

SERVICE MANUAL

BE-3E CHASSIS

MODEL	COMMANDER	DEST	CHASSIS NO.	MODEL	COMMANDER	DEST	CHASSIS NO.
KV-28DX30U	RM-888	UK	SCC-Q25H-A	KV-32DX30U	RM-888	UK	SCC-Q25J-A

FD Trinitron



TRINITRON® COLOR TV
SONY®

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CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE CARBON PAINTED ON THE CRT, AFTER REMOVAL OF THE ANODE CAP.

WARNING !!

AN ISOLATION TRANSFORMER MUST BE USED DURING ANY SERVICE WORK TO AVOID POSSIBLE SHOCK HAZARD DUE TO LIVE CHASSIS, THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARKED Δ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE.

ATTENTION !!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENTION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MARQUE Δ SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIÉCES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT, NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDiqué DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

ITEM MODEL	Television System	Stereo System	Channel Coverage	Color System
UK	I	NICAM Stereo	UHF : B21-B69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)

Model	KV-28DX30U	KV-32DX30U
Power Consumption	136W	134W

Picture Tube	FD Trinitron Wide Approx 71 cm (28 inches) (Approx 66cm picture measured diagonally) Approx 82 cm (32 inches) (Approx 76cm picture measured diagonally) 110 degree deflection	Sound output	Right and Left speaker 2x20W (Music Power) 2x10W (RMS)
Input/Output Terminals [REAR]		Power Requirements	220 - 240V AC
1: 21-pin Euro connector (CENELEC standard)	Inputs for Audio and Video signals. Inputs for RGB. Outputs of TV Video and Audio signals.	Dimensions	28" Approx 796x518x522mm 32" Approx 883x567x562mm
2: 21-pin Euro connector	Inputs for Audio and Video signals. Inputs for S Video. Outputs of TV Video and Audio signals. (selectable)	Weight	28" Approx 44.0kg 32" Approx 62.0kg
3: 21-pin Euro connector	Inputs for Audio and Video signals. Inputs for S Video. Outputs for Video and Audio signals (monitor out)	Supplied Accessories	RM-888 Remote Commander (1) IEC designated R6 battery (2)
RCA Connectors	Variable output for Audio Signals	Other Features	Digital EPG, Dynamic Picture Control, Virtual Dolby, 2 Tuners
DIN	External Speakers		
PCMCIA	Card Slot		
Input/Output Terminals [FRONT]		Remote control system	Infrared control
Headphone jack	stereo mini jack	Power requirements	3V dc 2 batteries IEC designation R6 (size AA)
Audio inputs	phono jacks	Dimensions	Approx 210x45x23mm (w/h/d)
Video inputs	phono jacks	Weight	Approx 95g (not including battery)
S Video input	4 pin DIN		
Design and specifications are subject to change without notice.			

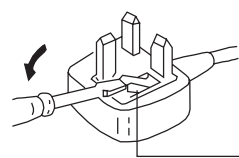
Model Name Item	KV-28DX30U	KV-32DX30U
Pal Comb	OFF	OFF
PIP	OFF	OFF
RGB Priority	ON	ON
Woofer Box	OFF	OFF
Scart 1	ON	ON
Scart 2	ON	ON
Scart 3	ON	ON
Front in (4)	ON	ON
Projector	OFF	OFF
AKB in 16:9 mode	ON	ON
Norm B/G	OFF	OFF
Norm I	ON	OFF
Norm D/K	OFF	OFF
Norm AUS	OFF	OFF
Norm L	OFF	OFF
Norm SAT	OFF	OFF
Norm M	OFF	OFF
Teletext	ON	ON
Nicam Stereo	ON	ON

WARNING (UK Models only)

The flexible mains lead is supplied connected to a **B.S. 1363** fused plug having a fuse of **5 AMP** rating. Should the fuse need to be replaced, use a **5 AMP FUSE** approved by ASTA to **BS 1362**, ie one that carries the  mark.

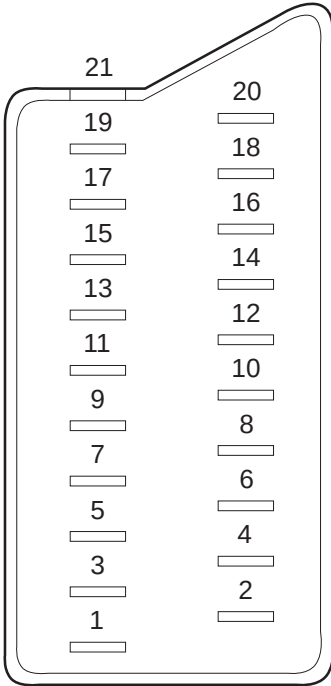
IF THE PLUG SUPPLIED WITH THIS APPLIANCE IS NOT SUITABLE FOR THE OUTLET SOCKETS IN YOUR HOME, IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED. THE PLUG SEVERED FROM THE MAINS LEAD MUST BE DESTROYED AS A PLUG WITH BARED WIRES IS DANGEROUS IF ENGAGED IN A LIVE SOCKET.

When an alternative type of plug is used, it should be fitted with a **5 AMP FUSE**, otherwise the circuit should be protected by a **5 AMP FUSE** at the distribution board.



How to replace the fuse.
Open the fuse compartment with a screwdriver blade and replace the fuse.

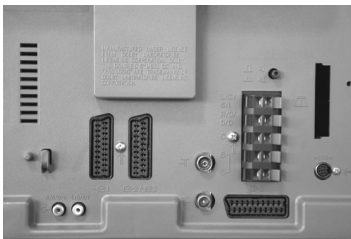
21 pin connector



Pin No	1	2	3	Signal	Signal level
1	○	○	○	Audio output B (right)	Standard level : 0.5V rms Output impedance : Less than 1kohm*
2	○	○	○	Audio output B (right)	Standard level : 0.5V rms Output impedance : More than 10kohm*
3	○	○	○	Audio output A (left)	Standard level : 0.5V rms Output impedance : Less than 1kohm*
4	○	○	○	Ground (audio)	
5	○	○	○	Ground (blue)	
6	○	○	○	Audio input A (left)	Standard level : 0.5V rms Output impedance : More than 10kohm*
7	○	●	●	Blue input	0.7 +/- 3dB, 75 ohms positive
8	○	○	○	Function select (AV control)	High state (9.5-12V) : Part mode Low state (0-2V) : TV mode Input impedance : More than 10K ohms Input capacitance : Less than 2nF
9	○	○	○	Ground (green)	
10	○	○	○	Open	
11	○	●	●	Green	Green signal : 0.7 +/- 3dB, 75 ohms, positive
12	○	○	○	Open	
13	○	○	○	Ground (red)	
14	○	○	○	Ground (blanking)	
15	○	-	-	Red input	0.7 +/- 3dB, 75 ohms, positive
	-	○	○	(S signal Chroma input)	0.3 +/- 3dB, 75 ohms, positive
16	○	●	●	Blanking input (Ys signal)	High state (1-3V) Low state (0-0.4V) Input impedance : 75 ohms
17	○	○	○	Ground (video output)	
18	○	○	○	Ground (video input)	
19	○	○	○	Video output	1V +/- 3dB, 75ohms, positive sync 0.3V (-3+10dB)
20	○	-	-	Video input	1V +/- 3dB, 75ohms, positive sync 0.3V (-3+10dB)
	-	○	○	Video input Y (S signal)	1V +/- 3dB, 75ohms, positive sync 0.3V (-3+10dB)
21	○	○	○	Common ground (plug, shield)	

○ Connected ● Not Connected (open) * at 20Hz - 20kHz

Rear Connection Panel



Front Connection Panel



S-Video socket

S Video socket pin configuration		
Pin No	Signal	Signal Level
1	Ground	-
2	Ground	-
3	Y (S signal) input	1V +/- 3dB 75ohm, positive Sync. 0.3V -3 +10dB
4	C (S signal) input	0.3V +/- 3dB 75ohm, positive Sync.

BE-3E SELF DIAGNOSTIC SOFTWARE

The errors indicated below can be read using an Error Reader Display (Part Number S-188-900-10) connected to the service connector. Once an error has been detected it will then be displayed on the two digit error reader. During the power up procedure and during normal run time, the micro's self diagnostic procedures monitor for various errors. Errors displayed refer to the table indicated below.

Error Code	Error Message
00	No error (TV Error Reader shows 00 in normal condition)
01	Not allowed (may be confused with Sircs response flash on LED)
02	Protection circuit trip[(OCP, OVP & No V-Sync)
03	Reserved for OVP (Included in error 2 for BE-3E)
04	Reserved for No V-Sync (Included in error 2 for BE-3E)
05	AKB
06	IIC Scl Low <Power Up Only>
07	IIC Sda Low <Power Up Only>
08	IIC Sda & Scl Low <Power Up Only>
09	Jungle controller no acknowledge <Power Up Only>
10	Video Switch (CXA2040) no acknowledge <Power Up Only>
11	Tuner no acknowledge
12	MSP no acknowledge
13	NVM no acknowledge
14	AV Switch (CXA2089) no acknowledge
15	Not Used
16	Port Expander (CXA1875) no acknowledge
17	Not Used
18	Dynamic Convergence (CXA8070) no acknowledge
19	Cannot initialise jungle (after initial power on check OK) - <Chassis Initialisation>
20	Jungle Controller response failure after power up check (+9v test)
21	Video Switch (CXA2040) cannot power on reset -<Chassis Initialisation>
22	Video Switch (CXA2040) response failure after power up check (+9v test)
23	NVM acknowledge fail after initialisation (STBY +5V - same as micro!)
24	MSP run-time failure <May Not Be Fatal - Display on Error Reader>
25	DSP run-time failure <May Not Be Fatal - Display on Error Reader>
26	M3L bus Clock low time out after data send <Run-Time Failure>
27	Not Used
28	M3L bus Clock low time out after data send <At Initialisation>
29	Not Used
30	Not Used
31	Not Used
32	Not Used
33	Compact Text does not respond (+5V test)
34	Compact Text run-time failure <May Not Be Fatal - Display on Error Reader>

Protection Error

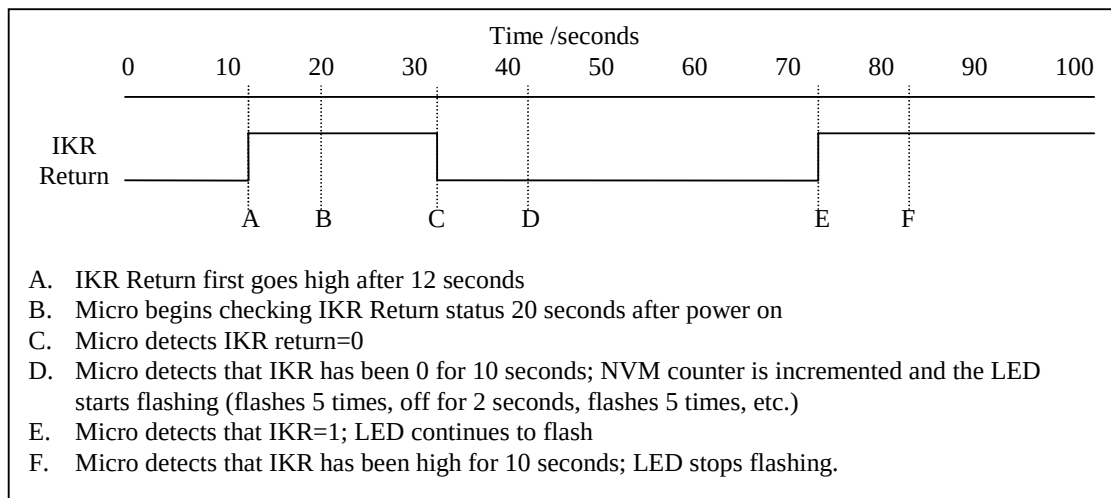
Once every main loop (approximately 200ms OSD mode, 50ms text or menu mode), the micro checks the protection pin (pin 66). If the protection pin is high 6 successive times, a protection error is diagnosed. The protection pin is **not** checked during the first 3 - 4 seconds after AC on.

If this error is diagnosed, the respective NVM register will be updated and the set goes straight into diagnostic standby with 2 flashes - no reset is attempted.

AKB Error (Error 5)

Once every main loop the micro checks the AKB stability by reading the IKR return from the Jungle IC. IKR=1 means that the AKB is stable, IKR=0 means that the AKB is unstable. If the AKB status is unstable for 10 seconds, an AKB error is diagnosed. AKB stability is not checked during the first 20 seconds after AC switch on.

If this error is diagnosed, the respective NVM register will be updated and the response LED will flash 5 times continually, but the set will not go into standby mode. If the AKB status becomes stable, and remains stable for 10 seconds, the LED will stop flashing.



Startup Diagnostic Errors (Error 6-18, 27, 29-32)

NVM	Error Message
6	SCL pin Low
7	SDA pin Low
8	Both SCL and the SDA pins are Low
9	No acknowledge from the Jungle (CXA2076)
10	No acknowledge from the Video Switch (CXA2040)
11	No acknowledge from the tuner
12	No acknowledge from the MSP
13	No acknowledge from the NVM
14	No acknowledge from the CXA2089 Video Switch
16	No acknowledge from the CXA1875 Video Port Expander
18	No acknowledge from the Dynamic Convergence (CXA8070)
27	M3L_TXD pin low after Compact Text RAM test
29	M3L_TXD pin low
30	M3L_RXD pin low
31	M3LEN pin low
32	Compact Text RAM test fail

If any of these errors are detected, the respective NVM register will be incremented. The software will then carry on with the power up sequence.

General IIC Device Run-time Errors (Errors 19-23)

NVM	Error Message
19	No acknowledge from Jungle when attempting to initialise
20	No acknowledge from Jungle when attempting to read registers
21	AV Switch cannot complete reset during initialisation
22	No acknowledge from AV Switch when attempting to read registers
23	No acknowledge from NVM when attempting to read or write

If any of these errors are detected, the respective NVM register will be incremented and the software will carry on.

Compact Text Run-time Errors (Errors 26, 28, 33 & 34)

NVM	Error Message
26	M3L_TXD pin low when checking register 81 (implies that no communication was possible)
28	M3L_TXD pin low when attempting to initialise (implies that no communication was possible)
33	Compact Text RAM test failed during initialisation of devices

In the case of these errors, the 'device reset' pin will be held low for 60ms, causing a hardware reset of Compact Text. Following this reset, a longer timeout will be allowed for the M3L bus to recover. If the error still exists, the NVM register will be incremented and the software will carry on.

NVM	Error Message
34	Register 81 check fail, but M3L_TXD pin high (implies that Compact Text has either reset or become corrupted)

In the case, the 'device reset' pin will be held low for 60ms, causing a hardware reset of Compact Text. Compact Text will then be re-initialised and the NVM counter updated. This is the same as for errors 26, 28 and 33 except that the M3L bus timeout is not changed.

MSP and DSP Run-time Errors (Errors 24 & 25)

NVM	Error Message
24	Error 24 can be caused by any of the following : - After MSP initialisation, Scart Prescale Register check fail (implies that the MSP has either reset or become corrupted). -MSP fails to acknowledge reset instruction. -Scart Prescale Register check fail (implies that the MSP has either reset or become corrupted).
25	DSP test byte corrupted implies that the MSP has either reset or become corrupted).

For both these errors, the software will refresh the MSP and DSP registers. If the errors still exist, the NVM counter will be incremented, and the software will carry on.

Error Display Mode

Error Display Mode is entered by the following sequence of commands :

Standby -> Information -> Digit 5 -> Volume Down -> TV

This mode will display a special menu, which will list all possible errors and the number of occurrences of each error (0 - 255, as stored in the NVM). There will also be a display of the current error (00 if no error). This display mode will appear as follows :

ERROR DISPLAY MODE			
Current Error Code = 00			
Error Code	Occurrences	Error Code	Occurrences
2	2	19	0
3	--	20	0
4	--	21	0
5	0	22	0
6	0	23	0
7	0	24	0
8	0	25	4
9	0	26	5
10	0	27	89
11	0	28	3
12	0	29	0
13	0	30	0
14	0	31	0
15	3	32	0
16	0	33	3
17	0	34	38
18	6		

Whilst in this mode, the number of occurrences of each error can be reset to 0 by following sequence of Sircs commands: Digit 8 -> Digit 0. 'TT08' will also reset this NVM data.

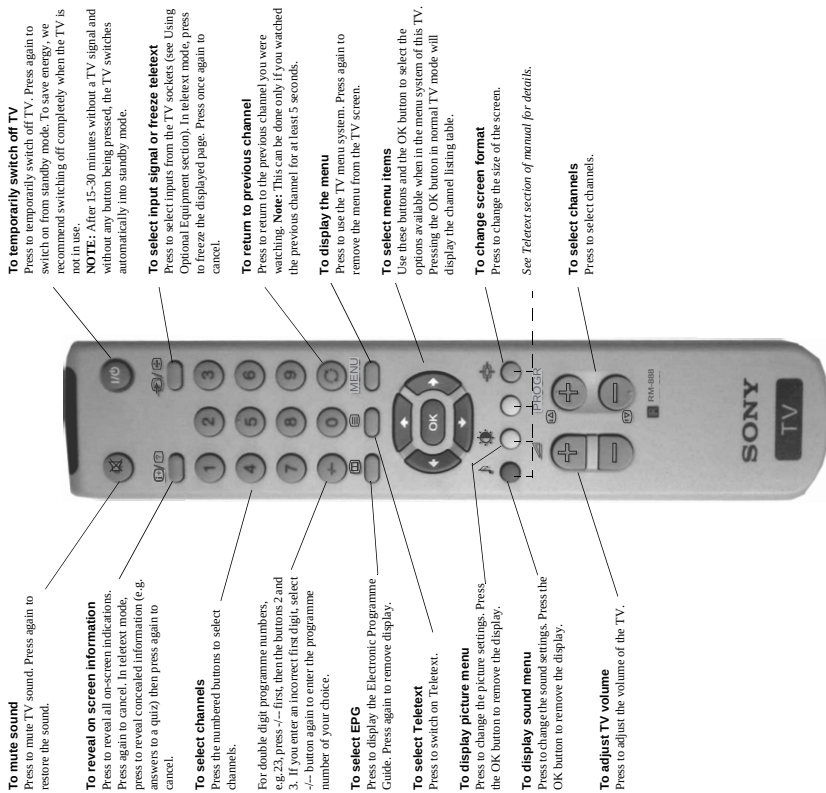
This mode can only be exited by switching off the TV.

The Current Error Code can also be read by using a TV Error Reader (IIC slave address 42H). This device simply receives 1 data byte, which is the error number in binary coded decimal form.

The operating instructions mentioned here are partial abstracts from the 'Operating Instruction Manual'. The page numbers of the 'Operating Instruction Manual' remain as in the manual.

Overview

Overview of the remote control buttons



To temporarily switch off TV

Press temporarily switch off TV. Press again to switch on from standby mode. To save energy, we recommend switching off completely when the TV is not in use.

NOTE: After 15-30 minutes without a TV signal and without any button being pressed, the TV switches automatically into standby mode.

To select input signal or freeze teletext

Press to select inputs from the TV sockets (see Using Optional Equipment section). In teletext mode, press to freeze the displayed page. Press once again to cancel.

To return to previous channel

Press to return to the previous channel you were watching. **Note:** This can be done only if you watched the previous channel for at least 5 seconds.

To display the menu

Press to use the TV menu system. Press again to remove the menu from the TV screen.

To select menu items

Use these buttons and the OK button to select the options available when in the menu system of this TV. Pressing the OK button in normal TV mode will display the channel listing table.

To change screen format

Press to change the size of the screen.

See Teletext section of manual for details.

To select channels

Press to select channels.

To mute sound

Press to mute TV sound. Press again to restore the sound.

To reveal on screen information

Press to reveal all on-screen indications. Press again to cancel. In teletext mode, press to reveal concealed information (e.g. answers to a quiz) then press again to cancel.

To select channels

Press the numbered buttons to select channels.

For double digit programme numbers, e.g. 23, press -- first, then the buttons 2 and 3. If you enter an incorrect first digit, select -- button again to enter the programme number of your choice.

To select EPG

Press to display the Electronic Programme Guide. Press again to remove display.

To select Teletext

Press to switch on Teletext.

To display picture menu

Press to change the picture settings. Press the OK button to remove the display.

To display sound menu

Press to change the sound settings. Press the OK button to remove the display.

To adjust TV volume

Press to adjust the volume of the TV.

Getting Started

6. Automatically tuning the TV

When you first switch on the TV, the following sequence of menu screens appear on the TV enabling you to 1) choose a language for the TV menu screens, 2) tune channels to the TV, 3) arrange the channels.

1. When switching on the TV for the first time, the 'LANGUAGE' menu appears automatically on the TV screen enabling you to select in which language you wish to read the TV menu screens. Press the **▲** or **▼** buttons on the remote control to select your chosen language then press the OK button to confirm your selection.

LANGUAGE	
☐	English
☐	Dutch
☐	French
☐	German
☐	Spanish
☐	Swedish
☐	Portuguese
☐	Italian
☐	Japanese
☐	Norwegian

Select Language: **▲▼**
Confirm: **OK**
2. The 'automatic tuning' menu appears on the TV screen in your selected language. Press the **▲** or **▼** buttons to select 'YES' then press the OK button to confirm.

Do you want to start automatic tuning?	
☐	Yes
☐	No

Confirm: **OK**
3. Ensure the antenna is connected as instructed, then press the OK button to confirm. The TV starts to automatically search and store all available channels for you. Please be patient and do not press any buttons. The digital channels will be stored on programme numbers 1-99 and the analogue channels on programme numbers 91-99.

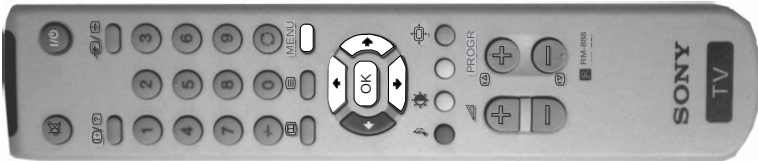
Note: If any digital channels are stored on programme numbers 91-99 during the Automatic Tuning procedure, then no analogue channels will be allocated. If this happens, please refer to the section 'Manually tuning the TV' on page 19 of this manual to tune in and store the analogue channels.
4. When the TV has finished tuning in all available channels, the 'PROGRAMME SORTING' menu appears on the TV screen enabling you to change the order of the channels on your TV. If you do not wish to use this option, proceed to step 5.

If you wish to change the channel order, press the **▲** or **▼** buttons on your remote control to select the channel you want to move, then press the OK button. Press the **▲** or **▼** buttons to select the new programme number position for your selected channel then press the OK button to confirm. The selected channel now moves to its new programme position. Repeat this procedure if you wish to sort the order of other channels on your TV.
5. Press the MENU button to remove the menu from the TV screen.

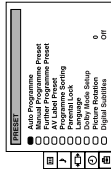
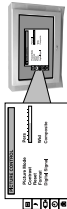
PROGRAMME SORTING				
PROG	SYS	CHAN	SERV	LABEL
1	DAB	C 30	BBC News	
2	DAB	C 30	BBC News	
3	DAB	C 30	BBC News	
4	DAB	C 30	BBC News	
5	DAB	C 30	BBC News	
6	DAB	C 30	BBC News	
7	DAB	C 30	BBC News	
8	DAB	C 30	BBC News	
9	DAB	C 30	BBC News	
10	DAB	C 30	BBC News	
11	DAB	C 30	BBC News	
12	DAB	C 30	BBC News	
13	DAB	C 30	BBC News	
14	DAB	C 30	BBC News	
15	DAB	C 30	BBC News	
16	DAB	C 30	BBC News	
17	DAB	C 30	BBC News	
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24	DAB	C 30	BBC News	
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26	DAB	C 30	BBC News	
27	DAB	C 30	BBC News	
28	DAB	C 30	BBC News	
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85	DAB	C 30	BBC News	
86	DAB	C 30	BBC News	
87	DAB	C 30	BBC News	
88	DAB	C 30	BBC News	
89	DAB	C 30	BBC News	
90	DAB	C 30	BBC News	
91	DAB	C 30	BBC News	
92	DAB	C 30	BBC News	
93	DAB	C 30	BBC News	
94	DAB	C 30	BBC News	
95	DAB	C 30	BBC News	
96	DAB	C 30	BBC News	
97	DAB	C 30	BBC News	
98	DAB	C 30	BBC News	
99	DAB	C 30	BBC News	
100	DAB	C 30	BBC News	
101	DAB	C 30	BBC News	
102	DAB	C 30	BBC News	
103	DAB	C 30	BBC News	
104	DAB	C 30	BBC News	
105	DAB	C 30	BBC News	
106	DAB	C 30	BBC News	
107	DAB	C 30	BBC News	
108	DAB	C 30	BBC News	
109	DAB	C 30	BBC News	
110	DAB	C 30	BBC News	
111	DAB	C 30	BBC News	
112	DAB	C 30	BBC News	
113	DAB	C 30	BBC News	
114	DAB	C 30	BBC News	
115	DAB	C 30	BBC News	
116	DAB	C 30	BBC News	
117	DAB	C 30	BBC News	
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119	DAB	C 30	BBC News	
120	DAB	C 30	BBC News	
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122	DAB	C 30	BBC News	
123	DAB	C 30	BBC News	
124	DAB	C 30	BBC News	
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126	DAB	C 30	BBC News	
127	DAB	C 30	BBC News	
128	DAB	C 30	BBC News	
129	DAB	C 30	BBC News	
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131	DAB	C 30	BBC News	
132	DAB	C 30	BBC News	
133	DAB	C 30	BBC News	
134	DAB	C 30	BBC News	
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136	DAB	C 30	BBC News	
137	DAB	C 30	BBC News	
138	DAB	C 30	BBC News	
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141	DAB	C 30	BBC News	
142	DAB	C 30	BBC News	
143	DAB	C 30	BBC News	
144	DAB	C 30	BBC News	
145	DAB	C 30	BBC News	
146	DAB	C 30	BBC News	
147	DAB	C 30	BBC News	
148	DAB	C 30	BBC News	
149	DAB	C 30	BBC News	
150	DAB	C 30	BBC News	
151	DAB	C 30	BBC News	
152	DAB	C 30	BBC News	
153	DAB	C 30	BBC News	
154	DAB	C 30	BBC News	
155	DAB	C 30	BBC News	
156	DAB	C 30	BBC News	
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161	DAB	C 30	BBC News	
162	DAB	C 30	BBC News	
163	DAB	C 30	BBC News	
164	DAB	C 30	BBC News	
165	DAB	C 30	BBC News	
166	DAB	C 30	BBC News	
167	DAB	C 30	BBC News	
168	DAB	C 30	BBC News	
169	DAB	C 30	BBC News	
170	DAB	C 30	BBC News	
171	DAB	C 30	BBC News	
172	DAB	C 30	BBC News	
173	DAB	C 30	BBC News	
174	DAB	C 30	BBC News	
175	DAB	C 30	BBC News	
176	DAB	C 30	BBC News	
177	DAB	C 30	BBC News	
178	DAB	C 30	BBC News	
179	DAB	C 30	BBC News	
180	DAB	C 30	BBC News	
181	DAB	C 30	BBC News	
182	DAB	C 30	BBC News	
183	DAB	C 30	BBC News	
184	DAB	C 30	BBC News	
185	DAB	C 30	BBC News	
186	DAB	C 30	BBC News	
187	DAB	C 30	BBC News	
188	DAB	C 30	BBC News	
189	DAB	C 30	BBC News	
190	DAB	C 30	BBC News	
191	DAB	C 30	BBC News	
192	DAB	C 30	BBC News	
193	DAB	C 30	BBC News	
194	DAB	C 30	BBC News	
195	DAB	C 30	BBC News	
196	DAB	C 30	BBC News	
197	DAB	C 30	BBC News	
198	DAB	C 30	BBC News	
199	DAB	C 30	BBC News	
200	DAB	C 30	BBC News	
201	DAB	C 30	BBC News	
202	DAB	C 30	BBC News	
203	DAB	C 30	BBC News	
204	DAB	C 30	BBC News	
205	DAB	C 30	BBC News	
206	DAB	C 30	BBC News	
207	DAB	C 30	BBC News	
208	DAB	C 30	BBC News	
209	DAB	C 30	BBC News	
210	DAB	C 30	BBC News	
211	DAB	C 30	BBC News	
212	DAB	C 30	BBC News	
213	DAB	C 30	BBC News	
214	DAB	C 30	BBC News	
215	DAB	C 30	BBC News	
216	DAB	C 30	BBC News	
217	DAB	C 30	BBC News	
218	DAB	C 30	BBC News	
219	DAB	C 30	BBC News	
220	DAB	C 30	BBC News	
221	DAB	C 30	BBC News	
222	DAB	C 30	BBC News	
223	DAB	C 30	BBC News	
224	DAB	C 30	BBC News	
225	DAB	C 30	BBC News	
226	DAB	C 30	BBC News	
227	DAB	C 30	BBC News	
228	DAB	C 30	BBC News	
229	DAB	C 30	BBC News	
230	DAB	C 30	BBC News	
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232	DAB	C 30	BBC News	
233	DAB	C 30	BBC News	
234	DAB	C 30	BBC News	
235	DAB	C 30	BBC News	
236	DAB	C 30	BBC News	
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238	DAB	C 30	BBC News	
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240	DAB	C 30	BBC News	
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248	DAB	C 30	BBC News	
249	DAB	C 30	BBC News	
250	DAB	C 30	BBC News	
251	DAB	C 30	BBC News	
252	DAB	C 30	BBC News	
253	DAB	C 30	BBC News	
254	DAB	C 30	BBC News	
255	DAB	C 30	BBC News	
256	DAB	C 30	BBC News	
257	DAB	C 30	BBC News	

Re-arranging the TV channels

After tuning the TV, you can use this feature to change the channel order.



1. Press the MENU button on the remote control to display the menu on the TV screen.
2. Press the or buttons to select the symbol on the menu screen then press the button to enter the 'PRESET' menu.
3. Press the button to select 'Programme Sorting', then press the button to enter the 'PROGRAMME SORTING' menu.
4. Press the or buttons to select the channel you want to move then press the OK button to confirm.
5. Press the or buttons to select the new programme position (e.g. PROG 4) for your selected channel, then press the OK button to confirm. The selected channel now moves to its new programme position.
6. Repeat steps 4 and 5 if you wish to sort other channels.
7. Press the MENU button to remove the menu from the TV screen.



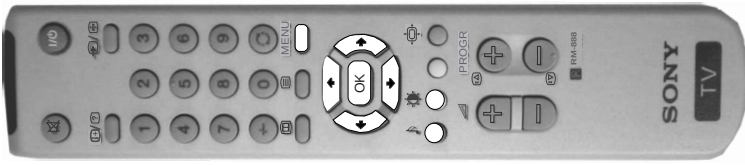
PROG	SYS	CHAN	LABEL
1	000	C 30	BBC ONE Wa
2	000	C 30	BBC TWO
3	000	C 34	ITV Channel
4	000	C 34	ITV Channel
5	000	C 30	Channel 5
6	000	C 30	Channel 5
7	000	C 30	BBC CHOICE
8	000	C 34	Channel 4
9	000	C 34	Channel 4

PROG	SYS	CHAN	LABEL
1	000	C 30	BBC ONE Wa
2	000	C 30	BBC TWO
3	000	C 34	ITV Channel
4	000	C 34	ITV Channel
5	000	C 30	Channel 5
6	000	C 30	Channel 5
7	000	C 30	BBC CHOICE
8	000	C 34	Channel 4
9	000	C 34	Channel 4

PROG	SYS	CHAN	LABEL
1	000	C 30	BBC ONE Wa
2	000	C 30	BBC TWO
3	000	C 34	ITV Channel
4	000	C 34	ITV Channel
5	000	C 30	Channel 5
6	000	C 30	Channel 5
7	000	C 30	BBC CHOICE
8	000	C 34	Channel 4
9	000	C 34	Channel 4

Adjusting the picture

Although the picture is adjusted at the factory, you can modify it to suit your own taste.



1. Press the MENU button on the remote control to display the menu on the TV screen.
2. Press the or buttons on the remote control to select the symbol on the menu screen then press the button to enter the 'PICTURE CONTROL' menu.
3. Press the or buttons to select the item on the screen you wish to adjust then press the button to confirm. For a description of the menu items and their effects, see the table below.
4. If you selected 'Picture Mode' or 'Format' in step 3, press the or buttons to select the item on the screen you wish to adjust then press the button to confirm.
5. Press the or buttons to adjust your selected item.
6. As soon as you have adjusted the item, press the OK button to store the new setting.
7. If you selected 'Picture Mode' or 'Format' in step 3, press the button to return to the 'PICTURE CONTROL' menu.
8. Repeat steps 3-7 to adjust the other items.
9. Press the MENU button to remove the menu from the TV screen.

Picture Mode

Picture Mode Personal (for individual settings)
Movie (for films)
Live (for live broadcasts)

Brightness*

Colour*

Sharpness*

Hue*

Contrast

Contrast

Reset

Reset Resets picture to factory preset levels.

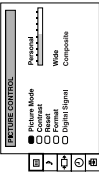
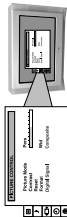
Format

Format (refer to page 14 for details)
Scroll Auto 16:9 Off On

Digital Signal

Digital Signal Set to Composite or RGB. Choose the option that gives you the picture quality you prefer

*Only if you select 'Personal' in 'Picture Mode'.
** Available for NTSC colour system only.



Changing picture and sound modes quickly

You can quickly change the Picture Mode or the Sound Mode without entering the 'PICTURE CONTROL' or the 'SOUND CONTROL' menu screens.

1. Press the symbol on the remote control for picture modes or the symbol for sound modes.
2. Press the or buttons to select the desired mode.
3. Press the OK button to remove the display from the TV screen.

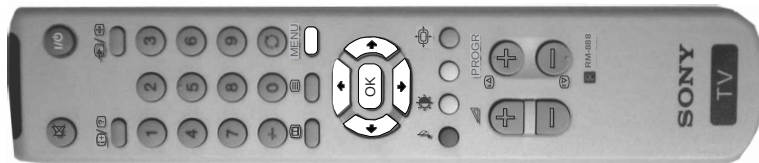
Picture Mode
 Personal
 Movie
 Live

Sound Mode
 Off
 Pro Logic
 3 Stereo
 Dolby
 Pseudo stereo
 Spatial

Adjusting the sound

Although the sound is adjusted at the factory, you can modify it to suit your own taste.

1. Press the MENU button on the remote control to display the menu on the TV screen.
2. Press the $\blacktriangle$ or $\blacktriangledown$ buttons to select the β symbol on the menu screen then press the $\blacktriangleright$ button to enter the 'SOUND CONTROL' menu.
3. Press the $\blacktriangle$ or $\blacktriangledown$ buttons to select the item on the screen you wish to adjust then press the $\blacktriangleright$ button to confirm. For a description of the menu items and their effects, see the table below.
4. If you selected 'Sound Mode' or 'Surround Mode' in step 3, press the $\blacktriangle$ or $\blacktriangledown$ buttons to select the item on the screen you wish to adjust then press the $\blacktriangleright$ button to confirm.
5. Press the $\blacktriangle$ or $\blacktriangledown$ buttons to adjust your selected item.
6. As soon as you have adjusted the item, press the OK button to store the new setting.
7. If you selected 'Sound Mode' or 'Surround Mode' in step 3, press the $\blacktriangle$ button to return to the 'SOUND CONTROL' menu.
8. Repeat steps 3-7 to adjust the other items.
9. Press the MENU button to remove the menu from the TV screen.



Sound Mode

- $\blacktriangle$ Personal
- Rock
- Jazz
- $\blacktriangledown$ Pop

In 'Personal' mode, Treble and Bass can be adjusted

Balance

Only available when 'Surround Mode' is set to 'Off'

Resets sound to factory preset levels

Resets bass by a fixed amount

Bass Extension

Surround Mode

Choose from the special sound effects:
Off -> Pro Logic -> 3 Stereo -> Virtual Dolby -> Pseudo Stereo -> Spatial

Dual Sound

Stereo $\blacktriangle$ $\blacktriangledown$ Mono (for a stereo broadcast)
A for channel 1 $\blacktriangle$ $\blacktriangledown$ B for channel 2
(for a bilingual broadcast)

Volume Offset

$\blacktriangle$ The channel volume level can be adjusted over a range of -12 to +12.

Headphones

Volume

Dual Sound

Stereo $\blacktriangle$ $\blacktriangledown$ Mono (for a stereo broadcast)
A for channel 1 $\blacktriangle$ $\blacktriangledown$ B for channel 2
(for a bilingual broadcast)

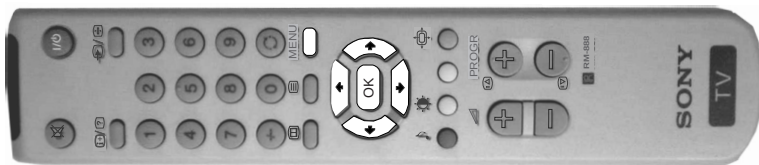
Auto Surround

Set to 'On' to automatically select Pro Logic Surround sound when transmitted.

Setting up Dolby Pro Logic

Before listening to Dolby Pro Logic encoded programmes, you can adapt the Dolby features to suit your own taste. This is only required if you have connected your own external speakers (SS-CR190 or equivalent), and/or if you decide to change the speaker positions.

Note: There will be no output available from the headphones or the audio output sockets on the rear of the TV during Dolby Pro Logic mode.



1. Press the MENU button on the remote control to display the menu on the TV screen.

2. Press the $\blacktriangle$ or $\blacktriangledown$ buttons to select the β symbol on the menu screen then press the $\blacktriangleright$ button to enter the 'PRESET' menu.

3. Press the $\blacktriangle$ or $\blacktriangledown$ buttons to select 'Dolby Mode Setup' on the menu screen then press the $\blacktriangleright$ button to enter the 'DOLBY MODE SETUP' menu.

4. Press the $\blacktriangle$ or $\blacktriangledown$ buttons to select 'Dolby Mode', then press the $\blacktriangleright$ button to enter. Press the $\blacktriangle$ or $\blacktriangledown$ buttons to select one of the following modes then press the OK button to store the chosen mode:

Pro Logic: all 5 speakers are activated

3 stereo: surround speakers are not used

Virtual: no external speakers required. Do not select this mode if you wish to receive Dolby Pro Logic

5. Press the $\blacktriangleright$ button to select 'Centre Mode', then push the $\blacktriangle$ button to enter. Press the $\blacktriangle$ or $\blacktriangledown$ buttons to select one of the following modes then press the OK button to store the chosen mode:

Normal: all 5 speakers are activated

Wide: wider bandwidth for centre speaker

Phantom: centre speaker is not used (This cannot be selected if you have chosen "3 stereo" mode in step 4)

6. Press the $\blacktriangleright$ button to select 'Test Tone' then push the $\blacktriangle$ button to enter. Press the $\blacktriangle$ or $\blacktriangledown$ buttons to select 'On', then press the OK button.
The test tone will cycle through all the speakers.

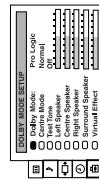
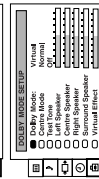
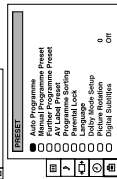
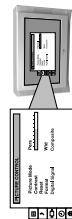
7. Press the $\blacktriangleright$ button to select the 'Left Speaker', then press the $\blacktriangleright$ button to confirm. The tone remains at the left speaker.

8. Press the $\blacktriangle$ or $\blacktriangledown$ buttons to alter the sound level, then press the OK button.

9. Repeat steps 7 and 8 to select and adjust the 'Centre', 'Right', and 'Surround' speakers, so that the sound output from all speakers are balanced in relation to your sitting position.

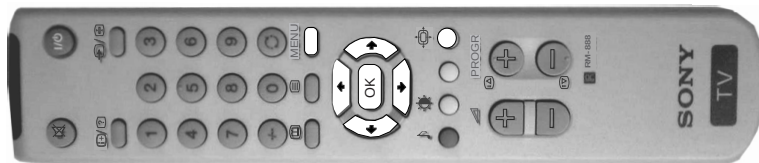
10. Press the MENU button to remove the display.

Note: After setting up Dolby ProLogic, refer to the 'Adjusting the sound' section on page 11 and set the Surround Mode to Pro Logic.



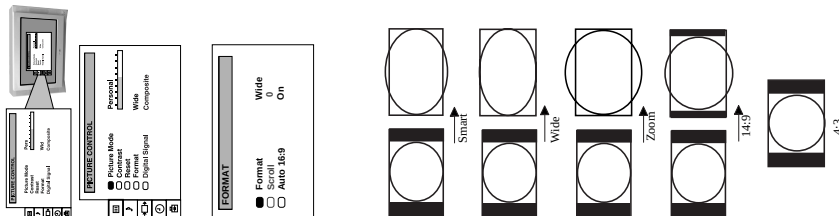
Changing the screen mode

Using this Screen Mode feature you can change the aspect ratio of the screen.



