

**AKAI**

# MANUAL

◀ **Stereo module**

6911 37 89

**RF-IF module** ▶

5829 02 58

**CT 2570 UK**

Ident-Nr. 5436 03 00

**CT 2870 UK**

Ident-Nr. 5436 03 10

**Replacement parts list**

When ordering spares please quote item and order number. When ordering (sub-)assemblies (modules), give the assembly number in addition!

△ Safety components in accordance with existing regulations. These components must only be replaced by original component parts.

<b>CT 2570 UK</b>			<b>CT 2870 UK</b>		
Cabinet		6112 86 36	Cabinet		6112 28 61
Front plate		6417 26 06	Front plate		6417 29 85
Loudspeaker blind		6411 07 20	Loudspeaker blind		6411 07 21
Operating unit lid		8687 02 81	Operating unit lid		8687 02 82
Holder for operating unit lid		8681 10 06	Holder for operating unit lid		8681 10 06
Grille for indicator		8251 44 19	Grille for indicator		8251 44 19
Window for indicator grille		6466 37 36	Window for indicator grille		6466 37 36
Pad		8642 01 48	Pad		8642 01 48
Rear cover		6214 10 68	Rear cover, grey		6214 09 59
Holder for rear cover		8624 47 10	Holder for rear cover		8624 47 10
Screw for picture tube		7864 02 21	Screw for picture tube		7864 02 21
Picture tube	A 59 ECF 00 X 01 SEL	△ 4362 25 55	Picture tube	A 66 ECF 00 X 01 SEL	△ 4362 28 03
Earth for picture tube		6141 03 05	Earth for picture tube		6141 03 05
Spring device for earthing		7351 28 46	Spring device for earthing		7351 28 48
Degaussing coil		△ 4588 05 24	Holder for picture tube		8623 31 40
Hook for degaussing coil		8681 72 15	Degaussing coil		△ 4588 05 24
Loudspeaker	8 Ω, 15 W	4311 07 15	Hook for degaussing coil		8681 72 15
Holder for loudspeaker		7368 01 96	Loudspeaker	8 Ω, 10 W	4311 07 15
Chassis conduct, left		8625 11 63	Loudspeaker	4 Ω, 10 W	4311 09 21
Chassis conduct, right		8625 11 64	Holder for loudspeaker		7368 01 96
Holder for STEREO-Modul		8625 48 09	Chassis conduct, left		8625 11 66
Plunger pin for RF module		8642 75 05	Chassis conduct, right		8625 11 65
Mains pushbutton		6315 36 18	Mains pushbutton		6315 36 18
Holder for decoder		8625 47 07	Holder for STEREO-Modul		8625 48 09
			Plunger pin for RF module		8642 75 05
			C 395/396	2.2 μF 100 V	3421 75 52
			Holder for decoder		8625 47 07

# Picture and sound IF-adjustment

## Required measuring equipment:

Sweep generator with marker transmitter: 30 ... 42 MHz, max. output 200 mV  
 Signal generator: 5.5 MHz, dispersion  $\pm 15$  kHz,  $f_{mod} = 1$  kHz  
 Oscillograph: Sensitivity 10 mV/cm ... 1 V/cm  
 RF rectifier probe  
 Bias voltage instrument: adjustable from 0 ... 10 V

## Preparations:

Bias voltage instrument to TZ 214. Check U V 12 V  $\pm 10\%$  at TZ 23. The cores must be at the upper end of the coil.

No.	Stage to be adjusted	Connect. sweep gen., transm.	Connect. oscillor.	Adjustment procedure	Oscillograms Remarks	
1.1	UHF/IF filter	Test circuit 1. Sweep gen. via 15 pF to TP 2 (UHF tuner) approx. 300 mV TP 203/204 to earth	Oscillo. via probe to TP 101/102. Amplitude: 10 mV/cm. See Fig. 1	Adjust to max. amplitude and level roof with L 62 and L 64 (VC and SC must have the same height). Bandwidth can be narrowed with L 63.		
1.2	UHF/VHF/IF-filter	Test circuit 1. Sweep gen. via 10 nF to TP 6 (UHF tuner) approx. 20 mV TP 4 to earth.	Oscillo. via probe to TP 203/204. Amplitude: approx. 20 mV/cm. See Fig 2	Adjust to max. amplitude and level roof with L 161 and L 162 (BT and FT must have the same height).		
2.	Reference circuit	Test circuit 2. Sweep gen. via interstage transformer (4:1) to TP 201/202 (approx. 20 mV)	Oscillo. to TZ 24. Amplitude 450 mV/cm.	Tune frequency marker 38.9 MHz to max. amplitude with L 206. (UK = 39.5 MHz)		
3	Monitoring of IF frequency response	Attenuation acc. to test circuit 3. TP 102 to earth via 2,2 nF. Test circuit 2. Sweep gen. via interstage transf. (4:1) to TP 203/204 (approx. 150 mV)	Oscillo. to T 24. Amplitude: 0.5 V/cm	Set frequency marker 38 MHz to 1,7 V <sub>ss</sub> - 0 dB with bias voltage at TZ 214. Marker 38,9 MHz should lie between -5 dB and -7 dB, marker 34,5 MHz between -3 dB and -5 dB.		
4.	DF	Test circuit 2. Sweep gen. via interstage transf. (4:1) to TP 203/204. (approx. 150 mV)	Oscillo. to TP 211. Amplitude 100 mV/cm. Bias voltage instr. 0 ... 10 V on TP 213.	Set frequency marker 38.9 MHz (VC) to zero with L 245. (UK = 39.5 MHz)		
5.1	DF-AF	Signal generator 5.5 MHz (Hub $\pm 27$ kHz, $f_{mod} = 1$ kHz $\geq 140$ mV <sub>ant</sub> ) on TP211	Oscillo. to TZ 31	Adjust R 233 on 761 mV <sub>ss</sub> .		
5.2	DF-AF	Signal generator 5.74 MHz (Hub $\pm 27$ kHz, $f_{mod} = 1$ kHz $\geq 140$ mV <sub>ant</sub> ) on TP212	Oscillo. to TZ 33	Tune L 226 (L 236) to AF max. and min. distortion factor.		
5.3	Some voltage level from sound channel 1 and channel 2	Signal generator 5.5 MHz on TP 211 and 5.74 MHz on TP 212	Oscillo. to TZ 31 and TZ 33	Tune sound channel 2 with R 225 (R 233) to have the same height wit sound channel 1 (appr. 1%).	Switch the respective terminals of TZ 31/TZ 33 to earth with 10 nF capacitors	
6.0	Monitoring of video signal	With the aid of a standard modulated TV transmitter, the video output voltage should be 2 V <sub>ss</sub> $\pm 0.2$ V.				

Abb. 1  
Probe for RF tuning

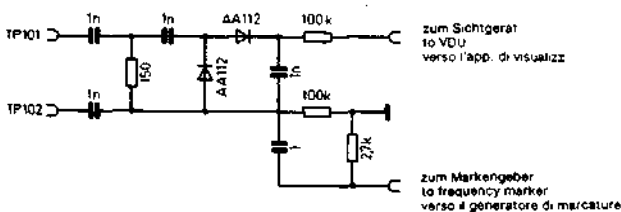
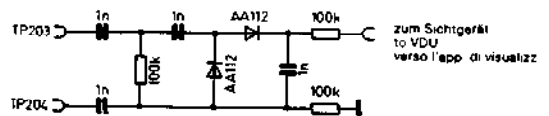
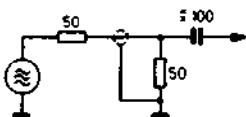


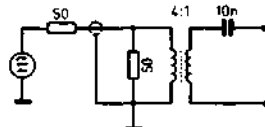
Abb. 2  
Probe for tuning of the IF coil



