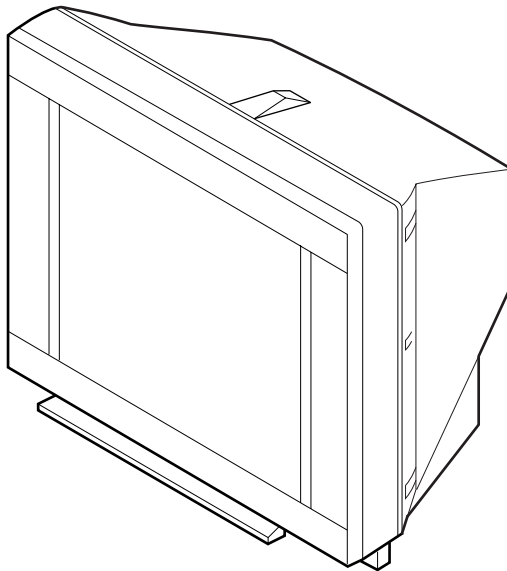




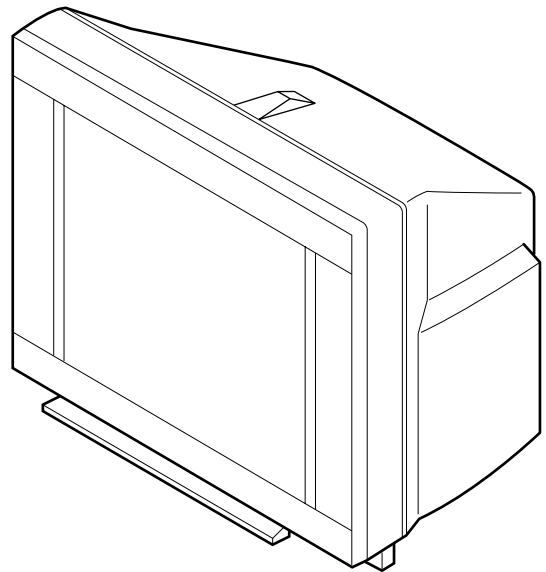
# SERVICE MANUAL

# BG3R CHASSIS

<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>	<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>
<i>KV-XA29M31</i>	<i>RM-954</i>	<i>OCE</i>	<i>SCC-U44A-A</i>				
<i>KV-XA29M61</i>	<i>RM-954</i>	<i>Malaysia</i>	<i>SCC-U45A-A</i>				
<i>KV-XA29M50</i>	<i>RM-954</i>	<i>Malaysia</i>	<i>SCC-U45B-A</i>				
<i>KV-XA34M31</i>	<i>RM-954</i>	<i>OCE</i>	<i>SCC-U44B-A</i>				



*KV-XA34M31*



*KV-XA29M31/XA29M50/XA29M61*



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## SELF DIAGNOSTIC FUNCTION

The units in this manual contain a self-diagnostic function. If an error occurs, the STANDBY/TIMER lamp will automatically begin to flash.

The number of times the lamp flashes translates to a probable source of the problem. A definition of the STANDBY/TIMER lamp flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the remote commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

### 1. DIAGNOSTIC TEST INDICATORS

When an errors occurs, the STANDBY/TIMER lamp will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the lamp will identify the first of the problem areas.

Result for all of the following diagnostic items are displayed on screen. No error has occurred if the screen displays a "0".

Diagnostic Item Description	No. of times STANDBY/TIMER lamp flashes	Self-diagnostic display/Diagnostic result	Probable Cause Location	Detected Symptoms
• Power does not turn on	Does not light	—	<ul style="list-style-type: none"> <li>• Power cord is not plugged in.</li> <li>• Fuse is burned out F4601 (F)</li> </ul>	<ul style="list-style-type: none"> <li>• Power does not come on.</li> <li>• No power is supplied to the TV.</li> <li>• AC power supply is faulty.</li> </ul>
<ul style="list-style-type: none"> <li>• +B overcurrent (OCP) or overvoltage (OVP)</li> <li>• Vertical deflection stopped</li> <li>• Horizontal deflection overdrive</li> </ul>	2 times	002:000 or 002:001~255 003:001~255 004:001~255 at the same time	<ul style="list-style-type: none"> <li>• H.OUT Q511 is shorted. (A board)</li> <li>• Q701, Q702, Q703 is shorted (C6 board)</li> <li>• -13V is not supplied. (A board)</li> <li>• IC 503 faulty (A board)</li> </ul>	<ul style="list-style-type: none"> <li>• Power does not come on.</li> <li>• Load on power line is shorted.</li> <li>• Has entered standby state after horizontal raster.</li> <li>• Vertical deflection pulse is stopped.</li> <li>• Power line is shorted or power supply is stopped.</li> </ul>
• White balance failure (no PICTURE)	5 times	005:000 or 005:001~225	<ul style="list-style-type: none"> <li>• G2 is improperly adjusted. (Note 2)</li> <li>• CRT problem.</li> <li>• R(Q703), G(Q702) or B(Q701) out is faulty (C6 board)</li> <li>• IC301 is faulty. (A board)</li> <li>• No connection A board to C6 board.</li> </ul>	<ul style="list-style-type: none"> <li>• No raster is generated.</li> <li>• CRT cathode current detection reference pulse output is small.</li> </ul>
• Micro reset	—	101:00 or 101:001~225	<ul style="list-style-type: none"> <li>• Discharge CRT (C6 Board)</li> <li>• Static discharge</li> <li>• External noise</li> </ul>	<ul style="list-style-type: none"> <li>• Power is shut down shortly, after this return back to normal.</li> <li>• Detect Micro latch up.</li> </ul>

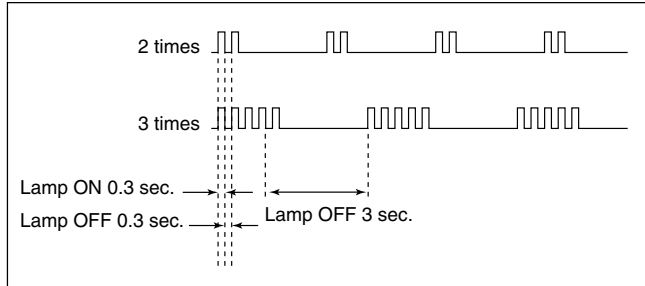
Note 1: If a + B overcurrent is detected, stoppage of the vertical deflection is detected simultaneously.

The symptom that is diagnosed first by the microcontroller is displayed on the screen.

Note 2: Refer to screen (G2) Adjustment in section 3-4 of this manual.

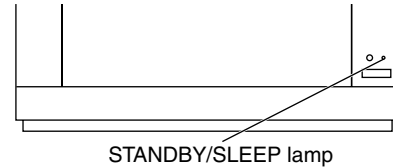
\* R(Q703), G(Q702) or B(Q701) out is faulty (C6 board).

## 2. DISPLAY OF STANDBY/TIMER LIGHT FLASH COUNT



Diagnostic Item	Flash Count*
+B overcurrent/overvoltage	2 times
Vertical deflection stopped	2 times
White balance failure	5 times

\* One flash count is not used for self-diagnostic.



## 3. STOPPING THE STANDBY/TIMER FLASH

Turn off the power switch on the TV main unit or unplug the power cord from the outlet to stop the STANDBY/TIMER lamp from flashing.

## 4. SELF-DIAGNOSTIC SCREEN DISPLAY

For errors with symptoms such as "power sometimes shuts off" or "screen sometimes goes out" that cannot be confirmed, it is possible to bring up past occurrences of failure for confirmation on the screen:

### [To Bring Up Screen Test]

In standby mode, press buttons on the remote commander sequentially in rapid succession as shown below:

Screen display → channel [5] → Sound volume [ ] → Power ON  
↑

Note that this differs from entering the service mode (mode volume [ ]).

### Self-Diagnosis screen display

SELF DIAGNOSTIC	
002 : 000 ←	Numeral "0" means that no fault has been detected.
003 : 000	
004 : 000	
005 : 001 ←	Numeral "1" means a fault has been detected.
101 : 000	

## 5. HANDLING OF SELF-DIAGNOSTIC SCREEN DISPLAY

Since the diagnostic results displayed on the screen are not automatically cleared, always check the self-diagnostic screen during repairs. When you have completed the repairs, clear the result display to "0".

Unless the result display is cleared to "0", the self-diagnostic function will not be able to detect subsequent faults after completion of the repairs.

### [Clearing the result display]

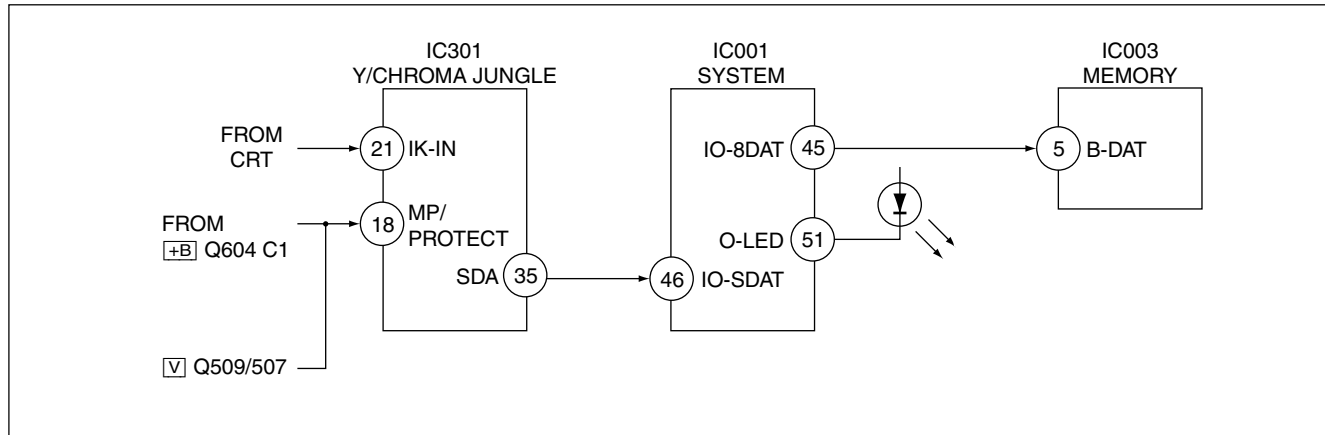
To clear the result display to "0", press buttons on the remote commander sequentially as shown below when the diagnostic screen is being displayed.

Channel **[8]** → 0

### [Quitting Self-diagnostic screen]

To quit the entire self-diagnostic screen, turn off the power switch on the remote commander or the main unit.

## 6. SELF-DIAGNOSTIC CIRCUIT



#### **[+B overcurrent (OCP)]**

Occurs when an overcurrent on the +B(135) line is detected by Q604. If Q604 go to ON and the voltage to pin 18 of IC301 should go down when V.SYNC is more than seven verticals in a period, the unit will automatically turn off.

#### **[Vertical deflection stopped]**

Occurs when an absence of the vertical deflection pulse is detected by Q509 and IC001 shut down the power supply.

#### **[Vertical deflection overcurrent]**

Occurs when an overcurrent on V drive line is detected by Q507. Power supply will be shut down when detect this by IC001.

#### **[White balance failure]**

If the RGB levels\* do not balance or become low level within 5 seconds, this error will be detected by IC301. TV will stay on, but there will be no picture.



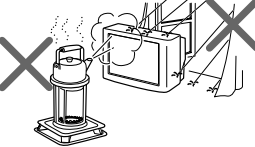
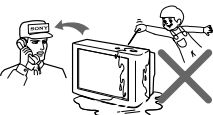
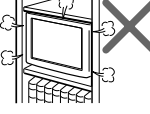
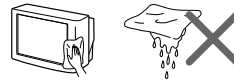


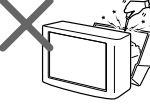
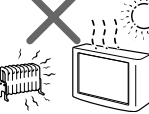
\* (Refers to the RGB levels of the AKB detection Ref pulse that detects IK.)

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


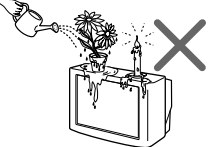
## SECTION 1 GENERAL

### WARNING

- Dangerously high voltages are present inside the TV.
- TV operating voltage: 220 – 240 V AC.

 <p>For your own safety, do not touch any part of the TV, the power cord and the antenna cable during lightning storms.</p>	 <p>For children's safety, do not leave children alone with the TV. Do not allow children to climb onto it.</p>
 <p>To prevent fire or shock hazard, do not expose the TV to rain or moisture.</p>	 <p>Do not operate the TV if any liquid or solid object falls into it. Have it checked immediately by qualified personnel only.</p>
 <p>Do not block the ventilation openings of the TV. Do not install the TV in a confined space, such as a bookcase or built-in cabinet.</p>	 <p>Clean the TV with a dry and soft cloth. Do not use benzine, thinner, or any other chemicals to clean the TV. Do not scratch the picture tube.</p>
 <p>Pull the power cord out by the plug. Do not pull the power cord itself. Disconnect the TV before moving it or if you are not going to use it for several days.</p>	 <p>Do not plug in too many appliances to the same power socket. Do not damage the power cord.</p>
 <p>Do not open the cabinet and the rear cover of the TV as high voltages and other hazards are present inside the TV. Refer servicing and disposal of the TV to qualified personnel.</p>	 <p>Your TV is recommended for home use only. Do not use the TV in any vehicle or where it may be subject to excessive dust, heat, moisture or vibrations.</p>

### WARNING (continued)

 <p>Do not install the TV in an unstable position. Use a proper TV stand.</p>	 <p>Do not place any objects on the TV.</p>
--	--

# Using Your New TV

## Getting Started

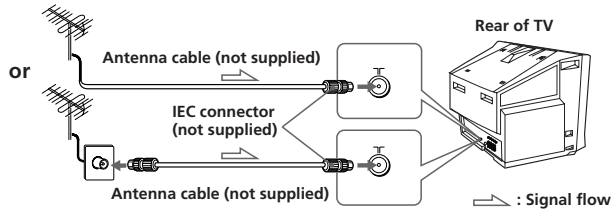
### CAUTION

- Do not connect the power cord until you have completed making all other connections; otherwise a minimum leakage current might flow through the antenna and other terminals to ground.
- To avoid battery leakage and damage to the remote, remove the batteries from the remote if you are not going to use it for several days. If any liquid that leaks from the batteries touches you, immediately wash it away with water.

## Step 1

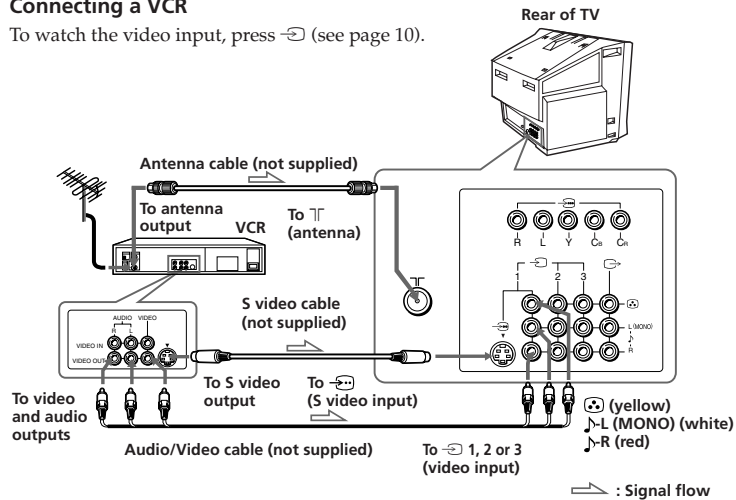
### Connect the antenna

If you wish to connect a VCR, see the "Connecting a VCR" diagram below.



### Connecting a VCR

To watch the video input, press (see page 10).

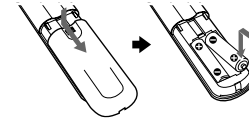


### Notes

- If you connect a monaural VCR, connect the yellow plug to (the yellow jack) and the black plug to (the white jack).
- If you connect a VCR to the terminal, preset the signal output from the VCR to the program number 0 on the TV.
- If both (S video input) and 1 (video input) at the rear of your TV are input at the same time, the (S video input) is automatically selected. To view 1 (video input), disconnect the S video cable.
- Do not connect video equipment to the 3 (video input) jacks at the front and the rear of your TV at the same time; otherwise the picture will not be displayed properly on the screen.
- When no signal is input to the connected video equipment, the TV screen becomes blue.

## Step 2

### Insert the batteries into the remote

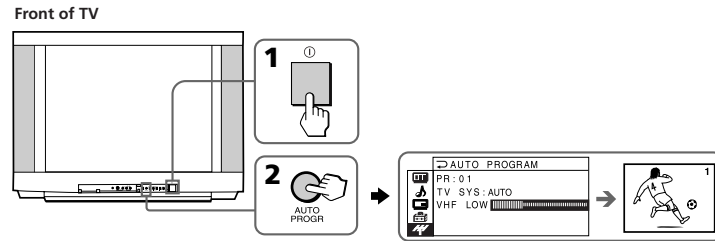


### Note

- Do not use old batteries nor use different types of batteries together.

## Step 3

### Preset the channels automatically



### Tips

- If you want to stop the automatic channel presetting, press MENU.
- If your TV has preset an unwanted channel or cannot preset a particular channel, then preset your TV manually (see page 28).

### Note (KV-XA29M50 only)

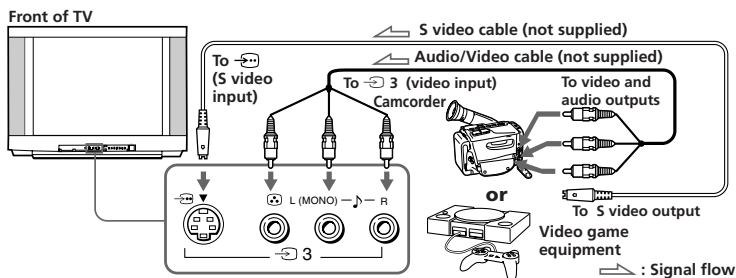
- During automatic channel presetting, your TV screen will indicate "B/G", "I", "D/K" or "M" for the TV system ("TV SYS").

## Connecting optional components

You can connect optional audio/video components, such as a VCR, multi disc player, DVD, camcorder, video game or stereo system.

To watch the picture of the connected equipment, press  $\rightarrow$  (see page 11).

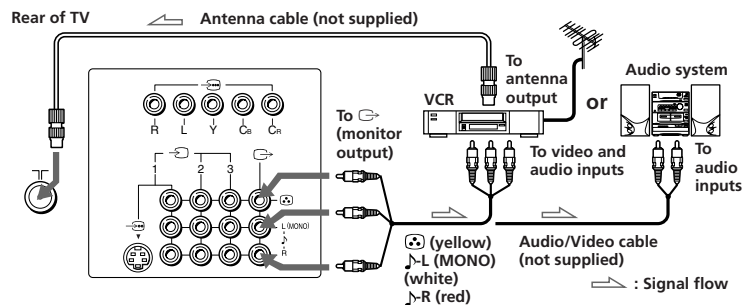
### Connecting a camcorder/video game equipment using the $\rightarrow$ (video input) jacks



#### Notes

- You can also connect video equipment to the  $\rightarrow$  1 or 2 (video input) jacks at the rear of your TV.
- If both  $\rightarrow$  (S video input) and  $\rightarrow$  3 (video input) at the front of your TV are input at the same time, the  $\rightarrow$  (S video input) is automatically selected. To view  $\rightarrow$  3 (video input), disconnect the S video cable.
- Do not connect video equipment to the  $\rightarrow$  3 (video input) jacks at the front and the rear of your TV at the same time; otherwise the picture will not be displayed properly on the screen.

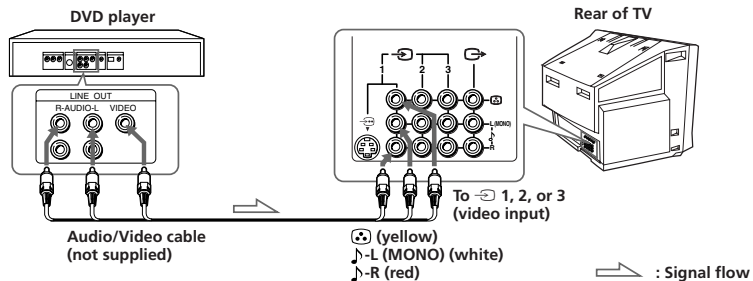
### Connecting audio/video equipment using the $\rightarrow$ (monitor output) jacks



#### Note

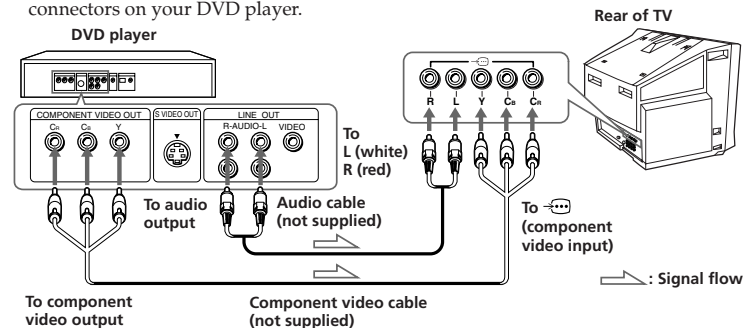
- If you select "DVD" on your TV screen, no signal will be output at the  $\rightarrow$  (monitor output) jacks (see page 12).

### Connecting a DVD player using the $\rightarrow$ (video input) jacks



### Connecting a DVD player using the $\rightarrow$ (component video input) jacks

- Connect R and L under  $\rightarrow$  (component video input) on your TV to the LINE OUT, AUDIO R and L output connectors on your DVD player.
- Using a component video cable, connect Y, C<sub>B</sub>, and C<sub>R</sub> under  $\rightarrow$  (component video input) on your TV to the COMPONENT VIDEO OUT Y, C<sub>B</sub>, and C<sub>R</sub> output connectors on your DVD player.



#### Notes

- Some DVD player terminals may be labeled differently:

Connect	To (on the DVD player)
Y (green)	Y
C <sub>B</sub> (blue)	C <sub>B</sub> , B-Y or P <sub>B</sub>
C <sub>R</sub> (red)	C <sub>R</sub> , R-Y or P <sub>R</sub>

- Since the high quality pictures on a DVD disc contain a lot of information, picture noise may appear. In this case, adjust the sharpness ("SHARP") in the "ADJUST" menu of the "PICTURE MODE" menu (see page 23).
- Connect your DVD player directly to your TV. Connecting the DVD player through other video equipment will cause unwanted picture noise.

continued

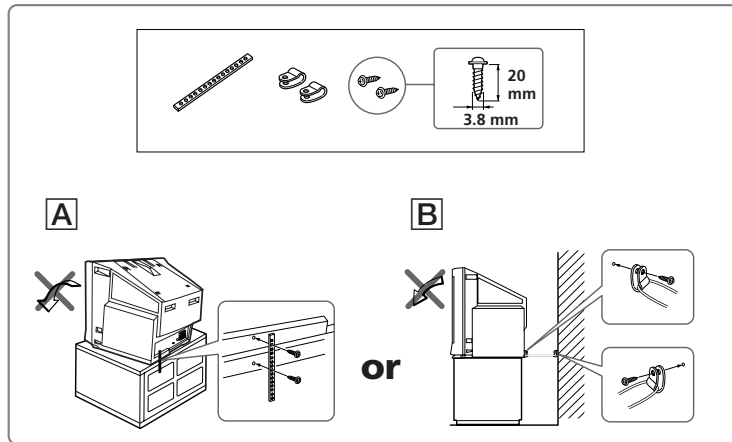
## Securing the TV

To prevent the TV from falling, secure the TV using one of the following methods:

- A** With the supplied screws, attach the band to the TV stand and to the rear of the TV using the provided hole.

or

- B** Put the cord or chain through the clamps to secure the TV against a wall or pillar.

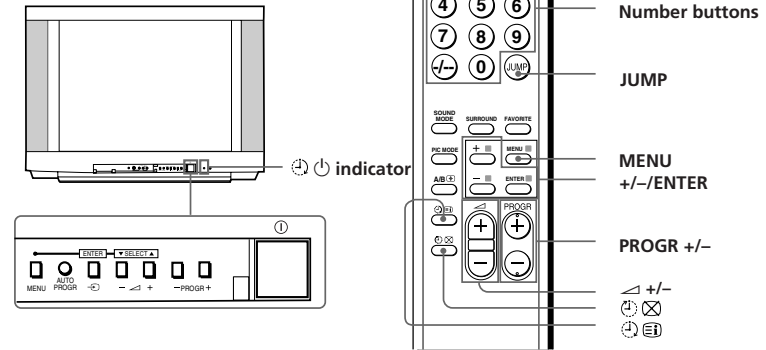


**Note**

- Use only the supplied screws. Use of other screws may damage the TV.

## Watching the TV

This section explains various functions and operations available while watching the TV. Most operations can be done using the remote.



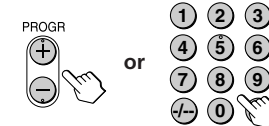
- 1** Press ① to turn on the TV.

When the TV is in the standby mode (the ① indicator on the TV is lit red), press I/O on the remote or PROG +/- on the TV.



- 2** Press PROG +/- or number buttons to select the TV program.

For double digit numbers, press +/-, then the number (e.g., for 25, press +/-, then 2 and 5).