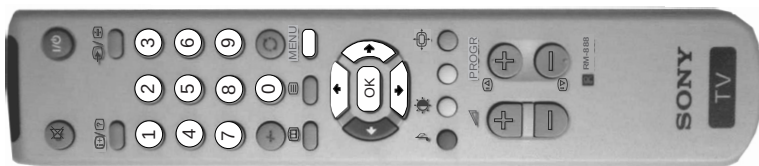
- Press the MENU button on the remote control to display the menu on the TV screen.
- Press the $\blacktriangle$ or $\blacktriangledown$ buttons to select the symbol on the menu screen then press the $\rightarrow$ button to enter the 'PICTURE CONTROL' menu.
- Press the $\blacktriangle$ or $\blacktriangledown$ buttons to select 'Format' on the menu screen then press the $\rightarrow$ button to enter the 'FORMAT' menu.
- Format**
Press the $\blacktriangle$ or $\blacktriangledown$ buttons to select 'Format' then press the $\rightarrow$ button to enter. Press the $\blacktriangle$ or $\blacktriangledown$ buttons repeatedly to select one of the following modes then press the OK button to store the chosen mode:
 - Smart - initiation of wide screen effect (16:9) for 4:3 broadcasts
 - Wide - for 16:9 broadcasts
 - Zoom - initiation of wide screen effect (16:9) for movies broadcast in cinematographic format
 - 14:9 - compromise between 4:3 and 16:9 format - for conventional 14:9 picture
 - 4:3 - conventional 4:3 picture
- Scroll** (Applies to Zoom, 14:9 or Smart format only)
Press the $\blacktriangle$ or $\blacktriangledown$ buttons to select 'Scroll'. You can use 'Scroll' to move the screen up or downwards in order to see the cut-off parts (e.g. to read subtitles). Press the $\blacktriangle$ button to highlight the present value then press the $\blacktriangle$ or $\blacktriangledown$ buttons to adjust the screen position over a range of -5 to +5. Press the OK button to store.
- Auto 16:9**
Press the $\blacktriangle$ or $\blacktriangledown$ buttons to select 'Auto 16:9' then press the $\rightarrow$ button to enter. Press the $\blacktriangle$ or $\blacktriangledown$ buttons to select 'On' if you wish the TV to switch automatically to wide format when a 16:9 broadcast is detected, or 'Off' to retain the format selected in step 4. Press the OK button to store.
- Press the MENU button to remove the menu from the TV screen.

Note: You can change the picture format quickly without having to enter the menu system. Simply press the button repeatedly until the picture is displayed in the format you desire.



Manually tuning the TV

You have already tuned the TV automatically using the instructions at the start of this manual. You can however carry out this operation manually, adding channels to the TV, one at a time.



- Press the MENU button on the remote control to display the menu on the TV screen.
- Press the $\blacktriangle$ or $\blacktriangledown$ buttons to select the symbol on the TV screen then press the $\rightarrow$ button to enter the PRESET menu.
- Press the $\blacktriangle$ or $\blacktriangledown$ buttons to select 'Manual Programme Preset' on the menu screen then press the $\rightarrow$ button to enter the 'MANUAL PROGRAMME PRESET' menu.
- Press the $\blacktriangle$ or $\blacktriangledown$ buttons to select an unused programme number for your channel then press the $\rightarrow$ button to enter.
- Press the $\blacktriangle$ or $\blacktriangledown$ buttons to select the TV broadcast system (1 for analogue or DIG for digital) or a video input source (AV1, AV2 ...) then press the $\rightarrow$ button to confirm.
- Select the first number digit of 'CHAN' (channel) then the second number digit of 'CHAN' with the numbered buttons on the remote control
or
Press the $\blacktriangle$ or $\blacktriangledown$ buttons to search for the next available channel.
- If you wish to change the 'SERV' service number (on digital programmes only), select each digit in turn and press the numbered buttons on the remote control to change to your desired service.
- If you do not wish to store this channel on the programme number you selected, press the $\blacktriangle$ or $\blacktriangledown$ buttons on the remote control to continue searching for the desired channel.
- If this is the channel you wish to store, press the OK button.
- Repeat steps 4-9 if you wish to store more channels then press the MENU button to remove the menu from the TV screen.

PRESET									
Channel Name	Channel No.	System	Input	Service	Label	Channel No.	System	Input	Service
0000000000	0	0	0	0	0	0	0	0	0

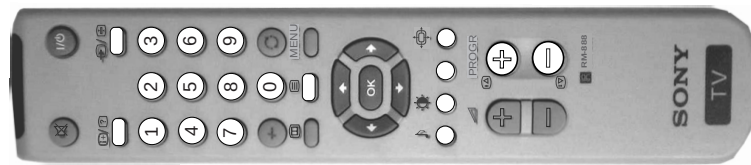
MANUAL PROGRAMME PRESET									
Prog	1	2	3	4	5	6	7	8	9
System	1	2	3	4	5	6	7	8	9
Input	1	2	3	4	5	6	7	8	9
Service	1	2	3	4	5	6	7	8	9
Label	1	2	3	4	5	6	7	8	9
Channel No.	1	2	3	4	5	6	7	8	9
System	1	2	3	4	5	6	7	8	9
Input	1	2	3	4	5	6	7	8	9
Service	1	2	3	4	5	6	7	8	9
Label	1	2	3	4	5	6	7	8	9

MANUAL PROGRAMME PRESET									
Prog	1	2	3	4	5	6	7	8	9
System	1	2	3	4	5	6	7	8	9
Input	1	2	3	4	5	6	7	8	9
Service	1	2	3	4	5	6	7	8	9
Label	1	2	3	4	5	6	7	8	9
Channel No.	1	2	3	4	5	6	7	8	9
System	1	2	3	4	5	6	7	8	9
Input	1	2	3	4	5	6	7	8	9
Service	1	2	3	4	5	6	7	8	9
Label	1	2	3	4	5	6	7	8	9

NOTE: After manually tuning in the channels you require, you can sort the channels into the order you prefer by following the procedure 'Re-arranging the TV channels' on page 24.

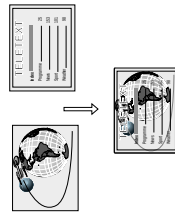
Viewing standard teletext

Teletext is an information service transmitted by most TV stations.



Selecting Teletext

1. When viewing analogue channels press a numbered button on the remote control to select the channel which carries the teletext service you wish to receive.
2. Press the  on the remote control to switch on teletext. Press the  button again if you wish to superimpose teletext on to the TV screen.
3. Select your required page using the numbered buttons on the remote control. If you make an error, complete the number, then re-enter the correct page number.
4. Press the  button to switch off teletext.



Using Other Standard Teletext Functions

To move to the next or preceding page

Press the  or  buttons to select the previous or next page.

To freeze a Teletext page

Press the  button to freeze the page. Press again to cancel the freeze.

Revealing concealed information (eg. answers to a quiz).

Press the  button to reveal information. Press again to conceal the information.

Using colour buttons to access pages (Fastext)

When the colour coded menu appears at the bottom of a page, press the colour buttons (red, green, yellow or blue) on the remote control to access the corresponding page.

Displaying TOP-Text (when available)

With TOP-Text you can access pages easily by selecting blocks or groups of pages. The block is a category (for example Sports) which includes the groups (for example Football). When TOP-Text is broadcast, a colour coded menu appears at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue buttons on the remote control. Press these coloured buttons to displayed the desired pages.

1. Press the  button to display teletext.
2. Press the coloured buttons to search for the page you desire:
Red: to go back to the previous page.
Green: to proceed to the next page.
Yellow: to proceed to the first page of the next group.
Blue: to proceed to the first page of the next block.
3. Press the  button twice to return to normal TV.

Viewing Digital Teletext

Most of the digital TV channels broadcast information via teletext. This digital service includes high quality text and graphics as well as advanced navigational options. Additionally, this television set has access to a dedicated digital teletext channel.

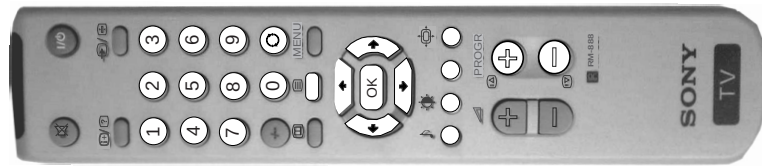
Selecting the dedicated digital teletext channel

1. To view the dedicated digital teletext service, press the numbered buttons on your remote control to select the relevant channel number. If you do not know the channel number, press the OK button to look for that channel in the channel table.
2. Once the teletext channel is displayed, follow the instructions on-screen to display the teletext information, then press the  or  buttons to guide the on-screen cursor to the required area of the screen, then press the OK button to display the chosen information.
3. Alternatively, you can use the numbered and coloured buttons on the remote control to directly enter the page number required and to display the various pages of text information.
4. If when viewing the teletext pages, you are requested to select 'OK' or 'Cancel', press the OK button for 'OK' or the  button for 'Cancel'.
5. When you have finished viewing teletext, press the  button or the PROG +/- buttons, and then select an alternative digital channel.

Selecting teletext from the other digital channels

Normal teletext services may also be available on other digital channels. Sometimes this is indicated by a small symbol or text display on your TV screen, superimposed on the channel you are watching.

1. Press the  or  buttons to select the symbol then press the OK button to display the chosen information.
 2. Alternatively, you may be requested to use the numbered and coloured buttons on your remote control to display the various pages of text information. If when viewing the teletext pages, you are requested to select 'OK' or 'Cancel', press the OK button for 'OK' or the  button for 'Cancel'.
 3. Once the text information is displayed on screen, use the  or  buttons, the coloured buttons and/or the numbered buttons to access the chosen information.
 4. When you have finished viewing teletext, press the  button and then select an alternative digital channel.
- On other channels there may be no on-screen symbol, but you can see if there is a digital service as follows:
1. When watching a digital TV channel, press the  button on your remote control to display any text service which may be available.
 2. Press the numbered buttons to select the various pages of information available and/or the coloured buttons for the functions shown on screen.
 3. When you have finished using the text service, press the  button to return to normal TV.



Specifications

TV system LD/BE-T	
Colour system PAL NTSC 3.58, 4.43 (only Video in)	
Channel coverage UHF:B21-69	
Picture tube KV-28DX30U FD Trinitron WIDE Approx. 71cm (28inches) (Approx. 66cm picture measured diagonally), 102° deflection KV-32DX30U FD Trinitron WIDE Approx. 82cm (32 inches) (Approx. 76cm picture measured diagonally), 102° deflection	
Rear Terminals -C1 21-pin Euro connector (CENELEC standard) including audio/video input, RGB input, TV audio/video output. -C2 -C3 2 21-pin Euro connector (CENELEC standard) including audio/video input, S-video input, selectable audio/video output. -C3 3 21-pin Euro connector (CENELEC standard) including audio/video input, selectable audio/video output. -MODEM Audio outputs - phono jacks Modem connection	
Front Terminals -C2 Video input - phono jack -C2 Audio inputs - phono jacks -C3 S video input - 4 pin DIN Headphones jack - minijack stereo	
Sound output Left/Right: 2x20W (music power)	
Power consumption KV-28DX30U: 136W KV-32DX30U: 134W	
Dimensions (wxdh) KV-28DX30U: Approx. 796x518x522mm KV-32DX30U: Approx. 883x567x562mm	
Weight KV-28DX30U: Approx. 44kg KV-32DX30U: Approx. 62kg	
Accessories supplied RM-888 remote control (1) IEC designated size AA battery (2)	
Other features Teletext Dolby ProLogic Surround System Smartlink	

Design and specifications are subject to change without notice.

Troubleshooting

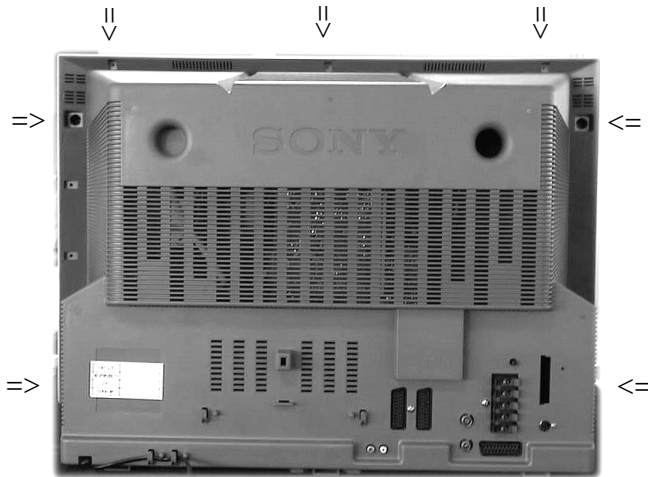
Here are some simple solutions to problems which may affect the picture and sound.

Problem	Cause
No picture, no sound.	- Power off. - TV in standby. - Aerial disconnected. - Picture preset level adjustment. - No digital transmissions in your area. - No digital transmissions from the transmitter you are currently using. - Weak signal. - Unsuitable aerial. - Scrambled/subscription-only channel. - Programme used only for data (no picture or sound). - Programme not being transmitted. - Digital mode Timer Record active (regular flash). - Fault (irregular flash). - Volume control. - The button marked  on the rear of the TV is pressed in. - The TV has been set up to receive Dolby Pro Logic.
Poor or no picture (screen is dark), but good sound. No picture on any channel after digital tuning.	- Wrong external mode selected on an RGB video source. - Colour level setting. - Batteries low. - Inputs from external equipment not switched off.
Some channels are blank.	
Standby indicator flashing.	
Good Picture, no sound.	
No head phone output and no output from the audio sockets marked  on the rear of the TV. Poor picture quality. No colour on colour programmes. Remote control does not function. Distorted picture when changing programmes or selecting Teletext.	
Cause	Solution
Power off. TV in standby.	- Plug in the TV. - Press the  button on the front of the TV. - If the  indicator is on press the  button or a numbered button on the remote control.
Aerial disconnected.	Check the aerial connection.
Picture level adjustment.	Select  on the TV menu system then adjust the brightness, picture and colour balance levels.
No digital transmissions in your area.	Tune in the analogue channels available using the 'Manually tuning the TV' instruction in this manual, then contact a local installer to find out when digital transmissions begin in your area.
No digital transmissions from the transmitter you are currently using. Unsuitable aerial.	Contact a local installer to find out which transmitter you should be pointing your aerial at.
Weak signal.	- Change your aerial to cover the channels used by digital programmes. (Contact a local installer) - Ensure aerial is correctly aligned to transmitter. - Upgrade to a higher gain aerial. - Subscribe to pay-per-view broadcaster.
Scrambled/subscription-only channel. Programme information without picture or sound.	- See 'Skipping programme positions' section. - See 'Re-arranging the TV channels' section. - Do not open the cabinet, refer to qualified personnel. - Contact your nearest Sony Service Centre.
Fault.	Press the  + button on the remote control.
Volume control.	If  is displayed on the screen, press the  button on the remote control.
Wrong external mode selected.	Press the  button repeatedly until the RGB symbol  is displayed on screen.
Colour level setting.	Select  on the TV menu system then adjust the colour setting.

- If you continue to have these problems, have your TV serviced by qualified personnel or you can contact the Sony UK Digital HelpLine on 0870 600 1717.
- NEVER open the casing yourself.

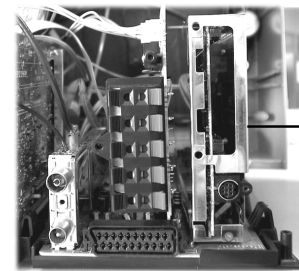
SECTION 2 DISASSEMBLY

2-1. Rear Cover Removal

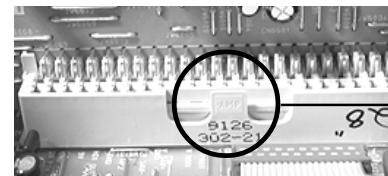


Remove the rear cover fixing screws indicated. Take care when removing the rear cover not to damage the speaker cables [Disconnect the speaker connector] as speakers are fitted inside the rear cover.

2-3. N Board Removal



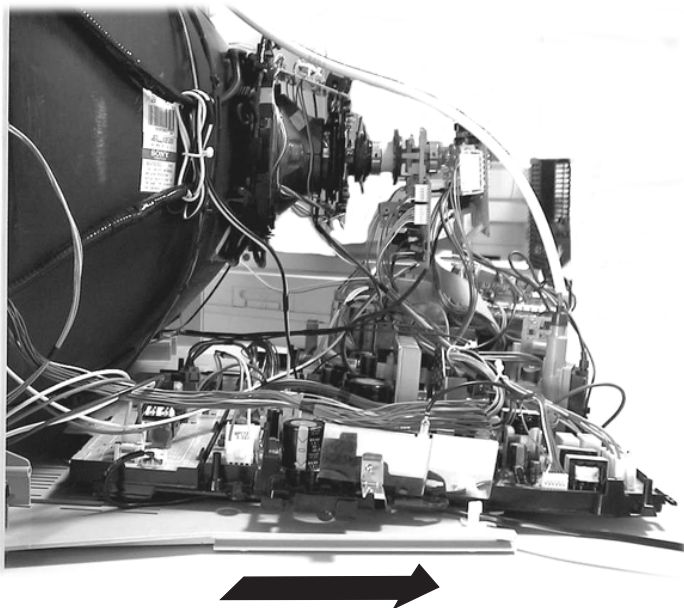
Shield Case



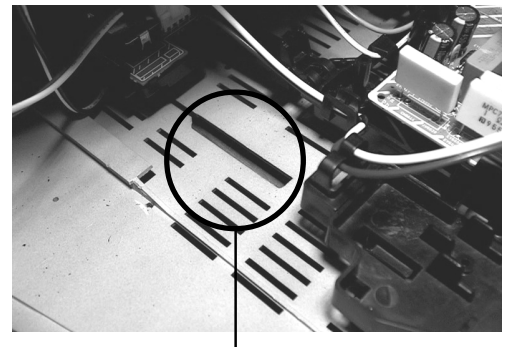
Clip

To remove the N Board first pull the shield case shown vertically. The clip circled can then be released and the board gently removed.

2-2. Chassis Removal and Refitting

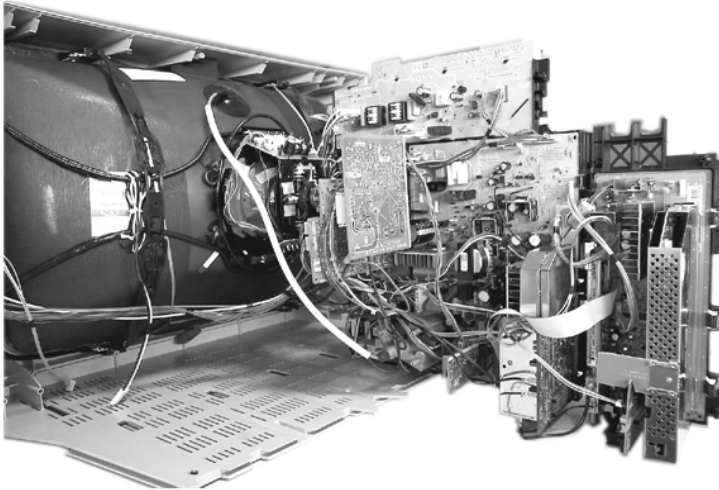


To remove lift the main bracket rear slightly and slide the chassis away from the beznet. Ensure that the interconnecting leads are released from their purse locks to prevent damage being caused.



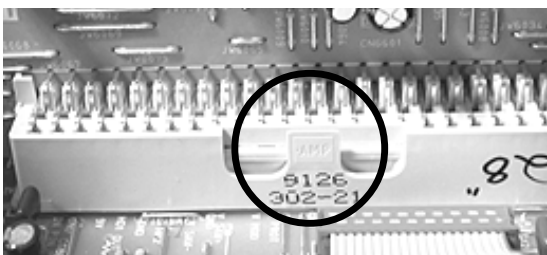
When refitting the chassis ensure that the main bracket is located in the beznet guide slots before sliding the chassis forwards. Refit the interconnecting leads in their respective purse locks.

2-4. Service Position



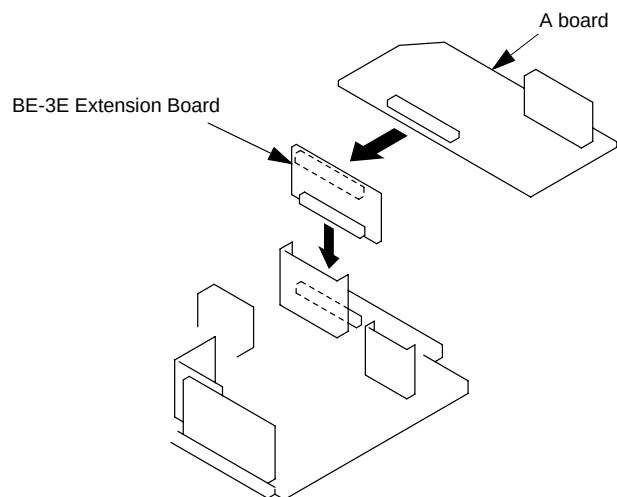
Position the chassis as indicated to access the solder side. To gain access to the D Board follow the instructions on page 19. [Removal and Replacement of the main bracket bottom plates].

2-5. A Board Removal



To remove the A Board release the clip circled and gently remove the board in a vertical direction.

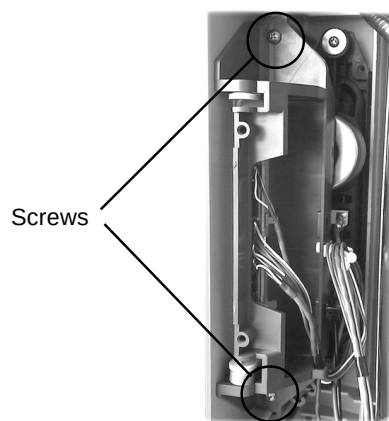
2-6. A Extension Board



To gain test access to the A Board remove the board and plug in the extension board. The A board can then be plugged into the extension board to allow testing.

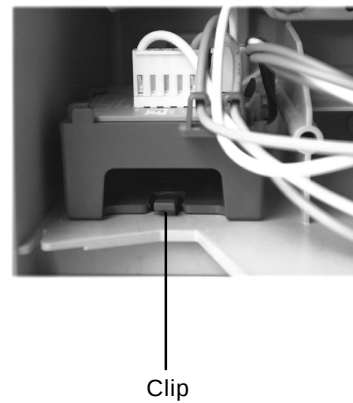
2-7. Side Control Module Removal

Remove the two screws fixing the user control module to the side of the set. The control module can then be removed by sliding it towards the rear of the set allowing access to the H7 Board.



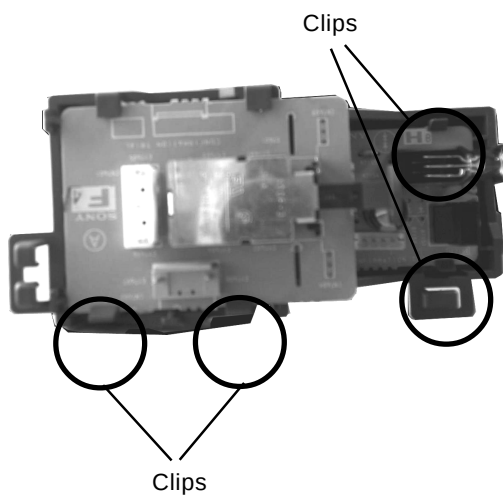
2-8. F4 Bracket Removal

Release the clip circled and pull the bracket towards the rear of the set. The bracket can then be removed to allow access to the boards.



2-9. F4 and H8 Board Removal

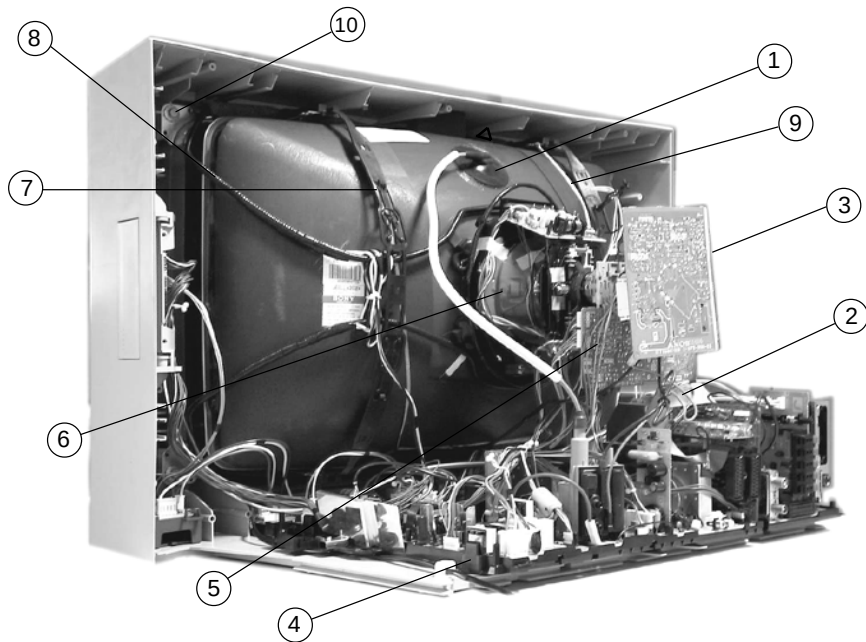
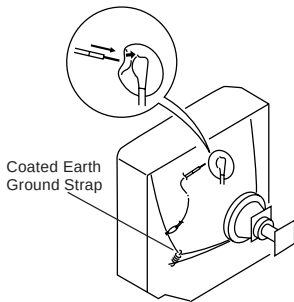
To remove the F4 and H8 Boards release the clips circled and ease the boards gently away from the support bracket.



2-10. Picture Tube Removal

WARNING: BEFORE REMOVING THE ANODE CAP

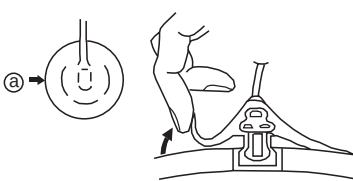
High voltage remains in the CRT even after the power is disconnected. To avoid electric shock, discharge CRT **before** attempting to remove the anode cap. Short between anode and CRT coated earth ground strap.



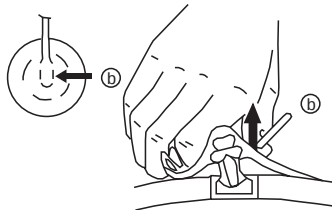
1. Discharge the anode of the CRT and remove the anode cap.
2. Unplug all interconnecting leads from the Deflection yoke, neck assy, degaussing coils and CRT grounding strap.
3. Remove the C Board from the CRT.
4. Remove the chassis assembly.
5. Loosen the Neck assembly fixing screw and remove.
6. Loosen the Deflection yoke fixing screw and remove.
7. Place the set with the CRT face down on a cushion and remove the Degaussing Coil holders.
8. Remove the Degaussing Coils.
9. Remove the CRT grounding strap and spring tensioners.
10. Unscrew the four CRT fixing screws [located on each CRT corner] and remove the CRT.
[Take care not to handle the CRT by the neck.]

Removal of the Anode-Cap

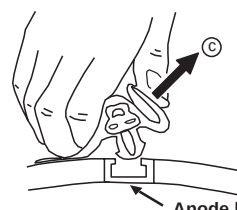
* REMOVING PROCEDURES.



- ① Turn up one side of the rubber cap in the direction indicated by the arrow (a)



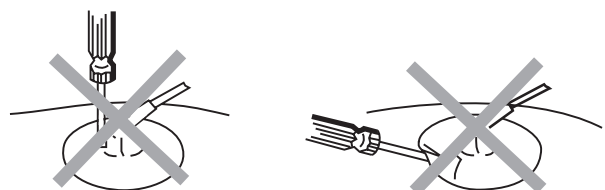
- ② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow (b)



- ③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow (c)

How to handle the Anode-Cap

1. To prevent damaging the surface of the anode-cap do not use sharp materials.
2. Do not apply too great a pressure on the rubber, as this may cause damage to the anode connector.
3. A metal fitting called a shatter hook terminal is fitted inside the rubber cap.
4. Do not turn the rubber foot over excessively, this may cause damage if the shatter hook sticks out.



REMOVAL AND REPLACEMENT OF THE MAIN-BRACKET BOTTOM PLATES.

(1) REMOVING THE PLATES

In the event of servicing being required to the solder side of the D Board printed wiring board, the bottom plates fitted to the main chassis bracket require to be removed. This is performed by cutting the gates with a sharp wire cutter at the locations indicated by the arrows.

Note : There are 4 plates fitted to the main bracket and secured by 3 gates.

Only remove the necessary plate to gain access to the printed wiring board.

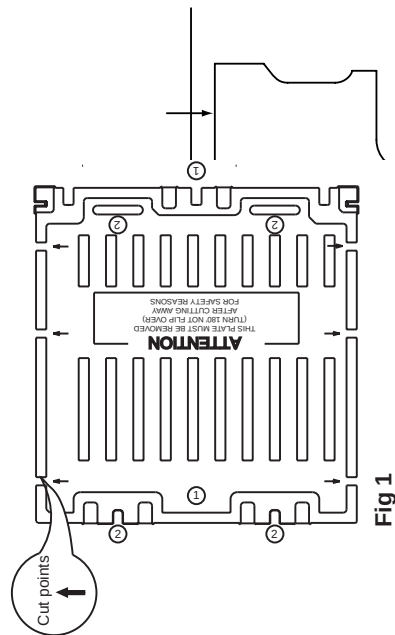
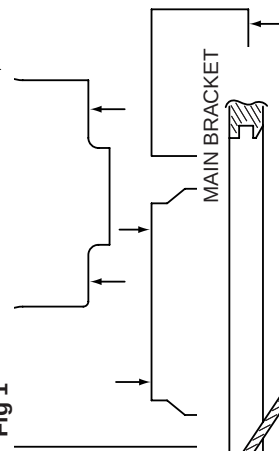
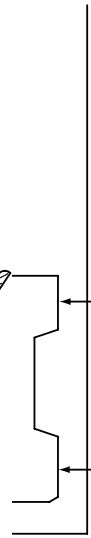


Fig 1



INSERT FROM THE BOTTOM SIDE

FIG 3



⚠ For safety reasons, on no account should the plates be removed and not refitted after servicing.

(2) REFITTING THE PLATES

Because the plates differ in size it is important that the correct plates are refitted in their original location.

Please note that the plates need to be rotated 180 degrees from their cut position to allow the tabs to be fitted into their catch positions.

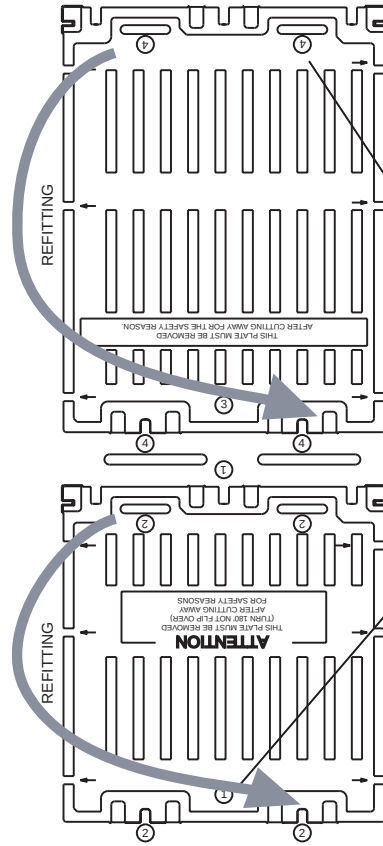


Fig 2

NUMERICAL MARKINGS

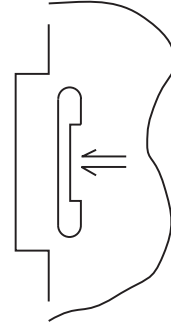


Fig 4

In the event of the plates requiring to be removed at a later stage, this can be achieved by inserting a screwdriver in the snap-recess indicated as in Fig 4 and lifting out.

SECTION 3 SET-UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there are specific instructions to the contrary, carry out these adjustments with the rated power supply.
- Unless there are specific instructions to the contrary, set the controls and switches to the following settings :

Contrast normal

Brightness normal

Carry out the adjustments in the following order :

- 3-1. Beam Landing.
- 3-2. Convergence.
- 3-3. Focus.
- 3-4. White Balance.

Note : Test equipment required.

1. Color bar/pattern generator.
2. Degausser.
3. Oscilloscope.
4. Digital multimeter.

3-1. Beam Landing

Preparation :

1. In order to reduce the influence of geomagnetism on the set's picture tube, face it in an easterly or westerly direction.
2. Switch on the TV set's power and degauss with a degausser.

(1) Adjustment of Correction Magnet for Y-Splitting Axis.

1. Input a crosshatch signal from the pattern generator.
2. Set the Picture control to minimum and confirm that the Brightness control is set to normal.
3. Position the neck assembly as indicated in Fig.3-3.
4. Loosen the deflection yoke fixing screw.
5. Move the deflection yoke as far forward as is possible.
6. Adjust the upper and lower pin symmetrically by opening or closing the Y-splitting axis correction magnets located on the neck assembly. [See Fig 3-1 and Fig 3-2]
7. Return the deflection yoke to its original position and re-tighten its fixing screw.

Fig.3-1

Y-splitting axis correction magnet

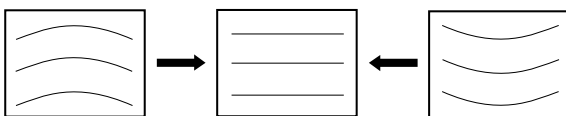
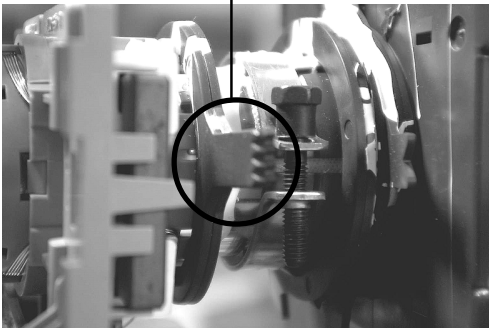


Fig.3-2

Caution :

High voltages are present on the Deflection yoke terminals - take care when handling the Deflection yoke whilst carrying out adjustments.

(2) Landing

Note : Before carrying out the following adjustments adjust the magnets as indicated below [See Fig.3-4].

1. Input a crosshatch signal from the signal generator.
2. Rough-adjust the focus and horizontal convergence.
3. Switch from the crosshatch pattern to an all-red pattern.
4. Move the deflection yoke backwards and adjust with the purity magnet so that the red is at the centre and it aligns symmetrically [See Fig.3-5].
5. Move the deflection yoke forward to the point where the entire screen just becomes red [Mark its position].
6. Move the deflection yoke further forward until the screen just changes colour at the edges. [Mark its position]
7. Position the deflection yoke between the two marks indicated above.
8. Input a crosshatch pattern from the pattern generator and rotate the deflection yoke so that the horizontal lines are parallel with the top and bottom of the screen.
9. When the position of the deflection yoke has been determined, fasten it with its fixing screw.
10. Switch the pattern generator to green then blue and confirm the purity.
11. If the beam does not land correctly in all the corners of the screen, use disk magnets to correct it. [Confirm the corner landing for green and blue]

Fig.3-3

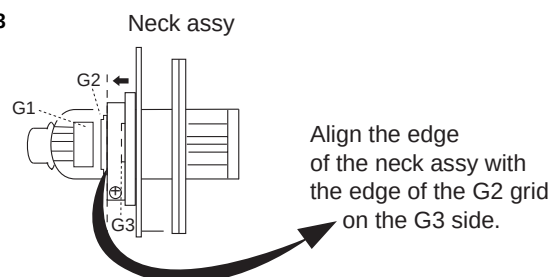


Fig.3-4

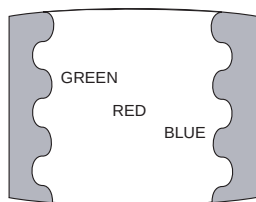
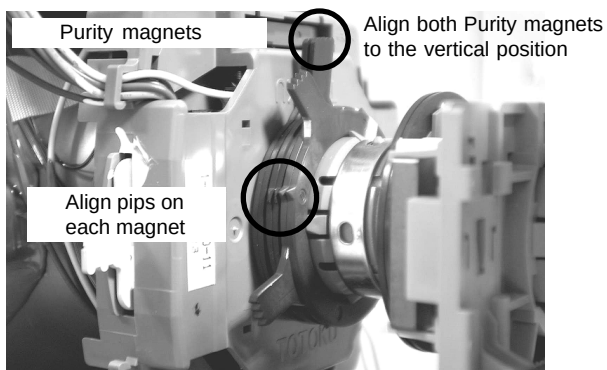
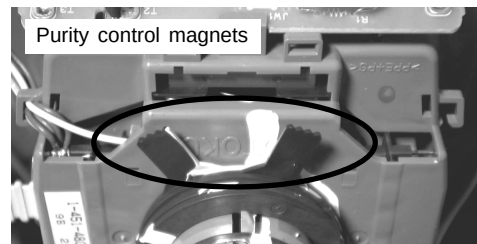
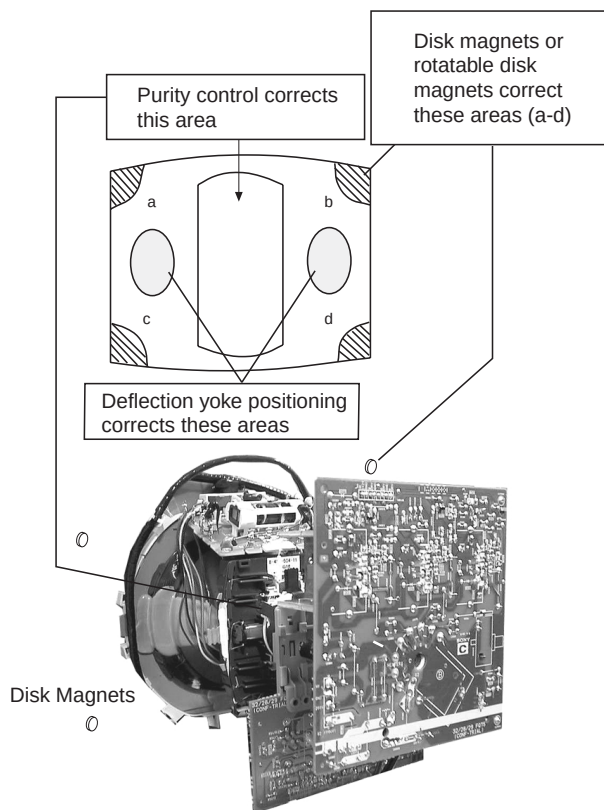


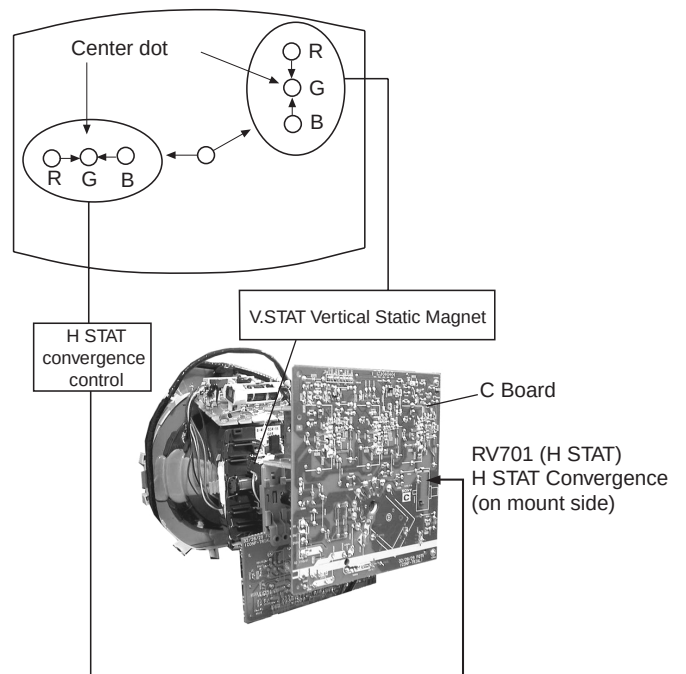
Fig.3-5



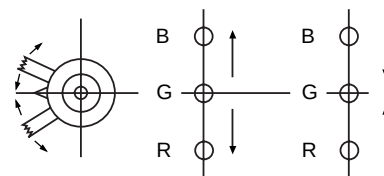
3-2. Convergence

(1) Screen centre convergence [Static convergence]

1. Input a dot pattern signal from the pattern generator.
2. Normalize the picture setting.
3. [Moving vertically], adjust the V.STAT magnet so that the vertical red, green and blue dots coincide at the centre of the screen.



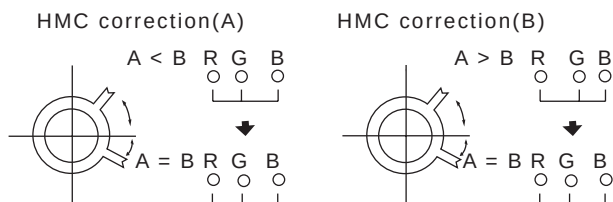
By opening or closing the V.STAT magnet, the red green and blue dots move in the direction indicated below.



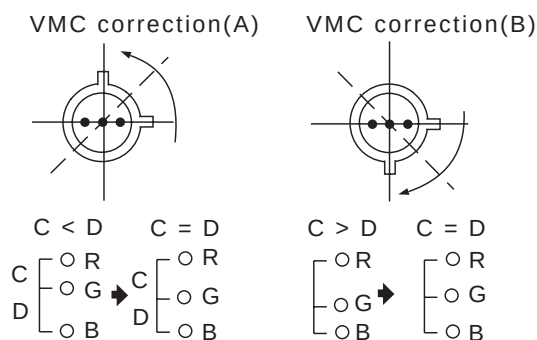
Note: Do not adjust the H.STAT by rotating the V.STAT magnets as this can affect the focus setting.

4. Correction for HMC [Horizontal mis-convergence] and VMC [Vertical mis-convergence] by using the BMC [Hexapole] magnet.

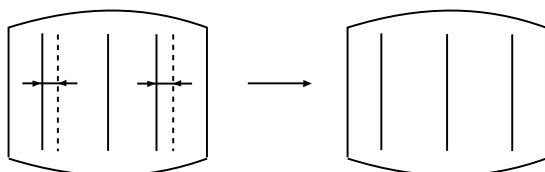
- a). HMC correction by BMC [Hexapole] magnet and movement of the electron beam.



- b). VMC correction by BMC [Hexapole] magnet and movement of the electron beam.