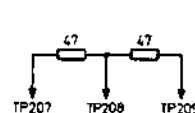
Test circuits 1

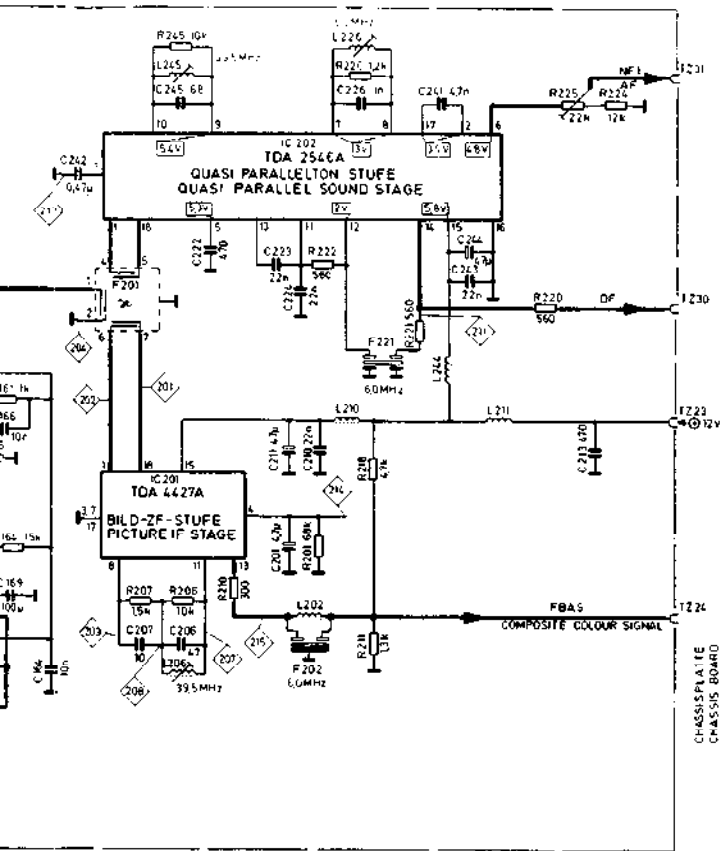


Test circuits 2



Test circuits 3





### Instructions for dismantling:

- Turn the two red plunger pins by 90°. Remove module from bracket (Fig. 1).
- Apply pressure to the plate channel simultaneously with both thumbs, until the cover seaming bends, then remove cover (Fig. 1).
- Before the cover can be put back on, the plate channel must first be pressed back into its proper position from the inside (Fig. 2).
- Put cover back on.

Raststift  
Plunger pins  
Ambedue le spine

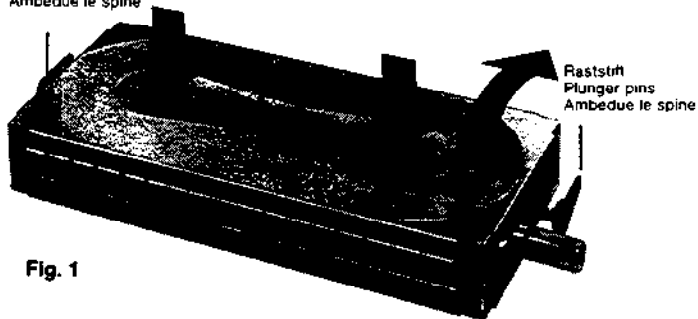


Fig. 1

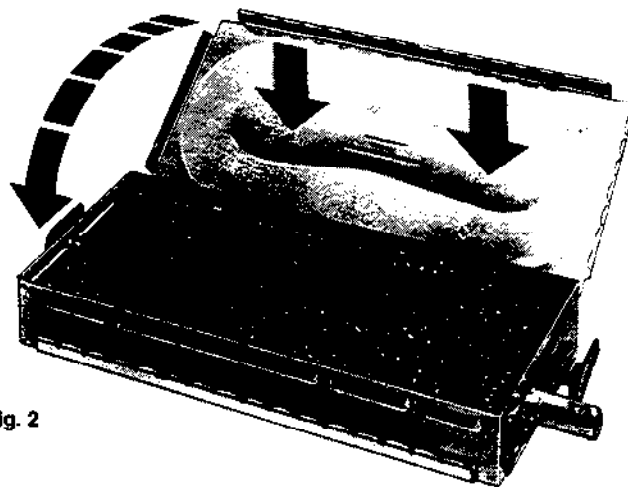
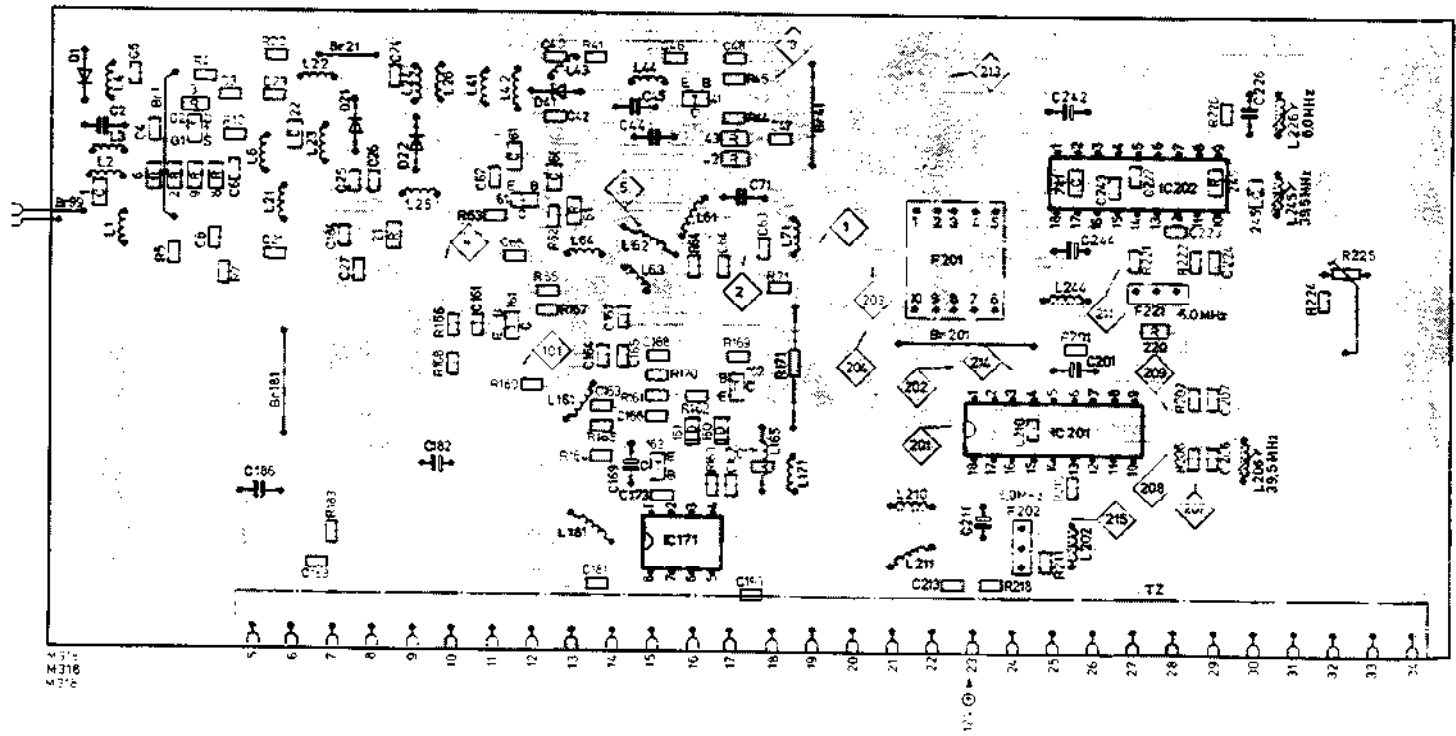
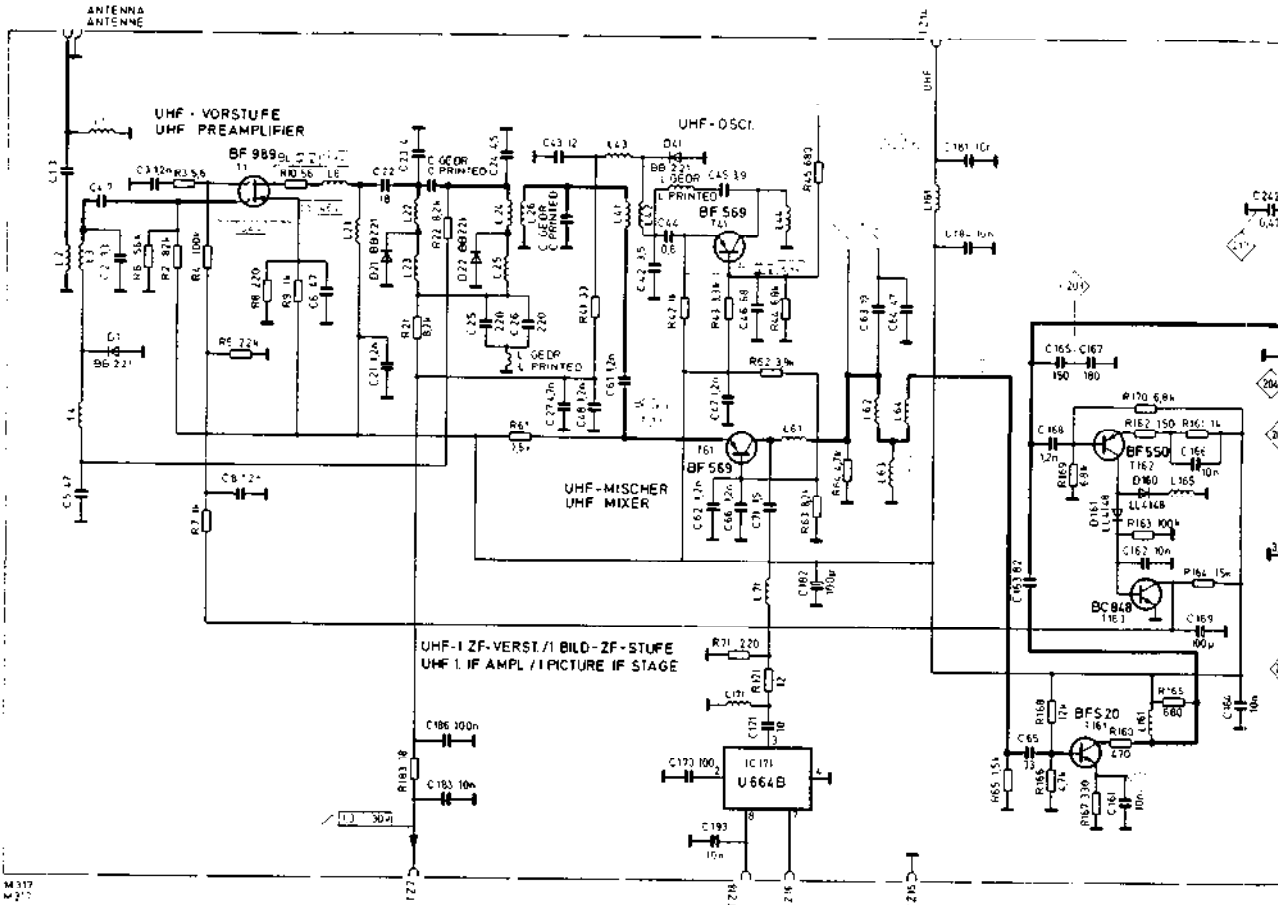


