

SERVICE MANUAL

AE-5 CHASSIS

MODEL	COMMANDER	DEST	CHASSIS NO.	MODEL	COMMANDER	DEST	CHASSIS NO.
KV-28FX60A	RM-891	Italian	SCC-Q12D-A	KV-32FX60A	RM-891	Italian	SCC-Q12B-A
KV-28FX60B	RM-891	French	SCC-Q13D-A	KV-32FX60B	RM-891	French	SCC-Q13B-A
KV-28FX60D	RM-891	AEP	SCC-Q11D-A	KV-32FX60D	RM-891	AEP	SCC-Q11B-A
KV-28FX60E	RM-891	Spanish	SCC-Q14D-A	KV-32FX60E	RM-891	Spanish	SCC-Q14B-A
KV-28FX60K	RM-891	OIRT	SCC-Q16F-A	KV-32FX60K	RM-891	OIRT	SCC-Q16A-A
KV-28FX60R	RM-891	OIRT	SCC-Q16E-A	KV-32FX60R	RM-891	OIRT	SCC-Q16B-A
KV-28FX60U	RM-891	UK	SCC-Q15C-A	KV-32FX60U	RM-891	UK	SCC-Q15B-A

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TRINITRON® COLOR TV
SONY®

ITEM MODEL	Television System	Stereo System	Channel Coverage	Color System
Italian	B/G/H,D/K	GERMAN Stereo	ITALIA VHF : A-H2 (C) UHF : 21-69 PAL B/G/H VHF : E2-E12 UHF : E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05,M1-M10,U1-U10 DK VHF : R01-R12 UHF : R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
French	B/G/H, D/K,L,I	GERMAN/NICAM Stereo	L VHF : F02-F10 UHF : F21-F60 CABLE : B-Q B/G/H VHF : E2-E12 UHF : E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF : A-H2 (C) UHF : 21-69 I UHF : B21-B69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
AEP	B/G/H, D/K	GERMAN Stereo	PAL B/G/H/ VHF : E2-E12 : E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF : A-H2 (C) UHF : 21-69 D/K VHF : R01-R12 UHF : R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
Spanish	B/G/H, D/K	GERMAN/NICAM Stereo	PAL B/G/H/ VHF : E2-E12 : E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF : A-H2 (C) UHF : 21-69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
OIRT	B/G/H, D/K	KV-28FX60K/32FX60K GERMAN/NICAM Stereo KV-28FX60R/32FX60R GERMAN Stereo	B/G/H/ VHF : E2-E12 UHF : E21-E69 CABLE TV (1) : S1-S41 D/K VHF : R01-R12 UHF : R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
UK	I	NICAM Stereo	UHF : B21-B69	PAL NTSC4.43, NTSC3.58 (VIDEO IN)

MODEL	28FX60A	28FX60B	28FX60D	28FX60E	28FX60K	28FX60R	28FX60U
Power Consumption	132W	132W	132W	132W	132W	132W	132W
MODEL	32FX60A	32FX60B	32FX60D	32FX60E	32FX60K	32FX60R	32FX60U
PowerConsumption	124W	124W	124W	124W	124W	124W	124W

[PICTURE TUBE]**KV-28FX60**

FD Trinitron
Approx. 71 cm (28 inches)
(Approx. 66 cm picture measured diagonally)
102 degree deflection

KV-32FX60

FD Trinitron
Approx. 82 cm (32 inches)
(Approx. 76 cm picture measured diagonally)
102 degree deflection

Input/Output Terminals**[REAR]**

 **1/**  **1** 21-pin Euro connector (CENELEC standard).

- Inputs for Audio and Video signals.
- Inputs for RGB.
- Outputs of TV Video and Audio signals.

 **2/**  **2** 21-pin Euro connector

- Inputs for Audio and Video signals.
- Inputs for S video.
- Outputs for Video and Audio signals (selectable).

 **3/**  **3** 21-pin Euro connector

- Inputs for Audio and Video signals.
- Inputs for S video.

External speaker terminals : 2-pin Din (5)

[FRONT]

 **3** Video output - phono jack

 **3** Audio inputs - phono jacks

 **3** S Video input - 4 pin din

 Headphone jack : stereo minijack

Sound output	2x25W (Music Power)
Subwoofer	25W (Music Power)
Power requirements	220 - 240V

Dimensions

KV-28FX60	Approx 772x497x533 (w/h/d)
KV-32FX60	Approx 867x564x558 (w/h/d)

Weight

KV-28FX60	Approx 42.5kg
KV-32FX60	Approx 65 kg

Supplied accessories

RM-891 Remote Commander (1)
IEC designated R6 battery (2)

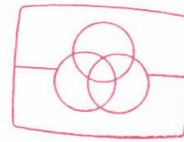
Other features

NICAM*, FASTEXT, TOPTTEXT

* (KV-28FX60B,28FX60E,28FX60K,28FX60U,
32FX60B,32FX60E,32FX60K,32FX60U only)

[RM-891]

Remote control system	Infrared control
Power requirements	3V dc 2 batteries IEC designation R6 (size AA)
Dimensions	Approx 210x56x24mm (w/h/d)
Weight	Approx 110g (Not including battery)



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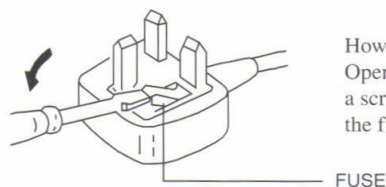
Model Name	KV-28FX60A	KV-28FX60B	KV-28FX60D	KV-28FX60E	KV-28FX60K	KV-28FX60R	KV28FX60U
Item	KV-32FX60A	KV-32FX60B	KV-32FX60D	KV-32FX60E	KV-32FX60K	KV-32FX60R	KV-32FX60U
Pal Comb	OFF	OFF	OFF	OFF	OFF	OFF	OFF
PIP	OFF	OFF	OFF	OFF	OFF	OFF	OFF
RGB Priority	ON	ON	ON	ON	ON	ON	ON
Woofer Box	ON	ON	ON	ON	ON	ON	ON
Scart 1	ON	ON	ON	ON	OFF	ON	ON
Scart 2	ON	ON	ON	ON	ON	ON	ON
Front in (3)	ON	ON	ON	ON	ON	ON	ON
Scart 4	ON	ON	ON	ON	ON	ON	ON
Projector	OFF	OFF	OFF	OFF	OFF	OFF	OFF
AKB in 16:9 mode	ON	ON	ON	ON	ON	ON	ON
Norm B/G	ON	ON	ON	ON	ON	ON	OFF
Norm I	OFF	ON	OFF	OFF	OFF	OFF	ON
Norm D/K	ON	ON	ON	ON	ON	ON	OFF
Norm AUS	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Norm L	OFF	ON	OFF	OFF	OFF	OFF	OFF
Norm SAT	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Norm M	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Teletext	ON	ON	ON	ON	ON	ON	ON
Nicam Stereo	OFF	ON	OFF	ON	ON	OFF	ON
Language Preset	Italian	French	German	Spanish	OIRT	OIRT	English

WARNING (KV-28FX60U/32FX60U only)

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

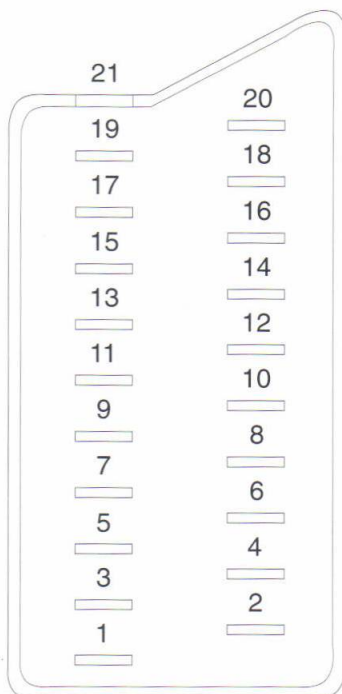
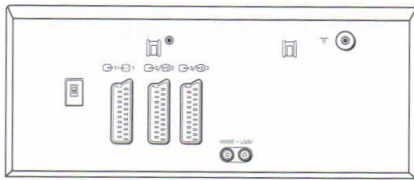
IF THE PLUG SUPPLIED WITH THIS APPLIANCE IS NOT SUITABLE FOR THE OUTLET SOCKETS IN YOUR HOME, IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED. THE PLUG SEVERED FROM THE MAINS LEAD MUST BE DESTROYED AS A PLUG WITH BARED WIRES IS DANGEROUS IF ENGAGED IN A LIVE OUTLET SOCKET.

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	4	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

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



AE-5 SELF DIAGNOSTIC SOFTWARE

The identification of errors within the AE-5 chassis is triggered in one of two ways :- 1: Busy or 2: Device failure to respond to IIC. In the event of one of these situations arising the software will first try to release the bus if busy (Failure to do so will report with continuous flashing LED) and then communicate with each device in turn to establish if a device is faulty. If a device is found to be faulty the relevant device number will be displayed through the LED (Series of flashes which must be counted) See table 1., non fatal errors are reported using this method.

Diagnostic Item Description	No of times Standby LED Flashes	Probable cause Location	Detected Symptoms
Power does not turn on	Does not light	Power cord is not plugged in Fuse is burned out	Power does not come on No power is supplied to the TV AC power supply is faulty
+B Overcurrent (OCP)	2 times	H.OUT (Q6803/6804) is shorted. (D Board) Linearity FET (Q6806) is shorted. (D Board) IC6604 Power IC is shorted. (D Board)	Power does not come on Load on power line has shorted
Vertical Deflection stopped	4 times	+15V is not supplied R6835 open (D Board) -15V is not supplied R6834 open (D Board) IC6700 is shorted (D Board)	Vertical deflection pulse has stopped Power line has shorted

ERROR	LED ERROR COUNT
No error	00
Not allowed (may be confused with Sircs response flash!)	01
Over Current Protection	02
Over Voltage Protection	03
Vertical Protection	04
AKB	05
H - Protection	06
Speaker Protection	07
General IIC Line 0 error	08
MEGATEXT	09
NVM	10
Main colour decoder	11
Feature Box	12
D/A converter	13
Backend	14
Multi sound processor	15
Auto Wide	16
External RAM	17

Flash Timing Example : e.g. error number 3

StBy LED



ERROR DETECTION MONITOR

Device acknowledge is used to check IIC errors. Device acknowledge is checked by sending an IIC start sequence during CRT power on. Each device is checked three times, if there is no acknowledge after every attempt, it will be regarded as an error.

There are three steps to check errors

1. IIC line 0
If all devices except the NVM are errors, IIC line 0 error is displayed
2. Board check
If all devices mounted on one board have errors, board error is displayed
3. Each device check
If IIC line error and board error are not detected then the device with an error is displayed

The detected errors can be displayed as follows:

1. Error Monitor Menu
2. Error Reader

1. ERROR MONITOR MENU

The error monitor menu is displayed by selecting TT33. The following menu will be displayed:

ERROR MONITOR	
Operating Time : 930360h 15h	
Saved Errors :	
1. 100h = A-Board	
2. 401h = BP-B CXD2069 MID	
3. 704h = J-B TDA9320 Main Col Dec	
4. 000h = no error occurred	
5. 000h = no error occurred	
Actual Error :	
New error code sequence is starting	
Ignore Errors :	[off]

2. ERROR READER DISPLAY

The error reader display is connected to the service connector to read actual error codes. The part number for the error reader display is S-188-900-10. Once an error has been detected it will then be displayed on the two digit error reader. The errors displayed refer to the following table :

Send Data to Error Reader				
Error Code	Data high	Data Low	Error type	Function
00 00h	-	f0h	no device	
Gen.IIC Error				
00 01h	f0h	01h	IIC 0 line	
00 02h	f0h	02h	IIC 1 line	not used
Board Error				
01 00h	f1h	00h	A Board	
02 00h	f2h	00h	B1 Board	
03 00h	f3h	00h	B2 Board	
04 00h	f4h	00h	BP Board	
05 00h	f5h	00h	D1 Board	
06 00h	f6h	00h	E Board	
07 00h	f7h	00h	J Board	
Device Error				
A Board				
01 01h	f1h	01h	CXA1875	Port Expander
01 02h	f1h	02h	TU1326	Main Tuner
01 03h	f1h	03h	TU1350	Sub Tuner
B1 Board				
02 01h	f2h	01h	P83C654	Feature Box
02 02h	f2h	02h	SDA9280	D/A Converter
B2 Board				
03 01h	f3h	01h	SAA4977	Basic
03 02h	f3h	02h	SAA4950	Memory
BP Board				
04 01h	f4h	01h	CXD2069	MID
D1 Board				
05 01h	f5h	01h	CXA8070	Dynamic Conv.
05 02h	f5h	02h	CXA1875	Port Expander
E Board				
06 01h	f6h	01h	CXD2100	Backend
J Board				
07 01h	f7h	01h	CXD2057	Auto Wide
07 02h	f7h	02h	SDA9288	PIP
07 03h	f7h	03h	TDA9320	Sub Colour
07 04h	f7h	04h	TDA9320	Main Colour
07 05h	f7h	05h	CXA1875	Sub Sound
07 06h	f7h	06h	TDA7309	HP Amp
07 07h	f7h	07h	TEA6422DT	Audio SW
07 08h	f7h	08h	MSP3410D	Sound Proc
07 09h	f7h	09h	TC9337F	Sound DSP

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CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR THE CARBON PAINTED ON THE CRT, AFTER REMOVAL OF THE ANODE CAP

WARNING !!

AN ISOLATING TRANSFORMER SHOULD 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 CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU 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 PIÈCES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT, NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÈCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1 GENERAL

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

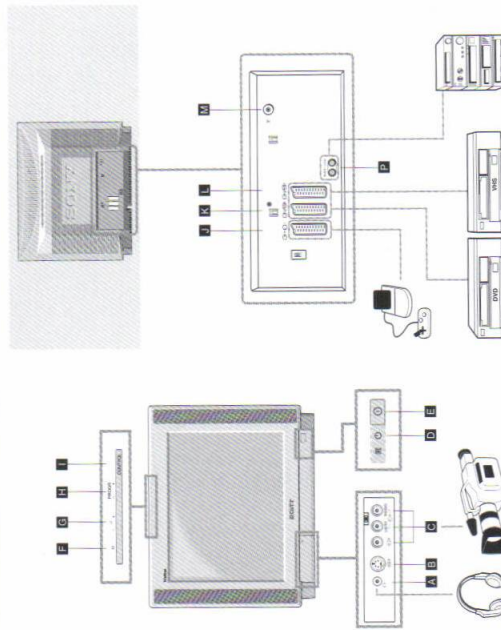
This section briefly describes the buttons and controls on the TV set and the Remote Control. Open the flaps at the front and back of his Instruction Manual for detailed illustrations. For more information refer to the page numbers given in the overview.

Remote Control

Symbol	Description	See page
1 TV/	TV: standby mode on/off	32
2	TV: on-screen display	32
3	Teletext: index page	42
4	Selecting of input source	44
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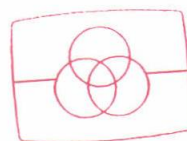
TV-set – front and top

Symbol	Description	See page
A	Headphone jack	46
B	S-video input jack	44
C	Phono video/audio inputs	44
D	Indicator for Standby mode	32
E	Power switch	32
F	Selecting of input source	44
G	Volume control	32
H	Channel selection up- and downwards	32
I	Control panel: Switching on/off	32



TV-set – rear

Symbol	Description	See page
J	21-pin Euro connector (Scart)	44
K	21-pin Euro connector (Scart)	44
L	21-pin Euro connector (Scart)	44
M	Aerial socket	30
N	L/G/S/I R/D/D/D	46



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First Time Operation

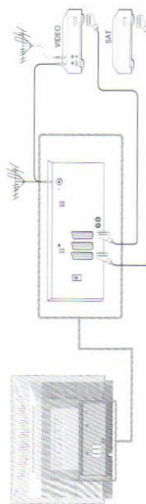
- 1** The following chapter contains all the steps necessary when first installing your TV and the basic TV functions.

Step 1 Installation

A Connecting the TV Set

- 1 Connect the TV set to the mains socket (220-240 V, AC, 50 Hz).
- 2a Connect a conventional aerial cable to the socket marked **T** **M** on the rear of the TV set, or
- 2b Connect your Satellite Receiver to one of the Scart connectors, **J** **K** **L** of the TV set.

- 1** **When connecting a VCR to your TV set:**
We recommend that you use the preset function Manual Programme Preset (page 33) to tune in the VCR signal to programme position 0.



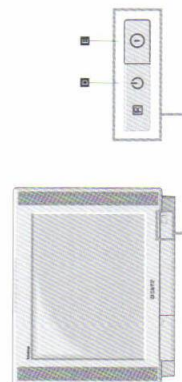
B Inserting the Batteries into the Remote Control

- 1** Make sure to insert the batteries using the correct polarities.
Dispose of exhausted batteries according to your local regulations.



C Switching on the TV Set

- Press the switch **E** at the front of the TV set.
- 1** If the standby mode indicator **D** on the TV is lit, press TV I/II on the Remote Control to switch on the TV set.

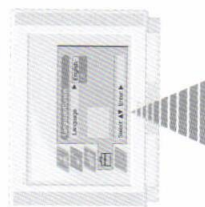
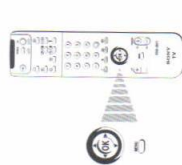


Step 2 Basic Presetting

A The Menu System

- 1** Your TV uses an on-screen menu system to guide you through the operations.
Use the following buttons on the Remote Control to operate the menu system:

- Press MENU **2** to switch the menu on and off.
- Use **4** **3** **1** **2** of the joystick **1** to select within the menu system.
- Press OK **5** to store.
- When menu is switched off:
Press **4** to return to the last menu screen.



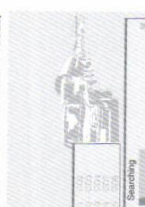
B Selecting Language and Country

- 1 Press the MENU **2** button.
- 2 The menu Language/Country appears on the screen.
Push the joystick **1** to **3**. Push the joystick **1** to **4** to select the language.
Press OK **5**.
- 3 The menus appear in the selected language.
- 4 Select the country in which you will operate the TV set using **3** or **4**.
Confirm by pressing OK **5**.
- 5 The menu Auto Tuning appears.



C Automatic Tuning In of Channels

- Push the joystick **1** to **3**.
After all available channels are stored, the TV goes back to the programme position with which you started the automatic tuning. Your TV is now ready for use.
- To stop the automatic tuning: Press OK **5**.
- If you wish to change the sequence of the stored channels, go to Sorting Programme Positions in Advanced Presetting.
- If you need to change or repeat the tuning afterwards (e.g. when you move house): select the menu Auto Tuning in the Set Up **2** menu.



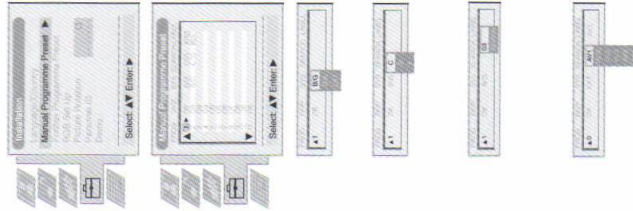
Sorting of Programme Positions

- 1 After having used Automatic Tuning of channels you may wish to rearrange the order of the channels.
- 1 Press MENU. Select the symbol using **▼**. Push to **▶**.
- 2 Select Programme Sorting using **▼**. Push to **▶** to enter.
- 3 Select the programme position of the channel you wish to sort using **▲** or **▼**. Push to **▶** to enter.
- 4 Move the channel to the new programme position using **▲** or **▼**. Store by pressing OK.
- 5 The channel is now at the new position. The other programme positions move accordingly.
- 5 To sort other programme positions repeat steps 3 to 4.
- 6 Press MENU to return to the normal TV screen.



Manual Tuning In of Channels

- 1 Use this function to preset channels or a video input source one by one to programme positions of your choice.
- 1 Press MENU. Select the symbol using **▼**. Push to **▶**.
- 2 Select Installation using **▼**. Push to **▶** to enter.
- 3 Select Manual Programme Preset using **▼**. Push to **▶** to enter.
- 3 Select the programme position by pushing to **▲** or **▼**. Push twice to **▶**. The column SYS is highlighted.
- 4 Select the TV system using **▲** or **▼**. Push to **▶** to enter.
- 4 Available TV systems are B/G for western European countries, D/K for eastern European countries, EXT for a video input source (please go to step 5c after selecting EXT)
- 5 The column SEARCH is highlighted.
- 5 Select your method for the channel tuning using **▲** or **▼**. Push to **▶** to enter. You have the choice between C for a terrestrial channel, S for a cable channel, F for direct frequency input.
- 5 a **Direct Channel Input - S, C or F**
- 5 For channel numbers input a two digit number, for the channel frequency a three digit number.
- 5 Select the two or three digits by using the number buttons 0 to 9.
- 5 To start the search and to store the channel, press OK.
- 5 To preset other channels repeat steps 3 to 5a.
- 5 b **Channel search (SEARCH)**
- 5 Use Search if you do not know the channel number or frequency
- 5 Start the search for the next available channel by pushing to **▼**.
- 5 Store the channel by pressing OK or continue the search by pushing again to **▼**.
- 5 To search for other channels repeat steps 3 to 5b.
- 5 c **For video input sources (EXT)**
- 5 Select the Video Input source using **▲** or **▼**.
- 5 Store your selection by pressing OK.
- 5 To allocate other sources repeat steps 3 to 5c.
- 6 Press MENU to return to the normal TV screen.



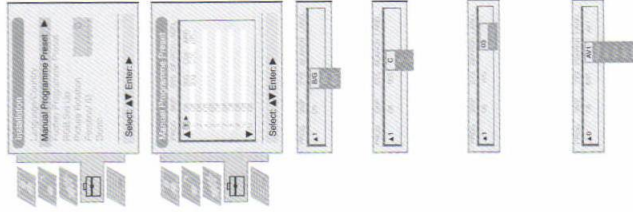
Sorting of Programme Positions

- 1 After having used Automatic Tuning of channels you may wish to rearrange the order of the channels.
- 1 Press MENU. Select the symbol using **▼**. Push to **▶**.
- 2 Select Programme Sorting using **▼**. Push to **▶** to enter.
- 3 Select the programme position of the channel you wish to sort using **▲** or **▼**. Push to **▶** to enter.
- 4 Move the channel to the new programme position using **▲** or **▼**. Store by pressing OK.
- 5 The channel is now at the new position. The other programme positions move accordingly.
- 5 To sort other programme positions repeat steps 3 to 4.
- 6 Press MENU to return to the normal TV screen.



Manual Tuning In of Channels

- 1 Use this function to preset channels or a video input source one by one to programme positions of your choice.
- 1 Press MENU. Select the symbol using **▼**. Push to **▶**.
- 2 Select Installation using **▼**. Push to **▶** to enter.
- 3 Select Manual Programme Preset using **▼**. Push to **▶** to enter.
- 3 Select the programme position by pushing to **▲** or **▼**. Push twice to **▶**. The column SYS is highlighted.
- 4 Select the TV system using **▲** or **▼**. Push to **▶** to enter.
- 4 Available TV systems are B/G for western European countries, D/K for eastern European countries, EXT for a video input source (please go to step 5c after selecting EXT)
- 5 The column SEARCH is highlighted.
- 5 Select your method for the channel tuning using **▲** or **▼**. Push to **▶** to enter. You have the choice between C for a terrestrial channel, S for a cable channel, F for direct frequency input.
- 5 a **Direct Channel Input - S, C or F**
- 5 For channel numbers input a two digit number, for the channel frequency a three digit number.
- 5 Select the two or three digits by using the number buttons 0 to 9.
- 5 To start the search and to store the channel, press OK.
- 5 To preset other channels repeat steps 3 to 5a.
- 5 b **Channel search (SEARCH)**
- 5 Use Search if you do not know the channel number or frequency
- 5 Start the search for the next available channel by pushing to **▼**.
- 5 Store the channel by pressing OK or continue the search by pushing again to **▼**.
- 5 To search for other channels repeat steps 3 to 5b.
- 5 c **For video input sources (EXT)**
- 5 Select the Video Input source using **▲** or **▼**.
- 5 Store your selection by pressing OK.
- 5 To allocate other sources repeat steps 3 to 5c.
- 6 Press MENU to return to the normal TV screen.

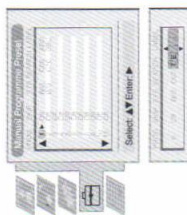


Advanced Presetting

Captioning a Station Name

1 During presetting the channels are usually labelled automatically. You can, however, individually name a channel or a video input source.

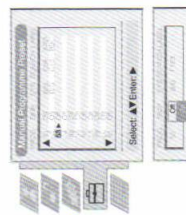
- 1 Press MENU. Select the symbol  using **▼**. Push to **►**.
- 2 Select Installation using **▼**. Push to **►** to enter.
- 3 Select Manual Programme Preset using **▼**. Push to **►** to enter.
- 4 Select the programme position of the channel or the video source you wish to label by pushing to **▼** or **▲**. Push repeatedly to **►** until the first element of the position LABEL is highlighted.
- 5 Select a number, a letter, + or a blank using **▲** or **▼**. Push to **►** to confirm. Select the other four characters in the same way.
- 6 Store your selection by pressing OK.
- 7 To label other channels or video sources repeat steps 3 to 5.
- 8 Press MENU to return to the normal TV screen.



Skipping of Programme Positions

1 In case of 100 programme positions there may be unused positions, which you can skip in the menu Manual Programme Preset. When changing channels with the PROC **+**/**-** buttons they do then not appear. You can, however, still select them using the number buttons.

- 1 Press MENU. Select the symbol  using **▼**. Push to **►**.
- 2 Select Installation using **▼**. Push to **►** to enter.
- 3 Select Manual Programme Preset using **▼**. Push to **►** to enter.
- 4 Select the programme position you wish to skip by pushing to **▲** or **▼**. Push to **►** to enter.
- 5 The column SKIP is highlighted.
- 6 Select ON using **▼**.
- 7 Store by pressing OK.
- 8 To skip other programme positions repeat steps 3 to 5.
- 9 Press MENU to return to the normal TV screen.



Advanced Presetting

Using of Further Programme Preset

1 Using the menu Further Programme Preset you can

- a) individually adjust the volume level of each channel.
- b) improve the quality of a weak channel (picture or sound distortions) with manual fine tuning.
- c) preset the AV output for programme positions of those channels with scrambled signals (e.g. from a Pay TV decoder). In this way a connected VCR records the unscrambled signal.



- 1 Press MENU. Select the symbol  using **▼**. Push to **►**.
- 2 Select Installation using **▼**. Push to **►** to enter. Select Further Programme Preset using **▼**. Push to **►** to enter.



- 3 Select the programme position of the desired channel by pushing to **▲** or **▼**. Push repeatedly to **►** to select:
VOL (Volume Offset), AFT (Automatic Fine Tuning) or DECODER.
The selected item changes colour.

4a VOL

Push to **▲** or **▼** to adjust the volume level (range -7 to +7) of the channel. Store by pressing OK.



Repeat steps 3 and 4a if you wish to adjust the volume level of other channels.

b AFT

Push to **▼** to select OFF. Push to **►** to enter Manual Fine Tuning. Push to **▲** or **▼** to fine tune the channel (range -15 to +15). Store by pressing OK.



Repeat steps 3 and 4b if you wish to fine tune other channels.

c DECODER

Push to **▲** or **▼** to select AV1 (Euro AV socket 1) or AV2 (Euro AV socket 2) as output for the video source on this programme position. Store by pressing OK.



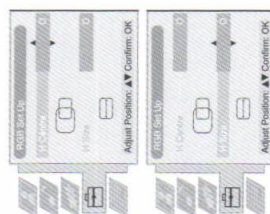
Repeat steps 3 and 4c if you wish to preset the AV output of other video sources. Should you use Auto Tuning afterwards, this setting will be cancelled.

- 5 Press MENU to return to the normal TV screen.

Adjusting the Picture Geometry for an RGB Source

1 When connecting an RGB source such as a Sony Playstation you may need to readjust the picture geometry.

- 1 Select the connected RGB source  by pressing  repeatedly.
- 2 Press MENU. Select the symbol  using . Push to .
- 3 Select Installation using . Push to  to enter. Select RGB Set Up using . Push to  to enter.
- 4 Select H Centre by pushing to . Adjust the centre of the picture (range from -5 to +5) using  or . Store by pressing OK.
- 5 Select H Size using . Push to  to enter. Adjust the horizontal coordinates (range from -5 to +5) using  or . Store by pressing OK.
- 6 Press MENU to return to the normal TV screen.



Inputting Your Personal ID

1 You can programme your TV with a safety code, so that you can be traced if your TV is stolen and recovered. This code can only be input once! Make sure to write it down in this Instruction Manual.

- 1 Press MENU. Select the symbol  using . Push to .
- 2 Select Installation using . Push to  to enter. Select Personal ID using . Push to  to enter.
- 3a Select the first of a total of 11 characters (letter, number, + or a blank) by using  or .
- b Push to  to go to the next character.
- c Repeat a and b for all characters.
- 4 Store by pressing OK.
- 5 Press MENU to return to the normal TV screen.



Adjusting the Picture Rotation

1 Because of the earth magnetism the picture might slant. In this case you can readjust the picture.

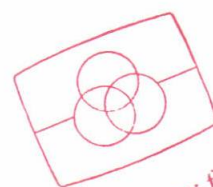
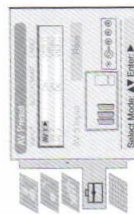
- 1 Press MENU. Select the symbol  using . Push to .
- 2 Select Installation using . Push to  to enter. Select Picture Rotation using . Push to  to enter.
- 3 Adjust the Picture Rotation (adjusting range -4 to +4) by pushing to  or . Store by pressing OK.
- 4 Press MENU to return to the normal TV picture.



Presetting and Labelling of Input Sources

1 Using AV Preset you can select the automatic format function and label an input source.

- 1 Press MENU. Select the symbol  using . Push to .
- 2 Select AV Preset using . Push to  to enter.
- 3 Select the desired AV input (AV 1, 2 or 3) using  or . Push to  to enter.
- 1** After each step you have the choice between memorizing (press OK) or going to the next item (push to ).
- 4 For automatic format selection of the AV input:
 - a Push to  to select Auto Format.
 - b Select On or Off using  or .
- 5 To label the source:
 - a Push to  to select Label.
 - b Select the first character using  or . Push to  to confirm.
 - c Repeat step b to select the other 4 characters.
 - d Store by pressing OK.
- 6 Repeat steps 3 to 5 for the other AV inputs.
- 7 Selecting the AV3 Input Source:
 - 1** In case of AV3 you have the choice between the front AV3 sockets  or the rear Scart 3  connector.
 - a Push to  to select AV3 Input. Push to  to enter.
 - b Select Front or Rear using  or .
 - c Store by pressing OK.
- 8 Press MENU to return to the normal TV screen.



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Advanced TV operation

Adjusting Picture and Sound

1 Picture and sound are adjusted at the factory. You can, however, adjust them individually.

2 Press MENU.
Select the symbol  for Picture or  for Sound using **▲** or **▼**.
Push to **▶** to enter.

The menu Picture or Sound Control is displayed.

3 Select the desired item using **▲** or **▼**. Push to **▶** to enter.

Adjust the selected item using **▲**, **▼**, **▶** and **◀**. Press OK to store.

4 Refer to the tables on this and the following page for more information.

5 Repeat steps 2 and 3 to adjust other items.

Press MENU to return to the normal TV screen.



Picture Control

Item	Effect/Operation
Picture Mode	▼ Personal (for individual settings) Movie (for movie broadcasts) ▲ Live (for live broadcasts)
Contrast	Less ◀ ▶ More
Brightness*	Darker ◀ ▶ Brighter
Colour*	Less ◀ ▶ More
Hue**	Greenish ◀ ▶ Reddish
Sharpness*	Softer ◀ ▶ Sharper
Reset	Resets picture to the factory preset levels
AI (Artificial Intelligence)	▼ Off: normal ▲ On: Automatic optimization of contrast level according to the TV signal
Noise Reduction	▼ Off: Normal ▲ On: Reduces picture noise in case of a weak broadcasting signal

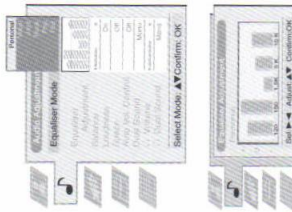
* Only if Personal is selected in Picture Mode

** Only available for NTSC colour signal (e.g. US video tapes)

Advanced TV operation

Sound Control

Item	Effect/Operation
Equaliser Mode	Select the following sound settings ▲ Personal Vocal Jazz Rock Pop ▼ Flat (fixed setting, cannot be adjusted)
Equaliser adjustment	1 You can adjust the mode selected in Equaliser mode by cutting and boosting of 5 selected frequency bands. 2 Only the changes made in Personal can be stored, the others return to factory setting. Select the desired bar using ▶ or ◀ , adjust using ▲ and ▼ . Press OK to store.
Balance	▲ More left ▼ More right
Loudness	▲ Off: Normal ▼ On: For music broadcasts
Space	▲ Off: Normal ▼ On: Special acoustic effect
Auto Volume Control	▼ On: volume level of the channels will stay the same independent of the broadcast signal (e.g. in case of advertisements) ▲ Off: volume level changes according to the broadcast signal
Dual Sound	• For a bilingual broadcast: A for channel 1 ◀ ▶ B for channel 2 • For a stereo broadcast: Stereo ◀ ▶ Mono 1 For a Nicam broadcast: When receiving a Nicam broadcast «NICAM» appears briefly on the screen.
Headphones Volume Dual Sound	Less ◀ ▶ More • For a bilingual broadcast: A for channel 1 ◀ ▶ B for channel 2 • For a stereo broadcast: Stereo ◀ ▶ Mono • PIP 1 When PIP is switched on, you can additionally select the PIP sound for the headphones



Using the Features Menu

- 1 Press MENU. Select the symbol  using **▼**. Push to **▶**.
- 2 Select the desired menu item using **▼**. Push to **▶** to enter.
- 3 Select the desired setting using **▲** or **▼**.
- 4 Store by pressing OK.
- 5 Press MENU to return to the normal TV screen.

Features

Item	Effect/Operation
Auto Format	▼ On: Automatic selection of the screen format ▲ Off: Normal mode
PIP Position	See next page for details
Sleep Timer	1 You can select a time period after which the TV switches itself into standby mode ▼ Off 10 min. 20 min. : ▲ 90 min.
Parental Lock	▼ Off: Normal mode ▲ On: TV can only be switched on out of standby-mode using the Remote Commander; the buttons on the TV do not work.
AV2 Source	1 You can select the source to be output from the Scart connector G2/-G2 . In this way you can record from this socket while watching another source. ▼ TV audio/video signal from the aerial T AV1 audio/video signal from Scart 1 AV2 audio/video signal from Scart 2 ▲ AV3 audio/video signal from front or rear connectors

Using Picture-in-Picture

1 Picture-in-Picture (PIP) lets you display a second, small screen within the main TV picture. In this way you can watch the video output from any connected equipment, e.g., from a VCR, while watching TV.

Switching PIP on and off

- Press **□/■** .
- 1** The small screen is displayed.
- 2** The source of the small screen is the one last used when the TV was on.
- Press **□/■** again to switch PIP off.

Selecting a PIP source

- 1 Press **↑** .
- 2 Press **↺** repeatedly until the desired source appears.
The symbol **↑** is displayed in the bottom left-hand corner of the screen.
You can select between
TV, AV1, AV2, YC2, AV3 and YC3.
3 If no video source (e.g. VCR or Camera) is connected, the PIP will be noisy.
4 You cannot display an RGB source in the PIP.

Swapping the screens

- Press **↻** .
- 1** The two screens are swapped.

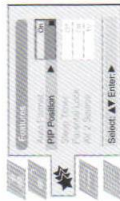
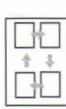
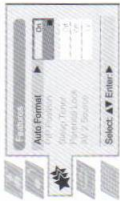
Changing channels if the TV picture is in the PIP

- First press **↑**, then the respective number buttons.

Changing the PIP position

- 1** There are four different positions of the small screen within the main screen. Select the PIP position in the Features menu.

- 1 Press MENU. Select the symbol  using **▼**. Push to **▶** to enter.
- 2 Select PIP position by pushing to **▼**. Push to **▶** to enter.
- 3 Select the desired position using **▼** or **▲**. Press OK to select.
- 4 Press MENU to return to the normal TV screen.



Teletext

Most TV channels broadcast information via teletext. The index page of the teletext service (usually page 100) gives you information on how to use their service.

! Make sure to use a TV channel with a strong signal, otherwise there may be teletext errors.

Direct Access Functions

Switching Teletext on and off

- 1 Select the TV channel which carries the teletext service you want to view.
- 2a Press **[M]** once to switch teletext on.
[M] The teletext menu is displayed.
 b Press **[M]** twice for Mix mode.
[M] The TV broadcast and the Teletext display are overlapped.
- 3 Press **[M]** or press **[M]** a third time to switch teletext off.

Selecting a Teletext Page

Direct Page Selection

- Input the three digits of the page number using the number buttons **[1-9]**.
[1] If you have made a mistake:
 Type in any three digits, then reenter the correct page number.

Page Catching

- 1 Select a teletext page which has several page numbers on it (e.g., the index page).
- 2 Press **[OK]**.
- 3a Page Catching is displayed at the top of the page.
 b Select the desired page number using **[▲]** or **[▼]** and press **[OK]**.
[M] The requested page is displayed after some seconds.

Selecting the next or the preceding page

- Press **[M]** (Page +) or **[M]** (Page -).

Selecting the index page

- Press **[0]**.

Selecting a subpage

- 1 A teletext page may consist out of several subpages. In this case an information line is displayed, showing the number of the subpages.
 • Select the mode by pushing to **[▲]**. Select the subpage by using **[▲]** or **[▼]**.

Freezing a Teletext subpage

- 1 Press **[M]** or **[M]**.
[M] The symbol **[M]** is displayed and the subpage is not updated.
- 2 Press **[M]** to resume normal teletext reception.

Using Fastext*

*depending on availability of service

- 1 Fastext lets you access pages with one button stroke. When Fastext 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 **[0]**, **[1]**, **[2]**, **[3]**.

- Press the coloured button which corresponds to the colour in the colour-coded menu.



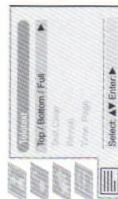
Teletext

Using the Teletext Menu

- 1 This TV set has a menu-guided teletext system. When teletext is switched on you can use the joystick buttons to operate the teletext menu.

Select the menu functions as follows:

- 1 Press **[MENU]**.
- 2 The Teletext menu is superimposed on the teletext display.
- 2 Select the teletext function using **[▲]** or **[▼]**. Push to **[▶]** to enter.



Top/Bottom/Full

- 1 For convenient reading of a Teletext page you can enlarge it.
- 2 After having selected the function, a sub menu **Top ▲ Bottom ▼ Full OK** is displayed.

- Push to **[▲]** to enlarge the upper half of the screen, push to **[▼]** to enlarge the lower half. Press **[OK]** to resume the normal size.

Top: **[▲]** Bottom: **[▼]** Full: **[OK]**



Text Clear

- 1 After having selected the function, you can watch a TV channel while waiting for a requested Teletext page. As soon as the page is available, the symbol **[M]** changes colour.

- Press **[M]** to view the page.

Reveal

- 1 Some teletext pages contain hidden information (e.g., for a quiz), which you can reveal.

- 2 After having selected the function, the hidden information appears.

- Press **[M]** to resume the normal Teletext operation.

Time Page*

*depending on availability of service

- 1 You can call up a time-coded page - such as an alarm page - at a time specified by you.

- 2 After having selected the function a sub menu is displayed.

- 1 Select **[On]** using **[▲]** or **[▼]**. Push to **[▶]** to enter.

- 2 Enter the three digits of the desired page using the number buttons **[1-9]**.

- 3 Push to **[▶]** after each digit.

- 3 Enter the four digits of the desired time using the number buttons **[1-9]**.

- 4 Push to **[▶]** after each digit.

- 4 Press **[OK]** to store.

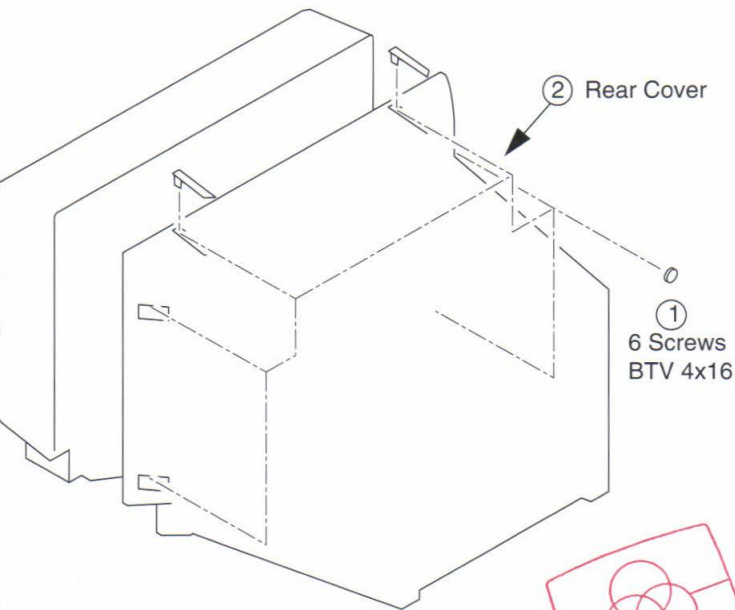
- 5 The time is displayed in the top left-hand corner of the screen.

At the requested time the page is displayed.

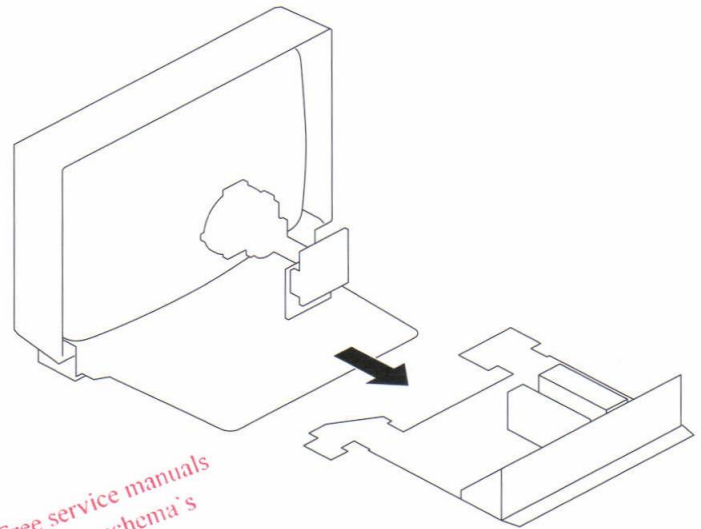


SECTION 2 DISASSEMBLY

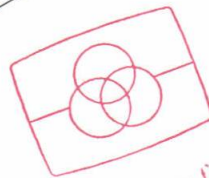
2-1. REAR COVER REMOVAL



2-2. CHASSIS ASSY REMOVAL

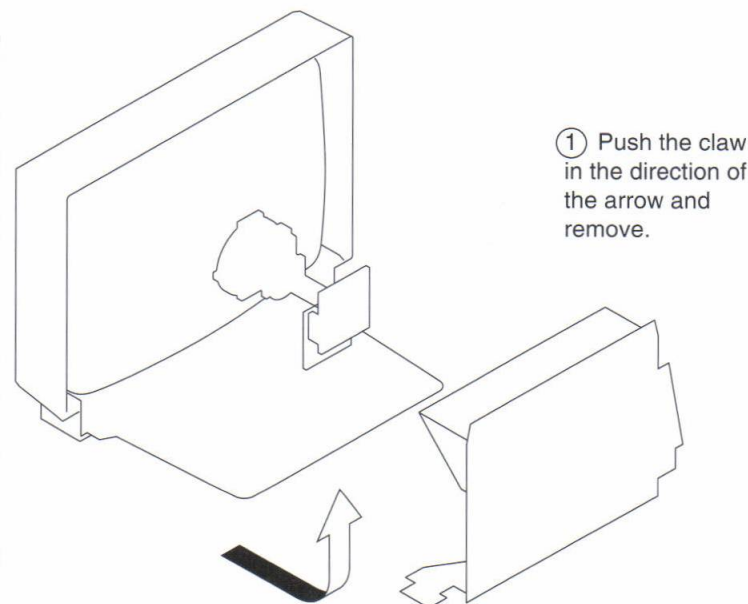


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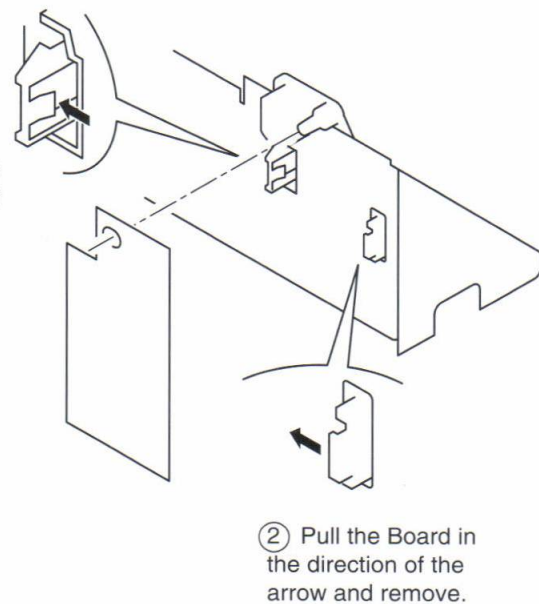


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2-3. SERVICE POSITION

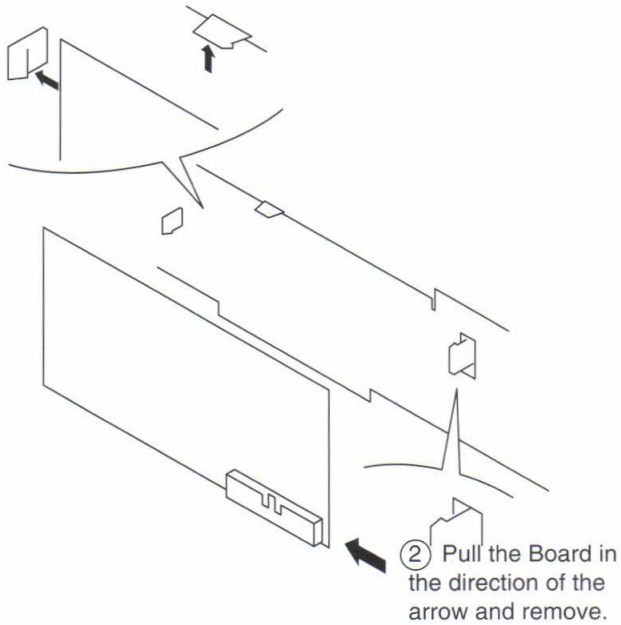


2-4. U BOARD REMOVAL



2-5. J BOARD REMOVAL

- ① Push the claw in the direction of the arrow and remove.

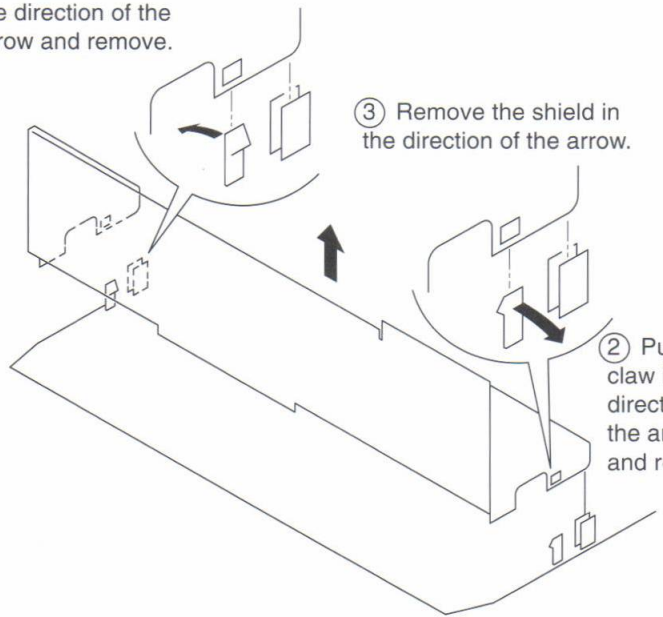


2-6. J SHIELD REMOVAL

- ① Push the claw in the direction of the arrow and remove.

- ③ Remove the shield in the direction of the arrow.

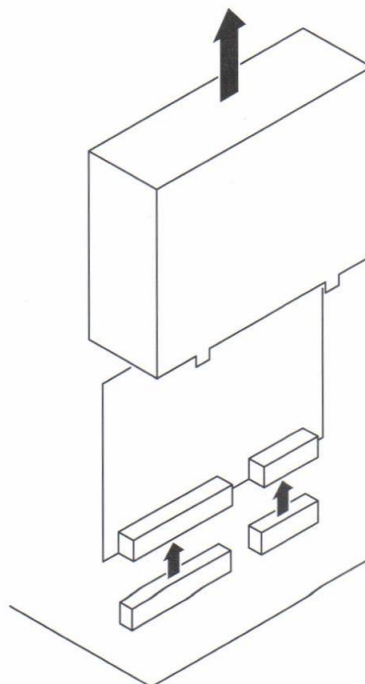
- ② Push the claw in the direction of the arrow and remove.



