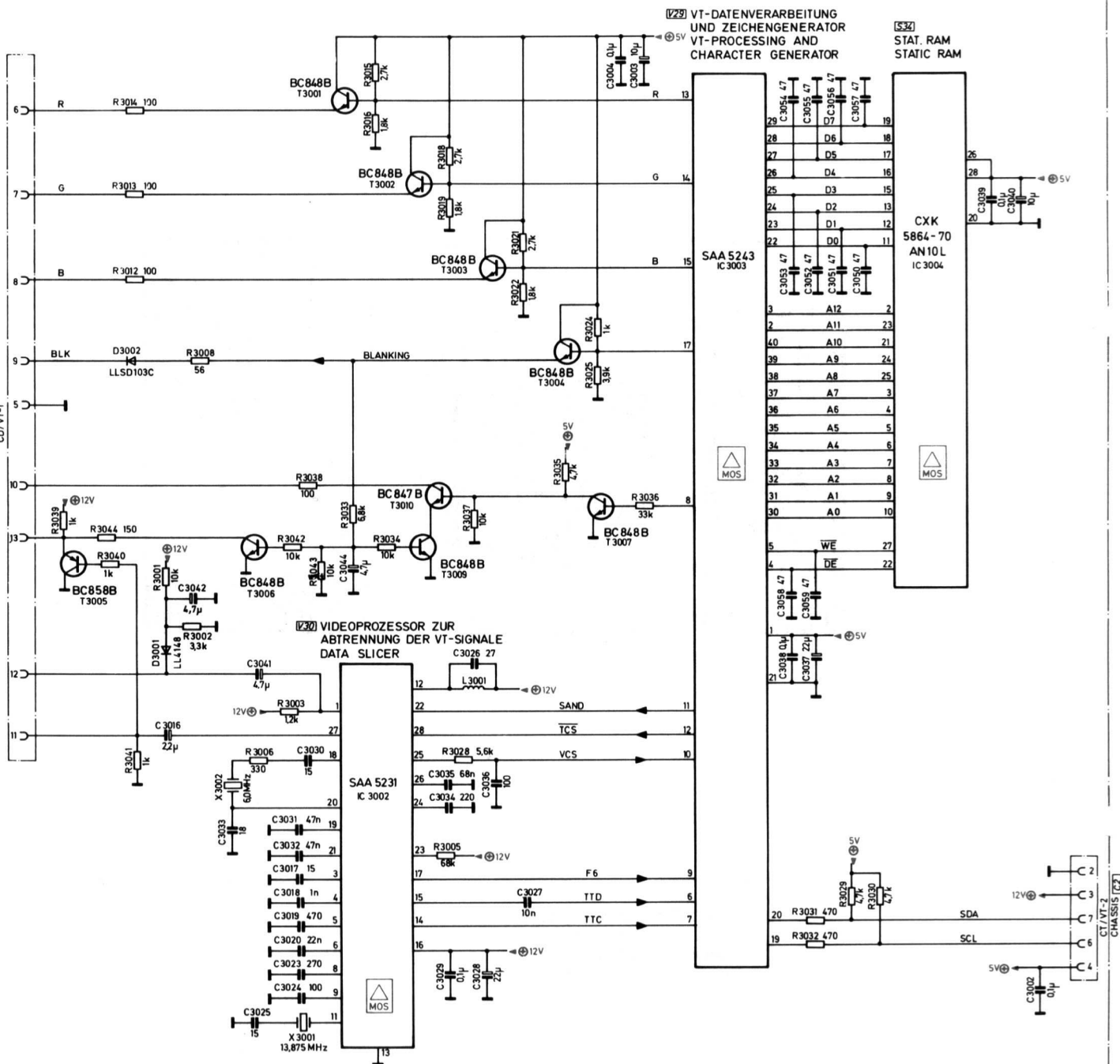
5652 20 77

Sender / transmitter
émetteur / trasmettitore



M544
M544

CHASSIS [C2]
CD/VT-1



M378 a
M 378 g

[C2] PLATINE DE CHASSIS
PIASTRA CHASSIS

[S34] RAM STAT.
RAM STATICA

[V29] TRAITEMENT DE DONNER VIDEOTEXT ET GENERATEUR DE CARACTERES
ELABORAZIONE DATI TELEVIDEO E GENERATORE DI CARATTERI

[V30] PROCESSION VIDEO POUR LA SEPARATION DES SIGNAUX VIDEOTEXT
PROCESSORE VIDEO PER LA SEPARAZIONE DEI SEGNALE TELEVIDEO

CT/VT-2
CHASSIS [C2]