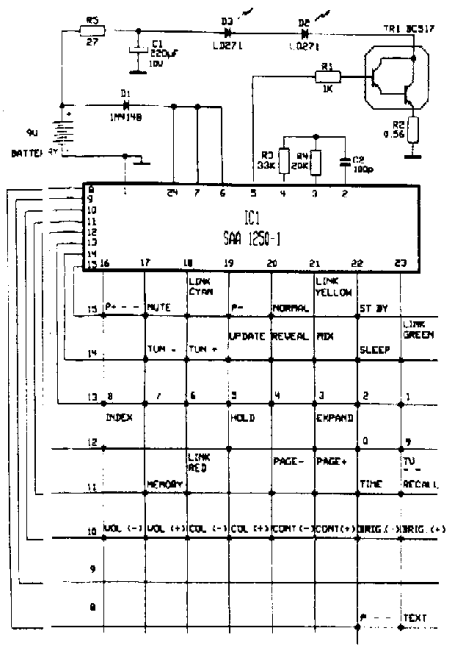
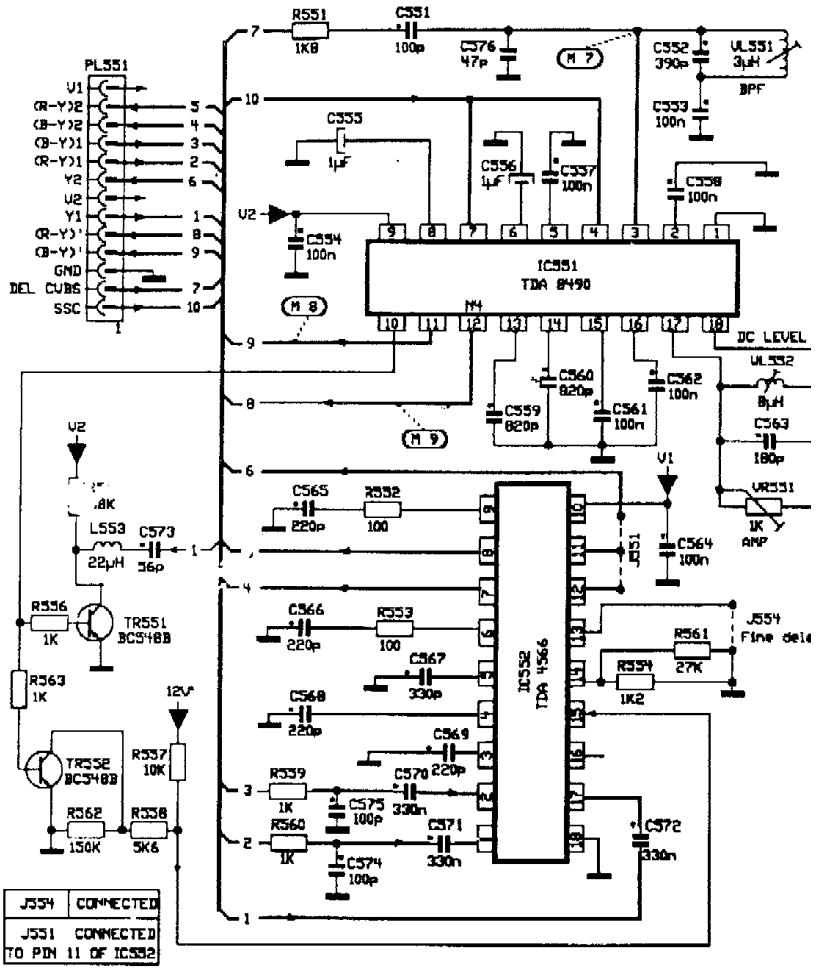
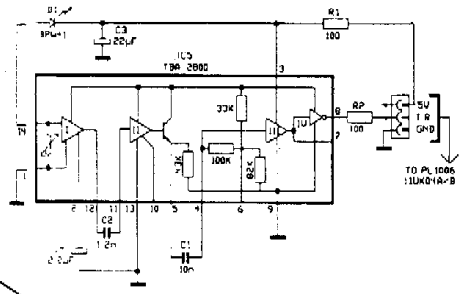
11 UV 04 RC Transmitter Diagram