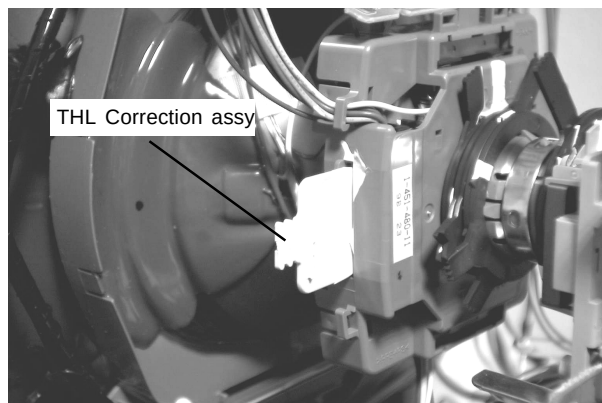


HAMP Adjustment

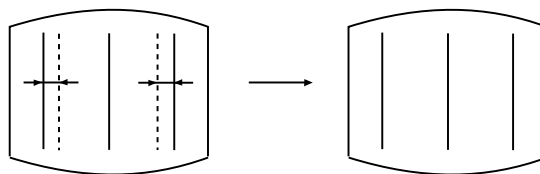


Adjust the HAMP using HAMPL and HAMPR registers in the Dynamic Convergence section of the service menu.

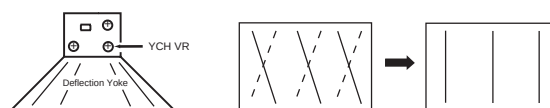
HTIL Adjustment



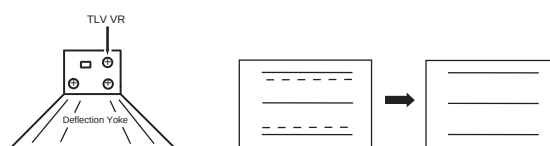
HTIL correction can be performed by adding a THL correction assembly to the Deflection yoke.



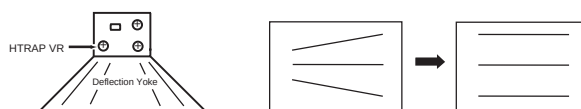
YCH Adjustment



TLV Adjustment

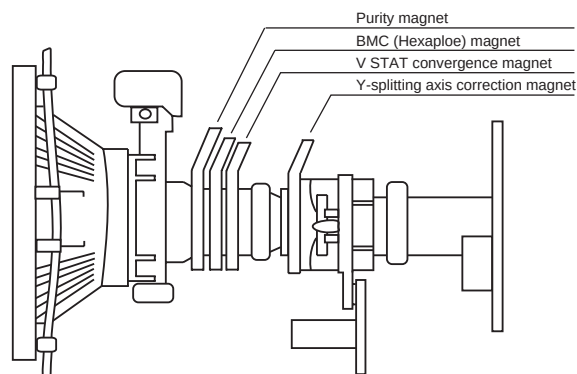


H-TRAP Adjustment

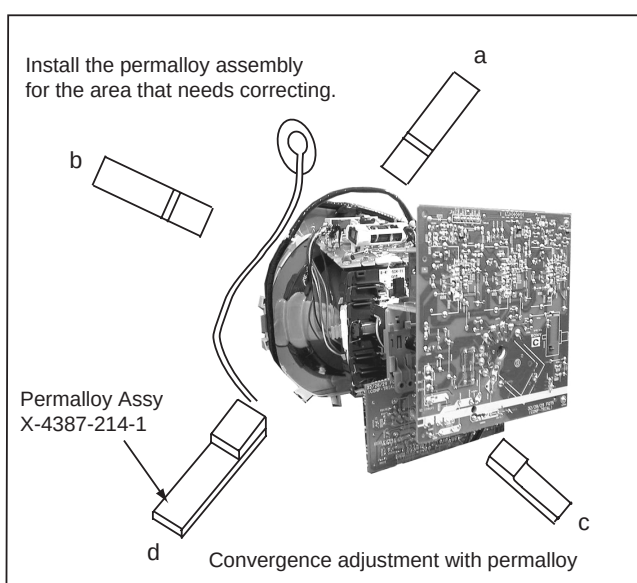
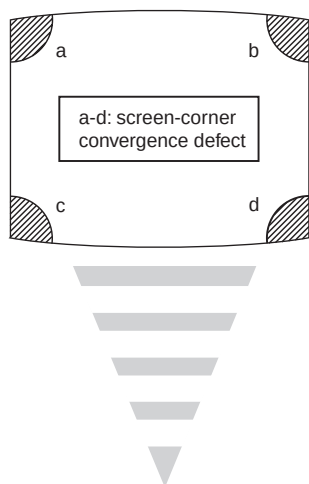


The H-TRAP should not be adjusted unless absolutely necessary as it affects the TLV settings.

Layout of each control

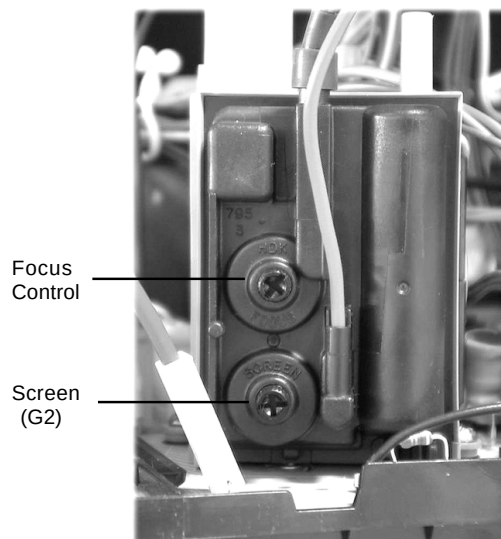


Note : If you are unable to adjust the corner convergence properly, this can be corrected with the use of permalloy magnets.



3-3. Focus, Screen (G2) Adjustment

1. Receive a television broadcast signal.
2. Normalize the picture setting.
3. Adjust the focus control located on the flyback transformer to obtain the best focus at the centre of the screen.
Bring only the centre area of the screen into focus, the magenta-tinge appears on the screen. In this case, adjust the focus to optimize the screen uniformly.



G2 adjustment [RV5376]

1. Input a dot signal from the pattern generator.
2. Set the Picture, Brightness and Colour to minimum.
3. Apply 170V DC from an external power supply to the R, G and B cathodes of the CRT.
4. Whilst watching the picture, adjust the G2 control RV5376 [SCREEN] located on the C Board to the point just before the flyback return lines disappear.

3-4. White Balance Adjustment

[Adjustment in the service mode using the remote commander]

White balance adjustment for TV mode

1. Input an all-white signal from the pattern generator.
2. Enter into the 'Service Mode' by pressing 'TEST', 'TEST' and 'MENU' on the Service Commander.
3. Select 'Picture Adjustment' from the on screen menu display and press the joystick to the right.
4. The 'Picture Adjustment' menu will appear on the screen. [See Page 24]
5. Select 'Sub Contrast' and adjust to 7.
6. Adjust the 'G-Drive' and the 'B-Drive' so that the white balance becomes optimum.
7. Press the 'TV' button on the remote commander to return to TV operation.

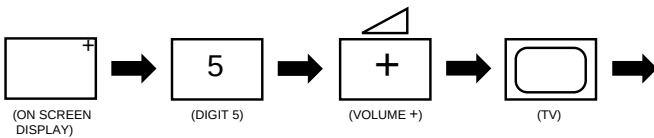
SECTION 4 CIRCUIT ADJUSTMENTS

4-1. ELECTRICAL ADJUSTMENTS

Service adjustments to this model can be performed using the supplied Remote Commander RM-888.

HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch and enter into the stand-by mode.
2. Press the following sequence of buttons on the Remote Commander.



- 'TT--' will appear in the upper right corner of the screen. Other status information will also be displayed.
3. Press 'MENU' on the remote commander to obtain the following menu on the screen.

TEST MENU

> Picture Adjustment
 Geometry
 Wide
 IC status
 MSP
 Dynamic Convergence
 Current TV status

4. Move to the corresponding adjustment using the button on the remote commander.
5. Press the + button to enter the selected adjustment.
6. Turn off the power to quit the service mode when adjustments have been completed.

PICTURE ADJUSTMENT

AFC mode	1
REF position	3
SCP BGR	1
SCP BGF	1
Trap fo	9
Sub contrast	Adj
Sub colour	Adj
Sub brightness	Adj
Green drive	Adj
Blue drive	Adj
Green cutoff	Adj
Blue cutoff	Adj
Gamma	0
Pre / overshoot	0
Y delay	3
D Pic	ON/OFF
D Colour	ON/OFF
DC Transfer	ON/OFF

GEOMETRY ADJUSTMENT - 4:3

V size	Adj
V position	Adj
S Correction	Adj
V Linearity	Adj
H size	Adj
H position	Adj
Pin Amp	Adj
Pin Phase	Adj
AFC Bow	Adj
AFC Angle	Adj
EHT V	1
EHT H	0
Lo Corn Pin	Adj
Up Corn Pin	Adj

WIDE ADJUSTMENT - 4:3

V Aspect	0
V Scroll	25
Upper V Lin	0
Lower V Lin	0
Left Blanking	1
Right Blanking	11

IC STATUS (CXA203452 / CXA2040)

CXA2034526

H lock	1
IKR	1
V NG	0
X-RAY	0
Colour system	7
CV1 sync	0

CXA2040

Sync sep	0
S1 mode pin	01
S2 mode pin	01

PORT EXPANDER

Power Good	1
------------	---

TUNER

Tuner status	01101011
--------------	----------

TV STATUS BE3E

Text system	C TEXT- 2
Dolby Enabled	YES
DSP Present	NO
Text language set	WEST
Menu language set	WEST
Destination	UK
Ageing	DISABLED
Auto Shut Off	ENABLED
Size	28/32
Colour trap sw	ALL
Velocity mod	ON
AFT STATUS	
Digital RF	YES
Attenuation	OFF
Micro/Jungle	SDA30C263/MSP3452

Dynamic Convergence

Range	Adj Off - 42
H stat	Adj Off - 63
H amp l	Adj Off - 63
H amp r	Adj Off - 63
Up Y	Adj Off - 63
Low Y	Adj Off - 63
Y up l	Adj Off - 63
Y up r	Adj Off - 63
Y low l	Adj Off - 63
Y low r	Adj Off - 63
Mbow up l	Adj Off - 63
Mbow up r	Adj Off - 63
Mbow low l	Adj Off - 63
Mbow low r	Adj Off - 63
V Stat	Adj Off - 63

SUB BRIGHTNESS ADJUSTMENT

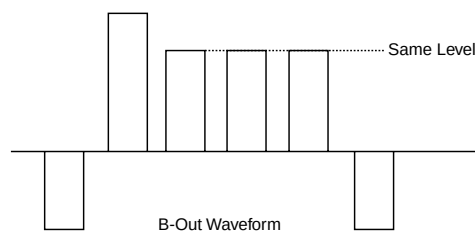
1. Input a Phillips pattern.
2. Set the picture control to minimum.
3. Enter into the 'Picture Adjustment' service menu.
4. Adjust the 'Sub-Brightness' data so that there is barely a difference between the 0 IRE and 10 IRE signal levels.

SUB CONTRAST ADJUSTMENT

1. Input a video that contains a small 100% area on a black background.
2. Set the picture control to maximum.
3. Connect an oscilloscope to Pin 3 of CN301 [A Board].
4. Enter into the 'Picture Adjustment' service menu.
5. Adjust the 'Sub-contrast' data to obtain a black to white amplitude of 2.20V.

SUB COLOUR ADJUSTMENT

1. Receive a PAL colour bar video signal.
2. Connect an oscilloscope to Pin 3 of CN301 [A Board].
3. Enter into the 'Picture Adjustment' service menu.
4. Adjust the 'Sub-colour' data so that the Cyan, Magenta and Blue colour bars are of equal height as indicated below.



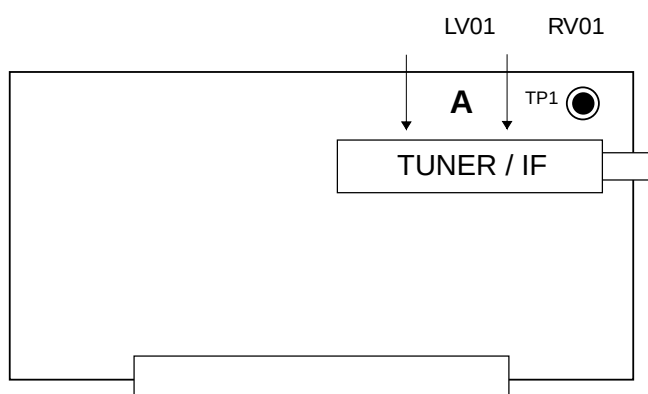
Note: The data indicated in the 'TV STATUS' table is dependant on destination, screen size and country.

I.F ADJUSTMENT

1. Input an off air signal of between 60-100dBuV / 75 ohm terminated, via the tuner socket.
2. Enter into the 'IF Adjustment' service mode [i.e 'TT59'] to fix the I.F frequency to 39.9MHz.
3. Enter into the service mode and select 'Current TV status'.
4. Adjust the I.F coil [LV01] until the 'AFT Status' indicates a 'Window' condition.

TUNER AGC ADJUSTMENT

1. Receive a signal of 63dBuV / 75 ohm terminated, via the tuner socket.
2. Measure the voltage at test point 1 [A Board].
3. Adjust RV01 control to obtain a voltage of 3.0V +/- 0.3V.

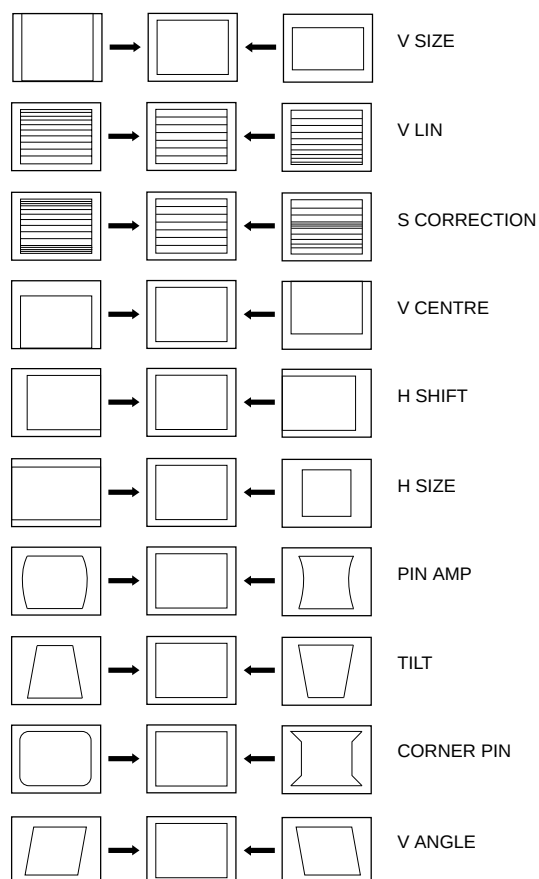


DEFLECTION SYSTEM ADJUSTMENT

1. Enter into the 'Geometry Adjustment' service menu.
2. Select and adjust each item in order to obtain the optimum image.

GEOMETRY ADJUSTMENT

V size	Adj
V position	Adj
S Correction	Adj
V Linearity	Adj
H size	Adj
H position	Adj
Pin Amp	Adj
Pin Phase	Adj
AFC Bow	Adj
AFC Angle	Adj
EHT V	1
EHT H	0
Lo Corn Pin	Adj
Up Corn Pin	Adj



4-2. 'TT' TEST MODE :

'TT' Mode is available by pressing the Test key twice. It is exited by pressing 0 twice, or by pressing the Test key, or by pressing the TV key, or by switching the set into standby.

The functions described below are available by pressing 2 digits:

00	Cancel Test mode
01	Picture Maximum
02	Picture Minimum
03	Volume & Headphone Volume 35%
04	Volume & Headphone Volume 50%
05	Volume & Headphone Volume 65%
06	Volume & Headphone Volume 80%
07	Ageing mode Enable/Disable
08	Shipping Condition
09	Display TV status
11	Sub Picture adjustment
12	Sub Colour adjustment
13	Sub Brightness adjustment
14	Text H-Position adjustment
15	Rotation Test
21	Destination A/D (East Menu/West Text)
22	Destination L (West Menu/West Text)
23	Destination E (West Menu/West Text)
24	Destination U (West Menu/ West Text)
25	Destination D (East Menu/Greek Text)
26	Destination B (East Menu/West Text)
27	Destination K (East Menu/East Text)
28	Destination R (Russian Menu/Russian Text)
31	Toggle Auto Shutoff Disable
32	Toggle Bit Error Rate Display
33	Toggle Terminal Debug Mode
38	Default Dynamic Convergence Settings
41	Re-initialize the NVM
42	Re-initialise geometry settings
43	Default Programme info in NVM with factory settings
44	Default favourite pages to 100,101,102 and 103
45	Switch off all Parental locks
47	Default MSP settings
48	Set NVM as Non-virgin
49	Set NVM as virgin
50	No function
51	Dolby Pro-Logic On, Volume 90%
52	Noise On Left Speaker
53	Noise On Right Speaker Only
54	Noise On Centre Speaker Only
55	Noise On Surround Speaker Only
56	Set Colour to Minimum and Picture to Maximum

57	Set Colour and Picture to Minimum and Adjust Sub-Brightness
58 - 60	No function
61	N-board Reset
62	Toggle the 3.3v regulator on A2-board
63	Toggle Attenuation switch on Port Expander
64	Smart Link Test- Toggle the Smart Link pin 50 times
66	No function
67	No function
68	Pre-set AV Labels
69	No function
70	No function
71	Select Compact Text/Compact Text-2
72	Balance Left/Right (press ← key for balance left, → for balance right, and ↑ for centre balance)
73	Dual Sound Headphones (↑key for A, key for B)
74	Dual Sound Speakers (↑key for A, key for B)
75	DSP Bypass
76	Dolby Enabled/Disabled toggle
77	Setup trap switch
78	Set Screen Size
79	Wide Setup
80	No function
81	Velocity Mod ON
82	Velocity Mod OFF
83	Special Picture Mode - Personal mode, reset & brightness = 0
84	Text Interlace odd (Non interlace mode = 3)
85	Text Interlace even (Non interlace mode = 2)
86	Auto Cut Off ENABLE
87	Auto Cut Off DISABLE
88	Diagnostics OFF
89	Diagnostics ON
90	No function
91	Clear & disable OSD
92	Enable OSD
93	D/K Nicam Enable
94	D/K Nicam Disable
95	Reset language select menu on power up
96	Set all programme labels to default
97	Toggle MHEG Mode

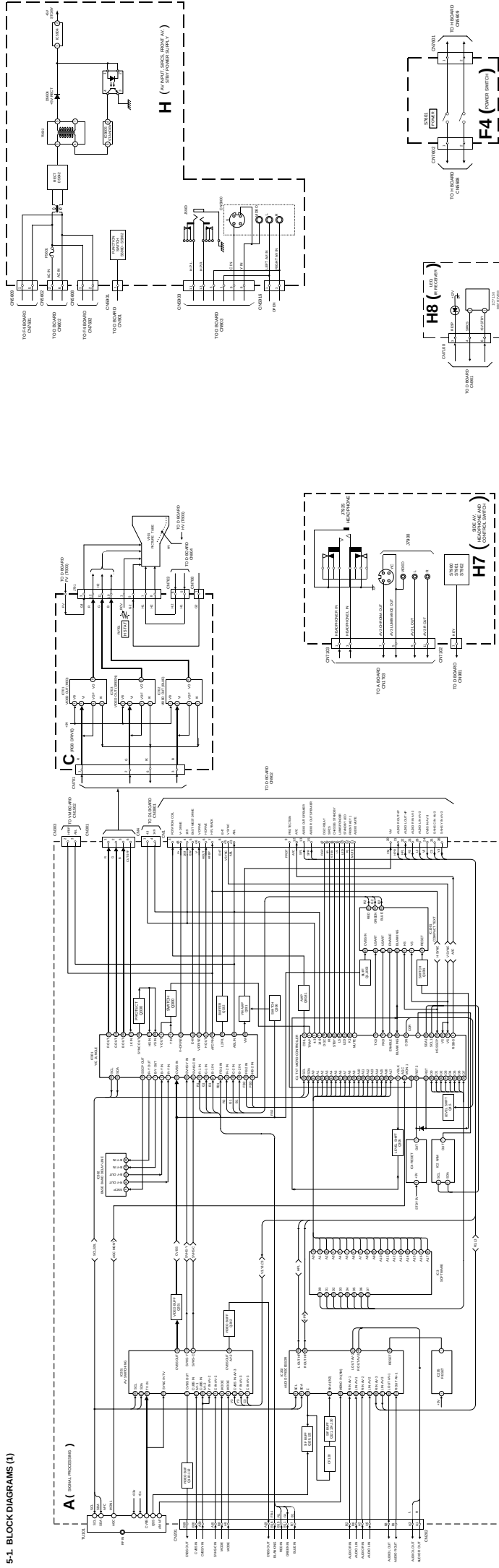
4-3. 'T' TEST MODE :

'T' Mode is available by pressing the Test key once. It is exited by pressing the Test key twice, or by pressing the TV key, or by switching the set into standby.

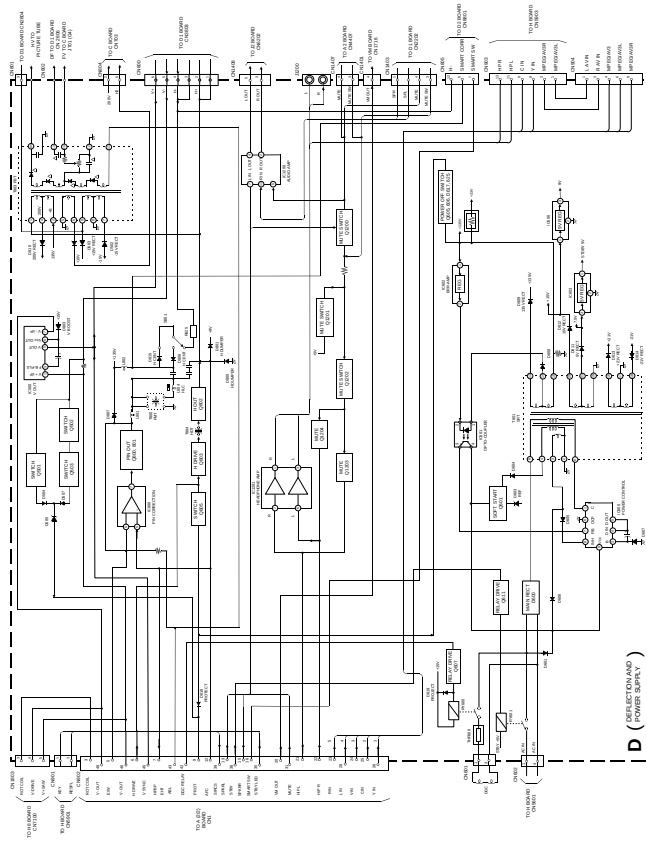
The functions described below are available by pressing the indicated key :

Key	T Mode Function
Volume +	Volume Maximum
Volume -	Volume Minimum
Picture +	Picture Maximum
Picture -	Picture Minimum
Colour +	Colour Maximum
Colour -	Colour Minimum
Brightness +	Brightness Maximum
Brightness -	Brightness Minimum
Hue +	Hue Maximum
Hue -	Hue Minimum
Sharpness +	Sharpness Maximum
Sharpness -	Sharpness Minimum
Balance Left	Balance Full Left
Balance Right	Balance Full Right
Treble +	Treble Maximum
Treble -	Treble Minimum
Bass +	Bass Maximum
Bass -	Bass Minimum
Analogue +	Select Analogue Value Maximum
Analogue -	Select Analogue Value Minimum

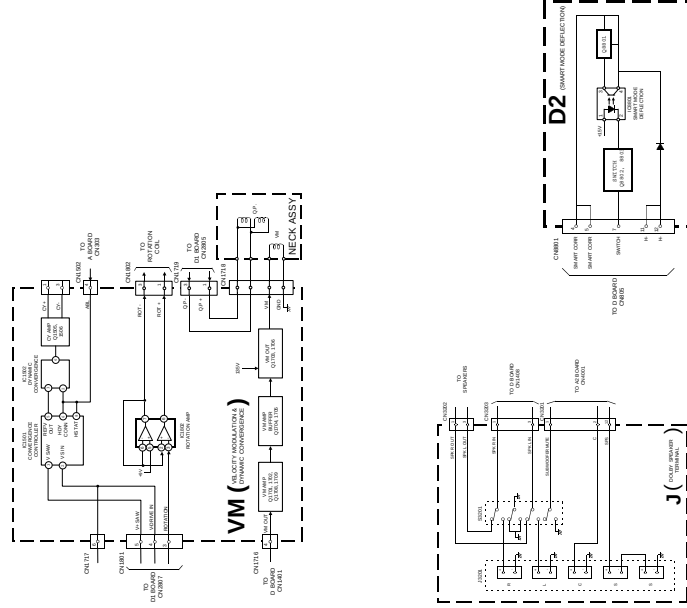
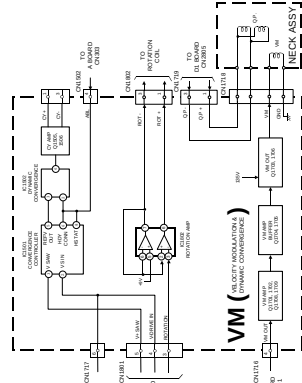
5-1. BLOCK DIAGRAMS (1)



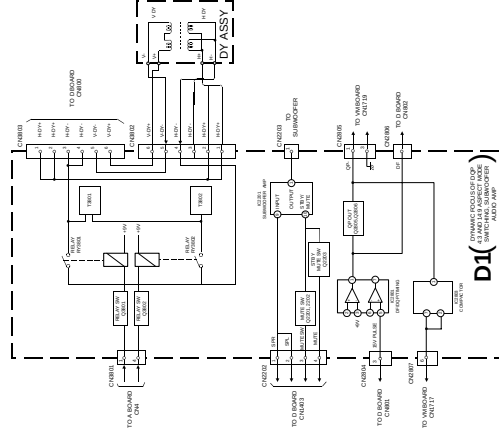
5-1. BLOCK DIAGRAMS (2)



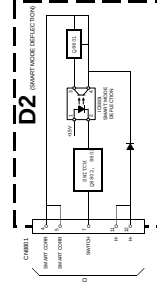
33



35

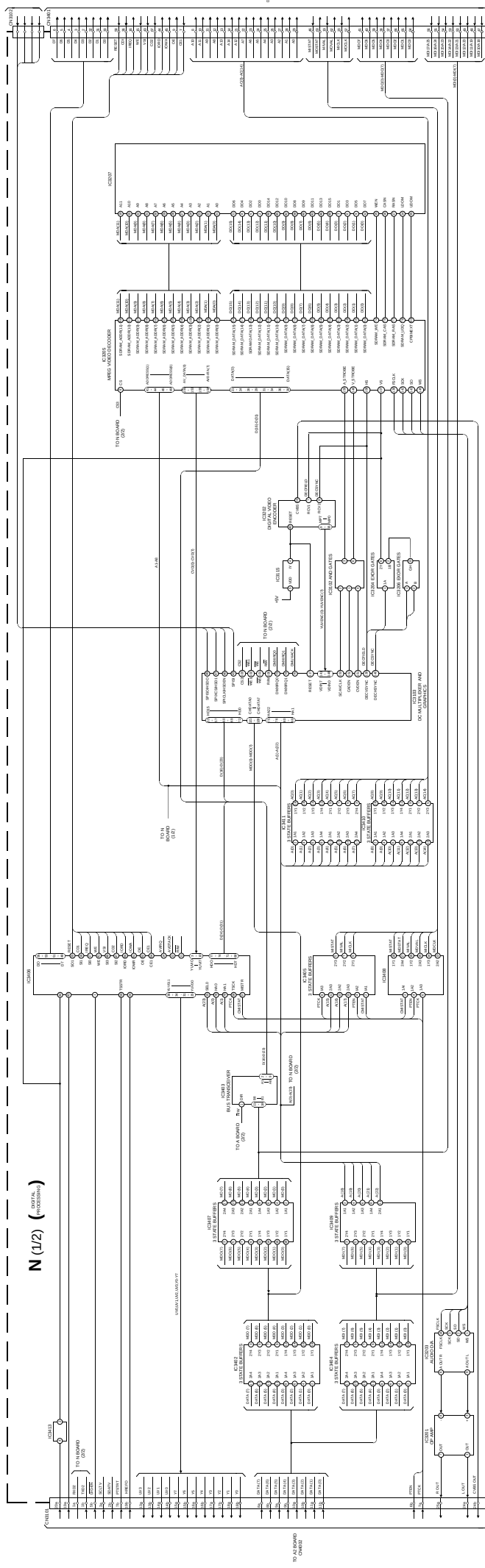


36

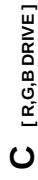


36

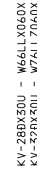
5-1. BLOCK DIAGRAMS (3)

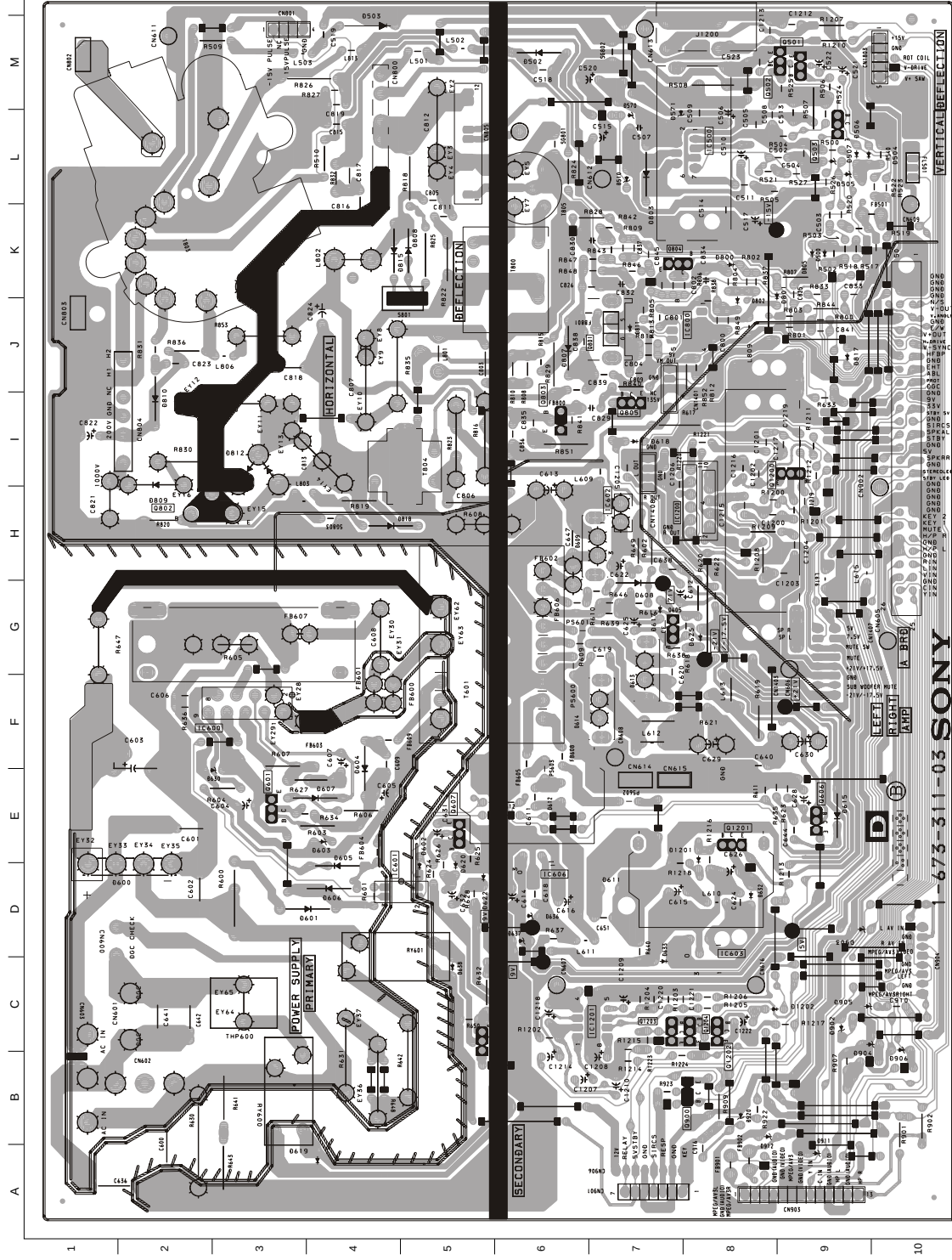


①	143 Vp-p (H)
②	139 Vp-p (H)
③	128 Vp-p (H)



Semiconductor Voltage Table			
Ref	(e)	(b)	(c)
Q701	3	0.1	3.2





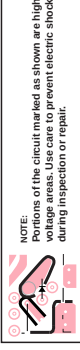
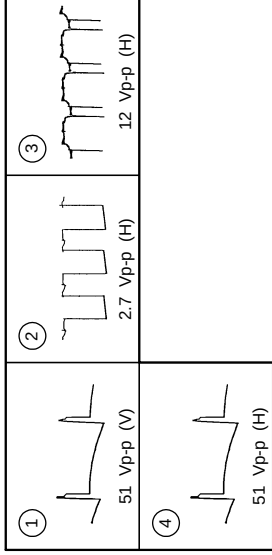
D [PRINTED WIRING BOARD]

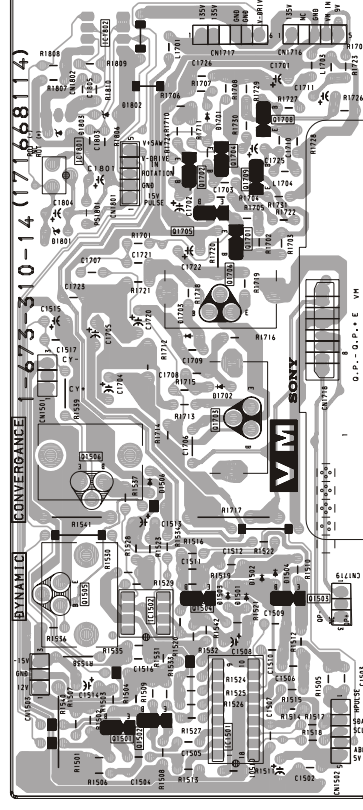
Semiconductor Voltage Table						
Ref	(e)	(b)	(c)	Ref	(e)	(c)
Q501	grd	0	0	Q805	grd	0
Q502	grd	0	-5.1	Q806	grd	0
Q503	-10.7	-5.1	-10.6	Q1200	2.4	3
Q605	0	0	12.1	Q1201	3.1	3.6
Q606	12.3	12.1	0	Q1202	grd	0
Q607	grd	0	12.3	Q1203	grd	0
Q611	grd	0	0	Q1204	0	0
Q803	grd	0	73.5			

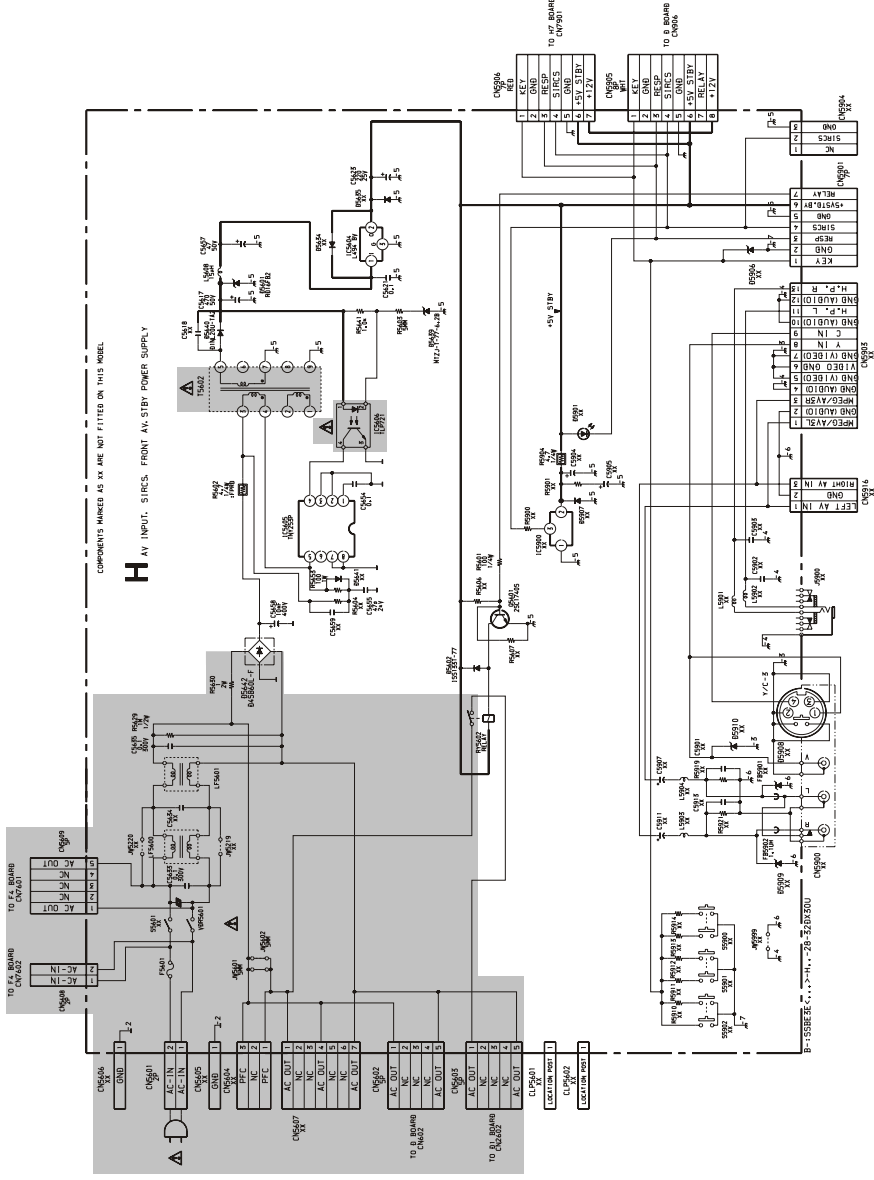
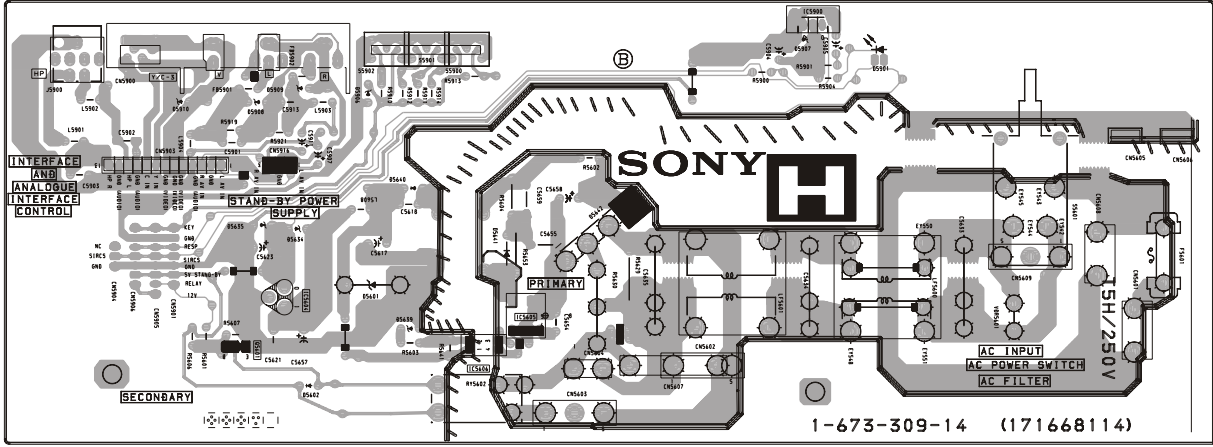
IC Voltage Table		
Ref No	Pin No	Voltage (V)
IC800	5	3.3
	6	2.3
	7	7.5
IC500	1	1.6
	3	11.5
	5	0
	6	13.0
	7	1.6
	1	-20.9
	2	0
	3	20.9
	4	0
IC1200	5	7.3
	6	-20.9
	7	0
	11	0

Semiconductor Location Table		
IC		
IC500	L-8	D571
IC600	F-3	D600
IC601	D-5	D601
IC602	H-7	D604
IC603	D-8	D605
IC606	D-6	D606
IC600	J-7	D607
IC1200	H-7	D608
IC1201	C-7	D609
TRANSISTOR		
Q501	M-8	D611
Q502	M-8	D612
Q503	L-9	D614
Q601	E-3	D617
Q605	G-7	D618
Q606	E-9	D619
Q607	E-5	D620
Q611	C-5	D622
Q801	J-6	D625
Q802	H-2	D637
Q803	I-6	D638
Q804	K-7	D600
Q805	I-7	D601
Q806	B-7	D603
Q1200	I-8	D607
Q1201	E-8	D608
Q1202	C-8	D610
Q1203	C-7	K-4
Q1204	K-7	D612
DIODES		
D500	K-9	D815
D502	M-6	D817
D503	M-4	D802
D504	L-10	D904
D505	L-9	D905
D506	L-9	D909
D507	L-9	D920
D510	L-7	D1201
D570	L-7	D1202

