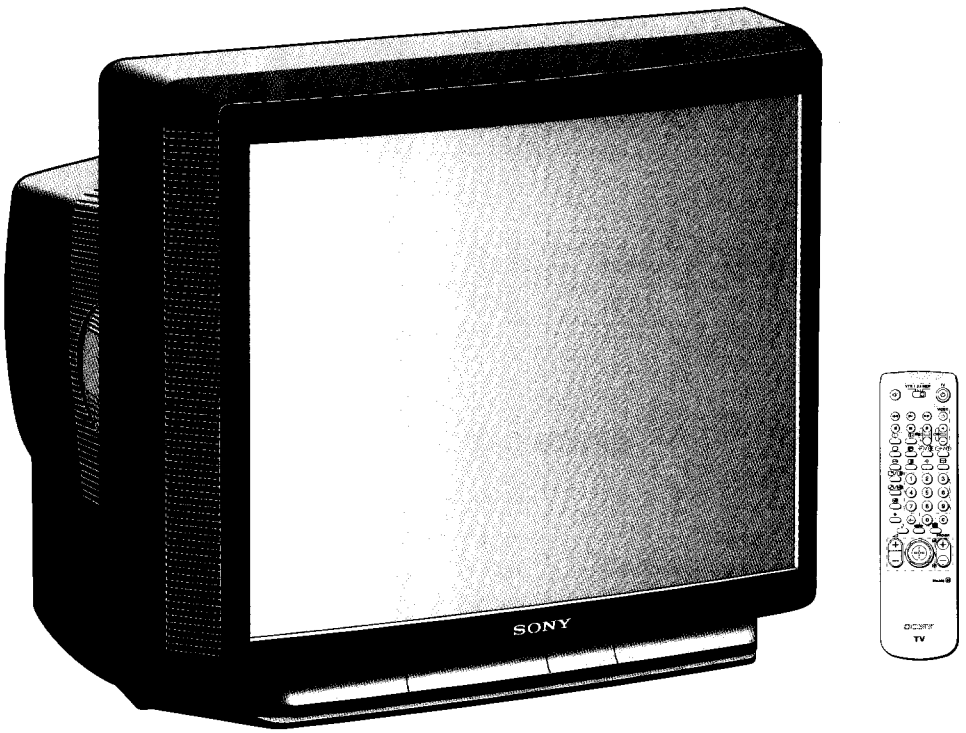
SERVICE MANUAL

AE-4 CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-25X3A	RM-862	Italian	SCC-K43JA	KV-25X3D	RM-862	AEP	SCC-K41JA
KV-25X3B	RM-862	French	SCC-K45JA	KV-25X3E	RM-862	Spanish	SCC-K42JA



MICROFILM

TRINITRON® COLOR TV

SONY®

ITEM MODEL	Television System	Channel Coverage	Colour System
Italian	B/G/H	VHF: E2-E12, S1-S20, A-H, H1, H2 UHF: E21-E69	PAL, SECAM NTSC3.58/4.43 (video input only)
French	B/G/H, D/K, L, I	L SECAM VHF: F2-F10 UHF: F21-F69 TV CABLE TV (1) VHF: B-Q UHF: S21-S44 PAL 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-H, H1, H2 PAL I UHF: B21-B69 D/K VHF: R01-R12 UHF: R21-R69 CABLE TV VHF: S1-S41, UHF: S01-S05	PAL, SECAM NTSC3.58/4.43 (video input only)
AEP	B/G/H, D/K	B/G/H VHF: E2-E12 UHF: S1-S20 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R12 UHF: R21-R69 CABLE TV VHF: S1-S41, UHF: S01-S05	PAL, SECAM NTSC3.58/4.43 (video input only)
Spanish	B/G/H, D/K	PAL 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-H, H1, H2 D/K VHF: R01-R12 UHF: R21-R69 CABLE TV VHF: S1-S41, UHF: S01-S05	PAL, SECAM NTSC3.58/4.43 (video input only)

MODEL	25X3A	25X3B	25X3D	25X3E
Power Consumption	110W	127W	127W	127W

SPECIFICATIONS

Picture Tube — Super Trinitron
Approx. 63 cm (25inches)
(Approx. 59 cm picture measured diagonally) 110˚ deflection

Rear/Front Terminals

[REAR]

21-pin Euro connector (CENELEC standard)
- Inputs for audio and video signals
- Inputs for RGB
- Outputs of TV video and audio signals

2/S 2 21-pin Euro connector
- Inputs for audio and video signals
- Inputs for S video
- Outputs for audio and video signals (selectable)

[FRONT]

3 Video input - phono jack
3 Audio inputs - phono jacks
3 S video input - 4 pin DIN
Headphones jack: stereo minijack

Sound output — 2x30W (music power), 2x15W (RMS)
Dimensions — 593x502x508 mm approx.
Weight — Approx. 33.1kg
Supplied accessories — Remote Commander RM-862 (1)
Batteries R6 (2)
Aerial cable (1)

Other features
FASTEXT, 100Hz Digital Plus, PIP,
NICAM stereo (KV-25X3B/25X3E only)

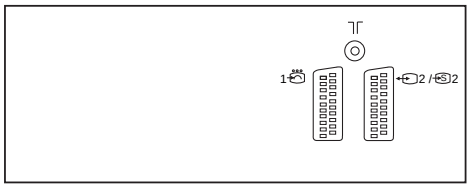
[RM-862]

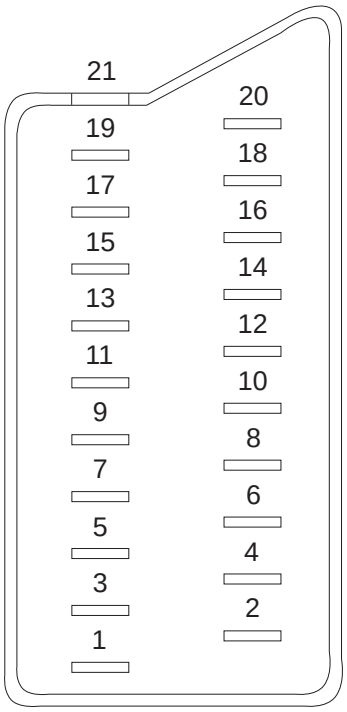
Remote control system	Infrared control
Power requirements	3V dc (2 batteries) R6 (size AA)
Dimensions	Approx. 210x56x24 mm (w/h/d)
Weight	Approx. 110g (Not including battery)

Design and specifications are subject to change without notice.

Item \ Model name	KV-25X3A	KV-25X3B	KV-25X3D	KV-25X3E
PIP	ON	ON	ON	ON
MPIP	OFF	OFF	OFF	OFF
Rotation Coil	ON	ON	ON	ON
VM Set (Velocity Modulation)	ON	ON	ON	ON
Scart 1	ON	ON	ON	ON
Scart 2	ON	ON	ON	ON
Front in (3)	ON	ON	ON	ON
AKB in 16:9 mode	ON	ON	ON	ON
TXT	ON	ON	ON	ON
FLOF	ON	ON	ON	ON
TOP	ON	ON	ON	ON
Norm B/G/H	ON	ON	ON	ON
Norm I	OFF	ON	OFF	OFF
Norm D/K	OFF	ON	ON	ON
Norm L	OFF	ON	OFF	OFF
Language Preset	Italian	French	German	Spanish

21 pin connector (G1, Y2/ j2)





Pin No.	1	2	4	Signal	Signal Level
1	○	○	○	Audio output B (Right)	Standard level : 0.5V rms Output impedance : Less than 1k ohms*
2	○	○	○	Audio input B (Right)	Standard level : 0.5V rms Output impedance : More than 10k ohms*
3	○	○	○	Audio output A (Left)	Standard level : 0.5V rms Output impedance : Less than 1k ohm*
4	○	○	○	Ground (Audio)	
5	○	○	○	Ground (Blue)	
6	○	○	○	Audio input A (Left)	Standard level : 0.5V rms Output impedance : Less than 10k ohm*
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 : More10k ohms Input capacitance : Less than 2nF
9	○	○	○	Ground (Green)	
10	○	○	○	Open	
11	○	●	●	Green	
12	○	○	○	Open	
13	○	○	○	Ground (Red)	
14	○	○	○	Ground (Blanking)	
15	○	—	—	Red input	0.7 ± 3dB, 75 ohms, positive
	—	○	○	(S signal) croma input	0.7 ± 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, sheild)	

○ 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 75ohm, positive Sync.

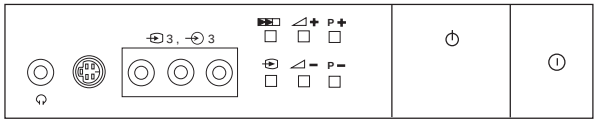


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CAUTION

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

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.

WARNING !!

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

ATTENTION !!

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

SAFETY-RELATED COMPONENT WARNING!!

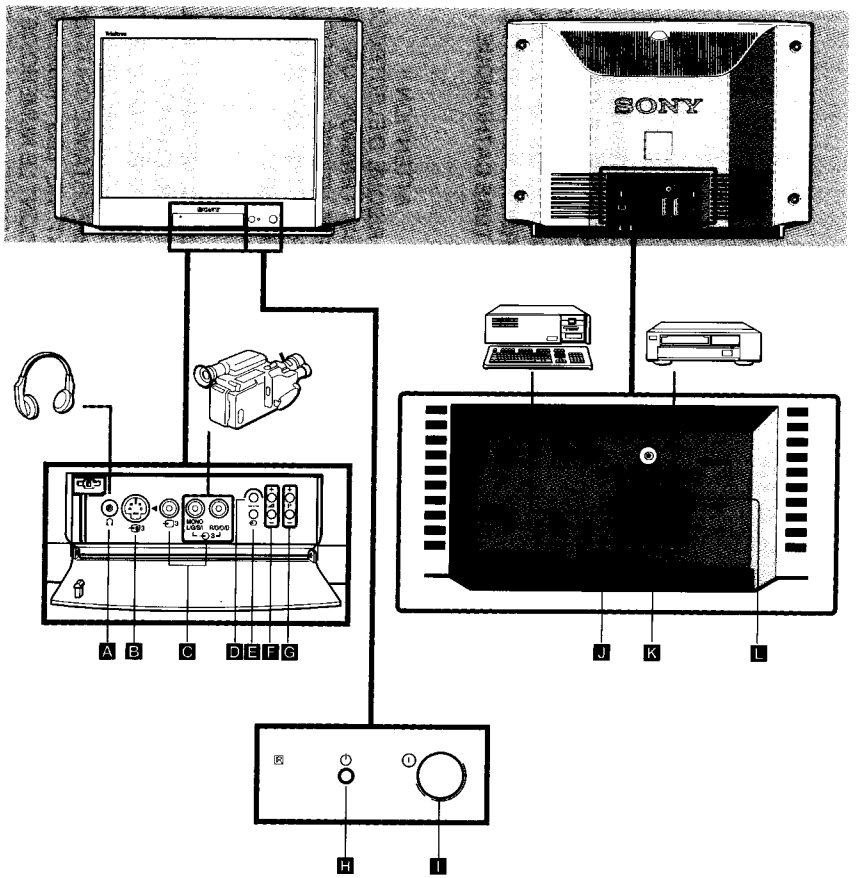
COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND, IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

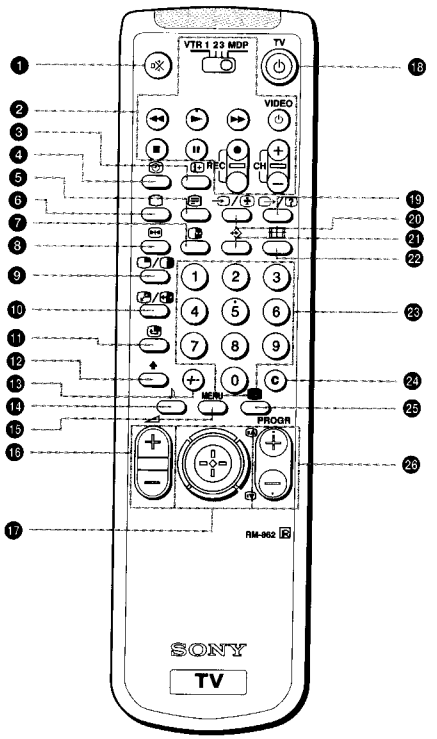
ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÈS PAR UNE TRAME ET PAR UNE MARQUE ⚠ SUR LES VUES EXPLOSÉES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE PUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1 GENERAL

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



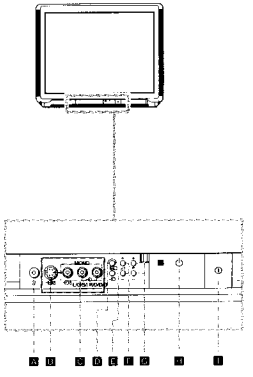


Overview

This section briefly describes the buttons and controls on the TV set and on the Remote Commander. Please open the flaps at the front and at the back of the Instruction Manual for detailed illustrations of the Remote Commander and the TV set. Letters in boxes refer to the buttons and connectors on the TV set, numbers in circles to the buttons on the Remote Commander. For more information, refer to the pages given next to each description.

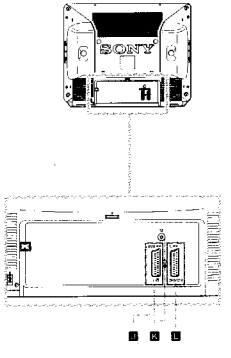
TV set – front

Reference and Symbol	Name	Refer to page
A	Headphones jack	35
B	S video input jack	40
C	Input jacks (video, audio)	40
D	Reset button	28
E	Input mode button	28
F	+/- Volume control	28
G	P +/- Programme buttons	28
H	Standby mode indicator	28
I	Main power switch	28



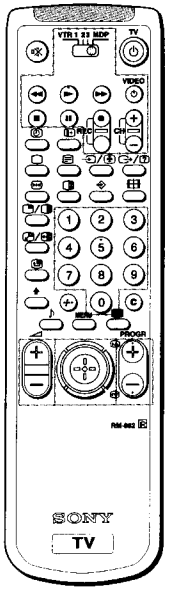
TV set – rear

Reference and Symbol	Name	Refer to page
J	21-pin Euro connector	40
K	Aerial socket	26
L	2/ 2 21-pin Euro connector	40



Remote Commander

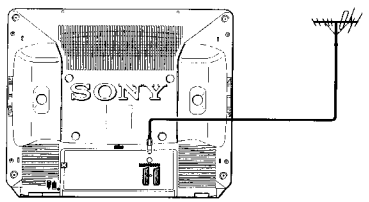
Reference and Symbol	Name	Refer to page
1	Muting on/off button	28
2	**VCR operation**	41
	VTR 123 MDP Video equipment selector	41
	Video equipment operation buttons	41
	VIDEO, CH +/-	
3	On-screen display button	28
4	Time display button	28
5	Teletext button	28, 37
6	TV power on/TV mode button	28
7	No function on this set	
8	Freeze button	28
9	PIP on/off button	36
10	PIP Swap button	36
11	PIP position button	36
12	PIP source selector	36
13	-/-- Double digit entering button	28
14	Sound mode button	34
15	MENU Menu on/off button	29
16	+/- Volume control buttons	28
17	Joystick for Menu selection	29
	Press to confirm selection (OK function)	
18	TV standby button	28
19	Output mode selector	40
	Teletext: Reveal button	37
20	Input mode selector	28
	Teletext: Freezing the subpage	37
21	Teletext: Favourite pages button	39
22	No function on this set	
23	1, 2, ... 9, 0 Number buttons	28
24	C Direct channel entering button	28
25	Picture mode button	34
26	PROGR +/- Programme buttons	28
	Teletext: Page up/page down buttons	37



Step 1 Installation

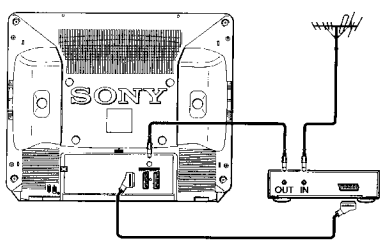
A Connecting the Aerial

(If you connect a VCR, skip to step B)
Insert the aerial plug of the supplied aerial cable tightly into the aerial socket ⅂ K.



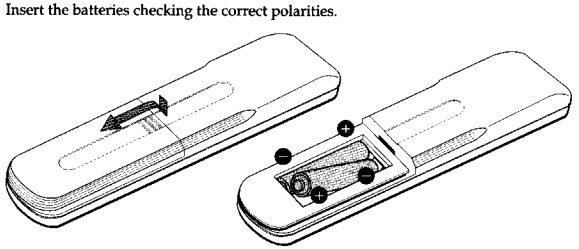
B Connecting a VCR

We recommend that you tune in the VCR signal to the programme position »0«.
Use the preset function »Manual Programme Preset« (page 29) to do this.



C Inserting the batteries into the Remote Commander

Insert the batteries checking the correct polarities.



! Respect your environment! Dispose of used batteries in an evironmental friendly way.

Step 2 Basic Presetting

A Choosing the Menu Language and the Country

Using this function you select the language of the menu screens. Also you select the country in which you will use the TV. In this way the channels of the selected country will automatically get the top positions during automatic presetting.

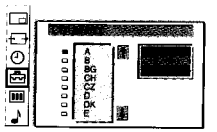
1 Press the power switch ⏻ I on the TV. If the standby indicator ⏻ H on the TV is lit, press ▭ 6 or a number button 20 on the Remote Commander. Press the MENU button 15 on the Remote Commander. The menu LANGUAGE appears.

2 Push the joystick 17 to blue or green to select the language. Press the joystick 17 to confirm your selection. The menu COUNTRY appears.

3 Push the joystick 17 to blue or green to select the country in which you wish to operate the TV. Press the joystick 17 to confirm the selection.

4 Press MENU 15 to restore the normal TV picture.





B Presetting Channels Automatically

With this function the TV automatically searches and stores up to 100 channels onto programme positions. If you prefer »Manual Presetting of channels« please refer to page 29 in Advanced Operation.

1 Press MENU 15.

2 Push the joystick 17 to blue or green to select the symbol 🧰 on the menu screen, then push to yellow.

3 Push the joystick 17 to blue or green to select »Auto Programme«, then push to yellow. The menu AUTO PROGRAMME appears.

4 a) All items shown on the menu screen are as wanted: Press joystick 17 to select START. Now the automatic channel presetting starts from programme position 1.

or

4 b) You wish to change items as shown on the menu screen: Push the joystick 17 to blue or green. Push to yellow repeatedly until the desired item is highlighted.

Push the joystick 17 to blue or green to select the following possibilities:

ACI
(Automatic Channel Installation, depending on availability of service in your country)
on: fast channel presetting by special networks using the channel frequency (e.g. F055) TV-system and station label
off: ACI is not active, only ITP (Intelligent Tuner Preset)

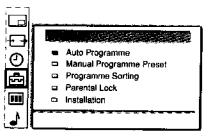
SYS (TV Broadcast System)
B/G for Western European Countries
D/K for Eastern European Countries

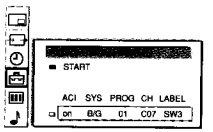
PROG (Programme Position)
Presetting automatically starts from position 1.

CH (channel)
C to start presetting with terrestrial channels
S to start presetting with cable channels

Press the joystick 17 as soon as the automatic presetting should start.

After presetting the normal TV picture reappears.





Joystick

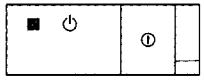


Step 3 TV operation

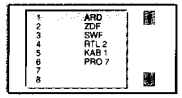
Using Direct Access Buttons

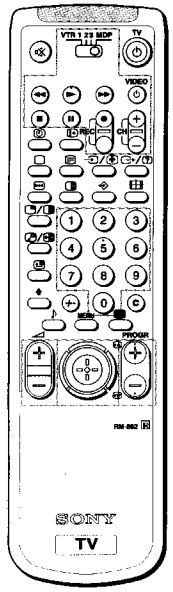
This section explains functions used while watching TV. Most operations are carried out using the Remote Commander (numbers in circles). All basic functions are also available on the TV set itself (letters in boxes).

To	Press
Switch on	• ⏻ I on TV.
Switch off temporarily (Standby mode)	• ⏻ 18. TV is now in standby mode and indicator ⏻ H lights up.
Switch on from standby mode	• ▭ 6, PROGR +/- 20 G or any number button 23.
Switch off completely	• ⏻ I on TV. ! To save energy, we recommend to switch off your TV completely when TV is not in use.
Select programmes	• PROGR +/- 20 G or number buttons 23. For double digit number, press -/- - 13, then the two number buttons 23. E.g. for 24, press -/- - 13, then 2 and 4.
Display a programme table	• The joystick 17. Push the joystick 17 to blue or green to select a programme, then press the joystick 17 to confirm.
Display on screen indications	• i+ 3. Press again to make the indications disappear.
Adjust the volume	• 🔊 + or - 10 F.
Mute the sound	• 🔇 1. Press again to restore the sound.
Display the time (only available when teletext is broadcast)	• 🕐 4. Press again to make the display disappear.
Tune in a channel temporarily	• »C« 22 once for terrestrial channels, twice for cable channels. The indication »C« or »S« for cable channels appears. Enter the channel number with two digits, e.g. for 4, press 0, then 4.
View the input of a connected device (see also page 40)	• ⇥ 20 E repeatedly until the desired input signal appears. Press ▭ 6 to restore the normal TV picture.
View teletext (see also page 37)	• ▤ 5 to switch on. Input a page number, using the number buttons 23 (e.g. for page 125, press 1, 2 and 5). ▭ 6 to switch off.
Freeze the picture	• ⏯ 8. Press again to restore the normal TV picture.
Reset picture settings to factory levels	• →•← D.



PROGRAMME TABLE





Using the Menu System

Use the following buttons on the Remote Commander to operate the Menu system:

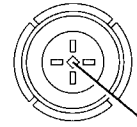
1 Press MENU button 15 to switch menu on or off.

MENU

2 Use the joystick 17 as follows:

GREEN : scroll up

RED : decrease/back to last item or to last menu. When menu is not displayed: Push to red to display the last menu screen



YELLOW : increase/forward to next item

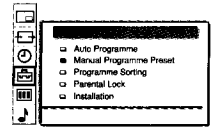
BLUE : scroll down

Joystick: Press at its neutral position to confirm selection or store

Advanced Presetting

Presetting Channels Manually

Using this function you can preset channels one by one to different programme positions. It is also convenient to allocate programme numbers to video input sources.

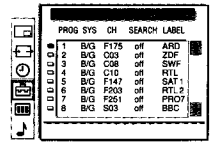


1 Press MENU 15.

2 Push joystick 17 to blue or green to select the symbol 🧰 on the menu screen. Push to yellow to confirm the selection.

3 Push to blue or green to select »Manual Programme Preset«. Push to yellow to confirm the selection.

4 Push to blue or green to select the programme position (PROG) to which you want to preset a channel. Push to yellow to confirm.



5 Push to blue or green to select the TV broadcast system (SYS) (B/G for western European countries, D/K for eastern European countries) or a video input source (EXT). Push to yellow to confirm.

6 Push to blue or green to select »C« (for terrestrial channels), »S« (for cable channels) or »F« (for channel frequency). Push to yellow to confirm.

There are two possibilities to preset channels manually:

a) You know the channel number or channel frequency. Please use method »Direct input«.

or

b) You don't know the channel number or frequency. Please use method »Search«.

continued >>>>>>>>>

7a) Direct Input

For channel numbers you need to input a two digit number, for the frequency a three digit number.

- Push to blue or green to select the first digit of the channel number or frequency. Push to yellow to confirm.
- Push to blue or green to select the second digit of the number or frequency. Push to yellow to confirm. In case of the channel number the search starts.
- Push to blue or green to select the third digit of the frequency number. Push to yellow to start the search of the frequency.
- To continue search for another channel: Push to blue or green.
- To store the selected channel: Press the joystick ⓱.
- Repeat steps 4 to 7a) to preset other channels.

Joystick



7b) Search

- Push repeatedly to yellow until a blue and a green arrow appear in the section SEARCH.
- Push to blue or green to search for the next available channel.
- To continue search for another channel: Push to blue or green.
- To store the selected channel: Press the joystick ⓱.
- Repeat steps 4 to 7b) to preset other channels.

Captioning a Station Name

Channels are usually automatically labelled during presetting. You can, however, individually name a channel or a video source using up to five characters.

1 Press MENU ⓯.

2 Push joystick ⓱ to blue or green to select the symbol on the menu screen. Push to yellow to confirm.

3 Push to blue or green to select »Manual Programme Preset«. Push to yellow to confirm.

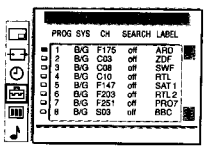
4 Push to blue or green to select the programme position with the channel you want to label. Push to yellow repeatedly until the first element of the position LABEL is highlighted.

5 Push to blue or green to select a letter or a number (select »-« for a blank). Push to yellow to confirm. Select the other four characters in the same way.

6 After selecting all characters, press the joystick ⓱.

7 Repeat steps 4 to 6 to label other channels or video sources.

8 Press MENU ⓯ to restore the normal TV picture.



Skipping Programme Positions

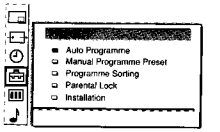
Joystick



This function enables you to skip unused programme positions when selecting them with the PROGR +/- buttons. However, by using the number buttons you can still select the skipped programme position.

1 Press MENU ⓯.

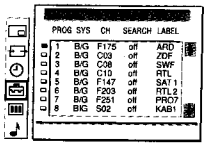
2 Push joystick ⓱ to blue or green to select the symbol on the menu screen. Push to yellow to confirm.



3 Push to blue or green to select »Manual Programme Preset«. Push to yellow to confirm.

4 Push to blue or green to select the programme position you want to skip. Push to yellow to confirm.

5 Push to blue or green to select »---« in the position SYS (system). Press the joystick ⓱ to confirm.



6 Repeat steps 4 and 5 to skip other programme positions.

7 Press MENU ⓯ to restore the normal TV picture.

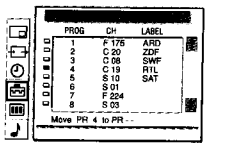
Sorting Programme Positions

This function enables you to sort the programme positions to a preferable order.

1 Press MENU ⓯.

2 Push joystick ⓱ to blue or green to select the symbol on the menu screen. Push to yellow to confirm.

3 Push to blue or green to select »Programme Sorting«. Push to yellow to confirm.



4 Push to blue or green to select the programme position of the channel you want to exchange. Press joystick ⓱ to confirm.

5 Push to blue or green to select the programme position of the second channel. Press joystick ⓱ to confirm. Now the two programme positions are swapped and sorted.

6 Repeat steps 4 and 5 to sort other programme positions.

7 Press Menu ⓯ to restore the normal TV picture.

Using Parental Lock

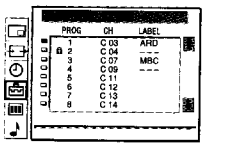
This function enables you to prevent children watching undesirable broadcasts.

1 Press MENU ⓯.

2 Push joystick ⓱ to blue or green to select the symbol on the menu screen. Push to yellow to confirm.

3 Push to green or blue to select »Parental Lock«. Push to yellow to confirm.

4 Push to green or blue to select the channel you want to block. Press the joystick ⓱ to confirm. The symbol 🔒 appears before the programme position to indicate that this channel is now blocked.



5 Repeat step 4 to block other channels.

6 Press MENU ⓯ to restore the normal TV picture.

! To unblock: Select the channel to unblock in the menu »Parental Lock«. Press the joystick ⓱. The symbol 🔒 disappears.

Using »Further Programme Preset«

Using the menu »Further Programme Preset« you can

a) individually adjust and store the volume level of each channel (Volume offset).

b) in case of picture distortions use manual fine tuning to obtain a better picture quality. The factory setting is »on« for AFT (Automatic Fine Tuning).

1 Press MENU ⑮.

2 Push joystick ⑰ to blue or green to select the symbol on the menu screen. Push to yellow to confirm.

3 Push to blue or green to select »Installation«. Push to yellow to confirm.

4 Push to blue or green to select »Further Programme Preset«. Push to yellow to confirm.

5 Push to blue or green to select the programme position you want. Push to yellow repeatedly to select:
a) VOL (Volume Offset) or b) AFT (Automatic Fine Tuning). The selected item changes colour.

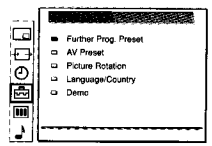
6a) VOL
Push to blue or green to adjust the volume for the selected programme position within a range of -7 to +7. Press the joystick ⑰ to confirm. Repeat step 6 to set the volume level for other programme positions.

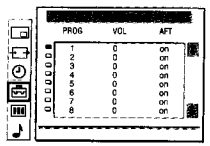
b) AFT
Push to blue or green to fine-tune the channel within a range of -15 to +15. Press the joystick ⑰ to confirm. Repeat step 6 to fine-tune other channels.

7 Press MENU ⑮ to restore the normal TV picture.

Joystick







Using »AV Preset«

Using this function you can preset the desired input source (e.g. 1, RGB signal) to the respective AV input (AV1). In this way a connected VCR switches automatically to the RGB signal. Also you can label the input sources.

1 Press MENU ⑮.

2 Push joystick ⑰ to blue or green to select the symbol on the menu screen. Push to yellow to confirm.

3 Push to blue or green to select »Installation«. Push to yellow. Push to blue or green to select »AV Preset«. Push to yellow to confirm.

4 Push to blue or green to select the desired AV input. Push to yellow to confirm.

5 Push to blue or green to select the desired source. Push to yellow to confirm. For the respective AV inputs you have the following choice:
AV1: RGB or AV
AV2: YC2 or AV
AV3: YC3 or AV

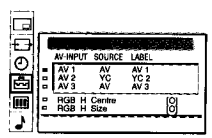
6 To label a source: Push to blue or green to select the first character (letter or number, »-« for a blank). Push to yellow to confirm. Select the other four characters in the same way.

7 Press the joystick ⑰ to store.

8 Repeat steps 4 to 7 for the other AV inputs.

9 For RGB input source only: Push to blue or green to select RGB H Centre.
- Push to yellow to confirm.
- Push to blue or green to adjust the centre of the picture in a range of –5 to +5. Press the joystick ⑰ to store.
- Repeat step 9 to adjust RGB H Size.

10 Press MENU ⑮ to restore the normal TV picture.



Adjusting the Picture Rotation

If, due to the earth magnetism, the picture slants, you can use this function to readjust the picture.

1 Press MENU ⑮.

2 Push joystick ⑰ to blue or green to select the symbol on the menu screen. Push to yellow to confirm.

3 Push to blue or green to select »Installation«. Push to yellow to confirm.

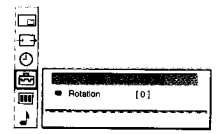
4 Push to blue or green to select »Picture Rotation«. Push to yellow to confirm.

5 Push to yellow. Push to blue or green to adjust the picture rotation. The adjusting range is - 4 to + 4. Press the joystick ⑰ to confirm.

6 Press MENU ⑮ to restore the normal TV picture.

Joystick





Advanced TV operation

Adjusting the Picture and Sound

Although the picture and sound are adjusted at the factory, you can adjust them to suit your own taste.

1 Press ● ㉒ (for Picture) or ♪ ⓮ (for Sound)
or
Press MENU ⓯.
Push joystick ⓱ to blue or green to select ▦ for Picture Control or ♪ for Sound Control. Push to yellow to confirm. The menu PICTURE CONTROL or SOUND CONTROL appears.

2 Push to blue or green to select the desired item. Push to yellow to confirm.

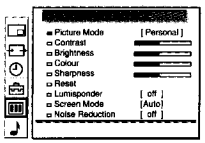
3 Push to red or yellow to adjust the selected item. Press the joystick ⓱ to confirm. For the effect of each control, see the following tables.

4 Repeat steps 2 and 3 to adjust other items.

5 Press MENU ⓯ to restore the normal TV picture.

Joystick





Picture Control

Item	Effect
Picture Mode	• Personal → Economy (energy saving setting) → Live → Sports → Movie → Game
Contrast	• Less ——|—— More
Brightness*	• Darker ——|—— Brighter
Colour*	• Less ——|—— More
Hue**	• Greenish ——|—— Reddish
Sharpness*	• Softer ——|—— Sharper
Reset	• Resets picture to the factory preset levels
Lumisponder	• Off: Normal On: Automatic optimization of picture level according to the surrounding lighting level
Screen Mode	• Auto (automatic selection of 16:9 broadcasts decoded in 4:3) → 16:9 → 4:3
Noise Reduction	• Off: Normal On: Reduction of picture noise in case of weak signals

* Only if »Personal« or »Economy« is selected in »Picture Mode«.
** Available for NTSC colour system only.

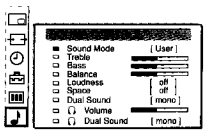
Sound Control

Item	Effect
Sound Mode	• Choice between different sound effects User → Pop → Jazz → Rock
Treble*	• Less ——|—— More
Bass*	• Less ——|—— More
Balance	• More left ——|—— More right
Loudness*	• Off: normal On: for music broadcasts
Space	• Off: normal On: special acoustic effect
Dual Sound	• A: channel 1 or B: channel 2 Stereo → Mono
Headphones	
∩ Volume	• Less ——|—— More
∩ Dual Sound	• A: channel 1 or B: channel 2 → PIP (if PIP is switched on, you can select the PIP sound for the headphones) → Stereo → Mono

* Only if »User« is selected in »Sound Mode«

Joystick





Using the Sleep Timer

This function enables you to select a time period after which the TV automatically switches into standby mode.

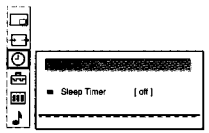
1 Press MENU ⓯.

2 Push joystick ⓱ to blue or green to select the symbol ◴ on the menu screen. Push to yellow to confirm.

3 Push to yellow. Push to blue or green to select the time.
OFF → 10 min → 20 min .....80 min → 90 min.
Press the joystick ⓱ to confirm.

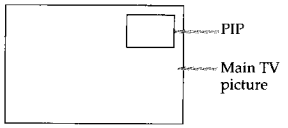
4 Press MENU ⓯ to restore the normal TV picture.

! One minute before the TV switches into standby mode, a message is displayed on the screen.



PIP (Picture-in-Picture)

With this function you can display a »PIP screen« (small picture) within the main TV picture. In this way you can watch or monitor the video output from any connected equipment (for example from a VTR) while watching TV or vice versa.



Switching PIP on and off

Press ◔/◨ ❾.
The PIP screen will be displayed. The PIP picture comes from the source chosen when the TV was last used.

To switch PIP off
Press ◔/◨ ❾ again.

or

1 Press MENU ⓯.

2 Push joystick ⓱ to blue or green to select the symbol ▭ on the menu screen. Push to yellow to confirm.

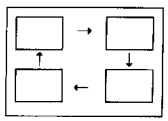
3 Push to yellow. Push to blue or green to select »On« or »Off«. Press joystick ⓱ to confirm.

4 To change the PIP Position:
Push to blue or green to select »PIP Position«. Push to yellow. Push to blue, green, red or yellow to select one of the four positions. Press joystick ⓱ to confirm.