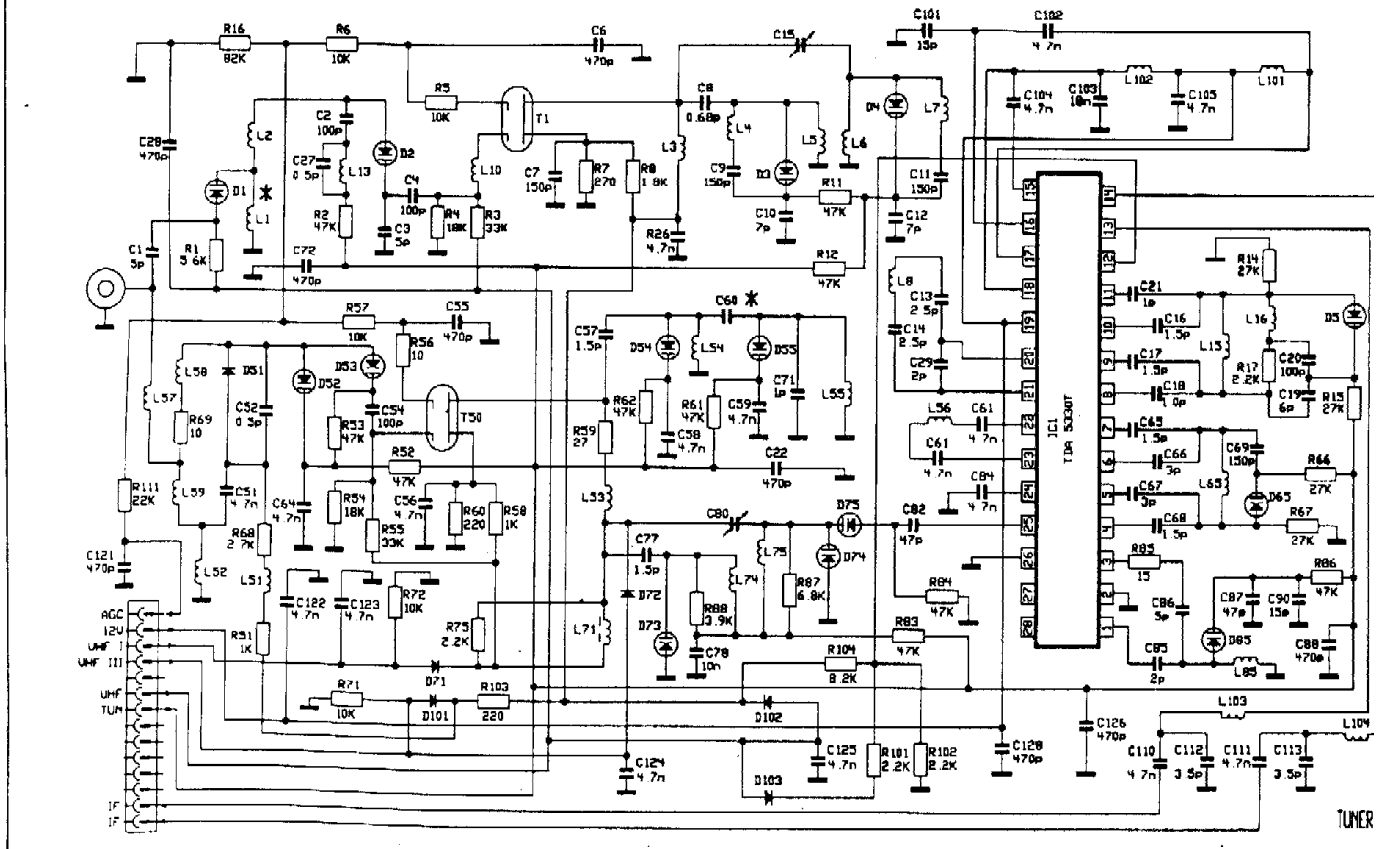
11 SC 01 SECAM & CTI Diagram



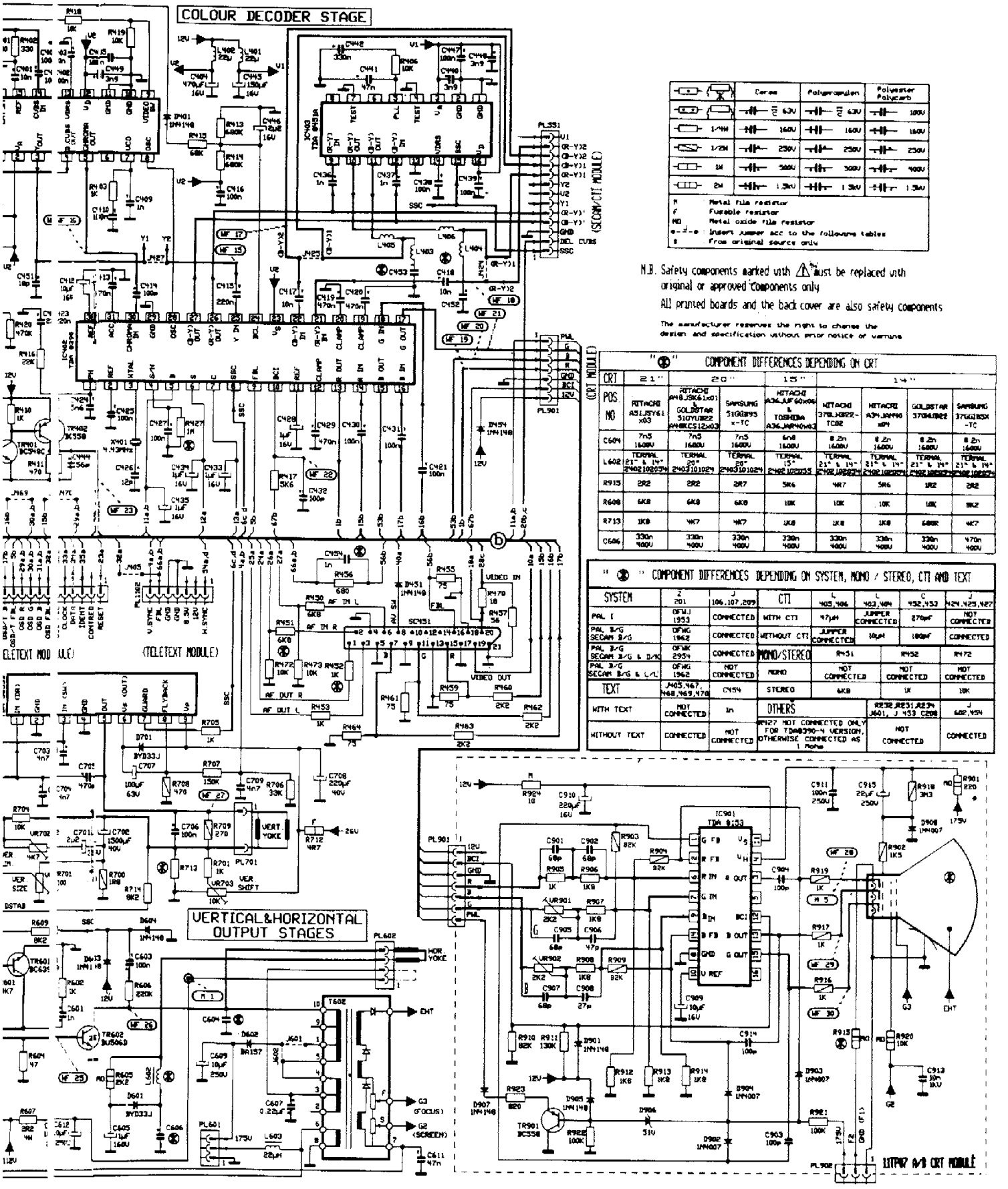
11 0Y 01 IR Pre-Amp Diagram



Tuner Diagram



Main Diagram



	Cermo	Polycarbonate	Polyester Polycarb
1/4W	160V	160V	160V
1/2W	250V	250V	250V
1W	500V	500V	400V
2W	1.5kV	1.5kV	1.5kV

M Metal film resistor
F Fusable resistor
MO Metal oxide film resistor
e-f-g Insert jumper acc to the following tables
S From original source only

N.B. Safety components marked with ⚠ must be replaced with original or approved components only

All printed boards and the back cover are also safety components

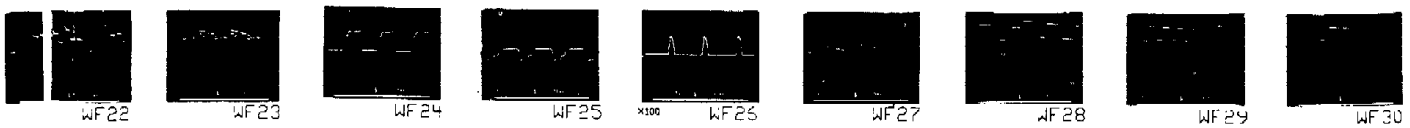
The manufacturer reserves the right to change the design and specification without prior notice or warning

"⊛" COMPONENT DIFFERENCES DEPENDING ON CRT