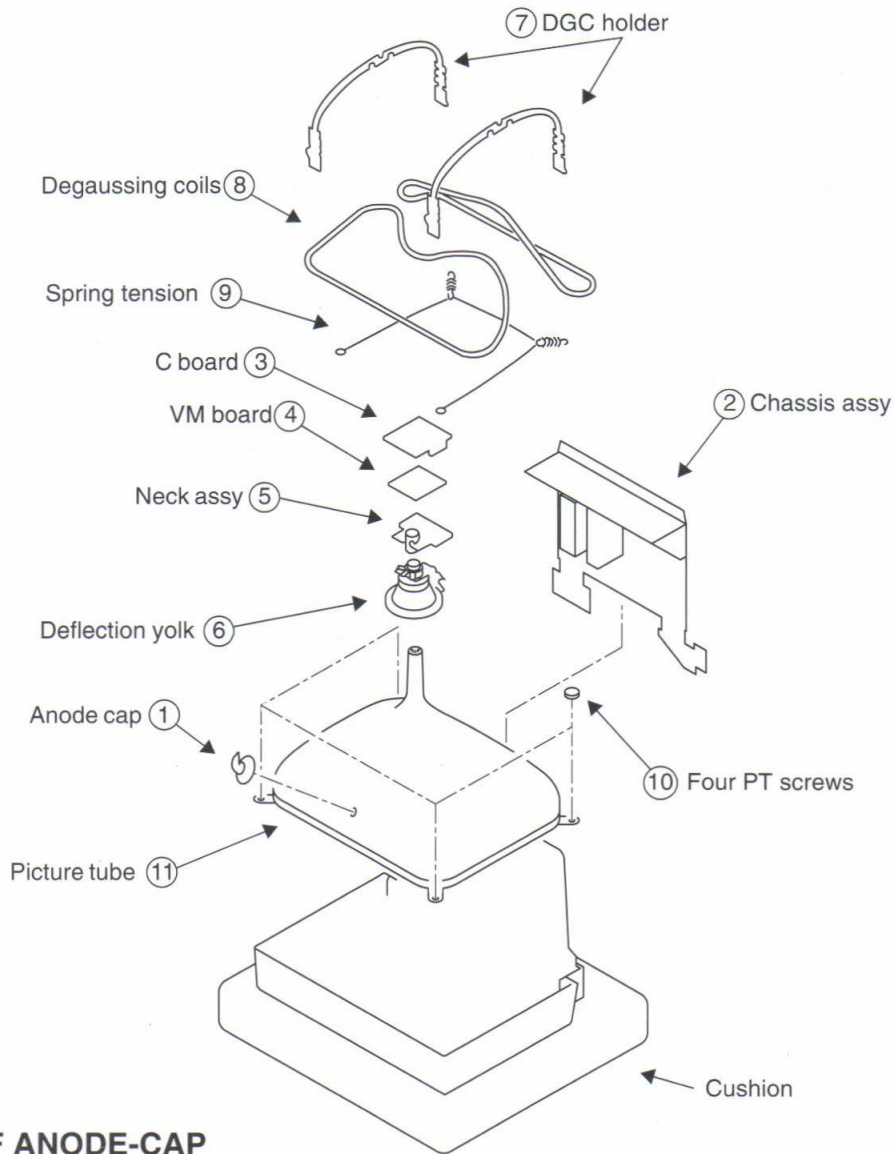
2-7. B1 BOARD REMOVAL

NOTE

All other boards are removed in a similar manner to those shown



2-8. PICTURE TUBE REMOVAL



• REMOVAL OF ANODE-CAP

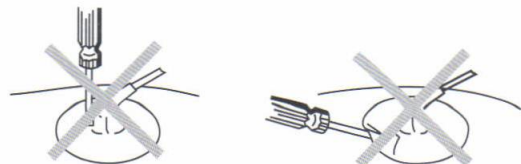
Note : Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

* 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. Do not turn the rubber foot over excessively this may cause damage if the shatter hook sticks out.



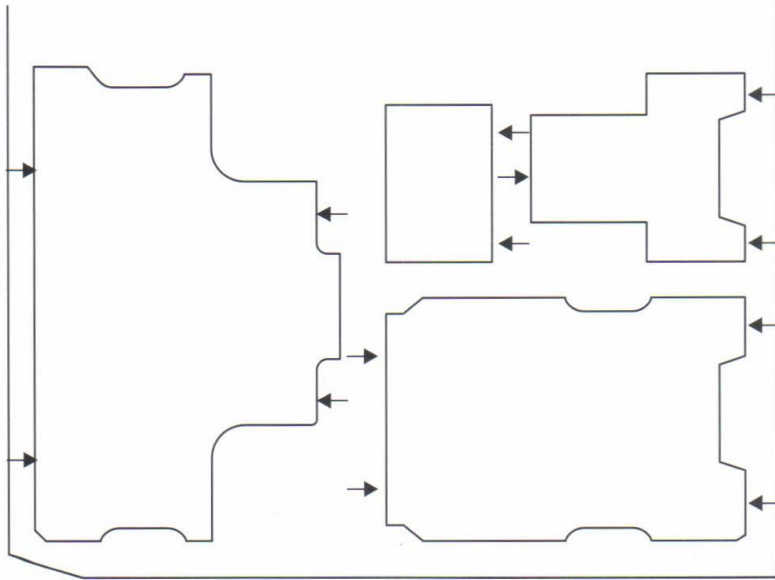
REMOVAL AND REPLACEMENT OF THE MAIN-BRACKET BOTTOM PLATES.

(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 arrows.

Note :There are 4 plates fitted to the main bracket and secured by 4 gates.
Only remove the necessary plate to gain access to the printed wiring board.

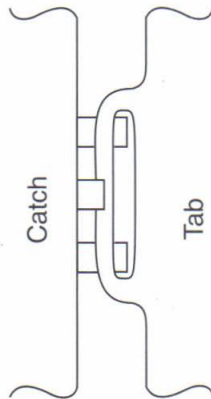


 For safety reasons, on no account should the plates be removed and not refitted after servicing.

(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 the cut position to allow the tabs to be fitted in the catch positions.



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 following adjustments in this 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. Digital multimeter.
4. Oscilloscope.

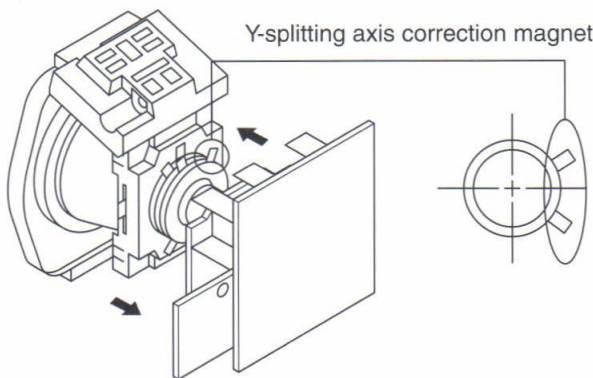
3-1. BEAM LANDING

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 set's power and degauss with the 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.3-2.
4. Move the deflection yolk as far forward as is possible.
5. Adjust the upper and lower pin symmetrically by opening or closing the Y-splitting axis correction magnets located on the neck assembly.
6. Return the deflection yolk to its original position.



Caution :

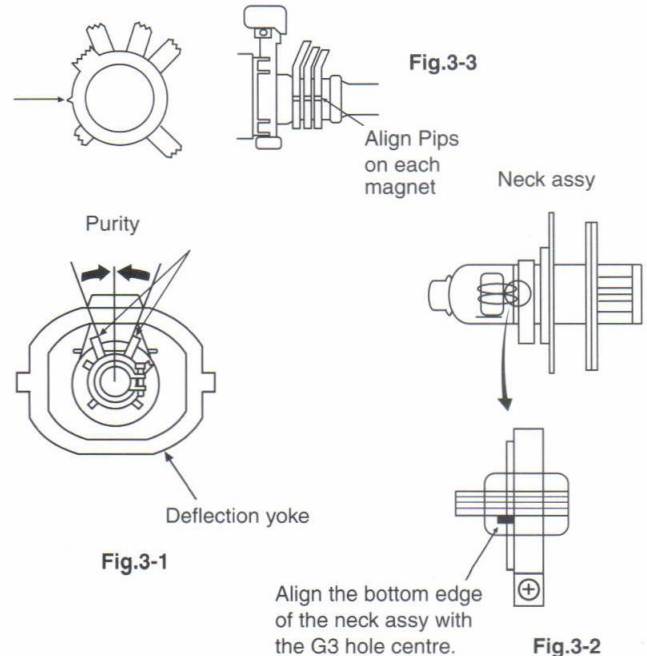
High voltages are present on the Deflection yolk terminals - take care when handling the Deflection yolk whilst carrying out adjustments.

(2) Landing

Note : Before carrying out the following adjustments

adjust the magnets as indicated below [See Fig.3-3].

1. Input an all-white signal from the pattern generator. Maximize the picture setting and adjust the Brightness setting.
2. Rough-adjust the focus and horizontal convergence.
3. Loosen the deflection yolk screws and align the purity adjustment knob to its central position. [See Fig.3-1].
4. Switch from the all-white pattern to an all-green pattern.
5. Move the deflection yolk backwards and adjust with the purity magnet so that the green is at the centre and it aligns symmetrically. [See Fig.3-4].
6. Move the deflection yolk forward and adjust so that the entire screen becomes green.
7. Switch the raster signal to red, then to blue and verify the landing condition.
8. When the position of the deflection yolk has been determined, fasten the deflection yolk with the screw.
9. If the beam does not land correctly in all the corners of the screen, use magnets to correct it. [See Fig.3-5].



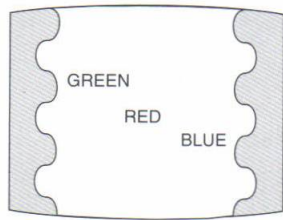


Fig.3-4

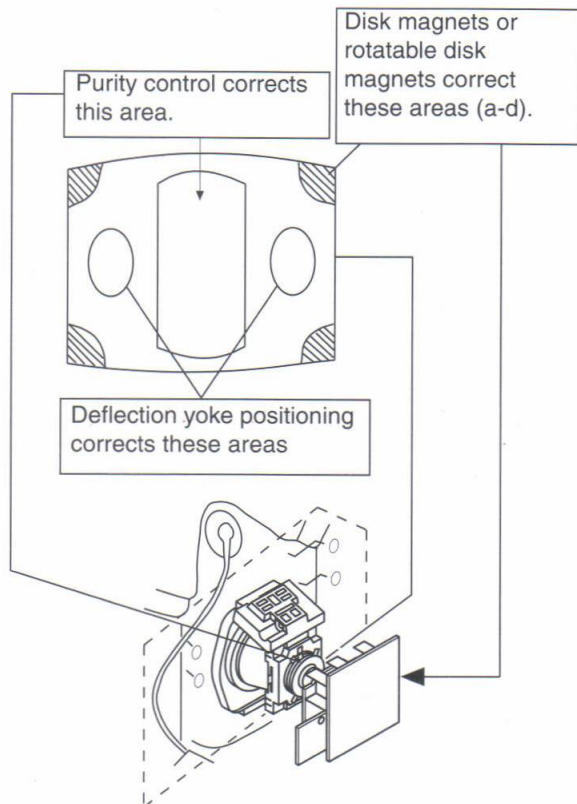
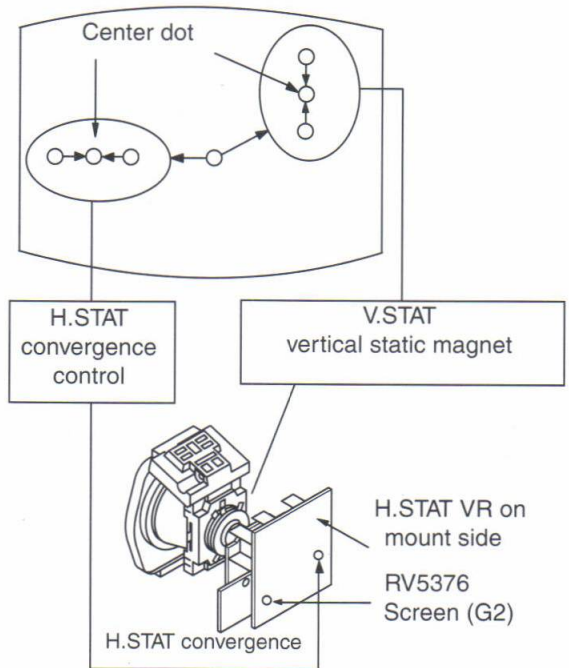


Fig. 3-5

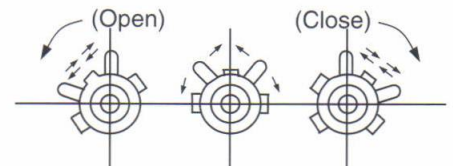
3-2. CONVERGENCE

(1) Screen centre convergence [Static convergence]

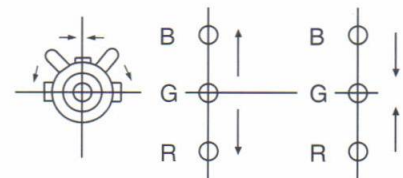
1. Input a dot signal from the pattern generator. Normalize the picture setting.
2. [Moving horizontally], adjust the H.STAT control so that the horizontal red, green and blue dots coincide at the centre of the screen.
3. [Moving vertically], adjust the V.STAT magnet so that the vertical red, green and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



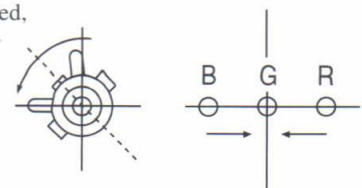
- If the horizontal dots are unable to coincide with the variable range of the H.STAT convergence, adjust together with the V.STAT convergence while tracking.
[Adjust the convergence by tilting the V.STAT convergence or by opening and closing the V.STAT convergence.]



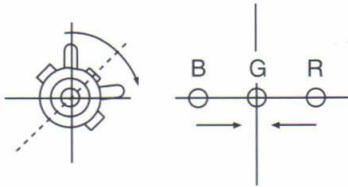
4. Movement of the red, green and blue dots by tilting the V.STAT magnet and by opening or closing the V.STAT magnet.
- a). By opening or closing the V.STAT magnet, the red, green and blue dots move as indicated below.



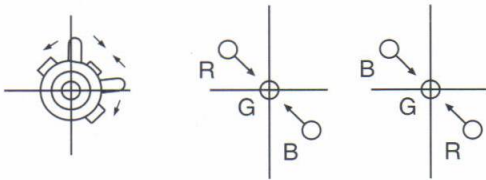
- b). By rotating the V.STAT magnet counter clockwise, the red, green and blue dots move as indicated below.



- c). By rotating the V.STAT magnet clockwise, the red, green and blue dots move in the direction indicated below.



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

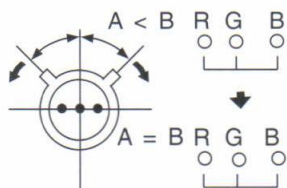


Note : If the blue dot does not coincide with the red and green points correct the points by using the BMC [Hexapole] magnet.

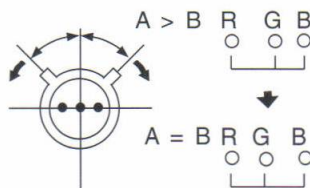
5. Correction for HMC [horizontal mis-convergence] and VMC [vertical mis-convergence] by using the BMC [Hexapole] magnet.

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

HMC correction(A)

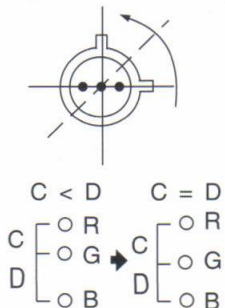


HMC correction(B)

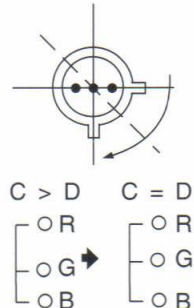


- b). VMC correction by BMC [Hexapole] magnet and movement of the electron beam.

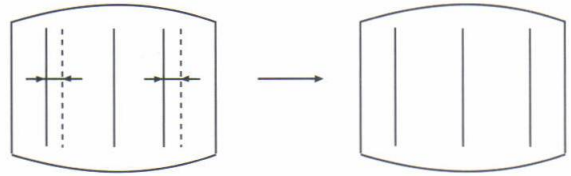
VMC correction(A)



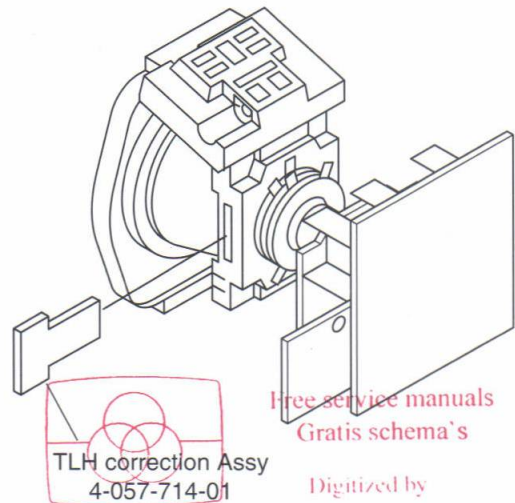
VMC correction(B)



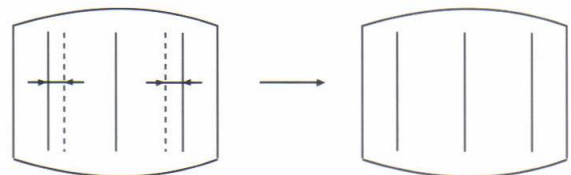
HAMP



7. HTIL correction can be performed by adding a THL correction ASSY to the DY.



HTIL



Layout of each control

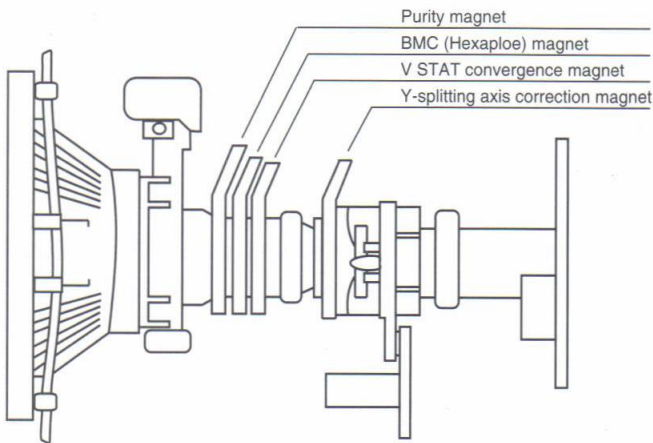
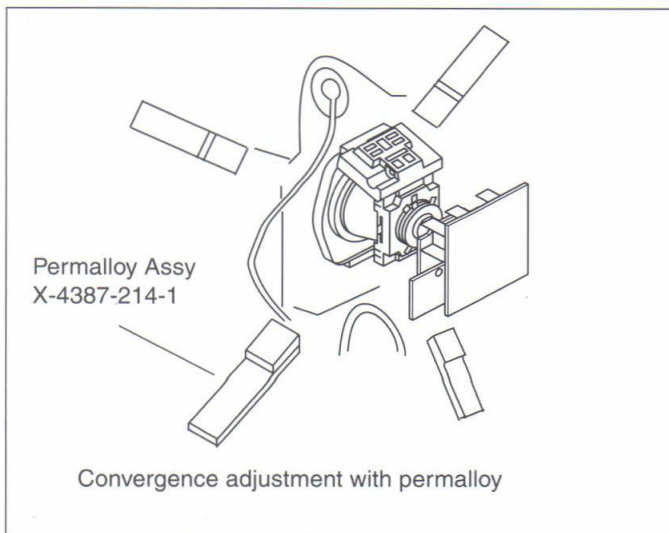
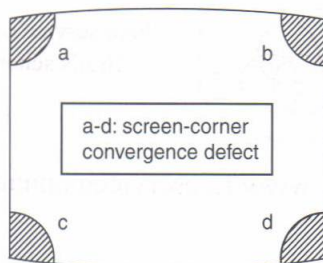


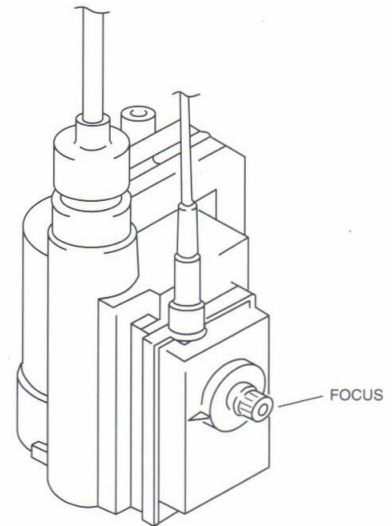
Fig 3-5

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



3-3. FOCUS

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-ring appears on the screen. In this case, adjust the focus to optimize the screen uniformly.



3-4. SCREEN (G2), WHITE BALANCE

[Adjustment in the service mode using the remote commander]

G2 adjustment (RV5376)

1. Input a dot signal from the pattern generator.
2. Set the Picture, Brightness and Colour to minimum.
3. Apply 175V 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.

White balance adjustment for TV mode

1. Input an all-white signal.
2. Enter into the Service Mode by pressing 'TEST', 'TEST' and 'MENU' 'MENU' on the Service Commander.
3. Select 'Backend' from the on screen menu display and press 'OK'.
4. The 'Backend' menu will appear on the screen.
5. Set the contrast to MAX.
6. Set the 'R DRIVE' to 41.
7. Adjust the 'G DRIVE' and 'B DRIVE' so that the white balance becomes optimum.
8. Press the 'OK' button to write the data for each item.
9. Set the contrast to MIN.
10. Set the 'R CUT-OFF' to 31.
11. Adjust the 'G CUT-OFF', and 'B CUT-OFF' with the left and right buttons on the remote commander so that the white balance becomes optimum.
12. Press the 'OK' button to write the data for each item.

Backend

No	Descr.	Def	Min	Max	Data
1	R-on	ON	OFF	ON	ON
2	G-on	ON	OFF	ON	ON
3	B-on	ON	OFF	ON	ON
4	D-col	OFF	OFF	ON	ON
5	Color-axis	2	0	3	2
6	Contrast	63	0	63	63
7	Limit-Luv	3	0	3	3
8	Hue	31	0	63	31
9	Colour	31	0	63	28
10	CTI -Level	2	0	3	2
11	Brightness	31	0	63	31
12	Gamma	2	0	3	2
13	Sharpness	31	0	63	44
14	LTI-Level	0	0	3	0
15	R-Drive	41	0	63	40
16	BLK-Bottom	0	0	3	0
17	G-Drive	41	0	63	38
18	ABL-TH	0	0	3	0
19	B-Drive	41	0	63	21
20	ABL-Mode	2	0	3	2
21	Sub Bright	31	0	63	32
22	VM-Level	2	0	3	2
23	R-Cutoff	31	0	63	41
24	Preover	2	0	3	2
25	G-Cutoff	31	0	63	45
26	DPIC-Level	2	0	3	2
27	B-Cutoff	31	0	63	48
28	DC-Tran	1	0	3	1
29	Sub-Cont	7	0	15	7
30	LRGB2-Lvl	12	0	15	12
31	P-Abl	15	0	15	15
32	DL-Pass	OFF	OFF	ON	OFF
33	Sharp.Fo	ON	OFF	ON	ON
34	Aging-W	OFF	OFF	ON	OFF
35	Aging-B	OFF	OFF	ON	OFF
36	CB-offset1	7	0	15	7
37	CR-offset1	7	0	15	7
38	CB-offset2	7	0	15	7
39	CR-offset2	7	0	15	7
40	Sub Colour	0	-8	8	-1

SECTION 4

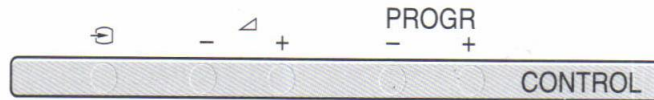
CIRCUIT ADJUSTMENTS

4-1. ELECTRICAL ADJUSTMENTS

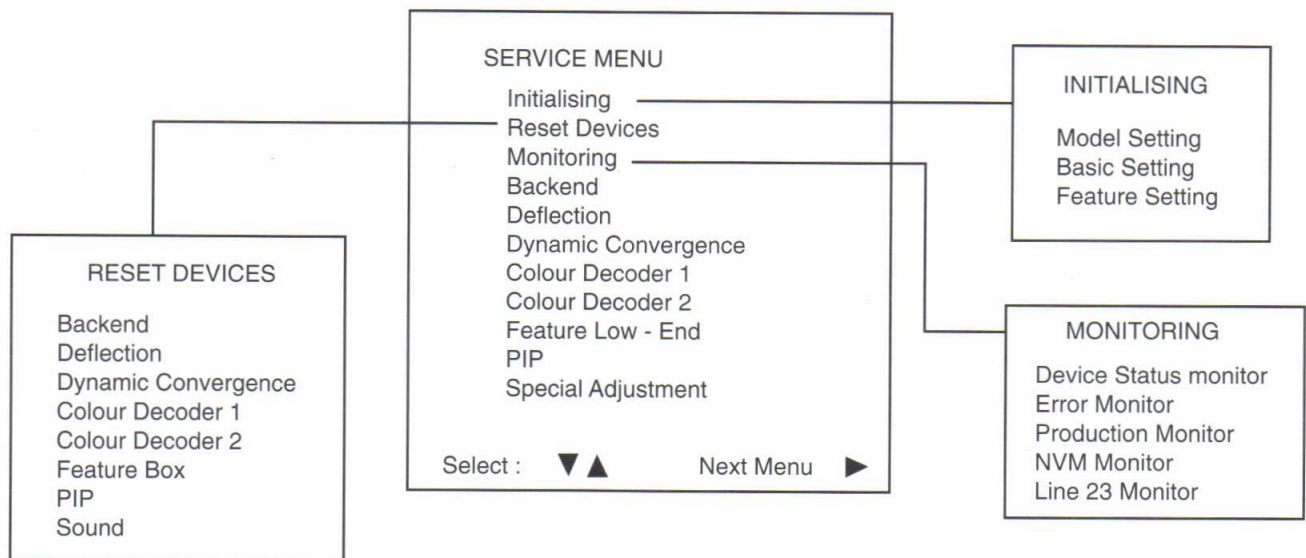
Service adjustments to this model can be performed using the supplied Remote Commander RM-891.

HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch of the set while pressing PROG + (plus) and PROG - (minus) buttons on the top panel.



2. "TT" will appear in the upper right corner of the screen.
3. Press the 'MENU' button twice on the remote commander to obtain the service menu on the screen.



4. Push the joystick up or down on the remote commander to select the adjustment item.
5. Push the right button to proceed to the next menu.
6. If the required adjustment item is 'Deflection', push the down button to move to 'Deflection'.
7. Push the joystick to the right to enter into 'Deflection'.
8. Change the data in order to comply with each standard.

NOTE:

- Before performing any adjustments assure that the correct model has been selected in the Model Setting menu.
- After carrying out the service adjustments, to prevent the customer accessing the Service Menu switch the TV set OFF and then ON.

Model Setting	
1	KV-29FX60A/D/E
2	KV-29FX60B
3	KV-29FX60U
4	KV-29FC60A/D/E
5	KV-29FC60B
6	KV-29FC60K
7	KV-29FC60R
8	KV-29FS60A/D/E
9	KV-29FS60B
10	KV-29FS60K
11	KV-29FS60R
12	KV-28/32FX60A/D/E
13	KV-28/32FX60B
14	KV-28/32FX60K
15	KV-28/32FX60R
16	KV-28/32FX60U
17	KV-29FS60A/D/E
18	KV-29FS60B

Fig.4-1

Basic setting				
No	Descr.	Min	Max	Data
1	Sys.B/G	OFF	ON	ON
2	Sys.D/K	OFF	ON	ON
3	Sys.L	OFF	ON	ON
4	Sys I (UK)	OFF	ON	OFF
5	Sys I (IRL)	OFF	ON	OFF
6	Russian sound	OFF	ON	OFF
7	TXT Nod.option	1	4	3
8	simple PAT	OFF	ON	OFF
9	16:9 CRT	OFF	ON	OFF
10	Sub-woofer	OFF	ON	ON
11	Auto stand-by	OFF	ON	ON
12	comb-filter	OFF	ON	OFF
13	Auto YC det	OFF	ON	ON
14	Auto comb det	OFF	ON	OFF
15	AV2 Available	OFF	ON	ON
16	AV3 Available	OFF	ON	ON
17	AV4 Available	OFF	ON	OFF
18	AV3 Front & rear	OFF	ON	ON
19	SECAM Tape	OFF	ON	OFF

Fig.4-2

NOTE:

The above table is dependant on model, destination & size.

Backend					
No	Descr.	Def	Min	Max	Data
1	R-on	ON	OFF	ON	ON
2	G-on	ON	OFF	ON	ON
3	B-on	ON	OFF	ON	ON
4	D-col	OFF	OFF	ON	ON
5	Color-axis	2	0	3	2
6	Contrast	63	0	63	63
7	Limit-Luv	3	0	3	3
8	Hue	31	0	63	31
9	Colour	31	0	63	28
10	CTI -Level	2	0	3	2
11	Brightness	31	0	63	31
12	Gamma	2	0	3	2
13	Sharpness	31	0	63	44
14	LTI-Level	0	0	3	0
15	R-Drive	41	0	63	40
16	BLK-Bottom	0	0	3	0
17	G-Drive	41	0	63	38
18	ABL-TH	0	0	3	0
19	B-Drive	41	0	63	21
20	ABL-Mode	2	0	3	2
21	Sub Bright	31	0	63	32
22	VM-Level	2	0	3	2
23	R-Cutoff	31	0	63	41
24	Preover	2	0	3	2
25	G-Cutoff	31	0	63	45
26	DPIC-Level	2	0	3	2
27	B-Cutoff	31	0	63	48
28	DC-Tran	1	0	3	1
29	Sub-Cont	7	0	15	7
30	LRGB2-Lvl	12	0	15	12
31	P-Abl	15	0	15	15
32	DL-Pass	OFF	OFF	ON	OFF
33	Sharp.Fo	ON	OFF	ON	ON
34	Aging-W	OFF	OFF	ON	OFF
35	Aging-B	OFF	OFF	ON	OFF
36	CB-offset1	7	0	15	7
37	CR-offset1	7	0	15	7
38	CB-offset2	7	0	15	7
39	CR-offset2	7	0	15	7
40	Sub Colour	0	-8	8	-1

Fig.4-3

Feature setting				
No	Descr.	Min	Max	Data
1	PIP	OFF	ON	ON

Fig.4-4

Colour Decoder 1					
No	Descr.	Def	Min	Max	Data
1	DelayLinMd	OFF	OFF	ON	OFF
2	Gain set	1	0	3	1
3	Y-Delay	7	0	15	7
4	Phase Time	0	0	3	0
5	Vid Ident Md	OFF	OFF	ON	OFF
6	Sync Mode	OFF	OFF	ON	OFF
7	Vid Ident Sw	ON	OFF	ON	ON
8	H-Output	OFF	OFF	ON	OFF
9	Enagating	OFF	OFF	ON	OFF
10	IF Circuit	ON	OFF	ON	ON
11	GP Delay	OFF	OFF	ON	OFF

Fig.4-5

Colour Decoder 2					
No	Descr.	Def	Min	Max	Data
1	DelayLinMd	OFF	OFF	ON	OFF
2	Gain set	1	0	3	1
3	Y-Delay	7	0	15	7
4	Phase Time	0	0	3	0
5	Vid Ident Md	OFF	OFF	ON	OFF
6	Sync Mode	OFF	OFF	ON	OFF
7	Vid Ident Sw	ON	OFF	ON	ON
8	H-Output	OFF	OFF	ON	OFF
9	Enagating	OFF	OFF	ON	OFF
10	IF Circuit	ON	OFF	ON	ON
11	GP Delay	OFF	OFF	ON	OFF

Fig.4-6

Deflection					
No	Descr.	Def	Min	Max	Data
1	V-Size	31	0	63	34
2	V-Position	31	0	63	21
3	V-Comp	1	0	3	1
4	V-Linear	7	0	15	7
5	S-Corr	7	0	15	8
6	H-Size	31	0	63	29
7	EW-DC	OFF	OFF	ON	OFF
8	Pin-Amp	31	0	63	36
9	Up-Cpin	31	0	63	35
10	M-Pin	2	0	3	2
11	Lo-Cpin	31	0	63	37
12	Trapezium	7	0	15	7
13	H-Position	31	0	63	25
14	AFC-Bow	7	0	15	7
15	AFC-Angle	7	0	15	9
16	Up-Vlin	0	0	15	0
17	Lo-Vlin	0	0	15	0

Fig.4-7

Dynamic Convergence					
No	Descr.	Def	Min	Max	Data
1	Range	63	0	63	32
2	H Stat	33	0	63	33
3	H amp L	37	0	63	37
4	H amp R	36	0	63	36
5	Up Y	31	0	63	31
6	Low Y	33	0	63	33
7	Y Up L	30	0	63	30
8	Y Up R	30	0	63	30
9	Y Low L	31	0	63	31
10	Y Low R	30	0	63	30
11	Mbow Up L	31	0	63	31
12	Mbow Up R	32	0	63	32
13	Mbow Low L	32	0	63	32
14	Mbow Low R	32	0	63	32
15	V Stat	32	0	63	32
16	Linearity	128	0	255	104
17	H Centre	32	0	63	32
18	H Trap	32	0	63	32
19	Rotation	0	0	255	0
20	Focus Phase	128	0	255	128

Fig.4-8

Feature Low-End					
No	Descr.	Def	Min	Max	Data
1	F.S.F.M	OFF	OFF	ON	OFF
2	G-Mode	OFF	OFF	ON	OFF
3	Picture Pos	0	0	3	0
4	Comp Mode	OFF	OFF	ON	OFF
5	CompSW	OFF	OFF	ON	OFF
6	Acqu.freq	OFF	OFF	ON	OFF
7	Still Pic	OFF	OFF	ON	OFF
8	Init	OFF	OFF	ON	OFF
9	Dis Feature	ON	OFF	ON	ON
10	Dis Vlimit	ON	OFF	ON	ON
11	Scr Fade	0	0	3	0
12	Hwe Delay	20	0	255	20
13	Auto Vshift	OFF	OFF	ON	OFF
14	Vwe Delay	0	0	127	0
15	SFR sw	OFF	OFF	ON	OFF
16	IPQ	0	0	3	0
17	D.Col Dec	OFF	OFF	ON	OFF
18	Blankfield	0	0	15	0
19	P1.5	OFF	OFF	ON	OFF
20	P1.4	OFF	OFF	ON	OFF
21	P1.3	OFF	OFF	ON	OFF
22	P1.2	OFF	OFF	ON	OFF
23	P1.1	OFF	OFF	ON	OFF
24	Set Vdba	OFF	OFF	ON	OFF
25	Set Sidep	ON	OFF	ON	ON
26	Set Hwe	OFF	OFF	ON	OFF
27	Set Clv	OFF	OFF	ON	OFF
28	Set Hddel	OFF	OFF	ON	OFF
29	Set Hblnd	OFF	OFF	ON	OFF
30	Set Hre	ON	OFF	ON	ON
31	Set Hbda	ON	OFF	ON	ON
32	Set Hdav	ON	OFF	ON	ON
33	Vbdasta	0	0	255	0
34	Vsdasto	0	0	255	0
35	Msbhwesto	OFF	OFF	ON	OFF
36	Msbhwesta	OFF	OFF	ON	OFF
37	Msbvbdasto	OFF	OFF	ON	OFF
38	Msbvbdasta	OFF	OFF	ON	OFF
39	Hdavsta	40	0	255	40
40	Hdavsto	255	0	255	255

Feature Low-End(Cont.)					
No	Descr.	Def	Min	Max	Data
41	Hbdasta	223	0	255	223
42	Hbdasto	222	0	255	222
43	Hresta	38	0	255	38
44	Hresto	202	0	255	202
45	Hblndsta	31	0	255	31
46	Hblndsto	30	0	255	30
47	MsbHblndsta	OFF	OFF	ON	OFF
48	MsbHblndsto	OFF	OFF	ON	OFF
49	Msb Hresto	ON	OFF	ON	ON
50	Msb Hresta	OFF	OFF	ON	OFF
51	Msbhbdasta	ON	OFF	ON	ON
52	Msbhbdasto	ON	OFF	ON	ON
53	Msbhdavsto	ON	OFF	ON	ON
54	Msbhdavsta	OFF	OFF	ON	OFF
55	Hddel	0	0	15	0
56	Clvsta	0	0	255	0
57	Clvsto	9	0	255	9
58	Hwesta	44	0	255	44
59	Hwesto	208	0	255	208
60	Ex-Thres	OFF	OFF	ON	OFF
61	Wes	ON	OFF	ON	OFF
62	Demo mode	ON	OFF	ON	OFF
63	Limerick NR	0	0	4	0
64	Nthr	0	0	255	2
65	Wval	200	0	255	200
66	Agc Ych	203	0	255	203
67	Agc Uvch	209	0	255	209
68	Aal-Bypass	OFF	OFF	ON	OFF
69	Stby Fr	OFF	OFF	ON	OFF
70	Lsb Agc-Uv	OFF	OFF	ON	OFF
71	Lsb Agc-Y	OFF	OFF	ON	OFF
72	Vcl cor	0	0	3	0
73	Ucl cor	0	0	3	0
74	Uv cor mode	0	0	3	0
75	Uvcl tau	3	0	3	3
76	Uvcol Lvl	0	0	3	0
77	Fil Mem	OFF	OFF	ON	OFF
78	Overl Thr	1	0	3	1
79	Y delay f	4	0	7	4
80	Dcti pdxsel	ON	OFF	ON	ON

Fig.4-9

Feature Low-End (Cont.)					
No	Descr.	Def	Min	Max	Data
81	Dcti Thres	0	0	15	0
82	Dcti Gain	0	0	7	0
83	Dcti Super	ON	OFF	ON	ON
84	Dcti Fil	ON	OFF	ON	ON
85	Dcti Prot	ON	OFF	ON	ON
86	Dcti Sep	ON	OFF	ON	ON
87	Dcti Limit	2	0	3	2
88	Peak Beta	0	0	7	0
89	Peak Alpha	2	0	7	2
90	Peak Neg g	0	0	3	0
91	Peak Delta	0	0	3	0
92	Peak Tau	0	0	7	0
93	Peak Corth	0	0	15	0
94	Overlay V	0	0	15	0
95	Overlay U	0	0	15	0
96	Overlay Y	10	0	255	10
97	Sidep sta	240	0	255	240
98	Sidep sto	36	0	255	36
99	Y delay B	7	0	7	7
100	Invert UV	ON	OFF	ON	ON
101	Output Range	ON	OFF	ON	ON
102	Sidep Fdel	0	0	3	0

PIP					
No	Descr.	Def	Min	Max	Data
1	Freeze	OFF	OFF	ON	OFF
2	Frame	ON	OFF	ON	ON
3	Pipon	ON	OFF	ON	OFF
4	Seldel	1	0	15	1
5	Mixdis	ON	OFF	ON	ON
6	H-Poshi	0	0	3	0
7	H-Pos	137	0	255	137
8	V-Pos	59	0	255	59
9	Y-Delay	0	0	7	0
10	V-Dec	OFF	OFF	ON	OFF
11	H-Dec	OFF	OFF	ON	OFF
12	Insvh	ON	OFF	ON	ON
13	Chrins	ON	OFF	ON	ON
14	Pmod	0	0	3	0
15	Imod	0	0	3	0
16	Clisw	ON	OFF	ON	ON
17	H side	4	0	15	4
18	Vsiisq	OFF	OFF	ON	OFF
19	Vsidel	0	0	31	0
20	Parasynd	ON	OFF	ON	ON
21	Vspisq	OFF	OFF	ON	OFF
22	Vspdel	10	0	31	10
23	Con	1	0	15	1
24	Fry	8	0	15	8
25	Frv	3	0	15	3
26	Fru	4	0	15	4
27	Sel Down	OFF	OFF	ON	OFF
28	Frwidv	1	0	3	1
29	Frwidh	2	0	7	2
30	Mat	4	0	7	4
31	Daconst	OFF	OFF	ON	OFF
32	Plltc	1	0	3	1
33	Dacontle	OFF	OFF	ON	OFF
34	Left	83	0	255	83
35	RightHi	1	0	3	1
36	Right	192	0	255	192
37	Up	46	0	255	46
38	Down	189	0	255	189

Fig.4-10

Sound					
No	Descr.	Def	Min	Max	Data
1	Ref.Level	40	0	20	40
2	Auto-gain	ON	OFF	ON	ON
3	Ana-in	0	0	1	0
4	Corr-mute	ON	OFF	ON	ON
5	Clock out	ON	OFF	ON	ON
6	AM-gain	ON	OFF	ON	ON
7	Clip mode	0	0	2	0
8	SCART1 Vol	79	0	127	79
9	SCART2 Vol	79	0	127	79
10	SCART Pr	27	0	127	27
11	Izs1-pr	16	0	127	16
12	Izs2-pr	16	0	127	16
13	FM pr	27	0	127	27
14	BG Nic-pr	53	0	127	53
15	L Nic-pr	59	0	127	59
16	DK Nic-pr	53	0	127	53
17	I Nic-pr	97	0	127	97
18	Irl Nic-pr	97	0	127	97
19	AVC-Decay	2	0	8	2
20	Subw-vol	0	0	-127	0
21	Subw-freq	20	5	40	20
22	Subw-Hpuss	OFF	OFF	ON	OFF
23	Spat-stre	127	0	-1	127
24	Spat-Coeff	0	0	8	0
25	Bass offs	0	-3	3	0
26	Treble offs	0	-3	3	0
27	Loudn offs	0	0	9	0
28	Hp-voloffs	-2	-5	5	-2
29	M-S Limit	30	-128	127	30
30	M-B Limit	-30	-128	127	-30
31	S-M Limit	12	-128	127	12
32	S-B Limit	-20	-128	127	-20
33	B-M Limit	-12	-128	127	-12
34	B-S Limit	20	-128	127	20
35	Err.Max	40	0	255	40
36	Err.Min	14	0	255	18

Fig.4-11

Special Adjustment				
No	Descr.	Min	Max	Data
1	RGB Level	0	7	0
2	RGB Gain	0	31	9
3	RGB PatLevel	0	7	7
4	RGB Patgain	0	31	31
5	RGB H-position	-10	10	-1
6	Extra Fw	0	255	255
7	EPG Chks Check	OFF	ON	ON
8	Slicer High	OFF	ON	ON
9	FCW Wide	OFF	ON	ON
10	High PII	OFF	ON	OFF
11	Panic offset	0	2	0
12	Wide Mute	OFF	ON	ON

Fig.4-12

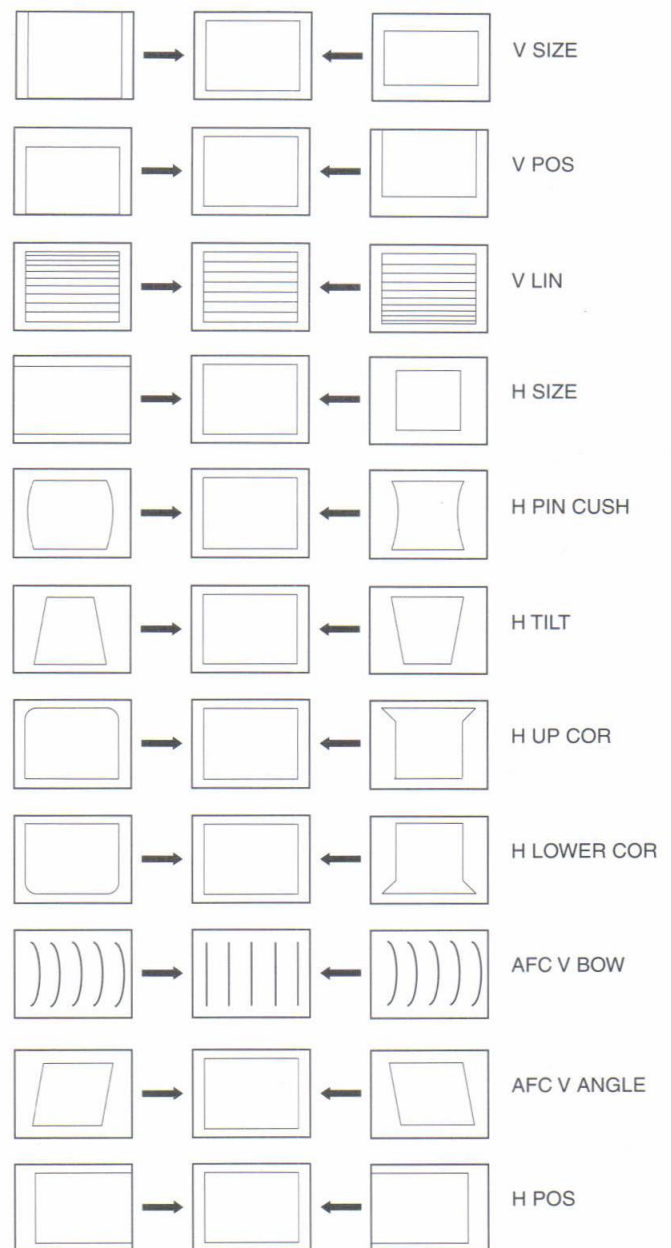
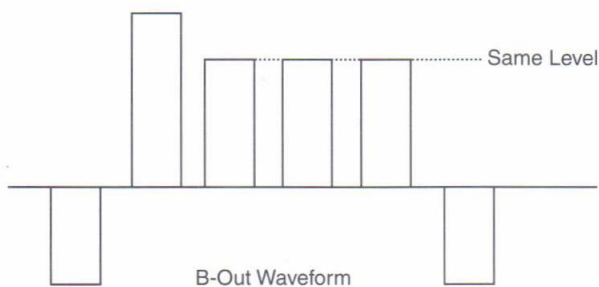
DEFLECTION SYSTEM ADJUSTMENT

1. Enter into the service mode and select 'Deflection'. The 'Deflect' adjustment menu will be displayed.
2. Select and adjust each item to obtain the optimum image.

4-2.VOLUME ELECTRICAL ADJUSTMENTS

Sub Colour Adjustment

1. Input a PAL colour bar signal.
2. Connect an oscilloscope to CN5400 pin 5 on the C board.
3. Enter into the 'SERVICE MODE'.
4. Choose 'Backend'.
5. Adjust Sub Colour data so that the right sides of the waveforms are of equal height.



4-3. TEST MODE 2:

Is available by pressing 'TEST' button twice, OSD 'TT' appears. The functions described below are available by pressing the two numbers. To release the Test mode 2, press 0, 10, 20 ... twice or switch the TV set into Stand-by Mode. Pressing the two Local Control buttons (+ and -) during Power ON will also switch into 'TT' mode.

In 'TT' mode, it is possible to remove the Menu from the screen by pressing the Speaker Off button once. Pressing the Speaker OFF button a second time will cause the menu to reappear. The Function is kept even when the menu is not displayed !!.

