

# HITACHI

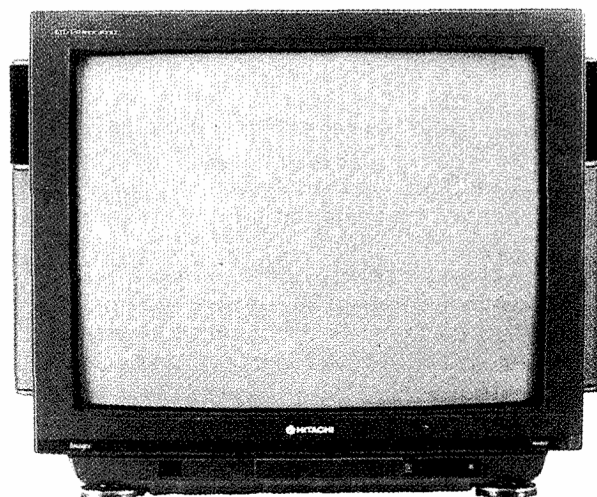
## CL2560TAN CL2860TAN

# SERVICE MANUAL

### CAUTION:

Before servicing this chassis, it is important that the service technician read the "Safety Precautions" and "Product Safety Notices" in this service manual.

CL2560TAN  
CL2860TAN



### TECHNICAL SPECIFICATIONS

TV Standard . . . . . 625 lines (PAL)  
525 lines (NTSC)  
Channel coverage . . . . . BAND 1 VHF, channels 2-4  
BAND 3 VHF, channels 5-12  
UHF, channels 21-68  
S-BAND, S01-S40

Aerial Input impedance . . . . . 75 ohm unbalanced

#### Intermediate Frequencies

I.F. Luminance . . . . . 38.9 MHz  
I.F. Sound . . . . . 33.4 MHz  
I.F. Chrominance . . . . . 34.47 MHz  
FM Sound . . . . . 5.5 MHz-5.74 MHz  
Colour sub carrier . . . . . 4.43 MHz

Focusing . . . . . Electro static  
Mains Voltage . . . . . 220-240 V 50 Hz  
Fusibles . . . . . T3.15A, 630 mA  
Picture Tubes . . . . . 59 cm and 66 cm Type

Programme Selectors . . . . . Channel UP/DOWN buttons  
with 59 programme remote control  
Speakers CL25/2860 . . . . . 10 cm and 5 cm

Power Consumption . . . . . Approximately 95 W

| Dimensions:      | CL2560 | CL2860 |
|------------------|--------|--------|
| Width . . . . .  | 662 mm | 772 mm |
| Height . . . . . | 511 mm | 549 mm |
| Depth . . . . .  | 439 mm | 467 mm |
| Weight . . . . . | 30 kg  | 35 kg  |

● Use this Service Manual in conjunction with "Technical Book" part No. X830788.

## 1992

## **SAFETY PRECAUTIONS**

**WARNING:** The following precautions should be observed.

1. Do not install, remove, or handle the picture tube in any manner unless shatter proof goggles are worn. People not so equipped should be kept away while picture tubes are handled. Keep the picture tube away from the body while handling.
2. When service is required, an isolation transformer should be inserted between power line and the receiver before any service is performed on the chassis.
3. When replacing the chassis in the cabinet, ensure all the protective devices are put back in place, such as barriers, non-metallic knobs, adjustment or compartment covers or shields, isolation resistors/capacitors, etc.
4. When service is required, observe the original lead dressing. Extra precaution should be taken to assure correct lead dressing in the high voltage circuitry area. Particularly note the R.G.B. lead dressing. Ensure they are dressed well away from the horizontal scan and F.B.T. circuitry.
5. Always use the manufacturer's replacement component. Always replace original spacers and maintain lead lengths. Especially critical components are indicated thus  $\triangle$  on the parts list and should not be replaced by other makes. Furthermore, where a short circuit has occurred, replace those components that indicate evidence of overheating.
6. Before returning a serviced receiver to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the instrument by the manufacturer has become defective, or inadvertently damaged during servicing.  
Therefore, the following checks are recommended for the continued protection of the customers and service technicians.

## **INSULATION**

Insulation resistance should not be less than  $10M\Omega$  at 500V DC between the mains poles and any accessible metal parts.

Also, no flashover or breakdown should occur during the dielectric strength test, applying 3kV AC or 4.25kV DC for two seconds between the main poles and accessible metal parts.

## **HIGH VOLTAGE**

High voltage should always be kept at the rated value of the chassis and no higher. Operating at higher voltages may cause a failure of the picture tube or high voltage supply, and also, under certain circumstances could produce X-radiation moderately in excess of design levels. The high voltage must not, under any circumstances, exceed 27kV on the chassis.

## **X-RADIATION**

**TUBES:** The primary source of X-radiation in this receiver is the picture tube. The tube utilised for the above mentioned function in this chassis is specially constructed to limit X-radiation.

For continued X-radiation protection, replace tube with the same type as the original HITACHI approved type.

## **PRODUCT SAFETY NOTICE**

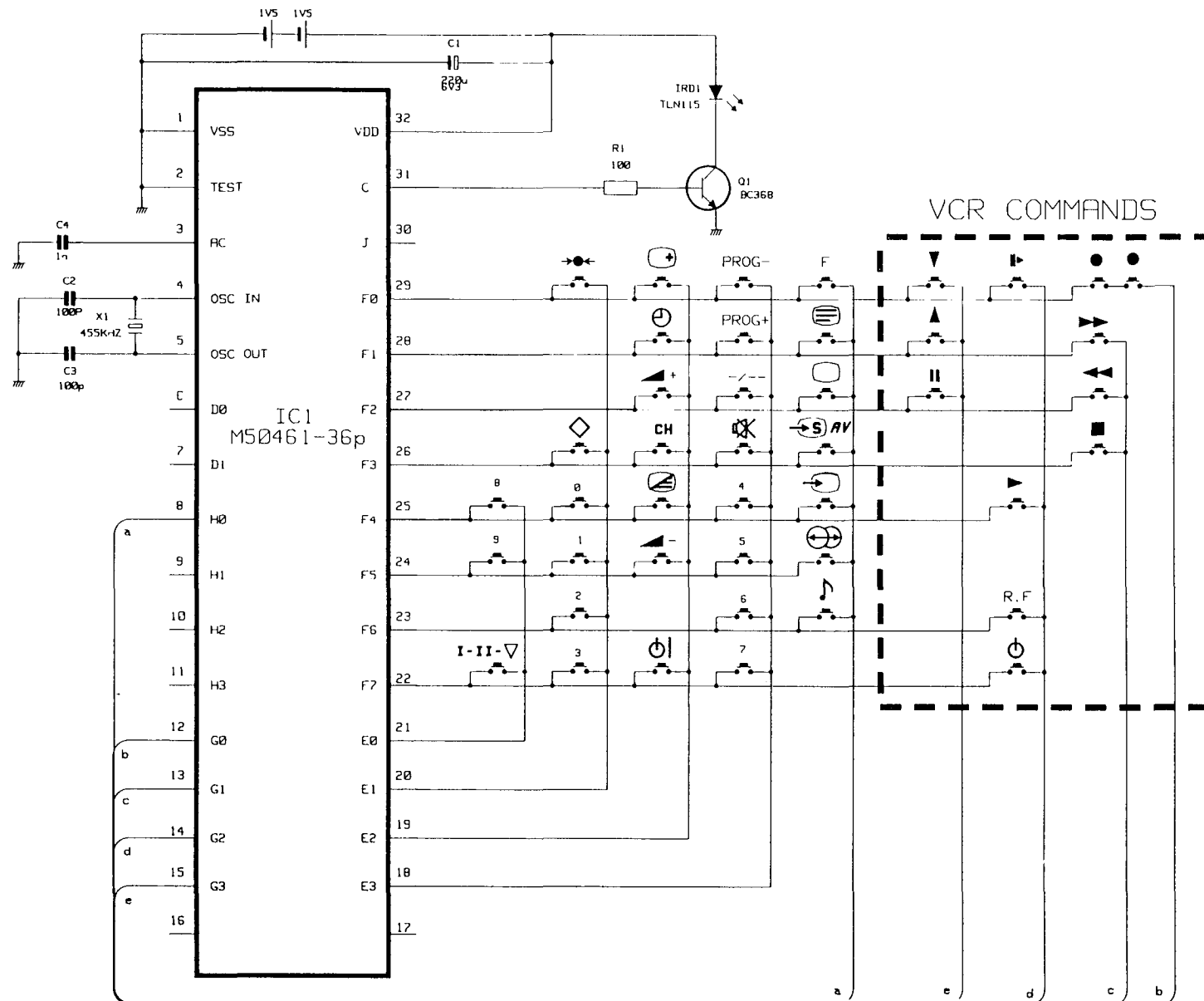
Many electrical and mechanical parts in HITACHI television receivers have special safety related characteristics. These characteristics are often not evident from visual inspection, nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified by marking with a  $\triangle$  on the schematics and replacement parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the HITACHI recommended replacement one, shown in the parts list in this Service Manual, may create electrical shock, fire, X-radiation, or other hazards.

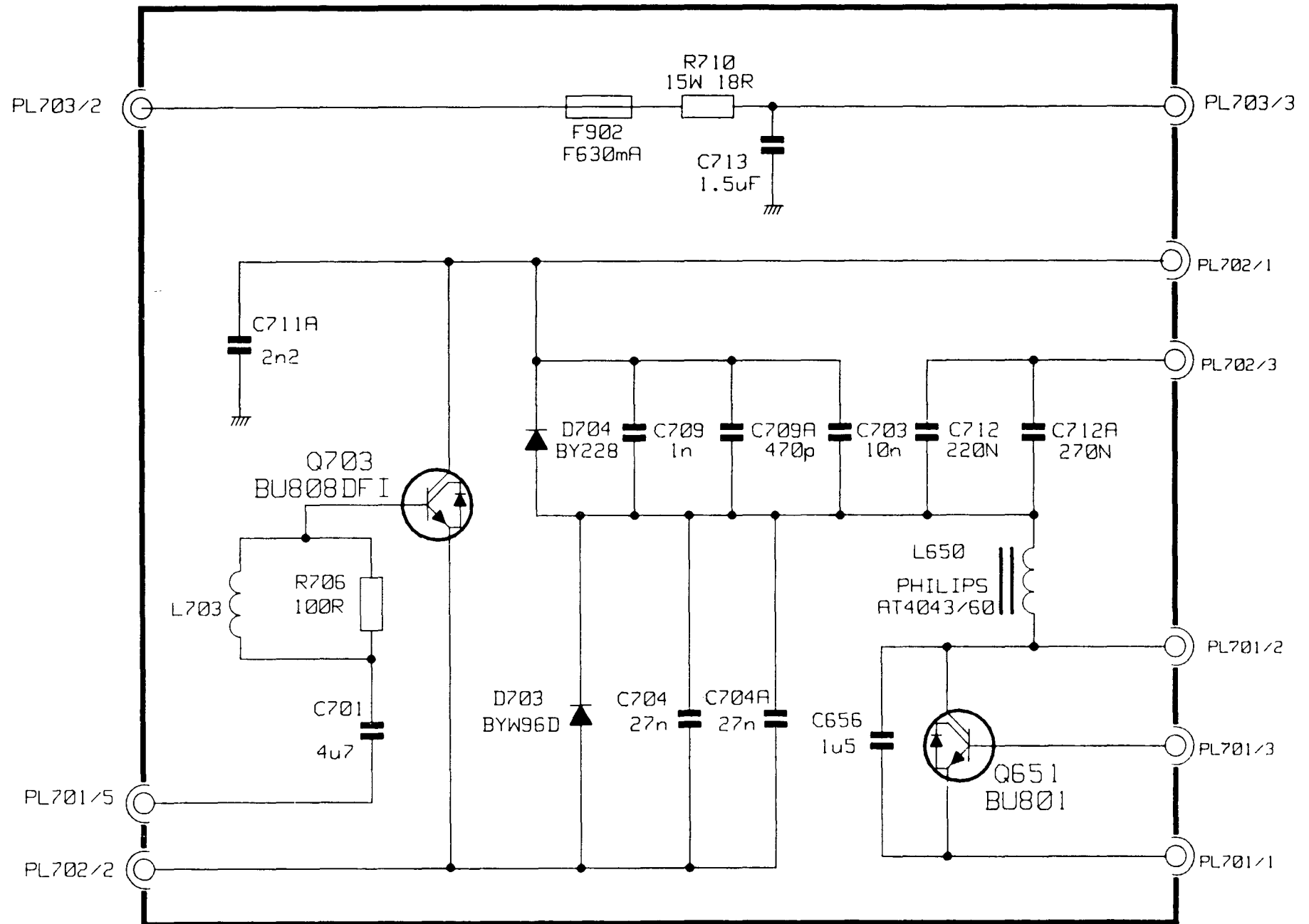
Product Safety is continuously under review, and new instructions are issued from time to time. For the latest information, always consult the current HITACHI Service Manual. A subscription to, or additional copies of HITACHI Service Manuals, may be obtained at a nominal charge from your HITACHI SALES CORPORATION.

## **TUBE DISCHARGE**

The line output stage can develop voltages in excess of 25kV; if the E.H.T. cap is required to be removed, discharge the anode cap to chassis via a high value resistor, prior to its removal from the tube.