### To select a TV program quickly

- (1) Press and hold PROG +/-.
- (2) Release PROG +/- when the desired program number appears.

**Note**

- When you select a TV program quickly, the picture may be disrupted. This does not indicate a malfunction.

continued

## Watching the TV (continued)

### Additional tasks

To	Do this
Turn off temporarily	Press I/⏻. The ⏻ indicator on the TV lights up red.
Turn off completely	Press ⏻ on the TV.
Adjust the volume	Press ◀+/-.
Mute the sound	Press ⏸.
Watch the video input (VCR, camcorder, etc.)	Press ⏮ to select "VIDEO 1", "VIDEO 2", "VIDEO 3" or "DVD". To return to the TV program, press □ (or ⏮ on the TV).
Jump back to the previous channel	Press JUMP.
Display the on-screen information*	Press ⓘ.


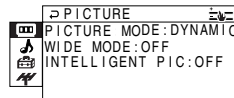
\* The picture, sound, and either the program number or video mode are displayed. The on-screen display for the picture and sound information disappears after about 3 seconds.



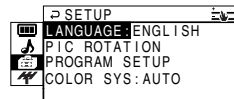
### Changing the menu language


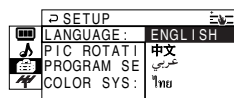
You can change the menu language as well as the on-screen language.




For details on how to use the menu, see **Introducing the menu system** on page 19.

- Press MENU.



- Press + or - to select the "SET UP" icon (⚙️), then press ENTER.




- Make sure "LANGUAGE" is selected, then press ENTER.



- Press + or - to select the desired language (e.g., "中文"), then press ENTER.

The selected menu language appears.

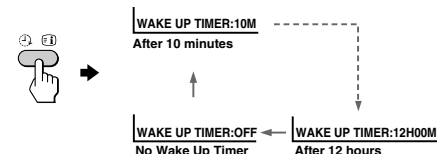
### To return to the normal screen

Press MENU.

### Setting the Wake Up timer

- Press ⏻ until the desired period of time appears.

The Wake Up timer starts immediately after you have set it.



- Select the TV program or video mode you want to display when you wake up.

- Press ⏻ or set the Sleep timer if you want the TV to turn off automatically. The ⏻ indicator on the TV lights up orange.

### To cancel the Wake Up timer

Press ⏻ until "WAKE UP TIMER: OFF" appears or turn off the TV's main power.

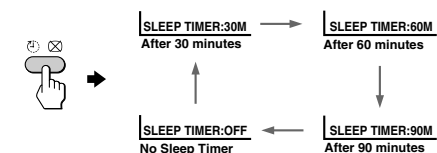
#### Note

- If no buttons or controls are pressed for more than two hours after the TV is turned on using the Wake Up timer, the TV automatically goes into the standby mode. To continue watching the TV, press any button or control on the TV or the remote.

### Setting the Sleep timer

- Press ⏻ until the desired period of time appears.

The Sleep timer starts immediately after you have set it.



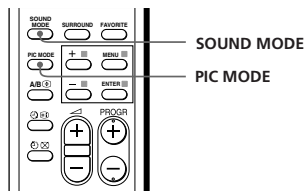
### To cancel the Sleep timer

Press ⏻ until "SLEEP TIMER: OFF" appears or turn the TV off.

## Advanced Operations

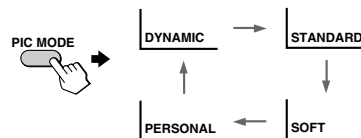
### Selecting the picture and sound modes

You can select picture and sound modes and adjust the setting to your preference in "PERSONAL" option.



#### Selecting the picture mode

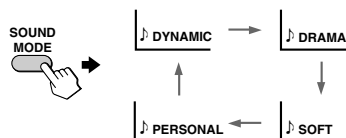
Press PIC MODE repeatedly until you get the desired picture mode.



Select	To
"DYNAMIC"	receive high contrast pictures.
"STANDARD"	receive normal contrast pictures.
"SOFT"	receive mild pictures.
"PERSONAL"	receive the last adjusted picture setting from the "ADJUST" option in the "PICTURE" menu (see page 21).

#### Selecting the sound mode

Press SOUND MODE repeatedly until you get the desired sound mode.



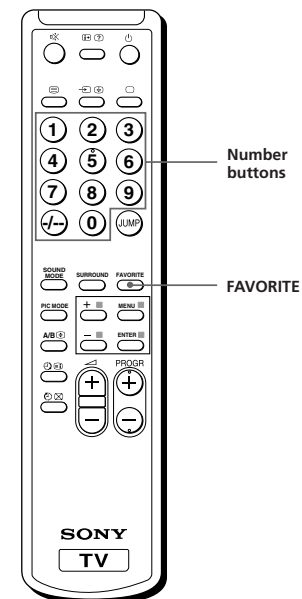
Select	To
"DYNAMIC"	listen to dynamic and clear sound that emphasizes the low and high tones.
"DRAMA"	listen to sound that emphasizes voice and high tones.
"SOFT"	receive soft sound.
"PERSONAL"	receive the last adjusted sound setting from the "ADJUST" option in the "SOUND" menu (see page 23).

**Tip**

- You can also set the picture and sound modes using the menu (see **Changing the "PICTURE" setting** on page 21 and **Changing the "SOUND" setting** on page 23).

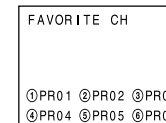
### Viewing your favorite channels

You can display and select six of your favorite channels directly from your TV screen.

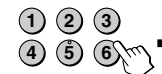


Advanced Operations

- 1 Press FAVORITE.



- 2 Press the number button from 1 to 6 to select the desired channel.

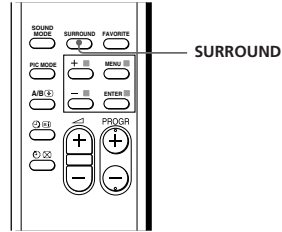


**Tip**

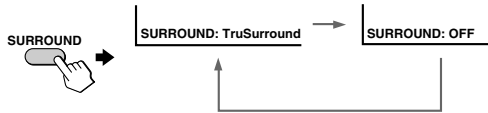
- To program your favorite channels, see **"Adjusting each channel settings (PROGRAM SETUP)"** on page 26.

## Listening with surround sound

The surround feature enables you to enjoy the sound effects of a concert hall or movie theater.



Press SURROUND repeatedly until you receive the desired surround sound.



Select	To
"TruSurround"	listen to the surround sound that spreads out to the rear of a room.
"OFF"	turn off the surround sound.

**Tip**

- You can also select the surround option using the menu (see **Changing the "SOUND" setting** on page 24).

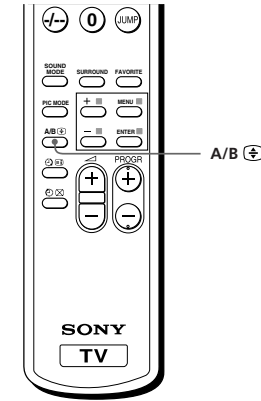
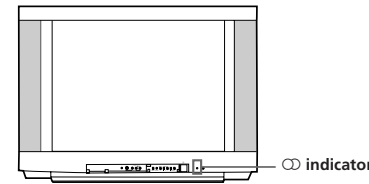
The surround of your TV is categorized as TruSurround.

**TruSurround**™ is a trademark of SRS Labs, Inc. SRS and the SRS symbol are registered trademarks of SRS Labs, Inc. in the United States and selected foreign countries. SRS and TruSurround are incorporated under license from SRS Labs, Inc. and are protected under United States Patent Nos. 4,748,669 and 4,841,572 with numerous additional issued and pending foreign patents.

## Enjoying stereo or bilingual programs

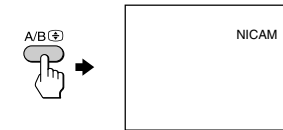
(KV-XA29M31/XA29M61/XA34M31)

You can enjoy stereo sound or bilingual programs of NICAM and A2 stereo systems.



Press A/B repeatedly until you receive the sound you want.

The on-screen display changes to show the selected sound. The indicator on the TV lights up red when receiving any stereo or bilingual program.



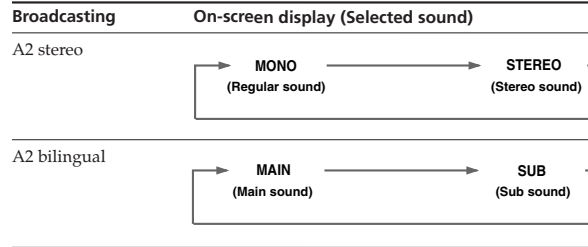
### When receiving a NICAM program

Broadcasting	On-screen display (Selected sound)
NICAM stereo	
NICAM bilingual	
NICAM monaural	

continued

## Enjoying stereo or bilingual programs (continued)

When receiving an A2 program



## Receiving area for NICAM and A2 programs

System	Receiving area
NICAM	Hong Kong, Singapore, New Zealand, Malaysia, Thailand, etc.
A2	Australia, Malaysia, Thailand, etc.

### Notes

- If the signal is very weak, the sound becomes monaural automatically.
- If the stereo sound is noisy when receiving a NICAM program, select "MONO". The sound becomes monaural, but the noise is reduced.

## If the sound is distorted when receiving a monaural program through the $\nabla$ (antenna) terminal

Press A/B repeatedly until "MONO" appears on the screen.

To cancel the monaural sound setting, press A/B again until "AUTO" appears on the screen.



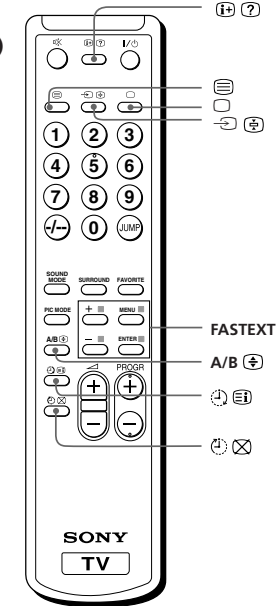
### Notes

- The "MONO" or "AUTO" setting is memorized for each program position.
- You cannot receive stereo broadcast signal when the TV is in the "MONO" setting. Normally set the TV to "AUTO".

## Viewing Teletext

(KV-XA29M31/XA29M61/XA34M31)

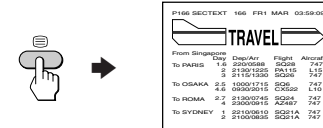
TV stations broadcast an information service called Teletext via some TV channels. Teletext allows you to receive various information, such as shares market or news.



## Displaying Teletext

- 1 Select a TV channel that carries the Teletext broadcast you want to watch.
- 2 Press to display the text.

A Teletext page (normally the index page) is displayed. If there is no Teletext broadcast, "100" is displayed at the top left corner of the screen.



## To turn off Teletext

Press .

continued

## Viewing Teletext (continued)

### Additional Teletext tasks

To	Do this
display a Teletext page on the TV picture	Press . Each time you press , the screen changes as follows: Teletext → Teletext and TV → TV.
check the contents of a Teletext service	Press . An overview of the Teletext contents and page numbers appear on the screen.
select a Teletext page	Press the number buttons to enter the three-digit page number of the desired Teletext page.* If you make a mistake, reenter the correct page number. To access the next or previous page, press PROGR +/-.
hold a Teletext display	Press  to display the symbol "". To resume normal Teletext operation, press  or .
reveal concealed information (e.g., an answer to a quiz)	Press . To conceal the information, press the button again.
enlarge the Teletext display	Press . Each time you press , the Teletext display changes as follows: Enlarge upper half → Enlarge lower half → Normal size.
wait for a Teletext page while watching a TV program	1 Enter the Teletext page number that you want to refer to, then press . 2 When the page number is displayed, press  to show the text.

\* You can also select a Teletext page that appears in the colored columns at the bottom of the screen using the corresponding color-coded buttons on the remote.

### Using FASTEXT

This feature allows you to quickly access a Teletext page that uses FASTEXT. When a FASTEXT program is broadcasted, the colored menus appear at the bottom of the screen. The colors of the menus correspond to the red, green, yellow, and blue color-coded buttons on the remote.

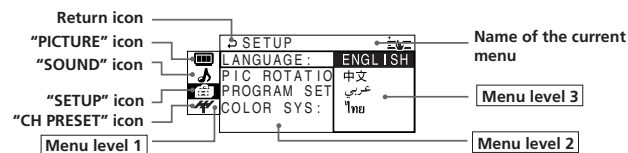
#### To access a FASTEXT menu

Press the color-coded button on the remote corresponding to the menu you want. The menu page appears on the screen after several seconds.

## Adjusting Your Setup (MENU)

### Introducing the menu system

The MENU button lets you open a menu and change the settings of your TV. Here's an overview of the menu system.



Level 1	Level 2	Level 3/Function
	"PICTURE MODE"	Select the "PICTURE" mode: "DYNAMIC" → "STANDARD" → "SOFT" → "PERSONAL" → "ADJUST"
	"ADJUST"	Adjust the "PERSONAL" option: "PICTURE" → "COLOR" → "BRIGHT" → "HUE" → "SHARP"
	"WIDE MODE"	Change the picture size.
	"INTELLIGENT PIC"	Optimize picture quality.
	"SOUND MODE"	Select the "SOUND" mode: "DYNAMIC" → "DRAMA" → "SOFT" → "PERSONAL" → "ADJUST"
	"ADJUST"	Adjust the "PERSONAL" option: "BASS" → "TREBLE" → "BALANCE" → "BBE"*
	"SURROUND"	Select the "SURROUND" mode: "TruSurround" → "OFF"
	"INTELLIGENT VOL"	Adjust volume automatically.
	"LANGUAGE"	Change the menu language: "ENGLISH" → "中文"(Chinese) → "عربي"(Arabic) → "ไทย"(Thai)
	"PIC ROTATION"	Rotate the picture.
	"PROGRAM SETUP"	Adjust each channel settings.
	"COLOR SYS"	Change the color system: "AUTO" → "PAL" → "SECAM" → "NTSC3.58" → "NTSC4.43"
	"AUTO PROGRAM"	Preset channels automatically.
	"MANUAL PROGRAM"	Preset channels manually.
	"TV SYS"	Change the TV system: "B/G" → "I" → "D/K" → "M"

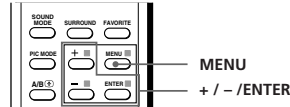
\* The BBE is manufactured by Sony Corporation under license from BBE Sound, Inc. It is covered by U.S. Patent No. 4,638,258 and No. 4,482,866. The word "BBE" and the BBE symbol are the trademarks of BBE Sound, Inc.

continued

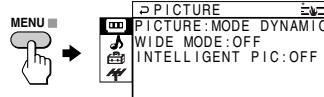
## Introducing the menu system (continued)

### How to use the menu

You can use the buttons on the remote and on the TV as well to display the menu and adjust the settings.



- 1 Press MENU to display the menu.



- 2 Press + or - to select the desired item.



- 3 Press ENTER to confirm your selection and go to the next menu level.



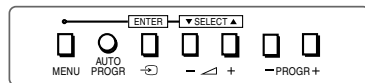
### Other menu operations

To	Press
Adjust the setting value	+/-
Return to the previous menu level	ENTER
Cancel the menu	MENU

#### Tips

- To return from Menu Level 2 to MENU Level 1, press +/- to select the return icon (⏪), then press ENTER.
- Some of the menu items can be operated directly using the remote buttons.
- The MENU, ENTER, and SELECT ▼/▲ buttons on the TV can also be used for the operations above.

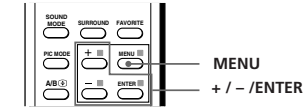
#### Front of TV



#### Note

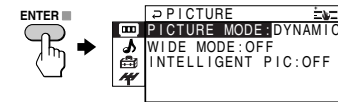
- If more than 60 seconds elapse between entries, the menu screen automatically disappears.

## Changing the "PICTURE" setting

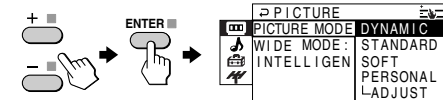


The "PICTURE" menu allows you to change the picture settings.

- 1 Press MENU.
- 2 Make sure the "PICTURE" icon (📺) is selected, then press ENTER.



- 3 Press + or - to select the desired item (e.g., "PICTURE MODE"), then press ENTER.



Select	To
"PICTURE MODE"	choose either "DYNAMIC", "STANDARD", "SOFT" "PERSONAL"*, or "ADJUST".
"WIDE MODE"	change the picture size when receiving wide-mode (16:9) picture signal. Press + or - to select "ON", then press ENTER. To cancel, select "OFF", then press ENTER.
"INTELLIGENT PIC"	optimize picture quality. Press + or - to select "ON", then press ENTER. To cancel, select "OFF", then press ENTER.

\* When the "PERSONAL" mode is selected, you can receive the last adjusted picture settings from the "ADJUST" option (see page 22).

#### Note

- For details on the options under "PICTURE MODE", see page 12.

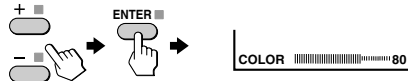
### To return to the normal screen

Press MENU.

continued

## Changing the "PICTURE setting" (continued)

### Adjusting the "ADJUST" items under "PICTURE MODE"

- Press + or – to select the desired item (e.g., "COLOR"), then press ENTER. 

- Adjust the value according to the following table, then press ENTER.

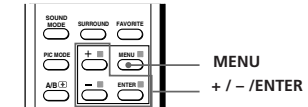
For	Press – to	Press + to
"PICTURE"	decrease picture contrast	increase picture contrast
"COLOR"	decrease color intensity	increase color intensity
"BRIGHT"	darken the picture	brighten the picture
"HUE"*	increase red picture tones	increase green picture tones
"SHARP"	soften the picture	sharpen the picture

\* You can adjust "HUE" for the NTSC color system only.


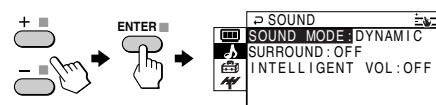
- Repeat the above steps to adjust other items.  
The adjusted settings will be received when you select "PERSONAL".

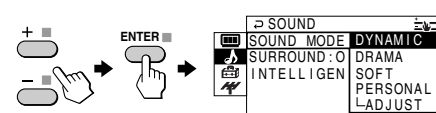
- Tip**
- For details on the menu system and how to use the menu, refer to **Introducing the menu system** on page 19.

## Changing the "SOUND" setting



The "SOUND" menu allows you to change the sound settings.

- Press MENU. 
- Press + or – to select the "SOUND" icon (🔊), then press ENTER. 

- Press + or – to select the desired item (e.g., "SOUND MODE"), then press ENTER. 

Select	To
"SOUND MODE"	choose either "DYNAMIC", "DRAMA", "SOFT", "PERSONAL"*, or "ADJUST".
"SURROUND"	choose either "TruSurround" or "OFF".
"INTELLIGENT VOL"	adjust the volume of all TV programs and video inputs automatically. Press + or – to select "ON", then press ENTER. To cancel, select "OFF", then press ENTER.

\* When the "PERSONAL" mode is selected, you can receive the last adjusted sound settings from the "ADJUST" option (see page 24).

- Tip**
- For details on the options under "SOUND MODE" and "SURROUND", see pages 12 and 14 respectively.

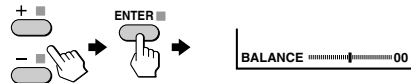
### To return to the normal screen

Press MENU.

continued

## Changing the sound setting (continued)

### Adjusting the "ADJUST" items under "SOUND MODE"

- Press + or – to select the desired item (e.g., "BALANCE"), then press ENTER. 

- Adjust the value according to the following table, then press ENTER.

For	Press – to	Press + to
"BASS"	decrease the bass	increase the bass
"TREBLE"	decrease the treble	increase the treble
"BALANCE"	increase the left speaker's volume	increase the right speaker's volume
"BBE"	select "HIGH" for higher enhancement of sound clarity; select "LOW" for lower enhancement of sound clarity; select "OFF" to turn off the BBE sound	

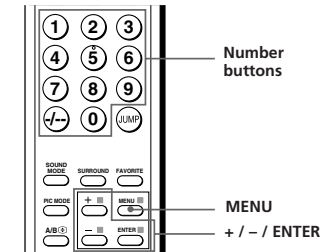
- Repeat the above steps to adjust other items.  
The adjusted settings will be received when you select "PERSONAL".


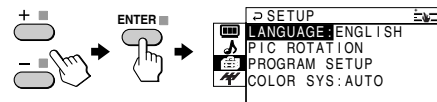
**Tip**

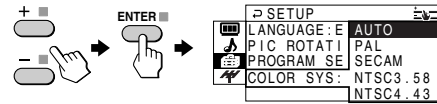
- For details on the menu system and how to use the menu, refer to **Introducing the menu system** on page 19.


## Changing the "SETUP" setting

The "SETUP" menu allows you to change the menu language, adjust the picture position, setup your program and select color system.



- Press MENU.
- Press + or – to select "SETUP" icon (  ), then press ENTER. 

- Press + or – to select the desired item (e.g., "COLOR SYS"), then press ENTER. 

Select	To
"LANGUAGE"	change the menu language (see <b>Changing the menu language</b> on page 10).
"PIC ROTATION"	adjust the picture position when it is not aligned to the TV screen. Press + or – to adjust the picture position, then press ENTER. 
"PROGRAM SETUP"	adjust each channel settings (see <b>Adjusting each channel settings (PROGRAM SETUP)</b> on page 26).
"COLOR SYS"	change the color system. Normally, set this to "AUTO".

### To return to the normal screen

Press MENU.

continued

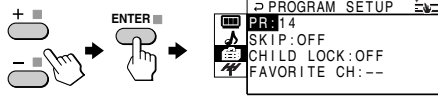
## Changing the "SETUP" setting (continued)

### Adjusting each channel settings (PROGRAM SETUP)

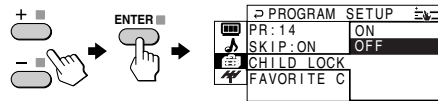
The "PROGRAM SETUP" menu allows you to change the program settings.

**1** Select "PROGRAM SETUP" from the "SETUP" menu.

**2** Select "PR" and press ENTER. Press + or - to select the desired channel you want to adjust, then press ENTER.



**3** Press + or - to select the desired item (e.g., "CHILD LOCK"), then press ENTER.



Select	To
"PR"	select the desired channel.
"SKIP"	skip unwanted or unused program number. Press + or - to select "ON", then press ENTER. To cancel, select "OFF", then press ENTER.
"CHILD LOCK"	prevent children from watching this selected channel. Press + or - to select "ON", then press ENTER. The lock symbol (🔒) appears on the screen. To cancel, select "OFF", then press ENTER. If you preset a locked channel, that particular channel will be unlocked automatically.
"FAVORITE CH"	program channels for direct selection. Press + or - to select one of the six favorite channel numbers (if you decide not to make any changes, select "↶"), then press ENTER. To view the selected favorite channel, refer page 13.

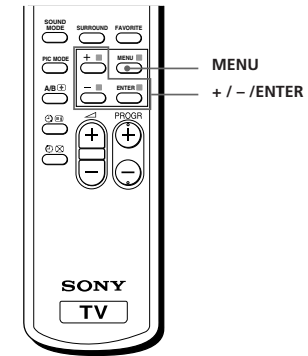
**4** To continue adjusting other channels, press + or - to select "PR", then repeat step 2 and 3.

#### To return to the normal screen

Press MENU.

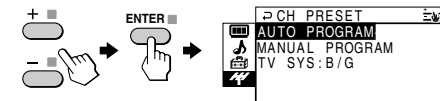
## Changing the Channel Preset ("CH PRESET") setting

The "CH PRESET" menu allows you to adjust the setup of your TV. For example, you can receive a channel with a weak signal that fails to be tuned in by automatic presetting.

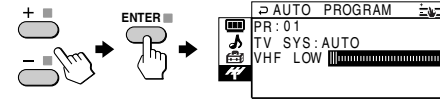


**1** Press MENU.

**2** Press + or - to select the "CH PRESET" icon (📺), then press ENTER.



**3** Press + or - to select the desired item (e.g., "AUTO PROGRAM"), then press ENTER.



Select	To
AUTO PROGRAM	preset channels automatically.
MANUAL PROGRAM	preset channels manually (see <b>Presetting channels manually</b> on page 28).
TV SYS	change the TV system. Press + or - to select either "B/G", "I", "D/K" or "M", then press ENTER.

#### To return to the normal screen

Press MENU.

#### Tip

- For details on the menu system and how to use the menu, refer to Introducing the menu system on page 21.

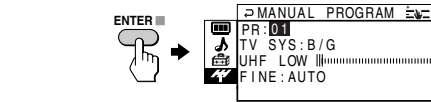
**continued**

**Changing the Channel Preset ("CH PRESET") setting (continued)**

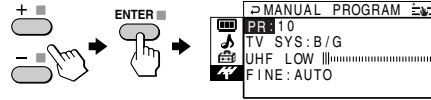
**Presetting channels manually**

**1** After selecting "MANUAL PROGRAM", select the program number to which you want to preset a channel.

(1) Make sure "PR" is selected, then press ENTER.

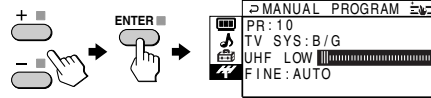


(2) Press + or - until the program number you want to preset (e.g., program number "10") appears on the menu, then press ENTER.