Fig. 2

Gegenstand Item Pièce Ricambi	Bestell-Nr. Order no. N° de com. No. di rif.	Gegenstand Item Pièce Ricambi	Bestell-Nr. Order no. N° de com. No. di rif.
<b>HF-ZF Modul (Kabeltuner)</b> <b>RF-IF module (Cable tuner)</b> <b>Module HF-BF (Tuner pour réseau câblé)</b> <b>Modulo MF-BF (Tuner a larga banda)</b>	<b>5829 02 58</b>	D 160, 161	LL 4148
IC 161	TDA 5030	L 202	Drossel / Choke / Bob de sell / Bobina
IC 171	U 664 B	L 205/245	Filter / Filter / Filtre / Filtre 38.9 MHz
IC 201	TDA 4427 A	L 206	Filter / Filter / Filtre / Filtre 38.9 MHz
IC 202	TDA 2546 A	L 207	Drossel / Choke / Bob de sell / Bobina
T 1	BF 989	L 210	Drossel / Choke / Bob de sell / Bobina
T 1	BF 9965-E 6327	L 211	Spule / Coil / Bobine / Bobina
T 41	BF 569-L	L 226, 236	Filter / Filter / Filtre / Filtre 5.5 MHz
T 61	BF 569-E 6327	L 244	Drossel / Choke / Bob de sell / Bobina
T 162	BF 550	F 201	OFW G 3205
T 163	BC 848 AF	F 202	OFW J 3203
D 1, 21, 22, 41	BB 221-SB		Filter / Filter / Filtre / Filtre
		Anschlußleiste 34 polig / Female plug 34 fold	4145 16 75
		Reglette a douilles, 34 fois / Spinothiera, 34 poli	
		Gehäusedeckel / Cabinet can top	8316 45 01
		Boîtier parte superier / Coperchio schermatura	
		Antennenbuchse / Antenna socket	4143 90 45
		Prise pour antenne / Presa per antenna	