5 Press MENU ⓯ to restore the normal TV picture.

Changing the position of the PIP

Press ◔ ⓫ repeatedly to change the position of the PIP screen within the main screen. There are four different positions available.



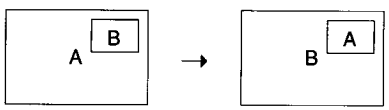
Selecting a PIP source

Press ↑ ⓬.
The symbol ↑⓬ will be displayed at the bottom, left-hand corner of the screen.
Press ⊕ ⓴ repeatedly until the desired source is indicated (e.g. TV, AV1, AV2, YC2, AV3, YC3, AV4, YC4).

Tips
- If no video source has been connected, the PIP picture will be noisy.
- A RGB input source cannot be displayed in PIP.

Swapping screens

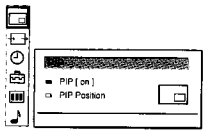
Press ◔/◔ ⓾.
The main screen will switch the picture with the PIP screen.



If the PIP screen shows a TV programme and the main picture a video source, and you want to change channels, first press ↑ ⓬ and then the programme buttons ㉓ or PROGR +/– ㉕.

Joystick





Teletext

Most TV channels broadcast information via teletext. The index page of the broadcaster (usually page 100) informs you about how to use the service. Make sure to use a TV channel with a strong signal, otherwise Teletext errors may occur.

Direct Access Function

Switching Teletext on and off

1 Select the TV channel which carries the teletext service you want to view.

2 Press ☰ ❺ once to switch Teletext on.
Press ☰ ❺ twice for Mix mode. The normal TV screen and the Teletext screen are overlapped.

3 Press ▢ ❻ to switch Teletext off.

Joystick



Selecting a Teletext page

Direct Page Selection
Use the number buttons ㉓ to input three digits of the page number.
If you have made a mistake: Type in any three digits, then reenter the correct page number.

Page Catching
1 Select a teletext page with page numbers (e.g. index page).

2 Press the joystick ⓱. »Page Catching« is displayed at the top of the page.
Push joystick ⓱ to blue or green to select the page you want. Press the joystick ⓱.
The requested page is displayed after some seconds.

Accessing the next or preceding page

Press ▲ ㉖ (Page +) or ▼ (Page -).

Freezing a teletext subpage

Press ⊕ ⓴. The symbol ⊕ is displayed.
Press ☰ ❺ to resume normal teletext reception.

Revealing hidden information (e.g. for a quiz)

Press ? ⓲. Press again to cancel.

Using Fastext

(only available, if the TV station broadcasts Fastext signals)

With Fastext you can access pages with one key 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 marks on the Remote Commander. Push the joystick ⓱ to the colour mark which corresponds to the colour-coded menu. The page is displayed after some seconds.

continued >>>>>>>>>

Using the Teletext Menu

Your TV is provided with a menu-guided teletext system. When teletext is switched on, you can use the buttons for menu operation to operate the teletext menu.
Select the teletext menu functions as follows:

1 Press MENU ⑮. The menu is superimposed on the teletext display.

2 Push the joystick ⑰ to blue or green to select the teletext function you want.
Push to yellow to confirm the selection.

USER PAGES/PRESET USER PAGES
See page 39 for information about presetting and operating the user pages.

INDEX
The index gives you an overview of the contents of the teletext you are using.

TOP/BOTTOM/FULL
For convenient reading of a teletext page you can enlarge the teletext page. After selecting the function, an information line »↑ Top ↓ Bottom OK Full« is displayed. Push joystick ⑰ to green to enlarge the upper half, push to blue to enlarge the lower half. Press the joystick ⑰ to resume the normal display. Press ⓣ ⑤ to resume normal teletext reception.

TEXT CLEAR
After selecting the function, you can watch a TV programme while waiting for a requested teletext page to be captured. When the page is available, the symbol ⓣ changes colour. Press ⓣ ⑤ to view the requested page.

SUBTITLES
Check with your teletext service for information about subtitled TV programmes. After selecting the function the subtitles are displayed.

TIME PAGE
Check with your teletext service about the availability of time coded pages.
If available, you can call up a page (e.g. an alarm page) at a certain time.

1 Select TIME PAGE in the teletext menu.
Push joystick ⑰ to yellow. An information window is displayed. Push to blue or green to select »On«. Push to yellow.

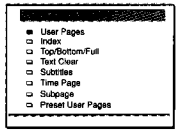
2 Use the number buttons ⑱ to enter the three digits of the page you want (e.g. 301). Push to yellow after each digit.

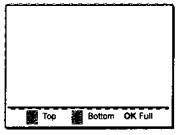
3 Use the number buttons ⑱ to enter the four digits of the desired time (e.g 18-54). Push to yellow after each digit. Press joystick ⑰ to confirm. Press MENU ⑮. The time is displayed in the top left-hand corner of the screen.
At the requested time the page is displayed.

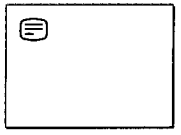
SUBPAGE
Using this function you can select a particular teletext page from several subpages (e.g. page 2 of 6 pages in total). After selecting the function an information line is displayed. Use the number buttons ㉓ to enter the four digits (e.g. enter 0002 for the second page of a sequence).
To cancel the request: Press the number button »0« ⑱ four times.

Joystick









User Page Bank System

You can store up to 6 of your favourite teletext pages per Teletext service. In this way you have quick access to the pages you frequently use.

Storing pages

1 Press ⓣ ⑤ to switch Teletext on. Press MENU ⑮.

2 Push joystick ⑰ to blue or green to select »Preset User Pages«.
Push to yellow to confirm.

3 Push to blue or green to select the bank (from A to E) you want.
Push to yellow to confirm.

4 Push to blue or green to select the three digits of your first favourite page.
Push to yellow after each digit. Push to yellow to confirm.

5 Repeat step 4 for the other 5 favourite pages. If you do not want to preset all 6 page numbers push to yellow without inserting any number. After finishing the presetting, press the joystick ⑰.

6 Push to blue or green to select »Allocate Bank«. Push to yellow to confirm.

7 Push to blue or green to select the programme position of the channel which carries the teletext service for which you have selected your favourite pages.
Push to yellow to confirm.

8 Push to blue or green to select the bank from step 3. Press the joystick ⑰ to confirm.
Push to red.

9 Repeat steps 3 to 8 for the other 4 banks available.

Displaying User Pages

1 Press MENU ⑮.

2 Push joystick ⑰ to blue or green to select »User Pages«. Push to yellow to confirm.

3 Push to blue or green to select the page you want. Press the joystick ⑰.
The page is displayed after some seconds.

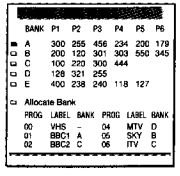
or

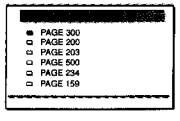
1 Press ⑳.

2 Push joystick ⑰ to blue or green to select the page you want. Press the joystick ⑰.
The page is displayed after some seconds.

Joystick







Optional Equipment

Connecting Optional Equipment

You can connect a wide range of optional equipment to your TV. Refer to the illustrations on the back lap page of this Instruction Manual.

Symbol	Acceptable input signals	Available output signals
1	Normal audio/video and RGB	Audio/video from TV tuner
2/2	Normal audio/video and S video	Audio/video from selected source
3, 3	Normal audio/video and S video	No output

About S video input
Video signals may be separated into Y (luminance) and C (chrominance) signals. Separating the two signals prevents interference and thus improves the picture quality.

Tips:
- If the picture or sound is distorted, move the VCR away from the TV.
- When connecting a monaural VCR, connect only the white jack to both the TV and VCR.

Selecting Input and Output Signals

a) Direct Access Buttons

Selecting the Input
Press 40 E repeatedly to select one of the following input modes:

Symbol on the screen	Input signals	
1	Audio/video through Euro AV connector	J
	RGB through Euro AV connector	J
2	Audio/video through Euro AV connector	L
2	S video through Euro AV connector	L
3	Audio/video through the phono jacks	C
3	S video through the 4 pin DIN	B

Press 6 to restore the normal TV picture.

Selecting the Output from Euro AV connector 2/2 L
Press 18 repeatedly to select one of the following output sources for the connector 2/2 L:

Symbol on the screen	2/2 L connector output signal	
1	Audio/video from Euro AV connector	J
2	Audio/video from Euro AV connector	L
2	Audio/video from Euro AV connector	L
3	Audio/video from the phono jacks	C
3	Audio/video from the 4 pin DIN	B
TV	Audio/video from the aerial terminal	K

b) Using the Menu »Video Connection«

1 Press MENU 15.

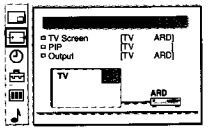
2 Push joystick 17 to blue or green to select the symbol on the menu screen. Push to yellow to confirm.

3 Push to blue or green to select »TV screen« (input source for TV-screen), PIP (source for PIP screen), or »Output« (output source for 2/2 L). Push to yellow to confirm.
You can select between the following sources:
• TV: TV-tuner • YC: S video signal • AV: Audio/Video

TV screen: TV, AV1, RGB, AV2, YC2, AV3, YC3
PIP: TV, AV1, AV2, YC2, AV3, YC3
Output: TV, AV1, AV2, YC2, AV3, YC3

4 Push to blue or green to select the desired source. Press joystick 17 to store.

5 Press MENU 15 to restore the normal TV picture.



Joystick



Remote Control of other Sony Equipment

Using the buttons 2 on the Remote Commander you can control other Sony equipment.

1 Set the selector VTR 1 2 3 MDP according to the equipment you want to control.
VTR 1: Beta VCR
VTR 2: 8mm VCR
VTR3: VHS VCR
MDP: Video Disk Player

2 Use the buttons 2 on the Remote Commander to operate the equipment.

Tips
- If your video equipment has a COMMAND MODE selector, set this selector to the same position as the VTR 1 2 3 MDP selector on the TV Remote Commander.
- If the equipment does not have a certain function, the corresponding button on the Remote Commander does not work.

Troubleshooting

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

Problem	Solution
No picture (screen is dark), no sound	• Plug the TV in. • Press ⏻ 1 on the TV. (If ⏻ indicator H is on, press 🖵 6 or a programme number 29 on the Remote Commander.) • Check the aerial connection. • Check if the selected video source is on. • Turn the TV off for 3 or 4 seconds and then turn it on again using ⏻ 1.
Poor or no picture (screen is dark), but good sound	• Press ■ 25 to enter the PICTURE CONTROL menu and adjust »Brightness«, »Contrast« and »Colour«.
Poor picture quality when watching an RGB video source	• Press ⇥ 20 repeatedly to select 📺.
Good picture but poor or no sound	• Press 🔊 +16. • If 🔇 is displayed on the screen, press 🔇 1.
No colour for colour programmes	• Press ■ 25 to enter the PICTURE CONTROL menu, select RESET, then press joystick 17.
Remote Commander does not function.	• Replace batteries.

If you continue to have problems, have your TV serviced by qualified personnel. Never open the casing yourself.

— 16 —

Channel Guide

	Receivable Channels	Channel Displays
B/G/H	E2 .. 12, 21 .. 69	C02 C03 C04 .. C12 C21 .. C69
CABLE TV (1)	S1 .. 41	S01 S02 .. S41
CABLE TV (2)	S01 .. S05, M1 .. M10, U1 .. U10	S42 .. S46 S01 .. S10 S11 .. S20
ITALIA	A B C D E F G H H1 H2	C13 C14 C15 C16 C17 C18 C19 C20 C11 C12
D/K	R01 .. R12, R21 .. R69	C01 .. C12 C21 .. C69
CABLE TV (1)	———	S01 S02 ..S41
CABLE TV (2)	———	S42 S43 ..S46

For Your Safety

Televisions operate on extremely high voltages. To prevent fire or an electric shock, please follow the safety procedures below. For your own safety, never open the cabinet. Refer servicing to qualified personnel only.

For General Safety

- Do not expose the TV to rain or moisture.
- Do not open the rear cover.

For Safe Installation

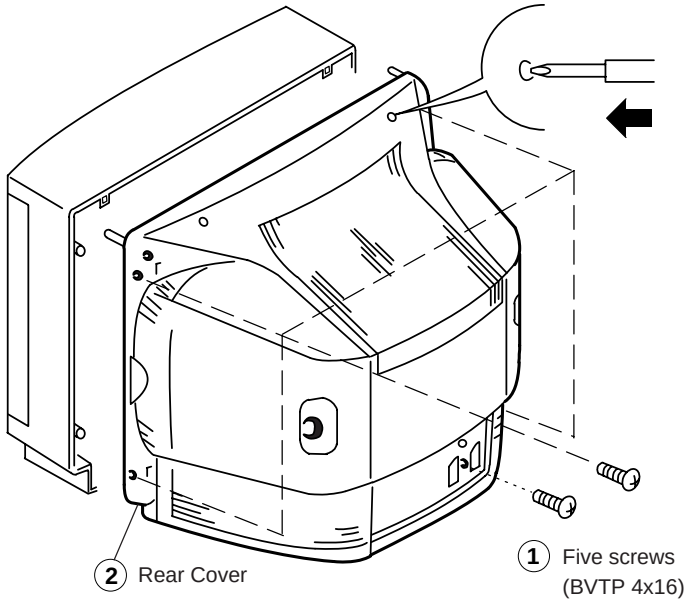
- Do not block or cover the ventilation openings. For ventilation, leave a space of at least 5 cm all around the set.
- Do not install the TV in hot, humid, or excessively dusty places.
- Do not install the TV where it may be exposed to mechanical vibrations.

For safe operations

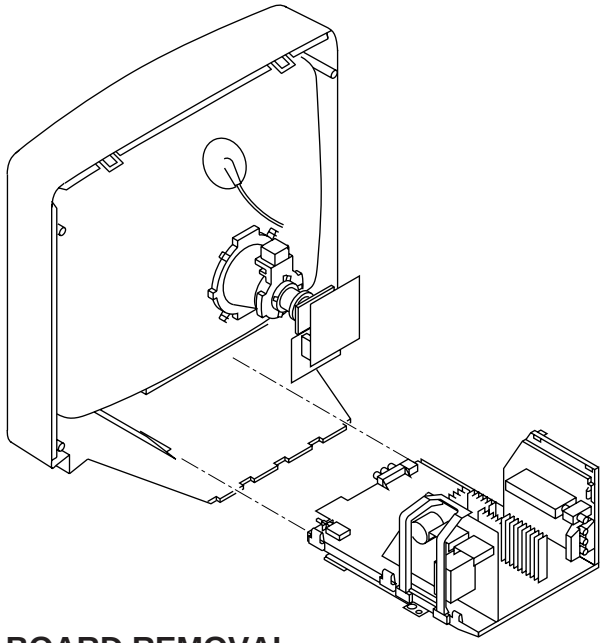
- Do not operate the TV on anything but 220 - 240V AC, 50 Hz.
- Unplug the TV if any liquid or solid object falls in it. Have it checked immediately!
- Unplug the TV if you are not going to use it for several days.
- When unplugging the TV, pull it out by the plug. Do not pull on the power cord!

SECTION 2
DISASSEMBLY

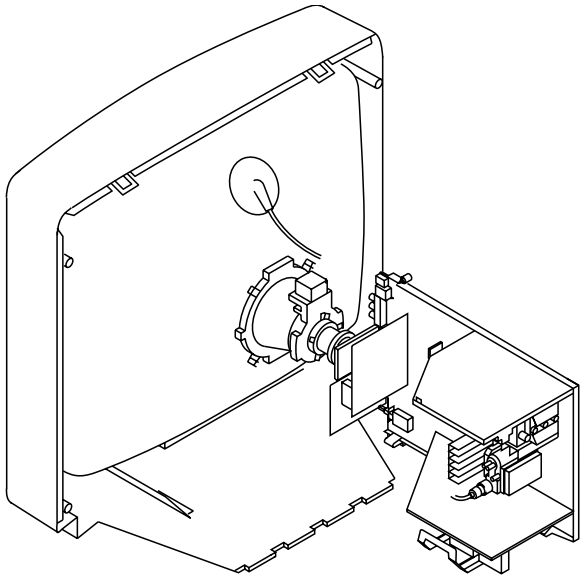
2-1. REAR COVER REMOVAL



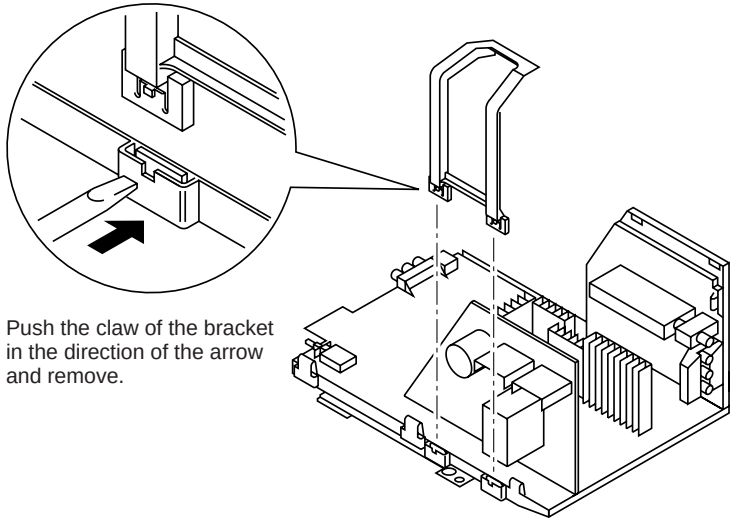
2-2. CHASSIS ASSY REMOVAL



2-3. SERVICE POSITION

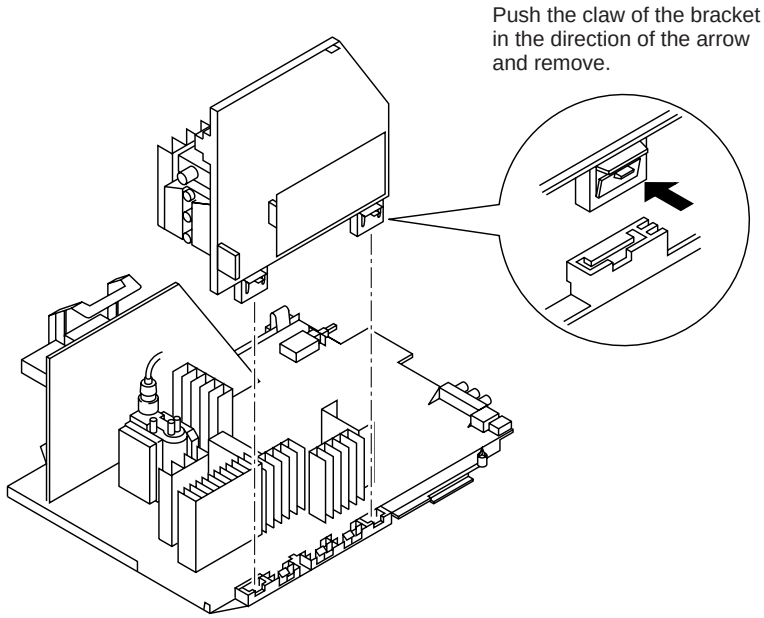


2-4. G BOARD REMOVAL

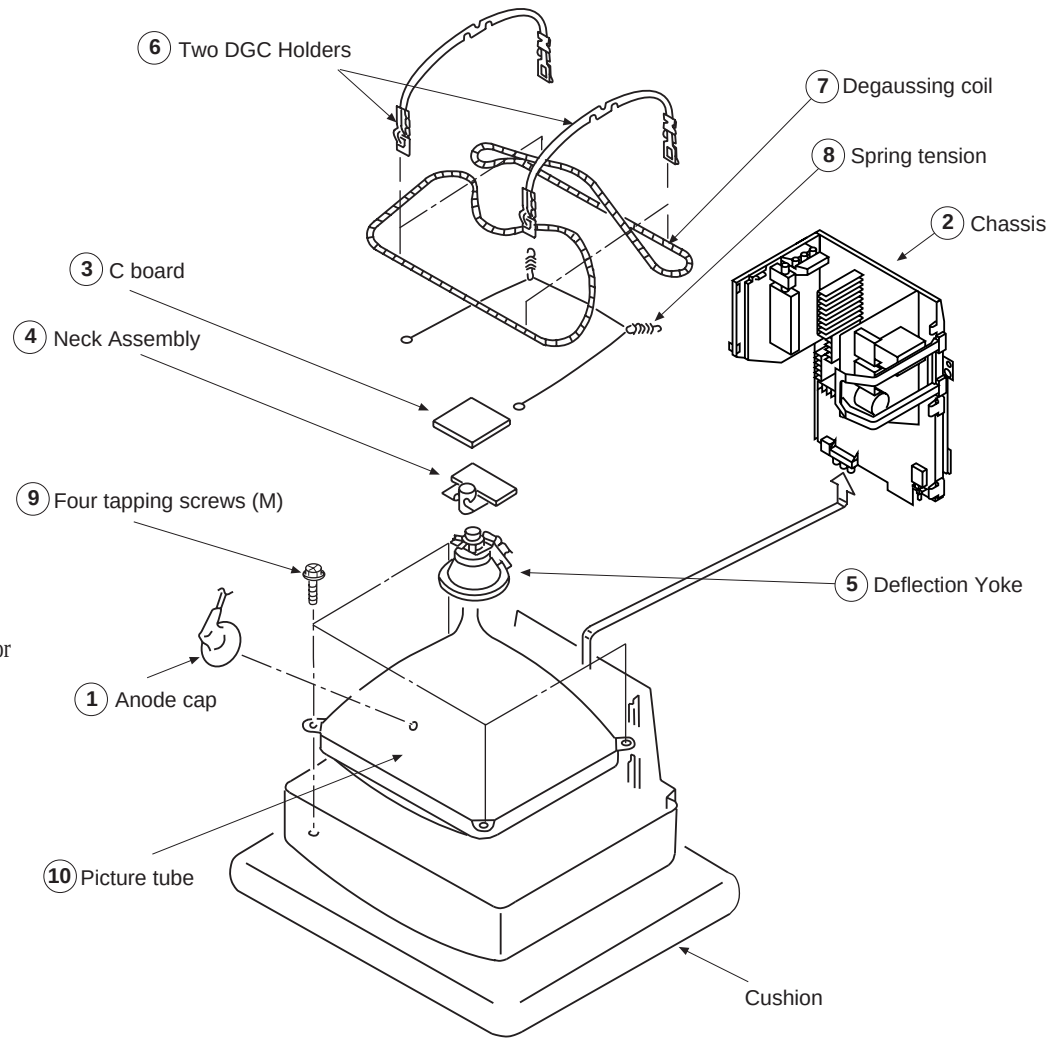


Push the claw of the bracket in the direction of the arrow and remove.

2-5. A BOARD REMOVAL



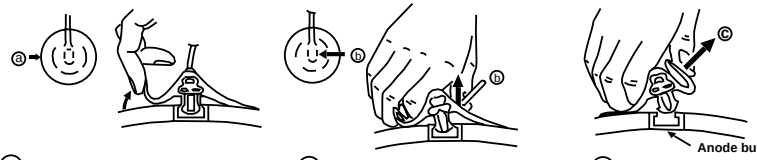
2-6. PICTURE TUBE REMOVAL



- **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 ⓐ

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

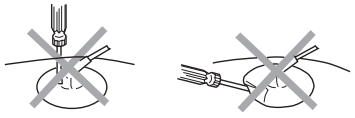
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ⓒ

- **HOW TO HANDLE AN ANODE-CAP**

① Don't damage the surface of anode-cap with sharp shaped material !

② Don't press the rubber hardly not to hurt inside of anode-caps !
A metal fitting called a shatter-hook terminal is built into the rubber.

③ Don't turn the foot of rubber over hardly !
The shatter-hook terminal will stick out or damage the rubber.



REMOVAL AND REPLACEMENT OF THE MAIN-BRACKET BOTTOM PLATES.

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

(1) REMOVING THE PLATES

In the event of servicing being required to the solder side of the D Board printed circuit, 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 shown and indicated by arrows.

Note : There are 5 plates fitted to the main bracket and secured by 4 or 6 gates. Only remove the necessary plate to gain access to the circuit board.

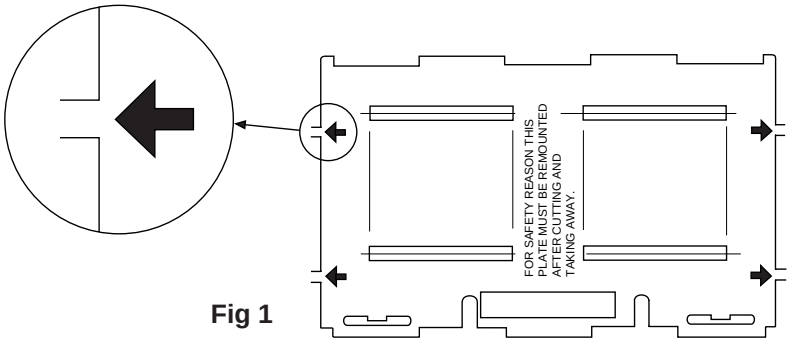


Fig 1

(2) REFITTING THE PLATES

Because the plates differ in size it is important that the correct plates are refitted in their original location.
The plates are identified by markings A-B-C-D-E on their top side.

1. Identify the plate by locating its marking.
2. Turn the plate over noting where the marking is located.
3. Locate the corresponding marking indicated on the main chassis bracket. See Fig 2.
4. Refit the plate as indicated in Fig 3 with the markings located next to each other.

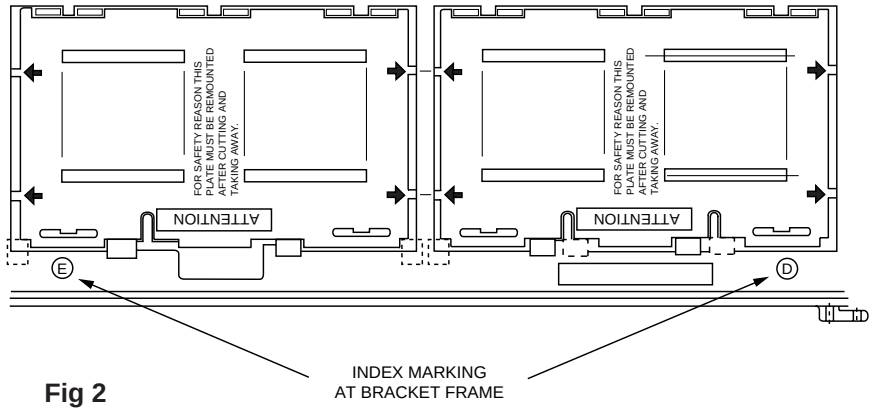


Fig 2

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

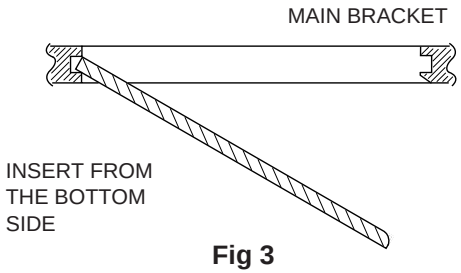


Fig 3

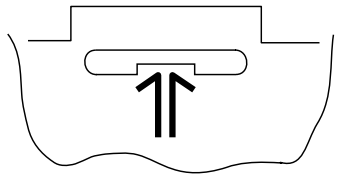


Fig 4

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 adjustment with the rated power supply.
- Unless there are specific instructions to the contrary, set the controls and switches as follows.

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

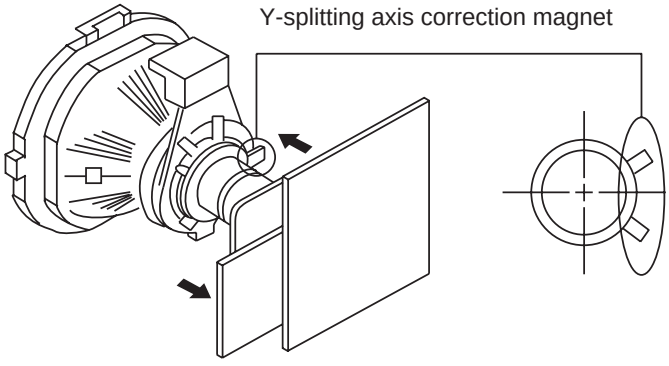
Note: Testing equipment required.
1. Color bar/pattern generator
2. Degausser
3. Vector scope

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.

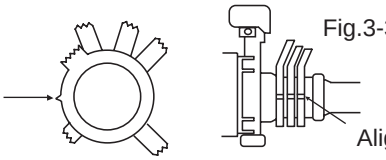
(1) Adjustment of Correction Magnet for Y-Splitting Axis

1. Input a crosshatch signal from the pattern generator.
2. Picture control is minimum and brightness control is still normal.
3. Position the neck assy as shown in Fig. 3-2.
4. Move the deflection yoke forward to touch the CRT and it stands up rightly.
5. Adjust the upper pin and the lower pin symmetrically by opening or closing the Y-splitting axis correction magnets on the neck assy.
6. Return the deflection yoke to its original position.



(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 yoke screws, align the purity adjustment knob to the central position. (See Fig. 3-1)
4. Switch from the all-white pattern to an all-green pattern.
5. Move the deflection yoke backwards and adjust with the purity magnet so that the green is at the center and it aligns symmetrically. (See Fig. 3-4)
6. Move the deflection yoke forward and adjust so that 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 yoke has been determined, fasten the deflection yoke with the screw.
9. If the beam does not land correctly in all the corners, use magnets to correct it. (See Fig. 3-5)


Fig.3-3

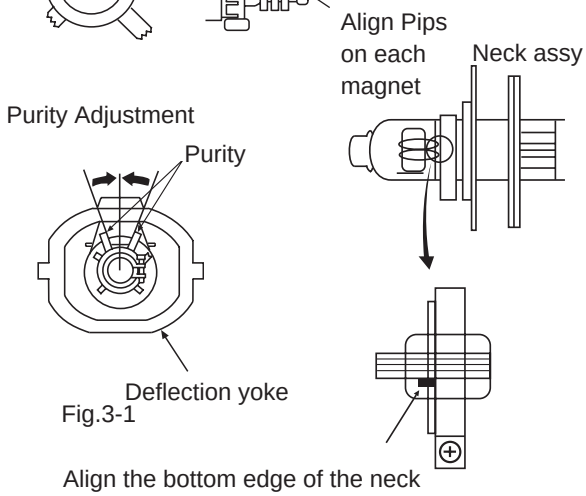


Fig.3-1

Align the bottom edge of the neck assy with the G3 hole center.

Fig.3-2

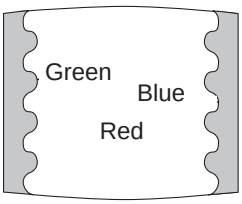


Fig.3-4

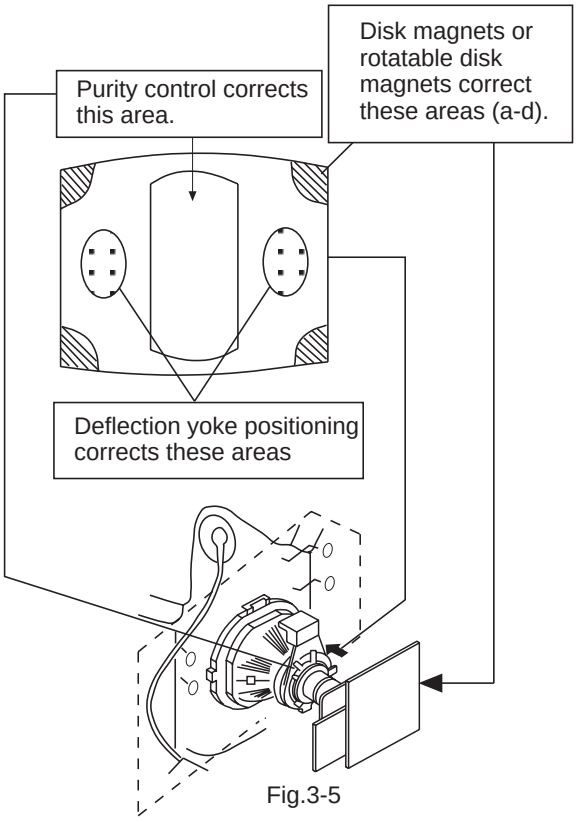
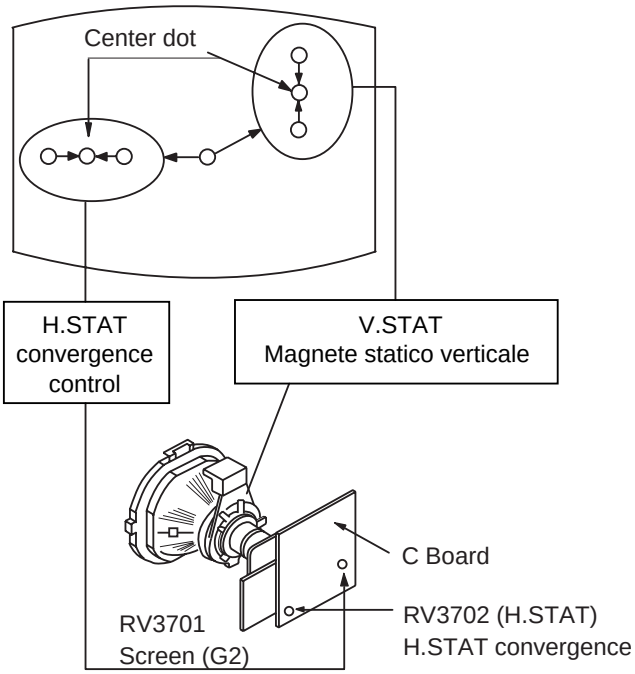


Fig.3-5

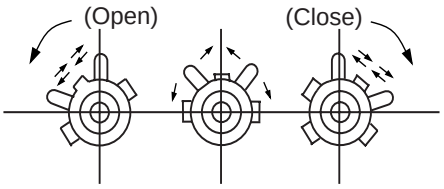
3-2. CONVERGENCE

(1) Screen center 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 center of screen.
3. (Moving vertically), adjust the V.STAT magnet so that the vertical red, green and blue points coincide at the center of screen.

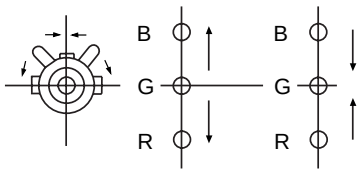


- If the horizontal dots are unable to coincide with the variable range of the H.STAT convergence, adjust together with the V.STAT convergence while tracking. (Adjust the convergence by tilting the V.STAT convergence or by opening or closing the V.STAT convergence.)