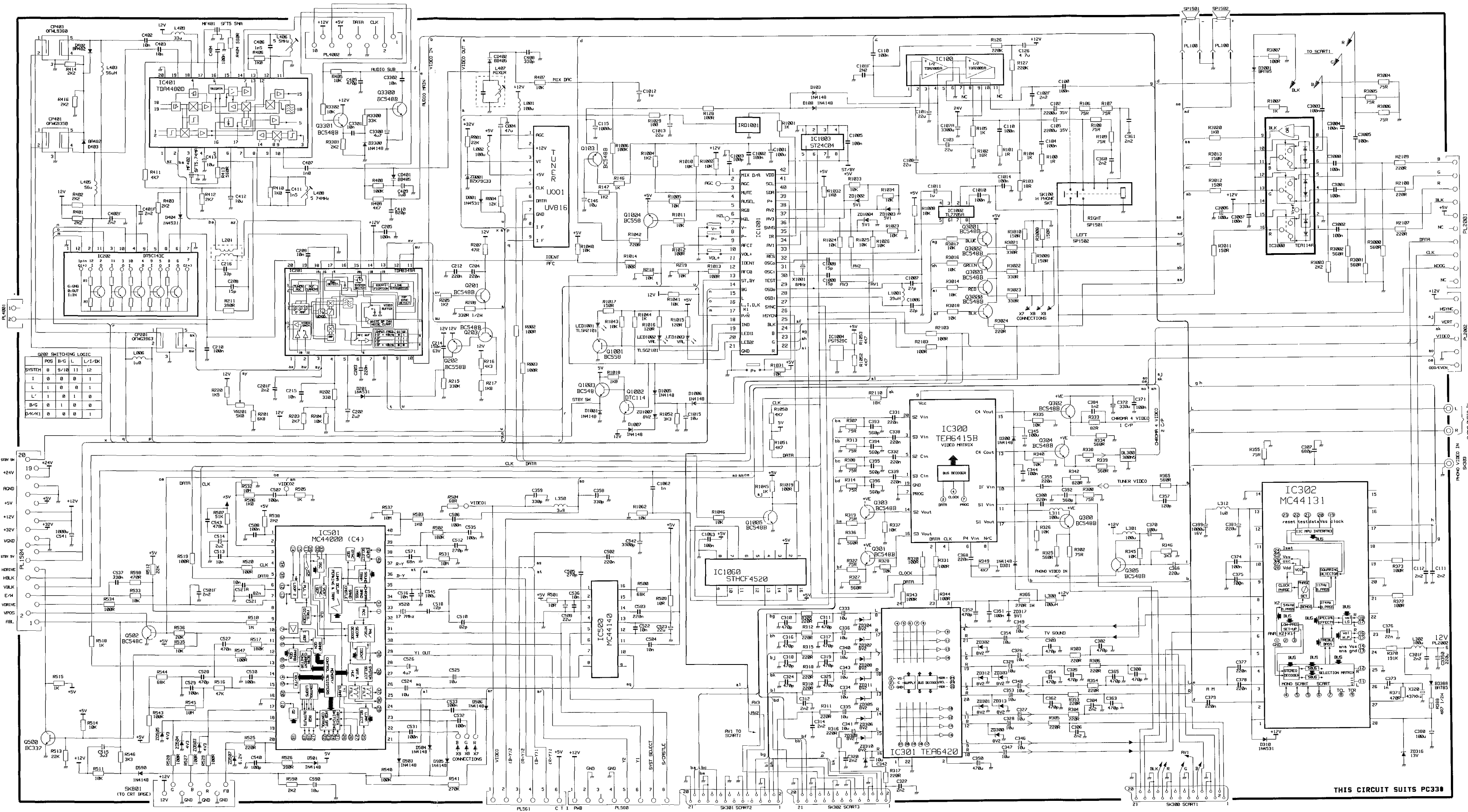


REMOTE CONTROL HANDSET CIRCUIT



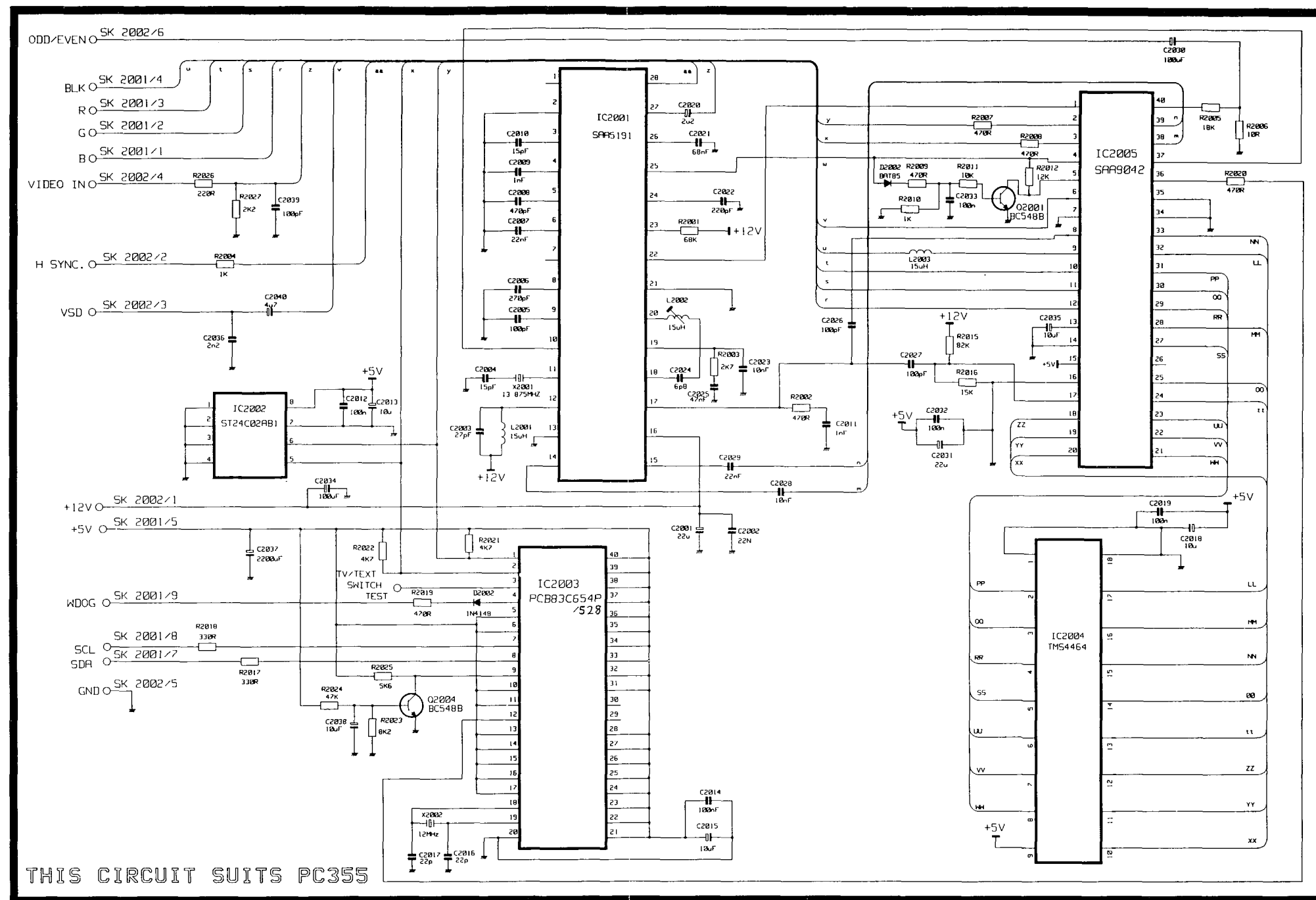
EAST/WEST CORRECTION CIRCUIT





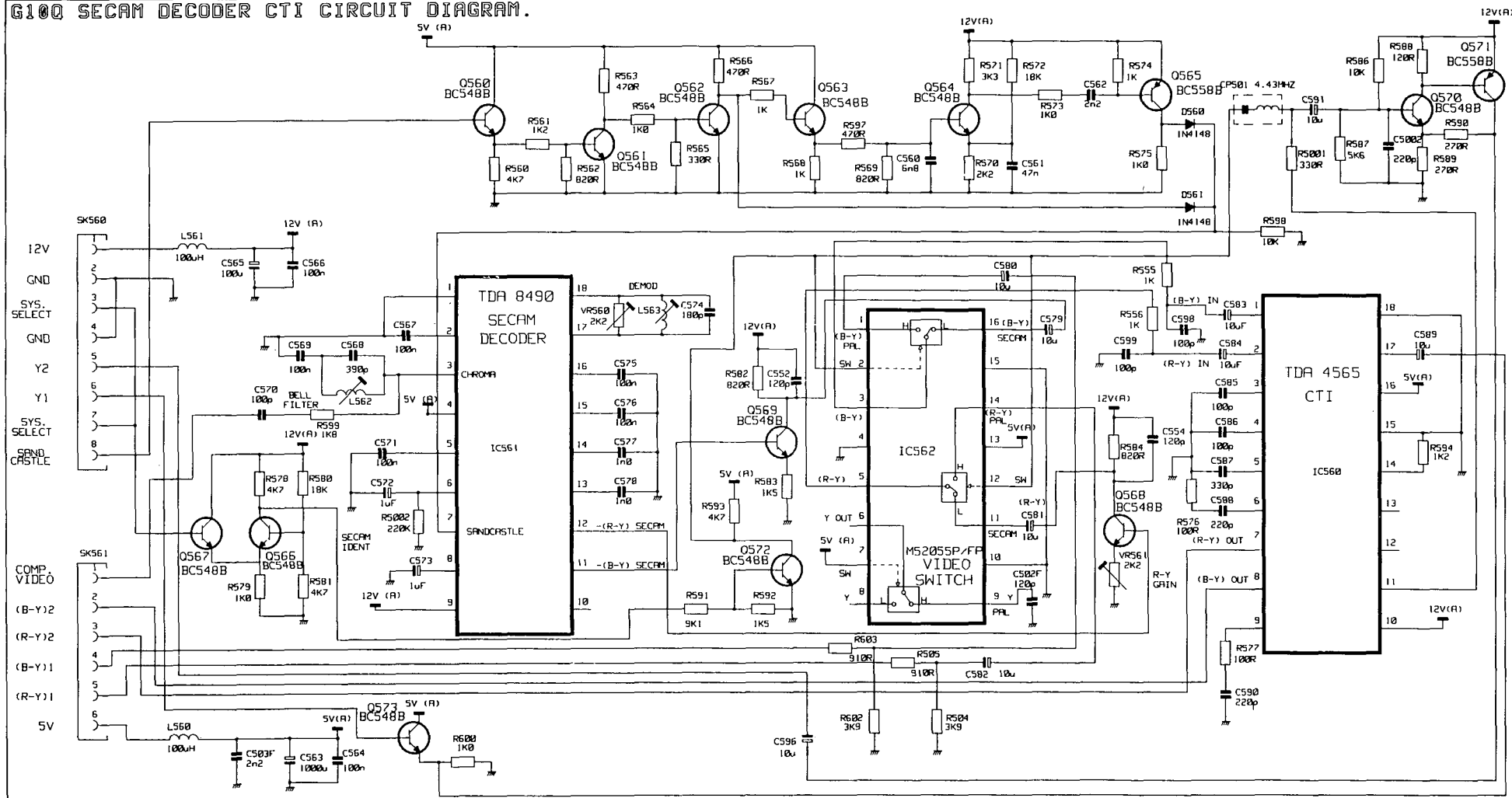
SIGNAL AND CONTROL CIRCUIT  
(CL25/2860TAN)





TELETEXT CIRCUIT

# G100 SECAM DECODER CTI CIRCUIT DIAGRAM.

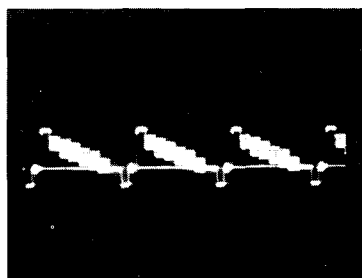


SECAM/CTI CIRCUIT

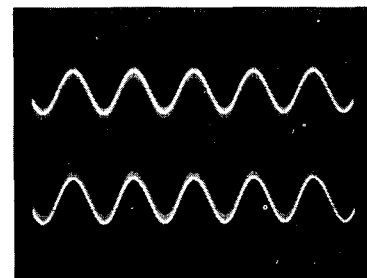
## CRT BASE CIRCUIT

**SOME WAVEFORMS FOR THE G10Q CHASSIS. TAKEN ON COLOUR BAR SIGNAL USING A 10:1 PROBE, WITH OSCILLOSCOPE SET TO  $20\mu$  SECS/CM UNLESS OTHERWISE STATED.**

IC201  
pin 13  
2v0 p p

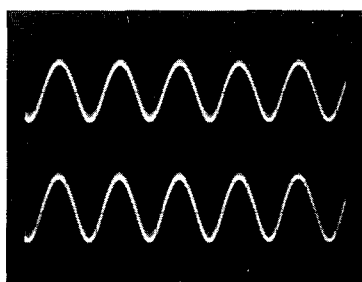


IC100  
pin 1  
0v7 p p at  
0 5m secs/cm

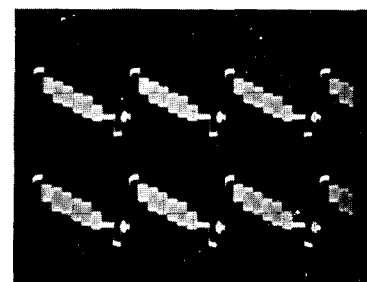


IC100  
pin 5  
0v7 p.p at  
0 5m secs/cm

IC100  
pin 8  
24v p p at  
0.5m secs/cm



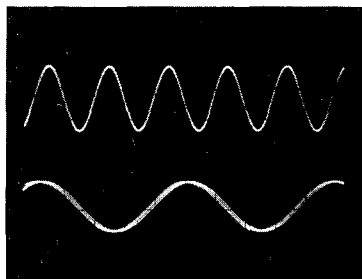
IC300  
pin 10  
1 2v p.p.



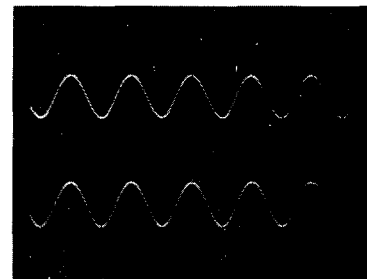
IC100  
pin 10  
24v p p at  
0.5m secs/cm

IC300  
pin 15  
2v4 p p.

IC302  
pin 2  
2v2 p p at  
0.5m secs/cm  
(Two-Tone NICAM.)



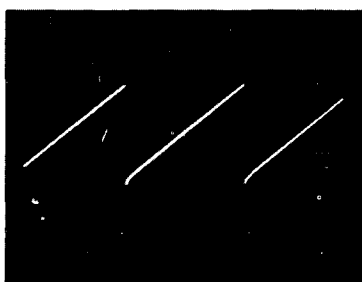
IC302  
pin 17  
0v75 p.p. at  
0 5m secs/cm.



IC302  
pin 3  
2v2 p p. at  
0.5m secs/cm  
(Two-Tone NICAM )

IC302  
pin 18  
0v75 p p. at  
0 5m secs/cm

IC501  
pin 7  
1 6v p p. at  
5m secs/cm

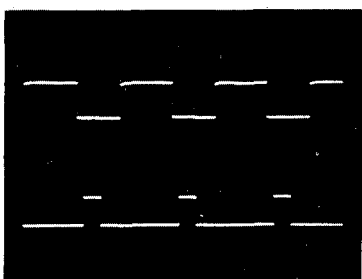


IC501  
pin 8  
1v5 p p

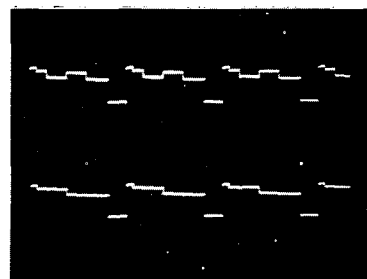


IC501  
pin 40  
1v3 p.p

IC501  
pin 12  
0v6 p.p



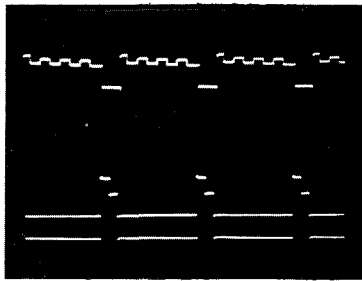
IC501  
pin 17  
2v4 p p



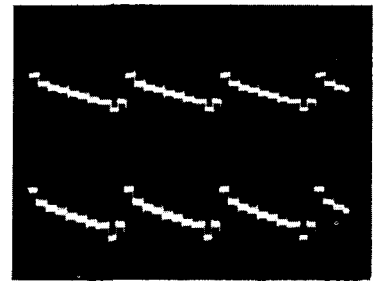
IC501  
pin 13  
5v0 p p

IC501  
pin 18  
2v4 p.p

IC501  
pin 19  
2v4 p p



IC501  
pin 25  
1v2 p p.



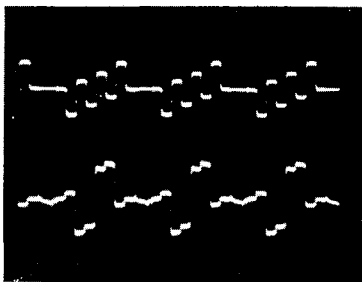
IC501  
pin 31  
4v2 p.p.



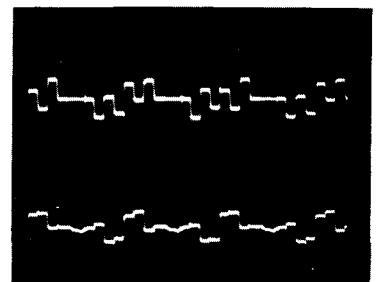
IC501  
pin 29  
0v9 p p



IC501  
pin 26  
1v0 p.p.



IC501  
pin 36  
1v4 p p.



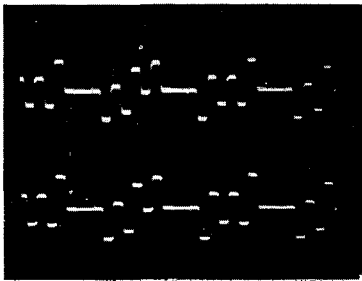
IC501  
pin 27  
1v2 p.p



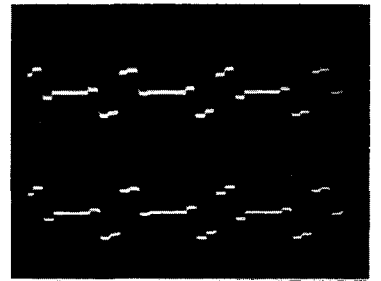
IC501  
pin 37  
1v2 p.p.



IC560  
pin 1  
1v0 p.p.



IC560  
pin 2  
0v9 p.p.



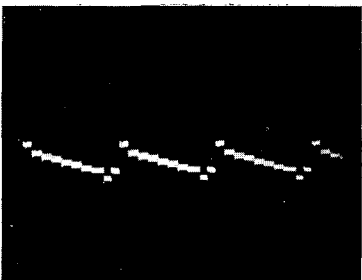
IC560  
pin 8  
1v1 p.p



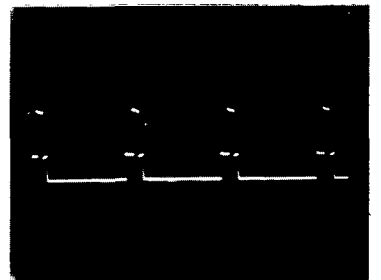
IC560  
pin 7  
0v9 p p



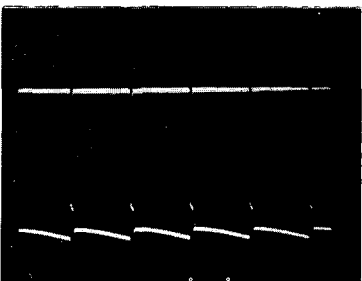
IC560  
pin 11  
0v7 p.p



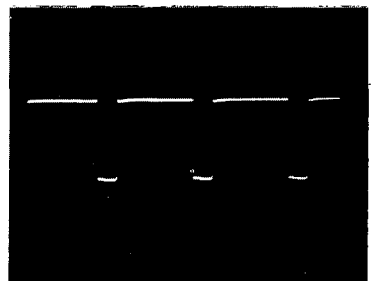
IC561  
pin 7  
12v p.p



IC601  
pin 1  
5v4 p p. at  
10m secs/cm.

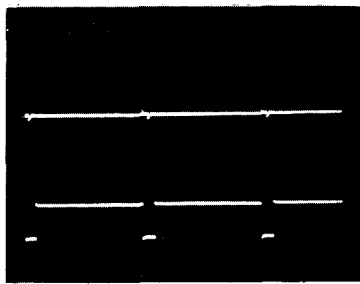


IC1060  
pin 1  
5v4 p.p.



IC601  
pin 5  
65v p.p. at  
10m secs/cm

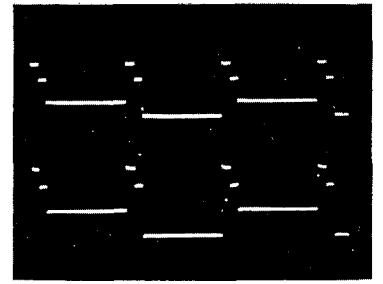
IC1060  
pin 7  
6v0 p p at  
5m secs/cm.



IC1060  
pin 9  
6v0 p p at  
5m secs/cm



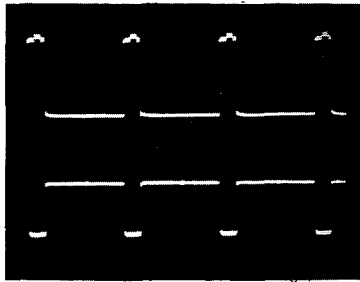
Q560  
Emitter  
3v9 p p



Q560  
Base  
4v8 p p.



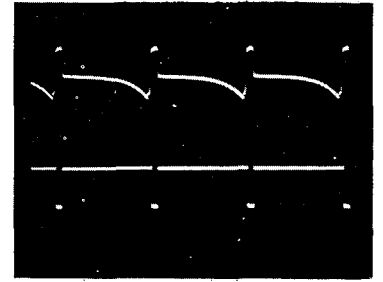
Q562  
Collector  
5v6 p p.



Q562  
Base  
0v9 p.p.



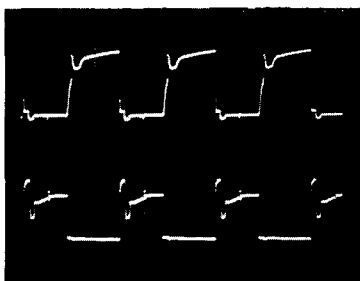
Q565  
Collector  
14v p.p



Q565  
Base  
1v8 p.p



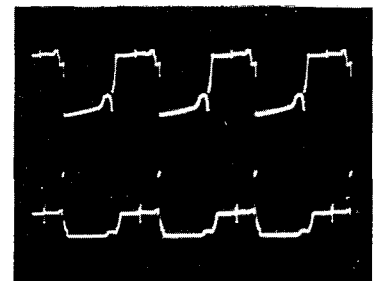
Q701  
Collector  
12v p p



Q701  
Base  
2v0 p p



Q703  
Base  
22v p p



Q702  
Emitter  
11v p.p



## VOLTAGE TABLES

The following voltages were taken on a colour bar signal (System I), using a 20k $\Omega$ /volt meter, with the contrast, colour, and brightness set to give normal viewing levels.

| IC100 TDA2009A |       |     |          |
|----------------|-------|-----|----------|
| Pin            | Volts | Pin | Volts    |
| 1              | 1v4   | 7   | not used |
| 2              | 0v8   | 8   | 13v      |
| 3              | 14v5  | 9   | 27v      |
| 4              | 0v8   | 10  | 12v5     |
| 5              | 1v4   | 11  | not used |
| 6              | 0v    |     |          |

| IC201 TDA8349A |           |     |           |
|----------------|-----------|-----|-----------|
| Pin            | Volts     | Pin | Volts     |
| 1              | 2v6       | 11  | 3v6       |
| 2              | 2v6       | 12  | 3v6       |
| 3              | 8v7       | 13  | 3v6       |
| 4              | 6v6       | 14  | 11v5      |
| 5              | 5v0 (3v2) | 15  | 6v0       |
| 6              | 7v5 (6v2) | 16  | 6v0       |
| 7              | 0v        | 17  | 0v        |
| 8              | 4v8       | 18  | 5v0 (0v2) |
| 9              | 4v8 (0v)  | 19  | 0v1 (9v5) |
| 10             | 3v8 (7v0) | 20  | 0v1 *4v5  |