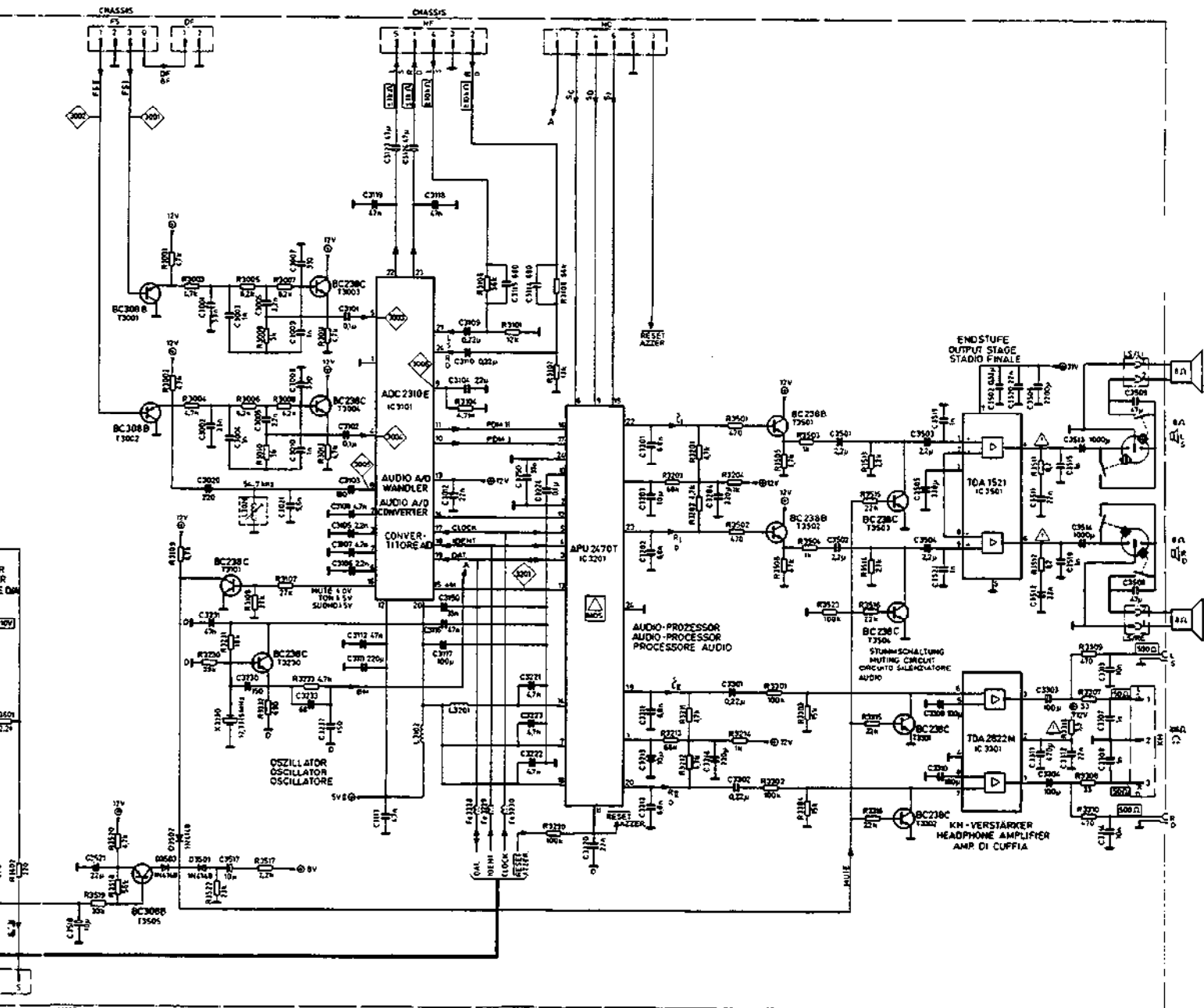




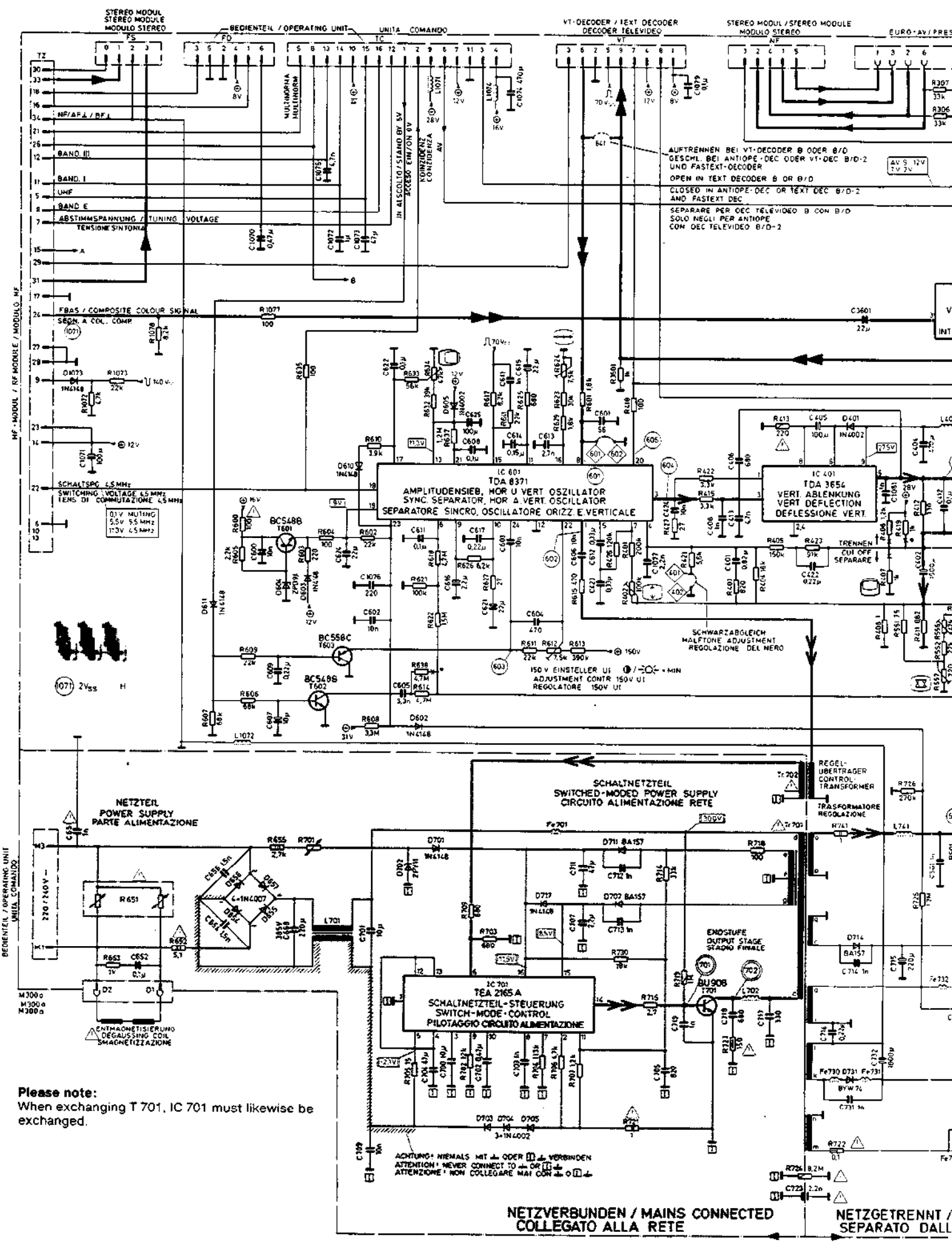
After changing or repairing a module, check the oscillator frequency and adjust if necessary.

Pilot signal alignment

Stereo signal (mono actv). Scope to TP 3005. L 3020 for max. adjustment (54.7 kHz).



DECODER M237C M237A M237B