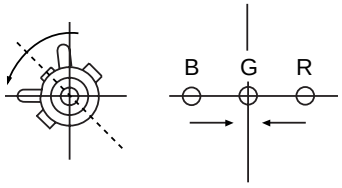


4. Movement of the red, green and blue dots by tilting the V.STAT magnet and by opening or closing the V.STAT magnet.

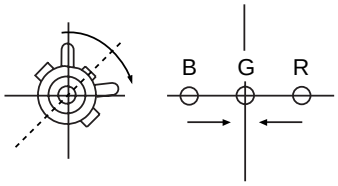
① By opening or closing the V.STAT magnet, the red, green and blue points move as shown below



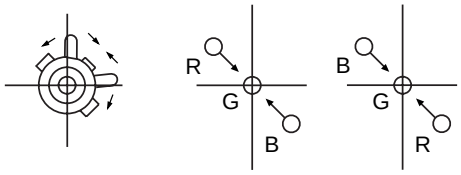
②By rotating the V. STAT magnet counterclockwise, the red, green and blue dots move as shown below.



③By rotating the V.STAT magnet clockwise, the red, green and blue dots move as shown below.



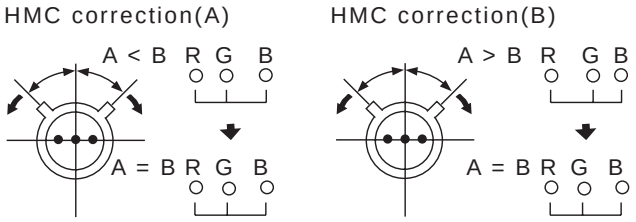
④By opening or closing the V.STAT magnet, the red, green and blue dots move as shown below.



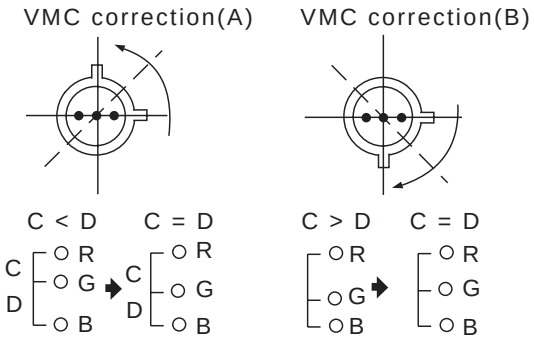
- If the blue dot does not coincide with the red and green points, correct the points by using the BMC (Hexapole) magnet.

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

①HMC correction by BMC (Hexapole) magnet and movement of the electronic beam.



②VMC correction by BMC (Hexapole) magnet and movement of the electronic beam.



Layout of each control

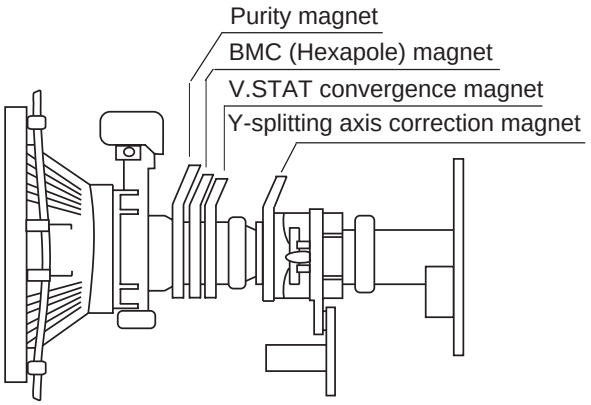
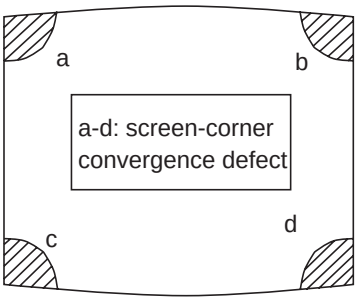
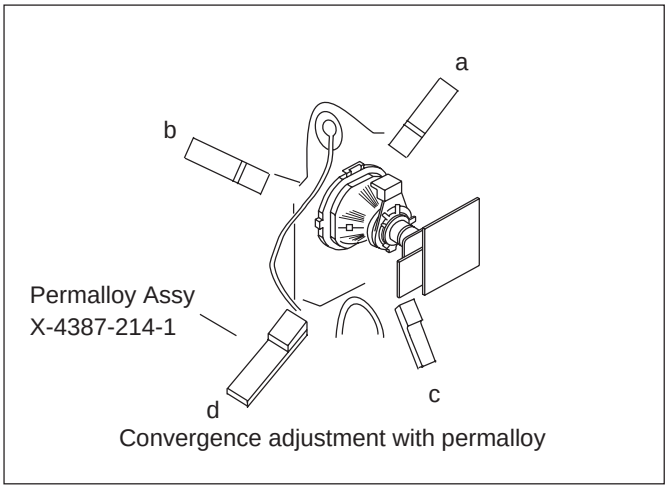


Fig.3-6

5. If you are unable to adjust the corner convergence properly, correct them with the use of permalloys.



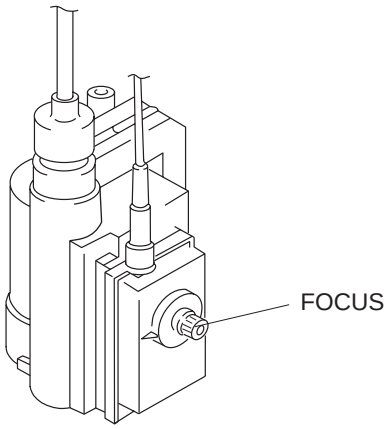




Convergence adjustment with permalloy

3-3. Focus

1. Receive a television broadcast signal.
2. Normalize the picture setting.
3. Adjust the focus control on the flyback transformer for the best focus at the center of the screen.
   Bring only the center 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 with remote commander)

G2 adjustment (RV3701)

1. Input a dot signal from the pattern generator.
2. Set the Picture, Brightness and Colour to minimum.
3. Apply 170V DC from an external power supply to the R, G and B cathodes of the CRT.
4. While watching the picture, adjust the G2 control RV3701 [SCREEN] on the C board to the point just before the return lines disappear.

White balance adjustment

1. Receive an all-white signal.
2. Enter into the Service Mode by pressing ' TEST ', ' TEST ' and ' MENU' on the Service Commander.
3. Select ' VIDEO PROC. ' from the on screen menu display and press OK .
4. The ' VIDEO PROC TDA4780' menu will appear on the screen.

Video Proc. TDA4780

Item No	Adjustment item	Data Amount
1	BRT	USER CONTROL
2	COL	USER CONTROL
3	PIC	USER CONTROL
4	HUE	USER CONTROL
5	R GAIN	40
6	G GAIN	Adj
7	B GAIN	Adj
8	R LVL REF	31
9	G LVL REF	Adj
10	B LVL REF	Adj
11	PEAK DRV LIMIT	55
12	GAMMA	31
13	SCP ON=3LEV OFF=2LEV	OFF
14	DELAY	OFF

5. Set picture to MAX.
6. Set the ' R GAIN ' to 25.
7. Adjust the ' G GAIN ' and ' B GAIN ' so that the white balance becomes optimum.
8. Press the OK button to write the data for each item.
9. Set picture to MIN.
10. Set the ' R LVL REF ' to 40.
11. Adjust ' G LVL REF ', and ' B LVL REF ' with the left and right buttons so that the white balance becomes optimum.
12. Press the OK button to write the data for each item.

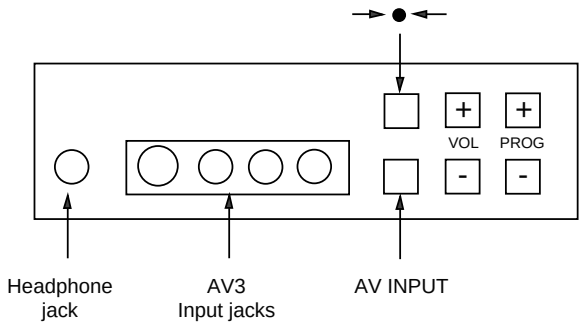
SECTION 4
CIRCUIT ADJUSTMENTS

4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander, RM-862.

HOW TO ENTER INTO SERVICE MODE

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



2. "TT" will appear on the upper right corner of the screen.
3. Press " MENU " on the commander to get the service menu on screen.

DEVICES	
Init TV	
Pip, Lumisponder & Autoside	
Sub Adjust	
Video Proc	TDA4780
Col Dec Main	TDA9144
Deflect. Cont	SDA9361
Col Dec Sub	TDA9143
Feature Box	S87C654
Al	TDA9170
DA	SDA9280
Single PIP	SDA9288
Sound	
Line23 det	

4. Push the joystick up (green) or down (blue) on the remote commander to select the adjustment item.
5. Press the center button to proceed to the next menu.
6. If the adjustment item is 'Video Proc.', push the down button to move to 'Video Proc.'.
7. The Menu as indicated in Fig 4-3 will appear on the screen.
8. Move the joystick up or down to move to the adjustment item and press the center (OK) button.
9. Change the data in order to comply with each standard.

Item No	Adjustment item	Data Amount
1	BRT	USER CONTROL
2	COL	USER CONTROL
3	PIC	USER CONTROL
4	HUE	USER CONTROL
5	R GAIN	40
6	G GAIN	Adj
7	B GAIN	Adj
8	R LVL REF	31
9	G LVL REF	Adj
10	B LVL REF	Adj
11	PEAK DRV LIMIT	55
12	GAMMA	31
13	SCP ON=3LEV OFF=2LEV	ON
14	DELAY	OFF
15	DATA BUFF	OFF
16	NTSC MATRIX	OFF
17	HDTV	OFF
18	FSBL	OFF
19	AUTO CUT OFF	ON
20	FSW 2 DIS	OFF
21	FSW 2	OFF
22	FSW 1 DIS	OFF
23	FSW 1	OFF
24	ADAPT BLACK	OFF
25	Y HIGH 1V	OFF
26	MOD2	OFF
27	BLUE STRETCH	OFF
28	VM OUT	OFF
29	PEAK DRV ABS	ON
30	TIME CNST PEAK LIMIT	OFF

Fig. 4-3

SDA9361 Def. Cont.

Item No	Adjustment item	Data Amount
1	HDE	ON
2	VR	0
3	RABL	ON
4	Blk Dis	OFF
5	2FH 2xLine Frq	ON
6	Standby Mode	OFF
7	Vertical	ON
8	BSE Blk Select	OFF
9	SSE Start Scan	OFF
10	SRSE Start Red Scan	OFF
11	GBE Guard Board	OFF
12	STE Scan time table	OFF
13	NSA Self Adaption	ON
14	V Shift	Adj
15	V Bite	Adj
16	V Lin	Adj
17	V S-Cor	Adj
18	V Eht Comp	110
19	H Size	Adj
20	Pin Phase	Adj
21	Pin Amp	Adj
22	Up Cor Pin	Adj
23	Low Cor Pin	Adj
24	H Eht Comp	100
25	H Shift	Adj
26	V Angle	Adj
27	V Bow	Adj
28	PWM Start	0

Item No	Adjustment item	Data Amount
29	D/A	0
30	V Blk time	28
31	H Blk time	41
32	Start V Scan	0
33	H Blk phase	61
34	V Scan width 0	0
35	V Scan width 1	0
36	Guard Band	0
37	Start red scan	0
38	Number fields	1
39	NI Non Interlace	OFF
40	NR Vsync Noise Red	OFF
41	SSC with VBL	ON
42	Min lines/field	0
43	Max lines/field	0
44	AFC EHT comp	0
45	PLL Freq	6
46	VCR	ON
47	Gen Mode	OFF
48	HSWID	ON
49	Int H phase	7
50	PWM width	0
51	Noisy VCR	OFF
52	Killzip	OFF
53	tc3rd	OFF
54	Bandgap4 off	OFF
55	Bandgap off	OFF
56	Bandgap	0

TDA4780 (VIDEO PROC.)

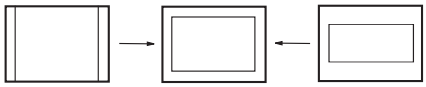
Item No	Adjustment item	Data Amount
1	BRT	USER CONTROL
2	COL	USER CONTROL
3	PIC	USER CONTROL
4	HUE	USER CONTROL
5	R GAIN	40
6	G GAIN	Adj
7	B GAIN	Adj
8	R LVL REF	31
9	G LVL REF	Adj
10	B LVL REF	Adj
11	PEAK DRV LIMIT	55
12	GAMMA	31
13	SCP ON = SLEV OFF = 2LEV	ON
14	DELAY	OFF
15	DATA BUFF	OFF
16	NTSC MATRIX	OFF
17	HDTV	OFF
18	FSBL	OFF
19	AUTO CUT OFF	ON
20	FSW 2 DIS	OFF
21	FSW 2	OFF
22	FSW 1	OFF
23	FSW 1	OFF
24	ADAPT BLACK	ON
25	Y HIGH 1V	OFF
26	MOD2	OFF
27	BLUE STRETCH	Before W/B Adj:OFF After W/B Adj:ON
28	VM OUT	OFF
29	PEAK DRV ABS	ON
30	TIME CNST PEAK LIMIT	OFF

DEFLECTION SYSTEM ADJUSTMENT

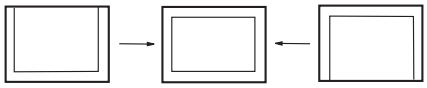
1. Enter into the service mode and select 'Deflect cont.'.The 'Deflect cont. SDA9361' adjustment menu will be displayed.
2. Select and adjust each item in order to get an optimum image.

Item No	Adjustment item	Data Amount
1	HDE	ON
2	VR	0
3	RABL	ON
4	Blk Dis	OFF
5	2FH 2xLine Frq	ON
6	Standby Mode	OFF
7	Vertical	ON
8	BSE Blk Select	OFF
9	SSE Start Scan	OFF
10	SRSE Start Red Scan	OFF
11	GBE Guard Board	OFF
12	STE Scan time table	OFF
13	NSA Self Adaption	ON
14	V Shift	Adj
15	V Bite	Adj
16	V Lin	Adj
17	V S-Cor	Adj
18	V Eht Comp	110
19	H Size	Adj
20	Pin Phase	Adj
21	Pin Amp	Adj
22	Up Cor Pin	Adj
23	Low Cor Pin	Adj
24	H Eht Comp	100
25	H Shift	Adj
26	V Angle	Adj
27	V Bow	Adj
28	PWM Start	0

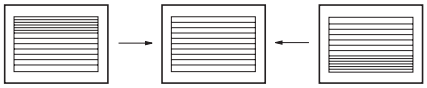
V SIZE



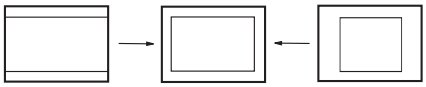
V POS



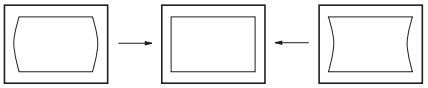
V LIN



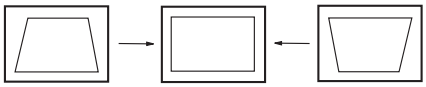
H SIZE



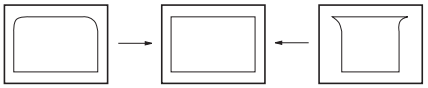
H PIN CUSH



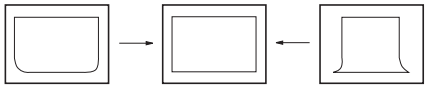
H TILT



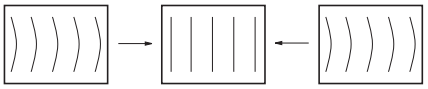
H UP COR



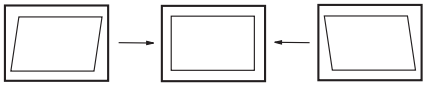
H LOWER COR



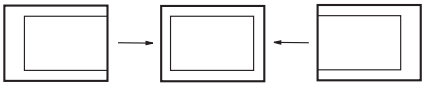
AFC V BOW



AFC V ANGLE



H POS



4-2. VOLUME ELECTRICAL ADJUSTMENTS

Sub Brightness Adjustment

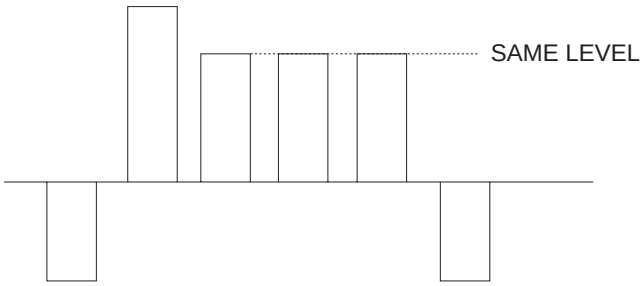
1. Enter Service Mode (Device Menu).
2. Select 'SUB ADJUST MENU'.

Sub adjustment
Sub Picture
Sub Color
Sub Brightness
4/3 Center
PAP H-Center
PAP HWE-Offset

3. Adjust the value according to the following advice.

Sub Color Adjustment

1. Input a PAL color bar signal.
2. Connect an oscilloscope to CN3703.
3. Enter into 'SERVICE MODE'.
4. Choose 'SUB ADJUST'.
5. Enter into Sub Color mode.
6. Adjust data so that the right sides of the waveforms are of equal height.



4-3. TEST MODE 2:

Is available by pressing the Test button twice, OSD “TT” appears. The functions described below are available by pressing the two numbers. To release Test Mode 2, press 0, 10, 20 ... twice or switch the TV into Standby 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!!

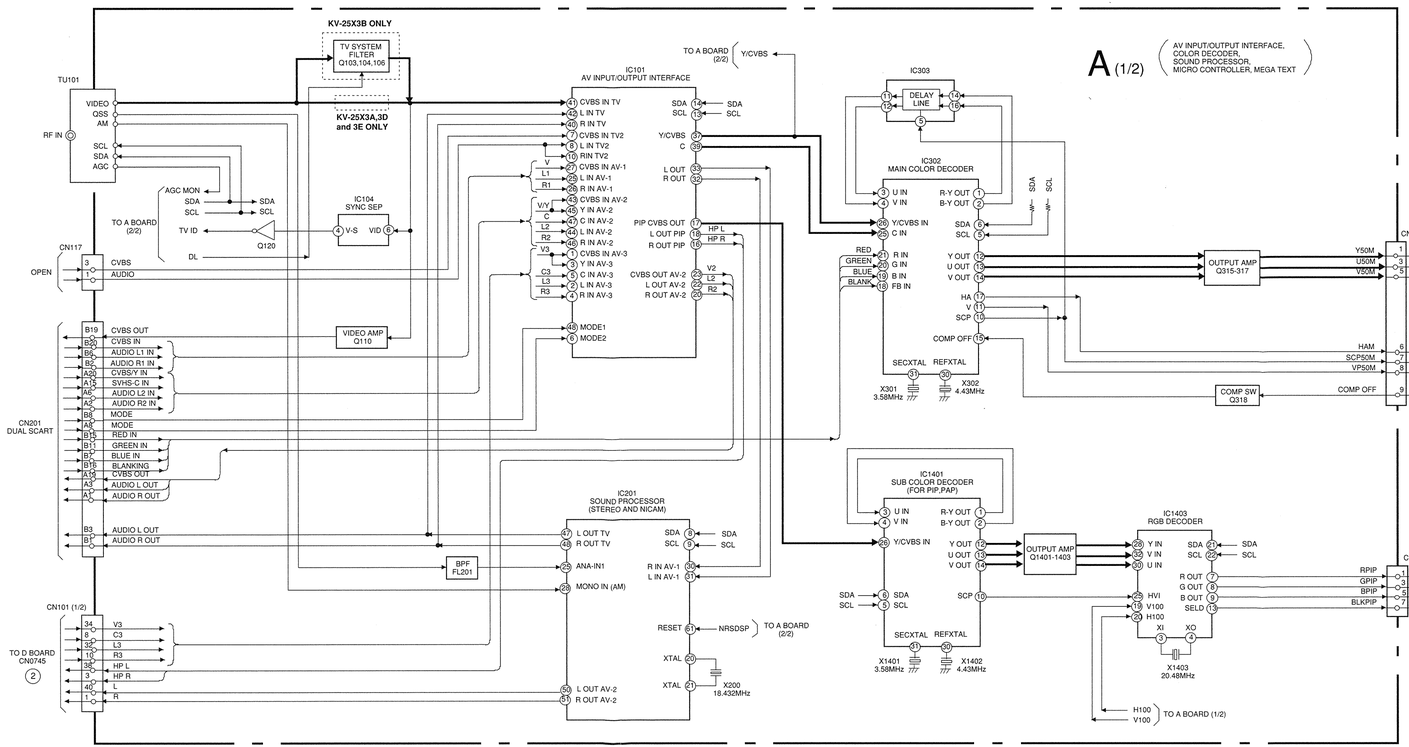
00	Switch back to normal mode - TT mode off
01	Switch service menu on
02	Direct access to Noise reduction
03	Set volume to 30%
04	Service menu in "Service Mode"
05	Service menu in "Production Mode"
06	Set Volume to 80%
07	Aging Mode
08	Shipping Condition
09	Language Reset
10	The TT number will be deleted
11	Direct access to Balance
12	Direct access to Hue
13	Display of TV set configuration
14	Production Info Display
15	Read Analog from ROM
16	Save Analog F in NVM
17	This function presets the Labels for the AV sources: AV1, RGB, AV2, YC2, AV3, YC3, AV4, YC4.
18	No function
19	No function
20	See TT10
21	Picture Rotation automatic function: (-4) -> (+4) -> 0
22	Error Monitor Display
23	Direct access to Sub Brightness Adjustment.
24	Direct access to Sub Colour.
25	Status Menu Display
26	Text Character selection (Char set 06 -> West Europe)
27	Text Character selection (Char set 38 -> East Europe)
28	Text Character selection (Char set 40 -> West Europe) US English
29	Text Character selection (Char set55 -> West Europe) Turkish
30	See TT10

31	no function
32	no function
33	no function
34	no function
35	no function
36	no function
37	no function
38	Screen Position
39	Reset Programme Table
40	See TT10
41	Picture Min
42	no function
43	no function
44	no function
45	Set NVM to Protect mode
46	IR Channel Pressetting Mode. The channel pressetting can be done by a Special transmitter. Sequence: TT46 -> --PR Number select display appears Select Prog. No. from where the channel shall be stored. --> Now TV is waiting for IR sequence <-- --> If no IR transmission starts TT46 is released after 20 secs <--! Note: when TT46 is active, any transmission will be interpreted as PROG data !
47	no function
48	no function
49	New Initialize
50	See TT10
51	Strobo mode is activated.
52	no function
53	no function
54	Direct access to Velocity Modulation VM (Production use)
55	Slicer High
56	Slicer No
57	Megatext Service Menu on
58	MTX Small Framing Code Window

59	MTX Wide Framing Code Window
60	See TT10
61	no function
62	no function
63	no function
64	Reset all IIC Slave commands (Production use)
65	Reset stored error codes in NVM
66	Feature box and Pal Plus
67	no function
68	Ignore Errors - on
69	Ignore errors - off
70	See TT10
71	no function
72	no function
73	Megatext RGB textlevel one step decreased.
74	Megatext RGB textlevel one step decreased (max 1 steps down starting from E0h) (Production use)
75	no function
76	CDA9360
77	SDA9280
78	PIP
79	no function
80	See TT10
81	S87C654 Default data setting
82	TDA9170 Default data setting
83	SAA 7185WP Default data setting
84	TDA4780 Default data setting
85	TDA9144 Default data setting
86	TDA9143 Default data setting
87	SDA9288 Default data setting
88	Char set Russian
89	Char set Russian (esc)
90	See TT10

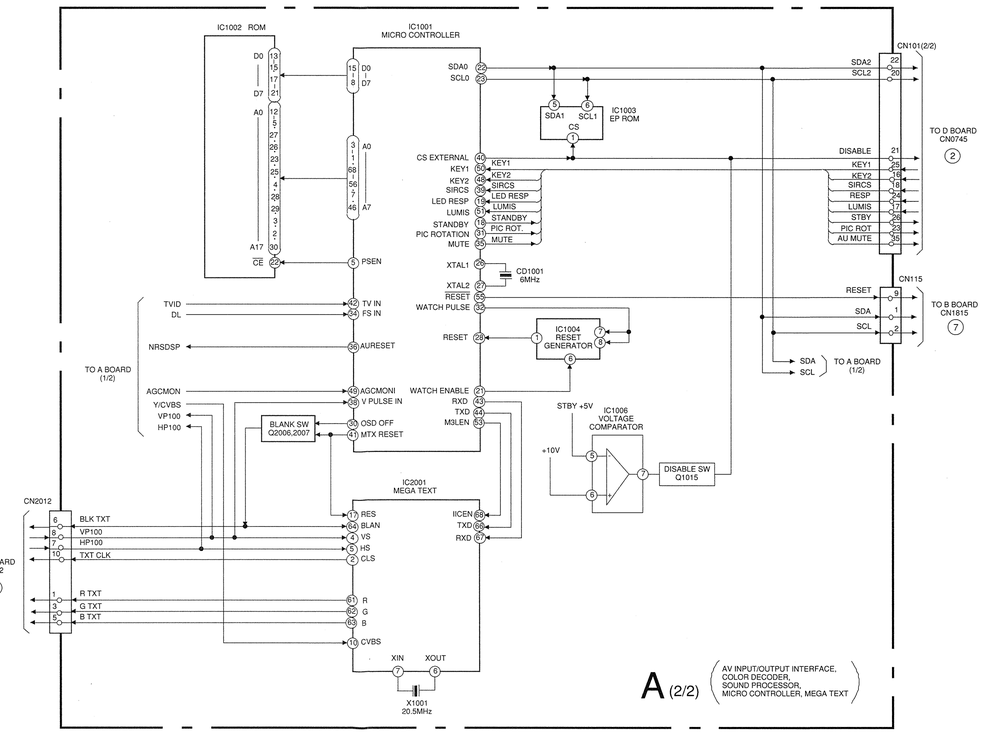
SECTION 5
DIAGRAMS

BLOCK DIAGRAM (1)



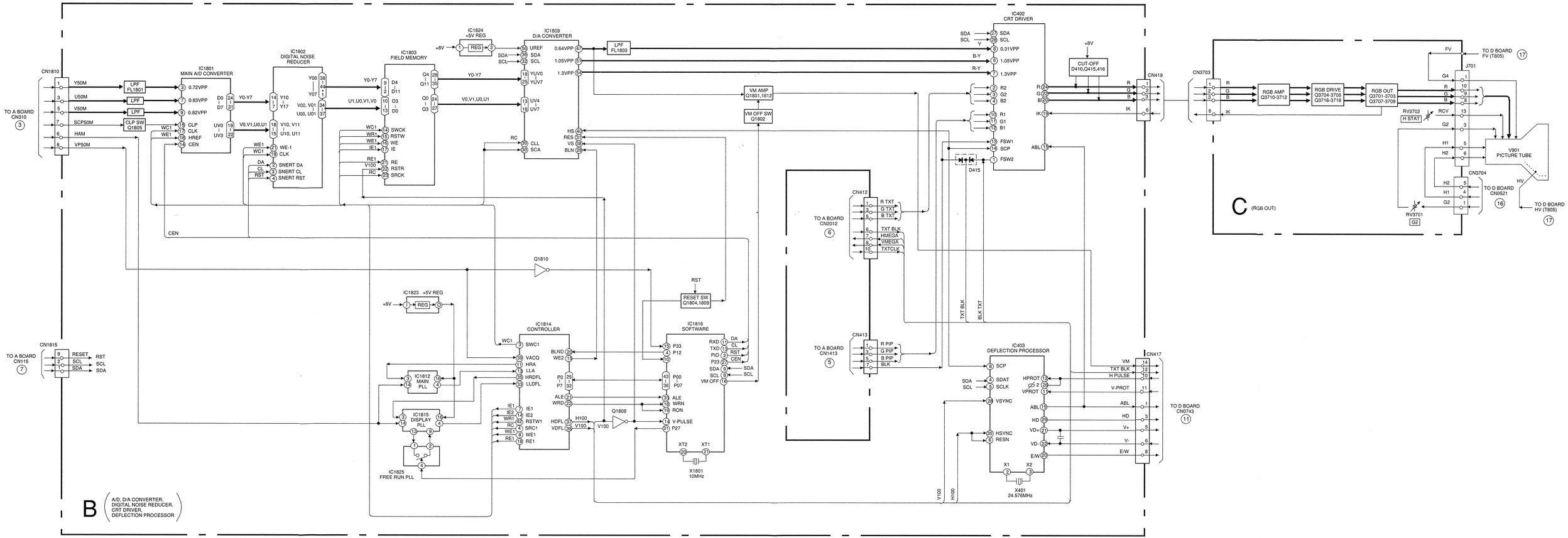
KV-25X3 KV-25X3

BLOCK DIAGRAM (2)

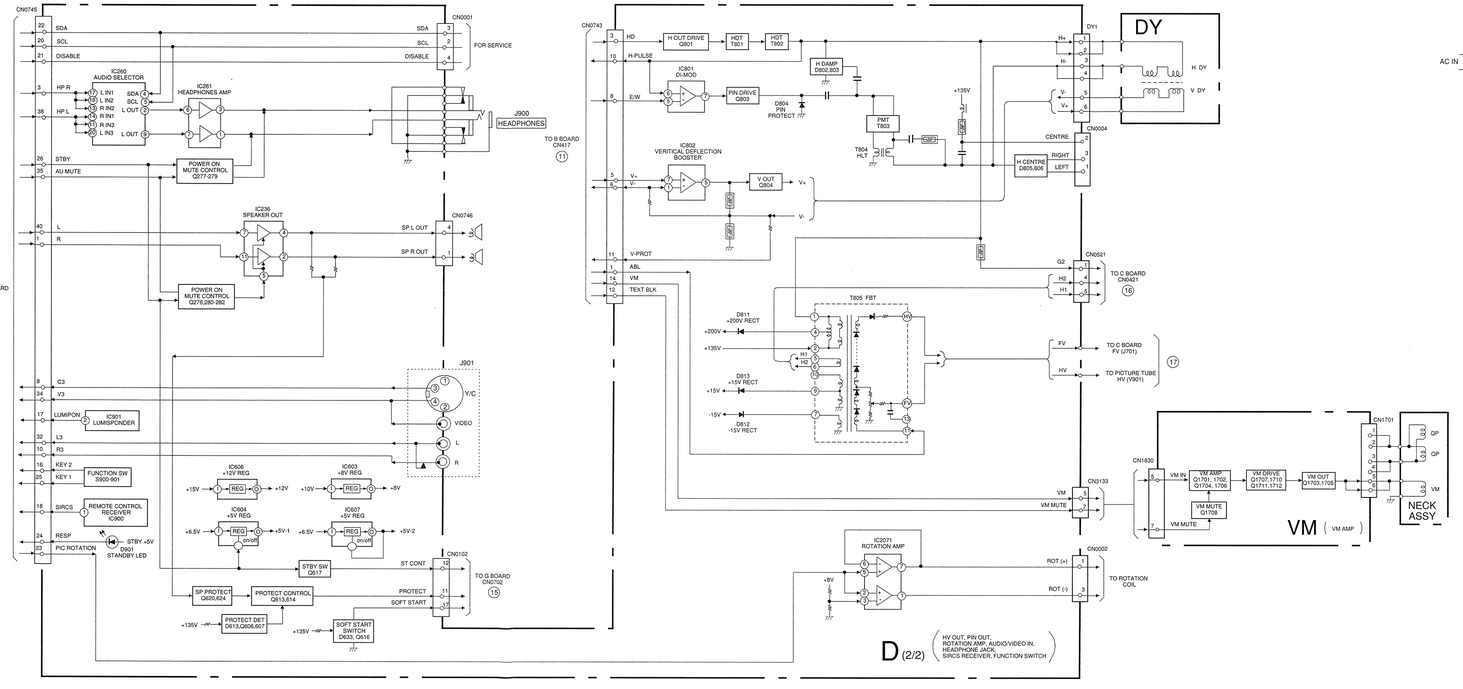


KV-25X3 KV-25X3

BLOCK DIAGRAM (3)

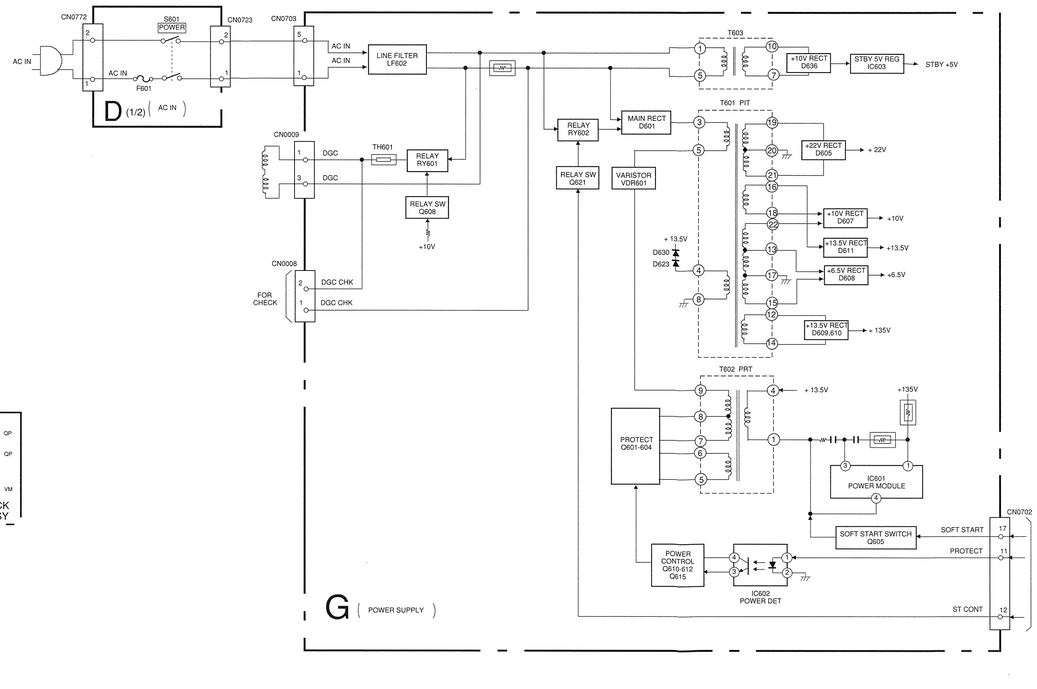


BLOCK DIAGRAM (4)

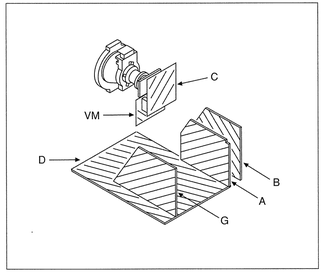


KV-25X3 KV-25X3

BLOCK DIAGRAM (5)



5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note :

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.
  k = 1000 , M = 1000K
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5 mm
Rating electrical power ¼ W

- : nonflammable resistor.
- △ : internal component.
- : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ⊥ : earth - ground.
- ⏚ : earth - chassis.
- ⏚ : no mounted.