() = No signal conditions

\* = System L

| IC202 DT5C143E |          |          |           |           |
|----------------|----------|----------|-----------|-----------|
| Pin            | System I | System L | System DK | System BG |
| 1              | 0v       | 0v       | 0v        | 0v        |
| 2              | 0v       | 0v       | 0v        | 4v3       |
| 3              | 0v9      | 0v8      | 0v8       | 0v8       |
| 4              | 4v3      | 4v3      | 4v3       | 0v        |
| 5              | 4v0      | 0v6      | 4v0       | 0v        |
| 6              | 4v4      | 0v       | 4v4       | 2v8       |
| 7              | 0v       | 0v       | 0v        | 0v        |
| 8              | 0v1      | 4v5      | 0v1       | 0v1       |
| 9              | 0v       | 0v       | 0v        | 4v9       |
| 10             | 0v       | 0v       | 0v        | 4v9       |
| 11             | 0v       | 0v       | 0v        | 0v        |
| 12             | 5v0      | 5v0      | 5v0       | 0v        |

| IC300 TEA6415B |          |     |          |
|----------------|----------|-----|----------|
| Pin            | Volts    | Pin | Volts    |
| 1              | 3v7      | 11  | 3v7      |
| 2              | 4v8      | 12  | not used |
| 3              | 3v7      | 13  | 2v8      |
| 4              | 4v7      | 14  | 3v6      |
| 5              | 3v7      | 15  | 3v6      |
| 6              | 3v7      | 16  | 3v6      |
| 7              | 0v       | 17  | 3v6      |
| 8              | not used | 18  | not used |
| 9              | 10v1     | 19  | 0v       |
| 10             | 4v0      | 20  | 3v7      |

| IC301 TEA6420 |       |     |       |     |       |
|---------------|-------|-----|-------|-----|-------|
| Pin           | Volts | Pin | Volts | Pin | Volts |
| 1             | 0v    | 9   | 4v6   | 18  | 4v6   |
| 2             | 4v6   | 10  | 4v6   | 19  | 4v6   |
| 3             | 9v3   | 11  | 4v6   | 20  | 4v6   |
| 4             | 4v6   | 12  | 4v6   | 21  | 4v6   |
| 5             | 4v6   | 13  | 4v6   | 22  | 0v    |
| 6             | 4v6   | 14  | 4v6   | 23  | 4v7   |
| 7             | 4v6   | 15  | 4v6   | 24  | 4v8   |
| 8             | 4v6   | 16  | 4v6   |     |       |

| IC302 MC44131 |       |     |          |     |          |
|---------------|-------|-----|----------|-----|----------|
| Pin           | Volts | Pin | Volts    | Pin | Volts    |
| 1             | 5v7   | 11  | not used | 21  | 4v7      |
| 2             | 5v7   | 12  | not used | 22  | not used |
| 3             | 5v7   | 13  | 5v7      | 23  | 11v1     |
| 4             | 5v5   | 14  | 0v       | 24  | 1v3      |
| 5             | 5v5   | 15  | not used | 25  | 0v       |
| 6             | 5v5   | 16  | not used | 26  | 6v6      |
| 7             | 5v0   | 17  | 5v0      | 27  | 4v7      |
| 8             | 5v0   | 18  | 5v0      | 28  | 11v1     |
| 9             | 5v5   | 19  | 4v7      |     |          |
| 10            | 5v5   | 20  | 0v       |     |          |

| IC401 TDA4480 |          |     |       |
|---------------|----------|-----|-------|
| Pin           | Volts    | Pin | Volts |
| 1             | 4v6      | 11  | 0v    |
| 2             | 4v6      | 12  | 4v8   |
| 3             | 2v4      | 13  | 4v8   |
| 4             | 2v9      | 14  | 0v1   |
| 5             | 3v3      | 15  | 3v1   |
| 6             | *4v0     | 16  | 11v4  |
| 7             | 3v6      | 17  | 2v4   |
| 8             | not used | 18  | 4v5   |
| 9             | not used | 19  | 4v5   |
| 10            | not used | 20  | 0v    |

| IC500 MC44140 |          |     |          |
|---------------|----------|-----|----------|
| Pin           | Volts    | Pin | Volts    |
| 1             | 2v3      | 9   | not used |
| 2             | 4v7      | 10  | 1v5      |
| 3             | 0v       | 11  | 1v5      |
| 4             | 1v2      | 12  | 0v       |
| 5             | 0v1      | 13  | 4v9      |
| 6             | 1v3      | 14  | 1v4      |
| 7             | 1v5      | 15  | 1v4      |
| 8             | not used | 16  | 1v2      |

\* Pin 6 = 0v7 in system L and  
2v2 in system B/G.

| IC501 MC44000 |                            |     |                         |     |                         |     |                     |
|---------------|----------------------------|-----|-------------------------|-----|-------------------------|-----|---------------------|
| Pin           | Volts                      | Pin | Volts                   | Pin | Volts                   | Pin | Volts               |
| 1             | 1v7                        | 11  | 0v (0v1)<br>(CH. 56-59) | 21  | 0v3 (1v6)<br>(RGB mode) | 34  | 0v                  |
| 2             | 0v8                        |     |                         |     |                         | 35  | 4v9                 |
| 3             | 1v3                        | 12  | 0v4                     | 22  | 3v0                     | 36  | 2v1-2v2             |
| 4             | 4v7                        | 13  | 0v3                     | 23  | 3v0                     | 37  | 1v9-2v4<br>(Colour) |
| 5             | 4v7                        | 14  | 1v2                     | 24  | 3v0                     |     |                     |
| 6             | 0v9                        | 15  | 1v9                     | 25  | 3v2                     | 38  | 0v9                 |
| 7             | 2v0-2v3<br>(Height)        | 16  | 0v                      | 26  | 3v2                     | 39  | 2v1                 |
| 8             | 0v4-2v8<br>(Width)         | 17  | 2v5-2v7                 | 27  | 3v2                     | 40  | 3v0                 |
|               |                            | 18  | 2v4-2v7                 | 28  | 3v2                     |     |                     |
| 9             | -1v4 - +1v9<br>(Brit/Cont) | 19  | 2v4-2v6<br>(Bright)     | 29  | 1v9                     |     |                     |
|               |                            | 20  | 1v4-3v9<br>(Brit/Cont)  | 30  | 0v4                     |     |                     |
| 10            | 1v4-3v5<br>(Vert. pos.)    |     |                         | 31  | 1v2                     |     |                     |
|               |                            |     |                         | 32  | 1v9                     |     |                     |
|               |                            |     |                         | 33  | 1v9                     |     |                     |

| IC560 TDA4565 |       |     |          |
|---------------|-------|-----|----------|
| Pin           | Volts | Pin | Volts    |
| 1             | 4v2   | 10  | 11v7     |
| 2             | 4v2   | 11  | 2v5      |
| 3             | 3v4   | 12  | not used |
| 4             | 3v5   | 13  | not used |
| 5             | 2v5   | 14  | 1v3      |
| 6             | 4v9   | 15  | 0v       |
| 7             | 4v2   | 16  | 5v0      |
| 8             | 4v3   | 17  | 2v7      |
| 9             | 5v0   | 18  | 0v       |

| IC561 TDA8490 |           |     |           |
|---------------|-----------|-----|-----------|
| Pin           | Volts     | Pin | Volts     |
| 1             | 0v        | 10  | not used  |
| 2             | 2v9       | 11  | 0v7 (3v6) |
| 3             | 2v9       | 12  | 3v6       |
| 4             | 5v0       | 13  | 4v0       |
| 5             | 9v8 (9v3) | 14  | 4v0       |
| 6             | 9v9 (7v7) | 15  | 6v9       |
| 7             | 1v4       | 16  | 6v5       |
| 8             | 11v8      | 17  | 2v2       |
| 9             | 12v       | 18  | 2v2       |

() = SECAM Mode

| IC562 M52055P |          |     |          |
|---------------|----------|-----|----------|
| Pin           | Volts    | Pin | Volts    |
| 1             | 2v9      | 9   | 2v9      |
| 2             | 4v8 (0v) | 10  | 0v       |
| 3             | 1v5      | 11  | 2v9      |
| 4             | 0v       | 12  | 4v8 (0v) |
| 5             | 1v5      | 13  | 5v0      |
| 6             | not used | 14  | 2v9      |
| 7             | 5v0      | 15  | 0v       |
| 8             | not used | 16  | 2v9      |

() = SECAM Mode

| IC601 TDA8170/8S |                         |     |                           |
|------------------|-------------------------|-----|---------------------------|
| Pin              | Volts                   | Pin | Volts                     |
| 1                | 2v3                     | 5   | 16v2-18v4<br>(Vert. size) |
| 2                | 27v                     |     |                           |
| 3                | 1v9-2v8<br>(Vert. size) | 6   | 28v                       |
| 4                | 0v                      | 7   | 2v3                       |

| IC602 LM393 |                    |     |          |
|-------------|--------------------|-----|----------|
| Pin         | Volts              | Pin | Volts    |
| 1           | 0v3                | 5   | not used |
| 2           | 4v4-4v6<br>(Width) | 6   | not used |
|             |                    | 7   | not used |
| 3           | 6v2                | 8   | 12v7     |
| 4           | 0v                 |     |          |

| IC800 TEA5101A |           |     |           |
|----------------|-----------|-----|-----------|
| Pin            | Volts     | Pin | Volts     |
| 1              | 3v2       | 9   | 97v-147v  |
| 2              | 11v7      | 10  | 138v-110v |
| 3              | 3v2       | 11  | 4v4-1v4   |
| 4              | 3v2       | 12  | 104v-148v |
| 5              | 187v      | 13  | 107v-137v |
| 6              | 1v4-3v5   | 14  | 1v4-4v4   |
| 7              | 101v-135v | 15  | 103v-148v |
| 8              | 0v        |     |           |

Variable voltages change with contrast and brightness levels

| IC921 7812 |       |
|------------|-------|
| Pin        | Volts |
| 1          | 15v6  |
| 2          | 0v    |
| 3          | 11v8  |

| IC922 L4941BV |       |
|---------------|-------|
| Pin           | Volts |
| 1             | 5v0   |
| 2             | 0v    |
| 3             | 11v0  |

| IC923 UA78L05AWC |       |
|------------------|-------|
| Pin              | Volts |
| 1                | 5v0   |
| 2                | 0v    |
| 3                | 11v0  |

| IC1001 ST6385 |            |     |             |     |                     |     |             |
|---------------|------------|-----|-------------|-----|---------------------|-----|-------------|
| Pin           | Volts      | Pin | Volts       | Pin | Volts               | Pin | Volts       |
| 1             | not used   | 11  | 4v9 (0v2)   | 21  | 0v                  | 34  | 0v (4v2)    |
| 2             | not used   | 12  | 4v8 (0v1)   | 22  | 0v (0v1)            |     | (AV1 input) |
| 3             | 0v3 (5v0)  |     | (No signal) | 23  | 0v (0v1)            | 35  | 4v8         |
|               | (Mute)     | 13  | 0v4 (4v8)   | 24  | 0v (0v1)            | 36  | 5v0         |
| 4             | 0v1        |     | (Standby)   | 25  | (on-screen display) | 37  | 0v (4v2)    |
| 5             | 5v0 (0v1)  | 14  | ** 0v       |     | 0v                  |     | (AV3 input) |
|               | (RGB mode) | 15  | ** 0v       | 26  | 4v0                 | 38  | 0v (4v2)    |
| 6             | not used   | 16  | ** 5v0      | 27  | 4v5                 |     | (AV2 input) |
| 7             | 4v9        | 17  | 0v1         | 28  | 4v6                 | 39  | 5v0         |
| 8             | 4v9        | 18  | 5v0 (0v)    | 29  | 4v6                 | 40  | 4v8         |
| 9             | 4v8        |     | (Standby)   | 30  | not used            | 41  | 4v7         |
| 10            | 4v9        | 19  | 4v4 (0v3)   | 31  | *                   | 42  | 5v0         |
|               |            | 20  | 4v4 (0v3)   | 32  | 2v8                 |     |             |
|               |            |     | (Stereo)    | 33  | *                   |     |             |

\* set trips when pin touched

\*\* Pin 14 = 5v0 in system B/G      Pin 15 = 5v0 in system L'  
Pin 16 = 0v in system B/G.

| IC1002 TL7705A |       |     |          |
|----------------|-------|-----|----------|
| Pin            | Volts | Pin | Volts    |
| 1              | 2v6   | 5   | *        |
| 2              | 3v5   | 6   | not used |
| 3              | 3v2   | 7   | 5v0      |
| 4              | 0v5   | 8   | 5v0      |

\* Set resets when pin touched

| IC1060 HCF4520B |          |     |          |
|-----------------|----------|-----|----------|
| Pin             | Volts    | Pin | Volts    |
| 1               | 4v0      | 9   | 4v5      |
| 2               | 5v0      | 10  | 2v4      |
| 3               | not used | 11  | not used |
| 4               | not used | 12  | 4v5      |
| 5               | not used | 13  | 4v5      |
| 6               | 2v4      | 14  | not used |
| 7               | 0v       | 15  | 0v       |
| 8               | 0v       | 16  | 5v0      |

| OPT01 CNX82 |          |     |             |
|-------------|----------|-----|-------------|
| Pin         | Volts    | Pin | Volts       |
| 1           | 0v1      | 4   | 0v7 (-4v4)  |
| 2           | 0v1      | 5   | 11v9 (15v2) |
| 3           | not used | 6   | not used    |

() = Standby mode

| IC2001 SAA5191 |          |     |       |     |       |
|----------------|----------|-----|-------|-----|-------|
| Pin            | Volts    | Pin | Volts | Pin | Volts |
| 1              | not used | 11  | 1v0   | 21  | 0v    |
| 2              | 0v       | 12  | 11v7  | 22  | 2v4   |
| 3              | 2v8      | 13  | 0v    | 23  | 1v6   |
| 4              | 5v8      | 14  | 4v0   | 24  | 8v7   |
| 5              | 3v9      | 15  | 3v1   | 25  | 0v5   |
| 6              | 2v9      | 16  | 11v7  | 26  | 4v9   |
| 7              | not used | 17  | 6v7   | 27  | 4v2   |
| 8              | 5v3      | 18  | 6v3   | 28  | 4v0   |
| 9              | 3v0      | 19  | 5v0   |     |       |
| 10             | 3v1      | 20  | 1v3   |     |       |

| IC2004 TMS4464 |           |     |           |
|----------------|-----------|-----|-----------|
| Pin            | Volts     | Pin | Volts     |
| 1              | 0v        | 10  | 3v5       |
| 2              | 0v7-1v7   | 11  | 1v5       |
| 3              | 0v4 (0v6) | 12  | 1v5       |
| 4              | 4v8       | 13  | 2v7 (0v6) |
| 5              | 1v2       | 14  | 2v6       |
| 6              | 3v5       | 15  | 1v7 (2v7) |
| 7              | 3v3 (1v4) | 16  | 4v7       |
| 8              | 1v4 (3v3) | 17  | 0v2 (0v5) |
| 9              | 4v9       | 18  | 0v        |

() = teletext mode

| IC2003 PCB83C654/528P |          |     |       |     |          |     |       |
|-----------------------|----------|-----|-------|-----|----------|-----|-------|
| Pin                   | Volts    | Pin | Volts | Pin | Volts    | Pin | Volts |
| 1                     | 4v5      | 11  | 4v9   | 21  | 4v9      | 31  | 4v9   |
| 2                     | 4v5      | 12  | 4v9   | 22  | 4v9      | 32  | 4v9   |
| 3                     | not used | 13  | 4v9   | 23  | 4v9      | 33  | 4v9   |
| 4                     | 0v       | 14  | 4v9   | 24  | 4v9      | 34  | 4v9   |
| 5                     | 4v9      | 15  | 4v9   | 25  | 4v9      | 35  | 4v9   |
| 6                     | 4v9      | 16  | 4v9   | 26  | 4v9      | 36  | 4v9   |
| 7                     | 4v7      | 17  | 4v9   | 27  | 4v9      | 37  | 4v9   |
| 8                     | 4v7      | 18  | 2v5   | 28  | 4v9      | 38  | 4v9   |
| 9                     | 0v1      | 19  | 2v2   | 29  | not used | 39  | 4v9   |
| 10                    | 4v9      | 20  | 0v    | 30  | not used | 40  | 4v9   |

| IC2005 SAA9042 |          |     |           |     |           |     |           |
|----------------|----------|-----|-----------|-----|-----------|-----|-----------|
| Pin            | Volts    | Pin | Volts     | Pin | Volts     | Pin | Volts     |
| 1              | 2v4      | 11  | 0v (0v5)  | 21  | 1v5       | 31  | 1v7 (2v7) |
| 2              | 4v5      | 12  | 0v        | 22  | 1v4 (3v3) | 32  | 0v4 (0v6) |
| 3              | 4v4      | 13  | 0v        | 23  | 3v3 (1v4) | 33  | 0v        |
| 4              | 0v5      | 14  | 0v        | 24  | 3v5       | 34  | 0v        |
| 5              | 0v5      | 15  | 0v1       | 25  | 3v5       | 35  | 0v        |
| 6              | 0v       | 16  | 0v        | 26  | not used  | 36  | 4v9       |
| 7              | 0v       | 17  | 1v8       | 27  | 1v2       | 37  | 3v1       |
| 8              | 1v5      | 18  | 2v6       | 28  | 4v7       | 38  | 0v        |
| 9              | 0v (1v5) | 19  | 2v5 (0v6) | 29  | 4v8       | 39  | 0v7       |
| 10             | 0v (1v5) | 20  | 1v5       | 30  | 0v2 (0v5) | 40  | 0v        |

() = teletext mode

| IC3000 TEA5114A |       |     |           |
|-----------------|-------|-----|-----------|
| Pin             | Volts | Pin | Volts     |
| 1               | 3v8   | 9   | 0v2 (1v5) |
| 2               | 0v    | 10  | 0v (2v6)  |
| 3               | 3v8   | 11  | 3v2       |
| 4               | 3v8   | 12  | 0v (2v6)  |
| 5               | 3v8   | 13  | 3v2       |
| 6               | 3v8   | 14  | 11v7      |
| 7               | 3v8   | 15  | 0v (2v6)  |
| 8               | 0v    | 16  | 3v2       |

| IC4001 BA15218 |       |     |       |
|----------------|-------|-----|-------|
| Pin            | Volts | Pin | Volts |
| 1              | 4v4   | 5   | 4v5   |
| 2              | 2v2   | 6   | 4v5   |
| 3              | 2v2   | 7   | 7v6   |
| 4              | 0v    | 8   | 11v7  |

| IC4002 BA15218 |       |     |       |
|----------------|-------|-----|-------|
| Pin            | Volts | Pin | Volts |
| 1              | 4v5   | 5   | 4v4   |
| 2              | 2v2   | 6   | 4v4   |
| 3              | 2v2   | 7   | 7v5   |
| 4              | 0v    | 8   | 11v7  |

() = RGB mode

| IC4003 TDA1543 |          |     |       |
|----------------|----------|-----|-------|
| Pin            | Volts    | Pin | Volts |
| 1              | 2v5      | 5   | 5v0   |
| 2              | 2v5      | 6   | 2v2   |
| 3              | 0v (1v0) | 7   | 2v2   |
| 4              | 0v       | 8   | 2v2   |

() = NICAM mode

| IC4004 HCF4053 |          |     |            |
|----------------|----------|-----|------------|
| Pin            | Volts    | Pin | Volts      |
| 1              | 7v6      | 9   | 0v         |
| 2              | 7v9      | 10  | 0v1 (11v7) |
| 3              | not used | 11  | 0v1 (11v7) |
| 4              | not used | 12  | 7v8        |
| 5              | not used | 13  | 7v5        |
| 6              | 0v       | 14  | 7v8 (7v5)  |
| 7              | 0v       | 15  | 7v8 (7v5)  |
| 8              | 0v       | 16  | 11v7       |

| IC4005 CF70088 |          |     |          |     |           |     |          |
|----------------|----------|-----|----------|-----|-----------|-----|----------|
| Pin            | Volts    | Pin | Volts    | Pin | Volts     | Pin | Volts    |
| 1              | not used | 11  | 5v0      | 21  | not used  | 31  | not used |
| 2              | 0v       | 12  | 1v9      | 22  | not used  | 32  | 5v0      |
| 3              | 0v       | 13  | 0v       | 23  | 4v7       | 33  | not used |
| 4              | 0v (1v2) | 14  | 2v5      | 24  | 4v7 (3v7) | 34  | not used |
| 5              | 5v0      | 15  | 2v4      | 25  | 0v        | 35  | not used |
| 6              | 0v1      | 16  | 0v       | 26  | 2v5       | 36  | 0v       |
| 7              | 1v5      | 17  | 5v0      | 27  | 5v0       | 37  | 5v0      |
| 8              | 0v       | 18  | 5v0      | 28  | 2v9 (1v9) | 38  | 0v       |
| 9              | 0v1      | 19  | 5v0      | 29  | 0v1 (1v0) | 39  | 0v       |
| 10             | 0v5      | 20  | 5v0 (0v) | 30  | 0v        | 40  | 0v       |