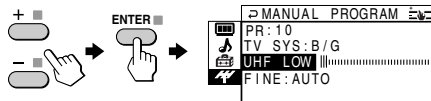


**2** Select the desired channel.

(1) Press + or - to select either "VHF LOW", "VHF HIGH" or "UHF", then press ENTER.

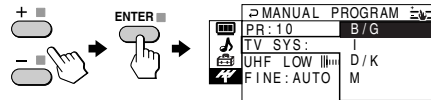


(2) Press + or - until the desired channel picture appears on the TV screen, then press ENTER.



**3** If the sound of the desired channel is abnormal, select the appropriate TV system.

(1) Press + or - to select "TV SYS", then press ENTER.

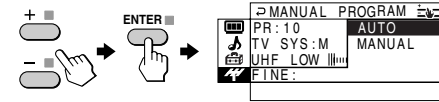


(2) Press + or - until the sound becomes normal (e.g., "M"), then press ENTER.

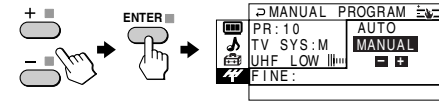


**4** If you are not satisfied with the picture and sound quality, you may improve them by using fine tuning.

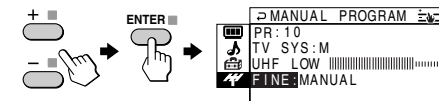
(1) Press + or - to select "FINE", then press ENTER.



(2) Press + or - to select "MANUAL", then press ENTER.



(3) Press + or - until the picture and sound quality are optimal, then press ENTER.



The + or - icon on the menu flashes while tuning.

**To return to the normal screen**



Press MENU.

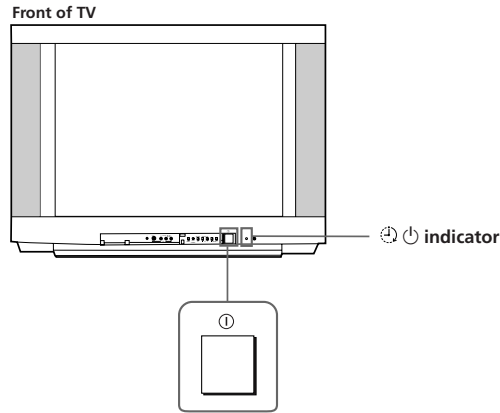
**Notes**





- If you preset a locked channel ("CHILD LOCK"), that particular channel will be unlocked automatically (see page 26).
- The TV system ("TV SYS") and the fine tuning ("FINE") settings are memorized for each program number.

## Additional Information

### Self-diagnosis function










Your TV is equipped with a self-diagnosis function. If there is a problem with your TV, the  indicator flashes red. The number of times the  indicator flashes indicates the possible causes.



- 1** Check that the  indicator flashes red a number of times between 3-second intervals.
- 2** Count the number of times the  indicator flashes.
- 3** Press  (main power) to turn off your TV.
- 4** Inform your nearest Sony service center about the number of times the  indicator flashes.  
Be sure to note the model name and serial number located on the rear of your TV.







### Troubleshooting


If you find any problem while viewing your TV, please check the following guide. If any problem persists, contact your Sony dealer .

Symptom	Possible cause	Solutions	Page
 Snowy picture	• Connection is loose or the cable is damaged.	• Check the antenna cable and connection on the TV, VCR and on the wall.	4
	• Channel presetting is inappropriate or incomplete.	• Display the "CH PRESET" menu and select "MANUAL PROGRAM" to preset the channel again.	28
 Noisy sound	• The antenna type is inappropriate.	• Check the antenna type ("VHF"/"UHF"). Contact a Sony dealer for advice.	-
	• The antenna direction is inappropriate.	• Adjust the antenna direction. Contact a Sony dealer for advice.	-
	• Signal transmission is low.	• Try using a booster.	-
 Distorted picture	• Broadcast signals are too strong.	• Turn off or disconnect the booster if it is in use.	-
 Noisy sound	 Good picture	• The TV system setting or channel presetting is inappropriate or incomplete.	27
		• If the sound of all the channels are noisy, display the "CH PRESET" menu and check the TV system ("TV SYS") setting, then select "AUTO PROGRAM" to preset the channels again. • If the sound of some channels are noisy, select the channel, then display the "CH PRESET" menu and select the appropriate TV system ("TV SYS").	27
 No picture	• The power cord, antenna or VCR is not connected.	• Check the power cord, antenna and the VCR connections.	4
	• The TV is not turned on.	• Press I/  (power). • Press  (main power) on the TV to turn off the TV for about five seconds, then turn it on again.	9 9
 No sound			

continued

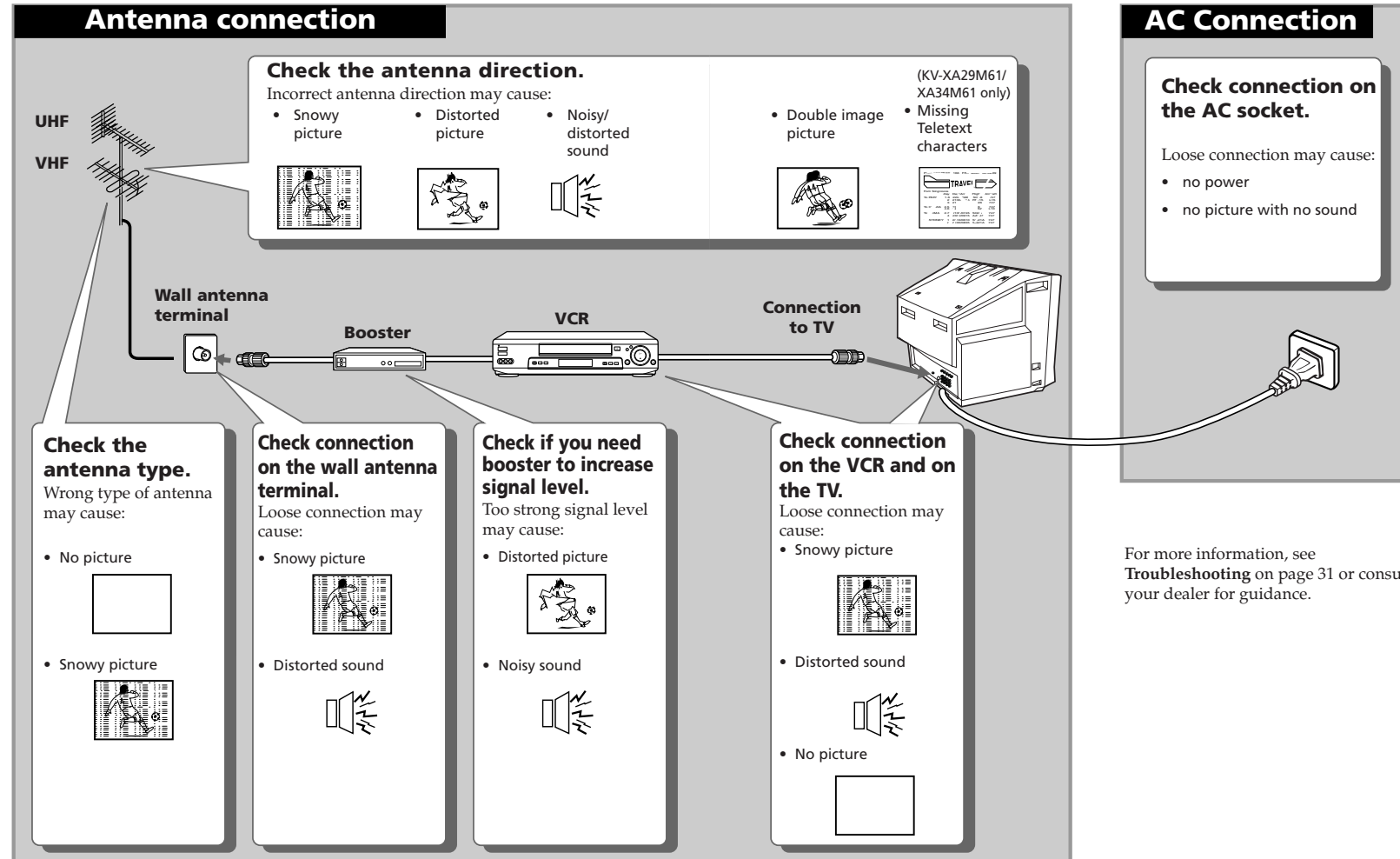
**Troubleshooting (continued)**

Symptom	Possible cause	Solutions	Page
<b>Good picture</b> 	• The volume level is too low.	• Press $\triangleleft$ + to increase the volume level.	10
	• The sound is muted.	• Press $\text{M}$ to cancel the muting.	10
<b>No sound</b> 	• Broadcast signal has a transmission problem.	• Press A/B until a good sound is heard. (KV-XA29M31/XA29M61/XA34M31 only)	15
	• There is local interference from cars, neon signs, hair dryers, power generators, etc.	• Do not use a hair dryer or other equipment near the TV. • Adjust the antenna direction for minimum interference. Contact a Sony dealer for advice.	–
<b>Dotted lines or stripes</b> 	• Broadcast signals are reflected by nearby mountains or buildings.	• Use a highly directional antenna. • Use the fine tuning ("FINE") function.	– 29
	• The antenna direction is inappropriate.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
<b>Double images or "ghosts"</b> 	• Use of a booster is inappropriate.	• Turn off or disconnect the booster if it is in use.	–
	• The color level setting is too low.	• Display the "PICTURE" menu and select "ADJUST" of "PICTURE MODE", then adjust the "COLOR" level.	22
<b>No color</b> 	• The color system setting is inappropriate.	• Display the "SETUP" menu and check the color system ("COLOR SYS") setting (usually set this to "AUTO").	25
	• The antenna direction is inappropriate.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
<b>Abnormal color patches</b> 	• The magnetic disturbance from external speakers or other equipment, or the direction of the earth's magnetic field may affect the TV.	• Keep external speakers or other electrical equipment away from the TV. Do not move the TV while the TV is turned on. Press $\text{O}$ (main power) on the TV to turn off the TV for about five minutes, then turn it on again.	–
<b>TV cannot receive stereo broadcast signal.</b> (KV-XA29M31/XA29M61/XA34M31)	• The stereo reception setting is inappropriate.	• Press A/B until "AUTO" appears on the screen.	15

Symptom	Possible cause	Solutions	Page
<b>Stereo broadcast sound switches on and off or is distorted.</b> <b>OR</b> The sound switches between monaural and stereo frequently. (KV-XA29M31/XA29M61/XA34M31)	• Connection is loose or the cable is damaged.	• Check the antenna cable and connection on the TV, VCR and on the wall.	4
	• The antenna direction is inappropriate.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
<b>"100" appears on the top of the screen and no Teletext display.</b> (KV-XA29M31/XA29M61/XA34M31)	• Broadcast signal has a transmission problem.	• Press A/B until a good sound is heard.	15
	• The channel carries no Teletext broadcast.	–	17
<b>Teletext display is incomplete (picture snowy or double images).</b> (KV-XA29M31/XA29M61/XA34M31)	• Connection is loose or the cable is damaged.	• Check the antenna cable and connection on the TV, VCR and on the wall.	4
	• The antenna direction is inappropriate.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
<b>Picture slant</b> 	• Signal transmission is too low.	• Try using a booster.	–
	• The terrestrial magnetism affects your TV set.	• Display the "SETUP" menu and adjust "PIC ROTATION" so that the picture is aligned to the TV screen.	25
<b>Lines moving across the TV screen.</b>	• There is interference from external sources, e.g., heavy machineries, nearby broadcast station.	• Use the fine tuning ("FINE") function.	29
<b>The <math>\text{O}</math> indicator on your TV flashes red a number of times between 3-second intervals.</b>	• Your TV may need service.	• Contact your nearest Sony service center.	30
<b>TV cabinet creaks.</b>	• Changes in room temperature sometimes make the TV cabinet expand or contract, making a noise. This does not indicate a malfunction.	–	–
<b>A "boom" sound is heard when the TV is turned on.</b>	• The TV's demagnetizing function is working. This does not indicate a malfunction.	–	–

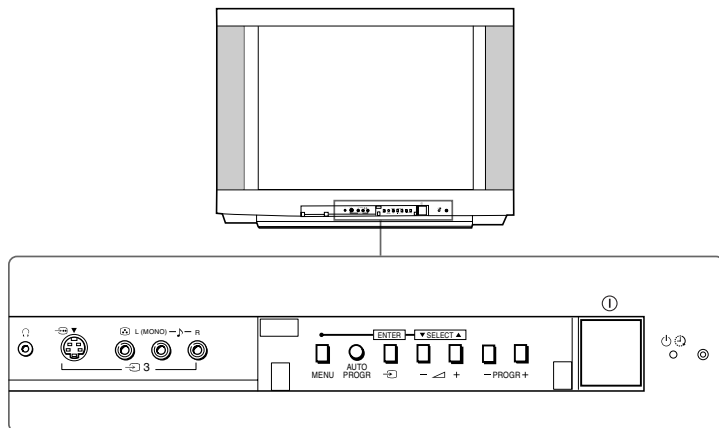
# Troubleshooting Shortcuts

For better viewing, please check the following connections.



## Overview of controls

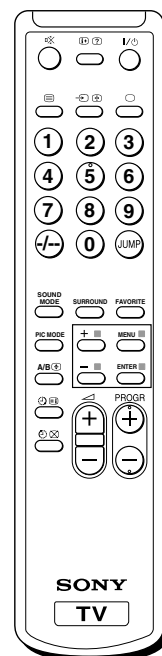
### TV front panel



Button	Function	Page
AUTO PROGR	Preset channels automatically.	5
①	Turn off completely or turn on the TV.	9
PROGR +/-	Select program number.	9
⏻	Standby indicator	9
↔ +/-	Adjust volume.	10
⏪	Select TV or video input.	10
⌚	Wake Up indicator	11
⊕	Stereo/Bilingual indicator.	15
MENU	Display the menu.	20
🎧	Headphones jack.	-

## Overview of controls (continued)

### Remote control



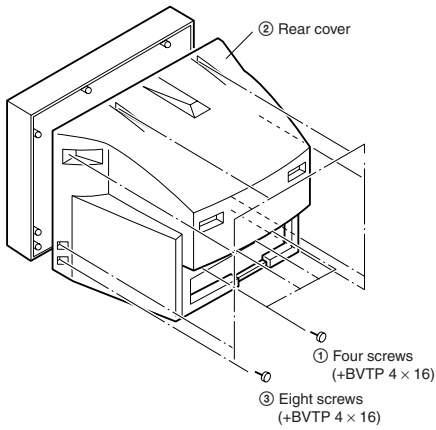
Names/symbols of buttons on the remote are indicated in different colors to represent the available functions.

Label color	Button function
White	For general TV operations
Green	For Teletext operations

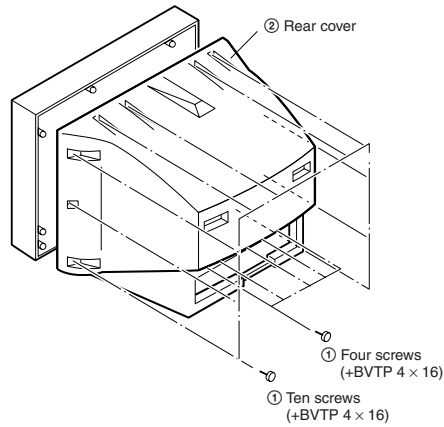
Button	Function	Page
I/⏻	Turn off temporarily or turn on the TV.	9
PROGR +/-	Select program number.	9
0 - 9, +/-	Input numbers.	9
↔ +/-	Adjust volume.	9
⏪	Select TV or video input.	10
⊞	Display the TV program.	10
⊗	Mute the sound.	10
ⓘ	Display on-screen information.	10
JUMP	Jump to previous channel.	10
<b>Timer operations</b>		
⌚	Set TV to turn on automatically.	11
⌚	Set TV to turn off automatically.	11
PIC MODE	Select picture mode.	12
SOUND MODE	Select sound mode.	12
FAVORITE	Display favorite channels.	13
SURROUND	Select surround mode.	14
<b>Stereo/bilingual operations (KV-XA29M61/XA34M61 only)</b>		
A/B	Select stereo/bilingual mode.	15
<b>Teletext operations (KV-XA29M61/XA34M61 only)</b>		
⊞	Display Teletext broadcast.	17
⊕	Enlarge the Teletext display.	18
⊗	Reveal concealed information.	18
⊞	Stop Teletext display from scrolling.	18
ⓘ	Display Teletext service contents.	18
⊗	Show TV screen while waiting for Teletext page.	18
■ (red, green, yellow, blue)	Access a Fastext menu	18
<b>Menu operations</b>		
MENU	Display the menu.	20
+ or -	Select and adjust item.	20
ENTER	Confirm selected item.	20

## SECTION 2 DISASSEMBLY

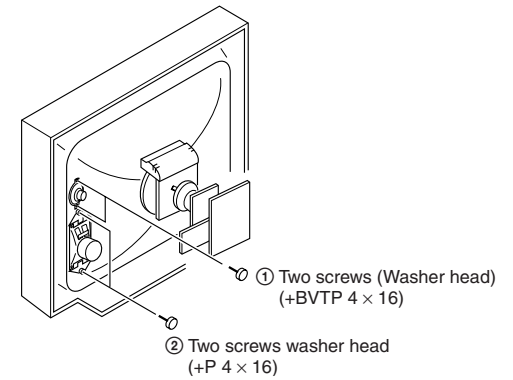
### 2-1. REAR COVER REMOVAL (KV-XA29M31/XA29M50/XA29M61)



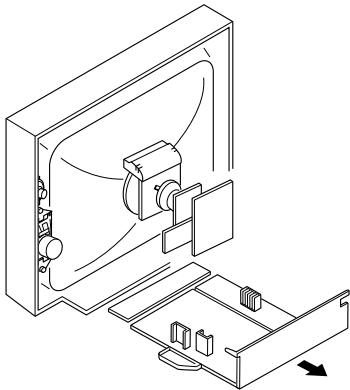
### (KV-XA34M31 only)



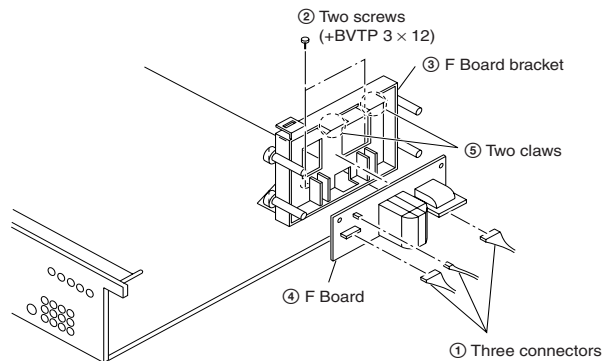
### 2-2. SPEAKER REMOVAL



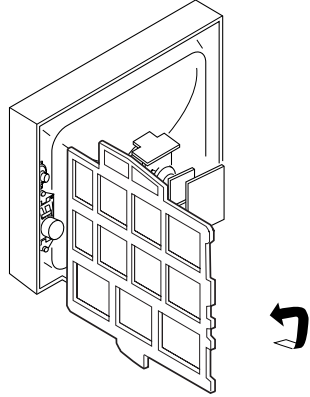
### 2-3. CHASSIS ASSY REMOVAL



### 2-4. F BRACKET REMOVAL



## 2-5. SERVICE POSITION



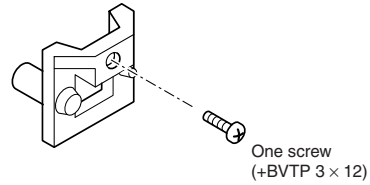
### Note:

1. Disconnect the speaker connection on the right side first.
2. Undress necessary wires before going to Service Position.

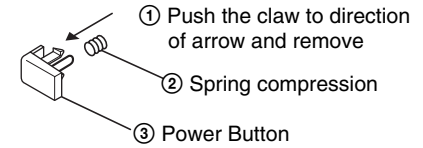
## 2-6. REPLACEMENT OF PARTS

For replacement of light guide, unscrew them, exchange with new parts and fix them with screws respectively.

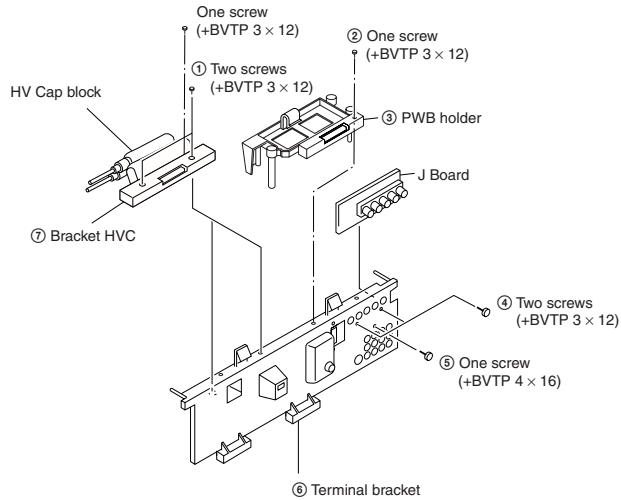
### 2-6-1. Light Guide



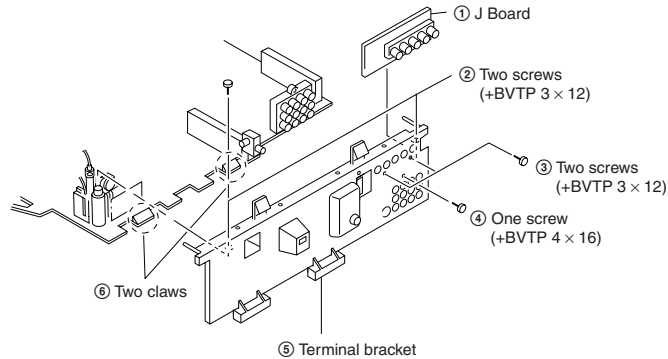
### 2-6-2. Power Button



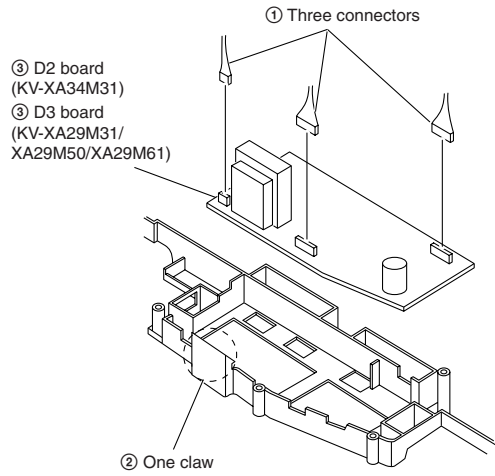
## 2-7. HV CAP BLOCK (KV-XA34M31 only), PWB HOLDER AND J BOARD REMOVAL



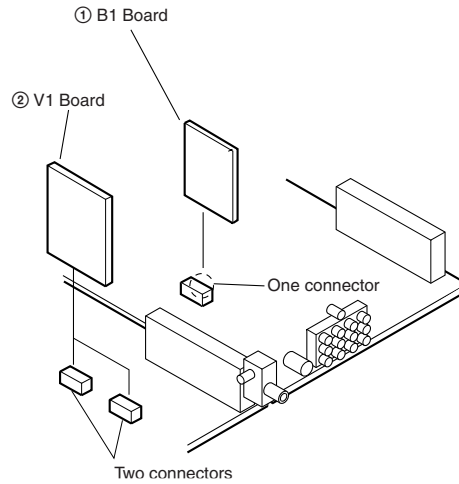
## 2-8. TERMINAL BRACKET REMOVAL



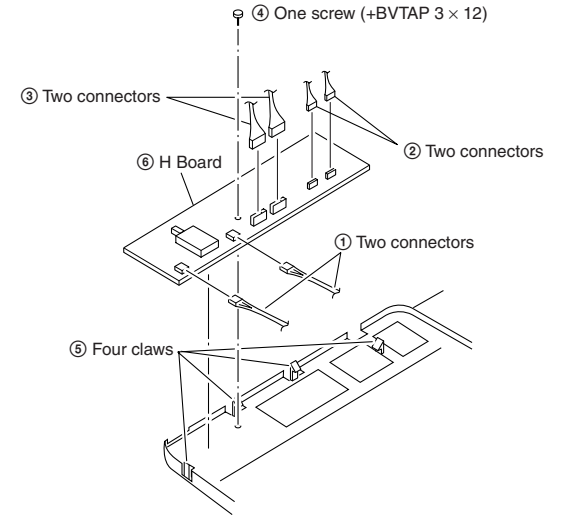
**2-9. D2 (KV-XA34M31) /D3 (KV-XA29M31/  
XA29M50/XA29M61) BOARDS REMOVAL**



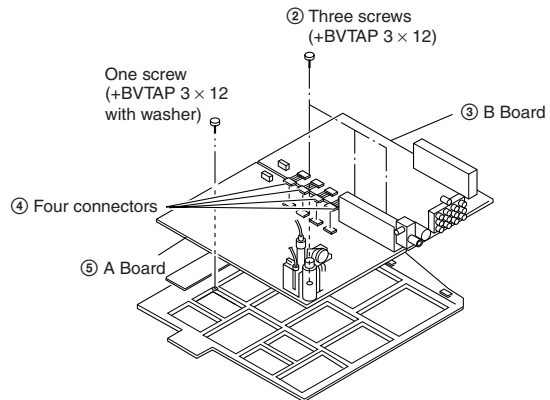
**2-10. B1 AND V1 (KV-XA29M31/XA29M61/  
XA34M31) BOARDS REMOVAL**



