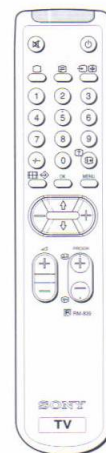


# SERVICE MANUAL

# BE-3D CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
<i>KV-32WF1A</i>	<i>RM-839</i>	<i>Italian</i>	<i>SCC-J05FA</i>	<i>KV-32WF1E</i>	<i>RM-839</i>	<i>Spanish</i>	<i>SCC-J03KA</i>
<i>KV-32WF1B</i>	<i>RM-839</i>	<i>French</i>	<i>SCC-J05GA</i>	<i>KV-32WF1K</i>	<i>RM-839</i>	<i>OIRT</i>	<i>SCC-J03LA</i>
<i>KV-32WF1D</i>	<i>RM-839</i>	<i>AEP</i>	<i>SCC-J06HA</i>	<i>KV-32WF1U</i>	<i>RM-839</i>	<i>UK</i>	<i>SCC-J02EA</i>



TRINITRON® COLOR TV  
**SONY**®



ITEM MODEL	Television System	Channel Coverage	Colour System
Italian	B/G/H	VHF: E2-E12 UHF: E21-E69 CABLE TV(1) : S1-S41 CABLE TV(2) : S01-S05,M1-M10, U1-U10 ITALIA A-H, H1, H2	PAL NTSC3.58/4.43 (video input only)
French	B/G/H, D/K, L, I	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-R20 UHF: B21-B69 L VHF: F2-F10 UHF: F21-F69 CABLE TV B-Q, S21-S44 I UHF: B21-B69	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-R20 UHF: B21-B69 CABLE TV S1-S41, 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-R20 UHF: B21-B69 CABLE TV S1-S41, S01-S05	PAL, SECAM NTSC3.58/4.43 (video input only)
OIRT	B/G/H, D/K	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 S1-S41, S01-S05	PAL, SECAM NTSC3.58/4.43 (video input only)
UK	I	UHF: U21-U69	PAL NTSC3.58/4.43 (video input only)

MODEL	32WF1A	32WF1B	32WF1D	32WF1E	32WF1K	32WF1U
Power Consumption	83W	93W	93W	93W	93W	144W

## SPECIFICATIONS

Picture Tube Super Trinitron  
Approx. 82 cm (32 inches)  
(Approx. 76 cm picture measured diagonally)  
110° -deflection

### [FRONT]

- 3 , Video input - phono jack
- 3 , Audio inputs - phono jacks
- 3 , S video input - 4 pin DIN
- 🎧 Stereo minijack - headphone jack

### Rear/Front Terminals

#### [REAR]

- 1 21-pin Euro connector (CENELEC standard)
- Inputs for audio / video signals
- Inputs for RGB
- Outputs for TV audio and video signals
- 2/→ 2, 21-pin Euro connector (CENELEC standard)
- Inputs for audio / video signals
- Inputs for S video
- Outputs for TV audio and video signals (selectable)
- Audio output - phono jack (variable)

#### Sound output

Left/Right 2x10W (RMS)  
2x20W (music power)

#### Dimensions

789x602x576 mm

#### Weight

Approx. 54 kg

#### Supplied accessories

RM-839 Remote Commander (1)  
Batteries R6 (2)

#### Other features

NICAM (KV-32WF1B/32WF1E/32WF1U only)


**[RM-839]**

Remote control system	Infrared control
Power requirements	3V dc (2 batteries) R6 (size AA)
Dimensions	Approx. 210x45x24 mm (w/h/d)
Weight	Approx. 90g (Not including battery)

**Design and specifications are subject to change without notice.**

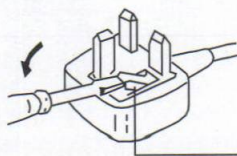
Model name	KV-32WF1A	KV-32WF1B	KV-32WF1D	KV-32WF1E	KV-32WF1K	KV-32WF1U
Item						
PIP	OFF	OFF	OFF	OFF	OFF	OFF
MPIP	OFF	OFF	OFF	OFF	OFF	OFF
Rotation Coil	ON	ON	ON	ON	ON	ON
VM Set	ON	ON	ON	ON	ON	ON
Scart 1	ON	ON	ON	ON	ON	ON
Scart 2	ON	ON	ON	ON	ON	ON
Front in (3)	ON	ON	ON	ON	ON	ON
TXT	ON	ON	ON	ON	ON	ON
FLOF	ON	ON	ON	ON	ON	ON
TOP	ON	ON	ON	ON	ON	ON
AKB in 16:9 mode	ON	ON	ON	ON	ON	ON
Norm B/G/H	ON	ON	ON	ON	ON	OFF
Norm I	OFF	ON	OFF	OFF	OFF	ON
Norm D/K	OFF	ON	ON	ON	ON	OFF
Norm L	OFF	ON	OFF	OFF	OFF	OFF
Language Preset	Italian	French	German	Spanish	OIRT	English

### WARNING ( KV-32WF1U only )

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

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

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

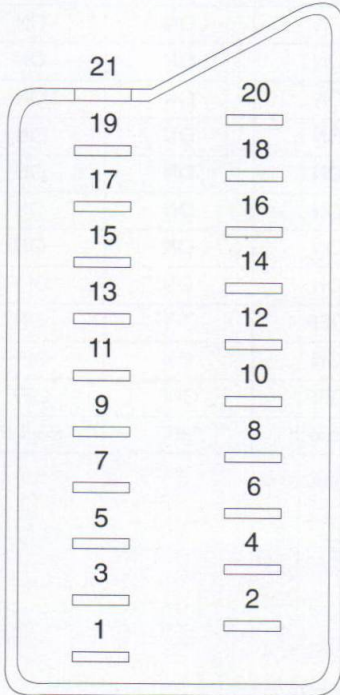
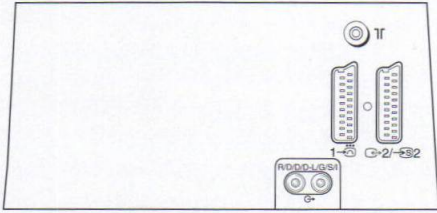


How to replace the fuse.

Open the fuse compartment with the screwdriver blade and replace the fuse.

FUSE

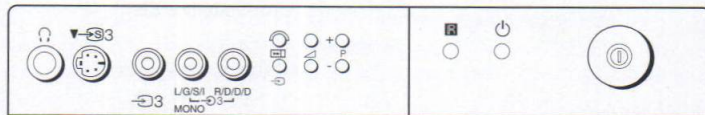
21 pin connector (  1,  2 /  2 )



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 : More 10k 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) chroma 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, shield)	

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

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

**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.

**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**

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

**ATTENTION !!**

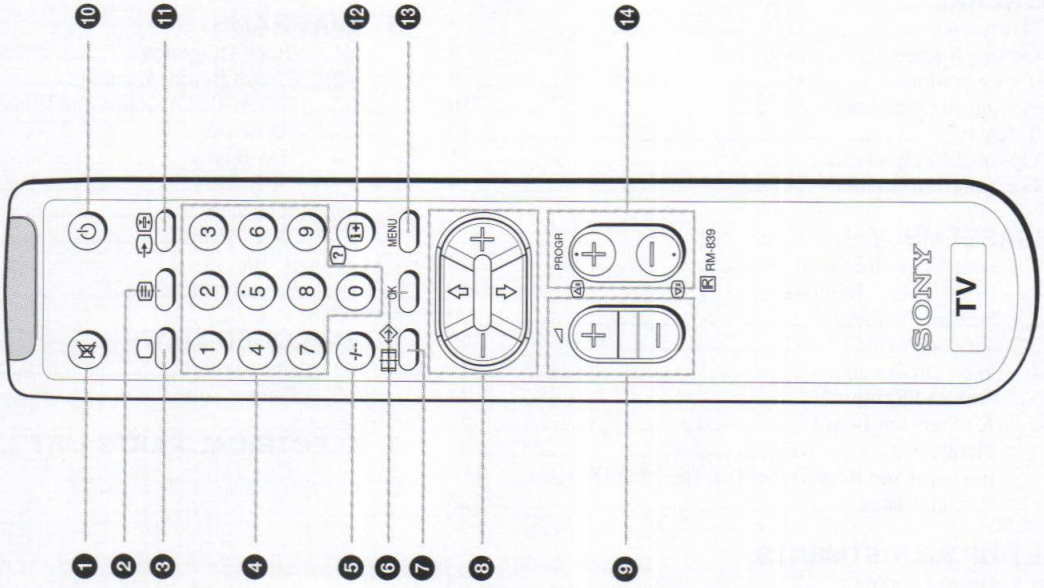
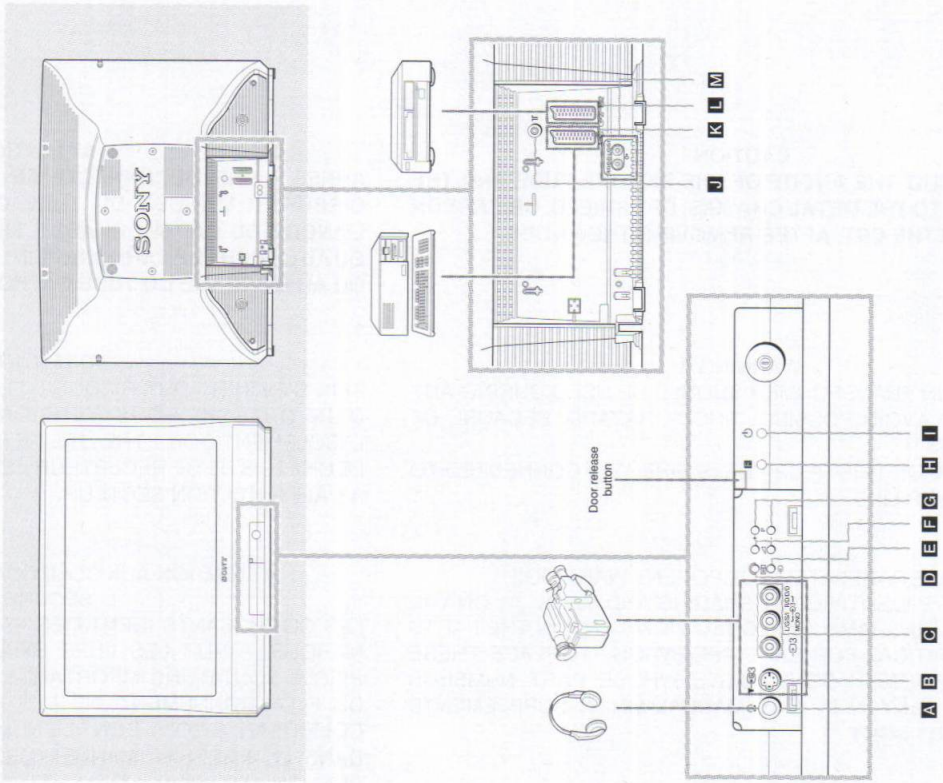
AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

**ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!**

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MARQUE  SUR LES VUES EXPLOSÉES ET LES LISTES DE PIÉCES 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 controls and the buttons on the TV set and on the Remote Commander. Please open the flap at the front of the instruction manual for illustrations of the TV set and the Remote Commander. Letters in boxes refer to the buttons on the TV set, numbers in circles to the buttons on the Remote Commander. For more information, refer to the page numbers given next to each description.

### TV buttons and Terminals

Reference and Symbol	Name	Refer to Page
<b>Front of the set</b>		
<b>A</b>	Headphones jack	29
<b>B</b>	S video input jack	29
<b>C</b>	Audio/video input jacks	29
<b>D</b>	Automatic Preset button	11
<b>E</b>	Input mode button	12
<b>F</b>	Volume control	12
<b>G</b>	Programme button	12
<b>H</b>	Standby mode indicator	12
<b>I</b>	Main power switch	12
<b>Rear of the set</b>		
<b>J</b>	Aerial socket	10
<b>K</b>	21 pin Euro connector	29
<b>L</b>	21 pin Euro connector	29
<b>M</b>	Audio phono jacks	29

## Overview


### Remote Commander Operation

Reference and Symbol	Name	Refer to Page
<b>1</b>	Muting on/off button	12
<b>2</b>	Teletext button	13
<b>3</b>	TV power on/TV mode button	12, 13
<b>4</b> 1, 2, ..., 9, 0	Number buttons	12
<b>5</b> - / - -	Double digit entering button	12
<b>6</b> OK	OK (Confirmation) button	14
<b>7</b>	Screen format button	13
	Teletext: Favourite pages button	28
<b>8</b>	Menu control	14
<b>9</b>	Volume control button	12
<b>10</b>	Standby button	12
<b>11</b>	Input mode button	12
	Teletext: Freezing the subpage	27
<b>12</b>	On-screen display button	12
	Teletext: reveal button	27
<b>13</b> MENU	Menu on/off button	14
<b>14</b>	Programme buttons	12
	Teletext: Page up/page down buttons	13

Getting Started

Step 1

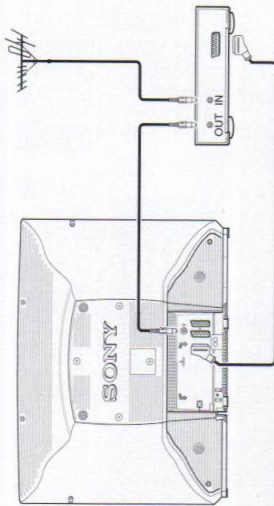
Connecting the Aerial  
(If you connect a VCR, skip to step 2)

Insert the aerial plug tightly into the aerial socket . Use a good-quality aerial cable (not supplied), corresponding to the relevant regulations.

Step 2

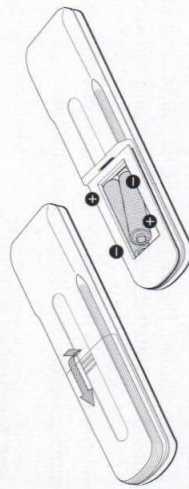
Connecting a VCR

We recommend that you tune in the VCR signal to programme number "0". For details, see "Presetting Channels Manually" on page 16. See "Connecting Optional Equipment" on page 29 for more information.



Step 3

Inserting the Batteries Into the Remote Commander



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

Step 4

Presetting Channels Automatically

With this function, the TV can automatically search and store up to 100 different channel numbers. If you prefer manual presetting, refer to "Presetting Channels Manually" on page 16.

1 Plug into mains.

Press the power switch  on the TV set.

2 Press and hold the button  on the TV set until the automatic menu is displayed and the search starts.

After all available channels are stored, the normal TV picture is shown.

Note: Channels are automatically stored as follows:

- Programme 1 BBC1
- Programme 2 BBC2
- Programme 3 ITV
- Programme 4 CH4 or S4C
- Programme 5 (If available in your area)

## TV Operation

This section explains functions used whilst watching TV. Most operations are carried out using the remote commander (numbers in circles). All basic functions are also available on the TV set (letters in boxes). Open the flap at the front of the Instruction Manual to see the illustrations of the Remote Commander and the TV set.

### TV Operation

To	Press
Switch on	Ⓚ <b>I</b> on TV
Switch off temporarily	Ⓚ <b>H</b> TV is now in standby mode and <b>H</b> indicator on TV lights up.
Switch on from standby mode	Ⓚ <b>3</b> , <b>PROGR +/ -</b> <b>14</b> <b>G</b> or any number button <b>4</b> .
Switch off completely	Ⓚ <b>I</b> on TV To save energy, switch off your TV completely when TV is not in use.
Select programmes	<b>PROGR +/ -</b> <b>14</b> <b>G</b> or number buttons <b>4</b> For double digit number, press -/ - <b>5</b> then the number e.g. For 23, press -/ - <b>5</b> then 2 and 3.
Display on screen indications	<b>12</b> <b>12</b> . Press again to make the indications disappear.
Adjust the volume	∇ + or - <b>9</b> <b>F</b>
Mute the sound	⊗ <b>1</b> . Press again to restore the sound.
View video input picture (see page 30 for detailed information)	↔ <b>1</b> <b>E</b> repeatedly until the desired video input appears. Press <b>0</b> <b>3</b> to restore the TV picture.

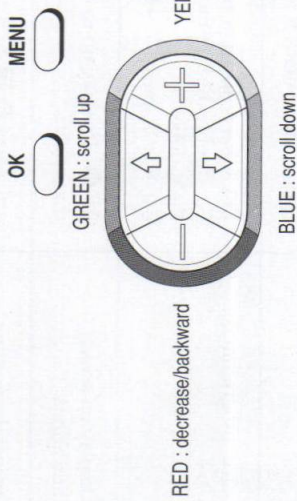
### TV Operation (continued)

To	Press
Operate Screen Mode (see page 18 for detailed information)	<b>7</b> <b>7</b> . 4:3 → Smart → Zoom → Wide When using Zoom mode select 'Scroll' to see the cut-off part of the screen.
View teletext (see page 27 for detailed information)	
Switch on	<b>2</b>
Select a page	three number buttons <b>4</b> or <b>14</b> (for next page) or <b>14</b> (for previous page).
Use fastext	Blue, Green, Red or Yellow <b>8</b> .
Switch off	<b>3</b>

## Adjusting and Setting the TV Using the Menu

You can adjust and set various functions on the TV using the following remote commander buttons:

- 1 Press MENU **8** to switch menu on/off.
- 2 Use the menu control buttons **9** and OK button **6** (confirm) as follows:



## Choosing the Menu Language

This function enables you to change the language of the menu screens.

- 1 Press power switch **1** on the TV. If the standby indicator **1** on the TV is lit, press **3** or a number button **4** on the Remote Commander.
- 2 Press the MENU button **8** on the remote commander.



- 3 Press blue or green **8** to select the language you want then press yellow **8**.
- 4 Press the MENU button **8** to restore the normal TV picture.

## Presetting Channels Automatically

You may have already preset the channels automatically by using the method shown on page 11. You can also preset channels automatically by using the remote commander as follows:

- 1 Press the MENU button **8**.
  - 2 Press blue or green **8** to select the symbol **9** on the menu screen then press yellow **8**.
- 
- 3 Press blue or green **8** to select 'AUTO PROGRAMME'.
  - 4 Press and hold yellow **8** until the automatic menu is displayed and the search starts.
- 
- After all available channels have been preset, the normal TV picture is shown.


**Note:** Channels are automatically stored as follows:

- Programme 1 BBC1
- Programme 2 BBC2
- Programme 3 ITV
- Programme 4 CH4 or S4C
- Programme 5 (If available in your area)


## Presetting Channels Manually

This function enables you to preset channels one by one to different programme numbers. This is also convenient for allocating programme numbers to various video input sources.

- 1 Press the MENU button **13**.
- 2 Press blue or green **8** to select the symbol **14** on the menu screen then press yellow **6**.



- 3 Press blue or green **8** to select 'MANUAL PROGRAMME' then press yellow **6**.



PROG	SYS	CHAN	LABEL	AFT
0	1	C31	.....	ON
1	1	C32	.....	ON
2	1	C33	.....	ON
3	1	C34	.....	ON
4	1	C35	.....	ON
5	1	C36	.....	ON
6	1	C37	.....	ON
7	1	C38	.....	ON
8	1	C39	.....	ON
9	1	C40	.....	ON

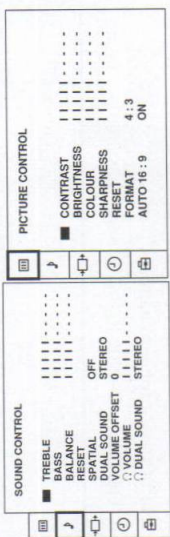
- 4 Press blue or green **8** to select on which programme number you want to preset a channel then press yellow **6**.
- 5 Press blue or green **8** to select the TV broadcast system 'T' or a video input source (AV1,AV2 ...) then press yellow **6**.
- 6 Press yellow **6**.
- 7 Select the first number digit of 'CHAN' (channel) then the second number digit of 'CHAN' with the number buttons **4** on the remote commander  
or  
Press blue or green **8** to search for the next available channel.

- 8 If you want to store the channel, go to step 9. If not, select a new channel using the number buttons **4** on the remote commander or press blue or green **8** to resume the search.
- 9 Press OK **6**.
- 10 Repeat steps 4 to 9 to preset other channels.
- 11 Press the MENU button **13** to restore the normal TV picture.

## 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 the MENU button **13**.
- 2 Press blue or green **8** to select **14** for picture control or **15** for sound control then press yellow **6**.

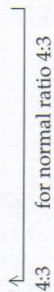


- 3 Press blue or green **8** to select the desired item then press yellow **6**.
- 4 Press red or yellow **8** to alter the item then press OK **6**.  
For the effect of each control, see the following tables.
- 5 Repeat steps 3 and 4 to adjust the other items.
- 6 Press the MENU button **13** to restore the normal TV picture.

## Adjusting the Picture and Sound (continued)

### PICTURE CONTROL Effect

- Lower —|— Higher
- Darker —|— Brighter
- Less —|— More
- Softer —|— Sharper
- Greenish —|— Reddish (NTSC signals only)
- Resets picture to the factory preset levels.
- 4:3 → Smart → Zoom → Wide



Smart for imitation of wide screen effect (16:9) for 4:3 broadcasts



Zoom for imitation of wide screen effect (16:9) for movies broadcast in cinematic format



Wide for 16:9 broadcasts

When 'Zoom' is selected, you can scroll the screen to see the cut-off part (e.g. subtitles) as follows:

- 1 Press blue **6** to select 'Scroll' then press yellow.
- 2 Press red or yellow **8** to scroll the picture upwards or downwards (-5 to +5) then press OK **6**.

Auto 16:9

- Automatically selects 16:9 picture mode when receiving a 16:9 broadcast (set to 'Off' if signal reception is weak)

## Adjusting the Picture and Sound (continued)

### SOUND CONTROL Effect

- Less —|— More
- Less —|— More
- Left —|— Right
- Resets sound to the factory preset levels.
- Acoustic sound effect.
- A: Left channel → B: Right channel → stereo → mono
- Presets the volume level for individual programmes. -12 — 0 — +12
- Adjusts the headphone volume.
- Selects the headphone channels.
- A: Left channel → B: Right channel → stereo → mono

Treble

Bass

Balance

Reset

Spatial

Dual Sound


Volume Offset

Volume

Dual Sound

## Manual Fine-Tuning


Normally, the automatic fine-tuning (AFT) function is operating. If the picture is distorted however, you can manually fine-tune the TV to obtain a better picture reception.








- 1 Press the MENU button **8**.
- 2 Press blue or green **8** to select the symbol  on the menu screen then press yellow **8**.
- 3 Press blue or green **8** to select 'MANUAL PROGRAMME PRESET' then press yellow **8**.
 

MANUAL PROGRAMME PRESET		
PROG	SYS	CHAN LABEL AFT
0	---	C29 ..... ON
1	---	C31 ..... ON
2	---	C36 ..... ON
3	---	C37 ..... ON
4	---	C40 ..... ON
5	---	C41 ..... ON
6	---	C44 ..... ON
7	---	C48 ..... ON
8	---	C49 ..... ON
9	---	C52 ..... ON
- 4 Press blue or green **8** to select the programme number which corresponds to the channel you want to manually fine-tune.
- 5 Press yellow **8** repeatedly until the AFT position changes colour.
- 6 Press blue or green **8** to fine-tune the channel frequency (-15 to +15).
- 7 Press OK **6**.
- 8 Repeat steps 4 to 7 to fine-tune other channels.
- 9 Press the MENU button **8** to restore the normal TV picture.

## Sorting Programme Positions

This function enables you to exchange the programme positions.

- 1 Press the MENU button **8**.
- 2 Press blue or green **8** to select the symbol  on the menu screen then press yellow **8**.
- 3 Press blue or green **8** to select 'PROGRAMME SORTING' then press yellow **8**.
 

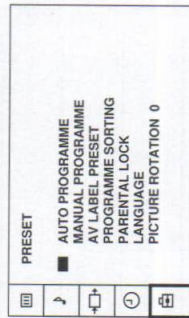
PRESET	
	AUTO PROGRAMME
	MANUAL PROGRAMME
	AV LABEL PRESET
	PROGRAMME SORTING
	PARENTAL LOCK
	LANGUAGE
	PICTURE ROTATION 0
- 4 Press blue or green **8** to select the channel you want to exchange then press yellow **8**.
 

PROGRAMME SORTING		
PROG	SYS	CHAN LABEL
0	---	C28 BBC-W
1	---	C29 VHS-2
2	---	C38 CHN...
3	---	C38
4	---	C40 MV-CH
5	---	C42 VHS-1
6	---	C55
7	---	C56
8	---	C57
9	---	C58
- 5 Press blue or green **8** to select the programme number you wish the channel chosen in step 4 to appear on, then press yellow **8**.
- 6 Repeat steps 4 to 5 if you wish to exchange other programme positions.
- 7 Press the MENU button **8** to restore the normal TV picture.

## Using Parental Lock

This function enables you to prevent undesirable broadcasts from appearing on the screen. We suggest you use this function to prevent children from watching programmes which you consider unsuitable.

- 1 Press the MENU button **13**.
- 2 Press blue or green **8** to select the symbol **14** on the menu screen then press yellow **8**.
- 3 Press blue or green **8** to select 'PARENTAL LOCK' then press yellow **8**.



- 4 Press blue or green **8** to select the channel you want to block then press yellow **8**.  
A symbol appears before the programme number to indicate that this channel is now blocked.

PARENTAL LOCK	
PROG	SYS
<input checked="" type="checkbox"/> 0	---
<input type="checkbox"/> 1	---
<input type="checkbox"/> 2	---
<input type="checkbox"/> 3	---
<input type="checkbox"/> 4	---
<input type="checkbox"/> 5	---
<input type="checkbox"/> 6	---
<input type="checkbox"/> 7	---
<input type="checkbox"/> 8	---
<input type="checkbox"/> 9	---

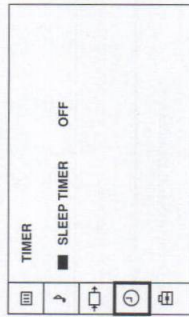
- 5 Repeat step 4 if you wish to block other channels.
- 6 Press the MENU button **13** to restore the normal TV picture.

**Note:** To unblock, press yellow **8** after selecting the channel to unblock in the 'PARENTAL LOCK' menu.

## Using the Sleep Timer

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

- 1 Press the MENU button **13**.
- 2 Press blue or green **8** to select the symbol **14** on the menu screen then press yellow **8**.
- 3 Press yellow **8**.
- 4 Press red or yellow **8** to set time delay and press OK **6**.




OFF 0:30 1:00 1:30 ..... 3:30 4:00

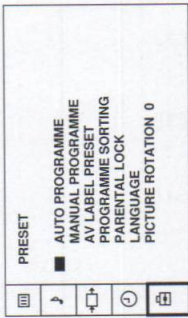
One minute before the TV switches into standby mode, a message is displayed on the screen.

- 5 Press the MENU button **13** to restore the normal TV picture.

## Adjusting the Picture Rotation


If, due to the earth magnetism, the picture slants, you can use the function 'Picture Rotation' to readjust the picture.

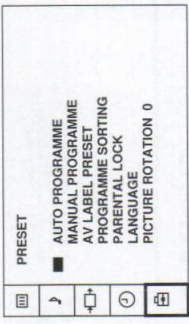
- 1 Press the MENU button **13**.
- 2 Press blue or green **8** to select the symbol  on the menu screen then press yellow **8**.
- 3 Press blue or green **8** to select 'PICTURE ROTATION' then press yellow **8**.
- 4 Press red or yellow **8** to adjust the picture rotation then press OK **6**. The adjusting range is -5 to +5.
- 5 Press the MENU button **13** to restore the normal TV picture.



## Skipping Programme Positions

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

- 1 Press the MENU button **13**.
- 2 Press blue or green **8** to select the symbol  on the menu screen then press yellow **8**.
- 3 Press blue or green **8** to select 'MANUAL PROGRAMME' then press yellow **8**.
- 4 Press blue or green **8** to select the programme position you want to skip then press yellow **8**.
- 5 Press blue or green **8** until '- - -' appears in the 'SYS' position.
- 6 Press OK **6**.
- 7 Repeat steps 4 to 6 to skip other programme positions.
- 8 Press the MENU button **13** to restore the normal TV picture.



MANUAL PROGRAMME PRESET		
PROG	SYS	CHAN LABEL AFT
0	---	C29 ..... ON
1	---	C31 ..... ON
2	---	C32 ..... ON
3	---	C33 ..... ON
4	---	C37 ..... ON
5	---	C40 ..... ON
6	---	C41 ..... ON
7	---	C42 ..... ON
8	---	C49 ..... ON
9	---	C52 ..... ON

Teletext

## Teletext

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

## Switching Teletext On and Off

- 1 Select the channel which carries the teletext service you wish to view.
- 2 Press **2** to display teletext.  
If no teletext signal is broadcast, the indication P100 is displayed on a black screen.
- 3 Input three digits for the page number using the number buttons **4**.  
The page counter searches for the page and after some seconds the page is displayed.
- 4 Press **0** to return to the normal TV picture.

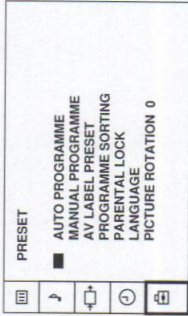
## Using Other Teletext Functions

- To Press
- Access the next or preceding teletext page **14** for the next page or **14** for the preceding page
- Mix the mode **2** when in teletext mode.  
Now the teletext page is superimposed on the TV programme. Press again to return to the normal teletext display.
- Freeze a teletext subpage **11**. Press once again to cancel.
- Reveal hidden information (eg: answers to a quiz) **12**. Press once again to cancel.

## Captioning a Station Name

Names for channels are usually automatically taken from teletext if available. You can however name a channel or an input video source using up to five characters (letters or numbers).

- 1 Press the MENU button **10**.
- 2 Press blue or green **6** to select the symbol **10** on the menu screen then press yellow **8**.
- 3 Press blue or green **6** to select 'MANUAL PROGRAMME' then press yellow **8**.



- 4 Press blue or green **6** to select the channel you wish to caption then press yellow **8** repeatedly until the first element of the 'LABEL' position is highlighted.
- 5 Press **6** blue or green to select a letter or number and press yellow **8** (select '-' for a blank).  
Select the other four characters in the same way.
- 6 After selecting all the characters, press OK **6**.
- 7 Repeat steps 4 to 6 to caption names for other channels.
- 8 Press the MENU button **10** to restore the normal TV screen.

MANUAL PROGRAMME PRESET			
PROG	SYS	CHAN	LABEL AFT
0	---	C39	..... ON
1	---	C32	..... ON
2	---	C36	..... ON
3	---	C37	..... ON
4	---	C41	..... ON
5	---	C44	..... ON
6	---	C48	..... ON
7	---	C49	..... ON
8	---	C52	..... ON

## Favourite page system

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

### Storing pages

- 1 Use the number buttons **4** to select the page you would like to store.
- 2 Press **↔** **7** twice.  
The colour prompts at the bottom of the screen flash.
- 3 Press red, green, blue or yellow **8** to store the selected page.  
The page is now stored on this colour.

Repeat steps 1 to 3 for the other 3 pages.

### Displaying the Favourite Pages

- 1 Press **↔** **7**.
- 2 Press red, green, blue or yellow **8** to select the desired page.

Make sure you press **↔** **7**, otherwise the normal Fastext facility operates.

## 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 colours on the Remote Commander.

Press the colour button **8** that corresponds to the colour-coded menu. The selected page is displayed after some seconds.