() = NICAM mode

| IC4010 7805 |       |
|-------------|-------|
| Pin         | Volts |
| 1           | 5v0   |
| 2           | 5v0   |
| 3           | 10v7  |

|   | Q103      | Q201 | Q202 | Q203 | Q300 | Q301 | Q302 | Q303 |
|---|-----------|------|------|------|------|------|------|------|
| E | 1v0 (4v2) | 2v9  | 11v7 | 3v5  | 3v0  | 3v0  | 3v0  | 3v0  |
| B | 0v3 (4v8) | 3v1  | 11v4 | 3v6  | 3v6  | 3v6  | 3v6  | 3v6  |
| C | 5v0 (4v3) | 11v1 | 10v7 | 11v5 | 10v8 | 10v8 | 10v8 | 10v8 |

() = Standby mode

|   | Q304 | Q305 | Q500 | Q502     | Q560 | Q561 | Q562 |
|---|------|------|------|----------|------|------|------|
| E | 2v1  | 2v3  | 0v   | 0v       | 0v9  | 0v   | 0v   |
| B | 2v8  | 2v9  | 0v4  | 0v5-0v6  | 1v2  | 0v3  | 0v6  |
| C | 10v8 | 11v7 | 0v6  | 12v3-6v0 | 4v9  | 2v0  | 0v9  |

Varies with  
vert. position

|   | Q563 | Q564 | Q565 | Q566      | Q567      | Q568 |
|---|------|------|------|-----------|-----------|------|
| E | 0v8  | 1v8  | 11v8 | 1v8 (2v4) | 1v8 (2v4) | 3v0  |
| B | 0v9  | 0v5  | 11v9 | 2v4 (2v5) | 0v (3v0)  | 3v7  |
| C | 4v9  | 11v0 | 0v8  | 2v3 (8v0) | 11v8      | 9v8  |

() = Secam mode

|   | Q569        | Q570 | Q571 | Q572      | Q573 |
|---|-------------|------|------|-----------|------|
| E | 0v1 (3v0)   | 5v6  | 0v   | 0v        | 1v2  |
| B | 0v7 (3v6)   | 6v3  | 4v2  | 0v3 (0v7) | 1v8  |
| C | 11v7 (10v2) | 11v1 | 11v0 | 3v8 (0v)  | 4v9  |

() = Secam mode

() = Secam mode

|   | Q651     | Q652     | Q701 | Q702 | Q703 |
|---|----------|----------|------|------|------|
| E | 0v       | 1v1-1v5  | 0v   | 5v4  | 0v   |
| B | 1v1-1v5  | 1v7-2v2  | 0v6  | 5v4  | -1v8 |
| C | 16v4-1v8 | 16v4-1v8 | 5v5  | 10v3 | 148v |

Min. - Max. width

|   | Q901 |   | Q902 | Q903 | Q904 | Q905 | Q941 | Q942       |
|---|------|---|------|------|------|------|------|------------|
| S | 0v   | E | 0v1  | 0v   | 0v   | 0v1  | 7v0  | 0v         |
| D | 320v | B | -0v4 | 0v1  | 0v7  | 0v   | 6v4  | 1v3 (1v2)  |
| G | 0v2  | C | 320v | -0v4 | 0v   | 0v   | 1v3  | 3v9 (13v7) |

() = Standby mode

|   | Q943       | Q944     | Q945       | Q946     | Q947 | Q948 | Q949 |
|---|------------|----------|------------|----------|------|------|------|
| E | 4v5 (9v3)  | 0v       | 3v9 (13v7) | 3v4 (0v) | 4v8  | 7v0  | 0v   |
| B | 3v9 (10v)  | 0v7 (0v) | 0v (1v8)   | 4v1 (0v) | 5v6  | 6v3  | -2v1 |
| C | 3v9 (13v7) | 0v (1v8) | 1v3 (1v2)  | 4v3 (0v) | 5v0  | 0v   | 4v1  |

() = Standby mode

|   | Q950       | Q951     | Q952       | Q1001 | Q1002     | Q1003    |
|---|------------|----------|------------|-------|-----------|----------|
| E | -0v1 (0v1) | 1v0 (0v) | 3v9 (13v6) | 4v2   | 0v        | 4v3 (0v) |
| B | -0v1 (0v1) | 0v5 (0v) | 3v9 (13v6) | 5v0   | 0v4 (4v8) | 5v0 (0v) |
| C | 3v9 (13v7) | 0v (0v)  | 1v3 (1v3)  | 0v    | 5v0 (0v)  | 5v0      |

() = Standby mode

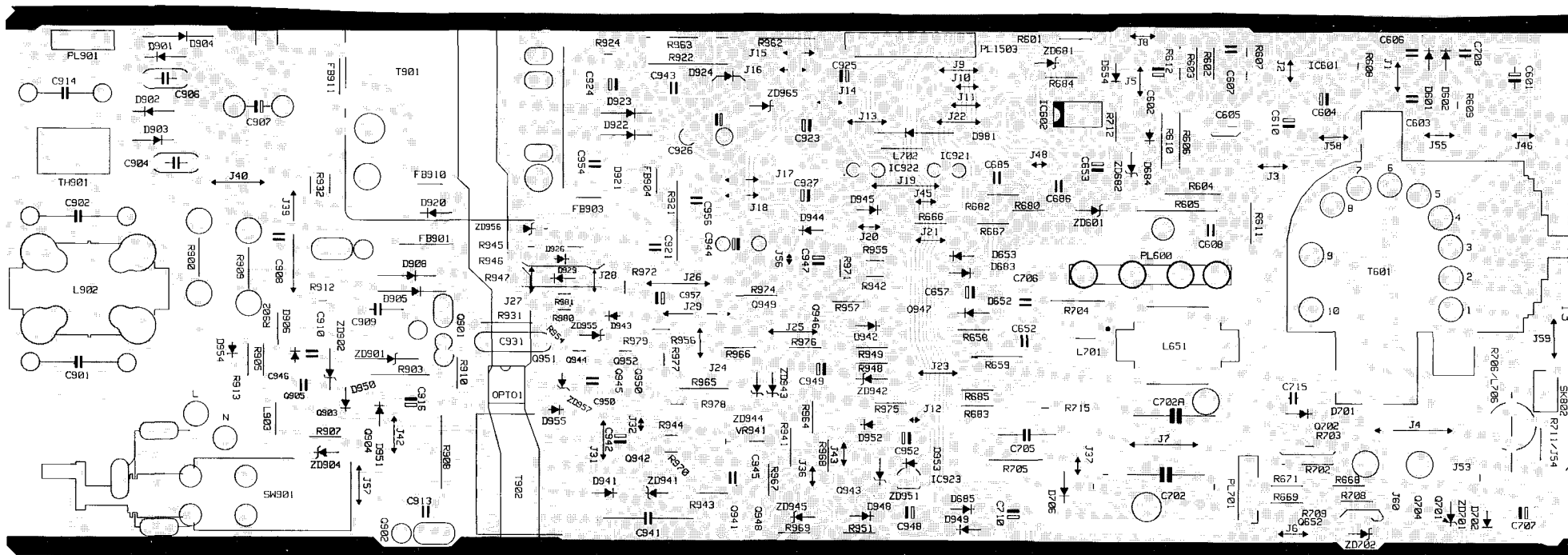
() = Standby mode

|   | Q1004     | Q1005 | Q2005 | Q3000 | Q3001 | Q3002 | Q3003 | Q3300 |
|---|-----------|-------|-------|-------|-------|-------|-------|-------|
| E | 4v9       | 0v    | 0v    | 0v3   | 1v6   | 1v6   | 1v6   | 0v    |
| B | 5v0 (4v2) | -0v4  | 0v6   | 0v1   | 0v    | 0v    | 0v    | 0v1   |
| C | 0v1 (4v9) | 4v0   | 0v1   | 4v9   | 4v9   | 4v9   | 4v9   | 0v2   |

() = RGB mode

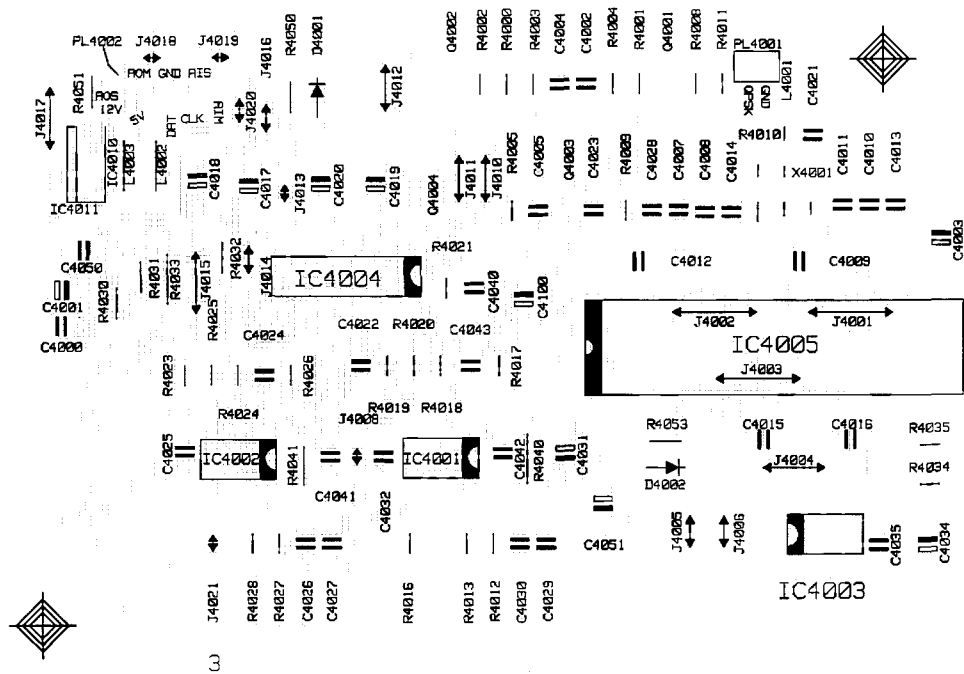
|   | Q3301 | Q3302 | Q4001 | Q4002 | Q4003    | Q4004      |
|---|-------|-------|-------|-------|----------|------------|
| E | 3v3   | 2v2   | 2v3   | 2v9   | 0v       | 0v         |
| B | 4v0   | 2v8   | 3v1   | 3v6   | 0v (0v1) | 5v0 (0v)   |
| C | 11v3  | 6v5   | 5v0   | 4v3   | 0v       | 0v1 (11v7) |

() = NICAM signal received

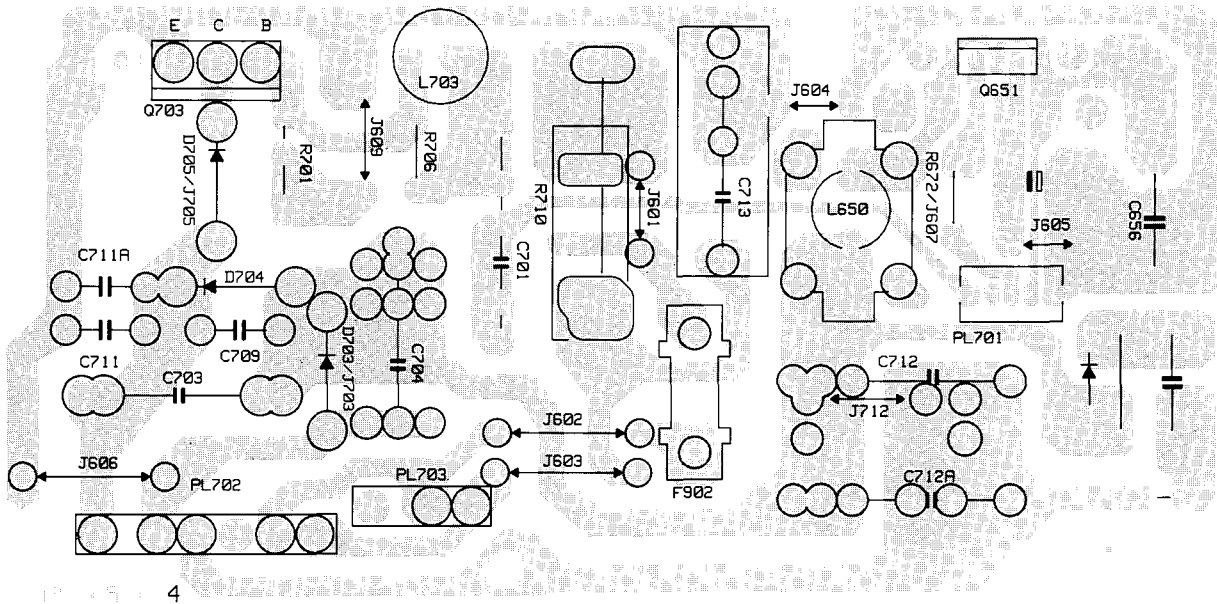


POWER SUPPLY AND DEFLECTION PCB—PRINT SIDE

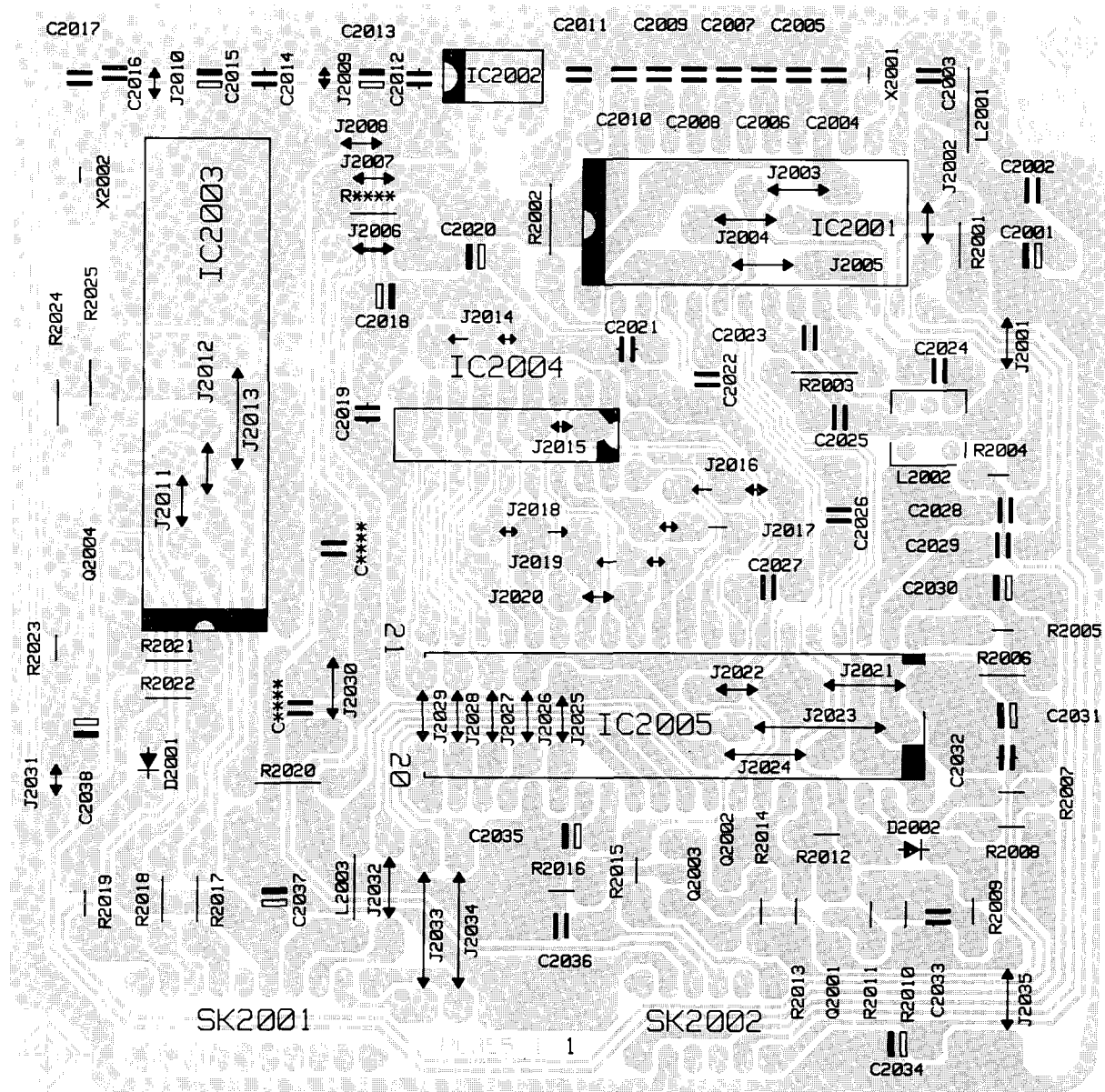
### SIGNAL AND CONTROL PCB—PRINT SIDE



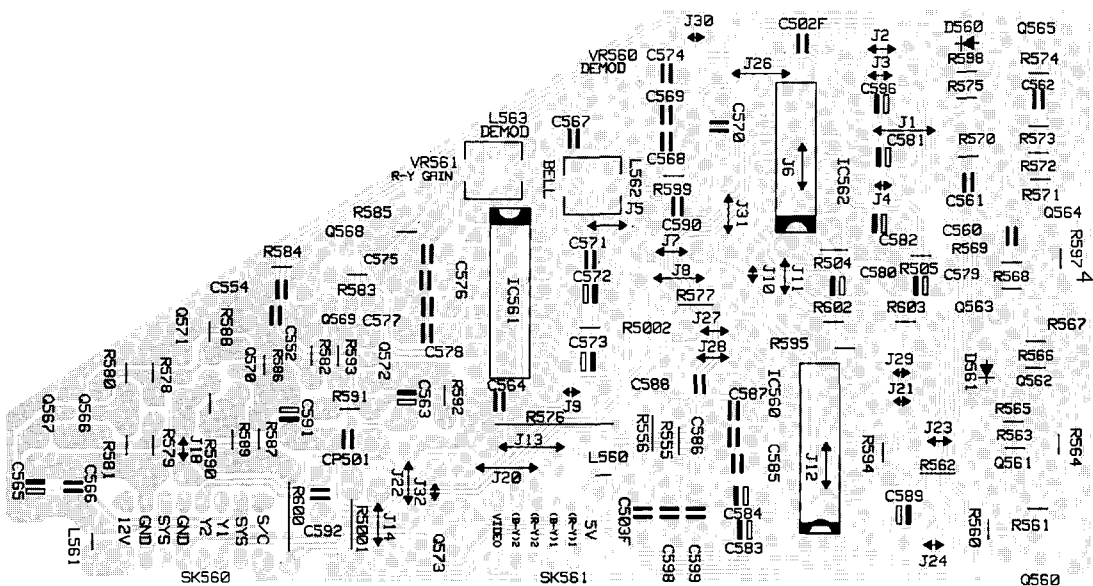
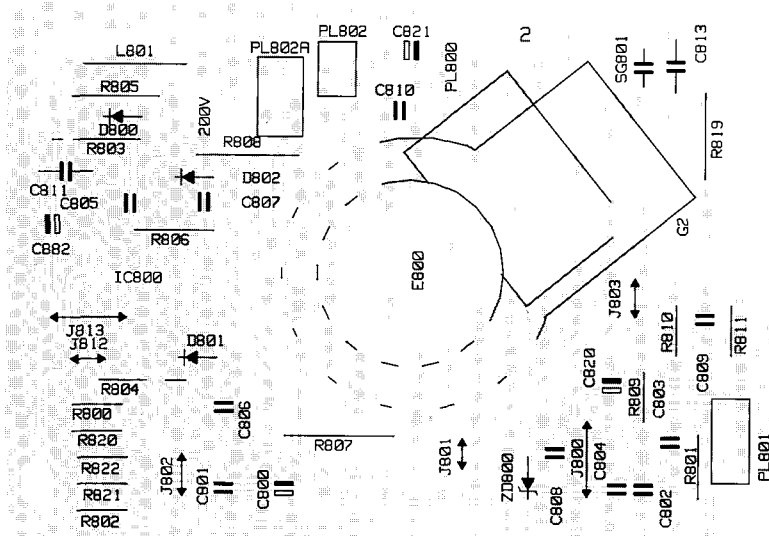
NICAM PCB—PRINT SIDE