**2-11. H BOARD REMOVAL**

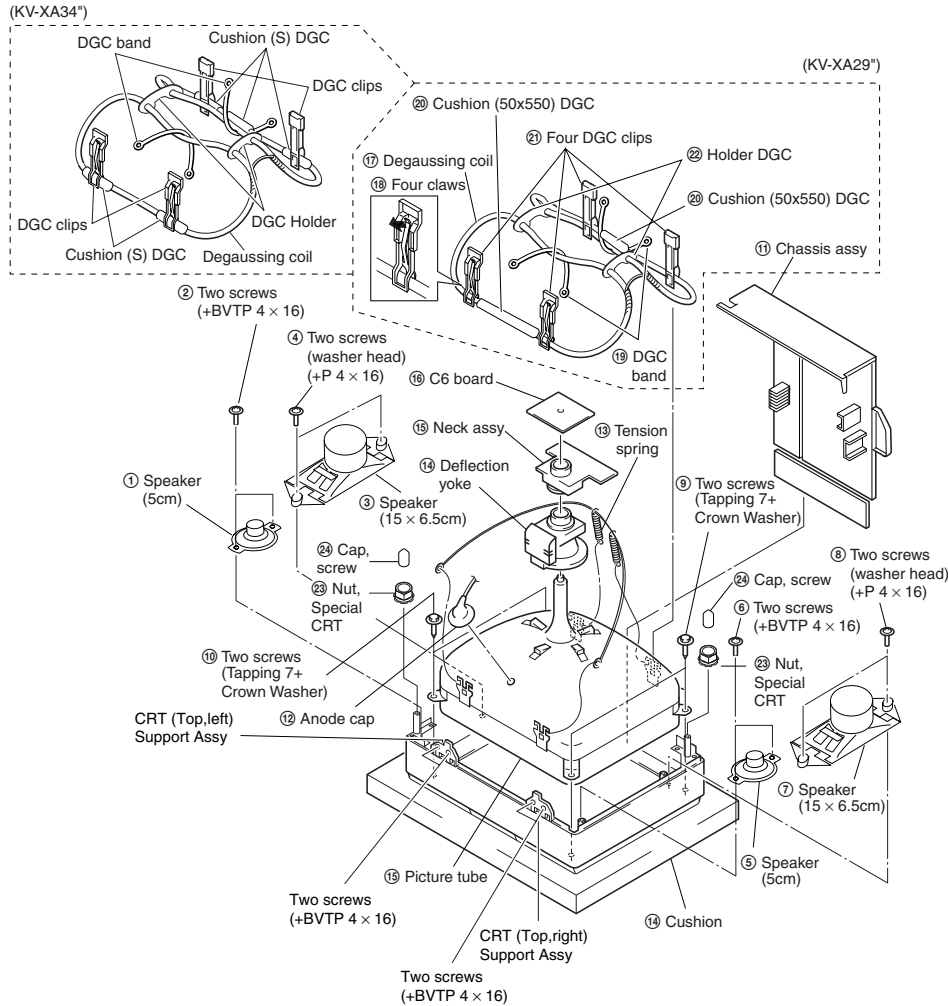


**2-12. A AND B BOARDS REMOVAL**



## 2-13. PICTURE TUBE REMOVAL

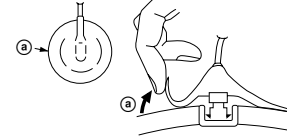
- NOTE : i) The picture tube for OCE model is upside down, and the position for the anode cap and tension springs are changed accordingly.  
 ii) Please remove necessary CRT support located on top left, top right, bottom left, bottom right, prior to removing the CRT.  
 iii) ⑨ and ⑩ (screws Tapping 7+ Crown Washer) (KV-XA29M31/XA29M50/XA29M61).  
 iv) Nut, Special, CRT and cap screw (KV-XA34M31 only).



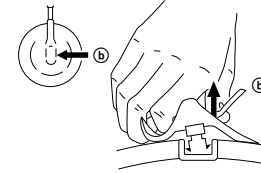
## •REMOVAL OF ANODE-CAP

- NOTE : After removing the anode, short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT.

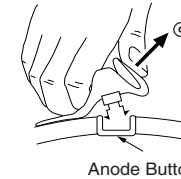
## •REMOVING PROCEDURES



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



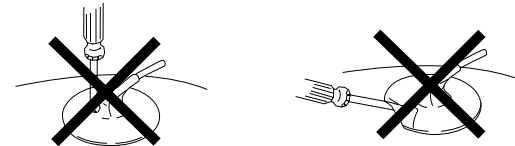
- ② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow (b).



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

## • HOW TO HANDLE AN ANODE-CAP

- ① Do not damage the surface of anode-caps with sharp shaped objects.  
 ② Do not press the rubber too hard so as not to damage the inside of anode-cap. A metal fitting called the shatter-hook terminal is built into the rubber.  
 ③ Do not turn the foot of rubber over too hard. The shatter-hook terminal will stick out or damage the rubber.



## SECTION 3 ADVANCE OPERATION

### 3-1. "RESET" FUNCTION

#### 1. Purpose

If a customer faces some setting problem that cannot be solved, using the "RESET" function some items will be reset to its original setting (shipment condition)

#### 2. How to Operate

The way to access to the "RESET" Function:-

- a) By pressing "MENU" button or "SELECT" button (for non-menu models) on the Front Key Input and hold it down for 5 seconds.

#### 3. Subsequent of Operation

Sequential to the resetting operation (either methods being used in No. 2), TV set would shut down once and automatically turn on again. The power-off duration is expected to be about 500msec. An OSD message, "RESET" tentatively will be displayed for 10 sec after IK status gets stable.

As a result, some items will be reset to an initial condition (shipment condition) whereas some other remains at the last selection by user.

#### Items that remains at the last selection by user

Program No., Favourite CH Setup, PIC rotation,  
OSD Language, Fine tuning, TV System, Skip

#### Reset Items

Video input	RF	Stereo mode	STEREO/NICAM* (except KV-XA29M50)
Volume	30	Bilingual mode	MAIN* (except KV-XA29M50)
Picture mode	DYNAMIC	High-deviation mode	AUTO*
Sound mode	DYNAMIC	Child lock	OFF*
Surround mode	OF	Wide mode	OFF
Color system(video)	AUTO	Game mode	OFF
Favourite CH mode	AUTO	Teletext mode	OFF (except KV-XA29M50)
Multi Picture (PIP)	OFF	Sleep timer	OFF
PIP position	Bottom Right	Wake-up timer	OFF
OSD recall	OFF	Sound muting	OFF
Intelligent volume	OFF		
ECO mode	OFF		
Color system(RF)	AUTO*		
Antenna sensitivity	HIGH*		

\*= only when in RF mode

## SECTION 4 SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

Controls and switches should be set as follows unless otherwise noted:

PICTURE control ..... normal  
BRIGHTNESS control ..... normal

Perform the adjustments in the following order :

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

**Note :** Test Equipment Required.

1. Pattern Generator
2. Degausser
3. Oscilloscope

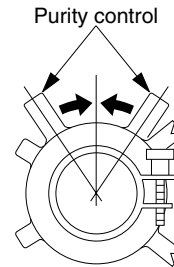
### Preparation :

- 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.

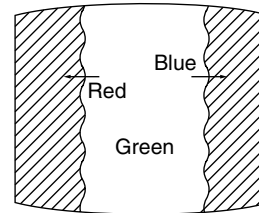
### 4-1. BEAM LANDING

1. Input a white signal with the pattern generator.  

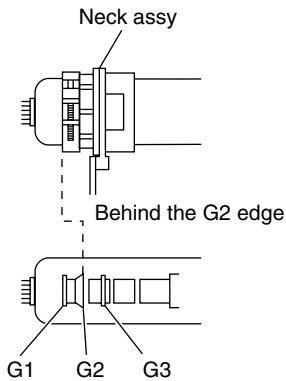
Contrast	}	normal
Brightness		
2. Position neck assy as shown in Fig4-2.
3. Set the pattern generator raster signal to a green raster.
4. Move the deflection yoke to the rear and adjust with the purity control so that the green is at the center and the blue and the red take up equally sized areas on each side.  
(See Figures 4-1 through 4-4.)
5. Move the deflection yoke forward and adjust so that the entire screen is green. (See Figure 4-2.)
6. Switch the raster signal to blue, then to red and verify the condition.
7. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws and DY spacers.
8. If the beam does not land correctly in all the corners, use a magnet to adjust it.  
(See Figure 4-5.)



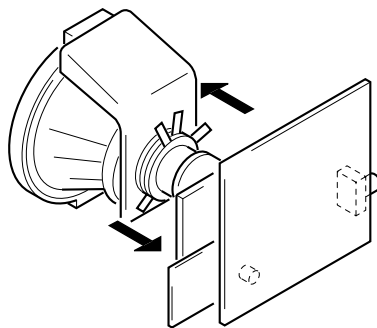
**Fig. 4-3**



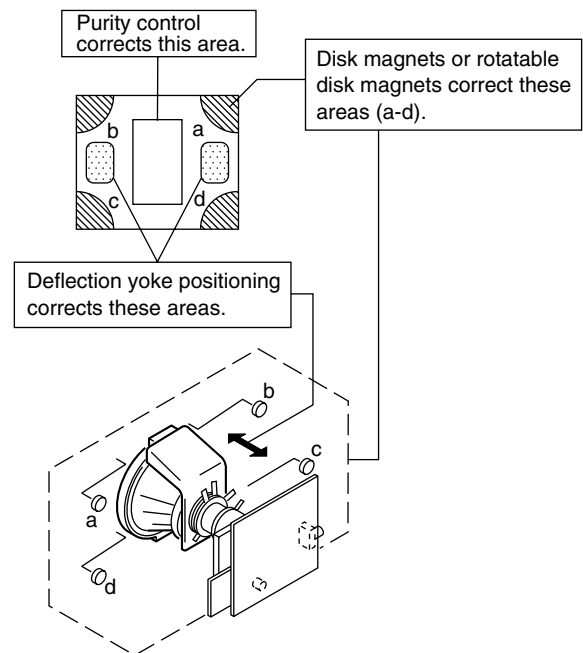
**Fig. 4-4**



**Fig. 4-1**



**Fig. 4-2**



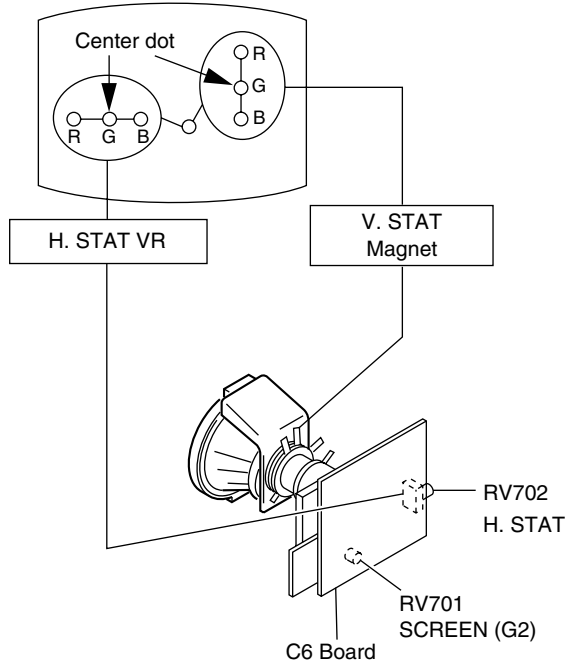
**Fig. 4-5**

## 4-2. CONVERGENCE

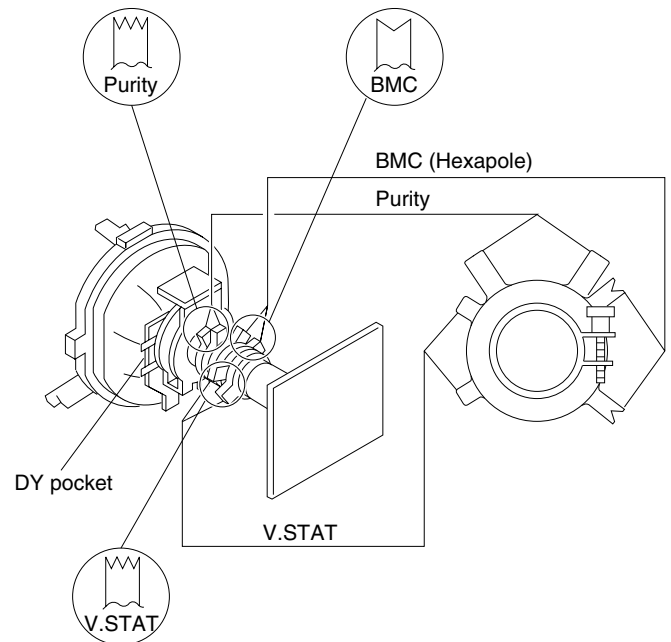
### Preparation :

- Before starting this adjustment, adjust the focus, horizontal size and vertical size.
- Receive dot/hatch signal.
- Pic mode: Personal (Pic 90%, Brightness 50%, Col 50 %, Hue 50%, Shp 50%).

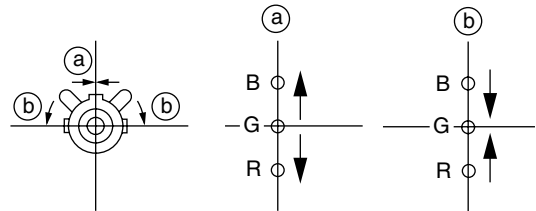
### (1) Horizontal and Vertical Static Convergence



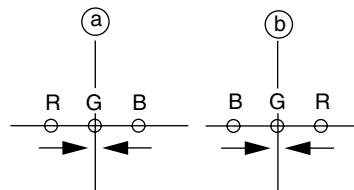
1. (Moving horizontally), adjust the H.STAT control so that the red, green and blue dots are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green and blue dots are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green and blue dots together at the center 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, so be sure to perform adjustments while tracking.)



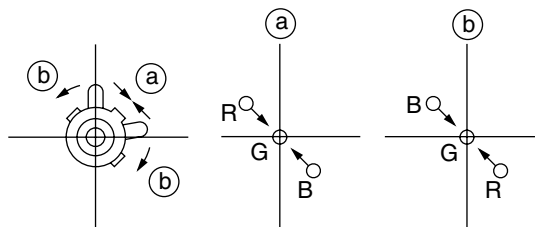
#### ① V. STAT



#### ② H. STAT VR

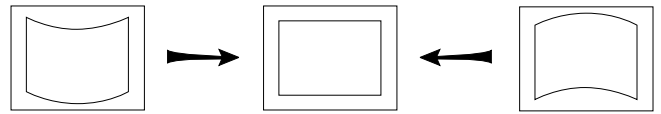
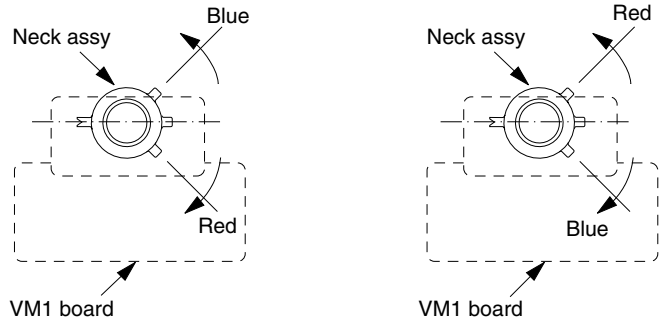
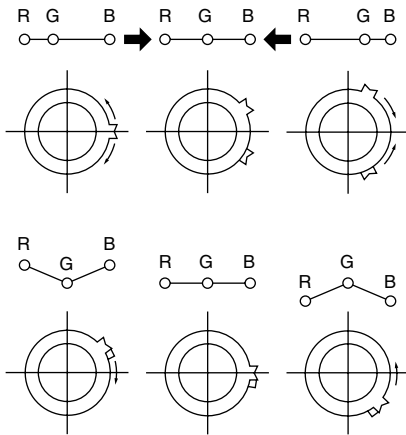


#### ③



④ BMC (Hexapole) Magnet.

If the red, green and blue dots are not balanced or aligned, then use the BMC magnet to adjust in the manner described below.



**Note**

1. The Red and Blue magnets should be equally far from the horizontal center line.
2. Do not separate the Red and Blue magnets too far. (Less than 8 mm)

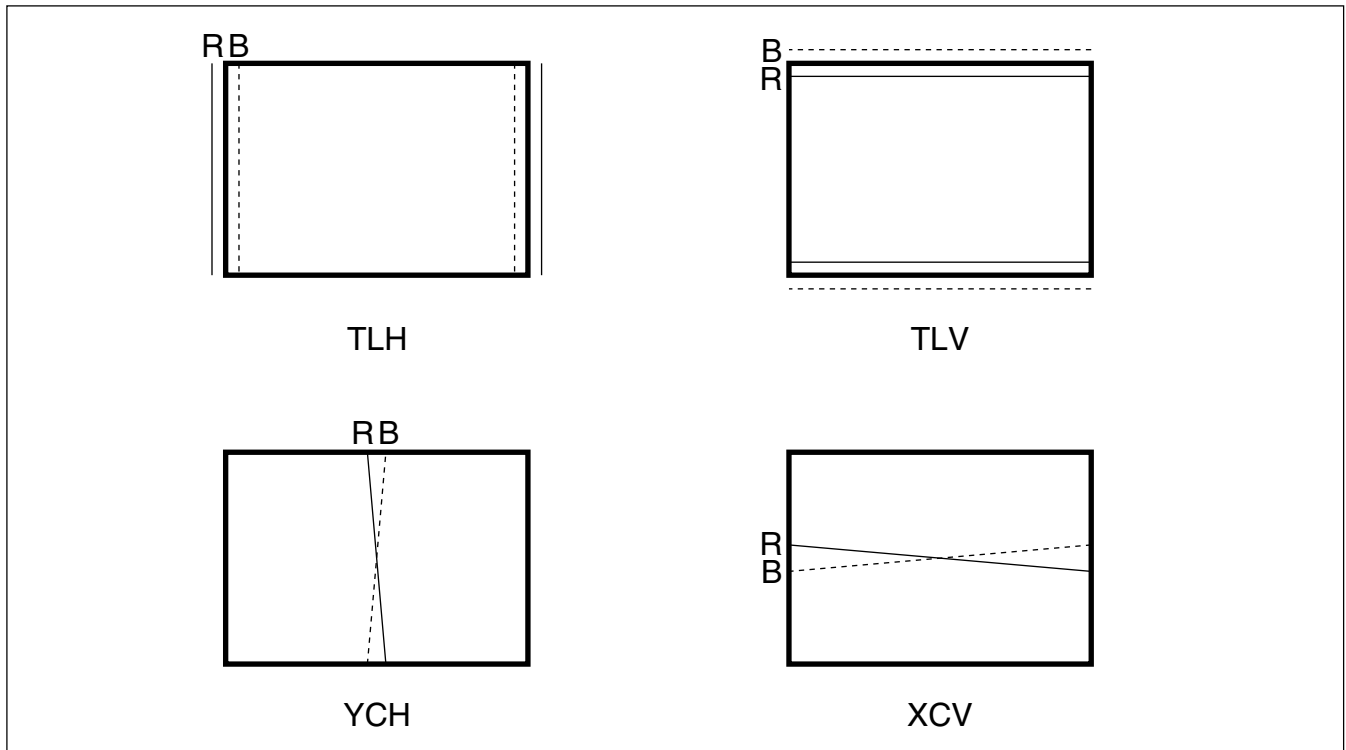
⑤ Y separation axis correction magnet adjustment.

1. Receive the cross-hatch signal and adjust [PICTURE] to [MIN] and [BRIGHTNESS] to [STANDARD] .
2. Adjust the Y separation axis correction magnet on the neck assembly so that the horizontal lines at the top and bottom of the screen are straight.

(2) Dynamic Convergence Adjustment

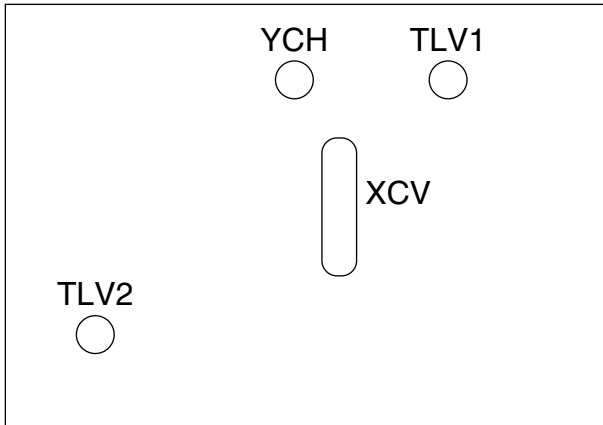
**Preparation:**

- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence

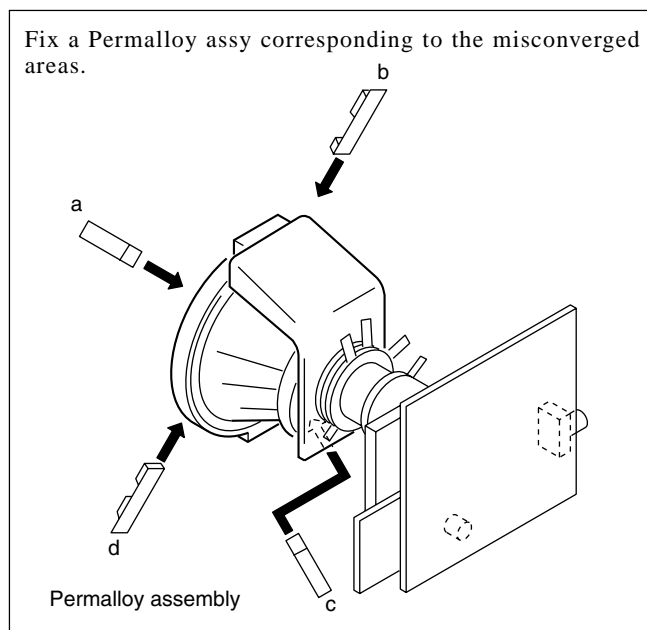
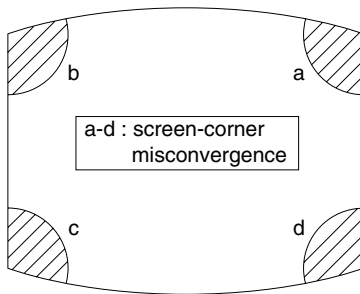


TLV	Rotate	TLV-2	VOL (29", 34") on DY
	Rotate	TLV	VOL (25") on DY
XCV	Rotate	XCV	Adj core on DY
YCH	Rotate	YCH	VOL on DY
TLH	Insert	TLH	Correction Plate to DY Pocket (Left or Right)

ON DY:



**(3) Screen-corner Convergence**



**4-3. FOCUS ADJUSTMENT**

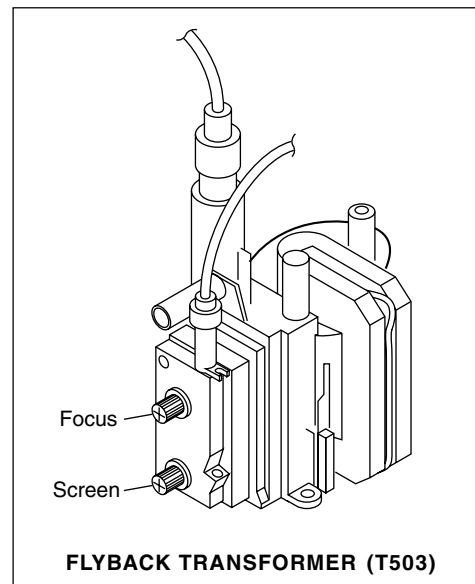
FOCUS adjustment should be completed before W/B adjustment.

**(Except 34")**

1. Receive digital monoscope pattern.
2. Set "Picture Mode" to "DYNAMIC".
3. (a) Adjust focus VR so that the center of screen becomes just focus ( except 25").
- (b) Adjust focus VR so that the lion teeth becomes just focus (25" only).
4. Change the receiving signal to white pattern and blue back.
5. Confirm magenta ring is not noticeable. In case magenta is very obvious, adjust focus VR to take balance of magenta ring and focus.

**(For 34")**

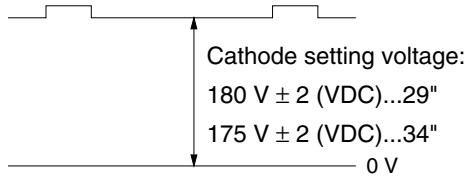
1. Receive digital monoscope pattern.
2. Set "Picture Mode" to "Standard".
3. Set S2801 to mechanical center position.
4. Adjust focus VR so that the center of the screen becomes just focus.
5. Adjust S2801 when corner focus is unbalance in right and left.
6. Change the receiving signal to white pattern blue back.
7. Confirm Magenta ring is not noticeable. In case magenta ring is very obvious, reset S2801 to mechanical center position and then adjust FOCUS VR to take balance of MAGENTA RING and FOCUS.