## Optional Equipment

### Connecting Optional Equipment

There is a wide range of optional equipment you can connect to your TV. Refer to the illustrations on the front flap page of this manual.

Symbol	Acceptable input signals	Available output signals
<b>1 K</b>	Normal audio/video and RGB	Audio/video from TV tuner
<b>2 L</b>	Normal audio/video and S video	Audio/video from selected source
<b>3 B</b>	Normal audio/video and S video	No output
<b>3 C</b>	No inputs	Audio from selected source

### Connecting Headphones

Plug in the headphones to the **⊖** socket **A** on the front of the TV.

### 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.

### Notes on connections:

- 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.
- Select 'TV' for output in the 'VIDEO CONNECTION' menu if you connect a decoder to **↔** **2 L** (see page 30).

## Selecting Input and Output Signals

This section explains how to select the output signal from **2/2** and how to select and view the input. You can use direct access buttons **1E** to select the input or the menu system to select input and output.

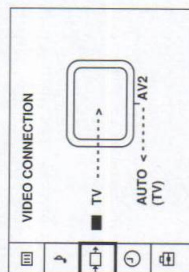
### Selecting Input Signals With Direct Access Buttons

Press **1E** repeatedly.  
Press **3** to restore the normal TV picture.

Symbol on the screen	Input Signal
<b>1</b>	Audio/video through Euro AV connector <b>K</b>
<b>2</b>	RGB through Euro AV connector <b>K</b>
<b>2</b>	Audio/video through Euro AV connector <b>L</b>
<b>3</b>	S video through Euro AV connector <b>L</b>
<b>3</b>	Audio/video through the phono jacks <b>C</b>
<b>3</b>	S video through the 4 pin DIN <b>B</b>

## Selecting With the Video Connection Menu

- 1 Press the MENU button **8**.
- 2 Press blue or green **8** to select **VIDEO CONNECTION** then press yellow **6**.



- 3 Press blue or green **8** to select input (for the TV screen) or output (for **2/2**) then press yellow **6**.
- 4 Press red or yellow **8** repeatedly to select the desired input or output source then press OK **6**.
- 5 Press the MENU button **8** to restore the normal TV picture.

**Note:** If you select 'AUTO' for output, the output source automatically becomes the same as the desired input source.

## Using AV Label Preset

This function enables you to label the input sources using up to five characters (letters or numbers).

- 1 Press the MENU button **8**.
- 2 Press blue or green **8** to select the symbol **AV** on the screen then press yellow **6**.
- 3 Press blue or green **8** to select 'AV LABEL PRESET' then press yellow **6**.

AV LABEL PRESET	
INPUT	LABEL
AV1	.....
RGB	.....
AV2	.....
YC2	.....
AV3	.....
YC3	.....

- 4 Press blue or green **8** to select the desired input source then press yellow **6**.
- 5 Press blue or green **8** to select a letter or number then press yellow **6** (select '-' for a blank).  
Select the other four characters in the same way.
- 6 After selecting all the characters, press OK **6**.
- 7 Repeat steps 4 to 6 to label other input sources.
- 8 Press the MENU button **8** to restore the normal TV screen.

## Troubleshooting

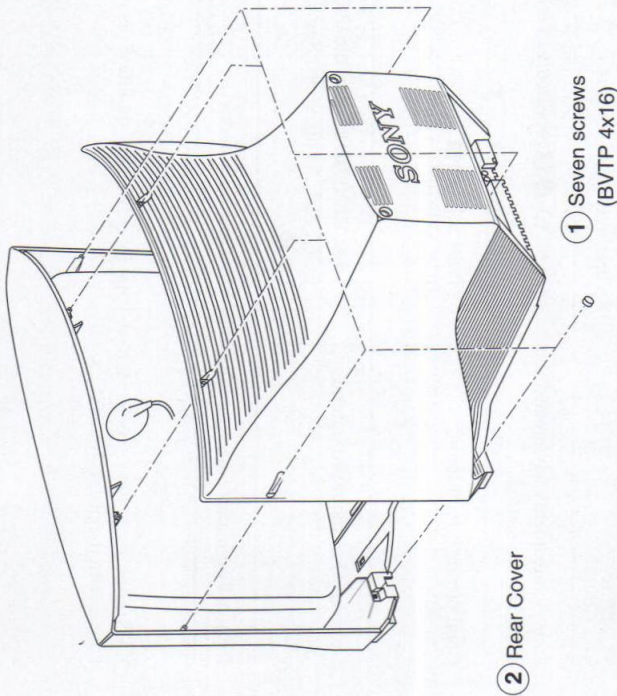
Here are some simple solutions to the problems which affect the picture and sound.

Problem	Solution
No picture (screen is dark), no sound	<ul style="list-style-type: none"><li>• Plug the TV in.</li><li>• Press <b>1</b> on the TV. (If <b>TV</b> indicator <b>H</b> is on, press <b>3</b> or a programme number <b>4</b> on the Remote Commander.)</li><li>• Check the aerial connection.</li><li>• Check if the selected video source is on.</li><li>• Turn the TV off for 3 or 4 seconds then turn it on again using <b>1</b>.</li></ul>
Poor or no picture (screen is dark), but good sound	<ul style="list-style-type: none"><li>• Press MENU <b>13</b> to enter the 'PICTURE CONTROL' menu and adjust 'Contrast', 'Brightness' and 'Colour'.</li></ul>
Poor picture quality when watching an RGB video source.	<ul style="list-style-type: none"><li>• Press <b>1</b> <b>E</b> repeatedly to select <b>RGB</b>.</li></ul>
Good picture but no sound	<ul style="list-style-type: none"><li>• Press <b>1</b> + <b>5</b> <b>F</b>.</li><li>• If <b>no sound</b> is displayed on the screen, press <b>1</b>.</li></ul>
No colour for colour programmes	<ul style="list-style-type: none"><li>• Press MENU <b>13</b> to enter the 'PICTURE CONTROL' menu, select 'Reset' then press OK <b>6</b>.</li></ul>
Remote Commander does not function.	<ul style="list-style-type: none"><li>• Replace the batteries.</li></ul>

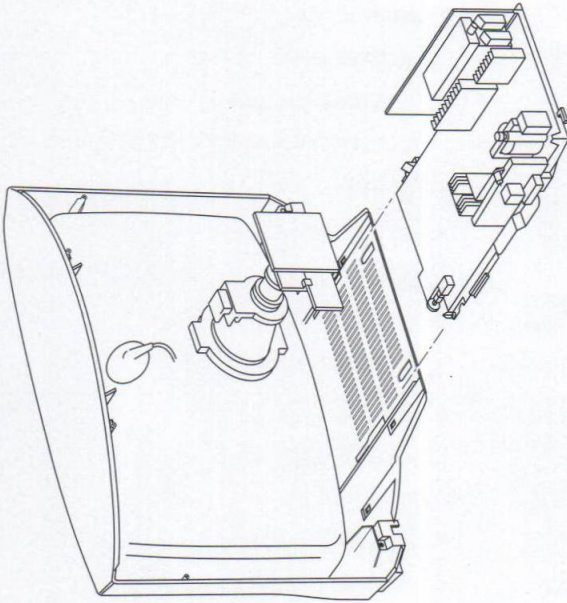
If you continue to have problems, have your TV serviced by qualified personnel. Never open the casing yourself.

## SECTION 2 DISASSEMBLY

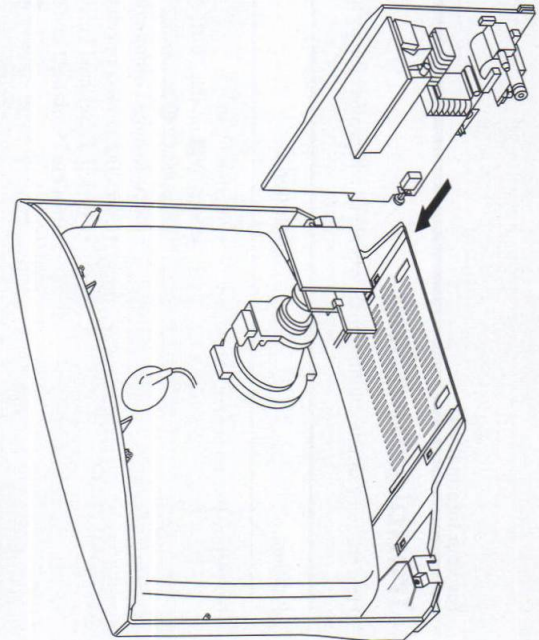
### 2-1. REAR COVER REMOVAL



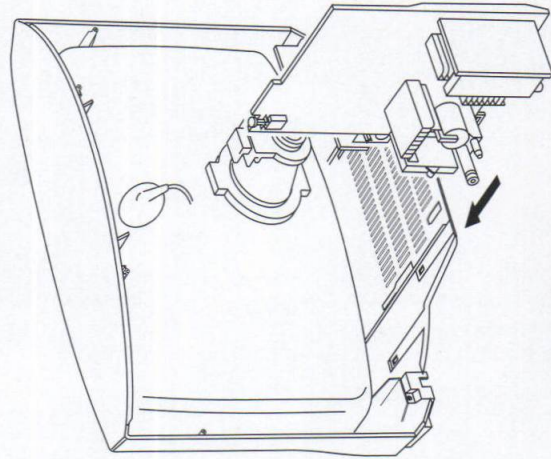
### 2-2. CHASSIS ASSY REMOVAL



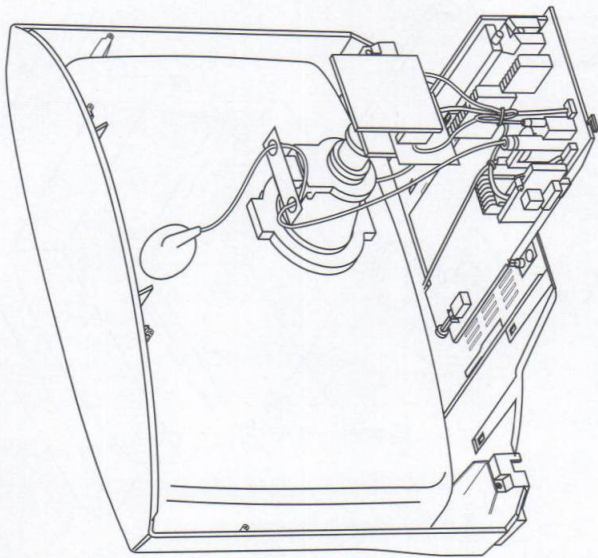
### 2-3-1. SERVICE POSITION (1)



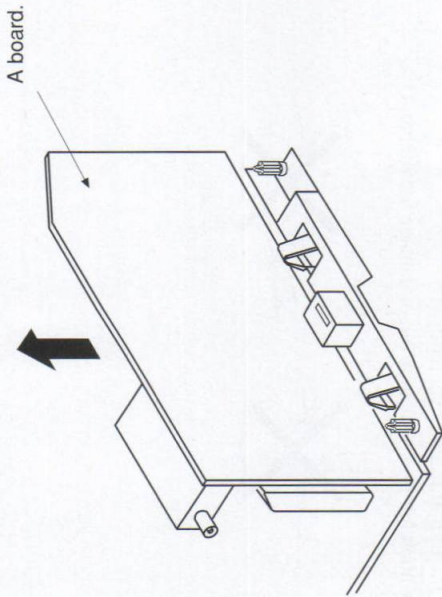
### 2-3-2. SERVICE POSITION (2)



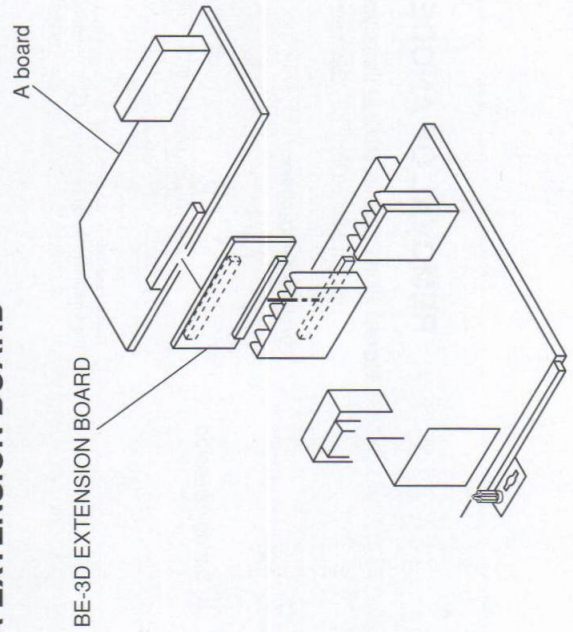
### 2-4. WIRE DRESSING



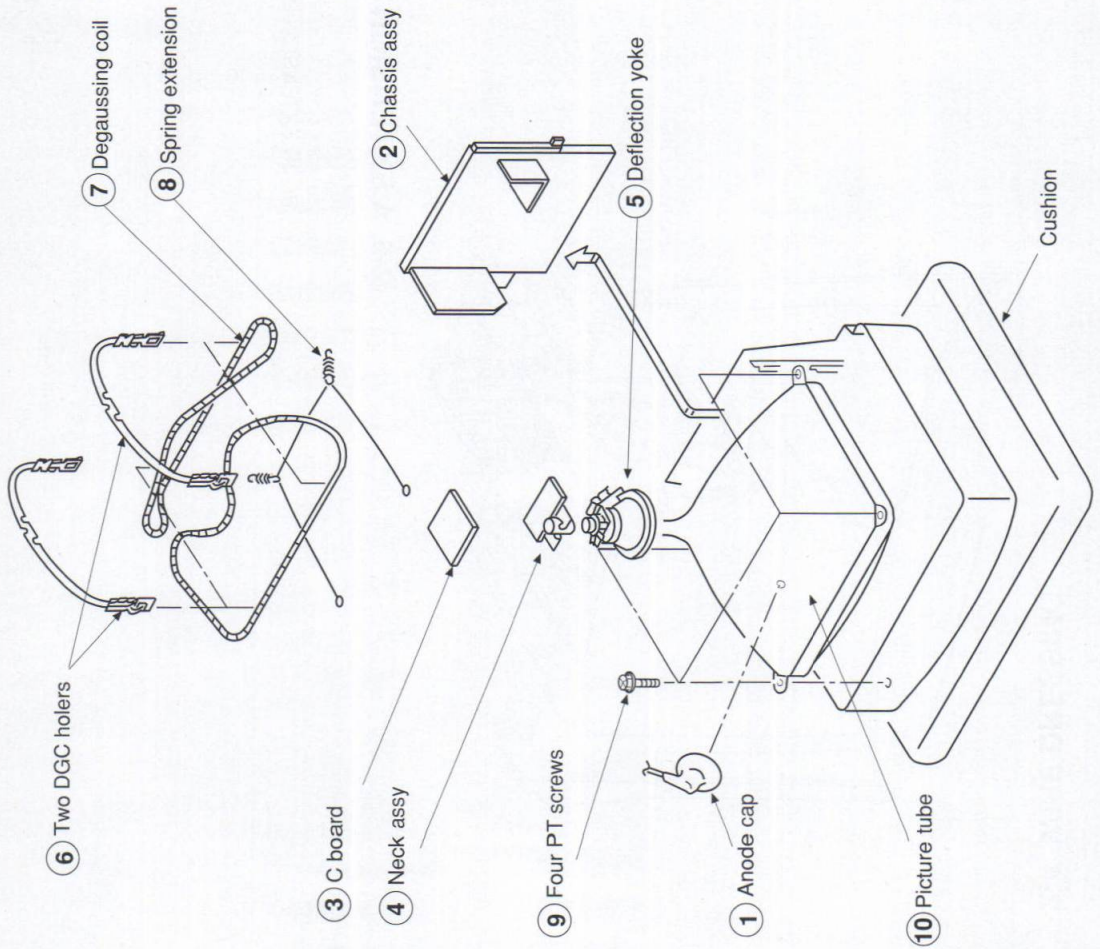
### 2-5. A BOARD REMOVAL



### 2-6. A EXTENSION BOARD



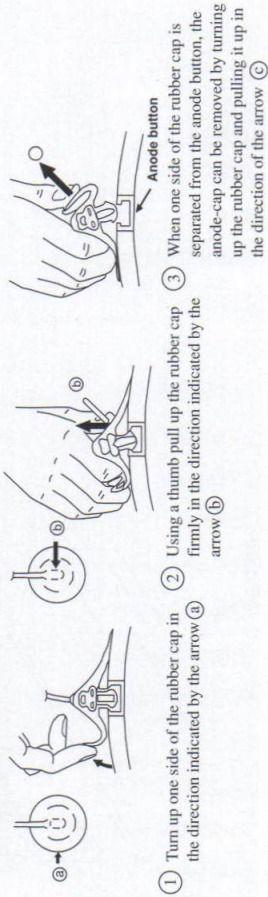
## 2-7. PICTURE TUBE REMOVAL



## • REMOVAL OF ANODE-CAP

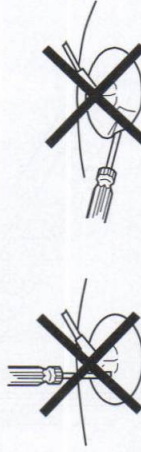
**Note:** Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

### \* REMOVING PROCEDURES.



### • 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 !
  - 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.

### (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.

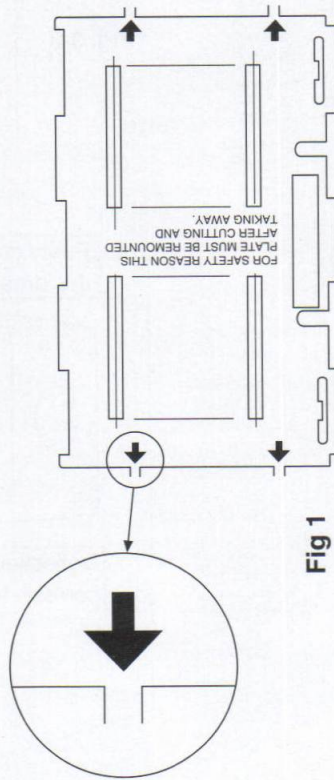


Fig 1

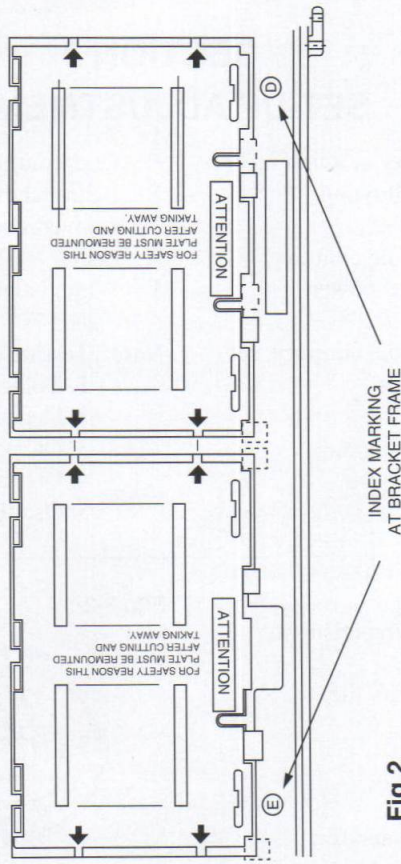


Fig 2

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.

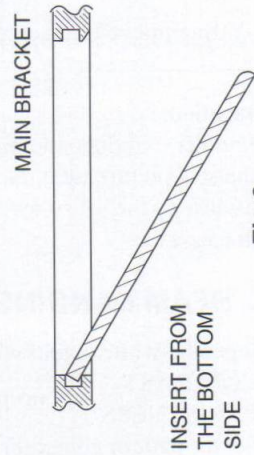


Fig 3

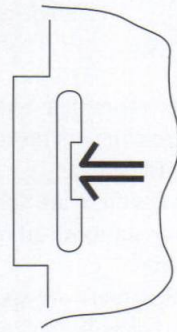


Fig 4

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

### (2) REFITTING THE PLATES

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

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.

## SECTION 3 SET-UP ADJUSTMENTS

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

Contrast ..... 80% (or remote control normal)  
 Brightness ..... 50%

- Carry out the following adjustments in this order :
  1. Beam landing
  2. Convergence
  3. Focus
  4. White balance

**Note:** Testing equipment required.

1. Color bar/pattern generator
2. Degausser
3. DC power supply
4. Digital multimeter
5. Oscilloscope

### Preparation:

- In order to reduce the influence of geomagnetism on the set's picture tube, face it east or west.
- Switch on the set's power and degauss with the degausser.

### 3-1. BEAM LANDING

1. Input the white signal with the pattern generator.  
 CONTRAST } normal  
 BRIGHTNESS }
2. Set the pattern generator raster signal to red.
3. Move the deflection yoke forward and adjust with the purity control so that the red is at the centre and the blue and the green take up equally sized areas on each side. (See Fig. 3-1 - 3-3)
4. Move the deflection yoke forward and adjust so that the entire screen becomes red. (See Fig. 3-1)
5. Switch the raster signal to blue, then to green and verify the condition.
6. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
7. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Fig. 3-4)

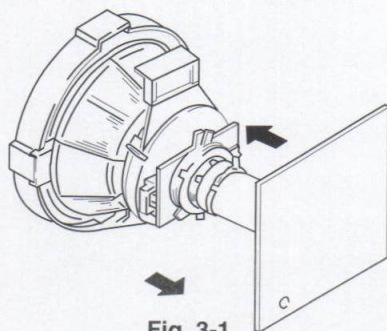


Fig. 3-1

Fig. 3-2

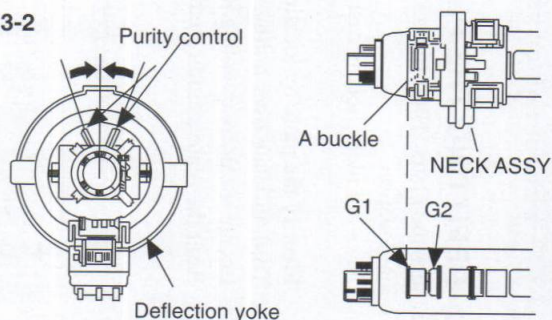


Fig. 3-3

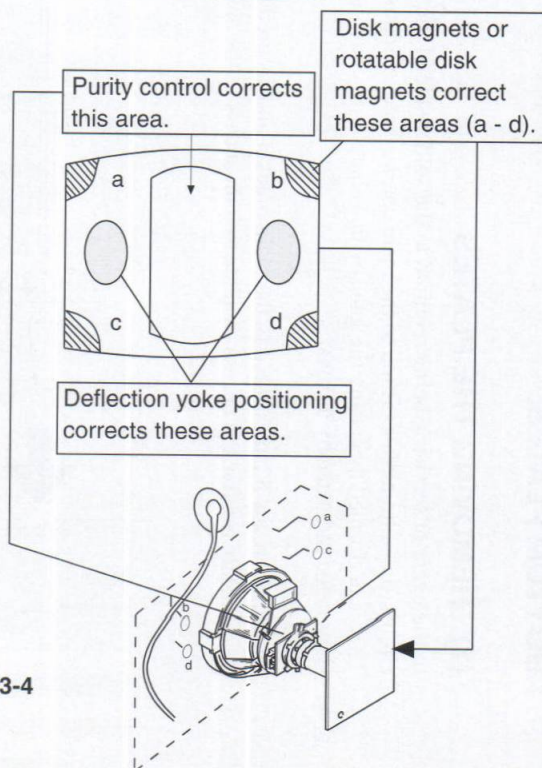
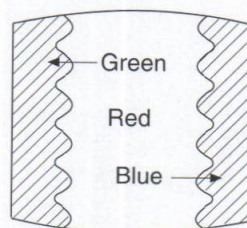


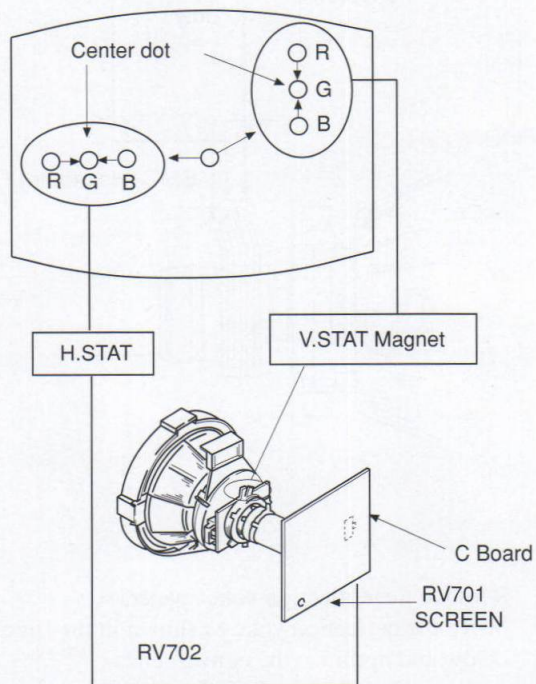
Fig. 3-4

### 3-2. CONVERGENCE

**Preparation:**

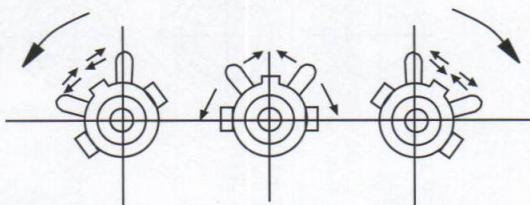
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide a dot pattern.

**(1) Horizontal and vertical static convergence**

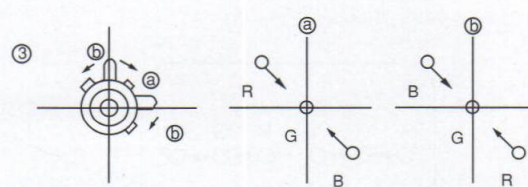
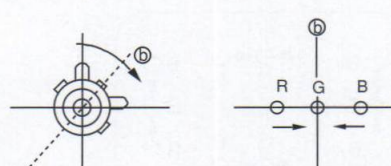
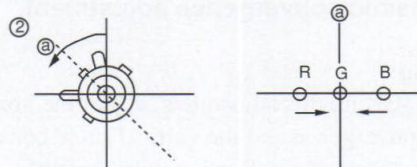
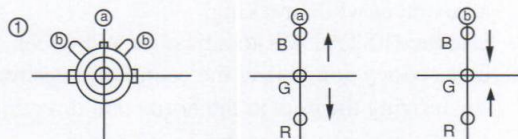


1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the centre of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the centre of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the centre of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.  
(In this case, the H.STAT variable resistor and the V.STAT magnet influence each other)

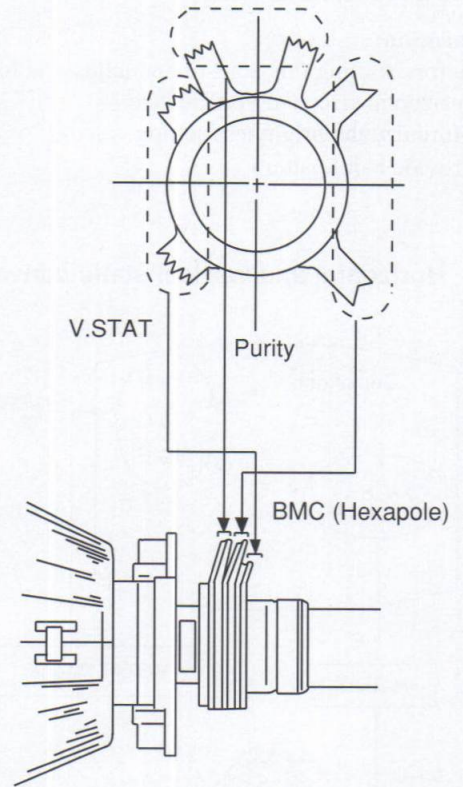
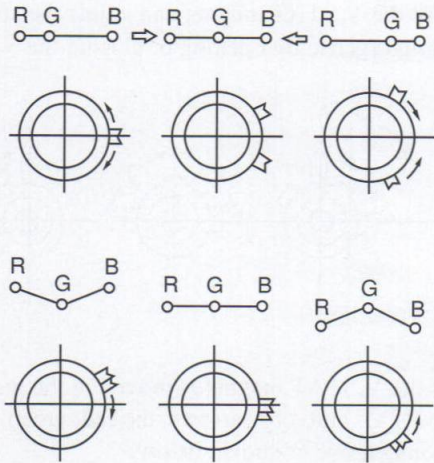
- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.



4. If the V.STAT magnet is moved in the direction of the (a) and (b) arrows, the red, green, and blue points move as shown below.



• Operation of BMC (Hexapole) Magnet



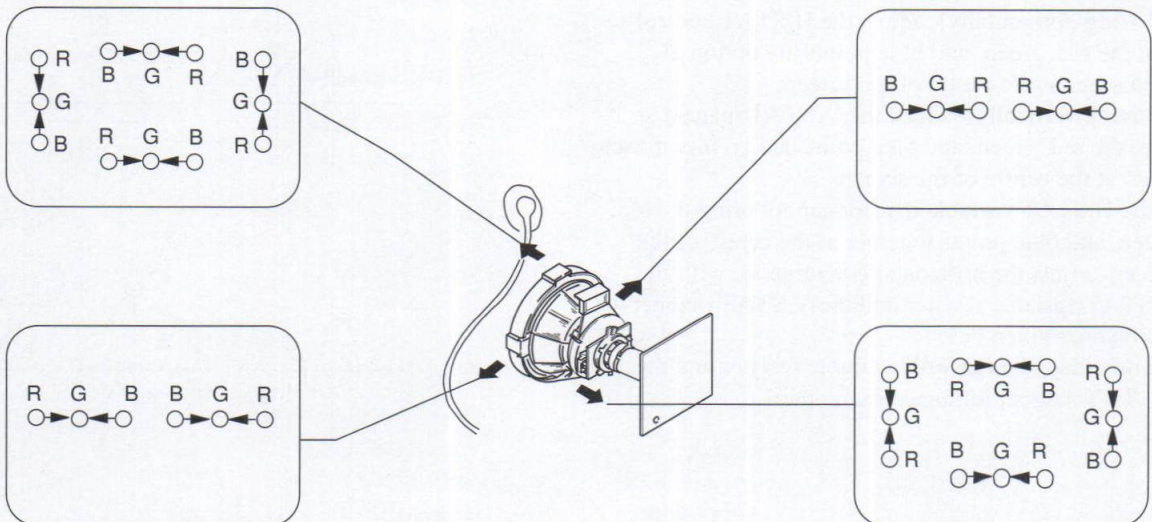
- The respective dot position resulting from moving each magnet interact, so be sure to perform adjustment while tracking.  
Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the centre of the screen (by moving the dots in the horizontal direction).

(2) Dynamic convergence adjustment.

Preparation:

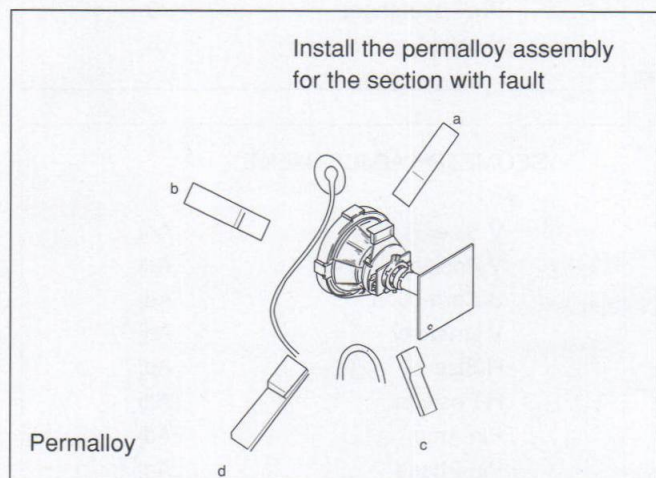
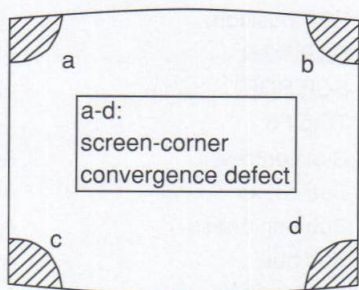
- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.
1. Slightly loosen the deflection yoke screws.