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

Note : Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ※	ADJUSTABLE 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

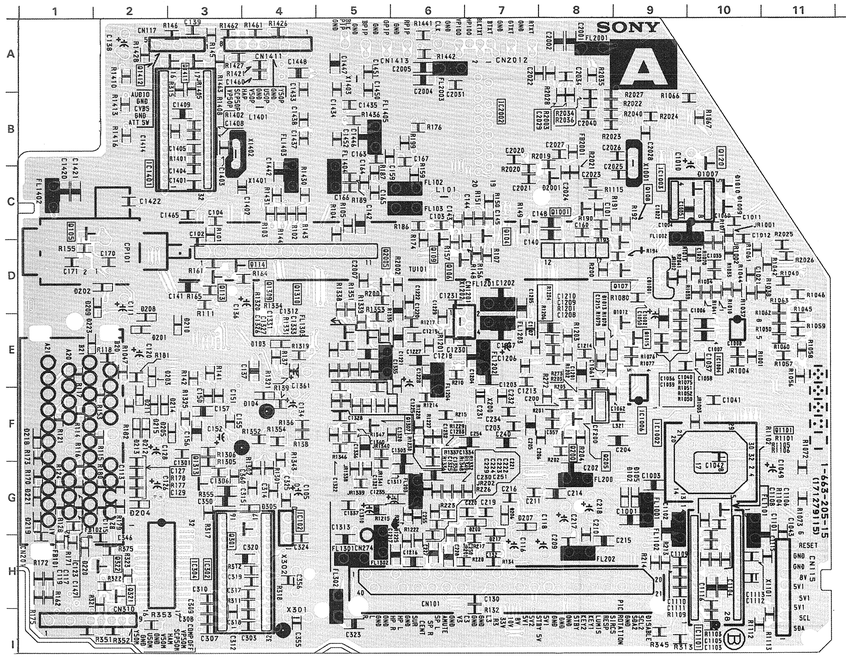
- Readings are taken with a colour-bar signal input.
- Readings are taken with 10M digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
- ——— : B+ bus.
- : signal path. (RF)

A BOARD

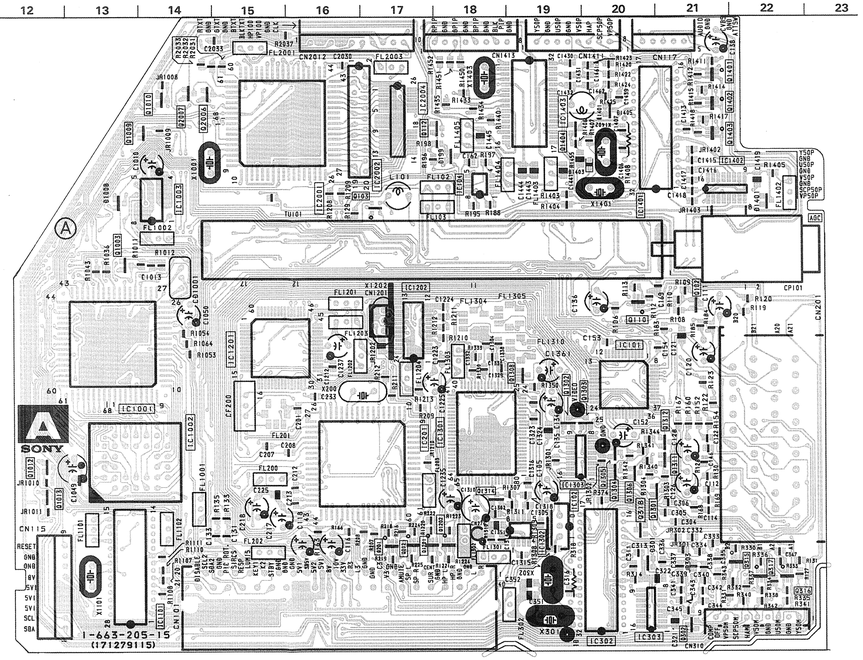
IC		Q1404	B-21
IC101	E-21	Q1411	A-3
IC102	H-4	Q1412	A-2
IC104	C-19	Q2005	D-6
IC201	G-18	Q2006	B-15
IC302	H-3	Q2007	B-15
IC303	I-21	DIODE	
IC1001	F-14	D102	G-9
IC1002	G-10	D103	E-4
IC1003	C-10	D104	F-4
IC1004	E-11	D105	G-9
IC1401	C-2	D199	C-18
IC1403	B-21	D200	H-7
IC2001	C-17	D201	E-2
TRANSISTOR		D202	D-2
Q102	E-22	D203	F-3
Q103	C-17	D204	G-2
Q104	D-7	D205	F-3
Q106	D-6	D206	G-7
Q107	D-9	D207	G-7
Q108	C-9	D208	E-2
Q109	D-6	D209	E-2
Q110	E-21	D210	E-3
Q112	B-18	D211	F-2
Q113	D3	D212	F-2
Q120	C-10	D213	F-2
Q200	G-8	D214	F-3
Q205	F-9	D215	F-2
Q301	H-4	D217	H-7
Q302	I-22	D218	F-1
Q315	H-22	D219	H-1
Q316	I-23	D220	H-1
Q317	I-23	D221	G-1
Q1001	C-8	D301	H-21
Q1015	E-9	D305	G-4
Q1301	H-21	D1007	C-10
Q1305	G-21	D1008	C-14
Q1311	G-22	D1009	C-10
Q1312	F-21	D1010	C-10
Q1401	A-22	D1012	E-9
Q1402	B-22	D1403	C20
Q1403	B-22	D1405	B-21

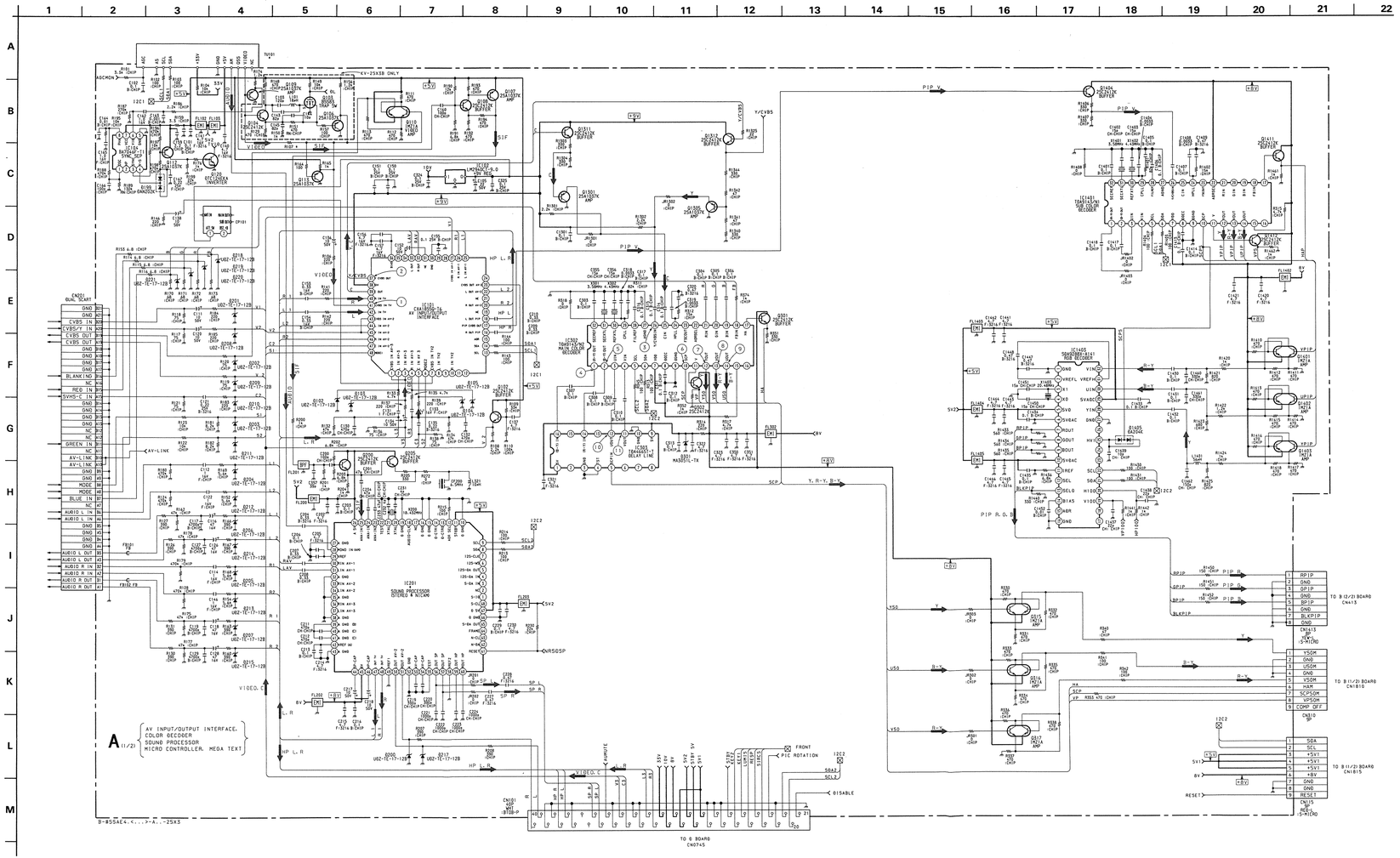
A AV INPUT/OUTPUT INTERFACE, COLOR DECODER, SOUND PROCESSOR, MICRO CONTROLLER, MEGA TEXT

A Board < Conductor Side >



A Board < Component Side >





WAVEFORMS A BOARD

① PAL 1.0 Vp-p (H)	① SECAM 1.0 Vp-p (H)	② PAL 2.0 Vp-p (H)
② SECAM 2.0 Vp-p (H)	③ PAL 1.0 Vp-p (H)	③ SECAM 1.2 Vp-p (H)
④ 0.6 Vp-p (H)	⑤ 0.7 Vp-p (H)	⑥ 4.5 Vp-p (H)
⑦ 1.0 Vp-p (H)	⑧ 1.0 Vp-p (H)	⑨ 1.4 Vp-p (H)
⑩ 1.5 Vp-p (H)	⑪ 1.0 Vp-p (H)	

A (1/2) BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table

Ref No	B Base	C Collector	E Emitter
Q102	1.9	4.7	1.3
Q105	0.08	4.5	0.08
Q107	4.4	1.7	5.0
Q108	1.8	4.4	1.2
Q112	4.3	4.9	5.0
Q120	4.6	0.1	0.1
Q301	0.5	8.0	0.4
Q302	-	8.0	0.3
Q318	0.1	5.2	0.1
Q1201	8.6	5.0	9.2
Q1202	0.7	5.0	9.2
Q1301	1.9	-	0.2
Q1302	-	-	0.6
Q1303	0.8	-	1.5
Q1304	2.2	-	0.1
Q1305	2.0	-	0.1
Q1306	1.7	-	-
Q1307	-	3.4	0.1
Q1308	3.5	4.7	2.9
Q1309	0.9	0.1	1.6
Q1310	1.0	0.1	1.6
Q1311	4.5	9.0	3.9
Q1312	4.5	9.0	-
Q1313	4.6	0.7	0.1
Q1314	4.8	4.7	4.3
Q1404	4.5	7.8	3.8
Q1411	0.5	8.0	0.6
Q1412	0.1	8.0	0.1
Q1201	2.6	8.6	2.1
Q1202	2.6	8.6	2.1

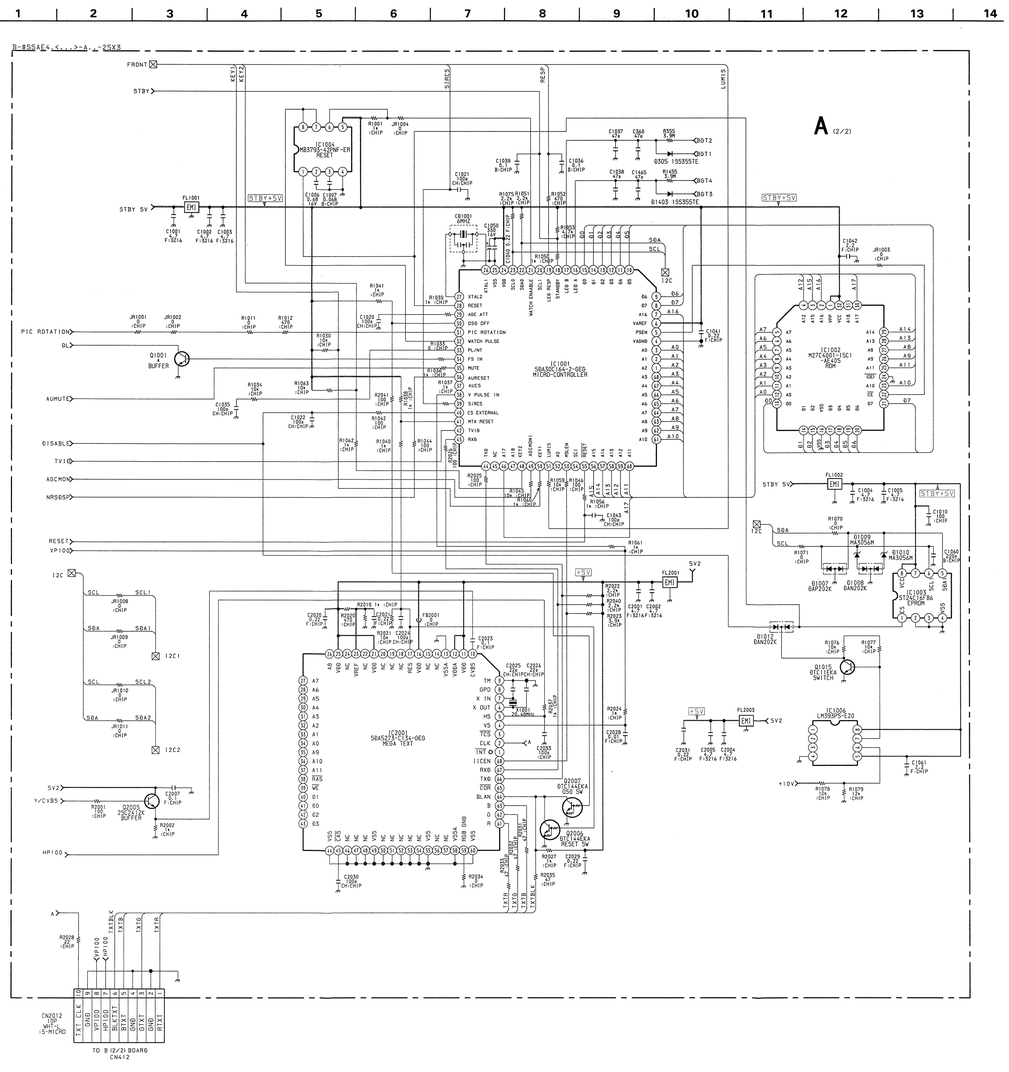
A (1/2) BOARD IC VOLTAGE TABLE

IC Voltage Table

Ref No	Pin No	Voltage (V)	Ref No	Pin No	Voltage (V)
IC201	4	0.5	IC1201	4	4.7
	5-6	4.7		13	4.7
	7	2.4		31	4.7
	8-9	4.7		35	4.7
	20	2.4		37	2.7
	24	4.4		39	2.2
	25	8.8		40	2.7
	26	4.4		41	4.7
	28	3.8		45	4.8
	29	2.7		29	2.7
	30-31	3.8		30-31	3.8
	39-42	3.8		39-42	3.8
	44	6.2		44	6.2
	45	8.0		45	8.0
	46	7.0	IC1303	1	5.0
	47-48	3.8		5	0.6
	50-51	3.7		11-12	3.0
	53-54	3.8		14	1.4
	56-57	1.2		16	1.2
	61	4.8		1-2	2.0
IC302	1-2	2.0	IC1401	3-4	2.4
	3-4	2.4		5	3.5
	5	3.0		6	4.0
	6	4.0		7	7.8
	7	8.0		8	0.8
	8	5.0		10	0.8
	10	0.5		12	2.4
	12	3.2		13-14	2.6
	13-14	2.6		15	8.0
	15	8.0		17	0.3
	17	0.3		22	7.8
	19	1.6		24	3.6
	21	1.0		26	3.3
	23-24	4.0		28	3.5
	26	3.7		29	4.3
	28	3.5		30	2.6
	29	5.0		31	2.6
	30	2.5		32	3.8
	31	2.5			
	32	2.0			

A BOARD *MARK

	25X3A	25X3B	25X3D	25X3E
IC201	MSP3400C-PP-C6-T-ND	MSP3410B-PS-F7-T-ND	MSP3400C-PP-C6-T-ND	MSP3410B-PS-F7-T-ND
Q1001	—	2SC2412K-T-146-R	—	—
R107	CONDUCTOR CHIP	—	CONDUCTOR CHIP	CONDUCTOR CHIP
TU101	TUVIF (AEP)	TUVIF (FR)	TUVIF (AEP)	TUVIF (AEP)



A (2/2) BOARD IC VOLTAGE TABLE

IC Voltage Table

Ref No	Pin No	Voltage (V)	Ref No	Pin No	Voltage (V)
IC101	1-5	4.6	1101	1	4.8
	7-8	4.6		2	1.1
	10	4.6		4	0.9
	17	4.6		5	0.3
	23	4.6		6-7	2.4
	29	4.6		8	1.4
	31	4.6		9	4.7
	34	4.6		10	1.7
	36	4.6		11	1.5
	38	9.0		16	4.0
	40-47	4.6		18-20	4.7
IC1001	5	2.4		21	2.5
	6	4.8		22	2.3
	19	3.6	2001	2	0.4
	20	0.1		5	0.3
	24	4.8		6-7	1.6
	26	2.1		8	4.0
	27	2.3		10	1.0
	28	4.6		11-12	4.7
	30	0.1		16	4.7
	31-32	2.4		21	4.7
	33	4.8		23	2.9
	36	4.1		25	4.7
	38	0.1		66	4.7
	39	0.6		68	4.7
	40	4.8			
	41	0.1			
	42	4.8			
	43	4.4			
	44	4.1			
	48	4.8			
	49	2.2			
	50	4.8			
	52	4.8			
	54	4.8			

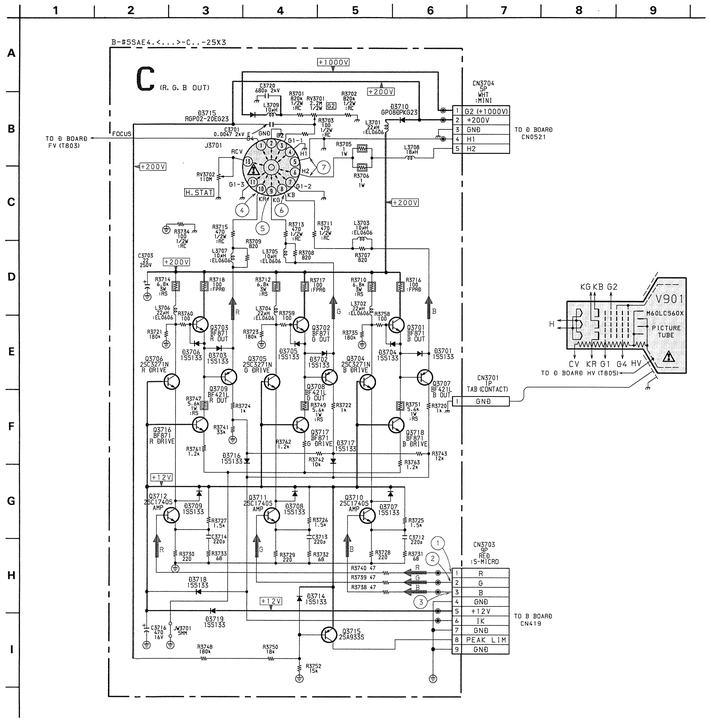
A (2/2) BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table

Ref No	B Base	C Collector	E Emitter
Q1001	0.1	0.7	0.1
Q1004	0.1	0.7	-
Q1101	3.3	5.0	2.6

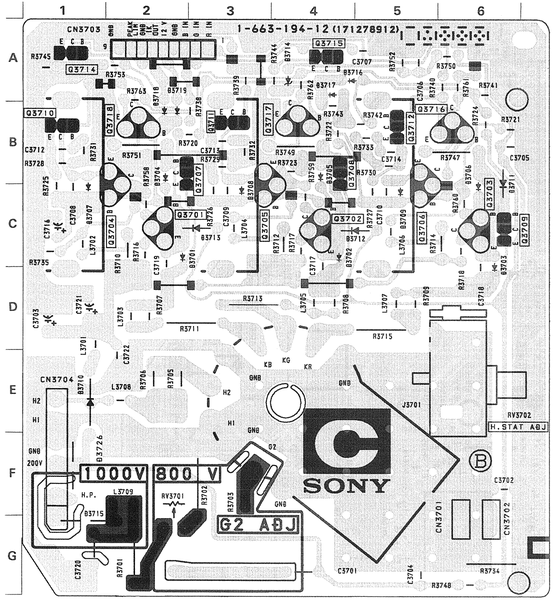
WAVEFORMS C BOARD

① 2.0 Vp-p (2H)	② 2.0 Vp-p (2H)	③ 2.0 Vp-p (2H)
④ 107 Vp-p (2H)	⑤ 95 Vp-p (2H)	⑥ 100 Vp-p (2H)
⑦ 30 Vp-p (2H)		



C [R,G,B OUT]

C Board



C BOARD

TRANSISTOR	
Q3701	C-2
Q3702	C-4
Q3703	C-6
Q3704	C-2
Q3705	C-3
Q3706	C-5
Q3707	B-3
Q3708	B-4
Q3709	C-6
Q3710	B-1
Q3711	B-3
Q3712	B-5
Q3715	A-4
Q3716	B-6
Q3717	B-4
Q3718	B-2
DIODE	
D3701	C-2
D3702	C-4
D3703	D-6
D3704	B-2
D3705	B-4
D3706	B-6
D3707	C-1
D3708	C-3
D3709	C-5
D3710	E-1
D3714	A-4
D3715	G-1
D3716	A-5
D3717	A-4
D3718	A-2
D3719	A-2
VARIABLE RESISTOR	
RV3701	F-2
RV3702	E-6

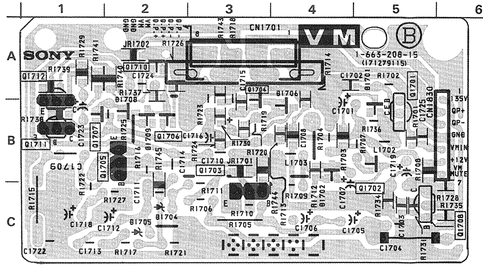
VM BOARD TRANSISTOR VOLTAGE TABLE

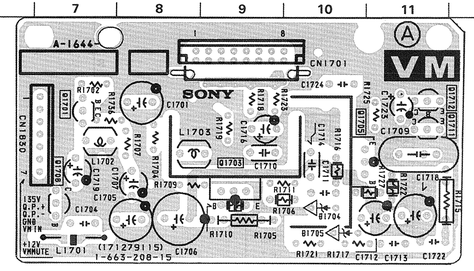
Transistor Voltage Table

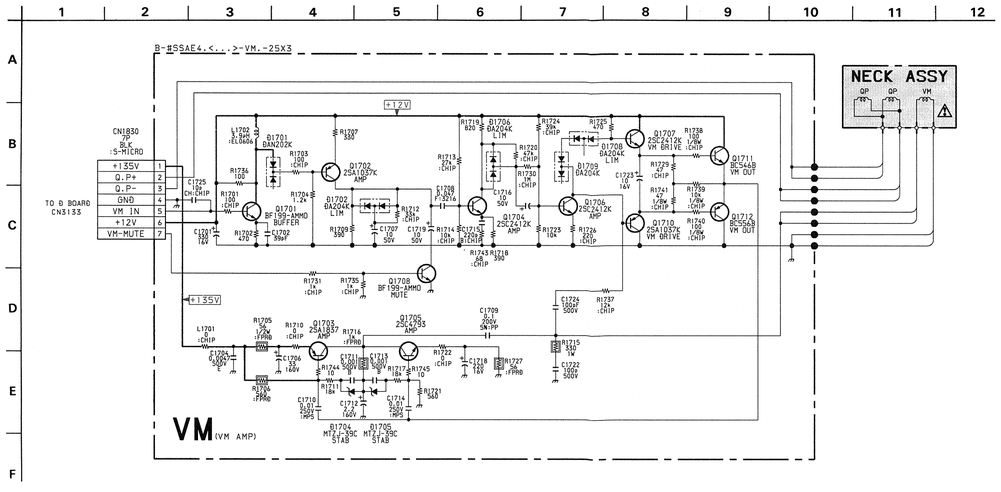
Ref No	B Base	C Collector	E Emitter
Q1701	0.8	0.7	2.1
Q1702	1.8	0.2	1.9
Q1703	24.0	13.3	24.0
Q1704	0.5	1.2	0.4
Q1705	0.1	12.3	-
Q1706	0.4	1.1	0.3
Q1707	1.5	2.1	1.4
Q1708	-	-	-
Q1710	1.1	-	1.2
Q1711	1.4	2.1	1.3
Q1712	1.3	1.2	-

VM [VM OUT]

VM Board







VM BOARD

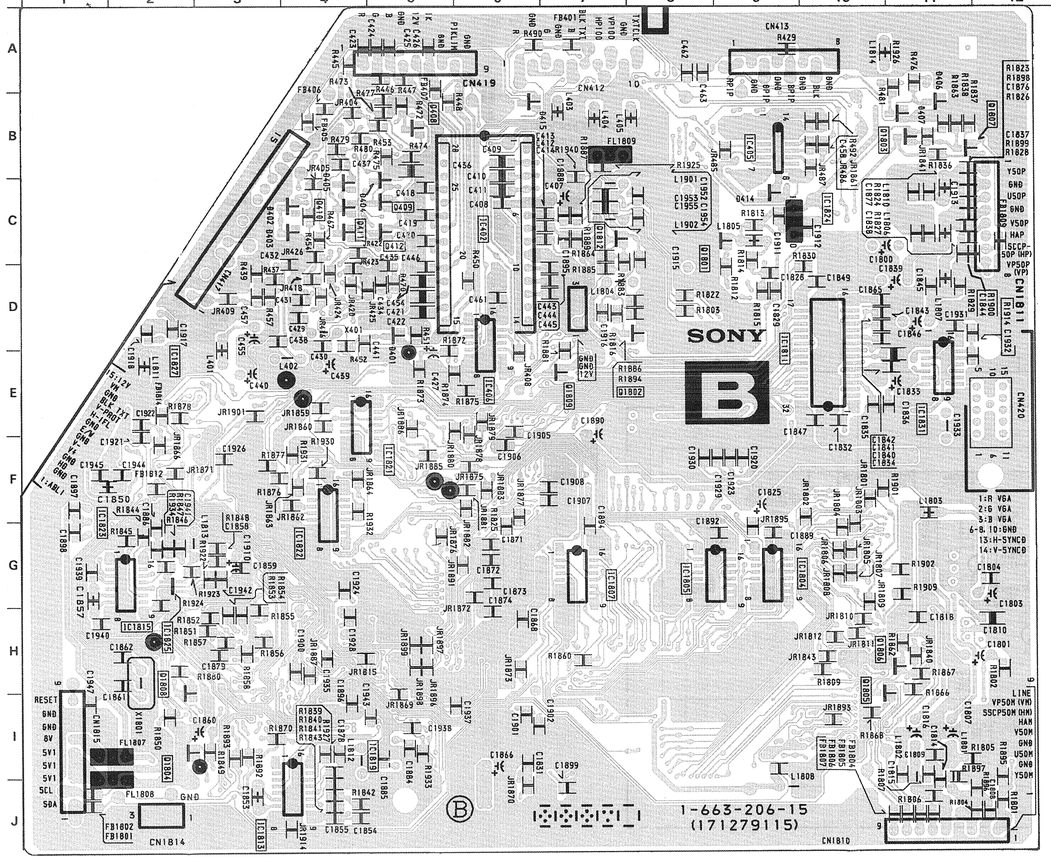
TRANSISTOR	
Q1701	A-5
Q1702	C-5
Q1703	B-3
Q1704	A-3
Q1705	B-2
Q1706	B-2
Q1707	B-1
Q1708	C-6
Q1710	A-2
Q1711	B-1
Q1712	A-1
DIODE	
D1701	A-5
D1702	C-4
D1704	C-2
D1705	C-2
D1706	A-4
D1708	B-2
D1709	B-2

B A/D, D/A CONVERTER, DIGITAL NOISE REDUCER, CRT DRIVER, DEFLECTION PROCESSOR

B BOARD

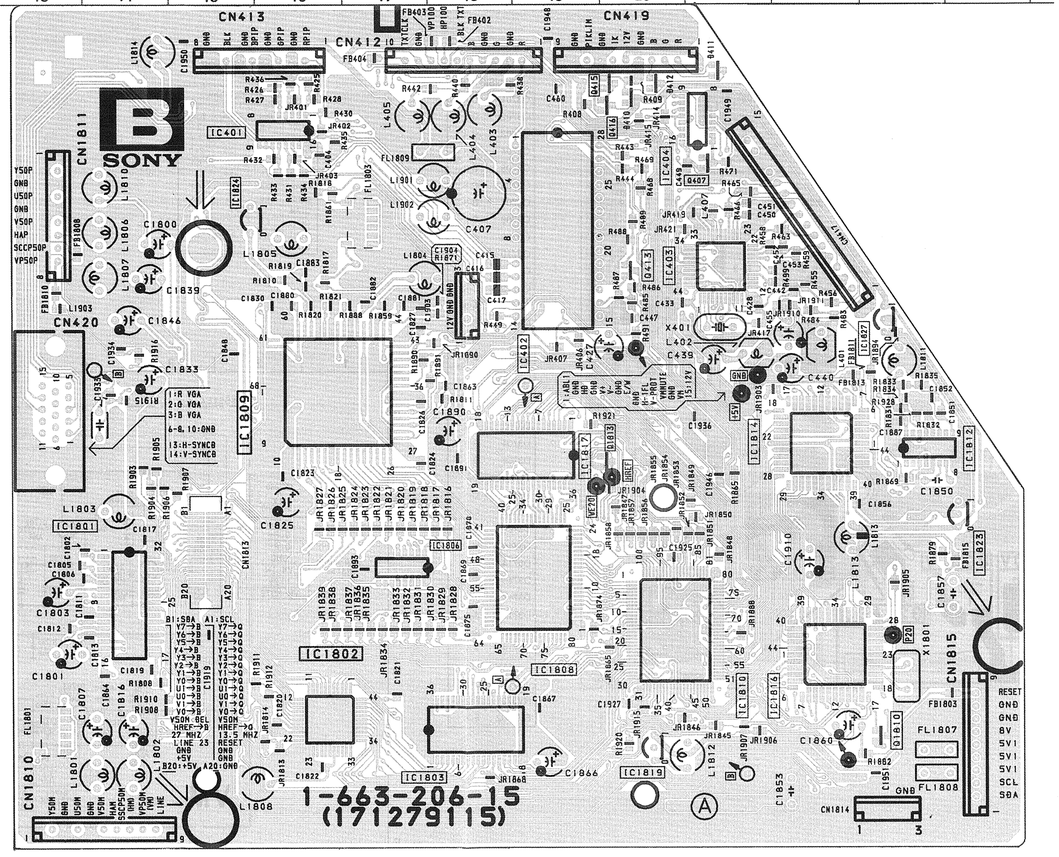
IC		Q416	B-20
IC402	C-6	Q1801	D-8
IC403	D-20	Q1802	E-8
IC1801	G-13	Q1804	I-2
IC1802	H-16	Q1805	I-10
IC1809	D-16	Q1808	H-2
IC1812	F-24	Q1809	E-7
IC1814	F-22	Q1810	I-23
IC1815	H-2	Q1812	C-7
IC1816	I-21	DIODE	
IC1823	F-1	D401	D-5
IC1824	C-10	D402	C-3
IC1825	H-2	D403	C-3
TRANSISTOR		D410	B-20
Q411	C-4	D411	A-21
Q412	C-5	D412	A-20
Q413	C-20	D415	B-7
Q415	B-19		