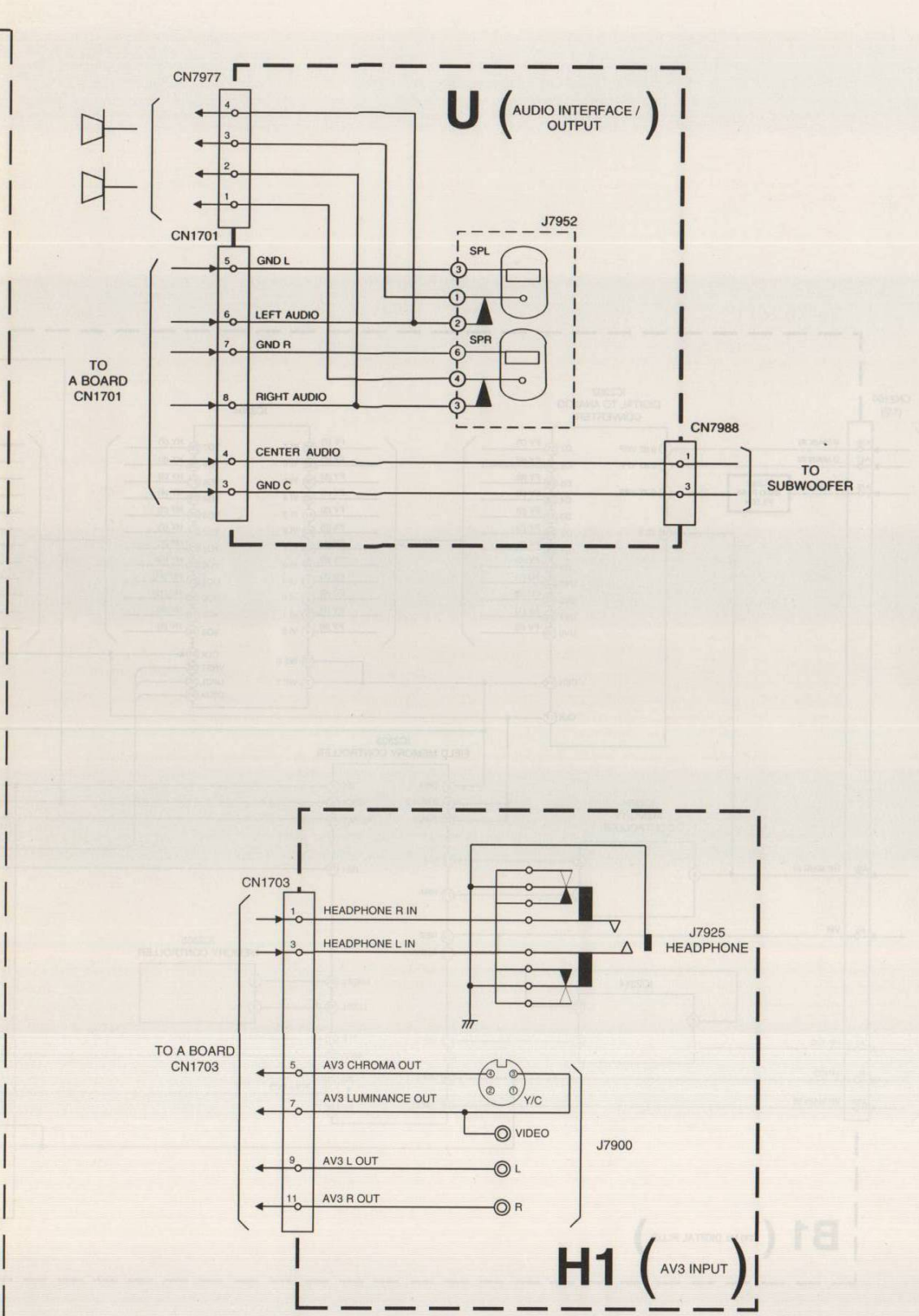
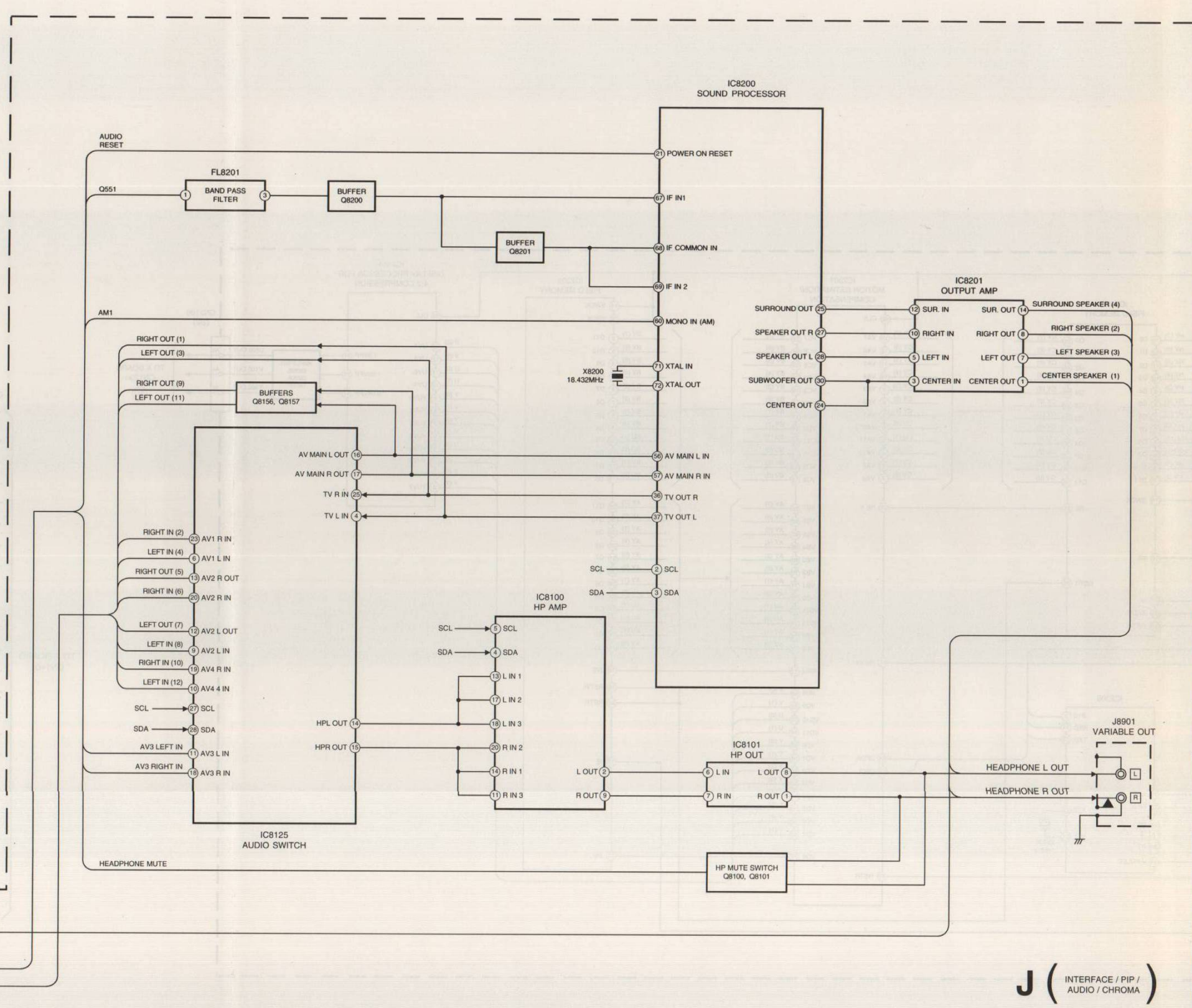
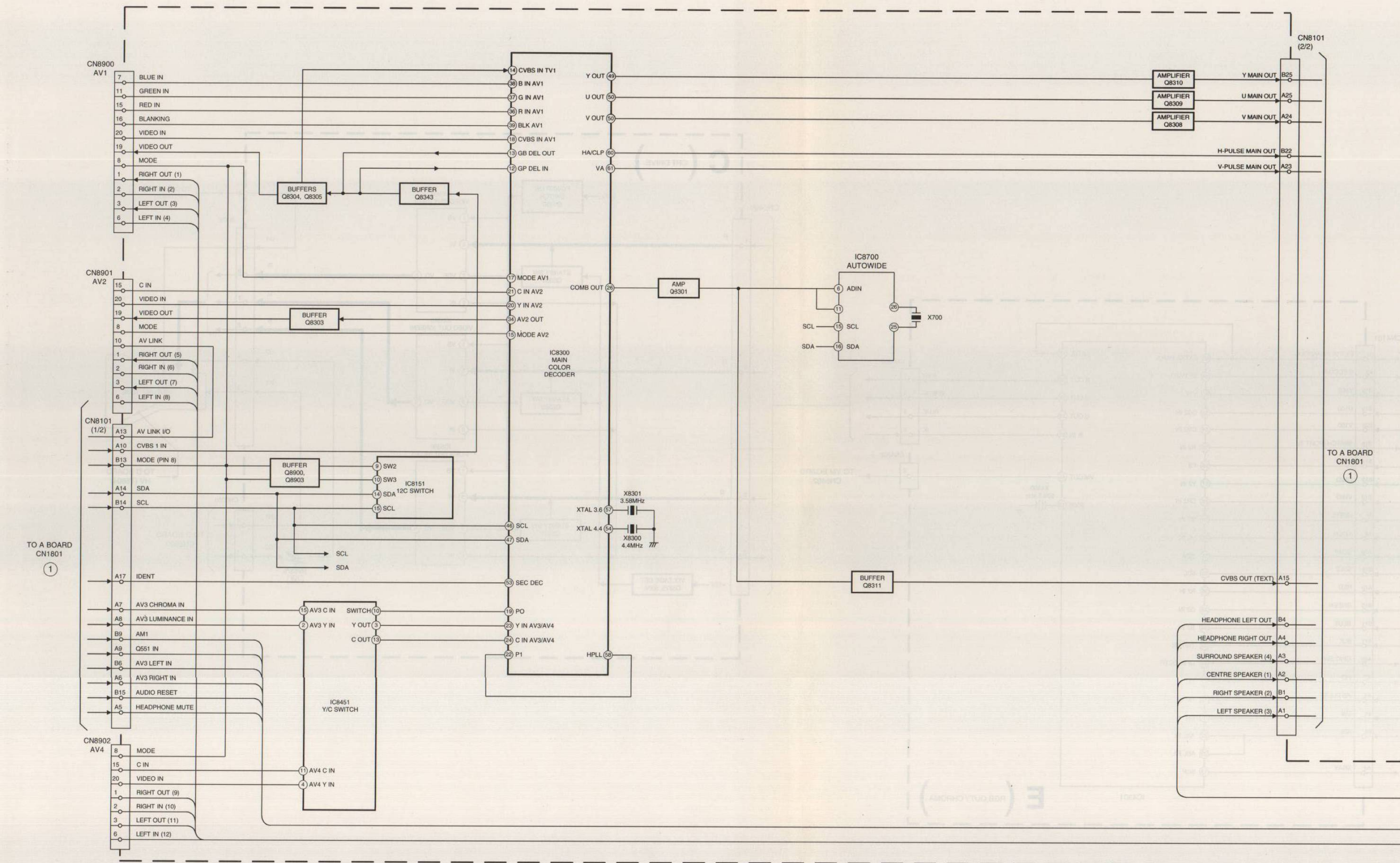
00	Switch back to normal mode - 'TT' mode off
01	Set picture maximum
02	Set picture minimum
03	Set speaker/headphone Volume to 30%
04	Set speaker/headphone Volume to 50%
05	Set speaker/headphone Volume to 65%
06	Set speaker/headphone Volume to 80%
07	Ageing Mode
08	Shipping Condition
09	Language Reset
10	No function
11	Sub picture adjustment
12	Sub colour adjustment
13	Display software version and TV set configuration
14	Production Info Display
15	Picture Rotation
16	Picture level 50%
17	Audio mute on
18	No function
19	Sub brightness adjustment
20	See 'TT10'
21	Destination A includes text settings, display TV status
22	Destination L includes text settings, display TV status
23	Destination E includes text settings, display TV status
24	Destination U includes text settings, display TV status
25	Destination D includes text settings, display TV status
26	Destination B includes text settings, display TV status
27	Destination K includes text settings, display TV status
28	Destination R includes text settings, display TV status
30	See 'TT10'
31	Geometry Adjustment 1
32	Geometry Adjustment 2
33	Error monitor
34	No function
35	CRT 4:3 < > 16:9 ; Display TV status
36	Line 23 detection switch
37	Velocity Modulation (VM) test
38	No function
39	No function
40	See 'TT10'

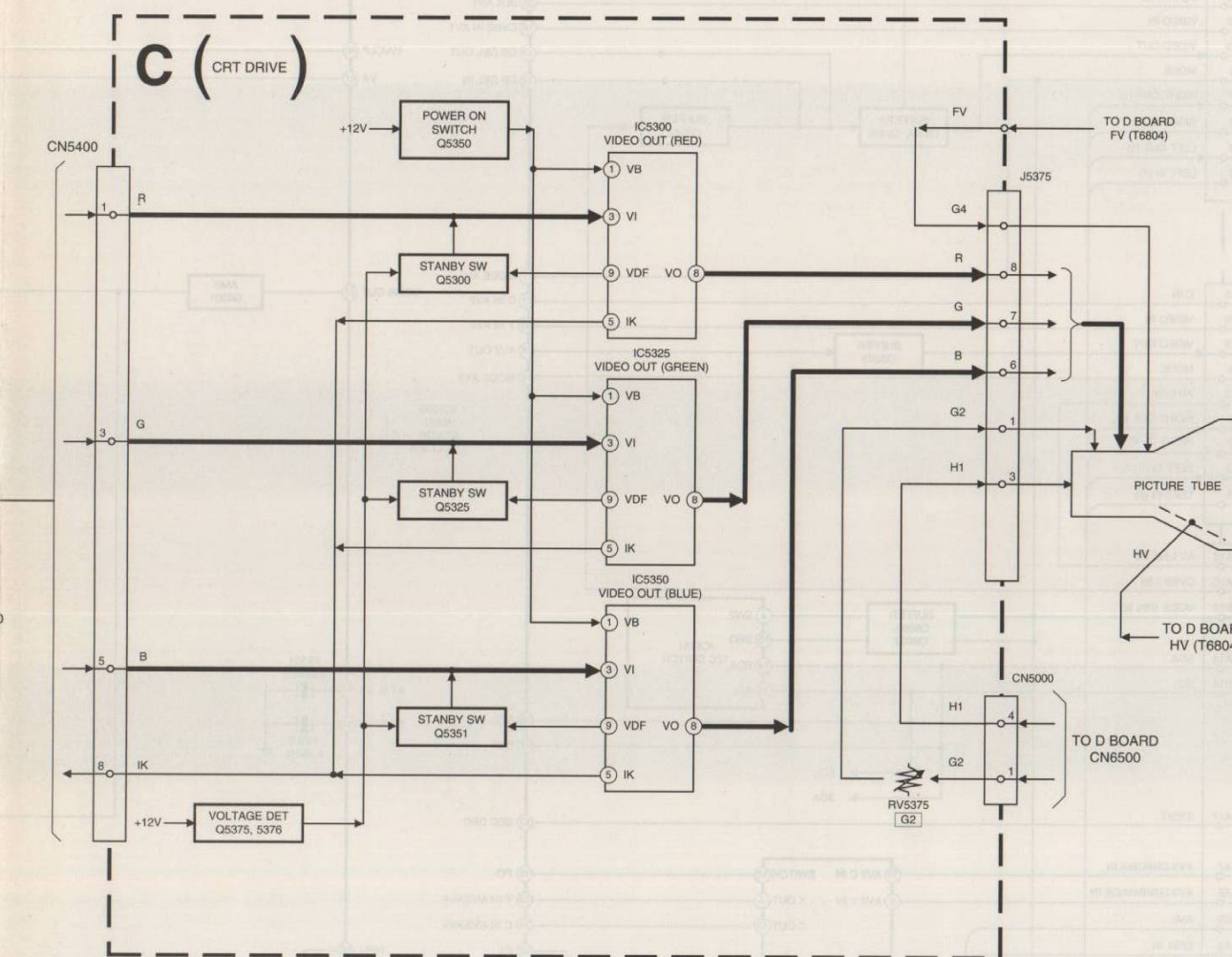
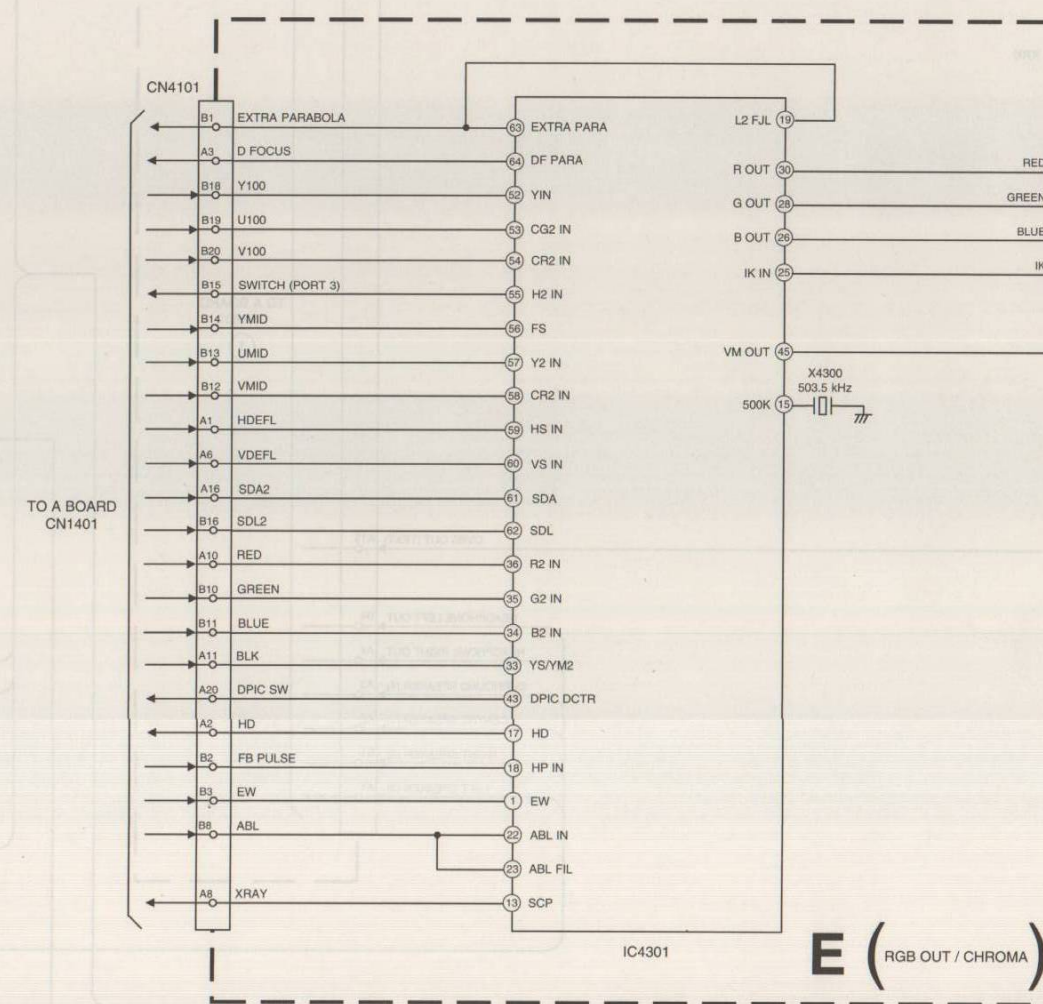
41	Screen mode check
42	Re initialise geometry
43	No function
44	No function
45	No function
46	Reserved for dealer commander
47	Re initialise NVM
48	Set NVM as non virgin
49	Set NVM as virgin
50	See 'TT10'
51	Set Dolby volume to 90%
52	Dolby on left speaker only
53	Dolby on right speaker only
54	Dolby on left centre only
55	Dolby on surround speaker only
56	No function
-	
59	
60	See 'TT10'
61	Service mode
62	Production mode
65	Reset error codes
68	Ignore errors on
69	Ignore errors off
70	See 'TT10'
71	No function
-	
72	
73	Clear programs
74	No function
-	
79	
80	See 'TT10'
81	PAP H adjustment left image
82	PAP H adjustment right image
83	No function
-	
86	
87	Personal ID reset
88	Parental Lock off
89	No function
90	See 'TT10'

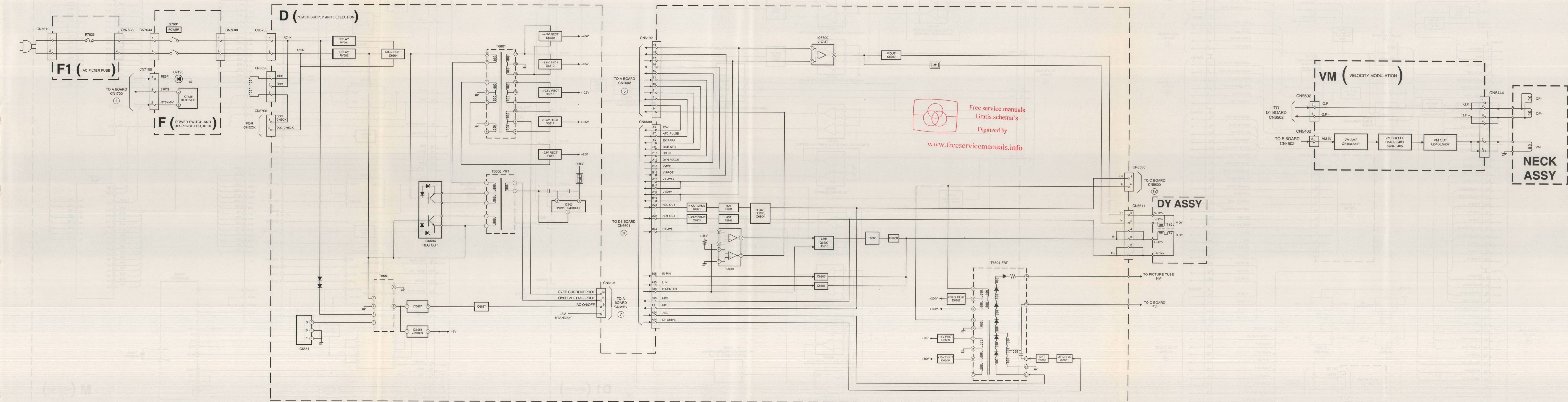
Memo

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

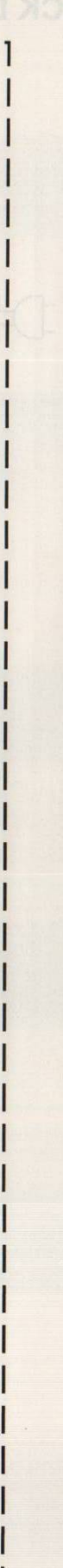
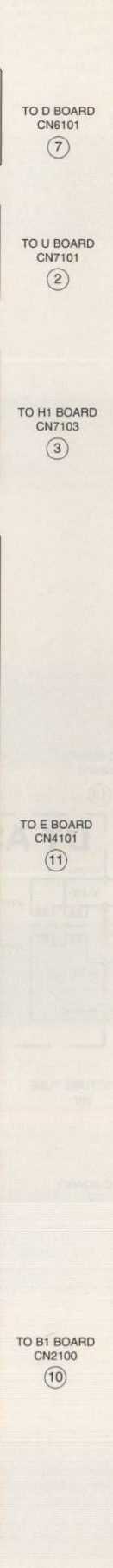
5-1 BLOCK DIAGRAMS (1)





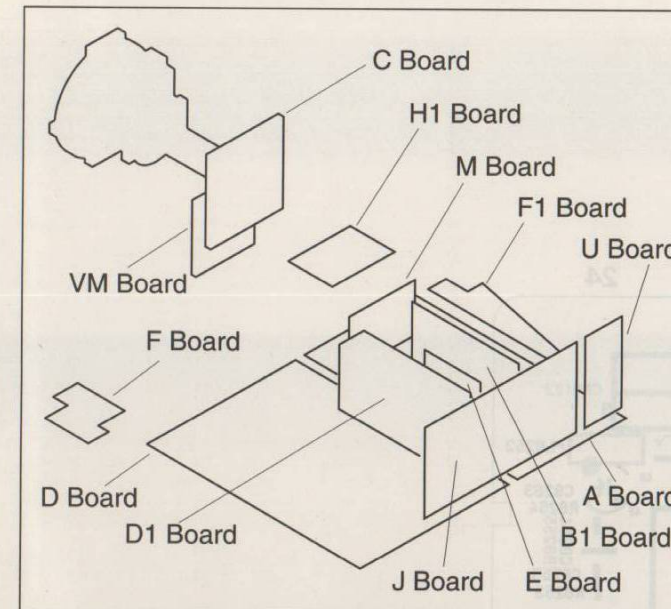


D1 (DEFLECTION)



C [RGB OUT]

5-2. CIRCUIT BOARD LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note :

- All capacitors are in μF unless otherwise noted.
- pF : μF 50V or less are not indicated except for electrolytic types.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5mm
Electrical power rating : 1/4W

- Chip resistors are 1/10W
- All resistors are in ohms.
- $k = 1000$ ohms, $M = 1000,000$ ohms

: nonflammable resistor.

: fusible resistor.

: internal component.

: panel designation or adjustment for repair.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- All voltages are in Volts.
- Readings are taken with a 10Mohm digital multimeter.
- Readings are taken with a color bar input signal.
- Voltage variations may be noted due to normal production tolerances.

: B + bus.

: B - bus.

: RF signal path.

: earth - ground.

: earth - chassis.

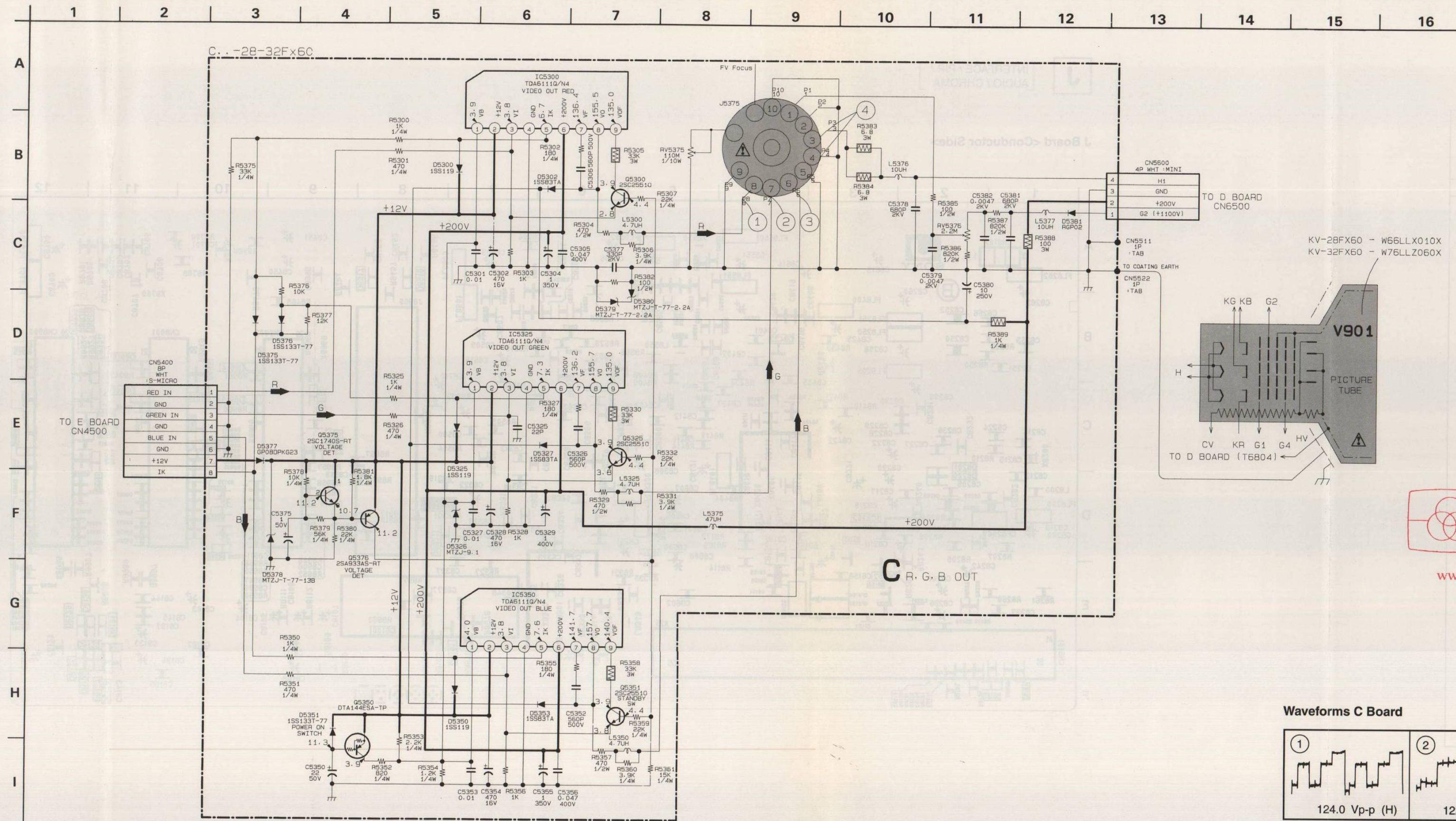
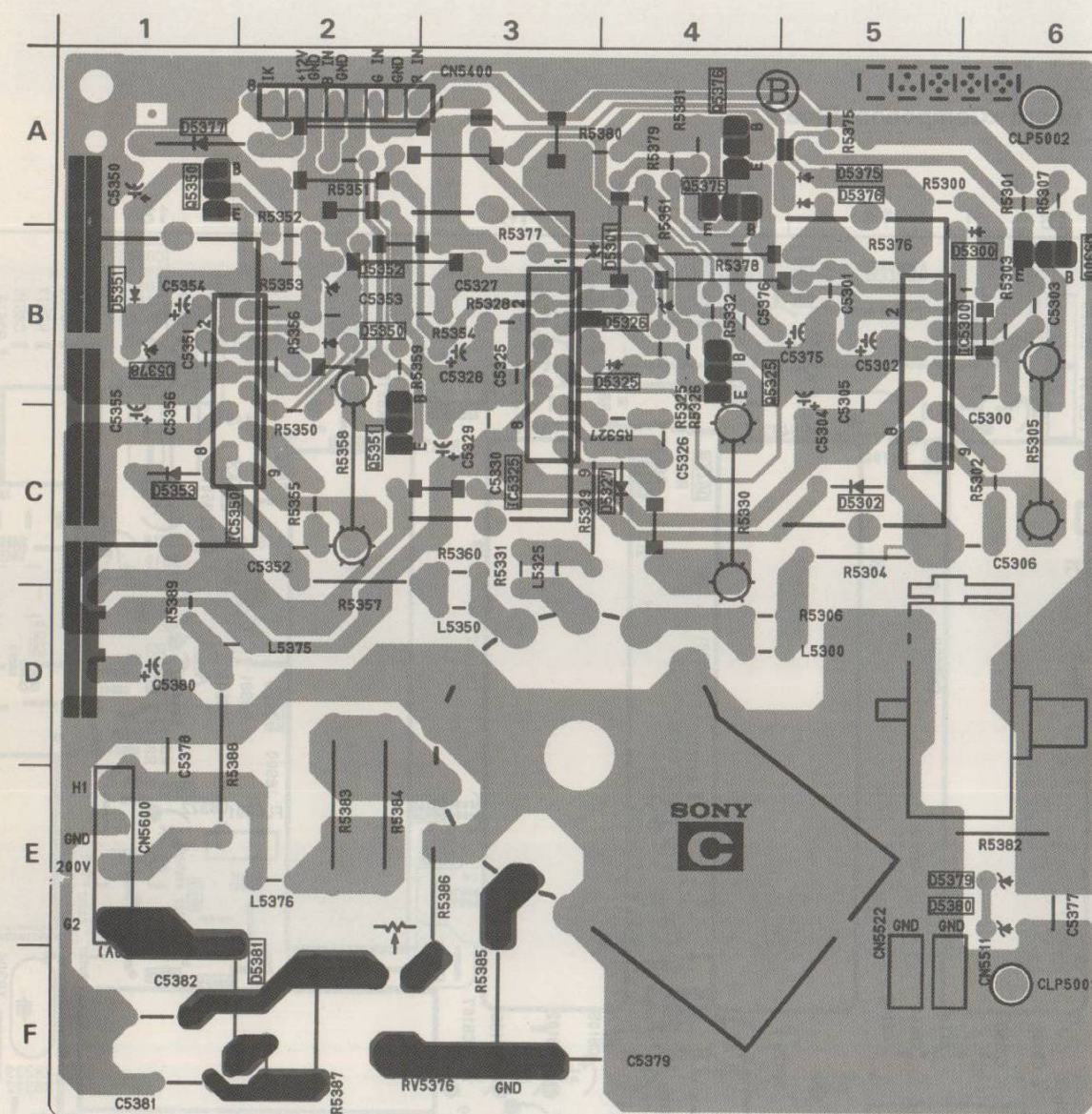
Reference Information

RESISTOR	RN	: METAL FILM
	RC	: SOLID
	FPRD	: NON FLAMMABLE CARBON
	FUSE	: NON FLAMMABLE FUSIBLE
	RS	: NON FLAMMABLE METAL OXIDE
	RB	: NON FLAMMABLE CEMENT
	RW	: NON FLAMMABLE WIREWOUND
		: ADJUSTMENT RESISTOR
COIL	LF-8L	: MICRO INDUCTOR
CAPACITOR	TA	: TANTALUM
	PS	: STYROL
	PP	: POLYPROPYLENE
	PT	: MYLAR
	MPS	: METALIZED POLYESTER
	MPP	: METALIZED POLYPROPYLENE
	ALB	: BIPOLAR
	ALT	: HIGH TEMPERATURE
	ALR	: HIGH RIPPLE

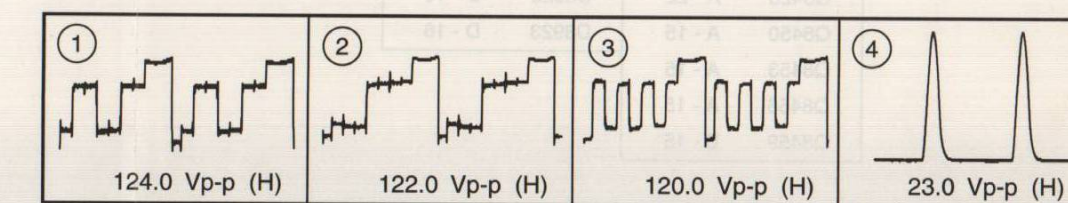
Note : The components identified by shading and marked are critical for safety. Replace only with the part numbers specified in the parts list.

Note : Les composants identifiés par une trame et par une marque sont d'une importance critique pour la sécurité. Ne les remplacer que par des pièces de numéro spécifié.

C Board



Waveforms C Board



C BOARD

IC	
IC5300	B - 6
IC5325	C - 3
IC5350	C - 1
TRANSISTOR	
Q5300	B - 6
Q5325	B - 5
Q5350	A - 1
Q5351	C - 2
Q5375	A - 4
Q5376	A - 4
DIODE	
D5300	B - 6
D5302	C - 5
D5325	B - 4
D5326	B - 4
D5327	C - 4
D5350	B - 2
D5351	B - 1
D5353	C - 1
D5375	A - 5
D5376	A - 5
D5377	A - 1
D5378	B - 1
D5379	E - 5
D5380	E - 5
D5381	F - 2

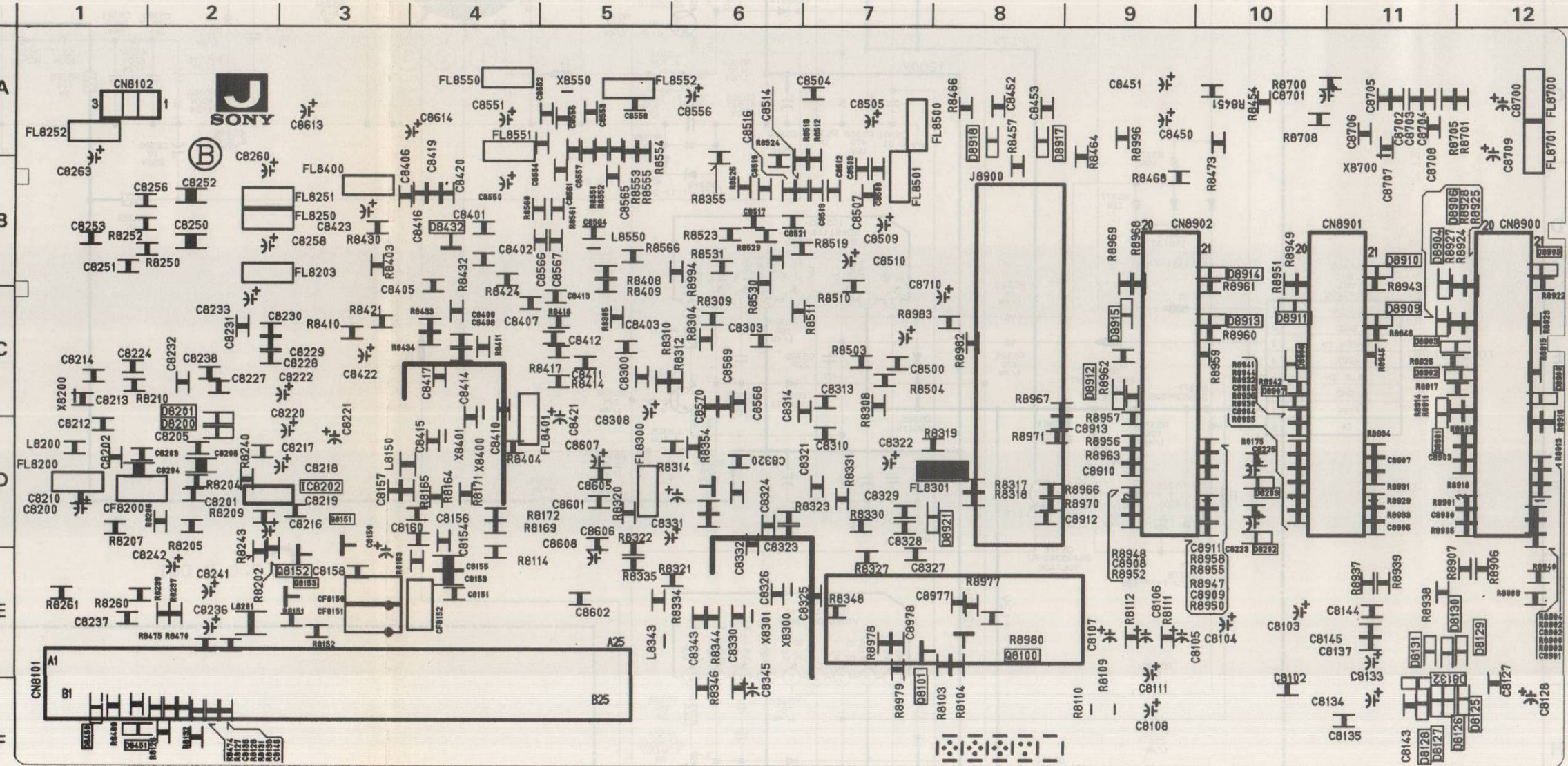
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Gratis schema's
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J BOARD

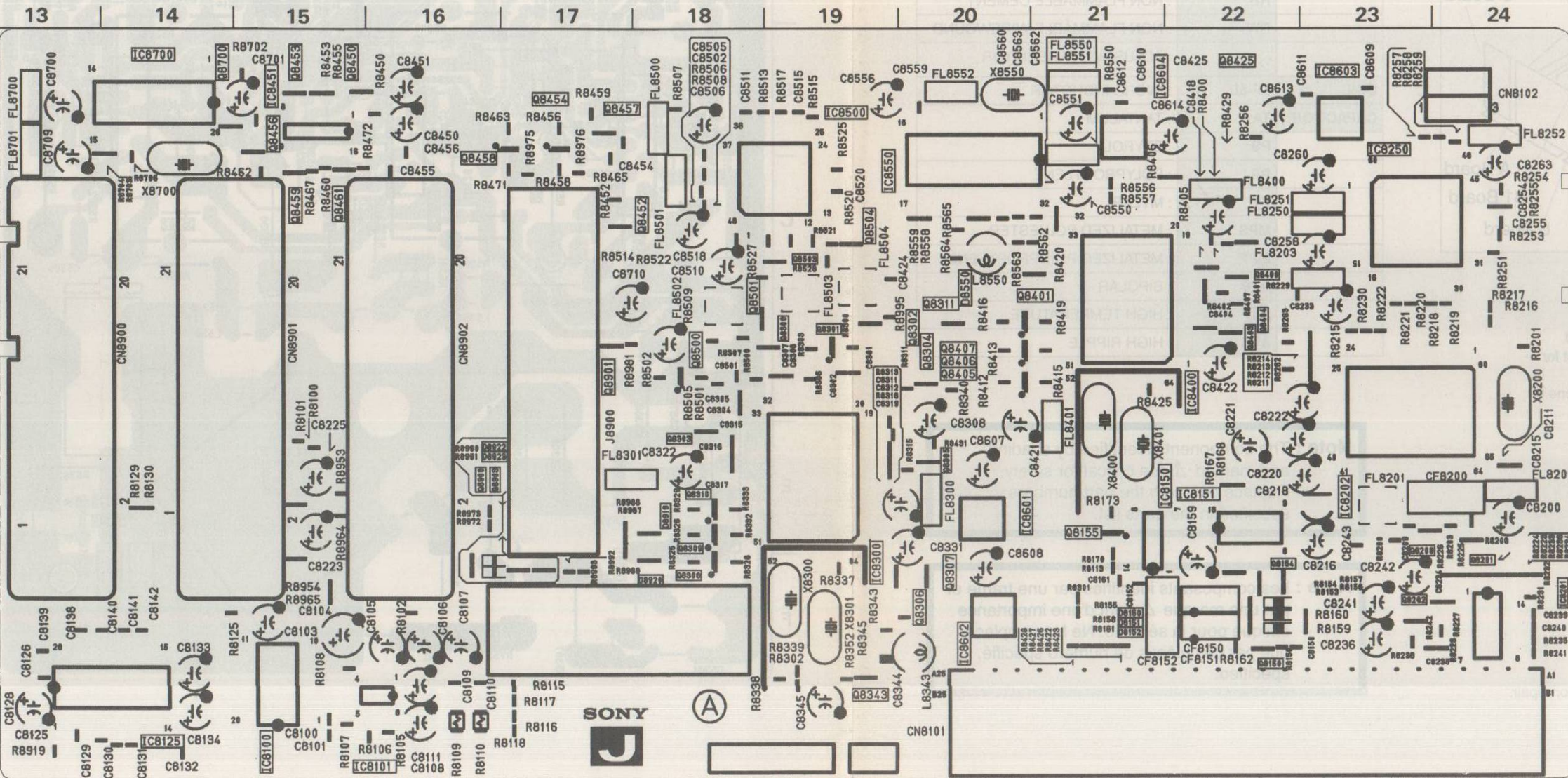
IC		Q8461	B - 15
IC8100	F - 15	Q8900	D - 16
IC8101	F - 15	Q8901	C - 17
IC8125	F - 14	Q8903	D - 16
IC8151	D - 22	DIODE	
IC8201	E - 24	D8125	F - 12
IC8202	D - 23	D8126	F - 12
IC8300	E - 19	D8127	F - 11
IC8400	C - 22	D8128	F - 11
IC8451	A - 15	D8129	E - 12
IC8550	B - 19	D8130	E - 12
IC8601	D - 20	D8131	E - 11
IC8602	E - 20	D8200	D - 2
IC8603	A - 23	D8201	D - 2
IC8604	A - 21	D8202	E - 10
TRANSISTOR		D8203	D - 10
Q8200	E - 23	D8432	B - 4
Q8201	E - 24	D8450	F - 1
Q8202	E - 23	D8451	F - 1
Q8303	C - 19	D8550	C - 20
Q8304	C - 20	D8900	C - 12
Q8305	D - 20	D8902	C - 11
Q8307	D - 18	D8903	C - 11
Q8308	E - 18	D8904	B - 11
Q8309	E - 18	D8905	B - 12
Q8310	D - 18	D8906	B - 12
Q8311	C - 20	D8907	C - 10
Q8343	F - 19	D8908	C - 10
Q8400	B - 22	D8909	C - 11
Q8401	C - 20	D8910	B - 11
Q8403	C - 22	D8911	C - 10
Q8404	C - 22	D8912	C - 9
Q8405	C - 20	D8913	C - 10
Q8406	C - 20	D8914	B - 10
Q8407	C - 20	D8915	C - 9
Q8425	A - 22	D8922	D - 16
Q8450	A - 15	D8923	D - 16
Q8453	A - 15		
Q8456	A - 15		
Q8459	B - 15		

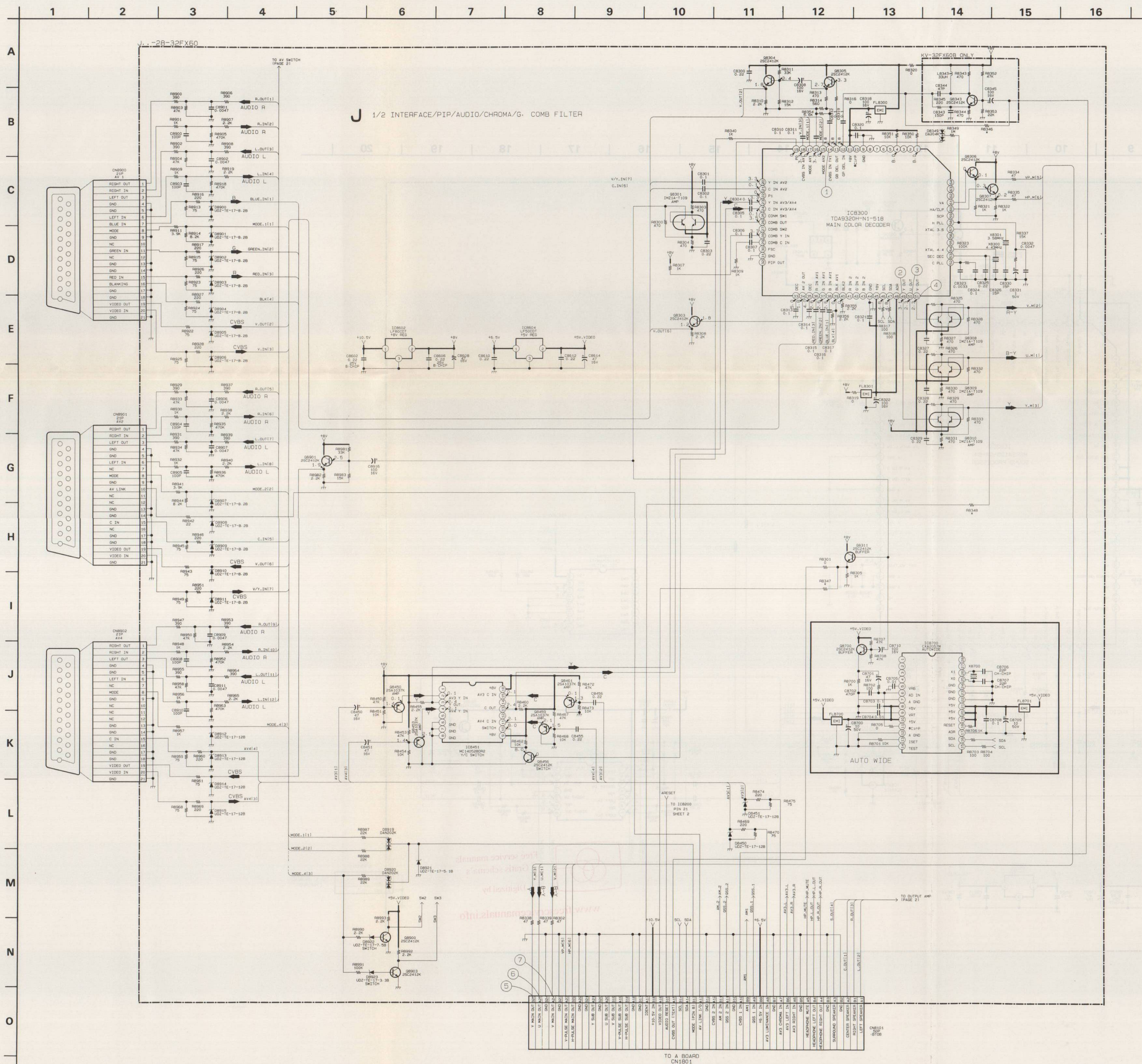
J
INTERFACE / PIP /
AUDIO / CHROMA

J Board <Conductor Side>



J Board <Component Side>

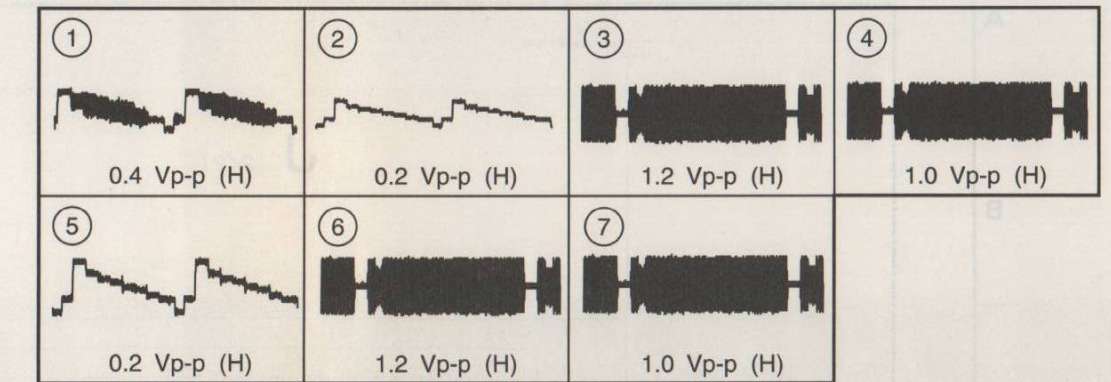


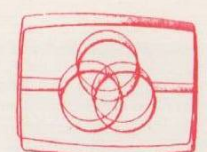


J BOARD * MARK

Ref	28FX60A	28FX60B	28FX60D	28FX60E	28FX60K	28FX60R	28FX60U	32FX60A	32FX60B	32FX60D	32FX60E	32FX60K	32FX60R	32FX60U
R8347	-	-	-	-	-	-	-	-	100	-	-	-	-	-
R8348	-	-	-	-	-	-	-	-	SHORT 0	-	-	-	-	-