2. Remove the deflection yoke spacer.
3. Move the deflection yoke as shown in the figure below and optimize the convergence.
4. Tighten the deflection yoke screws.
5. Re-install the deflection yoke spacer.



**(3) Screen corner convergence.**

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

**3-3. WHITE BALANCE****G2 Setting**

1. Switch the set into AV mode (apply no signal to the AV connectors).
2. Connect a Volt Meter to Test Point 1 on the A board.
3. Adjust RV01 to obtain a voltage of  $3.0V \pm 0.3V$ .

**White balance adjustment**

1. Input an all white signal from the pattern generator.
2. Enter into the service mode.
3. Enter into Picture Adjustment service menu.
4. Select sub-contrast and adjust to 7.
5. Select the Green Drive and adjust so that the white balance becomes optimum.
6. Select the Blue Drive and adjust so that the white balance becomes optimum.
7. Press the TV button to return to TV operation.

**PICTURE ADJUSTMENT**

AFC mode	1
REF position	2
SCP BGR	1
SCP BGF	1
Trap Fo	0
Sub contrast	Adj
Sub colour	Adj
Sub brightness	Adj
Sub hue	Adj
Green drive	Adj
Blue drive	Adj
Green cutoff	Adj
Blue cutoff	Adj
Gamma	0
Pre / overshoot	0
Y delay	3

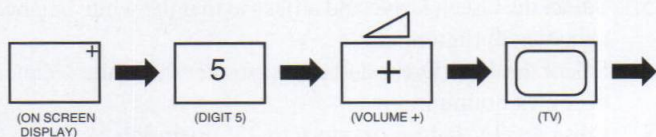
## SECTION 4 CIRCUIT ADJUSTMENTS

### 4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander RM-839.

#### HOW TO ENTER INTO SERVICE MODE

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



"TT-- " will appear in the top right corner of the screen. Other status information will also be displayed.

3. Press MENU on the commander to obtain the following menu on the screen.

#### TEST MENU

> Picture adjustment  
 Geometry  
 Wide  
 MSP  
 IC status  
 Current TV status

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

#### PICTURE ADJUSTMENT

AFC mode	1
REF position	3
SCP BGR	1
SCP BGF	1
Trap Fo	7
Sub contrast	Adj
Sub colour	Adj
Sub brightness	Adj
Sub hue	Adj
Green drive	Adj
Blue drive	Adj
Green cutoff	Adj
Blue cutoff	Adj
Gamma	0
Pre / overshoot	0
Y delay	5

#### GEOMETRY ADJUSTMENT

V Size	Adj
V Position	Adj
S Correction	Adj
V Linearity	Adj
H Size	Adj
H Position	Adj
Pin Amp	Adj
Pin Phase	Adj
AFC Bow	Adj
AFC Angle	Adj
EHT V	Adj
EHT H	Adj
Corner Pin	Adj

#### WIDE

V Aspect	43
V Scroll	31
Upper V Lin	0
Lower V Lin	0
Left Blanking	1
Right Blanking	11

**MSP**

AGC ON/OFF	ON
Constant gain CDB	0
FM prescale FMP	36
Zwei mono-st WHI	36
Zwei st-mono WLO	18
Zwei mono-bi WMH	36
Zwei bi-mono WLO	18
Time zwei WML	41
Fawct limit	10
Fawct soll init FAW	12
Fawer tol	2
Nicam Err Max CCT	10
Nicam Err Min	0
Nicam Prescale NIP	97
Time Nicam	31
Carrier mute CRM	OFF
Audio clock ACO	HIZ
Scart prescale	25
Scart volume	64

**IC STATUS (CXA2000 / CXA2040)****CXA2000**

H lock	1
IKR	1
VNG	0
X-RAY	0
Colour system	3
CV1 Sync	1

**CXA2040**

Sync sep	1
S1 mode pin	01
S2 mode pin	01

**TUNER**

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

**TV STATUS**

Text system	C TEXT/TV TEXT
Dolby	NO/YES
Text language set	WEST/EAST/RUSSIAN
Menu language set	WEST/EAST/RUSSIAN
Destination	B/D/U/K/L/E/A/R
Scart 16:9	OFF/ON
RGB priority	OFF/ON
Ageing	OFF/ON
Size	29/25
Colour trap sw	SECAM/ALL
Velocity mod	ON/OFF
AFT STATUS	WINDOW/HIGH/LOW

**SUB BRIGHTNESS ADJUSTMENT**

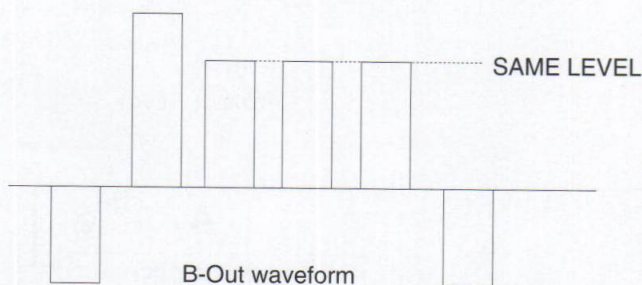
1. Input a Phillips pattern.
2. Set the picture control to minimum.
3. Enter into the Picture Adjustment Service Menu.
4. Adjust the Sub-Brightness data so that there is barely a difference between the 0 IRE and 10 IRE signal.

**SUB CONTRAST ADJUSTMENT**

1. Input a video that contains a small 100% area on a black background.
2. Set the picture control to maximum.
3. Connect an oscilloscope to pin 3 of CN301 (A board).
4. Enter into the Picture Adjustment Service Menu.
5. Adjust the Sub-contrast data to obtain a black to white amplitude of 2.50 volts.

**SUB COLOUR ADJUSTMENT**

1. Receive a PAL Colour Bar video signal.
2. Connect an oscilloscope to pin 3 of CN301 (A board).
3. Enter into the Picture Adjustment Service Menu.
4. Adjust the sub colour data so that cyan, magenta and blue colour bars are of equal height.



NOTE: The data shown in the TV STATUS table is dependant on destination, screen size and country.

**KV-32WF1**

**SYSTEM B/G, D/K, I & L I.F ADJUSTMENT**

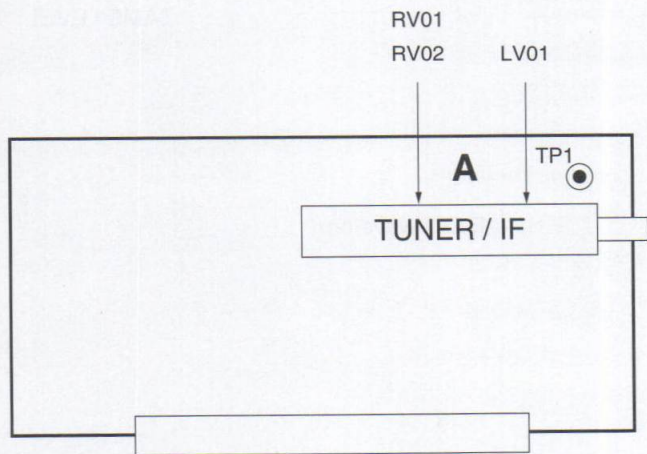
1. Input an off air signal of between 60-100dBuV / 75 ohm terminated, via the tuner socket.
2. Enter into the I.F adjustment service mode (i.e. " TT 59 " ) to fix the I.F frequency to 38.9 MHz.
3. Enter into the service mode and select "Current TVStatus".
4. Adjust the I.F coil (LV01) until the "AFT Status" indicates a " Window " condition.

**SYSTEM L BAND 1 I.F ADJUSTMENT**

1. Input an off air signal of between 60-100dBuV / 75 ohm terminated, via the tuner socket.
2. Enter into the I.F adjustment service mode (i.e. " TT 59 " ) to fix the I.F frequency to 34.2 MHz.
3. Enter into the service mode and select "Current TVStatus".
4. Adjust the RV02 until the "AFT Status" indicates a " Window " condition.

**TUNER AGC ADJUSTMENT**

1. Receive a signal of 63dBuV / 75 ohm terminated via the tuner socket.
2. Measure the voltage at test point 1 (A board).
3. Adjust RV01 to obtain a voltage of 3.0V ± 0.3V.



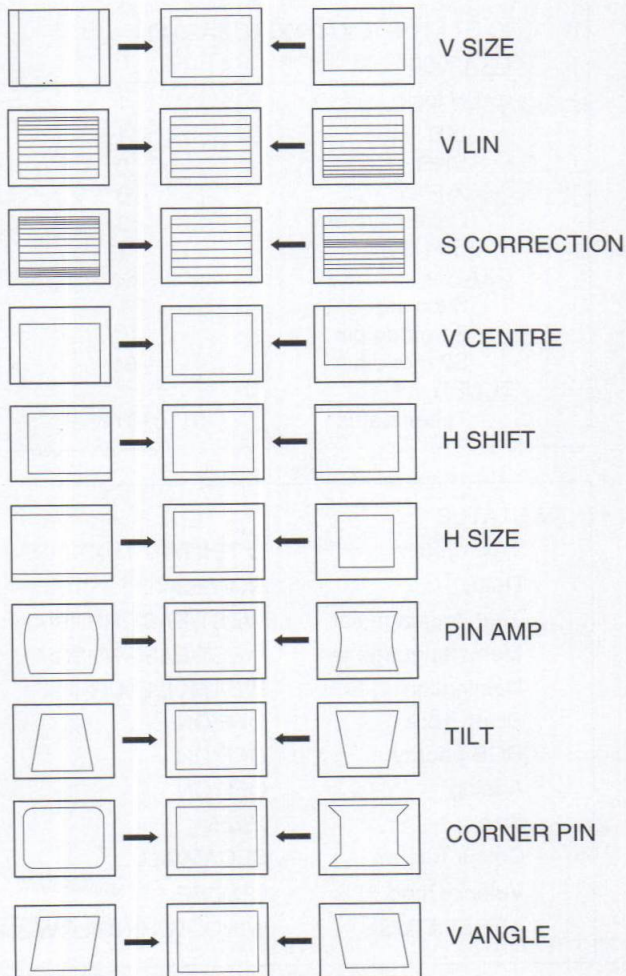
- A Board component side -

**DEFLECTION SYSTEM ADJUSTMENT**

1. Enter into the Geometry Adjustment Service Menu.
2. Select and adjust each item in order to obtain the optimum image.

**GEOMETRY ADJUSTMENT**

V Size	Adj
V Position	Adj
S Correction	Adj
V Linearity	Adj
H Size	Adj
H Position	Adj
Pin Amp	Adj
Pin Phase	Adj
AFC Bow	Adj
AFC Angle	Adj
EHT V	Adj
EHT H	Adj
Corner Pin	Adj



## 4-2. TEST MODE 2:

Is available by pressing Test button twice, OSD " TT " appears. The functions described below are available by pressing the two numbers. To release the Test mode 2, press 0 twice, or switch the TV into stand-by mode.

00	Cancel Test mode
01	Picture maximum
02	Picture minimum
03	Volume 30%
04	Volume 50%
05	Volume 65%
06	Volume 80%
07	Ageing mode
08	Set shipping conditions
09	Reset language select menu on power up
10	No function
11	Clear & Disable OSD
12	Enable OSD
13	Scart 16:9 Enable/Disable
14	Display TV status
15	Picture reset
16	Set 32" chassis (Wide models only)
17	Set all AV labels to default
18	RGB Priority Enable/Disable
19	Set all programme labels to default
20	No function
21	Sub Picture Adjustment (use red/yellow)
22	Sub Colour Adjustment (use red/yellow)
23	Sub Brightness Adjustment (use red/yellow)
24	Destination U
25	Destination D
26	Destination B
27	Destination K
28	Destination L
29	Destination E
30	No function
31	Destination A
32	Destination R

33	Sub Woofer Enable
34	Sub Woofer Disable
35	Set up trap switch
36	Rotation test
37	Set 25" (24" Wide models)
38	Set 29" (28" Wide models)
39	D/K Nicam Enable
40	No function
41	Re-initialise the NVM
42	Default Programme info in NVM with Pencoed factory channel setup
43	Default Geometry settings
44	Default favourite pages to 100,101,102 & 103
45	Switch off all Channel Locks
46	Dealer commander mode (pending)
47	Default MSP settings
48	Restore NVM test byte                      Undo TT49
49	Delete NVM test byte Sets virgin NVM
50	No function
51	Text interlace odd (NON INTERLACE MODE = 3)
52	Text interlace even (NON INTERLACE MODE = 2)
53	Auto picture ON
54	Auto picture OFF
55	Auto cut off ENABLE
56	Auto cut off DISABLE
57	AV3 ENABLE
58	AV3 DISABLE (if TV Text) otherwise AV3 ENABLE
59	Auto IF Display
60	No function
61	Dolby Pro-logic ON
62	Noise Left
63	Noise Right
64	Noise Centre
65	Noise Surround

66	DSP Bypass
67	D/K Nicam Disable
68	Diagnostics OFF
69	Diagnostics ON
70	No function
71	Lumisponder Curve 1
72	Lumisponder Curve 2
73	Jungle Select (CXA2000 or CXA2076)
74	Text H Position adjust
75	Picture reset
76	MSP BG filter enabled (h/w required)
77	Sound reset
78	MSP BG filter disabled (h/w required)
79	Wide set-up (Wide screen models only)
80	No function
81	Velocity Mod ON
82	Velocity Mod OFF
83	Picture Rise step 40ms
84	Picture Rise step 80ms
85	Picture Rise step 160ms
86	Picture Rise OFF
87	Select Shop mode
88	Compact Text Acquisition Disable
89	Compact Text Acquisition Enable
90	No function
91	Sound Centre mode NORMAL
92	Sound Centre mode WIDE
93	Sound Centre mode PHANTOM
94	Toggle Compact Text Acquisition Delay Bit 0
95	Toggle Compact Text Acquisition Delay Bit 1
96	Toggle Compact Text Acquisition Delay Bit 2
97	Toggle Compact Text Acquisition Delay Bit 3
98	Toggle Compact Text Acquisition Delay Bit 4
99	Set test menu

These test modes can set the delay byte to any value 0-31  
which creates a (value x 20) mS delay  
NOTE: Compact Text models ONLY

### 4-3. BE-3D SELF DIAGNOSTIC SOFTWARE

The identification of errors within the BE-3D chassis is triggered in 1 of 2 ways :- 1: Bus busy or 2: Device failure to respond to IIC. In the event of one of these situations arising the software will first try to release the bus if busy (Failure to do so will report with continuous flashing LED) and then communicate with each device in turn to establish if a device is faulty. If a device is found to be faulty the relevant device number will be displayed through the led (Series of flashes which must be counted) See Table 1, non fatal errors are reported with this method.

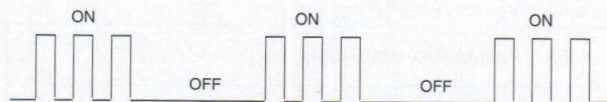
**Table 1**

ERROR	LED ERROR COUNT
No error	00
Not allowed (may be confused with Sircs response flash!)	01
Protection circuit trip < ANY TIME >	02
IIC SCL LOW < POWER UP ONLY >	03
IIC SDA LOW < POWER UP ONLY >	04
IIC SDA & SCL LOW < POWER UP ONLY >	05
Jungle/Chroma controller no acknowledge < POWER UP ONLY >	06
Video Switch no acknowledge < POWER UP ONLY >	07
Tuner no acknowledge	08
MSP no acknowledge	09
NVM no acknowledge	10
M3L TXD Low < POWER UP ONLY >	11
M3L RXD Low < POWER UP ONLY >	12
M3L ENABLE Low < POWER UP ONLY >	13
M3L TXD & RXD Low < POWER UP ONLY >	14
Compact Text test fail < POWER UP ONLY >	15
A V switch cannot power on reset < Chassis Initialisation >	16
Cannot initialise jungle (after initial power on checked out OK) - < Chassis Initialisation >	17
NVM acknowledge fail after initialisation (STBY +5V- same as micro!)	18
Multiple devices with no acknowledge < POWER UP ONLY >	19
Compact text run-time failure < MAY NOT BE FATAL-DISPLAY ON ERROR READER >	20
A V SWITCH response failure after power up check (+9V test)	21
JUNGLE/CHROMA controller response failure after power up check (-9V test)	22
Compact text does not respond (-5V test)	23
MSP run-time failure < MAY NOT BE FATAL-DISPLAY ON ERROR READER >	24

M3L bus Clock low time out after data send (run-time failure)	25
M3L bus Clock low time out after data send (at power up check)	26
M3L bus Clock low time out after data send (at initialisation)	27
DSP run-time failure < MAY NOT BE FATAL-DISPLAY ON ERROR READER >	28

Flash Timing Example : e.g. error number 3.

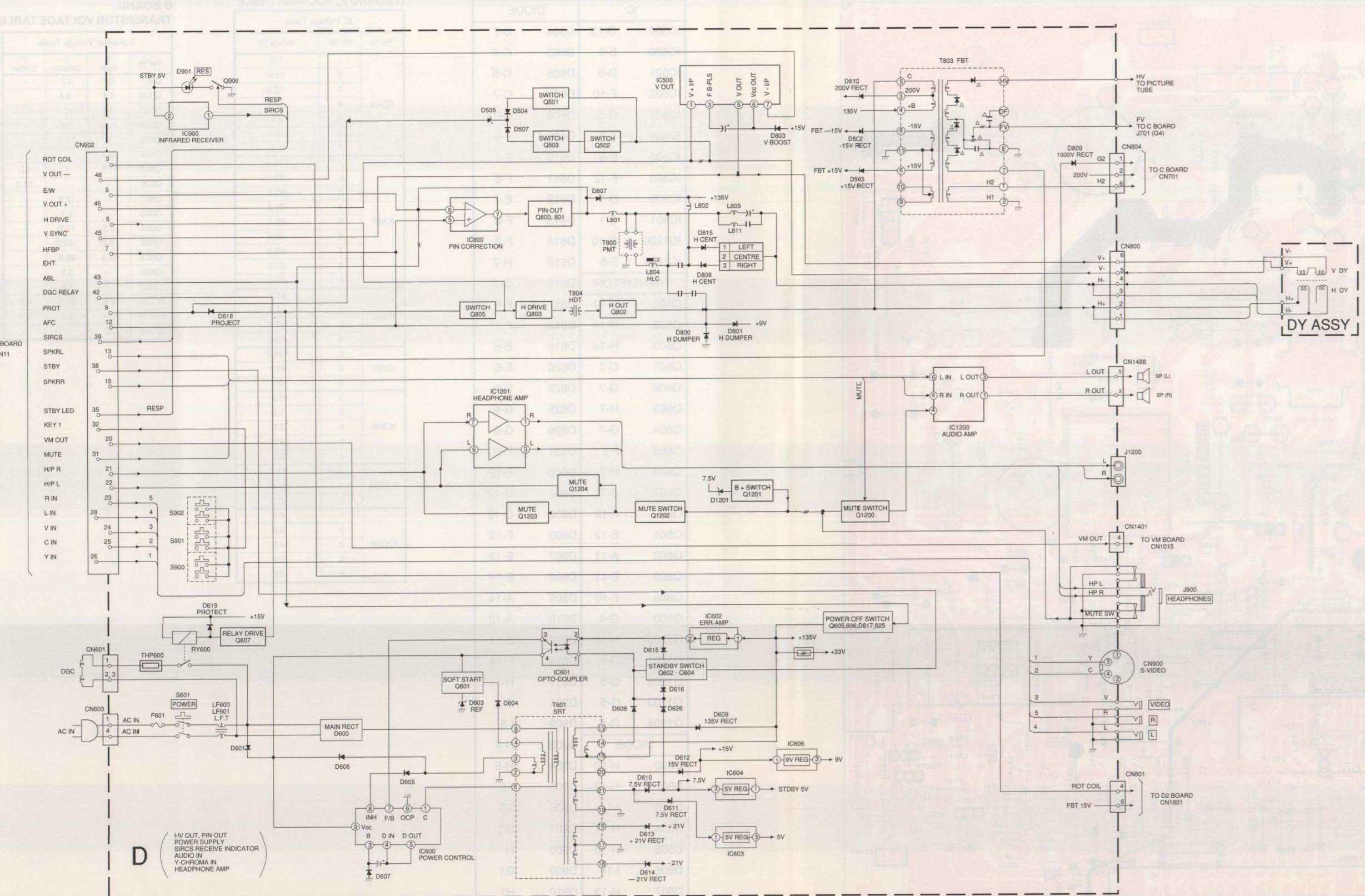
Stby LED



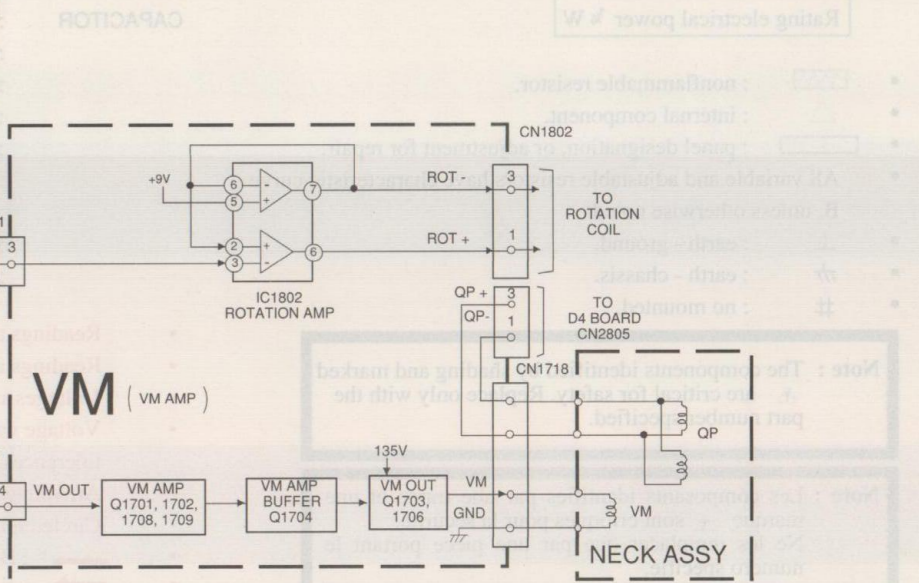
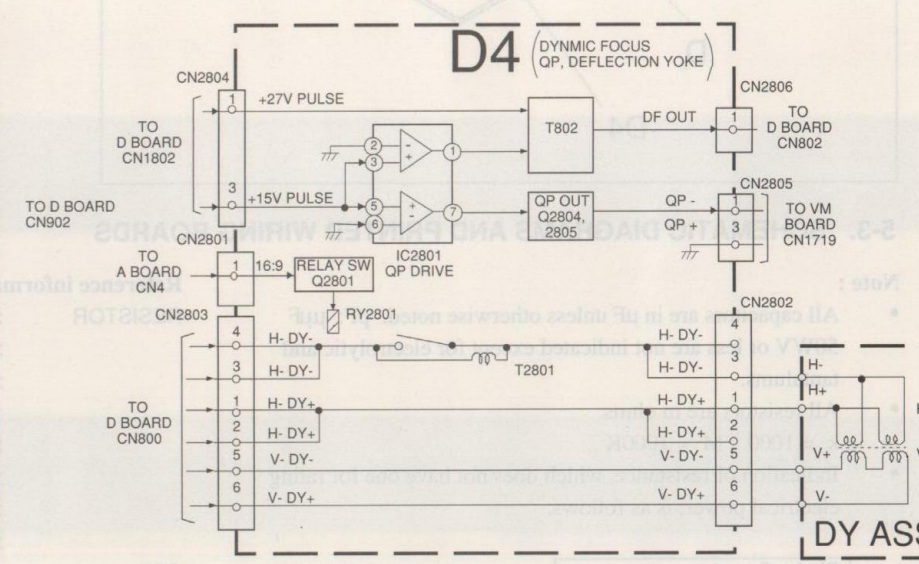
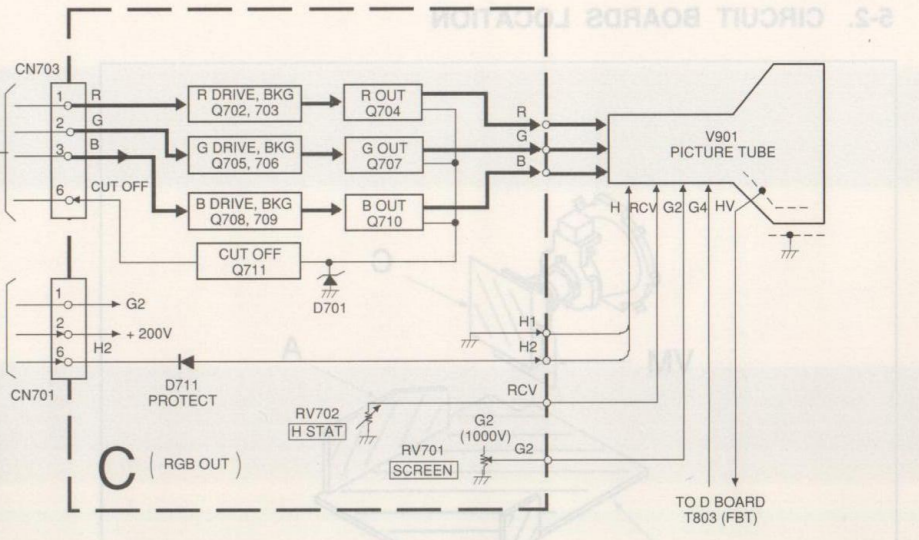
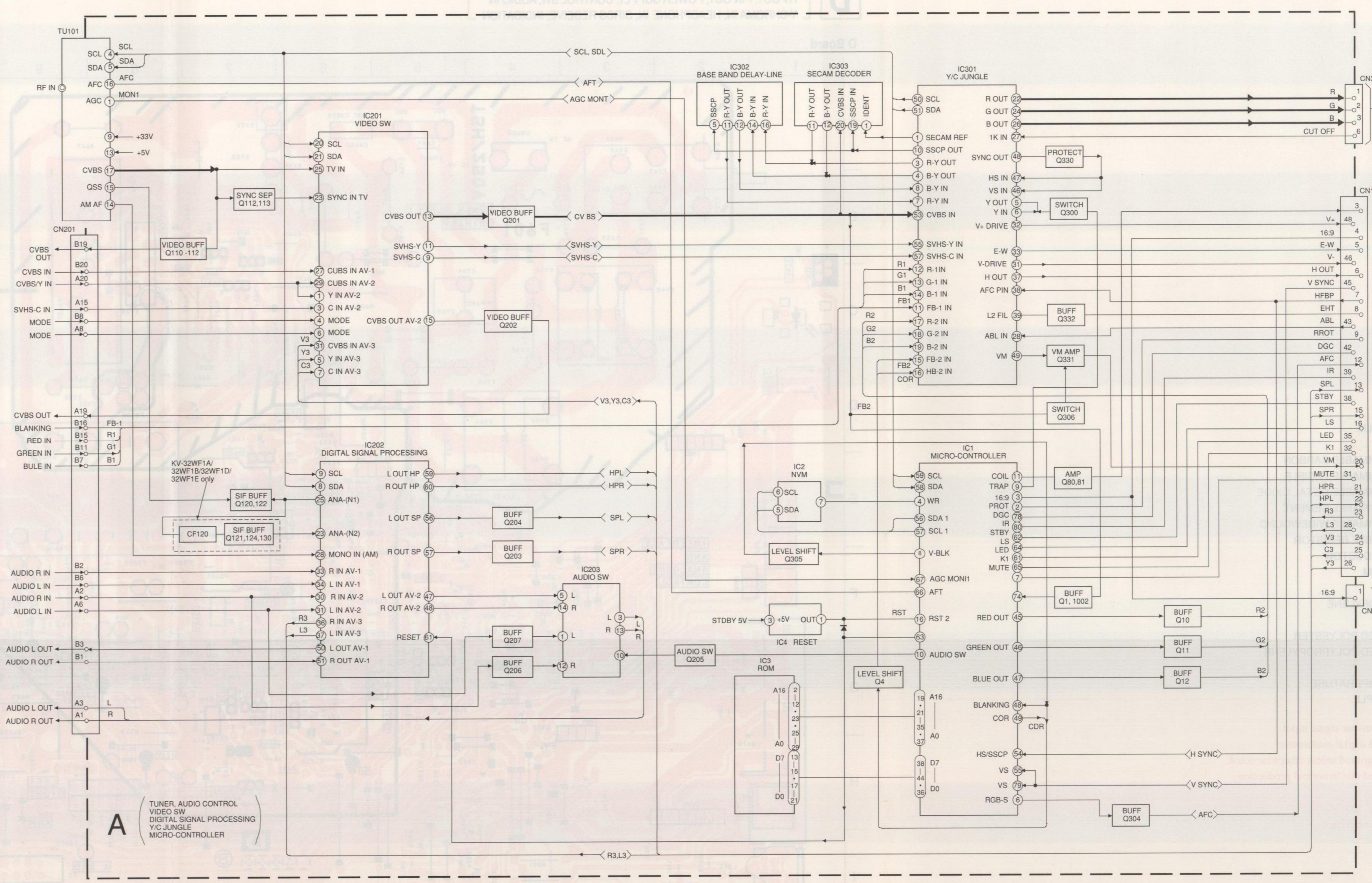


SECTION 5 DIAGRAMS

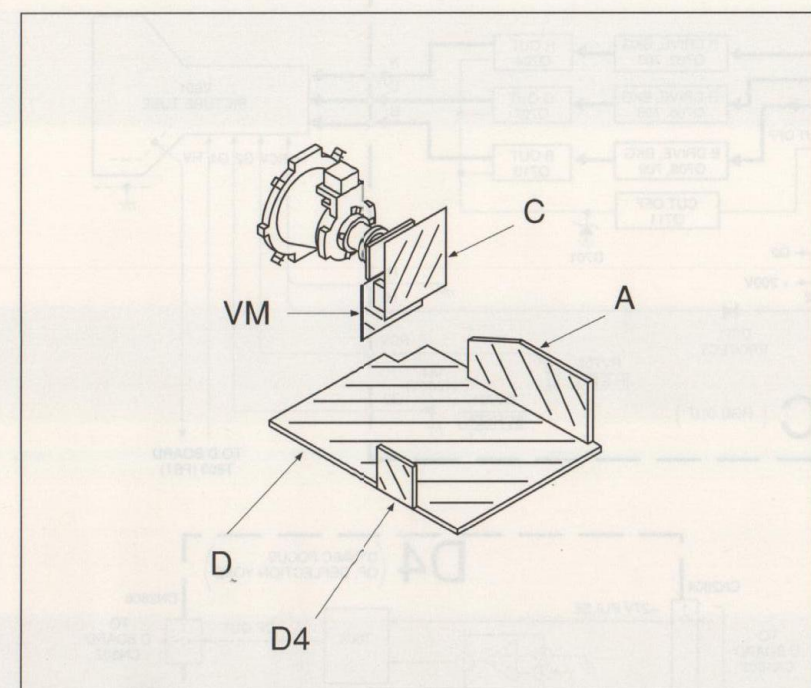
BLOCK DIAGRAM (1)



BLOCK DIAGRAM (2)



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 1/4 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.