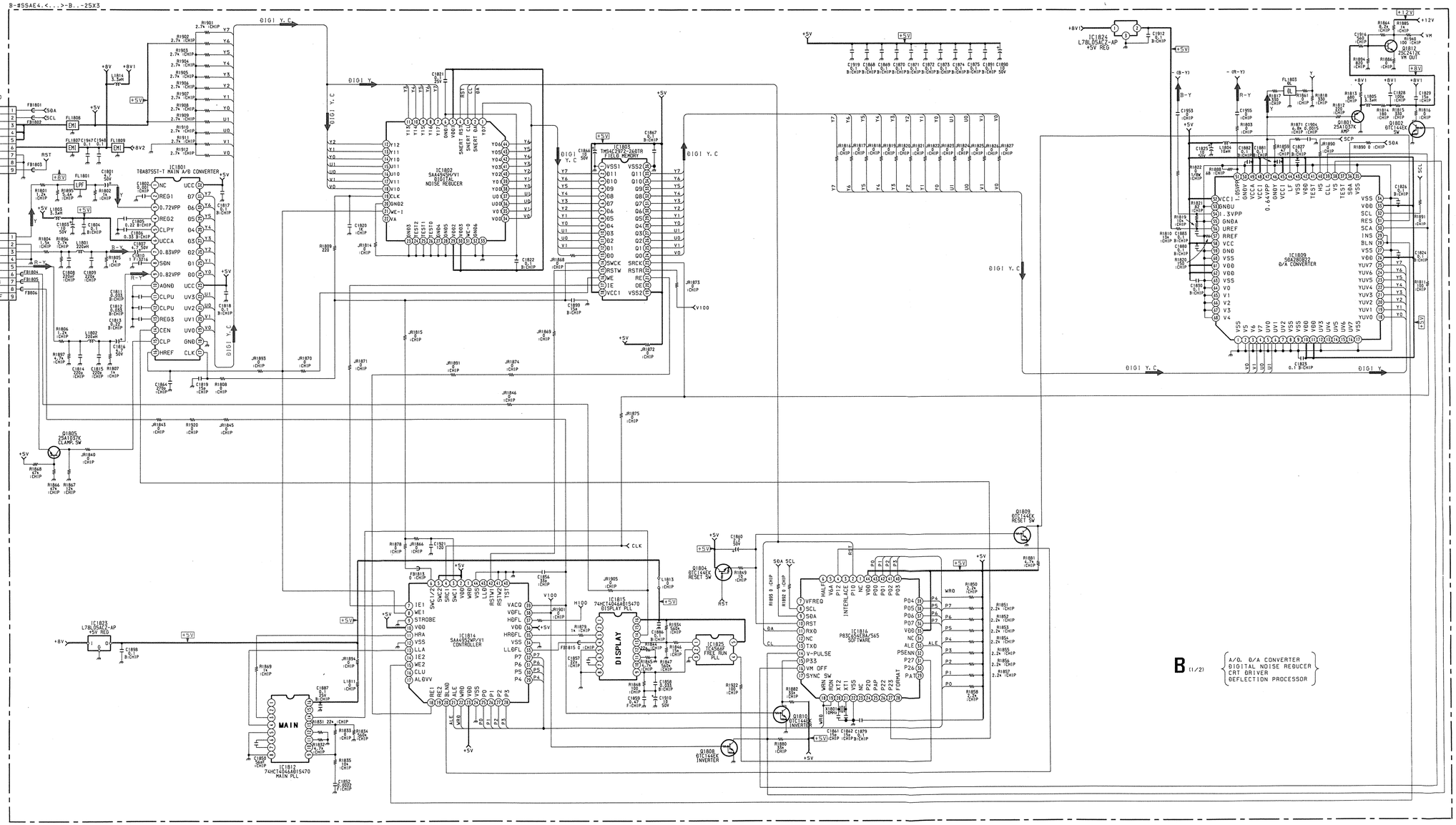
B Board < Conductor Side >



KV-25X3 KV-25X3

B Board < Component Side >





B (1/2) BOARD IC VOLTAGE TABLE

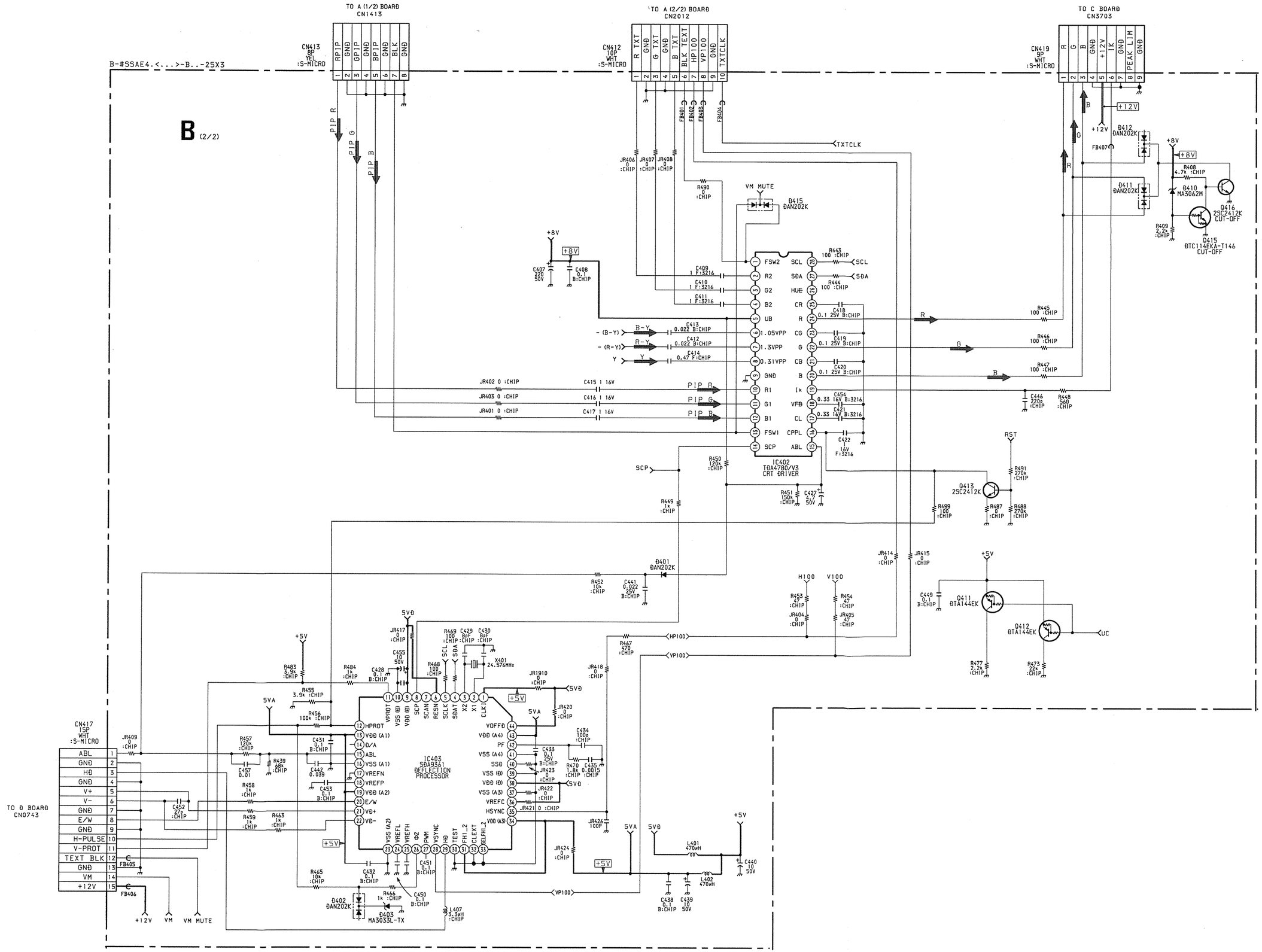
IC Voltage Table		
Ref No	Pin No	Voltage (V)
IC1812	3-4	2.4
	6-7	0.7
	9	4.6
	11-13	4.7
	14	0.3
	16	5.0
IC1813	3-4	2.4
	6-7	0.7
	9	4.6
	11-13	4.7
	14	0.3
	16	5.0
IC1815	1	5.0
	2	2.3
	3-4	2.5
	6-7	0.8
	9-11	3.0
	12	4.5
	13	3.0
	14	0.4
	15	0.2
	16	5.2
IC1821	2	2.5
	4-5	2.3
	12	2.0
	14	2.0
	15	2.6
	16	8.0
IC1822	2	2.9
	4-5	2.6
	12	2.3
	14	2.1
	15	2.8
	16	8.0

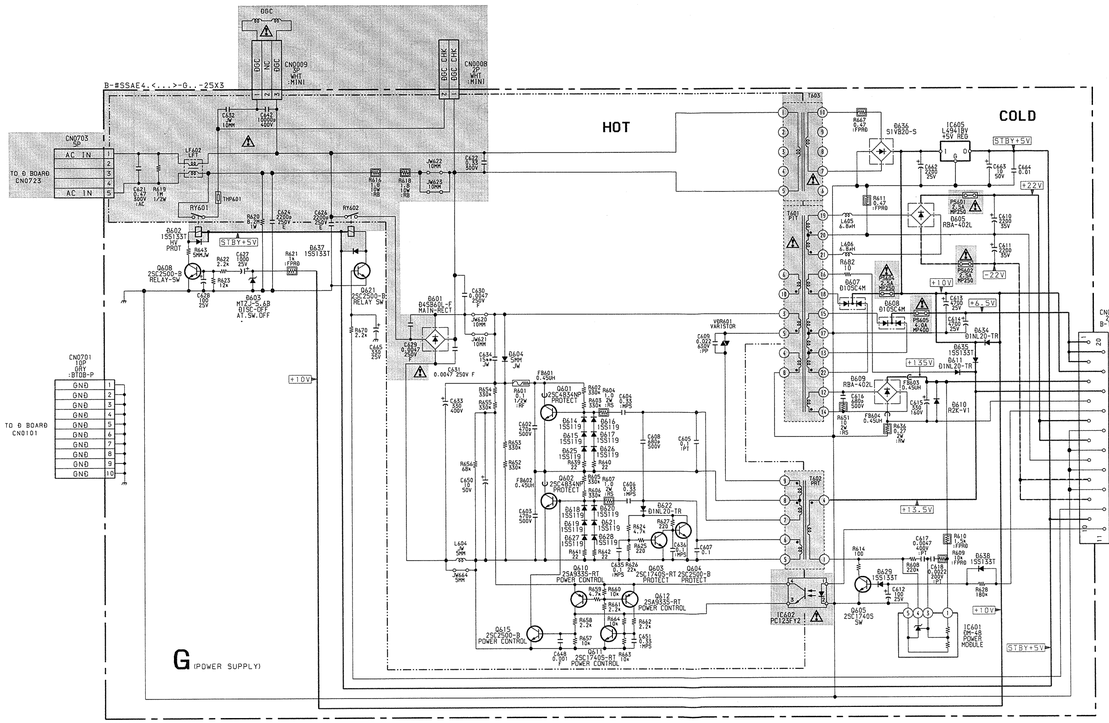
B BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q411	0.1	4.8	4.8
Q412	0.1	4.8	4.8
Q415	1.8	0.1	-
Q416	0.1	5.6	-
Q1801	0.1	-	0.9
Q1802	4.0	0.1	0.1
Q1804	0.3	4.8	0.1
Q1805	2.5	1.3	0.7
Q1807	2.5	1.3	0.7
Q1808	0.1	4.7	0.1
Q1809	0.1	0.1	0.1
Q1810	0.1	4.8	-
Q1812	0.5	10.5	-
Q1813	0.1	3.7	0.1

B (2/2) BOARD IC VOLTAGE TABLE

IC Voltage Table		
Ref No	Pin No	Voltage (V)
IC402	2-4	5.0
	5	7.8
	6-7	4.0
	8	3.7
	10-12	5.0
	14	0.7
	16	4.7
	17	5.1
	18	1.8
	19	7.5
	20	2.5
	21	3.3
	22	2.8
	23	3.3
	24	2.9
	25	3.3
	27	4.0
	28	3.8
IC405	5	3.2
	9	3.2
	13-14	3.2
IC406	16	4.8





G BOARD TRANSISTOR VOLTAGE TABLE

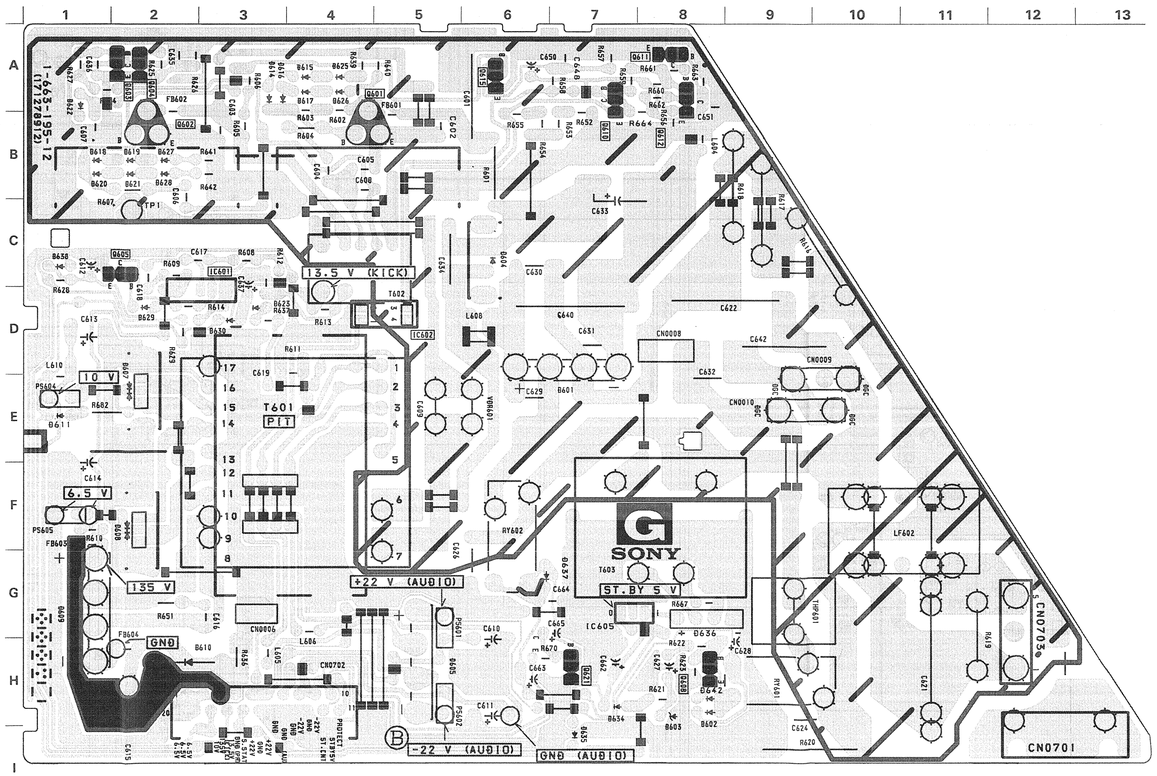
Transistor Voltage Table

Ref No	B Base	C Colector	E Emitter
Q601	-1.6	-	-
Q602	0.2	293.0	-
Q603	0.6	0.1	-
Q604	0.1	1.4	-
Q605	0.1	11.0	-0.1
Q608	-	4.8	-0.1
Q610	22.0	-2.3	26.8
Q611	-1.6	26.6	-
Q612	26.7	-1.1	26.8
Q615	-2.6	-1.5	-
Q621	0.6	-	-0.1

NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

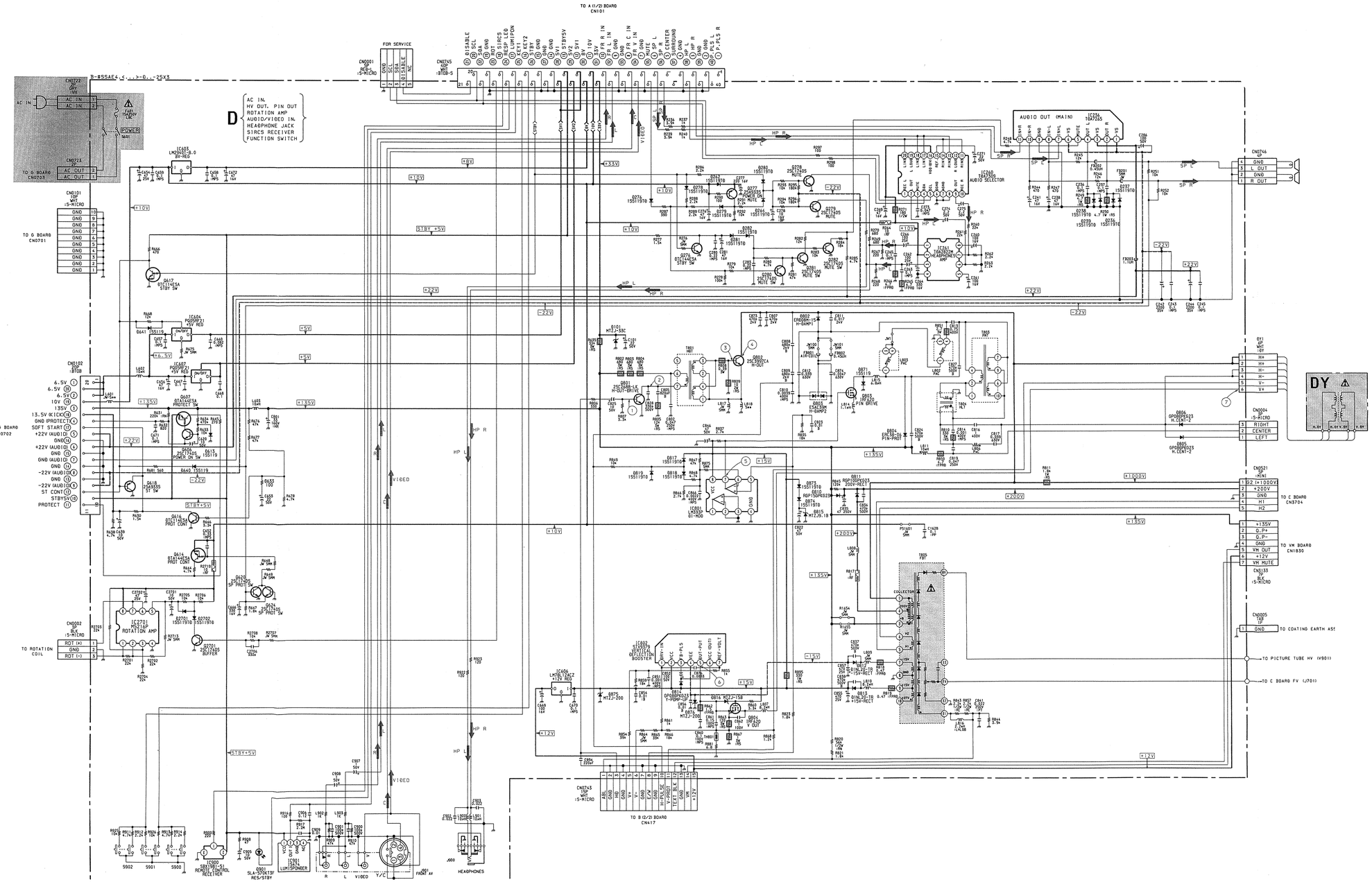
G [POWER SUPPLY]

G Board



G BOARD

IC	
IC601	C-3
IC602	D-5
IC605	G-7
TRANSISTOR	
Q601	A-5
Q602	B-2
Q603	B-2
Q604	B-2
Q605	C-1
Q608	H-8
Q610	B-7
Q611	A-8
Q612	B-8
Q615	A-6
Q621	H-7
DIODE	
D601	E-7
D602	H-8
D603	H-8
D605	H-5
D607	E-2
D608	F-2
D609	G-1
D610	H-3
D611	E-1
D614	A-3
D615	A-4
D616	A-3
D617	A-4
D618	B-1
D619	B-2
D620	B-1
D621	B-2
D622	A-1
D625	A-4
D626	A-4
D627	B-2
D633	G-7
D634	H-7
D636	G-8
D637	G-7
D638	C-1



D BOARD TRANSISTOR VOLTAGE TABLE

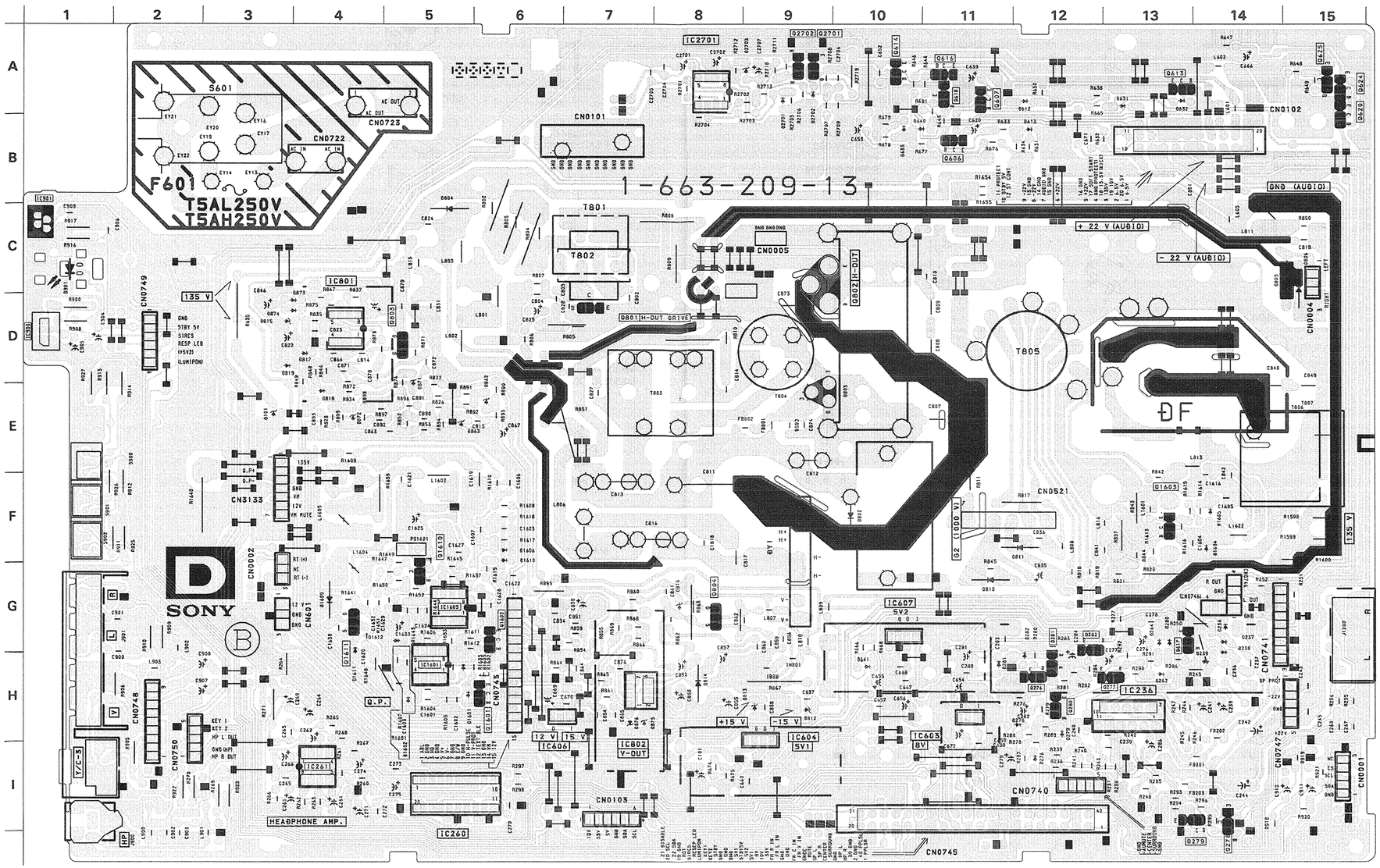
Transistor Voltage Table

Ref No	B Base	C Collector	E Emitter
Q276	0.7	4.0	-
Q277	10.0	-	9.7
Q278	-1.3	-	-
Q279	-1.3	-	-1.3
Q280	0.4	0.7	-
Q281	0.7	-	-
Q282	0.7	-	-
Q801	-1.0	101.0	-
Q802	-	136.0	-
Q803	9.0	15.0	-
Q804	11.3	0.1	-1.3
Q306	0.5	4.8	0.3
Q607	4.8	1.6	4.8
Q613	13.5	-	-
Q514	10.0	9.0	10.0
Q616	0.7	-	-
Q617	0.7	3.5	-
Q618	3.5	-	-
Q620	-	10.0	-
Q624	-	10.0	-
Q2701	-	2.3	-
Q1610	-0.5	2.2	-
Q1611	0.2	43.4	-

D AC IN, HV OUT, PIN OUT, ROTATION AMP, AUDIO/VIDEO IN, HEADPHONE JACK, SIRCS RECEIVER, FUNCTION SWITCH

KV-25X3 KV-25X3

D Board



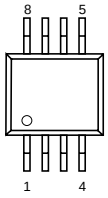
NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

D BOARD

IC		D237	G-14
IC236	H-13	D238	G-14
IC260	I-5	D239	G-14
IC261	I-4	D262	H-13
IC603	H-11	D264	G-13
IC604	H-9	D276	I-12
IC606	H-7	D278	H-12
IC607	G-10	D279	H-12
IC801	C-4	D280	G-13
IC802	H-8	D281	H-12
IC900	D-1	D282	G-12
IC901	C-1	D613	B-12
IC2701	A-8	D633	B-11
TRANSISTOR		D640	B-10
Q276	H12	D641	H-10
Q277	H-13	D802	F-10
Q278	I-14	D803	E-10
Q279	I-14	D804	B-5
Q280	H-12	D805	C-15
Q281	G-12	D806	C-15
Q282	G-13	D810	G-11
Q606	B-11	D811	F-12
Q607	A-11	D812	H-9
Q614	A-10	D813	H-9
Q616	A-11	D814	H-8
Q617	G-13	D815	D-3
Q618	A-11	D816	G-8
Q620	A-15	D817	D-4
Q624	A-15	D818	E-4
Q801	D-7	D819	D-3
Q802	C-10	D871	D-5
Q803	D-5	D873	D-4
Q804	G-8	D874	D-3
Q2701	A-9	D901	C-1
DIODE		D2701	A-9
D101	E-3	D2702	A-9
D236	G-14		

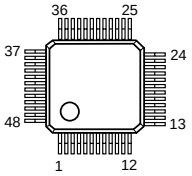
5-4. SEMICONDUCTORS

BA7046F
BA7046F-T1
MB3793-42PNF
MB3793-42PNF-ER



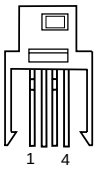
(TOP VIEW)

CXA1855Q-T6

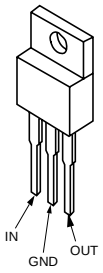


(TOP VIEW)

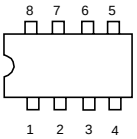
IS474



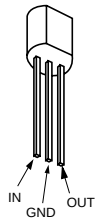
LM2940CT-9.0
LM2940T-9.0
L4941BV



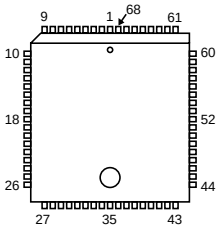
LM393P
LM393PS-E20
M5216P
ST24C16FB6
TDA2822M
UPC393C



LM78L12ACZ
L78L05ACZ-AP
L78L12ACZ-AP

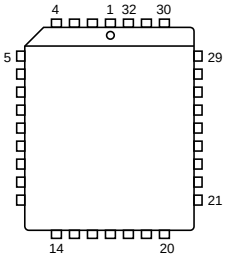


MSP3400C-PS-C6-T-ND
MSP3410B-PS-F7-T-ND
SDA30C164-2-GEG
SDA5273-C126-GEG



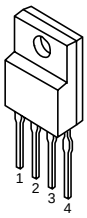
(TOP VIEW)

M27C4001-15C1-AE401



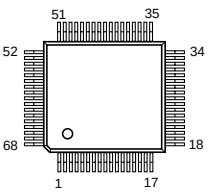
(TOP VIEW)

PQ05RF21



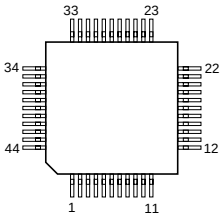
1 : V IN
2 : V OUT
3 : GND
4 : ON/OFF CONTROL

P83C654EBA/565
SDA9280822

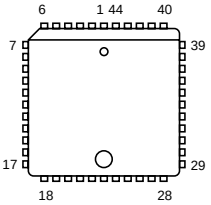


(TOP VIEW)

SAA4945H/V1
SDA9361

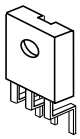


SAA4952WP/V1

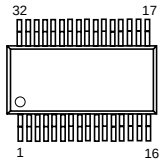


(TOP VIEW)

SBX1981-51

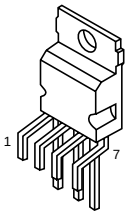


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TDA8755T-T

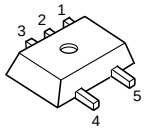


(TOP VIEW)

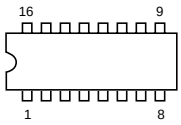
STV9379



TC4S66F
TC4S66F-TE85L

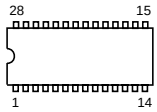


TDA4665T-T



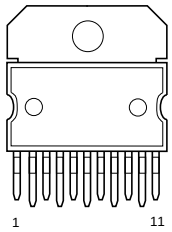
(TOP VIEW)

TDA4780/V3

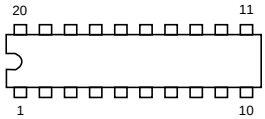


(TOP VIEW)

TDA7265

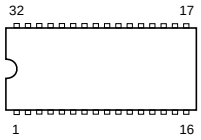


TDA7309



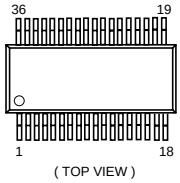
(TOP VIEW)

TDA9143/N2



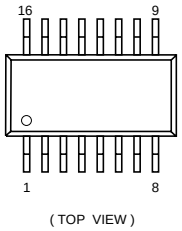
(TOP VIEW)

TMS4C2972-26DTR
TMS4C2972-28DTR

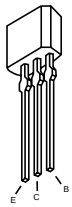


(TOP VIEW)

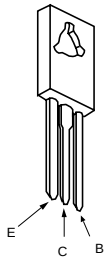
74HCT4046AD
74HCT4046AD/S470
74HCT4046AD/S470PASS01



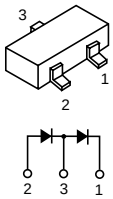
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DTC144ESA-TP
2SA933S-RT
2SC1740S-RT



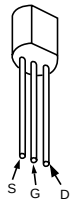
2SC2688-LK
2SC3271-N



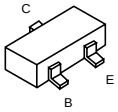
DA204K
DA204K-T-146



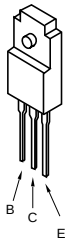
BC546B
BC556B



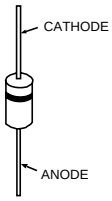
DTA144EK-T146 DTC144EK-T146
DTC114EK DTC144EKA-T146
DTC114EKA-T146 2SA1037K-T-146-R
DTC124EKA-T146 2SC2412K-T-146-R
DTC144EK



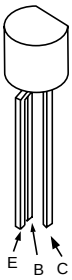
2SC4793



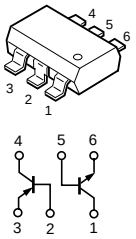
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GP08DPKG23
R2K-V1
RGP02-20EG23
RGP15GPKG23
1SS133T-77



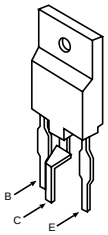
BF199
BF199-AMMO



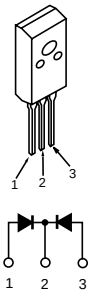
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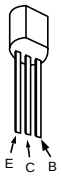
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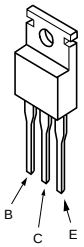
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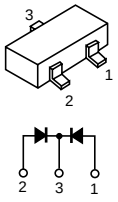
BF421L-AMMO
2SC2500-B



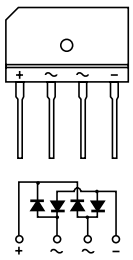
IRF620



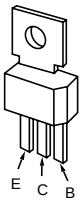
DAN202K
DAN202K-T-146



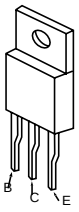
RBA-402L



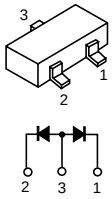
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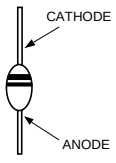
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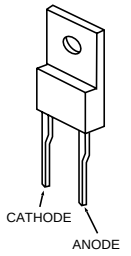
DAP202K
DAP202K-T-146



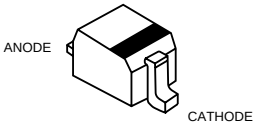
ERC38-06



ERD08M-15

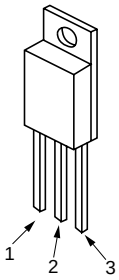


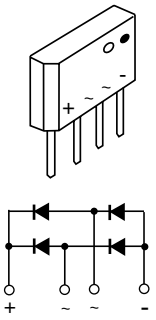
UDZ-TE-17-12B



S1VB20-S

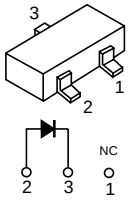
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ESAD39M-06CF38

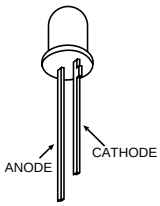




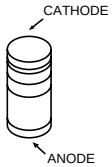
SLA-570KT3F

MA3033-L MA3056M-TX
MA3033L-TX MA3062M-TX

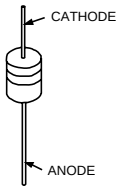




MA3051L-TX

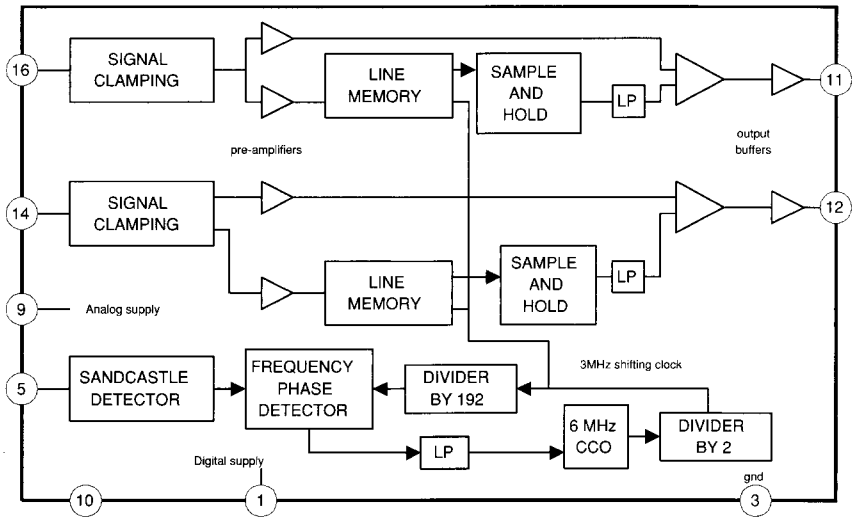


MTZJ-T-77-15B MTZJ-T-77-20D
MTZJ-T-77-33C 1SS119-25
MTZJ-T-77-39C 1SS119-25TD
MTZJ-T-77-9.1B

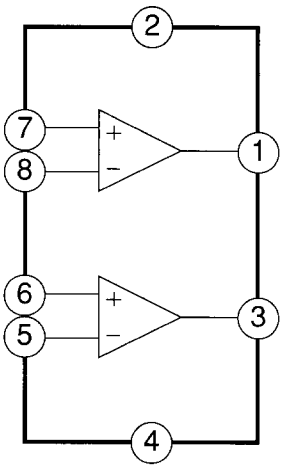


5-5. IC BLOCK DIAGRAMS

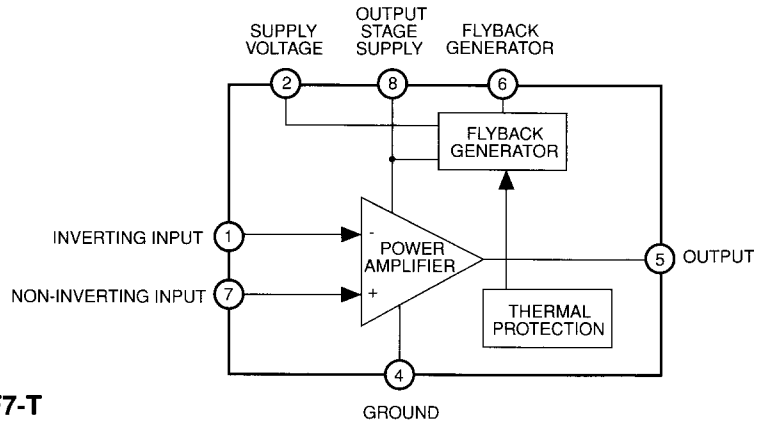
A Board IC303,TDA4665T-T



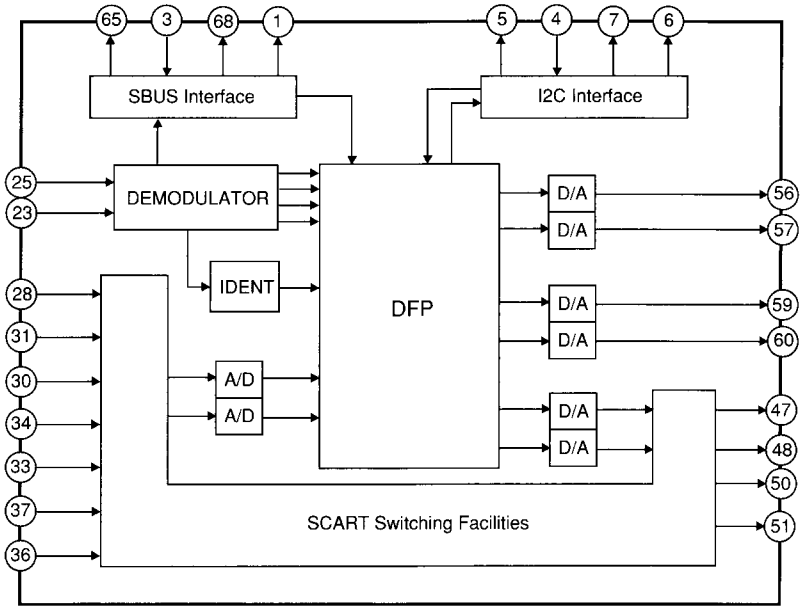
D Board IC261 TDA2822M



D Board IC802 STV9379



A Board IC201 MSP3400C-PS-C6-T/MSP3410B-PS-F7-T



SECTION 6

EXPLODED VIEWS

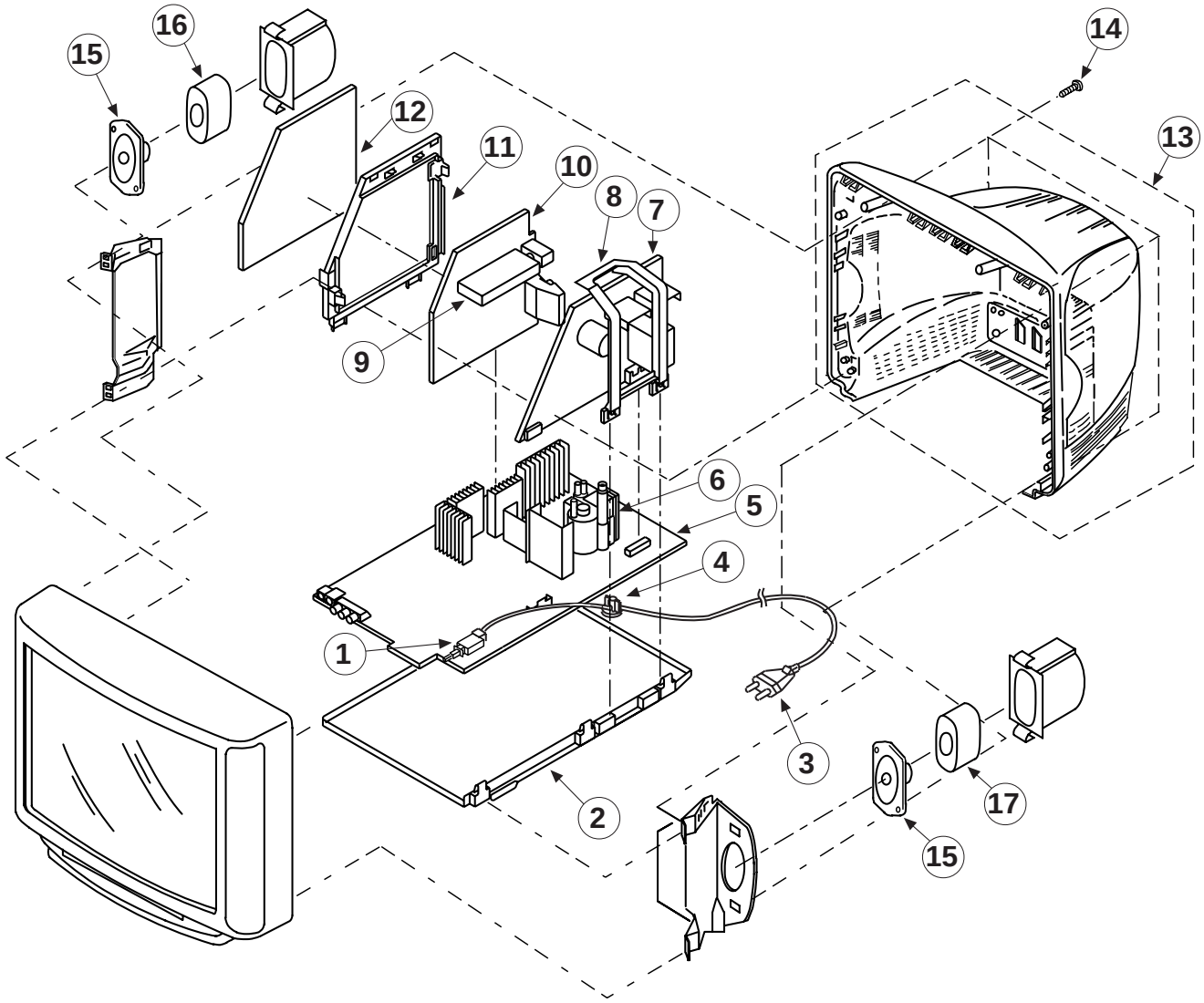
NOTE :