#### 4-4. G2 (SCREEN) AND WHITE BALANCE ADJUSTMENTS

##### 1. G2 (SCREEN) ADJUSTMENT

- 1) Set the PICTURE to normal.
- 2) Put to VIDEO input mode without signals.
- 3) Connect R, G and B of the C6 board cathode to the oscilloscope.
- 4) Adjust BRIGHTNESS to obtain the cathode voltage to the value below.
- 5) Adjust G2 (screen) on the FBT until picture shows the point before cut off.

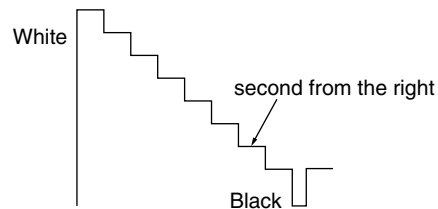


##### 2. WHITE BALANCE ADJUSTMENT

- 1) Set to Service Mode (Refer Section 5-1: ADJUSTMENTS WITH COMMANDER).
- 2) Input white raster signal.
- 3) Set the PICTURE to minimum.
- 4) Select GCT (WHB 4) and BCT (WHB 5) with [1] and [4], and adjust the level with [3] and [6] for the best white balance.
- 5) Set the PICTURE to maximum.
- 6) Select GDR (WHB 1) and BDR (WHB 2) with [1] and [4], and adjust the level with [3] and [6] for the best white balance.
- 7) Write into the memory by pressing [MUTING] then [0].

##### 3. SUB BRIGHT ADJUSTMENT

- 1) Set to service mode.
- 2) Input a staircase signal of black to white from the pattern generator.
- 3) BRIGHTNESS .... 50%.  
PICTURE ..... MINIMUM
- 4) Select SBR (WHB7) with [1] and [4], and adjust SBR (WHB7) level with [3] and [6] so that the second stripe from the right is dimly lit.



## SECTION 5 CIRCUIT ADJUSTMENTS

### 5-1. ADJUSTMENTS WITH COMMANDER

Service adjustments to this model can be performed using the supplied Remote Commander RM-954

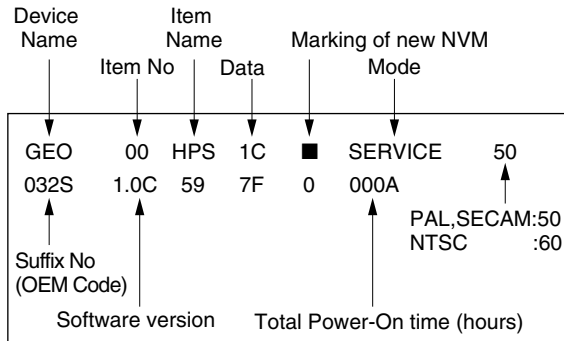
#### a. ENTERING SERVICE MODE

With the unit on standby



This operation sequence puts the unit into service mode.

The screen display is :



#### b. METHOD OF CANCELLATION FROM SERVICE MODE

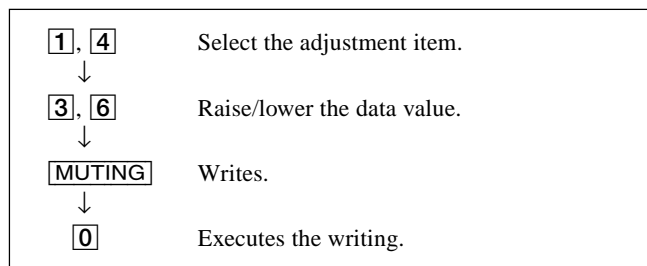
Set the standby condition (Press [POWER] button on the commander), then press [POWER] button again, hereupon it becomes TV mode.

#### c. METHOD OF WRITE INTO MEMORY

- 1) Set to Service Mode.
- 2) Press [1] (UP) and [4] (DOWN), to select the adjustment.
- 4) Press [MUTING] button to indicate WRITE on the screen.
- 5) Press [0] button to write into memory.

#### d. MEMORY WRITE CONFIRMATION METHOD

- 1) After adjustment, pull out the plug from AC outlet, and then plug into AC outlet again.
- 2) Turn the power switch ON and set to Service Mode.
- 3) Call the adjusted items again to confirm adjustments were made.



- [7], [0] All the data becomes the values in memory.
- [8], [0] All user control goes to the standard state.
- [5], [0] Service data initialization (Be sure not to use usually.)
- [2], [0] Write 50Hz adjustment data to 60Hz, or vice versa.

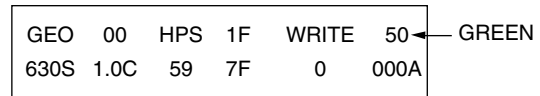
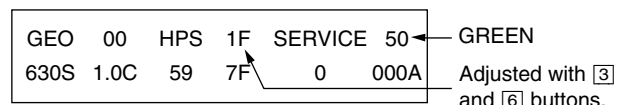
### 5-2. ADJUSTMENT METHOD

Item Number 00 of device GEO

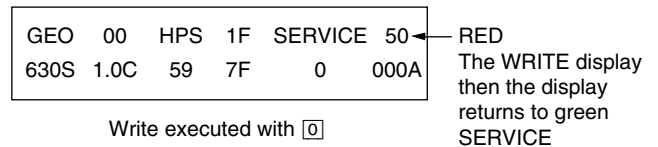
This explanation uses H-Position as an example.

1. Select "GEO 00 HPS" with the [1] and [4] buttons.
2. Raise/lower the data with the [3] and [6] buttons.
3. Select the optimum state. (The standard is 1F for PAL reception.)
4. Write with the [MUTING] button. (The display changes to WRITE.)
5. Execute the writing with the [0] button. (The WRITE display will be changed to red color while executing, and back to SERVICE.)

Example on screen display :-



Write with [MUTING]



Write executed with [0]

Use the same method for all Items. Use [1] and [4] to select the adjustment item, use [3] and [6] to adjust, write with [MUTING], then execute the write with [0].

- Note :**
1. In [WRITE], the data for all items are written into memory together.
  2. For adjustment items that have different standard data between 50Hz or 60Hz, be sure to use the respective input signal after adjustment.

Adjustment Item Table

8 TVG Category	Functionality		Range	Function	Table & Note	Register No.bit	Device Name Slava Address	RAM Address (bit)	NVM			Remarks: Initial data for tables
	No.	Name							Slave	Sub	Bit Range	
GEO	00	HPS	3F	H Position	Normal(50/60)/Wide(50/60)	14 (7-2)	CXA2159S(88H)	-	A0/A4	(A1/AE)/(44/4F)	7-2	1E (for 50Hz)/16(for 60Hz)
	01	HSZ	3F	H Size	Normal(50/60)/Wide(50/60)	13 (7-2)		-	A0/A4	(A0/AD)/(43/4E)	7-2	1F
	02	PAP	3F	Pin Amp	Normal(50/60)/Wide(50/60)	15 (7-2)		-	A0/A4	(A2/AF)/(45/50)	7-2	1F
	03	TLT	0F	Trapezium	Normal(50/60)/Wide(50/60)	17 (7-4)		-	A0/A4	(A4/B1)/(47/52)	7-4	7
	04	VPS	3F	V Position	Normal(50/60)/Wide(50/60)	11 (7-2)		-	A0/A4	(9E/AB)/(41/4C)	7-2	1F
	05	VSZ	3F	V size	Normal(50/60)/Wide(50/60)	10 (7-2)		-	A0/A4	(9D/AA)/(40/4B)	7-2	1F
	06	SCO	0F	S Correction	Normal(50/60)/Wide(50/60)	12 (7-4)		-	A0/A4	(9F/AC)/(42/4D)	7-4	7
	07	VLN	0F	V Linearity	Normal(50/60)/Wide(50/60)	12 (3-0)		-	A0/A4	(9F/AC)/(42/4D)	3-0	7
	08	BOW	0F	AFC Bow	Normal(50/60)/Wide(50/60)	18 (7-4)		-	A0/A4	(A5/B2)/(48/53)	7-4	7
	09	AGL	0F	AFC Angle	Normal(50/60)/Wide(50/60)	18 (3-0)		-	A0/A4	(A5/B2)/(48/53)	3-0	7
	0A	UPN	3F	Upper Pin	Normal(50/60)/Wide(50/60)	16 (7-2)		-	A0/A4	(A3/B0)/(46/51)	7-2	1F
	0B	LPN	3F	Lower Pin	Normal(50/60)/Wide(50/60)	1A (7-2)		-	A0/A4	(A7/B4)/(4A/55)	7-2	1F
	0C	HBL	1	H Blanking on/off		1A (1)		-	A0	9A	1	1
	0D	LBL	0F	Left H Blanking	Normal(50/60)/Wide(50/60)	19 (7-4)		-	A0/A4	(A6/B3)/(49/54)	7-4	0B(for 50Hz)/0F(for 60Hz)
	0E	RBL	0F	Right H Blanking	Normal(50/60)/Wide(50/60)	19 (3-0)		-	A0/A4	(A6/B3)/(49/54)	3-0	2
WHB	00	RDR	3F	R Drive	DYNAMIC/others	0B (7-2)	CXA2159S(88H)	-	A0	C0/BA	7-2	25 (DYNAMIC)/ 2A (for OTHERS)
	01	GDR	3F	G Drive	DYNAMIC/others	0C (7-2)		-	A0	C1/BB	7-2	1F
	02	BDR	3F	B Drive	DYNAMIC/others	0D (7-2)		-	A0	C2/BC	7-2	1F
	03	RCT	0F	R Cutoff	SECAM/others	09 (3-0)		-	A0	C3/BD	3-0	7
	04	GCT	0F	G Cutoff	SECAM/others	0A (7-4)		-	A0	C4/BE	7-4	7
	05	BCT	0F	B Cutoff	SECAM/others	0A (3-0)		-	A0	C4/BE	3-0	7
	06	BMN	1F	Brightness Minimum Data		08 (7-2)		-	A0	22	6-2	15
	07	SBR	3F	Sub Brightness Control		08 (7-2)		-	A0	23	7-2	1F
	08	APB	3	Sub Bright Control Switch for Intelligent Picture #3		08 (7-2)		-	A0	23	1-0	3
SAJ	00	PMX	3F	Picture Maximum Data	non-Wide/Wide	05 (7-2)	CXA2159S(88H)	-	A0	21/20	7-2	38(NON-WIDE) / 33 (WIDE)
	01	SHU	0F	Sub Hue Control	TV/Video	07 (7-2)		-	A0	24/38	5-2	8
	02	SSH	0F	Sub Sharpness Control	TV/Video	09 (7-4)		-	A0	25/36	7-4	04 (for TV) / 09 (FOR VIDEO)
	03	SCL	3F	Sub Color Control	(NTSC/others)/WIDE(NTSC/others)	06 (7-2)		-	A0	(37/26)/(3C/3B)	7-2	1F
VP	00	EHT	0F	EHT Comp	50/60Hz	17 (3-0)	CXA2159S(88H)	-	A0/[A4]	A4/B1]/(47/52)]	3-0	5
	01	GMA	3	Gamma Correction (sepatated in STANDARD mode)	NON-STD.(NTSC/Others)/STD.(NTSC/Others)	0D (1-0)		-	A4	68/67/6A/69	1-0	02(NON-STANDARD)/01 (STANDARD)
	02	APG	1	Gamma Control Switch for Intelligent Picture #3	NON-STD.(NTSC/Others)/STD.(NTSC/Others)	0D (1-0)		-	A4	68/67/6A/69	2	0
	03	YDL	0F	Y Delay	PAL/SECAM/NTSC/DVD	0E (3-0)		-	A4	3C/3E/3D/3F	3-0	(06/09/08/08 for PAL/SECAM/NTSC/DVD)
	04	SST	3	SECAM ID Start Position	SECAM&AUTO/FORSED-PAL&NTSC	03 (5-4)		-	A4	6B/6D	5-4	01(for SECAM/AUTO)/01(for forced PAL/NTSC)
	05	SSP	3	SECAM ID Stop Position	SECAM&AUTO/FORSED-PAL&NTSC	03 (7-6)		-	A4	6B/6D	7-6	01(for SECAM/AUTO)/01(for forced PAL/NTSC)
	06	RLM	3	RGB Limit		03 (1-0)		-	A0	83	1-0	0
	07	SLV	03	SECAM ID Level	SECAM&AUTO/FORSED-PAL&NTSC	04 (1-0)		-	A4	6C/6E	1-0	02(for SECAM/AUTO)/02(for forced PAL/NTSC)
	08	SBF	3F	SECAM BELL f0	SECAM&AUTO/FORSED-PAL&NTSC	04 (7-2)		-	A4	6C/6E	7-2	22(for SECAM/AUTO)/22(for forced PAL/NTSC)
	09	DYC	1	Dynamic Color on/off		0C (1)		-	A0	8C	1	1
	0A	ABL	1	ABL Mode Switching (except STANDARD mode)	except STANDARD	0B (1)		-	A0	8B	1	(00 for STANDARD)/01(OTHERS)
	0B	VTH	1	ABL Detection Vth Switching		0B (0)		-	A0	8B	0	1
	0C	SFO	1	FO Switching for Sharpness	NTSC/others	07 (1)		-	A4	5C/59	1	1
0D	DCX	1	DC Trans. Ratio Switching		08 (1)		-	A0	88	1	1	

## Adjustment Item Table

TVG Category	Functionality		Initial	Range	Function	Table & Note	Register No.bit	Slava Address	RAM Address (bit)	NVM			Remarks: Initial data for tables
	No.	Name								Slave	Sub	Bit Range	
VP	0E	SHT	-	1	Pre-/Overshoot ratio Switch	NTSC/others	08 (0)	CXA2159S(88H)	-	A4	5D/59	0	1
	0F	HDW	-	1	H Drive Pulse Width Switch		00 (6)		-	A0	80	6	0
	10	AFC	-	03	AFC Gain Control	TV/Video/Text	11 (1-0)		-	A0	28/29/2A	1-0	01/00/01 (for TV/VIDEO/TEXT)
	11	HOS	-	0F	H Oscillation		0E (7-4)		-	A0	8E	7-4	7
	12	HSS	-	1	Slice Level of H Sync Sep.		0F (1)		-	A0	8F	1	0
	13	VSS	-	1	Slice Level of V Sync Sep.		0F (0)		-	A0	8F	0	0
	14	HMS	-	1	Macro Vision C/m off/on	50/60Hz	10 (0)		-	A0/[A4]	9D/AA[40/4B]	0	1
	15	YUV	-	1	Y SEL		00 (2)		-	A0	80	2	0
	16	CDV	-	3	CD mode for Video and RF under no signal	Video only	0F (5-4)		-	A0	2B	5-4	1
	17	RON	-	1	R ON	not memorized	01 (2)		-	A0	81	2	1
	18	GON	-	1	G ON	not memorized	01 (1)		-	A0	81	1	1
	19	BON	-	1	B ON	not memorized	01 (0)		-	A0	81	0	1
	1A	PON	-	1	P ON	not memorized	00 (7)		-	A0	80	7	1
	1B	AXN	-	1	AXIS SW	NTSC/others (only for DYNAMIC)	07 (0)		-	A0	37/26[3C/3B]	0	1
	1C	RSL	-	1	RGB SEL		0C (0)		-	A0	8C	0	0
	1D	VBW	-	3	VBLKW		16 (1-0)		-	A0	96	1-0	0
	1E	RFP	-	1	REFP		14 (0)		-	A0	94	0	0
	1F	VMC	-	3	VM Level		03 (3-2)		-	A0	83	3-2	0
AP	00	AGC	-	1	AGC On/off Control		05 (7)	BH3868AFS(80H)	-	A6	05	7	0
	01	SON	-	1	Surround On/off		05 (6)		-	A6	05	6	0
	02	SST	-	1	Surround Stereo		05 (5)		-	A6	05	5	0
	03	SMO	-	1	Surround Monoral		05 (4)		-	A6	05	4	0
	04	LOP	-	1	Surround Effect Enhancer		05 (3)		-	A6	05	3	0
	05	SUR	-	7	Surround Effect		05 (2-0)		-	A6	05	2-0	0
	06	BAS	-	1F	Bass Sound Mode Control	dyna/drama/soft	03 (6-0)		-	A6	06/09/0C	4-0	12/10/10 (for DYNAMIC/DRAMA/SOFT)
	07	TRE	-	1F	Treble Sound Mode Control	dyna/drama/soft	04 (6-0)		-	A6	07/0A/0D	4-0	13/13/10 (for DYNAMIC/DRAMA/SOFT)
	08	TRF	-	3	Treble data offset		04 (6-0)		-	A6	11	1-0	2
	09	BBE	-	FF	BBE Sound Mode Control	dyna/drama/soft	02 (7-0)		-	A6	08/0B/0E	7-0	99/D5/00 (for DYNAMIC/DRAMA/SOFT)
MSP	00	WST	-	FF	W/G Stereo Threshold			MSP3415D(84H)	-	A0	60	7-0	15
	01	WBT	-	FF	W/G Bilingual Threshold				-	A0	61	7-0	EC
	02	WLL	-	FF	W/G Monaural Threshold				-	A0	62	7-0	5
	03	WAC	-	0F	W/G Agreement Count				-	A0	63	3-0	1
	04	WDL	-	FF	W/G Search Delay				-	A0	64	7-0	30
	05	NDL	-	FF	NICAM Search Delay				-	A0	65	7-0	20
	06	SDL	-	FF	Stereo Status Read Delay				-	A0	66	7-0	10
	07	AGC	-	1	AGC Switch Auto/Constant		00BB (7)		-	A0	68	7	1
	08	REL	-	3F	AGC Gain at Constant Mode		00BB (6-1)		-	A0	68	6-1	28
	09	CRM	-	1	Carrier muting on/off		00BB (9)		-	A0	67	1	0
0A	ACO	-	1	Audio Clock out on/off		0083 (5)		-	A0	69	5	1	

## Adjustment Item Table

TVG	Functionality		Initial	Range	Function	Table & Note	Register No.bit	Slava Address	RAM Address (bit)	NVM			Remarks:
	Category	No.								Name	Slave	Sub	Bit Range
MSP	0B	FP	-	7F	FM Prescale for non-M system		000E (14-8)	MSP3415D(84H)	-	A0	6A	6-0	1B
	0C	FPM	-	7F	FM Prescale for M system		000E (24-8)		-	A0	6B	6-0	32
	0D	FH	-	7F	FM Prescale for HDEV		000E (14-8)		-	A0	6C	6-0	36
	0E	FHM	-	7F	FM Prescale for HDEV and M		000E (14-8)		-	A0	6D	6-0	65
	0F	WGP	-	7F	W/G Prescale		000E (14-8)		-	A0	6E	6-0	1C
	10	NIP	-	7F	NICAM Prescale		0010 (14-8)		-	A0	6F	6-0	7F
	11	ERR	-	FF	Auto FM Switch Threshold		0021 (10-3)		-	A0	70	7-0	50
	12	VOL	-	FF	Loud Speaker gain 7000h to 7ff0h		0000 (15-4)		-	A4	62	7-0	6D
SVP	00	SBF	-	3F	SECAM BELL f0		1C (7-2)	CXA2139S(8AH)	-	A4	11	7-2	22
	01	HOS	-	0F	H Oscillation		0C (7-4)		-	A4	0C	7-4	7
	02	SHU	-	0F	Sub Hue Control	TV/Video	05 (7-2)		-	A4	2D/2F	5-2	8
	03	AFC	-	3	AFC Gain	TV/Video	0F (0)		-	A4	31/32	1-0	1
PIP	00	SDL	-	0F	Delay of Output SELECT		01 (6-3)	SDA9288X(D6H)	-	A4	1C	6-3	2
	01	PPH	-	FF	H Position of TOP-LEFT Pin P		01/02		-	A4	29	7-0	15
	02	PPV	-	FF	V Position of TOP-LEFT Pin P		03 (7-0)		-	A4	2A	7-0	2E
	03	YDL	-	7	Delay of Luminance Input		04 (2-0)		-	A4	1F	2-0	0
	04	HDI	-	0F	H Sync Delay for Inset		06 (3-0)		-	A4	21	3-0	0
	05	ISC	-	1	Inset Clock Selection		06 (4)		-	A4	21	4	1
	06	CLP	-	1	Clamp Pulse Selection		06 (5)		-	A4	21	5	1
	07	CLC	-	1	Clamp Cycle Selection		06 (6)		-	A4	21	6	0
	08	CON	-	0F	Contrast Adjustment for inset		09 (7-4)		-	A4	24	7-4	0
	09	PLL	-	3	H Position For A-ch		0D (6-5)		-	A4	28	6-5	2
	0A	PDV	-	0F	PIP V Pedestal Level		0E (7-4)		-	A4	57	7-4	0
0B	PDU	-	0F	PIP U Pedestal Level		0E (3-0)		-	A4	57	3-0	0	
TXT	00	TXH	-	3	Teletext Horizontal Position		10 (1-0)	SAA5261(58H)	-	A4	58	1-0	0
	01	TXV	-	3	Teletext Vertical Position		10 (5-4)		-	A4	58	5-4	0
OPM	00	OSH	-	3F	OSD H Position	Option-Misc	1F1	CXP750097(60H)	-	A0	27	7-2	0D
	01	COM	-	03	Comb Selection (0: None, NTSC, 2: Digital, 3: 3D)				-	A0	50	7-6	2
	02	APC	-	1	APC Switch				-	A0	4F	5	1
	03	TSY	-	3	TV Sys at Auto TV Sys				-	A0	4F	4-3	0
	04	MUT	-	1	No Signal Mute				-	A0	4F	0	0
	05	AFM	-	1	Auto FM Switch				-	A0	4F	1	1
	06	RFB	-	3	C-BPF Control				-	A0	50	5-4	0
	07	TV0	-	7	Tilt to V-Angle Offset				-	A0	50	2-0	2
	08	DBL	-	1	Disable Blueback Function				-	A0	4F	2	0
09	SSO	-	3	Speed Search Option (0-Off, 1-4X, 2-6X, 3-8x)				-	A0	4F	7-6	1	
OPB	00	OP1	-	FF	Optional Bits 1 (see the specified sheet)	Option-Bits		CXP750097(60H)	-	A0	2D	7-0	FF
	01	OP2	-	FF	Optional Bits 2 (see the specified sheet)				-	A0	2E	7-0	#
	02	OP3	-	FF	Optional Bits 3 (see the specified sheet)				-	A0	2F	7-0	#
	03	OP4	-	FF	Optional Bits 4 (see the specified sheet)				-	A0	30	7-0	#

### NOTE

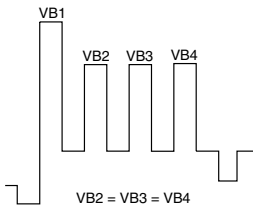
- ■ shaded items are fixed data.
- Standard data listed on the Adjustment Item Table are reference values, therefore it may be different for each model and for each mode.
- Note for Different Data Those are the standard data values written on the microprocessor. Therefore, the data values of the modes and stored respectively in the memory. In case of a device replacement, adjustment by rewriting the data value is necessary for some items.



### 5-3. PICTURE QUALITY ADJUSTMENTS

#### SUB COLOR ADJUSTMENT (KV-XA25/XA29)

1. Select Video.
2. Input a PAL color-bar.
3. Set to the following condition:  
PICTURE 100%, BRIGHTNESS 50%, COLOR 50%
4. Connect an oscilloscope to pin ① (B OUT) of CN305, A board.
5. Set to Service Mode and select SAJ 3 'SCL' with [1] and [4] of the commander then adjust to VB2=VB3=VB4 with [3] and [6].
6. Press [MUTING] → [0] of the commander to write the data.
7. Adjust SAJ 3 'SCL' as step 3 to 5 when receiving NTSC color-bar.
8. Select the 'Wide' mode, write the 'same data-3 steps' for both PAL and NTSC input.



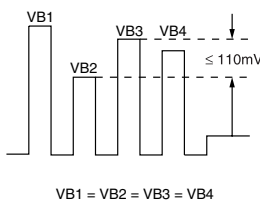
VB2 = VB3 = VB4 (Difference is within 70mV)

#### SUB COLOR ADJUSTMENT (KV-XA34)

1. Select Video.
2. Input PAL Color Bar
3. Set to following condition PICTURE 100%, BRIGHTNESS 50%, Color 50%.
4. Connect an oscilloscope to pin ① (BOU) of CN305, A Board.
5. Set the service mode and select SAJ 3 'SCL' with [1] and [4] of the commander then adjust the VB2=VB3=VB4 [3] and [6].
6. Press [MUTING] → [0] of the commander to write the data.
7. Add 6 steps and save the data.
8. Input NTSC Color Bar to the TV set and repeat items (3 to 7).
9. Select "WIDE" mode, write the "SAME DATA" for both PAL and NTSC Color Bar input.

#### SUB HUE ADJUSTMENT

1. Select Video 1.
2. Input a NTSC 3.58 color-bar, video into Video 1.
3. Set the following condition:  
PICTURE 100%, BRIGHTNESS 50%, COLOR 50%
4. Connect an oscilloscope to pin ① (B OUT) of CN305, A board.
5. Select SAJ 1 "SHU" with [1] and [4] of the commander by setting to Service Mode and adjust to VB1=VB2=VB3=VB4 with [3] and [6].



The highest level of VB1,VB2,VB3,VB4 must be aligned at the same line. Ideal difference level between VB2 and VB3 should be within  $\pm 110mV$ .