**Please note:**  
When exchanging T 701, IC 701 must likewise be exchanged.

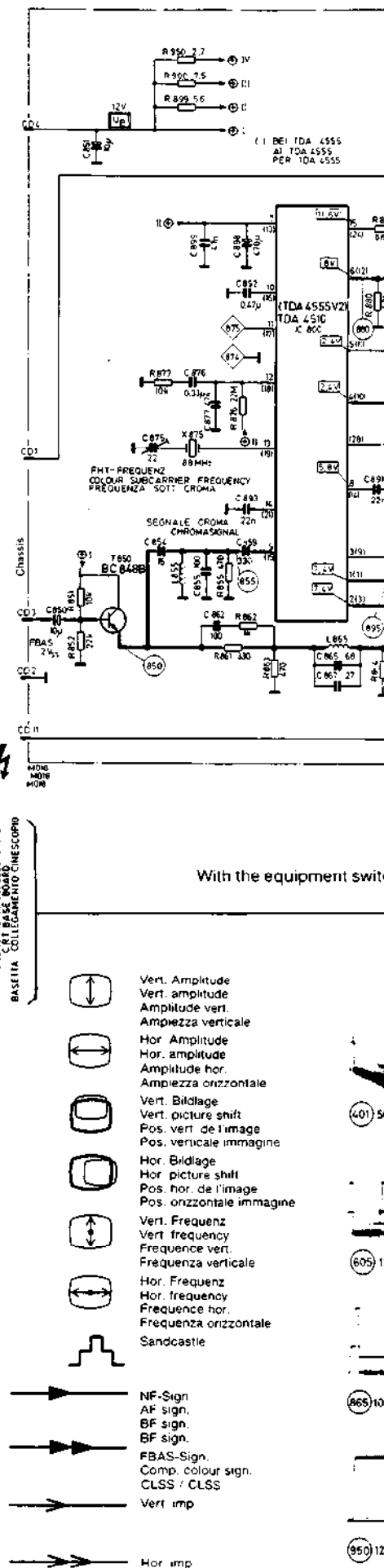
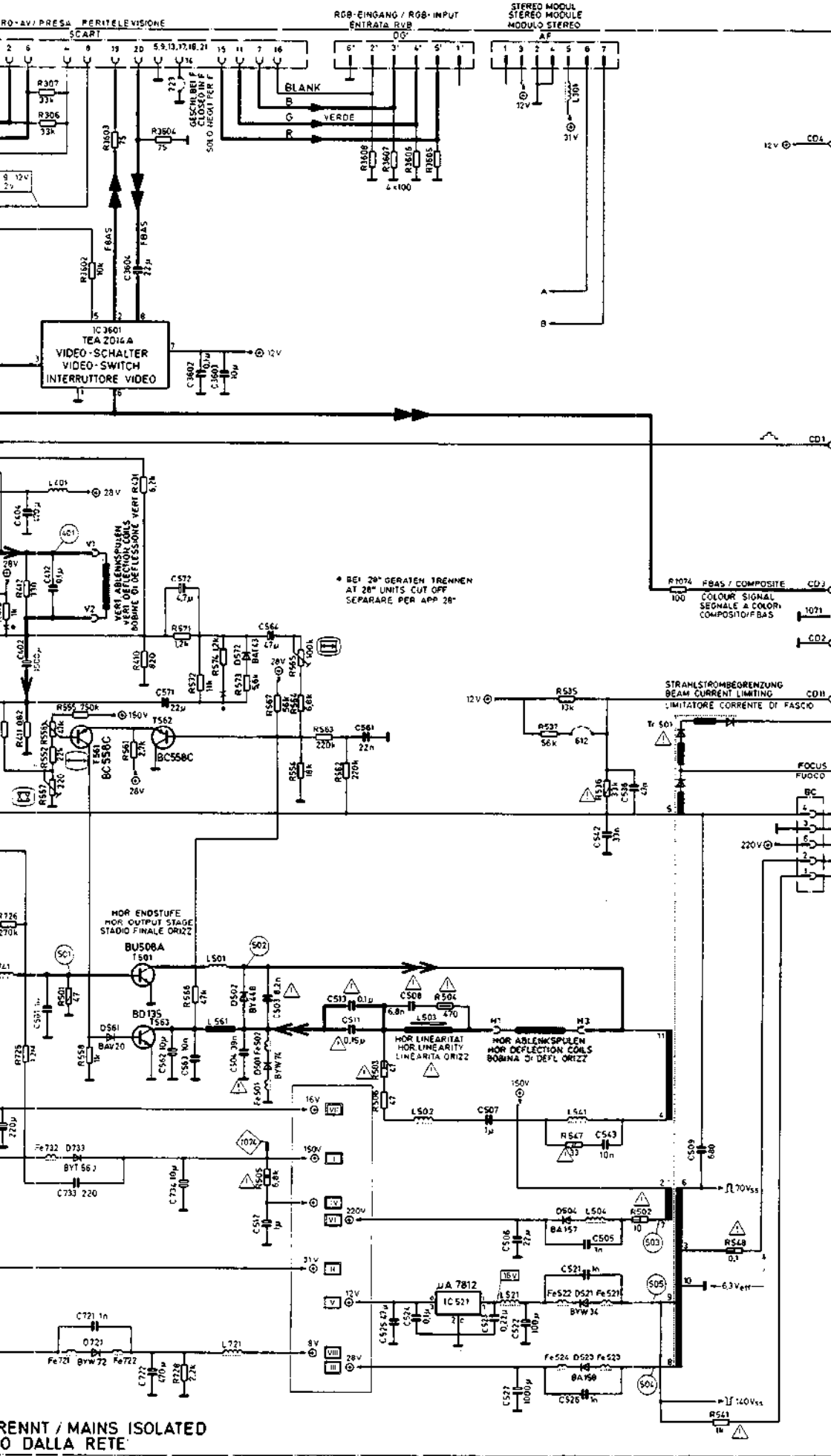
ACHTUNG! NIEMALS MIT  $\perp$  ODER  $\square$  VERBINDEN  
ATTENTION! NEVER CONNECT TO  $\perp$  OR  $\square$   
ATTENZIONE! NON COLLEGARE MAI CON  $\perp$  O  $\square$