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

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

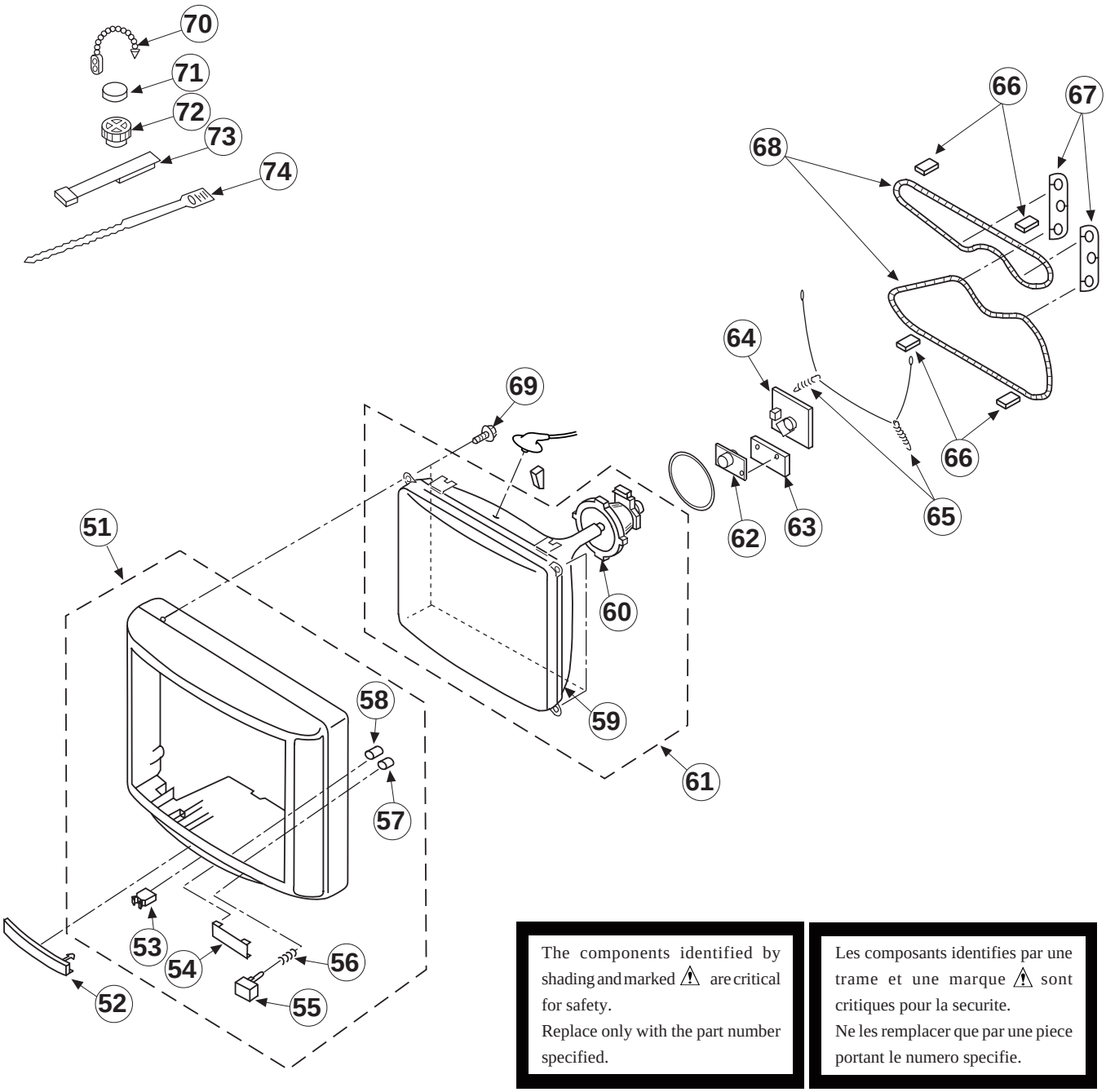
Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

6-1. CHASSIS



REF NO		PART NO	DESCRIPTION	REMARK
1	⚠	1-571-433-21	SWITCH, PUSH (AC POWER)	
2		*4-203-457-01	BRACKET, MAIN	
3	⚠	1-751-680-11	CORD, POWER (WITH NOISE FILTER) 2.5A/250V	
4		*4-202-531-01	AC CORD LOCK (SC)	
5		*A-1640-282-A	D BOARD, COMPLETE	
6	⚠	1-453-222-11	TRANSFORMER ASSY, FLYBACK	(NX-4003/U2B4)
7		*A-1636-024-A	G BOARD, COMPLETE	
8		*4-203-613-01	SUPPORTER, G	
9		1-693-338-11	TUNER (TUVIF) (AEP)	(KV-25X3A/25X3D/25X3E)
		1-693-340-11	TUNER (TUVIF) (FR)	(KV-25X3B)
10		*A-1632-664-A	A BOARD, COMPLETE	(KV-25X3A/25X3D)
		*A-1632-665-A	A BOARD, COMPLETE	(KV-25X3B)
		*A-1632-666-A	A BOARD, COMPLETE	(KV-25X3E)
11		*4-203-612-01	BRACKET, A-B	
12		*A-1620-096-A	B BOARD, COMPLETE	
13		X-4200-255-1	COVER ASSY, REAR	
14		4-039-358-01	SCREW (4X16), (+) BV TAPPING	
15		1-504-571-21	SPEAKER (7.5 X 13CM)	
16		A-1676-035-A	BAFFLE (L) ASSY	
17		A-1676-036-A	BAFFLE (R) ASSY	

6-2. PICTURE TUBE



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

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF NO		PART NO	DESCRIPTION	REMARK
51		X-4200-256-4	BEZNET ASSY	53-58
52		4-203-364-11	DOOR, CONTROL	(KV-25X3A/25X3D)
		4-203-364-01	DOOR, CONTROL	(KV-25X3B/25X3E)
53		4-047-464-01	CATCHER, PUSH	
54		4-203-365-01	WINDOW, ORNAMENTAL	
55		4-203-362-01	BUTTON, POWER	
56		4-202-964-01	SPRING	
57		*4-203-363-01	GUIDE, LED LIGHT	
58		4-202-465-01	GUIDE, LED LIGHT	
59	⚠	8-733-243-05	PICTURE TUBE (SD-257) (M60LCS60X)	
60	⚠	8-451-474-11	DEFLECTION YOKE (Y25GXCB)	
61	⚠	8-773-254-77	ITC	59-60
62	⚠	1-452-509-41	NECK ASSY, CRT (NA-308)	
63		A-1644-080-A	VM BOARD, COMPLETE	
64		*A-1638-105-A	C BOARD, COMPLETE	
65		4-200-433-01	SPRING, EXTENSION	
66		4-203-390-01	CUSHION, DGC	
67		4-202-745-01	HOLDER, DGC (25")	
68	⚠	1-406-806-21	COIL, DEGAUSSING	
69		4-036-188-01	SCREW, SELF TAPPING	
70		4-308-870-00	CLIP, LEAD WIRE	
71		1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
72		1-452-032-00	MAGNET, DISK; 10MM Ø	
73		X-4387-214-1	PERMALLOY ASSY, CORRECTION	
74		3-701-007-00	BAND, BINDING	

SECTION 7

ELECTRICAL PARTS LIST

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

CAPACITORS
MF : mF, PF : mmF

COILS
MMH : mH, µH : mH

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F : nonflammable

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

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

B

REF.NO.	PART NO.	DESCRIPTION		REMARK
	*A-1620-096-A	B BOARD, COMPLETE		
		**********		
		< CAPACITOR >		
C407	1-126-969-11	ELECT 220MF	20%	50V
C408	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C409	1-162-638-11	CERAMIC CHIP 1MF		16V
C410	1-162-638-11	CERAMIC CHIP 1MF		16V
C411	1-162-638-11	CERAMIC CHIP 1MF		16V
C412	1-163-037-11	CERAMIC CHIP 0.022MF	10%	50V
C413	1-163-037-11	CERAMIC CHIP 0.022MF	10%	50V
C414	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C415	1-162-638-11	CERAMIC CHIP 1MF		16V
C416	1-162-638-11	CERAMIC CHIP 1MF		16V
C417	1-162-638-11	CERAMIC CHIP 1MF		16V
C418	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C419	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C420	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C421	1-162-568-11	CERAMIC CHIP 0.33MF	10%	16V
C422	1-162-638-11	CERAMIC CHIP 1MF		16V
C427	1-126-963-11	ELECT 4.7MF	20%	50V
C428	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C429	1-163-091-00	CERAMIC CHIP 8PF	0.25PF	50V
C430	1-163-091-00	CERAMIC CHIP 8PF	0.25PF	50V
C431	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C432	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C433	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C434	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C435	1-163-145-00	CERAMIC CHIP 0.0015MF	5%	50V
C438	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C439	1-126-964-11	ELECT 10MF	20%	50V
C440	1-126-964-11	ELECT 10MF	20%	50V
C441	1-163-037-11	CERAMIC CHIP 0.022MF	10%	50V
C442	1-162-587-11	CERAMIC CHIP 0.039MF	10%	25V
C446	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C449	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C450	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C451	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C452	1-163-103-00	CERAMIC CHIP 27PF	5%	50V
C453	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C454	1-162-568-11	CERAMIC CHIP 0.33MF	10%	16V
C455	1-126-964-11	ELECT 10MF	20%	50V
C457	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1801	1-126-963-11	ELECT 4.7MF	20%	50V
C1802	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C1803	1-126-964-11	ELECT 10MF	20%	50V
C1804	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1805	1-164-489-11	CERAMIC CHIP 0.22MF	10%	16V
C1806	1-110-501-11	CERAMIC CHIP 0.33MF	10%	16V
C1807	1-126-963-11	ELECT 4.7MF	20%	50V
C1808	1-163-259-91	CERAMIC CHIP 220PF	5%	50V
C1809	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C1810	1-162-638-11	CERAMIC CHIP 1MF		16V
C1811	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V
C1812	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V
C1813	1-164-489-11	CERAMIC CHIP 0.22MF	10%	16V
C1814	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C1815	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C1816	1-126-963-11	ELECT 4.7MF	20%	50V
C1817	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1818	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1819	1-163-097-00	CERAMIC CHIP 15PF	5%	50V
C1820	1-216-049-91	METAL GLAZE 1K 5% 1/10W		
C1821	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1822	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1823	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1824	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1825	1-126-964-11	ELECT 10MF	20%	50V
C1826	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1827	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1828	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C1829	1-163-097-00	CERAMIC CHIP 15PF	5%	50V
C1830	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1850	1-163-245-11	CERAMIC CHIP 56PF	5%	50V
C1852	1-164-695-11	CERAMIC CHIP 0.0022MF	5%	50V
C1856	1-163-105-00	CERAMIC CHIP 33PF	5%	50V
C1857	1-163-101-00	CERAMIC CHIP 22PF	5%	50V
C1858	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V
C1859	1-164-005-11	CERAMIC CHIP 0.47MF		16V
C1860	1-126-961-11	ELECT 2.2MF	20%	50V
C1861	1-163-097-00	CERAMIC CHIP 15PF	5%	50V
C1862	1-163-097-00	CERAMIC CHIP 15PF	5%	50V
C1864	1-163-002-11	CERAMIC CHIP 270PF	10%	50V
C1866	1-126-964-11	ELECT 10MF	20%	50V
C1867	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1868	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1869	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1870	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1871	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1872	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V

REF.NO.	PART NO.	DESCRIPTION	REMARK
C1873	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C1874	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C1875	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C1879	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C1880	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C1881	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C1882	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C1883	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C1886	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C1887	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C1890	1-126-964-11	ELECT 10MF 20% 50V	
C1891	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C1898	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C1899	1-163-097-00	CERAMIC CHIP 15PF 5% 50V	
C1904	1-163-145-00	CERAMIC CHIP 0.0015MF 5% 50V	
C1910	1-126-964-11	ELECT 10MF 20% 50V	
C1912	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C1916	1-216-043-91	METAL GLAZE 560 5% 1/10W	
C1919	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C1921	1-216-027-00	METAL GLAZE 120 5% 1/10W	
C1947	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C1948	1-164-004-11	CERAMIC CHIP 0.1MF 10% 25V	
C1953	1-216-296-91	CONDUCTOR, CHIP	
C1955	1-216-296-91	CONDUCTOR, CHIP	
		< CONNECTOR >	
CN412	1-564-513-11	PLUG, CONNECTOR 10P	
CN413	*1-564-511-11	PLUG, CONNECTOR 8P	
CN417	*1-564-596-11	PLUG, CONNECTOR 15P	
CN419	*1-564-512-11	PLUG, CONNECTOR 9P	
CN1810	*1-564-512-11	PLUG, CONNECTOR 9P	
CN1815	*1-564-512-11	PLUG, CONNECTOR 9P	
		< DIODE >	
D401	8-719-914-43	DIODE DAN202K	
D402	8-719-914-43	DIODE DAN202K	
D403	8-719-028-00	DIODE MA3033L	
D410	8-719-401-63	DIODE MA3062M-TX	
D411	8-719-914-43	DIODE DAN202K	
D412	8-719-914-43	DIODE DAN202K	
D415	8-719-914-43	DIODE DAN202K	
		< FERRITE BEAD >	
FB401	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB402	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB403	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB404	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB405	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB406	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB407	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB1801	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB1802	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB1803	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB1804	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB1805	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB1806	1-414-234-11	INDUCTOR, FERRITE BEAD	
FB1813	1-216-295-91	CONDUCTOR, CHIP	
FB1815	1-216-295-91	CONDUCTOR, CHIP	

REF.NO.	PART NO.	DESCRIPTION	REMARK
		< ENCAPSULATED FILTER >	
FL1801	1-233-767-11	FILTER	
FL1803	1-415-940-11	DELAY LINE	
FL1807	1-236-071-11	ENCAPSULATED COMPONENT	
FL1808	1-236-071-11	ENCAPSULATED COMPONENT	
FL1809	1-236-071-11	ENCAPSULATED COMPONENT	
		< IC >	
IC402	8-759-275-36	IC TDA4780/V3	
IC403	8-759-421-42	IC SDA9361	
IC1801	8-759-257-59	IC TDA8755T-T	
IC1802	8-759-439-63	IC SAA4945H/V1	
IC1803	8-759-439-25	IC TMS4C2972-26DTR	
IC1809	8-759-467-19	IC SDA9280B22	
IC1812	8-759-426-57	IC 74HCT4046AD	
IC1814	8-759-438-64	IC SAA4952WP/V1	
IC1815	8-759-444-24	IC 74HCT4046AD/S470	
IC1816	8-759-470-61	IC P83C654EBA/565	
IC1823	8-759-991-41	IC LM78L05ACZ	
IC1824	8-759-991-41	IC LM78L05ACZ	
IC1825	8-759-234-77	IC TC4S66F	
		< COIL >	
L401	1-408-429-00	INDUCTOR 470UH	
L402	1-408-429-00	INDUCTOR 470UH	
L407	1-410-999-11	INDUCTOR CHIP 3.3UH	
L1801	1-410-435-21	INDUCTOR 220UH	
L1802	1-410-435-21	INDUCTOR 220UH	
L1803	1-408-403-00	INDUCTOR 3.3UH	
L1804	1-408-409-00	INDUCTOR 10UH	
L1805	1-410-999-11	INDUCTOR CHIP 3.3UH	
L1811	1-216-295-91	CONDUCTOR, CHIP	
L1813	1-216-295-91	CONDUCTOR, CHIP	
L1814	1-408-403-00	INDUCTOR 3.3UH	
		< TRANSISTOR >	
Q411	8-729-901-06	TRANSISTOR DTA144EK	
Q412	8-729-901-06	TRANSISTOR DTA144EK	
Q413	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q415	8-729-900-53	TRANSISTOR DTC114EK	
Q416	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q1801	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1802	8-729-901-01	TRANSISTOR DTC144EK	
Q1804	8-729-901-01	TRANSISTOR DTC144EK	
Q1805	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1808	8-729-901-01	TRANSISTOR DTC144EK	
Q1809	8-729-901-01	TRANSISTOR DTC144EK	
Q1810	8-729-901-01	TRANSISTOR DTC144EK	
Q1812	8-729-620-06	TRANSISTOR 2SC3052-EF	
		< RESISTOR >	
JR401	1-216-295-91	CONDUCTOR, CHIP	
JR402	1-216-295-91	CONDUCTOR, CHIP	
JR403	1-216-295-91	CONDUCTOR, CHIP	
JR404	1-216-295-91	CONDUCTOR, CHIP	
JR405	1-216-295-91	CONDUCTOR, CHIP	
JR406	1-216-295-91	CONDUCTOR, CHIP	
JR407	1-216-295-91	CONDUCTOR, CHIP	
JR408	1-216-295-91	CONDUCTOR, CHIP	
JR409	1-216-049-91	METAL GLAZE 1K 5% 1/10W	

B

REF.NO.	PART NO.	DESCRIPTION	REMARK
JR414	1-216-295-91	CONDUCTOR, CHIP	
JR415	1-216-295-91	CONDUCTOR, CHIP	
JR417	1-216-295-91	CONDUCTOR, CHIP	
JR418	1-216-295-91	CONDUCTOR, CHIP	
JR420	1-216-295-91	CONDUCTOR, CHIP	
JR421	1-216-295-91	CONDUCTOR, CHIP	
JR422	1-216-295-91	CONDUCTOR, CHIP	
JR423	1-216-295-91	CONDUCTOR, CHIP	
JR424	1-216-295-91	CONDUCTOR, CHIP	
JR426	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
JR1814	1-216-295-91	CONDUCTOR, CHIP	
JR1815	1-216-295-91	CONDUCTOR, CHIP	
JR1816	1-216-035-00	METAL GLAZE 270 5% 1/10W	
JR1817	1-216-035-00	METAL GLAZE 270 5% 1/10W	
JR1818	1-216-035-00	METAL GLAZE 270 5% 1/10W	
JR1819	1-216-035-00	METAL GLAZE 270 5% 1/10W	
JR1820	1-216-035-00	METAL GLAZE 270 5% 1/10W	
JR1821	1-216-035-00	METAL GLAZE 270 5% 1/10W	
JR1822	1-216-035-00	METAL GLAZE 270 5% 1/10W	
JR1823	1-216-035-00	METAL GLAZE 270 5% 1/10W	
JR1824	1-216-035-00	METAL GLAZE 270 5% 1/10W	
JR1825	1-216-035-00	METAL GLAZE 270 5% 1/10W	
JR1826	1-216-035-00	METAL GLAZE 270 5% 1/10W	
JR1827	1-216-035-00	METAL GLAZE 270 5% 1/10W	
JR1840	1-216-295-91	CONDUCTOR, CHIP	
JR1843	1-216-295-91	CONDUCTOR, CHIP	
JR1845	1-216-295-91	CONDUCTOR, CHIP	
JR1846	1-216-295-91	CONDUCTOR, CHIP	
JR1866	1-216-295-91	CONDUCTOR, CHIP	
JR1868	1-216-295-91	CONDUCTOR, CHIP	
JR1869	1-216-295-91	CONDUCTOR, CHIP	
JR1870	1-216-295-91	CONDUCTOR, CHIP	
JR1871	1-216-295-91	CONDUCTOR, CHIP	
JR1872	1-216-295-91	CONDUCTOR, CHIP	
JR1873	1-216-295-91	CONDUCTOR, CHIP	
JR1874	1-216-295-91	CONDUCTOR, CHIP	
JR1875	1-216-295-91	CONDUCTOR, CHIP	
JR1890	1-216-295-91	CONDUCTOR, CHIP	
JR1891	1-216-295-91	CONDUCTOR, CHIP	
JR1893	1-216-295-91	CONDUCTOR, CHIP	
JR1894	1-216-295-91	CONDUCTOR, CHIP	
JR1901	1-216-295-91	CONDUCTOR, CHIP	
JR1905	1-216-295-91	CONDUCTOR, CHIP	
JR1910	1-216-295-91	CONDUCTOR, CHIP	
R408	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R409	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R439	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
R443	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R444	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R445	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R446	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R447	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R448	1-216-043-91	METAL GLAZE 560 5% 1/10W	
R449	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R450	1-216-099-00	METAL GLAZE 120K 5% 1/10W	
R451	1-216-101-00	METAL GLAZE 150K 5% 1/10W	
R452	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R453	1-216-017-91	METAL GLAZE 47 5% 1/10W	
R454	1-216-017-91	METAL GLAZE 47 5% 1/10W	
R455	1-216-063-91	METAL GLAZE 3.9K 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R456	1-216-097-91	METAL GLAZE 100K 5% 1/10W	
R457	1-216-099-00	METAL GLAZE 120K 5% 1/10W	
R458	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R459	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R463	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R465	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R466	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R467	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R468	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R469	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R470	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R473	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R477	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R483	1-216-063-91	METAL GLAZE 3.9K 5% 1/10W	
R484	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R487	1-216-295-91	CONDUCTOR, CHIP	
R488	1-216-107-00	METAL GLAZE 270K 5% 1/10W	
R490	1-216-295-91	CONDUCTOR, CHIP	
R491	1-216-107-00	METAL GLAZE 270K 5% 1/10W	
R499	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R1801	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R1802	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1803	1-216-295-91	CONDUCTOR, CHIP	
R1804	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R1805	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1806	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R1807	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1808	1-216-295-91	CONDUCTOR, CHIP	
R1809	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1810	1-216-076-00	METAL GLAZE 13K 5% 1/10W	
R1811	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R1812	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1813	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R1814	1-216-031-00	METAL GLAZE 180 5% 1/10W	
R1815	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R1816	1-216-295-91	CONDUCTOR, CHIP	
R1817	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R1818	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R1819	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1820	1-216-029-00	METAL GLAZE 150 5% 1/10W	
R1821	1-216-023-00	METAL GLAZE 82 5% 1/10W	
R1822	1-216-295-91	CONDUCTOR, CHIP	
R1831	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R1832	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1833	1-216-295-91	CONDUCTOR, CHIP	
R1834	1-216-115-00	METAL GLAZE 560K 5% 1/10W	
R1835	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1844	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R1845	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1846	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R1848	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R1849	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R1850	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R1851	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R1852	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R1853	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R1854	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R1855	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R1856	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R1857	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R1858	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	

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REF.NO.	PART NO.	DESCRIPTION			REMARK
R1859	1-216-017-91	METAL GLAZE	47	5% 1/10W	
R1861	1-216-295-91	CONDUCTOR, CHIP			
R1864	1-216-071-00	METAL GLAZE	8.2K	5% 1/10W	
R1866	1-216-089-91	METAL GLAZE	47K	5% 1/10W	
R1867	1-216-075-00	METAL GLAZE	12K	5% 1/10W	
R1868	1-216-089-91	METAL GLAZE	47K	5% 1/10W	
R1869	1-216-049-91	METAL GLAZE	1K	5% 1/10W	
R1871	1-216-069-00	METAL GLAZE	6.8K	5% 1/10W	
R1878	1-216-295-91	CONDUCTOR, CHIP			
R1879	1-216-049-91	METAL GLAZE	1K	5% 1/10W	
R1880	1-216-085-00	METAL GLAZE	33K	5% 1/10W	
R1881	1-216-065-00	METAL GLAZE	4.7K	5% 1/10W	
R1882	1-216-085-00	METAL GLAZE	33K	5% 1/10W	
R1885	1-216-049-91	METAL GLAZE	1K	5% 1/10W	
R1886	1-216-295-91	CONDUCTOR, CHIP			
R1888	1-216-021-00	METAL GLAZE	68	5% 1/10W	
R1890	1-216-295-91	CONDUCTOR, CHIP			
R1891	1-216-295-91	CONDUCTOR, CHIP			
R1892	1-216-295-91	CONDUCTOR, CHIP			
R1893	1-216-295-91	CONDUCTOR, CHIP			
R1894	1-216-047-91	METAL GLAZE	820	5% 1/10W	
R1895	1-216-067-00	METAL GLAZE	5.6K	5% 1/10W	
R1896	1-216-059-00	METAL GLAZE	2.7K	5% 1/10W	
R1897	1-216-065-00	METAL GLAZE	4.7K	5% 1/10W	
R1901	1-216-059-00	METAL GLAZE	2.7K	5% 1/10W	
R1902	1-216-059-00	METAL GLAZE	2.7K	5% 1/10W	
R1903	1-216-059-00	METAL GLAZE	2.7K	5% 1/10W	
R1904	1-216-059-00	METAL GLAZE	2.7K	5% 1/10W	
R1905	1-216-059-00	METAL GLAZE	2.7K	5% 1/10W	
R1906	1-216-059-00	METAL GLAZE	2.7K	5% 1/10W	
R1907	1-216-059-00	METAL GLAZE	2.7K	5% 1/10W	
R1908	1-216-059-00	METAL GLAZE	2.7K	5% 1/10W	
R1909	1-216-059-00	METAL GLAZE	2.7K	5% 1/10W	
R1910	1-216-059-00	METAL GLAZE	2.7K	5% 1/10W	
R1911	1-216-059-00	METAL GLAZE	2.7K	5% 1/10W	
R1912	1-216-059-00	METAL GLAZE	2.7K	5% 1/10W	
R1920	1-216-295-91	CONDUCTOR, CHIP			
R1922	1-216-025-91	METAL GLAZE	100	5% 1/10W	
R1934	1-216-115-00	METAL GLAZE	560K	5% 1/10W	
R1940	1-216-025-91	METAL GLAZE	100	5% 1/10W	
		< CRYSTAL >			
X401	1-767-343-21	VIBRATOR, CRYSTAL			
X1801	1-579-175-11	VIBRATOR, CERAMIC			
**********					
	*A-1632-664-A	A BOARD, COMPLETE **********			(KV-25X3A/25X3D)
	*A-1632-665-A	A BOARD, COMPLETE **********			(KV-25X3B)
	*A-1632-666-A	A BOARD, COMPLETE **********			(KV-25X3E)
		< CAPACITOR >			
C101	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C102	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C103	1-163-253-11	CERAMIC CHIP	120PF	5% 50V	(KV-25X3B)
C105	1-126-965-11	ELECT	22MF	20% 50V	
C111	1-126-964-11	ELECT	10MF	20% 50V	
C112	1-164-346-11	CERAMIC CHIP	1MF	16V	

REF.NO.	PART NO.	DESCRIPTION			REMARK
C114	1-164-346-11	CERAMIC CHIP	1MF	16V	
C116	1-126-967-11	ELECT	47MF	20% 16V	
C117	1-163-017-00	CERAMIC CHIP	0.0047MF	10% 50V	
C118	1-126-967-11	ELECT	47MF	20% 16V	
C119	1-163-017-00	CERAMIC CHIP	0.0047MF	10% 50V	
C120	1-126-964-11	ELECT	10MF	20% 50V	
C121	1-164-299-11	CERAMIC CHIP	0.22MF	10% 25V	
C122	1-164-346-11	CERAMIC CHIP	1MF	16V	
C126	1-126-967-11	ELECT	47MF	20% 16V	
C127	1-163-017-00	CERAMIC CHIP	0.0047MF	10% 50V	
C128	1-126-967-11	ELECT	47MF	20% 16V	
C129	1-163-017-00	CERAMIC CHIP	0.0047MF	10% 50V	
C130	1-163-133-00	CERAMIC CHIP	470PF	5% 50V	
C131	1-164-346-11	CERAMIC CHIP	1MF	16V	
C132	1-163-133-00	CERAMIC CHIP	470PF	5% 50V	
C133	1-164-346-11	CERAMIC CHIP	1MF	16V	
C134	1-126-964-11	ELECT	10MF	20% 50V	
C135	1-164-299-11	CERAMIC CHIP	0.22MF	10% 25V	
C136	1-126-964-11	ELECT	10MF	20% 50V	
C137	1-164-506-11	CERAMIC CHIP	4.7MF	16V	
C140	1-164-506-11	CERAMIC CHIP	4.7MF	16V	
C141	1-164-506-11	CERAMIC CHIP	4.7MF	16V	
C143	1-163-249-11	CERAMIC CHIP	82PF	5% 50V	(KV-25X3B)
C144	1-163-227-11	CERAMIC CHIP	10PF	0.5PF 50V	(KV-25X3B)
C145	1-163-249-11	CERAMIC CHIP	82PF	5% 50V	(KV-25X3B)
C146	1-164-346-11	CERAMIC CHIP	1MF	16V	
C150	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C151	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C152	1-126-964-11	ELECT	10MF	20% 50V	
C153	1-110-501-11	CERAMIC CHIP	0.33MF	10% 16V	
C154	1-110-501-11	CERAMIC CHIP	0.33MF	10% 16V	
C155	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C156	1-164-506-11	CERAMIC CHIP	4.7MF	16V	
C157	1-164-506-11	CERAMIC CHIP	4.7MF	16V	
C159	1-164-505-11	CERAMIC CHIP	2.2MF	16V	
C160	1-163-251-11	CERAMIC CHIP	100PF	5% 50V	
C162	1-164-346-11	CERAMIC CHIP	1MF	16V	
C163	1-163-009-11	CERAMIC CHIP	0.001MF	10% 50V	
C164	1-164-232-11	CERAMIC CHIP	0.01MF	10% 50V	
C165	1-164-346-11	CERAMIC CHIP	1MF	16V	
C166	1-163-251-11	CERAMIC CHIP	100PF	5% 50V	
C167	1-164-222-11	CERAMIC CHIP	0.22MF	25V	
C200	1-163-251-11	CERAMIC CHIP	100PF	5% 50V	
C201	1-163-243-11	CERAMIC CHIP	47PF	5% 50V	
C202	1-164-506-11	CERAMIC CHIP	4.7MF	16V	
C203	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C204	1-162-568-11	CERAMIC CHIP	0.33MF	10% 16V	
C205	1-164-506-11	CERAMIC CHIP	4.7MF	16V	
C206	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C207	1-110-501-11	CERAMIC CHIP	0.33MF	10% 16V	
C208	1-110-501-11	CERAMIC CHIP	0.33MF	10% 16V	
C209	1-110-501-11	CERAMIC CHIP	0.33MF	10% 16V	
C210	1-110-501-11	CERAMIC CHIP	0.33MF	10% 16V	
C211	1-163-133-00	CERAMIC CHIP	470PF	5% 50V	
C212	1-163-133-00	CERAMIC CHIP	470PF	5% 50V	
C213	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C214	1-164-506-11	CERAMIC CHIP	4.7MF	16V	
C215	1-164-506-11	CERAMIC CHIP	4.7MF	16V	