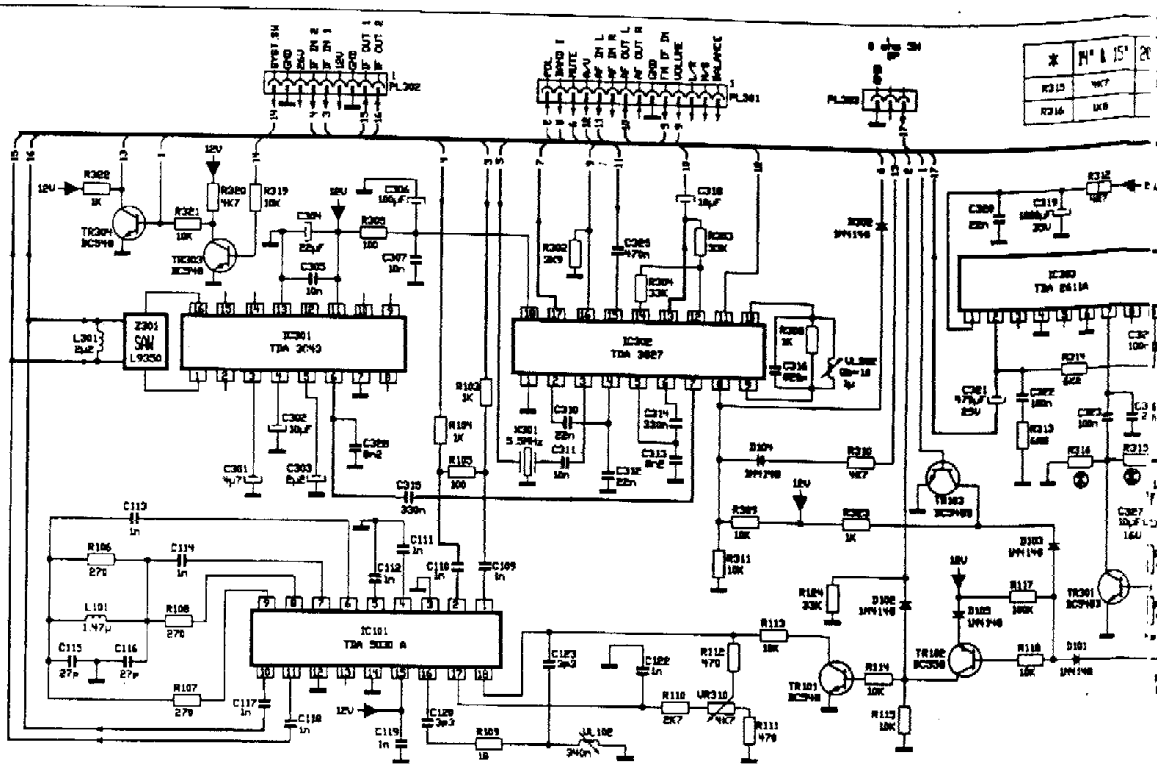
CRT	21"	20"		15"	14"			
POS. NO	HITACHI A51JSY61 x03	HITACHI A48JSK61x01 GOLDSTAR 510YU822 A48KCS12x03	SAMSUNG 5100895 x-TC	HITACHI A36JUF60x06 & TOSHIBA A36JAR40x03	HITACHI 3781J822-TC02	HITACHI A34JAM40 x04	GOLDSTAR 3704U822	SAMSUNG 376GD80X -TC
C604	7n5 1600V	7n5 1600V	7n5 1600V	6n8 1600V	8.2n 1600V	8.2n 1600V	8.2n 1600V	8.2n 1600V
L602	TERMAL 21" & 14" 2402102035M	TERMAL 20" 2403101024	TERMAL 20" 2403101024	TERMAL 15" 2402102035	TERMAL 21" & 14" 2402102035	TERMAL 21" & 14" 2402102035	TERMAL 21" & 14" 2402102035	TERMAL 21" & 14" 2402102035
R915	2R2	2R2	2R7	5R6	4R7	5R6	1R2	2R2
R608	6K8	6K8	6K8	10K	10K	10K	10K	8K2
R713	1K8	4K7	4K7	1K8	1K8	1K8	680R	4K7
C606	330n 400V	330n 400V	330n 400V	330n 400V	330n 400V	330n 400V	330n 400V	470n 400V