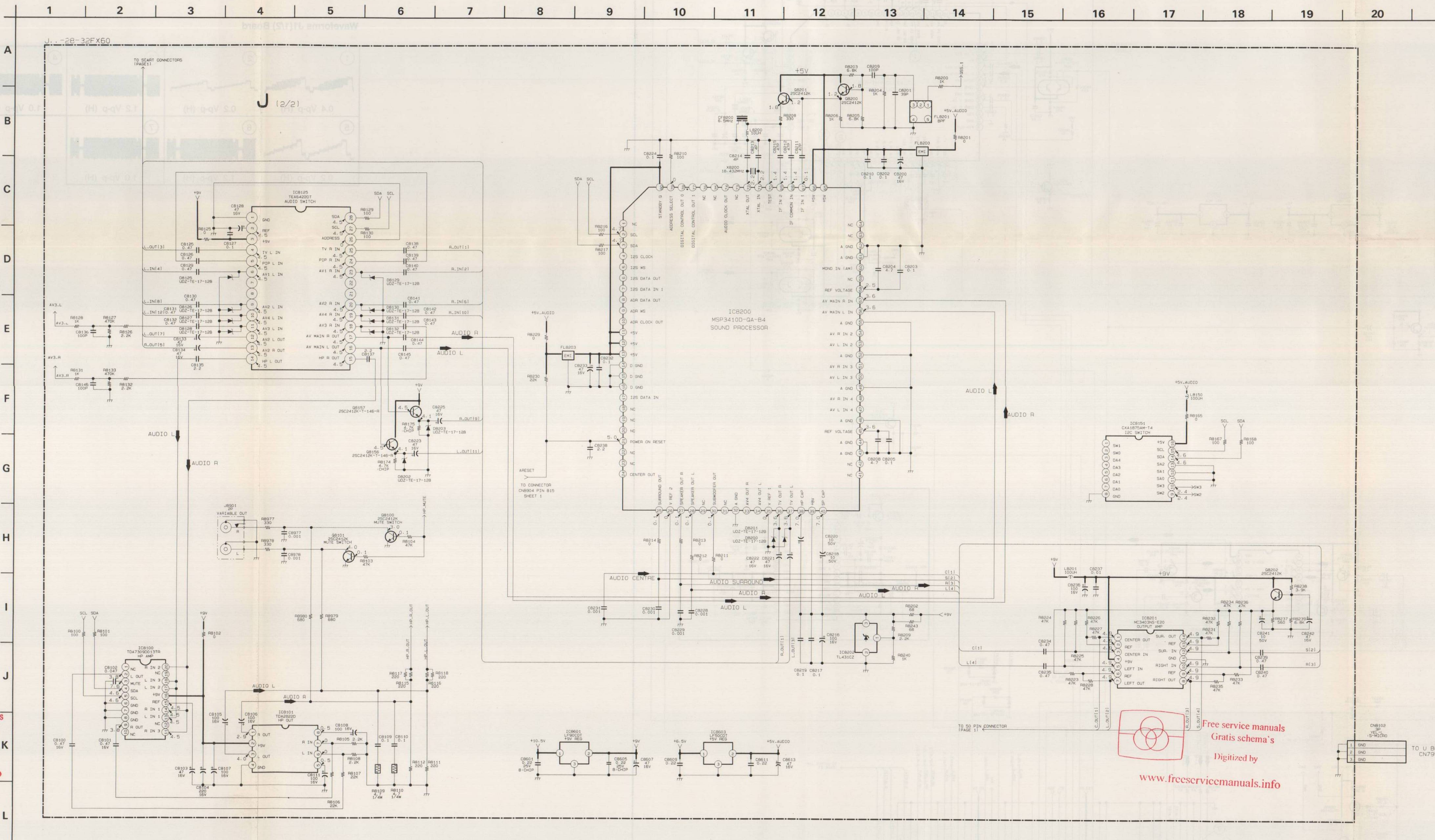
Waveforms J1(1/2) Board

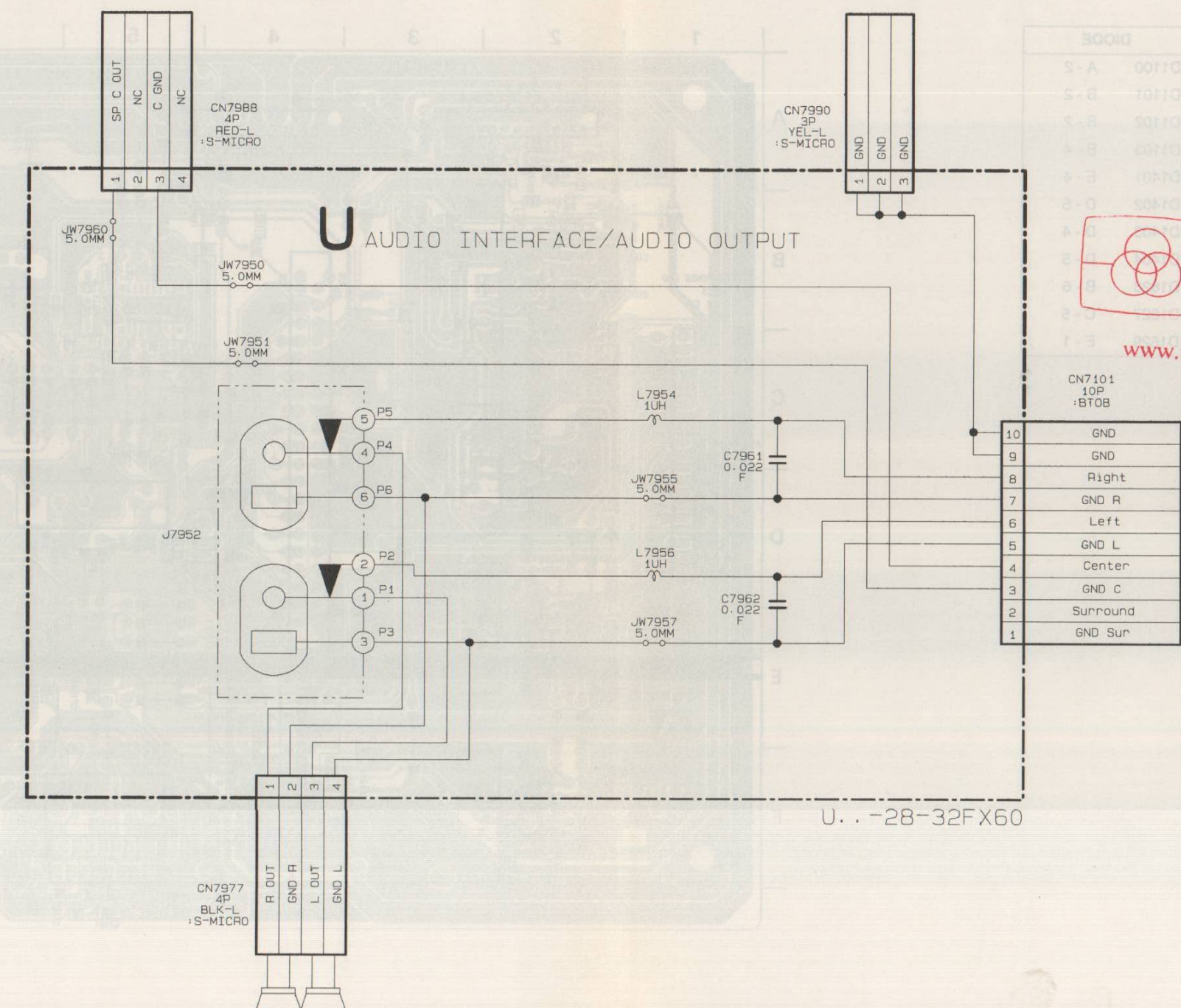
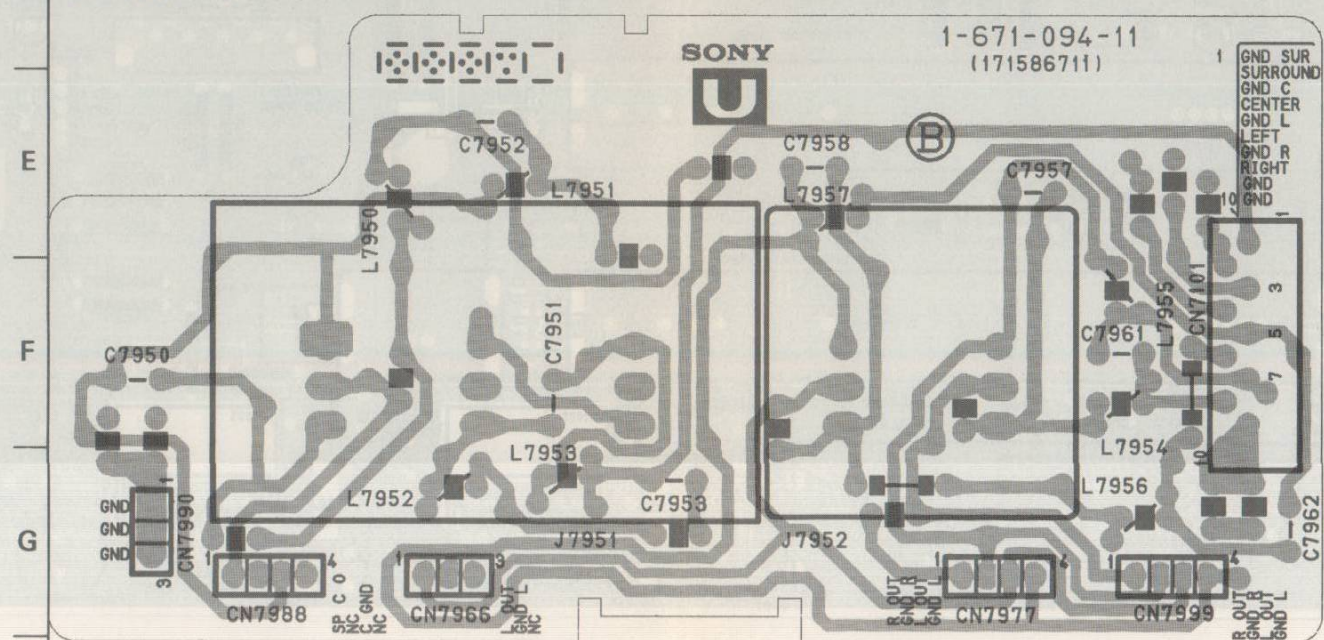




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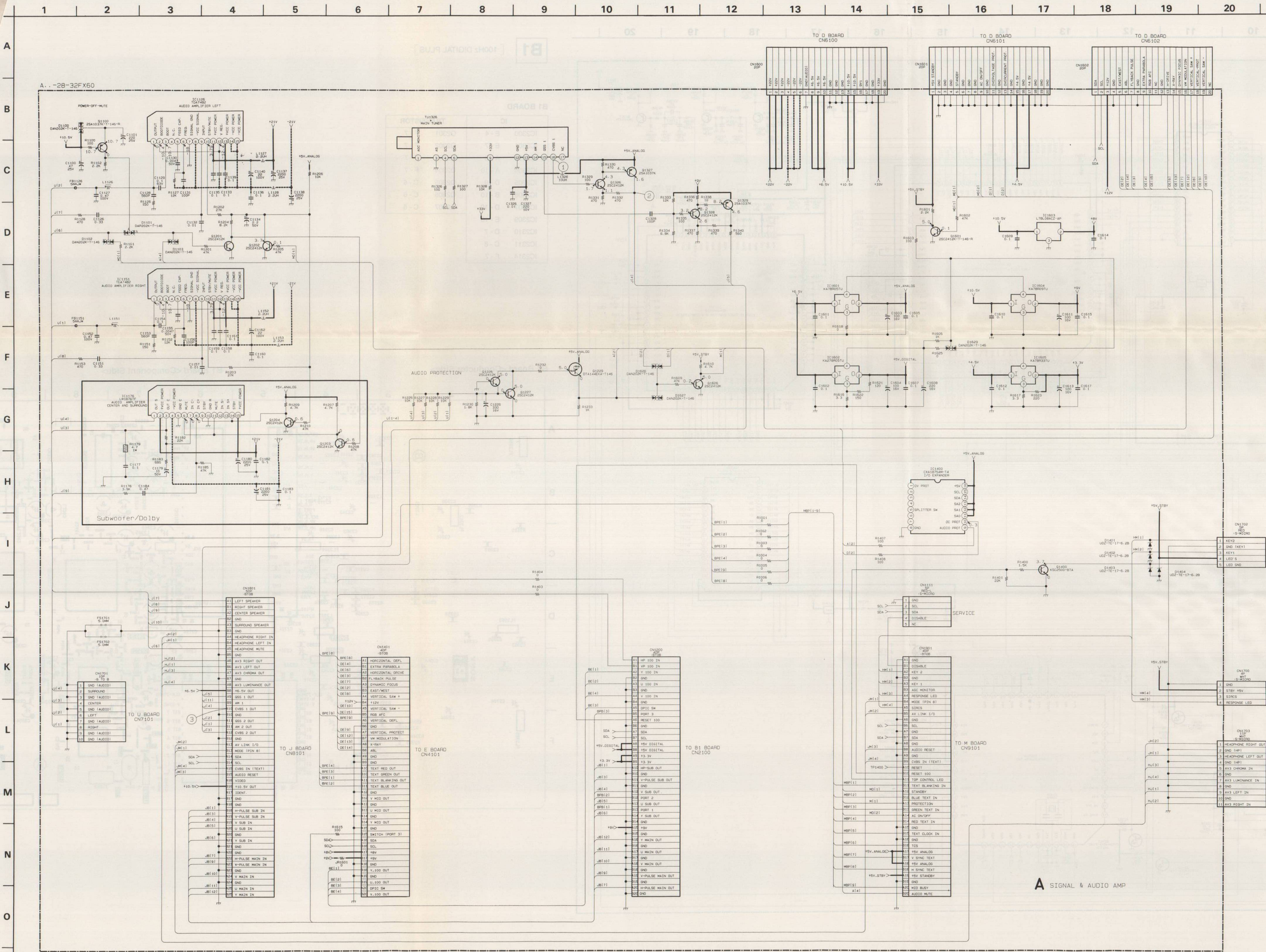
www.freeservicemanuals.info

TO A BOARD
CN1701

A Board <Component Side>

A Board <Component Side>

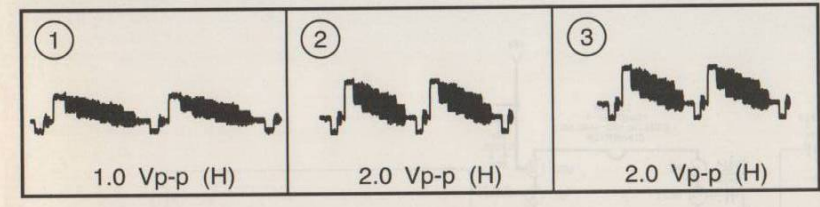
A Board <Conductor Side>



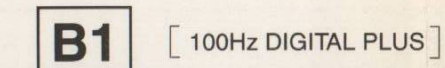
A BOARD * MARK

Ref	28FX60A	28FX60B	28FX60D	28FX60E	28FX60K	28FX60R	28FX60U	32FX60A	32FX60B	32FX60D	32FX60E	32FX60K	32FX60R	32FX60U
TU1326	TUNER/VIF (AEP)	TUNER/VIF (FR)	TUNER/VIF (AEP)	TUNER/VIF (AEP)	TUNER/VIF (AEP)	TUNER/VIF (AEP)	TUNER/VIF (UK)	TUNER/VIF (AEP)	TUNER/VIF (FR)	TUNER/VIF (AEP)	TUNER/VIF (AEP)	TUNER/VIF (AEP)	TUNER/VIF (AEP)	TUNER/VIF (AEP)

Waveforms A Board

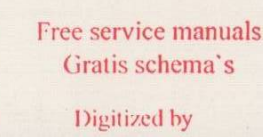


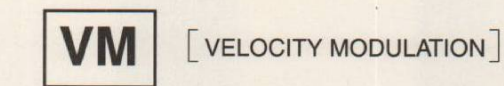
A SIGNAL & AUDIO AMP



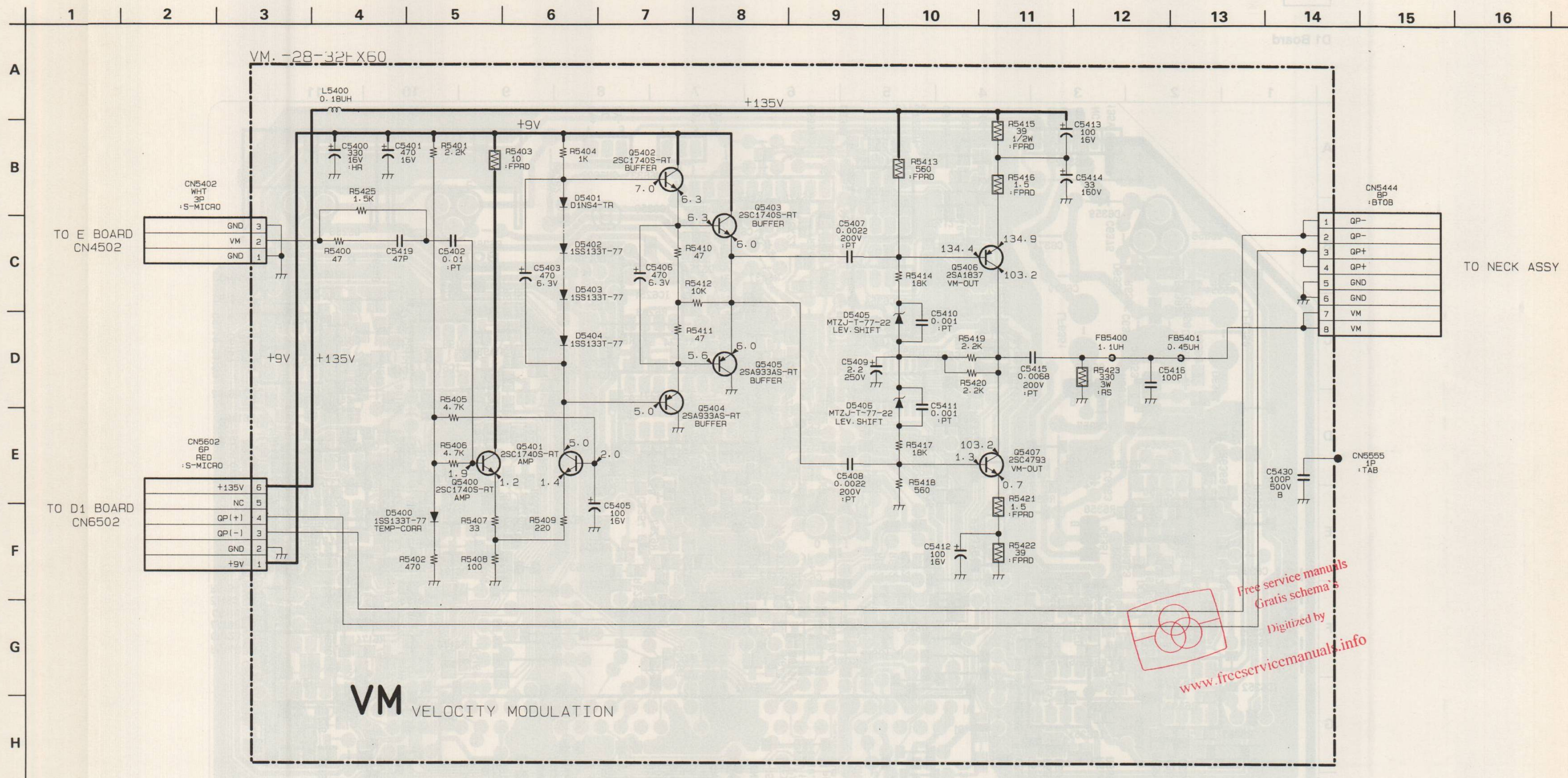
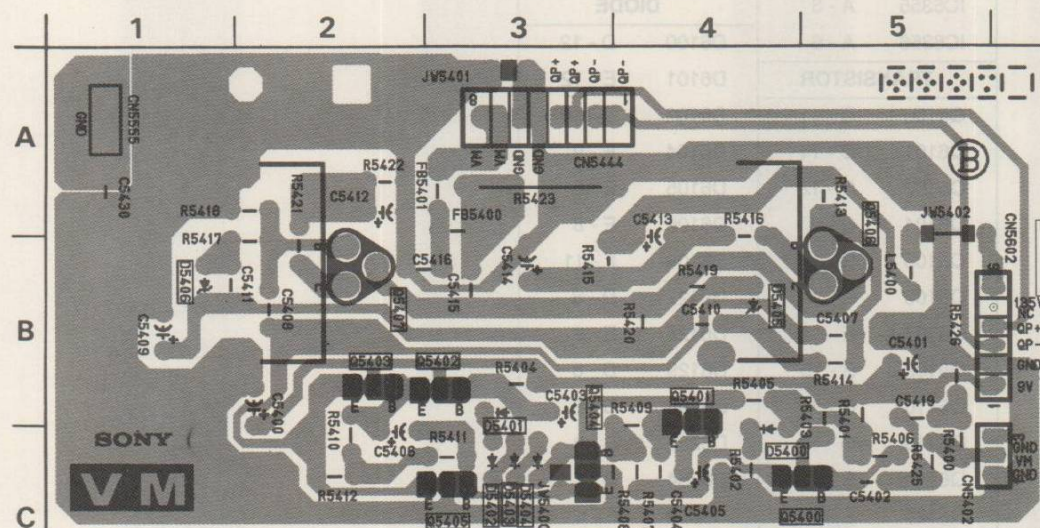
IC		TRANSISTOR	
IC2300	E - 4	Q2301	F - 7
IC2301	E - 7	Q2302	F - 7
IC2302	A - 8	Q2303	F - 7
IC2304	A - 10	Q2304	F - 7
IC2305	D - 9	Q2305	C - 6
IC2306	B - 10	Q2306	C - 6
IC2307	D - 10	Q2307	C - 6
IC2309	E - 10		
IC2310	D - 7		
IC2311	C - 8		
IC2314	F - 7		

B1 Board <Component Side>



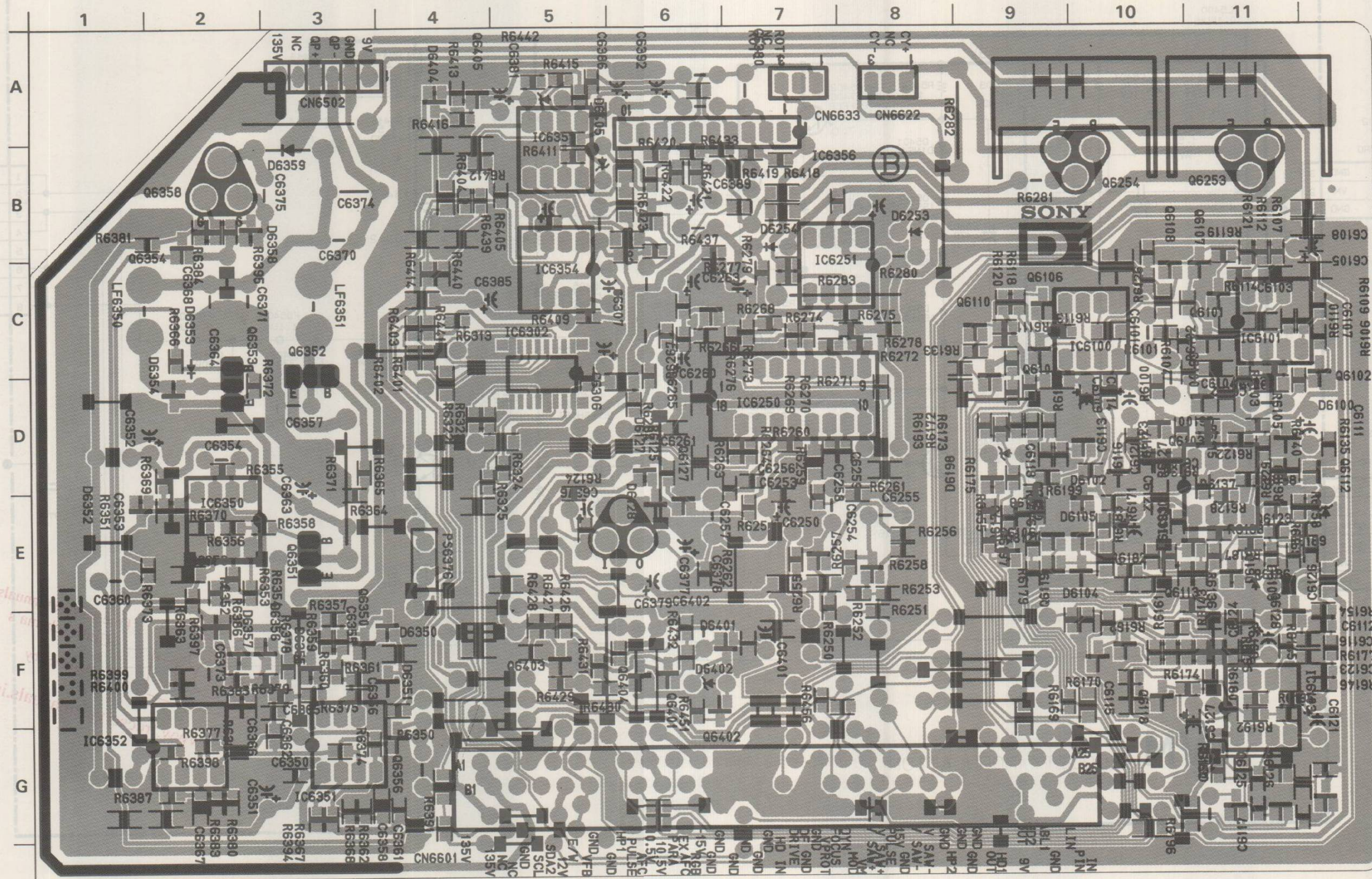


VM Board



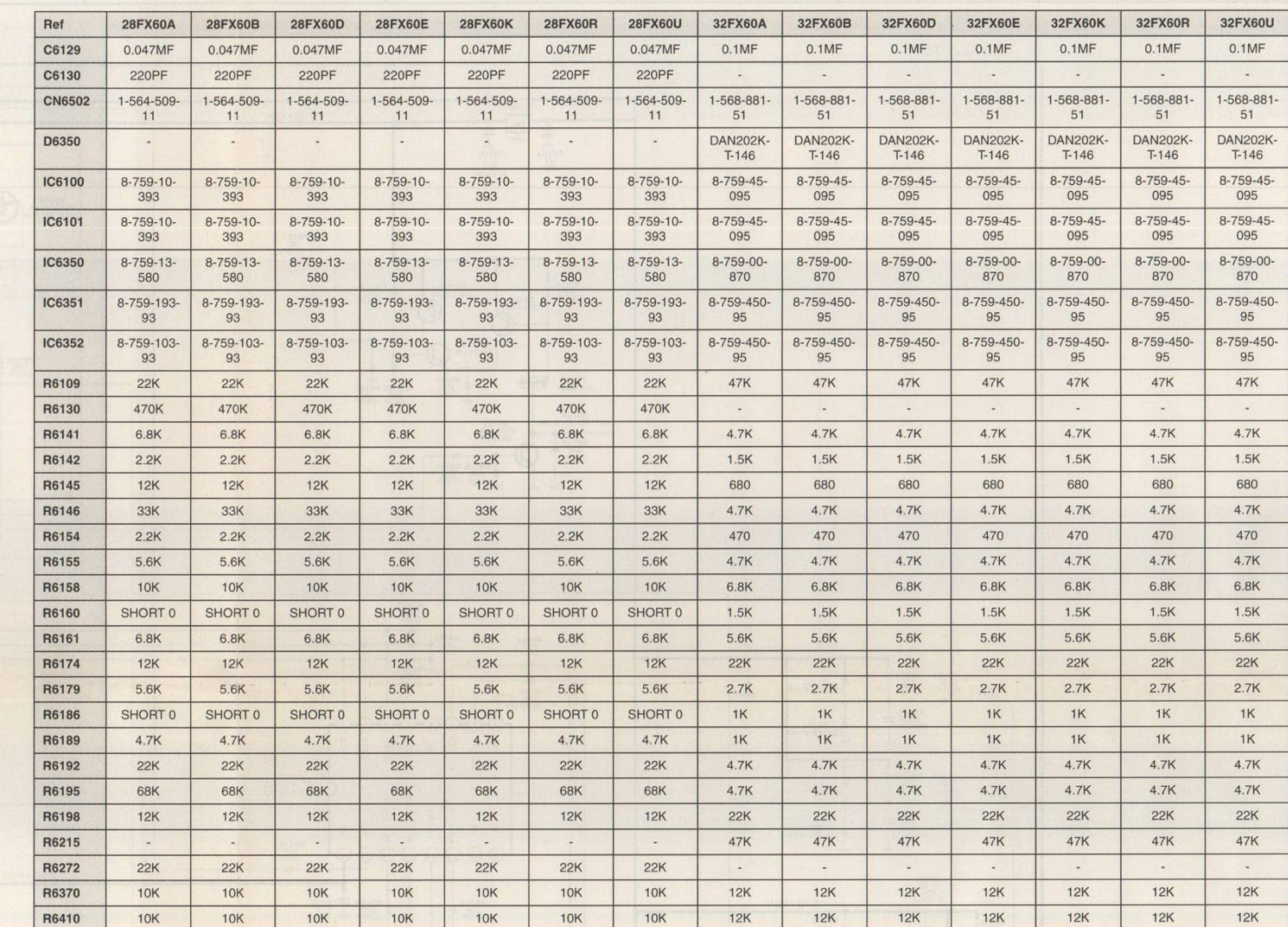
D1 [DEFLECTION]

D1 Board

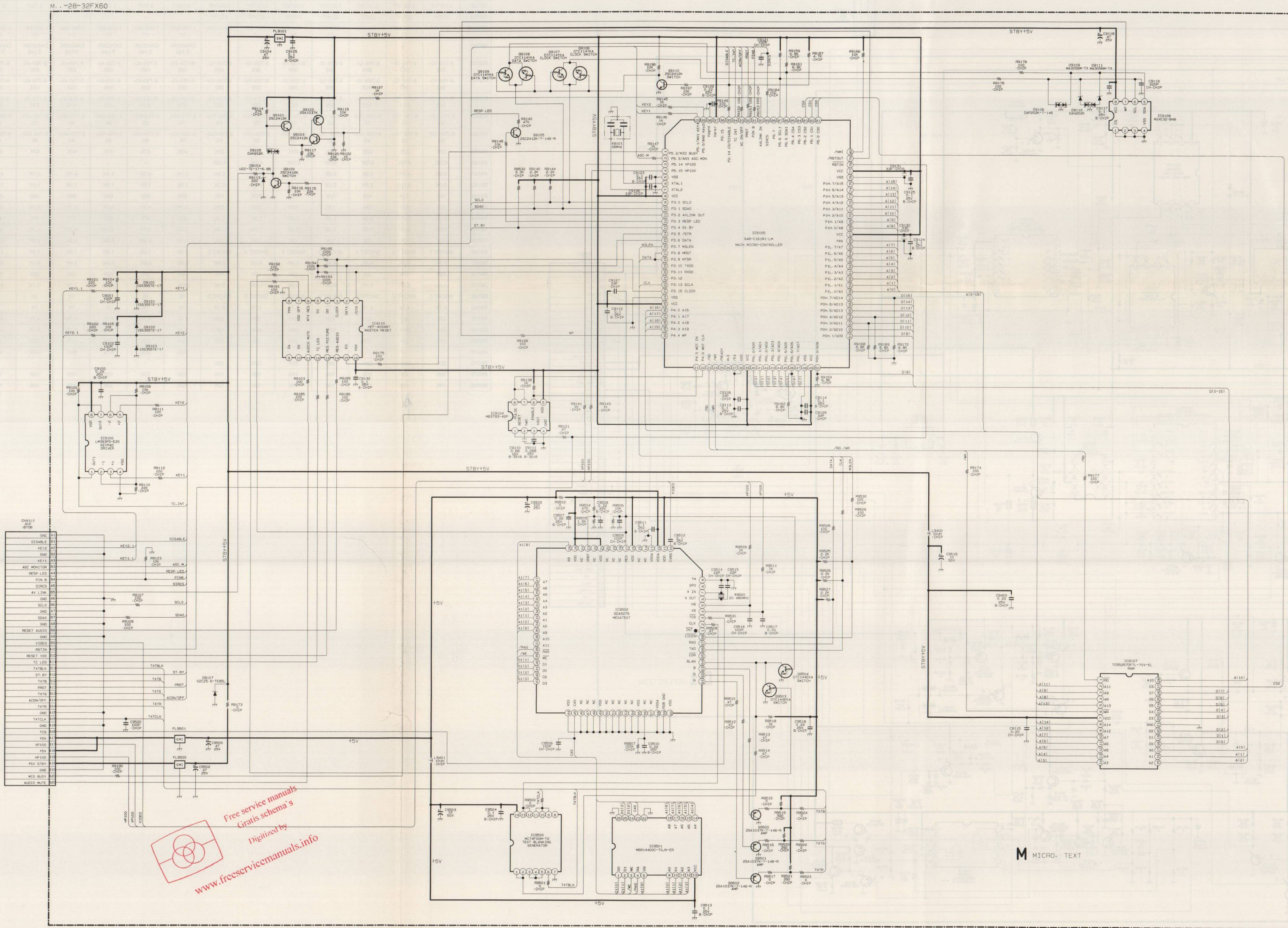


D1 BOARD

IC		Q6350	E - 8
IC6100	C - 9	Q6351	E - 3
IC6101	C - 12	Q6352	D - 3
IC6102	D - 11	Q6353	C - 2
IC6103	G - 12	Q6354	C - 2
IC6250	D - 8	Q6356	G - 4
IC6251	C - 8	Q6358	B - 2
IC6302	D - 5	Q6401	F - 7
IC6350	D - 3	Q6402	G - 6
IC6351	G - 3	Q6403	F - 5
IC6352	G - 1	Q6404	G - 6
IC6353	E - 5	Q6455	C - 8
IC6354	C - 5	Q6465	B - 5
IC6355	A - 5	DIODE	
IC6356	A - 6	D6100	D - 12
TRANSISTOR		D6101	E - 12
Q6100	D - 11	D6102	D - 10
Q6101	C - 11	D6104	E - 9
Q6102	C - 12	D6105	E - 9
Q6104	C - 9	D6106	E - 8
Q6105	B - 11	D6108	F - 11
Q6106	C - 9	D6127	D - 6
Q6107	E - 11	D6128	E - 6
Q6108	B - 10	D6129	D - 8
Q6110	C - 8	D6198	D - 8
Q6118	G - 10	D6253	B - 8
Q6119	E - 8	D6254	B - 7
Q6120	E - 9	D6350	F - 4
Q6122	E - 9	D6351	F - 4
Q6123	E - 12	D6352	E - 1
Q6125	H - 11	D6353	C - 2
Q6126	H - 11	D6354	D - 2
Q6127	E - 6	D6355	E - 3
Q6128	F - 12	D6358	B - 2
Q6130	H - 11	D6359	B - 3
Q6131	G - 12	D6401	F - 7
Q6201	F - 10	D6402	F - 6
Q6202	F - 10	D6403	A - 5
Q6250	E - 8	D6404	A - 4
Q6251	E - 8	D6405	A - 5
Q6252	B - 10		
Q6253	B - 11		
Q6254	C - 2		

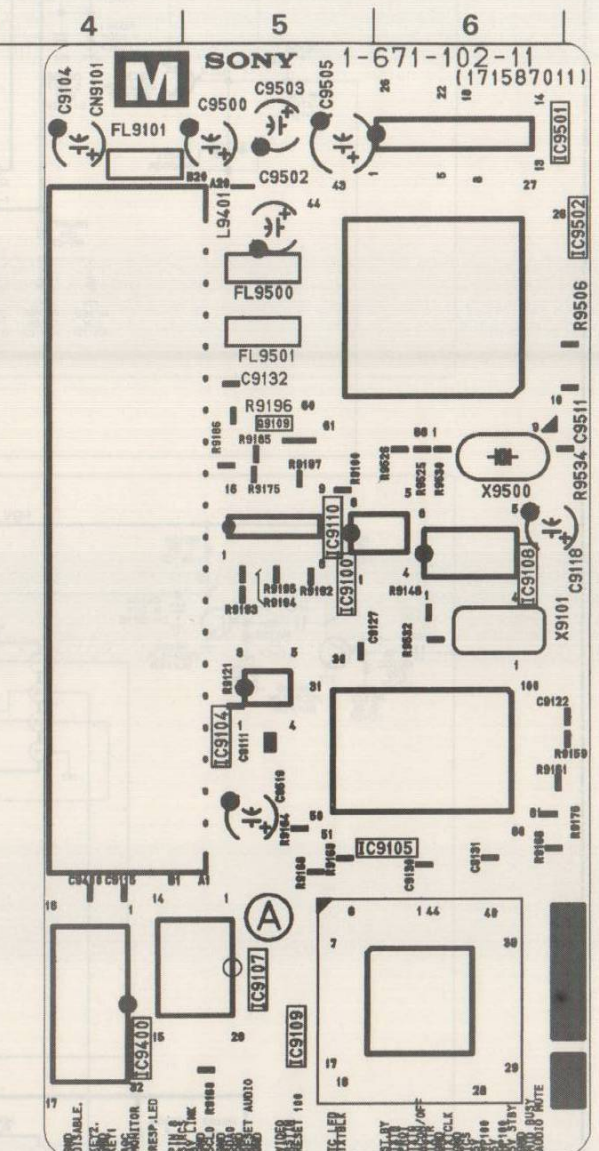
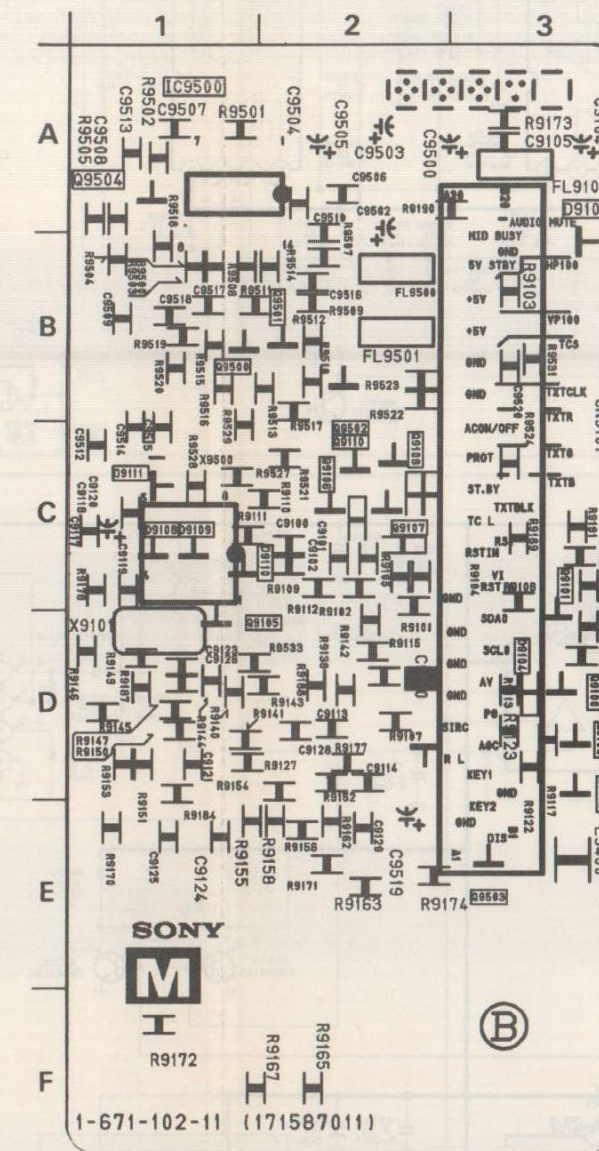


M [MICRO, TEXT]



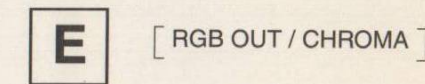
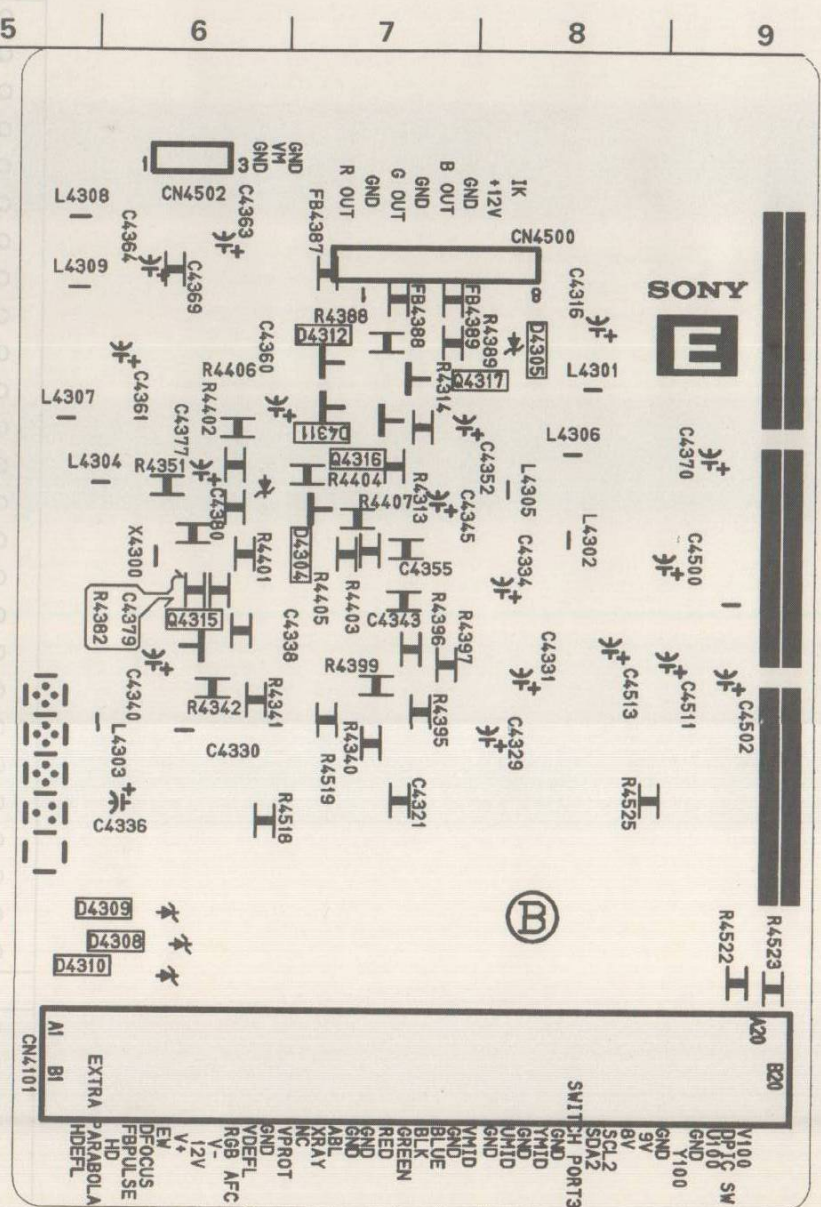
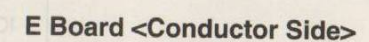
M Board <Conductor Side>

M Board <Component Side>



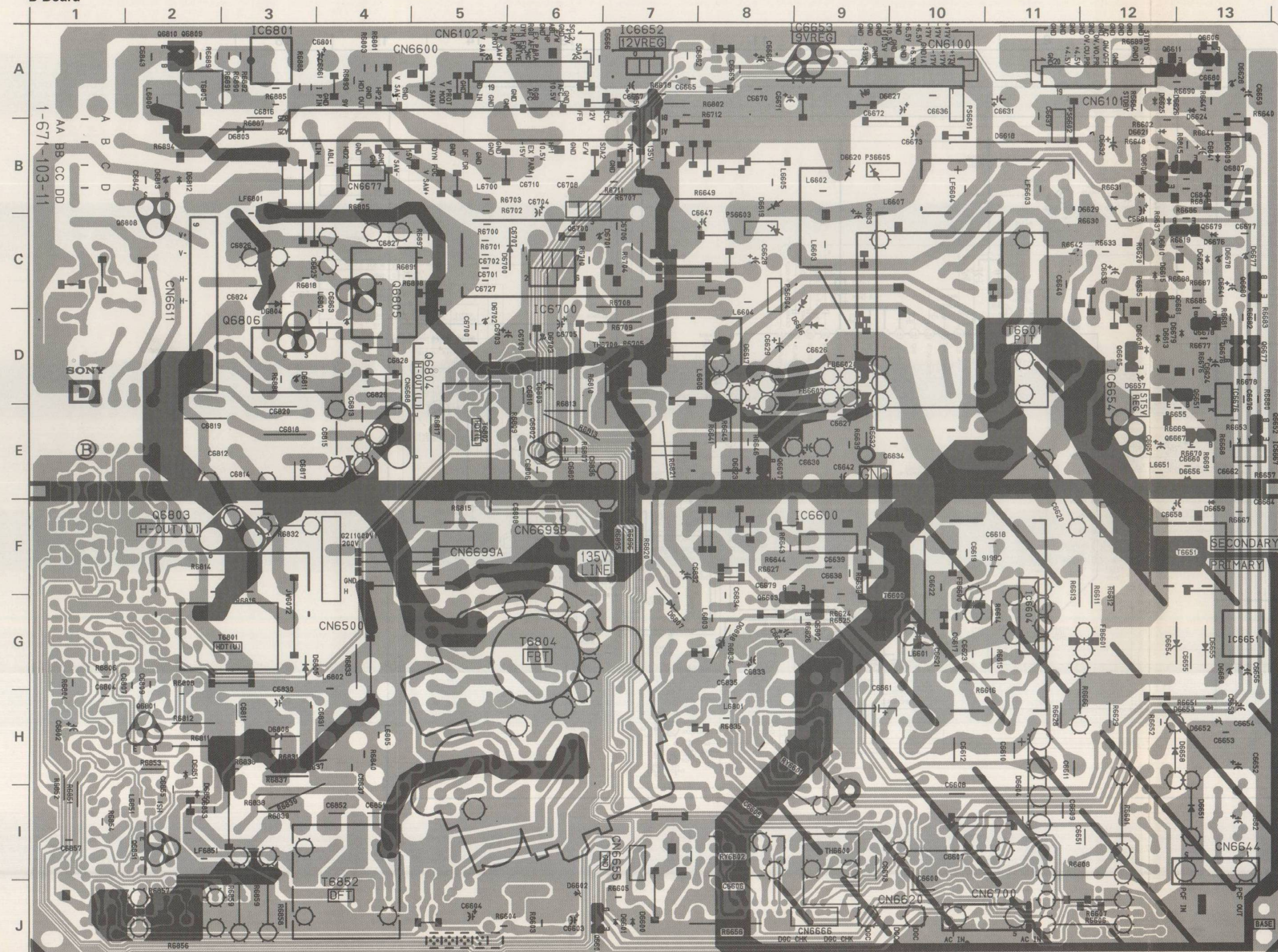
M BOARD

IC	
IC9100	C-5
IC9104	D-5
IC9105	E-6
IC9107	E-5
IC9108	C-6
IC9109	F-5
IC9110	C-5
IC9500	A-1
IC9502	B-6
TRANSISTOR	
Q9100	D-3
Q9101	C-3
Q9102	D-3
Q9103	D-3
Q9105	D-1
Q9106	C-2
Q9107	C-2
Q9108	C-2
Q9109	B-5
Q9110	C-2
Q9500	B-1
Q9501	B-2
Q9502	C-2
Q9503	E-3
Q9504	A-1
DIODE	
D9104	D-3
D9107	A-3
D9108	C-1
D9109	C-1
D9110	C-2
D9111	C-1

[illegible]

D Board

IC		D6613	D - 12
IC6600	F - 9	D6615	C - 12
IC6604	H - 11	D6616	D - 9
IC6651	G - 13	D6617	D - 8
IC6652	A - 7	D6618	B - 11
IC6653	A - 9	D6619	B - 8
IC6654	D - 12	D6620	B - 9
IC6667	E - 14	D6621	B - 12
IC6676	D - 13	D6622	C - 13
IC6700	D - 6	D6623	E - 8
IC6801	A - 3	D6624	B - 13
TRANSISTOR		D6625	A - 12
Q6600	J - 6	D6627	A - 10
Q6602	G - 9	D6628	A - 13
Q6603	G - 8	D6629	B - 12
Q6605	D - 12	D6651	I - 13
Q6606	A - 13	D6652	H - 13
Q6607	E - 8	D6653	H - 13
Q6651	E - 13	D6654	G - 12
Q6652	E - 14	D6655	G - 13
Q6667	E - 13	D6656	E - 13
Q6676	D - 13	D6658	H - 13
Q6677	D - 14	D6659	F - 13
Q6678	D - 13	D6676	C - 13
Q6679	C - 13	D6677	C - 13
Q6680	C - 13	D6678	C - 13
Q6681	D - 13	D6679	D - 13
Q6700	C - 6	D6681	E - 13
Q6801	H - 2	D6700	C - 5
Q6802	E - 6	D6701	H - 2
Q6803	F - 2	D6803	B - 3
Q6804	D - 5	D6804	C - 3
Q6805	E - 13	D6805	G - 3
Q6806	D - 3	D6806	H - 3
Q6807	B - 13	D6807	G - 7
Q6809	A - 2	D6808	G - 8
Q6810	A - 2	D6809	B - 13
Q6851	I - 2	D6811	D - 3
DIODE		D6812	B - 2
D6600	J - 7	D6813	B - 2
D6601	J - 7	D6851	H - 2
D6602	J - 6	D6852	1 - 2
D6603	D - 12		
D6604	I - 11		
D6610	C - 12		