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REF.NO.	PART NO.	DESCRIPTION		REMARK
C216	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C217	1-126-964-11	ELECT 10MF	20%	50V
C218	1-126-964-11	ELECT 10MF	20%	50V
C219	1-163-131-00	CERAMIC CHIP 390PF	5%	50V
C220	1-163-131-00	CERAMIC CHIP 390PF	5%	50V
C221	1-163-275-11	CERAMIC CHIP 0.001MF	5%	50V
C222	1-163-275-11	CERAMIC CHIP 0.001MF	5%	50V
C223	1-163-275-11	CERAMIC CHIP 0.001MF	5%	50V
C224	1-163-275-11	CERAMIC CHIP 0.001MF	5%	50V
C227	1-165-320-11	CERAMIC CHIP 0.47MF	10%	16V
C228	1-165-320-11	CERAMIC CHIP 0.47MF	10%	16V
C229	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C230	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C231	1-163-087-00	CERAMIC CHIP 4PF	0.25PF	50V
C232	1-163-087-00	CERAMIC CHIP 4PF	0.25PF	50V
C233	1-163-243-11	CERAMIC CHIP 47PF	5%	50V
C234	1-163-243-11	CERAMIC CHIP 47PF	5%	50V
C303	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C304	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C305	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C306	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C307	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C308	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C309	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C310	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C311	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C312	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C313	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C314	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C315	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C316	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C317	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C318	1-164-182-11	CERAMIC CHIP 0.0033MF	10%	50V
C319	1-164-182-11	CERAMIC CHIP 0.0033MF	10%	50V
C320	1-165-320-11	CERAMIC CHIP 0.47MF	10%	16V
C321	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C322	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C323	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C324	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C325	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C350	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C351	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C355	1-163-231-11	CERAMIC CHIP 15PF	5%	50V
C356	1-163-231-11	CERAMIC CHIP 15PF	5%	50V
C357	1-163-241-11	CERAMIC CHIP 39PF	5%	50V
C360	1-163-243-11	CERAMIC CHIP 47PF	5%	50V
C1001	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1002	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1003	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1004	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1005	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1006	1-165-321-11	CERAMIC CHIP 0.68MF	10%	16V
C1007	1-164-157-11	CERAMIC CHIP 0.068MF	10%	25V
C1010	1-126-933-11	ELECT 100MF	20%	16V
C1020	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C1021	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C1022	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C1035	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C1036	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1037	1-163-243-11	CERAMIC CHIP 47PF	5%	50V
C1038	1-163-243-11	CERAMIC CHIP 47PF	5%	50V

REF.NO.	PART NO.	DESCRIPTION		REMARK
C1039	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1040	1-164-222-11	CERAMIC CHIP 0.22MF		25V
C1041	1-164-222-11	CERAMIC CHIP 0.22MF		25V
C1042	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C1043	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C1050	1-104-661-91	ELECT 330MF	20%	16V
C1060	1-163-001-11	CERAMIC CHIP 220PF	10%	50V
C1061	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C1301	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1401	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1402	1-163-231-11	CERAMIC CHIP 15PF	5%	50V
C1403	1-163-231-11	CERAMIC CHIP 15PF	5%	50V
C1404	1-164-182-11	CERAMIC CHIP 0.0033MF	10%	50V
C1405	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1406	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1407	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1408	1-164-182-11	CERAMIC CHIP 0.0033MF	10%	50V
C1409	1-165-320-11	CERAMIC CHIP 0.47MF	10%	16V
C1413	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1414	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1417	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1418	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1420	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1421	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1430	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1431	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1432	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1433	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1434	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1435	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1437	1-163-235-11	CERAMIC CHIP 22PF	5%	50V
C1438	1-163-235-11	CERAMIC CHIP 22PF	5%	50V
C1439	1-163-227-11	CERAMIC CHIP 10PF	0.5PF	50V
C1441	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1442	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1443	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1444	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1445	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1446	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1447	1-165-320-11	CERAMIC CHIP 0.47MF	10%	16V
C1448	1-165-320-11	CERAMIC CHIP 0.47MF	10%	16V
C1450	1-163-231-11	CERAMIC CHIP 15PF	5%	50V
C1451	1-163-231-11	CERAMIC CHIP 15PF	5%	50V
C1452	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1460	1-163-263-11	CERAMIC CHIP 330PF	5%	50V
C1461	1-163-263-11	CERAMIC CHIP 330PF	5%	50V
C1462	1-163-121-00	CERAMIC CHIP 150PF	5%	50V
C1465	1-163-243-11	CERAMIC CHIP 47PF	5%	50V
C2001	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C2002	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C2004	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C2005	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C2007	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C2020	1-164-222-11	CERAMIC CHIP 0.22MF		25V
C2021	1-164-222-11	CERAMIC CHIP 0.22MF		25V
C2023	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C2024	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C2025	1-163-235-11	CERAMIC CHIP 22PF	5%	50V
C2026	1-163-235-11	CERAMIC CHIP 22PF	5%	50V
C2028	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C2029	1-164-222-11	CERAMIC CHIP 0.22MF		25V

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REF.NO.	PART NO.	DESCRIPTION	REMARK
C2030	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C2031	1-164-222-11	CERAMIC CHIP 0.22MF	25V
C2033	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
		< FILTER >	
CD1001	1-527-992-31	OSCILLATOR, CERAMIC	
CF200	1-409-327-00	TRAP, CERAMIC (6.5MHZ)	
		< CONNECTOR >	
CN101	1-695-301-11	CONNECTOR, BOARD TO BOARD 40P	
CN115	*1-564-524-11	PLUG, CONNECTOR 9P	
CN201	1-766-296-11	CONNECTOR, DUAL SCART	
CN310	1-900-901-84	CONNECTOR ASSY, MICRO 9P	
CN1413	1-564-523-11	PLUG, CONNECTOR 8P	
CN2012	*1-564-525-11	PLUG, CONNECTOR 10P	
CP101	1-473-953-11	ADAPTOR, IEC	
		< DIODE >	
D102	8-719-158-49	DIODE RD12SB2	
D103	8-719-158-49	DIODE RD12SB2	
D104	8-719-158-49	DIODE RD12SB2	
D105	8-719-158-49	DIODE RD12SB2	
D199	8-719-914-43	DIODE DAN202K	
D200	8-719-158-49	DIODE RD12SB2	
D201	8-719-158-49	DIODE RD12SB2	
D202	8-719-158-49	DIODE RD12SB2	
D203	8-719-158-49	DIODE RD12SB2	
D204	8-719-158-49	DIODE RD12SB2	
D205	8-719-158-49	DIODE RD12SB2	
D206	8-719-158-49	DIODE RD12SB2	
D207	8-719-158-49	DIODE RD12SB2	
D208	8-719-158-49	DIODE RD12SB2	
D209	8-719-158-49	DIODE RD12SB2	
D210	8-719-158-49	DIODE RD12SB2	
D211	8-719-158-49	DIODE RD12SB2	
D212	8-719-158-49	DIODE RD12SB2	
D213	8-719-158-49	DIODE RD12SB2	
D214	8-719-158-49	DIODE RD12SB2	
D215	8-719-158-49	DIODE RD12SB2	
D217	8-719-158-49	DIODE RD12SB2	
D218	8-719-158-49	DIODE RD12SB2	
D219	8-719-158-49	DIODE RD12SB2	
D220	8-719-158-49	DIODE RD12SB2	
D221	8-719-158-49	DIODE RD12SB2	
D301	8-719-401-41	DIODE MA3051L-TX	
D305	8-719-988-62	DIODE 1SS355	
D1007	8-719-914-44	DIODE DAP202K	
D1008	8-719-914-43	DIODE DAN202K	
D1009	8-719-105-91	DIODE RD5.6M-B2	
D1010	8-719-105-91	DIODE RD5.6M-B2	
D1012	8-719-914-43	DIODE DAN202K	
D1403	8-719-988-62	DIODE 1SS355	
D1405	8-719-914-42	DIODE DA204K	
		< FERRITE BEAD >	
FB101	1-414-235-11	INDUCTOR, FERRITE BEAD	
FB102	1-414-235-11	INDUCTOR, FERRITE BEAD	
FB2001	1-216-295-91	CONDUCTOR, CHIP	

REF.NO.	PART NO.	DESCRIPTION	REMARK
		< ENCAPSULATED FILTER >	
FL102	1-236-071-11	ENCAPSULATED COMPONENT	
FL103	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FL200	1-236-071-11	ENCAPSULATED COMPONENT	
FL201	1-233-764-21	FILTER	
FL202	1-236-071-11	ENCAPSULATED COMPONENT	
FL203	1-236-071-11	ENCAPSULATED COMPONENT	
FL302	1-236-071-11	ENCAPSULATED COMPONENT	
FL1001	1-236-071-11	ENCAPSULATED COMPONENT	
FL1002	1-236-071-11	ENCAPSULATED COMPONENT	
FL1402	1-236-071-11	ENCAPSULATED COMPONENT	
FL1403	1-236-071-11	ENCAPSULATED COMPONENT	
FL1404	1-236-071-11	ENCAPSULATED COMPONENT	
FL1405	1-236-071-11	ENCAPSULATED COMPONENT	
FL2001	1-236-071-11	ENCAPSULATED COMPONENT	
FL2003	1-236-071-11	ENCAPSULATED COMPONENT	
		< IC >	
IC101	8-752-068-45	IC CXA1855Q	
IC102	8-759-267-25	IC LM2940CT-9.0	
IC104	8-759-514-57	IC BA7046F	
IC201	8-759-438-00	IC MSP3400C-PS-C6-T	(KV-25X3A/25X3D)
	8-759-437-33	IC MSP3410B-PS-F7-T-ND	(KV-25X3B/25X3E)
IC302	8-759-447-68	IC TDA9143/N1	
IC303	8-759-288-85	IC TDA4665T-T	
IC1001	8-759-442-44	IC SDA30C164-2-GEG	
IC1002	8-759-444-64	IC 15C1-AE405	
	1-750-797-11	SOCKET, PLCC (IC1002)	
IC1003	8-759-378-21	IC ST24C16FB6	
IC1004	8-759-259-18	IC MB3793-42PNF	
IC1006	8-759-988-13	IC LM393PS	
IC1401	8-759-447-68	IC TDA9143/N1	
IC1403	8-759-438-61	IC SDA9288X-A141	
IC2001	8-759-452-22	IC SDA5273P-C134-G	
		< COIL >	
L101	1-412-751-11	INDUCTOR 18UH	(KV-25X3B)
L321	1-412-006-31	INDUCTOR CHIP 10UH	
L1401	1-410-428-11	INDUCTOR 56UH	
		< TRANSISTOR >	
Q102	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q103	8-729-039-67	TRANSISTOR BSS83	(KV-25X3B)
Q104	8-729-620-06	TRANSISTOR 2SC3052-EF	(KV-25X3B)
Q106	8-729-216-22	TRANSISTOR 2SA1162-G	(KV-25X3B)
Q107	8-729-216-22	TRANSISTOR 2SA1162-G	
Q108	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q109	8-729-216-22	TRANSISTOR 2SA1162-G	
Q110	8-729-038-96	TRANSISTOR IMZ1A-T109	
Q112	8-729-216-22	TRANSISTOR 2SA1162-G	
Q113	8-729-216-22	TRANSISTOR 2SA1162-G	
Q120	8-729-901-00	TRANSISTOR DTC124E	
Q200	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q205	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q301	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q302	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q315	8-729-038-96	TRANSISTOR IMZ1A-T109	
Q316	8-729-038-96	TRANSISTOR IMZ1A-T109	
Q317	8-729-038-96	TRANSISTOR IMZ1A-T109	
Q1001	8-729-620-06	TRANSISTOR 2SC3052-EF	(KV-25X3B)

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REF.NO.	PART NO.	DESCRIPTION	REMARK
Q1015	8-729-900-53	TRANSISTOR DTC114EK	
Q1301	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1305	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1311	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q1312	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q1401	8-729-038-96	TRANSISTOR IMZ1A-T109	
Q1402	8-729-038-96	TRANSISTOR IMZ1A-T109	
Q1403	8-729-038-96	TRANSISTOR IMZ1A-T109	
Q1404	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q1411	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q1412	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q2005	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q2006	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q2007	8-729-027-59	TRANSISTOR DTC144EKA-T146	
		< RESISTOR >	
JR201	1-216-295-91	CONDUCTOR, CHIP	
JR202	1-216-295-91	CONDUCTOR, CHIP	
JR301	1-216-295-91	CONDUCTOR, CHIP	
JR302	1-216-295-91	CONDUCTOR, CHIP	
JR303	1-216-295-91	CONDUCTOR, CHIP	
JR1001	1-216-295-91	CONDUCTOR, CHIP	
JR1002	1-216-295-91	CONDUCTOR, CHIP	
JR1003	1-216-295-91	CONDUCTOR, CHIP	
JR1004	1-216-295-91	CONDUCTOR, CHIP	
JR1008	1-216-025-91	METAL GLAZE 100 5% 1/10W	
JR1009	1-216-025-91	METAL GLAZE 100 5% 1/10W	
JR1010	1-216-025-91	METAL GLAZE 100 5% 1/10W	
JR1011	1-216-025-91	METAL GLAZE 100 5% 1/10W	
JR1301	1-216-295-91	CONDUCTOR, CHIP	
JR1302	1-216-295-91	CONDUCTOR, CHIP	
JR1402	1-216-295-91	CONDUCTOR, CHIP	
JR1403	1-216-295-91	CONDUCTOR, CHIP	
R101	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R102	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R103	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R104	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R106	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R107	1-216-295-91	CONDUCTOR CHIP	(KV-25X3A/25X3D/25X3E)
R108	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R109	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R110	1-216-097-91	METAL GLAZE 100K 5% 1/10W	
R111	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R112	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R113	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R114	1-216-311-00	METAL GLAZE 6.8 5% 1/10W	
R115	1-216-311-00	METAL GLAZE 6.8 5% 1/10W	
R116	1-216-311-00	METAL GLAZE 6.8 5% 1/10W	
R117	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R118	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R119	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R120	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R121	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R122	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R123	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R124	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R126	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R127	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R128	1-216-113-00	METAL GLAZE 470K 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R129	1-216-643-11	METAL CHIP 470 0.50% 1/10W	(KV-25X3B)
R130	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R131	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R132	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R133	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R134	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R135	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R136	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R137	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R138	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R139	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R141	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R142	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R143	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R144	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R148	1-216-643-11	METAL CHIP 470 0.50% 1/10W	(KV-25X3B)
R149	1-216-073-00	METAL GLAZE 10K 5% 1/10W	(KV-25X3B)
R150	1-216-049-91	METAL GLAZE 1K 5% 1/10W	(KV-25X3B)
R151	1-216-643-11	METAL CHIP 470 0.50% 1/10W	(KV-25X3B)
R152	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R153	1-216-311-00	METAL GLAZE 6.8 5% 1/10W	
R154	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R156	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	(KV-25X3B)
R157	1-216-025-91	METAL GLAZE 100 5% 1/10W	(KV-25X3B)
R159	1-216-304-11	METAL GLAZE 3.3 5% 1/10W	
R160	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R162	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R163	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R164	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R165	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R166	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R167	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R168	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R169	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R170	1-216-021-00	METAL GLAZE 68 5% 1/10W	
R171	1-216-021-00	METAL GLAZE 68 5% 1/10W	
R172	1-216-021-00	METAL GLAZE 68 5% 1/10W	
R173	1-216-021-00	METAL GLAZE 68 5% 1/10W	
R174	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R175	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R176	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R177	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R178	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R179	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R180	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R181	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R182	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R183	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R184	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R185	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R186	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R187	1-216-107-00	METAL GLAZE 270K 5% 1/10W	
R188	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R189	1-218-755-11	METAL CHIP 130K 0.50% 1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R190	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R191	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R192	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R193	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R194	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R195	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R196	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R197	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R198	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R199	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R200	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R201	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R202	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R203	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R204	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R205	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R207	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R208	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R213	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R214	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R215	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R230	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R272	1-216-295-91	CONDUCTOR, CHIP				
R311	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R312	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R313	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R314	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R315	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R317	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R318	1-220-860-91	RESISTER	0			
R330	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R331	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R332	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R333	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R334	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R335	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R336	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R337	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R338	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R340	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R341	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R342	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R345	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R351	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R352	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R353	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R355	1-216-284-00	METAL GLAZE	3.9M	5%	1/8W	
R374	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1001	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1011	1-216-295-91	CONDUCTOR, CHIP				
R1012	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1030	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1033	1-216-295-91	CONDUCTOR, CHIP				
R1034	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1036	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1037	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1038	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1039	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1040	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1041	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1042	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1044	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1045	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1046	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1050	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1051	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1052	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1053	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1056	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1059	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1060	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1061	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1062	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1063	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1070	1-216-295-91	CONDUCTOR, CHIP				
R1071	1-216-295-91	CONDUCTOR, CHIP				
R1075	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1076	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1077	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1078	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1079	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1301	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1302	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1303	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1304	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1325	1-216-009-00	METAL GLAZE	22	5%	1/10W	
R1340	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1341	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1342	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R1344	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1401	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R1402	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R1403	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1404	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1406	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1407	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1408	1-220-860-91	RESISTER	0			
R1410	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1411	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1412	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1413	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1414	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1415	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1416	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1417	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1418	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1420	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1421	1-216-047-91	METAL GLAZE	820	5%	1/10W	
R1422	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R1423	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1424	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1425	1-216-047-91	METAL GLAZE	820	5%	1/10W	
R1430	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1431	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1433	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R1434	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R1435	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R1436	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1440	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1441	1-216-049-91	METAL GLAZE	1K	5%	1/10W	

A G

The components identified by shading and marked ⚠ are critical for safety.
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REF.NO.	PART NO.	DESCRIPTION				REMARK
R1442	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1450	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R1451	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R1452	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R1455	1-216-284-00	METAL GLAZE	3.9M	5%	1/8W	
R1461	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1462	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R2001	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R2002	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R2019	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R2020	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2021	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2022	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2023	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R2024	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R2025	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R2026	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R2027	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R2028	1-216-009-00	METAL GLAZE	22	5%	1/10W	
R2031	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R2032	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R2033	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R2034	1-216-295-91	CONDUCTOR, CHIP				
R2035	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R2037	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R2040	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2041	1-216-025-91	METAL GLAZE	100	5%	1/10W	
		< TUNER >				
TU101	1-693-338-11	TUNER (TUVIF)(AEP)				(KV-25X3A/25X3D/25X3E)
	1-693-340-11	TUNER (TUVIF)(FR)				(KV-25X3B)
		< CRYSTAL >				
X200	1-760-628-11	VIBRATOR, CRYSTAL				
X301	1-567-505-11	OSCILLATOR, CRYSTAL				
X302	1-567-504-11	OSCILLATOR, CRYSTAL				
X1001	1-760-551-21	VIBRATOR, CERAMIC				
X1401	1-567-505-11	OSCILLATOR, CRYSTAL				
X1402	1-567-504-11	OSCILLATOR, CRYSTAL				
X1403	1-760-551-21	VIBRATOR, CERAMIC				
**********						
	*A-1636-024-A	G BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C602	1-165-127-11	CERAMIC	470PF	10%	500V	
C603	1-165-127-11	CERAMIC	470PF	10%	500V	
C604	1-136-171-00	FILM	0.33MF	5%	50V	
C605	1-137-399-11	FILM	0.1MF	5%	50V	
C606	1-136-171-00	FILM	0.33MF	5%	50V	
C607	1-137-399-11	FILM	0.1MF	5%	50V	
C608	1-164-625-11	CERAMIC	680PF	10%	500V	
C609	1-129-718-00	FILM	0.022MF	5%	630V	
C610	1-126-953-11	ELECT	2200MF	20%	35V	
C611	1-126-953-11	ELECT	2200MF	20%	35V	
C612	1-104-665-11	ELECT	100MF	20%	25V	
C613	1-128-548-11	ELECT	4700MF	20%	25V	
C614	1-128-548-11	ELECT	4700MF	20%	25V	

REF.NO.		PART NO.	DESCRIPTION			REMARK
C615		1-110-626-11	ELECT	330MF	20%	160V
C616		1-164-625-11	CERAMIC	680PF	10%	500V
C617		1-136-559-11	MYLAR	0.0047MF	10%	400V
C618		1-104-989-91	FILM	0.0022MF	5%	200V
C621	⚠	1-136-519-12	FILM	0.47MF	20%	300V
C622	⚠	1-136-518-12	FILM	0.33MF	20%	300V
C624	⚠	1-113-890-61	CERAMIC	0.0022MF	20%	250V
C626	⚠	1-113-890-61	CERAMIC	0.0022MF	20%	250V
C627		1-126-767-11	ELECT	1000MF	20%	16V
C628		1-104-665-11	ELECT	100MF	20%	25V
C629		1-162-599-12	CERAMIC	0.0047MF		250V
C630		1-162-599-12	CERAMIC	0.0047MF		250V
C631	⚠	1-161-964-91	CERAMIC	0.0047MF		250V
C632		1-535-143-11	LEAD, JUMPER (10.0MM)			
C633		1-125-555-11	ELECT	330MF	20%	400V
C634		1-535-143-31	LEAD, JUMPER (15.0MM)			
C635		1-136-165-00	FILM	0.1MF	5%	50V
C636		1-136-165-00	FILM	0.1MF	5%	50V
C642		1-161-744-00	CERAMIC	0.01MF		400V
C648		1-101-001-00	CERAMIC	0.001MF		50V
C650		1-126-964-11	ELECT	10MF	20%	50V
C651		1-136-171-00	FILM	0.33MF	5%	50V
C662		1-126-943-11	ELECT	2200MF	20%	25V
C663		1-126-964-11	ELECT	10MF	20%	50V
C664		1-102-129-00	CERAMIC	0.01MF	10%	50V
C665		1-126-940-11	ELECT	330MF	20%	25V
			< CONNECTOR >			
CN0008	⚠	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P			
CN0009	⚠	1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P			
CN0701		1-573-299-21	CONNECTOR, BOARD TO BOARD 10P			
CN0702		1-695-300-11	CONNECTOR, BOARD TO BOARD 20P			
CN0703	⚠	*1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P			
			< DIODE >			
D601		8-719-510-53	DIODE D4SB60L			
D602		8-719-991-33	DIODE 1SS133T-77			
D603		8-719-109-89	DIODE RD5.6ESB2			
D604		1-535-303-00	LEAD, JUMPER (5.0MM)			
D605		8-719-047-31	DIODE RBA-402L			
D607		8-719-510-12	DIODE D10SC4M			
		4-382-854-11	SCREW (M3X10), P, SW (+) (D607)			
D608		8-719-510-12	DIODE D10SC4M			
		4-382-854-11	SCREW (M3X10), P, SW (+) (D608)			
D609		8-719-047-31	DIODE RBA-402L			
D610		8-719-312-39	DIODE R2K-V1			
D611		8-719-510-64	DIODE S2LA20F			
D614		8-719-911-19	DIODE 1SS119-25			
D615		8-719-911-19	DIODE 1SS119-25			
D616		8-719-911-19	DIODE 1SS119-25			
D617		8-719-911-19	DIODE 1SS119-25			
D618		8-719-911-19	DIODE 1SS119-25			
D619		8-719-911-19	DIODE 1SS119-25			
D620		8-719-911-19	DIODE 1SS119-25			
D621		8-719-911-19	DIODE 1SS119-25			
D622		8-719-510-64	DIODE S2LA20F			
D625		8-719-911-19	DIODE 1SS119-25			
D626		8-719-911-19	DIODE 1SS119-25			
D627		8-719-911-19	DIODE 1SS119-25			
D628		8-719-911-19	DIODE 1SS119-25			
D629		8-719-991-33	DIODE 1SS133T-77			

G C

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REF.NO.		PART NO.	DESCRIPTION					REMARK
D634		8-719-510-64	DIODE S2LA20F					
D635		8-719-991-33	DIODE 1SS133T-77					
D636		8-719-511-40	DIODE S1VB40					
D637		8-719-991-33	DIODE 1SS133T-77					
D638		8-719-991-33	DIODE 1SS133T-77					
			< FERRITE BEAD >					
FB601		1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH					
FB602		1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH					
FB603		1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH					
FB604		1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH					
			< IC >					
IC601		1-810-051-11	POWER MODULE DM-48					
IC602	⚠	8-749-010-64	PHOTO COUPLER PC123FY2					
IC605		8-759-510-52	IC L4941BV					
			< COIL >					
L604		1-535-303-00	LEAD, JUMPER (5.0MM)					
L605		1-412-523-11	INDUCTOR 6.8UH					
L606		1-412-523-11	INDUCTOR 6.8UH					
			< IC LINK >					
PS601	⚠	1-801-550-21	PROTECTOR MODULE 2.5A/MP250					
PS602	⚠	1-801-550-21	PROTECTOR MODULE 2.5A/MP250					
PS604	⚠	1-801-550-21	PROTECTOR MODULE 2.5A/MP250					
PS605	⚠	1-801-549-21	PROTECTOR MODULE 2.5A/MP250					
			< TRANSISTOR >					
Q601		8-729-032-87	TRANSISTOR 2SC4834NP-F09					
		4-382-854-11	SCREW (M3X10), P, SW (+) (Q601)					
Q602		8-729-032-87	TRANSISTOR 2SC4834NP-F09					
		4-382-854-11	SCREW (M3X10), P, SW (+) (Q602)					
Q603		8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q604		8-729-200-21	TRANSISTOR 2SC2500-B					
Q605		8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q608		8-729-200-21	TRANSISTOR 2SC2500-B					
Q610		8-729-119-76	TRANSISTOR 2SA1175-HFE					
Q611		8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q612		8-729-119-76	TRANSISTOR 2SA1175-HFE					
Q615		8-729-200-21	TRANSISTOR 2SC2500-B					
Q621		8-729-200-21	TRANSISTOR 2SC2500-B					
			< RESISTOR >					
R601		1-202-933-61	FUSIBLE	0.1	10%	1/2W	F	
R602		1-247-891-00	CARBON	330K	5%	1/4W		
R603		1-247-891-00	CARBON	330K	5%	1/4W		
R604		1-216-369-00	METAL OXIDE	1	5%	2W	F	
R605		1-247-891-00	CARBON	330K	5%	1/4W		
R606		1-247-891-00	CARBON	330K	5%	1/4W		
R607		1-216-369-00	METAL OXIDE	1	5%	2W	F	
R608		1-247-887-00	CARBON	220K	5%	1/4W		
R609		1-249-429-11	CARBON	10K	5%	1/4W	F	
R610		1-249-419-11	CARBON	1.5K	5%	1/4W	F	
R611		1-249-377-11	CARBON	0.47	5%	1/4W	F	
R614		1-247-807-31	CARBON	100	5%	1/4W		
R616	⚠	1-202-961-11	WIREWOUND	1.8	5%	10W		
R618	⚠	1-202-961-11	WIREWOUND	1.8	5%	10W		
R619	⚠	1-244-945-91	CARBON	1M	5%	1/2W		
R620	⚠	1-218-265-11	METAL	8.2M	5%	1W		
R621		1-249-417-11	CARBON	1K	5%	1/4W	F	
R622		1-249-421-11	CARBON	2.2K	5%	1/4W		
R623		1-249-430-11	CARBON	12K	5%	1/4W		
R624		1-249-425-11	CARBON	4.7K	5%	1/4W		
R625		1-247-815-91	CARBON	220	5%	1/4W		
R626		1-247-863-91	CARBON	22K	5%	1/4W		
R627		1-247-815-91	CARBON	220	5%	1/4W		
R628		1-247-885-00	CARBON	180K	5%	1/4W		
R636		1-207-905-00	WIREWOUND	0.27	10%	2W	F	
R639		1-247-791-91	CARBON	22	5%	1/4W		
R640		1-247-791-91	CARBON	22	5%	1/4W		
R641		1-247-791-91	CARBON	22	5%	1/4W		
R642		1-247-791-91	CARBON	22	5%	1/4W		
R643		1-535-143-61	LEAD, JUMPER (5.0MM)					
R651		1-215-880-00	METAL OXIDE	10	5%	2W	F	
R652		1-247-891-00	CARBON	330K	5%	1/4W		
R653		1-247-891-00	CARBON	330K	5%	1/4W		
R654		1-247-891-00	CARBON	330K	5%	1/4W		
R655		1-247-891-00	CARBON	330K	5%	1/4W		
R656		1-249-439-11	CARBON	68K	5%	1/4W		
R657		1-249-429-11	CARBON	10K	5%	1/4W		
R658		1-249-421-11	CARBON	2.2K	5%	1/4W		
R659		1-249-425-11	CARBON	4.7K	5%	1/4W		
R660		1-249-429-11	CARBON	10K	5%	1/4W		
R661		1-249-421-11	CARBON	2.2K	5%	1/4W		
R662		1-249-421-11	CARBON	2.2K	5%	1/4W		
R663		1-249-429-11	CARBON	10K	5%	1/4W		
R664		1-249-429-11	CARBON	10K	5%	1/4W		
R667		1-249-377-11	CARBON	0.47	5%	1/4W	F	
R670		1-249-421-11	CARBON	2.2K	5%	1/4W		
R682		1-247-688-11	CARBON	10	5%	1/4W	F	
			< RELAY >					
RY601	⚠	1-755-167-11	RELAY, AC POWER					
RY602	⚠	1-755-167-11	RELAY, AC POWER					
			< TRANSFORMER >					
LF602	⚠	1-429-860-11	TRANSFORMER, LINE FILTER					
T601	⚠	1-429-844-11	TRANSFORMER, CONVERTER (PIT)					
T602	⚠	1-429-254-11	TRANSFORMER, CONVERTER (PRT)					
T603	⚠	1-429-952-11	TRANSFORMER, POWER					
			< THERMISTOR >					
THP601	⚠	1-809-827-11	THERMISTOR, POSITIVE					
VDR601		1-810-977-21	VARISTOR ERZV10D621					
**********								
		*A-1638-105-A	C BOARD, COMPLETE					
			**********					
			< CAPACITOR >					
C3701		1-162-114-00	CERAMIC	0.0047MF		2KV		
C3703		1-107-662-11	ELECT	22MF	20%	250V		
C3712		1-102-978-00	CERAMIC	220PF	5%	50V		
C3713		1-102-978-00	CERAMIC	220PF	5%	50V		
C3714		1-102-978-00	CERAMIC	220PF	5%	50V		
C3716		1-128-528-11	ELECT	470MF	20%	16V		
C3720		1-162-116-00	CERAMIC	680PF	10%	2KV		

C

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REF.NO.	PART NO.	DESCRIPTION	REMARK
		< CONNECTOR >	
CN3701	1-695-915-11	TAB (CONTACT)	
CN3703	*1-564-512-11	PLUG, CONNECTOR 9P	
CN3704	*1-508-767-00	PIN, CONNECTOR (5MM PITCH) 5P	
		< DIODE >	
D3701	8-719-991-33	DIODE 1SS133T-77	
D3702	8-719-991-33	DIODE 1SS133T-77	
D3703	8-719-991-33	DIODE 1SS133T-77	
D3704	8-719-991-33	DIODE 1SS133T-77	
D3705	8-719-991-33	DIODE 1SS133T-77	
D3706	8-719-991-33	DIODE 1SS133T-77	
D3707	8-719-991-33	DIODE 1SS133T-77	
D3708	8-719-991-33	DIODE 1SS133T-77	
D3709	8-719-991-33	DIODE 1SS133T-77	
D3710	8-719-908-03	DIODE GP08D	
D3714	8-719-991-33	DIODE 1SS133T-77	
D3715	8-719-031-34	DIODE RGP02-20EG23	
D3716	8-719-991-33	DIODE 1SS133T-77	
D3717	8-719-991-33	DIODE 1SS133T-77	
D3718	8-719-991-33	DIODE 1SS133T-77	
D3719	8-719-991-33	DIODE 1SS133T-77	
		< CRT SOCKET >	
J3701 ⚠	1-526-990-21	SOCKET, CRT	
		< COIL >	
L3701	1-408-607-31	INDUCTOR 22UH	
L3702	1-408-607-31	INDUCTOR 22UH	
L3703	1-408-409-00	INDUCTOR 10UH	
L3704	1-408-607-31	INDUCTOR 22UH	
L3705	1-408-409-00	INDUCTOR 10UH	
L3706	1-408-607-31	INDUCTOR 22UH	
L3707	1-408-409-00	INDUCTOR 10UH	
L3708	1-412-528-11	INDUCTOR 18UH	
L3709	1-408-409-00	INDUCTOR 10UH	
		< TRANSISTOR >	
Q3701	8-729-906-70	TRANSISTOR BF871-127	
Q3702	8-729-906-70	TRANSISTOR BF871-127	
Q3703	8-729-906-70	TRANSISTOR BF871-127	
Q3704	8-729-326-11	TRANSISTOR 2SC2611	
	4-382-854-11	SCREW (M3X10), P, SW (+) (Q3704)	
Q3705	8-729-326-11	TRANSISTOR 2SC2611	
	4-382-854-11	SCREW (M3X10), P, SW (+) (Q3705)	
Q3706	8-729-326-11	TRANSISTOR 2SC2611	
	4-382-854-11	SCREW (M3X10), P, SW (+) (Q3706)	
Q3707	8-729-200-17	TRANSISTOR BF421L-AMMO	
Q3708	8-729-200-17	TRANSISTOR BF421L-AMMO	
Q3709	8-729-200-17	TRANSISTOR BF421L-AMMO	
Q3710	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q3711	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q3712	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q3715	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q3716	8-729-906-70	TRANSISTOR BF871-127	
Q3717	8-729-906-70	TRANSISTOR BF871-127	
Q3718	8-729-906-70	TRANSISTOR BF871-127	