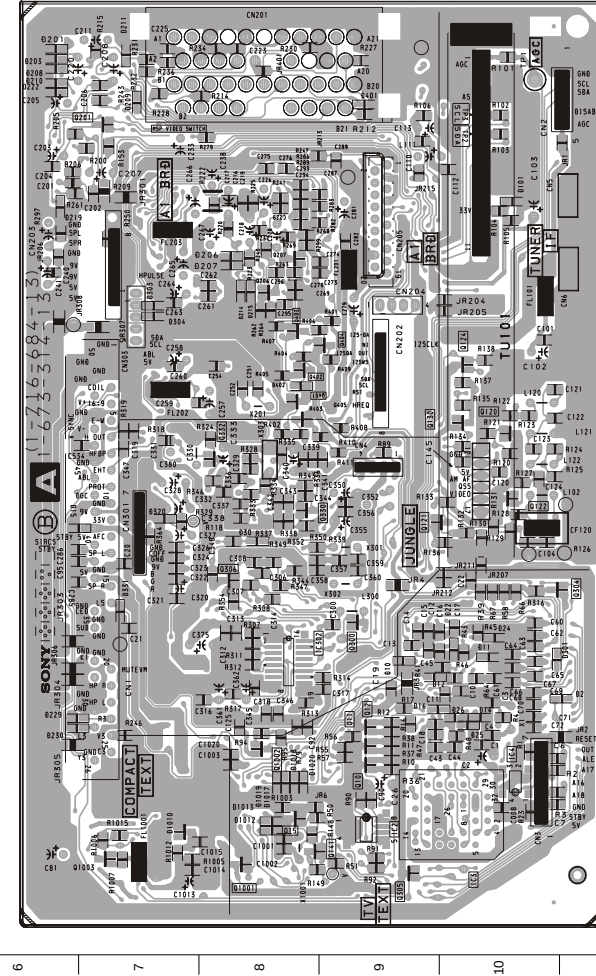
WAVEFORMS D BOARD



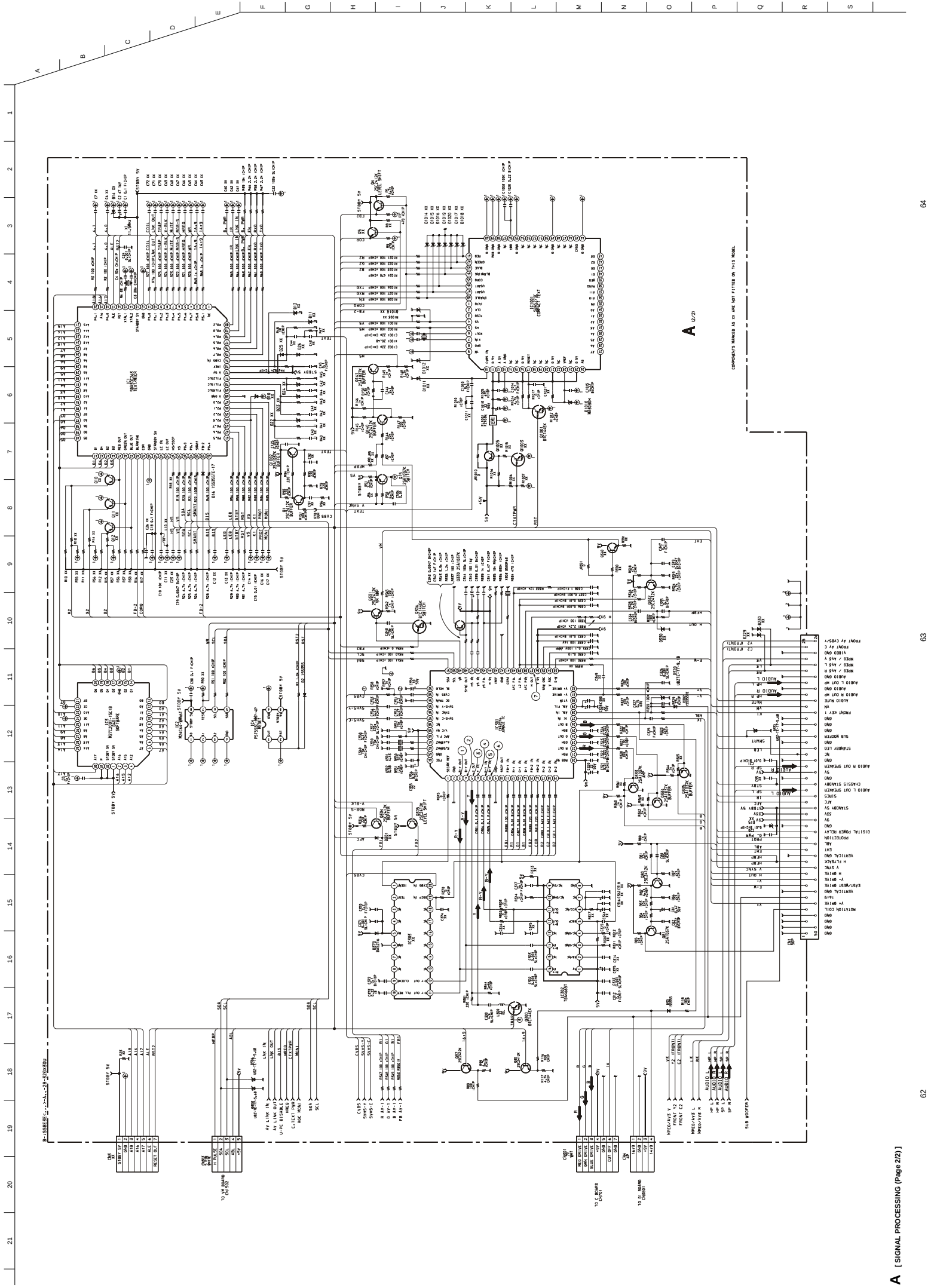




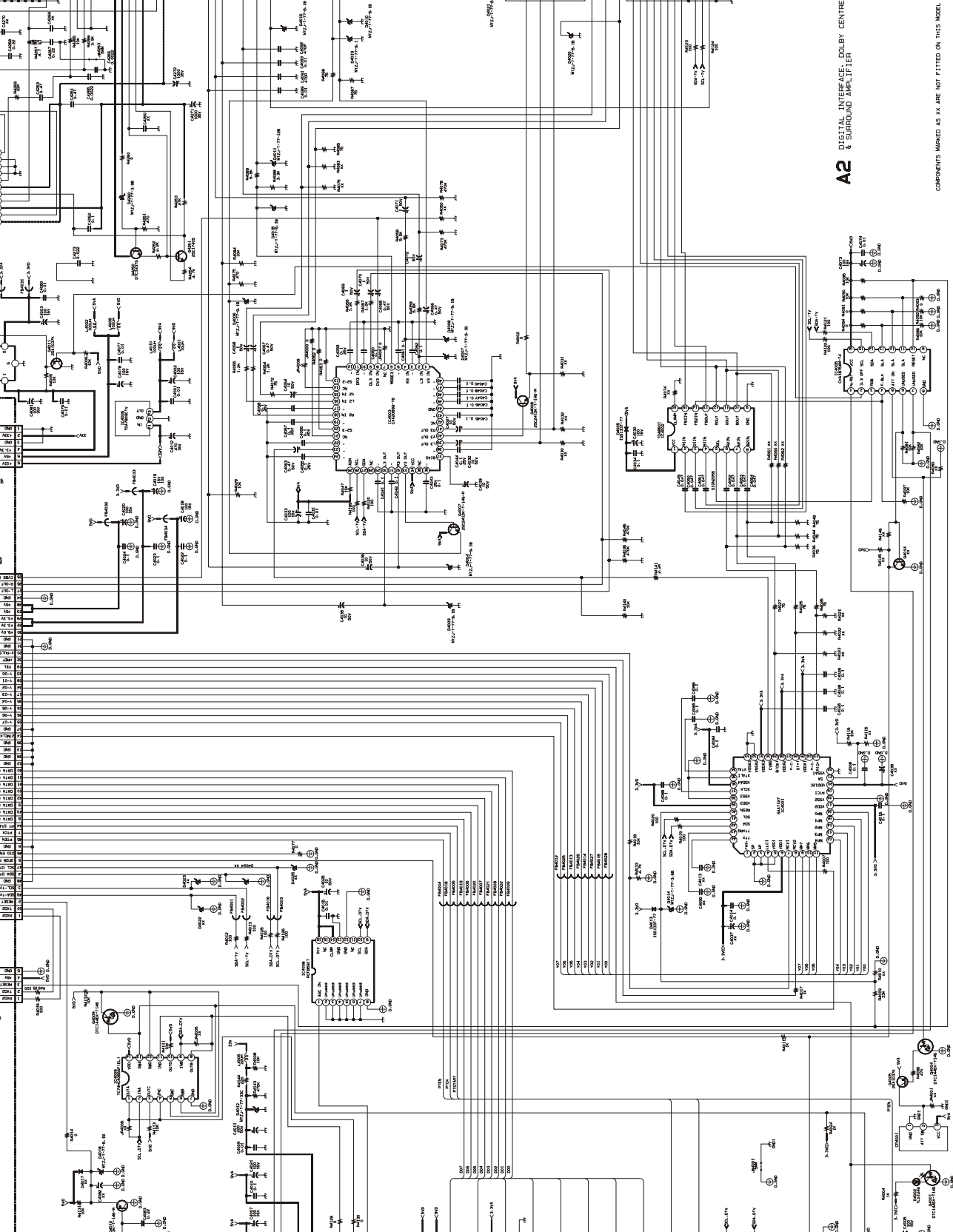
① 1.0 Vp-p (H)	② 1.3 Vp-p (H)	③ 1.1 Vp-p (H)
④ 1.1 Vp-p (H)	⑤ 1.0 Vp-p (H)	⑥ 1.2 Vp-p (V)
⑦ 187 mVp-p (H)		



IC		Q140	H-3	TRANSISTORS		D221	B-5
IC1	G-4	Q141	A-9	D2	C-10	D222	H-6
IC2	B-9	Q201	G-7	D16	C-9	D223	B-3
IC3	G-4	Q302	A-2	D30	D-8	D224	B-3
IC4	B-10	Q303	B-3	D101	G-10	D225	B-2
IC201	B-1	Q204	B-3	D201	H-6	D226	B-3
IC202	D-3	Q205	B-3	D202	A-4	D227	B-2
IC205	D-4	Q206	F-8	D203	H-6	D228	F-7
IC301	E-3	Q211	B-2	D204	C-2	D304	F-7
IC302	E-2	Q300	C-8	D205	C-2	D302	D-7
IC1001	G-2	Q304	D-10	D206	F-7	D331	D-7
Q1	G-3	Q305	A-9	D207	F-7	D370	F-3
Q4	H-4	Q306	D-8	D208	H-7	Q401	H-9
Q15	B-8	Q331	E-4	D210	H-6	Q402	E-8
Q30	E-4	Q332	E-8	D211	H-7	D410	B-7
Q80	H-1	Q333	F-2	D212	D-2		
Q81	G-1	Q334	E-2	D213	D-2		
Q82	D-4	Q335	E-2	D214	F-8		
Q110	B-4	Q401	E-9	D215	F-8		
Q111	B-4	Q402	B-5	D216	B-5		
Q112	B-4	Q403	F-8	D217	B-5		
Q120	E-10	Q404	F-9	D218	B-5		
D222	D-10	Q1002	B-8	D220	B-5		

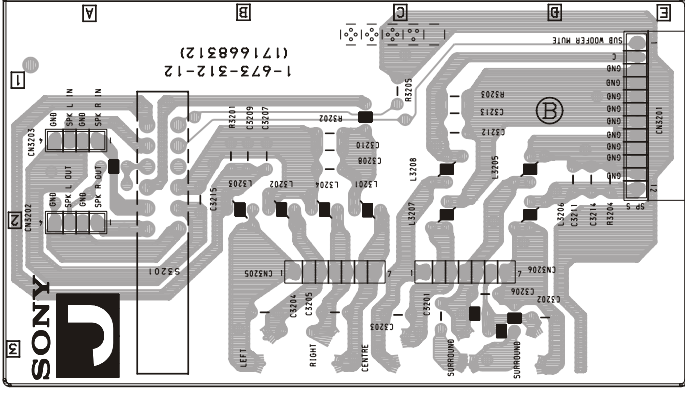
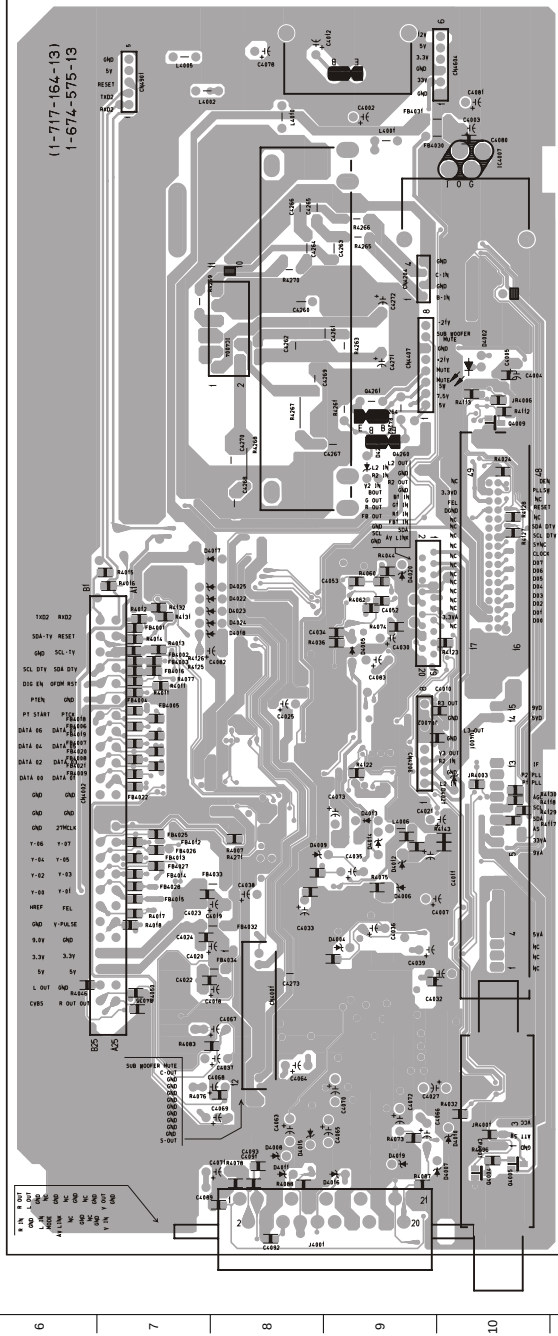
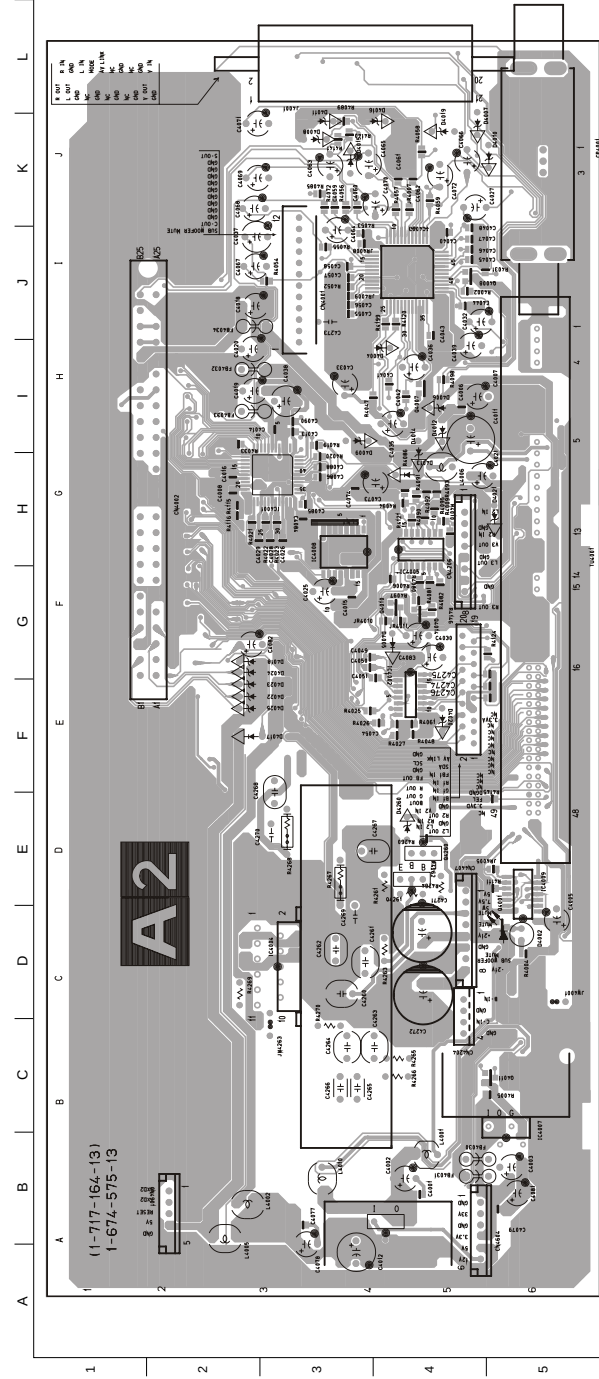


A2-28-320X30U

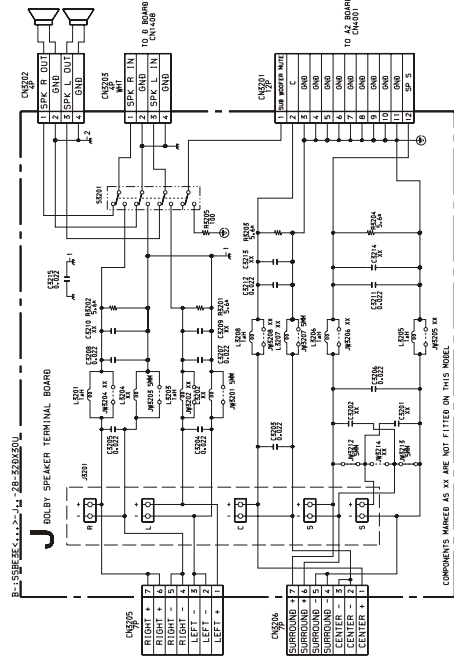


A2
DIGITAL INTERFACE, DOLBY CENTRE
& SURROUND AMPLIFIER

COMPONENTS MARKED AS X ARE NOT FITTED ON THIS MODEL

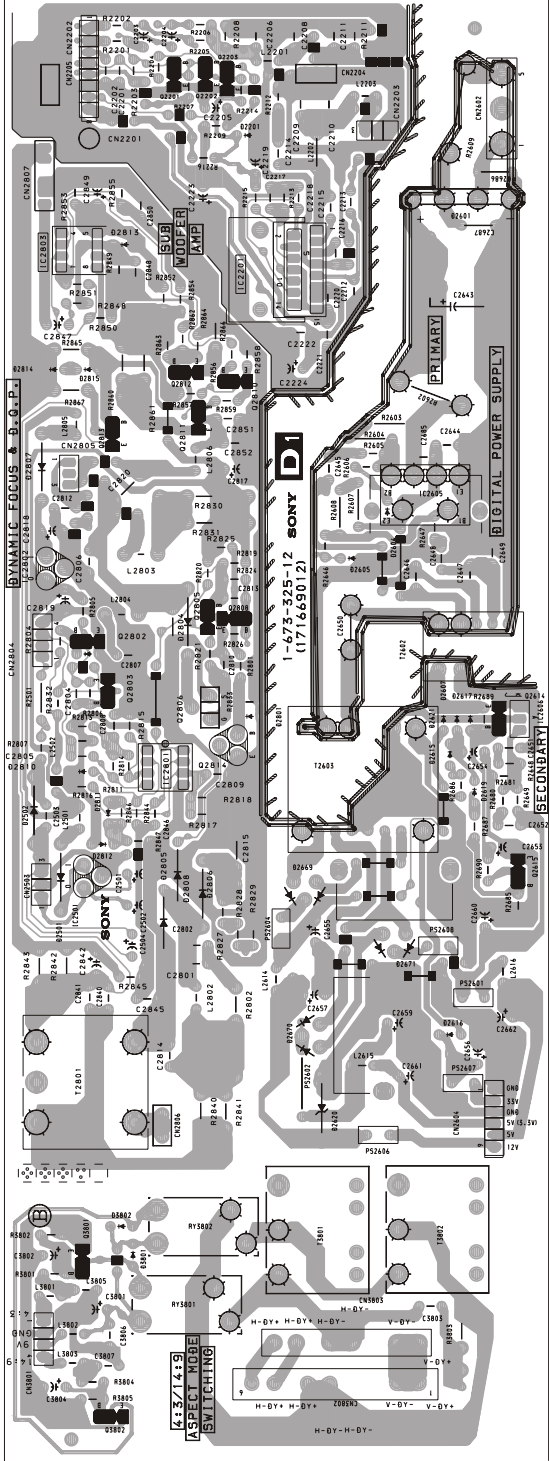


J [DOLBY SPEAKER TERMINAL BOARD]

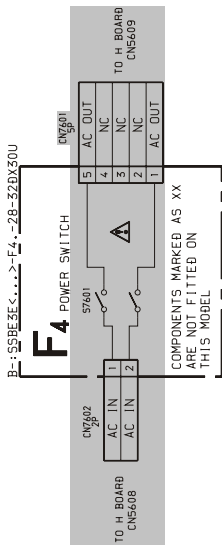


Semiconductor Location Table									
IC	TRANSISTORS			DIODES			IC		
	IC4003	IC4004	IC4005	IC4006	IC4007	IC4008	IC4009	IC4010	IC4011
IC4003	J - 4	D - 3	G - 4	B - 5	B - 5	H - 3	K - 3	K - 3	K - 3
IC4004	D - 3	D - 3	B - 10	B - 10	B - 10	H - 3	K - 3	K - 3	K - 3
IC4005	G - 4	G - 4	G - 4	G - 4	G - 4	H - 3	K - 3	K - 3	K - 3
IC4006	B - 5	B - 5	B - 10	B - 10	B - 10	H - 3	K - 3	K - 3	K - 3
IC4007	B - 5	B - 5	B - 10	B - 10	B - 10	H - 3	K - 3	K - 3	K - 3
IC4008	H - 3	H - 3	H - 3	H - 3	H - 3	H - 3	K - 3	K - 3	K - 3

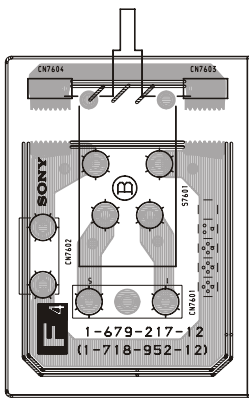
D1 [PRINTED WIRING BOARD]



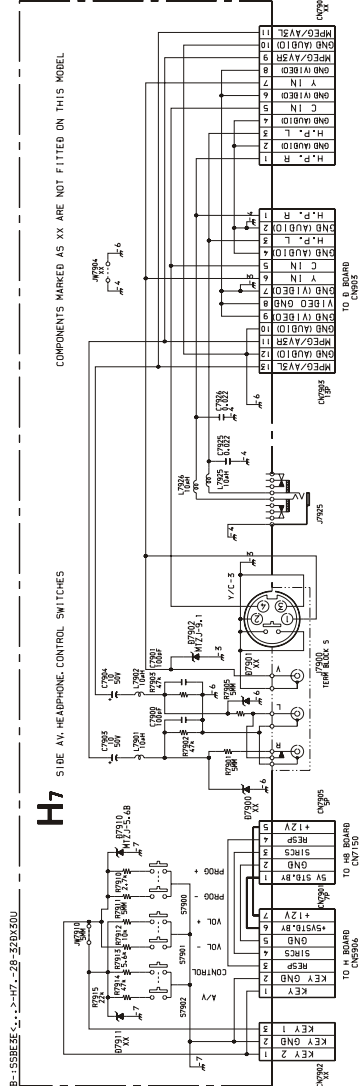
F4 [POWER SWITCH]



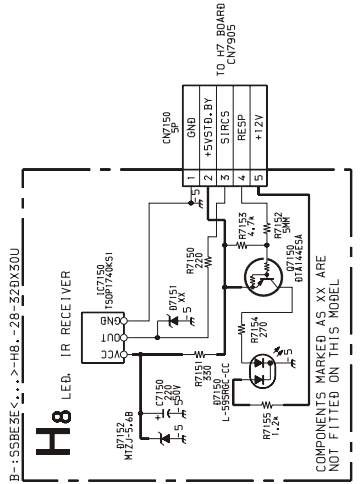
F4 [PRINTED WIRING BOARD]



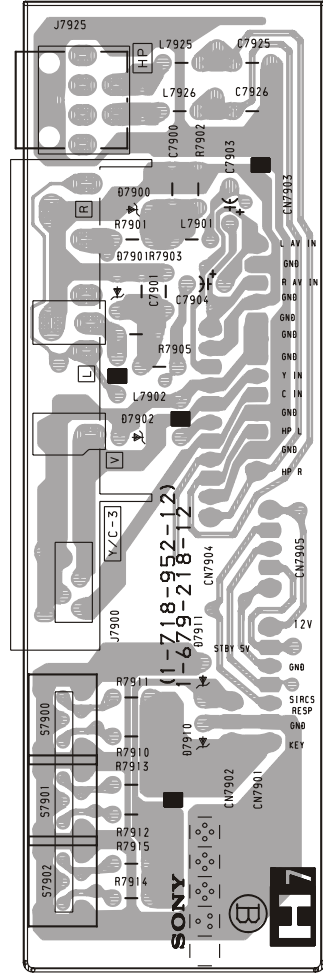
H7 [SIDE AV. HEADPHONE, CONTROL SWITCHES]



H8 [LED, IR RECEIVER]

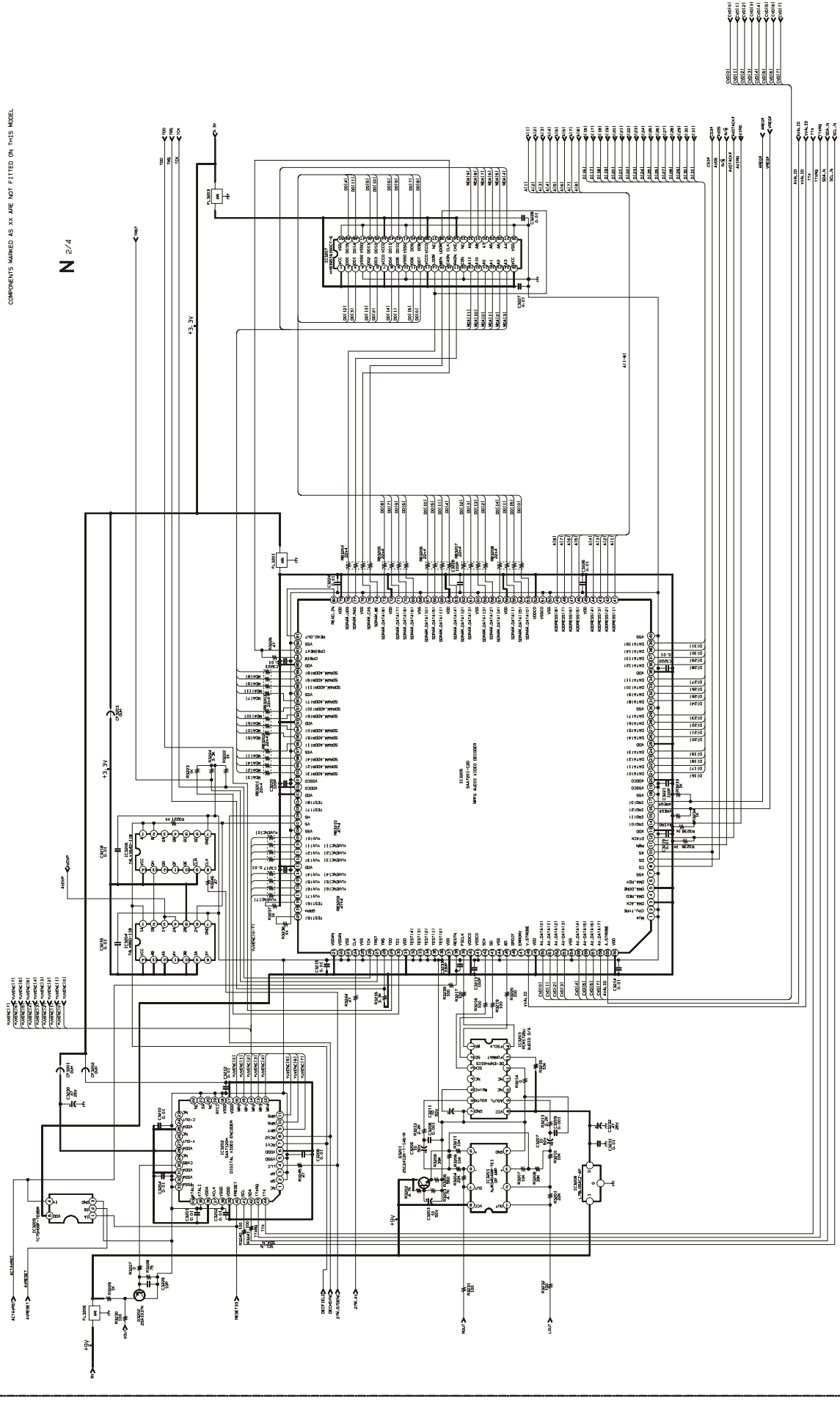


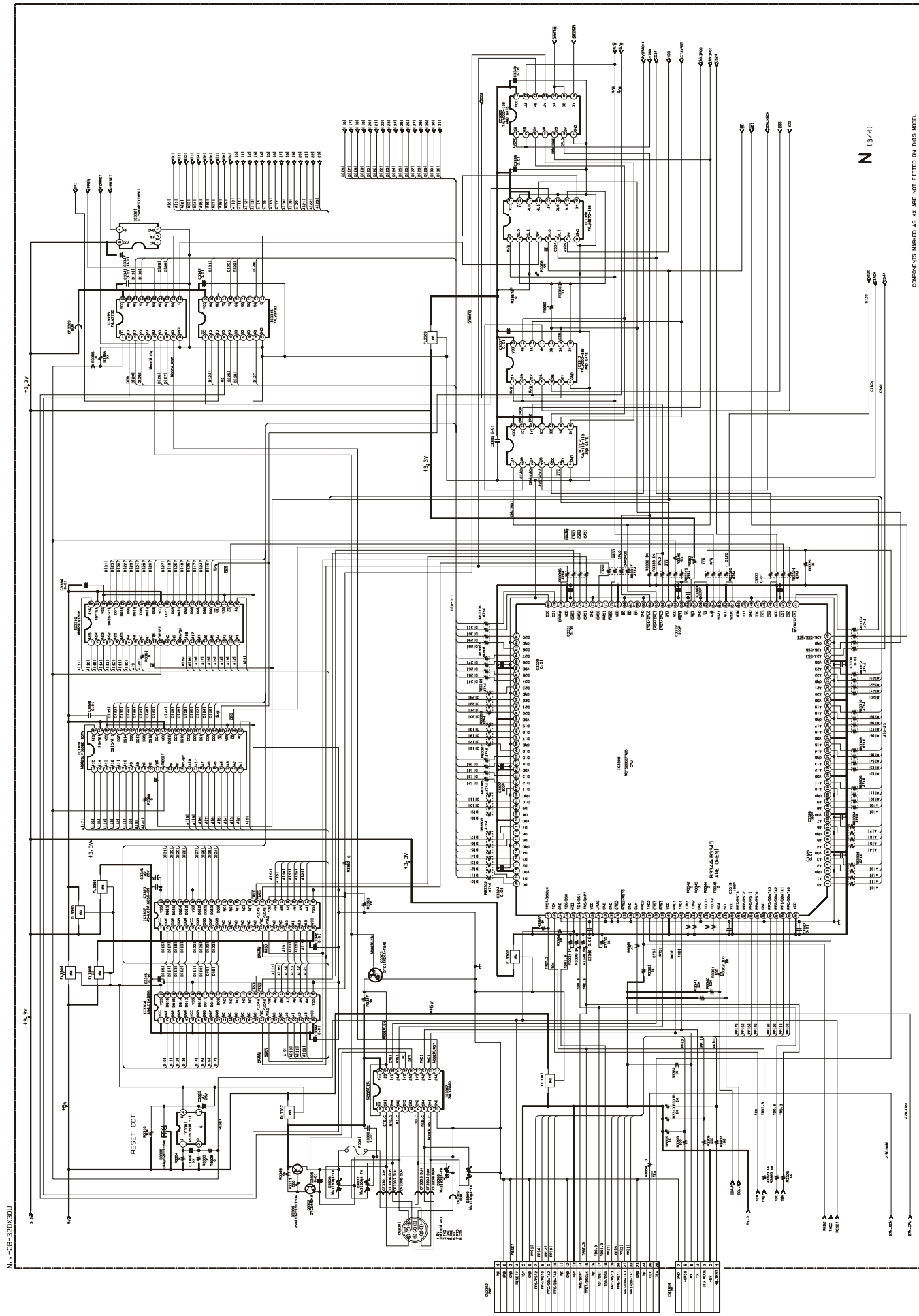
H7 [PRINTED WIRING BOARD]



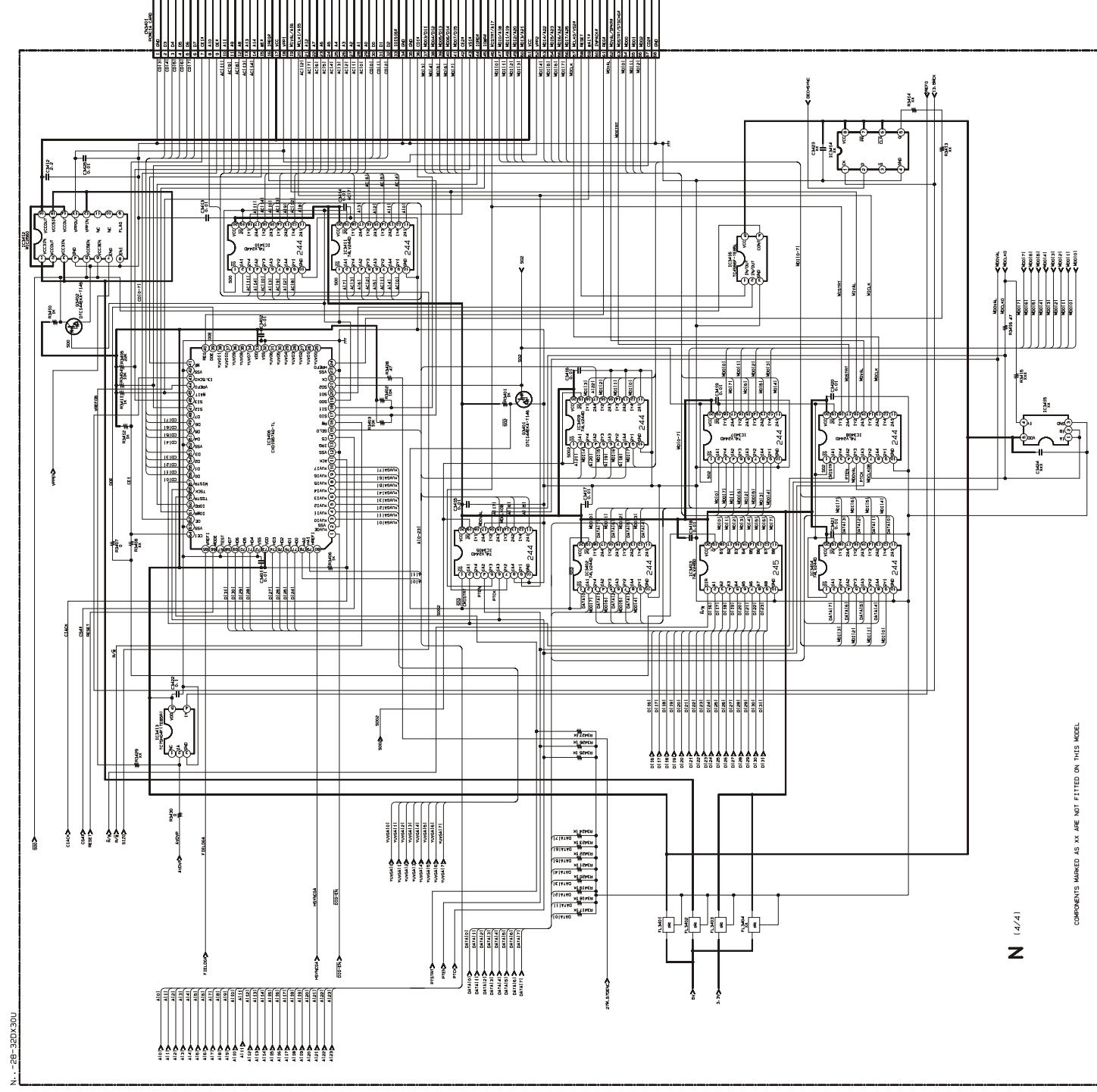


COMPONENTS MARKED AS XX ARE NOT FITTED ON THIS MODEL

N^{2/4}

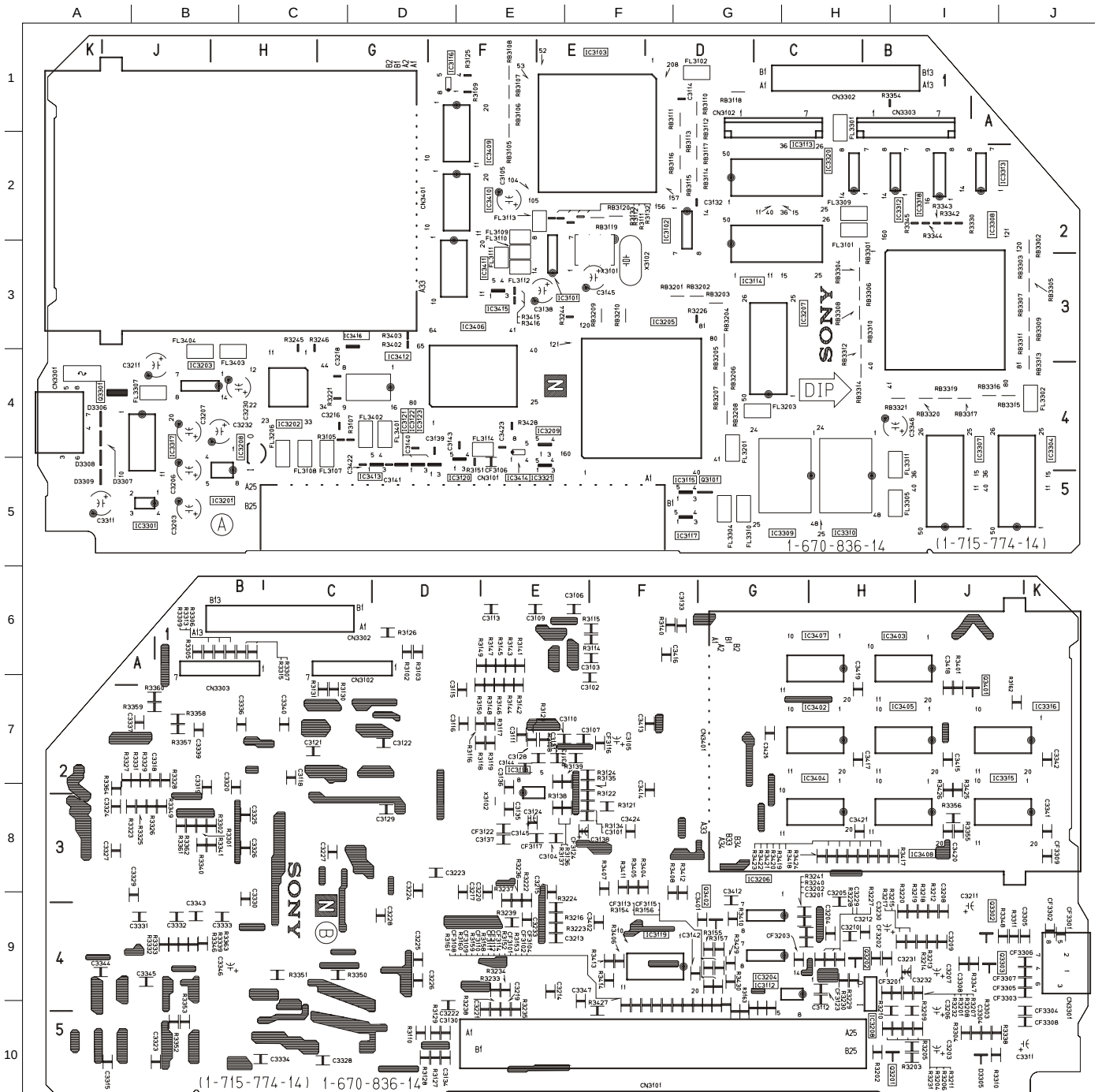


COMPONENTS MARKED AS XX ARE NOT FITTED ON THIS MODEL



COMPONENTS MARKED AS XX ARE NOT FITTED ON THIS MODEL

N (4/4)

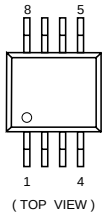


Semiconductor Location Table

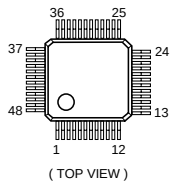
IC	IC3116	IC3201	IC3209	IC3315	IC3404	IC3412	Q3201	D3307
IC3101	IC3117	IC3202	IC3301	IC3316	IC3405	IC3413	Q3202	D3308
IC3102	IC3118	IC3203	IC3304	IC3317	IC3406	IC3413	Q3301	D3309
IC3103	IC3119	IC3204	IC3307	IC3318	IC3407	IC3414	Q3302	D3311
IC3112	IC3120	IC3205	IC3308	IC3320	IC3408	IC3415	Q3401	
IC3113	IC3121	IC3206	IC3309	IC3321	IC3409	IC3416	Q3402	
IC3114	IC3122	IC3207	IC3310	IC3402	IC3410	TRANSISTORS	DIODES	
IC3115	IC3123	IC3208	IC3312	IC3403	IC3411			
						Q3101	D3306	

5-4. SEMICONDUCTORS

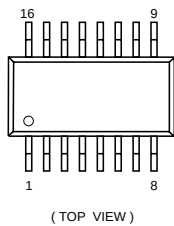
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NJM3404AD



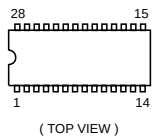
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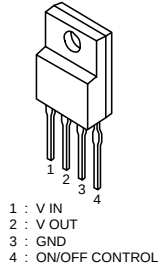
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SN74LS221D
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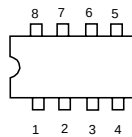
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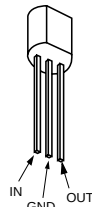
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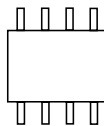
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ST24C16FB6
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UPC393C