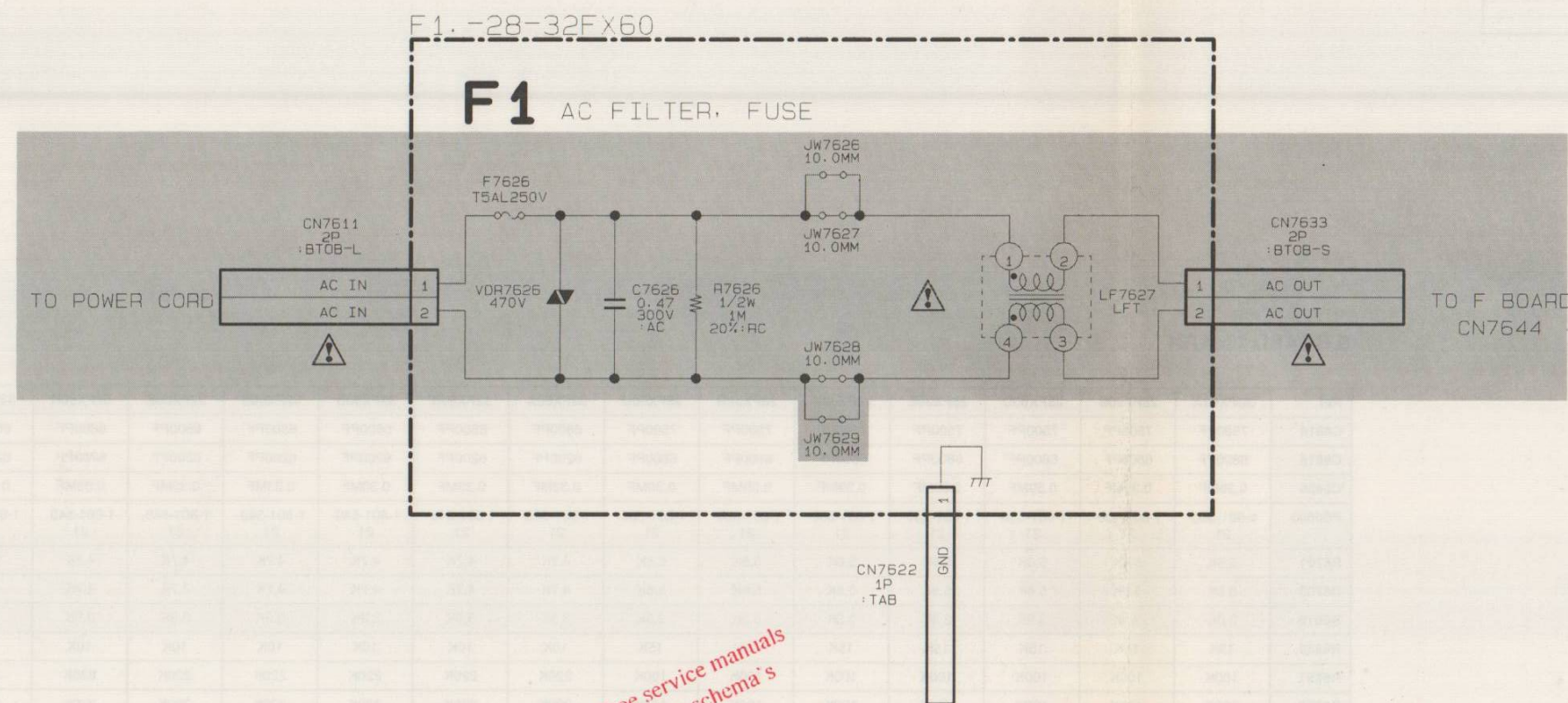
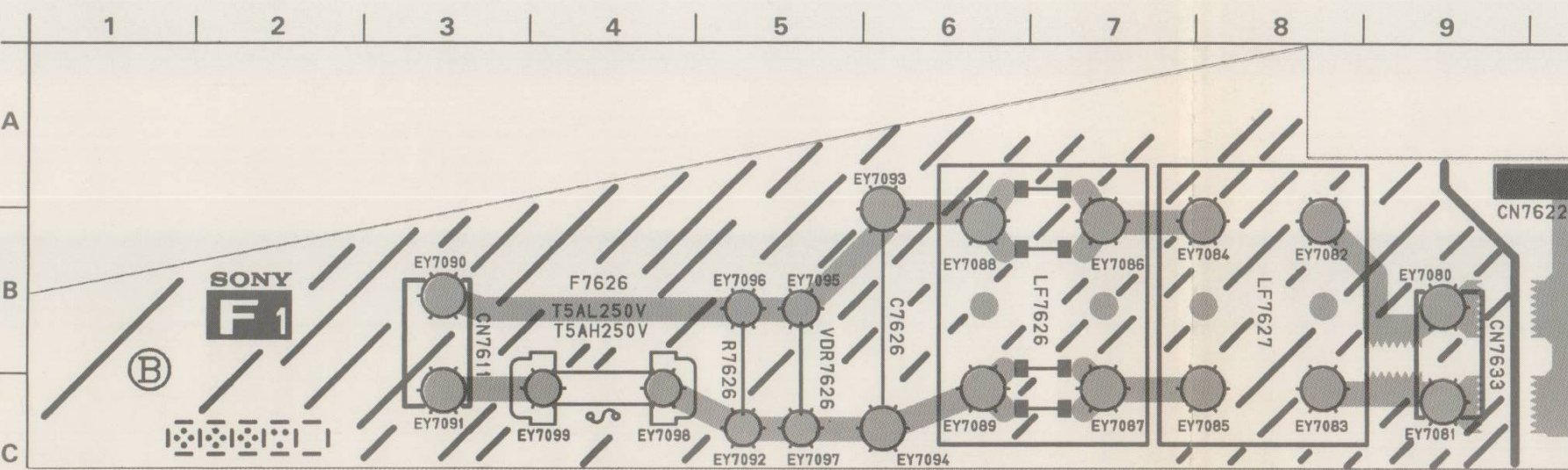




F1

[AC FILTER FUSE]

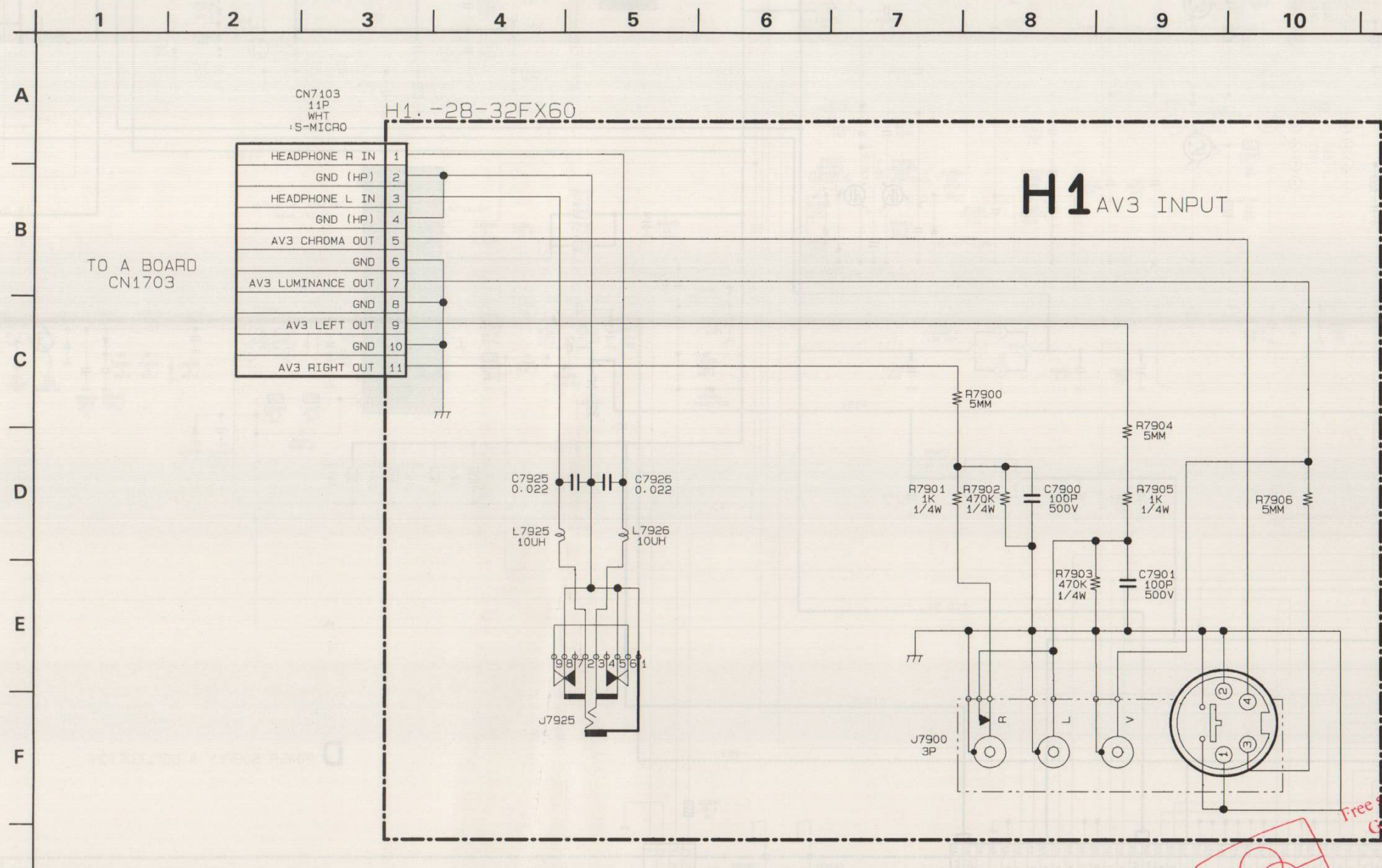
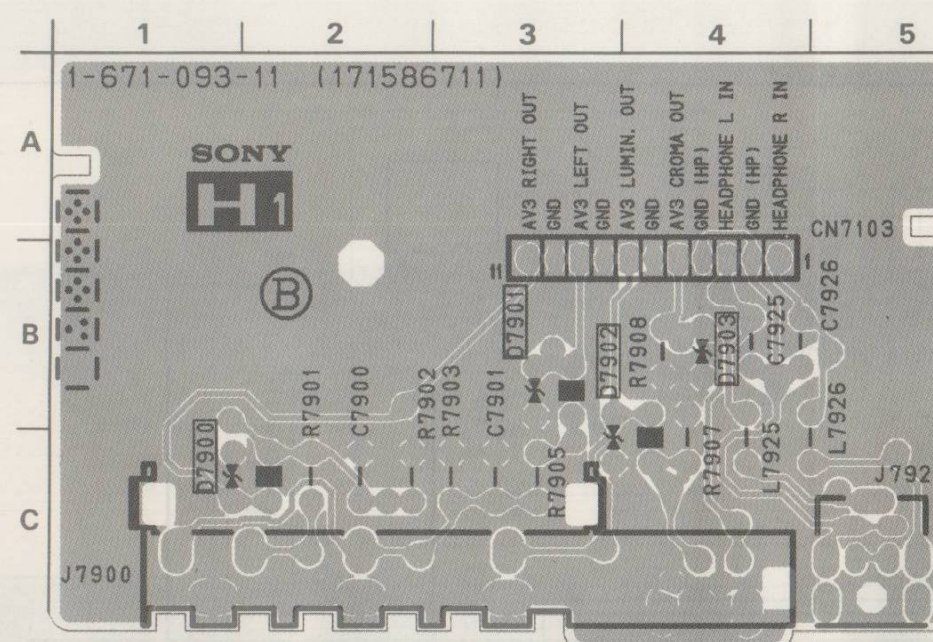
F1 Board



H1

[AV3 INPUT]

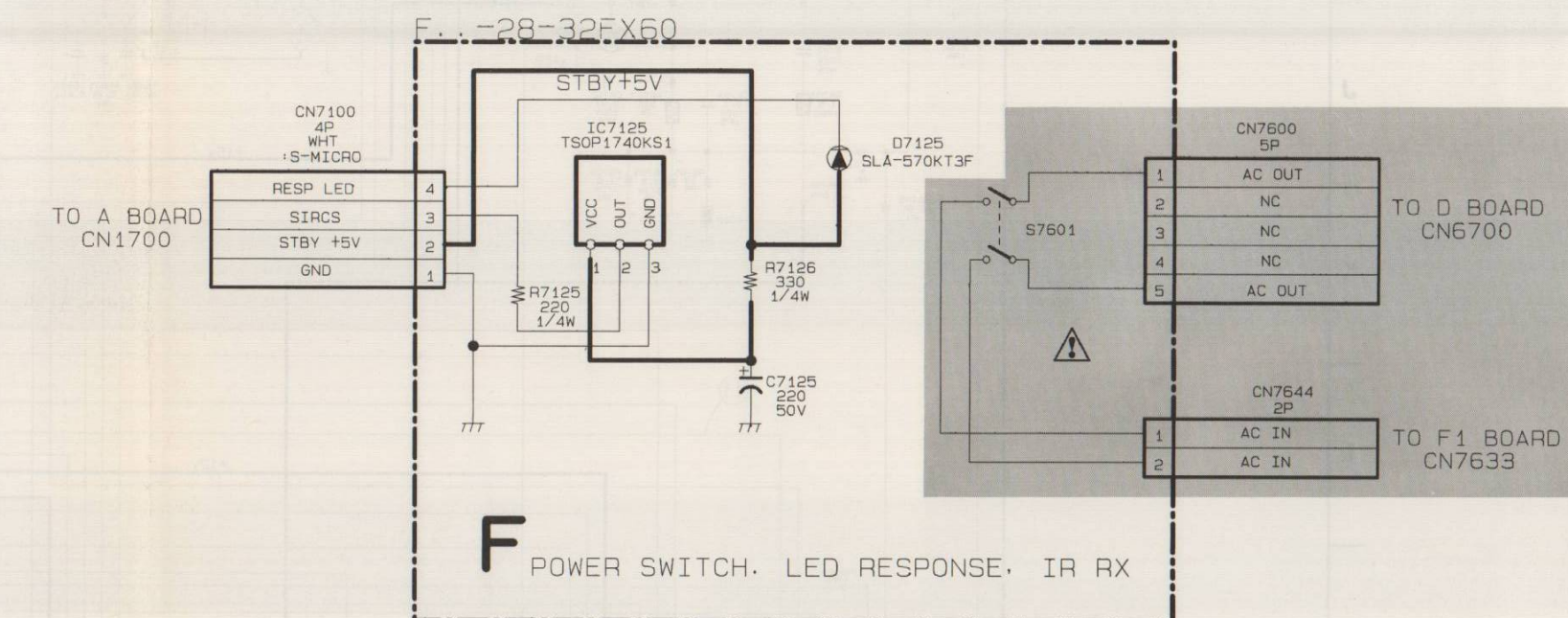
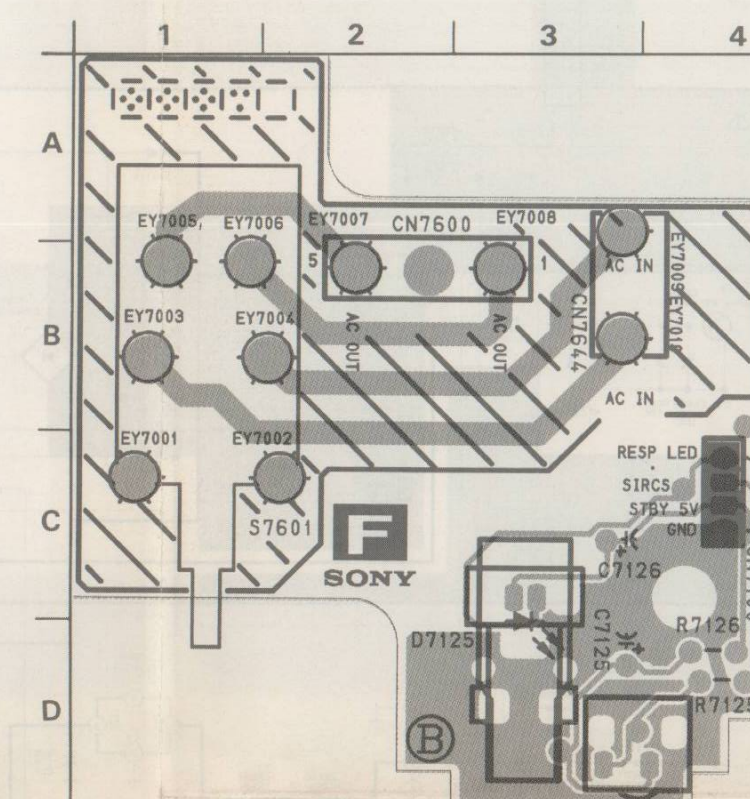
H1 Board



F

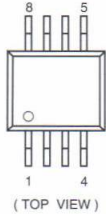
POWER SWITCH AND
RESPONSE LED, IR Rx

F Board

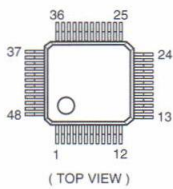


5-4 SEMICONDUCTORS

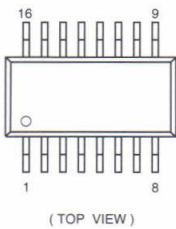
BA7046F
BA7046F-T1
LM393PS-E20
MB3793-42NF
MB3793-42NF-ER
NJM2240M
NJM2240M(TE2)
NJM3404AD



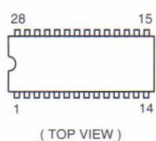
CXA1855Q-T6



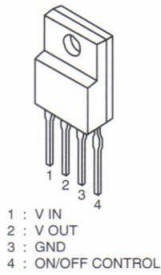
CXA1875AM-T4
HE4094BT
MC14052BDR2
MC74F157ADR2
SN74LS221D
74HCT4046AD/S470



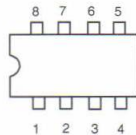
CXD2053S
TDA4780/V3



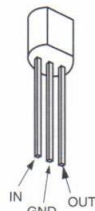
KA78R05TU
KA78R09TU
KA78R33TU



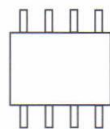
LM393D
M5216P
M24C32-BN6
ST24C16FB6
TDA2822M
UPC393C



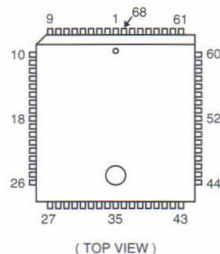
LM78L05ACZ
LM78L12ACZ
L78L05ACZ-AP
L78L12ACZ-AP



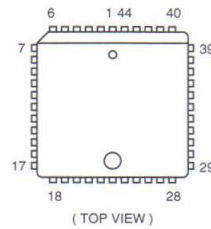
MB3793-42PNF-ER



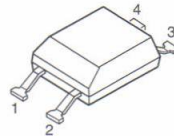
MSP3410D-QA-B4
SAA7185WP
SDA5273P-C134-GEG
SDA5275



M27C800-100K1



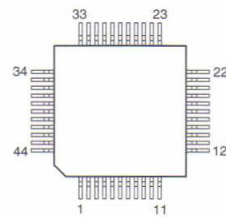
PC123F2
PC123FY2



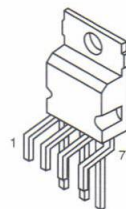
SBX1981-51



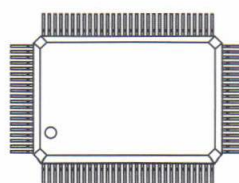
SDA9361



STV9379



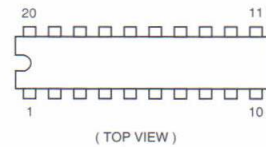
SAB-C161R1-LM



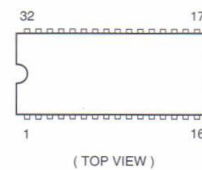
TC55257DFTL-70V-EL



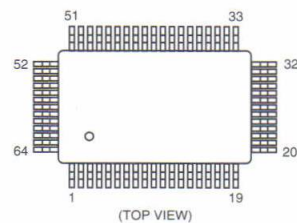
TDA7309D013TR



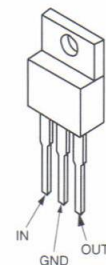
SDA9288X-B121
TDA9143/N2
TDA9144/N2
TDA9170T



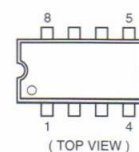
TDA9320H-N1-518



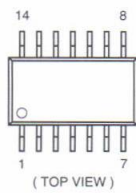
TEA6422DT
LM393N



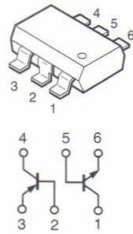
TOP209P



U2860B-BFPG3
74LVC08D



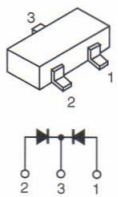
IMZ1A-T109



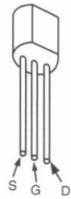
2SC2500-B
2SC2551-O
2SC2551O-TPE2



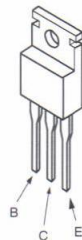
DAN202K
DAN202K-T-146



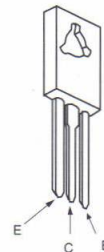
BC546B
BC556B



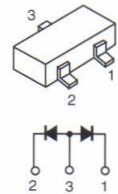
IRF614
IRF620



2SC2688-LK
2SC3840K



DAP202K
DAP202K-T-146



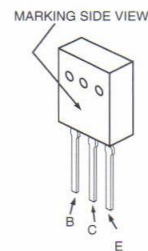
BF199
BF199-AMMO



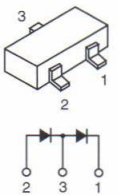
DTA144EK
DTA144EK-T146
DTC114EK
DTC114YKA-T146
DTC123EK
DTC123EK-T146
DTC124EKA-T146

DTC144EK
DTC144EK-T146
2SA1037K-T-146-R
2SA1162-G
2SC2412K-QR
2SC2412K-T-146-R

2SC3997CA



DA204K
DA204K-T-146



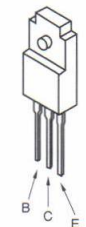
BF421-AMMO



DTA144ESA
DTA144ESA-TP
DTC114ESA-TP
DTC144ESA-TP
2SA1175-HFE
2SA733-K

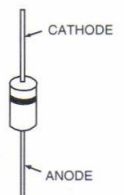
2SA933AS-RT
2SA933AS-QRT
2SA933S-RT
2SC1740S-RT
2SC2785-HFE

2SC4793

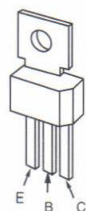


D1NL20-TA
D1NL20U-TR
D1N54-TR
EGP20G
EL1Z
GP08D
GP08DPKG23
R2K-V1

RGP02-20EG
RGP10GPKG
RGP15GPKG
S2LA20F
1SS133T-77
1SS83
1SS83TD



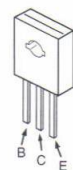
BF87-127



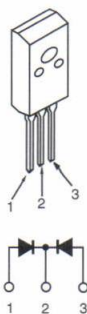
2SA1837



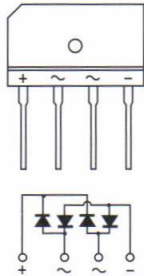
2SD2396H



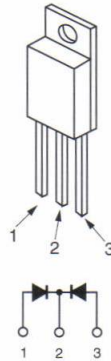
D10SC4M
D10SC6M



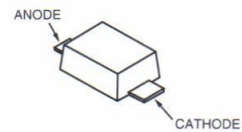
D4SB60L
D4SB60L-F
RBA-402L



ESAC39M-06C
ESAC39M-06CF38



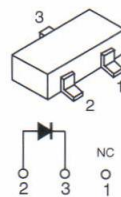
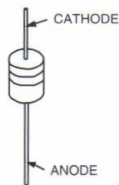
UF4005PKG23



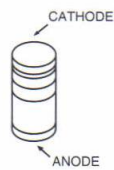
ERA38-06TP1
ERA82-004TP1
GP08DPKG23
MTZJ-T-77-12
MTZJ-T-77-15
MTZJ-T-77-2.2B
MTZJ-T-77-22
MTZJ-T-77-33C
MTZJ-T-77-3.6B
MTZJ-T-77-4.7B

MTZJ-T-77-5.6B
MTZJ-T-77-6.8
MTZJ-T-77-7.5B
MTZJ-T-77-9.1
MTZJ-33C
RD5.6ESB2
RD9.1ESB2
PGKE200AG23
1SS119-25
1SS119-25TD

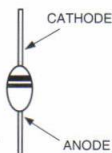
MA3033-L
MA3033L-TX
MA3056M-TX
MA3062M-TX
MA3030-H-(TX)



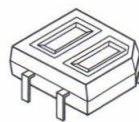
MA3051L-TX



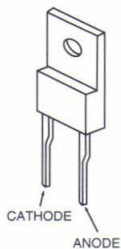
ERC04-06SE



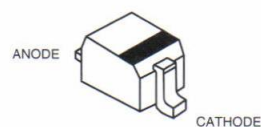
MA73-TX



ERD08M-15

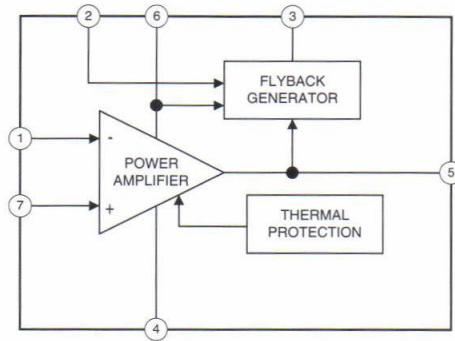


RD12SB2
UDZ-TE-17-6.2B
UDZ-TE-17-6.8B
UDZ-TE-12B

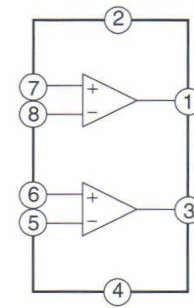


5-5. IC BLOCK DIAGRAMS

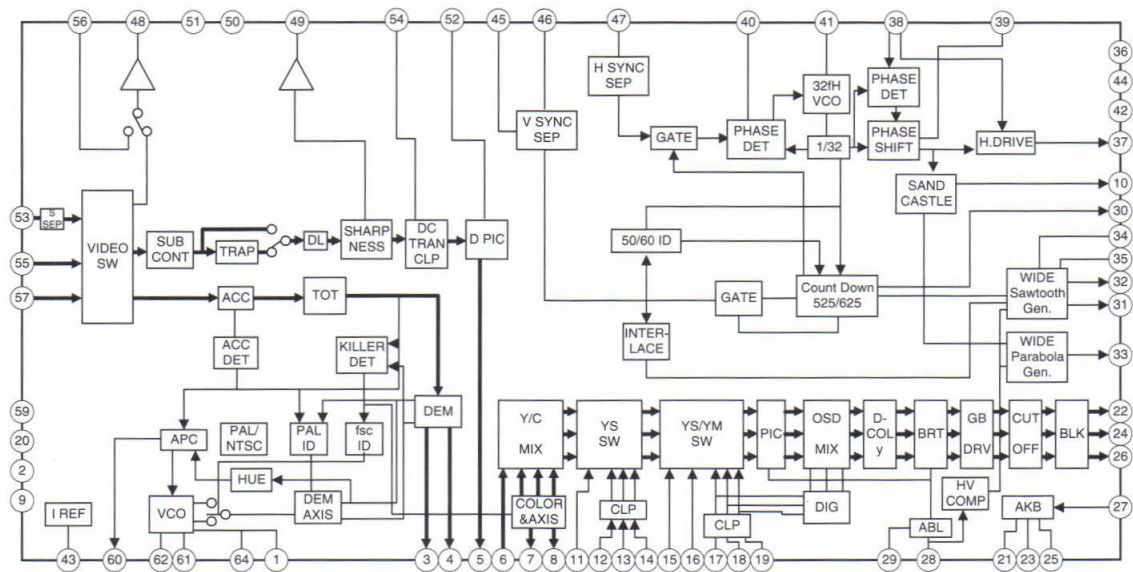
D BOARD IC6700 STV 9379



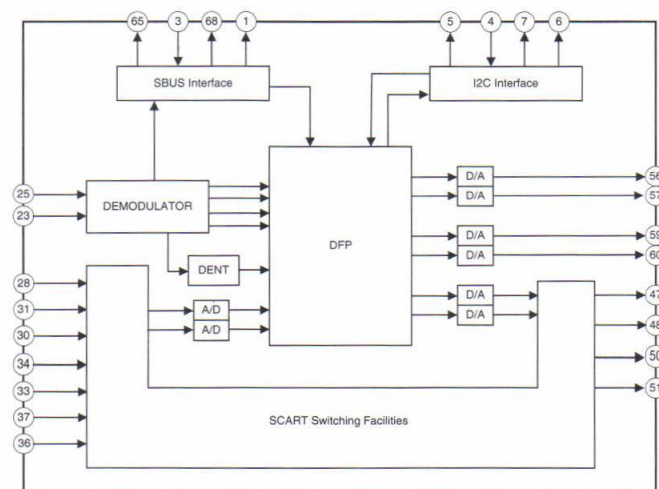
J BOARD IC8101 TDA2822M



E BOARD IC4301 CXA2100Q-TL



J BOARD IC8200 MSP3410D-QA-B4



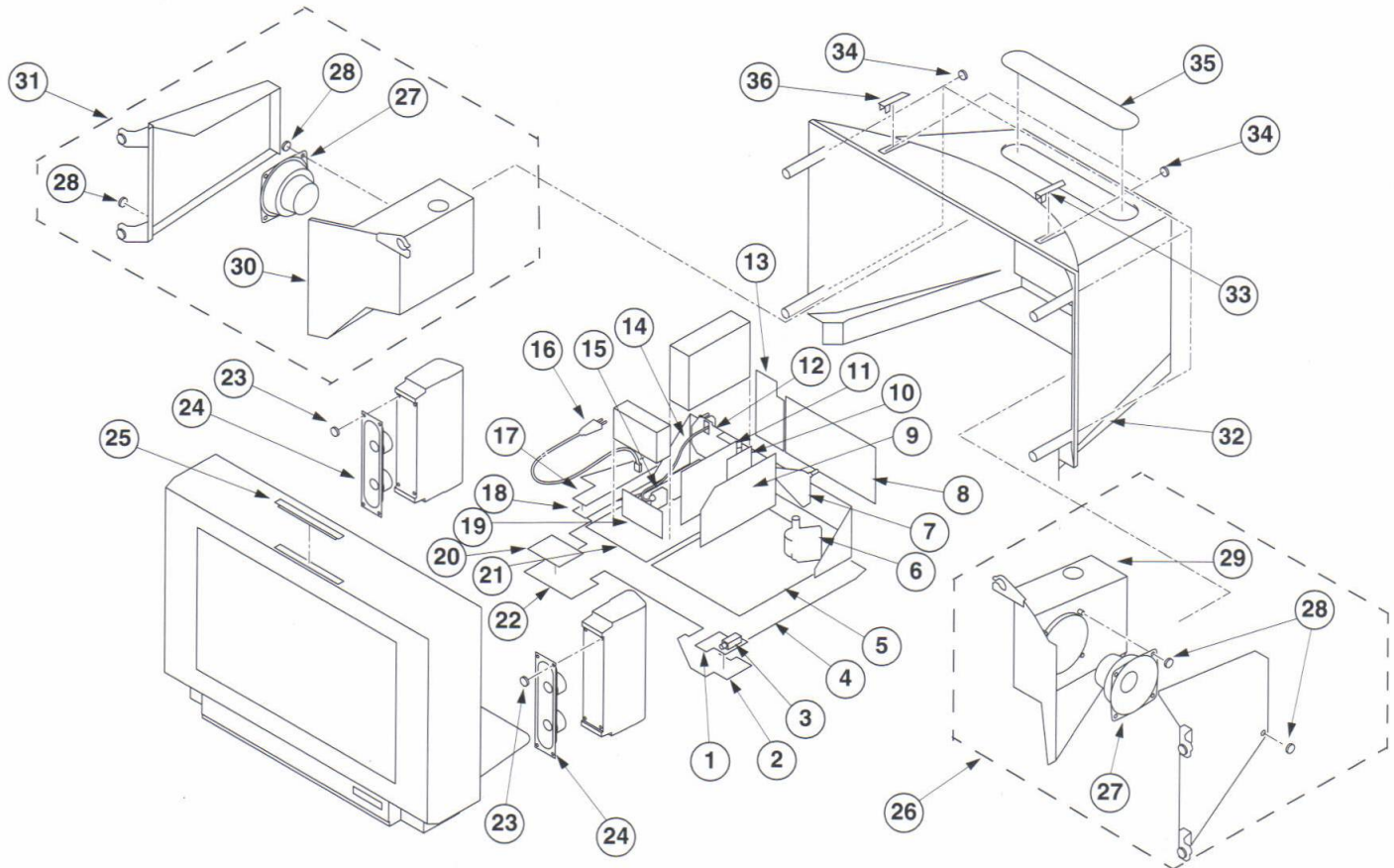
SECTION 6 EXPLODED VIEWS

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 Δ are critical for safety.
Replace only with the part number specified.

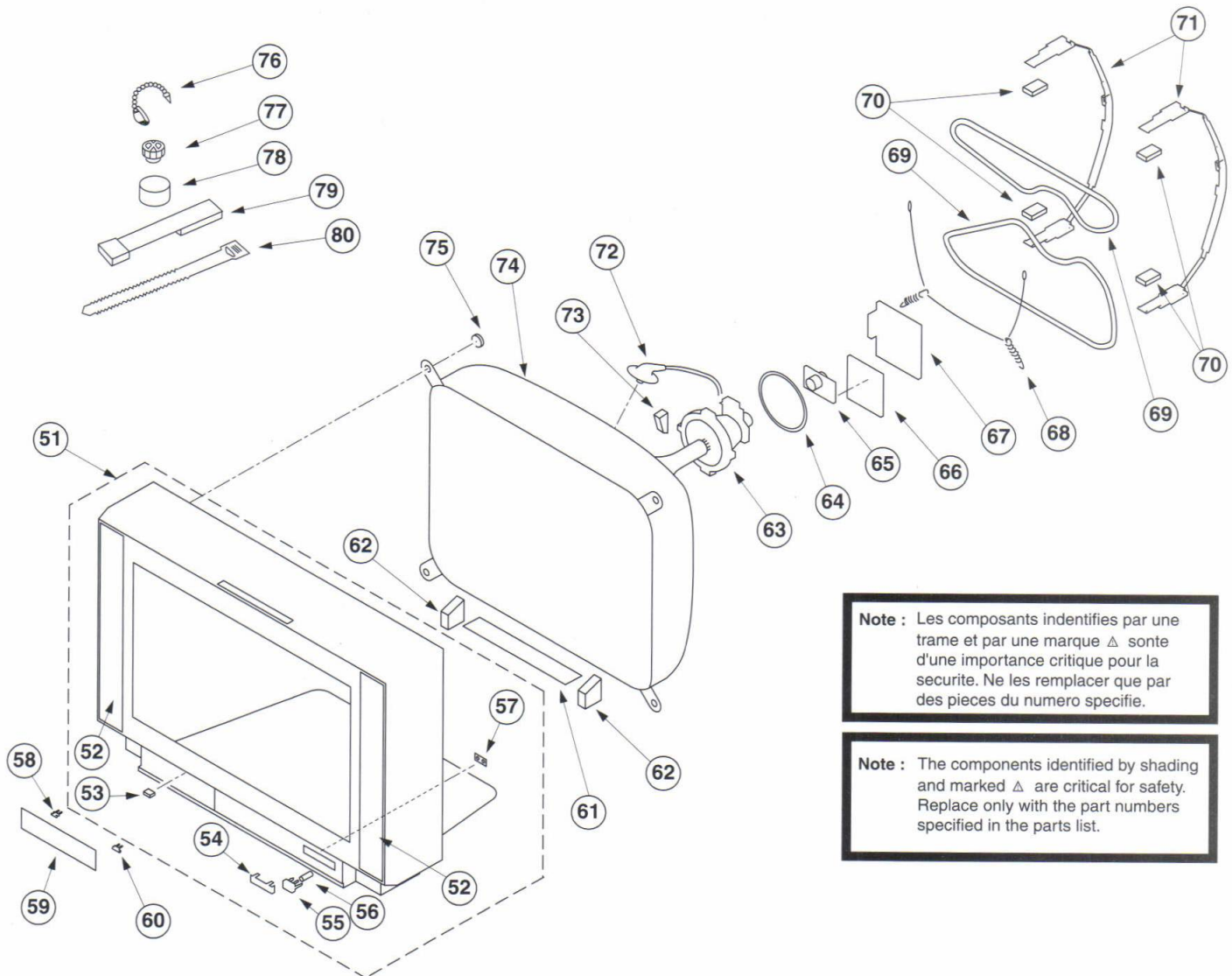
6-1. CHASSIS



REF. NO.	PART. NO	DESCRIPTION	REMARK	REF. NO.	PART. NO	DESCRIPTION	REMARK
1	*A-1624-073-A	F BOARD, COMPLETE		8	*A-1651-100-A	J BOARD, COMPLETE	
2	*4-204-551-01	BRACKET, F				(KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U/32FX60A/ 32FX60D/32FX60E/32FX60K/32FX60R/ 32FX60U)	
	*4-204-551-21	BRACKET, F (KV-28FX60B/28FX60U)			*A-1651-104-A	J BOARD, COMPLETE (KV-32FX60B)	
3	Δ 1-571-433-21	SWITCH, PUSH (AC POWER)		9	*A-1640-329-A	D1 BOARD, COMPLETE (KV-28FX60)	
4	*4-204-549-01	BRACKET, MAIN			*A-1640-322-A	D1 BOARD, COMPLETE (KV-32FX60)	
5	*A-1640-328-A	D BOARD, COMPLETE (KV-28FX60)		10	*A-1640-341-A	E BOARD, COMPLETE (KV-28FX60)	
	*A-1640-323-A	D BOARD, COMPLETE (KV-32FX60)			*A-1640-337-A	E BOARD, COMPLETE (KV-32FX60)	
6	Δ 1-453-272-11	TRANSFORMER ASSY, FLYBACK		11	*A-1620-112-A	B1 BOARD, COMPLETE	
		(NX-4512/U2B4)		12	*4-204-477-01	BRACKET, J2	
7	*4-204-476-01	BRACKET, J1		13	*A-1648-016-A	U BOARD, COMPLETE	
				14	1-790-082-11	CABLE, RF	

REF. NO.	PART. NO	DESCRIPTION	REMARK	REF. NO.	PART. NO	DESCRIPTION	REMARK
15	1-693-338-11	TUNER/VIF (AEP) (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/32FX60A/32FX60D/ 32FX60E/32FX60K/32FX60R)		22	*4-204-550-01	BRACKET, H (KV-28FX60A/28FX60D/28FX60E/28FX60K/ 28FX60R/32FX60A/32FX60B/32FX60D/ 32FX60E/32FX60R/32FX60U)	
	1-693-340-11	TUNER/VIF (FR) (KV-32FX60B)			*4-204-550-21	BRACKET, H (KV-28FX60B/28FX60U)	
	1-693-339-11	TUNER/VIF (UK) (KV-28FX60U/32FX60U)		23	4-039-358-01	SCREW (4X16), (+) BV TAPPING	
16	△ 1-574-062-61	CORD, POWER (WITH CONNECTOR) (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/32FX60A/32FX60B/ 32FX60D/32FX60E/32FX60K/32FX60R)		24	1-529-153-11	SPEAKER (4.8X20CM)	
	△ 1-590-762-21	CORD, POWER (WITH UK PLUG) (KV-28FX60U/32FX60U)		25	0-553-509-00	SWITCH, ARRAY	
17	*A-1624-074-A	F1 BOARD, COMPLETE		26	A-1678-188-A	WOOFER (R) ASSY	27-29
18	*4-204-552-01	BRACKET, F1		27	1-529-144-11	SPEAKER (13CM)	
19	*A-1634-047-A	M BOARD, COMPLETE		28	4-039-355-11	SCREW (4X12), (+) BV TAPPING	
20	*A-1646-170-A	H1 BOARD, COMPLETE		29	*A-1678-158-A	WOOFER (R) ASSY, SP FX	
21	*A-1630-978-A	A BOARD, COMPLETE (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/32FX60A/32FX60D/ 32FX60E/32FX60K/32FX60R)		30	*A-1678-157-A	WOOFER (L) ASSY, SP FX	
	*A-1630-989-A	A BOARD, COMPLETE (KV-28FX60U/32FX60U)		31	A-1678-150-A	WOOFER (L) ASSY	27,28,30
	*A-1630-988-A	A BOARD, COMPLETE (KV-32FX60B)		32	4-204-459-01	COVER, REAR (KV-28FX60)	
					4-204-367-21	COVER, REAR (KV-32FX60)	
				33	4-204-427-01	COVER, SCREW (L) (KV-28FX60)	
					4-204-369-01	COVER, SCREW (L) (KV-32FX60)	
				34	4-302-404-03	SCREW (WASHER HEAD) (+P 4X16)	
				35	*4-204-458-01	COVER, PORT	
				36	4-204-428-01	COVER, SCREW (R) (KV-28FX60)	
					4-204-370-01	COVER, SCREW (R) (KV-32FX60)	

6-2. PICTURE TUBE



REF. NO.	PART. NO	DESCRIPTION	REMARK
51	X-4200-417-2	BEZNET ASSY (KV-28FX60)	52-57
	X-4200-412-3	BEZNET ASSY (KV-32FX60)	
52	4-204-368-01	GRILLE, SPEAKER (KV-32FX60)	
53	4-042-192-01	CATCHER, PUSH	
54	4-204-492-01	WINDOW, ORNAMENTAL	
55	4-204-438-01	BUTTON, POWER	
56	4-202-964-11	SPRING	
57	4-204-439-01	GUIDE, LIGHT	
58	4-202-555-01	SHAFT, DOOR	
59	4-204-435-31	DOOR (KV-28FX60A/28FX60B/28FX60D/28FX60K/28FX60R/28FX60U/32FX60A/32FX60D/32FX60K/32FX60R)	
	4-204-435-41	DOOR (KV-28FX60E/28FX60U/32FX60B/32FX60E/32FX60U)	

REF. NO.	PART. NO	DESCRIPTION	REMARK
60	4-045-250-01	DAMPER	
61	4-203-128-31	SHEET, BLOTING (KV-28FX60)	
62	*4-203-098-01	SUPPORTER, CRT (KV-32FX60)	
63	Δ 1-451-481-11	DEFLECTION YOKE (Y28RCV2) (KV-28FX60)	
	Δ 1-451-480-11	DEFLECTION YOKE (Y32RCV2) (KV-32FX60)	
64	1-452-896-11	COIL, NA ROTATION (RT200)	
65	Δ 8-453-011-11	NECK ASSY, NA299-M	
66	*A-1644-094-A	VM BOARD, COMPLETE	
67	*A-1638-123-A	C BOARD, COMPLETE	
68	4-369-318-51	SPRING, TENSION	
69	Δ 1-416-466-11	COIL, DEMAGNETIC (KV-28FX60)	
	Δ 1-416-769-11	COIL, DEMAGNETIC (KV-32FX60)	
70	*4-202-988-01	CUSHION, BOX	

REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
71	*4-057-303-01	HOLDER, DGC (KV-28FX60)		75	4-036-188-01	SCREW, SELF TAPPING	
	*4-059-569-01	HOLDER, DGC (KV-32FX60)		76	4-308-870-00	CLIP, LEAD WIRE	
72	△ 1-251-317-31	CAP ASSY, HIGH-VOLTAGE		77	1-452-094-00	MAGNET, ROTABLE DISK; 15MM	
73	3-704-495-01	SPACER, DY		78	1-425-032-00	MAGNET, DISK; 10MM	
74	△ 8-737-785-05	PICTURE TUBE (W66LX010X) (KV-28FX60)		79	X-4387-214-1	PERMALLOY ASSY, CORRECTION	
	△ 8-735-054-05	PICTURE TUBE (W76LLZ060X) (SD-302)		80	3-701-007-00	BAND, BINDING	
		(KV-32FX60)					

SECTION 7

ELECTRICAL PARTS LIST

Note : Les composants indentifiés par une trame et par une marque Δ sont d'une importance critique pour la sécurité. Ne les remplacer que par des pièces du numéro spécifié.

Note : The components identified by shading and marked Δ are critical for safety. Replace only with the part numbers specified in the parts list.

- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

When indicating parts by reference number, please include the board name.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- **RESISTORS**
- All resistors are in ohms.
- F : nonflammable.