" ⊛ " COMPONENT DIFFERENCES DEPENDING ON SYSTEM, MONO / STEREO, CTI AND TEXT

SYSTEM	Z 201	J 106,107,209	CTI	L 405,406	L 402,404	C 452,453	J 429,423,427
PAL I	DFWJ 1953	CONNECTED	WITH CTI	47µH	JUMPER CONNECTED	270pF	NOT CONNECTED
PAL B/G SECAM B/G	DFWG 1962	CONNECTED	WITHOUT CTI	JUMPER CONNECTED	10µH	180pF	CONNECTED
PAL B/G SECAM B/G & D/K	DFWK 2954	CONNECTED	MONO/STEREO	R451	R452	R472	
PAL B/G SECAM B/G & L/L'	DFWG 1962	NOT CONNECTED	MONO	NOT CONNECTED	NOT CONNECTED	NOT CONNECTED	
TEXT	J405,407, 408,409,470	C454	STEREO	6K8	1K	10K	
WITH TEXT	NOT CONNECTED	1n	OTHERS		R232,233,234 J401, J 453 C298	J 602,454	
WITHOUT TEXT	CONNECTED	NOT CONNECTED	R427 NOT CONNECTED ONLY FOR TDA8390-4 VERSION, OTHERWISE CONNECTED AS 1 Mohm		NOT CONNECTED	CONNECTED	