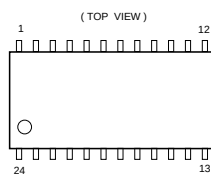
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L78L05ACZ-AP
L78L12ACZ-AP



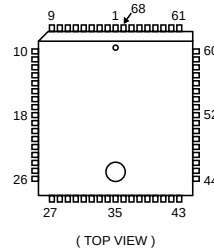
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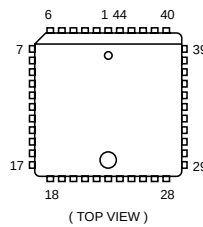
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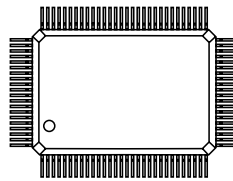
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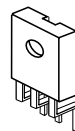
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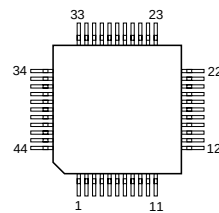
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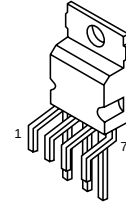
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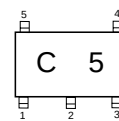
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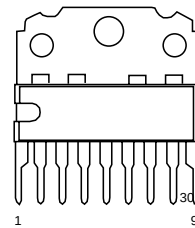
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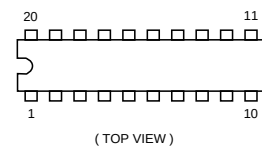
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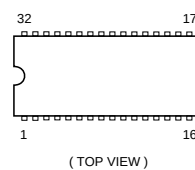
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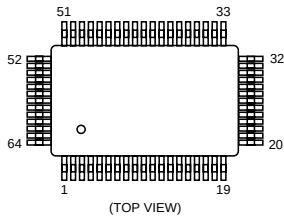
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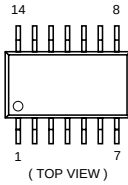
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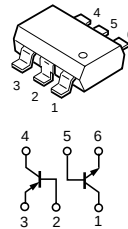
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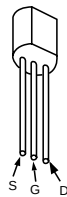
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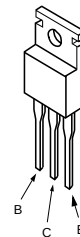
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2SC2551-O
2SC2551O-TPE2



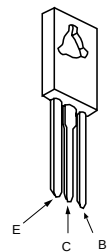
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BC556B



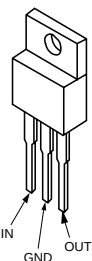
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IRF620



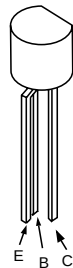
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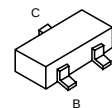
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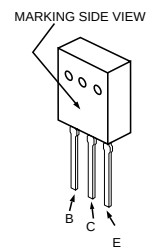
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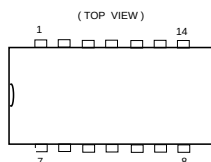
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DTC114EK
DTC114YKA-T146
DTC123EK
DTC123EK-T146
DTC124EKA-T146
DTC144EK
DTC144EK-T146
2SA1037K-T-146-R
2SA1162-G
2SC2412K-QR
2SC2412K-T-146-R



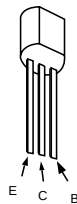
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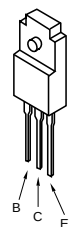
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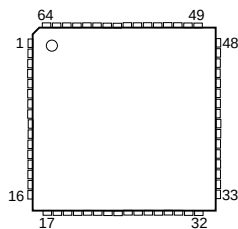
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2SA933AS-QRT
2SA933S-RT
2SC1740S-RT
2SC2785-HFE



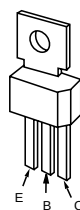
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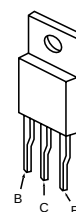
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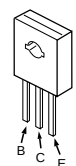
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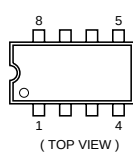
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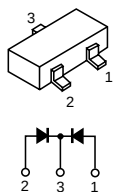
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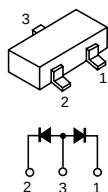
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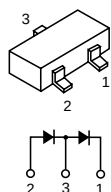
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DAP202K
DAP202K-T-146

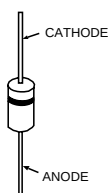


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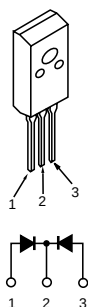


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EL1Z
GP08D
GP08DPKG23
R2K-V1

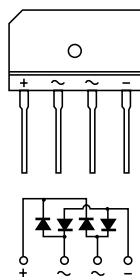
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RGP10GPKG23
RGP15GPKG23
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1SS133T-77
1SS83
1SS83TD



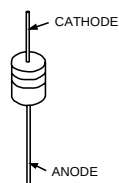
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D10SC6M



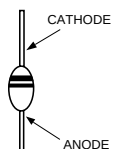
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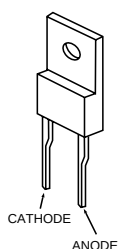
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ERA82-004TP1
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MTZJ-T-77-15
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MTZJ-T-77-3-3B
MTZJ-T-77-3.6A
MTZJ-T-77-4.7B
MTZJ-T-77-5.6B
MTZJ-T-77-6.8
MTZJ-T-77-7.5B



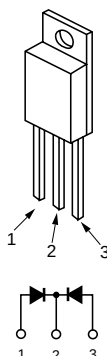
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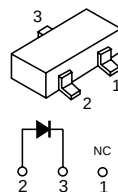
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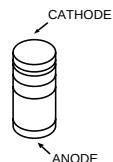
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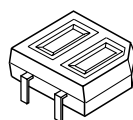
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MA3056M-TX
MA3062M-TX
MA3030-H-(TX)



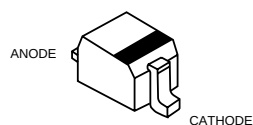
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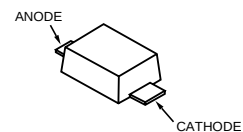
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UDZ-TE-17-6.2B
UDZ-TE-17-6.8B
UDZ-TE-12B

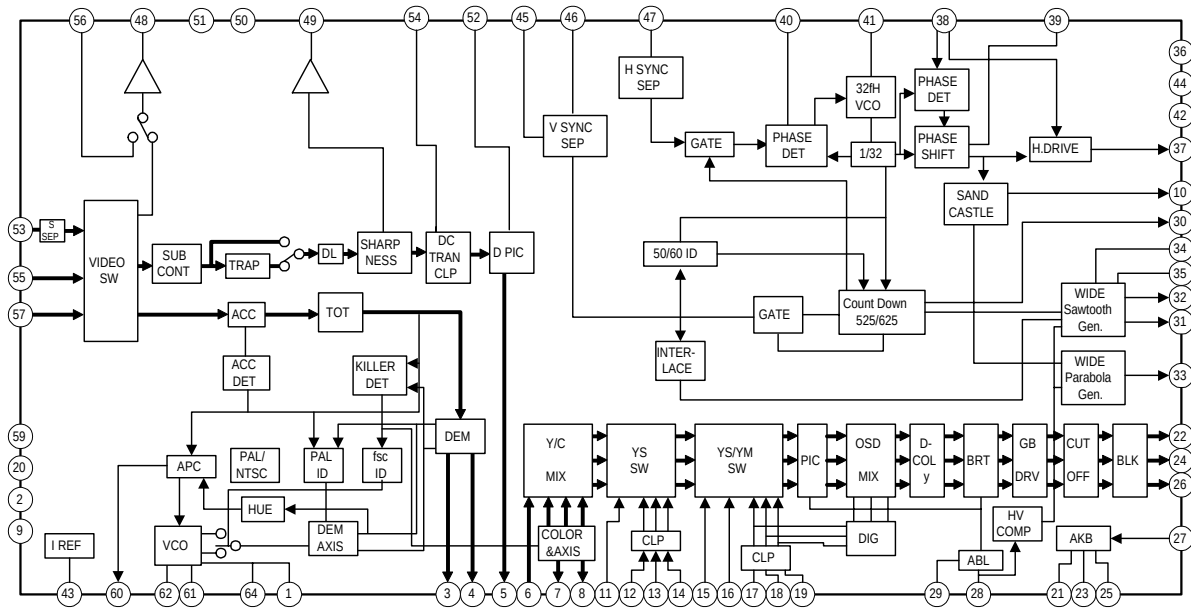


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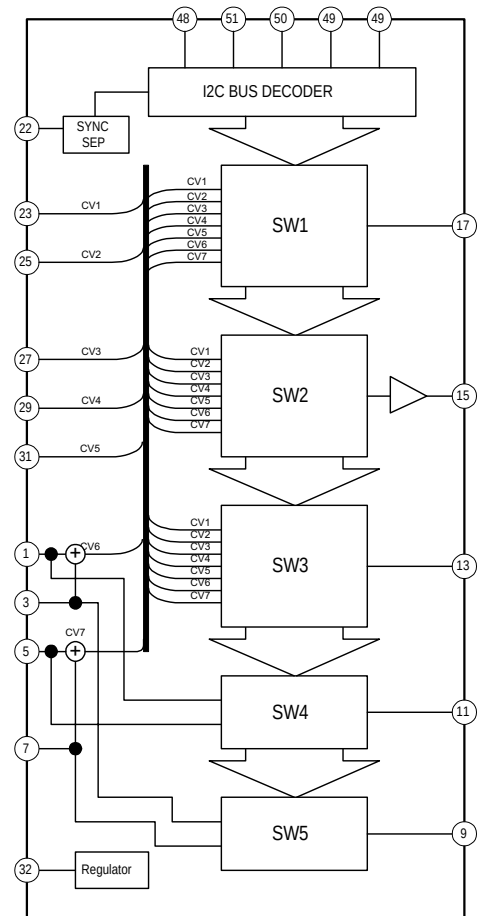


5-5. IC BLOCK DIAGRAMS (1)

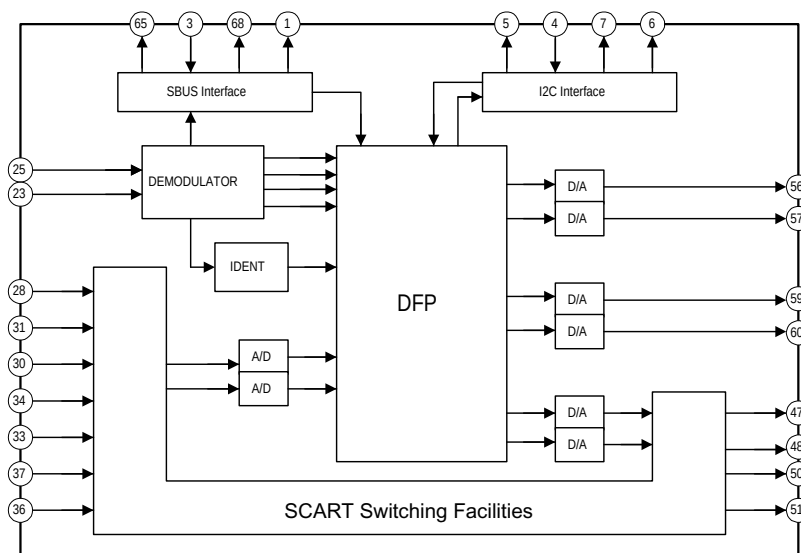
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A BOARD IC201 CXA2040AQ

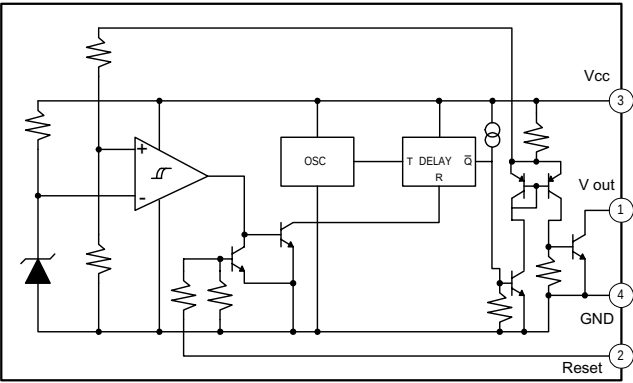


A BOARD IC202 MSP3410D

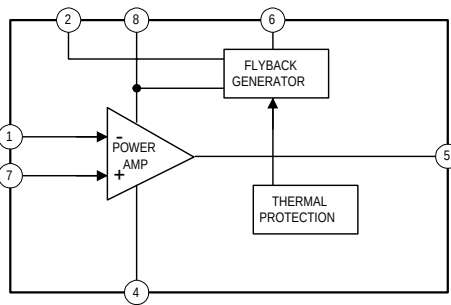


5-5. IC BLOCK DIAGRAMS (2)

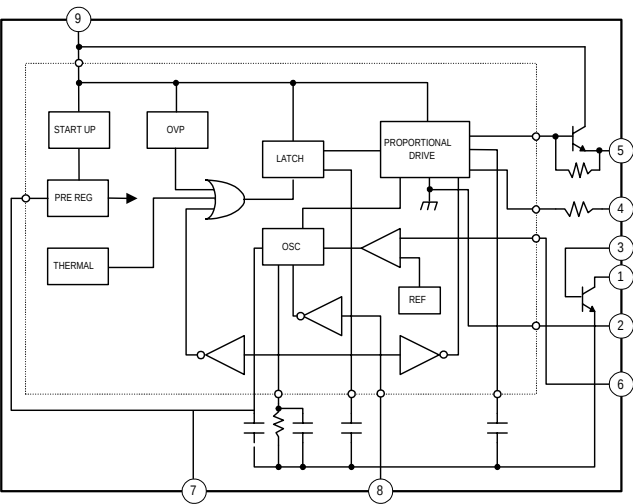
A BOARD IC4 PST593C



D BOARD IC500 STV9379



D BOARD IC600 STR-S6709



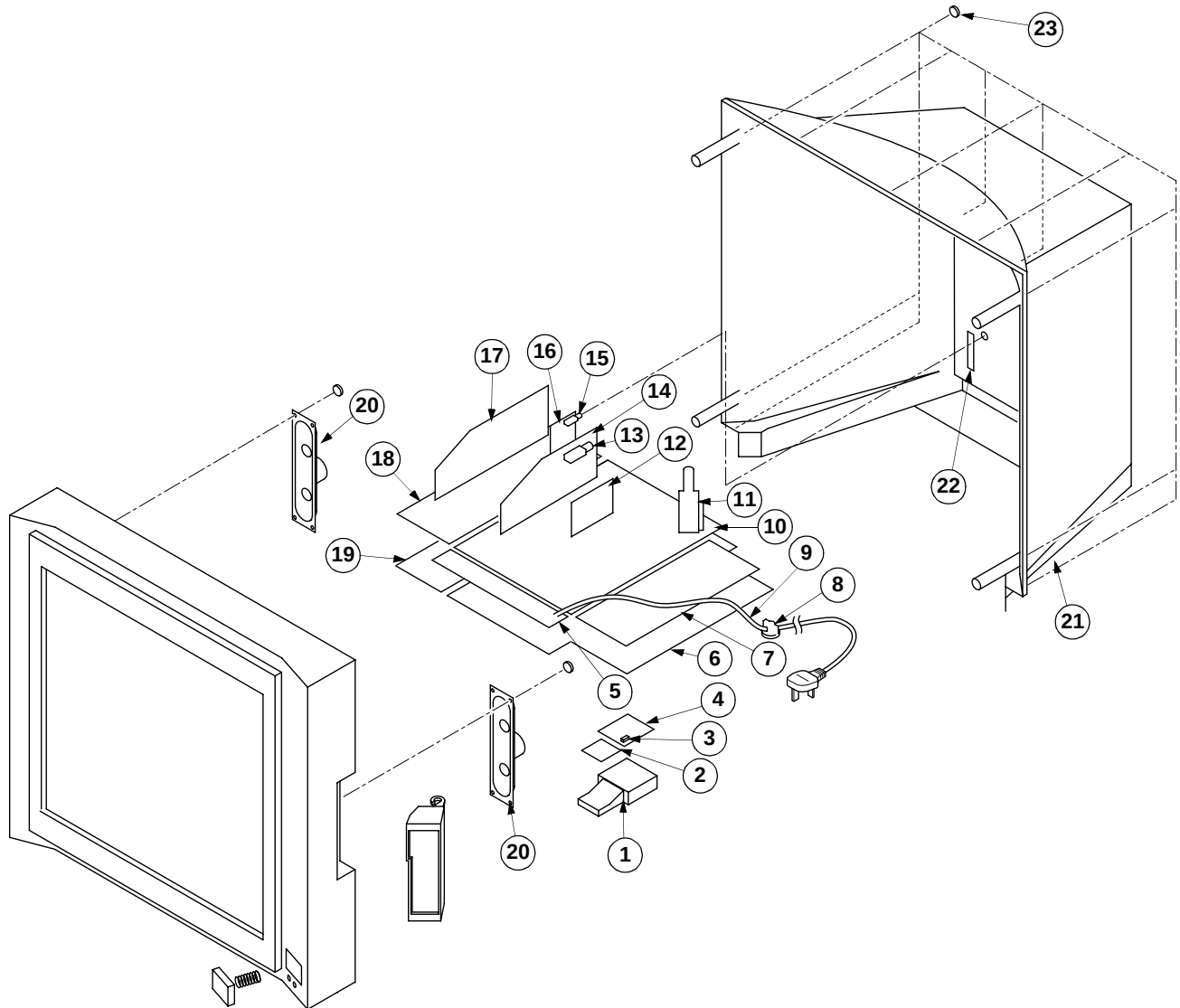
SECTION 6 EXPLODED VIEWS

NOTE :

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.
- Items marked “ * “ are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

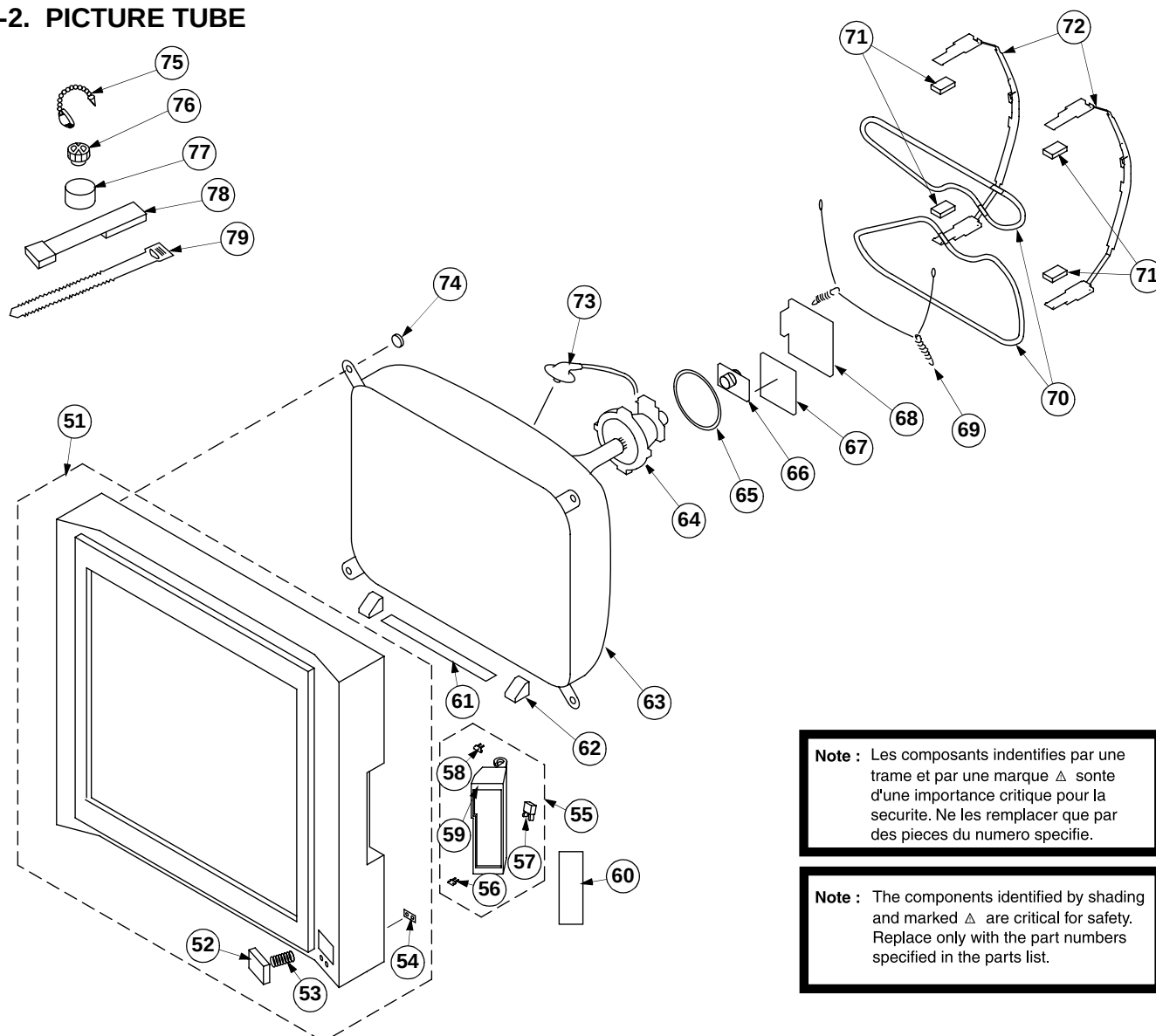
The components identified by shading and marked **△** are critical for safety. Replace only with the part number specified.

6-1. CHASSIS



REF. NO.	PART.NO	DESCRIPTION	REMARK	REF. NO.	PART.NO	DESCRIPTION	REMARK
1	*4-205-697-01	H/F BRACKET			*A-1642-251-A	D2 BOARD, COMPLETE (KV-32DX30U)	
2	*A-1646-223-A	H8 BOARD, COMPLETE		13	1-693-339-11	TUNER/VIF (UK)	
3	△ 1-571-433-21	SWITCH, PUSH (AC POWER)		14	*A-1632-909-A	A BOARD, COMPLETE	
4	*A-1624-091-A	F4 BOARD, COMPLETE		15	4-205-128-01	BUTTON, SURROUND	
5	*A-1647-041-A	H BOARD, COMPLETE		16	*A-1651-143-A	J BOARD, COMPLETE	
6	*4-204-752-02	BRACKET, MAIN		17	*A-1654-051-A	N BOARD, COMPLETE	
7	*A-1640-405-A	D1 BOARD, COMPLETE		18	*A-1632-908-A	A2 BOARD, COMPLETE	
8	*4-202-531-01	AC CORD LOCK (SC)		19	*4-204-751-11	BRACKET, A2	
9	△ 1-776-204-12	POWER CORD, FILTER (UK)		20	1-529-408-11	SPEAKER (4.2x24CM)	
10	*A-1642-268-A	D BOARD, COMPLETE (KV-28DX30U)		21	4-205-700-11	REAR COVER (KV-28DX30U)	
	*A-1642-269-A	D BOARD, COMPLETE (KV-32DX30U)			4-205-736-01	REAR COVER (KV-32DX30U)	
11	△ 1-453-332-11	TRANSFORMER ASSY, FLYBACK (NX-4521//J114)		22	4-204-656-11	COVER, PCMCIA	
12	*A-1651-254-A	D2 BOARD, COMPLETE (KV-28DX30U)		23	4-039-358-01	SCREW (4x16), (+) BV TAPPING	

6-2. PICTURE TUBE



REF. NO.	PART.NO	DESCRIPTION	REMARK	REF. NO.	PART.NO	DESCRIPTION	REMARK
51	X-4200-630-2	BEZNET ASSY (KV-28DX30U) 52-54		66	Δ 8-453-011-11	NECK ASSY, NA299-M	
	X-4200-641-1	BEZNET ASSY (KV-32DX30U) 52-54		67	*A-1644-107-A	VM BOARD, COMPLETE	
52	4-205-699-01	POWER BUTTON		68	*A-1638-126-A	C BOARD, COMPLETE	
53	4-202-964-11	SPRING		69	4-200-433-01	SPRING, EXTENSION	
54	4-205-698-01	GUIDE, LIGHT		70	Δ 1-416-466-11	COIL, DEMAGNETIC (KV-28DX30U)	
55	A-1610-076-A	DOOR ASSY	56-59		Δ 1-416-769-11	COIL, DEMAGNETIC (KV-32DX30U)	
56	3-022-410-01	DAMPER		71	*4-203-390-01	CUSHION, DGC (KV-28DX30U)	
57	4-047-464-01	CATCHER, PUSH			*4-203-390-41	CUSHION, DGC (KV-32DX30U)	
58	4-205-743-01	SPRING, TORSION		72	*4-057-303-01	HOLDER, DGC (KV-28DX30U)	
59	4-205-695-01	DOOR BRACKET			*4-059-569-01	HOLDER, DGC (KV-32DX30U)	
60	*A-1646-222-A	H7 BOARD, COMPLETE		73	Δ 1-251-317-63	CAP ASSY, HIGH-VOLTAGE	
61	4-203-128-41	SHEET, BLOTTING		74	4-036-188-01	SCREW, SELF TAPPING (KV-28DX30U)	
62	*4-203-098-01	SUPPORTER, CRT			4-204-225-01	PT SCREW (KV-32DX30U)	
63	Δ 8-737-786-05	PICTURE TUBE (W66LLX060X) (KV-28DX30U)		75	4-308-870-00	CLIP, LEAD WIRE	
	Δ 8-735-054-05	PICTURE TUBE (W66LLZ060X) (KV-32DX30U)		76	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
64	Δ 1-451-481-31	DEFLECTION YOKE (Y28RVC2) (KV-28DX30U)		77	1-452-032-00	MAGNET, DISK; 10MM Ø	
	Δ 1-451-480-31	DEFLECTION YOKE (Y32RVC2) (KV-32DX30U)		78	X-4387-214-1	PERMALLOY ASSY, CORRECTION	
65	1-452-896-11	COIL, NA ROTATION (RT200)		79	3-701-007-00	BAND, BINDING	

SECTION 7 ELECTRICAL PARTS LIST

PARTS LISTING TABLE OF CONTENTS

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Note : Refer to the designated variant parts list when seeking a part indicated by an asterisk (*)
 Parts indicated (#) on the Schematic Diagram are not used in this model and therefore do not appear in the Parts List.

H7

F4

A2

The components identified by shading and marked Δ are critical for safety
Replace only with the part number specified.

REF.NO. PART.NO DESCRIPTION REMARK

*A-1646-222-A H7 Board, Complete

< CAPACITOR >

C7900	1-102-106-00	CERAMIC	100PF	10.00%	50V
C7901	1-102-106-00	CERAMIC	100PF	10.00%	50V
C7903	1-126-964-11	ELECT	10UF	20.00%	50V
C7904	1-126-964-11	ELECT	10UF	20.00%	50V
C7925	1-137-372-11	MYLAR	0.022UF	5.00%	50V
C7926	1-137-372-11	MYLAR	0.022UF	5.00%	50V

< CONNECTOR >

CN7901	*1-564-522-11	PLUG, CONNECTOR 7P
CN7903	*1-564-528-11	PLUG, CONNECTOR 13P
CN7905	*1-564-520-11	PLUG, CONNECTOR 5P

< DIODE >

D7902	8-719-923-60	DIODE MTZJ-T-77-9.1
D7910	8-719-109-89	DIODE MTZJ-T-77-5.6B

< SOCKET >

J7900	1-694-564-11	TERMINAL BLOCK, S
J7925	1-785-448-11	JACK

< COIL >

L7901	1-408-603-31	INDUCTOR	10UH
L7902	1-408-603-31	INDUCTOR	10UH
L7925	1-414-183-41	INDUCTOR	10UH
L7926	1-414-183-41	INDUCTOR	10UH

< RESISTOR >

R7901	1-535-465-11	LEAD, JUMPER (5.0MM)
R7902	1-249-437-11	CARBON 47K 5% 1/4W
R7903	1-249-437-11	CARBON 47K 5% 1/4W
R7905	1-535-465-11	LEAD, JUMPER (5.0MM)
R7910	1-249-422-11	CARBON 2.7K 5% 1/4W
R7911	1-535-465-11	LEAD, JUMPER (5.0MM)
R7912	1-249-429-11	CARBON 10K 5% 1/4W
R7913	1-249-426-11	CARBON 5.6K 5% 1/4W
R7914	1-249-437-11	CARBON 47K 5% 1/4W
R7915	1-249-433-11	CARBON 22K 5% 1/4W

< SWITCH >

S7900	1-692-979-11	SWITCH, TACTILE
S7901	1-692-979-11	SWITCH, TACTILE
S7902	1-692-979-11	SWITCH, TACTILE

REF.NO. PART.NO DESCRIPTION REMARK

*A-1624-091-A F4 Board, Complete

*1-679-217-12 PWB, F4

< CONNECTOR >

CN7601	Δ *1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P
CN7602	Δ *1-580-843-11	PIN, CONNECTOR (POWER)

< SWITCH >

S7601	Δ 1-571-433-21	SWITCH, PUSH (AC POWER)
-------	-----------------------	-------------------------

*A-1632-908-A A2 Board, Complete

4-202-373-01 SPRING, IC
4-202-710-01 SPACER, INSULATING
4-382-854-11 SCREW (M3X10), P, SW (+)

< CAPACITOR >

C4001	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C4002	1-126-933-11	ELECT 100UF	20.00%	16V
C4003	1-126-933-11	ELECT 100UF	20.00%	16V
C4004	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C4005	1-126-933-11	ELECT 100UF	20.00%	16V
C4006	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C4007	1-126-933-11	ELECT 100UF	20.00%	16V
C4008	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C4009	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C4010	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C4011	1-126-969-11	ELECT 220UF	20.00%	50V
C4012	1-126-935-11	ELECT 470UF	20.00%	16V
C4014	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C4015	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C4016	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C4018	1-126-933-11	ELECT 100UF	20.00%	16V
C4019	1-126-933-11	ELECT 100UF	20.00%	16V
C4020	1-126-933-11	ELECT 100UF	20.00%	16V
C4021	1-126-933-11	ELECT 100UF	20.00%	16V
C4022	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C4023	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C4024	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C4025	1-126-964-11	ELECT 10UF	20.00%	50V
C4026	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C4027	1-126-964-11	ELECT 10UF	20.00%	50V
C4028	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C4029	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C4030	1-126-933-11	ELECT 100UF	20.00%	16V
C4031	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V

REF. NO.	PART.NO	DESCRIPTION	REMARK	REF. NO.	PART.NO	DESCRIPTION	REMARK
C4032	1-126-964-11	ELECT 10UF	20.00% 50V	C4084	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V
C4033	1-126-933-11	ELECT 100UF	20.00% 16V	C4085	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V
C4034	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	C4086	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V
C4035	1-126-964-11	ELECT 10UF	20.00% 50V	C4088	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V
C4036	1-126-964-11	ELECT 10UF	20.00% 50V	C4089	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C4039	1-126-964-11	ELECT 10UF	20.00% 50V	C4091	1-163-005-11	CERAMIC CHIP 470PF	10.00% 50V
C4040	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	C4092	1-163-005-11	CERAMIC CHIP 470PF	10.00% 50V
C4041	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	C4093	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C4042	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	C4261	1-137-194-81	FILM 0.47UF	5.00% 50V
C4043	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	C4262	1-136-165-00	FILM 0.1UF	5.00% 50V
C4044	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	C4263	1-137-194-81	FILM 0.47UF	5.00% 50V
C4045	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	C4264	1-137-194-81	FILM 0.47UF	5.00% 50V
C4046	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	C4265	1-137-366-11	MYLAR 0.0022UF	5.00% 50V
C4047	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	C4266	1-137-366-11	MYLAR 0.0022UF	5.00% 50V
C4048	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	C4267	1-136-169-00	FILM 0.22UF	5.00% 50V
C4049	1-163-035-00	CERAMIC CHIP 0.047UF	50V	C4268	1-136-169-00	FILM 0.22UF	5.00% 50V
C4050	1-163-035-00	CERAMIC CHIP 0.047UF	50V	C4271	1-126-952-11	ELECT 1000UF	20.00% 35V
C4051	1-163-035-00	CERAMIC CHIP 0.047UF	50V	C4272	1-126-952-11	ELECT 1000UF	20.00% 35V
C4052	1-163-035-00	CERAMIC CHIP 0.047UF	50V	C4273	1-101-005-00	CERAMIC 0.022UF	50V
C4053	1-163-035-00	CERAMIC CHIP 0.047UF	50V	< CONNECTOR >			
C4054	1-163-035-00	CERAMIC CHIP 0.047UF	50V	CN4001	*1-770-747-11	CONNECTOR, BOARD TO BOARD 12P	
C4055	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	CN4002	1-695-299-11	CONNECTOR, BOARD TO BOARD 50P	
C4056	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	CN4204	*1-564-507-11	PLUG, CONNECTOR 4P	
C4057	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	CN4205	1-785-802-11	PIN, CONNECTOR (WITH PWB) 20P	
C4058	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	CN4206	*1-564-511-11	PLUG, CONNECTOR 8P	
C4059	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	CN4407	*1-564-511-11	PLUG, CONNECTOR 8P	
C4060	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	CN4604	*1-564-509-11	PLUG, CONNECTOR 6P	
C4061	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	CN4901	*1-564-508-11	PLUG, CONNECTOR 5P	
C4062	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	< COMPOSITION CIRCUIT BLOCK >			
C4063	1-126-959-11	ELECT 0.47UF	20.00% 50V	CP4001	8-598-515-00	RF SPLITTER RFD-AC401	
C4064	1-126-964-11	ELECT 10UF	20.00% 50V	< DIODE >			
C4065	1-126-959-11	ELECT 0.47UF	20.00% 50V	D4002	8-719-812-43	DIODE TLG124A	
C4066	1-126-959-11	ELECT 0.47UF	20.00% 50V	D4004	8-719-929-15	DIODE MTZJ-T-77-9.1B	
C4067	1-126-959-11	ELECT 0.47UF	20.00% 50V	D4005	8-719-991-33	DIODE 1SS133T-77	
C4068	1-126-960-11	ELECT 1UF	20.00% 50V	D4006	8-719-929-15	DIODE MTZJ-T-77-9.1B	
C4069	1-126-960-11	ELECT 1UF	20.00% 50V	D4007	8-719-929-15	DIODE MTZJ-T-77-9.1B	
C4070	1-126-960-11	ELECT 1UF	20.00% 50V	D4008	8-719-929-15	DIODE MTZJ-T-77-9.1B	
C4071	1-126-960-11	ELECT 1UF	20.00% 50V	D4009	8-719-929-15	DIODE MTZJ-T-77-9.1B	
C4072	1-126-960-11	ELECT 1UF	20.00% 50V	D4010	8-719-929-15	DIODE MTZJ-T-77-9.1B	
C4073	1-126-933-11	ELECT 100UF	20.00% 16V	D4011	8-719-110-31	DIODE MTZJ-T-77-12B	
C4074	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	D4012	8-719-982-27	DIODE MTZJ-T-77-33C	
C4077	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	D4013	8-719-991-33	DIODE 1SS133T-77	
C4078	1-126-933-11	ELECT 100UF	20.00% 16V	D4014	8-719-109-69	DIODE MTZJ-T-77-3.6B	
C4079	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	D4015	8-719-109-85	DIODE MTZJ-T-77-5.1B	
C4080	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V				
C4081	1-126-933-11	ELECT 100UF	20.00% 16V				
C4083	1-125-943-21	FILM 0.22UF	5.00% 50V				

REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
D4016	8-719-109-85	DIODE MTZJ-T-77-5.1B				< SOCKET >	
D4018	8-719-109-85	DIODE MTZJ-T-77-5.1B					
D4019	8-719-923-60	DIODE MTZJ-T-77-9.1		J4001	*1-793-200-11	CONNECTOR, SQUARE TYPE 21P	
D4020	8-719-109-85	DIODE MTZJ-T-77-5.1B				< COIL >	
D4021	8-719-109-85	DIODE MTZJ-T-77-5.1B					
D4260	8-719-109-72	DIODE MTZJ-T-77-3.9B		L4001	1-408-603-31	INDUCTOR 10UH	
				L4002	1-410-645-31	INDUCTOR 100UH	
		< FERRITE BEAD >		L4005	1-410-645-31	INDUCTOR 100UH	
FB4001	1-414-232-22	INDUCTOR 0UH		L4006	1-410-667-31	INDUCTOR 22UH	
FB4002	1-414-232-22	INDUCTOR 0UH		L4010	1-410-645-31	INDUCTOR 100UH	
FB4003	1-414-232-22	INDUCTOR 0UH				< TRANSISTOR >	
FB4004	1-414-232-22	INDUCTOR 0UH		Q4001	1-801-806-11	TRANSISTOR DTC144EKA-T146	
FB4005	1-414-232-22	INDUCTOR 0UH		Q4004	1-801-806-11	TRANSISTOR DTC144EKA-T146	
				Q4005	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
FB4006	1-414-232-22	INDUCTOR 0UH		Q4007	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
FB4007	1-414-232-22	INDUCTOR 0UH		Q4008	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
FB4008	1-414-232-22	INDUCTOR 0UH					
FB4009	1-414-232-22	INDUCTOR 0UH		Q4009	1-801-806-11	TRANSISTOR DTC144EKA-T146	
FB4012	1-414-232-22	INDUCTOR 0UH		Q4010	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
				Q4011	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
FB4013	1-414-232-22	INDUCTOR 0UH		Q4260	8-729-029-94	TRANSISTOR DTC143TSA-TP	
FB4014	1-414-232-22	INDUCTOR 0UH		Q4261	8-729-119-78	TRANSISTOR 2SC1740S-RT	
FB4015	1-414-232-22	INDUCTOR 0UH				< RESISTOR >	
FB4016	1-414-232-22	INDUCTOR 0UH					
FB4018	1-414-232-22	INDUCTOR 0UH		JR4002	1-216-295-11	SHORT 0	
				JR4003	1-216-295-11	SHORT 0	
FB4019	1-414-232-22	INDUCTOR 0UH		JR4007	1-216-295-11	SHORT 0	
FB4020	1-414-232-22	INDUCTOR 0UH		JR4008	1-216-295-11	SHORT 0	
FB4021	1-414-232-22	INDUCTOR 0UH		JR4009	1-216-295-11	SHORT 0	
FB4022	1-414-232-22	INDUCTOR 0UH					
FB4025	1-414-232-22	INDUCTOR 0UH		JR4010	1-216-295-11	SHORT 0	
FB4026	1-414-232-22	INDUCTOR 0UH		R4002	1-216-295-11	SHORT 0	
FB4027	1-414-232-22	INDUCTOR 0UH		R4004	1-216-049-11	RES-CHIP 1K 5% 1/10W	
FB4028	1-414-232-22	INDUCTOR 0UH		R4005	1-216-073-00	RES-CHIP 10K 5% 1/10W	
FB4030	1-412-911-11	FERRITE 0UH		R4006	1-216-073-00	RES-CHIP 10K 5% 1/10W	
FB4031	1-412-911-11	FERRITE 0UH		R4007	1-216-025-11	RES-CHIP 100 5% 1/10W	
FB4032	1-412-911-11	FERRITE 0UH		R4008	1-216-073-00	RES-CHIP 10K 5% 1/10W	
FB4033	1-412-911-11	FERRITE 0UH		R4009	1-216-085-00	RES-CHIP 33K 5% 1/10W	
FB4034	1-412-911-11	FERRITE 0UH		R4011	1-216-049-11	RES-CHIP 1K 5% 1/10W	
		< IC >		R4012	1-216-025-11	RES-CHIP 100 5% 1/10W	
IC4001	8-759-587-04	IC SAA7127H		R4013	1-216-025-11	RES-CHIP 100 5% 1/10W	
IC4002	8-759-587-03	IC TDA8601T					
IC4003	8-752-087-76	IC CXA2089Q-T6		R4014	1-216-295-11	SHORT 0	
IC4004	8-759-585-29	IC TDA7264A		R4015	1-216-025-11	RES-CHIP 100 5% 1/10W	
IC4005	8-752-072-94	IC CXA1875AM-T4		R4016	1-216-025-11	RES-CHIP 100 5% 1/10W	
				R4017	1-216-049-11	RES-CHIP 1K 5% 1/10W	
IC4006	8-759-648-19	IC TYA7809CTV		R4018	1-216-073-00	RES-CHIP 10K 5% 1/10W	
IC4007	8-759-574-75	IC KA78R33-YDTU					
IC4008	8-759-057-06	IC PCF8591T		R4019	1-216-025-11	RES-CHIP 100 5% 1/10W	
IC4009	8-759-239-25	IC TC74HC4066AF(EL)		R4020	1-216-025-11	RES-CHIP 100 5% 1/10W	