CAPACITORS
MF : mF, PF : mmF

COILS
MMH : mH , uH

B1

REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
	*A-1620-112-A	B1 BOARD, COMPLETE *****					
		< CAPACITOR >					
C2301	1-126-934-11	ELECT 220MF	20% 16V	C2340	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C2302	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C2342	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C2303	1-126-964-11	ELECT 10MF	20% 50V	C2343	1-126-961-11	ELECT 2.2MF	20% 50V
C2304	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C2344	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C2305	1-163-259-91	CERAMIC CHIP 220PF	5% 50V	C2345	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C2306	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C2346	1-126-964-11	ELECT 10MF	20% 50V
C2307	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C2347	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
C2308	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C2348	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
C2309	1-126-934-11	ELECT 220MF	20% 16V	C2349	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C2311	1-126-963-11	ELECT 4.7MF	20% 50V	C2350	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C2312	1-126-963-11	ELECT 4.7MF	20% 50V	C2351	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C2313	1-126-963-11	ELECT 4.7MF	20% 50V	C2354	1-126-934-11	ELECT 220MF	20% 16V
C2314	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C2356	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C2315	1-164-489-11	CERAMIC CHIP 0.22MF	10% 16V	C2357	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C2316	1-110-501-11	CERAMIC CHIP 0.33MF	10% 16V	C2358	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C2317	1-162-638-11	CERAMIC CHIP 1MF	16V	C2361	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C2318	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V	C2362	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C2319	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V	C2363	1-126-934-11	ELECT 220MF	20% 16V
C2320	1-164-489-11	CERAMIC CHIP 0.22MF	10% 16V	C2364	1-102-518-11	CERAMIC CHIP 33PF	5% 50V
C2323	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	C2366	1-102-518-11	CERAMIC CHIP 33PF	5% 50V
C2324	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C2367	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C2325	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C2368	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C2327	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C2371	1-102-518-11	CERAMIC CHIP 33PF	5% 50V
C2328	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C2372	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C2329	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C2374	1-102-518-11	CERAMIC CHIP 33PF	5% 50V
C2330	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C2377	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C2331	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C2378	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C2332	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	C2380	1-163-145-00	CERAMIC CHIP 0.0015MF	5% 50V
C2333	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C2381	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C2334	1-126-964-11	ELECT 10MF	20% 50V	C2382	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C2335	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C2383	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C2337	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C2385	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C2338	1-126-934-11	ELECT 220MF	20% 16V	C2387	1-163-275-11	CERAMIC CHIP 0.001MF	2% 100V
C2339	1-164-005-11	CERAMIC CHIP 0.47MF	25V	C2388	1-136-479-11	FILM 0.001MF	1% 100V
				C2389	1-163-085-00	CERAMIC CHIP 2PF	0.25PF 50V
				C2390	1-102-852-91	CERAMIC 47PF	5% 50V
				C2391	1-102-852-91	CERAMIC 47PF	5% 50V
				C2704	1-126-934-11	ELECT 220MF	20% 16V

B1

REF.NO.	PART.NO	DESCRIPTION	REMARK
C2705	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
< CONNECTOR >			
CN2100	1-695-301-11	CONNECTOR, BOARD TO BOARD 40P	
< FILTER >			
FL2300	1-236-071-11	ENCAPSULATED COMPONENT	
FL2301	1-233-767-21	FILTER	
FL2302	1-236-071-11	ENCAPSULATED COMPONENT	
FL2303	1-236-071-11	ENCAPSULATED COMPONENT	
FL2305	1-236-071-11	ENCAPSULATED COMPONEN	
< IC >			
IC2300	8-759-991-41	IC LM78L05ACZ	
IC2301	8-759-295-09	IC TLC2932IPW	
IC2302	8-759-257-59	IC TDA8755T-T	
IC2303	8-759-438-64	IC SAA4952WP/V1	
IC2304	8-759-546-02	IC SAA4995WP-V1-T3	
IC2305	8-759-295-09	IC TLC2932IPW	
IC2306	8-759-439-27	IC TMS4C2972-28DTR	
IC2307	8-759-546-04	IC SAA4991WP-V1-T3	
IC2308	8-759-572-55	IC P83C654KBA/585	
IC2309	8-759-439-27	IC TMS4C2972-28DTR	
IC2310	8-759-991-41	IC LM78L05ACZ	
IC2311	8-759-467-19	IC SDA9280B22	
IC2314	8-759-439-26	IC SN74LS221D	
< COIL >			
L2300	1-408-597-31	INDUCTOR 3.3UH	
L2301	1-410-435-21	INDUCTOR 220UH	
L2302	1-410-435-21	INDUCTOR 220UH	
L2303	1-408-597-31	INDUCTOR 3.3UH	
L2304	1-414-186-31	INDUCTOR 33UH	
L2305	1-408-603-31	INDUCTOR 10UH	
L2306	1-414-186-31	INDUCTOR 33UH	
L2307	1-414-384-11	INDUCTOR 5.6UH	
< TRANSISTOR >			
Q2301	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q2302	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q2303	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q2304	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q2305	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2306	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2307	8-729-216-22	TRANSISTOR 2SA1162-G	
< RESISTOR >			
R2300	1-216-051-00	RES,CHIP 1.2K 5%	1/10W
R2301	1-216-053-00	RES,CHIP 1.5K 5%	1/10W
R2302	1-216-067-00	RES,CHIP 5.6K 5%	1/10W
R2303	1-216-059-00	RES,CHIP 2.7K 5%	1/10W

REF.NO.	PART.NO	DESCRIPTION	REMARK
R2304	1-216-051-00	RES,CHIP 1.2K 5%	1/10W
R2305	1-216-065-91	RES,CHIP 4.7K 5%	1/10W
R2306	1-216-295-91	SHORT 0	
R2307	1-216-049-91	RES,CHIP 1K 5%	1/10W
R2310	1-216-049-91	RES,CHIP 1K 5%	1/10W
R2312	1-216-049-91	RES,CHIP 1K 5%	1/10W
R2313	1-216-047-91	RES,CHIP 820 5%	1/10W
R2314	1-216-063-91	RES,CHIP 3.9K 5%	1/10W
R2315	1-216-113-00	RES,CHIP 470K 5%	1/10W
R2316	1-216-073-00	RES,CHIP 10K 5%	1/10W
R2317	1-216-025-91	RES,CHIP 100 5%	1/10W
R2320	1-216-295-91	SHORT 0	
R2321	1-216-295-91	SHORT 0	
R2337	1-216-049-91	RES,CHIP 1K 5%	1/10W
R2338	1-216-295-91	SHORT 0	
R2341	1-216-295-91	SHORT 0	
R2345	1-216-025-91	RES,CHIP 100 5%	1/10W
R2348	1-216-089-91	RES,CHIP 47K 5%	1/10W
R2355	1-216-295-91	SHORT 0	
R2356	1-216-063-91	RES,CHIP 3.9K 5%	1/10W
R2358	1-216-295-91	SHORT 0	
R2359	1-216-001-00	RES,CHIP 10 5%	1/10W
R2360	1-216-085-00	RES,CHIP 33K 5%	1/10W
R2361	1-216-085-00	RES,CHIP 33K 5%	1/10W
R2362	1-216-295-91	SHORT 0	
R2363	1-216-295-91	SHORT 0	
R2364	1-216-057-00	RES,CHIP 2.2K 5%	1/10W
R2365	1-216-057-00	RES,CHIP 2.2K 5%	1/10W
R2366	1-216-057-00	RES,CHIP 2.2K 5%	1/10W
R2367	1-216-057-00	RES,CHIP 2.2K 5%	1/10W
R2368	1-216-057-00	RES,CHIP 2.2K 5%	1/10W
R2369	1-216-057-00	RES,CHIP 2.2K 5%	1/10W
R2370	1-216-057-00	RES,CHIP 2.2K 5%	1/10W
R2371	1-216-057-00	RES,CHIP 2.2K 5%	1/10W
R2372	1-216-057-00	RES,CHIP 2.2K 5%	1/10W
R2373	1-216-065-91	RES,CHIP 4.7K 5%	1/10W
R2374	1-216-049-91	RES,CHIP 1K 5%	1/10W
R2375	1-216-049-91	RES,CHIP 1K 5%	1/10W
R2376	1-216-049-91	RES,CHIP 1K 5%	1/10W
R2377	1-216-049-91	RES,CHIP 1K 5%	1/10W
R2378	1-216-029-00	RES,CHIP 150 5%	1/10W
R2379	1-216-076-00	RES,CHIP 13K 5%	1/10W
R2380	1-216-073-00	RES,CHIP 10K 5%	1/10W
R2381	1-216-021-00	RES,CHIP 68 5%	1/10W
R2382	1-216-049-91	RES,CHIP 1K 5%	1/10W
R2383	1-216-049-91	RES,CHIP 1K 5%	1/10W
R2384	1-216-021-00	RES,CHIP 68 5%	1/10W
R2385	1-216-037-00	RES,CHIP 330 5%	1/10W
R2386	1-216-295-91	SHORT 0	
R2387	1-216-027-00	RES,CHIP 120 5%	1/10W
R2388	1-216-037-00	RES,CHIP 330 5%	1/10W

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

B1**F****F1**

REF.NO.	PART.NO	DESCRIPTION	REMARK
R2389	1-216-069-00	RES,CHIP	6.8K 5% 1/10W
R2390	1-216-049-91	RES,CHIP	1K 5% 1/10W
R2391	1-216-025-91	RES,CHIP	100 5% 1/10W
R2392	1-216-295-91	SHORT	0
R2393	1-216-295-91	SHORT	0
R2394	1-216-295-91	SHORT	0
R2395	1-216-295-91	SHORT	0
R2396	1-216-295-91	SHORT	0
R2397	1-216-295-91	SHORT	0
R2398	1-216-295-91	SHORT	0
R2410	1-216-037-00	RES,CHIP	330 5% 1/10W
R2411	1-216-037-00	RES,CHIP	330 5% 1/10W
R2412	1-216-668-11	METAL CHIP	5.1K 0.50% 1/10W
R2413	1-216-059-11	RES,CHIP	2.7K 0.50% 1/10W
R2415	1-216-295-91	SHORT	0
R2711	1-216-001-00	RES,CHIP	10 5% 1/10W
R2712	1-216-295-91	SHORT	0
R2713	1-216-295-91	SHORT	0
R2714	1-216-295-91	SHORT	0
R2715	1-216-295-91	SHORT	0
R2716	1-216-295-91	SHORT	0
R2717	1-216-295-91	SHORT	0
R2718	1-216-295-91	SHORT	0
R2719	1-216-295-91	SHORT	0
R2720	1-216-295-91	SHORT	0
R2721	1-216-295-91	SHORT	0
R2722	1-216-295-91	SHORT	0
R2723	1-216-027-00	RES,CHIP	120 5% 1/10W
R2724	1-216-295-91	SHORT	0
R2725	1-216-021-00	RES,CHIP	68 5% 1/10W
R2726	1-216-295-91	SHORT	0
R2727	1-216-295-91	SHORT	0
R2734	1-216-295-91	SHORT	0
R2735	1-216-021-00	RES,CHIP	68 5% 1/10W
R2736	1-216-295-91	SHORT	0
R2738	1-216-025-91	RES,CHIP	100 5% 1/10W
< CRYSTAL >			
X2300	1-579-175-11	VIBRATOR, CERAMIC	

*A-1624-073-A F BOARD, COMPLETE			

*4-203-258-11 HOLDER, LED			
< CAPACITOR >			
C7125	1-126-969-11	ELECT	220MF 20% 50V

REF.NO.	PART.NO	DESCRIPTION	REMARK
< CONNECTOR >			
CN7100	*1-568-879-11	PIN, CONNECTOR 4P	
CN7600	Δ *1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P	
CN7644	Δ *1-580-844-11	PIN, CONNECTOR (POWER)	
< DIODE >			
D7125	8-719-030-11	DIODE SLA-570KT3F	
< IC >			
IC7125	8-749-014-59	IC TSOP1740KS1	
< RESISTOR >			
R7125	1-247-815-91	CARBON 220 5% 1/4W	
R7126	1-249-411-11	CARBON 330 5% 1/4W	
< SWITCH >			
S7601	Δ 1-571-433-21	SWITCH, PUSH (AC POWER)	

*A-1624-074-A F1 BOARD, COMPLETE			

< CAPACITOR >			
C7626	Δ 1-136-519-12	FILM 0.47MF 20% 300V	
< CONNECTOR >			
CN7611	Δ *1-580-844-11	PIN, CONNECTOR (POWER)	
CN7622	1-695-915-11	TAB (CONTACT)	
CN7633	Δ *1-580-843-11	PIN, CONNECTOR (POWER)	
< FUSE >			
F7626	Δ 1-532-505-00	FUSE 5A/250V	
	Δ *1-533-725-11	HOLDER, FUSE (F7626)	
< TRANSFORMER >			
LF7627	Δ 1-433-488-11	TRANSFORMER, LINE FILTER	
< RESISTOR >			
R7626	Δ 1-202-885-91	SOLID 1M 20% 1/2W	
< VARISTOR >			
VDR7626	Δ 1-801-073-31	VARISTOR ERZV14D471	

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REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
* A-1630-978-A	A BOARD, COMPLETE	*****		C1326	1-163-059-91	CERAMIC CHIP 0.01MF	10% 50V
	(KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/32FX60A/32FX60D/ 32FX60E/32FX60K/32FX60R)			C1327	1-126-934-11	ELECT 220MF	20% 10V
				C1328	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
				C1601	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
				C1602	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
* A-1630-988-A	A BOARD, COMPLETE (KV-32FX60B)	*****		C1603	1-126-933-11	ELECT 100MF	20% 16V
				C1604	1-126-933-11	ELECT 100MF	20% 16V
* A-1630-989-A	A BOARD, COMPLETE (KV-28FX60U/32FX60U)	*****		C1605	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
				C1607	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
				C1608	1-126-934-11	ELECT 220MF	20% 16V
4-204-625-01	HEAT SINK, AUDIO			C1609	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
4-382-854-11	SCREW (M3X10), P, SW (+)			C1610	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
*4-931-401-01	HEAT SINK, V.OUT			C1611	1-126-933-11	ELECT 100MF	20% 16V
< CAPACITOR >				C1612	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1100	1-104-664-11	ELECT 47MF	20% 25V	C1613	1-126-933-11	ELECT 100MF	20% 16V
C1101	1-104-666-11	ELECT 220MF	20% 25V	C1614	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1126	1-162-568-11	CERAMIC CHIP 0.33MF	10% 16V	C1615	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1127	1-130-785-81	MYLAR 0.47MF	5% 50V	C1617	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1128	1-163-135-00	CERAMIC CHIP 560PF	5% 50V	< CONNECTOR >			
C1129	1-130-777-00	FILM 0.1MF	5% 63V	CN1111	*1-564-520-11	PLUG, CONNECTOR 5P	
C1130	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	CN1200	1-695-298-11	CONNECTOR, BOARD TO BOARD 40P	
C1131	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	CN1401	1-695-298-11	CONNECTOR, BOARD TO BOARD 40P	
C1132	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	CN1600	1-900-903-64	CONNECTOR ASSY 20P	
C1133	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	CN1601	1-900-903-64	CONNECTOR ASSY 20P	
C1134	1-126-961-11	ELECT 2.2MF	20% 50V	CN1602	1-900-903-64	CONNECTOR ASSY 20P	
C1135	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	CN1700	*1-568-879-11	PIN, CONNECTOR 4P	
C1136	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	CN1701	1-573-296-11	CONNECTOR, BOARD TO BOARD 10P	
C1137	1-126-943-11	ELECT 2200MF	20% 25V	CN1702	*1-568-880-51	PIN, CONNECTOR 5P	
C1138	1-126-943-11	ELECT 2200MF	20% 25V	CN1703	*1-564-514-11	PLUG, CONNECTOR 11P	
C1139	1-104-329-11	CERAMIC CHIP 0.1MF	10% 50V	CN1801	1-695-299-11	CONNECTOR, BOARD TO BOARD 50P	
C1140	1-128-560-11	ELECT 22MF	20% 100V	CN1901	1-695-298-11	CONNECTOR, BOARD TO BOARD 40P	
C1151	1-162-568-11	CERAMIC CHIP 0.33MF	10% 16V	< DIODE >			
C1152	1-130-785-11	MYLAR 0.47MF	5% 50V	D1100	8-719-914-43	DIODE DAN202K	
C1153	1-163-135-00	CERAMIC CHIP 560PF	5% 50V	D1101	8-719-914-44	DIODE DAP202K	
C1154	1-130-777-00	FILM 0.1MF	5% 63V	D1102	8-719-914-43	DIODE DAN202K	
C1155	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	D1103	8-719-914-43	DIODE DAN202K	
C1156	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	D1401	8-719-105-99	DIODE RD6.2M-B1	
C1157	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	D1402	8-719-105-99	DIODE RD6.2M-B1	
C1158	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	D1403	8-719-105-99	DIODE RD6.2M-B1	
C1159	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	D1404	8-719-105-99	DIODE RD6.2M-B1	
C1160	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	D1626	8-719-914-43	DIODE DAN202K	
C1161	1-104-329-11	CERAMIC CHIP 0.1MF	10% 50V	D1627	8-719-914-43	DIODE DAN202K	
C1162	1-128-560-11	ELECT 22MF	20% 100V	D1629	8-719-914-43	DIODE DAN202K	
C1177	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	< FERRITE BEAD >			
C1179	1-126-964-11	ELECT 10MF	20% 50V	FB1126	1-535-303-00	LEAD, JUMPER (5.0MM)	
C1180	1-126-943-11	ELECT 2200MF	20% 25V	FB1151	1-535-303-00	LEAD, JUMPER (5.0MM)	
C1181	1-126-943-11	ELECT 2200MF	20% 25V				
C1182	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V				
C1183	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V				
C1184	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V				
C1226	1-104-661-91	ELECT 330MF	20% 16V				

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REF. NO.	PART. NO	DESCRIPTION	REMARK	REF. NO.	PART. NO	DESCRIPTION	REMARK
< IC >				R1128	1-216-041-00	RES,CHIP	470 5% 1/10W
IC1126	8-759-544-25	IC TDA7482		R1151	1-216-631-11	METAL CHIP	150 0.50% 1/10W
IC1151	8-759-544-25	IC TDA7482		R1152	1-216-075-00	RES,CHIP	12K 5% 1/10W
IC1176	8-759-333-24	IC LM1876TF		R1153	1-216-041-00	RES,CHIP	470 5% 1/10W
IC1400	8-752-072-94	IC CXA1875AM-T4		R1176	1-216-063-91	RES,CHIP	3.9K 5% 1/10W
IC1601	8-759-457-44	IC KA78R05TU		R1179	1-216-357-00	METAL OXIDE	4.7 5% 1W F
IC1602	8-759-544-09	IC KA278R05TU		R1182	1-216-081-00	RES,CHIP	22K 5% 1/10W
IC1603	8-759-295-82	IC L78L08ACZ-AP		R1183	1-216-045-00	RES,CHIP	680 5% 1/10W
IC1604	8-759-544-13	IC KA78R09TU		R1185	1-216-089-91	RES,CHIP	47K 5% 1/10W
IC1605	8-759-544-11	IC KA78R33TU		R1201	1-216-089-91	RES,CHIP	47K 5% 1/10W
< COIL >				R1202	1-216-083-00	RES,CHIP	27K 5% 1/10W
L1126	1-416-857-11	INDUCTOR	65UH	R1203	1-216-083-00	RES,CHIP	27K 5% 1/10W
L1127	1-414-158-11	INDUCTOR	2.2UH	R1204	1-216-071-00	RES,CHIP	8.2K 5% 1/10W
L1128	1-414-158-11	INDUCTOR	2.2UH	R1205	1-216-089-91	RES,CHIP	47K 5% 1/10W
L1151	1-416-857-11	INDUCTOR	65UH	R1206	1-216-073-00	RES,CHIP	10K 5% 1/10W
L1152	1-414-158-11	INDUCTOR	2.2UH	R1207	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
L1153	1-414-158-11	INDUCTOR	2.2UH	R1208	1-216-089-91	RES,CHIP	47K 5% 1/10W
L1326	1-414-183-41	INDUCTOR	10UH	R1209	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
< TRANSISTOR >				R1210	1-216-089-91	RES,CHIP	47K 5% 1/10W
Q1100	8-729-216-22	TRANSISTOR 2SA1162-G		R1226	1-216-073-00	RES,CHIP	10K 5% 1/10W
Q1201	8-729-620-06	TRANSISTOR 2SC3052-EF		R1227	1-216-073-00	RES,CHIP	10K 5% 1/10W
Q1202	8-729-620-06	TRANSISTOR 2SC3052-EF		R1228	1-216-073-00	RES,CHIP	10K 5% 1/10W
Q1203	8-729-620-06	TRANSISTOR 2SC3052-EF		R1229	1-216-073-00	RES,CHIP	10K 5% 1/10W
Q1204	8-729-620-06	TRANSISTOR 2SC3052-EF		R1230	1-216-055-00	RES,CHIP	1.8K 5% 1/10W
Q1226	8-729-620-06	TRANSISTOR 2SC3052-EF		R1232	1-216-295-91	SHORT	0
Q1227	8-729-620-06	TRANSISTOR 2SC3052-EF		R1233	1-216-049-91	RES,CHIP	1K 5% 1/10W
Q1229	8-729-027-38	TRANSISTOR DTA144EKA-T146		R1326	1-216-025-91	RES,CHIP	100 5% 1/10W
Q1326	8-729-620-06	TRANSISTOR 2SC3052-EF		R1327	1-216-025-91	RES,CHIP	100 5% 1/10W
Q1327	8-729-216-22	TRANSISTOR 2SA1162-G		R1328	1-216-073-00	RES,CHIP	10K 5% 1/10W
Q1328	8-729-620-06	TRANSISTOR 2SC3052-EF		R1329	1-216-025-91	RES,CHIP	100 5% 1/10W
Q1329	8-729-216-22	TRANSISTOR 2SA1162-G		R1330	1-216-041-00	RES,CHIP	470 5% 1/10W
Q1400	8-729-046-47	TRANSISTOR KSC2500-BTA		R1331	1-216-041-00	RES,CHIP	470 5% 1/10W
Q1601	8-729-620-06	TRANSISTOR 2SC3052-EF		R1332	1-216-041-00	RES,CHIP	470 5% 1/10W
Q1626	8-729-620-06	TRANSISTOR 2SC3052-EF		R1333	1-216-075-00	RES,CHIP	12K 5% 1/10W
< RESISTOR >				R1334	1-216-069-00	RES,CHIP	6.8K 5% 1/10W
JR1601	1-216-296-91	SHORT	0	R1335	1-216-025-91	RES,CHIP	100 5% 1/10W
R1001	1-216-295-91	SHORT	0	R1336	1-216-041-00	RES,CHIP	470 5% 1/10W
R1002	1-216-295-91	SHORT	0	R1337	1-216-041-00	RES,CHIP	470 5% 1/10W
R1003	1-216-295-91	SHORT	0	R1338	1-216-001-00	RES,CHIP	10 5% 1/10W
R1004	1-216-295-91	SHORT	0	R1339	1-216-041-00	RES,CHIP	470 5% 1/10W
R1005	1-216-295-91	SHORT	0	R1340	1-216-043-91	RES,CHIP	560 5% 1/10W
R1006	1-216-295-91	SHORT	0	R1400	1-216-053-00	RES,CHIP	1.5K 5% 1/10W
R1100	1-216-025-91	RES,CHIP	100 5% 1/10W	R1401	1-216-081-00	RES,CHIP	22K 5% 1/10W
R1101	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R1403	1-216-295-91	SHORT	0
R1102	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R1404	1-216-295-91	SHORT	0
R1126	1-216-631-11	METAL CHIP	150 0.50% 1/10W	R1601	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R1127	1-216-075-00	RES,CHIP	12K 5% 1/10W	R1602	1-216-691-11	METAL CHIP	47K 0.50% 1/10W
				R1603	1-216-025-91	RES,CHIP	100 5% 1/10W
				R1605	1-216-049-91	RES,CHIP	1K 5% 1/10W
				R1609	1-216-089-91	RES,CHIP	47K 5% 1/10W
				R1610	1-216-065-91	RES,CHIP	4.7K 5% 1/10W

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REF.NO.	PART.NO	DESCRIPTION	REMARK
R1615	1-216-025-91	RES,CHIP 100 5% 1/10W	
R1616	1-216-304-11	RES,CHIP 3.3 5% 1/10W	
R1617	1-216-304-11	RES,CHIP 3.3 5% 1/10W	
R1618	1-216-295-91	SHORT 0	
R1621	1-216-027-00	RES,CHIP 120 5% 1/10W	
R1622	1-216-029-00	RES,CHIP 150 5% 1/10W	
R1623	1-216-033-00	RES,CHIP 220 5% 1/10W	
R1625	1-216-295-91	SHORT 0	
< TUNER >			
TU1326	1-693-338-11	TUNER/VIF (AEP) (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/32FX60A/32FX60D/ 32FX60E/32FX60K/32FX60R)	
	1-693-340-11	TUNER/VIF (FR) (KV-32FX60B)	
	1-693-339-11	TUNER/VIF (UK) (KV-28FX60U/32FX60U)	

	*A-1634-047-A	M BOARD, COMPLETE	

< CAPACITOR >			
C9100	1-115-340-11	CERAMIC CHIP 0.22MF 10% 25V	
C9101	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C9102	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C9104	1-104-664-11	ELECT 47MF 20% 25V	
C9105	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C9110	1-165-321-11	CERAMIC CHIP 0.68MF 10% 16V	
C9111	1-164-157-11	CERAMIC CHIP 0.068MF 10% 25V	
C9112	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C9113	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C9114	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C9115	1-115-340-11	CERAMIC CHIP 0.22MF 10% 25V	
C9117	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C9118	1-104-664-11	ELECT 47MF 20% 25V	
C9119	1-163-259-91	CERAMIC CHIP 220PF 5% 50V	
C9121	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C9122	1-115-340-11	CERAMIC CHIP 0.22MF 10% 25V	
C9123	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C9124	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C9125	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C9126	1-163-105-00	CERAMIC CHIP 33PF 5% 50V	
C9127	1-163-105-00	CERAMIC CHIP 33PF 5% 50V	
C9128	1-163-105-00	CERAMIC CHIP 33PF 5% 50V	
C9129	1-163-105-00	CERAMIC CHIP 33PF 5% 50V	
C9130	1-163-105-00	CERAMIC CHIP 33PF 5% 50V	
C9131	1-163-105-00	CERAMIC CHIP 33PF 5% 50V	
C9132	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C9400	1-115-340-11	CERAMIC CHIP 0.22MF 10% 25V	
C9500	1-104-664-11	ELECT 47MF 20% 25V	
C9502	1-104-664-11	ELECT 47MF 20% 25V	
C9503	1-126-964-11	ELECT 10MF 20% 50V	

REF.NO.	PART.NO	DESCRIPTION	REMARK
C9504	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C9505	1-104-665-11	ELECT 100MF 20% 25V	
C9506	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C9507	1-115-340-11	CERAMIC CHIP 0.22MF 10% 25V	
C9508	1-115-340-11	CERAMIC CHIP 0.22MF 10% 25V	
C9509	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C9510	1-115-340-11	CERAMIC CHIP 0.22MF 10% 25V	
C9511	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C9512	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C9513	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C9514	1-163-235-11	CERAMIC CHIP 22PF 5% 50V	
C9515	1-163-235-11	CERAMIC CHIP 22PF 5% 50V	
C9516	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
C9517	1-163-021-91	CERAMIC CHIP 0.01MF 10% 50V	
C9518	1-115-340-11	CERAMIC CHIP 0.22MF 10% 25V	
C9519	1-126-964-11	ELECT 10MF 20% 50V	
C9520	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
< CONNECTOR >			
CN9101	1-695-301-11	CONNECTOR, BOARD TO BOARD 40P	
< DIODE >			
D9100	8-719-988-62	DIODE 1SS355	
D9101	8-719-988-62	DIODE 1SS355	
D9102	8-719-988-62	DIODE 1SS355	
D9103	8-719-988-62	DIODE 1SS355	
D9104	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D9105	8-719-914-43	DIODE DAN202K	
D9107	8-719-025-31	DIODE 02CZ5.6-TE85L	
D9108	8-719-914-44	DIODE DAP202K	
D9109	8-719-105-91	DIODE RD5.6M-B2	
D9110	8-719-914-43	DIODE DAN202K	
D9111	8-719-105-91	DIODE RD5.6M-B2	
< FILTER >			
FL9101	1-236-071-11	ENCAPSULATED COMPONENT	
FL9500	1-236-071-11	ENCAPSULATED COMPONENT	
FL9501	1-236-071-11	ENCAPSULATED COMPONENT	
< IC >			
IC9100	8-759-988-13	IC LM393PS	
IC9104	8-759-259-18	IC MB3793-42PNF	
IC9105	8-759-544-30	IC SAB-C161R1-LM	
IC9107	8-759-395-27	IC TC55527DFTL-70V	
IC9108	8-759-531-64	IC M24C32-BN6	
IC9110	8-759-559-96	IC HEF4094BT	
IC9500	8-759-034-47	IC MC74F00M-T2	
IC9501	8-759-426-56	IC MB814400C-70PUN-ER	
IC9502	8-759-438-62	IC SDA5275	

REF. NO.	PART.NO	DESCRIPTION	REMARK	REF. NO.	PART.NO	DESCRIPTION	REMARK
< COIL >				R9145	1-216-049-91	RES,CHIP	1K 5% 1/10W
L9400	1-412-029-11	INDUCTOR CHIP 10UH		R9146	1-216-049-91	RES,CHIP	1K 5% 1/10W
L9401	1-412-029-11	INDUCTOR CHIP 10UH		R9147	1-216-049-91	RES,CHIP	1K 5% 1/10W
< TRANSISTOR >				R9148	1-216-073-00	RES,CHIP	10K 5% 1/10W
Q9100	8-729-620-06	TRANSISTOR 2SC3052-EF		R9149	1-216-025-91	RES,CHIP	100 5% 1/10W
Q9101	8-729-620-06	TRANSISTOR 2SC3052-EF		R9150	1-216-025-91	RES,CHIP	100 5% 1/10W
Q9102	8-729-216-22	TRANSISTOR 2SA1162-G		R9151	1-216-025-91	RES,CHIP	100 5% 1/10W
Q9103	8-729-620-06	TRANSISTOR 2SC3052-EF		R9153	1-216-025-91	RES,CHIP	100 5% 1/10W
Q9105	8-729-620-06	TRANSISTOR 2SC3052-EF		R9159	1-216-069-00	RES,CHIP	6.8K 5% 1/10W
Q9106	8-729-027-46	TRANSISTOR DTC114YKA-T146		R9161	1-216-069-00	RES,CHIP	6.8K 5% 1/10W
Q9107	8-729-027-46	TRANSISTOR DTC114YKA-T146		R9162	1-216-069-00	RES,CHIP	6.8K 5% 1/10W
Q9108	8-729-027-46	TRANSISTOR DTC114YKA-T146		R9164	1-216-069-00	RES,CHIP	6.8K 5% 1/10W
Q9109	8-729-027-46	TRANSISTOR DTC114YKA-T146		R9166	1-216-073-00	RES,CHIP	10K 5% 1/10W
Q9110	8-729-620-06	TRANSISTOR 2SC3052-EF		R9168	1-216-069-00	RES,CHIP	6.8K 5% 1/10W
Q9110	8-729-620-06	TRANSISTOR 2SC3052-EF		R9169	1-216-069-00	RES,CHIP	6.8K 5% 1/10W
Q9500	8-729-216-22	TRANSISTOR 2SA1162-G		R9172	1-216-069-00	RES,CHIP	6.8K 5% 1/10W
Q9501	8-729-216-22	TRANSISTOR 2SA1162-G		R9173	1-216-295-91	SHORT	0
Q9502	8-729-216-22	TRANSISTOR 2SA1162-G		R9174	1-216-025-91	RES,CHIP	100 5% 1/10W
Q9503	1-801-806-11	TRANSISTOR DTC144EKA-T146		R9175	1-216-025-91	RES,CHIP	100 5% 1/10W
Q9504	1-801-806-11	TRANSISTOR DTC144EKA-T146		R9176	1-216-025-91	RES,CHIP	100 5% 1/10W
< RESISTOR >				R9177	1-216-025-91	RES,CHIP	100 5% 1/10W
R9100	1-216-073-00	RES,CHIP	10K 5% 1/10W	R9178	1-216-025-91	RES,CHIP	100 5% 1/10W
R9101	1-216-033-00	RES,CHIP	220 5% 1/10W	R9184	1-216-025-91	RES,CHIP	100 5% 1/10W
R9102	1-216-033-00	RES,CHIP	220 5% 1/10W	R9185	1-216-025-91	RES,CHIP	100 5% 1/10W
R9103	1-216-025-91	RES,CHIP	100 5% 1/10W	R9186	1-216-025-91	RES,CHIP	100 5% 1/10W
R9104	1-216-073-00	RES,CHIP	10K 5% 1/10W	R9187	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R9105	1-216-073-00	RES,CHIP	10K 5% 1/10W	R9188	1-216-025-91	RES,CHIP	100 5% 1/10W
R9107	1-216-025-91	RES,CHIP	100 5% 1/10W	R9189	1-216-025-91	RES,CHIP	100 5% 1/10W
R9108	1-216-025-91	RES,CHIP	100 5% 1/10W	R9190	1-216-025-91	RES,CHIP	100 5% 1/10W
R9109	1-216-073-00	RES,CHIP	10K 5% 1/10W	R9191	1-216-025-91	RES,CHIP	100 5% 1/10W
R9110	1-216-081-00	RES,CHIP	22K 5% 1/10W	R9192	1-216-025-91	RES,CHIP	100 5% 1/10W
R9111	1-216-025-91	RES,CHIP	100 5% 1/10W	R9193	1-216-097-91	RES,CHIP	100K 5% 1/10W
R9112	1-216-025-91	RES,CHIP	100 5% 1/10W	R9194	1-216-097-91	RES,CHIP	100K 5% 1/10W
R9113	1-216-033-00	RES,CHIP	220 5% 1/10W	R9195	1-216-097-91	RES,CHIP	100K 5% 1/10W
R9114	1-216-083-00	RES,CHIP	27K 5% 1/10W	R9196	1-216-073-00	RES,CHIP	10K 5% 1/10W
R9115	1-216-081-00	RES,CHIP	22K 5% 1/10W	R9197	1-216-073-00	RES,CHIP	10K 5% 1/10W
R9116	1-216-073-00	RES,CHIP	10K 5% 1/10W	R9500	1-216-295-91	SHORT	0
R9117	1-216-073-00	RES,CHIP	10K 5% 1/10W	R9501	1-216-295-91	SHORT	0
R9119	1-216-073-00	RES,CHIP	10K 5% 1/10W	R9502	1-216-295-91	SHORT	0
R9120	1-216-073-00	RES,CHIP	10K 5% 1/10W	R9504	1-216-041-00	RES,CHIP	470 5% 1/10W
R9121	1-216-017-91	RES,CHIP	47 5% 1/10W	R9505	1-216-051-00	RES,CHIP	1.2K 5% 1/10W
R9122	1-216-049-91	RES,CHIP	1K 5% 1/10W	R9506	1-216-073-00	RES,CHIP	10K 5% 1/10W
R9123	1-216-073-00	RES,CHIP	10K 5% 1/10W	R9507	1-216-097-91	RES,CHIP	100K 5% 1/10W
R9127	1-216-049-91	RES,CHIP	1K 5% 1/10W	R9508	1-216-017-91	RES,CHIP	47 5% 1/10W
R9138	1-216-049-91	RES,CHIP	1K 5% 1/10W	R9509	1-216-049-91	RES,CHIP	1K 5% 1/10W
R9140	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R9510	1-216-017-91	RES,CHIP	47 5% 1/10W
R9141	1-216-049-91	RES,CHIP	1K 5% 1/10W	R9511	1-216-049-91	RES,CHIP	1K 5% 1/10W
R9142	1-216-041-00	RES,CHIP	470 5% 1/10W	R9512	1-216-017-91	RES,CHIP	47 5% 1/10W
R9143	1-216-049-91	RES,CHIP	1K 5% 1/10W	R9513	1-216-017-91	RES,CHIP	47 5% 1/10W
R9144	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R9514	1-216-017-91	RES,CHIP	47 5% 1/10W
				R9515	1-216-295-91	SHORT	0

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REF.NO.	PART.NO	DESCRIPTION	REMARK
R9516	1-216-295-91	SHORT 0	
R9517	1-216-295-91	SHORT 0	
R9518	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R9519	1-216-039-00	RES,CHIP 390 5% 1/10W	
R9520	1-216-039-00	RES,CHIP 390 5% 1/10W	
R9521	1-216-039-00	RES,CHIP 390 5% 1/10W	
R9522	1-216-295-91	SHORT 0	
R9523	1-216-295-91	SHORT 0	
R9524	1-216-295-91	SHORT 0	
R9525	1-216-057-00	RES,CHIP 2.2K 5% 1/10W	
R9526	1-216-057-00	RES,CHIP 2.2K 5% 1/10W	
R9527	1-216-057-00	RES,CHIP 2.2K 5% 1/10W	
R9528	1-216-025-91	RES,CHIP 100 5% 1/10W	
R9529	1-216-025-91	RES,CHIP 100 5% 1/10W	
R9530	1-216-025-91	RES,CHIP 100 5% 1/10W	
R9531	1-216-295-91	SHORT 0	
R9532	1-216-061-00	RES,CHIP 3.3K 5% 1/10W	
< CRYSTAL >			
X9101	1-781-107-21	RESONATOR	
X9500	1-760-551-21	VIBRATOR, CERAMIC	

* A-1638-123-A C BOARD, COMPLETE			

1-671-108-11 PWB, CIC			
4-382-854-11 SCREW (M3X10), P, SW			
< CAPACITOR >			
C5301	1-102-129-91	CERAMIC 0.01MF 10% 50V	
C5302	1-128-525-91	ELECT 470MF 20% 16V	
C5304	1-107-657-91	ELECT 1MF 20% 350V	
C5305	1-137-052-91	FILM 0.047MF 10% 400V	
C5306	1-102-157-91	CERAMIC 560PF 10% 500V	
C5325	1-102-959-91	CERAMIC 22PF 5% 50V	
C5326	1-102-157-91	CERAMIC 560PF 10% 500V	
C5327	1-102-129-91	CERAMIC 0.01MF 10% 50V	
C5328	1-128-525-91	ELECT 470MF 20% 16V	
C5329	1-107-967-91	ELECT 1MF 20% 400V	
C5350	1-107-907-91	ELECT 22MF 20% 50V	
C5352	1-102-157-91	CERAMIC 560PF 10% 500V	
C5353	1-102-129-91	CERAMIC 0.01MF 10% 50V	
C5354	1-128-525-91	ELECT 470MF 20% 16V	
C5355	1-107-657-91	ELECT 1MF 20% 350V	
C5356	1-137-052-91	FILM 0.047MF 10% 400V	
C5375	1-107-902-91	ELECT 1MF 20% 50V	
C5377	1-162-115-91	CERAMIC 330PF 10% 2KV	
C5378	1-162-116-91	CERAMIC 680PF 10% 2KV	
C5379	1-162-114-71	CERAMIC 0.0047MF 2KV	
C5380	1-107-652-91	ELECT 10MF 20% 250V	

REF.NO.	PART.NO	DESCRIPTION	REMARK
C5381	1-162-116-91	CERAMIC 680PF 10% 2KV	
C5382	1-162-114-71	CERAMIC 0.0047MF 2KV	
< CONNECTOR >			
CN5400	1-564-511-11	PLUG, CONNECTOR 8P	
CN5511	1-695-915-21	TAB (CONTACT)	
CN5522	1-695-915-21	TAB (CONTACT)	
CN5600	1-508-766-12	PIN, CONNECTOR (5MM PITCH) 4P	
< DIODE >			
D5300	8-719-921-20	DIODE 1SS119-25TD	
D5302	8-719-989-09	DIODE 1SS83TA	
D5325	8-719-921-20	DIODE 1SS119-25TD	
D5326	8-719-923-58	DIODE MTZJ-T-77-9.1A	
D5327	8-719-989-09	DIODE 1SS83TA	
D5350	8-719-921-20	DIODE 1SS119-25TD	
D5351	8-719-991-33	DIODE 1SS133T-77	
D5353	8-719-989-09	DIODE 1SS83TA	
D5375	8-719-991-33	DIODE 1SS133T-77	
D5376	8-719-991-33	DIODE 1SS133T-77	
D5377	8-719-936-83	DIODE GP08DPKG23	
D5378	8-719-923-84	DIODE MTZJ-T-77-13B	
D5379	8-719-982-96	DIODE MTZJ-T-77-2.2A	
D5380	8-719-982-96	DIODE MTZJ-T-77-2.2A	
D5381	8-719-031-34	DIODE RGP02-20EG23	
< IC >			
IC5300	8-759-360-83	IC TDA6111Q/N4	
IC5325	8-759-360-83	IC TDA6111Q/N4	
IC5350	8-759-360-83	IC TDA6111Q/N4	
< SOCKET >			
J5375	Δ 1-540-071-22	SOCKET, CRT	
< COIL >			
L5300	1-408-599-41	INDUCTOR 4.7UH	
L5325	1-408-599-41	INDUCTOR 4.7UH	
L5350	1-408-599-41	INDUCTOR 4.7UH	
L5375	1-410-671-41	INDUCTOR 47UH	
L5376	1-532-637-91	LINK, IC 1A/150V (ICP-F25)	
L5377	1-414-183-40	INDUCTOR 10UH	
< TRANSISTOR >			
Q5300	8-729-204-98	TRANSISTOR 2SC25510-TPE2	
Q5325	8-729-204-98	TRANSISTOR 2SC25510-TPE2	
Q5350	8-729-029-57	TRANSISTOR DTA144ESA-TP	
Q5351	8-729-204-98	TRANSISTOR 2SC25510-TPE2	
Q5375	8-729-900-95	TRANSISTOR 2SC1740S-RT	
Q5376	8-729-026-40	TRANSISTOR 2SA933AS-RT	

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REF.NO. PART.NO DESCRIPTION REMARK

< RESISTOR >

R5300 1-247-831-91 CARBON 1K 5% 1/4W
 R5301 1-247-823-91 CARBON 470 5% 1/4W
 R5302 1-247-813-91 CARBON 180 5% 1/4W
 R5303 1-247-831-91 CARBON 1K 5% 1/4W
 R5304 1-202-565-81 SOLID 470 20% 1/2W

R5305 1-215-926-51 METAL OXIDE 33K 5% 3W F
 R5306 1-247-845-91 CARBON 3.9K 5% 1/4W
 R5307 1-247-863-91 CARBON 22K 5% 1/4W
 R5325 1-247-831-91 CARBON 1K 5% 1/4W
 R5326 1-247-823-91 CARBON 680 5% 1/4W

R5327 1-247-813-91 CARBON 180 5% 1/4W
 R5328 1-249-417-11 CARBON 1K 5% 1/4W
 R5329 1-202-565-81 SOLID 470 20% 1/2W
 R5330 1-215-926-51 METAL OXIDE 33K 5% 3W F
 R5331 1-247-845-91 CARBON 3.9K 5% 1/4W

R5332 1-247-863-91 CARBON 22K 5% 1/4W
 R5350 1-249-417-11 CARBON 1K 5% 1/4W
 R5351 1-247-823-91 CARBON 470 5% 1/4W
 R5352 1-247-829-91 CARBON 820 5% 1/4W
 R5353 1-247-839-91 CARBON 2.2K 5% 1/4W

R5354 1-247-833-91 CARBON 1.2K 5% 1/4W
 R5355 1-247-813-91 CARBON 180 5% 1/4W
 R5356 1-249-417-11 CARBON 1K 5% 1/4W
 R5357 1-202-565-81 SOLID 470 20% 1/2W
 R5358 1-215-926-51 METAL OXIDE 33K 5% 3W F

R5359 1-247-863-91 CARBON 22K 5% 1/4W
 R5360 1-247-845-91 CARBON 3.9K 5% 1/4W
 R5361 1-247-859-91 CARBON 4.7K 5% 1/4W
 R5375 1-247-867-91 CARBON 33K 5% 1/4W
 R5376 1-247-855-91 CARBON 10K 5% 1/4W

R5377 1-247-857-91 CARBON 12K 5% 1/4W
 R5378 1-247-855-91 CARBON 10K 5% 1/4W
 R5379 1-247-873-91 CARBON 56K 5% 1/4W
 R5380 1-247-863-91 CARBON 22K 5% 1/4W
 R5381 1-247-837-91 CARBON 1.8K 5% 1/4W

R5382 1-202-549-81 SOLID 100 20% 1/2W
 R5383 1-216-399-51 METAL OXIDE 6.8 5% 3W F
 R5384 1-216-399-51 METAL OXIDE 6.8 5% 3W F
 R5385 1-202-549-81 SOLID 100 20% 1/2W
 R5386 1-202-884-91 SOLID 820K 20% 1/2W

R5387 1-202-884-91 SOLID 820K 20% 1/2W
 R5388 1-215-911-51 METAL OXIDE 100 5% 3W F
 R5389 1-249-417-91 CARBON 1K 5% 1/4W F

< VARIABLE RESISTOR >

RV5375 1-241-656-21 RES, ADJ, METAL FILM 110M
 RV5376 1-230-641-21 RES, ADJ, METAL GLAZE 2.2M

REF.NO. PART.NO DESCRIPTION REMARK

*A-1640-329-A D1 BOARD, COMPLETE (KV-28FX60)

*A-1640-322-A D1 BOARD, COMPLETE (KV-32FX60)

4-382-854-11 SCREW (M3X10), P, SW (+)

< CAPACITOR >

C6100 1-136-165-00 FILM 0.1MF 5% 50V
 C6101 1-136-165-00 FILM 0.1MF 5% 50V
 C6102 1-136-165-00 FILM 0.1MF 5% 50V
 C6103 1-163-205-00 CERAMIC CHIP 0.001MF 5% 50V
 C6104 1-163-205-00 CERAMIC CHIP 0.001MF 5% 50V

C6105 1-126-967-11 ELECT 47MF 20% 50V
 C6106 1-163-133-00 CERAMIC CHIP 470PF 5% 50V
 C6108 1-163-021-91 CERAMIC CHIP 0.01MF 10% 50V
 C6109 1-126-967-11 ELECT 47MF 20% 50V
 C6110 1-126-967-11 ELECT 47MF 20% 50V

C6111 1-126-967-11 ELECT 47MF 20% 50V
 C6112 1-163-037-11 CERAMIC CHIP 0.022MF 10% 50V
 C6113 1-163-021-91 CERAMIC CHIP 0.01MF 10% 50V
 C6114 1-126-964-11 ELECT 10MF 20% 50V
 C6115 1-163-005-11 CERAMIC CHIP 470PF 10% 50V

C6116 1-163-275-11 CERAMIC CHIP 0.001MF 5% 50V
 C6117 1-163-275-11 CERAMIC CHIP 0.001MF 5% 50V
 C6119 1-163-021-91 CERAMIC CHIP 0.01MF 10% 50V
 C6121 1-126-964-11 ELECT 10MF 20% 50V
 C6122 1-126-967-11 ELECT 47MF 20% 50V

C6125 1-163-017-00 CERAMIC CHIP 0.0047MF 10% 50V
 C6126 1-163-809-11 CERAMIC CHIP 0.047MF 10% 25V
 C6127 1-163-021-91 CERAMIC CHIP 0.01MF 10% 50V
 C6128 1-163-017-00 CERAMIC CHIP 0.0047MF 10% 50V
 C6129 1-163-809-11 CERAMIC CHIP 0.047MF 10% 25V

(KV-28FX60A/28FX60B/28FX60D/28FX60E/
 28FX60K/28FX60R/28FX60U)

1-164-004-11 CERAMIC CHIP 0.1MF 10% 25V
 (KV-32FX60A/32FX60B/32FX60D/32FX60E/
 32FX60K/32FX60R/32FX60U)

C6130 1-163-259-91 CERAMIC CHIP 220PF 5% 50V
 (KV-28FX60A/28FX60B/28FX60D/28FX60E/
 28FX60K/28FX60R/28FX60U)

C6131 1-126-964-11 ELECT 10MF 20% 50V
 C6132 1-163-259-91 CERAMIC CHIP 220PF 5% 50V

C6199 1-163-229-11 CERAMIC CHIP 12PF 5% 50V
 C6207 1-126-967-11 ELECT 47MF 20% 50V
 C6208 1-126-967-11 ELECT 47MF 20% 50V
 C6209 1-163-133-00 CERAMIC CHIP 470PF 5% 50V
 C6210 1-163-009-11 CERAMIC CHIP 0.001MF 10% 50V

C6250 1-104-664-11 ELECT 47MF 20% 16V
 C6253 1-115-339-11 CERAMIC CHIP 0.1MF 10% 50V
 C6254 1-136-177-00 FILM 1MF 5% 50V
 C6255 1-136-177-00 FILM 1MF 5% 50V
 C6256 1-163-117-00 CERAMIC CHIP 100PF 5% 50V

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REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
C6257	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V	< CONNECTOR >			
C6258	1-163-127-00	CERAMIC CHIP 270PF	5% 50V	CN6502	1-564-509-11	PLUG, CONNECTOR 6P (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
C6259	1-110-501-11	CERAMIC CHIP 0.33MF	10% 16V	*1-568-881-51	PIN, CONNECTOR 6P (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)		
C6260	1-104-664-11	ELECT 47MF	20% 16V	CN6601	1-695-302-11	CONNECTOR, BOARD TO BOARD 50P	
C6261	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V	CN6622	*1-568-878-51	PIN, CONNECTOR 3P	
C6262	1-136-165-00	FILM 0.1MF	5% 50V	CN6633	*1-568-878-51	PIN, CONNECTOR 3P	
C6263	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	< DIODE >			
C6264	1-126-964-11	ELECT 10MF	20% 50V	D6100	8-719-914-43	DIODE DAN202K	
C6306	1-126-964-11	ELECT 10MF	20% 50V	D6101	8-719-921-40	DIODE MT2J-4.7C	
C6307	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	D6102	8-719-914-43	DIODE DAN202K	
C6350	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	D6104	8-719-914-43	DIODE DAN202K	
C6351	1-126-967-11	ELECT 47MF	20% 50V	D6105	8-719-914-43	DIODE DAN202K	
C6353	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V	D6106	8-719-914-43	DIODE DAN202K	
C6354	1-136-159-00	FILM 0.033MF	5% 50V	D6107	8-719-914-47	DIODE DAN202K-T-146	
C6355	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	D6108	8-719-921-40	DIODE MT2J-4.7C	
C6356	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	D6127	8-719-914-43	DIODE DAN202K	
C6357	1-136-165-00	FILM 0.1MF	5% 50V	D6128	8-719-914-43	DIODE DAN202K	
C6358	1-104-329-11	CERAMIC CHIP 0.1MF	10% 50V	D6129	8-719-914-43	DIODE DAN202K	
C6359	1-104-329-11	CERAMIC CHIP 0.1MF	10% 50V	D6198	8-719-109-54	DIODE MT2J-T-77-2.2B	
C6360	1-107-714-11	ELECT 10MF	20% 50V	D6253	8-719-911-19	DIODE 1SS119-25	
C6361	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	D6254	1-535-303-00	LEAD, JUMPER (5.0MM)	
C6362	1-164-182-11	CERAMIC CHIP 0.0033MF	10% 50V	D6255	8-719-914-43	DIODE DAN202K	
C6363	1-104-665-11	ELECT 100MF	20% 25V	D6350	8-719-914-43	DIODE DAN202K (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)	
C6364	1-137-493-11	FILM 0.0047MF	5% 630V	D6351	8-719-914-43	DIODE DAN202K	
C6365	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	D6352	8-719-914-43	DIODE DAN202K	
C6367	1-104-329-11	CERAMIC CHIP 0.1MF	10% 50V	D6353	8-719-987-87	DIODE ERA85-009	
C6368	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	D6354	8-719-914-43	DIODE DAN202K	
C6370	1-137-493-11	FILM 0.0047MF	5% 630V	D6355	8-719-914-43	DIODE DAN202K	
C6371	1-137-493-11	FILM 0.0047MF	5% 630V	D6358	8-719-914-43	DIODE DAN202K	
C6373	1-136-153-00	FILM 0.01MF	5% 50V	D6359	8-719-302-43	DIODE EL1Z	
C6374	1-137-499-11	FILM 0.015MF	5% 630V	D6401	8-719-914-43	DIODE DAN202K	
C6375	1-102-110-00	CERAMIC 220PF	10% 50V	D6402	8-719-982-03	DIODE MT2J-3.6A	
C6376	1-104-664-11	ELECT 47MF	20% 16V	D6403	8-719-921-63	DIODE MT2J-7.5B	
C6377	1-128-551-11	ELECT 22MF	20% 25V	D6404	8-719-914-43	DIODE DAN202K	
C6378	1-115-339-11	CERAMIC CHIP 0.1MF	10% 50V	D6405	8-719-921-63	DIODE MT2J-7.5B	
C6380	1-136-165-00	FILM 0.1MF	5% 50V	< IC >			
C6381	1-126-960-11	ELECT 1MF	20% 50V	IC6100	8-759-103-93	IC LM393N (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
C6385	1-104-664-11	ELECT 47MF	20% 25V	8-759-450-95	IC LM393N (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)		
C6386	1-104-664-11	ELECT 47MF	20% 25V				
C6388	1-126-964-11	ELECT 10MF	20% 50V				
C6389	1-126-964-11	ELECT 10MF	20% 50V				
C6392	1-104-664-11	ELECT 47MF	20% 25V				
C6401	1-126-964-11	ELECT 10MF	20% 50V				
C6402	1-107-714-11	ELECT 10MF	20% 50V				
C6407	1-136-161-00	FILM 0.047MF	5% 50V				
C6408	1-136-161-00	FILM 0.047MF	5% 50V				
C6409	1-126-964-11	ELECT 10MF	20% 50V				