11 SO 01 Sound Diagram (L/L & B/G)



Electrical Parts List

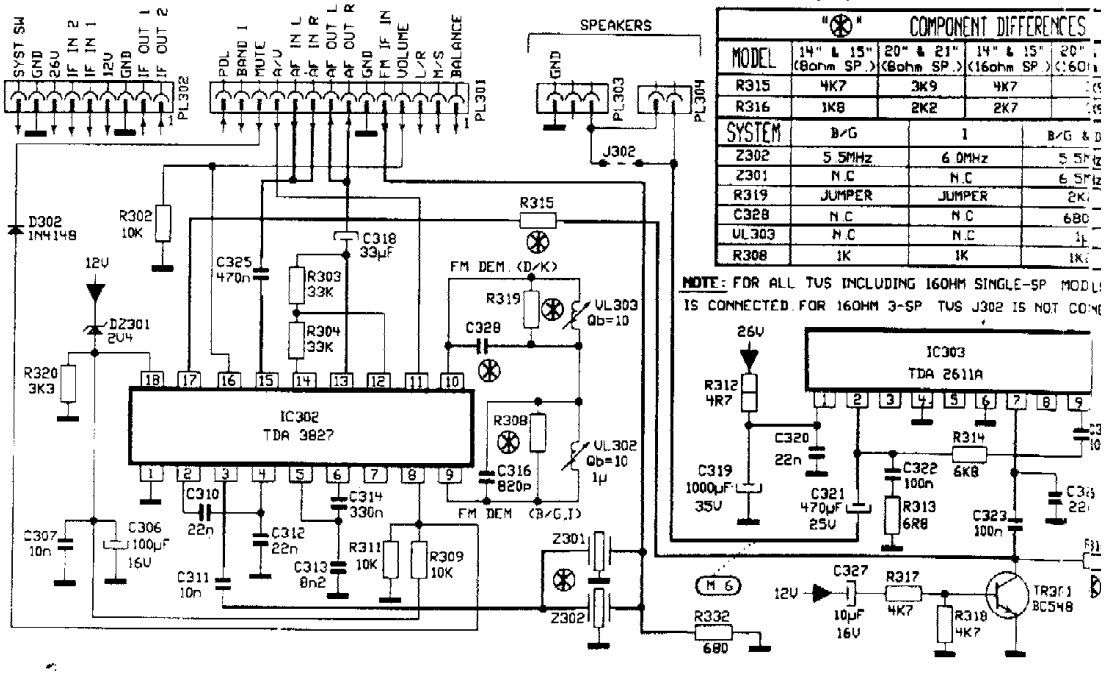
IC's

IC302	IC TDA 3827 - 013242352
IC303	IC TDA 2611A - 013242402
IC201	IC TDA 4504A - 013242472
IC401	IC TDA 8452A - 013242522
IC402	IC TDA 8390 4 - 013242582
IC403	IC TDA 8451A - 013242602
IC701	IC TDA 3653B - 013229812
IC801	IC TDA 4601 - 013223402
IC802	IC LM 317T - 013242102
IC901	IC TDA 8153 - 013242802
IC1001	IC LM 78L05 - 013240852
IC1003	IC MDA 2062 - 013200320
IC1003	IC MDA 2062 - 013200330
IC1002	IC 7805 - 013225002
IC1004	IC TVPO 2066 VES 05 - 013242412
IC1005	IC LM 2901 - 013206302
IC1102	IC DPU 2543 - 013240352
IC1103	IC LM 317T - 013242102
IC1104	IC TPU 2732 - 013230852
IC1105	IC HM 4164 - 013231352

Transistors

TR201	TR BC548B - 013120702
TR202	TR BC548B - 013120702
TR401	TR BC548C - 013120712
TR402	TR BC558B - 013120902
TR601	TR BC639 - 013100902
TR602	TR BU506D - 013116082
TR801	TR BU508A - 013108102
TR802	TR BC548B - 013120702
TR1002	TR BC848B SMD - 013720882
TR1003	TR BC848B SMD - 013720882
TR1004	TR BC848B SMD - 013720882
TR1006	TR BF240 - 013115102
TR1007	TR BC848B SMD - 013720882
TR1010	SMD JUMPER WIRE - 014031441
TR1011	TR BC848B SMD - 013720882
TR1012	TR BC848B SMD - 013720882
TR1014	TR BC548B - 013120702
TR1102	TR BC548B - 013120702
TR1103	TR BF240 - 013115102
TR1104	TR BC548B - 013120702
TR1105	TR BC548B - 013120702
TR1106	TR BC548B - 013120702
TR1107	TR BC548B - 013120702
TR1108	TR BC548B - 013120702
TR1109	TR BC548B - 013120702
TR1110	TR BC548B - 013120702
TR1111	TR BC548B - 013120702
TR1112	TR BC548B - 013120702
TR1113	TR BC548B - 013120702

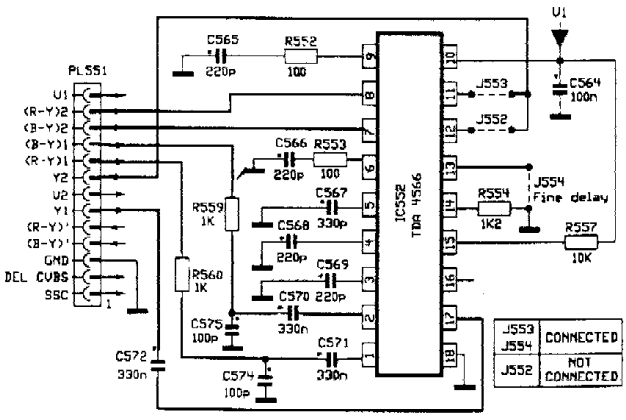
11 SD 01 - C Sound Diagram (B/G,I,D/K)



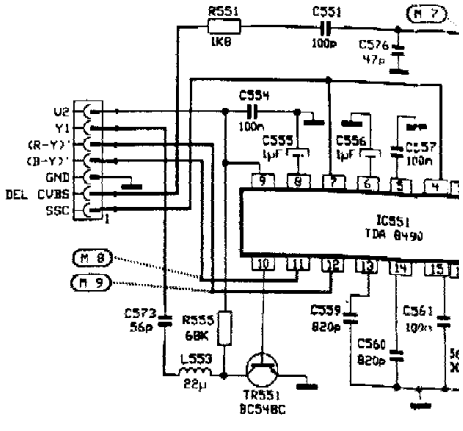
"⊛" COMPONENT DIFFERENCES				
MODEL	14" & 15" (8ohm SP.)	20" & 21" (8ohm SP.)	14" & 15" (16ohm SP.)	20" (16ohm SP.)
R315	4K7	3K9	4K7	
R316	1K8	2K2	2K7	

SYSTEM	B/G	I	B/G & D
Z302	5.5MHz	6.0MHz	5.5MHz
Z301	N.C	N.C	6.5MHz
R319	JUMPER	JUMPER	2K7
C328	N.C	N.C	680p
VL303	N.C	N.C	1µ
R308	1K	1K	1K