A2

A

REF. NO.	PART.NO	DESCRIPTION	REMARK			REF. NO.	PART.NO	DESCRIPTION	REMARK		
R4024	1-216-049-11	RES-CHIP	1K	5%	1/10W	R4118	1-216-025-11	RES-CHIP	100	5%	1/10W
R4025	1-216-022-00	RES-CHIP	75	5%	1/10W	R4120	1-216-025-11	RES-CHIP	100	5%	1/10W
R4026	1-216-022-00	RES-CHIP	75	5%	1/10W	R4121	1-216-025-11	RES-CHIP	100	5%	1/10W
R4027	1-216-022-00	RES-CHIP	75	5%	1/10W	R4122	1-216-025-11	RES-CHIP	100	5%	1/10W
R4029	1-216-073-00	RES-CHIP	10K	5%	1/10W	R4123	1-216-025-11	RES-CHIP	100	5%	1/10W
R4033	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R4124	1-216-025-11	RES-CHIP	100	5%	1/10W
R4035	1-216-113-00	RES-CHIP	470K	5%	1/10W	R4125	1-216-025-11	RES-CHIP	100	5%	1/10W
R4036	1-216-022-00	RES-CHIP	75	5%	1/10W	R4126	1-216-025-11	RES-CHIP	100	5%	1/10W
R4044	1-216-022-00	RES-CHIP	75	5%	1/10W	R4127	1-216-025-11	RES-CHIP	100	5%	1/10W
R4046	1-216-113-00	RES-CHIP	470K	5%	1/10W	R4128	1-216-025-11	RES-CHIP	100	5%	1/10W
R4047	1-216-073-00	RES-CHIP	10K	5%	1/10W	R4129	1-216-295-11	SHORT	0		
R4048	1-216-022-00	RES-CHIP	75	5%	1/10W	R4130	1-216-295-11	SHORT	0		
R4052	1-216-295-11	SHORT	0			R4131	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4053	1-216-295-11	SHORT	0			R4132	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4054	1-216-051-00	RES-CHIP	1.2K	5%	1/10W	R4140	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4055	1-216-051-00	RES-CHIP	1.2K	5%	1/10W	R4141	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4056	1-216-051-00	RES-CHIP	1.2K	5%	1/10W	R4143	1-216-113-00	RES-CHIP	470K	5%	1/10W
R4057	1-216-051-00	RES-CHIP	1.2K	5%	1/10W	R4144	1-216-033-00	RES-CHIP	220	5%	1/10W
R4058	1-216-067-00	RES-CHIP	5.6K	5%	1/10W	R4199	1-216-025-11	RES-CHIP	100	5%	1/10W
R4059	1-216-067-00	RES-CHIP	5.6K	5%	1/10W	R4260	1-216-295-11	SHORT	0		
R4072	1-216-022-00	RES-CHIP	75	5%	1/10W	R4261	1-249-413-11	CARBON	470	5%	1/4W
R4073	1-216-113-00	RES-CHIP	470K	5%	1/10W	R4262	1-249-421-11	CARBON	2.2K	5%	1/4W
R4075	1-216-041-00	RES-CHIP	470	5%	1/10W	R4263	1-249-434-11	CARBON	27K	5%	1/4W
R4077	1-216-295-11	SHORT	0			R4264	1-249-425-11	CARBON	4.7K	5%	1/4W
R4078	1-216-113-00	RES-CHIP	470K	5%	1/10W	R4265	1-249-429-11	CARBON	10K	5%	1/4W
R4081	1-216-073-00	RES-CHIP	10K	5%	1/10W	R4266	1-249-424-11	CARBON	3.9K	5%	1/4W
R4082	1-216-073-00	RES-CHIP	10K	5%	1/10W	R4267	1-212-849-00	FUSIBLE	4.7	5%	1/4W
R4084	1-216-073-00	RES-CHIP	10K	5%	1/10W	R4268	1-212-849-00	FUSIBLE	4.7	5%	1/4W
R4085	1-216-022-00	RES-CHIP	75	5%	1/10W	R4269	1-249-433-11	CARBON	22K	5%	1/4W
R4086	1-216-073-00	RES-CHIP	10K	5%	1/10W	R4270	1-249-429-11	CARBON	10K	5%	1/4W
R4087	1-216-022-00	RES-CHIP	75	5%	1/10W	< TUNER >					
R4088	1-216-061-00	RES-CHIP	3.3K	5%	1/10W	TU4001	8-598-572-00	FRONT END BTD-DU603			
R4089	1-216-069-00	RES-CHIP	6.8K	5%	1/10W	*A-1632-909-A A Board, Complete					
R4090	1-216-073-00	RES-CHIP	10K	5%	1/10W	1-750-797-11	SOCKET, PLCC				
R4091	1-216-295-11	SHORT	0			4-352-844-01	PIN, LEAD, COATING				
R4092	1-216-073-00	RES-CHIP	10K	5%	1/10W	< CAPACITOR >					
R4093	1-216-295-11	SHORT	0			C1	1-163-038-11	CERAMIC CHIP	0.1UF		25V
R4094	1-216-295-11	SHORT	0			C2	1-104-664-11	ELECT	47UF	20.00%	16V
R4095	1-216-073-00	RES-CHIP	10K	5%	1/10W	C3	1-163-104-00	CERAMIC CHIP	30PF	5.00%	50V
R4096	1-216-089-11	RES-CHIP	47K	5%	1/10W	C4	1-163-104-00	CERAMIC CHIP	30PF	5.00%	50V
R4097	1-216-073-00	RES-CHIP	10K	5%	1/10W	C8	1-163-038-11	CERAMIC CHIP	0.1UF		25V
R4098	1-216-022-00	RES-CHIP	75	5%	1/10W	C10	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4111	1-216-073-00	RES-CHIP	10K	5%	1/10W	C15	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
R4112	1-216-073-00	RES-CHIP	10K	5%	1/10W	C18	1-163-038-11	CERAMIC CHIP	0.1UF		25V
R4113	1-216-073-00	RES-CHIP	10K	5%	1/10W						
R4116	1-216-073-00	RES-CHIP	10K	5%	1/10W						
R4117	1-216-025-11	RES-CHIP	100	5%	1/10W						

REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
C19	1-163-017-00	CERAMIC CHIP 0.0047UF	10.00% 50V	C227	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C20	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C228	1-104-664-11	ELECT 47UF	20.00% 16V
C21	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C229	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C22	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V	C230	1-126-964-11	ELECT 10UF	20.00% 50V
C24	1-163-275-11	CERAMIC CHIP 0.001UF	5.00% 50V	C233	1-104-664-11	ELECT 47UF	20.00% 16V
C45	1-163-038-11	CERAMIC CHIP 0.1UF	25V	C238	1-104-664-11	ELECT 47UF	20.00% 16V
C80	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V	C239	1-163-275-11	CERAMIC CHIP 0.001UF	5.00% 50V
C81	1-126-959-11	ELECT 0.47UF	20.00% 50V	C251	1-163-087-00	CERAMIC CHIP 4PF	0.25PF 50V
C82	1-163-037-11	CERAMIC CHIP 0.022UF	10.00% 50V	C252	1-163-087-00	CERAMIC CHIP 4PF	0.25PF 50V
C90	1-163-038-11	CERAMIC CHIP 0.1UF	25V	C253	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V
C101	1-163-038-11	CERAMIC CHIP 0.1UF	25V	C254	1-163-109-00	CERAMIC CHIP 47PF	5.00% 50V
C102	1-126-934-11	ELECT 220UF	20.00% 16V	C255	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V
C103	1-126-965-11	ELECT 22UF	20.00% 50V	C256	1-163-038-11	CERAMIC CHIP 0.1UF	25V
C104	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V	C257	1-126-965-11	ELECT 22UF	20.00% 50V
C110	1-104-664-11	ELECT 47UF	20.00% 16V	C258	1-126-964-11	ELECT 10UF	20.00% 50V
C112	1-163-275-11	CERAMIC CHIP 0.001UF	5.00% 50V	C259	1-164-005-11	CERAMIC CHIP 0.47UF	25V
C113	1-104-664-11	ELECT 47UF	20.00% 16V	C260	1-163-038-11	CERAMIC CHIP 0.1UF	25V
C120	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V	C261	1-163-005-11	CERAMIC CHIP 470PF	10.00% 50V
C121	1-163-113-00	CERAMIC CHIP 68PF	5.00% 50V	C262	1-163-005-11	CERAMIC CHIP 470PF	10.00% 50V
C122	1-163-137-00	CERAMIC CHIP 680PF	5.00% 50V	C263	1-163-038-11	CERAMIC CHIP 0.1UF	25V
C123	1-163-113-00	CERAMIC CHIP 68PF	5.00% 50V	C264	1-126-963-11	ELECT 4.7UF	20.00% 50V
C124	1-163-038-11	CERAMIC CHIP 0.1UF	25V	C265	1-126-964-11	ELECT 10UF	20.00% 50V
C125	1-163-275-11	CERAMIC CHIP 0.001UF	5.00% 50V	C266	1-126-964-11	ELECT 10UF	20.00% 50V
C144	1-163-038-11	CERAMIC CHIP 0.1UF	25V	C267	1-126-965-11	ELECT 22UF	20.00% 50V
C201	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	C268	1-163-038-11	CERAMIC CHIP 0.1UF	25V
C202	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	C269	1-163-131-00	CERAMIC CHIP 390PF	5.00% 50V
C203	1-104-661-91	ELECT 330UF	20.00% 16V	C270	1-163-131-00	CERAMIC CHIP 390PF	5.00% 50V
C204	1-163-038-11	CERAMIC CHIP 0.1UF	25V	C271	1-163-275-11	CERAMIC CHIP 0.001UF	5.00% 50V
C205	1-126-965-11	ELECT 22UF	20.00% 50V	C272	1-163-275-11	CERAMIC CHIP 0.001UF	5.00% 50V
C207	1-126-964-11	ELECT 10UF	20.00% 50V	C273	1-163-275-11	CERAMIC CHIP 0.001UF	5.00% 50V
C208	1-126-964-11	ELECT 10UF	20.00% 50V	C274	1-163-275-11	CERAMIC CHIP 0.001UF	5.00% 50V
C211	1-126-964-11	ELECT 10UF	20.00% 50V	C275	1-164-346-11	CERAMIC CHIP 1UF	16V
C212	1-164-346-11	CERAMIC CHIP 1UF	16V	C276	1-164-346-11	CERAMIC CHIP 1UF	16V
C213	1-163-005-11	CERAMIC CHIP 470PF	10.00% 50V	C277	1-164-346-11	CERAMIC CHIP 1UF	16V
C214	1-164-346-11	CERAMIC CHIP 1UF	16V	C278	1-164-346-11	CERAMIC CHIP 1UF	16V
C215	1-163-005-11	CERAMIC CHIP 470PF	10.00% 50V	C279	1-126-965-11	ELECT 22UF	20.00% 50V
C216	1-104-664-11	ELECT 47UF	20.00% 16V	C280	1-163-038-11	CERAMIC CHIP 0.1UF	25V
C217	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C281	1-126-965-11	ELECT 22UF	20.00% 50V
C218	1-104-664-11	ELECT 47UF	20.00% 16V	C282	1-163-038-11	CERAMIC CHIP 0.1UF	25V
C219	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C289	1-163-005-11	CERAMIC CHIP 470PF	10.00% 50V
C220	1-126-964-11	ELECT 10UF	20.00% 50V	C290	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C221	1-164-505-11	CERAMIC CHIP 2.2UF	16V	C291	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C222	1-164-346-11	CERAMIC CHIP 1UF	16V	C292	1-163-005-11	CERAMIC CHIP 470PF	10.00% 50V
C223	1-163-005-11	CERAMIC CHIP 470PF	10.00% 50V	C293	1-164-346-11	CERAMIC CHIP 1UF	16V
C224	1-164-346-11	CERAMIC CHIP 1UF	16V	C294	1-163-141-00	CERAMIC CHIP 0.001UF	5.00% 50V
C225	1-163-005-11	CERAMIC CHIP 470PF	10.00% 50V	C295	1-164-346-11	CERAMIC CHIP 1UF	16V
C226	1-104-664-11	ELECT 47UF	20.00% 16V	C296	1-164-346-11	CERAMIC CHIP 1UF	16V

REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
C300	1-163-109-00	CERAMIC CHIP 47PF	5.00% 50V	C353	1-164-505-11	CERAMIC CHIP 2.2UF	16V
C301	1-163-038-11	CERAMIC CHIP 0.1UF	25V	C354	1-164-005-11	CERAMIC CHIP 0.47UF	25V
C302	1-163-275-11	CERAMIC CHIP 0.001UF	5.00% 50V	C355	1-126-965-11	ELECT 22UF	20.00% 50V
C303	1-163-275-11	CERAMIC CHIP 0.001UF	5.00% 50V	C356	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C304	1-163-038-11	CERAMIC CHIP 0.1UF	25V	C357	1-163-267-91	CERAMIC CHIP 470PF	5.00% 50V
C305	1-163-038-11	CERAMIC CHIP 0.1UF	25V	C358	1-164-005-11	CERAMIC CHIP 0.47UF	25V
C306	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C359	1-163-231-11	CERAMIC CHIP 15PF	5.00% 50V
C307	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C360	1-163-231-11	CERAMIC CHIP 15PF	5.00% 50V
C308	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C370	1-164-505-11	CERAMIC CHIP 2.2UF	16V
C309	1-164-346-11	CERAMIC CHIP 1UF	16V	C371	1-163-275-11	CERAMIC CHIP 0.001UF	5.00% 50V
C310	1-164-346-11	CERAMIC CHIP 1UF	16V	C372	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V
C311	1-164-346-11	CERAMIC CHIP 1UF	16V	C373	1-164-489-11	CERAMIC CHIP 0.22UF	10.00% 16V
C312	1-164-505-11	CERAMIC CHIP 2.2UF	16V	C534	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C313	1-163-275-11	CERAMIC CHIP 0.001UF	5.00% 50V	C1001	1-163-235-11	CERAMIC CHIP 22PF	5.00% 50V
C315	1-216-295-11	SHORT 0		C1002	1-163-235-11	CERAMIC CHIP 22PF	5.00% 50V
C317	1-163-038-11	CERAMIC CHIP 0.1UF	25V	C1003	1-216-097-11	RES-CHIP 100K	5% 1/10W
C319	1-163-017-00	CERAMIC CHIP 0.0047UF	10.00% 50V	C1010	1-163-038-11	CERAMIC CHIP 0.1UF	25V
C320	1-126-965-11	ELECT 22UF	20.00% 50V	C1013	1-126-965-11	ELECT 22UF	20.00% 50V
C321	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C1014	1-163-038-11	CERAMIC CHIP 0.1UF	25V
C322	1-163-037-11	CERAMIC CHIP 0.022UF	10.00% 50V	C1015	1-164-489-11	CERAMIC CHIP 0.22UF	10.00% 16V
C323	1-163-037-11	CERAMIC CHIP 0.022UF	10.00% 50V	C1020	1-164-489-11	CERAMIC CHIP 0.22UF	10.00% 16V
C324	1-163-037-11	CERAMIC CHIP 0.022UF	10.00% 50V	< CONNECTOR >			
C325	1-164-346-11	CERAMIC CHIP 1UF	16V	CN1	1-695-302-11	CONNECTOR, BOARD TO BOARD 50P	
C326	1-163-275-11	CERAMIC CHIP 0.001UF	5.00% 50V	CN2	*1-564-508-11	PLUG, CONNECTOR 5P	
C327	1-130-770-00	MYLAR 0.15UF	5.00% 63V	CN4	*1-568-879-11	PIN, CONNECTOR 4P	
C328	1-126-965-11	ELECT 22UF	20.00% 50V	CN5	1-695-915-11	TAB (CONTACT)	
C329	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	CN6	1-695-915-11	TAB (CONTACT)	
C330	1-137-581-11	FILM 0.1UF	5.00% 100V	CN201	1-766-296-21	CONNECTOR, DUAL SCART	
C331	1-137-581-11	FILM 0.1UF	5.00% 100V	CN204	*1-564-507-11	PLUG, CONNECTOR 4P	
C332	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	CN205	1-785-802-11	PIN, CONNECTOR (WITH PWB) 20P	
C333	1-126-933-11	ELECT 100UF	20.00% 16V	CN301	*1-568-882-51	PIN, CONNECTOR 7P	
C334	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	CN303	*1-568-880-51	PIN, CONNECTOR 5P	
C335	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	< DIODE >			
C336	1-163-009-11	CERAMIC CHIP 0.001UF	10.00% 50V	D2	8-719-988-61	DIODE 1SS355TE-17	
C337	1-163-009-11	CERAMIC CHIP 0.001UF	10.00% 50V	D16	8-719-988-61	DIODE 1SS355TE-17	
C338	1-164-346-11	CERAMIC CHIP 1UF	16V	D30	8-719-988-61	DIODE 1SS355TE-17	
C339	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	D101	8-719-977-81	DIODE MA8330-TX	
C340	1-126-933-11	ELECT 100UF	20.00% 16V	D201	8-719-069-60	DIODE UDZS-TE17-9.1B	
C341	1-164-005-11	CERAMIC CHIP 0.47UF	25V	D202	8-719-069-60	DIODE UDZS-TE17-9.1B	
C342	1-164-346-11	CERAMIC CHIP 1UF	16V	D203	8-719-069-60	DIODE UDZS-TE17-9.1B	
C343	1-163-017-00	CERAMIC CHIP 0.0047UF	10.00% 50V	D204	8-719-069-60	DIODE UDZS-TE17-9.1B	
C344	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V	D205	8-719-069-60	DIODE UDZS-TE17-9.1B	
C347	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	D206	8-719-069-60	DIODE UDZS-TE17-9.1B	
C348	1-163-005-11	CERAMIC CHIP 470PF	10.00% 50V	D207	8-719-069-60	DIODE UDZS-TE17-9.1B	
C350	1-126-964-11	ELECT 10UF	20.00% 50V	D208	8-719-069-60	DIODE UDZS-TE17-9.1B	
C351	1-164-505-11	CERAMIC CHIP 2.2UF	16V				
C352	1-164-005-11	CERAMIC CHIP 0.47UF	25V				

REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
D209	8-719-069-60	DIODE UDZS-TE17-9.1B		< COIL >			
D210	8-719-069-60	DIODE UDZS-TE17-9.1B		L111	1-410-993-22	INDUCTOR 1UH	
D211	8-719-069-60	DIODE UDZS-TE17-9.1B		L120	1-408-602-31	INDUCTOR 8.2UH	
D212	8-719-069-60	DIODE UDZS-TE17-9.1B		L121	1-408-591-21	INDUCTOR 1UH	
D213	8-719-069-60	DIODE UDZS-TE17-9.1B		L122	1-408-602-31	INDUCTOR 8.2UH	
D214	8-719-069-60	DIODE UDZS-TE17-9.1B		L300	1-408-607-21	INDUCTOR 22UH	
D215	8-719-069-60	DIODE UDZS-TE17-9.1B		< TRANSISTOR >			
D216	8-719-069-55	DIODE UDZS-TE17-5.6B		Q1	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
D217	8-719-069-55	DIODE UDZS-TE17-5.6B		Q4	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
D218	8-719-069-55	DIODE UDZS-TE17-5.6B		Q15	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
D220	8-719-988-61	DIODE 1SS355TE-17		Q30	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
D221	8-719-988-61	DIODE 1SS355TE-17		Q80	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
D222	8-719-069-60	DIODE UDZS-TE17-9.1B		Q81	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
D223	8-719-069-60	DIODE UDZS-TE17-9.1B		Q82	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
D224	8-719-069-60	DIODE UDZS-TE17-9.1B		Q110	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
D225	8-719-069-60	DIODE UDZS-TE17-9.1B		Q111	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
D226	8-719-069-60	DIODE UDZS-TE17-9.1B		Q112	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
D227	8-719-977-13	DIODE DTZ-TT11-6.8C		Q120	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
D251	8-719-047-16	DIODE BAS216		Q122	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
D302	8-719-988-61	DIODE 1SS355TE-17		Q140	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
D303	8-719-069-55	DIODE UDZS-TE17-5.6B		Q141	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
D304	8-719-069-55	DIODE UDZS-TE17-5.6B		Q201	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
D320	8-719-069-60	DIODE UDZS-TE17-9.1B		Q202	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
D331	8-719-069-55	DIODE UDZS-TE17-5.6B		Q203	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
D370	8-719-047-16	DIODE BAS216		Q204	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
D401	8-719-978-33	DIODE UDZS-TE17-6.8B		Q205	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
D402	8-719-988-61	DIODE 1SS355TE-17		Q206	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
D1010	8-719-036-58	DIODE MA3030-H(TX)		Q207	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
< FILTER >				Q211	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
FL101	1-236-071-11	ENCAPSULATED COMPONENT		Q300	1-801-806-11	TRANSISTOR DTC144EK-T147	
FL201	1-236-071-11	ENCAPSULATED COMPONENT		Q304	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
FL202	1-236-071-11	ENCAPSULATED COMPONENT		Q305	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
FL203	1-236-071-11	ENCAPSULATED COMPONENT		Q306	1-801-806-11	TRANSISTOR DTC144EK-T147	
FL1001	1-236-071-11	ENCAPSULATED COMPONENT		Q330	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
< IC >				Q331	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
IC1	8-759-376-77	IC SDA30C263-GEG		Q332	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
IC2	8-759-684-72	IC M24C64-WMN6T		Q333	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
IC3	8-759-699-30	IC M27C2001-15C1BD401		Q334	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
IC4	8-759-394-57	IC PST593C-MMP-4P		Q335	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
IC201	8-752-081-26	IC CXA2040AQ-T4		Q401	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
IC202	8-759-691-48	IC MSP3452G-P5-A1		Q402	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
IC205	8-759-394-57	IC PST593C-MMP-4P		Q403	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R	
IC301	8-752-081-43	IC CXA2076Q-TL		Q404	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
IC302	8-759-565-20	IC TDA4665T/V5-118		Q405	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
IC1001	8-759-584-20	IC SDA5273-3CP-C55-22-GEG		Q1001	1-801-806-11	TRANSISTOR DTC144EK-T147	
				Q1002	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	

REF.NO.	PART.NO	DESCRIPTION	REMARK			REF. NO.	PART.NO	DESCRIPTION	REMARK		
< RESISTOR >						R60	1-216-025-11	RES-CHIP	100	5%	1/10W
JR7	1-216-295-11	SHORT	0			R61	1-216-025-11	RES-CHIP	100	5%	1/10W
	1-216-295-11	SHORT	0			R62	1-216-025-11	RES-CHIP	100	5%	1/10W
	1-216-295-11	SHORT	0			R63	1-216-025-11	RES-CHIP	100	5%	1/10W
	1-216-295-11	SHORT	0			R64	1-216-025-11	RES-CHIP	100	5%	1/10W
	1-216-295-11	SHORT	0								
JR207	1-216-295-11	SHORT	0			R65	1-216-025-11	RES-CHIP	100	5%	1/10W
	1-216-295-11	SHORT	0			R66	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
	1-216-295-11	SHORT	0			R67	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
	1-216-022-00	RES-CHIP	75	5%	1/10W	R68	1-216-049-11	RES-CHIP	1K	5%	1/10W
	1-216-025-11	RES-CHIP	100	5%	1/10W	R69	1-216-049-11	RES-CHIP	1K	5%	1/10W
JR213	1-216-025-11	RES-CHIP	100	5%	1/10W						
JR214	1-216-025-11	RES-CHIP	100	5%	1/10W	R70	1-216-025-11	RES-CHIP	100	5%	1/10W
						R71	1-216-025-11	RES-CHIP	100	5%	1/10W
JR215	1-216-025-11	RES-CHIP	100	5%	1/10W	R72	1-216-025-11	RES-CHIP	100	5%	1/10W
JR216	1-216-025-11	RES-CHIP	100	5%	1/10W	R73	1-216-025-11	RES-CHIP	100	5%	1/10W
JR391	1-216-295-11	SHORT	0			R74	1-216-025-11	RES-CHIP	100	5%	1/10W
JR1010	1-216-295-11	SHORT	0								
R1	1-216-049-11	RES-CHIP	1K	5%	1/10W	R75	1-216-025-11	RES-CHIP	100	5%	1/10W
R2	1-216-025-11	RES-CHIP	100	5%	1/10W	R76	1-216-025-11	RES-CHIP	100	5%	1/10W
R3	1-216-025-11	RES-CHIP	100	5%	1/10W	R77	1-216-025-11	RES-CHIP	100	5%	1/10W
R4	1-216-013-00	RES-CHIP	33	5%	1/10W	R78	1-414-233-22	INDUCTOR	0UH		
R5	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R79	1-216-033-00	RES-CHIP	220	5%	1/10W
R7	1-216-041-00	RES-CHIP	470	5%	1/10W	R80	1-216-049-11	RES-CHIP	1K	5%	1/10W
R9	1-216-041-00	RES-CHIP	470	5%	1/10W	R81	1-216-081-00	RES-CHIP	22K	5%	1/10W
R19	1-216-025-11	RES-CHIP	100	5%	1/10W	R82	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R20	1-216-025-11	RES-CHIP	100	5%	1/10W	R83	1-216-073-00	RES-CHIP	10K	5%	1/10W
R21	1-216-025-11	RES-CHIP	100	5%	1/10W	R84	1-216-081-00	RES-CHIP	22K	5%	1/10W
R22	1-216-025-11	RES-CHIP	100	5%	1/10W	R85	1-216-073-00	RES-CHIP	10K	5%	1/10W
R24	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R86	1-216-081-00	RES-CHIP	22K	5%	1/10W
R25	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R87	1-216-081-00	RES-CHIP	22K	5%	1/10W
R26	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R88	1-216-025-11	RES-CHIP	100	5%	1/10W
R28	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R89	1-216-025-11	RES-CHIP	100	5%	1/10W
R29	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R91	1-216-025-11	RES-CHIP	100	5%	1/10W
R30	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R92	1-216-025-11	RES-CHIP	100	5%	1/10W
R31	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R93	1-216-033-00	RES-CHIP	220	5%	1/10W
R32	1-216-025-11	RES-CHIP	100	5%	1/10W	R94	1-216-033-00	RES-CHIP	220	5%	1/10W
R33	1-216-025-11	RES-CHIP	100	5%	1/10W	R95	1-216-033-00	RES-CHIP	220	5%	1/10W
R34	1-216-025-11	RES-CHIP	100	5%	1/10W	R99	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R35	1-216-025-11	RES-CHIP	100	5%	1/10W	R101	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R39	1-216-073-00	RES-CHIP	10K	5%	1/10W	R102	1-216-025-11	RES-CHIP	100	5%	1/10W
R46	1-216-095-00	RES-CHIP	82K	5%	1/10W	R103	1-216-025-11	RES-CHIP	100	5%	1/10W
R48	1-216-121-11	RES-CHIP	1M	5%	1/10W	R104	1-216-073-00	RES-CHIP	10K	5%	1/10W
R49	1-216-025-11	RES-CHIP	100	5%	1/10W	R105	1-216-113-00	RES-CHIP	470K	5%	1/10W
R50	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R106	1-216-073-00	RES-CHIP	10K	5%	1/10W
R51	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	R110	1-216-073-00	RES-CHIP	10K	5%	1/10W
R54	1-216-025-11	RES-CHIP	100	5%	1/10W	R111	1-216-029-00	RES-CHIP	150	5%	1/10W
R58	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	R112	1-216-029-00	RES-CHIP	150	5%	1/10W
R59	1-216-025-11	RES-CHIP	100	5%	1/10W	R113	1-216-001-00	RES-CHIP	10	5%	1/10W
						R114	1-216-029-00	RES-CHIP	150	5%	1/10W

REF. NO.	PART.NO	DESCRIPTION	REMARK	REF. NO.	PART.NO	DESCRIPTION	REMARK
R115	1-216-033-00	RES-CHIP	220 5% 1/10W	R219	1-216-113-00	RES-CHIP	470K 5% 1/10W
R116	1-216-025-11	RES-CHIP	100 5% 1/10W	R220	1-216-295-11	SHORT	0
R117	1-216-065-91	RES-CHIP	4.7K 5% 1/10W	R221	1-216-041-00	RES-CHIP	470 5% 1/10W
R118	1-216-097-11	RES-CHIP	100K 5% 1/10W	R222	1-216-089-11	RES-CHIP	47K 5% 1/10W
R120	1-216-069-00	RES-CHIP	6.8K 5% 1/10W	R223	1-216-295-11	SHORT	0
R121	1-216-073-00	RES-CHIP	10K 5% 1/10W	R224	1-216-041-00	RES-CHIP	470 5% 1/10W
R122	1-216-041-00	RES-CHIP	470 5% 1/10W	R225	1-216-089-11	RES-CHIP	47K 5% 1/10W
R123	1-216-031-00	RES-CHIP	180 5% 1/10W	R226	1-216-033-00	RES-CHIP	220 5% 1/10W
R124	1-216-049-11	RES-CHIP	1K 5% 1/10W	R227	1-216-022-00	RES-CHIP	75 5% 1/10W
R125	1-216-081-00	RES-CHIP	22K 5% 1/10W	R228	1-216-022-00	RES-CHIP	75 5% 1/10W
R126	1-216-025-11	RES-CHIP	100 5% 1/10W	R229	1-216-033-00	RES-CHIP	220 5% 1/10W
R127	1-216-081-00	RES-CHIP	22K 5% 1/10W	R230	1-216-022-00	RES-CHIP	75 5% 1/10W
R128	1-216-035-00	RES-CHIP	270 5% 1/10W	R232	1-216-025-11	RES-CHIP	100 5% 1/10W
R129	1-216-033-00	RES-CHIP	220 5% 1/10W	R233	1-216-025-11	RES-CHIP	100 5% 1/10W
R130	1-216-061-00	RES-CHIP	3.3K 5% 1/10W	R234	1-216-113-00	RES-CHIP	470K 5% 1/10W
R131	1-216-073-00	RES-CHIP	10K 5% 1/10W	R235	1-216-025-11	RES-CHIP	100 5% 1/10W
R132	1-216-025-11	RES-CHIP	100 5% 1/10W	R236	1-216-113-00	RES-CHIP	470K 5% 1/10W
R133	1-216-041-00	RES-CHIP	470 5% 1/10W	R237	1-216-295-11	SHORT	0
R134	1-216-001-00	RES-CHIP	10 5% 1/10W	R238	1-216-089-11	RES-CHIP	47K 5% 1/10W
R135	1-216-037-00	RES-CHIP	330 5% 1/10W	R239	1-216-041-00	RES-CHIP	470 5% 1/10W
R136	1-216-033-00	RES-CHIP	220 5% 1/10W	R240	1-216-295-11	SHORT	0
R137	1-216-049-11	RES-CHIP	1K 5% 1/10W	R241	1-216-089-11	RES-CHIP	47K 5% 1/10W
R138	1-216-041-00	RES-CHIP	470 5% 1/10W	R242	1-216-041-00	RES-CHIP	470 5% 1/10W
R144	1-216-081-00	RES-CHIP	22K 5% 1/10W	R243	1-216-033-00	RES-CHIP	220 5% 1/10W
R145	1-216-049-11	RES-CHIP	1K 5% 1/10W	R244	1-216-295-11	SHORT	0
R146	1-216-049-11	RES-CHIP	1K 5% 1/10W	R245	1-216-022-00	RES-CHIP	75 5% 1/10W
R147	1-216-033-00	RES-CHIP	220 5% 1/10W	R246	1-216-041-00	RES-CHIP	470 5% 1/10W
R148	1-216-051-00	RES-CHIP	1.2K 5% 1/10W	R247	1-216-049-11	RES-CHIP	1K 5% 1/10W
R149	1-216-049-11	RES-CHIP	1K 5% 1/10W	R248	1-216-073-00	RES-CHIP	10K 5% 1/10W
R150	1-216-061-00	RES-CHIP	3.3K 5% 1/10W	R249	1-216-001-00	RES-CHIP	10 5% 1/10W
R151	1-216-025-11	RES-CHIP	100 5% 1/10W	R250	1-216-073-00	RES-CHIP	10K 5% 1/10W
R153	1-216-295-11	SHORT	0	R251	1-216-025-11	RES-CHIP	100 5% 1/10W
R200	1-216-049-11	RES-CHIP	1K 5% 1/10W	R252	1-216-025-11	RES-CHIP	100 5% 1/10W
R203	1-216-025-11	RES-CHIP	100 5% 1/10W	R253	1-216-025-11	RES-CHIP	100 5% 1/10W
R204	1-216-025-11	RES-CHIP	100 5% 1/10W	R254	1-216-025-11	RES-CHIP	100 5% 1/10W
R205	1-216-081-00	RES-CHIP	22K 5% 1/10W	R255	1-216-025-11	RES-CHIP	100 5% 1/10W
R206	1-216-033-00	RES-CHIP	220 5% 1/10W	R256	1-216-025-11	RES-CHIP	100 5% 1/10W
R208	1-216-041-00	RES-CHIP	470 5% 1/10W	R257	1-216-011-00	RES-CHIP	27 5% 1/10W
R209	1-216-182-00	RES-CHIP	220 5% 1/8W	R258	1-216-049-11	RES-CHIP	1K 5% 1/10W
R210	1-216-011-00	RES-CHIP	27 5% 1/10W	R262	1-216-049-11	RES-CHIP	1K 5% 1/10W
R211	1-216-033-00	RES-CHIP	220 5% 1/10W	R263	1-216-081-00	RES-CHIP	22K 5% 1/10W
R212	1-216-022-00	RES-CHIP	75 5% 1/10W	R264	1-216-089-11	RES-CHIP	47K 5% 1/10W
R213	1-216-022-00	RES-CHIP	75 5% 1/10W	R265	1-216-065-91	RES-CHIP	4.7K 5% 1/10W
R214	1-216-025-11	RES-CHIP	100 5% 1/10W	R266	1-412-002-31	INDUCTOR	4.7UH
R216	1-216-025-11	RES-CHIP	100 5% 1/10W	R267	1-412-002-31	INDUCTOR	4.7UH
R217	1-216-113-00	RES-CHIP	470K 5% 1/10W	R268	1-216-089-11	RES-CHIP	47K 5% 1/10W
R218	1-216-025-11	RES-CHIP	100 5% 1/10W	R269	1-216-081-00	RES-CHIP	22K 5% 1/10W

REF. NO.	PART.NO	DESCRIPTION	REMARK			REF. NO.	PART.NO	DESCRIPTION	REMARK		
R270	1-216-022-00	RES-CHIP	75	5%	1/10W	R330	1-216-025-11	RES-CHIP	100	5%	1/10W
R271	1-216-022-00	RES-CHIP	75	5%	1/10W	R331	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R272	1-216-022-00	RES-CHIP	75	5%	1/10W	R332	1-216-025-11	RES-CHIP	100	5%	1/10W
R273	1-216-022-00	RES-CHIP	75	5%	1/10W	R333	1-216-075-00	RES-CHIP	12K	5%	1/10W
R278	1-216-041-00	RES-CHIP	470	5%	1/10W	R334	1-216-041-00	RES-CHIP	470	5%	1/10W
R279	1-216-022-00	RES-CHIP	75	5%	1/10W	R335	1-216-675-91	METAL CHIP	10K	0.5%	1/10W
R280	1-216-049-11	RES-CHIP	1K	5%	1/10W	R336	1-216-109-00	RES-CHIP	330K	5%	1/10W
R281	1-216-081-00	RES-CHIP	22K	5%	1/10W	R337	1-216-025-11	RES-CHIP	100	5%	1/10W
R282	1-216-089-11	RES-CHIP	47K	5%	1/10W	R338	1-216-051-00	RES-CHIP	1.2K	5%	1/10W
R283	1-216-049-11	RES-CHIP	1K	5%	1/10W	R339	1-216-049-11	RES-CHIP	1K	5%	1/10W
R284	1-216-081-00	RES-CHIP	22K	5%	1/10W	R340	1-216-025-11	RES-CHIP	100	5%	1/10W
R285	1-216-089-11	RES-CHIP	47K	5%	1/10W	R341	1-216-025-11	RES-CHIP	100	5%	1/10W
R286	1-216-049-11	RES-CHIP	1K	5%	1/10W	R342	1-216-049-11	RES-CHIP	1K	5%	1/10W
R288	1-216-081-00	RES-CHIP	22K	5%	1/10W	R343	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R289	1-216-089-11	RES-CHIP	47K	5%	1/10W	R344	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R291	1-216-049-11	RES-CHIP	1K	5%	1/10W	R345	1-216-025-11	RES-CHIP	100	5%	1/10W
R292	1-216-049-11	RES-CHIP	1K	5%	1/10W	R346	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R293	1-216-049-11	RES-CHIP	1K	5%	1/10W	R347	1-216-025-11	RES-CHIP	100	5%	1/10W
R294	1-216-049-11	RES-CHIP	1K	5%	1/10W	R348	1-216-025-11	RES-CHIP	100	5%	1/10W
R295	1-216-049-11	RES-CHIP	1K	5%	1/10W	R349	1-216-025-11	RES-CHIP	100	5%	1/10W
R296	1-216-049-11	RES-CHIP	1K	5%	1/10W	R350	1-216-042-00	RES-CHIP	510	5%	1/10W
R297	1-216-022-00	RES-CHIP	75	5%	1/10W	R351	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R298	1-216-025-11	RES-CHIP	100	5%	1/10W	R352	1-216-077-91	RES-CHIP	15K	5%	1/10W
R299	1-216-049-11	RES-CHIP	1K	5%	1/10W	R353	8-719-058-24	DIODE RB501V-40TE-17			
R300	1-216-025-11	RES-CHIP	100	5%	1/10W	R354	1-216-295-11	SHORT	0		
R301	1-216-033-00	RES-CHIP	220	5%	1/10W	R357	1-216-049-11	RES-CHIP	1K	5%	1/10W
R302	1-216-295-11	SHORT	0			R358	1-216-295-11	SHORT	0		
R303	1-216-295-11	SHORT	0			R359	1-216-097-11	RES-CHIP	100K	5%	1/10W
R308	1-216-025-11	RES-CHIP	100	5%	1/10W	R360	1-216-049-11	RES-CHIP	1K	5%	1/10W
R309	1-216-033-00	RES-CHIP	220	5%	1/10W	R362	1-216-049-11	RES-CHIP	1K	5%	1/10W
R310	1-216-033-00	RES-CHIP	220	5%	1/10W	R364	1-216-049-11	RES-CHIP	1K	5%	1/10W
R311	1-216-295-11	SHORT	0			R370	1-216-295-11	SHORT	0		
R312	1-216-295-11	SHORT	0			R401	1-216-033-00	RES-CHIP	220	5%	1/10W
R314	1-216-295-11	SHORT	0			R402	1-216-049-11	RES-CHIP	1K	5%	1/10W
R315	1-216-295-11	SHORT	0			R403	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R316	1-216-033-00	RES-CHIP	220	5%	1/10W	R404	1-216-083-00	RES-CHIP	27K	5%	1/10W
R318	1-216-089-11	RES-CHIP	47K	5%	1/10W	R405	1-216-073-00	RES-CHIP	10K	5%	1/10W
R319	1-216-081-00	RES-CHIP	22K	5%	1/10W	R406	1-216-073-00	RES-CHIP	10K	5%	1/10W
R320	1-216-025-11	RES-CHIP	100	5%	1/10W	R407	1-216-073-00	RES-CHIP	10K	5%	1/10W
R321	1-216-025-11	RES-CHIP	100	5%	1/10W	R408	1-216-049-11	RES-CHIP	1K	5%	1/10W
R322	1-216-025-11	RES-CHIP	100	5%	1/10W	R409	1-216-049-11	RES-CHIP	1K	5%	1/10W
R323	1-216-033-00	RES-CHIP	220	5%	1/10W	R410	1-216-049-11	RES-CHIP	1K	5%	1/10W
R324	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R411	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R326	1-216-025-11	RES-CHIP	100	5%	1/10W	R1001	1-216-025-11	RES-CHIP	100	5%	1/10W
R327	1-216-025-11	RES-CHIP	100	5%	1/10W	R1002	1-216-025-11	RES-CHIP	100	5%	1/10W
R328	1-216-129-00	RES-CHIP	2.2M	5%	1/10W	R1005	1-216-041-00	RES-CHIP	470	5%	1/10W
R329	1-216-083-00	RES-CHIP	27K	5%	1/10W	R1010	1-216-295-11	SHORT	0		

A

C

The components identified by shading and marked Δ are critical for safety
Replace only with the part number specified.

REF. NO. PART. NO DESCRIPTION REMARK

R1012 1-216-041-00 RES-CHIP 470 5% 1/10W
R1014 1-216-065-91 RES-CHIP 4.7K 5% 1/10W
R1017 1-216-295-11 SHORT 0
R1021 1-216-025-11 RES-CHIP 100 5% 1/10W
R1022 1-216-025-11 RES-CHIP 100 5% 1/10W

R1023 1-216-025-11 RES-CHIP 100 5% 1/10W
R1024 1-216-041-00 RES-CHIP 470 5% 1/10W
R1026 1-216-025-11 RES-CHIP 100 5% 1/10W
R1027 1-216-025-11 RES-CHIP 100 5% 1/10W
R1028 1-216-025-11 RES-CHIP 100 5% 1/10W

< TUNER >

TU101 1-693-339-21 TUNER/VIF (UK)

< CRYSTAL >

X1 1-767-154-21 VIBRATOR, CERAMIC
X201 1-760-628-11 VIBRATOR, CRYSTAL
X301 1-567-504-11 OSCILLATOR, CRYSTAL
X302 1-567-505-11 OSCILLATOR, CRYSTAL
X303 1-767-127-11 VIBRATOR, CERAMIC

X1001 1-579-965-21 VIBRATOR, CRYSTAL

***A-1638-126-A C Board, Complete**

< CAPACITOR >

C702 1-128-551-11 ELECT 22UF 20.00% 25V
C703 1-104-664-11 ELECT 47UF 20.00% 10V
C704 1-102-945-00 CERAMIC 8PF 0.50PF 50V
C705 1-102-945-00 CERAMIC 8PF 0.50PF 50V
C706 1-102-953-00 CERAMIC 18PF 5.00% 50V

C707 1-107-651-11 ELECT 4.7UF 20.00% 250V
C708 1-126-960-11 ELECT 1UF 20.00% 50V
C709 1-101-006-00 CERAMIC 0.047UF 50V
C710 1-107-651-11 ELECT 4.7UF 20.00% 250V
C711 1-107-651-11 ELECT 4.7UF 20.00% 250V

C712 1-101-006-00 CERAMIC 0.047UF 50V
C714 1-101-006-00 CERAMIC 0.047UF 50V
C715 1-101-006-00 CERAMIC 0.047UF 50V
C716 1-102-157-00 CERAMIC 560PF 10.00% 500V
C717 1-102-157-00 CERAMIC 560PF 10.00% 500V

C718 1-102-157-00 CERAMIC 560PF 10.00% 500V
C719 1-102-074-00 CERAMIC 0.001UF 10.00% 50V
C725 1-107-651-11 ELECT 4.7UF 20.00% 250V
C731 1-117-214-11 CERAMIC 0.001UF 10.00% 2KV

REF. NO. PART. NO DESCRIPTION REMARK

< CONNECTOR >

CN701 *1-568-882-51 PIN, CONNECTOR 7P
CN703 1-778-037-11 PIN, CONNECTOR 6P
CN706 1-695-915-11 TAB (CONTACT)
CN708 1-695-915-11 TAB (CONTACT)

< DIODE >

D701 8-719-109-85 DIODE MTZJ-T-77-5.1B
D704 8-719-991-33 DIODE 1SS133T-77
D705 8-719-991-33 DIODE 1SS133T-77
D707 8-719-991-33 DIODE 1SS133T-77
D709 8-719-051-85 DIODE HSS83TD

D710 8-719-051-85 DIODE HSS83TD
D711 8-719-051-85 DIODE HSS83TD
D712 8-719-908-03 DIODE GP08DPKG23
D713 8-719-109-72 DIODE MTZJ-T-77-3.9B
D714 8-719-991-33 DIODE 1SS133T-77

< IC >

IC701 8-759-346-42 IC TDA6101Q/N3
IC702 8-759-346-42 IC TDA6101Q/N3
IC703 8-759-346-42 IC TDA6101Q/N3

< SOCKET >

J701 Δ 1-526-990-21 SOCKET, CRT

< COIL >

L701 1-410-667-31 INDUCTOR 22UH

< TRANSISTOR >

Q701 8-729-119-76 TRANSISTOR 2SA1309A-QRSTA

< RESISTOR >

R701 1-247-807-31 CARBON 100 5% 1/4W
R702 1-249-417-11 CARBON 1K 5% 1/4W
R703 1-249-437-11 CARBON 47K 5% 1/4W
R704 1-215-413-00 METAL 470 1% 1/4W
R705 1-249-441-11 CARBON 100K 5% 1/4W

R706 1-535-465-11 LEAD, JUMPER (5.0MM)
R707 1-215-424-00 METAL 1.3K 1% 1/4W
R708 1-215-424-00 METAL 1.3K 1% 1/4W
R709 1-215-424-00 METAL 1.3K 1% 1/4W
R710 1-215-413-00 METAL 470 1% 1/4W

R711 1-249-421-11 CARBON 2.2K 5% 1/4W
R712 1-249-431-11 CARBON 15K 5% 1/4W
R718 1-249-422-11 CARBON 2.7K 5% 1/4W

The components identified by shading and marked Δ are critical for safety
Replace only with the part number specified.