6. Press [MUTING] → [0] of the commander to write the data.
7. Adjust SAJ 1 "SHU" as step 3 to 6 when receiving TV mode.

### 5-4. DISPLAY POSITION ADJUSTMENT

#### PIP POSITION (Not used for these models)

1. Input a PAL color-bar.
2. Press PIP button of the remote commander to set the PIP picture.
3. Set to Service Mode.
4. Use [1] and [4] of the remote commander to select PIP 1 "PPH" and use [3] and [6] to set data "15".
5. Select PIP 2 "PPV" to set data "2E".
6. Press [MUTING] → [0] of the remote commander to write the data.
7. Use the screen display menu changing the PIP position to check the PIP position.

### 5-5. DEFLECTION ADJUSTMENT

#### NORMAL MODE (50Hz)

1. Set to Service Mode.
2. Using the [1] and [4] button, select category GEO (Service Mode).
3. Raise/lower the data using the [3] and [6] buttons. Select and adjust the following items to obtain optimum image.

#### Service Item

GEO : 00	HPS	H POSITION
01	HSZ	H SIZE
02	PAP	PIN AMP
03	TLT	TILT
04	VPS	V POSITION
05	VSZ	V SIZE
06	SCO	S CORRECTION
07	VLN	V LINEARITY
08	BOW	AFC BOW
09	AGL	AFC ANGLE
0A	UPN	UPPER CORNER PIN
0B	LPN	LOWER CORNER PIN

#### WIDE MODE (50Hz)

4. Input PAL color bar.
5. Adjust condition change to WIDE MODE : ON.
6. Using the [1] and [3] button, select category GEO (Service Mode).
7. Copy (item from normal mode (50Hz)) adjusted data for the following item:

#### Service Item

GEO : 01	HSZ	H POSITION
05	VSZ	V POSITION
06	SCO	S CORRECTION
07	VLN	V LINEARITY

8. Raise/lower data using [3] and [6] buttons, select and adjust the following items to obtain optimum image.

#### Service Item

GEO : 00	HPS	H POSITION
02	PAP	PIN AMP
03	TLT	TILT
04	VPS	V POSITION
08	BOW	AFC BOW
09	AGL	AFC ANGLE
0A	UPN	UPPER CORNER PIN
0B	LPN	LOWER CORNER PIN

9. After confirm WIDE MODE : ON – OFF.
10. Repeat same steps for NTSC input signal.

**NORMAL MODE (60Hz)**

11. Input 525/60Hz signal.
12. Using the **[1]** and **[4]** buttons select category GEO (Service Mode).
13. Select and adjust the following items to obtain optimum image. Raise/lower the data with the **[3]** and **[6]** buttons.

Service Item

GEO : 00	HPS	H POSITION
01	HSZ	H SIZE
02	PAP	PIN AMP
03	TLT	TILT
04	VPS	V POSITION
05	VSZ	V SIZE
06	SCO	S CORRECTION
07	VLN	V LINEARITY
08	BOW	AFC BOW
09	AGL	AFC ANGLE
0A	UPN	UPPER CORNER PIN
0B	LPN	LOWER CORNER PIN

**WIDE MODE (60Hz)**

14. Input monoscope signal.
15. Adjust condition change to WIDE MODE: ON.
16. Using the **[1]** and **[4]** button select category GEO (Service Mode).
17. Copy (item from NORMAL MODE (60Hz)) adjusted data for the following items:

Service Item

GEO : 01	HSZ	H SIZE
05	VSZ	V SIZE
06	SCO	S CORRECTION
07	VLN	V LINEARITY

18. Raise/lower the data with the **[3]** and **[6]** buttons. Select and adjust the following items to obtain optimum image.

Service Item

GEO : 00	HPS	H POSITION
02	PAP	PIN AMP
03	TLT	TILT
04	VPS	V POSITION
08	BOW	AFC BOW
09	AGL	AFC ANGLE
0A	UPN	UPPER CORNER PIN
0B	LPN	LOWER CORNER PIN

19. After confirm WIDE MODE : ON – OFF.

Note:

For Deflection Adjustment, set PICTURE MODE to "SOFT".

**5-6. H-TRAPEZOID ADJUSTMENT**

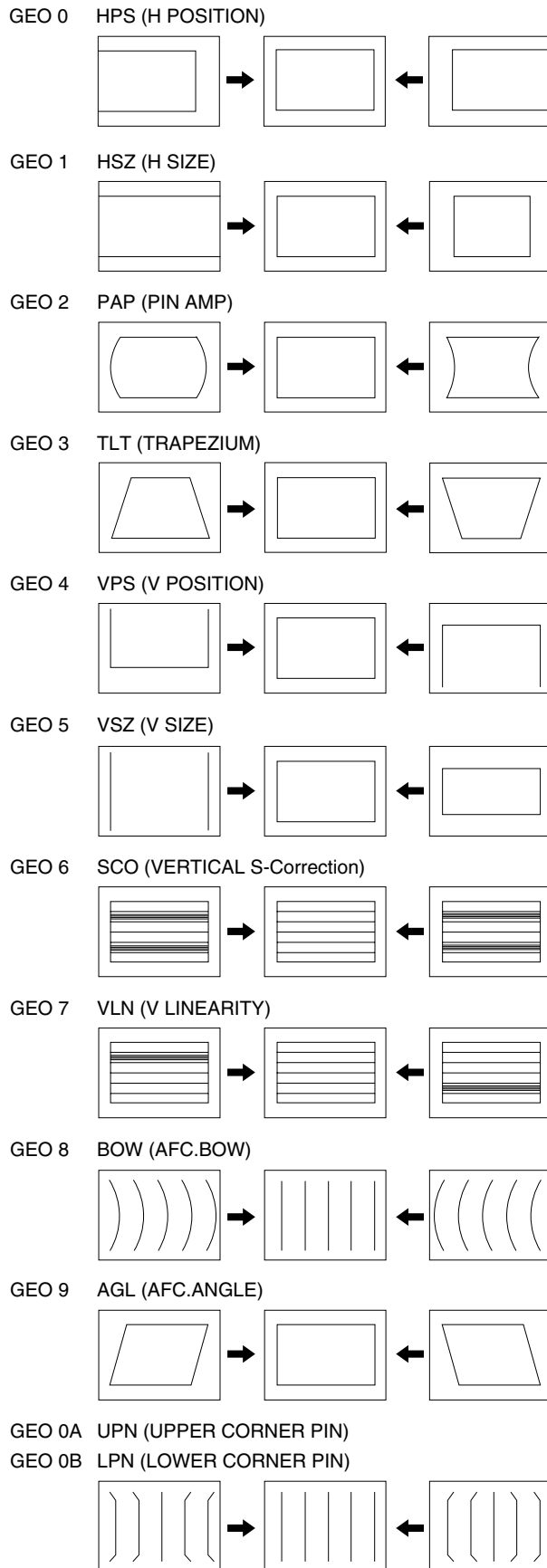
1. Receive cross hatch/dot signal.
2. Adjust RV1801 on C6 board to make H-Trapezoid distortion best.

**5-7. A BOARD ADJUSTMENT AFTER IC003 (MEMORY) REPLACEMENT**

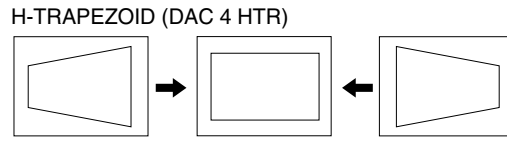
1. Enter to Service Mode.
2. Press commander buttons **[5]** and **[0]** (Data Initialize), and **[2]** and **[0]** (Data Copy) to initialize the data.
3. Call each item number and check if the respective screen shows the normal picture.  
In cases where items are not well adjusted, rectify the fine adjustment.  
Write the data per each item number (**[MUTING]** + **[0]**).
4. Select item numbers "OPB00" (OP1), "OPB01" (OP2), "OPB 02" (OP3) and "OPB 03" (OP4) respectively set the bit per model with command buttons **[3]** and **[6]**.
5. Press commander buttons **[8]** and **[0]** (Test Normal) to return to the data that was set on the shipment from the factory. (This will also cancel Service Mode.)

**5-8. PICTURE DISTORTION ADJUSTMENT (1)**

Item Number 00 – 0B



**PICTURE DISTORTION ADJUSTMENT (2)**

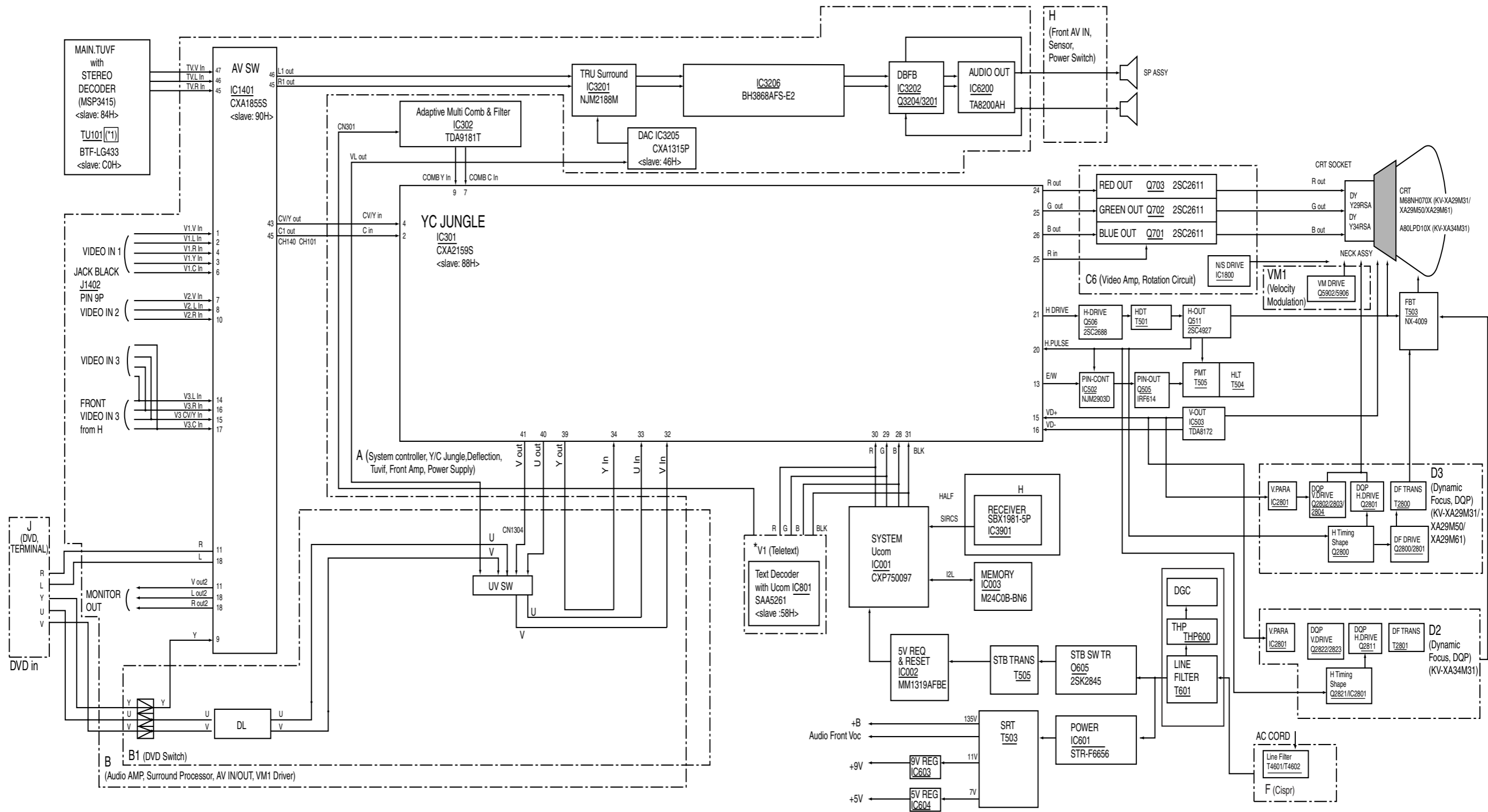


6-1. BLOCK DIAGRAM

SECTION 6  
DIAGRAMS

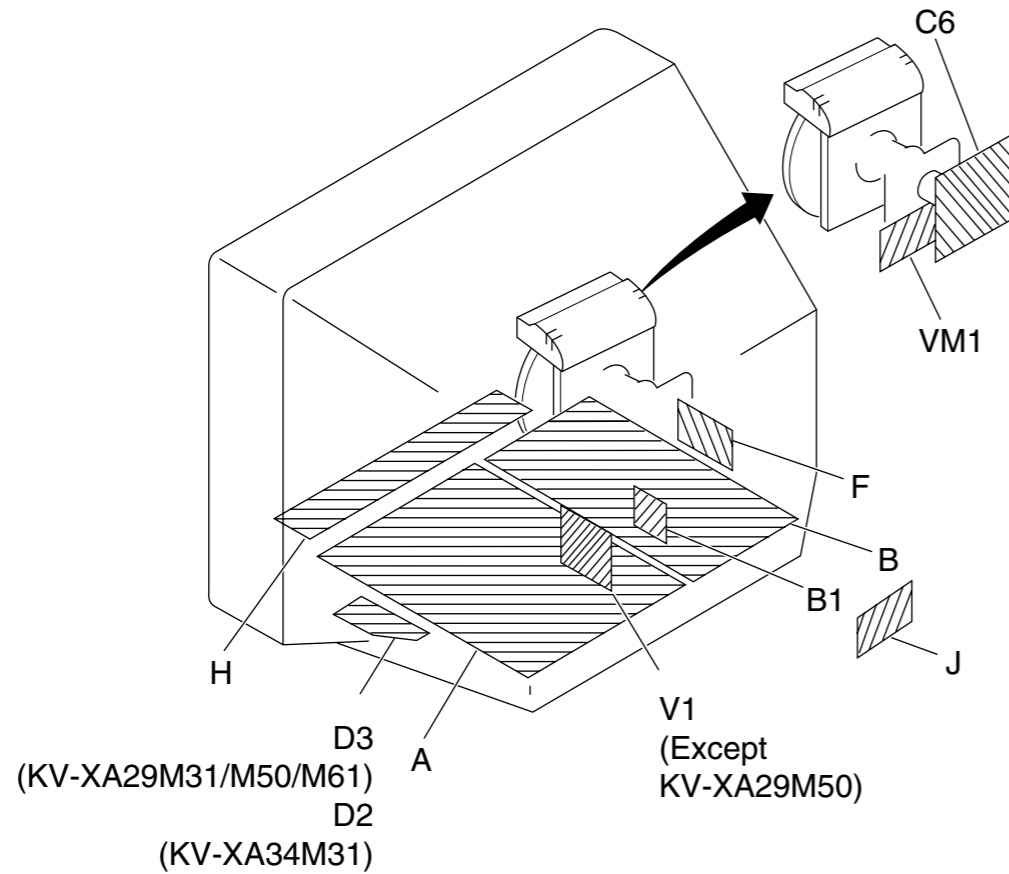
KV-XA29M31/XA29M50/  
XA29M61/XA34M31  
RM-954

KV-XA29M31/XA29M50/  
XA29M61/XA34M31  
RM-954



\*V1 (KV-XA29M31/XA29M61/XA34M31)

6-2. CIRCUIT BOARDS LOCATION



6-3. SCHEMATIC DIAGRAM

Note:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.
- All electrolytic capacitors are rated at 50V unless otherwise noted.
- All resistors are in ohms.
- $\text{k}\Omega = 1000\Omega$ ,  $\text{M}\Omega = 1000\text{k}\Omega$
- Indication of resistance which does not have rating electrical power is as follows.

Pitch: 5 mm  
Rating electrical power 1/4W (CHIP: 1/10W)

- : nonflammable resistor.
- $\Delta$  : internal component.
- : panel designation or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B unless otherwise noted.
- **Readings are taken with a color-bar signal input.**  
no mark : PAL  
( ) : SECAM  
[ ] : NTSC 3.58  
<< >> : NTSC 4.43
- **Readings are taken with a 10W MW digital multimeter.**
- **Voltage are dc with respect to ground unless otherwise noted.**
- **Voltage variations may be noted due to normal production tolerances.**
- **All voltage are in V.**
- \* : Cannot be measured.
- **Circled numbers are waveform references.**
- : B +bus.
- : B -bus.
- : signal path.

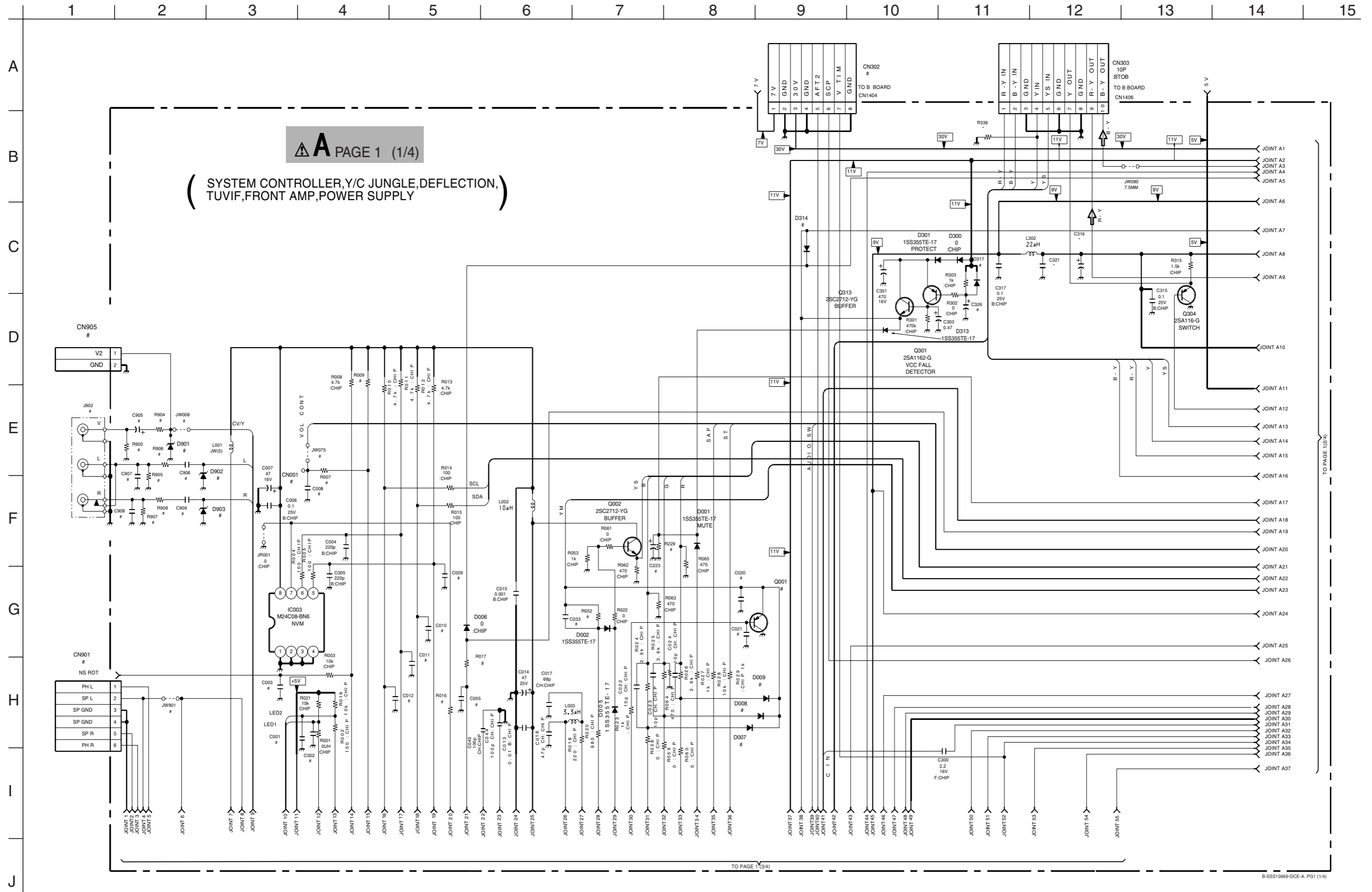
Reference information

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

**Note: The component identified by shading and mark  $\Delta$  are critical for safety. Replace only with part number specified.**



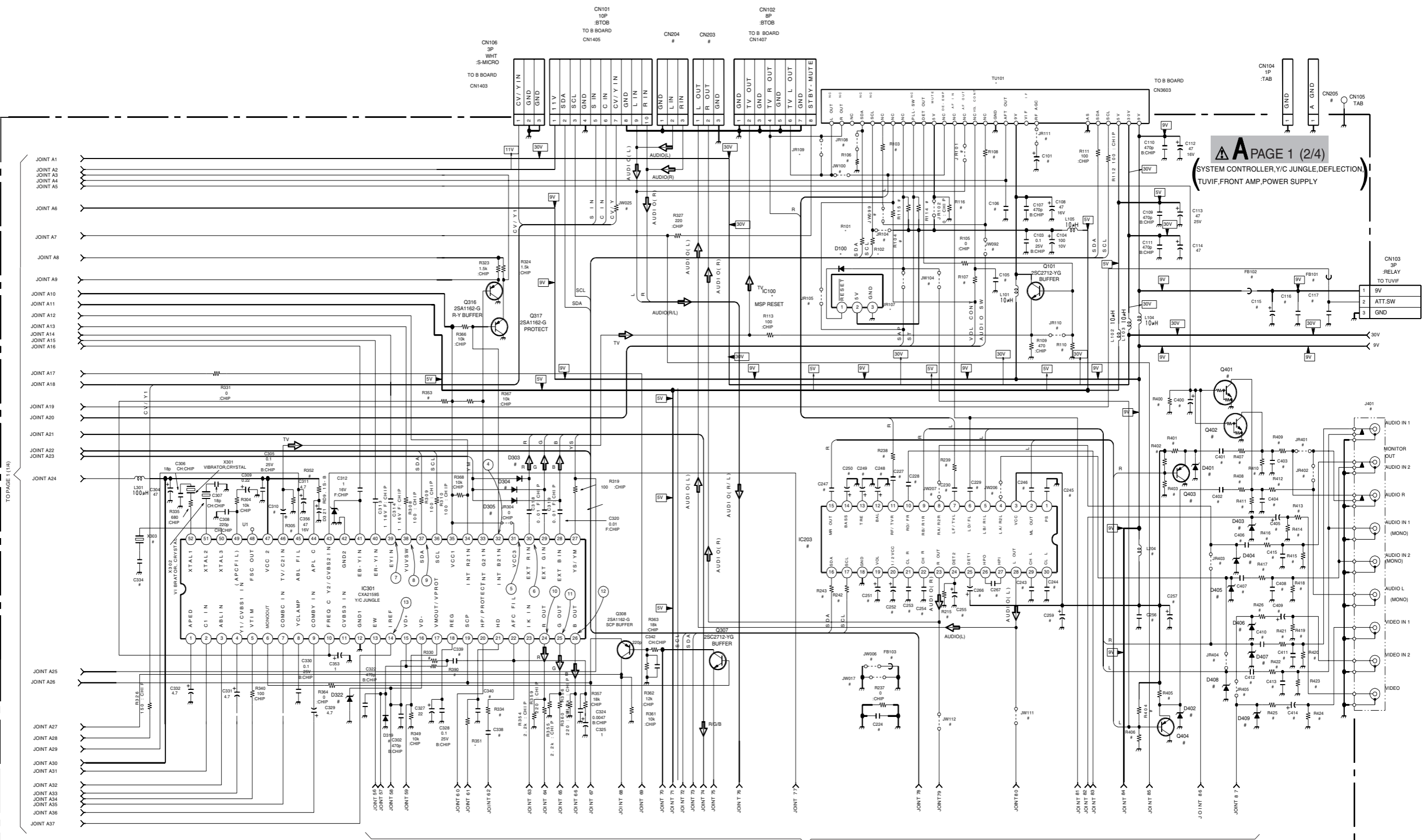
(2) Schematic Diagram of A Board



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

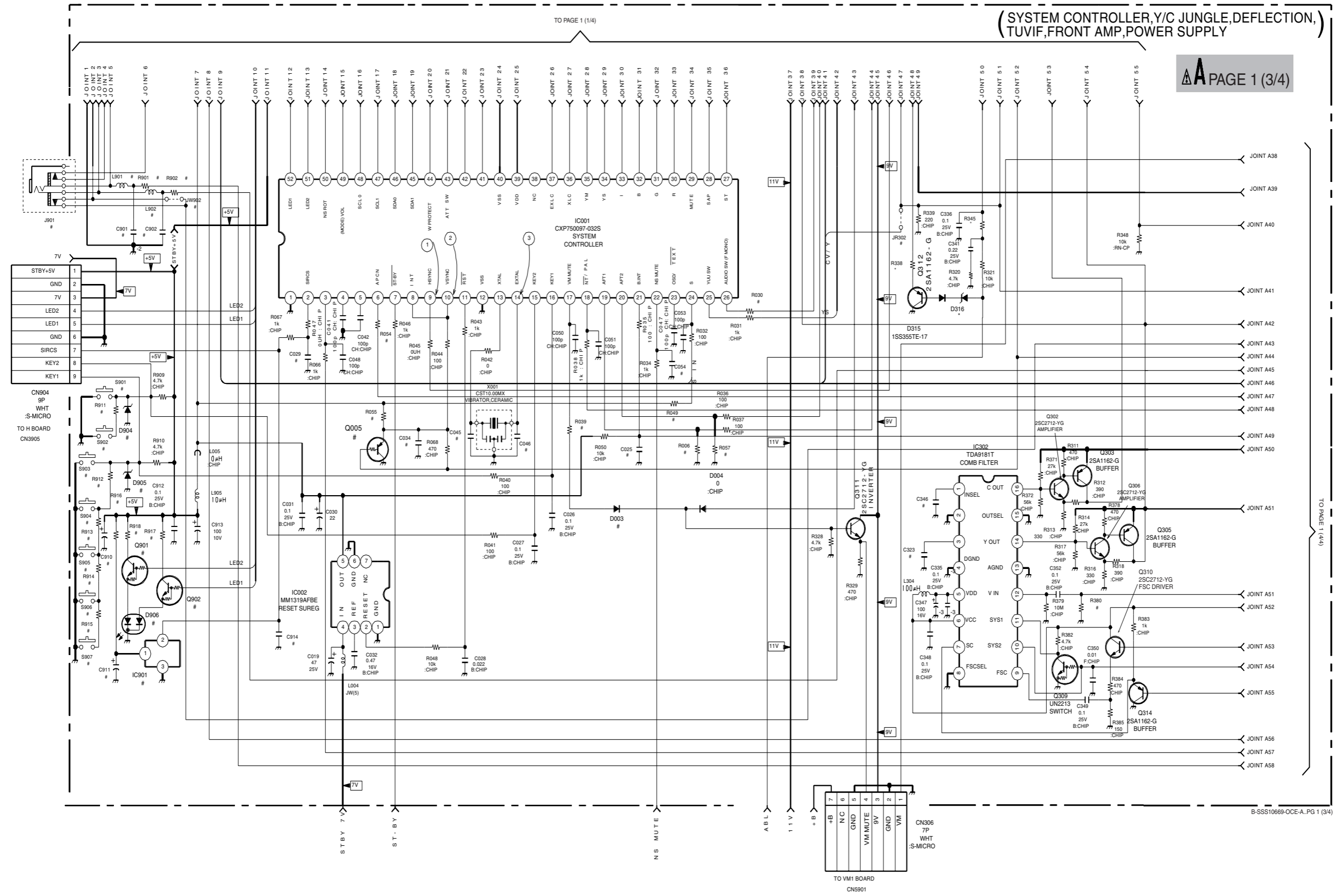
A  
B  
C  
D  
E  
F  
G  
H  
I  
J

**A** PAGE 1 (2/4)  
(SYSTEM CONTROLLER, Y/C JUNGLE, DEFLECTION,  
TUVIF, FRONT AMP, POWER SUPPLY)



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

A  
B  
C  
D  
E  
F  
G  
H  
I  
J



(SYSTEM CONTROLLER, Y/C JUNGLE, DEFLECTION,  
TUVIF, FRONT AMP, POWER SUPPLY)