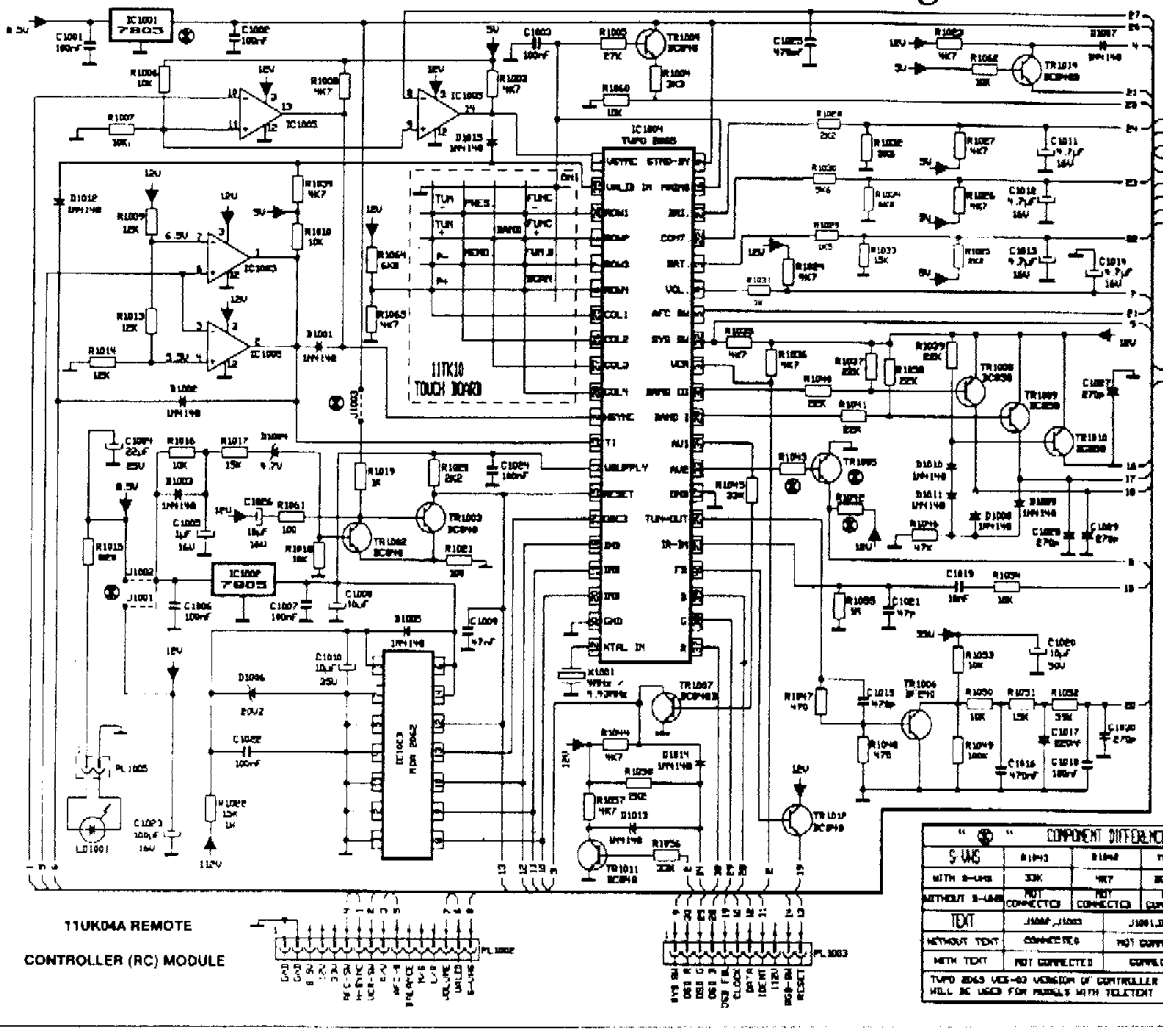
11 CT 01 CTI Diagram



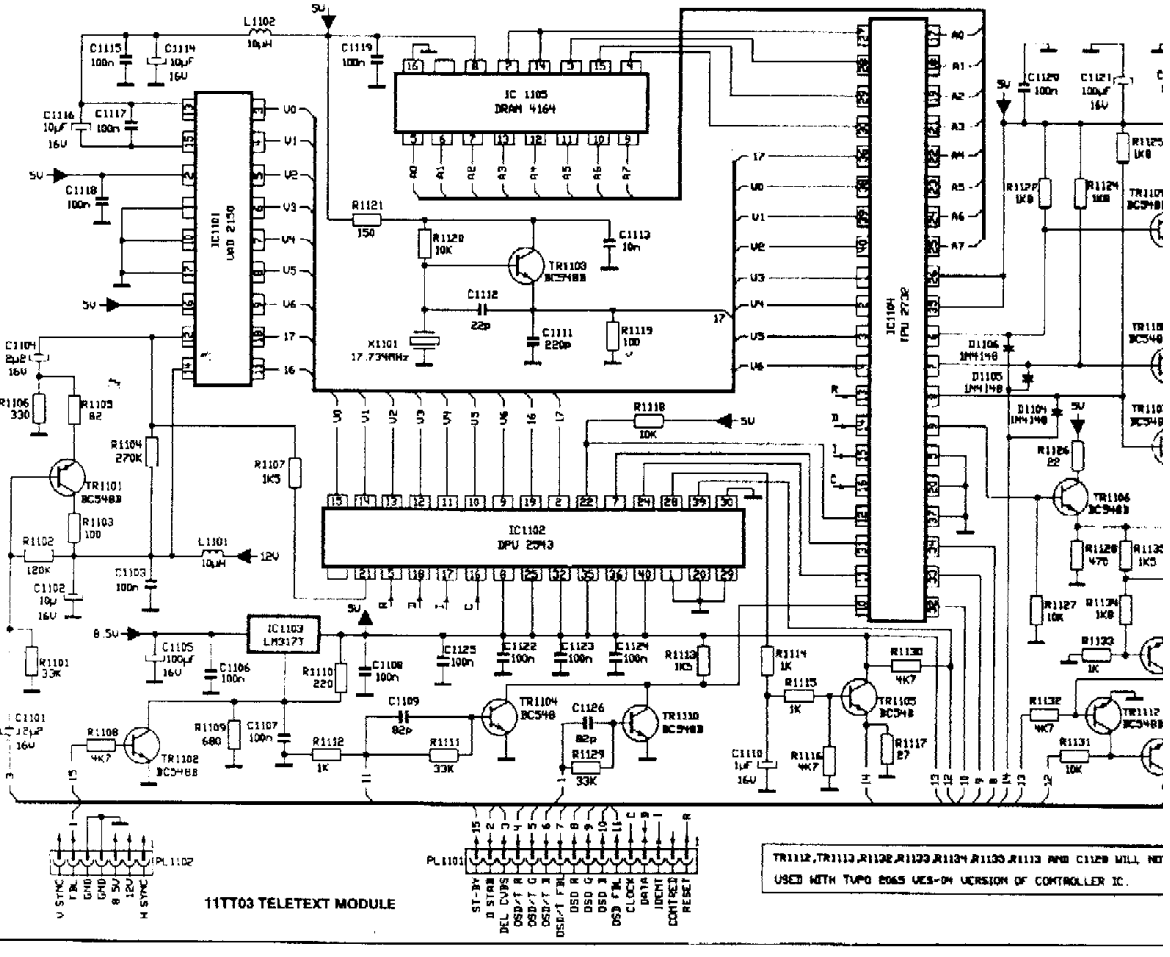
11 SM 01 SECAM Da



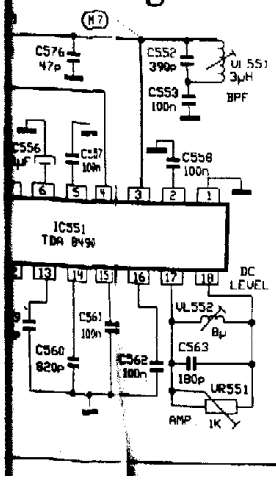
11 UK 04A Remote Controller Diagram



11 TT 03 Teletext Diagram



AM Diagram



Service Adjustments