C

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REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
R719	1-249-422-11	CARBON 2.7K 5% 1/4W		C2685	1-107-824-11	CERAMIC 220PF 5.00% 1KV	
R720	1-249-422-11	CARBON 2.7K 5% 1/4W		C2686 Δ	1-161-964-91	CERAMIC 0.0047UF 250V	
R722	1-249-435-11	CARBON 33K 5% 1/4W		C2687 Δ	1-161-964-91	CERAMIC 0.0047UF 250V	
R725	1-215-903-11	METAL OXIDE 68K 5% 2W		C2801	1-102-002-00	CERAMIC 680PF 10.00% 500V	
R727	1-215-903-11	METAL OXIDE 68K 5% 2W		C2805	1-102-973-00	CERAMIC 100PF 5.00% 50V	
R729	1-215-903-11	METAL OXIDE 68K 5% 2W		C2806	1-136-347-11	FILM 0.0047UF 5.00% 630V	
R731	1-202-818-00	SOLID 1K 20% 1/2W		C2808	1-130-491-00	MYLAR 0.047UF 5.00% 50V	
R732	1-202-818-00	SOLID 1K 20% 1/2W		C2809	1-130-483-00	MYLAR 0.01UF 5.00% 50V	
R733	1-202-818-00	SOLID 1K 20% 1/2W		C2811	1-129-716-00	FILM 0.015UF 5.00% 630V	
R734	1-247-739-11	CARBON 100 5% 1/2W		C2813	1-102-228-00	CERAMIC 470PF 10.00% 500V	
R738	1-249-489-11	CARBON 22K 5% 1/2W		C2814	1-129-992-00	FILM 0.0024UF 5.00% 630V	
R740	1-216-391-11	METAL OXIDE 1.5 5% 3W		C2815	1-117-455-11	FILM 22000PF 5.00% 630V	
R742	1-215-912-11	METAL OXIDE 150 5% 3W		C2817	1-126-933-11	ELECT 100UF 20.00% 16V	
R743	1-202-847-00	SOLID 560K 20% 1/2W		C2818	1-104-665-11	ELECT 100UF 20.00% 25V	
< VARIABLE RESISTOR >				C2819	1-126-933-11	ELECT 100UF 20.00% 16V	
RV701	1-241-656-21	RES, ADJ, METAL FILM 110M		C2820	1-129-725-00	FILM 0.082UF 5.00% 400V	
< SPARK GAP >				C2841	1-102-244-00	CERAMIC 220PF 10.00% 500V	
SG701	1-517-712-31	GAP, SPARK		C2842	1-109-954-11	ELECT 0.47UF 20.00% 160V	
SG702	1-517-712-31	GAP, SPARK		C2845	1-136-684-51	FILM 0.0022UF 5.00% 50V	
SG703	1-517-712-31	GAP, SPARK		C2846	1-130-491-00	MYLAR 0.047UF 5.00% 50V	
SG704	1-519-421-11	GAP, DISCHARGE		C2847	1-126-964-11	ELECT 10UF 20.00% 50V	
*A-1640-405-A D1 Board, Complete				C2848	1-136-159-00	FILM 0.033UF 5.00% 50V	
4-382-854-11	SCREW (M3X10), P, SW (+)			C2849	1-126-964-11	ELECT 10UF 20.00% 50V	
< CAPACITOR >				C2850	1-130-483-00	MYLAR 0.01UF 5.00% 50V	
C2643	1-125-991-11	ELECT 180UF 20% 450V		C2851	1-136-169-00	FILM 0.22UF 5.00% 50V	
C2644	1-107-824-11	CERAMIC 220PF 5.00% 1KV		C2852	1-136-169-00	FILM 0.22UF 5.00% 50V	
C2645	1-136-169-00	FILM 0.22UF 5.00% 50V		C3802	1-126-965-11	ELECT 22UF 20.00% 50V	
C2646	1-136-164-00	FILM 0.082UF 5.00% 50V		C3804	1-126-965-11	ELECT 22UF 20.00% 50V	
C2647	1-107-824-11	CERAMIC 220PF 5.00% 1KV		< CONNECTOR >			
C2648	1-136-169-00	FILM 0.22UF 5.00% 50V		CN2503	*1-564-506-11	PLUG, CONNECTOR 3P	
C2649	1-136-164-00	FILM 0.082UF 5.00% 50V		CN2602 Δ	*1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P	
C2650	1-117-631-21	FILM 3300PF 3.00% 1.2KV		CN2604	*1-568-881-51	PIN, CONNECTOR 6P	
C2651	1-136-157-00	FILM 0.022UF 5.00% 50V		CN2804	*1-568-879-11	PIN, CONNECTOR 4P	
C2652	1-136-165-00	FILM 0.1UF 5.00% 50V		CN2805	1-568-878-51	PIN, CONNECTOR 3P	
C2653	1-126-965-11	ELECT 22UF 20.00% 50V		CN2806	1-695-915-11	TAB (CONTACT)	
C2654	1-126-967-11	ELECT 47UF 20.00% 50V		CN2807	*1-564-509-11	PLUG, CONNECTOR 6P	
C2655	1-126-941-11	ELECT 470UF 20.00% 25V		CN3801	*1-568-879-11	PIN, CONNECTOR 4P	
C2656	1-126-967-11	ELECT 47UF 20.00% 50V		CN3802	*1-785-270-12	PIN, DY CONNECTOR (PC BOARD)	
C2657	1-126-967-11	ELECT 47UF 20.00% 50V		CN3803	*1-580-798-11	CONNECTOR PIN (DY) 6P	
C2659	1-126-936-11	ELECT 3300UF 20.00% 16V		< DIODE >			
C2660	1-126-936-11	ELECT 3300UF 20.00% 16V		D2601	8-719-025-88	DIODE GBU4JL-6088	
C2661	1-126-935-11	ELECT 470UF 20.00% 16V		D2607	8-719-991-33	DIODE 1SS133T-77	
C2662	1-126-935-11	ELECT 470UF 20.00% 16V		D2615	8-719-063-73	DIODE D1NL20U-TR	
				D2616	8-719-063-73	DIODE D1NL20U-TR	
				D2617	8-719-991-33	DIODE 1SS133T-77	

D1

The components identified by shading and marked Δ are critical for safety
Replace only with the part number specified.

REF. NO.	PART.NO	DESCRIPTION	REMARK	REF. NO.	PART.NO	DESCRIPTION	REMARK
D2619	8-719-110-57	DIODE RD22ES-T1B2		< TRANSISTOR >			
D2620	8-719-160-65	DIODE RD16FB2		Q2614	8-729-026-39	TRANSISTOR 2SA933AS-RT	
D2621	8-719-991-33	DIODE 1SS133T-77		Q2615	8-729-119-78	TRANSISTOR 2SC1740S-RT	
D2669	8-719-510-12	DIODE D10SC4M-F		Q2802	8-729-119-78	TRANSISTOR 2SC1740S-RT	
D2670	8-719-040-01	DIODE FMB-22H		Q2805	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA	
D2671	8-719-040-01	DIODE FMB-22H		Q2806	8-729-039-68	TRANSISTOR IRF620	
D2801	8-719-110-41	DIODE MTZJ-T-77-15B		Q2808	8-729-119-78	TRANSISTOR 2SC1740S-RT	
D2802	8-719-991-33	DIODE 1SS133T-77		Q2810	8-729-119-78	TRANSISTOR 2SC1740S-RT	
D2804	8-719-302-43	DIODE RGP10GPKG23		Q2811	8-729-140-97	TRANSISTOR 2SB734-T-34	
D2805	8-719-970-87	DIODE ERA38-06TP1		Q2814	8-729-043-95	TRANSISTOR 2SC3840K	
D2806	8-719-300-33	DIODE ERB44-06TP1		Q3801	8-729-119-78	TRANSISTOR 2SC1740S-RT	
D2807	8-719-302-43	DIODE RGP10GPKG23		Q3802	8-729-119-78	TRANSISTOR 2SC1740S-RT	
D2808	8-719-970-87	DIODE ERA38-06TP1		< RESISTOR >			
D2810	8-719-991-33	DIODE 1SS133T-77		R2602	1-217-418-00	FUSIBLE 0.47 10% 1/2W	
D2811	8-719-991-33	DIODE 1SS133T-77		R2603	1-260-127-11	CARBON 220K 5% 1/2W	
D2812	8-719-991-33	DIODE 1SS133T-77		R2604	1-260-127-11	CARBON 220K 5% 1/2W	
D2813	8-719-991-33	DIODE 1SS133T-77		R2605	1-249-391-11	CARBON 6.8 5% 1/4W	
D3801	8-719-991-33	DIODE 1SS133T-77		R2607	1-260-127-11	CARBON 220K 5% 1/2W	
D3802	8-719-991-33	DIODE 1SS133T-77		R2608	1-260-127-11	CARBON 220K 5% 1/2W	
< IC >				R2609 Δ	1-202-962-11	CEMENTED 3.3 5% 10W	
IC2605	8-729-039-65	TRANSISITOR MX0541AB-F		R2647	1-249-391-11	CARBON 6.8 5% 1/4W	
IC2606	8-759-908-15	IC TL431CLP-Z20		R2648	1-249-437-11	CARBON 47K 5% 1/4W	
IC2801	8-759-103-93	IC LM393P		R2649	1-215-429-00	METAL 2.2K 1% 1/4W	
IC2802	8-759-701-59	IC MC7809CT		R2680	1-249-417-11	CARBON 1K 5% 1/4W	
IC2803	8-759-700-42	IC NJM2904D		R2681	1-215-428-00	METAL 2K 1% 1/4W	
< COIL >				R2685	1-249-429-11	CARBON 10K 5% 1/4W	
L2614	1-412-525-31	INDUCTOR 10UH		R2686	1-249-377-11	CARBON 0.47 5% 1/4W	
L2615	1-412-525-31	INDUCTOR 10UH		R2687	1-249-417-11	CARBON 1K 5% 1/4W	
L2616	1-535-465-11	LEAD, JUMPER (5.0MM)		R2689	1-249-429-11	CARBON 10K 5% 1/4W	
L2801	1-535-465-11	LEAD, JUMPER (5.0MM)		R2690	1-247-807-31	CARBON 100 5% 1/4W	
L2802	1-406-677-11	INDUCTOR 10MH		R2801	1-535-465-11	LEAD, JUMPER (5.0MM)	
L2803	1-406-989-21	INDUCTOR 10MH		R2802	1-215-919-11	METAL OXIDE 2.2K 5% 3W	
L2805	1-406-667-11	INDUCTOR 220UH		R2804	1-249-437-11	CARBON 47K 5% 1/4W	
L2806	1-406-679-11	INDUCTOR 22MH		R2805	1-249-429-11	CARBON 10K 5% 1/4W	
L3801	1-535-465-11	LEAD, JUMPER (5.0MM)		R2811	1-215-445-00	METAL 10K 1% 1/4W	
L3802	1-535-465-11	LEAD, JUMPER (5.0MM)		R2813	1-215-469-00	METAL 100K 1% 1/4W	
L3803	1-535-465-11	LEAD, JUMPER (5.0MM)		R2814	1-215-445-00	METAL 10K 1% 1/4W	
< IC LINK >				R2815	1-215-469-00	METAL 100K 1% 1/4W	
PS2601 Δ	1-801-550-21	PROTECTOR, MODULE		R2816	1-215-443-00	METAL 8.2K 1% 1/4W	
PS2602 Δ	1-533-597-31	LINK, IC		R2817	1-215-465-00	METAL 68K 1% 1/4W	
PS2604 Δ	1-801-550-21	PROTECTOR, MODULE		R2818	1-215-459-00	METAL 39K 1% 1/4W	
PS2606 Δ	1-801-550-21	PROTECTOR, MODULE		R2819	1-249-421-11	CARBON 2.2K 5% 1/4W	
PS2607 Δ	1-532-637-00	LINK, IC 1A (ICP-F25)		R2820	1-249-421-11	CARBON 2.2K 5% 1/4W	
PS2608 Δ	1-801-549-21	PROTECTOR, MODULE		R2821	1-247-807-31	CARBON 100 5% 1/4W	
				R2823	1-535-465-11	LEAD, JUMPER (5.0MM)	

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D2

REF.NO.	PART.NO	DESCRIPTION	REMARK
R2824	1-249-425-11	CARBON	4.7K 5% 1/4W
R2825	1-249-417-11	CARBON	1K 5% 1/4W
R2826	1-249-417-11	CARBON	1K 5% 1/4W
R2827	1-249-441-11	CARBON	100K 5% 1/4W
R2828	1-249-441-11	CARBON	100K 5% 1/4W
R2829	1-249-441-11	CARBON	100K 5% 1/4W
R2830	1-215-912-11	METAL OXIDE	150 5% 3W
R2832	1-249-379-11	CARBON	0.68 5% 1/4W
R2840	1-215-922-11	METAL OXIDE	6.8K 5% 3W
R2841	1-215-922-11	METAL OXIDE	6.8K 5% 3W
R2842	1-215-923-00	METAL OXIDE	10K 5% 3W
R2843	1-215-923-00	METAL OXIDE	10K 5% 3W
R2844	1-249-409-11	CARBON	220 5% 1/4W
R2845	1-215-489-00	METAL	680K 1% 1/4W
R2846	1-247-903-00	CARBON	1M 5% 1/4W
R2847	1-249-429-11	CARBON	10K 5% 1/4W
R2848	1-215-449-00	METAL	15K 1% 1/4W
R2849	1-215-491-00	METAL	820K 1% 1/4W
R2850	1-215-445-00	METAL	10K 1% 1/4W
R2851	1-215-445-00	METAL	10K 1% 1/4W
R2852	1-215-481-00	METAL	330K 1% 1/4W
R2853	1-215-477-00	METAL	220K 1% 1/4W
R2854	1-215-457-00	METAL	33K 1% 1/4W
R2855	1-215-457-00	METAL	33K 1% 1/4W
R2856	1-247-807-31	CARBON	100 5% 1/4W
R2857	1-249-413-11	CARBON	470 5% 1/4W
R2858	1-249-424-11	CARBON	3.9K 5% 1/4W
R2859	1-247-807-31	CARBON	100 5% 1/4W
R2860	1-215-888-00	METAL OXIDE	220 5% 2W
R2861	1-215-888-00	METAL OXIDE	220 5% 2W
R3801	1-249-421-11	CARBON	2.2K 5% 1/4W
R3804	1-249-421-11	CARBON	2.2K 5% 1/4W
< RELAY >			
RY3801	1-755-172-11	RELAY	
RY3802	1-755-172-11	RELAY	
< TRANSFORMER >			
T2602	1-431-616-11	TRANSFORMER, CONVERTER	
T2603	1-433-490-11	TRANSFORMER, CONVERTER (PIT)	
T2801	1-433-849-11	TRANSFORMER, FERRITE (DFT)	
T3801	1-419-090-11	COIL, CHOKE (100UH)	
T3802	1-419-090-11	COIL, CHOKE (100UH)	

REF.NO. PART.NO DESCRIPTION REMARK

***A-1642-254-A D2 Board, Complete (KV-28DX30U)**
***A-1642-251-A D2 Board, Complete (KV-32DX30U)**

D2 Board Common Parts

< CAPACITOR >

C8801 1-107-683-11 ELECT 2.2UF 250V
C8804 1-136-207-11 MYLAR 0.047UF 10.00% 250V

< CONNECTOR >

CN8801 *1-770-748-11 CONNECTOR, BOARD TO BOARD 12P

< DIODE >

D8801 8-719-923-60 DIODE MTZJ-T-77-9.1
D8802 8-719-302-43 DIODE RGP10GPKG23

< IC >

IC8801 8-749-010-64 PHOTO COUPLER PC123FY2

< COIL >

L8801 1-406-674-11 INDUCTOR 3.3MH
L8802 1-406-978-11 INDUCTOR 150UH

< TRANSISTOR >

Q8801 8-729-034-09 TRANSISTOR 2SK2518-01MR
Q8802 8-729-030-02 TRANSISTOR DTC144ESA-TP
Q8803 8-729-030-02 TRANSISTOR DTC144ESA-TP

< RESISTOR >

R8801 1-215-909-11 METAL OXIDE 47 5% 3W
R8802 1-249-441-11 CARBON 100K 5% 1/4W
R8803 1-249-441-11 CARBON 100K 5% 1/4W
R8804 1-249-421-11 CARBON 2.2K 5% 1/4W
R8805 1-249-429-11 CARBON 10K 5% 1/4W
R8806 1-247-807-31 CARBON 100 5% 1/4W
R8807 1-202-719-00 SOLID 1M 20% 1/2W

D2 Board Variant Parts KV-28DX30U

< CAPACITOR >

C8802 1-136-104-00 FILM 0.16UF 5.00% 200V
C8805 1-136-569-11 FILM 1.2UF 5.00% 200V

D2**D**

The components identified by shading and marked Δ are critical for safety
Replace only with the part number specified.

REF.NO.	PART.NO	DESCRIPTION	REMARK
D2 Board Variant Parts KV-32DX30U			
< CAPACITOR >			
C8802	1-136-946-11	FILM 0.12UF	5.00% 200V
C8805	1-136-540-11	FILM 0.82UF	5.00% 200V
*A-1642-268-A D Board, Complete (KV-28DX30U) *A-1642-269-A D Board, Complete (KV-32DX30U)			
D Board Common Parts			
1-900-900-22 LEAD ASSY, FOCUS			
4-201-023-01 SPACER			
4-202-373-01 SPRING, IC			
4-202-710-01 SPACER			
4-382-854-11 SCREW (M3X10), P, SW (+)			
< CAPACITOR >			
C503	1-136-165-00	FILM 0.1UF	5.00% 50V
C504	1-102-119-00	CERAMIC 0.0015UF	10.00% 50V
C506	1-126-941-11	ELECT 470UF	20.00% 25V
C507	1-109-953-11	ELECT 2.2UF	20.00% 50V
C509	1-136-165-00	FILM 0.1UF	5.00% 50V
C510	1-126-969-11	ELECT 220UF	20.00% 50V
C511	1-136-202-11	MYLAR 0.33UF	5.00% 63V
C513	1-106-220-00	MYLAR 0.1UF	10.00% 100V
C514	1-136-165-00	FILM 0.1UF	5.00% 50V
C515	1-126-941-11	ELECT 470UF	20.00% 25V
C517	1-126-941-11	ELECT 470UF	20.00% 25V
C518	1-102-228-00	CERAMIC 470PF	10.00% 500V
C519	1-102-228-00	CERAMIC 470PF	10.00% 500V
C520	1-126-941-11	ELECT 470UF	20.00% 25V
C521	1-107-698-11	ELECT 10UF	20.00% 25V
C522	1-126-964-11	ELECT 10UF	20.00% 50V
C523	1-136-165-00	FILM 0.1UF	5.00% 50V
C600	Δ 1-119-888-51	CERAMIC 2200PF	20.00% 250V
C601	Δ 1-161-964-91	CERAMIC 0.0047UF	250V
C602	Δ 1-161-964-91	CERAMIC 0.0047UF	250V
C603	1-117-752-11	ELECT (BLOCK) 330UF	20.00% 450V
C604	1-126-968-11	ELECT 100UF	20.00% 50V
C605	1-107-929-11	ELECT 10UF	20.00% 100V
C606	1-162-318-11	CERAMIC 0.001UF	10.00% 500V
C607	1-104-666-11	ELECT 220UF	20.00% 25V
C608	1-109-880-11	FILM 0.0015UF	3.00% 2KV
C609	1-102-228-00	CERAMIC 470PF	10.00% 500V
C611	1-102-228-00	CERAMIC 470PF	10.00% 500V
C612	1-107-929-11	ELECT 10UF	20.00% 100V
C613	1-124-347-51	ELECT 100UF	20.00% 160V

REF.NO.	PART.NO	DESCRIPTION	REMARK
C614	1-126-933-11	ELECT 100UF	20.00% 16V
C615	1-115-789-11	ELECT 0.001F	20.00% 25V
C616	1-115-789-11	ELECT 0.001F	20.00% 25V
C618	1-136-165-00	FILM 0.1UF	5.00% 50V
C619	1-102-228-00	CERAMIC 470PF	10.00% 500V
C620	1-102-228-00	CERAMIC 470PF	10.00% 500V
C622	1-107-925-11	ELECT 1UF	20.00% 100V
C624	1-136-165-00	FILM 0.1UF	5.00% 50V
C625	1-126-967-11	ELECT 47UF	20.00% 50V
C626	1-104-666-11	ELECT 220UF	20.00% 25V
C628	1-126-964-11	ELECT 10UF	20.00% 50V
C629	1-115-819-11	ELECT 0.0022F	20.00% 35V
C630	1-115-819-11	ELECT 0.0022F	20.00% 35V
C631	1-126-965-11	ELECT 22UF	20.00% 50V
C632	1-104-666-11	ELECT 220UF	20.00% 25V
C636	Δ 1-119-888-51	CERAMIC 2200PF	20.00% 250V
C638	1-136-203-11	MYLAR 0.01UF	10.00% 250V
C640	1-106-220-00	MYLAR 0.1UF	10.00% 100V
C641	Δ 1-113-916-11	CERAMIC 0.01UF	20.00% 250V
C642	Δ 1-113-916-11	CERAMIC 0.01UF	20.00% 250V
C647	1-162-116-00	CERAMIC 680PF	10.00% 2KV
C651	1-102-228-00	CERAMIC 470PF	10.00% 500V
C800	1-137-368-11	MYLAR 0.0047UF	5.00% 50V
C803	1-129-898-00	FILM 0.0022UF	5.00% 630V
C804	1-136-165-00	FILM 0.1UF	5.00% 50V
C805	1-136-207-11	MYLAR 0.047UF	10.00% 250V
C806	1-107-370-11	MYLAR 0.1UF	10.00% 200V
C807	1-136-540-11	FILM 0.82UF	5.00% 200V
C811	1-162-318-11	CERAMIC 0.001UF	10.00% 500V
C815	1-137-046-11	MYLAR 0.0082UF	10.00% 400V
C816	1-117-214-11	CERAMIC 0.001UF	10.00% 2KV
C817	1-117-214-11	CERAMIC 0.001UF	10.00% 2KV
C819	1-136-208-11	MYLAR 0.068UF	10.00% 250V
C822	1-107-662-11	ELECT 22UF	20.00% 250V
C824	1-123-024-21	ELECT 33UF	160V
C829	1-126-959-11	ELECT 0.47UF	20.00% 50V
C832	1-126-960-11	ELECT 1UF	20.00% 50V
C834	1-128-551-11	ELECT 22UF	20.00% 25V
C835	1-162-318-11	CERAMIC 0.001UF	10.00% 500V
C836	1-162-117-00	CERAMIC 100PF	10.00% 500V
C838	1-102-228-00	CERAMIC 470PF	10.00% 500V
C839	1-136-207-11	MYLAR 0.047UF	10.00% 250V
C841	1-102-114-00	CERAMIC 470PF	10.00% 50V
C910	1-535-465-11	LEAD, JUMPER (5.0MM)	
C916	1-162-318-11	CERAMIC 0.001UF	10.00% 500V
C1200	1-136-165-00	FILM 0.1UF	5.00% 50V
C1201	1-137-194-81	FILM 0.47UF	5.00% 50V

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REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
C1202	1-137-194-81	FILM	0.47UF 50V	D503	8-719-979-85	DIODE RGP15GPKG23	
C1203	1-136-169-00	FILM	0.22UF 50V	D504	8-719-991-33	DIODE 1SS133T-77	
C1204	1-136-169-00	FILM	0.22UF 50V	D505	8-719-982-03	DIODE MTZJ-T-77-3.6A	
C1205	1-101-005-00	CERAMIC	0.022UF 50V	D506	8-719-991-33	DIODE 1SS133T-77	
C1206	1-101-005-00	CERAMIC	0.022UF 50V	D507	8-719-109-85	DIODE MTZJ-T-77-5.1B	
C1207	1-126-933-11	ELECT	100UF 20.00% 16V	D510	8-719-924-13	DIODE MTZJ-T-77-22B	
C1208	1-126-963-11	ELECT	4.7UF 20.00% 50V	D570	8-719-924-13	DIODE MTZJ-T-77-22B	
C1209	1-126-963-11	ELECT	4.7UF 20.00% 50V	D571	8-719-924-13	DIODE MTZJ-T-77-22B	
C1210	1-126-941-11	ELECT	470UF 20.00% 25V	D600	8-719-510-53	DIODE D4SB60L-F	
C1212	1-162-318-11	CERAMIC	0.001UF 10.00% 500V	D601	8-719-046-77	DIODE EM1-V1	
C1213	1-162-318-11	CERAMIC	0.001UF 10.00% 500V	D603	8-719-109-97	DIODE MTZJ-T-77-6.8B	
C1214	1-126-933-11	ELECT	100UF 20.00% 16V	D604	8-719-046-75	DIODE EU-1-V1	
C1215	1-137-194-81	FILM	0.47UF 50V	D605	8-719-302-43	DIODE RGP10GPKG23	
C1216	1-137-366-11	MYLAR	0.0022UF 50V	D606	8-719-302-43	DIODE RGP10GPKG23	
C1217	1-137-366-11	MYLAR	0.0022UF 50V	D607	8-719-046-78	DIODE EG-1Z-V1	
C1218	1-126-941-11	ELECT	470UF 20.00% 25V	D608	8-719-302-06	DIODE EU2-V1	
C1220	1-162-318-11	CERAMIC	0.001UF 10.00% 500V	D609	8-719-053-32	DIODE FMU-G16S	
C1221	1-162-318-11	CERAMIC	0.001UF 10.00% 500V	D611	8-719-058-38	DIODE FMN-G12S	
C1222	1-126-965-11	ELECT	22UF 20.00% 50V	D612	8-719-058-38	DIODE FMN-G12S	
C1223	1-101-006-00	CERAMIC	0.047UF 50V	D613	8-719-058-38	DIODE FMN-G12S	
< CONNECTOR >				D614	8-719-058-38	DIODE FMN-G12S	
CN600	Δ *1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P		D617	8-719-991-33	DIODE 1SS133T-77	
CN601	Δ 1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P		D618	8-719-991-33	DIODE 1SS133T-77	
CN602	Δ *1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P		D619	8-719-991-33	DIODE 1SS133T-77	
CN613	4-352-844-01	PIN, LEAD, COATING		D620	8-719-991-33	DIODE 1SS133T-77	
CN616	4-352-844-01	PIN, LEAD, COATING		D622	8-719-923-60	DIODE MTZJ-T-77-9.1	
CN800	*1-580-798-11	CONNECTOR PIN (DY) 6P		D625	8-719-991-33	DIODE 1SS133T-77	
CN801	*1-568-879-11	PIN, CONNECTOR 4P		D637	8-719-110-17	DIODE MTZJ-T-77-10B	
CN802	1-695-915-11	TAB (CONTACT)		D638	8-719-991-33	DIODE 1SS133T-77	
CN803	1-695-915-11	TAB (CONTACT)		D800	8-719-991-33	DIODE 1SS133T-77	
CN804	1-778-037-11	PIN, CONNECTOR 6P		D801	8-719-991-33	DIODE 1SS133T-77	
CN805	*1-770-747-11	CONNECTOR, BOARD TO BOARD 12P		D803	8-719-908-03	DIODE GP08DPKG23	
CN901	*1-564-510-11	PLUG, CONNECTOR 7P		D807	8-719-302-43	DIODE RGP10GPKG23	
CN902	1-695-299-11	CONNECTOR, BOARD TO BOARD 50P		D808	8-719-908-03	DIODE GP08DPKG23	
CN903	*1-564-516-11	PLUG, CONNECTOR 13P		D810	8-719-302-43	DIODE RGP10GPKG23	
CN904	*1-564-511-11	PLUG, CONNECTOR 8P		D811	8-719-110-41	DIODE MTZJ-T-77-15B	
CN906	*1-564-511-11	PLUG, CONNECTOR 8P		D812	8-719-038-49	DIODE FMV-3FU-LF027-103	
CN1401	*1-564-506-11	PLUG, CONNECTOR 3P		D815	8-719-908-03	DIODE GP08DPKG23	
CN1403	*1-564-511-11	PLUG, CONNECTOR 8P		D817	8-719-109-85	DIODE MTZJ-T-77-5.1B	
CN1407	*1-564-511-11	PLUG, CONNECTOR 8P		D902	8-719-923-60	DIODE MTZJ-T-77-9.1	
CN1408	*1-564-507-11	PLUG, CONNECTOR 4P		D903	8-719-923-60	DIODE MTZJ-T-77-9.1	
CN1803	*1-564-508-11	PLUG, CONNECTOR 5P		D904	8-719-923-60	DIODE MTZJ-T-77-9.1	
< DIODE >				D905	8-719-923-60	DIODE MTZJ-T-77-9.1	
D500	8-719-109-85	DIODE MTZJ-T-77-5.1B		D906	8-719-923-60	DIODE MTZJ-T-77-9.1	
D502	8-719-979-85	DIODE RGP15GPKG23		D920	8-719-109-89	DIODE MTZJ-T-77-5.6B	
D1201	8-719-109-72	DIODE MTZJ-T-77-3.9B					
D1202	1-249-429-11	CARBON 10K 5% 1/4W					

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REF. NO.	PART.NO	DESCRIPTION	REMARK	REF. NO.	PART.NO	DESCRIPTION	REMARK
< FERRITE BEAD >				L802	1-459-104-00	COIL, WITH CORE	
FB501	1-410-397-21	FERRITE	1.1UH	L806	1-535-465-11	LEAD, JUMPER (5.0MM)	
FB600	1-410-396-41	FERRITE	0.45UH	L809	1-408-611-31	INDUCTOR 47UH	
FB601	1-410-396-41	FERRITE	0.45UH	L813	1-412-552-11	INDUCTOR 2.2MH	
FB602	1-410-397-21	FERRITE	1.1UH	< IC LINK >			
FB603	1-410-396-41	FERRITE	0.45UH	PS600	Δ 1-532-686-21	LINK, IC 2.7A (ICP-F75)	
FB604	1-410-396-41	FERRITE	0.45UH	PS601	Δ 1-532-686-21	LINK, IC 2.7A (ICP-F75)	
FB605	1-410-396-41	FERRITE	0.45UH	PS602	Δ 1-532-686-21	LINK, IC 2.7A (ICP-F75)	
FB606	1-410-397-21	FERRITE	1.1UH	PS603	Δ 1-532-686-21	LINK, IC 2.7A (ICP-F75)	
FB607	1-410-397-21	FERRITE	1.1UH	< TRANSISTOR >			
FB608	1-410-396-41	FERRITE	0.45UH	Q501	8-729-119-78	TRANSISTOR 2SC1740S-RT	
FB609	1-410-397-21	FERRITE	1.1UH	Q502	8-729-026-39	TRANSISTOR 2SA933AS-RT	
FB800	1-410-397-21	FERRITE	1.1UH	Q503	8-729-030-02	TRANSISTOR DTC144ESA-TP	
FB801	1-410-396-41	FERRITE	0.45UH	Q601	8-729-025-04	TRANSISTOR 2SC3852A	
FB901	1-535-465-11	LEAD, JUMPER (5.0MM)		Q605	8-729-119-78	TRANSISTOR 2SC1740S-RT	
FB902	1-535-465-11	LEAD, JUMPER (5.0MM)		Q606	8-729-029-56	TRANSISTOR DTA144ESA-TP	
< FILTER >				Q607	8-729-119-78	TRANSISTOR 2SC1740S-RT	
FL501	1-236-163-41	ENCAPSULATED COMPONENT		Q611	8-729-200-21	TRANSISTOR 2SC2500-B	
< IC >				Q801	8-729-039-68	TRANSISTOR IRF620	
IC500	8-759-192-71	IC STV9379		Q802	8-729-042-86	TRANSISTOR 2SC5251-01	
IC600	8-749-010-92	IC STR-S6709		Q803	8-729-119-80	TRANSISTOR 2SC2688-L	
IC601	Δ 8-749-013-21	IC TLP721(D4-GR.T)		Q804	8-729-029-66	TRANSISTOR DTC114ESA-TP	
IC602	8-749-016-19	IC SE135N-LF4		Q805	8-729-030-02	TRANSISTOR DTC144ESA-TP	
IC603	8-759-390-57	IC LM2940CT-5.0		Q900	8-729-119-78	TRANSISTOR 2SC1740S-RT	
IC606	8-759-267-25	IC LM2940CT-9.0		Q1200	8-729-119-78	TRANSISTOR 2SC1740S-RT	
IC800	8-759-103-93	IC LM393P		Q1201	8-729-029-94	TRANSISTOR DTC143TSA-TP	
IC1200	8-759-585-29	IC TDA7264A		Q1202	8-729-029-66	TRANSISTOR DTC114ESA-TP	
IC1201	8-759-502-21	IC TDA2822M		Q1203	8-729-029-94	TRANSISTOR DTC143TSA-TP	
< SOCKET >				Q1204	8-729-029-94	TRANSISTOR DTC143TSA-TP	
J1200	1-770-218-11	JACK, PIN		< RESISTOR >			
< COIL >				R500	1-215-457-00	METAL 33K 1% 1/4W	
L501	1-535-465-11	LEAD, JUMPER (5.0MM)		R502	1-249-421-11	CARBON 2.2K 5% 1/4W	
L502	1-412-519-11	INDUCTOR 3.3UH		R503	1-249-429-11	CARBON 10K 5% 1/4W	
L503	1-412-519-11	INDUCTOR 3.3UH		R505	1-249-382-11	CARBON 1.2 5% 1/4W	
L609	1-412-533-21	INDUCTOR 47UH		R507	1-215-888-00	METAL OXIDE 220 5% 2W	
L610	1-535-465-11	LEAD, JUMPER (5.0MM)		R508	1-216-371-00	METAL OXIDE 1.5 5% 2W	
L611	1-412-527-11	INDUCTOR 15UH		R509	1-249-443-11	CARBON 0.47 5% 1/4W	
L612	1-412-522-41	INDUCTOR 5.6UH		R510	1-249-443-11	CARBON 0.47 5% 1/4W	
L613	1-412-522-41	INDUCTOR 5.6UH		R520	1-215-451-00	METAL 18K 1% 1/4W	
L615	1-412-529-11	INDUCTOR 22UH		R522	1-249-433-11	CARBON 22K 5% 1/4W	
L616	1-412-533-21	INDUCTOR 47UH		R523	1-249-433-11	CARBON 22K 5% 1/4W	
L801	1-459-111-00	INDUCTOR 10MH		R524	1-249-425-11	CARBON 4.7K 5% 1/4W	
				R525	1-249-425-11	CARBON 4.7K 5% 1/4W	
				R526	1-249-421-11	CARBON 2.2K 5% 1/4W	
				R527	1-215-433-00	METAL 3.3K 1% 1/4W	

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REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
R540	1-249-441-11	CARBON	100K 5% 1/4W	R815	1-249-381-11	CARBON	1 5% 1/4W
R600	1-216-490-11	METAL OXIDE	39K 5% 3W	R816	1-215-917-11	METAL OXIDE	1K 5% 3W
R601	1-249-417-11	CARBON	1K 5% 1/4W	R818	1-215-884-11	METAL OXIDE	47 5% 2W
R602	1-215-473-00	METAL	150K 1% 1/4W	R819	1-535-143-71	LEAD, JUMPER (7.5MM)	
R603	1-215-898-11	METAL OXIDE	10K 5% 2W	R820	1-249-403-11	CARBON	68 5% 1/4W
R604	1-249-420-11	CARBON	1.8K 5% 1/4W	R822	1-215-868-00	METAL OXIDE	680 5% 1W
R605	1-216-362-11	METAL OXIDE	0.27 5% 2W	R823	1-215-918-00	METAL OXIDE	1.5K 5% 3W
R606	1-535-143-21	LEAD, JUMPER (12.5MM)		R825	1-215-884-11	METAL OXIDE	47 5% 2W
R607	1-216-421-11	METAL OXIDE	12 5% 1W	R826	1-260-099-11	CARBON	1K 5% 1/2W
R608	1-216-365-00	METAL OXIDE	0.47 5% 2W	R827	1-249-425-11	CARBON	4.7K 5% 1/4W
R609	1-535-465-11	LEAD, JUMPER (5.0MM)		R829	1-260-120-11	CARBON	56K 5% 1/2W
R611	1-249-439-11	CARBON	68K 5% 1/4W	R831	1-535-465-11	LEAD, JUMPER (5.5MM)	
R612	1-249-426-11	CARBON	5.6K 5% 1/4W	R833	1-247-887-00	CARBON	220K 5% 1/4W
R616	1-215-471-00	METAL	120K 1% 1/4W	R836	1-249-439-11	CARBON	68K 5% 1/4W
R617	1-215-901-00	METAL OXIDE	33K 5% 2W	R838	1-215-455-00	METAL	27K 1% 1/4W
R618	1-249-433-11	CARBON	22K 5% 1/4W	R840	1-247-807-31	CARBON	100 5% 1/4W
R619	1-216-425-11	METAL OXIDE	56 5% 1W	R841	1-249-418-11	CARBON	1.2K 5% 1/4W
R620	1-260-131-11	CARBON	470K 5% 1/2W	R844	1-535-143-11	LEAD, JUMPER (10.5MM)	
R621	1-216-425-11	METAL OXIDE	56 5% 1W	R849	1-249-429-11	CARBON	10K 5% 1/4W
R622	1-249-437-11	CARBON	47K 5% 1/4W	R851	1-215-898-11	METAL OXIDE	10K 5% 2W
R623	1-249-429-11	CARBON	10K 5% 1/4W	R852	1-249-432-11	CARBON	18K 5% 1/4W
R624	1-249-393-11	CARBON	10 5% 1/4W	R853	1-216-361-00	METAL OXIDE	0.22 5% 2W
R625	1-249-434-11	CARBON	27K 5% 1/4W	R901	1-260-082-11	CARBON	39 5% 1/2W
R626	1-249-430-11	CARBON	12K 5% 1/4W	R902	1-260-082-11	CARBON	39 5% 1/2W
R627	1-216-347-11	METAL OXIDE	0.68 5% 1W	R907	1-249-417-11	CARBON	1K 5% 1/4W
R628	1-249-415-11	CARBON	680 5% 1/4W	R909	1-249-429-11	CARBON	10K 5% 1/4W
R631 Δ	1-202-968-11	CEMENTED	1.2 5% 10W	R922	1-247-807-31	CARBON	100 5% 1/4W
R632	1-247-807-31	CARBON	100 5% 1/4W	R923	1-249-416-11	CARBON	820 5% 1/4W
R633	1-247-807-31	CARBON	100 5% 1/4W	R1200	1-249-425-11	CARBON	4.7K 5% 1/4W
R634	1-249-397-11	CARBON	22 5% 1/4W	R1201	1-249-434-11	CARBON	27K 5% 1/4W
R636	1-249-417-11	CARBON	1K 5% 1/4W	R1202	1-249-389-11	CARBON	4.7 5% 1/4W
R637	1-249-409-11	CARBON	220 5% 1/4W	R1203	1-249-417-11	CARBON	1K 5% 1/4W
R638	1-249-433-11	CARBON	22K 5% 1/4W	R1204	1-249-417-11	CARBON	1K 5% 1/4W
R639	1-215-425-00	METAL	1.5K 1% 1/4W	R1205	1-249-428-11	CARBON	8.2K 5% 1/4W
R641 Δ	1-240-030-91	METAL	4.7M 5% 1/2W	R1206	1-249-428-11	CARBON	8.2K 5% 1/4W
R642 Δ	1-202-968-11	CEMENTED	1.2 5% 10W	R1207	1-249-413-11	CARBON	470 5% 1/4W
R643 Δ	1-240-030-91	METAL	4.7M 5% 1/2W	R1208	1-212-849-00	FUSIBLE	4.7 5% 1/4W
R646	1-249-377-11	CARBON	0.47 5% 1/4W	R1209	1-212-849-00	FUSIBLE	4.7 5% 1/4W
R647	1-202-933-61	FUSIBLE	0.1 10% 1/2W	R1210	1-249-413-11	CARBON	470 5% 1/4W
R648 Δ	1-202-968-11	CEMENTED	1.2 5% 10W	R1211	1-249-424-11	CARBON	3.9K 5% 1/4W
R649	1-249-426-11	CARBON	5.6K 5% 1/4W	R1212	1-249-424-11	CARBON	3.9K 5% 1/4W
R800	1-249-429-11	CARBON	10K 5% 1/4W	R1213	1-249-421-11	CARBON	2.2K 5% 1/4W
R808	1-215-888-00	METAL OXIDE	220 5% 2W	R1216	1-249-413-11	CARBON	470 5% 1/4W
R810	1-215-888-00	METAL OXIDE	220 5% 2W	R1217	1-249-425-11	CARBON	4.7K 5% 1/4W
R812	1-249-421-11	CARBON	2.2K 5% 1/4W	R1218	1-535-465-11	LEAD, JUMPER (5.0MM)	
R813	1-249-417-11	CARBON	1K 5% 1/4W	R1219	1-249-417-11	CARBON	1K 5% 1/4W
R814	1-249-381-11	CARBON	1 5% 1/4W	R1220	1-249-433-11	CARBON	22K 5% 1/4W

D

The components identified by shading and marked Δ are critical for safety
Replace only with the part number specified.