REF.NO.	PART NO.	DESCRIPTION				REMARK
		< RESISTOR >				
R3701	1-202-884-11	SOLID	820K	20%	1/2W	
R3702	1-202-884-11	SOLID	820K	20%	1/2W	
R3703	1-202-549-00	SOLID	100	20%	1/2W	
R3705	1-216-349-00	METAL OXIDE	1	5%	1W	F
R3706	1-216-349-00	METAL OXIDE	1	5%	1W	F
R3707	1-249-416-11	CARBON	820	5%	1/4W	
R3708	1-249-416-11	CARBON	820	5%	1/4W	
R3709	1-249-416-11	CARBON	820	5%	1/4W	
R3710	1-215-922-11	METAL OXIDE	6.8K	5%	3W	F
R3711	1-202-565-00	SOLID	470	20%	1/2W	
R3712	1-215-922-11	METAL OXIDE	6.8K	5%	3W	F
R3713	1-202-565-00	SOLID	470	20%	1/2W	
R3714	1-215-922-11	METAL OXIDE	6.8K	5%	3W	F
R3715	1-202-565-00	SOLID	470	20%	1/2W	
R3716	1-249-405-11	CARBON	100	5%	1/4W	F
R3717	1-249-405-11	CARBON	100	5%	1/4W	F
R3718	1-249-405-11	CARBON	100	5%	1/4W	F
R3720	1-249-417-11	CARBON	1K	5%	1/4W	F
R3721	1-247-885-00	CARBON	180K	5%	1/4W	
R3722	1-249-417-11	CARBON	1K	5%	1/4W	F
R3723	1-247-885-00	CARBON	180K	5%	1/4W	
R3724	1-249-417-11	CARBON	1K	5%	1/4W	F
R3725	1-249-419-11	CARBON	1.5K	5%	1/4W	
R3726	1-249-419-11	CARBON	1.5K	5%	1/4W	
R3727	1-249-419-11	CARBON	1.5K	5%	1/4W	
R3728	1-247-815-91	CARBON	220	5%	1/4W	
R3729	1-247-815-91	CARBON	220	5%	1/4W	
R3730	1-247-815-91	CARBON	220	5%	1/4W	
R3731	1-249-403-11	CARBON	68	5%	1/4W	
R3732	1-249-403-11	CARBON	68	5%	1/4W	
R3733	1-249-403-11	CARBON	68	5%	1/4W	
R3734	1-202-549-00	SOLID	100	20%	1/2W	
R3735	1-247-885-00	CARBON	180K	5%	1/4W	
R3738	1-249-401-11	CARBON	47	5%	1/4W	
R3739	1-249-401-11	CARBON	47	5%	1/4W	
R3740	1-249-401-11	CARBON	47	5%	1/4W	
R3741	1-249-435-11	CARBON	33K	5%	1/4W	
R3742	1-249-429-11	CARBON	10K	5%	1/4W	
R3743	1-249-430-11	CARBON	12K	5%	1/4W	
R3747	1-216-437-00	METAL OXIDE	5.6K	5%	1W	F
R3748	1-247-885-00	CARBON	180K	5%	1/4W	
R3749	1-216-437-00	METAL OXIDE	5.6K	5%	1W	F
R3750	1-249-432-11	CARBON	18K	5%	1/4W	
R3751	1-216-437-00	METAL OXIDE	5.6K	5%	1W	F
R3752	1-249-431-11	CARBON	15K	5%	1/4W	
R3758	1-247-807-31	CARBON	100	5%	1/4W	
R3759	1-247-807-31	CARBON	100	5%	1/4W	
R3760	1-247-807-31	CARBON	100	5%	1/4W	
R3761	1-249-418-11	CARBON	1.2K	5%	1/4W	
R3762	1-249-418-11	CARBON	1.2K	5%	1/4W	
R3763	1-249-418-11	CARBON	1.2K	5%	1/4W	
		< VARIABLE RESISTOR >				
RV3701	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M				
RV3702	1-241-714-11	RES, ADJ, METAL FILM 110M				

D

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REF.NO.	PART NO.	DESCRIPTION			REMARK
	*A-1640-282-A	D BOARD, COMPLETE **********			
	4-201-023-01	SPACER, INSULATING			
		< CAPACITOR >			
C101	1-126-965-11	ELECT	22MF	20%	50V
C236	1-136-165-00	FILM	0.1MF	5%	50V
C237	1-136-165-00	FILM	0.1MF	5%	50V
C238	1-126-967-11	ELECT	47MF	20%	16V
C241	1-126-967-11	ELECT	47MF	20%	16V
C242	1-126-953-11	ELECT	2200MF	20%	35V
C243	1-136-165-00	FILM	0.1MF	5%	50V
C244	1-126-953-11	ELECT	2200MF	20%	35V
C245	1-136-165-00	FILM	0.1MF	5%	50V
C260	1-126-933-11	ELECT	100MF	20%	16V
C261	1-126-933-11	ELECT	100MF	20%	16V
C262	1-104-665-11	ELECT	100MF	20%	25V
C263	1-136-165-00	FILM	0.1MF	5%	50V
C264	1-104-661-91	ELECT	330MF	20%	16V
C265	1-136-165-00	FILM	0.1MF	5%	50V
C266	1-104-665-11	ELECT	100MF	20%	25V
C269	1-126-967-11	ELECT	47MF	20%	16V
C271	1-126-965-11	ELECT	22MF	20%	50V
C273	1-136-161-00	FILM	0.047MF	5%	50V
C274	1-126-961-11	ELECT	2.2MF	20%	50V
C275	1-126-961-11	ELECT	2.2MF	20%	50V
C276	1-126-967-11	ELECT	47MF	20%	16V
C277	1-126-934-11	ELECT	220MF	20%	16V
C278	1-107-714-11	ELECT	10MF	20%	16V
C280	1-136-169-00	FILM	0.22MF	5%	50V
C281	1-126-967-11	ELECT	47MF	20%	16V
C283	1-136-169-00	FILM	0.22MF	5%	50V
C286	1-126-968-11	ELECT	100MF	20%	50V
C620	1-126-964-11	ELECT	10MF	20%	50V
C639	1-126-964-11	ELECT	10MF	20%	50V
C652	1-136-171-00	FILM	0.33MF	5%	50V
C653	1-126-965-11	ELECT	22MF	20%	50V
C654	1-104-664-11	ELECT	47MF	20%	25V
C656	1-126-967-11	ELECT	47MF	20%	16V
C657	1-136-165-00	FILM	0.1MF	5%	50V
C658	1-136-165-00	FILM	0.1MF	5%	50V
C659	1-136-165-00	FILM	0.1MF	5%	50V
C660	1-136-164-00	FILM	0.082MF	5%	50V
C666	1-104-661-91	ELECT	330MF	20%	16V
C667	1-136-165-00	FILM	0.1MF	5%	50V
C668	1-136-165-00	FILM	0.1MF	5%	50V
C669	1-126-933-11	ELECT	100MF	20%	16V
C670	1-136-165-00	FILM	0.1MF	5%	50V
C671	1-136-165-00	FILM	0.1MF	5%	50V
C672	1-126-967-11	ELECT	47MF	20%	16V
C801	1-123-024-21	ELECT	33MF		160V
C802	1-136-207-11	FILM	0.047MF	10%	250V
C805	1-102-212-00	CERAMIC	820PF	10%	500V
C807	1-162-134-11	CERAMIC	470PF	10%	2KV
C808	1-162-116-00	CERAMIC	680PF	10%	2KV
C809	1-162-116-00	CERAMIC	680PF	10%	2KV
C810	1-136-558-11	FILM	0.0039MF	10%	400V
C811	1-113-582-11	FILM	0.017MF	3%	2KV
C812	1-136-759-11	FILM	0.039MF	5%	630V
C813	1-109-961-11	FILM	0.75MF	5%	400V
C814	1-129-702-00	FILM	0.001MF	10%	400V
C816	1-110-486-11	FILM	1MF	5%	400V
C817	1-136-759-11	FILM	0.039MF	5%	630V
C819	1-136-207-11	FILM	0.047MF	10%	250V
C822	1-126-967-11	ELECT	47MF	20%	50V
C823	1-102-129-00	CERAMIC	0.01MF	10%	50V
C824	1-102-228-00	CERAMIC	470PF	10%	500V
C825	1-126-964-11	ELECT	10MF	20%	50V
C827	1-102-228-00	CERAMIC	470PF	10%	500V
C828	1-102-030-00	CERAMIC	330PF	10%	500V
C835	1-107-655-11	ELECT	47MF	20%	250V
C836	1-102-228-00	CERAMIC	470PF	10%	500V
C837	1-102-228-00	CERAMIC	470PF	10%	500V
C838	1-102-228-00	CERAMIC	470PF	10%	500V
C841	1-106-375-12	MYLAR	0.022MF	10%	250V
C846	1-107-909-11	ELECT	47MF	20%	50V
C851	1-129-702-00	FILM	0.001MF	10%	400V
C852	1-126-968-11	ELECT	100MF	20%	50V
C854	1-102-129-00	CERAMIC	0.01MF	10%	50V
C855	1-126-941-11	ELECT	470MF	20%	25V
C856	1-102-129-00	CERAMIC	0.01MF	10%	50V
C857	1-126-941-11	ELECT	470MF	20%	25V
C860	1-106-220-00	MYLAR	0.1MF	10%	100V
C861	1-137-423-11	MYLAR	0.15MF	10%	100V
C862	1-130-789-00	FILM	1MF	5%	100V
C866	1-137-040-11	FILM	0.0022MF	10%	400V
C873	1-162-134-11	CERAMIC	470PF	10%	2KV
C874	1-137-493-11	FILM	0.0047MF	5%	630V
C876	1-136-298-00	FILM	0.0033MF	2%	100V
C894	1-102-978-00	CERAMIC	220PF	5%	50V
C900	1-101-810-00	CERAMIC	100PF	5%	500V
C901	1-101-810-00	CERAMIC	100PF	5%	500V
C902	1-137-372-11	FILM	0.022MF	5%	50V
C903	1-137-372-11	FILM	0.022MF	5%	50V
C905	1-126-964-11	ELECT	10MF	20%	50V
C906	1-136-166-00	FILM	0.12MF	5%	50V
C907	1-126-960-11	ELECT	1MF	20%	50V
C908	1-126-960-11	ELECT	1MF	20%	50V
C909	1-136-153-00	FILM	0.01MF	5%	50V
C1628	1-136-244-11	FILM	0.1MF	5%	50V
C2701	1-126-964-11	ELECT	10MF	20%	50V
C2702	1-104-664-11	ELECT	47MF	20%	25V
C2706	1-102-820-00	CERAMIC	330PF	5%	50V
		< CONNECTOR >			
CN0001	*1-564-520-11	PLUG, CONNECTOR 5P			
CN0002	*1-568-878-51	PIN, CONNECTOR 3P			
CN0004	1-568-878-51	PIN, CONNECTOR 3P			
CN0005	1-695-915-11	TAB (CONTACT)			
CN0101	*1-573-296-21	CONNECTOR, BOARD TO BOARD 10P			
CN0102	1-695-297-11	CONNECTOR, BOARD TO BOARD 20P			
CN0521	*1-508-767-00	PIN, CONNECTOR (5MM PITCH) 5P			
CN0722 ⚠	*1-580-844-11	PIN, CONNECTOR (POWER)			
CN0723 ⚠	*1-695-292-11	PIN, CONNECTOR (POWER)			
CN0743	*1-564-596-11	PLUG, CONNECTOR 15P			
CN0745	1-695-298-11	CONNECTOR, BOARD TO BOARD 40P			
CN0746	*1-568-879-11	PIN, CONNECTOR 4P			
CN3133	1-568-882-51	PIN, CONNECTOR 7P			
DY1	*1-580-798-11	CONNECTOR PIN (DY) 6P			

D

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REF.NO.	PART NO.	DESCRIPTION	REMARK
		< DIODE >	
D101	8-719-982-27	DIODE MTZJ-33C	
D236	8-719-911-19	DIODE 1SS119-25	
D237	8-719-911-19	DIODE 1SS119-25	
D238	8-719-911-19	DIODE 1SS119-25	
D239	8-719-911-19	DIODE 1SS119-25	
D262	8-719-911-19	DIODE 1SS119-25	
D264	8-719-911-19	DIODE 1SS119-25	
D276	8-719-911-19	DIODE 1SS119-25	
D278	8-719-911-19	DIODE 1SS119-25	
D279	8-719-911-19	DIODE 1SS119-25	
D280	8-719-911-19	DIODE 1SS119-25	
D281	8-719-911-19	DIODE 1SS119-25	
D282	8-719-911-19	DIODE 1SS119-25	
D613	8-719-911-19	DIODE 1SS119-25	
D633	1-247-807-31	CARBON 100 5% 1/4W	
D640	8-719-911-19	DIODE 1SS119-25	
D641	8-719-911-19	DIODE 1SS119-25	
D802	8-719-979-99	DIODE ERD08M-15	
	4-382-854-11	SCREW (M3X10), P, SW (+) (D802)	
D803	8-719-043-14	DIODE ESAD39M-06C	
	4-382-854-11	SCREW (M3X10), P, SW (+) (D803)	
D804	8-719-971-20	DIODE ERC38-06	
D805	8-719-908-03	DIODE GP08D	
D806	8-719-908-03	DIODE GP08D	
D810	8-719-979-85	DIODE EGP20G	
D811	8-719-302-43	DIODE ELIZ	
D812	8-719-510-64	DIODE SLA20F	
D813	8-719-510-64	DIODE SLA20F	
D814	8-719-908-03	DIODE GP08D	
D815	8-719-929-15	DIODE HZS9.1NB2	
D816	8-719-110-41	DIODE RD15ES-B2	
D817	8-719-911-19	DIODE 1SS119-25	
D818	8-719-911-19	DIODE 1SS119-25	
D819	8-719-911-19	DIODE 1SS119-25	
D871	8-719-911-19	DIODE 1SS119-25	
D873	8-719-911-19	DIODE 1SS119-25	
D874	8-719-911-19	DIODE 1SS119-25	
D875	8-719-048-52	DIODE MTZJ-T-77-20D	
D876	8-719-048-52	DIODE MTZJ-T-77-20D	
D901	8-719-030-11	DIODE SLA-570KT3F	
	*4-203-258-01	HOLDER, LED (D901)	
D2701	8-719-911-19	DIODE 1SS119-25	
D2702	8-719-911-19	DIODE 1SS119-25	
		< FUSE >	
F601	⚠ 1-532-299-00	FUSE 2.5A 250V	
	⚠ *1-533-725-11	HOLDER, FUSE; F601	
		< FERRITE BEAD >	
FB201	1-535-143-61	LEAD, JUMPER (5.0MM)	
FB202	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB203	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB801	1-422-613-11	COIL, AIR CORE	
FB802	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
		< IC >	
IC236	8-759-190-89	IC TDA7265	
	4-202-373-01	SPRING, IC (IC236)	
	4-202-710-01	SPACER, INSULATING (IC236)	
IC260	8-759-330-93	IC TDA7309	
IC261	8-759-502-21	IC TDA2822M	
IC603	8-759-095-34	IC LM2940T-8.0	
	4-382-854-11	SCREW (M3X10), P, SW (+) (IC603)	
IC604	8-759-513-71	IC PQ05RF21	
	4-202-373-01	SPRING, IC (IC604)	
IC606	8-759-991-43	IC L78L12ACZ	
IC607	8-759-513-71	IC PQ05RF21	
	4-202-373-01	SPRING, IC (IC607)	
IC801	8-759-103-93	IC UPC393C	
IC802	8-759-192-71	IC STV9379	
	4-202-373-01	SPRING, IC (IC802)	
IC900	8-742-014-10	HIC SBX1981-51	
IC901	8-749-012-12	IC IS474	
IC2701	8-759-603-37	IC M5216P	
		< JACK >	
J900	1-764-606-11	JACK	
J901	1-568-678-11	TERMINAL BLOCK, S 3P	
		< COIL >	
L601	1-535-303-00	LEAD, JUMPER (5.0MM)	
L602	1-412-525-31	INDUCTOR 10UH	
L603	1-412-525-31	INDUCTOR 10UH	
L802	1-459-123-00	COIL,DUST CORE(PAC)	
L803	1-459-123-00	COIL,DUST CORE(PAC)	
L806	1-459-592-11	COIL (WITH CORE) (PMC)	
L807	1-412-524-11	INDUCTOR 8.2UH	
L808	1-535-303-00	LEAD, JUMPER (5.0MM)	
L809	1-412-533-21	INDUCTOR 47UH	
L810	1-412-524-11	INDUCTOR 8.2UH	
L811	1-459-104-00	COIL, WITH CORE	
L814	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
L815	1-412-523-11	INDUCTOR 6.8UH	
L816	1-408-947-00	INDUCTOR 2.2MMH	
L817	1-535-303-00	LEAD, JUMPER (5.0MM)	
L818	1-535-303-00	LEAD, JUMPER (5.0MM)	
L900	1-408-409-00	INDUCTOR 10UH	
L901	1-408-409-00	INDUCTOR 10UH	
L902	1-249-417-11	CARBON 1K 5% 1/4W	
L903	1-249-417-11	CARBON 1K 5% 1/4W	
		< IC LINK >	
PS1601	1-535-303-00	LEAD, JUMPER (5.0MM)	
		< TRANSISTOR >	
Q276	8-729-030-03	TRANSISTOR DTC144ESA-TP	
Q277	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q278	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q279	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q280	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q281	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q282	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q606	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q607	8-729-029-56	TRANSISTOR DTA144ESA	
Q614	8-729-029-56	TRANSISTOR DTA144ESA	
Q616	8-729-029-67	TRANSISTOR DTC114ESA-TP	
Q617	8-729-029-67	TRANSISTOR DTC114ESA-TP	
Q618	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q620	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q624	8-729-119-78	TRANSISTOR 2SC2785-HFE	

REF.NO.	PART NO.	DESCRIPTION				REMARK
Q801	8-729-119-80	TRANSISTOR 2SC2688-LK				
Q802	8-729-821-07	TRANSISTOR 2SC3997CA				
	4-382-854-11	SCREW (M3X10), P, SW (+) (Q802)				
Q803	8-729-039-68	TRANSISTOR IRF620				
	4-202-373-01	SPRING, IC (Q803)				
Q804	8-729-039-68	TRANSISTOR IRF620				
Q2701	8-729-119-78	TRANSISTOR 2SC2785-HFE				
		< RESISTOR >				
R236	1-249-424-11	CARBON	3.9K	5%	1/4W	
R237	1-249-417-11	CARBON	1K	5%	1/4W	
R239	1-249-424-11	CARBON	3.9K	5%	1/4W	
R240	1-249-417-11	CARBON	1K	5%	1/4W	
R244	1-249-413-11	CARBON	470	5%	1/4W	
R245	1-249-430-11	CARBON	12K	5%	1/4W	
R246	1-249-430-11	CARBON	12K	5%	1/4W	
R247	1-249-413-11	CARBON	470	5%	1/4W	
R248	1-249-425-11	CARBON	4.7K	5%	1/4W	
R249	1-216-357-00	METAL OXIDE	4.7	5%	1W	F
R250	1-216-357-00	METAL OXIDE	4.7	5%	1W	F
R251	1-249-429-11	CARBON	10K	5%	1/4W	
R252	1-249-429-11	CARBON	10K	5%	1/4W	
R260	1-247-863-91	CARBON	22K	5%	1/4W	
R261	1-247-863-91	CARBON	22K	5%	1/4W	
R262	1-249-421-11	CARBON	2.2K	5%	1/4W	
R263	1-249-421-11	CARBON	2.2K	5%	1/4W	
R264	1-212-857-00	FUSIBLE	10	5%	1/4W	F
R265	1-249-389-11	CARBON	4.7	5%	1/4W	F
R266	1-249-389-11	CARBON	4.7	5%	1/4W	F
R267	1-247-815-91	CARBON	220	5%	1/4W	
R268	1-247-815-91	CARBON	220	5%	1/4W	
R269	1-249-415-11	CARBON	680	5%	1/4W	
R270	1-249-415-11	CARBON	680	5%	1/4W	
R271	1-247-742-11	CARBON	180	5%	1/2W	F
R276	1-535-303-00	LEAD, JUMPER (5.0MM)				
R277	1-249-419-11	CARBON	1.5K	5%	1/4W	
R278	1-249-441-11	CARBON	100K	5%	1/4W	
R279	1-249-429-11	CARBON	10K	5%	1/4W	
R280	1-249-425-11	CARBON	4.7K	5%	1/4W	
R281	1-249-437-11	CARBON	47K	5%	1/4W	
R282	1-249-430-11	CARBON	12K	5%	1/4W	
R283	1-249-429-11	CARBON	10K	5%	1/4W	
R284	1-249-432-11	CARBON	18K	5%	1/4W	
R285	1-249-425-11	CARBON	4.7K	5%	1/4W	
R286	1-249-421-11	CARBON	2.2K	5%	1/4W	
R287	1-249-412-11	CARBON	390	5%	1/4W	
R288	1-249-421-11	CARBON	2.2K	5%	1/4W	
R289	1-249-421-11	CARBON	2.2K	5%	1/4W	
R290	1-247-807-31	CARBON	100	5%	1/4W	
R291	1-249-421-11	CARBON	2.2K	5%	1/4W	
R292	1-249-429-11	CARBON	10K	5%	1/4W	
R293	1-249-429-11	CARBON	10K	5%	1/4W	
R294	1-249-429-11	CARBON	10K	5%	1/4W	
R295	1-247-885-00	CARBON	180K	5%	1/4W	
R296	1-247-885-00	CARBON	180K	5%	1/4W	
R297	1-247-807-31	CARBON	100	5%	1/4W	
R298	1-247-807-31	CARBON	100	5%	1/4W	
R630	1-249-419-11	CARBON	1.5K	5%	1/4W	
R631	1-215-477-00	METAL	220K	1%	1/4W	
R632	1-249-416-11	CARBON	820	5%	1/4W	
R633	1-249-429-11	CARBON	10K	5%	1/4W	
R634	1-247-895-91	CARBON	470K	5%	1/4W	
R635	1-215-926-00	METAL OXIDE	33K	5%	3W	F
R638	1-249-425-11	CARBON	4.7K	5%	1/4W	
R644	1-249-425-11	CARBON	4.7K	5%	1/4W	
R645	1-249-410-11	CARBON	270	5%	1/4W	
R646	1-247-843-11	CARBON	3.3K	5%	1/4W	
R647	1-249-420-11	CARBON	1.8K	5%	1/4W	
R648	1-535-303-00	LEAD, JUMPER (5.0MM)				
R649	1-535-303-00	LEAD, JUMPER (5.0MM)				
R666	1-249-413-11	CARBON	470	5%	1/4W	
R668	1-249-430-11	CARBON	12K	5%	1/4W	
R675	1-535-303-00	LEAD, JUMPER (5.0MM)				
R676	1-249-437-11	CARBON	47K	5%	1/4W	
R677	1-249-437-11	CARBON	47K	5%	1/4W	
R678	1-249-425-11	CARBON	4.7K	5%	1/4W	
R681	1-249-414-11	CARBON	560	5%	1/4W	
R802	1-215-916-00	METAL OXIDE	680	5%	3W	F
R803	1-215-916-00	METAL OXIDE	680	5%	3W	F
R804	1-215-916-00	METAL OXIDE	680	5%	3W	F
R805	1-216-487-11	METAL OXIDE	12K	5%	3W	F
R806	1-249-411-11	CARBON	330	5%	1/4W	
R807	1-247-843-11	CARBON	3.3K	5%	1/4W	
R808	1-216-384-11	METAL OXIDE	0.39	5%	3W	F
R809	1-215-880-00	METAL OXIDE	10	5%	2W	F
R810	1-215-914-11	METAL OXIDE	330	5%	3W	F
R811	1-216-434-11	METAL OXIDE	1.8K	5%	1W	F
R817	1-202-972-61	FUSIBLE	1	5%	1/4W	F
R818	1-249-377-11	CARBON	0.47	5%	1/4W	F
R819	1-249-377-11	CARBON	0.47	5%	1/4W	F
R820	1-214-907-00	METAL	56K	1%	1/2W	
R821	1-249-420-11	CARBON	1.8K	5%	1/4W	
R823	1-249-420-11	CARBON	1.8K	5%	1/4W	
R835	1-249-432-11	CARBON	18K	5%	1/4W	
R837	1-249-422-11	CARBON	2.7K	5%	1/4W	
R843	1-202-822-00	SOLID	2.2K	20%	1/2W	
R844	1-249-424-11	CARBON	3.9K	5%	1/4W	
R845	1-247-881-00	CARBON	120K	5%	1/4W	
R846	1-249-422-11	CARBON	2.7K	5%	1/4W	
R847	1-249-437-11	CARBON	47K	5%	1/4W	
R848	1-249-425-11	CARBON	4.7K	5%	1/4W	
R849	1-249-429-11	CARBON	10K	5%	1/4W	
R850	1-249-389-11	CARBON	4.7	5%	1/4W	F
R851	1-216-394-00	METAL OXIDE	2.7	5%	3W	F
R854	1-249-436-11	CARBON	39K	5%	1/4W	
R855	1-249-417-11	CARBON	1K	5%	1/4W	
R857	1-202-822-00	SOLID	2.2K	20%	1/2W	
R859	1-249-432-11	CARBON	18K	5%	1/4W	
R860	1-247-843-11	CARBON	3.3K	5%	1/4W	
R861	1-249-417-11	CARBON	1K	5%	1/4W	
R862	1-249-383-11	CARBON	1.5	5%	1/4W	F
R863	1-216-475-11	METAL OXIDE	120	5%	3W	F
R864	1-535-303-00	LEAD, JUMPER (5.0MM)				
R865	1-249-436-11	CARBON	39K	5%	1/4W	
R866	1-249-432-11	CARBON	18K	5%	1/4W	
R867	1-216-389-11	METAL OXIDE	1	5%	3W	F
R868	1-249-418-11	CARBON	1.2K	5%	1/4W	
R875	1-535-303-00	LEAD, JUMPER (5.0MM)				
R881	1-247-779-91	CARBON	6.8	5%	1/4W	
R895	1-215-866-11	METAL OXIDE	330	5%	1W	F

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REF.NO.		PART NO.	DESCRIPTION			REMARK
R900		1-247-815-91	CARBON 220	5%	1/4W	
R908		1-249-401-11	CARBON 47	5%	1/4W	
R909		1-249-437-11	CARBON 47K	5%	1/4W	
R910		1-249-437-11	CARBON 47K	5%	1/4W	
R911		1-249-425-11	CARBON 4.7K	5%	1/4W	
R912		1-249-421-11	CARBON 2.2K	5%	1/4W	
R913		1-249-425-11	CARBON 4.7K	5%	1/4W	
R914		1-249-421-11	CARBON 2.2K	5%	1/4W	
R916		1-247-807-31	CARBON 100	5%	1/4W	
R917		1-259-880-11	CARBON 2.2M	5%	1/4W	
R922		1-249-406-11	CARBON 120	5%	1/4W	
R923		1-249-406-11	CARBON 120	5%	1/4W	
R925		1-249-429-11	CARBON 10K	5%	1/4W	
R926		1-249-429-11	CARBON 10K	5%	1/4W	
R1654		1-535-303-00	LEAD, JUMPER (5.0MM)			
R1655		1-535-303-00	LEAD, JUMPER (5.0MM)			
R2701		1-247-863-91	CARBON 22K	5%	1/4W	
R2702		1-247-863-91	CARBON 22K	5%	1/4W	
R2703		1-247-863-91	CARBON 22K	5%	1/4W	
R2704		1-247-863-91	CARBON 22K	5%	1/4W	
R2705		1-249-429-11	CARBON 10K	5%	1/4W	
R2706		1-249-429-11	CARBON 10K	5%	1/4W	
R2707		1-535-303-00	LEAD, JUMPER (5.0MM)			
R2708		1-249-429-11	CARBON 10K	5%	1/4W	
R2713		1-535-303-00	LEAD, JUMPER (5.0MM)			
R2719		1-212-857-00	FUSIBLE 10	5%	1/4W	F
			< SWITCH >			
S601	⚠	1-571-433-21	SWITCH, PUSH (AC POWER)			
S900		1-692-979-11	SWITCH, TACTILE			
S901		1-692-979-11	SWITCH, TACTILE			
S902		1-692-979-11	SWITCH, TACTILE			
			< TRANSFORMER >			
T801		1-427-762-11	TRANSFORMER, FERRITE (HDT)			
T803		1-426-897-11	TRANSFORMER, FERRITE (PMT)			
T804		1-426-940-11	HLT			
T805	⚠	1-453-222-11	TRANSFORMER ASSY, FLYBACK NX-4003/U2B4			
			< THERMISTOR >			
TH801		1-800-193-00	THERMISTOR (DIRECT-HEATING DINK)			

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*A-1644-080-A VM BOARD, COMPLETE
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< CAPACITOR >

C1701		1-104-661-91	ELECT 330MF	20%	16V	
C1702		1-163-241-11	CERAMIC CHIP 39PF	5%	50V	
C1704		1-161-830-00	CERAMIC 0.0047MF		500V	
C1706		1-107-638-11	ELECT 33MF	20%	160V	
C1707		1-126-964-11	ELECT 10MF	20%	50V	
C1708		1-163-075-00	CERAMIC CHIP 0.047MF		50V	
C1709		1-104-999-11	FILM 0.1MF	5%	200V	
C1710		1-136-203-11	FILM 0.01MF	10%	250V	
C1711		1-162-318-11	CERAMIC 0.001MF	10%	500V	
C1712		1-107-667-11	ELECT 2.2MF	20%	160V	
C1713		1-162-318-11	CERAMIC 0.001MF	10%	500V	
C1714		1-136-203-11	FILM 0.01MF	10%	250V	
C1715		1-163-001-11	CERAMIC CHIP 220PF	10%	50V	
C1716		1-126-964-11	ELECT 10MF	20%	50V	
C1718		1-126-934-11	ELECT 220MF	20%	16V	
C1719		1-126-964-11	ELECT 10MF	20%	50V	
C1722		1-101-810-00	CERAMIC 100PF	5%	500V	
C1723		1-126-791-11	ELECT 10MF	20%	16V	
C1724		1-101-810-00	CERAMIC 100PF	5%	500V	
C1725		1-102-947-00	CERAMIC 10PF	0.5PF	50V	
C1725		1-102-947-00	CERAMIC 10PF	0.5PF	50V	
C1725		1-163-093-00	CERAMIC CHIP 10PF	5%	50V	
C1725		1-163-227-11	CERAMIC CHIP 10PF	0.5PF	50V	
			< CONNECTOR >			
CN1830		1-568-882-51	PIN, CONNECTOR 7P			
			< DIODE >			
D1701		8-719-914-43	DIODE DAN202K			
D1702		8-719-914-42	DIODE DA204K			
D1704		8-719-982-37	DIODE MTZJ-39C			
D1705		8-719-982-37	DIODE MTZJ-39C			
D1706		8-719-914-42	DIODE DA204K			
D1708		8-719-914-42	DIODE DA204K			
D1709		8-719-914-42	DIODE DA204K			
			< COIL >			
L1701		1-216-296-91	CONDUCTOR, CHIP			
L1702		1-408-404-00	INDUCTOR 3.9UH			
			< TRANSISTOR >			
Q1701		8-729-901-59	TRANSISTOR BF199			
Q1702		8-729-216-22	TRANSISTOR 2SA1162-G			
Q1703		8-729-017-05	TRANSISTOR 2SA1837			
		4-382-854-11	SCREW (M3X10), P, SW (+) (Q1703)			
Q1704		8-729-620-06	TRANSISTOR 2SC3052-EF			
Q1705		8-729-017-06	TRANSISTOR 2SC4793			
		4-382-854-11	SCREW (M3X10), P, SW (+) (Q1705)			
Q1706		8-729-620-06	TRANSISTOR 2SC3052-EF			
Q1707		8-729-620-06	TRANSISTOR 2SC3052-EF			
Q1708		8-729-901-59	TRANSISTOR BF199			
Q1710		8-729-216-22	TRANSISTOR 2SA1162-G			
Q1711		8-729-039-27	TRANSISTOR BC546B			
Q1712		8-729-039-25	TRANSISTOR BC556B			
			< RESISTOR >			
R1701		1-216-025-91	METAL GLAZE 100	5%	1/10W	
R1702		1-249-413-11	CARBON 470	5%	1/4W	
R1703		1-216-174-00	METAL GLAZE 100	5%	1/8W	
R1704		1-249-418-11	CARBON 1.2K	5%	1/4W	
R1705		1-247-736-11	CARBON 56	5%	1/2W	F
R1706		1-249-414-11	CARBON 560	5%	1/4W	F
R1707		1-249-411-11	CARBON 330	5%	1/4W	
R1709		1-249-412-11	CARBON 390	5%	1/4W	
R1710		1-216-295-91	CONDUCTOR, CHIP			
R1711		1-249-432-11	CARBON 18K	5%	1/4W	
R1712		1-216-085-00	METAL GLAZE 33K	5%	1/10W	
R1713		1-216-083-00	METAL GLAZE 27K	5%	1/10W	
R1714		1-216-073-00	METAL GLAZE 10K	5%	1/10W	
R1715		1-215-866-11	METAL OXIDE 330	5%	1W	F
R1716		1-249-417-11	CARBON 1K	5%	1/4W	F
R1717		1-249-432-11	CARBON 18K	5%	1/4W	
R1718		1-249-412-11	CARBON 390	5%	1/4W	
R1719		1-249-416-11	CARBON 820	5%	1/4W	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R1720	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R1721	1-249-414-11	CARBON	560	5%	1/4W	
R1722	1-216-295-91	CONDUCTOR, CHIP				
R1723	1-249-429-11	CARBON	10K	5%	1/4W	
R1724	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R1725	1-249-413-11	CARBON	470	5%	1/4W	
R1726	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1727	1-249-402-11	CARBON	56	5%	1/4W	F
R1729	1-216-166-00	METAL GLAZE	47	5%	1/8W	
R1730	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R1731	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1735	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1736	1-247-807-31	CARBON	100	5%	1/4W	
R1737	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1738	1-216-174-00	METAL GLAZE	100	5%	1/8W	
R1739	1-216-222-00	METAL GLAZE	10K	5%	1/8W	
R1740	1-216-174-00	METAL GLAZE	100	5%	1/8W	
R1741	1-216-166-00	METAL GLAZE	47	5%	1/8W	
R1743	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R1744	1-216-150-91	METAL GLAZE	10	5%	1/8W	
R1745	1-216-150-91	METAL GLAZE	10	5%	1/8W	

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REF.NO.	PART NO.	DESCRIPTION	REMARK
		MISCELLANEOUS	
		**********	
⚠	1-406-806-21	COIL, DEGAUSSING	
	1-452-032-00	MAGNET, DISK; 10MM Ø	
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
⚠	1-453-222-11	TRANSFORMER ASSY, FLYBACK	(NX-4003/U2B4)
	1-504-571-21	SPEAKER (7.5X13CM)	
⚠	1-571-433-21	SWITCH, PUSH (AC POWER)	
	1-693-338-11	TUNER (TUVIF) (AEP)	(KV-25X3A/25X3D/25X3E)
	1-693-340-11	TUNER (TUVIP) (FR)	(KV-25X3B)
⚠	1-751-680-11	CORD, POWER (WITH NOISE FILTER) 2.5A/250V	
⚠	8-451-474-11	DEFLECTION YOKE (Y25GXCB)	
⚠	1-452-509-41	NECK ASSY, (NA-308)	
V901 ⚠	8-733-243-05	PICTURE TUBE (SD-257) (M60LCS60X)	
⚠	8-733-254-77	ITC	

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ACCESSORIES AND PACKING MATERIALS
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	1-769-175-11	CABLE, ANTENNA (WITH FILTER)
*	4-395-957-01	BAG, PROTECTION
*	4-202-592-01	CUSHION (UPPER) (ASSY)
*	4-202-591-01	CUSHION (LOWER) (ASSY)
*	4-203-413-01	INDIVIDUAL CARTON
	4-203-846-41	MANUAL INSTRUCTION (KV-25X3A) (ITALIAN)
	4-203-846-51	MANUAL INSTRUCTION (KV-25X3B) (FRENCH/GERMAN/ITALIAN/DUTCH)
	4-203-846-11	MANUAL INSTRUCTION (KV-25X3D) (GERMAN/ENGLISH/DUTCH/GREEK/TURKISH)
	4-203-846-71	MANUAL INSTRUCTION (KV-25X3E) (SPANISH)
	4-203-846-81	MANUAL INSTRUCTION (KV-25X3E) (PORTUGUESE/DANISH/SWEDISH/ NORWEGIAN/FINNISH)

REMOTE COMMANDER
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	1-473-692-11	COMMANDER, STANDARD TYPE (RM-862)

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Sony UK
Service Promotions Div.

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