EAST/WEST CORRECTION PCB—PRINT SIDE



TELETEXT PCB—PRINT SIDE



## PRESENTATION PARTS

|                                 |                                                 |         |
|---------------------------------|-------------------------------------------------|---------|
| △ CRT Type A59ECY13X01          | CL2560 . . . . .                                | T159011 |
|                                 | CL2564 . . . . .                                | T159006 |
| △ A66ECY13X01                   | CL2860 . . . . .                                | T166015 |
|                                 | CL2864 . . . . .                                | T166012 |
| △ Cabinet Back                  | CL2560 . . . . .                                | X263006 |
|                                 | CL2860 . . . . .                                | X263026 |
|                                 | CL2564 . . . . .                                | X240331 |
|                                 | CL2864 . . . . .                                | X263102 |
| △ Cabinet Front Frame           | CL2560 . . . . .                                | X254096 |
|                                 | CL2860 . . . . .                                | X254134 |
|                                 | CL2564 . . . . .                                | X240373 |
|                                 | CL2864 . . . . .                                | X212373 |
| Control Door                    | CL25/2860 . . . . .                             | X262081 |
|                                 | CL25/2864 . . . . .                             | X263142 |
| HITACHI Badge                   | CL25/2860 . . . . .                             | X640231 |
|                                 | CL25/2864 . . . . .                             | X640242 |
| Remote Control Window (Cabinet) | CL25/2860 . . . . .                             | X420753 |
| I.R. Lens (Cabinet)             | CL25/2864 . . . . .                             | X425051 |
| △ Mains Lead                    | CL25/2864 (SPAIN) . . . . .                     | E846635 |
|                                 | ALL OTHER MODELS . . . . .                      | 2972374 |
| Mains Switch Knob               | CL25/2860 . . . . .                             | X321001 |
|                                 | CL25/2864 . . . . .                             | X321031 |
| Operating Guide                 | CL25/2860 + CL25/2864 (SPAIN/BELGIUM) . . . . . | X830669 |
|                                 | CL25/2864 (NORWAY, FINLAND, DENMARK) . . . . .  | X830815 |
|                                 | CL25/2864 (SWEDEN) . . . . .                    | X830810 |
| Remote Control Handset          | CLE-876D . . . . .                              | X100023 |

## MISCELLANEOUS PARTS

|                                       |                             |
|---------------------------------------|-----------------------------|
| △ CRT Socket . . . . .                | 2698351                     |
| △ Degaussing Coil                     | CL2560/64 . . . . . 2274361 |
|                                       | CL2860/64 . . . . . 2274362 |
| △ Fuse Type T3.15A F901 . . . . .     | E882368                     |
| △ Fuse Type F630mA F902 . . . . .     | E882371                     |
| Fuse Holder F901 . . . . .            | 2721791                     |
| Fuse Holder F902 . . . . .            | 2721793                     |
| Headphone Socket . . . . .            | 2671351                     |
| △ ON/OFF Switch . . . . .             | 2633391                     |
| Phono Socket (Red) . . . . .          | E826138                     |
| Phono Socket (White) . . . . .        | E826139                     |
| Phono Socket (Yellow) . . . . .       | E826140                     |
| 21 Pin Scart Socket . . . . .         | E826923                     |
| Speaker (Tweeter) CL25/2860 . . . . . | E511111                     |
| (Woofer) CL25/2860 . . . . .          | E511110                     |
| Speakers CL25/2864 . . . . .          | 2413131                     |
| (Sub Woofer) CL25/2864 . . . . .      | E511113                     |
| Touch Button Block . . . . .          | E139407                     |
| Tuner . . . . .                       | E710030                     |

PRODUCT SAFETY NOTE: Components marked with a  $\Delta$  have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE at the beginning of this service manual. Don't degrade the safety of this receiver through improper servicing.

| Resistor Abbreviation | Type             |
|-----------------------|------------------|
| CF                    | Carbon Film      |
| MO                    | Metal Oxide      |
| FF                    | Fusible Film     |
| VR                    | Variable Control |
| MF                    | Metal Film       |
| WW                    | Wire Wound       |

| Capacitor Abbreviation | Type              |
|------------------------|-------------------|
| C                      | Ceramic           |
| PF                     | Plastic Film      |
| FT                     | Feed Through      |
| MPO                    | Met Polyester     |
| MPS                    | Mica/Polystyrene  |
| MP                     | Metallised Paper  |
| TA                     | Tantalum          |
| MPP                    | Met Polypropylene |

Parts marked \* in this list are unique to models CL25/2864TAN.

| Ref No    | Part No. | Value | Type | Tol % | Wattage |
|-----------|----------|-------|------|-------|---------|
| R001      | 0700058M | 22K   | CF   | 5     | 1/16    |
| R002      | 0700027M | 100R  | CF   | 5     | 1/16    |
| R003      | 0700027M | 100R  | CF   | 5     | 1/16    |
| R004      | 0700055M | 12K   | CF   | 5     | 1/16    |
| R100      | R100330  | 1R0   | CF   | 5     | 1/4     |
| R101      | R100330  | 1R0   | CF   | 5     | 1/4     |
| R102      | R118330  | 18R   | CF   | 5     | 1/4     |
| R103      | R118330  | 18R   | CF   | 5     | 1/4     |
| R104      | 0700041M | 1K0   | CF   | 5     | 1/16    |
| *R104     | 0700038M | 680R  | CF   | 5     | 1/16    |
| R105      | 0700041M | 1K0   | CF   | 5     | 1/16    |
| *R105     | 0700038M | 680R  | CF   | 5     | 1/16    |
| R106 - 09 | R715330  | 75R   | CF   | 5     | 1/4     |
| R124      | 0700043M | 1K5   | CF   | 5     | 1/16    |
| R125      | 0700043M | 1K5   | CF   | 5     | 1/16    |
| R126      | 0700072M | 220K  | CF   | 5     | 1/16    |
| R127      | 0700072M | 220K  | CF   | 5     | 1/16    |
| R128      | 0700027M | 100R  | CF   | 5     | 1/16    |
| R146      | 0700041M | 1K0   | CF   | 5     | 1/16    |
| R147      | 0700042M | 1K2   | CF   | 5     | 1/16    |
| VR201     | 0160214  | 5K0   | VR   | AGC   | CONTROL |
| R201      | 0700052M | 6K8   | CF   | 5     | 1/16    |
| R202      | 0700034M | 330R  | CF   | 5     | 1/16    |
| R203      | 0700046M | 2K7   | CF   | 5     | 1/16    |
| R204      | 0700054M | 10K   | CF   | 5     | 1/16    |
| R205      | 0700042M | 1K2   | CF   | 5     | 1/16    |
| R207      | R417330  | 47R   | CF   | 5     | 1/4     |
| R208      | R323319  | 330R  | CF   | 5     | 1/2     |
| R211      | 0700035M | 390R  | CF   | 5     | 1/16    |
| R215      | 0700074M | 330K  | CF   | 5     | 1/16    |
| R216      | 0187080M | 4K3   | CF   | 5     | 1/16    |
| R217      | 0700044M | 1K8   | CF   | 5     | 1/16    |
| R218      | 0700054M | 10K   | CF   | 5     | 1/16    |
| R219      | 0700054M | 10K   | CF   | 5     | 1/16    |
| R220      | 0700043M | 1K5   | CF   | 5     | 1/16    |
| R300      | R715330  | 75R   | CF   | 5     | 1/4     |
| R302      | R715330  | 75R   | CF   | 5     | 1/4     |
| R303 - 06 | 0700032M | 220R  | CF   | 5     | 1/16    |
| R307      | 0187038M | 75R   | CF   | 5     | 1/16    |
| R308      | 0187038M | 75R   | CF   | 5     | 1/16    |
| R309 - 12 | R222330  | 220R  | CF   | 5     | 1/4     |
| R313      | 0187038M | 75R   | CF   | 5     | 1/16    |
| R314      | 0187038M | 75R   | CF   | 5     | 1/16    |
| R315 - 18 | R222330  | 220R  | CF   | 5     | 1/4     |
| R319      | R715330  | 75R   | CF   | 5     | 1/4     |
| R322      | R715330  | 75R   | CF   | 5     | 1/4     |
| R325      | R526330  | 560R  | CF   | 5     | 1/4     |
| R326      | R140330  | 10K   | CF   | 5     | 1/4     |
| R327      | R526330  | 560R  | CF   | 5     | 1/4     |
| R328      | R140330  | 10K   | CF   | 5     | 1/4     |
| R330      | R120330  | 100R  | CF   | 5     | 1/4     |
| R331      | R120330  | 100R  | CF   | 5     | 1/4     |
| R333      | R812330  | 82R   | CF   | 5     | 1/4     |
| R334      | R526330  | 560R  | CF   | 5     | 1/4     |
| R335      | R140330  | 10K   | CF   | 5     | 1/4     |
| R336      | R526330  | 560R  | CF   | 5     | 1/4     |
| R337      | R140330  | 10K   | CF   | 5     | 1/4     |
| R338      | 0700041M | 1K0   | CF   | 5     | 1/16    |
| R339      | R526330  | 560R  | CF   | 5     | 1/4     |
| R340      | R140330  | 10K   | CF   | 5     | 1/4     |
| R342      | 0700039M | 820R  | CF   | 5     | 1/16    |

| Ref No. | Part No. | Value | Type | Tol % | Wattage |
|---------|----------|-------|------|-------|---------|
| R343    | R120330  | 100R  | CF   | 5     | 1/4     |
| R344    | R120330  | 100R  | CF   | 5     | 1/4     |
| R345    | R140330  | 10K   | CF   | 5     | 1/4     |
| R346    | R333330  | 3K3   | CF   | 5     | 1/4     |
| R349    | R427330  | 4K7   | CF   | 5     | 1/4     |
| R353    | R222330  | 220R  | CF   | 5     | 1/4     |
| R354    | R222330  | 220R  | CF   | 5     | 1/4     |
| R355    | R715330  | 75R   | CF   | 5     | 1/4     |
| R365    | 0700037M | 560R  | CF   | 5     | 1/16    |
| R366    | R227542  | 270R  | MO   | 5     | 1       |
| R370    | R000304  | 191K  | MF   | 1     | 1/5     |
| R371    | 0700036M | 470R  | CF   | 5     | 1/16    |
| R372    | 0700027M | 100R  | CF   | 5     | 1/16    |
| R373    | 0700027M | 100R  | CF   | 5     | 1/16    |
| R388    | R407551  | 4R7   | FF   | 5     | 1/2     |
| R401    | 0700045M | 2K2   | CF   | 5     | 1/16    |
| R402    | 0700045M | 2K2   | CF   | 5     | 1/16    |
| R403    | 0700045M | 2K2   | CF   | 5     | 1/16    |
| R404    | 0700037M | 560R  | CF   | 5     | 1/16    |
| R405    | 0700054M | 10K   | CF   | 5     | 1/16    |
| R406    | 0700041M | 1K0   | CF   | 5     | 1/16    |
| R407    | 0700054M | 10K   | CF   | 5     | 1/16    |
| R408    | 0700067M | 100K  | CF   | 5     | 1/16    |
| R409    | 0700049M | 4K7   | CF   | 5     | 1/16    |
| R410    | 0700041M | 1K0   | CF   | 5     | 1/16    |
| R411    | 0700049M | 4K7   | CF   | 5     | 1/16    |
| R412    | 0700046M | 2K7   | CF   | 5     | 1/16    |
| R413    | 0700043M | 1K5   | CF   | 5     | 1/16    |
| R414    | 0700045M | 2K2   | CF   | 5     | 1/16    |
| R416    | 0700045M | 2K2   | CF   | 5     | 1/16    |
| R500    | R648330  | 68K   | CF   | 5     | 1/4     |
| R501    | R110330  | 10R   | CF   | 5     | 1/4     |
| R502    | R158330  | 180K  | CF   | 5     | 1/4     |
| R503    | R130330  | 1K0   | CF   | 5     | 1/4     |
| R504    | 0700025M | 68R   | CF   | 5     | 1/16    |
| R504    | 0700048M | 3K9   | CF   | 5     | 1/16    |
| R505    | R130330  | 1K0   | CF   | 5     | 1/4     |
| R505    | 0187064M | 910R  | CF   | 5     | 1/16    |
| R506    | R130330  | 1K0   | CF   | 5     | 1/4     |
| R507    | R541330  | 51K   | CF   | 5     | 1/4     |
| R509    | R110330  | 10R   | CF   | 5     | 1/4     |
| R510    | R160330  | 1M0   | CF   | 5     | 1/4     |
| R511    | 0700054M | 10K   | CF   | 5     | 1/16    |
| R512    | R242330  | 22K   | CF   | 5     | 1/4     |
| R513    | 0700058M | 22K   | CF   | 5     | 1/16    |
| R514    | 0700054M | 10K   | CF   | 5     | 1/16    |
| R515    | 0700041M | 1K0   | CF   | 5     | 1/16    |
| R516    | 0700063M | 47K   | CF   | 5     | 1/16    |
| R517    | 0700071M | 180K  | CF   | 5     | 1/16    |
| R518    | R130330  | 1K0   | CF   | 5     | 1/4     |
| R519    | R120330  | 100R  | CF   | 5     | 1/4     |
| R520    | R120330  | 100R  | CF   | 5     | 1/4     |
| R525    | R222330  | 220R  | CF   | 5     | 1/4     |
| R526    | R329330  | 390R  | CF   | 5     | 1/4     |
| R527    | 0700027M | 100R  | CF   | 5     | 1/16    |
| R528    | 0700027M | 100R  | CF   | 5     | 1/16    |
| R529    | 0700027M | 100R  | CF   | 5     | 1/16    |

PRODUCT SAFETY NOTE: Components marked with a  $\Delta$  have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE at the beginning of this service manual. Don't degrade the safety of this receiver through improper servicing.

| Ref No | Part No  | Value | Type | Tol % | Wattage            |
|--------|----------|-------|------|-------|--------------------|
| R531   | R170330  | 10M   | CF   | 5     | 1/4                |
| R532   | R170330  | 10M   | CF   | 5     | 1/4                |
| R533   | 0700054M | 10K   | CF   | 5     | 1/16               |
| R534   | 0700027M | 100R  | CF   | 5     | 1/16               |
| R535   | 0700054M | 10K   | CF   | 5     | 1/16               |
| R536   | R240360  | 20K   | CF   | 5     | 1/16               |
| R537   | R170330  | 10M   | CF   | 5     | 1/4                |
| R538   | R262330  | 2M2   | CF   | 5     | 1/4                |
| R540   | 0700067M | 100K  | CF   | 5     | 1/16               |
| R541   | 0700073M | 270K  | CF   | 5     | 1/16               |
| R543   | 0700067M | 100K  | CF   | 5     | 1/16               |
| R544   | 0700065M | 68K   | CF   | 5     | 1/16               |
| R545   | R170360  | 10M   | CF   | 5     | 1/16               |
| R546A  | 0700041M | 1K0   | CF   | 5     | 1/16               |
| R546B  | 0700041M | 1K0   | CF   | 5     | 1/16               |
| R547   | 0700027M | 100R  | CF   | 5     | 1/16               |
| R555   | 0700041M | 1K0   | CF   | 5     | 1/16               |
| R556   | 0700041M | 1K0   | CF   | 5     | 1/16               |
| VR560  | E311069  | 2K2   | VR   | DEM0D | ADJUSTMENT         |
| R560   | 0700049M | 4K7   | CF   | 5     | 1/16               |
| VR561  | E311069  | 2K2   | VR   | R - Y | GAIN               |
| R561   | 0700042M | 1K2   | CF   | 5     | 1/16               |
| R562   | 0700039M | 820R  | CF   | 5     | 1/16               |
| R563   | 0700036M | 470R  | CF   | 5     | 1/16               |
| R564   | 0700041M | 1K0   | CF   | 5     | 1/16               |
| R565   | 0700034M | 330R  | CF   | 5     | 1/16               |
| R566   | 0700036M | 470R  | CF   | 5     | 1/16               |
| R567   | 0700041M | 1K0   | CF   | 5     | 1/16               |
| R568   | 0700041M | 1K0   | CF   | 5     | 1/16               |
| R569   | 0700039M | 820R  | CF   | 5     | 1/16               |
| R570   | 0700045M | 2K2   | CF   | 5     | 1/16               |
| R571   | 0700047M | 3K3   | CF   | 5     | 1/16               |
| R572   | 0700057M | 18K   | CF   | 5     | 1/16               |
| R573   | 0700041M | 1K0   | CF   | 5     | 1/16               |
| R574   | 0700041M | 1K0   | CF   | 5     | 1/16               |
| R575   | 0700041M | 1K0   | CF   | 5     | 1/16               |
| R576   | 0700027M | 100R  | CF   | 5     | 1/16               |
| R577   | 0700027M | 100R  | CF   | 5     | 1/16               |
| R578   | 0700049M | 4K7   | CF   | 5     | 1/16               |
| R579   | 0700041M | 1K0   | CF   | 5     | 1/16               |
| R580   | 0700057M | 18K   | CF   | 5     | 1/16               |
| R581   | 0700049M | 4K7   | CF   | 5     | 1/16               |
| R582   | 0700039M | 820R  | CF   | 5     | 1/16               |
| R583   | 0700043M | 1K5   | CF   | 5     | 1/16               |
| R584   | 0700039M | 820R  | CF   | 5     | 1/16               |
| R586   | 0700054M | 10K   | CF   | 5     | 1/16               |
| R587   | 0700051M | 5K6   | CF   | 5     | 1/16               |
| R588   | 0700028M | 120R  | CF   | 5     | 1/16               |
| R589   | 0700033M | 270R  | CF   | 5     | 1/16               |
| R590   | 0700045M | 2K2   | CF   | 5     | 1/16               |
| R590   | 0700033M | 270R  | CF   | 5     | 1/16               |
|        |          |       |      |       | (CTI/ SECAM PANEL) |
| R591   | 0187088M | 9K1   | CF   | 5     | 1/16               |
| R592   | 0700043M | 1K5   | CF   | 5     | 1/16               |
| R593   | 0700049M | 4K7   | CF   | 5     | 1/16               |
| R594   | 0700042M | 1K2   | CF   | 5     | 1/16               |
| R597   | 0700036M | 470R  | CF   | 5     | 1/16               |
| R598   | 0700036M | 470R  | CF   | 5     | 1/16               |
| R598   | 0700054M | 10K   | CF   | 5     | 1/16               |
|        |          |       |      |       | (CTI/ SECAM PANEL) |
| R599   | 0700044M | 1K8   | CF   | 5     | 1/16               |
| R600   | 0700041M | 1K0   | CF   | 5     | 1/16               |
| R601   | R531330  | 5K1   | CF   | 5     | 1/4                |
| *R601  | R632330  | 6K2   | CF   | 5     | 1/4                |
| R602   | R638725  | 6K8   | MF   | 1     | 1/2                |
| R602   | 0700048M | 3K9   | CF   | 5     | 1/16               |
|        |          |       |      |       | (CTI/ SECAM PANEL) |
| R603   | R247330  | 27K   | CF   | 5     | 1/4                |
| R603   | 0187064M | 910R  | CF   | 5     | 1/16               |
|        |          |       |      |       | (CTI/ SECAM PANEL) |
| *R603  | R340330  | 30K   | CF   | 5     | 1/4                |
| R604   | R323319  | 330R  | CF   | 5     | 1/2                |
| *R604  | R227319  | 270R  | CF   | 5     | 1/2                |
| R605   | R336330  | 3K6   | CF   | 5     | 1/4                |
| R606   | R735330  | 7K5   | CF   | 5     | 1/4                |
| *R606  | R142330  | 12K   | CF   | 5     | 1/4                |
| R607   | R100551  | 1R0   | FF   | 5     | 1/2                |