NETZVERBUNDEN / MAINS CONNECTED  
COLLEGATO ALLA RETE

NETZGETRENNT / SEPARATO DALLA

# Chassis Compact D/2 FST

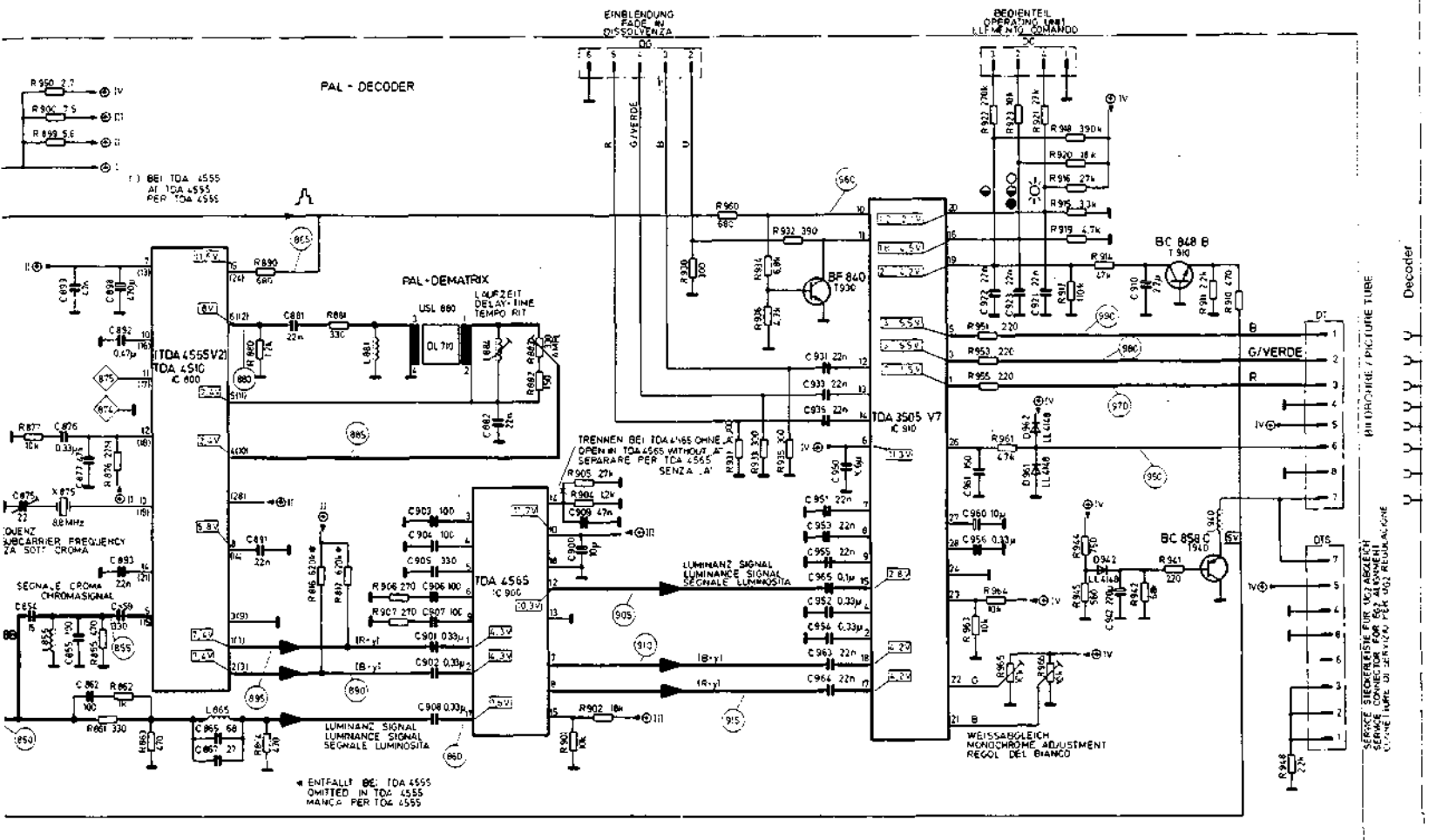
5861 75 22





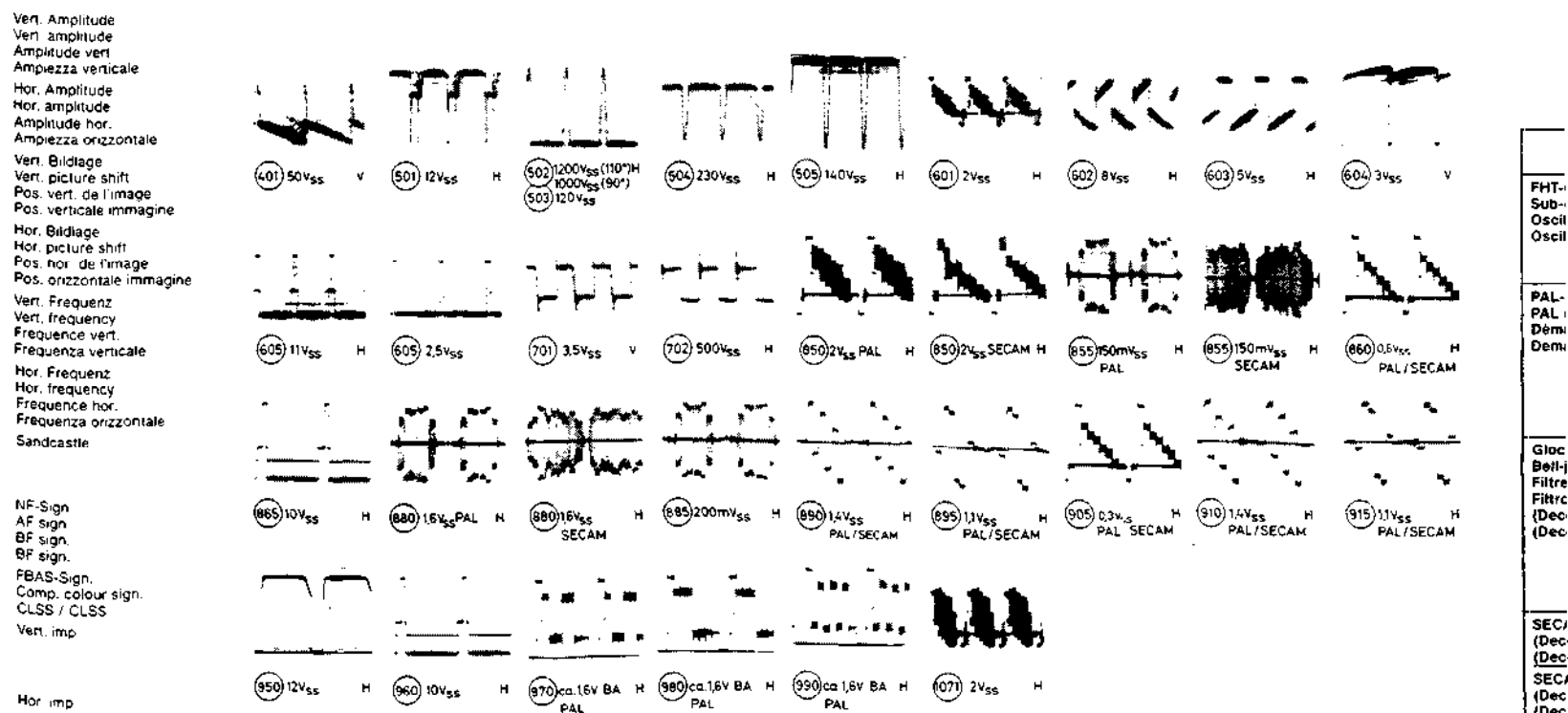
# PAL Decoder

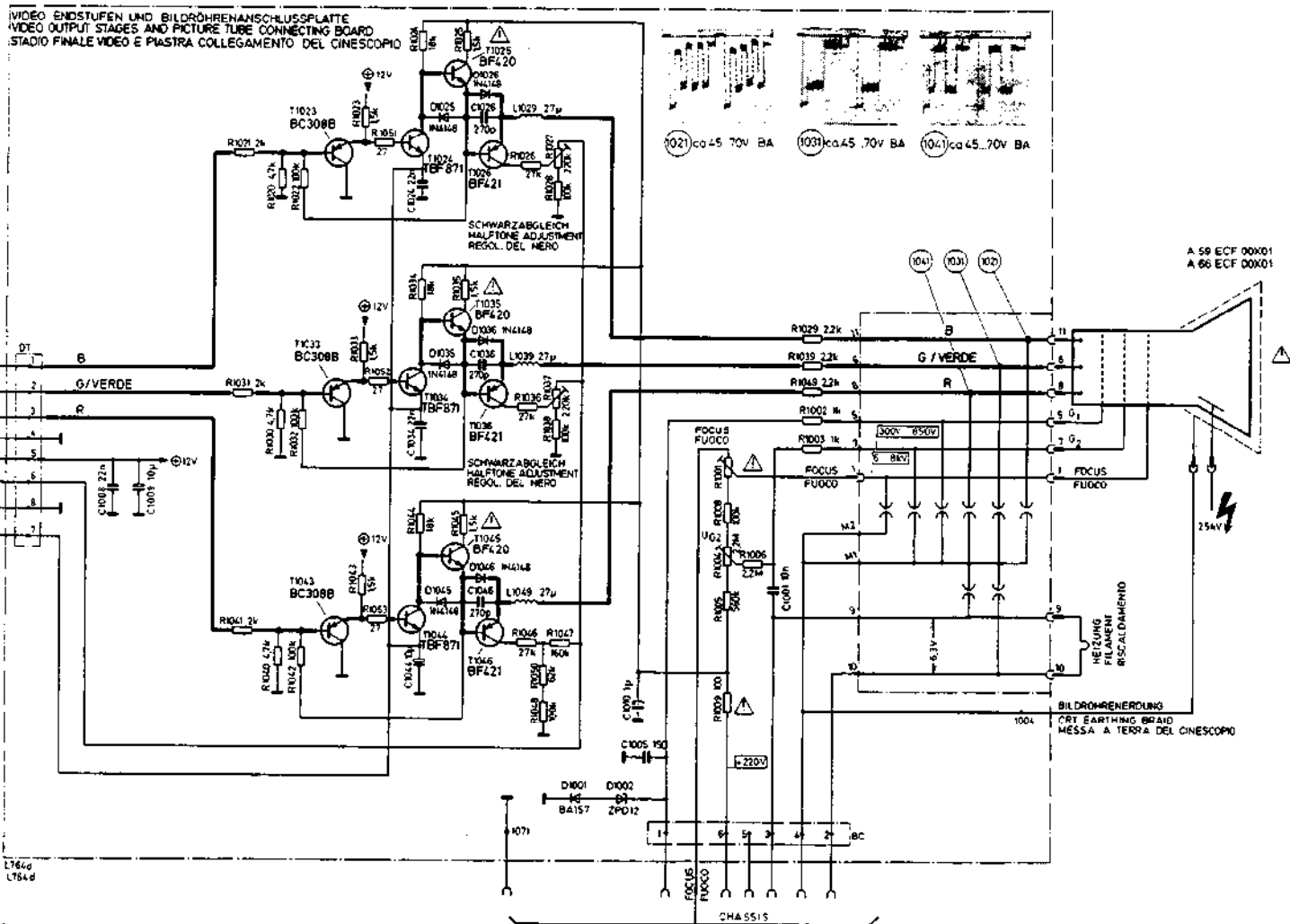
6911 30 28



With the equipment switched to stand-by, the voltages of the switched-mode power supply and the horizontal output stage are below nominal value.