Reference information

Table mapping resistor/capacitor codes to materials and types. Includes columns for RESISTOR and CAPACITOR with various codes like RN, RC, FPRD, etc.

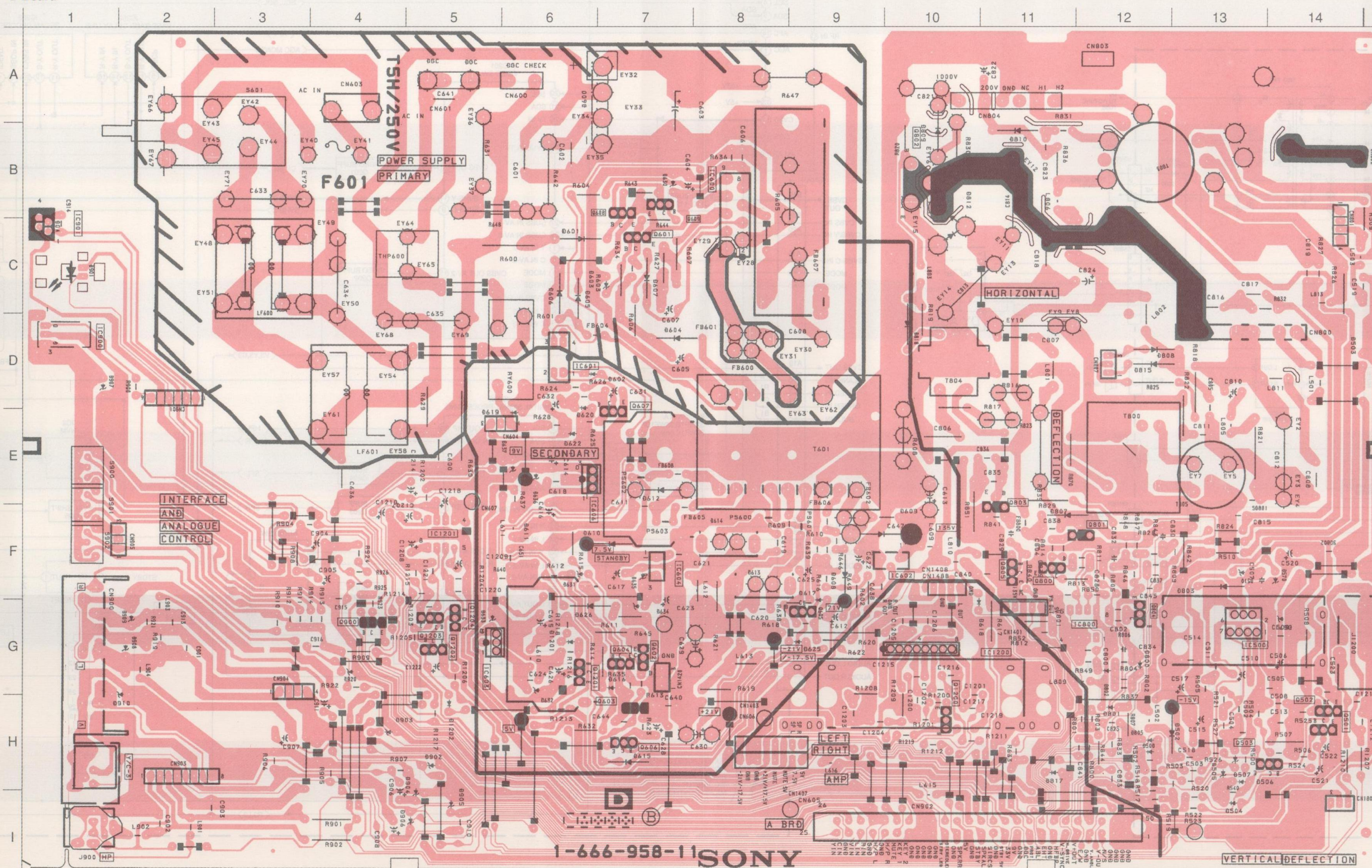
- Readings are taken with a colour-bar signal input.
Readings are taken with 10MΩ digital multimeter.
Voltages are dc with respect to ground unless otherwise noted.
Voltage variations may be noted due to normal production tolerances.
All voltages are in V.
Circled numbers are waveform references.
B+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

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

Note : Les composants identifiés par une trame et une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

D [ HV OUT, PIN OUT, POWER SUPPLY, CONTROL SW, AUDIO IN, Y-CHROMA IN, HEADPHONE IN, SIRCS RECEIVE, INDICATION ]

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

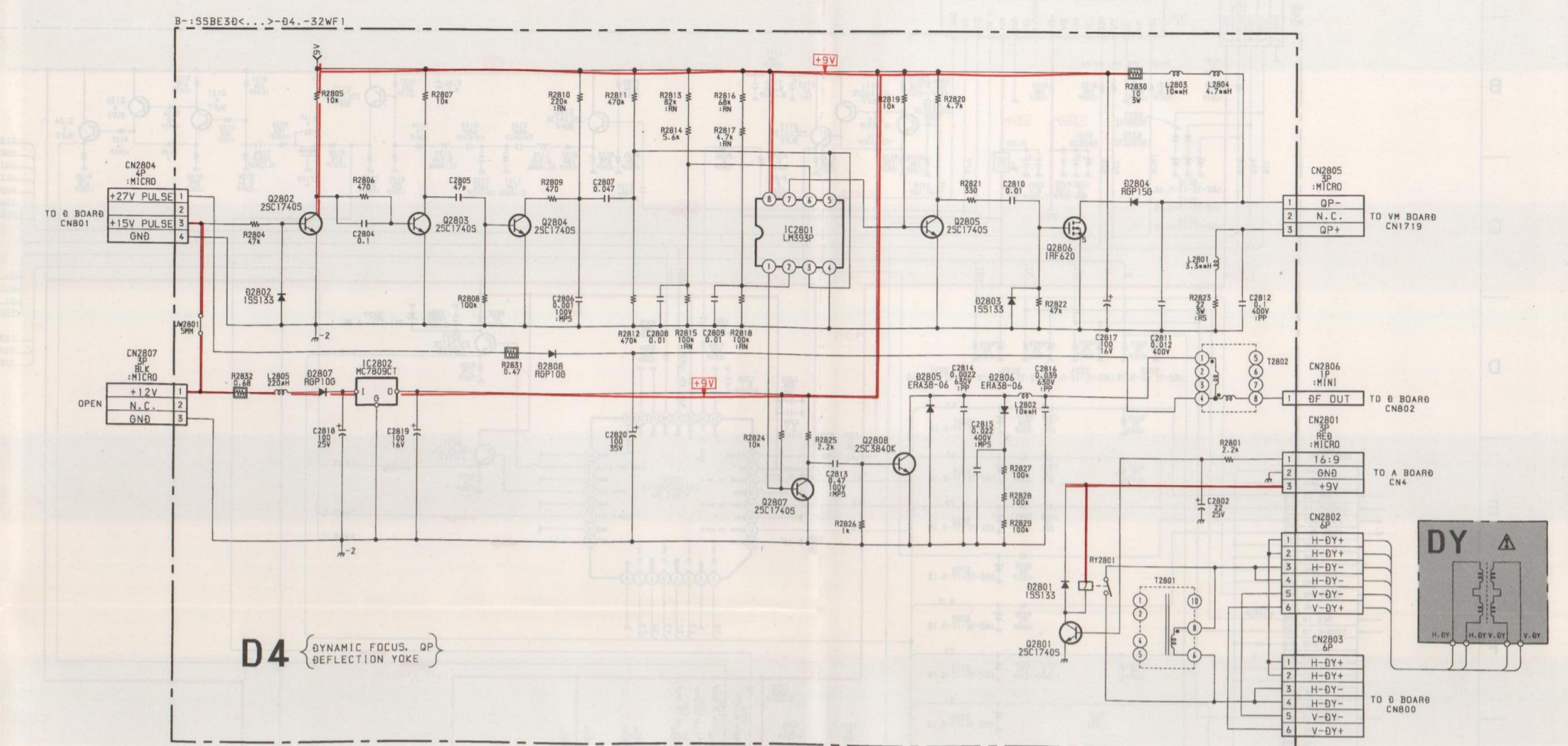
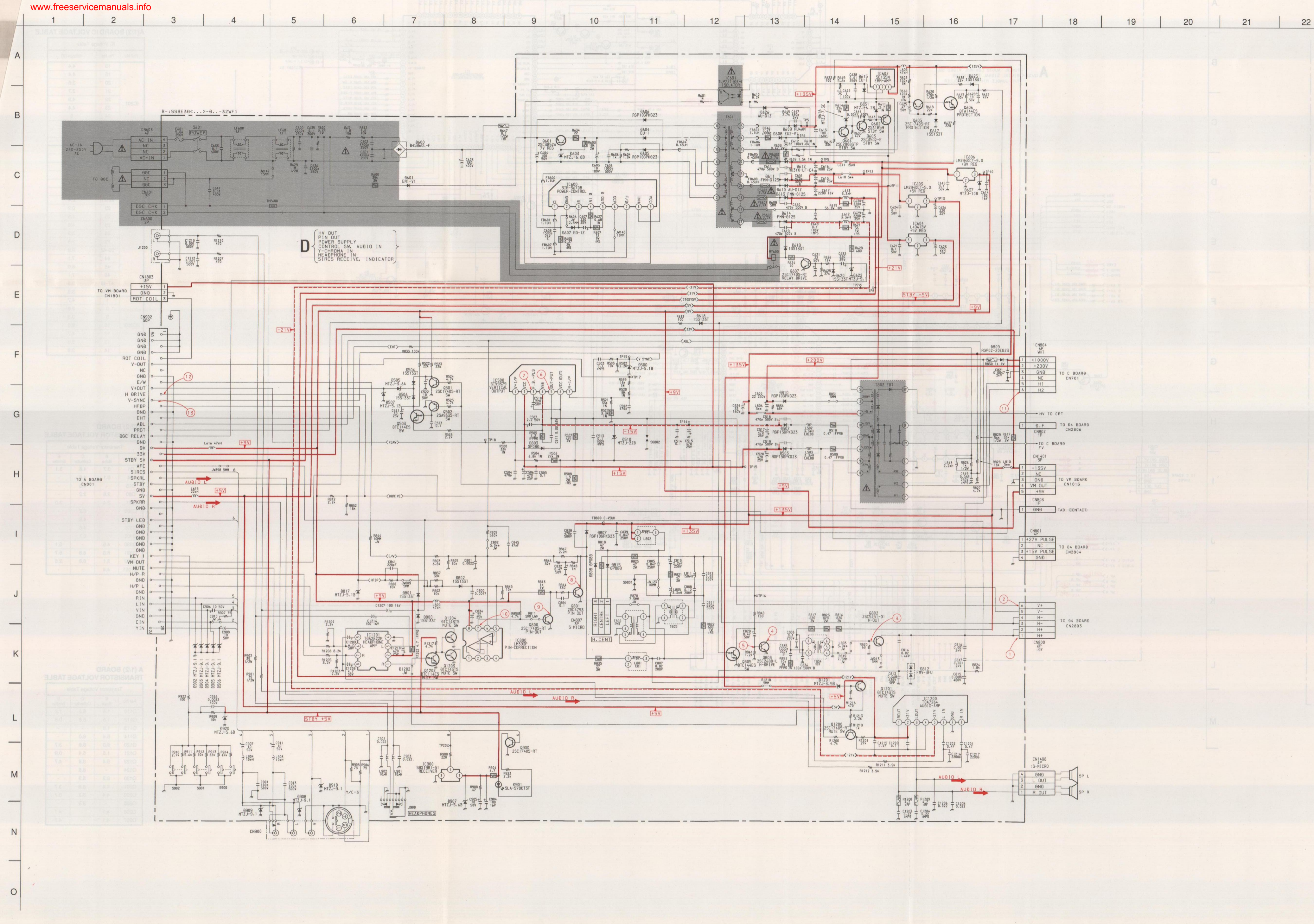
IC and Diode voltage tables for the D Board. Includes columns for IC, Diode, and Voltage (V) for various components like IC500, IC600, etc.

D BOARD IC VOLTAGE TABLE

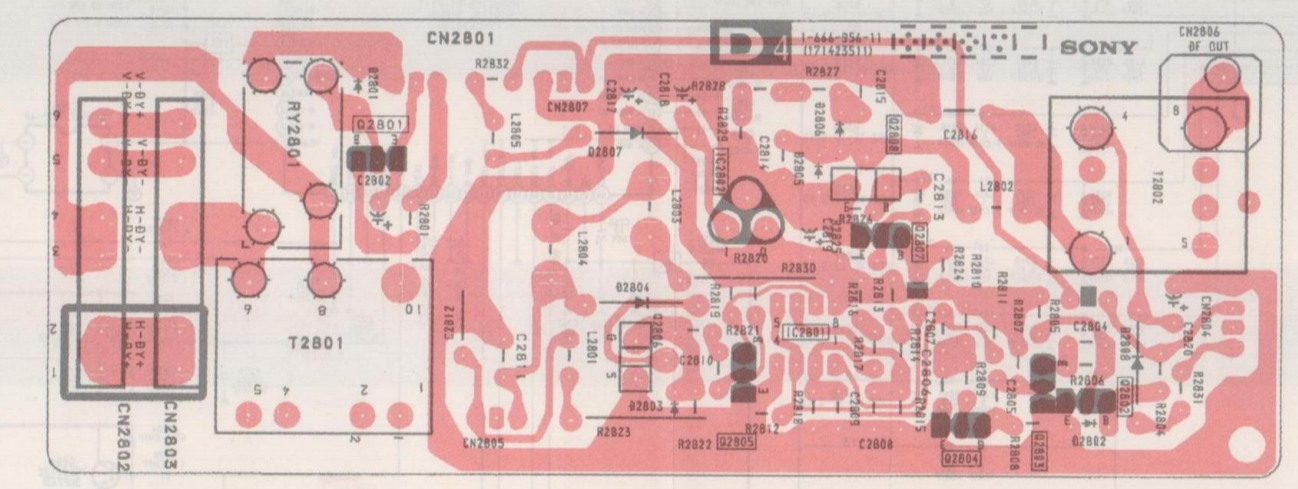
IC Voltage Table with columns for Ref No, Pin No, and Voltage (V) for IC500, IC600, IC800, IC1200, and IC1201.

D BOARD TRANSISTOR VOLTAGE TABLE

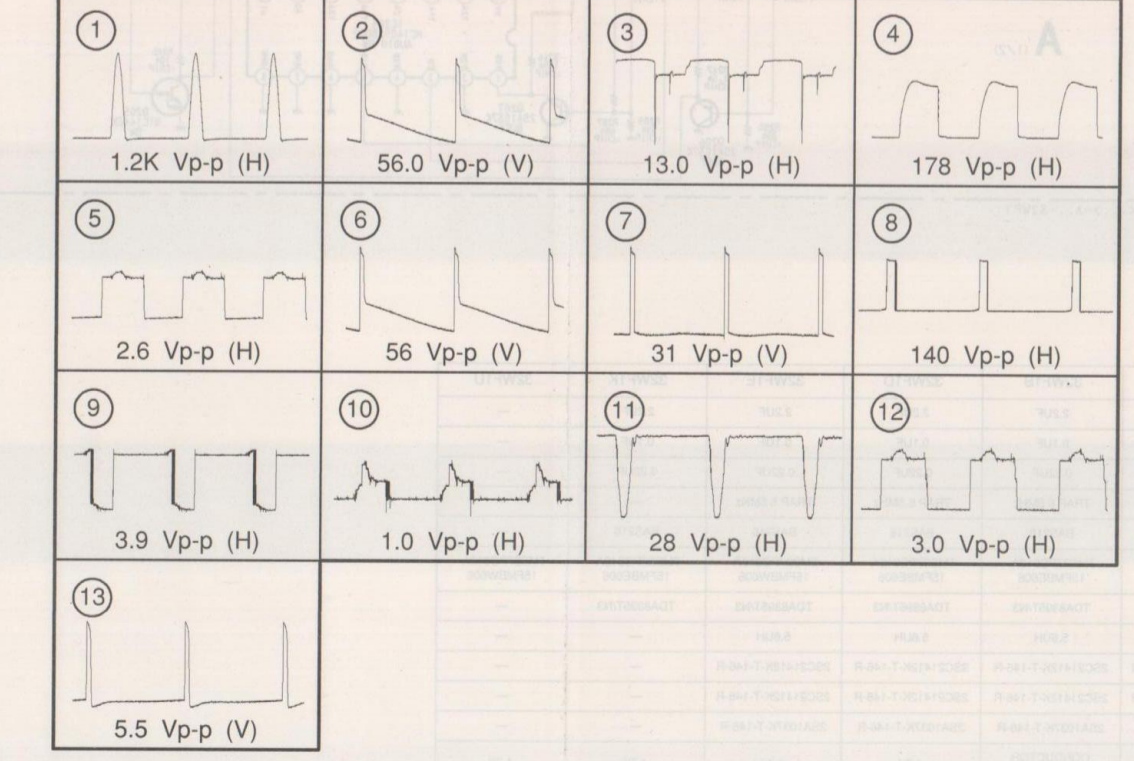
Transistor Voltage Table with columns for Ref No, B (Base), C (Collector), and E (Emitter) for various transistors like Q501, Q601, etc.

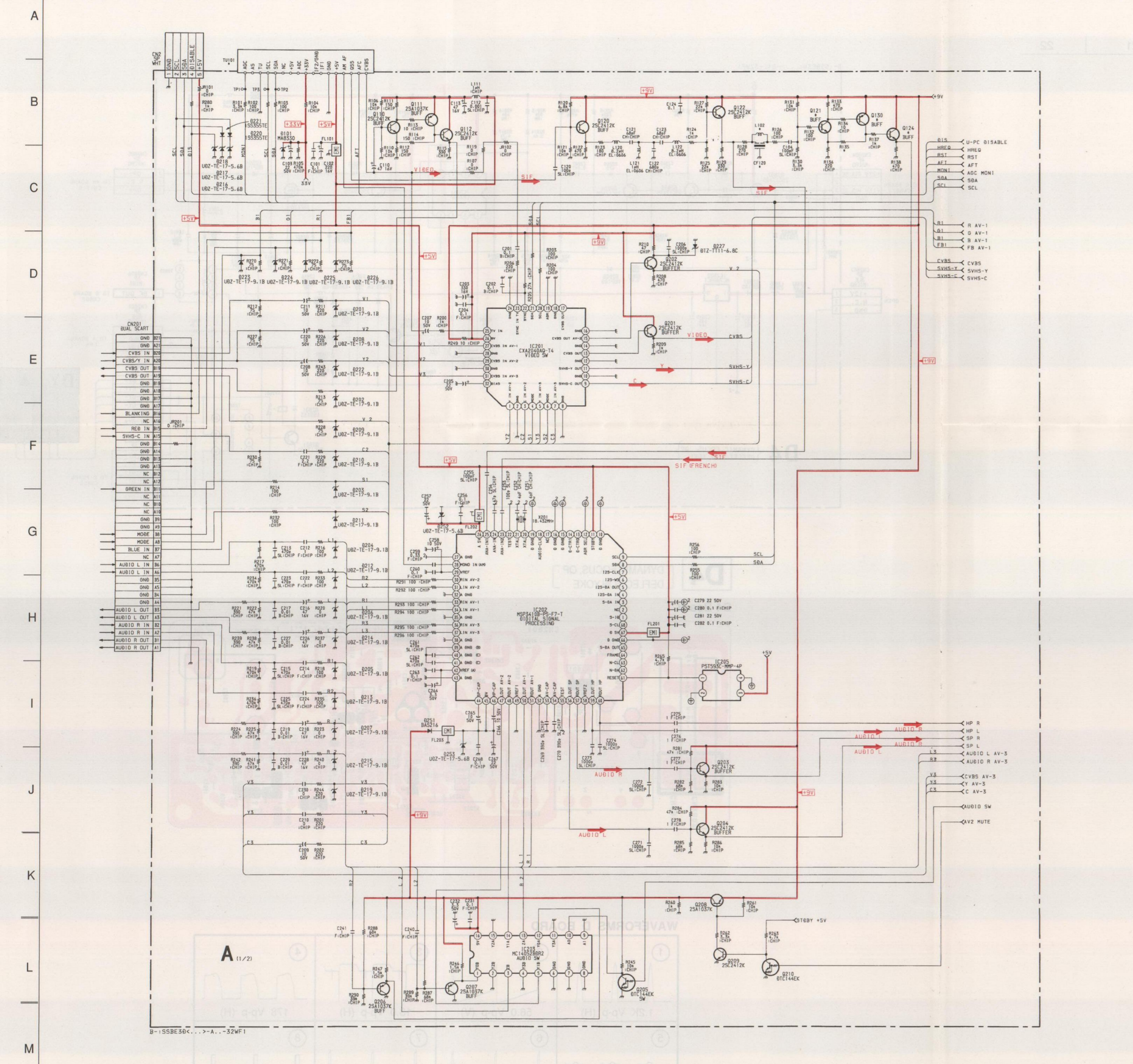


**D4** [ DYNAMIC FOCUS, OP  
DEFLECTION YOKE ]  
D4 Board



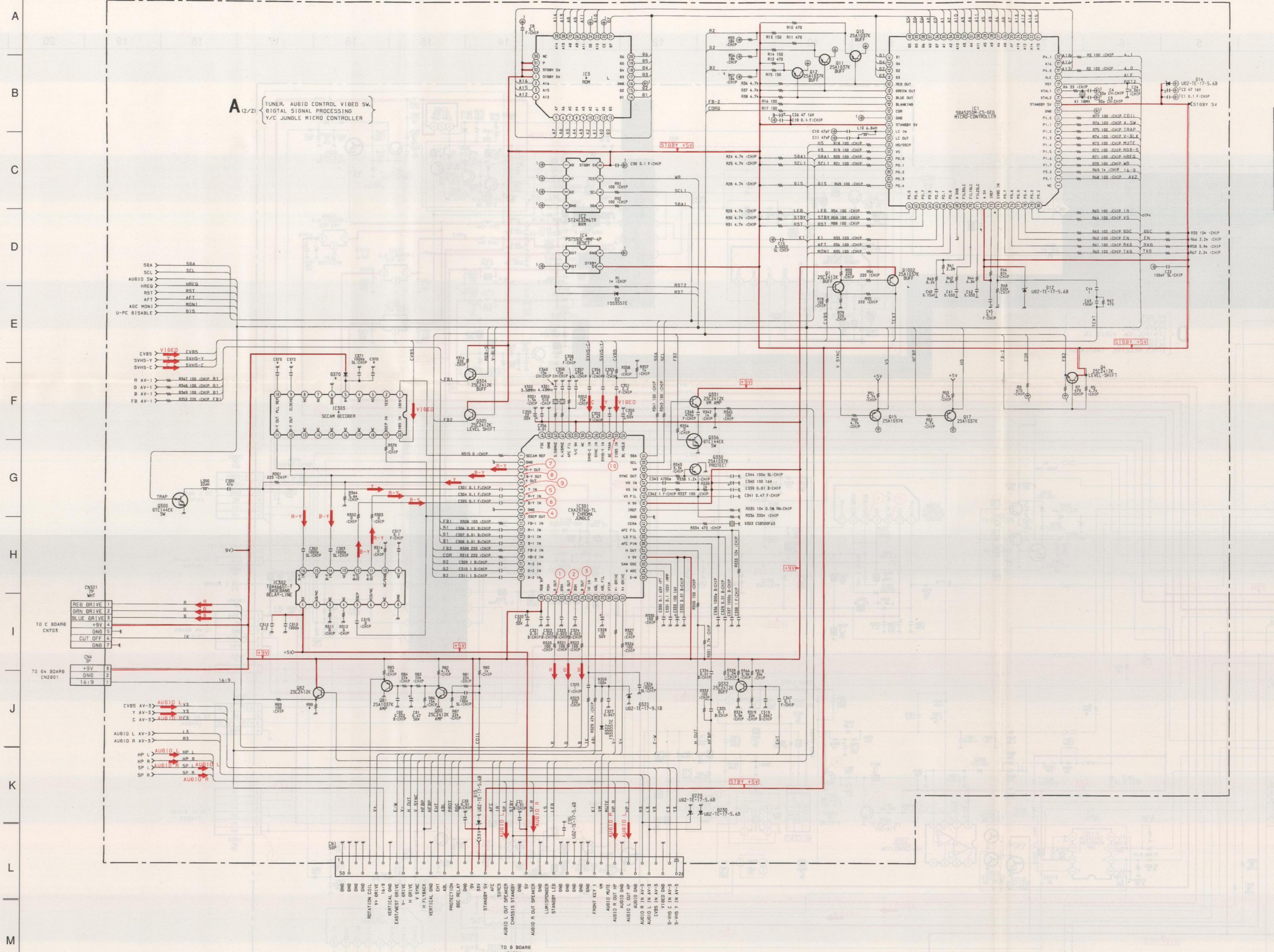
WAVEFORMS D BOARD





**A (1/2) BOARD IC VOLTAGE TABLE**

Ref No	Pin No	Voltage (V)
IC201	13	4.4
	15	4.4
	20	3.5
	21	2.7
	22	4.9
	23	4.4
	24	0
	25	4.4
	26	8.8
	32	4.4
	4	2.8
IC202	6-7	0.1
	8	3.0
	9	3.6
	11	4.7
	13	4.7
	20-21	2.4
	23	0.2
	25	1.5
	26	4.8
	28	3.8
	29	2.6
IC203	39-42	3.8
	44	7.1
	45	8.0
	46	7.1
	47-48	3.8
	53-54	3.8
	1	4.7
	3	3.8
	5	3.8
	10	9.0
	12	4.7
13	3.8	
14	3.8	



**B (2/2) BOARD TRANSISTOR VOLTAGE TABLE**

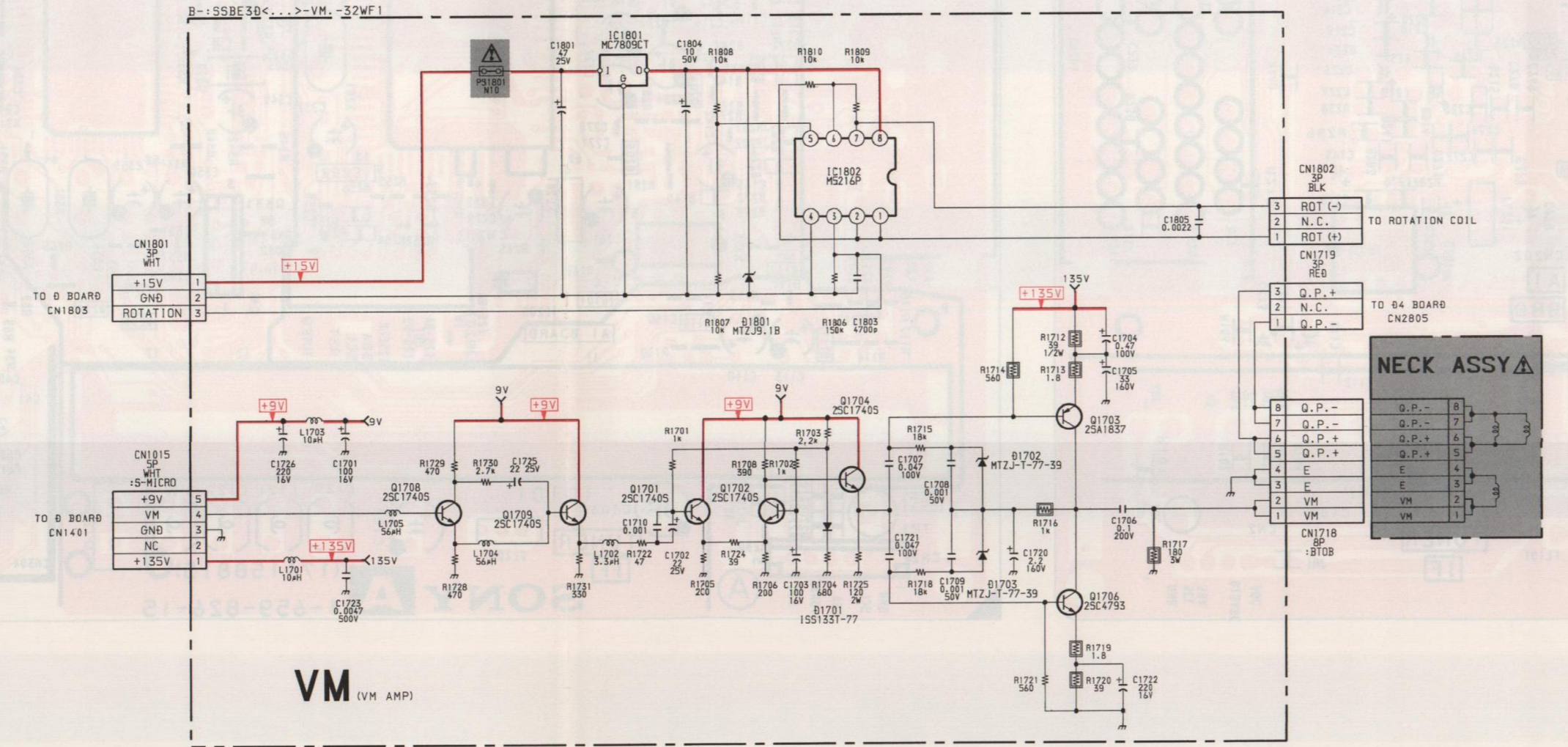
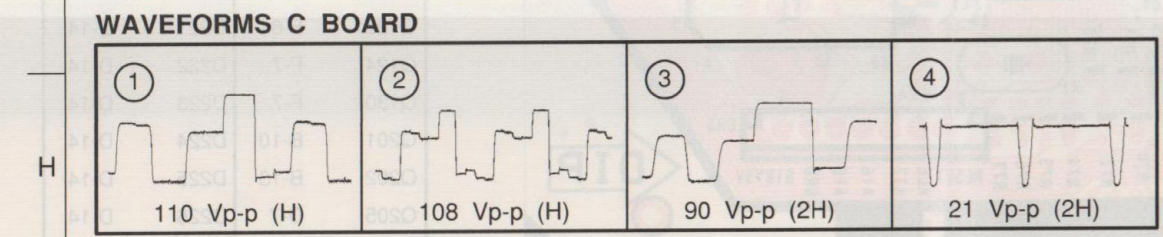
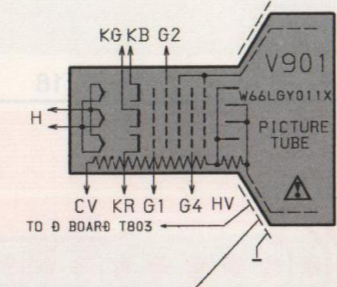
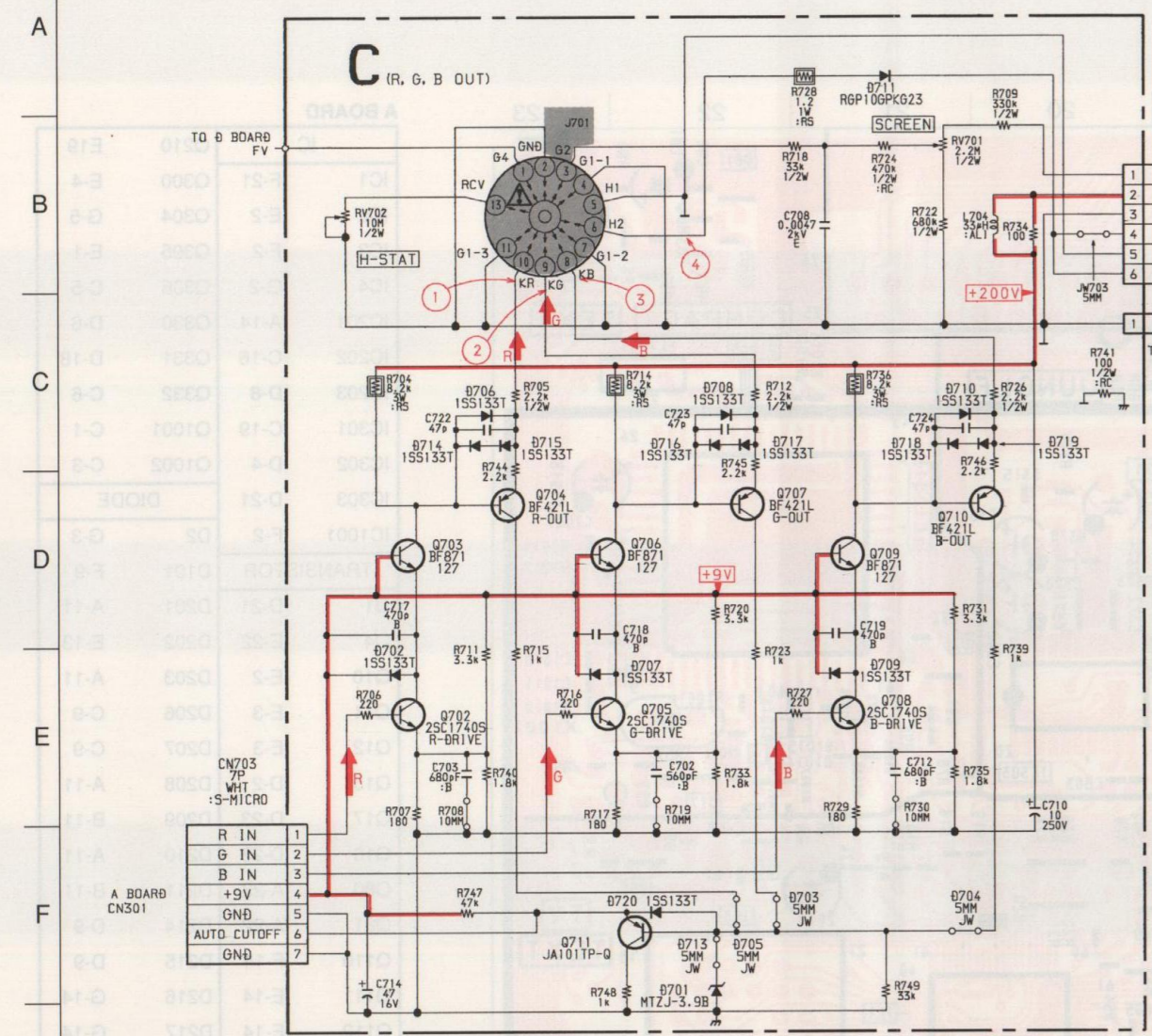
Ref No	B Base	C Collector	E Emitter
Q1	3.7	4.8	3.1
Q4	0.1	4.8	-
Q15	-	4.3	-
Q30	2.6	2.2	-
Q81	2.4	-	3.0
Q304	-	0.2	-
Q305	-	4.8	-
Q305	-	4.8	-
Q306	-	0.1	-
Q330	4.5	-	5.1
Q331	6.3	8.8	5.7
Q332	3.1	8.8	2.5
Q1001	4.4	-	-