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

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REF. NO.	PART. NO	DESCRIPTION	REMARK	REF. NO.	PART. NO	DESCRIPTION	REMARK
IC6101	8-759-103-93	IC LM393N (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)		Q6112	8-729-620-06	TRANSISTOR 2SC3052-EF	
	8-759-450-95	IC LM393N (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)		Q6113	8-729-620-06	TRANSISTOR 2SC3052-EF	
IC6102	8-759-701-50	IC NJM3404AD		Q6118	8-729-620-06	TRANSISTOR 2SC3052-EF	
IC6103	8-759-450-95	IC LM393N		Q6119	8-729-216-22	TRANSISTOR 2SA1162-G	
IC6250	8-759-478-66	IC CXA8070P		Q6120	8-729-216-22	TRANSISTOR 2SA1162-G	
IC6251	8-759-903-16	IC LM318P		Q6122	8-729-216-22	TRANSISTOR 2SA1162-G	
IC6302	8-752-072-94	IC CXA1875AM-T4		Q6123	8-729-216-22	TRANSISTOR 2SA1162-G	
IC6350	8-759-135-80	IC LM358P (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)		Q6125	8-729-620-06	TRANSISTOR 2SC3052-EF	
	8-759-008-70	IC LM358N (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)		Q6126	8-729-216-22	TRANSISTOR 2SA1162-G	
IC6351	8-759-103-93	IC LM393P (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)		Q6127	8-729-216-22	TRANSISTOR 2SA1162-G	
	8-759-450-95	IC LM393N (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)		Q6128	8-729-620-06	TRANSISTOR 2SC3052-EF	
IC6352	8-759-103-93	IC LM393P (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)		Q6129	8-729-216-22	TRANSISTOR 2SA1162-G	
	8-759-450-95	IC LM393N (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)		Q6130	8-729-216-22	TRANSISTOR 2SA1162-G	
IC6353	8-759-231-53	IC TA7805S		Q6131	8-729-620-06	TRANSISTOR 2SC3052-EF	
IC6354	8-759-325-48	IC CA0005AD		Q6201	8-729-620-06	TRANSISTOR 2SC3052-EF	
IC6355	8-759-008-70	IC LM358N		Q6202	8-729-620-06	TRANSISTOR 2SC3052-EF	
IC6356	8-759-822-38	IC LA6510		Q6250	8-729-620-06	TRANSISTOR 2SC3052-EF	
< FILTER >				Q6251	8-729-620-06	TRANSISTOR 2SC3052-EF	
LF6350	1-406-989-21	INDUCTOR	0UH	Q6252	8-729-216-22	TRANSISTOR 2SA1162-G	
LF6351	1-406-989-21	INDUCTOR	0UH	Q6253	8-729-017-06	TRANSISTOR 2SC4793	
< IC LINK >				Q6254	8-729-017-05	TRANSISTOR 2SA1837	
PS6376 △	1-532-637-00	LINK, IC 1A (ICP-N25)		Q6350	8-729-620-06	TRANSISTOR 2SC3052-EF	
< TRANSISTOR >				Q6351	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q6100	8-729-620-06	TRANSISTOR 2SC3052-EF		Q6352	8-729-140-97	TRANSISTOR 2SB734-34	
Q6101	8-729-620-06	TRANSISTOR 2SC3052-EF		Q6353	8-729-140-97	TRANSISTOR 2SB734-34	
Q6102	8-729-620-06	TRANSISTOR 2SC3052-EF		Q6354	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q6103	8-729-620-06	TRANSISTOR 2SC3052-EF		Q6356	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q6104	8-729-620-06	TRANSISTOR 2SC3052-EF		Q6358	8-729-038-83	TRANSISTOR 2SK2251-01-F19	
Q6105	8-729-620-06	TRANSISTOR 2SC3052-EF		Q6401	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q6106	8-729-620-06	TRANSISTOR 2SC3052-EF		Q6402	1-801-806-11	TRANSISTOR DTC144EKA-T146	
Q6107	8-729-620-06	TRANSISTOR 2SC3052-EF		Q6403	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q6108	8-729-216-22	TRANSISTOR 2SA1162-G		Q6404	8-729-216-22	TRANSISTOR 2SA1162-G	
Q6110	8-729-216-22	TRANSISTOR 2SA1162-G		Q6405	8-729-216-22	TRANSISTOR 2SA1162-G	
< RESISTOR >				Q6455	8-729-620-06	TRANSISTOR 2SC3052-EF	
				Q6465	8-729-620-06	TRANSISTOR 2SC3052-EF	
				R6100	1-216-033-00	RES,CHIP 220 5% 1/10W	
				R6101	1-216-033-00	RES,CHIP 220 5% 1/10W	
				R6102	1-216-057-00	RES,CHIP 2.2K 5% 1/10W	
				R6103	1-216-057-00	RES,CHIP 2.2K 5% 1/10W	
				R6104	1-216-057-00	RES,CHIP 2.2K 5% 1/10W	
				R6105	1-216-049-91	RES,CHIP 1K 5% 1/10W	
				R6106	1-216-057-00	RES,CHIP 2.2K 5% 1/10W	
				R6107	1-216-657-11	METAL CHIP 1.8K 0.50% 1/10W	
				R6108	1-216-657-11	METAL CHIP 1.8K 0.50% 1/10W	
				R6109	1-216-683-11	METAL CHIP 22K 0.5% 1/10W	
						(KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
					1-216-683-11	METAL CHIP 22K 0.50% 1/10W	
						(KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)	

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REF. NO.	PART.NO	DESCRIPTION	REMARK	REF. NO.	PART.NO	DESCRIPTION	REMARK
R6110	1-216-691-11	METAL CHIP	47K 0.50% 1/10W	R6146	1-216-085-00	RES,CHIP 33K 5% 1/10W (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
R6111	1-216-057-00	RES,CHIP	2.2K 5% 1/10W				
R6112	1-216-057-00	RES,CHIP	2.2K 5% 1/10W				
R6113	1-216-073-00	RES,CHIP	10K 5% 1/10W	1-216-065-91	RES,CHIP	4.7K 5% 1/10W (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)	
R6114	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R6115	1-216-089-91	RES,CHIP	47K 5% 1/10W	R6147	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R6116	1-216-089-91	RES,CHIP	47K 5% 1/10W	R6148	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R6117	1-216-073-00	RES,CHIP	10K 5% 1/10W	R6149	1-216-025-91	RES,CHIP	100 5% 1/10W
R6118	1-216-073-00	RES,CHIP	10K 5% 1/10W	R6154	1-216-057-00	RES,CHIP	2.2K 5% 1/10W (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)
R6119	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R6120	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	1-216-041-00	RES,CHIP	470 5% 1/10W (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)	
R6121	1-216-057-00	RES,CHIP	2.2K 5% 1/10W				
R6122	1-216-057-00	RES,CHIP	2.2K 5% 1/10W				
R6123	1-216-089-91	RES,CHIP	47K 5% 1/10W	R6155	1-216-067-00	RES,CHIP	5.6K 5% 1/10W (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)
R6124	1-216-089-91	RES,CHIP	47K 5% 1/10W				
R6125	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	1-216-065-91	RES,CHIP	4.7K 5% 1/10W (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)	
R6126	1-216-037-00	RES,CHIP	330 5% 1/10W				
R6127	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W				
R6128	1-216-691-11	METAL CHIP	47K 0.50% 1/10W	R6158	1-216-675-11	METAL CHIP	10K 5% 1/10W (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)
R6129	1-216-691-11	METAL CHIP	47K 0.50% 1/10W				
R6130	1-218-768-11	METAL CHIP	470K 0.50% 1/10W (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	1-216-671-11	METAL CHIP	6.8K 0.50% 1/10W (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)	
R6131	1-216-037-00	RES,CHIP	330 5% 1/10W				
R6132	1-216-037-00	RES,CHIP	330 5% 1/10W				
R6133	1-216-037-00	RES,CHIP	330 5% 1/10W	R6159	1-216-295-91	SHORT	0
R6134	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R6160	1-216-295-91	SHORT	0 (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)
R6135	1-216-057-00	RES,CHIP	2.2K 5% 1/10W				
R6136	1-216-691-11	METAL CHIP	47K 0.50% 1/10W	1-216-655-11	METAL CHIP	1.5K 0.50% 1/10W (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)	
R6137	1-216-691-11	METAL CHIP	47K 0.50% 1/10W				
R6138	1-216-691-11	METAL CHIP	47K 0.50% 1/10W	R6161	1-216-671-11	METAL CHIP	6.8K 0.50% 1/10W (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)
R6139	1-216-691-11	METAL CHIP	47K 0.50% 1/10W				
R6140	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	1-216-669-11	METAL CHIP	5.6K 0.50% 1/10W (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)	
R6141	1-216-069-00	RES,CHIP	6.8K 5% 1/10W (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)				
	1-216-065-91	RES,CHIP	4.7K 5% 1/10W (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)				
R6142	1-216-057-00	RES,CHIP	2.2K 5% 1/10W (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	R6162	1-216-049-91	RES,CHIP	1K 5% 1/10W
	1-216-053-00	RES,CHIP	1.5K 5% 1/10W (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)	R6165	1-216-699-11	METAL CHIP	100K 0.50% 1/10W
				R6168	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
				R6169	1-216-699-11	METAL CHIP	100K 0.50% 1/10W
				R6170	1-216-037-00	RES,CHIP	330 5% 1/10W
R6143	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R6171	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R6145	1-216-075-00	RES,CHIP	12K 5% 1/10W (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	R6174	1-216-075-00	PES,CHIP	12K 5% 1/10W (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)
	1-216-045-00	RES,CHIP	680 5% 1/10W (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)		1-216-081-00	RES,CHIP	22K 5% 1/10W (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)

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REF. NO.	PART. NO	DESCRIPTION	REMARK	REF. NO.	PART. NO	DESCRIPTION	REMARK
R6176	1-216-295-91	SHORT	0	R6210	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R6177	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	R6211	1-216-073-00	RES,CHIP	10K 5% 1/10W
R6178	1-216-073-00	RES,CHIP	10K 5% 1/10W	R6212	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R6179	1-216-067-00	RES,CHIP	5.6K 5% 1/10W	R6215	1-216-089-91	RES,CHIP	47K 5% 1/10W
		(KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)				(KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)	
	1-216-059-00	RES,CHIP	2.7K 5% 1/10W	R6216	1-216-089-91	RES,CHIP	47K 5% 1/10W
		(KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)		R6217	1-216-073-00	RES,CHIP	10K 5% 1/10W
R6180	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R6254	1-216-049-91	RES,CHIP	1K 5% 1/10W
R6182	1-216-089-91	RES,CHIP	47K 5% 1/10W	R6255	1-216-061-00	RES,CHIP	3.3K 5% 1/10W
R6183	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R6256	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R6186	1-216-295-91	SHORT	0	R6257	1-216-061-00	RES,CHIP	3.3K 5% 1/10W
		(KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)		R6258	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
	1-216-049-91	RES,CHIP	1K 5% 1/10W	R6259	1-216-097-91	RES,CHIP	100K 5% 1/10W
		(KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)		R6260	1-216-049-91	RES,CHIP	1K 5% 1/10W
R6187	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	R6261	1-216-097-91	RES,CHIP	100K 5% 1/10W
R6188	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	R6262	1-260-321-71	CARBON	270 5% 1/2W
		(KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)		R6263	1-216-025-91	RES,CHIP	100 5% 1/10W
R6189	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	R6264	1-216-025-91	RES,CHIP	100 5% 1/10W
		(KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)		R6265	1-216-101-00	RES,CHIP	150K 5% 1/10W
	1-216-049-91	RES,CHIP	1K 5% 1/10W	R6267	1-216-049-91	RES,CHIP	1K 5% 1/10W
		(KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)		R6269	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W
R6190	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R6270	1-216-667-11	METAL CHIP	4.7K 0.50% 1/10W
R6191	1-215-925-11	METAL OXIDE	22K 5% 3W F	R6271	1-216-683-11	METAL CHIP	22K 0.50% 1/10W
R6192	1-216-081-00	RES,CHIP	22K 5% 1/10W	R6272	1-216-683-11	METAL CHIP	22K 5% 1/10W
		(KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)				(KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	R6273	1-216-081-00	RES,CHIP	22K 5% 1/10W
		(KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)		R6276	1-216-689-11	METAL CHIP	39K 0.50% 1/10W
R6194	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	R6277	1-216-686-11	METAL CHIP	30K 0.50% 1/10W
R6195	1-216-093-00	RES,CHIP	68K 5% 1/10W	R6278	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
		(KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)		R6279	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	R6280	1-249-377-11	CARBON	0.47 5% 1/4W F
		(KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)		R6281	1-249-377-11	CARBON	0.47 5% 1/4W F
R6196	1-249-377-11	CARBON	0.47 5% 1/4W F	R6282	1-215-886-11	METAL OXIDE	100 5% 2W F
R6198	1-216-075-00	RES,CHIP	12K 5% 1/10W	R6283	1-216-393-00	METAL OXIDE	2.2 5% 3W F
		(KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)		R6284	1-216-113-00	RES,CHIP	470K 5% 1/10W
	1-216-081-00	RES,CHIP	22K 5% 1/10W	R6285	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
		(KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)		R6286	1-216-073-00	RES,CHIP	10K 5% 1/10W
R6199	1-216-081-00	RES,CHIP	22K 5% 1/10W	R6287	1-216-073-00	RES,CHIP	10K 5% 1/10W
R6205	1-216-025-91	RES,CHIP	100 5% 1/10W	R6313	1-216-295-91	SHORT	0
R6206	1-216-105-91	RES,CHIP	220K 5% 1/10W	R6322	1-216-049-91	RES,CHIP	1K 5% 1/10W
R6208	1-216-089-91	RES,CHIP	47K 5% 1/10W	R6323	1-216-049-91	RES,CHIP	1K 5% 1/10W
R6209	1-216-295-91	SHORT	0	R6324	1-216-025-91	RES,CHIP	100 5% 1/10W
				R6325	1-216-025-91	RES,CHIP	100 5% 1/10W
				R6350	1-216-089-91	RES,CHIP	47K 5% 1/10W
				R6351	1-218-762-11	METAL CHIP	270K 0.50% 1/10W
				R6353	1-216-671-11	METAL CHIP	6.8K 0.50% 1/10W
				R6355	1-218-774-11	METAL CHIP	820K 0.50% 1/10W
				R6356	1-216-675-11	METAL CHIP	10K 0.50% 1/10W
				R6357	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
				R6358	1-216-047-91	RES,CHIP	820 5% 1/10W

World of Free Manuals
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D1

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REF. NO.	PART.NO	DESCRIPTION	REMARK	REF. NO.	PART.NO	DESCRIPTION	REMARK
R6359	1-216-097-91	RES,CHIP	100K 5% 1/10W	R6414	1-216-679-11	METAL CHIP	15K 0.50% 1/10W
R6360	1-216-073-00	RES,CHIP	10K 5% 1/10W	R6415	1-216-683-11	METAL CHIP	22K 0.50% 1/10W
R6361	1-216-097-91	RES,CHIP	100K 5% 1/10W	R6416	1-216-683-11	METAL CHIP	22K 0.50% 1/10W
R6362	1-216-687-11	METAL CHIP	33K 0.50% 1/10W	R6418	1-216-093-00	RES,CHIP	68K 5% 1/10W
R6363	1-216-675-11	METAL CHIP	10K 0.50% 1/10W	R6419	1-216-073-00	RES,CHIP	10K 5% 1/10W
R6364	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R6420	1-216-091-00	RES,CHIP	56K 5% 1/10W
R6365	1-216-033-00	RES,CHIP	220 5% 1/10W	R6421	1-216-637-11	METAL CHIP	270 0.50% 1/10W
R6366	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R6422	1-216-639-11	METAL CHIP	330 0.50% 1/10W
R6367	1-216-679-11	METAL CHIP	15K 0.50% 1/10W	R6423	1-216-657-11	METAL CHIP	1.8K 0.50% 1/10W
R6368	1-218-760-11	METAL CHIP	220K 0.50% 1/10W	R6426	1-216-081-00	RES,CHIP	22K 5% 1/10W
R6369	1-218-762-11	METAL CHIP	270K 0.50% 1/10W	R6427	1-216-081-00	RES,CHIP	22K 5% 1/10W
R6370	1-216-675-11	METAL CHIP	10K	R6428	1-216-101-00	RES,CHIP	150K 5% 1/10W
		(KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)		R6429	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
	1-216-677-11	METAL CHIP	12K 0.50% 1/10W	R6430	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
		(KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)		R6431	1-216-113-00	RES,CHIP	470K 5% 1/10W
R6371	1-216-474-11	METAL OXIDE	82 5% 3W F	R6432	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R6372	1-216-033-00	RES,CHIP	220 5% 1/10W	R6433	1-216-073-00	RES,CHIP	10K 5% 1/10W
R6373	1-216-681-11	METAL CHIP	18K 0.50% 1/10W	R6437	1-249-422-11	CARBON	2.7K 5% 1/4W
R6374	1-216-689-11	METAL CHIP	39K 0.50% 1/10W	R6438	1-249-421-11	CARBON	2.2K 5% 1/4W
R6375	1-216-041-00	RES,CHIP	470 5% 1/10W	R6439	1-216-683-11	METAL CHIP	22K 0.50% 1/10W
R6377	1-216-689-11	METAL CHIP	39K 0.50% 1/10W	R6440	1-216-683-11	METAL CHIP	22K 0.50% 1/10W
R6378	1-216-675-11	METAL CHIP	10K 0.50% 1/10W	R6441	1-216-673-11	METAL CHIP	8.2K 0.50% 1/10W
R6379	1-216-295-91	SHORT	0	R6442	1-216-039-00	RES,CHIP	390 5% 1/10W
R6380	1-218-754-11	METAL CHIP	120K 0.50% 1/10W	R6455	1-216-295-91	SHORT	0
R6381	1-216-045-00	RES,CHIP	680 5% 1/10W	R6456	1-216-097-91	RES,CHIP	100K 5% 1/10W
R6382	1-218-754-11	METAL CHIP	120K 0.50% 1/10W	R6457	1-216-075-00	RES,CHIP	12K 5% 1/10W
R6383	1-216-687-11	METAL CHIP	33K 0.50% 1/10W	R6458	1-216-089-91	RES,CHIP	47K 5% 1/10W
R6384	1-216-043-91	RES,CHIP	560 5% 1/10W	R6459	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R6385	1-216-295-91	SHORT	0	R6460	1-249-393-11	CARBON	10 5% 1/4W
R6386	1-216-699-11	METAL CHIP	100K 0.50% 1/10W	R6461	1-249-411-11	CARBON	330 5% 1/4W
R6387	1-216-677-11	METAL CHIP	12K 0.50% 1/10W	R6462	1-249-406-11	CARBON	120 5% 1/4W
R6391	1-249-417-11	CARBON	1K 5% 1/4W	R6463	1-216-095-00	RES,CHIP	82K 5% 1/10W
R6394	1-216-069-00	RES,CHIP	6.8K 5% 1/10W	R6464	1-216-079-00	RES,CHIP	18K 5% 1/10W
R6395	1-216-081-00	RES,CHIP	22K 5% 1/10W	*****			
R6397	1-216-675-11	METAL CHIP	10K 0.50% 1/10W	*A-1640-328-A D BOARD, COMPLETE (KV-28FX60) *****			
R6398	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	*A-1640-323-A D BOARD, COMPLETE (KV-32FX60) *****			
R6399	1-218-756-11	METAL CHIP	150K 0.50% 1/10W	4-201-023-01 SPACER, INSULATING			
R6400	1-216-675-11	METAL CHIP	10K 0.50% 1/10W	4-202-373-01 SPRING,IC			
R6401	1-216-295-91	SHORT	0	4-382-854-11 SCREW (M3X10), P, SW (+)			
R6402	1-216-295-91	SHORT	0	*4-931-401-01 HEAT SINK, V.OUT			
R6403	1-216-661-11	METAL CHIP	2.7K 0.50% 1/10W	< CAPACITOR >			
R6404	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	C6600	△ 1-162-580-51	CERAMIC	0.01MF 400V
R6405	1-216-683-11	METAL CHIP	22K 0.50% 1/10W	C6603	1-126-933-11	ELECT	100MF 20% 16V
R6409	1-216-025-91	RES,CHIP	100 5% 1/10W	C6604	1-126-767-11	ELECT	1000MF 20% 16V
R6410	1-216-073-00	RES,CHIP	10K 5% 1/10W	C6605	△ 1-119-888-51	CERAMIC	2200PF 20% 250V
		(KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)		C6606	△ 1-119-888-51	CERAMIC	2200PF 20% 250V
R6411	1-216-073-00	RES,CHIP	10K 5% 1/10W	C6607	△ 1-107-565-11	FILM	0.33MF 20% 300V
R6412	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R6413	1-216-679-11	METAL CHIP	15K 0.50% 1/10W				

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REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
C6608	Δ 1-161-964-91	CERAMIC	0.0047MF 250V	C6672	1-104-664-11	ELECT	47MF 20% 16V
C6609	Δ 1-161-964-91	CERAMIC	0.0047MF 250V	C6673	1-104-664-11	ELECT	47MF 20% 16V
C6610	1-162-599-12	CERAMIC	0.0047MF 250V	C6677	1-136-165-00	FILM	0.1MF 5% 50V
C6611	1-162-599-12	CERAMIC	0.0047MF 250V	C6679	1-130-495-00	FILM	0.1MF 5% 50V
C6612	1-161-744-00	CERAMIC	0.01MF 400V	C6680	1-137-370-11	FILM	0.01MF 5% 50V
C6616	1-164-625-11	CERAMIC	680PF 10% 500V	C6681	1-126-964-11	ELECT	10MF 20% 50V
C6617	1-164-625-11	CERAMIC	680PF 10% 500V	C6700	1-102-129-00	CERAMIC	0.01MF 10% 50V
C6618	1-136-175-00	FILM	0.68MF 5% 50V	C6703	1-128-527-11	ELECT	330MF 20% 25V
C6619	1-137-194-91	FILM	0.47MF 5% 50V	C6704	1-126-968-11	ELECT	100MF 20% 50V
C6620	1-136-618-11	FILM	0.047MF 5% 1.25KV	C6705	1-128-527-11	ELECT	330MF 20% 25V
C6621	1-136-175-00	FILM	0.68MF 5% 50V	C6706	1-106-228-00	MYLAR	0.22MF 10% 100V
C6622	1-164-625-11	CERAMIC	680PF 10% 500V	C6707	1-129-702-00	FILM	0.001MF 10% 400V
C6623	1-137-194-91	FILM	0.47MF 5% 50V	C6708	1-106-220-00	MYLAR	0.1MF 10% 100V
C6624	1-126-968-11	ELECT	100MF 20% 50V	C6709	1-102-129-00	CERAMIC	0.01MF 10% 50V
C6626	1-164-625-11	CERAMIC	680PF 10% 500V	C6710	1-130-785-11	MYLAR	0.47MF 10% 100V
C6627	1-164-625-11	CERAMIC	680PF 10% 500V	C6727	1-102-228-00	CERAMIC	470PF 10% 500V
C6628	1-126-936-11	ELECT	3300MF 20% 16V	C6801	1-104-664-11	ELECT	47MF 20% 25V
C6629	1-128-548-11	ELECT	4700MF 20% 25V	C6802	1-126-960-11	ELECT	1MF 20% 50V
C6630	1-110-626-11	ELECT	330MF 20% 160V	C6803	1-126-960-11	ELECT	1MF 20% 50V
C6631	1-128-548-11	ELECT	4700MF 20% 25V	C6804	1-102-114-00	CERAMIC	470PF 10% 50V
C6632	1-128-548-11	ELECT	4700MF 20% 25V	C6805	1-102-114-00	CERAMIC	470PF 10% 50V
C6633	1-126-935-11	ELECT	470MF 20% 16V	C6808	1-102-030-00	CERAMIC	330PF 10% 500V
C6634	1-136-165-00	FILM	0.1MF 5% 50V	C6809	1-102-030-00	CERAMIC	330PF 10% 500V
C6635	1-104-664-11	ELECT	47MF 20% 25V	C6810	1-107-368-11	FILM	0.047MF 10% 200V
C6636	1-102-129-00	CERAMIC	0.01MF 10% 50V	C6811	1-107-368-11	FILM	0.047MF 10% 200V
C6637	1-102-129-00	CERAMIC	0.01MF 10% 50V	C6812	1-162-131-11	CERAMIC	220PF 10% 2KV
C6638	1-137-368-11	FILM	0.0047MF 5% 50V	C6813	1-162-134-11	CERAMIC	470PF 10% 2KV
C6639	1-102-228-00	CERAMIC	470PF 10% 500V	C6814	1-117-641-11	FILM	7500PF 3% 1.2KV
C6641	1-126-967-11	ELECT	47MF 20% 50V	(KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)			
C6642	1-126-964-11	ELECT	10MF 20% 50V	1-117-640-11	FILM	6800PF 3% 1.2KV	
C6647	1-104-664-11	ELECT	47MF 20% 25V	(KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)			
C6649	1-126-965-11	ELECT	22MF 20% 50V	C6815	1-117-836-11	FILM	6800PF 3% 2KV
C6651	1-162-599-12	CERAMIC	0.0047MF 250V	(KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)			
C6652	1-107-679-91	ELECT	10MF 20% 450V	1-117-835-11	FILM	6200PF 3% 2KV	
C6653	1-126-968-11	ELECT	100MF 20% 50V	(KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)			
C6654	1-162-117-00	CERAMIC	100PF 10% 500V	C6816	1-137-364-00	FILM	0.001MF 5% 50V
C6655	1-109-879-11	CERAMIC	22PF 5% 2KV	C6817	1-125-893-11	FILM	680PF 3% 2KV
C6656	1-126-967-11	ELECT	47MF 20% 50V	C6818	1-125-893-11	FILM	680PF 3% 2KV
C6657	1-126-941-11	ELECT	470MF 20% 25V	C6819	1-125-893-11	FILM	680PF 3% 2KV
C6658	1-104-665-11	ELECT	100MF 20% 25V	C6820	1-125-893-11	FILM	680PF 3% 2KV
C6659	1-104-665-11	ELECT	100MF 20% 25V	C6824	1-107-846-11	FILM	0.1MF 5% 200V
C6661	1-117-753-11	ELECT (BLOCK)	470MF 20% 450V	C6825	1-117-662-11	FILM	0.18MF 5% 200V
C6662	1-136-165-00	FILM	0.1MF 5% 50V	C6826	1-117-666-71	FILM	0.39MF 5% 250V
C6664	1-136-153-00	FILM	0.01MF 5% 50V	(KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)			
C6665	1-136-165-00	FILM	0.1MF 5% 50V	1-117-665-11	FILM	0.33MF 5% 200V	
C6666	1-136-165-00	FILM	0.1MF 5% 50V	(KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)			
C6667	1-126-933-11	ELECT	100MF 20% 16V				
C6668	1-126-933-11	ELECT	100MF 20% 16V				
C6669	1-136-165-00	FILM	0.1MF 5% 50V				
C6670	1-136-165-00	FILM	0.1MF 5% 50V				
C6671	1-104-664-11	ELECT	47MF 20% 16V				

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REF. NO.	PART.NO	DESCRIPTION	REMARK
C6827	1-117-660-21	FILM 0.12MF	5% 200V
C6828	1-127-681-91	CERAMIC 10000PF	2% 100V
C6829	1-127-681-91	CERAMIC 10000PF	2% 100V
C6830	1-107-655-11	ELECT 47MF	20% 250V
C6831	1-102-228-00	CERAMIC 470PF	10% 500V
C6832	1-126-941-11	ELECT 470MF	20% 25V
C6833	1-126-941-11	ELECT 470MF	20% 25V
C6834	1-102-228-00	CERAMIC 470PF	10% 500V
C6835	1-102-228-00	CERAMIC 470PF	10% 500V
C6836	1-123-024-21	ELECT 33MF	160V
C6837	1-106-375-12	MYLAR 0.022MF	10% 250V
C6840	1-137-370-11	FILM 0.01MF	5% 50V
C6841	1-104-664-11	ELECT 47MF	20% 16V
C6842	1-136-207-11	FILM 0.047MF	10% 400V
C6843	1-136-177-00	FILM 1MF	5% 50V
C6851	1-162-131-11	CERAMIC 220PF	10% 2KV
C6852	1-162-129-00	CERAMIC 150PF	10% 2KV
C6853	1-137-536-11	FILM 0.0022MF	5% 630V
C6855	1-136-205-11	FILM 0.022MF	10% 400V
C6856	1-102-030-00	CERAMIC 330PF	10% 500V
C6857	1-130-785-11	FILM 0.47MF	10% 100V
C6861	1-137-364-11	FILM 0.001MF	5% 50V
C6862	1-137-364-11	FILM 0.001MF	5% 50V
C6863	1-162-134-11	CERAMIC 470PF	10% 2KV

< CONNECTOR >

CN6100	1-785-805-11	JACK, I.LINK
CN6101	1-785-805-11	JACK, I.LINK
CN6102	1-785-805-11	JACK, I.LINK
CN6500	1-508-766-00	PIN, CONNECTOR (5MM PITCH) 4P
CN6600	1-695-299-11	CONNECTOR, BOARD TO BOARD 50P
CN6611	*1-580-798-11	CONNECTOR, PIN (DY) 6P
CN6620 Δ	1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P
CN6655	1-695-915-11	TAB (CONTACT)
CN6666 Δ	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P
CN6677	1-695-915-11	TAB (CONTACT)
CN6688	1-695-915-11	TAB (CONTACT)
CN6700 Δ	*1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P

< DIODE >

D6600	8-719-911-19	DIODE 1SS119-25
D6601	8-719-510-64	DIODE S2LA20F
D6602	8-719-109-89	DIODE RD5.6ESB2
D6603	8-719-911-19	DIODE 1SS119-25
D6604	8-719-510-53	DIODE D4SB60L
D6610	8-719-510-64	DIODE S2LA20F
D6613	8-719-911-19	DIODE 1SS119-25
D6615	8-719-911-19	DIODE 1SS119-25
D6616	8-719-510-12	DIODE D10SC4M
D6617	8-719-500-71	DIODE D8LC40
D6618	8-719-047-31	DIODE RBA-402L

REF. NO.	PART.NO	DESCRIPTION	REMARK
D6619	8-719-510-12	DIODE D10SC4M	
D6620	8-719-510-09	DIODE D10SC6M	
D6621	8-719-991-33	DIODE 1SS133T-77	
D6622	8-719-991-33	DIODE 1SS133T-77	
D6623	8-719-911-19	DIODE 1SS119-25	
D6624	8-719-991-33	DIODE 1SS133T-77	
D6625	8-719-991-33	DIODE 1SS133T-77	
D6627	8-719-982-27	DIODE MTZJ-33C	
D6628	8-719-109-97	DIODE RD6.8ESB2	
D6629	8-719-991-33	DIODE 1SS133T-77	
D6630	8-719-991-33	DIODE 1SS133T-77	
D6651	8-719-068-00	DIODE ERC04-06SE	
D6652	8-719-923-78	DIODE MTZJ-T-77-12	
D6653	8-719-510-64	DIODE S2LA20F	
D6654	8-719-059-23	DIODE P6KE200AG23	
D6655	8-719-979-64	DIODE UF4005PKG23	
D6656	8-719-510-64	DIODE S2LA20F	
D6658	8-719-068-00	DIODE ERC04-06SE	
D6659	8-719-510-64	DIODE S2LA20F	
D6676	8-719-991-33	DIODE 1SS133T-77	
D6677	8-719-921-40	DIODE MTZJ-4.7C	
D6678	8-719-921-40	DIODE MTZJ-4.7C	
D6679	8-719-991-33	DIODE 1SS133T-77	
D6700	8-719-908-03	DIODE GP08D	
D6701	8-719-110-41	DIODE RD15ESB2	

< FERRITE BEAD >

FB6600	1-535-303-00	LEAD, JUMPER (5.0MM)
FB6601	1-535-303-00	LEAD, JUMPER (5.0MM)
FB6602	1-410-396-41	FERRITE 0.45UH
FB6603	1-410-396-41	FERRITE 0.45UH

< IC >

IC6600	1-810-051-11	POWER MODULE DM-48
IC6604	8-729-045-40	TRANSISTOR MX0842A-F
IC6651	8-759-468-89	IC TOP209P
IC6652	8-759-604-39	IC M5F78M12L
IC6653	8-759-544-13	IC KA78R09TU
IC6654	8-759-457-44	IC KA78R05TU

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REF. NO. PART. NO DESCRIPTION REMARK

IC6667 8-759-908-15 IC TL431CLP
IC6676 8-759-908-15 IC TL431CLP
IC6700 8-759-192-71 IC STV9379
IC6801 8-759-103-93 IC UPC393C

< COIL >

L6601 1-535-303-00 LEAD, JUMPER (5.0MM)
L6602 1-412-529-11 INDUCTOR 22UH
L6603 1-412-529-11 INDUCTOR 22UH
L6604 1-412-525-31 INDUCTOR 10UH
L6605 1-412-525-31 INDUCTOR 10UH

L6606 1-412-525-31 INDUCTOR 10UH
L6607 1-412-525-31 INDUCTOR 10UH
L6651 1-414-183-41 INDUCTOR 10UH
L6700 1-412-524-41 INDUCTOR 8.2UH
L6801 1-412-519-11 INDUCTOR 3.3UH

L6802 1-412-519-11 INDUCTOR 3.3UH
L6803 1-412-519-11 INDUCTOR 3.3UH
L6805 1-408-947-00 INDUCTOR 2.2MMH
L6806 1-410-397-21 FERRITE 1.1UH
L6807 1-410-397-21 FERRITE 1.1UH

L6808 1-406-675-11 INDUCTOR 0UH
L6851 1-535-303-00 LEAD, JUMPER (5.0MM)

< FILTER >

LF6603 1-406-656-21 INDUCTOR 0UH
LF6604 1-406-656-21 INDUCTOR 0UH
LF6801 1-406-985-11 INDUCTOR 0UH
LF6851 1-406-674-11 INDUCTOR 0UH

< IC LINK >

PS6601 Δ 1-801-550-21 PROTECTOR MODULE 2.5A MP250
PS6602 Δ 1-801-550-21 PROTECTOR MODULE 2.5A MP250
PS6603 Δ 1-801-550-21 PROTECTOR MODULE 2.5A MP250
(KV-28FX60A/28FX60B/28FX60D/28FX60E/
28FX60K/28FX60R/28FX60U)
 Δ 1-801-549-21 PROTECTOR MODULE 4.0A MP400
(KV-32FX60A/32FX60B/32FX60D/32FX60E/
32FX60K/32FX60R/32FX60U)

PS6604 Δ 1-801-550-21 PROTECTOR MODULE 2.5A MP250
PS6605 Δ 1-801-550-21 PROTECTOR MODULE 2.5A MP250

< TRANSISTOR >

Q6600 8-729-046-47 TRANSISTOR KSC2500-BTA
Q6602 8-729-026-41 TRANSISTOR 2SA933AS-QRT
Q6603 8-729-119-78 TRANSISTOR 2SC2785-HFE
Q6605 8-729-046-47 TRANSISTOR KSC2500-BTA
Q6606 8-729-029-56 TRANSISTOR DTA144ESA

Q6607 8-729-119-78 TRANSISTOR 2SC2785-HFE
Q6608 8-729-029-66 TRANSISTOR DTC114ESA
Q6651 8-729-026-41 TRANSISTOR 2SA933AS-QRT
Q6652 8-729-029-86 TRANSISTOR DTC124ESA

REF. NO. PART. NO DESCRIPTION REMARK

Q6667 8-729-026-41 TRANSISTOR 2SA933AS-QRT
Q6676 8-729-119-78 TRANSISTOR 2SC2785-HFE
Q6677 8-729-119-78 TRANSISTOR 2SC2785-HFE
Q6678 8-729-119-78 TRANSISTOR 2SC2785-HFE
Q6679 8-729-026-41 TRANSISTOR 2SA933AS-QRT

Q6680 8-729-029-66 TRANSISTOR DTC114ESA
Q6681 8-729-029-66 TRANSISTOR DTC114ESA
Q6700 8-729-039-68 TRANSISTOR IRF620
Q6801 8-729-119-80 TRANSISTOR 2SC2688-LK
Q6802 8-729-119-80 TRANSISTOR 2SC2688-LK

Q6803 8-729-046-18 TRANSISTOR 2SC5480-01
Q6804 8-729-046-18 TRANSISTOR 2SC5480-01
Q6805 8-729-038-83 TRANSISTOR 2SK2251-01-F19
Q6806 8-729-930-91 TRANSISTOR IRF740
Q6807 8-729-030-02 TRANSISTOR DTC144ESA

Q6809 8-729-119-78 TRANSISTOR 2SC2785-HFE
Q6810 8-729-026-41 TRANSISTOR 2SA933AS-QRT
Q6851 8-729-043-95 TRANSISTOR 2SC3840(3)

< RESISTOR >

R6601 Δ 1-202-968-11 CEMENTED 1.2 5% 10W
R6603 1-249-430-11 CARBON 12K 5% 1/4W
R6604 1-249-421-11 CARBON 2.2K 5% 1/4W
R6605 1-249-417-11 CARBON 1K 5% 1/4W F
R6606 Δ 1-202-968-11 CEMENTED 1.2 5% 10W

R6607 Δ 1-202-968-11 CEMENTED 1.2 5% 10W
R6608 Δ 1-202-968-11 CEMENTED 1.2 5% 10W
R6611 1-260-125-11 CARBON 150K 5% 1/2W
R6612 1-260-125-11 CARBON 150K 5% 1/2W
R6613 1-216-369-00 METAL OXIDE 1 5% 2W F

R6614 1-260-125-11 CARBON 150K 5% 1/2W
R6615 1-260-125-11 CARBON 150K 5% 1/2W
R6616 1-216-369-00 METAL OXIDE 1 5% 2W F
R6619 1-249-425-11 CARBON 4.7K 5% 1/4W
R6620 1-249-443-11 CARBON 0.47 5% 1/4W F

R6624 1-249-425-11 CARBON 4.7K 5% 1/4W
R6625 1-249-429-11 CARBON 10K 5% 1/4W
R6626 1-247-807-31 CARBON 100 5% 1/4W
R6627 1-249-429-11 CARBON 10K 5% 1/4W
R6628 1-260-129-11 CARBON 330K 5% 1/2W

R6629 1-260-129-11 CARBON 330K 5% 1/2W
R6630 1-249-417-11 CARBON 1K 5% 1/4W
R6631 1-249-425-11 CARBON 4.7K 5% 1/4W
R6632 1-207-905-00 WIREWOUND 0.27 10% 2W F
R6633 1-249-429-11 CARBON 10K 5% 1/4W

R6635 1-535-303-00 LEAD, JUMPER (5.0MM)
R6637 1-249-421-11 CARBON 2.2K 5% 1/4W
R6638 1-247-895-91 CARBON 470K 5% 1/4W
R6639 1-249-416-11 CARBON 820 5% 1/4W
R6640 1-249-417-11 CARBON 1K 5% 1/4W

R6641 1-260-127-11 CARBON 220K 5% 1/2W

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REF. NO.	PART.NO	DESCRIPTION	REMARK	REF. NO.	PART.NO	DESCRIPTION	REMARK
R6642	1-249-389-11	CARBON	4.7 5% 1/4W F	R6802	1-214-915-00	METAL	120K 1% 1/2W
R6643	1-249-417-11	CARBON	1K 5% 1/4W F	R6803	1-249-421-11	CARBON	2.2K 5% 1/4W
R6644	1-249-429-11	CARBON	10K 5% 1/4W	R6804	1-247-807-31	CARBON	100 5% 1/4W
R6645	1-260-131-11	CARBON	470K 5% 1/2W	R6805	1-247-807-31	CARBON	100 5% 1/4W
R6646	1-249-429-11	CARBON	10K 5% 1/4W	R6806	1-249-411-11	CARBON	330 5% 1/4W
R6647	1-249-410-11	CARBON	270 5% 1/4W	R6807	1-249-411-11	CARBON	330 5% 1/4W
R6648	1-247-863-91	CARBON	22K 5% 1/4W	R6808	1-260-340-11	CARBON	10K 5% 1/2W
R6649	1-215-926-00	METAL OXIDE	33K 5% 3W F	R6809	1-260-340-11	CARBON	10K 5% 1/2W
R6651	1-247-791-91	CARBON	22 5% 1/4W	R6810	1-215-895-11	METAL OXIDE	3.3K 5% 3W F
R6652	1-249-389-11	CARBON	4.7 5% 1/4W F			(KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
R6653	1-249-421-11	CARBON	2.2K 5% 1/4W		1-216-460-11	METAL OXIDE	3.9K 5% 3W F
R6655	1-249-429-11	CARBON	10K 5% 1/4W			(KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)	
R6656 Δ	1-218-265-11	METAL	8.2M 5% 1W				
R6657	1-215-424-00	METAL	1.3K 1% 1/4W	R6811	1-216-461-00	METAL OXIDE	5.6K 5% 2W F
R6666	1-202-933-61	FUSIBLE	0.1 10% 1/2W F	R6812	1-215-895-11	METAL OXIDE	3.3K 5% 2W F
R6667	1-215-441-00	METAL	6.8K 1% 1/4W	R6813	1-215-895-11	METAL OXIDE	3.3K 5% 2W F
R6668	1-249-429-11	CARBON	10K 5% 1/4W	R6814	1-215-880-00	METAL OXIDE	10 5% 2W F
R6669	1-249-413-11	CARBON	470 5% 1/4W	R6815	1-215-880-00	METAL OXIDE	10 5% 2W F
R6670	1-249-417-11	CARBON	1K 5% 1/4W				
R6676	1-249-417-11	CARBON	1K 5% 1/4W	R6816	1-216-361-00	METAL OXIDE	0.22 5% 2W F
R6677	1-249-417-11	CARBON	1K 5% 1/4W	R6817	1-216-361-00	METAL OXIDE	0.22 5% 2W F
R6678	1-249-417-11	CARBON	1K 5% 1/4W	R6818	1-247-807-31	CARBON	100 5% 1/4W
R6679	1-215-479-00	METAL	270K 1% 1/4W	R6819	1-247-807-31	CARBON	100 5% 1/4W
R6681	1-215-467-00	METAL	82K 1% 1/4W	R6831	1-260-124-11	CARBON	120K 5% 1/2W
R6682	1-215-447-00	METAL	12K 1% 1/4W	R6832	1-216-434-11	METAL OXIDE	1.8K 5% 1W F
R6683	1-215-429-00	METAL	2.2K 1% 1/4W	R6833	1-202-972-61	FUSIBLE	1 5% 1/4W F
R6684	1-247-807-31	CARBON	100 5% 1/4W	R6834	1-249-377-11	CARBON	0.47 5% 1/4W F
R6685	1-249-417-11	CARBON	1K 5% 1/4W	R6835	1-249-377-11	CARBON	0.47 5% 1/4W F
R6686	1-215-449-00	METAL	15K 1% 1/4W	R6836	1-249-431-11	CARBON	15K
R6687	1-249-431-11	CARBON	15K 5% 1/4W			(KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
R6688	1-249-417-11	CARBON	1K 5% 1/4W		1-249-429-11	CARBON	10K 5% 1/4W
R6700	1-215-441-00	METAL	6.8K 1% 1/4W			(KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)	
R6701	1-215-439-00	METAL	5.6K 1% 1/4W				
		(KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)		R6837	1-215-894-11	METAL OXIDE	2.2K 5% 2W F
	1-215-437-00	METAL	4.7K 1% 1/4W	R6838	1-260-119-11	CARBON	47K 5% 1/2W
		(KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)		R6839	1-215-894-11	METAL OXIDE	2.2K 5% 2W F
R6702	1-215-441-00	METAL	6.8K 1% 1/4W	R6840	1-247-843-11	CARBON	3.3K 5% 1/4W
R6703	1-215-439-00	METAL	5.6K 1% 1/4W	R6842	1-260-123-11	CARBON	100K 5% 1/2W
		(KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)		R6843	1-249-429-11	CARBON	10K 5% 1/4W
	1-215-437-00	METAL	4.7K 1% 1/4W	R6844	1-249-441-11	CARBON	100K 5% 1/4W
		(KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)		R6845	1-247-863-91	CARBON	22K 5% 1/4W
R6704	1-249-383-11	CARBON	1.5 5% 1/4W F	R6851	1-260-123-11	CARBON	100K 5% 1/4W
R6705	1-247-791-91	CARBON	22 5% 1/4W			(KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
R6707	1-215-888-00	METAL OXIDE	220 5% 2W F		1-260-127-11	CARBON	220K 5% 1/2W
R6708	1-214-798-21	METAL	1.8 1% 1/2W			(KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)	
R6709	1-214-798-21	METAL	1.8 1% 1/2W				
R6710	1-247-843-11	CARBON	3.3K 5% 1/4W	R6852	1-260-123-11	CARBON	100K 5% 1/4W
R6801	1-215-440-00	METAL	6.2K 1% 1/4W			(KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
					1-260-127-11	CARBON	220K 5% 1/2W
						(KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)	

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

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REF.NO.	PART.NO	DESCRIPTION	REMARK
R6853	1-260-123-11	CARBON 100K 5% 1/4W (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
	1-260-127-11	CARBON 220K 5% 1/2W (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)	
R6854	1-247-831-91	CARBON 1K 5% 1/4W	
R6856	1-216-486-00	METAL OXIDE 8.2K 5% 3W F (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
	1-215-922-11	METAL OXIDE 6.8K 5% 3W F (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)	
R6857	1-216-486-00	METAL OXIDE 8.2K 5% 3W F (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
	1-215-922-11	METAL OXIDE 6.8K 5% 3W F (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)	
R6858	1-216-486-00	METAL OXIDE 8.2K 5% 3W F (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
	1-215-922-11	METAL OXIDE 6.8K 5% 3W F (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)	
R6859	1-216-486-00	METAL OXIDE 8.2K 5% 3W F (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
	1-215-922-11	METAL OXIDE 6.8K 5% 3W F (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)	
R6880	1-215-436-00	METAL 4.3K 1% 1/4W	
R6885	1-215-493-00	METAL 1M 1% 1/4W	
R6886	1-215-477-00	METAL 220K 1% 1/4W	
R6887	1-215-461-00	METAL 47K 1% 1/4W	
R6888	1-249-441-11	CARBON 100K 5% 1/4W	
R6889	1-249-421-11	CARBON 2.2K 5% 1/4W	
R6890	1-247-887-00	CARBON 220K 5% 1/4W	
R6891	1-247-895-91	CARBON 470K 5% 1/4W	
R6892	1-249-437-11	CARBON 47K 5% 1/4W	
R6893	1-249-429-11	CARBON 10K 5% 1/4W	
R6895	1-249-443-11	CARBON 0.47 5% 1/4W F	
R6896	1-249-443-11	CARBON 0.47 5% 1/4W F	

< RELAY >

RY6601 Δ	1-755-167-11	RELAY, AC POWER
RY6602 Δ	1-755-167-11	RELAY, AC POWER

< TRANSFORMER >

T6600 Δ	1-431-616-11	TRANSFORMER, CONVERTER
T6601 Δ	1-433-516-11	TRANSFORMER, CONVERTER
T6651	1-431-732-11	TRANSFORMER, CONVERTER (SRT)

REF.NO.	PART.NO	DESCRIPTION	REMARK
T6801	1-433-489-11	TRANSFORMER, FERRITE (HDT)	
T6802	1-433-489-11	TRANSFORMER, FERRITE (HDT)	
T6804 Δ	1-453-272-11	TRANSFORMER, ASSY, FLYBACK (NX-4512/U2B4)	
T6805	1-429-741-11	TRANSFORMER, DRIVE	
T6852	1-426-896-11	TRANSFORMER, FERRITE (DFT)	

< THERMISTOR >

TH6600 Δ	1-809-827-11	THERMISTOR, POSITIVE
TH6700	1-800-193-00	THERMISTOR

*A-1640-341-A E BOARD, COMPLETE (KV-28FX60)

*A-1640-337-A E BOARD, COMPLETE (KV-32FX60)

< CAPACITOR >

C4316	1-104-664-11	ELECT 47MF	20%	25V
C4317	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C4318	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C4319	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C4320	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C4321	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C4322	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C4324	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C4325	1-163-093-00	CERAMIC CHIP 10PF	5%	50V
		(KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)		
C4329	1-126-963-11	ELECT 4.7MF	20%	50V
C4330	1-136-165-00	FILM 0.1MF	5%	50V
C4331	1-126-959-11	ELECT 0.47MF	20%	50V
C4332	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C4333	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C4334	1-126-967-11	ELECT 47MF	20%	50V
C4336	1-126-967-11	ELECT 47MF	20%	50V
C4338	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C4340	1-126-967-11	ELECT 47MF	20%	50V
C4342	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
C4343	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C4344	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V
C4345	1-126-967-11	ELECT 47MF	20%	50V
C4346	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C4347	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C4348	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C4349	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C4350	1-164-004-11	ELECT 0.1MF	20%	50V
		(KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)		
	1-126-963-11	ELECT 4.7MF	20%	50V
		(KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)		