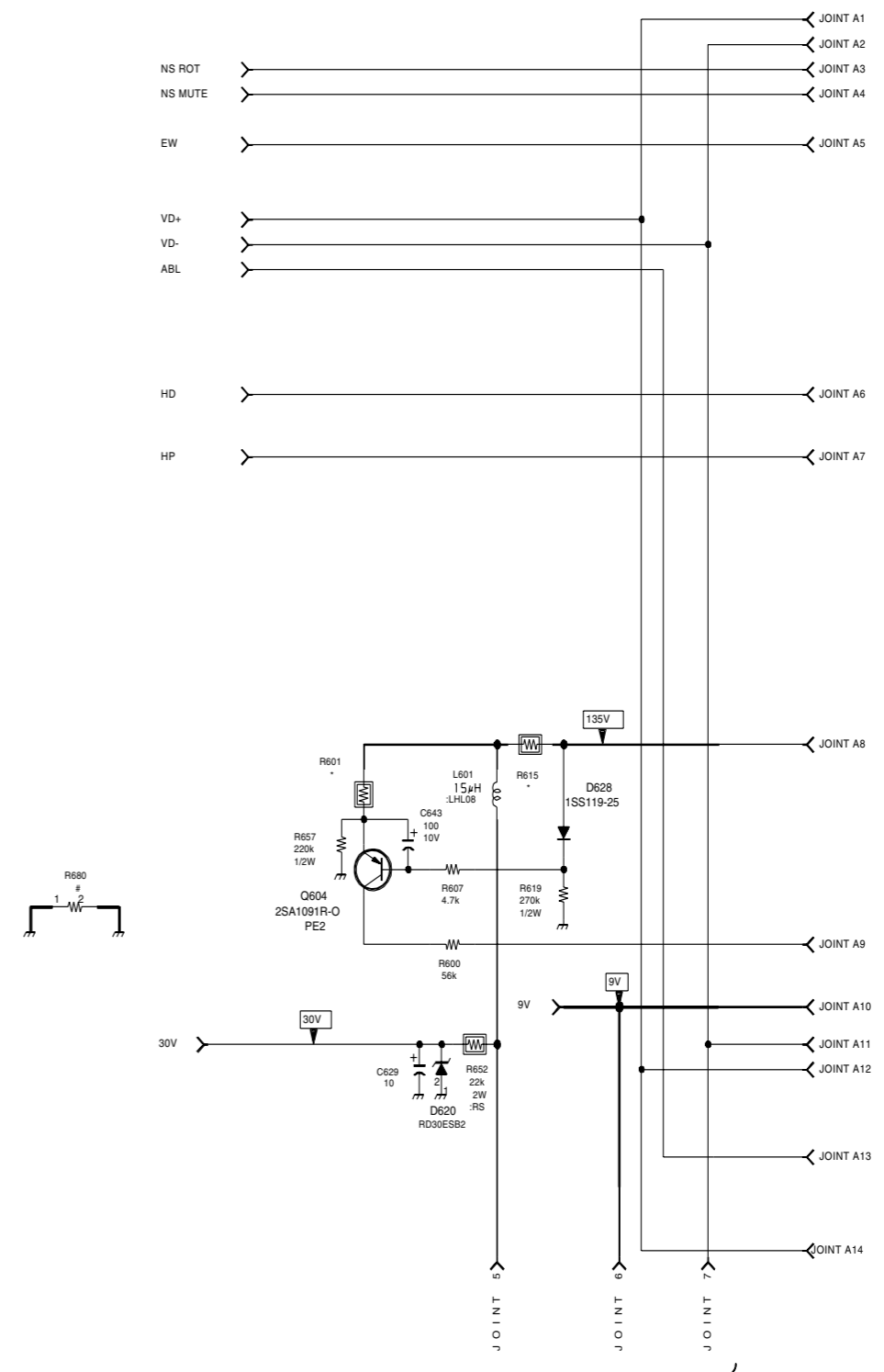
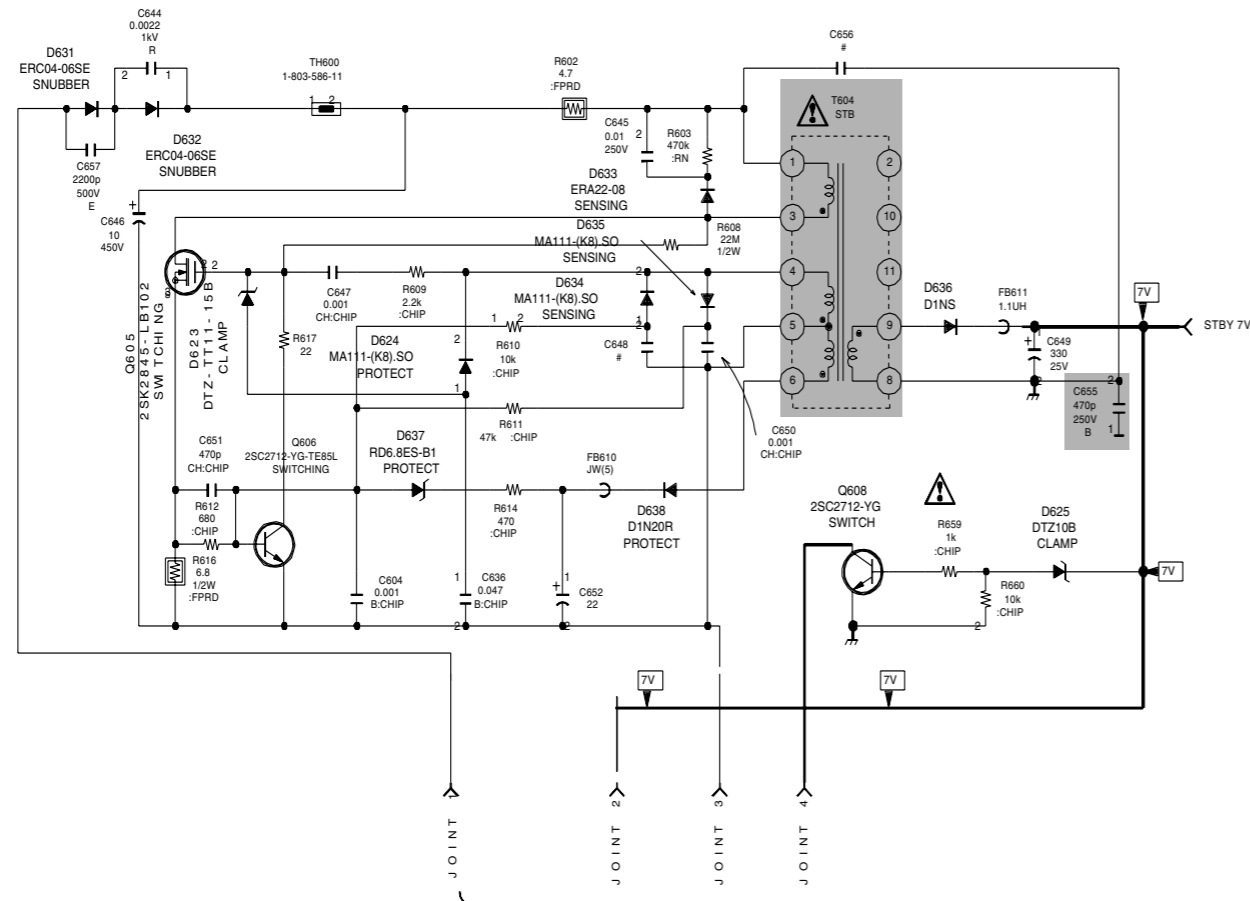
**A** PAGE 1 (3/4)



A  
B  
C  
D  
E  
F  
G  
H  
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J

**A** PAGE 2 (1/4)

(SYSTEM CONTROLLER, Y/C JUNGLE, DEFLECTION,  
TUVIF, FRONT AMP, POWER SUPPLY)



TO PAGE 2 (3/4)

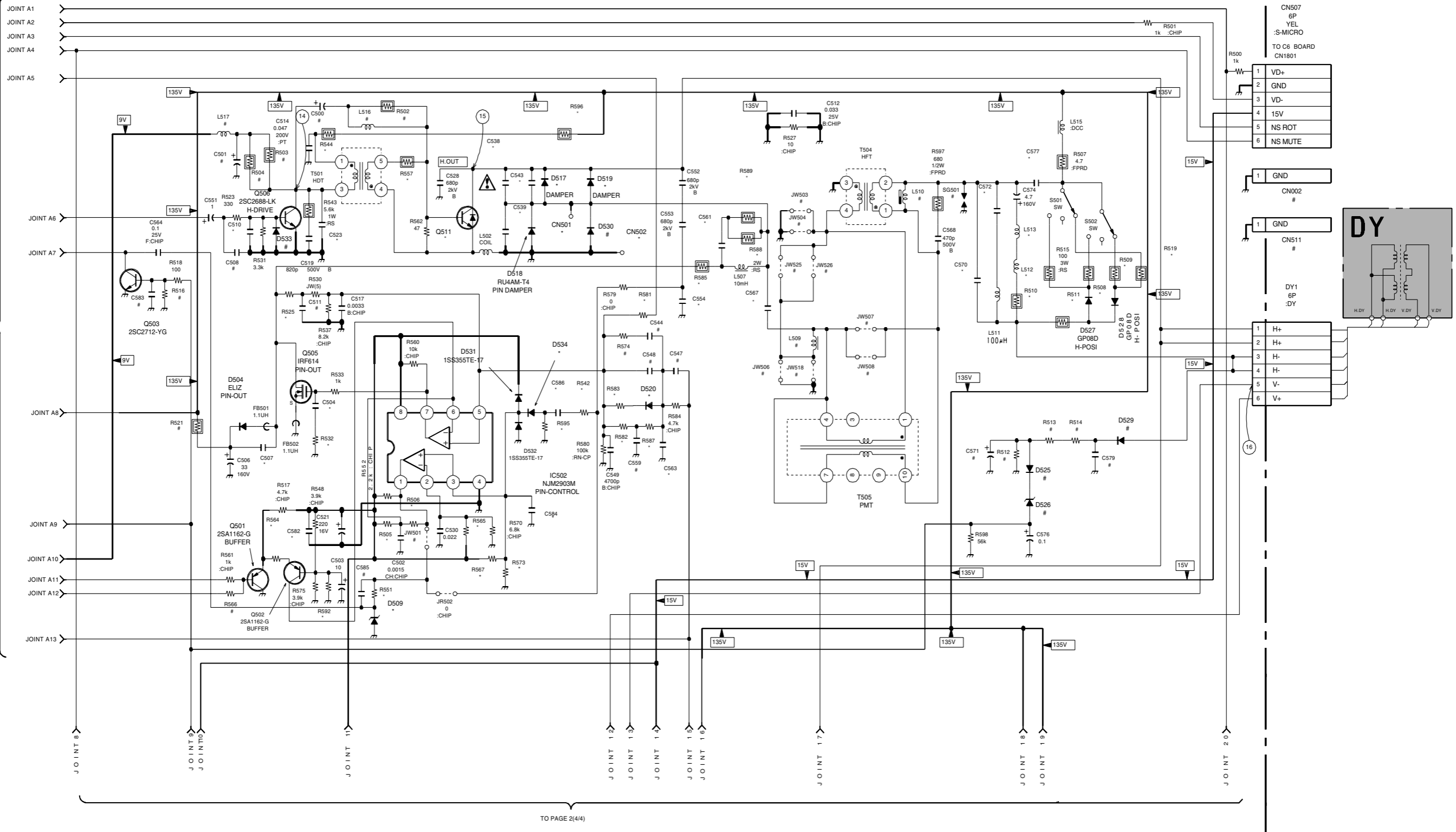
TO PAGE 2 (2/4)

TO PAGE 2 (4/4)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

A  
B  
C  
D  
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H  
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**A** PAGE 2 (2/4)  
( SYSTEM CONTROLLER, Y/C JUNGLE, DEFLECTION,  
TUVIF, FRONT AMP, POWER SUPPLY )

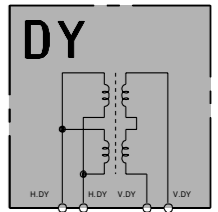


1	VD+
2	GND
3	VD-
4	15V
5	NS ROT
6	NS MUTE

1	GND
---	-----

1	GND
---	-----

1	H+
2	H+
3	H-
4	H-
5	V-
6	V+



TO PAGE 2(4/4)

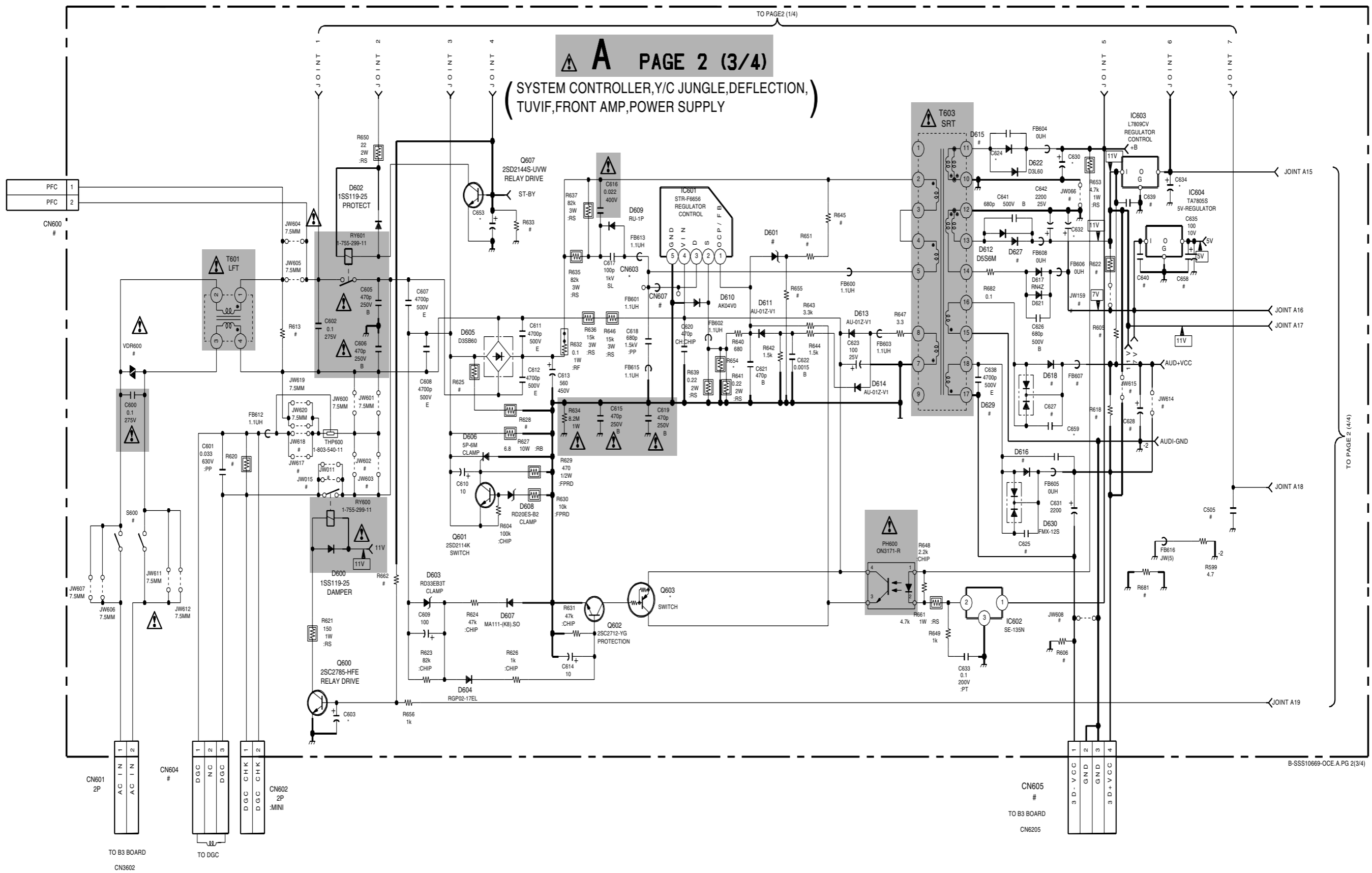
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

A  
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C  
D  
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G  
H  
I  
J

TO PAGE2 (1/4)

**A** PAGE 2 (3/4)

(SYSTEM CONTROLLER, Y/C JUNGLE, DEFLECTION,  
TUVIF, FRONT AMP, POWER SUPPLY)



TO PAGE 2 (4/4)

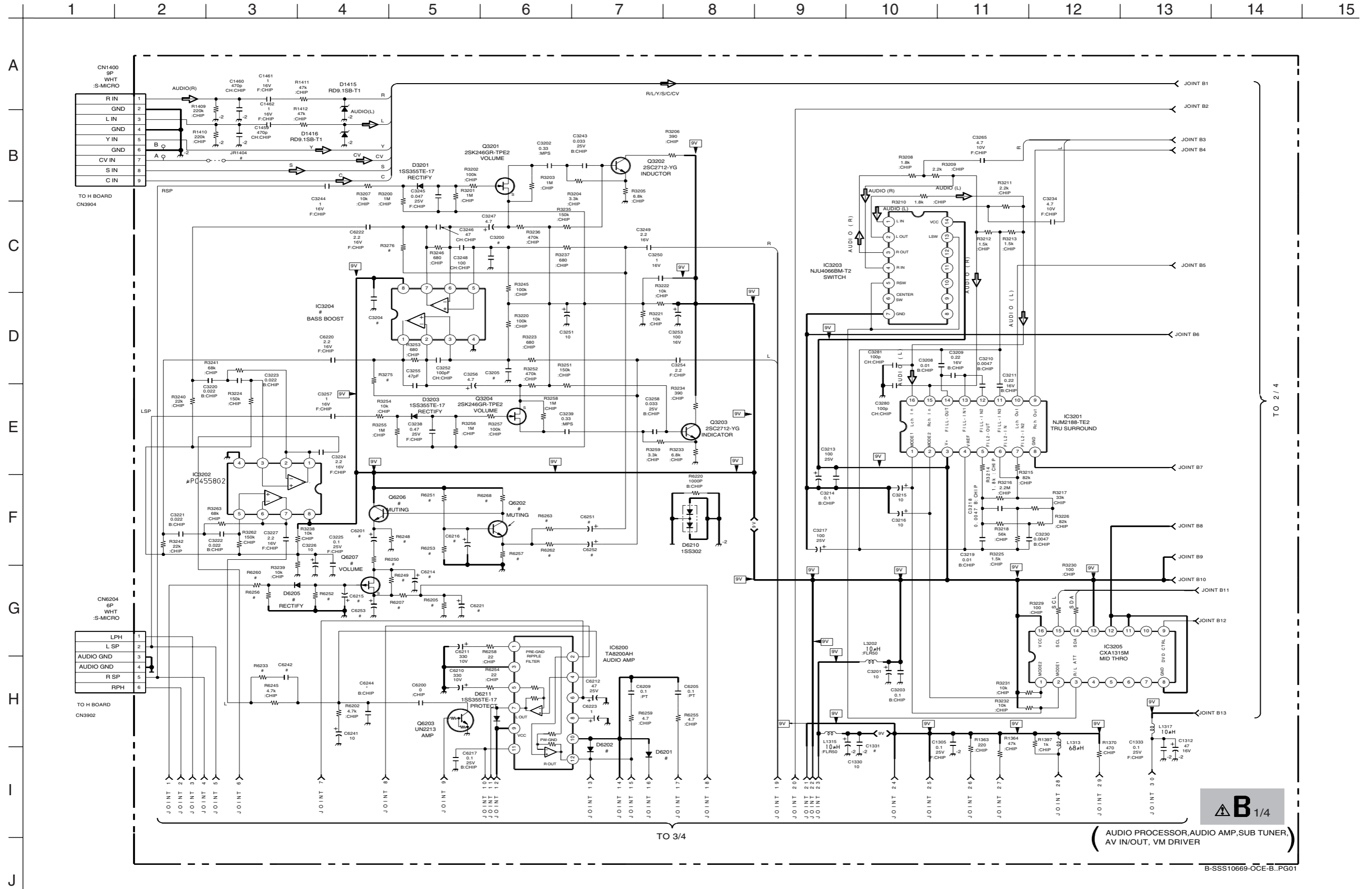
B-SSS10669-OCE.A.PG 2(3/4)



(3) Schematic Diagram of B Board

KV-XA29M31/XA29M50/  
XA29M61/XA34M31  
RM-954

KV-XA29M31/XA29M50/  
XA29M61/XA34M31  
RM-954



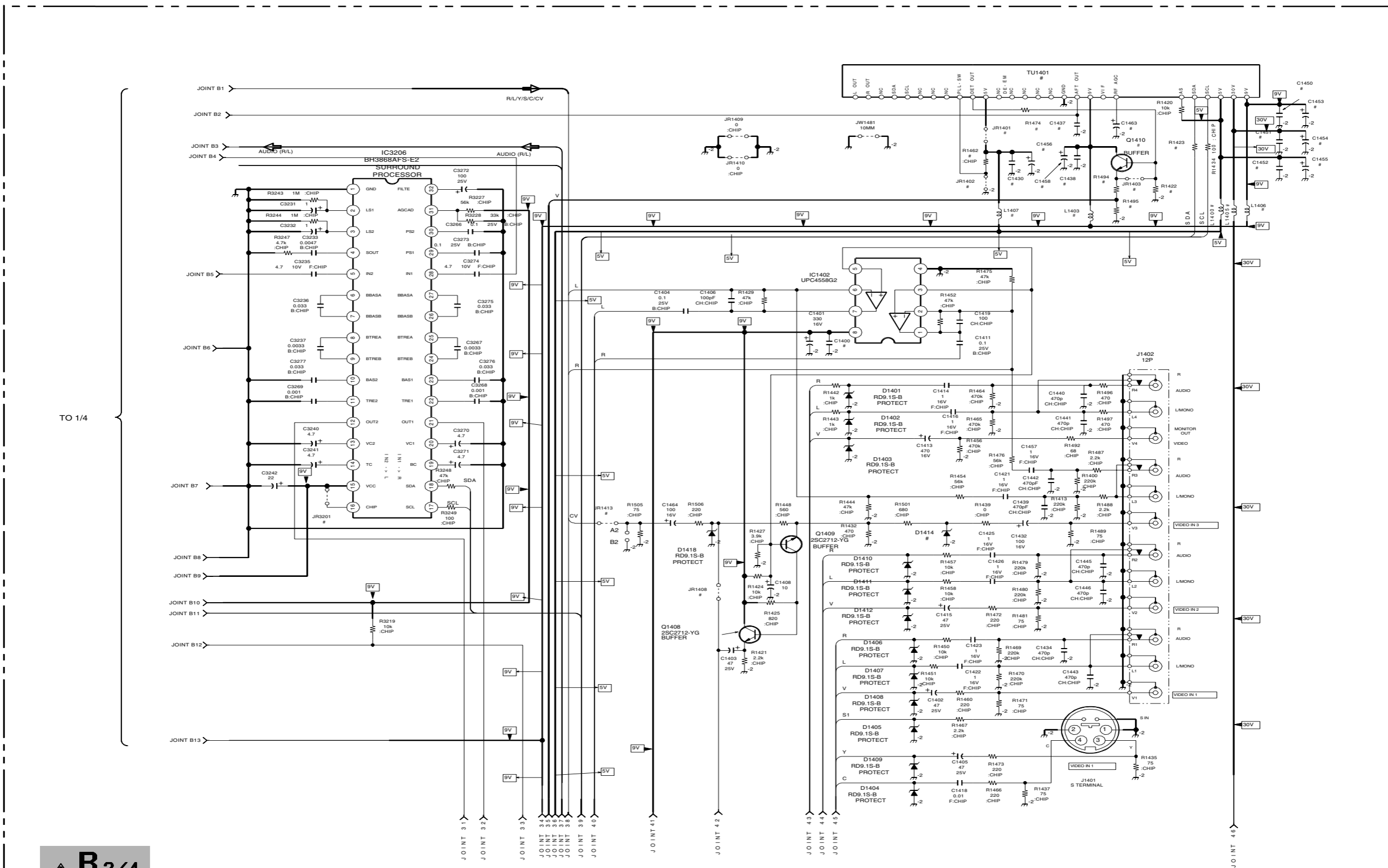
**B**<sub>1/4</sub>

( AUDIO PROCESSOR, AUDIO AMP, SUB TUNER, AV IN/OUT, VM DRIVER )