$\Delta$   
 $\Delta$

$\Delta$

$\Delta$

$\Delta$

$\Delta$

$\Delta$

$\Delta$

$\Delta$

$\Delta$

$\Delta$

$\Delta$

$\Delta$

$\Delta$

| Ref No. | Part No  | Value | Type | Tol % | Wattage |
|---------|----------|-------|------|-------|---------|
| R608    | R105551  | 1R5   | FF   | 5     | 1/2     |
| R609    | R100551  | 1R0   | FF   | 5     | 1/2     |
| R610    | R125542  | 150R  | MO   | 5     | 1       |
| R611    | R222319  | 220R  | CF   | 5     | 1/2     |
| *R611   | R227319  | 270R  | CF   | 5     | 1/2     |
| R612    | R222330  | 220R  | CF   | 5     | 1/4     |
| *R612   | R521330  | 510R  | CF   | 5     | 1/4     |
| R659    | R832542  | 8K2   | MO   | 5     | 1       |
| R666    | R832330  | 8K2   | CF   | 5     | 1/4     |
| R667    | R132330  | 1K2   | CF   | 5     | 1/4     |
| R668    | R427330  | 470R  | CF   | 5     | 1/4     |
| *R669   | R150330  | 100K  | CF   | 5     | 1/4     |
| R680    | R140330  | 10K   | CF   | 5     | 1/4     |
| R682    | R140721  | 10K   | MF   | 1     | 1/4     |
| R683    | R632721  | 6K2   | MF   | 1     | 1/4     |
| R684    | R622330  | 620R  | CF   | 5     | 1/4     |
| R685    | R349330  | 39K   | CF   | 5     | 1/4     |
| R702    | R128319  | 180R  | CF   | 5     | 1/2     |
| R703    | R110551  | 10R   | FF   | 5     | 1/2     |
| R704    | R822546  | 820R  | MO   | 5     | 1       |
| R705    | R145542  | 15K   | MO   | 5     | 1       |
| R706    | R120330  | 100R  | CF   | 5     | 1/4     |
| R710    | 0147837  | 18R   | WW   | 5     | 15      |
| R710A   | R516539  | 56R   | MO   | 5     | 2       |
| R712    | R457716  | 470K  | MF   | 5     | 1/4     |
| *R713   | R222547  | 220R  | MO   | 5     | 1/2     |
| *R714   | R128547  | 180R  | MO   | 5     | 1/2     |
| R715    | R200551  | 2R0   | FF   | 5     | 1/2     |
| R800    | R120330  | 100R  | CF   | 5     | 1/4     |
| R801    | R120330  | 100R  | CF   | 5     | 1/4     |
| R802    | R120330  | 100R  | CF   | 5     | 1/4     |
| R803    | R349542  | 39K   | MO   | 5     | 1       |
| R804    | R349542  | 39K   | MO   | 5     | 1       |
| R805    | R349542  | 39K   | MO   | 5     | 1       |
| R806    | R130319  | 1K0   | CF   | 5     | 1/2     |
| R807    | R130319  | 1K0   | CF   | 5     | 1/2     |
| R808    | R130319  | 1K0   | CF   | 5     | 1/2     |
| R809    | R130330  | 1K0   | CF   | 5     | 1/4     |
| R810    | R130330  | 1K0   | CF   | 5     | 1/4     |
| R811    | R130330  | 1K0   | CF   | 5     | 1/4     |
| R819    | R150714  | 100K  | MF   | 5     | 1/2     |
| R820    | R148330  | 18K   | CF   | 5     | 1/4     |
| R821    | R349330  | 39K   | CF   | 5     | 1/4     |
| R822    | R349330  | 39K   | CF   | 5     | 1/4     |
| R900    | 0147524  | 2R2   | WW   | 10    | 5       |
| R901    | R162714  | 1M2   | MF   | 5     | 1/2     |
| R902    | R556716  | 560K  | MF   | 5     | 1/4     |
| R903    | R618330  | 68R   | CF   | 5     | 1/4     |
| R904    | R162714  | 1M2   | MF   | 5     | 1/2     |
| R905    | R333330  | 3K3   | CF   | 5     | 1/4     |
| R907    | R110721  | 10R   | MF   | 1     | 1/4     |
| R908    | R333549  | 3K3   | MO   | 5     | 2       |
| R909    | 0147572  | 220R  | MO   | 5     | 5       |
| R910    | R142330  | 12K   | CF   | 5     | 1/4     |
| R912    | R407551  | 4R7   | FF   | 5     | 1/2     |
| R913    | R413330  | 43R   | CF   | 5     | 1/4     |
| R914    | R333549  | 3K3   | MO   | 5     | 2       |
| R915    | R417330  | 47R   | CF   | 5     | 1/4     |
| R921    | 0110221S | 100R  | MO   | 5     | 1       |
| R922    | R000505  | 0R5   | MO   | 5     | 7       |
| R924    | R812551  | 82R   | FF   | 5     | 1/2     |
| R931    | R170714  | 10M   | MF   | 5     | 1/2     |
| R932    | R252726  | 220K  | MF   | 5     | 2       |
| VR941   | E311036  | 2K2   | VR   | HT    | PRESET  |
| R941    | R142562  | 12K   | MO   | 5     | 5       |
| R942    | 0700041M | 1K0   | CF   | 5     | 1/16    |
| R943    | R130330  | 1K0   | CF   | 5     | 1/4     |
| R944    | 0700036M | 470R  | CF   | 5     | 1/16    |
| R945    | R100542  | 1R0   | MO   | 5     | 1       |
| R946    | R000505  | 0R5   | MO   | 5     | 7       |
| R947    | R000505  | 0R5   | MO   | 5     | 7       |
| R948    | 0700067M | 100K  | CF   | 5     | 1/16    |
| R949    | R227330  | 270R  | CF   | 5     | 1/4     |
| R951    | 0700045M | 2K2   | CF   | 5     | 1/16    |
| R954    | 0700053M | 8K2   | CF   | 5     | 1/16    |
| R955    | 0700041M | 1K0   | CF   | 5     | 1/16    |
| R956    | 0700045M | 2K2   | CF   | 5     | 1/16    |
| R957    | 0700041M | 1K0   | CF   | 5     | 1/16    |

$\Delta$

PRODUCT SAFETY NOTE: Components marked with a  $\triangle$  have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE at the beginning of this service manual. Don't degrade the safety of this receiver through improper servicing.

| Ref No.  | Part No. | Value | Type | Tol % | Wattage |
|----------|----------|-------|------|-------|---------|
| R962     | R132542  | 1K2   | MO   | 5     | 1       |
| R963     | R000505  | 0R5   | MO   | 5     | 7       |
| R964     | R541330  | 51K   | CF   | 5     | 1/4     |
| R965     | R227330  | 270R  | CF   | 5     | 1/4     |
| R966     | R150716  | 100K  | MF   | 5     | 1/4     |
| R967     | 0700047M | 3K3   | CF   | 5     | 1/16    |
| R968     | R541330  | 51K   | CF   | 5     | 1/4     |
| R969     | R339330  | 3K9   | CF   | 5     | 1/4     |
| R970     | 0700067M | 100K  | CF   | 5     | 1/16    |
| R971     | 0700049M | 4K7   | CF   | 5     | 1/16    |
| R972     | 0700054M | 10K   | CF   | 5     | 1/16    |
| R974     | R232319  | 2K2   | CF   | 5     | 1/2     |
| R975     | R150716  | 100K  | MF   | 5     | 1/4     |
| R976     | R648728  | 68K   | MF   | 5     | 1/2     |
| R977     | 0700014M | 10R   | CF   | 5     | 1/16    |
| R978     | 0700023M | 47R   | CF   | 5     | 1/16    |
| R979     | 0700045M | 2K2   | CF   | 5     | 1/16    |
| R980     | 0700053M | 8K2   | CF   | 5     | 1/16    |
| R981     | 0700053M | 8K2   | CF   | 5     | 1/16    |
| R1001    | R130330  | 1K0   | CF   | 5     | 1/4     |
| R1002    | R140330  | 10K   | CF   | 5     | 1/4     |
| R1004    | 0700042M | 1K2   | CF   | 5     | 1/16    |
| R1005    | 0700054M | 10K   | CF   | 5     | 1/16    |
| R1006    | 0700067M | 100K  | CF   | 5     | 1/16    |
| R1007    | R130330  | 1K0   | CF   | 5     | 1/4     |
| R1008    | 0700054M | 10K   | CF   | 5     | 1/16    |
| R1010    | R140330  | 10K   | CF   | 5     | 1/4     |
| R1011    | R140330  | 10K   | CF   | 5     | 1/4     |
| R1012    | R120330  | 100R  | CF   | 5     | 1/4     |
| R1013    | R120330  | 100R  | CF   | 5     | 1/4     |
| R1014    | R120330  | 100R  | CF   | 5     | 1/4     |
| R1015    | R122330  | 120R  | CF   | 5     | 1/4     |
| R1016    | R122330  | 120R  | CF   | 5     | 1/4     |
| R1017    | R125330  | 150R  | CF   | 5     | 1/4     |
| R1018    | 0700044M | 1K8   | CF   | 5     | 1/16    |
| R1019    | R120330  | 100R  | CF   | 5     | 1/4     |
| R1023-06 | 0700054M | 10K   | CF   | 5     | 1/16    |
| R1029    | R120330  | 100R  | CF   | 5     | 1/4     |
| R1031    | 0700054M | 10K   | CF   | 5     | 1/16    |
| R1032    | 0700041M | 1K0   | CF   | 5     | 1/16    |
| R1033    | 0700054M | 10K   | CF   | 5     | 1/16    |
| R1034    | 0700054M | 10K   | CF   | 5     | 1/16    |
| R1040    | 0700054M | 10K   | CF   | 5     | 1/16    |
| R1041    | 0700054M | 10K   | CF   | 5     | 1/16    |
| R1042    | R222330  | 220R  | CF   | 5     | 1/4     |
| R1043    | R140330  | 10K   | CF   | 5     | 1/4     |
| R1044    | R130330  | 1K0   | CF   | 5     | 1/4     |
| R1045    | R130330  | 1K0   | CF   | 5     | 1/4     |
| R1046    | R140330  | 10K   | CF   | 5     | 1/4     |
| R1050    | 0700049M | 4K7   | CF   | 5     | 1/16    |
| R1051    | 0700049M | 4K7   | CF   | 5     | 1/16    |
| R1052    | 0700047M | 3K3   | CF   | 5     | 1/16    |
| R1053    | 0700049M | 4K7   | CF   | 5     | 1/16    |
| R1062    | R140330  | 10K   | CF   | 5     | 1/4     |
| R2001    | 0700065M | 68K   | CF   | 5     | 1/16    |
| R2002    | 0700036M | 470R  | CF   | 5     | 1/16    |
| R2003    | 0700046M | 2K7   | CF   | 5     | 1/16    |
| R2004    | 0700041M | 1K0   | CF   | 5     | 1/16    |
| R2005    | 0700057M | 18K   | CF   | 5     | 1/16    |
| R2006    | 0700014M | 10R   | CF   | 5     | 1/16    |
| R2007    | 0700036M | 470R  | CF   | 5     | 1/16    |
| R2008    | 0700036M | 470R  | CF   | 5     | 1/16    |
| R2009    | 0700036M | 470R  | CF   | 5     | 1/16    |
| R2010    | 0700041M | 1K0   | CF   | 5     | 1/16    |
| R2011    | 0700054M | 10K   | CF   | 5     | 1/16    |
| R2012    | 0700055M | 12K   | CF   | 5     | 1/16    |
| R2015    | 0700066M | 82K   | CF   | 5     | 1/16    |
| R2016    | 0700056M | 15K   | CF   | 5     | 1/16    |
| R2017    | 0700034M | 330R  | CF   | 5     | 1/16    |
| R2018    | 0700034M | 330R  | CF   | 5     | 1/16    |
| R2019    | 0700036M | 470R  | CF   | 5     | 1/16    |
| R2020    | 0700036M | 470R  | CF   | 5     | 1/16    |
| R2021    | 0700049M | 4K7   | CF   | 5     | 1/16    |
| R2022    | 0700049M | 4K7   | CF   | 5     | 1/16    |
| R2023    | 0700053M | 8K2   | CF   | 5     | 1/16    |
| R2024    | 0700063M | 47K   | CF   | 5     | 1/16    |

| Ref No | Part No  | Value | Type | Tol % | Wattage |
|--------|----------|-------|------|-------|---------|
| R2025  | 0700051M | 5K6   | CF   | 5     | 1/16    |
| R2026  | 0700032M | 220R  | CF   | 5     | 1/16    |
| R2027  | 0700045M | 2K2   | CF   | 5     | 1/16    |
| R2103  | R120330  | 100R  | CF   | 5     | 1/4     |
| R2104  | R120330  | 100R  | CF   | 5     | 1/4     |
| R2107  | 0700032M | 220R  | CF   | 5     | 1/16    |
| R2108  | 0700032M | 220R  | CF   | 5     | 1/16    |
| R2109  | 0700032M | 220R  | CF   | 5     | 1/16    |
| R2110  | 0700057M | 18K   | CF   | 5     | 1/16    |
| R3000  | 0700037M | 560R  | CF   | 5     | 1/16    |
| R3001  | 0700037M | 560R  | CF   | 5     | 1/16    |
| R3002  | 0700037M | 560R  | CF   | 5     | 1/16    |
| R3003  | 0700045M | 2K2   | CF   | 5     | 1/16    |
| R3004  | R715330  | 75R   | CF   | 5     | 1/4     |
| R3005  | R715330  | 75R   | CF   | 5     | 1/4     |
| R3006  | R715330  | 75R   | CF   | 5     | 1/4     |
| R3007  | R120330  | 100R  | CF   | 5     | 1/4     |
| R3008  | R125330  | 150R  | CF   | 5     | 1/4     |
| R3009  | R125330  | 150R  | CF   | 5     | 1/4     |
| R3010  | R125330  | 150R  | CF   | 5     | 1/4     |
| R3011  | 0700029M | 150R  | CF   | 5     | 1/16    |
| R3012  | 0700029M | 150R  | CF   | 5     | 1/16    |
| R3013  | 0700029M | 150R  | CF   | 5     | 1/16    |
| R3014  | 0700054M | 10K   | CF   | 5     | 1/16    |
| R3016  | 0700054M | 10K   | CF   | 5     | 1/16    |
| R3017  | 0700054M | 10K   | CF   | 5     | 1/16    |
| R3018  | 0700054M | 10K   | CF   | 5     | 1/16    |
| R3020  | 0700041M | 1K0   | CF   | 5     | 1/16    |
| R3021  | 0700034M | 330R  | CF   | 5     | 1/16    |
| R3022  | 0700034M | 330R  | CF   | 5     | 1/16    |
| R3023  | 0700034M | 330R  | CF   | 5     | 1/16    |
| R3024  | 0700032M | 220R  | CF   | 5     | 1/16    |
| R3300  | 0700061M | 33K   | CF   | 5     | 1/16    |
| R3301  | 0700045M | 2K2   | CF   | 5     | 1/16    |
| R3302  | 0700054M | 10K   | CF   | 5     | 1/16    |
| R4000  | 0700038M | 680R  | CF   | 5     | 1/16    |
| R4001  | 0700023M | 47R   | CF   | 5     | 1/16    |
| R4002  | 0700036M | 470R  | CF   | 5     | 1/16    |
| R4003  | 0700044M | 1K8   | CF   | 5     | 1/16    |
| R4004  | 0700029M | 150R  | CF   | 5     | 1/16    |
| R4005  | 0700044M | 1K8   | CF   | 5     | 1/16    |
| R4008  | 0700041M | 1K0   | CF   | 5     | 1/16    |
| R4009  | 0700046M | 2K7   | CF   | 5     | 1/16    |
| R4010  | 0700036M | 470R  | CF   | 5     | 1/16    |
| R4012  | 0700036M | 470R  | CF   | 5     | 1/16    |
| R4013  | 0700047M | 3K3   | CF   | 5     | 1/16    |
| R4016  | 0700054M | 10K   | CF   | 5     | 1/16    |
| R4017  | 0700054M | 10K   | CF   | 5     | 1/16    |
| R4018  | 0700054M | 10K   | CF   | 5     | 1/16    |
| R4019  | 0700062M | 39K   | CF   | 5     | 1/16    |
| R4020  | 0700059M | 27K   | CF   | 5     | 1/16    |
| R4021  | 0700046M | 2K7   | CF   | 5     | 1/16    |
| R4023  | 0700059M | 27K   | CF   | 5     | 1/16    |
| R4024  | 0700062M | 39K   | CF   | 5     | 1/16    |
| R4025  | 0700054M | 10K   | CF   | 5     | 1/16    |
| R4026  | 0700054M | 10K   | CF   | 5     | 1/16    |
| R4027  | 0700036M | 470R  | CF   | 5     | 1/16    |
| R4028  | 0700047M | 3K3   | CF   | 5     | 1/16    |
| R4030  | 0700067M | 100K  | CF   | 5     | 1/16    |
| R4031  | 0700062M | 39K   | CF   | 5     | 1/16    |
| R4032  | 0700062M | 39K   | CF   | 5     | 1/16    |
| R4033  | 0700067M | 100K  | CF   | 5     | 1/16    |
| R4034  | 0700027M | 100R  | CF   | 5     | 1/16    |
| R4035  | 0700027M | 100R  | CF   | 5     | 1/16    |
| R4040  | 0700041M | 1K0   | CF   | 5     | 1/16    |
| R4041  | 0700041M | 1K0   | CF   | 5     | 1/16    |
| R4042  | 0700039M | 820R  | CF   | 5     | 1/16    |
| R4043  | 0700039M | 820R  | CF   | 5     | 1/16    |
| R4051  | 0700045M | 2K2   | CF   | 5     | 1/16    |
| R4053  | 0700054M | 10K   | CF   | 5     | 1/16    |
| R5001  | 0700034M | 330R  | CF   | 5     | 1/16    |
| R5002  | 0700072M | 220K  | CF   | 5     | 1/16    |

PRODUCT SAFETY NOTE: Components marked with a  $\Delta$  have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE at the beginning of this service manual. Don't degrade the safety of this receiver through improper servicing.