**A (1/2) BOARD TRANSISTOR VOLTAGE TABLE**

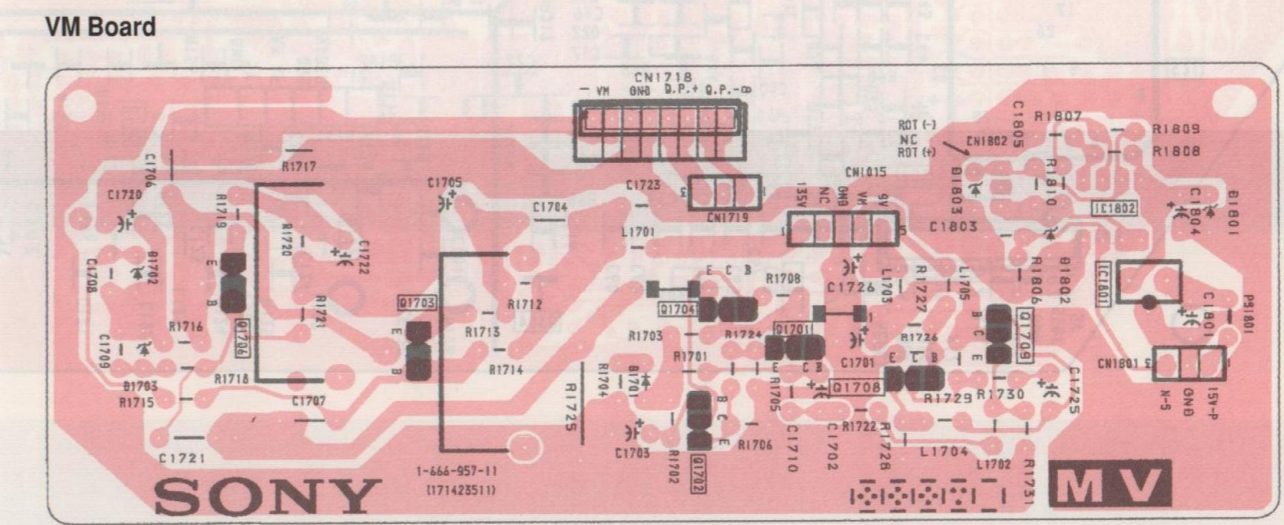
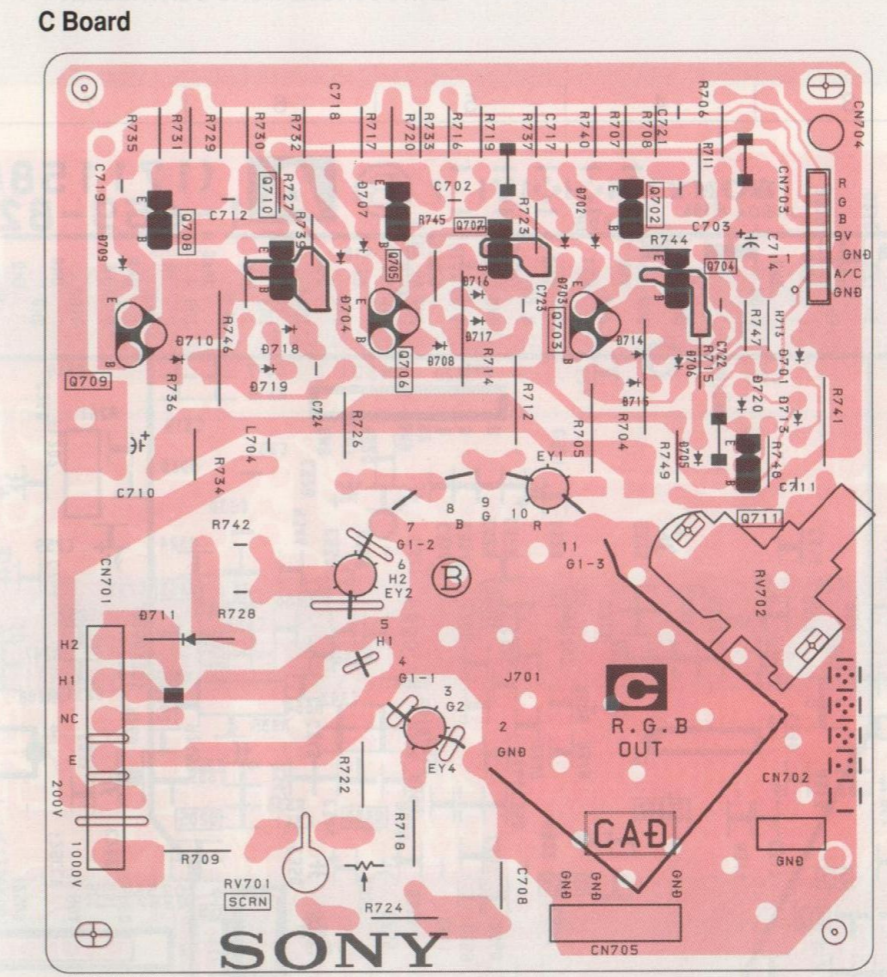
Ref No	B Base	C Collector	E Emitter
Q110	1.8	8.2	1.2
Q112	1.5	8.8	0.8
Q113	1.8	-	-
Q114	5.4	6.0	-
Q120	9.0	8.8	3.7
Q121	1.5	5.4	0.9
Q122	5.4	8.8	4.7
Q124	-	8.8	-
Q130	8.2	5.3	-
Q201	4.4	8.8	3.7
Q202	4.4	8.8	3.7
Q205	-	8.9	-
Q206	4.1	-	4.7
Q207	4.1	-	4.7



1 2 3 4 5 6 7 8 9



C [ R,G,B OUT ] VM [ VM AMP ]



C BOARD TRANSISTOR VOLTAGE TABLE

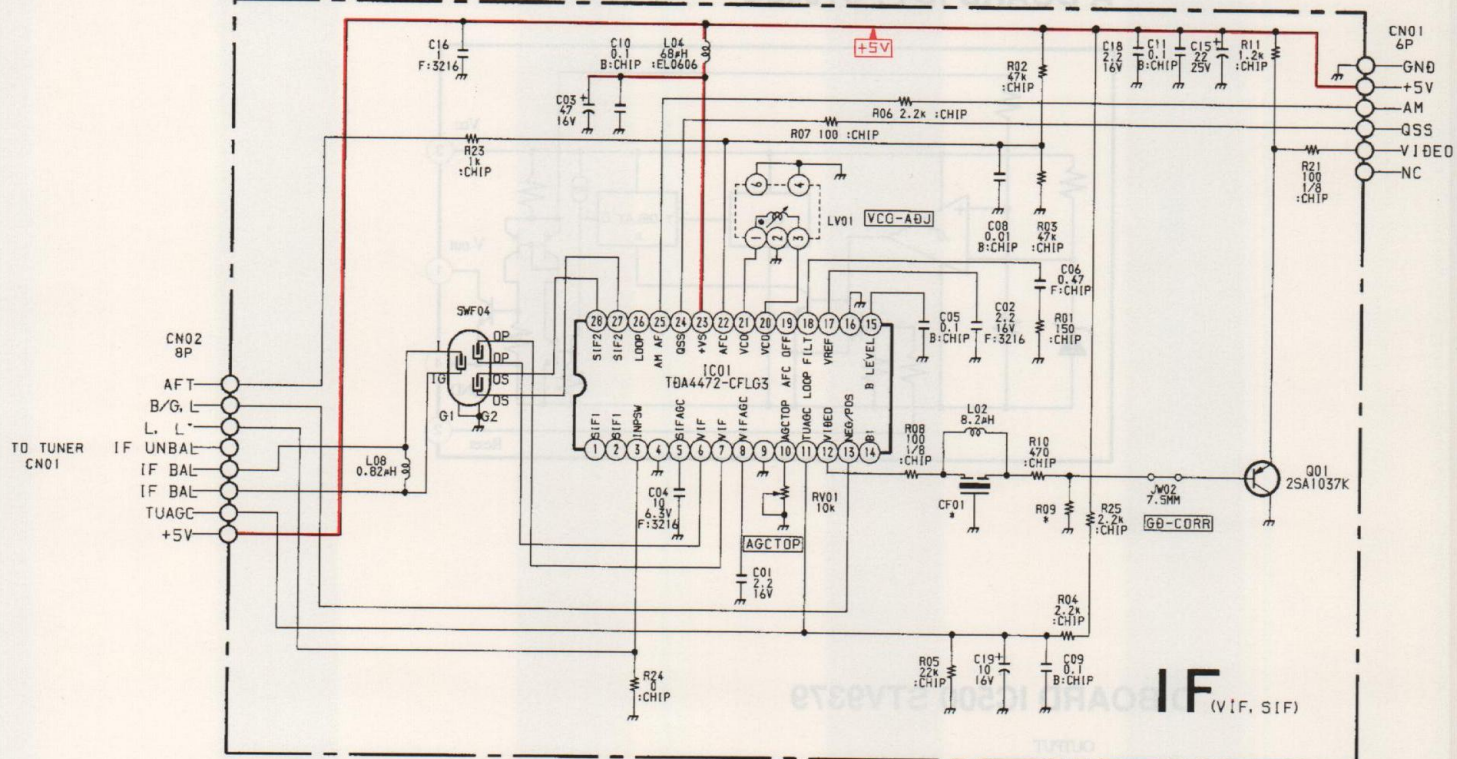
Transistor Voltage Table				
Ref No	B Base	C Collector	E Emitter	
Q702	2.0	11.4	1.4	
Q703	12.0	168.3	11.4	
Q704	168.3	6.0	163.5	
Q705	1.7	11.4	1.2	
Q706	12.0	178.8	11.4	
Q707	2.0	6.2	173.8	
Q708	178.2	11.4	1.4	
Q709	12.0	168.3	11.4	
Q710	168.0	6.4	160.0	

VM BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table				
Ref No	B Base	C Collector	E Emitter	
Q1701	2.5	8.8	1.8	
Q1702	2.5	5.5	1.8	
Q1703	134.3	71.8	134.8	
Q1704	5.5	8.8	4.8	
Q1706	1.0	71.8	0.4	
Q1708	2.9	6.6	2.2	
Q1709	2.2	8.8	1.5	

TUVIF (AEP) (KV-32WF1A, 32WF1D, 32WF1E, and 32WF1K ONLY)  
TUVIF (UK) (KV-32WF1U ONLY)

B-#TVF-01<UK/AEP>-IF.



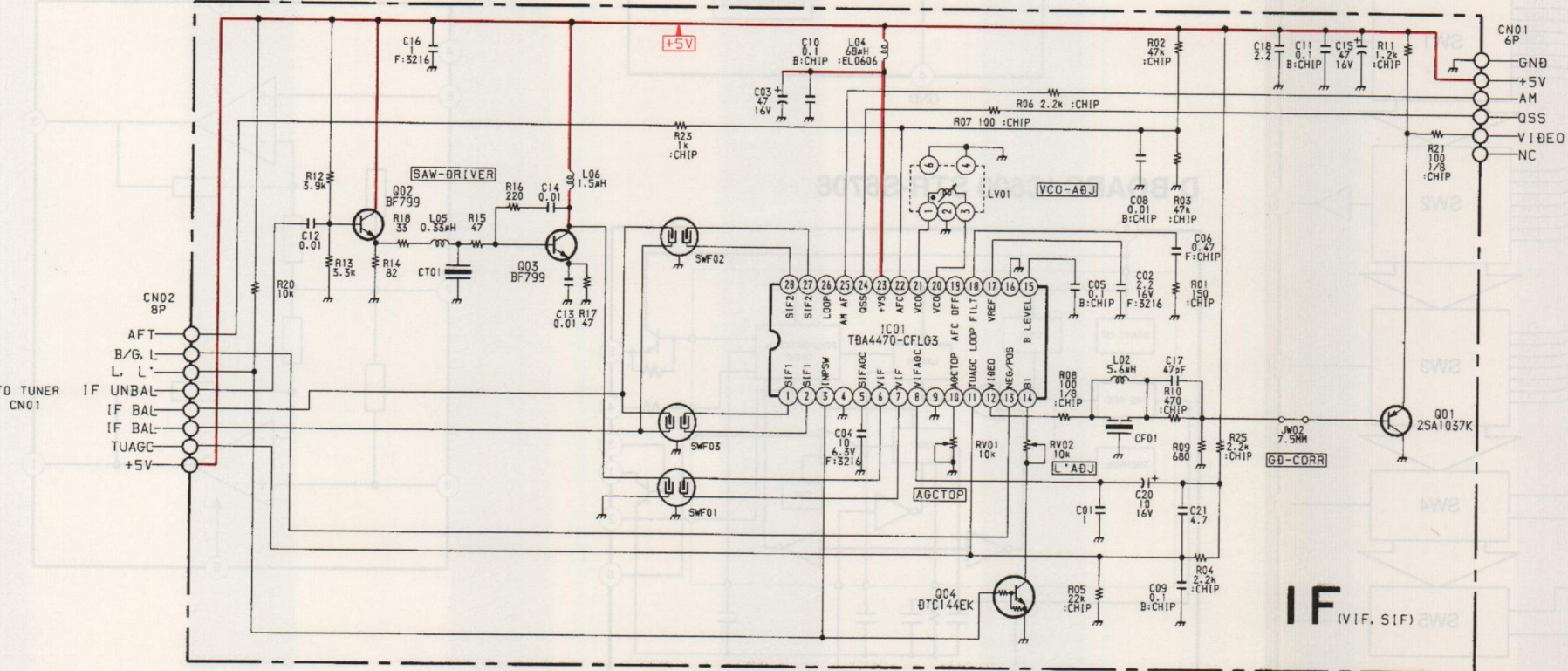
IF (VIF, SIF)

IF Board

Ref. No	Model	32WF1A	32WF1D	32WF1E	32WF1K	32WF1U
CF01		5.5MHz	5.5MHz	5.5MHz	5.5MHz	6.0MHz
R09		680MF	680MF	680MF	680MF	1K

TUVIF (FR) (KV-32WF1B ONLY)

B-#TVF-01<FR.>-IF.

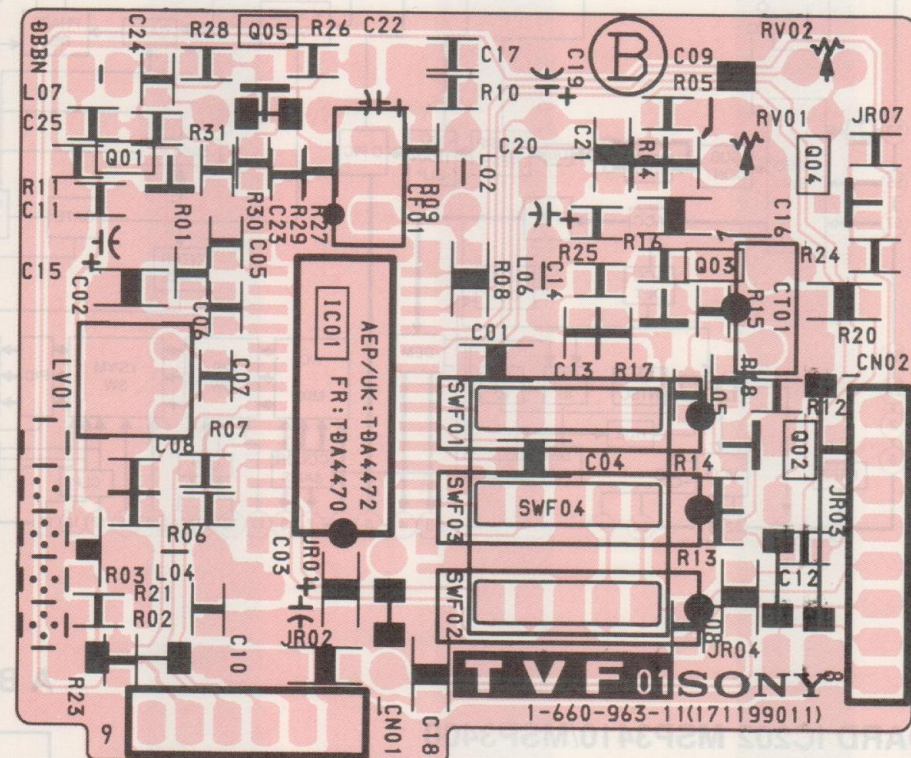


IF (VIF, SIF)

IF

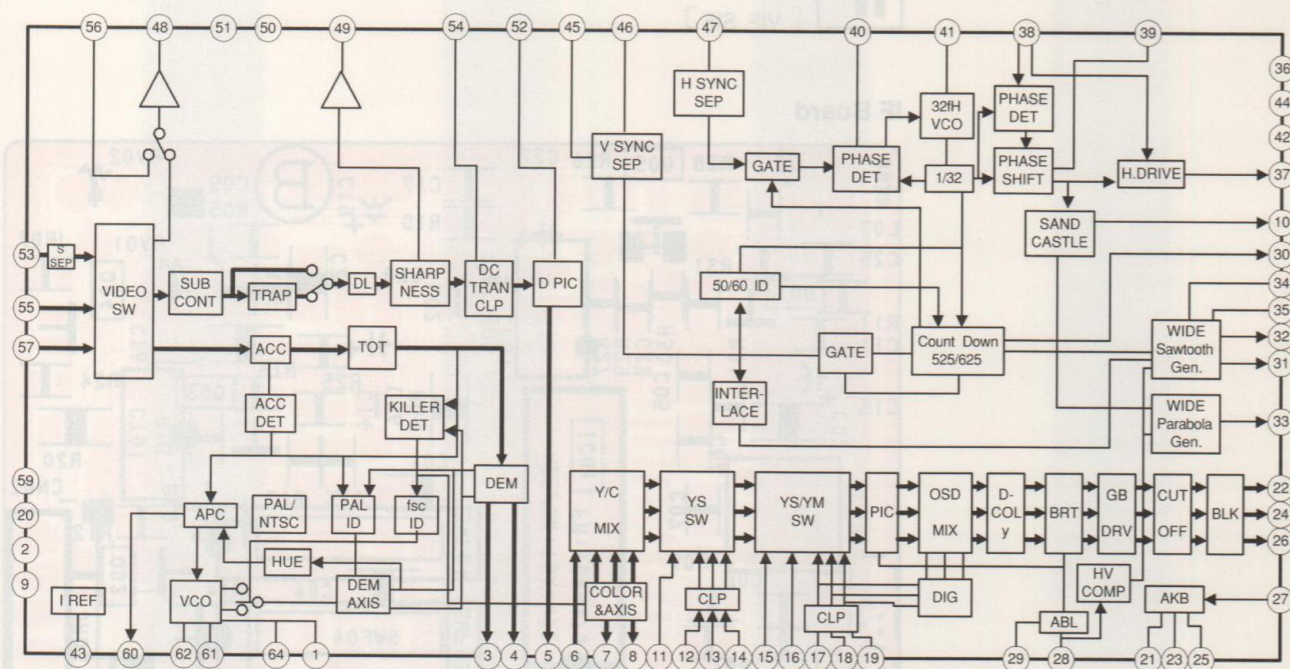
[ VIF, SIF ]

IF Board

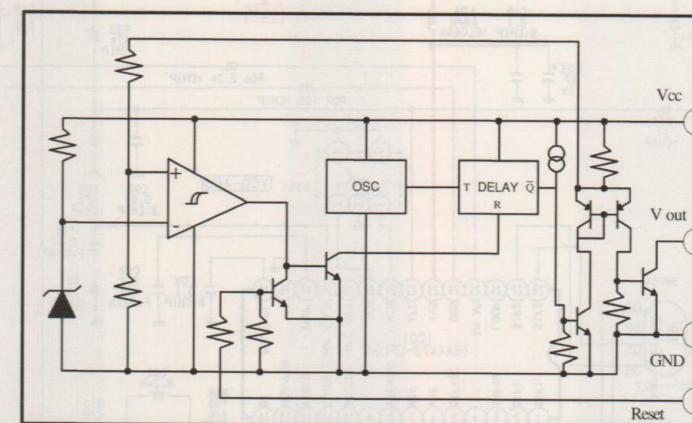


TVF01SONY  
1-660-963-11(171199011)

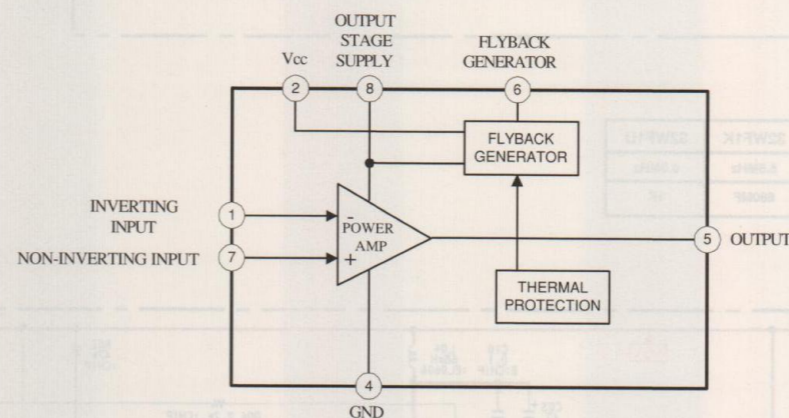
A BOARD IC301 CXA2000Q-TL



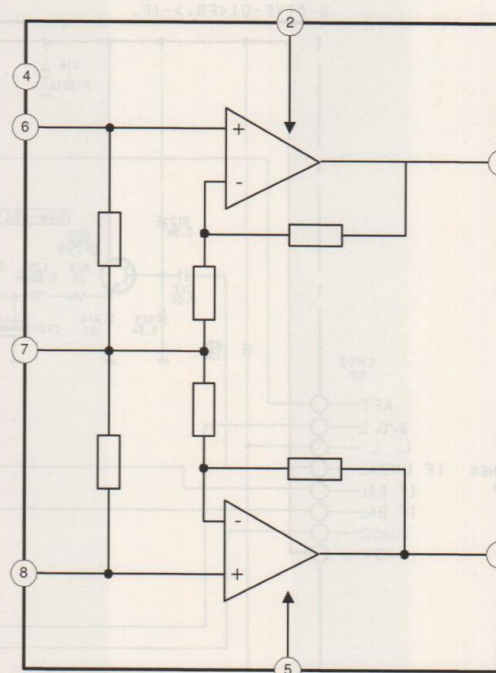
A BOARD IC4 PST593C



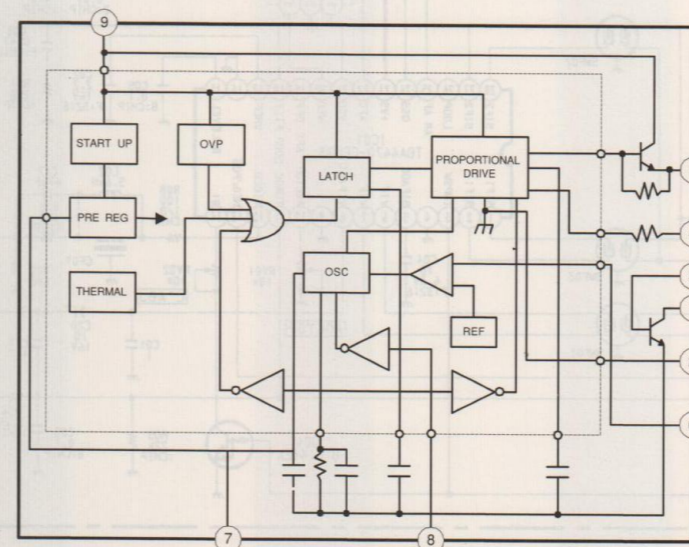
D BOARD IC500 STV9379



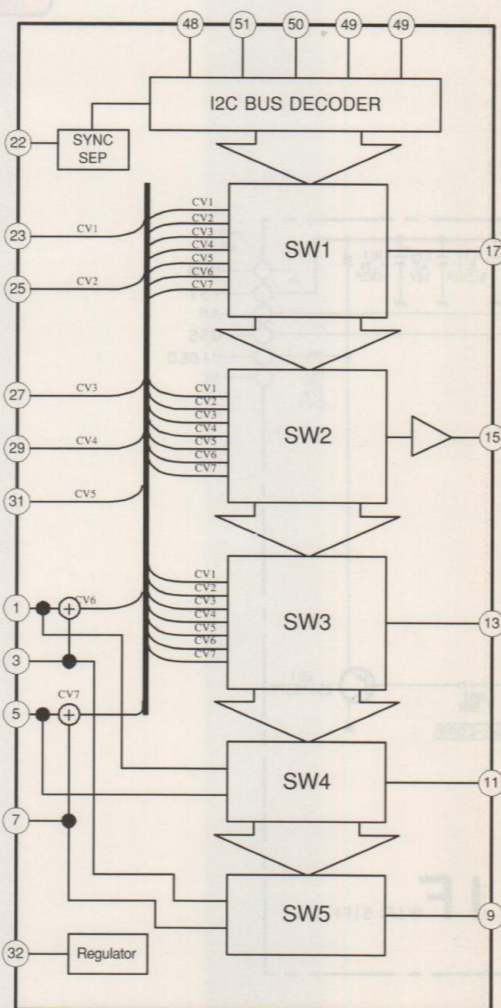
D BOARD IC1200 TDA7264



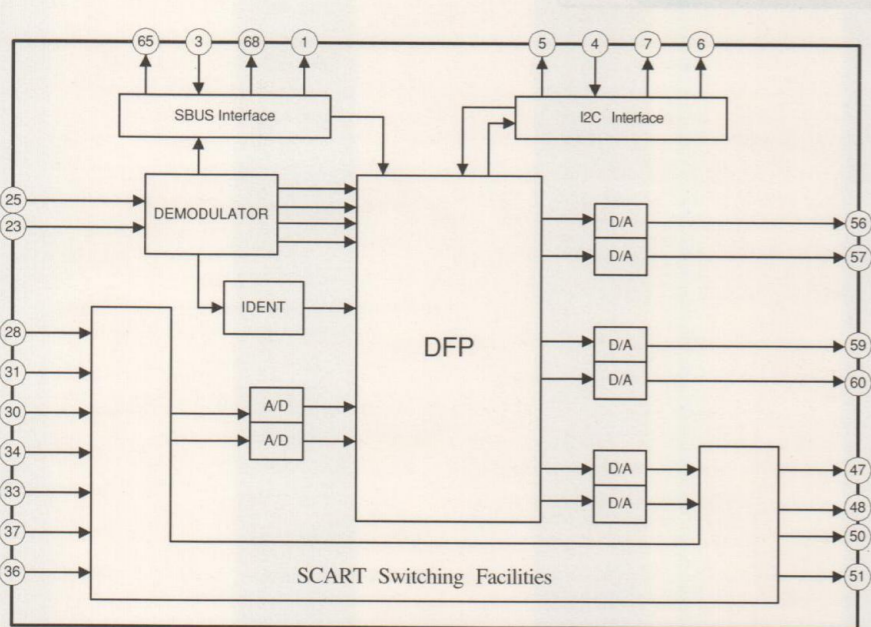
D BOARD IC600 STR-S6708



A BOARD IC201 CXA2040Q

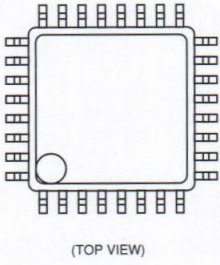


A BOARD IC202 MSP3410/MSP3400

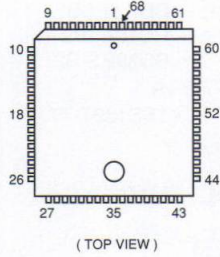


5-4. SEMICONDUCTORS

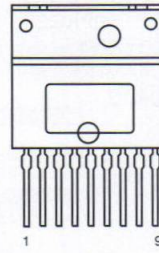
CXA2040Q-T4



MSP3400C-PS-C6-T  
MSP3410B-PS-F7-T



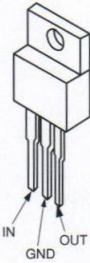
STR-S6708



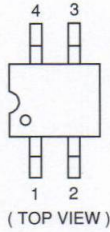
BF871-127



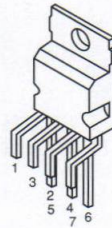
L4941BV  
TEA7605



PST593C-MMP-4P



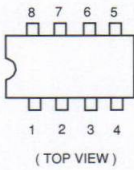
STV9379



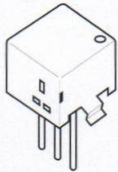
BF421L-AMMO  
JA101TP-Q  
2SA733-K  
2SA933AS  
2SA933S  
2SA1091-O  
2SC3502-E  
2SC3601-E  
2SC2808STP-R