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REF. NO.	PART.NO	DESCRIPTION	REMARK	REF. NO.	PART.NO	DESCRIPTION	REMARK
C4351	1-164-009-11	CERAMIC CHIP 0.001MF	10% 50V (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)			< DIODE >	
	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)	D4302	8-719-025-29	DIODE 02CZ5.1-TE85L (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
C4352	1-126-967-11	ELECT 47MF	20% 50V	D4303	8-719-041-97	DIODE MA113-(TX) (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
C4353	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V	D4304	8-719-923-60	DIODE MTZJ-T-77-9.1A	
C4354	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V	D4305	8-719-923-60	DIODE MTZJ-T-77-9.1A	
C4355	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	D4311	8-719-914-43	DIODE DAN202K	
C4356	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	D4312	8-719-914-43	DIODE DAN202K	
C4357	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	D4313	8-719-401-63	DIODE MA3062M-TX	
	1-163-009-11	CERAMIC CHIP 0.001MF	10% 25V (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)			< FERRITE BEAD >	
C4358	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	FB4387	1-414-234-22	INDUCTOR CHIP 0UH	
C4359	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V	FB4388	1-414-234-22	INDUCTOR CHIP 0UH	
C4360	1-126-963-11	ELECT 4.7MF	20% 50V (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	FB4389	1-414-234-22	INDUCTOR CHIP 0UH	
	1-126-966-11	ELECT 33MF	20% 50V (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)			< IC >	
C4361	1-126-967-11	ELECT 47MF	20% 50V (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	IC4301	8-752-086-23	IC CXA2100Q-TL	
C4362	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V			< COIL >	
C4363	1-126-967-11	ELECT 47MF	20% 50V	L4301	1-414-183-41	INDUCTOR 10UH	
C4364	1-126-967-11	ELECT 47MF	20% 50V	L4302	1-414-183-41	INDUCTOR 10UH	
C4366	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)	L4303	1-414-183-41	INDUCTOR 10UH	
C4367	1-104-760-11	CERAMIC CHIP 0.047MF	10% 50V (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)	L4304	1-414-183-41	INDUCTOR 10UH	
				L4305	1-414-183-41	INDUCTOR 10UH	
C4369	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	L4306	1-414-183-41	INDUCTOR 10UH	
C4370	1-126-967-11	ELECT 47MF	20% 50V	L4307	1-414-183-41	INDUCTOR 10UH (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
C4371	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	L4308	1-408-609-41	INDUCTOR 33UH	
C4377	1-126-960-11	ELECT 1MF	20% 50V	L4309	1-408-609-41	INDUCTOR 33UH	
C4379	1-163-243-11	CERAMIC CHIP 47PF	5% 50V (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)			< TRANSISTOR >	
C4380	1-163-005-11	CERAMIC CHIP 470PF	10% 50V	Q4304	8-729-216-22	TRANSISTOR 2SA1162-G	
C4381	1-163-249-11	CERAMIC CHIP 82PF	5% 50V	Q4305	8-729-620-06	TRANSISTOR 2SA2412K-T-146-R (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
C4518	1-162-638-11	CERAMIC CHIP 1MF	16V	Q4306	8-729-620-06	TRANSISTOR 2SA2412K-T-146-R (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
				Q4307	8-729-216-22	TRANSISTOR 2SA1162-G	
				Q4308	8-729-216-22	TRANSISTOR 2SA1162-G	
				Q4309	8-729-216-22	TRANSISTOR 2SA1162-G	
				Q4310	8-729-216-22	TRANSISTOR 2SA1162-G	
				Q4315	1-801-806-11	TRANSISTOR DTC144EKA-T146	
						< CONNECTOR >	
CN4101	1-695-301-11	CONNECTOR, BOARD TO BOARD 40P					
CN4500	1-564-511-11	PLUG, CONNECTOR 8P					
CN4502	*1-568-878-51	PIN, CONNECTOR 3P					

REF. NO.	PART.NO	DESCRIPTION	REMARK	REF. NO.	PART.NO	DESCRIPTION	REMARK
Q4316	8-729-620-06	TRANSISTOR 2SC2412K-T-146-R (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)		R4365	1-216-025-91	RES,CHIP 100 5% 1/10W	
	8-719-918-98	TRANSISTOR SLP253B (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)		R4366	1-216-025-91	RES,CHIP 100 5% 1/10W	
Q4317	8-729-900-53	TRANSISTOR DTC114EK		R4367	1-216-025-91	RES,CHIP 100 5% 1/10W	
Q4318	8-729-216-22	TRANSISTOR 2SA1162-G		R4368	1-215-097-91	RES,CHIP 100K 5% 1/10W (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
< RESISTOR >				R4369	1-216-073-00	RES,CHIP 10K 5% 1/10W (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
R4301	1-216-025-91	RES,CHIP 100 5% 1/10W		R4370	1-216-077-00	RES,CHIP 15K 5% 1/10W	
R4302	1-216-025-91	RES,CHIP 100 5% 1/10W		R4371	1-216-069-00	RES,CHIP 6.8K 5% 1/10W	
R4303	1-216-025-91	RES,CHIP 100 5% 1/10W		R4372	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R4304	1-216-025-91	RES,CHIP 100 5% 1/10W		R4373	1-216-073-00	RES,CHIP 10K 5% 1/10W	
R4305	1-216-025-91	RES,CHIP 100 5% 1/10W		R4374	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R4306	1-216-025-91	RES,CHIP 100 5% 1/10W		R4375	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R4313	1-216-065-91	RES,CHIP 4.7K 5% 1/10W		R4376	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R4314	1-216-057-00	RES,CHIP 2.2K 5% 1/10W		R4377	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R4331	1-216-073-00	RES,CHIP 10K 5% 1/10W		R4378	1-216-101-00	RES,CHIP 150K 5% 1/10W	
R4332	1-216-073-00	RES,CHIP 10K 5% 1/10W		R4380	1-216-073-00	RES,CHIP 10K 5% 1/10W	
R4333	1-216-073-00	RES,CHIP 10K 5% 1/10W		R4381	1-216-127-11	RES,CHIP 1.8M 5% 1/10W (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)	
R4334	1-216-025-91	RES,CHIP 100 5% 1/10W		R4382	1-216-073-00	RES,CHIP 10K 5% 1/10W	
R4335	1-216-025-91	RES,CHIP 100 5% 1/10W		R4383	1-216-079-00	RES,CHIP 18K 5% 1/10W (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)	
R4336	1-216-025-91	RES,CHIP 100 5% 1/10W		R4384	1-216-025-91	RES,CHIP 100 5% 1/10W	
R4337	1-216-025-91	RES,CHIP 100 5% 1/10W		R4387	1-216-025-91	RES,CHIP 100 5% 1/10W	
R4339	1-216-049-91	RES,CHIP 1K 5% 1/10W		R4388	1-216-025-91	RES,CHIP 100 5% 1/10W	
R4340	1-216-111-00	RES,CHIP 390K 5% 1/10W		R4389	1-216-025-91	RES,CHIP 100 5% 1/10W	
R4341	1-216-295-91	SHORT 0		R4395	1-216-295-91	SHORT 0	
R4343	1-216-025-91	RES,CHIP 100 5% 1/10W		R4396	1-216-295-91	SHORT 0	
R4344	1-216-025-91	RES,CHIP 100 5% 1/10W		R4398	1-216-025-91	RES,CHIP 100 5% 1/10W	
R4345	1-216-677-11	METAL CHIP 12K 0.50% 1/10W		R4401	1-216-105-91	RES,CHIP 220K 5% 1/10W	
R4346	1-216-683-11	METAL CHIP 22K 0.50% 1/10W		R4402	1-216-129-00	RES,CHIP 2.2K 5% 1/10W (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
R4347	1-216-025-91	RES,CHIP 100 5% 1/10W		R4403	1-216-073-00	RES,CHIP 10K 5% 1/10W (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
R4348	1-216-025-91	RES,CHIP 100 5% 1/10W		R4404	1-216-073-00	RES,CHIP 10K 5% 1/10W (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
R4350	1-216-025-91	RES,CHIP 100 5% 1/10W		R4405	1-216-087-91	RES,CHIP 39K 5% 1/10W (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
R4354	1-216-675-11	METAL CHIP 10K 0.50% 1/10W		R4406	1-216-105-91	RES,CHIP 220K 5% 1/10W (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
R4358	1-216-071-00	RES,CHIP 8.2K 5% 1/10W		R4407	1-216-091-00	RES,CHIP 56K 5% 1/10W (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)	
R4359	1-216-041-00	RES,CHIP 470 5% 1/10W		R4504	1-216-295-91	SHORT 0	
R4360	1-216-057-00	RES,CHIP 2.2K 5% 1/10W (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)					
	1-216-061-00	RES,CHIP 3.3K 5% 1/10W (KV-32FX60A/32FX60B/32FX60D/32FX60E/ 32FX60K/32FX60R/32FX60U)					
R4361	1-216-133-00	RES,CHIP 3.3M 5% 1/10W					
R4362	1-216-049-91	RES,CHIP 1K 5% 1/10W (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)					
R4363	1-216-025-91	RES,CHIP 100 5% 1/10W					
R4364	1-216-097-91	RES,CHIP 100K 5% 1/10W (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U)					

E**VM**

REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
R4505	1-216-295-91	SHORT	0	D5405	8-719-924-11	DIODE MTZJ-T-77-22	
R4506	1-216-295-91	SHORT	0	D5406	8-719-924-11	DIODE MTZJ-T-77-22	
R4507	1-216-121-91	RES,CHIP	1M 5% 1/10W	< FERRITE BEAD >			
R4518	1-216-025-91	RES,CHIP	100 5% 1/10W	FB5400	1-410-397-21	FERRITE	1.1UH
R4519	1-216-025-91	RES,CHIP	100 5% 1/10W	FB5401	1-410-396-41	FERRITE	0.45UH
R4520	1-216-295-91	SHORT	0	< COIL >			
R4521	1-216-295-91	SHORT	0	L5400	1-410-784-41	INDUCTOR	0.18UH
R4522	1-216-295-91	SHORT	0	< TRANSISTOR >			
R4523	1-216-295-91	SHORT	0	Q5400	8-729-119-78	TRANSISTOR 2SC2785-HFE	
< CRYSTAL >				Q5401	8-729-119-78	TRANSISTOR 2SC2785-HFE	
X4300	1-767-127-11	VIBRATOR, CERAMIC		Q5402	8-729-119-78	TRANSISTOR 2SC2785-HFE	
*****				Q5403	8-729-119-78	TRANSISTOR 2SC2785-HFE	
*A-1644-094-A VM BOARD, COMPLETE				Q5404	8-729-026-41	TRANSISTOR 2SA933AS-QRT	
*****				Q5405	8-729-026-41	TRANSISTOR 2SA933AS-QRT	
4-382-854-11 SCREW (M3X10), P, SW (+)				Q5406	8-729-017-05	TRANSISTOR 2SA1837	
< CAPACITOR >				Q5407	8-729-017-06	TRANSISTOR 2SC4793	
C5400	1-107-883-11	ELECT	330MF 20% 16V	< RESISTOR >			
C5401	1-126-935-11	ELECT	470MF 20% 16V	R5400	1-249-401-11	CARBON	47 5% 1/4W
C5402	1-137-370-11	FILM	0.01MF 5% 50V	R5401	1-249-421-11	CARBON	2.2K 5% 1/4W
C5403	1-126-935-11	ELECT	470MF 20% 6.3V	R5402	1-249-413-11	CARBON	470 5% 1/4W
C5405	1-126-933-11	ELECT	100MF 20% 16V	R5403	1-249-393-11	CARBON	10 5% 1/4W F
C5406	1-126-935-11	ELECT	470MF 20% 6.3V	R5404	1-249-417-11	CARBON	1K 5% 1/4W
C5407	1-104-989-91	FILM	0.0022MF 5% 200V	R5405	1-249-425-11	CARBON	4.7K 5% 1/4W
C5408	1-104-989-91	FILM	0.0022MF 5% 200V	R5406	1-249-425-11	CARBON	4.7K 5% 1/4W
C5409	1-107-649-11	ELECT	2.2MF 20% 250V	R5407	1-249-399-11	CARBON	33 5% 1/4W
C5410	1-137-364-11	FILM	0.001MF 5% 50V	R5408	1-247-807-31	CARBON	100 5% 1/4W
C5411	1-137-364-11	FILM	0.001MF 5% 50V	R5409	1-247-815-91	CARBON	220 5% 1/4W
C5412	1-126-933-11	ELECT	100MF 20% 16V	R5410	1-249-401-11	CARBON	47 5% 1/4W
C5413	1-126-933-11	ELECT	100MF 20% 16V	R5411	1-249-401-11	CARBON	47 5% 1/4W
C5414	1-107-638-11	ELECT	33MF 20% 160V	R5412	1-249-429-11	CARBON	10K 5% 1/4W
C5415	1-107-363-91	FILM	0.0068MF 10% 200V	R5413	1-249-414-11	CARBON	560 5% 1/4W F
C5416	1-102-106-00	CERAMIC	100PF 10% 50V	R5414	1-249-432-11	CARBON	18K 5% 1/4W
C5419	1-101-880-00	CERAMIC	47PF 5% 50V	R5415	1-260-311-11	CARBON	39 5% 1/2W
C5430	1-162-117-00	CERAMIC	100PF 10% 500V	R5416	1-249-383-11	CARBON	1.5 5% 1/4W F
< CONNECTOR >				R5417	1-249-432-11	CARBON	18K 5% 1/4W
CN5402	*1-568-878-51	PIN, CONNECTOR 3P		R5418	1-249-414-11	CARBON	560 5% 1/4W
CN5444	*1-770-723-11	CONNECTOR, BOARD TO BOARD 8P		R5419	1-249-421-11	CARBON	2.2K 5% 1/4W
CN5555	1-695-915-11	TAB (CONTACT)		R5420	1-249-421-11	CARBON	2.2K 5% 1/4W
CN5602	*1-568-881-51	PIN, CONNECTOR 6P		R5421	1-249-383-11	CARBON	1.5 5% 1/4W F
< DIODE >				R5422	1-249-400-11	CARBON	39 5% 1/4W F
D5400	8-719-991-33	DIODE 1SS133T-77		R5423	1-215-914-11	METAL OXIDE	330 5% 3W F
D5401	8-719-510-02	DIODE D1NS4		R5425	1-249-419-11	CARBON	1.5K 5% 1/4W
D5402	8-719-991-33	DIODE 1SS133T-77					
D5403	8-719-991-33	DIODE 1SS133T-77					
D5404	8-719-991-33	DIODE 1SS133T-77					

H1

U

J

REF. NO.	PART.NO	DESCRIPTION	REMARK
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*A-1646-170-A H1 BOARD, COMPLETE

< CAPACITOR >

C7900	1-101-810-00	CERAMIC	100PF 5% 500V
C7901	1-101-810-00	CERAMIC	100PF 5% 500V
C7925	1-137-372-11	FILM	0.022MF 5% 50V
C7926	1-137-372-11	FILM	0.022MF 5% 50V

< CONNECTOR >

CN7103	*1-564-514-11	PLUG, CONNECTOR 11P
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< JACK >

J7900	1-779-947-11	TERMINAL BLOCK, S
J7925	1-764-606-11	JACK

< COIL >

L7925	1-414-183-41	INDUCTOR	10UH
L7926	1-414-183-41	INDUCTOR	10UH

< RESISTOR >

R7900	1-535-303-00	LEAD, JUMPER (5.0MM)
R7901	1-249-417-11	CARBON 1K 5% 1/4W
R7902	1-247-895-91	CARBON 470K 5% 1/4W
R7903	1-247-895-91	CARBON 470K 5% 1/4W
R7904	1-535-303-00	LEAD, JUMPER (5.0MM)
R7905	1-249-417-11	CARBON 1K 5% 1/4W
R7906	1-535-303-00	LEAD, JUMPER (5.0MM)

*A-1648-016-A U BOARD, COMPLETE

< CAPACITOR >

C7961	1-101-005-00	CERAMIC	0.022MF 50V
C7962	1-101-005-00	CERAMIC	0.022MF 50V

< CONNECTOR >

CN7101	1-573-299-21	CONNECTOR, BOARD TO BOARD 10P
CN7977	*1-564-519-11	PLUG, CONNECTOR 4P
CN7988	*1-564-519-11	PLUG, CONNECTOR 4P
CN7990	*1-564-518-11	PLUG, CONNECTOR 3P

< JACK >

J7952	1-537-339-11	TERMINAL BOARD
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< COIL >

L7954	1-402-711-11	INDUCTOR	0UH
L7956	1-402-711-11	INDUCTOR	0UH

REF. NO.	PART.NO	DESCRIPTION	REMARK
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*A-1651-100-A J BOARD, COMPLETE (KV-28FX60A/28FX60B/
***** 28FX60D/28FX60E/
28FX60K/28FX60R/28FX60U/
32FX60A/32FX60D/32FX60E/
32FX60K/32FX60R/32FX60U)

*A-1651-104-A J BOARD, COMPLETE (KV-32FX60B)

< CAPACITOR >

C8100	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V
C8101	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V
C8102	1-104-760-11	CERAMIC CHIP 0.047MF	10% 50V
C8103	1-104-664-11	ELECT 47MF	20% 16V
C8104	1-126-934-11	ELECT 220MF	20% 16V

C8105	1-126-933-11	ELECT 100MF	20% 16V
C8106	1-126-933-11	ELECT 100MF	20% 16V
C8107	1-126-933-11	ELECT 100MF	20% 16V
C8108	1-126-933-11	ELECT 100MF	20% 16V
C8109	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V

C8110	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8111	1-126-933-11	ELECT 100MF	20% 16V
C8125	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V
C8126	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V
C8127	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V

C8128	1-104-664-11	ELECT 47MF	20% 16V
C8129	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V
C8130	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V
C8131	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V
C8132	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V

C8133	1-104-664-11	ELECT 47MF	20% 16V
C8134	1-104-664-11	ELECT 47MF	20% 16V
C8135	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C8136	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C8137	1-164-505-11	CERAMIC CHIP 2.2MF	16V

C8138	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V
C8139	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V
C8140	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V
C8141	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V
C8142	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V

C8143	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V
C8144	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V
C8145	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V
C8146	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C8200	1-104-664-11	ELECT 47MF	20% 16V

C8201	1-163-241-11	CERAMIC CHIP 39PF	5% 50V
C8202	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8203	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8204	1-164-506-11	CERAMIC CHIP 4.7MF	16V
C8205	1-165-319-11	CERAMIC CHIP 0.1MF	50V

C8208	1-164-506-11	CERAMIC CHIP 4.7MF	16V
C8209	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C8210	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V



REF. NO.	PART.NO	DESCRIPTION	REMARK	REF. NO.	PART.NO	DESCRIPTION	REMARK
C8211	1-163-243-11	CERAMIC CHIP 47PF	5% 50V	C8322	1-126-933-11	ELECT 100MF	20% 16V
C8212	1-163-243-11	CERAMIC CHIP 47PF	5% 50V	C8323	1-164-182-11	CERAMIC CHIP 0.0033MF	10% 50V
C8213	1-163-087-00	CERAMIC CHIP 4PF	0.25PF 50V	C8324	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8214	1-163-087-00	CERAMIC CHIP 4PF	0.25PF 50V	C8325	1-115-340-11	CERAMIC CHIP 0.22MF	10% 25V
C8215	1-163-243-11	CERAMIC CHIP 47PF	5% 50V	C8326	1-163-231-11	CERAMIC CHIP 15PF	5% 50V
C8216	1-126-933-11	ELECT 100MF	20% 16V	C8327	1-115-340-11	CERAMIC CHIP 0.22MF	10% 25V
C8217	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C8328	1-115-340-11	CERAMIC CHIP 0.22MF	10% 25V
C8218	1-126-964-11	ELECT 10MF	20% 50V	C8329	1-115-340-11	CERAMIC CHIP 0.22MF	10% 25V
C8219	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C8330	1-163-231-11	CERAMIC CHIP 15PF	5% 50V
C8220	1-126-964-11	ELECT 10MF	20% 50V	C8331	1-126-960-11	ELECT 1MF	20% 50V
C8221	1-104-664-11	ELECT 47MF	20% 16V	C8332	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C8222	1-104-664-11	ELECT 47MF	20% 16V	C8343	1-163-185-00	CERAMIC CHIP 150PF	5% 50V
C8223	1-104-664-11	ELECT 47MF	20% 16V			(KV-32FX60B)	
C8224	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C8344	1-163-173-00	CERAMIC CHIP 47PF	5% 50V
C8225	1-104-664-11	ELECT 47MF	20% 16V			(KV-32FX60B)	
C8228	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C8345	1-126-933-11	ELECT 100MF	20% 16V
C8229	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V			(KV-32FX60B)	
C8230	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C8450	1-104-664-11	ELECT 47MF	20% 16V
C8231	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C8451	1-104-664-11	ELECT 47MF	20% 16V
C8232	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C8455	1-115-340-11	CERAMIC CHIP 0.22MF	10% 25V
C8233	1-104-664-11	ELECT 47MF	20% 16V	C8456	1-115-340-11	CERAMIC CHIP 0.22MF	10% 25V
C8234	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V	C8601	1-115-340-11	CERAMIC CHIP 0.22MF	10% 25V
C8235	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V	C8602	1-115-340-11	CERAMIC CHIP 0.22MF	10% 25V
C8236	1-126-933-11	ELECT 100MF	20% 16V	C8605	1-115-340-11	CERAMIC CHIP 0.22MF	10% 25V
C8237	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V	C8606	1-115-340-11	CERAMIC CHIP 0.22MF	10% 25V
C8238	1-164-505-11	CERAMIC CHIP 2.2MF	16V	C8607	1-104-664-11	ELECT 47MF	20% 16V
C8239	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V	C8608	1-104-664-11	ELECT 47MF	20% 16V
C8240	1-107-823-11	CERAMIC CHIP 0.47MF	10% 16V	C8609	1-115-340-11	CERAMIC CHIP 0.22MF	10% 25V
C8241	1-126-964-11	ELECT 10MF	20% 50V	C8610	1-115-340-11	CERAMIC CHIP 0.22MF	10% 25V
C8242	1-104-664-11	ELECT 47MF	20% 16V	C8611	1-115-340-11	CERAMIC CHIP 0.22MF	10% 25V
C8300	1-115-340-11	CERAMIC CHIP 0.22MF	10% 25V	C8612	1-115-340-11	CERAMIC CHIP 0.22MF	10% 25V
C8301	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C8613	1-104-664-11	ELECT 47MF	20% 16V
C8302	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C8614	1-104-664-11	ELECT 47MF	20% 16V
C8303	1-115-340-11	CERAMIC CHIP 0.22MF	10% 25V	C8700	1-126-964-11	ELECT 10MF	20% 50V
C8304	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C8701	1-104-664-11	ELECT 47MF	20% 16V
C8305	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C8702	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C8306	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C8703	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8307	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C8704	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C8308	1-126-933-11	ELECT 100MF	20% 16V	C8705	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V
C8310	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C8706	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C8311	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C8707	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C8312	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C8708	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8313	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C8709	1-126-964-11	ELECT 10MF	20% 50V
C8314	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C8710	1-126-933-11	ELECT 100MF	20% 16V
C8315	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C8900	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C8316	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C8901	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C8317	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C8902	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C8318	1-126-933-11	ELECT 100MF	20% 16V	C8903	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C8319	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C8904	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C8320	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C8905	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C8321	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C8906	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V

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REF. NO.	PART.NO	DESCRIPTION	REMARK	REF. NO.	PART.NO	DESCRIPTION	REMARK
C8907	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	D8919	8-719-914-43	DIODE DAN202K-T-146	
C8908	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	D8920	8-719-914-43	DIODE DAN202K-T-146	
C8909	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	D8921	8-719-976-99	DIODE UDZ-TE-17-5.1B	
C8910	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	D8922	8-719-056-84	DIODE UDZ-TE-17-7.5B	
C8911	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	D8923	8-719-978-04	DIODE DTZ-TT11-3.3B	
C8916	1-126-933-11	ELECT 100MF	20% 16V	< FILTER >			
C8977	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	FL8200	1-236-071-11	ENCAPSULATED COMPONENT	
C8978	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	FL8201	1-233-764-21	FILTER	
< FILTER >				FL8203	1-236-071-11	ENCAPSULATED COMPONENT	
CF8200	1-409-327-00	TRAP, CERAMIC (6.5MHZ)		FL8300	1-236-071-11	ENCAPSULATED COMPONENT	
< CONNECTOR >				FL8301	1-236-071-11	ENCAPSULATED COMPONENT	
CN8101	1-695-302-11	CONNECTOR, BOARD TO BOARD 50P		FL8700	1-236-071-11	ENCAPSULATED COMPONENT	
CN8102	*1-564-518-11	PLUG, CONNECTOR 3P		FL8701	1-236-071-11	ENCAPSULATED COMPONENT	
CN8900	1-561-534-41	SOCKET, PIN 21P		< IC >			
CN8901	1-695-293-11	SOCKET 21P		IC8100	8-759-352-94	IC TDA7309D013TR	
CN8902	1-695-293-11	SOCKET 21P		IC8101	8-759-085-34	IC TDA2822D	
< DIODE >				IC8125	8-759-351-01	IC TEA6422DT	
D8125	8-719-158-49	DIODE RD12SB2		IC8151	8-752-072-94	IC CXA1875AM-T4	
D8126	8-719-158-49	DIODE RD12SB2		IC8200	8-759-544-10	IC MSP3410D-QA-B4	
D8127	8-719-158-49	DIODE RD12SB2		IC8201	8-759-701-36	IC NJM3403AM	
D8128	8-719-158-49	DIODE RD12SB2		IC8202	8-759-908-15	IC TL431CLP	
D8129	8-719-158-49	DIODE RD12SB2		IC8300	8-759-546-01	IC TDA9320H-N1-518	
D8130	8-719-158-49	DIODE RD12SB2		IC8451	8-759-385-76	IC MC14052BDR2	
D8131	8-719-158-49	DIODE RD12SB2		IC8601	8-759-544-24	IC LF90CDT	
D8132	8-719-158-49	DIODE RD12SB2		IC8602	8-759-544-23	IC LF80CDT	
D8200	8-719-158-49	DIODE RD12SB2		IC8603	8-759-544-22	IC LF50CDT	
D8201	8-719-158-49	DIODE RD12SB2		IC8604	8-759-544-22	IC LF50CDT	
D8202	8-719-158-49	DIODE RD12SB2		IC8700	8-752-074-78	IC CXD2057M	
D8203	8-719-158-49	DIODE RD12SB2		< JACK >			
D8349	8-719-914-42	DIODE DA204K		J8901	1-774-747-11	JACK BLOCK, PIN	
D8450	8-719-158-49	DIODE RD12SB2		< COIL >			
D8451	8-719-158-49	DIODE RD12SB2		L8150	1-414-757-11	INDUCTOR 100UH	
D8900	8-719-056-85	DIODE UDZ-TE-17-8.2B		L8200	1-412-006-31	INDUCTOR CHIP 10UH	
D8901	8-719-056-85	DIODE UDZ-TE-17-8.2B		L8201	1-412-064-11	INDUCTOR CHIP 100UH	
D8902	8-719-056-85	DIODE UDZ-TE-17-8.2B		L8343	1-410-425-11	INDUCTOR 33UH	(KV-32FX60B)
D8903	8-719-056-85	DIODE UDZ-TE-17-8.2B		< TRANSISTOR >			
D8904	8-719-056-85	DIODE UDZ-TE-17-8.2B		Q8100	8-729-620-06	TRANSISTOR 2SC3052-EF	
D8905	8-719-056-85	DIODE UDZ-TE-17-8.2B		Q8101	8-729-620-06	TRANSISTOR 2SC3052-EF	
D8906	8-719-056-85	DIODE UDZ-TE-17-8.2B		Q8156	8-729-620-06	TRANSISTOR 2SC3052-EF	
D8907	8-719-056-85	DIODE UDZ-TE-17-8.2B		Q8157	8-729-620-06	TRANSISTOR 2SC3052-EF	
D8908	8-719-056-85	DIODE UDZ-TE-17-8.2B		Q8200	8-729-620-06	TRANSISTOR 2SC3052-EF	
D8909	8-719-056-85	DIODE UDZ-TE-17-8.2B		Q8201	8-729-620-06	TRANSISTOR 2SC3052-EF	
D8910	8-719-056-85	DIODE UDZ-TE-17-8.2B		Q8202	8-729-620-06	TRANSISTOR 2SC3052-EF	
D8911	8-719-056-85	DIODE UDZ-TE-17-8.2B		Q8301	8-729-038-96	TRANSISTOR IMZ1A-T109	
D8912	8-719-158-49	DIODE RD12SB2		Q8303	8-729-620-06	TRANSISTOR 2SC3052-EF	
D8913	8-719-158-49	DIODE RD12SB2		Q8304	8-729-620-06	TRANSISTOR 2SC3052-EF	
D8914	8-719-158-49	DIODE RD12SB2					
D8915	8-719-158-49	DIODE RD12SB2					

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REF.NO.	PART.NO	DESCRIPTION	REMARK	REF.NO.	PART.NO	DESCRIPTION	REMARK
Q8305	8-729-620-06	TRANSISTOR 2SC3052-EF		R8201	1-216-295-91	SHORT	0
Q8306	8-729-620-06	TRANSISTOR 2SC3052-EF		R8202	1-216-021-00	RES,CHIP	68 5% 1/10W
Q8307	8-729-620-06	TRANSISTOR 2SC3052-EF		R8203	1-216-069-00	RES,CHIP	6.8K 5% 1/10W
Q8308	8-729-038-96	TRANSISTOR IMZ1A-T109		R8204	1-216-049-91	RES,CHIP	1K 5% 1/10W
Q8309	8-729-038-96	TRANSISTOR IMZ1A-T109		R8205	1-216-069-00	RES,CHIP	6.8K 5% 1/10W
Q8310	8-729-038-96	TRANSISTOR IMZ1A-T109		R8206	1-216-049-91	RES,CHIP	1K 5% 1/10W
Q8311	8-729-620-06	TRANSISTOR 2SC3052-EF		R8208	1-216-037-00	RES,CHIP	330 5% 1/10W
Q8343	8-729-620-06	TRANSISTOR 2SC3052-EF	(KV-32FX60B)	R8209	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W
Q8450	8-729-216-22	TRANSISTOR 2SA1162-G		R8210	1-216-025-91	RES,CHIP	100 5% 1/10W
Q8453	8-729-216-22	TRANSISTOR 2SA1162-G		R8211	1-216-295-91	SHORT	0
Q8456	8-729-620-06	TRANSISTOR 2SC3052-EF		R8212	1-216-295-91	SHORT	0
Q8459	8-729-216-22	TRANSISTOR 2SA1162-G		R8213	1-216-295-91	SHORT	0
Q8461	8-729-216-22	TRANSISTOR 2SA1162-G		R8214	1-216-295-91	SHORT	0
Q8700	8-729-620-06	TRANSISTOR 2SC3052-EF		R8216	1-216-025-91	RES,CHIP	100 5% 1/10W
Q8900	8-729-620-06	TRANSISTOR 2SC3052-EF		R8217	1-216-025-91	RES,CHIP	100 5% 1/10W
Q8901	8-729-620-06	TRANSISTOR 2SC3052-EF		R8223	1-216-089-91	RES,CHIP	47K 5% 1/10W
Q8903	8-729-620-06	TRANSISTOR 2SC3052-EF		R8224	1-216-089-91	RES,CHIP	47K 5% 1/10W
< RESISTOR >				R8225	1-216-089-91	RES,CHIP	47K 5% 1/10W
R8100	1-216-025-91	RES,CHIP	100 5% 1/10W	R8226	1-216-089-91	RES,CHIP	47K 5% 1/10W
R8101	1-216-025-91	RES,CHIP	100 5% 1/10W	R8227	1-216-089-91	RES,CHIP	47K 5% 1/10W
R8102	1-216-295-91	SHORT	0	R8228	1-216-089-91	RES,CHIP	47K 5% 1/10W
R8103	1-216-089-91	RES,CHIP	47K 5% 1/10W	R8229	1-216-295-91	SHORT	0
R8104	1-216-089-91	RES,CHIP	47K 5% 1/10W	R8230	1-216-081-00	RES,CHIP	22K 5% 1/10W
R8105	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R8231	1-216-089-91	RES,CHIP	47K 5% 1/10W
R8106	1-216-081-00	RES,CHIP	22K 5% 1/10W	R8232	1-216-089-91	RES,CHIP	47K 5% 1/10W
R8107	1-216-081-00	RES,CHIP	22K 5% 1/10W	R8233	1-216-089-91	RES,CHIP	47K 5% 1/10W
R8108	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R8234	1-216-089-91	RES,CHIP	47K 5% 1/10W
R8109	1-249-389-11	CARBON	4.7 5% 1/4W F	R8235	1-216-089-91	RES,CHIP	47K 5% 1/10W
R8110	1-249-389-11	CARBON	4.7 5% 1/4W F	R8236	1-216-089-91	RES,CHIP	47K 5% 1/10W
R8111	1-216-033-00	RES,CHIP	220 5% 1/10W	R8237	1-216-043-91	RES,CHIP	560 5% 1/10W
R8112	1-216-033-00	RES,CHIP	220 5% 1/10W	R8238	1-216-063-91	RES,CHIP	3.9K 5% 1/10W
R8115	1-216-033-00	RES,CHIP	220 5% 1/10W	R8239	1-216-069-00	RES,CHIP	6.8K 5% 1/10W
R8116	1-216-033-00	RES,CHIP	220 5% 1/10W	R8240	1-216-651-11	METAL CHIP	1K 0.50% 1/10W
R8117	1-216-033-00	RES,CHIP	220 5% 1/10W	R8243	1-216-021-00	RES,CHIP	68 5% 1/10W
R8118	1-216-033-00	RES,CHIP	220 5% 1/10W	R8300	1-216-041-00	RES,CHIP	470 5% 1/10W
R8125	1-216-295-91	SHORT	0	R8301	1-216-295-91	SHORT	0
R8126	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R8302	1-216-017-91	RES,CHIP	47 5% 1/10W
R8127	1-216-113-00	RES,CHIP	470K 5% 1/10W	R8303	1-216-041-00	RES,CHIP	470 5% 1/10W
R8128	1-216-049-91	RES,CHIP	1K 5% 1/10W	R8304	1-216-041-00	RES,CHIP	470 5% 1/10W
R8129	1-216-025-91	RES,CHIP	100 5% 1/10W	R8305	1-216-049-91	RES,CHIP	1K 5% 1/10W
R8130	1-216-025-91	RES,CHIP	100 5% 1/10W	R8307	1-216-049-91	RES,CHIP	1K 5% 1/10W
R8131	1-216-049-91	RES,CHIP	1K 5% 1/10W	R8308	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R8132	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R8309	1-216-049-91	RES,CHIP	1K 5% 1/10W
R8133	1-216-113-00	RES,CHIP	470K 5% 1/10W	R8310	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R8165	1-216-295-91	SHORT	0	R8311	1-216-085-00	RES,CHIP	33K 5% 1/10W
R8167	1-216-025-91	RES,CHIP	100 5% 1/10W	R8312	1-216-077-00	RES,CHIP	15K 5% 1/10W
R8168	1-216-025-91	RES,CHIP	100 5% 1/10W	R8313	1-216-041-00	RES,CHIP	470 5% 1/10W
R8174	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	R8314	1-216-043-91	RES,CHIP	560 5% 1/10W
R8175	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	R8316	1-216-295-91	SHORT	0
R8200	1-216-049-91	RES,CHIP	1K 5% 1/10W	R8317	1-216-025-91	RES,CHIP	100 5% 1/10W
				R8318	1-216-025-91	RES,CHIP	100 5% 1/10W

REF. NO.	PART.NO	DESCRIPTION	REMARK	REF. NO.	PART.NO	DESCRIPTION	REMARK
R8319	1-216-295-91	SHORT	0	R8467	1-216-089-91	RES,CHIP	47K 5% 1/10W
R8320	1-216-295-91	SHORT	0	R8468	1-216-073-00	RES,CHIP	10K 5% 1/10W
R8321	1-216-049-91	RES,CHIP	1K 5% 1/10W	R8469	1-216-033-00	RES,CHIP	220 5% 1/10W
R8322	1-216-049-91	RES,CHIP	1K 5% 1/10W	R8470	1-216-022-00	RES,CHIP	75 5% 1/10W
R8323	1-216-097-91	RES,CHIP	100K 5% 1/10W	R8472	1-216-089-91	RES,CHIP	47K 5% 1/10W
R8325	1-216-041-00	RES,CHIP	470 5% 1/10W	R8473	1-216-073-00	RES,CHIP	10K 5% 1/10W
R8326	1-216-041-00	RES,CHIP	470 5% 1/10W	R8474	1-216-033-00	RES,CHIP	220 5% 1/10W
R8327	1-216-041-00	RES,CHIP	470 5% 1/10W	R8475	1-216-022-00	RES,CHIP	75 5% 1/10W
R8328	1-216-041-00	RES,CHIP	470 5% 1/10W	R8700	1-216-049-91	RES,CHIP	1K 5% 1/10W
R8329	1-216-041-00	RES,CHIP	470 5% 1/10W	R8701	1-216-073-00	RES,CHIP	10K 5% 1/10W
R8330	1-216-041-00	RES,CHIP	470 5% 1/10W	R8702	1-216-025-91	RES,CHIP	100 5% 1/10W
R8331	1-216-041-00	RES,CHIP	470 5% 1/10W	R8703	1-216-025-91	RES,CHIP	100 5% 1/10W
R8332	1-216-041-00	RES,CHIP	470 5% 1/10W	R8704	1-216-025-91	RES,CHIP	100 5% 1/10W
R8333	1-216-041-00	RES,CHIP	470 5% 1/10W	R8705	1-216-295-91	SHORT	0
R8334	1-216-017-91	RES,CHIP	47 5% 1/10W	R8706	1-216-049-91	RES,CHIP	1K 5% 1/10W
R8335	1-216-017-91	RES,CHIP	47 5% 1/10W	R8707	1-216-089-91	RES,CHIP	47K 5% 1/10W
R8337	1-216-077-00	RES,CHIP	15K 5% 1/10W	R8708	1-216-089-91	RES,CHIP	47K 5% 1/10W
R8338	1-216-017-91	RES,CHIP	47 5% 1/10W	R8900	1-216-039-00	RES,CHIP	390 5% 1/10W
R8339	1-216-017-91	RES,CHIP	47 5% 1/10W	R8901	1-216-049-91	RES,CHIP	1K 5% 1/10W
R8340	1-216-049-91	RES,CHIP	1K 5% 1/10W	R8902	1-216-039-00	RES,CHIP	390 5% 1/10W
R8343	1-216-041-00	RES,CHIP	470 5% 1/10W (KV-32FX60B)	R8903	1-216-089-91	RES,CHIP	47K 5% 1/10W
R8344	1-216-041-00	RES,CHIP	470 5% 1/10W (KV-32FX60B)	R8904	1-216-089-91	RES,CHIP	47K 5% 1/10W
R8345	1-216-033-00	RES,CHIP	220 5% 1/10W (KV-32FX60B)	R8905	1-216-113-00	RES,CHIP	470K 5% 1/10W
R8346	1-216-295-41	SHORT	0 (KV-28FX60A/28FX60B/28FX60D/28FX60E/ 28FX60K/28FX60R/28FX60U/32FX60A/ 32FX60D/32FX60E/32FX60K/32FX60R/ 32FX60U)	R8906	1-216-039-00	RES,CHIP	390 5% 1/10W
R8347	1-216-025-91	RES,CHIP	100 5% 1/10W (KV-32FX60B)	R8907	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R8348	1-216-295-91	SHORT	0 (KV-32FX60B)	R8908	1-216-039-00	RES,CHIP	390 5% 1/10W
R8349	1-216-121-91	RES,CHIP	1M 5% 1/10W	R8909	1-216-049-91	RES,CHIP	1K 5% 1/10W
R8350	1-216-073-00	RES,CHIP	10K 5% 1/10W	R8911	1-216-063-91	RES,CHIP	3.9K 5% 1/10W
R8351	1-216-073-00	RES,CHIP	10K 5% 1/10W	R8913	1-216-022-00	RES,CHIP	75 5% 1/10W
R8352	1-216-089-91	RES,CHIP	47K 5% 1/10W (KV-32FX60B)	R8914	1-216-071-00	RES,CHIP	8.2K 5% 1/10W
R8353	1-216-081-00	RES,CHIP	22K 5% 1/10W (KV-32FX60B)	R8915	1-216-022-00	RES,CHIP	75 5% 1/10W
R8354	1-216-067-00	RES,CHIP	5.6K 5% 1/10W	R8916	1-216-033-00	RES,CHIP	220 5% 1/10W
R8355	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R8917	1-216-033-00	RES,CHIP	220 5% 1/10W
R8356	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R8918	1-216-113-00	RES,CHIP	470K 5% 1/10W
R8450	1-216-089-91	RES,CHIP	47K 5% 1/10W	R8919	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R8451	1-216-073-00	RES,CHIP	10K 5% 1/10W	R8922	1-216-022-00	RES,CHIP	75 5% 1/10W
R8453	1-216-089-91	RES,CHIP	47K 5% 1/10W	R8923	1-216-022-00	RES,CHIP	75 5% 1/10W
R8454	1-216-073-00	RES,CHIP	10K 5% 1/10W	R8924	1-216-022-00	RES,CHIP	75 5% 1/10W
R8455	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R8925	1-216-022-00	RES,CHIP	75 5% 1/10W
R8460	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R8926	1-216-033-00	RES,CHIP	220 5% 1/10W
R8462	1-216-073-00	RES,CHIP	10K 5% 1/10W	R8927	1-216-033-00	RES,CHIP	220 5% 1/10W
				R8928	1-216-033-00	RES,CHIP	220 5% 1/10W
				R8929	1-216-039-00	RES,CHIP	390 5% 1/10W
				R8930	1-216-049-91	RES,CHIP	1K 5% 1/10W
				R8931	1-216-039-00	RES,CHIP	390 5% 1/10W
				R8932	1-216-049-91	RES,CHIP	1K 5% 1/10W
				R8933	1-216-089-91	RES,CHIP	47K 5% 1/10W
				R8934	1-216-089-91	RES,CHIP	47K 5% 1/10W
				R8935	1-216-113-00	RES,CHIP	470K 5% 1/10W
				R8936	1-216-113-00	RES,CHIP	470K 5% 1/10W
				R8937	1-216-039-00	RES,CHIP	390 5% 1/10W

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

J

REF. NO.	PART.NO	DESCRIPTION	REMARK	REF. NO.	PART.NO	DESCRIPTION	REMARK
R8938	1-216-057-00	RES,CHIP	2.2K 5% 1/10W			MISCELLANEOUS	
R8939	1-216-039-00	RES,CHIP	390 5% 1/10W			*****	
R8940	1-216-057-00	RES,CHIP	2.2K 5% 1/10W				
R8941	1-216-063-91	RES,CHIP	3.9K 5% 1/10W				
R8942	1-216-009-00	RES,CHIP	22 5% 1/10W				
R8943	1-216-022-00	RES,CHIP	75 5% 1/10W				
R8944	1-216-071-00	RES,CHIP	8.2K 5% 1/10W				
R8945	1-216-022-00	RES,CHIP	75 5% 1/10W				
R8946	1-216-033-00	RES,CHIP	220 5% 1/10W				
R8947	1-216-039-00	RES,CHIP	390 5% 1/10W				
R8948	1-216-049-91	RES,CHIP	1K 5% 1/10W				
R8949	1-216-022-00	RES,CHIP	75 5% 1/10W				
R8950	1-216-089-91	RES,CHIP	47K 5% 1/10W				
R8951	1-216-033-00	RES,CHIP	220 5% 1/10W				
R8952	1-216-113-00	RES,CHIP	470K 5% 1/10W				
R8953	1-216-039-00	RES,CHIP	390 5% 1/10W				
R8954	1-216-057-00	RES,CHIP	2.2K 5% 1/10W				
R8955	1-216-039-00	RES,CHIP	390 5% 1/10W				
R8956	1-216-049-91	RES,CHIP	1K 5% 1/10W				
R8957	1-216-049-91	RES,CHIP	1K 5% 1/10W				
R8958	1-216-089-91	RES,CHIP	47K 5% 1/10W				
R8959	1-216-022-00	RES,CHIP	75 5% 1/10W				
R8960	1-216-033-00	RES,CHIP	220 5% 1/10W				
R8961	1-216-022-00	RES,CHIP	75 5% 1/10W				
R8963	1-216-113-00	RES,CHIP	470K 5% 1/10W				
R8964	1-216-039-00	RES,CHIP	390 5% 1/10W				
R8965	1-216-057-00	RES,CHIP	2.2K 5% 1/10W				
R8968	1-216-022-00	RES,CHIP	75 5% 1/10W				
R8969	1-216-033-00	RES,CHIP	220 5% 1/10W				
R8977	1-216-037-00	RES,CHIP	330 5% 1/10W				
R8978	1-216-037-00	RES,CHIP	330 5% 1/10W				
R8979	1-216-045-00	RES,CHIP	680 5% 1/10W				
R8980	1-216-045-00	RES,CHIP	680 5% 1/10W				
R8981	1-216-085-00	RES,CHIP	33K 5% 1/10W				
R8982	1-216-057-00	RES,CHIP	2.2K 5% 1/10W				
R8983	1-216-077-00	RES,CHIP	15K 5% 1/10W				
R8987	1-216-081-00	RES,CHIP	22K 5% 1/10W				
R8988	1-216-081-00	RES,CHIP	22K 5% 1/10W				
R8989	1-216-081-00	RES,CHIP	22K 5% 1/10W				
R8990	1-216-057-00	RES,CHIP	2.2K 5% 1/10W				
R8991	1-216-097-91	RES,CHIP	100K 5% 1/10W				
R8992	1-216-057-00	RES,CHIP	2.2K 5% 1/10W				
R8993	1-216-057-00	RES,CHIP	2.2K 5% 1/10W				
		< CRYSTAL >					
X8200	1-781-148-21	VIBRATOR, CRYSTAL					
X8300	1-567-504-11	OSCILLATOR, CRYSTAL					
X8301	1-567-505-11	OSCILLATOR, CRYSTAL					
X8700	1-767-342-21	VIBRATOR, CRYSTAL					

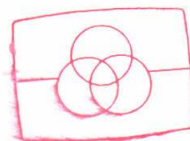
REF. NO.	PART.NO	DESCRIPTION	REMARK	REF. NO.	PART.NO	DESCRIPTION	REMARK
	*4-204-457-01	INDIVIDUAL CARTON					
	*4-204-451-01	CUSHION (UPPER) (ASSY)					
	*4-204-454-01	CUSHION (LOWER) (ASSY)					

		ACCESSORIES AND PACKAGING MATERIALS (KV-32FX60)					

	4-204-561-41	MANUAL, INSTRUCTION (KV-32FX60A)					
		(ITALIAN)					
	4-204-561-51	MANUAL, INSTRUCTION (KV-32FX60B)					
		(FRENCH/GERMAN/ITALIAN/DUTCH)					
	4-204-561-11	MANUAL, INSTRUCTION (KV-32FX60D)					
		(GERMAN/ENGLISH/GERMAN/TURKISH)					
	4-204-561-71	MANUAL, INSTRUCTION (KV-32FX60E)					
		(SPANISH/PORTUGUESE/FINNISH/DANISH/ NORWEGIAN/SWEDISH)					
	4-204-561-91	MANUAL, INSTRUCTION					
		(KV-32FX60K/32FX60R)					
		(RUSSIAN/BULGARIAN/ENGLISH/CZECH)					
	4-204-561-61	MANUAL, INSTRUCTION (KV-32FX60U)					
		(ENGLISH)					
	*4-029-168-01	BAG, PROTECTION					
	*4-204-378-01	INDIVIDUAL CARTON					
	*4-204-387-01	CUSHION (UPPER) (ASSY)					
	*4-204-388-01	CUSHION (LOWER) (ASSY)					

		REMOTE COMMANDER					

	1-418-047-11	REMOTE COMMANDER (RM-891)					



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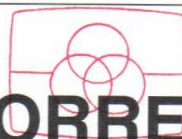
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SERVICE MANUAL

AE-5 CHASSIS

MODEL	COMMANDER	DEST	CHASSIS NO.	MODEL	COMMANDER	DEST	CHASSIS NO.
KV-28FX60A	RM-891	Italian	SCC-Q12D-A	KV-32FX60A	RM-891	Italian	SCC-Q12B-A
KV-28FX60B	RM-891	French	SCC-Q13D-A	KV-32FX60B	RM-891	French	SCC-Q13B-A
KV-28FX60D	RM-891	AEP	SCC-Q11D-A	KV-32FX60D	RM-891	AEP	SCC-Q11B-A
KV-28FX60E	RM-891	Spanish	SCC-Q14D-A	KV-32FX60E	RM-891	Spanish	SCC-Q14B-A
KV-28FX60K	RM-891	OIRT	SCC-Q16F-A	KV-32FX60K	RM-891	OIRT	SCC-Q16A-A
KV-28FX60R	RM-891	OIRT	SCC-Q16E-A	KV-32FX60R	RM-891	OIRT	SCC-Q16B-A
KV-28FX60U	RM-891	UK	SCC-Q15C-A	KV-32FX60U	RM-891	UK	SCC-Q15B-A



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CORRECTION - 1

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SUBJECT : D BOARD PWB ERROR

File this correction with the service manual

INTRODUCTION : Due to a printing error the D Board PWB layout is incorrect. Refer to the layout indicated in this correction bulletin.

- **D Board [Power Supply and Deflection].....**See page 106

Sony Corporation

Sony UK

Service Promotions Dept.

English

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[POWER SUPPLY AND DEFLECTION]