| Ref No. | Part No. | Value | Type | Tol % | Voltage |
|---------|----------|-------|------|-------|---------|
| C004    | 0800041R | 47u   | EL   | -     | 16      |
| C100    | C150715  | 100n  | MPO  | 10    | 63      |
| C101    | 0800027R | 22u   | EL   | -     | 63      |
| C101F   | 0244105R | 2n2   | C    | 10    | 50      |
| C102    | 0253934  | 2200u | EL   | -     | 315     |
| C102F   | 0244105R | 2n2   | C    | 10    | 50      |
| C103    | 0800026R | 22u   | EL   | -     | 50      |
| *C103   | 0800061  | 220u  | EL   | -     | 315     |
| C104    | C150877  | 100n  | C    | 10    | 25      |
| C105    | 0253934  | 2200u | EL   | -     | 315     |
| C106    | C150715  | 100n  | MPO  | 10    | 63      |
| C107    | 0253935  | 3300u | EL   | -     | 35      |
| C108    | 0800026R | 22u   | EL   | -     | 50      |
| *C108   | 0800061  | 220u  | EL   | -     | 315     |
| C110    | C150877  | 100n  | C    | 10    | 25      |
| C111    | C232877  | 2n2   | C    | 10    | 25      |
| C112    | C232877  | 2n2   | C    | 10    | 25      |
| C115    | 0800079R | 1000u | EL   | -     | 63      |
| C124    | 0880051R | 33n   | PF   | 10    | 50      |
| C125    | 0880051R | 33n   | PF   | 10    | 50      |
| C126    | 0800009R | 4u7   | EL   | -     | 25      |
| C146    | 0800015R | 10u   | EL   | -     | 16      |
| C202    | 0800005R | 2u2   | EL   | -     | 50      |
| C203    | C252715  | 220n  | MPO  | 10    | 63      |
| C204    | C252715  | 220n  | MPO  | 10    | 63      |
| C205    | C150877  | 100n  | C    | 10    | 25      |
| C208    | C115182  | 15p   | C    | 2     | 50      |
| C209    | C140877  | 10n   | C    | 10    | 25      |
| C210    | C150877  | 100n  | C    | 10    | 25      |
| C212    | C252715  | 220n  | MPO  | 10    | 63      |
| C214    | C155715  | 150n  | MPO  | 10    | 63      |
| C215    | C140877  | 10n   | C    | 10    | 25      |
| C216    | C313345  | 33p   | C    | 10    | 100     |
| C300    | C252715  | 220n  | MPO  | 10    | 63      |
| C301F   | 0244105R | 2n2   | C    | 10    | 50      |
| C302    | 0244118R | 470p  | C    | 10    | 50      |
| C303    | 0244118R | 470p  | C    | 10    | 50      |
| C304    | C232877  | 2n2   | C    | 10    | 25      |
| C306    | C232877  | 2n2   | C    | 10    | 25      |
| C307    | 0244117  | 680p  | C    | 10    | 50      |
| C308-11 | 0244118R | 470p  | C    | 10    | 50      |
| C312    | C232877  | 2n2   | C    | 10    | 25      |
| C314    | C232877  | 2n2   | C    | 10    | 25      |
| C316-19 | 0244118R | 470p  | C    | 10    | 50      |
| C320    | C232877  | 2n2   | C    | 10    | 25      |
| C322    | C232877  | 2n2   | C    | 10    | 25      |
| C324    | 0244118R | 470p  | C    | 10    | 50      |
| C325    | 0244118R | 470p  | C    | 10    | 50      |
| C326-29 | 0800015R | 10u   | EL   | -     | 16      |
| C331    | C252715  | 220n  | MPO  | 10    | 63      |
| C332    | C252715  | 220n  | MPO  | 10    | 63      |
| C333-36 | 0800015R | 10u   | EL   | -     | 16      |
| C338    | C252715  | 220n  | MPO  | 10    | 63      |
| C339    | C252715  | 220n  | MPO  | 10    | 63      |
| C340-43 | 0800015R | 10u   | EL   | -     | 16      |
| C344    | C150877  | 100n  | C    | 10    | 25      |
| C345    | 0800049R | 100u  | EL   | -     | 16      |
| C346-49 | 0800015R | 10u   | EL   | -     | 16      |
| C350    | 0800074  | 470u  | EL   | -     | 16      |
| C351    | C150877  | 100n  | C    | 10    | 25      |
| C352    | 0800041R | 47u   | EL   | -     | 16      |
| C353    | 0800015R | 10u   | EL   | -     | 16      |
| C354    | 0800015R | 10u   | EL   | -     | 16      |
| C355    | C252715  | 220n  | MPO  | 10    | 63      |
| C357    | C122182  | 120p  | C    | 2     | 50      |
| C358    | C323182  | 330p  | C    | 2     | 50      |
| C359    | C323182  | 330p  | C    | 2     | 50      |
| C360    | C232877  | 2n2   | C    | 10    | 25      |
| C361    | C232877  | 2n2   | C    | 10    | 25      |
| C362-65 | 0244118R | 470p  | C    | 10    | 50      |
| C366    | 0800058R | 220u  | EL   | -     | 16      |
| C368    | C252715  | 220n  | MPO  | 10    | 63      |
| C370    | 0800049R | 100u  | EL   | -     | 16      |
| C371    | C150877  | 100n  | C    | 10    | 25      |
| C372    | 0800066R | 330u  | EL   | -     | 16      |
| C373    | C130877  | 1n0   | C    | 10    | 25      |

| Ref No  | Part No. | Value | Type | Tol % | Voltage |
|---------|----------|-------|------|-------|---------|
| C374    | C150877  | 100n  | C    | 10    | 25      |
| C375    | C150877  | 100n  | C    | 10    | 25      |
| C376-79 | C252715  | 220n  | MPO  | 10    | 63      |
| C380    | 0800049R | 100u  | EL   | -     | 16      |
| C381    | 0800058R | 220u  | EL   | -     | 16      |
| C384    | 0890088R | 1n2   | C    | 10    | 50      |
| C392-6  | 0244115R | 560p  | C    | 10    | 50      |
| C399    | 0800082  | 1000u | EL   | -     | 16      |
| C401F   | 0244105R | 2n2   | C    | 10    | 50      |
| C402    | C140877  | 10n   | C    | 10    | 25      |
| C402F   | 0244105R | 2n2   | C    | 10    | 50      |
| C403    | C140877  | 10n   | C    | 10    | 25      |
| C404    | C150877  | 100n  | C    | 10    | 25      |
| C405    | 0244118R | 470p  | C    | 10    | 50      |
| C406    | 0299005R | 1n5   | PF   | 2     | 100     |
| C407    | C130877  | 1n0   | C    | 10    | 25      |
| C408    | C323182  | 330p  | C    | 2     | 50      |
| C409    | 0800003R | 1u0   | EL   | -     | 50      |
| C410    | 0890086R | 820p  | C    | 10    | 50      |
| C411    | 0299005R | 1n5   | PF   | 2     | 100     |
| C412    | 0800015R | 10u   | EL   | -     | 16      |
| C413    | 0800015R | 10u   | EL   | -     | 16      |
| C501F   | 0244105R | 2n2   | C    | 10    | 50      |
| C502    | C252715  | 220n  | MPO  | 10    | 63      |
| C502F   | C122182  | 120p  | C    | 2     | 50      |
| C503    | C252715  | 220n  | MPO  | 10    | 63      |
| C503F   | 0244105R | 2n2   | C    | 10    | 50      |
| C504    | C140877  | 10n   | C    | 10    | 25      |
| C505    | C227130  | 270p  | C    | 5     | 50      |
| C506    | C150877  | 100n  | C    | 10    | 25      |
| C507    | C150877  | 100n  | C    | 10    | 25      |
| C508    | C150877  | 100n  | C    | 10    | 25      |
| C509    | 0800023R | 22u   | EL   | -     | 16      |
| C510    | 0248682R | 82p   | C    | 5     | 50      |
| C512    | 0248694R | 270p  | C    | 5     | 50      |
| C513    | C140877  | 10n   | C    | 10    | 25      |
| C514    | 0800005R | 2u2   | EL   | -     | 50      |
| C515    | 0800007R | 3u3   | EL   | -     | 50      |
| C516    | C140877  | 10n   | C    | 10    | 25      |
| C518    | C212182  | 22p   | C    | 2     | 50      |
| C521    | C842715  | 82n   | MPO  | 10    | 63      |
| C521A   | C140877  | 10n   | C    | 10    | 25      |
| C522    | C140877  | 10n   | C    | 10    | 25      |
| C523    | 0800023R | 22u   | EL   | -     | 16      |
| C524    | 0800015R | 10u   | EL   | -     | 16      |
| C525    | 0800015R | 10u   | EL   | -     | 16      |
| C526    | 0800009R | 4u7   | EL   | -     | 25      |
| C527    | C457715  | 470n  | MPO  | 10    | 63      |
| C528    | 0244118R | 470p  | C    | 10    | 50      |
| C529    | C150877  | 100n  | C    | 10    | 25      |
| C530    | C150877  | 100n  | C    | 10    | 25      |
| C531    | C150422  | 100n  | C    | -     | 50      |
| C532    | C150422  | 100n  | C    | -     | 50      |
| C533    | C150422  | 100n  | C    | -     | 50      |
| C535    | C150877  | 100n  | C    | 10    | 25      |
| C536    | C140877  | 10n   | C    | 10    | 25      |
| C537    | C353715  | 330n  | MPO  | 10    | 63      |
| C537A   | C457715  | 470n  | MPO  | 10    | 63      |
| C540    | 0246464R | 100p  | C    | 5     | 50      |
| C541    | 0800082  | 1000u | EL   | -     | 16      |
| C542    | 0800089  | 3300u | EL   | -     | 10      |
| C543    | C457715  | 470n  | MPO  | 10    | 63      |
| C545    | 0800048R | 100u  | EL   | -     | 10      |
| C552    | C122182  | 120p  | C    | 2     | 50      |
| C554    | C122182  | 120p  | C    | 2     | 50      |
| C560    | C638715  | 6n8   | MPO  | 10    | 63      |
| C561    | C447715  | 47n   | MPO  | 10    | 63      |
| C562    | C232715  | 2n2   | MPO  | 10    | 63      |
| C563    | 0800079  | 1000u | EL   | -     | 6.3     |
| C564    | C150877  | 100n  | C    | 10    | 25      |
| C565    | 0800049R | 100u  | EL   | -     | 16      |
| C566    | C150877  | 100n  | C    | 10    | 25      |
| C567    | C150877  | 100n  | C    | 10    | 25      |
| C568    | 0248699R | 390p  | C    | 5     | 50      |
| C569    | C150715  | 100n  | MPO  | 10    | 63      |
| C570    | C120145  | 100p  | C    | 2     | 100     |

PRODUCT SAFETY NOTE: Components marked with a  $\Delta$  have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE at the beginning of this service manual. Don't degrade the safety of this receiver through improper servicing.

| Ref No. | Part No. | Value | Type               | Tol % | Voltage |
|---------|----------|-------|--------------------|-------|---------|
| C571    | C648715  | 68n   | MPO                | 10    | 63      |
| C571    | C150877  | 100n  | C                  | 10    | 25      |
|         |          |       | (CTI/ SECAM PANEL) |       |         |
| C572    | 0800003R | 1u0   | EL                 | —     | 50      |
| C573    | 0800003R | 1u0   | EL                 | —     | 50      |
| C574    | C128145  | 180p  | C                  | 2     | 100     |
| C575    | C150877  | 100n  | C                  | 10    | 25      |
| C576    | C150877  | 100n  | C                  | 10    | 25      |
| C577    | C130863  | 1n0   | C                  | 10    | 100     |
| C578    | C130863  | 1n0   | C                  | 10    | 100     |
| C579-82 | 0253046R | 10u   | EL                 | —     | 16      |
| C583    | 0800015R | 10u   | EL                 | —     | 16      |
| C584    | 0800015R | 10u   | EL                 | —     | 16      |
| C585    | 0248054R | 100p  | C                  | 10    | 50      |
| C586    | 0248054R | 100p  | C                  | 10    | 50      |
| C587    | C323182  | 330p  | C                  | 2     | 50      |
| C588    | 0248692R | 220p  | C                  | 5     | 50      |
| C589    | 0253046R | 10u   | EL                 | —     | 16      |
| C590    | 0800015R | 10u   | EL                 | —     | 16      |
| C590    | 0248692R | 220p  | C                  | 5     | 50      |
|         |          |       | (CTI/ SECAM PANEL) |       |         |
| C591    | 0253046R | 10u   | EL                 | —     | 16      |
| C596    | 0253046R | 10u   | EL                 | —     | 16      |
| C598    | 0248054R | 100p  | C                  | 10    | 50      |
| C599    | 0248054R | 100p  | C                  | 10    | 50      |
| C601    | 0253935  | 3300u | EL                 | —     | 35      |
| C602    | 0800009R | 4u7   | EL                 | —     | 25      |
| *C602   | 0800005R | 2u2   | EL                 | —     | 50      |
| C603    | C150715  | 100n  | MPO                | 10    | 63      |
| C604    | 0800053R | 100u  | EL                 | —     | 50      |
| C605    | 0800084  | 1000u | EL                 | —     | 31.5    |
| C606    | C252715  | 220n  | MPO                | 10    | 63      |
| *C606   | C457715  | 470n  | MPO                | 10    | 63      |
| C607    | C140877  | 10n   | C                  | 10    | 25      |
| C608    | C150715  | 100n  | MPO                | 10    | 63      |
| *C608   | C252715  | 220n  | MPO                | 10    | 63      |
| C610    | C150715  | 100n  | MPO                | 10    | 63      |
| C653    | 0800009R | 4u7   | EL                 | —     | 25      |
| C656    | D546006  | 1u5   | EL                 | —     | 22.5    |
| C657    | 0800018R | 10u   | EL                 | —     | 50      |
| C685    | C150877  | 100n  | C                  | 10    | 25      |
| C686    | C237877  | 2n7   | C                  | 10    | 25      |
| C701    | C472733  | 4u7   | MPO                | 10-27 | 63      |
| C702    | 0299932  | 330n  | PF                 | 10    | 200     |
| C702A   | 0299930  | 220n  | PF                 | 10    | 200     |
| C703    | 0262441  | 10n   | C                  | 2     | 1600    |
| C704    | 0299995F | 27n   | PF                 | 5     | 630     |
| C704A   | 0299995F | 27n   | PF                 | 5     | 630     |
| C705    | C160736  | 1u0   | PF                 | 5     | 100     |
| C706    | 0243512R | 820p  | C                  | 10    | 500     |
| C707    | 0257540F | 4u7   | EL                 | —     | 250     |
| C708    | C150711  | 100n  | MPO                | 10    | 100     |
| *C709   | 0244211  | 1n0   | C                  | 10    | 2000    |
| *C709A  | 0244202  | 470p  | C                  | 10    | 2000    |
| C710    | 0800082  | 1000u | EL                 | —     | 16      |
| C711    | 0244215  | 2n2   | C                  | 10    | 2000    |
| *C711A  | 0244215  | 2n2   | C                  | 10    | 2000    |
| C712    | 0299930F | 220n  | PF                 | 10    | 200     |
| C712A   | 0299931F | 270n  | PF                 | 10    | 200     |
| C713    | C165735  | 1u5   | PF                 | 10    | 250     |
| *C713   | 0244505R | 2n2   | C                  | 10    | 500     |
| *C714   | 0244505R | 2n2   | C                  | 10    | 500     |
| C715    | C130877  | 1n0   | C                  | 10    | 25      |
| C800    | 0800023R | 22u   | EL                 | —     | 16      |
| C801    | C150877  | 100n  | C                  | 10    | 25      |
| C802    | 0248054R | 100p  | C                  | 5     | 50      |
| C803    | 0248054R | 100p  | C                  | 5     | 50      |
| C804    | 0248054R | 100p  | C                  | 5     | 50      |
| C805    | 0243509R | 470p  | C                  | 10    | 500     |
| C806    | 0243509R | 470p  | C                  | 10    | 500     |
| C807    | 0243509R | 470p  | C                  | 10    | 500     |
| C810    | C130877  | 1n0   | C                  | 10    | 25      |
| C811    | C150710  | 100n  | MPO                | 10    | 250     |
| C813    | E884110  | 10n   | SPARK              | GAP   | 2000    |
| C821    | 0257540  | 4u7   | EL                 | —     | 250     |
| C822    | 0257540  | 4u7   | EL                 | —     | 250     |

| Ref No        | Part No. | Value                      | Type | Tol % | Voltage |
|---------------|----------|----------------------------|------|-------|---------|
| $\Delta$ C901 | C150712  | 100n                       | MP   | 20    | 275 AC  |
| $\Delta$ C902 | C150712  | 100n                       | MP   | 20    | 275 AC  |
| $\Delta$ C903 | C150712  | 100n                       | MP   | 20    | 275 AC  |
| $\Delta$ C904 | 0249395  | 4n7                        | C    | —     | 400     |
| $\Delta$ C906 | 0249395  | 4n7                        | C    | —     | 400     |
| C907          | C001544  | 220u                       | EL   | —     | 400     |
| C908          | 0244509R | 4n7                        | C    | 10    | 500     |
| C909          | 0244211  | 1n0                        | C    | 10    | 2000    |
| C910          | 0890084R | 560p                       | C    | 10    | 50      |
| C913          | 0246344  | 100p                       | C    | 10    | 2000    |
| $\Delta$ C914 | C648712  | 68n                        | MP   | 20    | 275 AC  |
| C915          | 0245612  | 4n7                        | C    | 10    | 1000    |
| C916          | 0800005R | 2u2                        | EL   | —     | 50      |
| C921          | 0246344  | 100p                       | C    | 10    | 2000    |
| C923          | 0800066R | 330u                       | EL   | —     | 16      |
| C924          | C001542  | 470u                       | EL   | —     | 16      |
| C925          | 0800018R | 10u                        | EL   | —     | 50      |
| C926          | 0258116F | 1000u                      | EL   | —     | 50      |
| C927          | C001541  | 470u                       | EL   | —     | 25      |
| $\Delta$ C931 | 0249499  | 4n7                        | C    | 20    | 4000    |
| C941          | C472733  | 4u7                        | MPO  | 10-27 | 63      |
| C942          | 0800018R | 10u                        | EL   | —     | 50      |
| C943          | 0246344  | 100p                       | C    | 10    | 2000    |
| C944          | 0259431  | 220u                       | EL   | —     | 200     |
| C945          | C150877  | 100n                       | C    | 10    | 25      |
| C946          | C437715  | 4n7                        | MPO  | 10    | 63      |
| C947          | 0800049R | 100u                       | EL   | —     | 16      |
| C948          | 0800082  | 1000u                      | EL   | —     | 16      |
|               |          | (SIGNAL AND CONTROL PANEL) |      |       |         |
| C948          | 0800049R | 100u                       | EL   | —     | 16      |
| C949          | 0800005R | 2u2                        | EL   | —     | 50      |
| C950          | C140715  | 10n                        | MPO  | 10    | 63      |
| C952          | 0800044R | 47u                        | EL   | —     | 50      |
| $\Delta$ C953 | 0247975  | 3n3                        | C    | —     | 50      |
| C954          | 0246344  | 100p                       | C    | 10    | 2000    |
| C956          | 0244105R | 2n2                        | C    | 10    | 50      |
| C957          | 0800005R | 2u2                        | EL   | —     | 50      |
| C959          | C242877  | 22n                        | C    | 10    | 25      |
| C960          | 0800074  | 470u                       | EL   | —     | 16      |
| C1001         | 0800049R | 100u                       | EL   | —     | 16      |
| C1002         | C150877  | 100n                       | C    | 10    | 25      |
| C1003         | 0248684R | 100p                       | C    | 5     | 50      |
| C1005         | C150877  | 100n                       | C    | 10    | 25      |
| C1006         | C212182  | 22p                        | C    | 2     | 50      |
| C1007         | C217182  | 27p                        | C    | 2     | 50      |
| C1008         | C115182  | 15p                        | C    | 2     | 50      |
| C1009         | C115182  | 15p                        | C    | 2     | 50      |
| C1010         | C150877  | 100n                       | C    | 10    | 25      |
| C1011         | 0800003R | 1u0                        | EL   | —     | 50      |
| C1012         | 0800003R | 1u0                        | EL   | —     | 50      |
| C1013         | 0800023R | 22u                        | EL   | —     | 16      |
| C1014         | C150877  | 100n                       | C    | 10    | 25      |
| C1015         | 0800015R | 10u                        | EL   | —     | 16      |
| C1062         | C437877  | 4n7                        | C    | 10    | 25      |
| C1063         | C150877  | 100n                       | C    | 10    | 25      |
| C2001         | 0800023R | 22u                        | EL   | —     | 16      |
| C2002         | C242877  | 22n                        | C    | 10    | 25      |
| C2003         | C217145  | 27p                        | C    | 2     | 100     |
| C2004         | C115182  | 15p                        | C    | 2     | 50      |
| C2005         | C120182  | 100p                       | C    | 2     | 50      |
| C2006         | 0890079R | 270p                       | C    | 10    | 50      |
| C2007         | C242877  | 22n                        | C    | 10    | 25      |
| C2008         | 0890083R | 470p                       | C    | 10    | 50      |
| C2009         | C130877  | 1n0                        | C    | 10    | 25      |
| C2010         | C115182  | 15p                        | C    | 2     | 50      |
| C2011         | C130877  | 1n0                        | C    | 10    | 25      |
| C2012         | C150877  | 100n                       | C    | 10    | 25      |
| C2013         | 0800018R | 10u                        | EL   | —     | 50      |
| C2014         | C150877  | 100n                       | C    | 10    | 25      |
| C2015         | 0800018R | 10u                        | EL   | —     | 50      |
| C2016         | C212182  | 22p                        | C    | 2     | 50      |
| C2017         | C212182  | 22p                        | C    | 2     | 50      |
| C2018         | 0800018R | 10u                        | EL   | —     | 50      |
| C2019         | C150877  | 100n                       | C    | 10    | 25      |
| C2020         | 0800005R | 2u2                        | EL   | —     | 50      |
| C2021         | C648877  | 68n                        | C    | 10    | 25      |