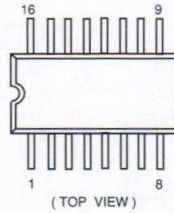
LM393P  
M5216P  
TDA2822M  
μPC393C



SBX1790-51



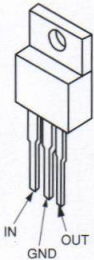
TDA4665T-T



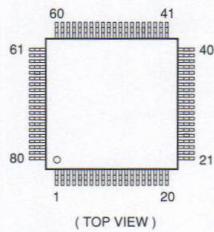
DTA144ES  
DTC114ES  
DTC143TS  
DTC144ES  
2SC1740S-RT



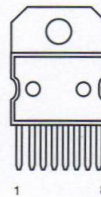
LM2940CT-5.0  
LM2940CT  
LM2940T-9.0  
MCT7809CT  
NJM78M09FA  
μPC2405HF



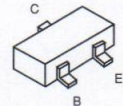
SDA5250M-C5-GEG



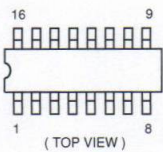
TDA7264



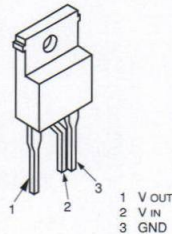
DTC144EK  
2SA1037K  
2SA1162-G  
2SC2412K



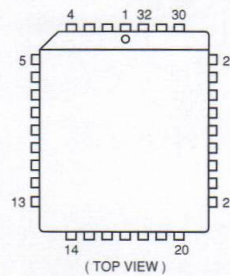
MC14052BDR2



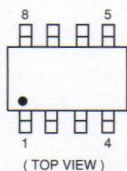
SE135N



TMS27PC010A-15FML



ST24E32M6TR



KV-32WF1

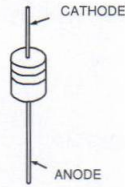
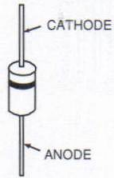
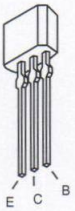
TLP721(D4-)



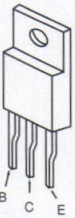
- |           |             |
|-----------|-------------|
| AU-01Z-V1 | FML-G12S    |
| EG-1Z-V1  | GP08D       |
| EGP20G    | RGP02       |
| EL1Z      | RGP10GPKG23 |
| EM1-V1    | RGP15GPKG23 |
| EU-1-V1   | RU3YX-V1    |
| EU2A      | RU4AM-T3    |
| EU2-V1    | RU4DS       |

- |                |            |
|----------------|------------|
| MTZJ-3.6A      | RD3.9ESB2  |
| MTZJ-3.9B      | RD5.1ESB2  |
| MTZJ-5.1B      | RD5.6ESB2  |
| MTZJ-5.6B      | RD6.2ESB2  |
| MTZJ-6.2B      | RD6.8ESB2  |
| MTZJ-6.8B      | RD7.5ESB2  |
| MTZJ-7.5C      | RD10ESB2   |
| MTZJ-9.1       | RD39ES-B2  |
| MTZJ-T-77-9.1A |            |
| MTZJ-10        | 1SS133T-77 |
| MTZJ-39        |            |

2SC2785-HFE

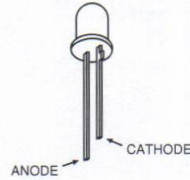
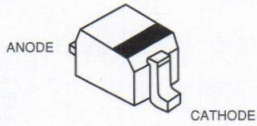


2SA1837

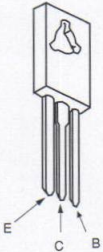


- |         |                |
|---------|----------------|
| BAS216  | MA8330         |
| DTZ6.8C | 1SS355         |
| DTZ9.1  | UDZ-TE-17-5.6B |
| DTZ33B  | UDZ-TE-17-9.1B |

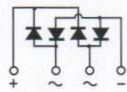
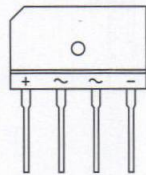
SLA-570KT3F



2SC2688-LK



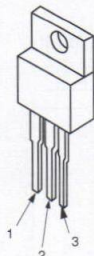
D4SB60L



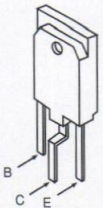
2SC4793



FMS-3FU



2SC4927-01



## SECTION 6 EXPLODED VIEWS

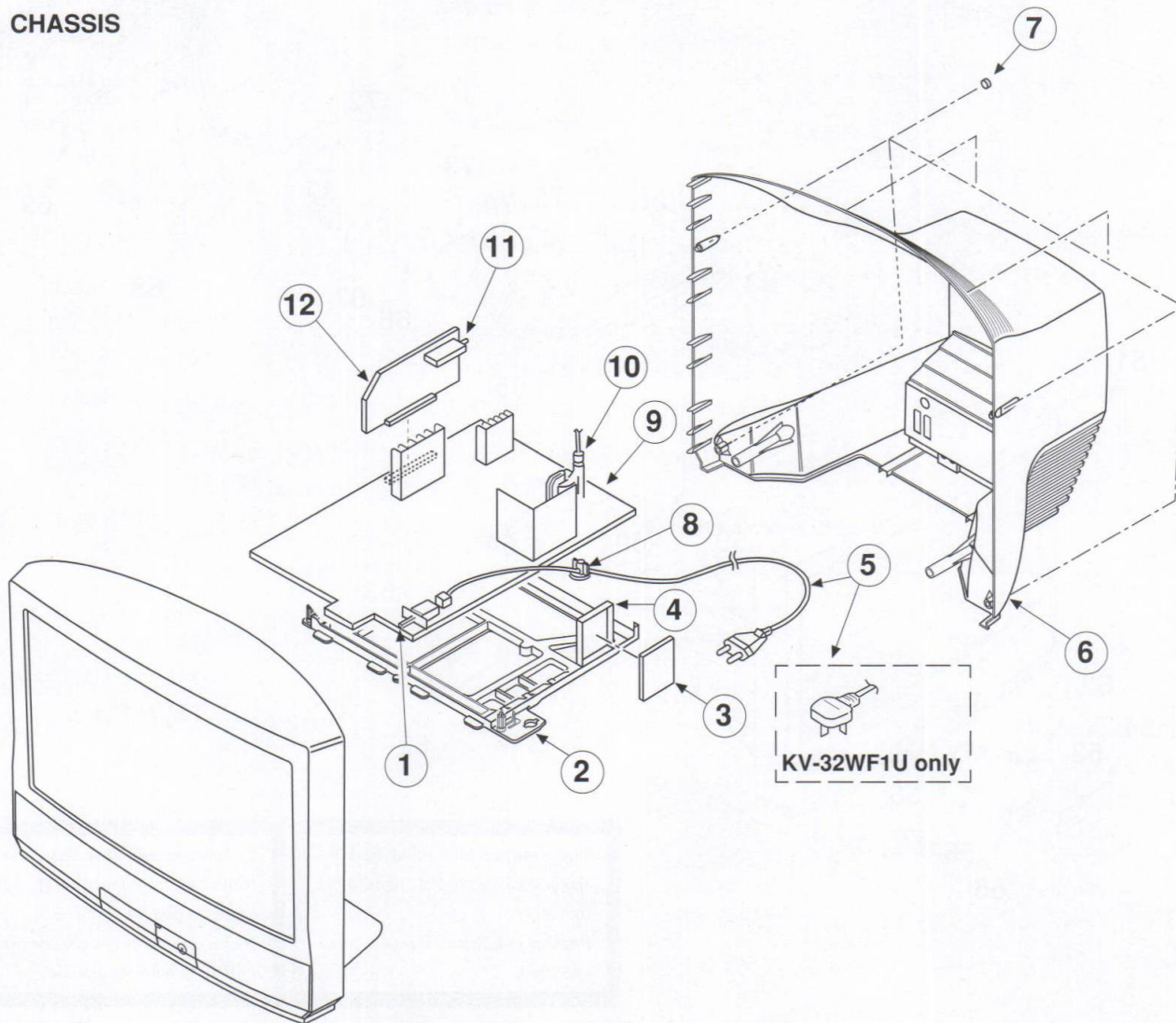
**NOTE :**

- 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.

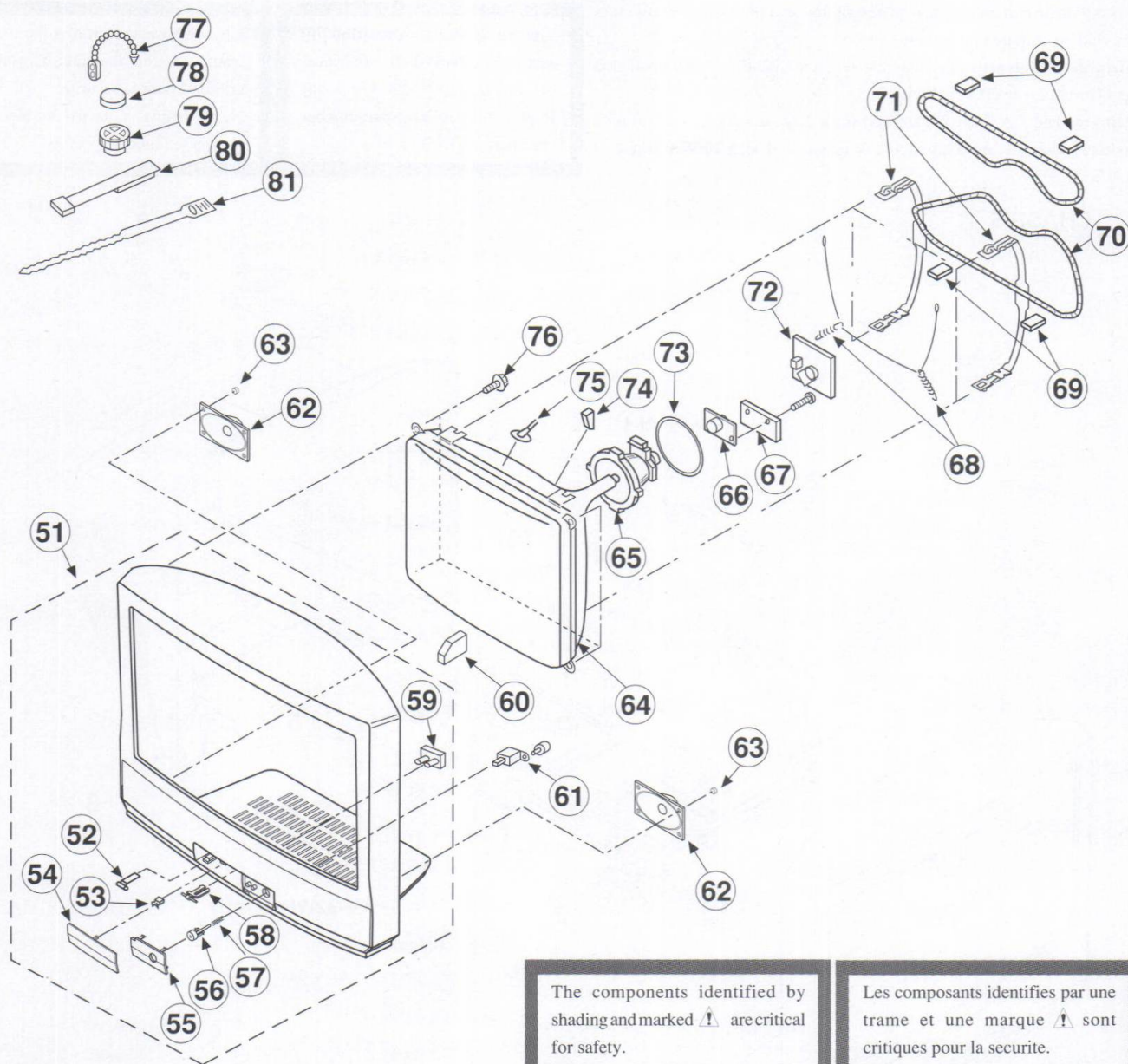
Les composants identifiés par une trame et une marque sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

### 6-1. CHASSIS



REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMARK
1	1-571-433-21	SWITCH, PUSH (AC POWER)		11	1-693-338-11	TUNER (TUVIF) (AEP)	
2	*4-203-315-01	BRACKET, MAIN				(KV-32WF1A/32WF1D/32WF1E/32WF1K)	
3	*A-1640-284-A	D4 BOARD, COMPLETE			1-693-340-11	TUNER (TUVIF) (FR)	(KV-32WF1B)
4	*4-203-752-01	BRACKET, D4			1-693-339-11	TUNER (TUVIF) (UK)	(KV-32WF1U)
5	1-751-501-21	CORD, POWER (WITH NOISE FILTER)		12	*A-1632-688-A	A BOARD, COMPLETE	(KV-32WF1A)
		2.5A/250v (KV-32WF1A/32WF1B/32WF1D/32WF1E/32WF1K)			*A-1632-685-A	A BOARD, COMPLETE	(KV-32WF1B)
	1-776-204-12	CORD, POWER (FILTER) (KV-32WF1U)			*A-1632-686-A	A BOARD, COMPLETE	(KV-32WF1D)
		2.5A/250v			*A-1632-687-A	A BOARD, COMPLETE	(KV-32WF1E)
6	4-203-754-01	COVER, REAR			*A-1632-690-A	A BOARD, COMPLETE	(KV-32WF1K)
7	4-039-358-01	SCREW (4X16), (+) BV TAPPING			*A-1632-689-A	A BOARD, COMPLETE	(KV-32WF1U)
8	*4-202-531-01	AC CORD LOCK (SC)					
9	*A-1642-216-A	D BOARD, COMPLETE					
10	1-453-257-11	TRANSFORMER ASSY, FLYBACK	(NX-4126/U2A4)				

6-2. PICTURE TUBE




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


Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifique.

REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMARK
51	X-4200-343-1	BEZNET ASSY	52-59	67	*A-1644-082-A	VM BOARD, COMPLETE	
52	4-045-250-01	DAMPER		68	4-369-318-31	SPRING, EXTENSION	
53	4-047-464-01	CATCHER, PUSH		69	*4-203-390-01	CUSHION, DGC	
54	4-203-723-31	DOOR		70	⚠ 1-416-452-11	COIL, DEGAUSSING	
55	4-203-724-01	WINDOW, ORNAMENTAL		71	4-045-294-01	HOLDER, DGC	
56	4-203-722-11	BUTTON POWER		72	A-1638-078-A	C BOARD, COMPLETE	
57	4-202-964-01	SPRING		73	1-452-724-11	COIL, NA ROTATION (RT 165)	
58	4-202-555-01	SHAFT, DOOR		74	3-704-495-01	SPACER, DY	
59	4-203-739-11	GUIDE, LIGHT		75	⚠ 1-251-528-21	CAP ASSY HIGH VOLTAGE	
60	4-203-098-01	SUPPORTER, CRT		76	4-036-188-01	SCREW, (M), PT	
61	4-042-940-21	UNIT, LOCK		77	4-308-870-00	CLIP, LEAD WIRE	
62	1-505-782-11	SPEAKER LOUD		78	1-452-032-00	MAGNET, DISK; 10MM Ø	
63	4-039-355-11	SCREW (4X12), (+) BV TAPPING		79	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
64	⚠ 8-735-037-05	PICTURE TUBE (SD297) (W76LHT060X)		80	X-4387-214-1	PERMALLOY ASSY, CORRECTION	
65	⚠ 8-451-492-11	DEFLECTION YOKE Y32C2A-M		81	3-701-007-00	BAND, BINDING	
66	⚠ 8-453-011-11	NECK ASSY (NA299-M)					

## SECTION 7

### ELECTRICAL PARTS LIST

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

Les composants identifiés par une trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

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

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

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

## CAPACITORS

MF : mF, PF : mmF

## COILS

MMH : mH,  $\mu$ H : mH

## RESISTORS

- All resistors are in ohms
- F : nonflammable

A

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
*A-1632-688-A	A BOARD COMPLETE (KV-32WF1A)	*****		C113	1-126-967-11	ELECT 47MF	20% 16V
*A-1632-685-A	A BOARD COMPLETE (KV-32WF1B)	*****		C120	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
*A-1632-686-A	A BOARD COMPLETE (KV-32WF1D)	*****		C121	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
*A-1632-687-A	A BOARD COMPLETE (KV-32WF1E)	*****		C122	1-163-137-00	CERAMIC CHIP 680PF	5% 50V
*A-1632-690-A	A BOARD COMPLETE (KV-32WF1K)	*****		C123	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
*A-1632-689-A	A BOARD COMPLETE (KV-32WF1U)	*****		C124	1-163-038-00	CERAMIC CHIP 0.1MF	25V
1-750-797-11	SOCKET, PLCC			C201	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
	< CAPACITOR >			C202	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C203	1-104-661-91	ELECT 330MF	20% 16V
C2	1-126-967-11	ELECT 47MF	20% 16V	C204	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C3	1-163-104-00	CERAMIC CHIP 30PF	5% 50V	C205	1-126-965-11	ELECT 22MF	20% 50V
C4	1-163-104-00	CERAMIC CHIP 30PF	5% 50V	C206	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C8	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C207	1-126-964-11	ELECT 10MF	20% 50V
C10	1-163-243-91	CERAMIC CHIP 47PF	5% 25V	C208	1-126-964-11	ELECT 10MF	20% 50V
C11	1-163-243-91	CERAMIC CHIP 47PF	5% 25V	C209	1-126-964-11	ELECT 10MF	20% 50V
C15	1-164-695-11	CERAMIC CHIP 0.0022MF	5% 50V	C210	1-216-295-00	CONDUCTOR, CHIP	
C18	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C211	1-126-964-11	ELECT 10MF	20% 50V
C20	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C212	1-164-346-11	CERAMIC CHIP 1MF	16V
C21	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C213	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C22	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C214	1-164-346-11	CERAMIC CHIP 1MF	16V
C24	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C215	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C26	1-104-660-91	ELECT 47MF	20% 16V	C216	1-126-967-11	ELECT 47MF	20% 16V
C40	1-164-492-11	CERAMIC CHIP 0.15MF	10% 16V	C217	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C41	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V	C218	1-126-967-11	ELECT 47MF	20% 16V
C42	1-163-989-11	CERAMIC CHIP 0.033MF	10% 25V	C219	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C43	1-163-121-91	CERAMIC CHIP 150PF	5% 50V	C220	1-126-964-11	ELECT 10MF	20% 50V
C44	1-164-346-11	CERAMIC CHIP 1MF	16V	C221	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C45	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C222	1-164-346-11	CERAMIC CHIP 1MF	16V
C80	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C223	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C81	1-126-959-11	ELECT 0.47MF	20% 50V	C224	1-164-346-11	CERAMIC CHIP 1MF	16V
C82	1-163-037-11	CERAMIC CHIP 0.022MF	10% 50V	C225	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C90	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C226	1-126-967-11	ELECT 47MF	20% 16V
C95	8-719-158-15	DIODE RD5.6S-B		C227	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C101	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C228	1-126-967-11	ELECT 47MF	20% 16V
C102	1-126-934-11	ELECT 220MF	20% 16V	C229	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C103	1-126-965-11	ELECT 22MF	20% 50V	C230	1-216-295-00	CONDUCTOR, CHIP	
C104	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C231	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C110	1-126-967-11	ELECT 47MF	20% 16V	C232	1-126-962-11	ELECT 3.3MF	20% 50V
C112	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C240	1-164-346-11	CERAMIC CHIP 1MF	16V
				C241	1-164-346-11	CERAMIC CHIP 1MF	16V
				C251	1-163-087-00	CERAMIC CHIP 4PF	0.25PF 50V
				C252	1-163-087-00	CERAMIC CHIP 4PF	0.25PF 50V
				C253	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
				C254	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
				C255	1-163-117-00	CERAMIC CHIP 100PF	5% 50V

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C256	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C337	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C257	1-126-965-11	ELECT 22MF	20% 50V	C338	1-164-346-11	CERAMIC CHIP 1MF	16V
C258	1-126-964-11	ELECT 10MF	20% 50V	C339	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C259	1-164-336-11	CERAMIC CHIP 0.33MF	25V	C340	1-126-933-11	ELECT 100MF	20% 16V
C260	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C341	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C261	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C342	1-164-346-11	CERAMIC CHIP 1MF	16V
C262	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C343	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C263	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C344	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C264	1-126-962-11	ELECT 3.3MF	20% 50V	C347	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C265	1-126-964-11	ELECT 10MF	20% 50V	C348	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C266	1-126-964-11	ELECT 10MF	20% 50V	C350	1-126-964-11	ELECT 10MF	20% 50V
C267	1-126-965-11	ELECT 22MF	20% 50V	C351	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C268	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C352	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C269	1-163-131-00	CERAMIC CHIP 390PF	5% 50V	C353	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C270	1-163-131-00	CERAMIC CHIP 390PF	5% 50V	C354	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C271	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C355	1-126-965-11	ELECT 22MF	20% 50V
C272	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C356	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C273	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C357	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C274	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C358	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C275	1-164-346-11	CERAMIC CHIP 1MF	16V	C359	1-163-231-11	CERAMIC CHIP 15PF	5% 50V
C276	1-164-346-11	CERAMIC CHIP 1MF	16V	C360	1-163-231-11	CERAMIC CHIP 15PF	5% 50V
C277	1-164-346-11	CERAMIC CHIP 1MF	16V	C370	1-164-505-11	CERAMIC CHIP 2.2MF	16V
C278	1-164-346-11	CERAMIC CHIP 1MF	16V			(KV-32WF1B/32WF1D/32WF1E/32WF1K)	
C279	1-126-965-11	ELECT 22MF	20% 50V	C371	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C280	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C372	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C281	1-126-965-11	ELECT 22MF	20% 50V			(KV-32WF1B/32WF1D/32WF1E/32WF1K)	
C282	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C373	1-164-489-11	CERAMIC CHIP 0.22MF	10% 16V
C300	1-163-109-00	CERAMIC CHIP 47PF	5% 50V			(KV-32WF1B/32WF1D/32WF1E/32WF1K)	
C301	1-163-038-00	CERAMIC CHIP 0.1MF	25V			< FILTER >	
C302	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	CF120	1-409-327-00	TRAP, CERAMIC (6.5MHZ)	
C303	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V			(KV-32WF1A/32WF1B/32WF1D/32WF1E)	
C304	1-163-038-00	CERAMIC CHIP 0.1MF	25V			< CONNECTOR >	
C305	1-163-038-00	CERAMIC CHIP 0.1MF	25V	CN1	1-695-302-11	CONNECTOR, BOARD TO BOARD 50P	
C306	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	CN2	*1-568-880-51	PIN, CONNECTOR 5P	
C307	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	CN4	1-568-878-51	PIN, CONNECTOR 3P	
C308	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	CN201	1-766-296-11	CONNECTOR, DUAL SCART	
C309	1-164-346-11	CERAMIC CHIP 1MF	16V	CN301	*1-568-882-51	PIN, CONNECTOR 7P	
C310	1-164-346-11	CERAMIC CHIP 1MF	16V			< DIODE >	
C311	1-164-346-11	CERAMIC CHIP 1MF	16V	D2	8-719-988-62	DIODE 1SS355	
C312	1-164-505-11	CERAMIC CHIP 2.2MF	16V	D12	8-719-158-15	DIODE RD5.6S-B	
C313	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	D14	8-719-158-15	DIODE RD5.6S-B	
C315	1-216-295-00	CONDUCTOR, CHIP		D15	8-719-158-15	DIODE RD5.6S-B	
C317	1-163-038-00	CERAMIC CHIP 0.1MF	25V	D101	8-719-977-81	DIODE DTZ33B	
C319	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	D201	8-719-977-22	DIODE DTZ9.1	
C320	1-126-965-11	ELECT 22MF	20% 50V	D202	8-719-977-22	DIODE DTZ9.1	
C321	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D203	8-719-977-22	DIODE DTZ9.1	
C322	1-163-037-11	CERAMIC CHIP 0.022MF	10% 50V	D204	8-719-977-22	DIODE DTZ9.1	
C323	1-163-037-11	CERAMIC CHIP 0.022MF	10% 50V	D205	8-719-977-22	DIODE DTZ9.1	
C324	1-163-037-11	CERAMIC CHIP 0.022MF	10% 50V	D206	8-719-977-22	DIODE DTZ9.1	
C325	1-164-346-11	CERAMIC CHIP 1MF	16V	D207	8-719-977-22	DIODE DTZ9.1	
C326	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	D208	8-719-977-22	DIODE DTZ9.1	
C327	1-137-374-11	FILM 0.047MF	5% 50V	D209	8-719-977-22	DIODE DTZ9.1	
C328	1-126-964-11	ELECT 10MF	20% 50V	D210	8-719-977-22	DIODE DTZ9.1	
C329	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D211	8-719-977-22	DIODE DTZ9.1	
C330	1-130-777-00	FILM 0.1MF	5% 63V	D212	8-719-977-22	DIODE DTZ9.1	
C331	1-137-581-11	FILM 0.1MF	5% 100V	D213	8-719-977-22	DIODE DTZ9.1	
C332	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D214	8-719-977-22	DIODE DTZ9.1	
C333	1-126-933-11	ELECT 100MF	20% 16V	D215	8-719-977-22	DIODE DTZ9.1	
C334	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V				
C335	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V				
C336	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V				