REF. NO.	PART.NO	DESCRIPTION	REMARK
R1221	1-249-433-11	CARBON 22K 5% 1/4W	
R1223	1-249-417-11	CARBON 1K 5% 1/4W	
R1224	1-249-417-11	CARBON 1K 5% 1/4W	
< RELAY >			
RY600	Δ 1-755-198-11	RELAY	
RY601	Δ 1-755-266-11	RELAY, AC POWER	
< SWITCH >			
S801	1-572-707-11	SWITCH, LEVER	
< SPARK GAP >			
SG801	1-519-422-11	GAP, SPARK	
SG802	1-519-422-11	GAP, SPARK	
SG803	1-519-422-11	GAP, SPARK	
< TRANSFORMER >			
T601	Δ 1-429-604-11	TRANSFORMER, CONVERTER	
T800	1-426-981-61	TRANSFORMER, FERRITE (PMT)	
T803	Δ 1-453-332-11	TRANSFORMER ASSY, FLYBACK (NX4521//J114)	
T804	1-437-195-11	TRANSFORMER, HORIZONTAL DRIVE	
< THERMISTOR >			
THP600	Δ 1-809-827-11	THERMISTOR, POSITIVE	

D Board Variant Parts KV-28DX30U

< CAPACITOR >			
C502	1-102-824-00	CERAMIC 470PF 5.00% 50V	
C801	1-137-368-11	MYLAR 0.0047UF 5.00% 50V	
C812	1-136-540-11	FILM 0.82UF 5.00% 200V	
C813	1-129-724-00	FILM 0.068UF 5.00% 630V	
C814	1-136-732-11	FILM 0.021UF 3.00% 1.4KV	
C818	1-162-134-11	CERAMIC 470UF 10.00% 2KV	
C845	1-101-880-00	CERAMIC 47PF 5.00% 50V	
< CONNECTOR >			
CN615	1-695-915-11	TAB (CONTACT)	
< DIODE >			
D802	8-719-991-33	DIODE 1SS133T-77	
< COIL >			
L803	1-420-872-00	COIL, AIR CORE	

< RESISTOR >			
R504	1-215-457-00	METAL 33K 1% 1/4W	
R506	1-215-441-00	METAL 6.8K 1% 1/4W	
R519	1-215-443-00	METAL 8.2K 1% 1/4W	
R521	1-215-455-00	METAL 27K 1% 1/4W	
R610	1-215-429-00	METAL 2.2K 1% 1/4W	
R802	1-215-437-00	METAL 4.7K 1% 1/4W	
R803	1-247-843-11	CARBON 3.3K 5% 1/4W	
R804	1-249-427-11	CARBON 6.8K 5% 1/4W	
R805	1-249-435-00	CARBON 33K 5% 1/4W	
R806	1-247-887-00	CARBON 220K 5% 1/4W	
R809	1-247-893-11	CARBON 390K 5% 1/4W	
R824	1-215-423-00	METAL 1.2K 1% 1/4W	
R828	1-215-449-00	METAL 15K 1% 1/4W	
R835	1-216-471-11	METAL OXIDE 27 5% 3W	
R843	1-247-891-00	CARBON 330K 5% 1/4W	
R846	1-247-893-11	CARBON 390K 5% 1/4W	
R847	1-247-897-11	CARBON 560K 5% 1/4W	
R848	1-249-433-11	CARBON 22K 5% 1/4W	
< TRANSFORMER >			
T805	1-433-980-12	TRANSFORMER, HORIZONTAL LINEAR	

D Board Variant Parts KV-32DX30U

< CAPACITOR >			
C502	1-102-119-00	CERAMIC 0.015UF 10.00% 50V	
C801	1-137-372-11	MYLAR 0.022UF 5.00% 50V	
C812	1-136-853-11	FILM 0.56UF 5.00% 200V	
C813	1-129-723-00	FILM 0.056UF 5.00% 630V	
C814	1-136-735-11	FILM 0.019UF 3.00% 1.4KV	
C818	1-117-214-11	CERAMIC 0.001UF 10.00% 2KV	
C845	1-247-903-00	CARBON 1M 5% 1/4W	
< DIODE >			
D802	1-535-465-11	LEAD, JUMPER (5.0MM)	
< COIL >			
L803	1-535-465-11	LEAD, JUMPER (5.0MM)	
< RESISTOR >			
R504	1-215-447-00	METAL 12K 1% 1/4W	
R506	1-215-455-00	METAL 27K 1% 1/4W	
R519	1-215-451-00	METAL 18K 1% 1/4W	
R521	1-215-459-00	METAL 39K 1% 1/4W	
R610	1-215-427-00	METAL 1.8K 1% 1/4W	

The components identified by shading and marked Δ are critical for safety
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D

H8

H

REF. NO.	PART.NO	DESCRIPTION	REMARK
R802	1-215-443-00	METAL 8.2K 1%	1/4W
R803	1-249-427-11	CARBON 6.8K 5%	1/4W
R805	1-215-451-00	METAL 18K 1%	1/4W
R806	1-247-895-91	CARBON 470K 5%	1/4W
R809	1-247-891-00	CARBON 330K 5%	1/4W
R824	1-249-420-00	CARBON 1.8K 5%	1/4W
R828	1-249-432-00	CARBON 18K 5%	1/4W
R835	1-215-907-11	METAL OXIDE 22 5%	3W
R846	1-259-883-11	CARBON 3.9M 5%	1/4W
R847	1-259-880-11	CARBON 2.2M 5%	1/4W
R848	1-259-880-11	CARBON 2.2M 5%	1/4W
< TRANSFORMER >			
T805	1-435-107-11	TRANSFORMER, HORIZONTAL LINEAR	

***A-1646-223-A H8 Board, Complete**

4-205-711-01 HOLDER, LED			
< CAPACITOR >			
C7150	1-126-969-11	ELECT 220UF	20.00% 50V
< CONNECTOR >			
CN7150	*1-564-508-11	PLUG, CONNECTOR 5P	
< DIODE >			
D7150	8-719-081-56	DIODE L-59SRGC-CC	
D7152	8-719-109-89	DIODE MTZJ-T-77-5.6B	
< IC >			
IC7150	8-749-014-59	IC TSOP1740KS1	
< TRANSISTOR >			
Q7150	8-729-029-56	TRANSISTOR DTA144ESA-TP	
< RESISTOR >			
R7150	1-249-409-11	CARBON 220 5%	1/4W
R7151	1-249-411-11	CARBON 330 5%	1/4W
R7152	1-535-465-11	LEAD, JUMPER (5.00MM)	
R7153	1-249-425-11	CARBON 4.7K 5%	1/4W
R7154	1-249-410-11	CARBON 270 5%	1/4W
R7155	1-249-418-11	CARBON 1.2K 5%	1/4W

REF. NO.	PART.NO	DESCRIPTION	REMARK
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***A-1647-041-A H Board, Complete**

*4-374-846-01 COVER, CAPACITOR, CAP TYPE

< CAPACITOR >

C5617	1-126-971-11	ELECT 470UF	20.00% 50V
C5621	1-136-165-00	FILM 0.1UF	5.00% 50V
C5623	1-104-666-11	ELECT 220UF	20.00% 25V
C5633	Δ 1-107-563-11	FILM 0.1UF	20.00% 300V
C5635	Δ 1-107-563-11	FILM 0.1UF	20.00% 300V
C5654	1-136-165-00	FILM 0.1UF	5.00% 50V
C5655	1-107-974-11	CERAMIC 47PF	5.00% 2KV
C5657	1-126-967-11	ELECT 47UF	20.00% 50V
C5658	1-107-679-91	ELECT 10UF	20.00% 450V

< CONNECTOR >

CN5601	Δ *1-580-844-11	PIN, CONNECTOR (POWER)	
CN5602	Δ *1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P	
CN5603	Δ *1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P	
CN5608	Δ *1-580-843-11	PIN, CONNECTOR (POWER)	
CN5609	Δ *1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P	

CN5901	*1-568-882-51	PIN, CONNECTOR 7P	
CN5905	*1-564-511-11	PLUG, CONNECTOR 8P	
CN5906	*1-564-510-11	PLUG, CONNECTOR 7P	

< DIODE >

D5601	8-719-160-65	DIODE RD16FB2	
D5602	8-719-991-33	DIODE 1SS133T-77	
D5639	8-719-109-93	DIODE MTZJ-T-77-6.2B	
D5640	8-719-063-70	DIODE D1NL20U-TA2	
D5642	8-719-510-53	DIODE D4SB60L-F	

< FUSE >

F5601	Δ 1-576-232-21	FUSE (H.B.C.) 5A/250V	
	Δ *1-533-725-11	HOLDER, FUSE (F5601)	

< IC >

IC5604	8-759-510-52	IC L4941BV	
IC5605	8-759-584-19	IC TNY253P	
IC5606	Δ 8-749-013-21	IC TLP721 (D4-GR.T)	

< COIL >

L5608	1-412-527-11	INDUCTOR 15UH	
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< TRANSISTOR >

Q5601	8-729-119-78	TRANSISTOR 2SC1740S-RT	
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The components identified by shading and marked Δ are critical for safety
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REF.NO.	PART.NO	DESCRIPTION	REMARK
< RESISTOR >			
R5601	1-247-807-31	CARBON 100 5% 1/4W	
R5602	1-249-389-11	CARBON 4.7 5% 1/4W	
R5603	1-535-465-11	LEAD, JUMPER (5.00MM)	
R5629	Δ 1-260-135-11	CARBON 1M 5% 1/2W	
R5630	Δ 1-217-155-00	METAL 1 10% 2W	
R5641	1-249-417-11	CARBON 1K 5% 1/4W	
R5653	1-215-863-11	METAL OXIDE 100 5% 1W	
R5904	1-249-389-11	CARBON 4.7 5% 1/4W	

< RELAY >			
RY5602	Δ 1-755-245-11	RELAY, AC POWER	

< TRANSFORMER >			
LF5600	Δ 1-431-402-11	TRANSFORMER, LINE FILTER	
LF5601	Δ 1-431-402-11	TRANSFORMER, LINE FILTER	

T5602	Δ 1-433-925-12	TRANSFORMER, CONVERTER	
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< VARISTOR >			
VDR5601	Δ 1-803-830-11	VARISTOR (ERZV14D621)	

*A-1651-143-A J Board, Complete

< CAPACITOR >			
C3203	1-101-005-00	CERAMIC 0.022UF	50V
C3204	1-101-005-00	CERAMIC 0.022UF	50V
C3205	1-101-005-00	CERAMIC 0.022UF	50V
C3206	1-101-005-00	CERAMIC 0.022UF	50V
C3207	1-101-005-00	CERAMIC 0.022UF	50V
C3208	1-101-005-00	CERAMIC 0.022UF	50V
C3211	1-101-005-00	CERAMIC 0.022UF	50V
C3212	1-101-005-00	CERAMIC 0.022UF	50V
C3215	1-101-005-00	CERAMIC 0.022UF	50V

< CONNECTOR >			
CN3201	*1-770-748-11	CONNECTOR, BOARD TO BOARD 12P	
CN3202	*1-564-507-11	PLUG, CONNECTOR 4P	
CN3203	*1-568-879-11	PIN, CONNECTOR 4P	
CN3205	*1-564-510-11	PLUG, CONNECTOR 7P	
CN3206	*1-564-510-11	PLUG, CONNECTOR 7P	

< SOCKET >			
J3201	1-694-591-11	TERMINAL BOARD, SPEAKER	

< COIL >			
L3201	1-402-711-11	INDUCTOR 1UH	
L3203	1-402-711-11	INDUCTOR 1UH	
L3205	1-402-711-11	INDUCTOR 1UH	
L3206	1-402-711-11	INDUCTOR 1UH	
L3208	1-402-711-11	INDUCTOR 1UH	

< RESISTOR >			
R3201	1-249-426-11	CARBON 5.6K 5% 1/4W	
R3202	1-249-426-11	CARBON 5.6K 5% 1/4W	
R3203	1-249-426-11	CARBON 5.6K 5% 1/4W	
R3204	1-249-426-11	CARBON 5.6K 5% 1/4W	
R3205	1-247-807-31	CARBON 100 5% 1/4W	

< SWITCH >			
S3201	1-771-784-11	SWITCH, PUSH BUTTON	

*A-1654-051-A N Board, Complete

4-204-791-01	SCREW + B, 2X8		
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< CAPACITOR >			
C3101	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3102	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3103	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V
C3104	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3105	1-126-964-11	ELECT 10UF	20.00% 50V
C3106	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3107	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3109	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V
C3110	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3111	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V
C3112	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3113	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3114	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3115	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V
C3116	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3118	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3121	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3122	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3128	1-163-038-11	CERAMIC CHIP 0.1UF	25V
C3129	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3130	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3131	1-163-263-11	CERAMIC CHIP 330PF	5.00% 50V
C3132	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3134	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3135	1-163-222-11	CERAMIC CHIP 5PF	0.25PF 50V

REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
C3136	1-163-222-11	CERAMIC CHIP 5PF	0.25PF 50V	C3323	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3137	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C3324	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3138	1-107-888-11	ELECT 47UF	20.00% 25V	C3325	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3142	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C3326	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V
C3143	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C3327	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V
C3144	1-163-159-00	CERAMIC CHIP 12PF	2.00% 50V	C3328	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3145	1-126-964-11	ELECT 10UF	20.00% 50V	C3329	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3201	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C3330	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3202	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C3331	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3203	1-126-964-11	ELECT 10UF	20.00% 50V	C3332	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V
C3204	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C3333	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3205	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C3334	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3206	1-126-964-11	ELECT 10UF	20.00% 50V	C3336	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3207	1-126-964-11	ELECT 10UF	20.00% 50V	C3337	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3208	1-163-009-11	CERAMIC CHIP 0.001UF	10.00% 50V	C3339	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3209	1-163-009-11	CERAMIC CHIP 0.001UF	10.00% 50V	C3340	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3210	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C3341	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3211	1-126-964-11	ELECT 10UF	20.00% 50V	C3342	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3212	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C3343	1-163-263-11	CERAMIC CHIP 330PF	5.00% 50V
C3213	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V	C3344	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3214	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C3345	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3215	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C3346	1-107-888-11	ELECT 47UF	20.00% 25V
C3216	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C3347	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3217	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C3401	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3218	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C3402	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3219	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C3412	1-164-505-11	CERAMIC CHIP 2.2UF	16V
C3220	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V	C3413	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3221	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V	C3414	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3222	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C3415	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3223	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C3416	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3224	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C3417	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3225	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V	C3418	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3226	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C3419	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3227	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C3420	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3228	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	C3421	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3229	1-163-227-11	CERAMIC CHIP 10PF	0.50PF 50V	C3422	1-163-038-11	CERAMIC CHIP 0.1UF	25V
C3230	1-107-888-11	ELECT 47UF	20.00% 25V	C3425	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3231	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	< FILTER >			
C3232	1-107-888-11	ELECT 47UF	20.00% 25V	CF3101	1-543-948-22	FERRITE 0UH	
C3233	1-163-263-11	CERAMIC CHIP 330PF	5.00% 50V	CF3102	1-543-948-22	FERRITE 0UH	
C3305	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	CF3104	1-543-948-22	FERRITE 0UH	
C3308	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	CF3106	1-216-295-11	SHORT 0	
C3311	1-107-888-11	ELECT 47UF	20.00% 25V	CF3108	1-543-948-22	FERRITE 0UH	
C3315	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	CF3109	1-543-948-22	FERRITE 0UH	
C3318	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	CF3110	1-543-948-22	FERRITE 0UH	
C3319	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V	CF3111	1-543-948-22	FERRITE 0UH	
C3320	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V				

REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
CF3112	1-543-948-22	FERRITE	0UH	FL3112	1-239-558-11	FILTER, CHIP EMI	
CF3113	1-543-948-22	FERRITE	0UH	FL3113	1-239-558-11	FILTER, CHIP EMI	
CF3114	1-543-948-22	FERRITE	0UH	FL3114	1-239-558-11	FILTER, CHIP EMI	
CF3115	1-543-948-22	FERRITE	0UH	FL3201	1-239-899-21	FILTER, CHIP EMI	
CF3116	1-500-245-11	FERRITE	0UH	FL3203	1-239-899-21	FILTER, CHIP EMI	
CF3122	1-500-245-11	FERRITE	0UH	FL3206	1-239-899-21	FILTER, CHIP EMI	
CF3123	1-500-245-11	FERRITE	0UH	FL3301	1-239-899-21	FILTER, CHIP EMI	
CF3124	1-500-245-11	FERRITE	0UH	FL3302	1-239-899-21	FILTER, CHIP EMI	
CF3201	1-500-245-11	FERRITE	0UH	FL3307	1-239-899-21	FILTER, CHIP EMI	
CF3202	1-500-245-11	FERRITE	0UH	FL3309	1-239-899-21	FILTER, CHIP EMI	
CF3203	1-500-245-11	FERRITE	0UH	FL3310	1-239-899-21	FILTER, CHIP EMI	
CF3301	1-414-232-22	INDUCTOR	0UH	FL3311	1-239-899-21	FILTER, CHIP EMI	
CF3302	1-414-232-22	INDUCTOR	0UH	FL3401	1-239-899-21	FILTER, CHIP EMI	
CF3303	1-414-232-22	INDUCTOR	0UH	FL3402	1-239-899-21	FILTER, CHIP EMI	
CF3304	1-414-232-22	INDUCTOR	0UH	FL3403	1-239-899-21	FILTER, CHIP EMI	
CF3305	1-414-232-22	INDUCTOR	0UH	< IC >			
CF3306	1-414-232-22	INDUCTOR	0UH	IC3101	8-759-398-17	IC MC74HC04ADR2	
CF3307	1-414-232-22	INDUCTOR	0UH	IC3102	8-759-560-76	IC 74LV08D-118	
CF3308	1-414-232-22	INDUCTOR	0UH	IC3103	8-759-590-03	IC AVIA-GTX-PCO	
CF3309	1-500-245-11	FERRITE	0UH	IC3112	8-759-684-72	IC M24C64-WMN6T	
< CONNECTOR >				IC3113	8-759-638-52	IC AS4LC1M16E5-60TCTR	
CN3101	1-695-302-11	CONNECTOR, BOARD TO BOARD 50P		IC3114	8-759-638-52	IC AS4LC1M16E5-60TCTR	
CN3102	*1-564-510-11	PLUG, CONNECTOR 7P		IC3115	8-759-325-67	IC TC7SH04F(TE85R)	
CN3301	1-563-486-11	SOCKET, CONNECTOR		IC3117	8-759-394-05	IC TC7SH08F-TE85R	
CN3302	*1-785-719-11	PIN, CONNECTOR (PWB) 26P		IC3118	8-759-544-28	IC MK2720STR	
CN3303	*1-564-510-11	PLUG, CONNECTOR 7P		IC3119	8-759-542-07	IC 74LV244D-118	
CN3401	1-785-770-11	CONNECTOR, CARD (PCMCIA CARD)		IC3120	8-759-394-05	IC TC7SH08F-TE85R	
< DIODE >				IC3201	8-759-701-40	IC NJM3404AM-TE1	
D3305	8-719-914-43	DIODE DAN202K-T-146		IC3202	8-759-485-02	IC SAA7120H/V1	
D3306	8-719-421-59	DIODE MA3130WA-TX		IC3203	8-759-491-20	IC PCM1725U	
D3307	8-719-421-59	DIODE MA3130WA-TX		IC3204	8-759-492-07	IC 74LV86D-118	
D3308	8-719-421-59	DIODE MA3130WA-TX		IC3205	8-759-560-24	IC SAA7201-C2D	
D3309	8-719-421-59	DIODE MA3130WA-TX		IC3206	8-759-492-08	IC 74LV164D-118	
< FUSE >				IC3207	8-759-678-13	IC HYB39516160CT.6	
F3301	1-533-900-21	FUSE		IC3208	8-759-991-41	IC L78L05ACZ-AP	
< FILTER >				IC3209	8-759-394-05	IC TC7SH08F-TE85R	
FL3101	1-239-899-21	FILTER, CHIP EMI		IC3301	8-759-342-60	IC PST575DMT-T1	
FL3102	1-239-899-21	FILTER, CHIP EMI		IC3304	8-759-638-52	IC AS4LC1M16E5-60TCTR	
FL3107	1-239-899-21	FILTER, CHIP EMI		IC3307	8-759-638-52	IC AS4LC1M16E5-60TCTR	
FL3108	1-239-899-21	FILTER, CHIP EMI		IC3308	8-759-539-09	IC MCF5206EFT25	
FL3109	1-239-558-11	FILTER, CHIP EMI		IC3309	8-759-713-02	IC MBM29LV160BE-90TN-BE401	
FL3110	1-239-558-11	FILTER, CHIP EMI		IC3310	8-759-561-60	IC MBM29LV160B-90PFTN	
FL3111	1-239-558-11	FILTER, CHIP EMI		IC3312	8-759-542-03	IC 74LV11D-118	
				IC3313	8-759-492-09	IC 74LV00D-118	
				IC3315	8-759-577-89	IC 74LV273D-118	
				IC3316	8-759-542-08	IC 74LV373D-118	

REF. NO.	PART. NO	DESCRIPTION	REMARK	REF. NO.	PART. NO	DESCRIPTION	REMARK
IC3317	8-759-542-07	IC 74LV244D-118		R3125	1-216-295-11	SHORT	0
IC3318	8-759-560-75	IC 74LV157D-118		R3126	1-216-049-11	RES-CHIP	1K 5% 1/10W
IC3320	8-759-492-09	IC 74LV00D-118		R3128	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
IC3321	8-759-325-67	IC TC7SH04F (TE85R)		R3129	1-216-295-11	SHORT	0
IC3402	8-759-542-07	IC 74LV244D-118		R3130	1-216-295-11	SHORT	0
IC3403	8-759-542-06	IC 74LV245D-118		R3132	1-216-017-91	RES-CHIP	47 5% 1/10W
IC3404	8-759-542-07	IC 74LV244D-118		R3133	1-216-017-91	RES-CHIP	47 5% 1/10W
IC3405	8-759-542-07	IC 74LV244D-118		R3134	1-216-017-91	RES-CHIP	47 5% 1/10W
IC3406	8-752-397-41	IC CXD1957AQ-TL		R3135	1-216-017-91	RES-CHIP	47 5% 1/10W
IC3407	8-759-542-07	IC 74LV244D-118		R3136	1-216-295-11	SHORT	0
IC3408	8-759-542-07	IC 74LV244D-118		R3138	1-216-295-11	SHORT	0
IC3409	8-759-542-07	IC 74LV244D-118		R3141	1-216-025-11	RES-CHIP	100 5% 1/10W
IC3410	8-759-542-07	IC 74LV244D-118		R3142	1-216-025-11	RES-CHIP	100 5% 1/10W
IC3411	8-759-542-07	IC 74LV244D-118		R3143	1-216-025-11	RES-CHIP	100 5% 1/10W
IC3412	*8-759-346-63	IC MIC2560-0BWM-T&R		R3144	1-216-025-11	RES-CHIP	100 5% 1/10W
IC3413	8-759-325-67	IC TC7SH04F (TE85R)		R3145	1-216-025-11	RES-CHIP	100 5% 1/10W
IC3416	8-759-234-77	IC TC4S66F-TE85L		R3146	1-216-025-11	RES-CHIP	100 5% 1/10W
< TRANSISTOR >				R3147	1-216-025-11	RES-CHIP	100 5% 1/10W
Q3101	1-801-806-11	TRANSISTOR DTC144EKA-T146		R3148	1-216-025-11	RES-CHIP	100 5% 1/10W
Q3201	8-729-120-28	TRANSISTOR 2SC2412K-T-146-R		R3149	1-216-025-11	RES-CHIP	100 5% 1/10W
Q3202	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R		R3150	1-216-025-11	RES-CHIP	100 5% 1/10W
Q3301	8-729-106-60	TRANSISTOR 2SB1132-T101-QR		R3151	1-216-017-91	RES-CHIP	47 5% 1/10W
Q3302	1-801-806-11	TRANSISTOR DTC144EKA-T146		R3154	1-216-025-11	RES-CHIP	100 5% 1/10W
Q3303	1-801-806-11	TRANSISTOR DTC144EKA-T146		R3155	1-216-025-11	RES-CHIP	100 5% 1/10W
Q3401	1-801-806-11	TRANSISTOR DTC144EKA-T146		R3156	1-216-025-11	RES-CHIP	100 5% 1/10W
Q3402	1-801-806-11	TRANSISTOR DTC144EKA-T146		R3157	1-216-025-11	RES-CHIP	100 5% 1/10W
< RESISTOR >				R3158	1-216-025-11	RES-CHIP	100 5% 1/10W
R3102	1-216-025-11	RES-CHIP	100 5% 1/10W	R3159	1-216-025-11	RES-CHIP	100 5% 1/10W
R3103	1-216-025-11	RES-CHIP	100 5% 1/10W	R3160	1-216-025-11	RES-CHIP	100 5% 1/10W
R3105	1-216-025-11	RES-CHIP	100 5% 1/10W	R3161	1-216-025-11	RES-CHIP	100 5% 1/10W
R3107	1-216-025-11	RES-CHIP	100 5% 1/10W	R3162	1-216-025-11	RES-CHIP	100 5% 1/10W
R3108	1-216-073-00	RES-CHIP	10K 5% 1/10W	R3163	1-216-025-11	RES-CHIP	100 5% 1/10W
R3109	1-216-049-11	RES-CHIP	1K 5% 1/10W	R3201	1-216-683-11	METAL CHIP	22K 0.5% 1/10W
R3110	1-216-049-11	RES-CHIP	1K 5% 1/10W	R3202	1-216-065-00	RES-CHIP	4.7K 5% 1/10W
R3111	1-216-049-11	RES-CHIP	1K 5% 1/10W	R3203	1-216-065-00	RES-CHIP	4.7K 5% 1/10W
R3112	1-216-025-11	RES-CHIP	100 5% 1/10W	R3204	1-216-683-11	METAL CHIP	22K 0.5% 1/10W
R3113	1-216-025-11	RES-CHIP	100 5% 1/10W	R3205	1-216-043-91	RES-CHIP	560 5% 1/10W
R3114	1-216-049-11	RES-CHIP	1K 5% 1/10W	R3206	1-216-675-91	METAL CHIP	10K 0.5% 1/10W
R3115	1-216-049-11	RES-CHIP	1K 5% 1/10W	R3207	1-216-073-00	RES-CHIP	10K 5% 1/10W
R3116	1-216-295-11	SHORT	0	R3208	1-216-689-11	RES-CHIP	39K 5% 1/10W
R3117	1-216-295-11	SHORT	0	R3209	1-216-689-11	RES-CHIP	39K 5% 1/10W
R3120	1-216-025-11	RES-CHIP	100 5% 1/10W	R3210	1-216-675-91	METAL CHIP	10K 0.5% 1/10W
R3121	1-216-017-91	RES-CHIP	47 5% 1/10W	R3211	1-216-073-00	RES-CHIP	10K 5% 1/10W
R3122	1-216-017-91	RES-CHIP	47 5% 1/10W	R3212	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
R3124	1-216-017-91	RES-CHIP	47 5% 1/10W	R3213	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
				R3214	1-216-295-11	SHORT	0
				R3215	1-216-073-00	RES-CHIP	10K 5% 1/10W

REF. NO.	PART. NO	DESCRIPTION	REMARK			REF. NO.	PART. NO	DESCRIPTION	REMARK		
R3216	1-216-061-00	RES-CHIP	3.3K	5%	1/10W	R3340	1-216-073-00	RES-CHIP	10K	5%	1/10W
R3217	1-216-025-11	RES-CHIP	100	5%	1/10W	R3341	1-216-073-00	RES-CHIP	10K	5%	1/10W
R3218	1-216-025-11	RES-CHIP	100	5%	1/10W	R3342	1-216-295-11	SHORT	0		
R3219	1-216-025-11	RES-CHIP	100	5%	1/10W	R3343	1-216-295-11	SHORT	0		
R3220	1-216-025-11	RES-CHIP	100	5%	1/10W	R3344	1-216-295-11	SHORT	0		
R3222	1-216-049-11	RES-CHIP	1K	5%	1/10W	R3345	1-216-295-11	SHORT	0		
R3223	1-216-049-11	RES-CHIP	1K	5%	1/10W	R3346	1-216-025-11	RES-CHIP	100	5%	1/10W
R3224	1-216-061-00	RES-CHIP	3.3K	5%	1/10W	R3347	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3226	1-216-017-91	RES-CHIP	47	5%	1/10W	R3348	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3227	1-216-295-11	SHORT	0			R3349	1-216-017-91	RES-CHIP	47	5%	1/10W
R3228	1-216-022-00	RES-CHIP	75	5%	1/10W	R3350	1-216-295-11	SHORT	0		
R3229	1-216-049-11	RES-CHIP	1K	5%	1/10W	R3351	1-216-295-11	SHORT	0		
R3230	1-216-025-11	RES-CHIP	100	5%	1/10W	R3352	1-216-295-11	SHORT	0		
R3231	1-216-025-11	RES-CHIP	100	5%	1/10W	R3354	1-216-295-11	SHORT	0		
R3232	1-216-025-11	RES-CHIP	100	5%	1/10W	R3355	1-216-295-11	SHORT	0		
R3233	1-216-049-11	RES-CHIP	1K	5%	1/10W	R3357	1-216-295-11	SHORT	0		
R3234	1-216-049-11	RES-CHIP	1K	5%	1/10W	R3359	1-216-295-11	SHORT	0		
R3235	1-216-049-11	RES-CHIP	1K	5%	1/10W	R3361	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3237	1-216-049-11	RES-CHIP	1K	5%	1/10W	R3362	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3238	1-216-049-11	RES-CHIP	1K	5%	1/10W	R3363	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3239	1-216-025-11	RES-CHIP	100	5%	1/10W	R3401	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3240	1-216-025-11	RES-CHIP	100	5%	1/10W	R3402	1-216-073-00	RES-CHIP	10K	5%	1/10W
R3241	1-216-025-11	RES-CHIP	100	5%	1/10W	R3403	1-216-073-00	RES-CHIP	10K	5%	1/10W
R3244	1-216-017-91	RES-CHIP	47	5%	1/10W	R3404	1-216-073-00	RES-CHIP	10K	5%	1/10W
R3245	1-216-017-91	RES-CHIP	47	5%	1/10W	R3405	1-216-081-00	RES-CHIP	22K	5%	1/10W
R3246	1-216-017-91	RES-CHIP	47	5%	1/10W	R3406	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3301	1-216-025-11	RES-CHIP	100	5%	1/10W	R3407	1-216-295-11	SHORT	0		
R3302	1-216-025-11	RES-CHIP	100	5%	1/10W	R3410	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3303	1-216-049-11	RES-CHIP	1K	5%	1/10W	R3411	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3304	1-216-295-11	SHORT	0			R3412	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3305	1-216-025-11	RES-CHIP	100	5%	1/10W	R3416	1-216-017-91	RES-CHIP	47	5%	1/10W
R3306	1-216-025-11	RES-CHIP	100	5%	1/10W	R3417	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3307	1-216-025-11	RES-CHIP	100	5%	1/10W	R3418	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3309	1-216-049-11	RES-CHIP	1K	5%	1/10W	R3419	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3310	1-216-073-00	RES-CHIP	10K	5%	1/10W	R3420	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3311	1-216-043-91	RES-CHIP	560	5%	1/10W	R3421	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3313	1-216-049-11	RES-CHIP	1K	5%	1/10W	R3422	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3315	1-216-049-11	RES-CHIP	1K	5%	1/10W	R3423	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3327	1-216-049-11	RES-CHIP	1K	5%	1/10W	R3424	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3328	1-216-049-11	RES-CHIP	1K	5%	1/10W	R3425	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3329	1-216-049-11	RES-CHIP	1K	5%	1/10W	R3426	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3330	1-216-049-11	RES-CHIP	1K	5%	1/10W	R3427	1-216-049-11	RES-CHIP	1K	5%	1/10W
R3331	1-216-049-11	RES-CHIP	1K	5%	1/10W	R3428	1-216-017-91	RES-CHIP	47	5%	1/10W
R3332	1-216-049-11	RES-CHIP	1K	5%	1/10W	R3430	1-216-295-11	SHORT	0		
R3333	1-216-049-11	RES-CHIP	1K	5%	1/10W						
R3338	1-216-295-11	SHORT	0								
R3339	1-216-049-11	RES-CHIP	1K	5%	1/10W						

***A-1644-107-A VM Board, Complete**



The components identified by shading and marked **△** are critical for safety
Replace only with the part number specified.

REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
< IC >				R1726	1-249-429-11	CARBON 10K 5% 1/4W	
IC1801	8-759-701-59	IC MC7809CT		R1727	1-249-431-11	CARBON 15K 5% 1/4W	
IC1802	8-759-603-37	IC M5216P		R1728	1-249-408-11	CARBON 180 5% 1/4W	
< COIL >				R1729	1-249-408-11	CARBON 180 5% 1/4W	
L1701	1-535-465-11	LEAD, JUMPER (5.00MM)		R1730	1-249-417-11	CARBON 1K 5% 1/4W	
L1703	1-408-603-31	INDUCTOR 10UH		R1731	1-249-414-11	CARBON 560 5% 1/4W	
L1704	1-408-603-31	INDUCTOR 10UH		R1806	1-247-883-00	CARBON 150K 5% 1/4W	
< IC LINK >				R1807	1-249-429-11	CARBON 10K 5% 1/4W	
PS1801 △	1-532-605-00	LINK, IC 0.4A (ICP-F10)		R1808	1-249-429-11	CARBON 10K 5% 1/4W	
< TRANSISTOR >				R1809	1-249-429-11	CARBON 10K 5% 1/4W	
Q1701	8-729-119-78	TRANSISTOR 2SC1740S-RT		R1810	1-249-429-11	CARBON 10K 5% 1/4W	
Q1702	8-729-119-78	TRANSISTOR 2SC1740S-RT					
Q1703	8-729-017-05	TRANSISTOR 2SA1837					
Q1704	8-729-119-78	TRANSISTOR 2SC1740S-RT					
Q1705	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA					
Q1706	8-729-017-06	TRANSISTOR 2SC4793					
Q1708	8-729-119-78	TRANSISTOR 2SC1740S-RT					
Q1709	8-729-119-78	TRANSISTOR 2SC1740S-RT					
< RESISTOR >							
R1701	1-249-397-11	CARBON 22 5% 1/4W					
R1702	1-247-807-31	CARBON 100 5% 1/4W					
R1703	1-249-416-11	CARBON 820 5% 1/4W					
R1704	1-247-807-31	CARBON 100 5% 1/4W					
R1706	1-249-409-11	CARBON 220 5% 1/4W					
R1707	1-249-411-11	CARBON 330 5% 1/4W					
R1708	1-249-417-11	CARBON 1K 5% 1/4W					
R1710	1-249-403-11	CARBON 68 5% 1/4W					
R1711	1-249-403-11	CARBON 68 5% 1/4W					
R1712	1-212-974-00	FUSIBLE 47 5% 1/2W					
R1713	1-249-386-11	CARBON 2.7 5% 1/4W					
R1714	1-249-414-11	CARBON 560 5% 1/4W					
R1715	1-249-432-11	CARBON 18K 5% 1/4W					
R1716	1-249-417-11	CARBON 1K 5% 1/4W					
R1717	1-216-476-11	METAL OXIDE 180 5% 3W					
R1718	1-249-432-11	CARBON 18K 5% 1/4W					
R1719	1-249-385-11	CARBON 2.2 5% 1/4W					
R1720	1-249-401-11	CARBON 47 5% 1/4W					
R1721	1-249-414-11	CARBON 560 5% 1/4W					
R1722	1-249-401-11	CARBON 47 5% 1/4W					
R1723	1-535-465-11	LEAD, JUMPER (5.00MM)					
R1724	1-249-417-11	CARBON 1K 5% 1/4W					
R1725	1-249-417-11	CARBON 1K 5% 1/4W					

The components identified by shading and marked Δ are critical for safety
Replace only with the part number specified.

REF. NO.	PART.NO	DESCRIPTION	REMARK	REF. NO.	PART.NO	DESCRIPTION	REMARK
MISCELLANEOUS							
Δ	1-416-466-11	COIL DEMAGNETIC (KV-28DX30U)					
Δ	1-416-769-11	COIL DEMAGNETIC (KV-32DX30U)					
	1-452-032-00	MAGNET, DISK; 10MM					
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM					
Δ	1-453-332-11	TRANSFORMER ASSY, FLYBACK (NX-4521//J114)					
	1-529-408-11	SPEAKER (4.2x24CM)					
	1-452-896-11	COIL, NA ROTATION (RT200)					
Δ	1-571-433-21	SWITCH, PUSH (AC POWER)					
Δ	1-776-204-12	POWER CORD, FILTER (UK)					
	1-693-339-11	TUNER/VIF (UK)					
Δ	8-737-786-05	PICTURE TUBE (W66LLX060X) (KV-28DX30U)					
Δ	8-735-054-05	PICTURE TUBE (W76LLZ060X) (KV-32DX30U)					
Δ	1-451-481-31	DEFLECTION YOKE (Y28RVC2) (KV-28DX30U)					
Δ	1-451-480-31	DEFLECTION YOKE (Y32RVC2) (KV-32DX30U)					
Δ	8-453-011-11	NECK ASSY, NA-299-M					
Δ	1-251-317-63	CAP ASSY, HIGH VOLTAGE					
ACCESSORIES AND PACKAGING MATERIALS							
	4-205-754-61	MANUAL, INSTRUCTION (ENGLISH)					
*	4-395-957-01	BAG, PROTECTION (KV-28DX30U)					
*	4-029-168-01	BAG, PROTECTION (KV-32DX30U)					
*	4-205-503-01	INDIVIDUAL CARTON (KV-28DX30U)					
*	4-205-530-01	INDIVIDUAL CARTON (KV-32DX30U)					
*	4-205-504-01	CUSHION (UPPER) (ASSY) (KV-28DX30U)					
*	4-205-531-01	CUSHION (UPPER) (ASSY) (KV-32DX30U)					
*	4-205-505-01	CUSHION (LOWER) (ASSY) (KV-28DX30U)					
*	4-205-532-01	CUSHION (LOWER) (ASSY) (KV-32DX30U)					
REMOTE COMMANDER							
	1-418-595-12	REMOTE COMMANDER (RM-888)					

TRACE

A new TV Repair Assistance Tool that combines ease of use and powerful PC software tools to allow you to save valuable time during many TV repairs.



The TRACE interface connects to the PC's serial port. It provides connection to the TV's I²C bus and can be provided with an InfraRed transmitter (optional).

The interface is powered by a standard 9 V PP3 battery for portable use, and can also be powered by an external 9V/25mA DC power supply.

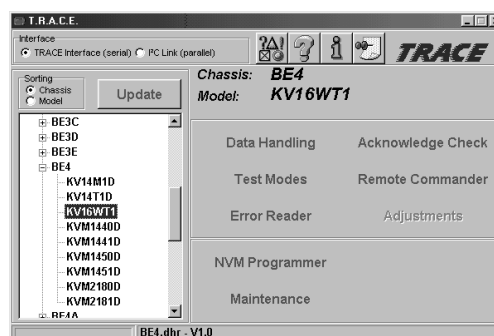
The TRACE software that is supplied with the interface allows you to:

- Read, restore and compare NVM contents via the I²C bus
- Acknowledge check of all I²C devices in the TV set
- Read Error Codes (emulation of the Error Reader tool)

With the optional IR Add-on kit, the following features can be added:

- Remote Commander emulation
- User programmable Functional Check through Infrared
- Fast and documented Test Mode setting of all Sony TV chassis

Additional features such as Adjustments and Troubleshooting are available in chassis-dependent software modules. Please contact your local Sony Service organisation for the latest information.



Note: For workshops already using the existing I²C Link parallel port interface (9-948-320-30), this software can be used as well, replacing the TV Data Handling software (9-948-340-50), but Error Reader and IR functions can only be accessed with the TRACE interface.

Partnumbers: TRACE Starter Kit (TRACE interface + software): 9-948-320-70
 TRACE Software (for users of the I²C Link interface): 9-948-340-80
 TRACE IR Add-on (IR interface + Remote Commander software): 9-948-320-80

PC requirements: IBM-compatible PC with operating system Windows95, Windows98, or WindowsNT*.

* WindowsNT only supported with TRACE interface

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