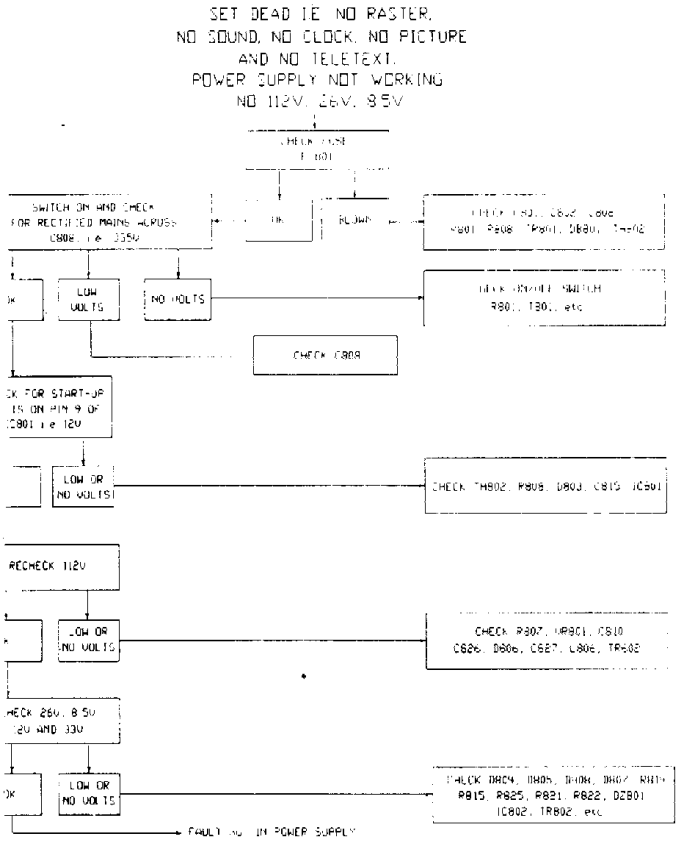
All adjustments are to be made at 220V line voltage after a warm-up period of approximately 5 minutes.
Required test and measurement instruments; Pattern generator (PHILIPS PM 5515 or PM5518), Multimeter (Input Impedance – 10 MΩ), Oscilloscope