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
D216	8-719-158-15	DIODE RD5.6S-B		Q17	8-729-216-22	TRANSISTOR 2SA1162-G	
D217	8-719-158-15	DIODE RD5.6S-B		Q80	8-729-620-06	TRANSISTOR 2SC3052-EF	
D218	8-719-158-15	DIODE RD5.6S-B		Q81	8-729-216-22	TRANSISTOR 2SA1162-G	
D219	8-719-977-22	DIODE DTZ9.1		Q82	8-729-620-06	TRANSISTOR 2SC3052-EF	
D220	8-719-988-62	DIODE 1SS355		Q110	8-729-620-06	TRANSISTOR 2SC3052-EF	
D221	8-719-988-62	DIODE 1SS355		Q111	8-729-216-22	TRANSISTOR 2SA1162-G	
D222	8-719-977-22	DIODE DTZ9.1		Q112	8-729-620-06	TRANSISTOR 2SC3052-EF	
D223	8-719-977-22	DIODE DTZ9.1		Q120	8-729-620-06	TRANSISTOR 2SC3052-EF	
D224	8-719-977-22	DIODE DTZ9.1		Q121	8-729-620-06	TRANSISTOR 2SC3052-EF	(KV-32WF1A/32WF1B/32WF1D/32WF1E)
D225	8-719-977-22	DIODE DTZ9.1		Q122	8-729-620-06	TRANSISTOR 2SC3052-EF	
D226	8-719-977-22	DIODE DTZ9.1		Q124	8-729-620-06	TRANSISTOR 2SC3052-EF	
D227	8-719-977-13	DIODE DTZ6.8C					
D229	8-719-977-22	DIODE DTZ9.1		Q130	8-729-216-22	TRANSISTOR 2SA1162-G	(KV-32WF1A/32WF1B/32WF1D/32WF1E)
D230	8-719-158-15	DIODE RD5.6S-B					
D251	8-719-047-16	DIODE BAS216					(KV-32WF1A/32WF1B/32WF1D/32WF1E)
D252	8-719-158-15	DIODE RD5.6S-B		Q201	8-729-620-06	TRANSISTOR 2SC3052-EF	
D253	8-719-158-15	DIODE RD5.6S-B		Q202	8-729-620-06	TRANSISTOR 2SC3052-EF	
D302	8-719-988-62	DIODE 1SS355		Q203	8-729-620-06	TRANSISTOR 2SC3052-EF	
D320	8-719-977-22	DIODE DTZ9.1		Q204	8-729-620-06	TRANSISTOR 2SC3052-EF	
D370	8-719-047-16	DIODE BAS216		Q205	8-729-901-01	TRANSISTOR DTC144EKA	
		(KV-32WF1B/32WF1D/32WF1E/32WF1K)		Q206	8-729-216-22	TRANSISTOR 2SA1162-G	
		< ENCAPSULATED FILTER >		Q207	8-729-216-22	TRANSISTOR 2SA1162-G	
FL101	1-236-071-11	ENCAPSULATED COMPONENT		Q208	8-729-216-22	TRANSISTOR 2SA1162-G	
FL201	1-236-071-11	ENCAPSULATED COMPONENT		Q209	8-729-620-06	TRANSISTOR 2SC3052-EF	
FL202	1-236-071-11	ENCAPSULATED COMPONENT		Q210	8-729-901-01	TRANSISTOR DTC144EKA	
FL203	1-236-071-11	ENCAPSULATED COMPONENT		Q300	8-729-901-01	TRANSISTOR DTC144EKA	
		< IC >		Q304	8-729-620-06	TRANSISTOR 2SC3052-EF	
IC1	8-759-376-75	IC SDA5250M-C5-GEG		Q305	8-729-620-06	TRANSISTOR 2SC3052-EF	
IC2	8-759-334-20	IC ST24E32M6TR		Q306	8-729-901-01	TRANSISTOR DTC144EKA	
IC3	8-759-452-99	IC TMS27PC010A-15FMBE606		Q330	8-729-216-22	TRANSISTOR 2SA1162-G	
		(KV-32WF1A/32WF1B/32WF1D/32WF1K)		Q331	8-729-620-06	TRANSISTOR 2SC3052-EF	
	8-759-452-84	IC TMS27PC010A-15FMBW606		Q332	8-729-620-06	TRANSISTOR 2SC3052-EF	
		(KV-32WF1E/32WF1U)		Q1002	8-729-216-22	TRANSISTOR 2SA1162-G	
		< RESISTOR >		JR101	1-216-295-00	CONDUCTOR, CHIP	
IC4	8-759-394-57	IC PST593C-MMP-4P		JR102	1-216-295-00	CONDUCTOR, CHIP	
IC201	8-752-081-26	IC CXA2040AQ-T4		JR201	1-216-295-00	CONDUCTOR, CHIP	
IC202	8-759-376-80	IC MSP3410B-PS-F7-T		R1	1-216-049-00	METAL GLAZE 1K 5%	1/10W
IC203	8-759-385-76	IC MC14052BDR2		R2	1-216-025-00	METAL GLAZE 100 5%	1/10W
IC205	8-759-394-57	IC PST593C-MMP-4P		R3	1-216-025-00	METAL GLAZE 100 5%	1/10W
IC301	8-752-081-43	IC CXA2076Q-TL		R4	1-216-013-00	METAL GLAZE 33 5%	1/10W
IC302	8-759-288-85	IC TDA4665T-T		R5	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
IC303	8-759-430-79	IC TDA8395T/N3		R7	1-216-041-00	METAL GLAZE 470 5%	1/10W
		< COIL >		R9	1-216-041-00	METAL GLAZE 470 5%	1/10W
L10	1-410-379-41	INDUCTOR CHIP 6.8UH		R10	1-216-041-91	METAL GLAZE 470 5%	1/10W
L102	1-408-406-00	INDUCTOR 5.6UH		R11	1-216-041-91	METAL GLAZE 470 5%	1/10W
		(KV-32WF1A/32WF1B/32WF1D/32WF1E)		R12	1-216-041-91	METAL GLAZE 470 5%	1/10W
L111	1-410-993-11	INDUCTOR CHIP 1UH		R13	1-216-029-00	METAL GLAZE 150 5%	1/10W
L120	1-408-408-00	INDUCTOR 8.2UH		R14	1-216-029-00	METAL GLAZE 150 5%	1/10W
L121	1-408-397-00	INDUCTOR 1UH		R15	1-216-029-00	METAL GLAZE 150 5%	1/10W
L122	1-408-408-00	INDUCTOR 8.2UH		R16	1-216-025-00	METAL GLAZE 100 5%	1/10W
L300	1-408-607-31	INDUCTOR 22UH		R17	1-216-025-00	METAL GLAZE 100 5%	1/10W
		< TRANSISTOR >		R18	1-216-025-00	METAL GLAZE 100 5%	1/10W
Q1	8-729-620-06	TRANSISTOR 2SC3052-EF		R19	1-216-025-00	METAL GLAZE 100 5%	1/10W
Q4	8-729-620-06	TRANSISTOR 2SC3052-EF		R20	1-216-025-00	METAL GLAZE 100 5%	1/10W
Q10	8-729-216-22	TRANSISTOR 2SA1162-G		R21	1-216-025-00	METAL GLAZE 100 5%	1/10W
Q11	8-729-216-22	TRANSISTOR 2SA1162-G		R24	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
Q12	8-729-216-22	TRANSISTOR 2SA1162-G		R25	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
Q15	8-729-216-22	TRANSISTOR 2SA1162-G		R28	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R29	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R93	1-216-033-00	METAL GLAZE 220 5%	1/10W
R30	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R94	1-216-033-00	METAL GLAZE 220 5%	1/10W
R31	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R95	1-216-033-00	METAL GLAZE 220 5%	1/10W
R33	1-216-025-00	METAL GLAZE 100 5%	1/10W	R99	1-216-295-00	CONDUCTOR, CHIP	
R34	1-216-025-00	METAL GLAZE 100 5%	1/10W				(KV-32WF1A/32WF1B)
R35	1-216-025-00	METAL GLAZE 100 5%	1/10W		1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R36	1-216-065-71	METAL GLAZE 4.7K 5%	1/10W				(KV-32WF1D/32WF1E/32WF1K/32WF1U)
R37	1-216-065-71	METAL GLAZE 4.7K 5%	1/10W	R101	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R38	1-216-065-71	METAL GLAZE 4.7K 5%	1/10W	R102	1-216-025-00	METAL GLAZE 100 5%	1/10W
R39	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R103	1-216-025-00	METAL GLAZE 100 5%	1/10W
R40	1-216-071-00	METAL GLAZE 8.2K 5%	1/10W	R104	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R41	1-216-129-00	METAL GLAZE 2.2M 5%	1/10W	R105	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R42	1-216-069-91	METAL GLAZE 6.8K 5%	1/10W	R106	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R44	1-216-069-91	METAL GLAZE 6.8K 5%	1/10W	R107	1-216-295-00	CONDUCTOR, CHIP	
R46	1-216-095-00	METAL GLAZE 82K 5%	1/10W	R110	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R47	1-216-041-00	METAL GLAZE 470 5%	1/10W	R111	1-216-029-00	METAL GLAZE 150 5%	1/10W
R48	1-216-109-00	METAL GLAZE 330K 5%	1/10W	R112	1-216-029-00	METAL GLAZE 150 5%	1/10W
R49	1-216-025-00	METAL GLAZE 100 5%	1/10W	R113	1-216-001-00	METAL GLAZE 10 5%	1/10W
R50	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R114	1-216-029-00	METAL GLAZE 150 5%	1/10W
R51	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W	R115	1-216-037-00	METAL GLAZE 330 5%	1/10W
R52	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R119	1-216-295-00	CONDUCTOR, CHIP	
R53	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W	R120	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
R54	1-216-025-00	METAL GLAZE 100 5%	1/10W	R121	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R55	1-216-079-00	METAL GLAZE 18K 5%	1/10W	R122	1-216-041-00	METAL GLAZE 470 5%	1/10W
R56	1-216-079-00	METAL GLAZE 18K 5%	1/10W	R123	1-216-031-00	METAL GLAZE 180 5%	1/10W
R57	1-216-079-00	METAL GLAZE 18K 5%	1/10W	R124	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R58	1-216-063-91	METAL GLAZE 3.9K 5%	1/10W	R125	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R59	1-216-025-00	METAL GLAZE 100 5%	1/10W	R126	1-216-025-00	METAL GLAZE 100 5%	1/10W
R60	1-216-025-00	METAL GLAZE 100 5%	1/10W	R127	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R61	1-216-025-00	METAL GLAZE 100 5%	1/10W	R128	1-216-035-00	METAL GLAZE 270 5%	1/10W
R62	1-216-025-00	METAL GLAZE 100 5%	1/10W	R129	1-216-037-00	METAL GLAZE 330 5%	1/10W
R63	1-216-025-00	METAL GLAZE 100 5%	1/10W	R130	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R64	1-216-025-00	METAL GLAZE 100 5%	1/10W	R131	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R65	1-216-025-00	METAL GLAZE 100 5%	1/10W	R132	1-216-025-00	METAL GLAZE 100 5%	1/10W
R66	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R133	1-216-041-00	METAL GLAZE 470 5%	1/10W
R67	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R134	1-216-001-00	METAL GLAZE 10 5%	1/10W
R68	1-216-025-00	METAL GLAZE 100 5%	1/10W	R135	1-216-037-00	METAL GLAZE 330 5%	1/10W
R69	1-216-049-00	METAL GLAZE 1K 5%	1/10W				(KV-32WF1A/32WF1B/32WF1D/32WF1E)
R70	1-216-025-00	METAL GLAZE 100 5%	1/10W		1-216-045-00	METAL GLAZE 680 5%	1/10W
R71	1-216-025-00	METAL GLAZE 100 5%	1/10W				(KV-32WF1K/32WF1U)
R72	1-216-025-00	METAL GLAZE 100 5%	1/10W	R136	1-216-033-00	METAL GLAZE 220 5%	1/10W
R73	1-216-025-00	METAL GLAZE 100 5%	1/10W	R137	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R74	1-216-025-00	METAL GLAZE 100 5%	1/10W	R138	1-216-041-00	METAL GLAZE 470 5%	1/10W
R75	1-216-025-00	METAL GLAZE 100 5%	1/10W	R200	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R76	1-216-025-00	METAL GLAZE 100 5%	1/10W	R201	1-216-033-00	METAL GLAZE 220 5%	1/10W
R77	1-216-025-00	METAL GLAZE 100 5%	1/10W	R202	1-216-033-00	METAL GLAZE 220 5%	1/10W
R78	1-216-025-00	METAL GLAZE 100 5%	1/10W	R203	1-216-025-00	METAL GLAZE 100 5%	1/10W
R79	1-216-033-00	METAL GLAZE 220 5%	1/10W	R204	1-216-025-00	METAL GLAZE 100 5%	1/10W
R80	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R205	1-216-083-00	METAL GLAZE 27K 5%	1/10W
R81	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R206	1-216-033-00	METAL GLAZE 220 5%	1/10W
R82	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	R208	1-216-041-00	METAL GLAZE 470 5%	1/10W
R83	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R209	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R84	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R210	1-216-017-91	METAL GLAZE 47 5%	1/10W
R85	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R211	1-216-033-00	METAL GLAZE 220 5%	1/10W
R86	1-216-077-00	METAL GLAZE 15K 5%	1/10W	R212	1-216-022-00	METAL GLAZE 75 5%	1/10W
R87	1-216-081-00	METAL GLAZE 22K 5%	1/10W	R213	1-216-022-00	METAL GLAZE 75 5%	1/10W
R88	1-216-025-00	METAL GLAZE 100 5%	1/10W	R214	1-216-025-00	METAL GLAZE 100 5%	1/10W
R89	1-216-025-00	METAL GLAZE 100 5%	1/10W	R216	1-216-025-00	METAL GLAZE 100 5%	1/10W
R91	1-216-025-00	METAL GLAZE 100 5%	1/10W	R217	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R92	1-216-025-00	METAL GLAZE 100 5%	1/10W	R218	1-216-025-00	METAL GLAZE 100 5%	1/10W
				R219	1-216-113-00	METAL GLAZE 470K 5%	1/10W



**A** **IF** (KV-32WF1A/32WF1D/32WF1E/  
32WF1K/32WF1U) **IF** (KV-32WF1B)

REF.NO.	PART NO.	DESCRIPTION	REMARK
< CRYSTAL >			
X1	1-767-120-21	VIBRATOR, CERAMIC	
X201	1-760-628-11	VIBRATOR, CRYSTAL	
X301	1-567-504-11	OSCILLATOR, CRYSTAL	
X302	1-567-505-11	OSCILLATOR, CRYSTAL	
X303	1-767-127-11	VIBRATOR, CERAMIC	
*****			
A-1652-037-A	IF BOARD, COMPLETE	(KV-32WF1A/32WF1D/ 32WF1E/32WF1K)	
A-1652-038-A	IF BOARD, COMPLETE	(KV-32WF1U)	
*****			
< CAPACITOR >			
C01	1-164-337-11	CERAMIC CHIP 2.2MF	16V
C02	1-164-337-11	CERAMIC CHIP 2.2MF	16V
C03	1-104-957-11	ELECT 47MF	20% 16V
C04	1-135-259-11	TANTAL. CHIP 10MF	20% 6.3V
C05	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C06	1-164-005-11	CERAMIC CHIP 0.47MF	16V
C08	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C09	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C10	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C11	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C15	1-124-282-00	ELECT 22MF	20% 25V
C16	1-162-638-11	CERAMIC CHIP 1MF	16V
C18	1-164-337-11	CERAMIC CHIP 2.2MF	16V
C19	1-124-937-11	ELECT 10MF	20% 16V
< FILTER >			
CF01	1-404-134-00	TRAP, CERAMIC (5.5MHZ)	
		(KV-32WF1A/32WF1D/32WF1E/32WF1K/32WF1U)	
	1-409-333-21	TRAP, CERAMIC (6.0MHZ)	(KV-32WF1U)
SWF04	1-767-084-11	FILTER, SURFACE WAVE	
< IC >			
IC01	8-759-385-26	IC TDA4472-CFLG3	
< COIL >			
L02	1-408-408-00	INDUCTOR 8.2UH	
L04	1-408-419-00	INDUCTOR 68UH	
L08	1-410-992-11	INDUCTOR CHIP 0.82UH	
< VARIABLE COIL >			
LV01	1-411-874-11	COIL	
< TRANSISTOR >			
Q01	8-729-216-22	TRANSISTOR 2SA1162-G	
< RESISTOR >			
JR01	1-216-296-91	METAL GLAZE 0	5% 1/8W
JR02	1-216-296-91	METAL GLAZE 0	5% 1/8W
JR03	1-216-295-00	METAL GLAZE 0	5% 1/10W
JR04	1-216-296-91	METAL GLAZE 0	5% 1/8W
JR05	1-216-295-00	METAL GLAZE 0	5% 1/10W
JR07	1-216-295-00	METAL GLAZE 0	5% 1/10W
R01	1-216-029-00	METAL GLAZE 150	5% 1/10W
R02	1-216-089-91	METAL GLAZE 47K	5% 1/10W
R03	1-216-089-91	METAL GLAZE 47K	5% 1/10W

REF.NO.	PART NO.	DESCRIPTION	REMARK
R04	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R05	1-216-081-00	METAL GLAZE 22K	5% 1/10W
R06	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R07	1-216-025-91	METAL GLAZE 100	5% 1/10W
R08	1-216-174-00	METAL GLAZE 100	5% 1/8W
R09	1-216-045-00	METAL GLAZE 680	5% 1/10W
		(KV-32WF1A/32WF1D/32WF1E/32WF1K/32WF1U)	
	1-216-049-91	METAL GLAZE 1K	5% 1/10W
		(KV-32WF1U)	
R10	1-216-041-00	METAL GLAZE 470	5% 1/10W
R11	1-216-051-00	METAL GLAZE 1.2K	5% 1/10W
R23	1-216-049-91	METAL GLAZE 1K	5% 1/10W
R24	1-216-295-91	METAL GLAZE 0	5% 1/10W
R25	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
R021	1-216-174-00	METAL GLAZE 100	5% 1/8W
< VARIABLE RESISTOR >			
RV01	1-226-703-11	RES, ADJ, METAL GLAZE 10K	
*****			
A-1652-036-A	IF BOARD, COMPLETE	(KV-32WF1B)	
*****			
< CAPACITOR >			
C01	1-162-638-11	CERAMIC CHIP 1MF	16V
C02	1-164-337-11	CERAMIC CHIP 2.2MF	16V
C03	1-104-957-11	ELECT 47MF	20% 16V
C04	1-135-259-11	TANTAL. CHIP 10MF	20% 6.3V
C05	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C06	1-164-005-11	CERAMIC CHIP 0.47MF	16V
C08	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C09	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C10	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C11	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C12	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C13	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C14	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C15	1-104-957-11	ELECT 47MF	20% 16V
C16	1-162-638-11	CERAMIC CHIP 1MF	16V
C17	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
C18	1-164-337-11	CERAMIC CHIP 2.2MF	16V
C20	1-124-937-11	ELECT 10MF	20% 16V
C21	1-164-506-11	CERAMIC CHIP 4.7MF	16V
< FILTER >			
CF01	1-409-430-11	TRAP, CERAMIC	
SWF01	1-579-273-11	FILTER, SURFACE WAVE	
SWF02	1-760-329-11	FILTER, SURFACE WAVE	
SWF03	1-767-083-11	FILTER, SURFACE WAVE	
< TRIMMER >			
CT01	1-760-662-11	TRAP, CERAMIC	
< IC >			
IC01	8-759-069-36	IC MC74HC4046AF	
< COIL >			
L02	1-408-406-00	INDUCTOR 5.6UH	
L04	1-408-419-00	INDUCTOR 68UH	

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

Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



REF.NO.	PART NO.	DESCRIPTION	REMARK
L05	1-410-987-11	INDUCTOR CHIP 0.33UH	
L06	1-408-399-00	INDUCTOR 1.5UH	
< VARIABLE COIL >			
LV01	1-411-874-11	COIL	
< TRANSISTOR >			
Q01	8-729-216-22	TRANSISTOR 2SA1162-G	
Q02	8-729-035-11	TRANSISTOR BF799-GEG	
Q03	8-729-035-11	TRANSISTOR BF799-GEG	
Q04	8-729-901-01	TRANSISTOR DTC144EK	
< RESISTOR >			
JR01	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR02	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR03	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR04	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR05	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR07	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R01	1-216-029-00	METAL GLAZE 150 5% 1/10W	
R02	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R03	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R04	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R05	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R06	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R07	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R08	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R09	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R10	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R11	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R12	1-216-063-91	METAL GLAZE 3.9K 5% 1/10W	
R13	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R14	1-216-023-00	METAL GLAZE 82 5% 1/10W	
R15	1-216-017-91	METAL GLAZE 47 5% 1/10W	
R16	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R17	1-216-017-91	METAL GLAZE 47 5% 1/10W	
R18	1-216-013-00	METAL GLAZE 33 5% 1/10W	
R20	1-216-222-00	METAL GLAZE 10K 5% 1/8W	
R23	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R25	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R21	1-216-174-00	METAL GLAZE 100 5% 1/8W	
< VARIABLE RESISTOR >			
RV01	1-226-703-11	RES, ADJ, METAL GLAZE 10K	
RV02	1-226-703-11	RES, ADJ, METAL GLAZE 10K	
*****			
*A-1638-078-A C BOARD, COMPLETE			
*****			
< CAPACITOR >			
C702	1-102-115-00	CERAMIC 560PF 10% 50V	
C703	1-102-116-00	CERAMIC 680PF 10% 50V	
C708	1-162-114-00	CERAMIC 0.0047MF 2KV	
C710	1-107-652-11	ELECT 10MF 20% 250V	
C712	1-102-116-00	CERAMIC 680PF 10% 50V	
C714	1-126-967-11	ELECT 47MF 20% 16V	
C717	1-102-114-00	CERAMIC 470PF 10% 50V	
C718	1-102-114-00	CERAMIC 470PF 10% 50V	

REF.NO.	PART NO.	DESCRIPTION	REMARK
C719	1-102-114-00	CERAMIC 470PF 10%	50V
C722	1-101-880-00	CERAMIC 47PF 5%	50V
C723	1-101-880-00	CERAMIC 47PF 5%	50V
C724	1-101-880-00	CERAMIC 47PF 5%	50V
< CONNECTOR >			
CN701	1-778-037-11	PIN, CONNECTOR 6P	
CN702	1-695-915-11	TAB (CONTACT)	
CN703	*1-568-882-51	PIN, CONNECTOR 7P	
< DIODE >			
D701	8-719-109-72	DIODE RD3.9ES-B2	
D702	8-719-991-33	DIODE 1SS133T-77	
D703	1-535-465-11	LEAD, JUMPER (5.0MM)	
D704	1-535-465-11	LEAD, JUMPER (5.0MM)	
D705	1-535-465-11	LEAD, JUMPER (5.0MM)	
D706	8-719-991-33	DIODE 1SS133T-77	
D707	8-719-991-33	DIODE 1SS133T-77	
D708	8-719-991-33	DIODE 1SS133T-77	
D709	8-719-991-33	DIODE 1SS133T-77	
D710	8-719-991-33	DIODE 1SS133T-77	
D711	8-719-302-43	DIODE EL1Z	
D713	1-535-465-11	LEAD, JUMPER (5.0MM)	
D714	8-719-991-33	DIODE 1SS133T-77	
D715	8-719-991-33	DIODE 1SS133T-77	
D716	8-719-991-33	DIODE 1SS133T-77	
D717	8-719-991-33	DIODE 1SS133T-77	
D718	8-719-991-33	DIODE 1SS133T-77	
D719	8-719-991-33	DIODE 1SS133T-77	
D720	8-719-991-33	DIODE 1SS133T-77	
< CRT SOCKET >			
J701	*1-526-990-21	SOCKET, CRT	
< COIL >			
L704	1-408-609-41	INDUCTOR 33UH	
< TRANSISTOR >			
Q702	8-729-119-78	TRANSISTOR 23C2785-HFE	
Q703	8-729-906-70	TRANSISTOR BF871-127	
Q704	8-729-200-17	TRANSISTOR BF421L-AMMO	
Q705	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q706	8-729-906-70	TRANSISTOR BF871-127	
Q707	8-729-200-17	TRANSISTOR BF421L-AMMO	
Q708	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q709	8-729-906-70	TRANSISTOR BF871-127	
Q710	8-729-200-17	TRANSISTOR BF421L-AMMO	
Q711	8-729-026-41	TRANSISTOR 2SA933AS-QRT	
< RESISTOR >			
R704	1-216-486-00	METAL OXIDE 8.2K 5% 3W F	
R705	1-260-103-11	CARBON 2.2K 5% 1/2W	
R706	1-247-815-91	CARBON 220 5% 1/4W	
R707	1-249-408-11	CARBON 180 5% 1/4W	
R708	1-535-143-11	LEAD, JUMPER (10MM)	
R709	1-202-844-00	SOLID 330K 10% 1/2W	
R711	1-247-843-11	CARBON 3.3K 5% 1/4W	
R712	1-260-103-11	CARBON 2.2K 5% 1/2W	
R714	1-216-486-00	METAL OXIDE 8.2K 5% 3W F	
R715	1-249-417-11	CARBON 1K 5% 1/4W	
R716	1-247-815-91	CARBON 220 5% 1/4W	

C	D4
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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R717	1-249-408-11	CARBON 180	5% 1/4W	CN2806	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	
R718	1-202-814-11	SOLID 33K	10% 1/2W	CN2807	*1-568-878-51	PIN, CONNECTOR 3P	
R719	1-535-143-11	LEAD, JUMPER (10MM)					
R720	1-247-843-11	CARBON 3.3K	5% 1/4W			< DIODE >	
R722	1-202-848-00	SOLID 680K	10% 1/2W	D2801	8-719-991-33	DIODE 1SS133T-77	
R723	1-249-417-11	CARBON 1K	5% 1/4W	D2802	8-719-991-33	DIODE 1SS133T-77	
R724	1-202-846-00	SOLID 470K	10% 1/2W	D2803	8-719-991-33	DIODE 1SS133T-77	
R726	1-260-103-11	CARBON 2.2K	5% 1/2W	D2804	8-719-979-85	DIODE EGP20G	
R727	1-247-815-91	CARBON 220	5% 1/4W	D2805	8-719-970-87	DIODE ERA38-06	
R728	1-216-350-11	METAL OXIDE 1.2	5% 1W F	D2806	8-719-970-87	DIODE ERA38-06	
R729	1-249-408-11	CARBON 180	5% 1/4W	D2807	8-719-302-43	DIODE ELIZ	
R730	1-535-143-11	LEAD JUMPER (10MM)		D2808	8-719-302-43	DIODE ELIZ	
R731	1-247-843-11	CARBON 3.3K	5% 1/4W			< IC >	
R733	1-249-420-11	CARBON 1.8K	5% 1/4W				
R734	1-247-807-31	CARBON 100	5% 1/4W	IC2801	8-759-103-93	IC UPC393C	
R735	1-249-420-11	CARBON 1.8K	5% 1/4W	IC2802	8-759-701-59	IC NUM7809FA	
R736	1-216-486-00	METAL OXIDE 8.2K	5% 3W F			< COIL >	
R739	1-249-417-11	CARBON 1K	5% 1/4W				
R740	1-249-420-11	CARBON 1.8K	5% 1/4W	L2801	1-406-674-21	INDUCTOR 3.3MMH	
R741	1-202-549-00	SOLID 100	20% 1/2W	L2802	1-406-989-11	INDUCTOR 10MMH	
R744	1-249-421-11	CARBON 2.2K	5% 1/4W	L2803	1-406-989-11	INDUCTOR 10MMH	
R745	1-249-421-11	CARBON 2.2K	5% 1/4W	L2804	1-406-987-11	INDUCTOR 4.7MMH	
R746	1-249-421-11	CARBON 2.2K	5% 1/4W	L2805	1-406-667-21	INDUCTOR 220UH	
R747	1-249-437-11	CARBON 47K	5% 1/4W			< TRANSISTOR >	
R748	1-249-417-11	CARBON 1K	5% 1/4W	Q2801	8-729-119-78	TRANSISTOR 2SC2785-HFE	
R749	1-249-435-11	CARBON 33K	5% 1/4W	Q2802	8-729-119-78	TRANSISTOR 2SC2785-HFE	
		< VARIABLE RESISTOR >		Q2803	8-729-119-78	TRANSISTOR 2SC2785-HFE	
RV701	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M		Q2804	8-729-119-78	TRANSISTOR 2SC2785-HFE	
RV702	1-241-656-21	RES, ADJ, METAL FILM 110M		Q2805	8-729-119-78	TRANSISTOR 2SC2785-HFE	
*****							
	*A-1640-284-A	D4 BOARD, COMPLETE		Q2806	8-729-039-68	TRANSISTOR IRF620	
		*****		Q2807	8-729-119-78	TRANSISTOR 2SC2785-HFE	
				Q2808	8-729-011-06	TRANSISTOR 2SC3840K	
		< CAPACITOR >				< RESISTOR >	
C2802	1-128-551-11	ELECT 22MF	20% 25V	R2801	1-249-421-11	CARBON 2.2K	5% 1/4W
C2804	1-136-165-00	FILM 0.1MF	5% 50V	R2804	1-249-437-11	CARBON 47K	5% 1/4W
C2805	1-102-852-91	CERAMIC 47PF	5% 50V	R2805	1-249-429-11	CARBON 10K	5% 1/4W
C2806	1-136-250-11	FILM 0.001MF	2% 100V	R2806	1-249-413-11	CARBON 470	5% 1/4W
C2807	1-136-161-00	FILM 0.047MF	5% 50V	R2807	1-249-429-11	CARBON 10K	5% 1/4W
C2808	1-136-153-00	FILM 0.01MF	5% 50V	R2808	1-249-441-11	CARBON 100K	5% 1/4W
C2809	1-136-153-00	FILM 0.01MF	5% 50V	R2809	1-249-413-11	CARBON 470	5% 1/4W
C2810	1-136-153-00	FILM 0.01MF	5% 50V	R2810	1-215-477-00	METAL 220K	1% 1/4W
C2811	1-110-191-71	MYLAR 0.012MF	5% 400V	R2811	1-247-895-91	CARBON 470K	5% 1/4W
C2812	1-137-205-11	FILM 0.1MF	5% 400V	R2812	1-247-895-91	CARBON 470K	5% 1/4W
C2813	1-110-329-71	MYLAR 0.47MF	% 100V	R2813	1-215-467-00	METAL 82K	1% 1/4W
C2814	1-137-536-11	FILM 0.0022MF	5% 630V	R2814	1-215-439-00	METAL 5.6K	1% 1/4W
C2815	1-136-205-11	FILM 0.022MF	10% 400V	R2815	1-215-469-00	METAL 100K	1% 1/4W
C2816	1-136-759-11	FILM 0.039MF	5% 630V	R2816	1-215-465-00	METAL 68K	1% 1/4W
C2817	1-126-933-11	ELECT 100MF	20% 16V	R2817	1-215-437-00	METAL 4.7K	1% 1/4W
C2818	1-104-665-11	ELECT 100MF	20% 25V	R2818	1-215-469-00	METAL 100K	1% 1/4W
C2819	1-126-933-11	ELECT 100MF	20% 16V	R2819	1-249-429-11	CARBON 10K	5% 1/4W
C2820	1-126-948-11	ELECT 100MF	20% 35V	R2820	1-249-425-11	CARBON 4.7K	5% 1/4W
		< CONNECTOR >		R2821	1-249-411-11	CARBON 330	5% 1/4W
CN2801	1-568-878-51	PIN, CONNECTOR 3P		R2822	1-249-437-11	CARBON 47K	5% 1/4W
CN2802	*1-580-798-11	CONNECTOR PIN (DY) 6P		R2823	1-215-907-11	METAL OXIDE 22	5% 3W F
CN2803	*1-580-798-11	CONNECTOR PIN (DY) 6P		R2824	1-249-429-11	CARBON 10K	5% 1/4W
CN2804	*1-568-879-11	PIN, CONNECTOR 4P		R2825	1-249-421-11	CARBON 2.2K	5% 1/4W
CN2805	1-568-878-51	PIN, CONNECTOR 3P		R2826	1-249-417-11	CARBON 1K	5% 1/4W
				R2827	1-249-441-11	CARBON 100K	5% 1/4W

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**D4** **D**

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R2828	1-249-441-11	CARBON	100K 5% 1/4W	C624	1-136-165-00	FILM	0.1MF 5% 50V
R2829	1-249-441-11	CARBON	100K 5% 1/4W	C625	1-126-967-11	ELECT	47MF 20% 50V
R2830	1-215-905-11	METAL OXIDE	10 5% 3W F	C626	1-104-666-11	ELECT	220MF 20% 25V
R2831	1-249-377-11	CARBON	0.47 5% 1/4W F	C628	1-126-964-11	ELECT	10MF 20% 50V
R2832	1-249-379-91	CARBON	0.68 5% 1/4W F	C629	1-111-097-11	ELECT	0.0022F 20% 35V
< RELAY >				C630	1-111-097-11	ELECT	0.0022F 20% 35V
RY2801	1-755-172-11	RELAY		C631	1-126-965-11	ELECT	22MF 20% 50V
< TRANSFORMER >				C632	1-104-666-11	ELECT	220MF 20% 25V
T2801	1-406-904-21	COIL, CHOKE 160UH		C633 †	1-107-563-11	FILM	0.1MF 20% 300V
T2802	1-429-305-11	TRANSFORMER, FERRITE (DFT)		C635 †	1-107-563-11	FILM	0.1MF 20% 300V
*****							
*A-1642-216-A	D BOARD, COMPLETE	*****					
4-201-023-01	SPACER, INSULATING						
4-202-373-01	SPRING, IC						
< CAPACITOR >				C636 †	1-113-890-51	CERAMIC	0.0022MF 20% 250V
C502	1-102-824-00	CERAMIC	470PF 5% 50V	C638	1-136-203-11	FILM	0.01MF 10% 250V
C503	1-136-165-00	FILM	0.1MF 5% 50V	C640	1-106-220-00	MYLAR	0.1MF 10% 100V
C504	1-102-824-00	CERAMIC	470PF 5% 50V	C641 †	1-161-744-00	CERAMIC	0.01MF 400V
C506	1-126-941-11	ELECT	470MF 20% 25V	C644	1-137-043-11	FILM	0.0047MF 10% 400V
C507	1-109-953-11	ELECT	2.2MF 20% 50V	C647	1-162-116-00	CERAMIC	680PF 10% 2KV
C509	1-136-165-00	FILM	0.1MF 5% 50V	C651	1-102-228-00	CERAMIC	470PF 10% 500V
C510	1-126-969-11	ELECT	220MF 20% 50V	C800	1-137-368-11	FILM	0.0047MF 5% 50V
C511	1-136-202-11	FILM	0.33MF 5% 63V	C801	1-137-372-11	FILM	0.022MF 5% 50V
C513	1-106-220-00	MYLAR	0.1MF 10% 100V	C802	1-535-465-11	LEAD, JUMPER (5.0MM)	
C514	1-136-165-00	FILM	0.1MF 5% 50V	C804	1-136-165-00	FILM	0.1MF 5% 50V
C515	1-126-941-11	ELECT	470MF 20% 25V	C805	1-136-207-11	FILM	0.047MF 10% 250V
C517	1-126-941-11	ELECT	470MF 20% 25V	C806	1-104-999-11	MYLAR	0.1MF 10% 200V
C518	1-102-228-00	CERAMIC	470PF 10% 500V	C807	1-136-540-11	FILM	0.82MF 5% 200V
C519	1-102-228-00	CERAMIC	470PF 10% 500V	C808	1-136-946-11	FILM	0.12MF 5% 200V
C520	1-126-941-11	ELECT	470MF 20% 25V	C810	1-107-683-11	ELECT	2.2MF 0 250V
C521	1-107-698-11	ELECT	10MF 20% 25V	C811	1-102-212-00	CERAMIC	820PF 10% 500V
C522	1-126-964-11	ELECT	10MF 20% 50V	C812	1-136-540-11	FILM	0.82MF 5% 200V
C523	1-136-165-00	FILM	0.1MF 5% 50V	C813	1-129-724-51	FILM	0.068MF 10% 630V
C600 †	1-113-890-51	CERAMIC	0.0022MF 20% 250V	C814	1-136-952-11	FILM	0.02MF 3% 1.4KV
C601 †	1-161-964-91	CERAMIC	0.0047MF 250V	C815	1-137-046-11	FILM	0.0082MF 10% 400V
C602 †	1-161-964-91	CERAMIC	0.0047MF 250V	C816	1-161-754-00	CERAMIC	0.001MF 10% 2KV
C603	1-125-555-11	ELECT	330MF 20% 400V	C817	1-161-754-00	CERAMIC	0.001MF 10% 2KV
C604	1-126-968-11	ELECT	100MF 20% 50V	C819	1-136-208-11	FILM	0.068MF 10% 250V
C605	1-107-929-11	ELECT	10MF 20% 100V	C820	1-102-114-00	CERAMIC	470PF 10% 50V
C606	1-162-318-11	CERAMIC	0.001MF 10% 500V	C821	1-162-114-00	CERAMIC	0.0047MF 2KV
C607	1-104-666-11	ELECT	220MF 20% 25V	C822	1-107-662-11	ELECT	22MF 20% 250V
C608	1-109-880-11	FILM	0.0015MF 3% 2KV	C824	1-123-024-21	ELECT	33MF 160V
C611	1-102-228-00	CERAMIC	470PF 10% 500V	C829	1-126-959-11	ELECT	0.47MF 20% 50V
C612	1-111-160-11	ELECT	22MF 20% 100V	C832	1-126-959-11	ELECT	0.47MF 20% 50V
C613	1-124-347-00	ELECT	100MF 20% 160V	C834	1-128-551-11	ELECT	22MF 20% 25V
C614	1-126-933-11	ELECT	100MF 20% 16V	C835	1-162-318-11	CERAMIC	0.001MF 10% 500V
C615	1-111-067-11	ELECT	0.001F 20% 25V	C836	1-162-117-00	CERAMIC	100PF 10% 500V
C616	1-111-067-11	ELECT	0.001F 20% 25V	C838	1-102-228-00	CERAMIC	470PF 10% 500V
C617	1-128-339-11	ELECT	2200MF 20% 16V	C839	1-136-207-11	FILM	0.047MF 10% 250V
C618	1-136-165-00	FILM	0.1MF 5% 50V	C841	1-102-110-00	CERAMIC	220PF 10% 50V
C619	1-102-228-00	CERAMIC	470PF 10% 500V	C845	1-101-880-91	CERAMIC	47PF 5% 50V
C620	1-102-228-00	CERAMIC	470PF 10% 500V	C901	1-101-810-00	CERAMIC	100PF 5% 500V
C621	1-136-165-00	FILM	0.1MF 5% 50V	C902	1-137-372-11	FILM	0.022MF 5% 50V
C622	1-107-925-11	ELECT	1MF 20% 100V	C903	1-137-372-11	FILM	0.022MF 5% 50V
C623	1-104-666-11	ELECT	220MF 20% 25V	C904	1-126-933-11	ELECT	100MF 20% 16V
				C905	1-126-964-11	ELECT	10MF 20% 50V
				C906	1-126-964-11	ELECT	10MF 20% 50V
				C907	1-126-964-11	ELECT	10MF 20% 50V
				C908	1-126-964-11	ELECT	10MF 20% 50V
				C910	1-535-465-11	LEAD, JUMPER (5.0MM)	
				C911	1-126-964-11	ELECT	10MF 20% 50V
				C913	1-101-810-00	CERAMIC	100PF 5% 500V
				C916	1-137-040-11	FILM	0.0022MF 10% 400V
				C1200	1-136-165-00	FILM	0.1MF 5% 50V