**Important**  
Following exc  
c.r.t. board m  
The decoder  
Standard PAL  
mum and brig

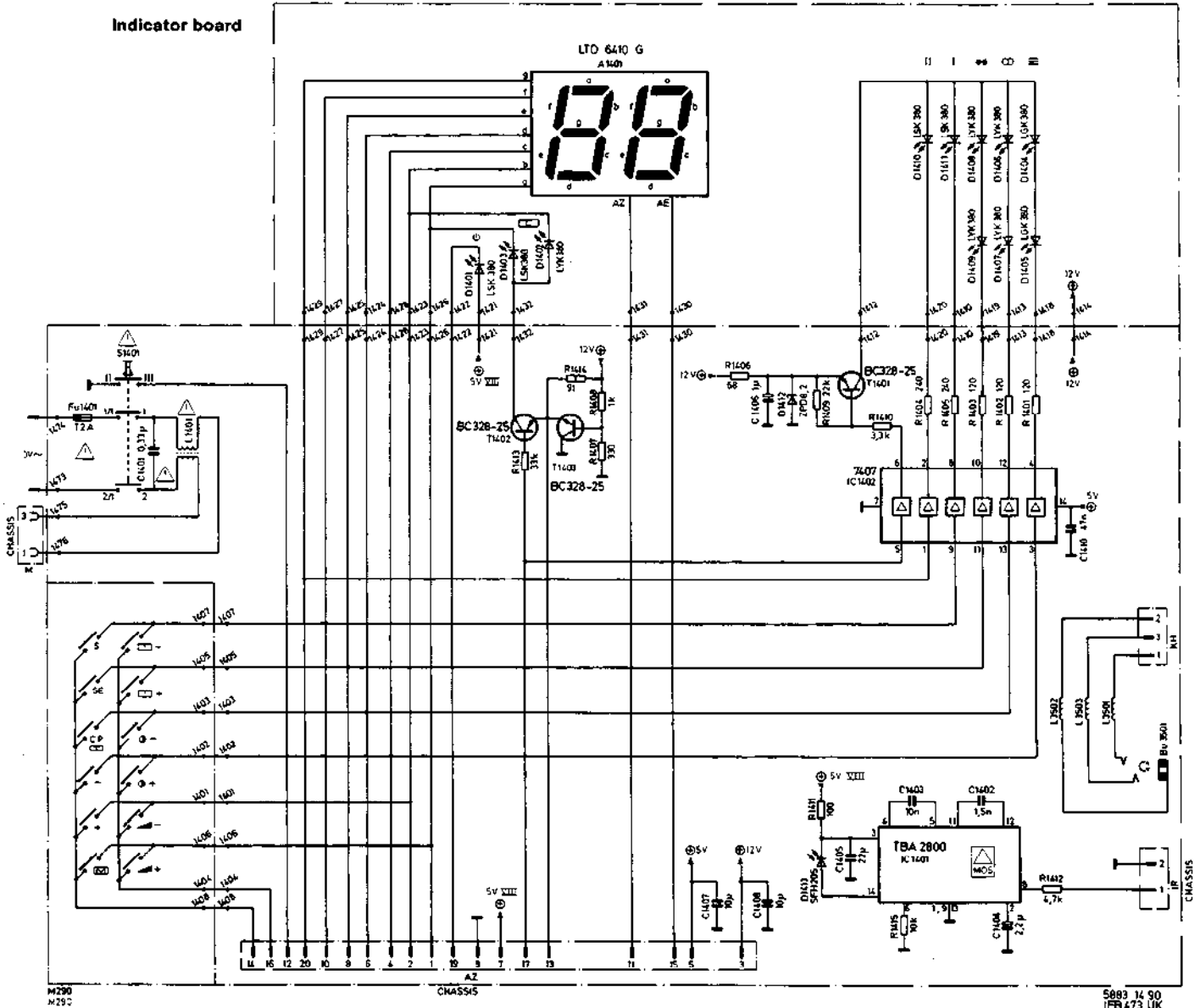




SERVICE CHECKS FOR VCI ABRECHEN  
 CONTROL TUBE UI 38V/140V 25A 100V RESONANZ-GRE

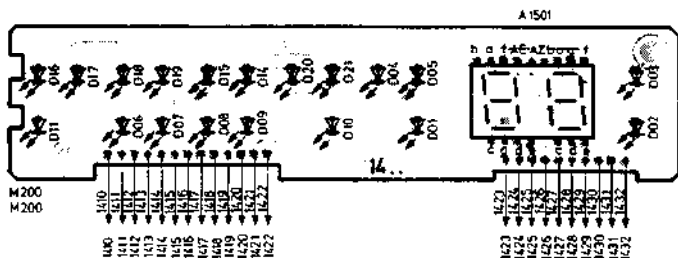
**Important:**  
 Following exchange or repair of the colour decoder, ensure that the additional earth connection  
 c.r.t. board has been re-established before switching on the set.  
 The decoder waveforms are taken under following conditions:  
 Standard PAL that is, SECAM colour bar pattern, contrast at maximum and brightness and colour saturation at nominal value.

PAL SECAM Decoder 6911 30 30/6911 30 29 U <sub>B</sub> = 12 V kontr./cont PAL Decoder 6911 30 26/6911 30 28			
FHT-Oszillator Sub-carrier oscillator Oscillateur FHT Oscillatore FHT	C 875	annähernd stehende Farbinformation near stationary colours sur l'information de couleur presque stable su inf. di colore approssimata	Farbtestbild / colour bar signal Segnale barre colore Kurzschl. Connect Court-circ. Corte circ.
PAL-Dematrix PAL dematrix Dématrice PAL Dematrice PAL	L 884	verschwindende Jalousie im Feld „G-Y = 0“ minimum Hanover bars in "G-Y = 0" sur jalousie disparaissante dans le champ "G-Y = 0" in modo da ottenere una spazizione delle striscie nel campo "G-Y = 0"	FuBK-Testbild Test picture mire immagine di test
	R 883	verschwindende Jalousie im Feld +V ± U minimum Hanover bars in +V ± U sur jalousie disparaissante dans le champ +V ± U in modo da ottenere una spazizione delle striscie nel campo +V ± U	
Glockenfilter Bell-jar filter Filtre de cloche Filtro a campana (Decoder 6911 30 30) (Decoder 6911 30 29)	L 810	Daß die Amplitude beider Zeilen bei schwarz/weiß und während des Frequenz-Nulldurchganges gleich sind That the amplitude of both lines is the same with black/white and during zero frequency passage. De sorte que les amplitudes des deux lignes soient identiques, en noir et blanc et durant le passage par zero de la fréquence. Che l'ampieudine di ambedue le righe nel caso di bianco e nero e durante il passaggio della frequenza per lo zero sia uguale.	Oscil. → 810 Zwei Zeilen übereinander schreiben. Adjust to converge two consecutive lines. Ecrire 2 lignes l'une sur l'autre. Scrivere 2 righe una sovrapposta all'altra.
SECAM-Discrim. (R-Y) (Decoder 6911 30 30) (Decoder 6911 30 29)	L 830	Schwarz- u. Weißpegel = deckungsgleich zu Austastpegel to where the black level and the white level coincide on the blanking level à l'egalisation du niveau noir et niveau blanc qu'il soit situé au niveau de suppression	Oscil. → 831
	SECAM-Discrim. (B-Y) (Decoder 6911 30 30) (Decoder 6911 30 29)	L 835	in modo che il livello del nero e quello del bianco siano congruenti sul livello di cancellazione



Program board

Base board



Indicator board, IFB 473/483

**Hint for antenna connecting**

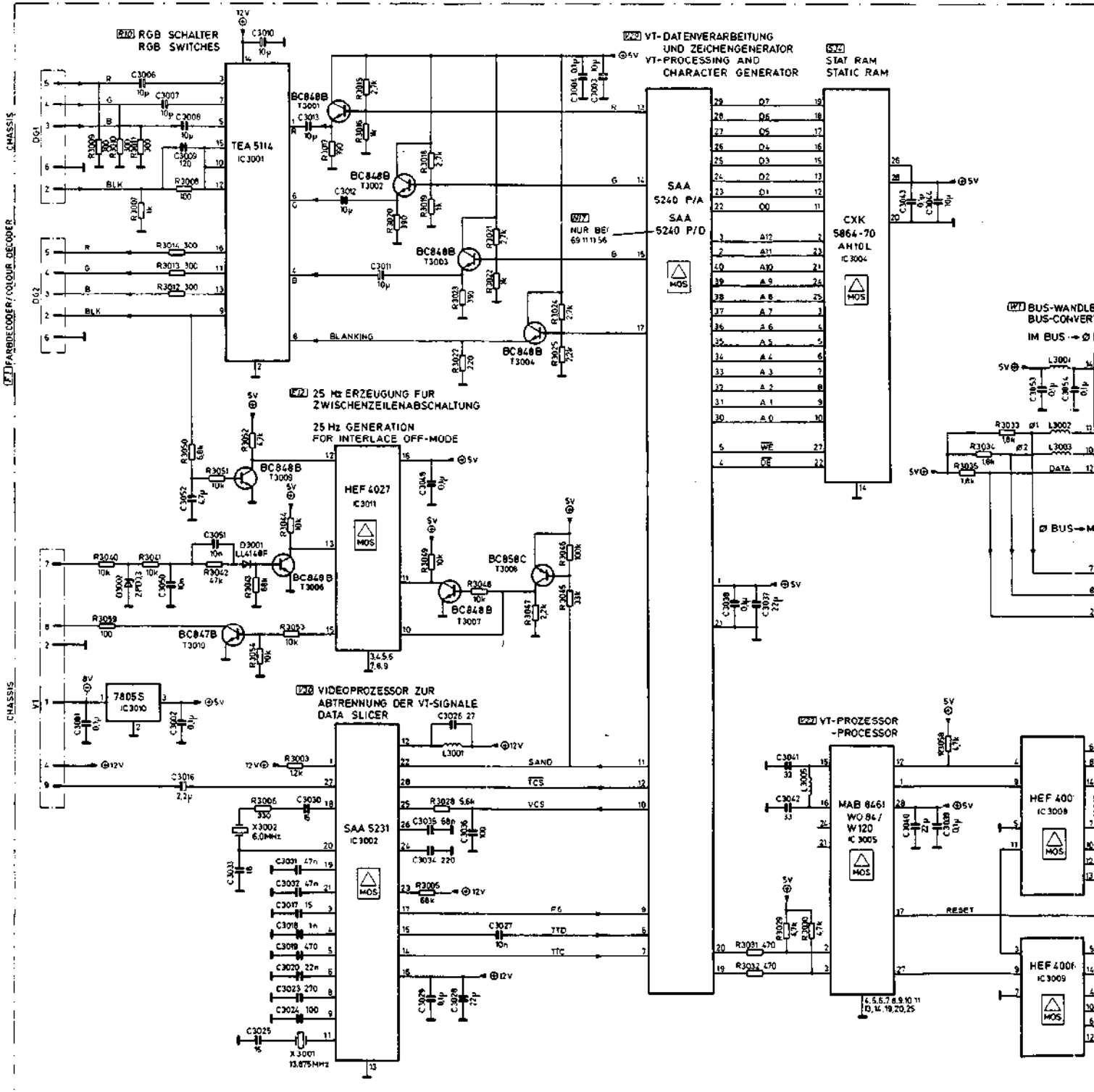
Because of the ever increasing number of interference sources and their negative effect only shielded (75 ohm) antenna cables and antenna plugs (DIN 45325) should be used. possible interference suppression. Unshielded antenna cables, balanced-to-unbalanced and antenna plugs often prove insufficient for interference-free reception.