**PRODUCT SAFETY NOTE:** Components marked with a  have special characteristics important to safety. Before replacing any of these components, read carefully the **PRODUCT SAFETY NOTICE** at the beginning of this service manual. Don't degrade the safety of this receiver through improper servicing.

| Ref No.    | Part No  | Value | Type | Tol % | Voltage |
|------------|----------|-------|------|-------|---------|
| C2022      | 0890078R | 220p  | C    | 10    | 50      |
| C2023      | C140877  | 10n   | C    | 10    | 25      |
| C2024      | C608182  | 6p8   | C    | 2     | 50      |
| C2025      | C447877  | 47n   | C    | 10    | 25      |
| C2026      | C120182  | 100p  | C    | 2     | 50      |
| C2027      | C120182  | 100p  | C    | 2     | 50      |
| C2028      | C140877  | 10n   | C    | 10    | 25      |
| C2029      | C242877  | 22n   | C    | 10    | 25      |
| C2030      | 0800048R | 100u  | EL   | -     | 10      |
| C2031      | 0800023R | 22u   | EL   | -     | 16      |
| C2032      | C150877  | 100n  | C    | 10    | 25      |
| C2033      | C150877  | 100n  | C    | 10    | 25      |
| C2034      | 0800049R | 100u  | EL   | -     | 16      |
| C2035      | 0800018R | 10u   | EL   | -     | 50      |
| C2036      | C232877  | 2n2   | C    | 10    | 25      |
| C2037      | 0800087  | 2200u | EL   | -     | 16      |
| C2038      | 0800018R | 10u   | EL   | -     | 50      |
| C2039      | C120182  | 100p  | C    | 2     | 50      |
| C2040      | 0800012R | 4u7   | EL   | -     | 50      |
| C3000      | C150877  | 100n  | C    | 10    | 25      |
| C3001      | C150877  | 100n  | C    | 10    | 25      |
| C3002      | C150877  | 100n  | C    | 10    | 25      |
| C3003      | C150422  | 100n  | C    | -     | 50      |
| C3004      | C150422  | 100n  | C    | -     | 50      |
| C3005      | C150422  | 100n  | C    | -     | 50      |
| C3006      | 0800049R | 100u  | EL   | -     | 16      |
| C3007      | C150877  | 100n  | C    | 10    | 25      |
| C3300      | 0800009R | 4u7   | EL   | -     | 25      |
| C3301      | C140877  | 10n   | C    | 10    | 25      |
| C3302      | C140877  | 10n   | C    | 10    | 25      |
| C3350      | 0800058R | 220u  | EL   | -     | 16      |
| C4000      | C150877  | 100n  | C    | 10    | 25      |
| C4001      | 0800049R | 100u  | EL   | -     | 16      |
| C4003      | 0800015R | 10u   | EL   | -     | 16      |
| C4004      | 0890072R | 68p   | C    | -     | 50      |
| C4005      | C140877  | 10n   | C    | 10    | 25      |
| C4007      | C140877  | 10n   | C    | 10    | 25      |
| C4008      | C140877  | 10n   | C    | 10    | 25      |
| C4009      | C457421  | 470n  | C    | -     | 50      |
| C4010      | 0890072R | 68p   | C    | -     | 50      |
| C4011      | C130877  | 1n0   | C    | 10    | 25      |
| C4012      | C457421  | 470n  | C    | -     | 50      |
| C4013      | C140877  | 10n   | C    | 10    | 25      |
| C4014      | C140877  | 10n   | C    | 10    | 25      |
| C4015      | C457421  | 470n  | C    | -     | 50      |
| C4016      | C457421  | 470n  | C    | -     | 50      |
| C4017 - 20 | 0800023R | 22u   | EL   | -     | 16      |
| C4022      | C130877  | 1n0   | C    | 10    | 25      |
| C4023      | C140877  | 10n   | C    | 10    | 25      |
| C4024      | C130877  | 1n0   | C    | 10    | 25      |
| C4025      | C130877  | 1n0   | C    | 10    | 25      |

[illegible]

PRODUCT SAFETY NOTE: Components marked with a  $\Delta$  have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE at the beginning of this service manual. Don't degrade the safety of this receiver through improper servicing.

| Ref. No. | Part No. | Description        |
|----------|----------|--------------------|
| OPT01    | T548009  | CNX82/TLP731LF2    |
| IC100    | T900523  | TDA2009A           |
| IC201    | T900525  | TDA8349A           |
| IC202    | T900527  | DT5C143E           |
| IC300    | T900517  | TEA6415B           |
| IC301    | T900516  | TEA6420            |
| IC302    | T900537  | MC44131            |
| IC401    | T900557  | TDA4480-D          |
| IC500    | T900519  | MC44140            |
| IC501    | T900559  | MC44000            |
| IC560    | T900533  | TDA4565            |
| IC561    | T900532  | TDA8490            |
| IC562    | T900501  | M52055P            |
| IC601    | T900522  | TDA8170            |
| *IC601   | T900556  | TDA8178S           |
| IC602    | T900508  | LM393              |
| IC800    | T900509  | TEA5101A           |
| IC921    | T900326  | 12V REGULATOR      |
| IC922    | T900515  | L4941BV            |
| IC923    | T900536  | 5V REGULATOR       |
| IC1001   | T900565  | ST6385             |
| IC1002   | T900529  | TL7705 ACP         |
| IC1003   | T900528  | X24C04 512X8EEPROM |
| IC1004   | 2009401R | PST529C            |
| IC1060   | T900548  | HCF4520B           |
| IC2001   | T900505  | SAA5191            |
| IC2002   | E740007  | ST24C02-P          |
| *IC2002  | T900539  | ST24C02 AB1        |
| IC2003   | T900566  | PCB83C654 V2.6     |
| *IC2003  | T900555  | PCB83C528 P        |
| IC2004   | T900460  | TMS4464/KM41C64P   |
| IC2005   | T900506  | SAA9042            |
| IC3000   | T900512  | TEA5114A           |
| IC4001   | T900545  | BA15218            |
| IC4002   | T900545  | BA15218            |
| IC4003   | T900483  | TDA1543            |
| IC4004   | T900546  | HCF4053BE          |
| IC4005   | T900543  | CF70088            |
| IC4010   | T900345  | 5V REGULATOR       |
| IC4011   | T732013  | TS0820-20          |
| Q103     | T631275  | BC548B             |
| Q201     | T631275  | BC548B             |
| Q202     | T631276  | BC558B             |
| Q203     | T631275  | BC548B             |
| Q300-05  | T631275  | BC548B             |
| Q500     | T631247  | BC337              |
| Q502     | T631286  | BC548C             |
| Q560-64  | T631275  | BC548B             |
| Q565     | T631276  | BC558B             |
| Q566-70  | T631275  | BC548B             |
| Q571     | T631276  | BC558B             |
| Q572     | T631275  | BC548B             |
| Q573     | T631275  | BC548B             |
| Q651     | T636046  | BU801              |
| Q652     | T631275  | BC548B             |
| Q701     | T636045  | BD675A             |
| Q702     | T631247  | BC337              |
| Q703     | T636050  | BU808              |
| Q901     | T636054  | H8N80FI            |
| Q902     | T636043  | BUX87              |
| Q903     | T631275  | BC548B             |
| Q904     | T631275  | BC548B             |
| Q905     | T631275  | BC548B             |
| Q941     | T631276  | BC558B             |
| Q942     | T636052  | BD675              |
| Q943-47  | T631275  | BC548B             |
| Q948     | T631276  | BC558B             |
| Q949     | T631275  | BC548B             |
| Q950     | T631275  | BC548B             |
| Q951     | T631276  | BC558B             |
| Q952     | T631276  | BC558B             |
| Q1001    | T631276  | BC558B             |
| Q1002    | T631292  | DTC 114 ES         |
| Q1003    | T631275  | BC548B             |
| Q1004    | T631276  | BC558B             |
| Q1005    | T631275  | BC548B             |

| Ref. No. | Part No. | Description          |
|----------|----------|----------------------|
| Q2001    | T631275  | BC548B               |
| Q2004    | T631275  | BC548B               |
| Q3000-03 | T631275  | BC548B               |
| Q3300    | T631275  | BC548B               |
| Q3301    | T631275  | BC548B               |
| Q4001    | T633134  | BF240                |
| Q4002    | T633134  | BF240                |
| Q4003    | T633141  | 2N5461               |
| Q4004    | 2326873R | DTC 144 EST          |
| CD401    | T532017  | BB405B VARICAP DIODE |
| CD402    | T532017  | BB405B VARICAP DIODE |
| D001     | T531057  | 1N4531               |
| D103     | T531053  | 1N4148               |
| D108     | T531053  | 1N4148               |
| D201     | T531057  | 1N4531               |
| D300     | T531053  | 1N4148               |
| D301     | T531053  | 1N4148               |
| D310     | T531057  | 1N4531               |
| BD388    | T531055  | BAT85                |
| D402     | T531058  | BA482                |
| D403     | T531058  | BA482                |
| D404     | T531057  | 1N4531               |
| D501     | T531053  | 1N4148               |
| D503-06  | T531053  | 1N4148               |
| D560     | T531053  | 1N4148               |
| D561     | T531053  | 1N4148               |
| D590     | T531053  | 1N4148               |
| D601     | T431040  | 1N4004               |
| D602     | T431113  | BYD33J               |
| D652     | T531053  | 1N4148               |
| D653     | T531053  | 1N4148               |
| D654     | T531053  | 1N4148               |
| D681     | T531053  | 1N4148               |
| D683     | T531053  | 1N4148               |
| D684     | T531053  | 1N4148               |
| D685     | T531056  | BYV10-40             |
| D701     | T431113  | BYD33J               |
| D702     | T431113  | BYD33J               |
| D703     | T431116  | BYW96D               |
| D704     | T431117  | BY228                |
| D706     | T431113  | BYD33J               |
| D800     | T531053  | 1N4148               |
| D801     | T531053  | 1N4148               |
| D802     | T531053  | 1N4148               |
| D901-04  | 2344111M | BY134GP              |
| D905     | T431113  | BYD33J               |
| D906     | T531053  | 1N4148               |
| D907     | T531053  | 1N4148               |
| D908     | T431113  | BYD33J               |
| D920     | T431113  | BYD33J               |
| D921     | T431121  | MUR880               |
| D922     | T431120  | BYV27-150            |
| D923     | T431120  | BYV27-150            |
| D924     | T431122  | BYV28-200            |
| D926     | T531053  | 1N4148               |
| D929     | T531053  | 1N4148               |
| D941     | T431113  | BYD33J               |
| D942-45  | T531053  | 1N4148               |
| D948-54  | T531053  | 1N4148               |
| D955     | T531055  | BAT85                |
| D1001    | T531053  | 1N4148               |
| LED1001  | T547041  | TL5H2101             |
| LED1002  | T547046  | TL5G 2101            |
| LED1003  | T547046  | TL5G 2101            |
| D1005    | T531053  | 1N4148               |
| D1006    | T531053  | 1N4148               |
| D1007    | T531053  | 1N4148               |
| D2001    | T531053  | 1N4148               |
| D2002    | T531055  | BAT85                |
| D3001    | T531055  | BAT85                |
| D3300    | T531053  | 1N4148               |
| D4002    | T531053  | 1N4148               |
| ZD001    | T536215  | BZX79C33V            |
| ZD300-13 | T536186  | BZX79C8V2            |
| ZD316    | T536181  | BZX79C13V            |
| ZD317    | T536229  | BZX79B9V1            |

PRODUCT SAFETY NOTE: Components marked with a  $\Delta$  have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE at the beginning of this service manual. Don't degrade the safety of this receiver through improper servicing.

| Ref. No.       | Part No. | Description                        |
|----------------|----------|------------------------------------|
| ZD503          | T536213  | BZX79C4V3                          |
| ZD504          | T536213  | BZX79C4V3                          |
| ZD505          | T536213  | BZX79C4V3                          |
| ZD507          | T536225  | BZX79B6V2                          |
| ZD601          | T536172  | BZX79C27V                          |
| ZD681          | T536077  | BZX79C6V2                          |
| ZD701          | T536177  | BZX79C12V                          |
| ZD800          | T536181  | BZX79C13V                          |
| ZD901          | T536246  | 18V ZENER 1 3W                     |
| ZD902          | T536246  | 18V ZENER 1 3W                     |
| ZD904          | T536217  | BZX79B2V7                          |
| ZD941          | T536172  | BZX79C27V                          |
| ZD942          | T536177  | 12V ZENER 500mW                    |
| ZD943          | T536247  | BZX55C120                          |
| ZD944          | T536248  | BZX55C160                          |
| ZD945          | T536207  | BZV10                              |
| ZD951          | T536230  | BZX79B10                           |
| ZD955          | T536177  | BZX79C12V                          |
| ZD956          | T536089  | BZX79C6V8                          |
| ZD957          | T536217  | BZX79B2V7                          |
| ZD965          | T536089  | BZX79C6V8                          |
| ZD1002         | T536201  | BZX79B5V                           |
| ZD1003         | T536201  | BZX79B5V                           |
| ZD1004         | T536201  | BZX79B5V                           |
| ZD1007         | T536186  | BZX79C8V2                          |
| L001           | 2122253M | 100uH AXIAL COIL                   |
| L002           | 2122253M | 100uH AXIAL COIL                   |
| L006           | 2122299M | 1uH AXIAL COIL                     |
| L201           | L410164  | VISION DETECTOR COIL               |
| L300           | 2122253M | 100uH AXIAL COIL                   |
| L301           | 2122253M | 100uH AXIAL COIL                   |
| L302           | 2122253M | 100uH AXIAL COIL                   |
| L311           | 2122253M | 100uH AXIAL COIL                   |
| L312           | 2122299M | 1uH AXIAL COIL                     |
| L350           | 2122234M | 3.9uH AXIAL COIL                   |
| L403           | 2125221R | 56uH FILTER COIL                   |
| L405           | 2125221R | 56uH FILTER COIL                   |
| L406           | L410154  | 5 5MHz SOUND DETECTOR COIL         |
| L407           | L410156  | 11 5MHz SOUND FREQ.<br>CHANGE COIL |
| L408           | L410154  | 5 5MHz SOUND DETECTOR COIL         |
| L409           | 2123109M | 33uH FILTER COIL                   |
| L560           | 2123781R | 100uH FILTER COIL                  |
| L561           | 2123781R | 100uH FILTER COIL                  |
| L562           | 2143191  | BELL FILTER COIL                   |
| L563           | 2143192  | DISCRIMINATOR COIL                 |
| L650           | 2220641  | E - W CORRECTION COIL              |
| L651           | 2220642  | FILTER COIL                        |
| L701           | 2161371  | LINEARITY COIL                     |
| L703           | 2121211  | FILTER COIL                        |
| L706           | 2122094  | 22uH FIXED COIL                    |
| L801           | 2122253M | 100uH AXIAL COIL                   |
| L901           | 2124531  | LINE FILTER                        |
| L902           | L210061  | MAINS FILTER CHOKE                 |
| L903           | 2122239M | 10uH AXIAL COIL                    |
| L1001          | 2122247M | 39uH AXIAL COIL                    |
| L2001          | 2122945M | 15uH AXIAL COIL                    |
| L2002          | L410165  | 15uH VARIABLE COIL                 |
| L2003          | 2122945M | 15uH AXIAL COIL                    |
| L4001          | 2122943M | 10uH AXIAL COIL                    |
| L4003          | 2122239M | 10uH AXIAL COIL                    |
| $\Delta$ T701  | 2436792  | FLYBACK TRANSFORMER                |
| $\Delta$ *T701 | 2436796  | FLYBACK TRANSFORMER                |
| $\Delta$ T901  | L380086  | SWITCH MODE TRANSFORMER            |
| $\Delta$ *T901 | L380091  | SWITCH MODE TRANSFORMER            |
| $\Delta$ T902  | L380090  | START UP TRANSFORMER               |

| CRYSTALS, FILTERS, DELAY LINES etc |         |                              |
|------------------------------------|---------|------------------------------|
| X320                               | E518030 | CERAMIC RESONATOR            |
| X520                               | E516038 | 17 734MHz CRYSTAL            |
| X1001                              | E516034 | 8MHz CRYSTAL                 |
| X2001                              | 2940251 | 13 875MHz CRYSTAL            |
| X2002                              | E516030 | 12MHz CRYSTAL                |
| X4001                              | E516046 | 16.384MHz CRYSTAL            |
| MF401                              | 2142782 | 5.5MHz CERAMIC FILTER        |
| MF402                              | 2142783 | 5 74MHz CERAMIC FILTER       |
| CP201                              | E518042 | SAW FILTER                   |
| CP401                              | E518041 | SAW FILTER                   |
| CP403                              | E518040 | SAW FILTER                   |
| CP501                              | 2143891 | 4.43MHz TRAP                 |
| DL300                              | 2165903 | 300ns DELAY LINE             |
| TH901                              | E441034 | THERMISTOR                   |
| IR1001                             | T549010 | INFRA RED AMPLIFIER ASSEMBLY |
| SG801                              | 2340037 | SPARK GAP                    |

# HITACHI

HITACHI LTD. TOKYO JAPAN  
International Sales Division,  
THE HITACHI ATAGO BLDG.  
No. 15 -12 Nishi-Shinbashi, 2 - Chome,  
Minato-Ku, Tokyo 105, Japan  
Tel. Tokyo 3 32581111

**HITACHI SALES EUROPA GmbH**  
Am Seestern 18,  
40547 Düsseldorf,  
Germany  
Tel. 0211 5291 50

**HITACHI SALES (HELLAS) S.A.**  
91, Falirou Street, 117-41 Athens,  
Greece  
Tel. 92 42-620-4

**HITACHI HOME ELECTRONICS (EUROPE) Ltd.**  
Hitachi House, Station Road, Hayes,  
Middlesex UB3 4DR,  
England  
Tel. 0181 849 2000

**HITACHI SALES IBERICA, S.A.**  
Gran Via Carlos Tercero.101,1 -1  
Barcelona 08028  
Tel. 3- 330.86.52

**HITACHI FRANCE (RADIO-T.V.-ELECTRO-MENAGER) S.A.**  
4, allée des Sorbiers,  
Parc d'active de Chêne,  
69671 BRON Cedex,  
France  
Tel. 72 14-29-70

**HITACHI HOME ELECTRONICS NORDIC**  
Domnarvsgatan 29 Lunda, Box 62  
S-163 91 Spanga,  
Sweden  
Tel. 08 621 8250

**Scan & PDF-Design: Schaltungsdienst  
Lange oHG  
Verlag technische Druckschriften**

**Zehrendorfer Straße 11  
D-12277 Berlin**

**<http://www.schaltungsdienst.com>**