D

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C1201	1-136-173-00	FILM 0.47MF	5% 50V	D622	8-719-923-60	DIODE MTZJ-T-77-9.1A	
C1202	1-136-173-00	FILM 0.47MF	5% 50V	D625	8-719-991-33	DIODE 1SS133T-77	
C1203	1-136-169-00	FILM 0.22MF	5% 50V	D626	8-719-046-74	DIODE AU-01Z-V1	
C1204	1-136-169-00	FILM 0.22MF	5% 50V	D631	8-719-109-93	DIODE RD6.2ES-B2	
C1205	1-101-005-00	CERAMIC 0.022MF	50V	D637	8-719-110-17	DIODE RD10ES-B2	
C1206	1-101-005-00	CERAMIC 0.022MF	50V	D800	8-719-991-33	DIODE 1SS133T-77	
C1207	1-126-933-11	ELECT 100MF	20% 16V	D801	8-719-991-33	DIODE 1SS133T-77	
C1208	1-126-963-11	ELECT 4.7MF	20% 50V	D802	8-719-991-33	DIODE 1SS133T-77	
C1209	1-126-963-11	ELECT 4.7MF	20% 50V	D803	8-719-908-03	DIODE GP08D	
C1212	1-162-318-11	CERAMIC 0.001MF	10% 500V	D807	8-719-302-43	DIODE EL1Z	
C1213	1-162-318-11	CERAMIC 0.001MF	10% 500V	D808	8-719-908-03	DIODE GP08D	
C1214	1-126-933-11	ELECT 100MF	20% 16V	D809	8-719-031-34	DIODE RGP02-20EG23	
C1215	1-136-173-00	FILM 0.47MF	5% 50V	D810	8-719-302-43	DIODE EL1Z	
C1216	1-137-366-11	FILM 0.0022MF	5% 50V	D812	8-719-038-49	DIODE FMS-3FU-LF027-103	
C1217	1-137-366-11	FILM 0.0022MF	5% 50V	D815	8-719-908-03	DIODE GP08D	
C1218	1-126-941-11	ELECT 470MF	20% 25V	D817	8-719-109-85	DIODE RD5.1ES-B2	
< CONNECTOR >				D901	8-719-030-11	DIODE SLA-570KT3F	
CN600	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P		D902	8-719-923-60	DIODE MTZJ-T-77-9.1A	
CN601	1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P		D903	8-719-923-60	DIODE MTZJ-T-77-9.1A	
CN603	*1-580-844-11	PIN, CONNECTOR (POWER)		D904	8-719-923-60	DIODE MTZJ-T-77-9.1A	
CN800	*1-580-798-11	CONNECTOR PIN (DY) 6P		D905	8-719-923-60	DIODE MTZJ-T-77-9.1A	
CN801	*1-568-879-11	PIN, CONNECTOR 4P		D906	8-719-923-60	DIODE MTZJ-T-77-9.1A	
CN802	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P		D907	8-719-109-89	DIODE RD5.6ES-B2	
CN803	1-695-915-11	TAB (CONTACT)		D908	8-719-923-60	DIODE MTZJ-T-77-9.1A	
CN804	1-778-037-11	PIN, CONNECTOR 6P		D909	8-719-923-60	DIODE MTZJ-T-77-9.1A	
CN807	1-568-878-51	PIN, CONNECTOR 3P		D910	8-719-923-60	DIODE MTZJ-T-77-9.1A	
CN902	1-695-299-11	CONNECTOR, BOARD TO BOARD 50P		D920	8-719-109-89	DIODE RD5.6ESB2	
CN1401	*1-568-880-51	PIN, CONNECTOR 5P		D1201	8-719-109-72	DIODE RD3.9ES-B2	
CN1408	*1-568-879-11	PIN, CONNECTOR 4P		D1202	1-535-465-11	LEAD, JUMPER (5.0MM)	
CN1803	*1-568-878-51	PIN, CONNECTOR 3P		< FUSE >			
< DIODE >				F601	1-576-232-21	FUSE (H.B.C.)	
D500	8-719-109-85	DIODE RD5.1ES-B2			*1-533-725-11	HOLDER, FUSE : F601	
D502	8-719-979-85	DIODE EGP20G		< FERRITE BEAD >			
D503	8-719-979-85	DIODE EGP20G		FB600	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
D504	8-719-991-33	DIODE 1SS133T-77		FB601	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
D505	8-719-982-03	DIODE MTZJ-3.6A		FB602	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
D506	8-719-991-33	DIODE 1SS133T-77		FB604	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
D507	8-719-109-85	DIODE RD5.1ES-B2		FB605	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
D510	8-719-924-13	DIODE MTZJ-T-77-22B		FB606	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
D600	8-719-510-53	DIODE D4SB60L		FB607	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
D601	8-719-046-77	DIODE EM1-V1		FB608	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
D603	8-719-109-97	DIODE RD6.8ES-B2		FB800	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
D604	8-719-046-75	DIODE EU-1-V1		< IC >			
D605	8-719-302-43	DIODE EL1Z		IC500	8-759-192-71	IC STV9379	
D606	8-719-302-43	DIODE EL1Z		IC600	8-749-010-84	IC STR-S6708	
D607	8-719-046-78	DIODE EG-1Z-V1		IC601	8-749-013-21	IC TLP721(D4-G,T)	
D608	8-719-302-06	DIODE EU2A		IC602	8-749-920-61	IC SE135N	
D609	8-719-312-10	DIODE RU4AM-T3		IC603	8-759-144-82	IC UPC2405HF	
D610	8-719-046-74	DIODE AU-01Z-V1		IC604	8-759-510-52	IC L4941BV	
D611	8-719-058-38	DIODE FMN-G12S		IC606	8-759-267-25	IC LM2940T-9.0	
D612	8-719-046-76	DIODE RU3YX-LF-C4		IC800	8-759-103-93	IC UPC393C	
D613	8-719-058-38	DIODE FMN-G12S		IC900	8-742-014-10	HYB IC SBX1981-51	
D614	8-719-058-38	DIODE FMN-G12S		IC1200	8-759-250-68	IC TDA7264	
D615	8-719-046-75	DIODE EU-1-V1		IC1201	8-759-502-21	IC TDA2822M	
D616	8-719-110-03	DIODE RD7.5ES-B2					
D617	8-719-991-33	DIODE 1SS133T-77					
D618	8-719-991-33	DIODE 1SS133T-77					
D619	8-719-991-33	DIODE 1SS133T-77					
D620	8-719-991-33	DIODE 1SS133T-77					

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
< JACK >							
J900	1-764-606-11	JACK		R503	1-249-429-11	CARBON 10K 5%	1/4W
J1200	1-770-218-11	JACK, PIN		R504	1-215-441-00	METAL 6.8K 1%	1/4W
< COIL >							
L502	1-412-519-11	INDUCTOR 3.3UH		R505	1-249-382-11	CARBON 1.2 5%	1/4W F
L503	1-412-519-11	INDUCTOR 3.3UH		R506	1-215-455-00	METAL 27K 1%	1/4W
L609	1-412-533-21	INDUCTOR 47UH		R507	1-215-888-00	METAL OXIDE 220 5%	2W F
L10	1-535-465-11	LEAD, JUMPER (5MM)		R508	1-216-371-00	METAL OXIDE 1.5 5%	2W F
L611	1-412-527-11	INDUCTOR 15UH		R509	1-249-443-11	CARBON 0.47 5%	1/4W F
L612	1-412-519-11	INDUCTOR 3.3UH		R510	1-249-443-11	CARBON 0.47 5%	1/4W F
L613	1-412-519-11	INDUCTOR 3.3UH		R519	1-215-451-00	METAL 18K 1%	1/4W
L615	1-412-529-11	INDUCTOR 22UH		R520	1-215-451-00	METAL 18K 1%	1/4W
L616	1-412-533-21	INDUCTOR 47UH		R521	1-215-457-00	METAL 33K 1%	1/4W
L801	1-459-111-00	COIL, DRAM CORE (CDI)		R522	1-247-863-91	CARBON 22K 5%	1/4W
L802	1-459-104-00	COIL, WITH CORE		R523	1-247-863-91	CARBON 22K 5%	1/4W
L803	1-535-465-11	LEAD, JUMPER (5.0MM)		R524	1-249-425-11	CARBON 4.7K 5%	1/4W
L805	1-406-674-11	COIL, CHOKE 3.3MMH		R525	1-249-425-11	CARBON 4.7K 5%	1/4W
L806	1-535-405-11	LEAD, JUMPER (5.0MM)		R526	1-249-421-11	CARBON 2.2K 5%	1/4W
L809	1-408-417-00	INDUCTOR 47UH		R527	1-215-433-00	METAL 3.3K 1%	1/4W
L810	1-535-465-11	LEAD, JUMPER (5MM)		R600	1-216-490-11	METAL OXIDE 39K 5%	3W F
L811	1-406-978-11	COIL, CHOKE 150UH		R601	1-249-417-11	CARBON 1K 5%	1/4W
L813	1-412-552-11	INDUCTOR 2.2MMH		R602	1-215-473-00	METAL 150K 1%	1/4W
L901	1-408-603-31	INDUCTOR 10UH		R603	1-215-898-11	METAL OXIDE 10K 5%	2W F
L902	1-408-603-31	INDUCTOR 10UH		R604	1-249-420-11	CARBON 1.8K 5%	1/4W
L903	1-408-409-00	INDUCTOR 10UH		R605	1-216-362-11	METAL OXIDE 0.27 5%	2W F
L904	1-408-409-00	INDUCTOR 10UH		R606	1-535-143-21	LEAD, JUMPER (12.5MM)	
< IC LINK >							
PS600	$\Delta$ 1-532-686-21	LINK, IC 2.7A (ICP-F75)		R607	1-216-421-11	METAL OXIDE 12 5%	1W F
PS601	$\Delta$ 1-532-686-21	LINK, IC 2.7A (ICP-F75)		R608	1-216-365-00	METAL OXIDE 0.47 5%	2W F
PS602	$\Delta$ 1-532-686-21	LINK, IC 2.7A (ICP-F75)		R609	1-535-465-11	LEAD, JUMPER (5.0MM)	
PS603	$\Delta$ 1-532-686-21	LINK, IC 2.7A (ICP-F75)		R610	1-215-427-00	METAL 1.8K 1%	1/4W
< TRANSISTOR >							
Q501	8-729-119-78	TRANSISTOR 2SC2785-HFE		R611	1-216-354-11	METAL OXIDE 2.7 5%	1W F
Q502	8-729-119-76	TRANSISTOR 2SA1175-HFE		R612	1-249-428-11	CARBON 8.2K 5%	1/4W
Q503	8-729-903-02	TRANSISTOR DTC144ESA		R613	1-249-417-11	CARBON 1K 5%	1/4W
Q601	8-729-025-04	TRANSISTOR 2SC3852A		R614	1-215-877-11	METAL OXIDE 22K 5%	1W F
Q602	8-729-320-28	TRANSISTOR 2SA1667		R615	1-249-435-11	CARBON 33K 5%	1/4W
Q603	8-729-805-05	TRANSISTOR 2SC3601-E		R616	1-215-471-00	METAL 120K 1%	1/4W
Q604	8-729-024-35	TRANSISTOR 2SC2808STP-R		R617	1-215-901-00	METAL OXIDE 33K 5%	2W F
Q605	8-729-119-78	TRANSISTOR 2SC2785-HFE		R618	1-247-863-91	CARBON 22K 5%	1/4W
Q606	8-729-900-65	TRANSISTOR DTA144ES		R619	1-216-425-11	METAL OXIDE 56 5%	1W F
Q607	8-729-119-78	TRANSISTOR 2SC2785-HFE		R620	1-260-131-11	CARBON 470K 5%	1/2W
Q800	8-729-119-78	TRANSISTOR 2SC2785-HFE		R621	1-216-425-11	METAL OXIDE 56 5%	1W F
Q801	8-729-017-06	TRANSISTOR 2SC4793		R622	1-249-437-11	CARBON 47K 5%	1/4W
Q802	8-729-042-86	TRANSISTOR 2SC5251-01		R623	1-249-429-11	CARBON 10K 5%	1/4W
Q803	8-729-119-80	TRANSISTOR 2SC2688-LK		R624	1-249-393-11	CARBON 10 5%	1/4W F
Q805	8-729-903-02	TRANSISTOR DTC144ESA		R625	1-249-434-11	CARBON 27K 5%	1/4W
Q900	8-729-119-78	TRANSISTOR 2SC2785-HFE		R626	1-249-430-11	CARBON 12K 5%	1/4W
Q1200	8-729-119-78	TRANSISTOR 2SC2785-HFE		R627	1-216-347-11	METAL OXIDE 0.68 5%	1W F
Q1201	8-729-029-94	TRANSISTOR DTC143TSA		R628	1-249-415-11	CARBON 680 5%	1/4W F
Q1202	8-729-024-94	TRANSISTOR DTC114TSA		R629	1-214-937-00	CARBON 1M 5%	1/2W
Q1203	8-729-029-94	TRANSISTOR DTC143TSA		R629	1-260-135-11	CARBON 1M 5%	1/2W
Q1204	8-729-029-94	TRANSISTOR DTC143TSA		R630	1-218-265-11	METAL 8.2M 5%	1W
< RESISTOR >							
R500	1-215-457-00	METAL 33K 1%	1/4W	R631	1-202-961-11	WIREWOUND 1.8 5%	10W
R502	1-249-421-11	CARBON 2.2K 5%	1/4W	R632	1-247-807-31	CARBON 100 5%	1/4W
				R633	1-247-807-31	CARBON 100 5%	1/4W
				R634	1-249-397-11	CARBON 22 5%	1/4W F
				R635	1-249-437-11	CARBON 47K 5%	1/4W
				R636	1-249-417-11	CARBON 1K 5%	1/4W
				R637	1-247-815-91	CARBON 220 5%	1/4W
				R638	1-247-863-91	CARBON 22K 5%	1/4W
				R639	1-215-425-00	METAL 1.5K 1%	1/4W
				R642	1-205-949-11	WIREWOUND 1.8 5%	10W
				R646	1-249-377-11	CARBON 0.47 5%	1/4W F
				R647	1-202-933-61	FUSIBLE 0.1 10%	1/2W F



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REF.NO.	PART NO.	DESCRIPTION	REMARK
R649	1-249-426-11	CARBON 5.6K 5%	1/4W
R800	1-249-429-11	CARBON 10K 5%	1/4W
R802	1-249-429-11	CARBON 10K 5%	1/4W
R803	1-249-427-11	CARBON 6.8K 5%	1/4W
R805	1-249-429-11	CARBON 10K 5%	1/4W
R809	1-247-897-11	CARBON 560K 5%	1/4W
R811	1-535-465-11	LEAD, JUMPER (5.0MM)	
R812	1-249-421-11	CARBON 2.2K 5%	1/4W
R813	1-215-869-11	METAL OXIDE 1K 5%	1W F
R814	1-249-411-11	CARBON 330 5%	1/4W
R816	1-216-456-21	METAL OXIDE 820 5%	2W F
R817	1-216-456-21	METAL OXIDE 820 5%	2W F
R818	1-215-884-51	METAL OXIDE 47 5%	2W F
R819	1-535-143-71	LEAD, JUMPER (7.5)MM	
R820	1-249-403-11	CARBON 68 5%	1/4W
R821	1-215-909-11	METAL OXIDE 47 5%	3W F
R822	1-215-868-00	METAL OXIDE 680 5%	1W F
R823	1-216-456-21	METAL OXIDE 820 5%	2W F
R824	1-249-420-11	CARBON 1.8K 5%	1/4W
R825	1-215-884-51	METAL OXIDE 47 5%	2W F
R826	1-247-752-11	CARBON 1K 5%	1/2W
R827	1-249-425-11	CARBON 4.7K 5%	1/4W
R828	1-249-432-11	CARBON 18K 5%	1/4W
R829	1-260-120-11	CARBON 56K 5%	1/2W
R830	1-217-778-11	FUSIBLE 1K 5%	1W F
R831	1-535-465-11	LEAD, JUMPER (5.0MM)	
R833	1-249-441-11	CARBON 100K 5%	1/4W
R835	1-216-471-71	METAL OXIDE 27 5%	3W F
R836	1-249-439-11	CARBON 68K 5%	1/4W
R837	1-247-869-91	CARBON 39K 5%	1/4W
R840	1-247-807-31	CARBON 100 5%	1/4W
R841	1-249-418-11	CARBON 1.2K 5%	1/4W
R844	1-535-143-11	LEAD, JUMPER (10.0MM)	
R846	1-249-440-11	CARBON 82K 5%	1/4W
R847	1-259-880-11	CARBON 2.2M 5%	1/4W
R848	1-247-903-00	CARBON 1M 5%	1/4W
R849	1-249-429-11	CARBON 10K 5%	1/4W
R850	1-249-425-11	CARBON 4.7K 5%	1/4W
R851	1-215-898-11	METAL OXIDE 10K 5%	2W F
R852	1-249-432-11	CARBON 18K 5%	1/4W
R870	1-535-143-71	LEAD, JUMPER (7.5MM)	
R900	1-247-815-91	CARBON 220 5%	1/4W
R901	1-247-734-11	CARBON 39 5%	1/2W
R901	1-260-311-11	CARBON 39 5%	1/2W
R902	1-247-734-11	CARBON 39 5%	1/2W
R904	1-249-389-11	CARBON 4.7 5%	1/4W F
R905	1-247-804-11	CARBON 75 5%	1/4W
R906	1-247-804-11	CARBON 75 5%	1/4W
R907	1-247-804-11	CARBON 75 5%	1/4W
R908	1-249-401-11	CARBON 47 5%	1/4W
R909	1-249-429-11	CARBON 10K 5%	1/4W
R910	1-249-422-11	CARBON 2.7K 5%	1/4W
R911	1-249-426-11	CARBON 5.6K 5%	1/4W
R912	1-249-429-11	CARBON 10K 5%	1/4W
R913	1-247-863-91	CARBON 22K 5%	1/4W
R914	1-249-437-11	CARBON 47K 5%	1/4W
R922	1-247-807-31	CARBON 100 5%	1/4W
R923	1-249-421-11	CARBON 2.2K 5%	1/4W
R1200	1-249-425-11	CARBON 4.7K 5%	1/4W
R1201	1-249-434-11	CARBON 27K 5%	1/4W
R1202	1-249-389-11	CARBON 4.7 5%	1/4W F

REF.NO.	PART NO.	DESCRIPTION	REMARK
R1203	1-249-421-11	CARBON 2.2K 5%	1/4W
R1204	1-249-421-11	CARBON 2.2K 5%	1/4W
R1205	1-249-428-11	CARBON 8.2K 5%	1/4W
R1206	1-249-428-11	CARBON 8.2K 5%	1/4W
R1207	1-249-413-11	CARBON 470 5%	1/4W
R1208	1-212-849-00	FUSIBLE 4.7 5%	1/4W F
R1209	1-212-849-00	FUSIBLE 4.7 5%	1/4W F
R1210	1-249-413-11	CARBON 470 5%	1/4W
R1211	1-249-424-11	CARBON 3.9K 5%	1/4W
R1212	1-249-424-11	CARBON 3.9K 5%	1/4W
R1213	1-249-421-11	CARBON 2.2K 5%	1/4W
R1216	1-249-413-11	CARBON 470 5%	1/4W
R1217	1-249-425-11	CARBON 4.7K 5%	1/4W
R1218	1-535-465-11	LEAD, JUMPER (5.0MM)	
R1219	1-249-417-11	CARBON 1K 5%	1/4W

< RELAY >

RY600 †	1-755-018-11	RELAY
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< 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

< SPARK GAP >

SG801	1-519-422-11	GAP, SPARK
SG802	1-519-422-11	GAP, SPARK

< TRANSFORMER >

LF600 †	1-421-776-11	LFT
LF601 †	1-421-776-11	LFT

T601 †	1-429-605-11	TRANSFORMER, CONVERTER
T800	1-426-981-11	TRANSFORMER, FERRITE (PMT)
T803 †	1-453-257-11	TRANSFORMER, ASSY FLYBACK (NX-4126/U2A4)

T804	1-437-090-31	HDT
T805	1-429-306-11	TRANSFORMER, HORIZONTAL LINEAR

< THERMISTOR >

THP600 †	1-809-827-11	THERMISTOR, POSITIVE
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*A-1644-082-A	VM BOARD, COMPLETE
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*4-368-683-11	SPRING, TRANSISTOR
*4-368-683-21	SPRING, TRANSISTOR

< CAPACITOR >

C1701	1-126-933-11	ELECT	100MF	20%	16V
C1702	1-128-551-11	ELECT	22MF	20%	25V
C1703	1-126-933-11	ELECT	100MF	20%	16V
C1704	1-107-357-11	FILM	0.47MF	5%	100V
C1705	1-107-638-11	ELECT	33MF	20%	160V
C1706	1-104-999-11	FILM	0.1MF	5%	200V
C1707	1-137-397-11	FILM	0.047MF	5%	100V
C1708	1-137-364-11	FILM	0.001MF	5%	50V
C1709	1-137-364-11	FILM	0.001MF	5%	50V
C1710	1-102-074-00	CERAMIC	0.001MF	10%	50V

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VM

REF.NO.	PART NO.	DESCRIPTION	REMARK
C1720	1-107-667-11	ELECT 2.2MF	20% 160V
C1721	1-137-397-11	FILM 0.047MF	5% 100V
C1722	1-126-934-11	ELECT 220MF	20% 16V
C1723	1-161-830-00	CERAMIC 0.0047MF	500V
C1725	1-128-551-11	ELECT 22MF	20% 25V
C1726	1-126-934-11	ELECT 220MF	20% 16V
C1801	1-104-664-11	ELECT 47MF	20% 25V
C1803	1-137-368-11	FILM 0.0047MF	5% 50V
C1804	1-126-964-11	ELECT 10MF	20% 50V
C1805	1-137-366-11	FILM 0.0022MF	5% 50V

< CONNECTOR >

CN1015	*1-568-880-51	PIN, CONNECTOR 5P	
CN1718	*1-770-723-11	CONNECTOR, BOARD TO BOARD 8P	
CN1719	1-568-878-51	PIN, CONNECTOR 3P	
CN1801	*1-568-878-51	PIN, CONNECTOR 3P	
CN1802	*1-568-878-51	PIN, CONNECTOR 3P	

< DIODE >

D1701	8-719-991-33	DIODE 1SS133T-77	
D1702	8-719-110-88	DIODE RD39ES-B2	
D1703	8-719-110-88	DIODE RD39ES-B2	
D1801	8-719-929-15	DIODE HZS9.1N-B2	

< IC >

IC1801	8-759-701-59	IC NJM78M09FA	
IC1802	8-759-603-37	IC M5216P	

< COIL >

L1701	1-408-409-00	INDUCTOR 10UH	
L1702	1-408-403-00	INDUCTOR 3.3UH	
L1703	1-408-409-00	INDUCTOR 10UH	
L1704	1-408-418-00	INDUCTOR 56UH	
L1705	1-408-418-00	INDUCTOR 56UH	

< IC LINK >

PS1801	▲ 1-532-605-00	LINK, IC	
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< TRANSISTOR >

Q1701	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1702	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1703	8-729-017-05	TRANSISTOR 2SA1837	
Q1704	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1706	8-729-017-06	TRANSISTOR 2SC4793	
Q1708	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1709	8-729-119-78	TRANSISTOR 2SC2785-HFE	

< RESISTOR >

R1701	1-249-417-11	CARBON 1K	5%	1/4W
R1702	1-249-417-11	CARBON 1K	5%	1/4W
R1703	1-249-421-11	CARBON 2.2K	5%	1/4W
R1704	1-249-415-11	CARBON 680	5%	1/4W
R1705	1-247-815-91	CARBON 220	5%	1/4W
R1706	1-247-815-91	CARBON 220	5%	1/4W
R1708	1-249-412-11	CARBON 390	5%	1/4W
R1712	1-260-311-11	CARBON 39	5%	1/2W
R1713	1-249-384-11	CARBON 1.8	5%	1/4W F
R1714	1-249-414-11	CARBON 560	5%	1/4W F
R1715	1-249-432-11	CARBON 18K	5%	1/4W
R1716	1-249-417-11	CARBON 1K	5%	1/4W F
R1717	1-216-476-11	METAL OXIDE 180	5%	3W F
R1718	1-249-432-11	CARBON 18K	5%	1/4W

REF.NO.	PART NO.	DESCRIPTION	REMARK
R1719	1-249-384-11	CARBON 1.8	5% 1/4W F
R1720	1-249-400-11	CARBON 39	5% 1/4W F
R1721	1-249-414-11	CARBON 560	5% 1/4W
R1722	1-249-401-11	CARBON 47	5% 1/4W
R1724	1-247-797-91	CARBON 39	5% 1/4W
R1725	1-216-451-11	METAL OXIDE 120	5% 2W F
R1728	1-249-413-11	CARBON 470	5% 1/4W
R1729	1-249-413-11	CARBON 470	5% 1/4W
R1730	1-249-422-11	CARBON 2.7K	5% 1/4W
R1731	1-249-411-11	CARBON 330	5% 1/4W
R1806	1-247-883-00	CARBON 150K	5% 1/4W
R1807	1-249-429-11	CARBON 10K	5% 1/4W
R1808	1-249-429-11	CARBON 10K	5% 1/4W
R1809	1-249-429-11	CARBON 10K	5% 1/4W
R1810	1-249-429-11	CARBON 10K	5% 1/4W

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

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
MISCELLANEOUS *****							
$\Delta$	1-416-452-11	COIL, DEGAUSSING					
	1-452-032-00	MAGNET, DISK; 10MM $\emptyset$					
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM $\emptyset$					
$\Delta$	1-453-257-11	TRANSFORMER ASSY, FLYBACK (NX-4126/U2A4)					
	1-505-782-11	SPEAKER (8CM)					
	1-452-724-71	COIL, ROTATION (RT-165)					
$\Delta$	1-571-433-21	SWITCH, PUSH (AC POWER)					
	1-693-338-11	TUNER (TUVIF) (AEP) (KV-32WF1A/32WF1D/32WF1E/32WF1K)					
	1-693-340-11	TUNER (TUVIF) (FR) (KV-32WF1B)					
	1-693-339-11	TUNER (TUVIF) (UK) (KV-32WF1U)					
$\Delta$	1-751-501-21	CORD, POWER (WITH NOISE FILTER) (KV-32WF1A/32WF1B/32WF1D/32WF1E/32WF1K)					
$\Delta$	1-776-204-12	CORD, POWER (FILTER) 3A/250V (KV-32WF1U)					
$\Delta$	8-451-492-11	DEFLECTION YOKE (Y32C2A-M)					
$\Delta$	8-453-011-11	NECK ASSY, (NA299-M)					
V901	$\Delta$	8-735-037-05	PICTURE TUBE (SD-297) (W76LHTO60X)				
*****							
ACCESSORIES AND PACKING MATERIALS *****							
	4-203-872-41	MANUAL, INSTRUCTION (KV-32WF1A) (ITALIAN)					
	4-203-872-51	MANUAL, INSTRUCTION (KV-32WF1B) (FRENCH/GERMAN/ITALIAN/DUTCH)					
	4-203-872-11	MANUAL, INSTRUCTION (KV-32WF1D) (ENGLISH/DUTCH/GERMAN/GREEK)					
	4-203-872-71	MANUAL, INSTRUCTION (KV-32WF1E) (SPANISH)					
	4-203-872-81	MANUAL, INSTRUCTION (KV-32WF1E) (PORTUGUESE/FINNISH/DANISH/ NORWEGIAN/SWEDISH)					
	4-203-872-91	MANUAL, INSTRUCTION (KV-32WF1K/ (ENGLISH/CZECH/POLISH)					
	4-203-872-61	MANUAL, INSTRUCTION (KV-32WF1U) (ENGLISH)					
	*4-203-902-01	INDIVIDUAL CARTON					
	*4-203-901-01	CUSHION (LOWER) (ASSY)					
	*4-203-900-01	CUSHION (UPPER) (ASSY)					
	*4-203-908-01	CUSHION (REAR)					
	*4-029-168-01	BAG, PROTECTION					
REMOTE COMMANDER *****							
	1-473-693-11	COMMANDER, STANDARD TYPE (RM-839)					
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