Adjustment Sequence No	Type of Adjustment	Test Signal at Antenna Input	Preperation of Adjustment	Connection of Voltmeter and Oscilloscope	Adjustments
1	SMPS System Voltage	Colour bar, 1 KHz sound signal	B(Brightness), C(Contrast) S(Colour), VOL (Volume) at min position.	Voltmeter to shorted pins of the socket PL602 (M1)	Set VR801 for V_{M1} = 112Vdc for 20-21 inch models. ($110V_{dc}$ for 14-15 inch models)
2	Vision Demodulator and AFC	No antenna input. Colour bar, frequency of 38.9 MHz for B/G models (39.5 MHz for I models), level of 10mV	Connect RF output of the pattern generator to any one input of SAW filter and connect the other input of SAW filter to ground through 10nF.	Voltmeter to pin 21 of IC201 (M2)	Set L203 for V_{M2} = 6.0 ± 0.3V_{dc} After adjustments remove the all external connections.
3	Sound Trap	Grey scale, 1KHz sound signal	B, C, S at normal position.	Oscilloscope to base of TR 201(M3)	Set L202 for minimum sound carrier (5.5 MHz for B/G models, 6.0 MHz for I models) on video signal.
4	Horizontal Oscillator	Colour bar and circle	B, C, S at normal position. Connect 1K resistor between pin 8 and pin 28 of IC 201.		Set VR203 for horizontaly synchronized picture approximately. After adjustment remove 1Kohm resistor
5	Picture Geometry and Focus	Centre cross, circle and cross-hatch.	B, C, S at normal position.		Set VR202 for horizontal centreing, VR703 for vertical centreing, VR701 for vertical size, VR702 for vertical linearity and focus pot (on EHT transformer) for optimum focusing.
6	Tuner AGC	Colour bar, level of 60 dBμV	B, C, S at normal posibon.	Voltmeter to pin 6 of IC201 (M4)	Set VR201 for V_{M4} = 8.5 ± 0.1V_{dc}
7	G2 (Screen)	Colour bar	B, C, S at min position.	Voltmeter to cathode Red of CRT (M5)	Set SCREEN pot (on EHT transformer) for V_{M5} = 180V_{dc} for 20-21 inch models. (150V_{dc} for 14-15 inch models)
8	White Balance (CRT Module)	White pattern	B, C, S at normal position.		Set VR901 (Green) and VR902 (Blue) for optimum white on the screen.
9	FM Modulator (SOUND Module)	Colour bar,. 1KHz sound signal	B, C, S and VOL at normal position.	Oscilloscope to the socket PL303 (M6)	Set L302 for max amplitude of 1KHz sound signal and for minimum noise on 1KHz sound signal.
10	Chroma BPF (SECAM and SECAM/CTI Module)	SECAM colour bar	B, C, S at normal position.	Oscilloscope to pin 3 of IC 551 (M7)	Set VL551 for equal amplitudes of the colour bars.
11	Chroma Level and Black Level (SECAM and SECAM / CTI Module)	SECAM colour bar	B, C, S at normal position.	Oscilloscope to pin 17 (B-Y) and pin 12 (R-Y) of IC 551 (M8 and M9)	Set VR551 for V_{B-Y} = 1.6V_{pp} and V_{R-Y} = 1.26V_{pp} and VL552 for equal DC level of B-Y and R-Y signals.

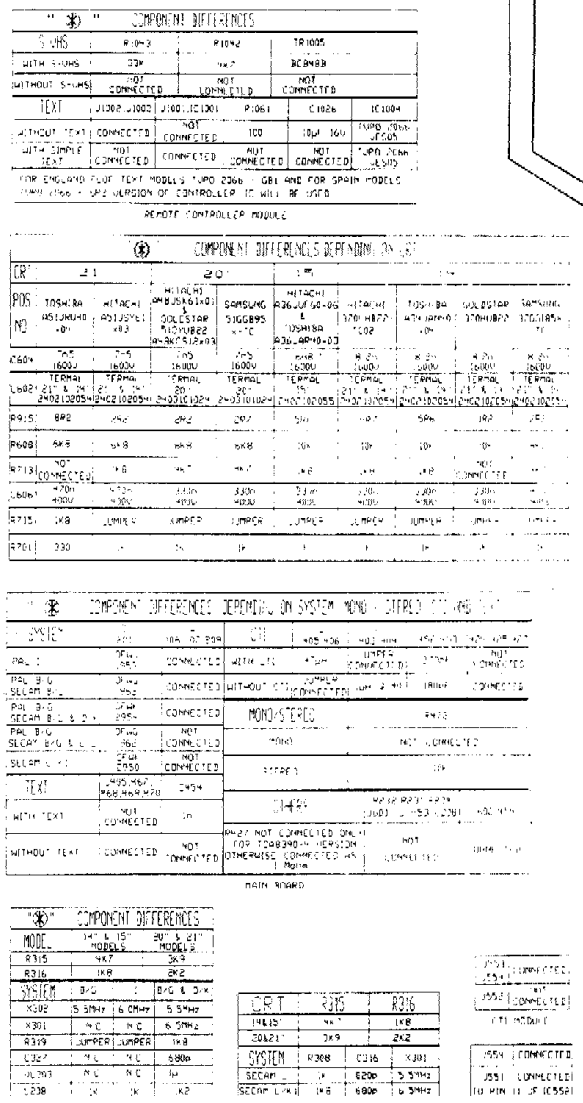
Trouble Shooting Guide

2V rail is automatically reduced in the event of excessive current drain. (approx. 1A) the event of continuous overload on 112V rail, the power supply will repeatedly empt to restart giving rise to an audible oscillation from the SMPS transformer.

e accompanying chart suggests a step by step check procedure starting from a ET DEAD" condition.



Component Differences



eforms

WF1
WF2
WF3
WF4
WF5
WF6
WF7
WF8
WF9
WF10
WF11
WF12
WF13
WF14
WF15

Main

IF & SYNC SEPARATOR STAGE

SMPS STAGE

(RC MODULE) (SOUND MODULE) (SOUND MODULE) (RC MODULE) (RC MODULE) (TELETEXT MODULE)

WF16 (PAL) WF17 (SECAM) WF17 (PAL) WF18 (SECAM) WF18 WF19 WF20 WF21 WF22