**Repair tips**

1. With disconnected switching stage T 701 (base open), the power supply is capable of... As no output voltages are generated in this condition, the IC 601 is without supply voltage. In other words, the power supply is not synchronised. Rectangular pulses with approx. 14.6 kHz are measurable at Pin 14 (IC 701). However, the IC operates in so-called interrupt mode; i.e. the pulse voltage at Pin 14 is 200 ms.
2. N.B. If the switching stage is disconnected, the electrolytic capacitor C 658 must be re-connection (soldering).
3. With disconnected horizontal output stage (e.g. terminal 4 Tr 501 open) and a replacement of D 733 (60 watt lamp), the power supply delivers approx. 110 V (Compact D), ca. 1.5 A.
4. If the T 701 (ON 4048) fails repeatedly, the following components should be replaced even if these are OK according to the ohmmeter, and C 704.
5. For servicing the set under operating conditions when the electronic fuse has cut across C 700 (C 713) if the electronic fuse cuts out due to a momentary overvoltage, re-started by switching the mains switch off and then on again.

Chassis board / C.R.T. base board / Color decoder board

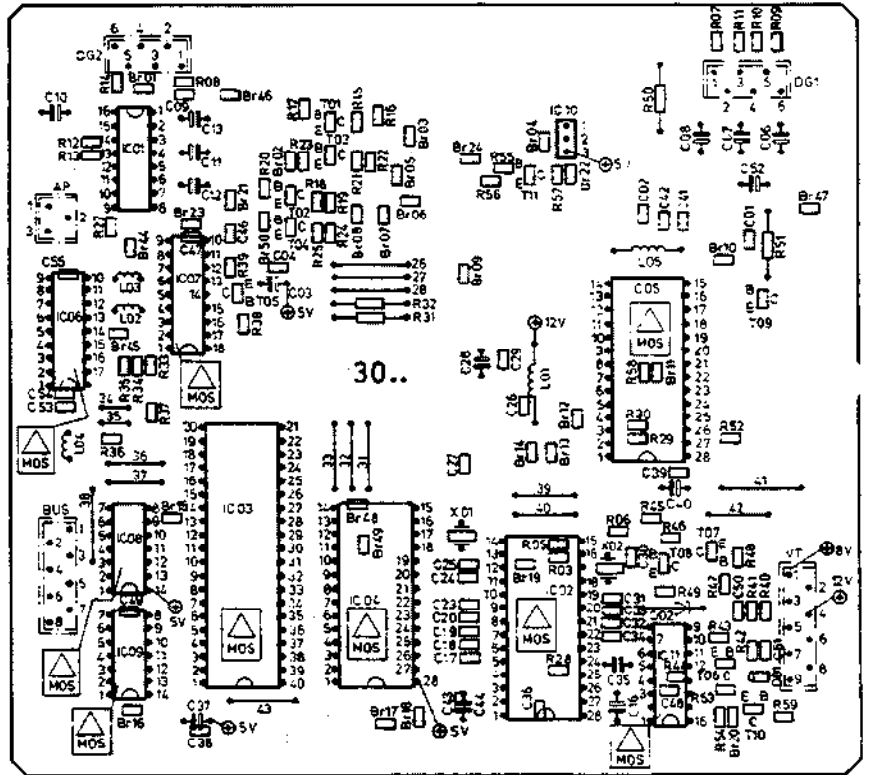
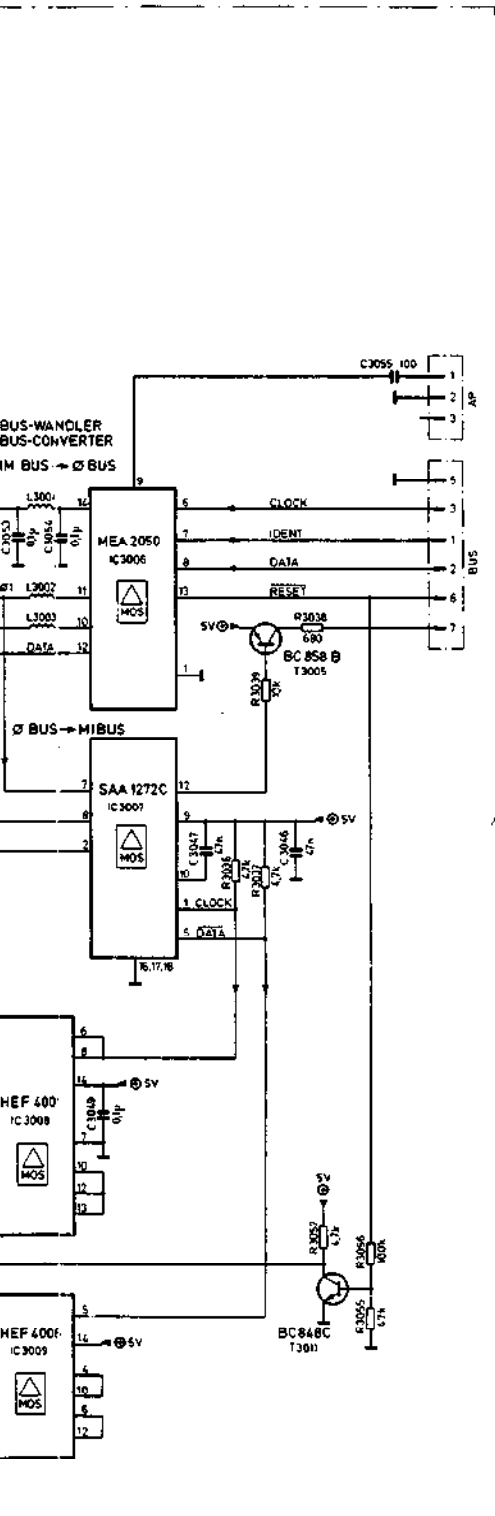
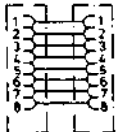
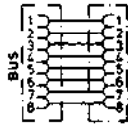
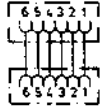
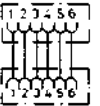
FLOF decoder  
6911 11 59



M394.5  
M394.6



Pay attention to protective measures for MOS components!



H2940  
H2948  
H2928

**Decoder**

IC 3001	TEA 5114 A		3766 11 53
IC 3002	SA A 5231	MOS	3779 15 38
IC 3003	SA A 5240	MOS	3779 15 40
IC 3004	CXK 5864 AP 10 L	MOS	3776 01 59
IC 3005	MAB 8461 P	MOS	3777 51 21
IC 3006	MEA 2050	MOS	3779 11 61
IC 3007	SA A 1272 C	MOS	3779 11 31
IC 3008, 3011	HEF 4001 BP	MOS	3771 51 07
IC 3009	HEF 4006	MOS	3771 51 89
IC 3010	L 7805 ACV	MOS	3768 17 85

T 3001...3004, 3006, 3007, 3009	BC 848 B		3614 53 22
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T 3008, 3011	BC 858 C		3614 54 23
T 3010	BC 847 C		3614 53 13

D 3001	LL 4148 F		3656 03 11
D 3002	ZPD 3.3		3653 17 44

L 3001	Drossel / Choke / Bobina		4557 17 82
L 3002	Drossel / Choke / Bobina		4557 16 66
L 3004...3006	Drossel / Choke / Bobina		4557 16 37

X 3001	Quarz / Quartz / Quarzo 13.875 MHz		4421 31 07
X 3002	Quarz / Quartz / Quarzo 6.0 MHz		4421 31 80

IC-Fassung, 14 polig / IC socket, 14 fold Zoccolo del IC, 14 poli			4156 30 75
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IC-Fassung, 16 polig / IC socket, 16 fold Zoccolo del IC, 16 poli			4156 30 76
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IC-Fassung, 18 polig / IC socket, 18 fold Zoccolo del IC, 18 poli			4156 30 77
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IC-Fassung, 40 polig / IC socket, 40 fold Zoccolo del IC, 40 poli			4156 30 80
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Kühlblech für IC 3001 / Heat sink for IC 3001 Aletta di raffreddamento per IC 3001			6524 73 03
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