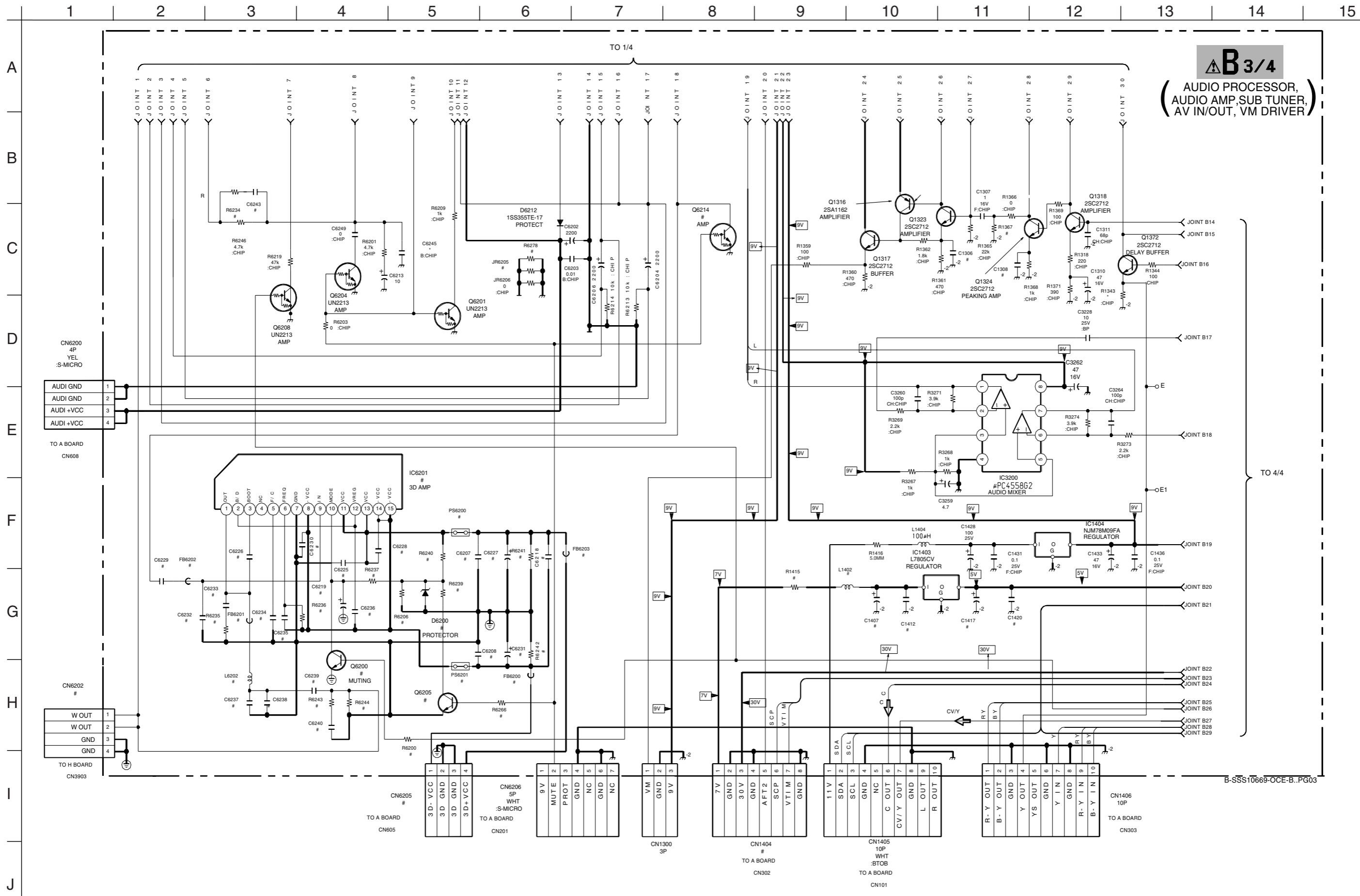
B-SSS10669-OCE-B.PG01

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

A  
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D  
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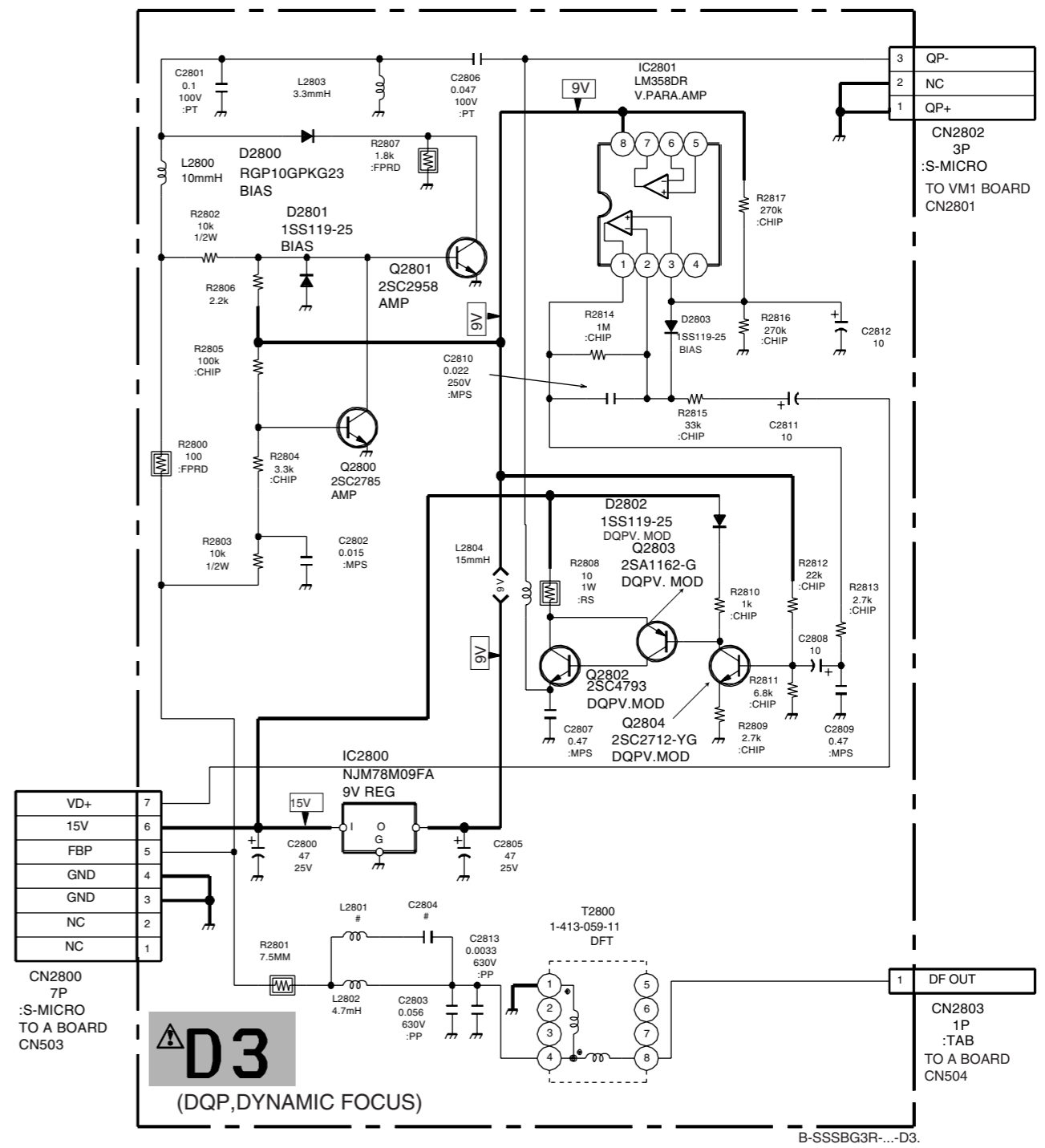
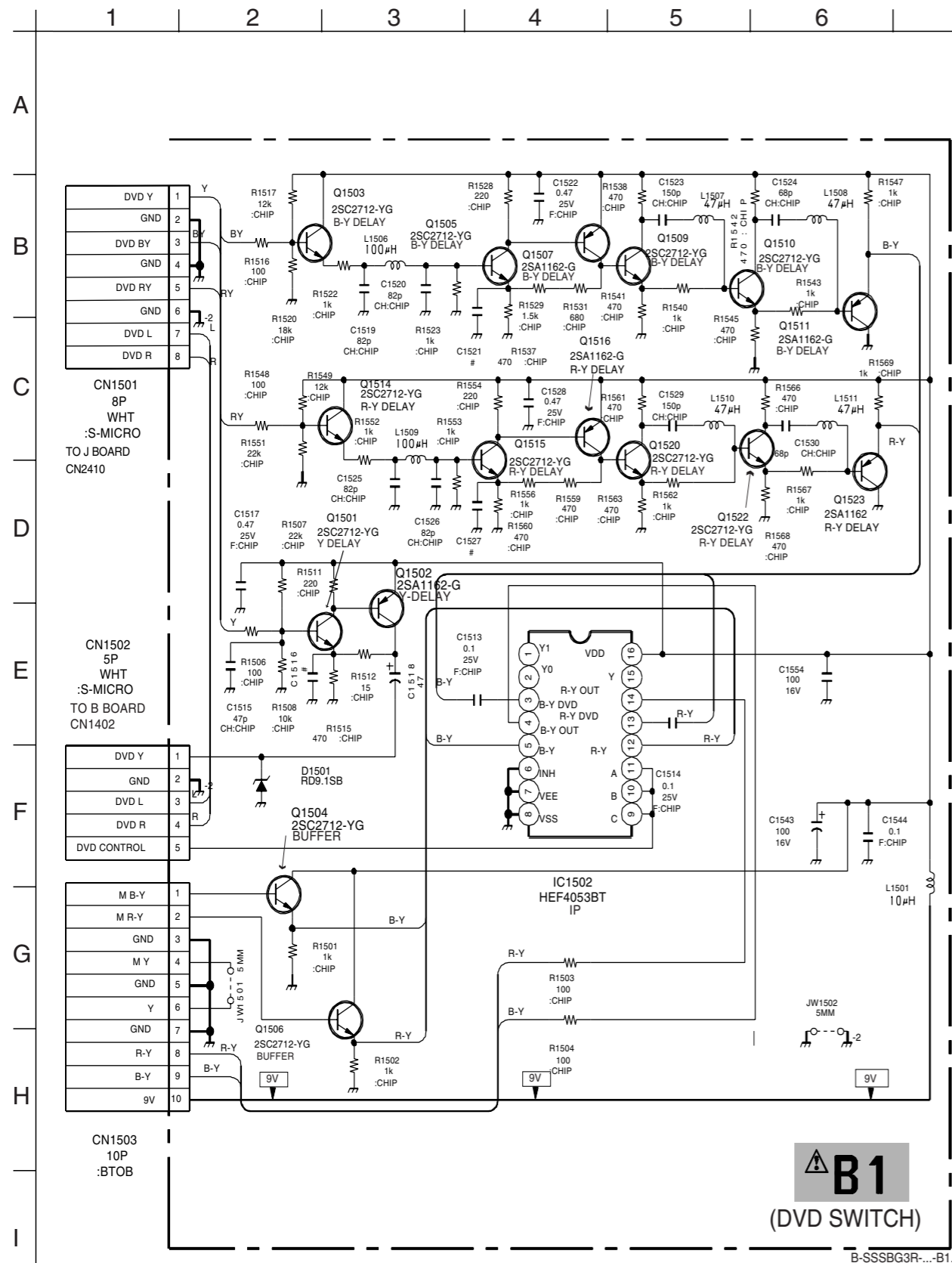
**B<sub>2/4</sub>**  
(AUDIO PROCESSOR, AUDIO AMP, SUB TUNER.)  
AV IN/OUT, VM DRIVER



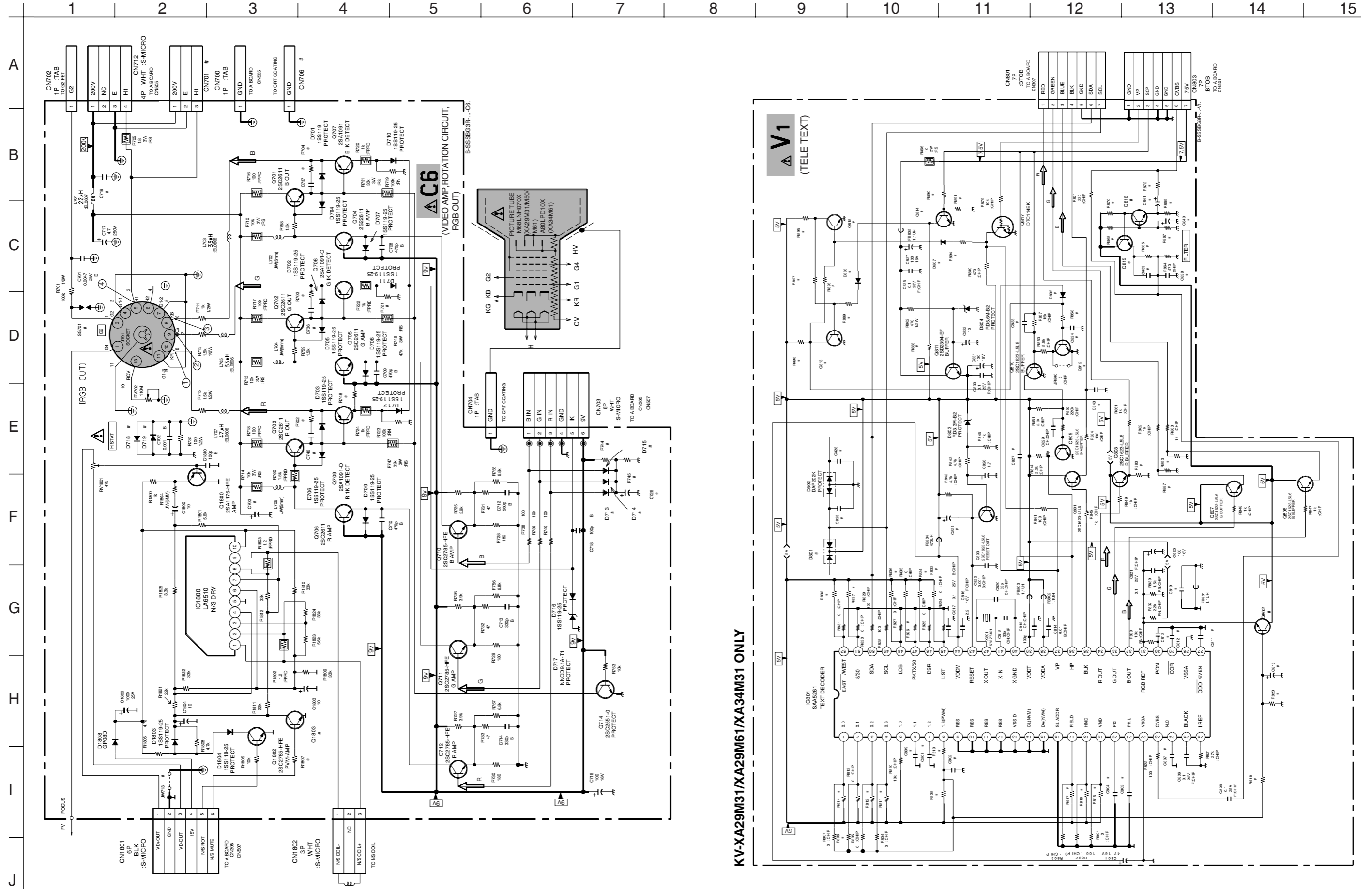
**B 3/4**  
AUDIO PROCESSOR,  
AUDIO AMP, SUB TUNER,  
AV IN/OUT, VM DRIVER



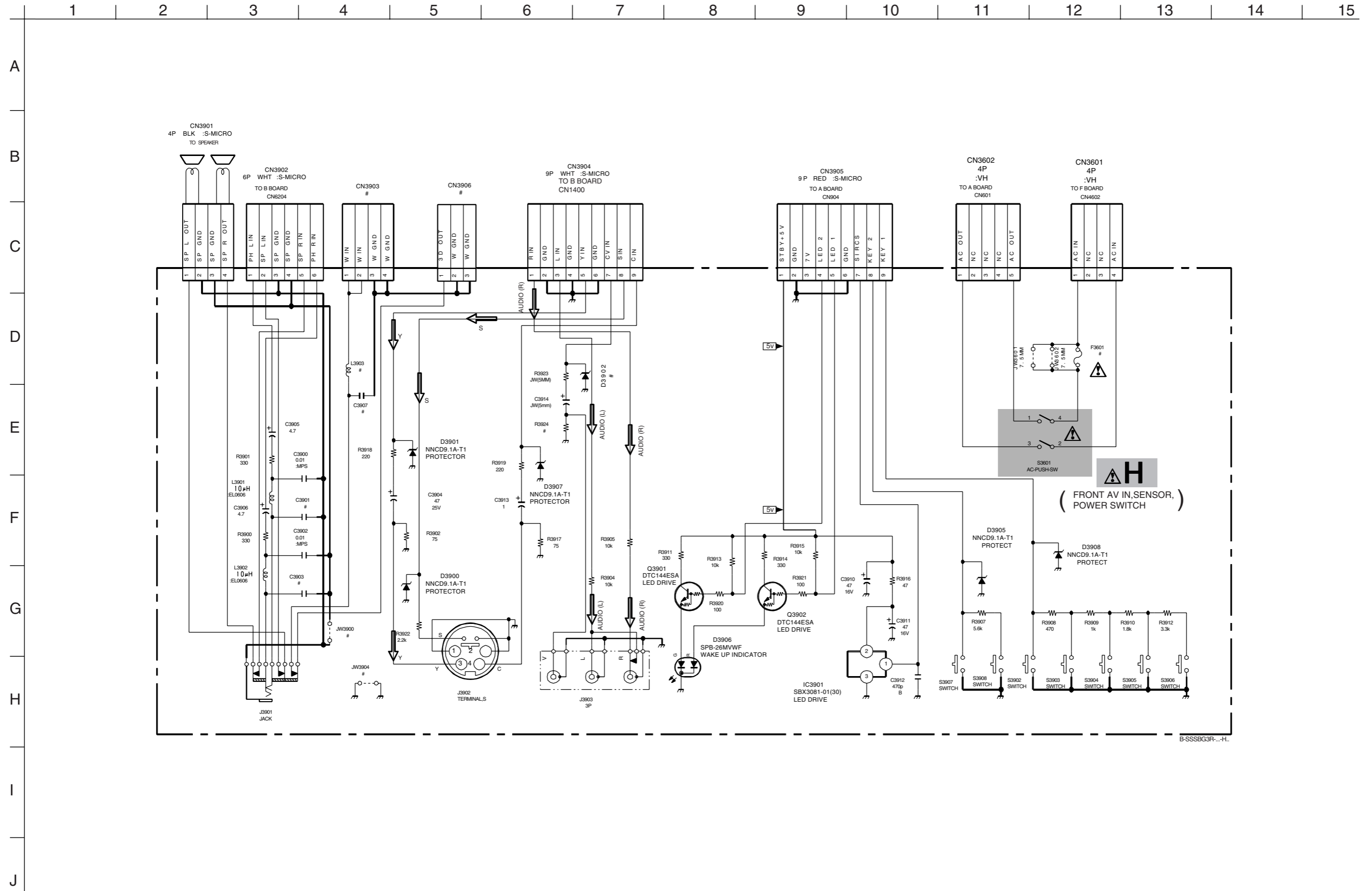
(4) Schematic Diagrams of B1 and D3 (KV-XA29M31/XA29M50/XA29M61) Boards



(5) Schematic Diagrams of C6 and V1 Boards (KV-XA29M31/XA29M61/XA34M31)

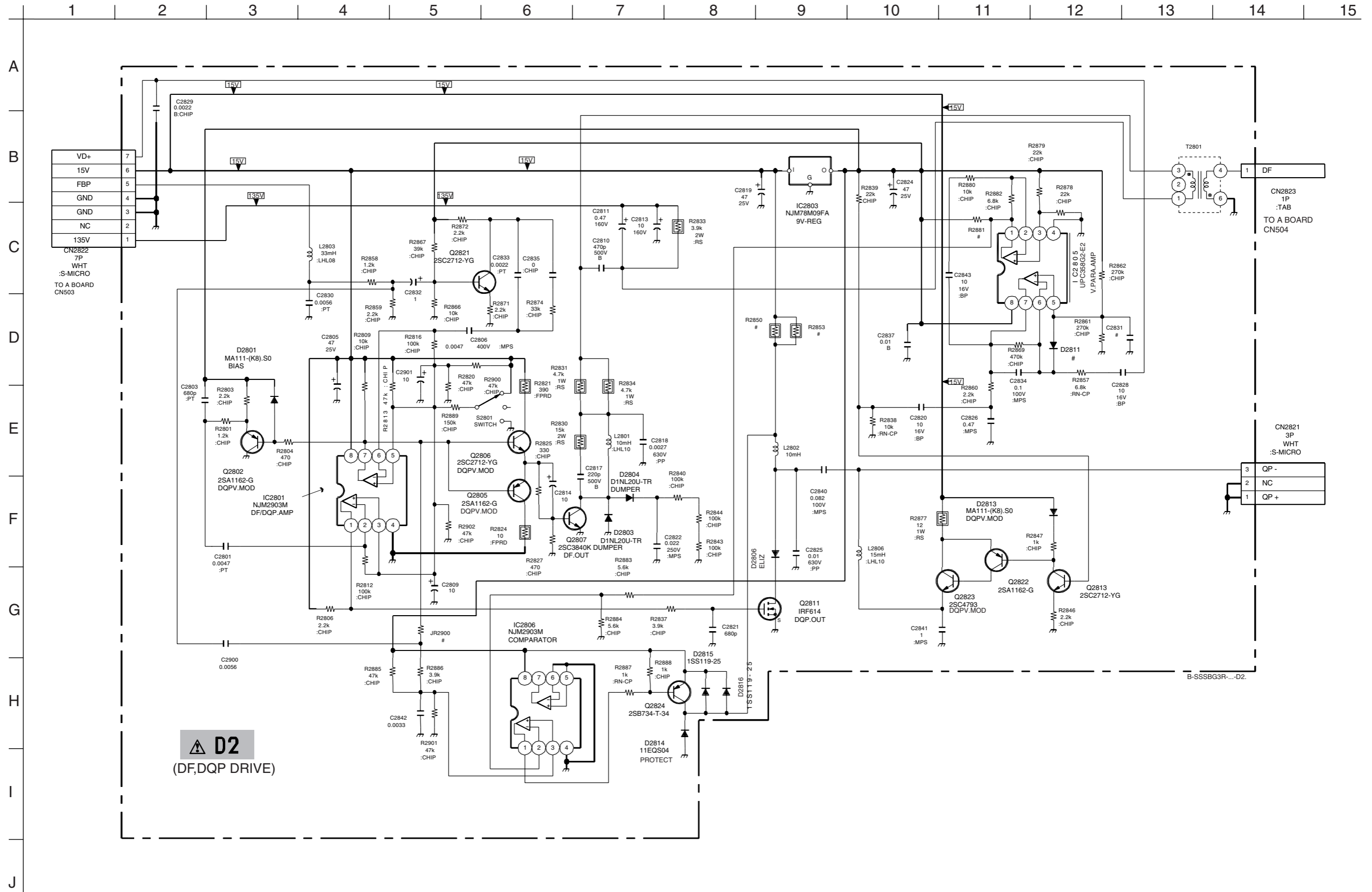


(6) Schematic Diagram of H Board



B-SSSBG3FR...-H.

(7) Schematic Diagram of D2 Board (KV-XA34M31)



6-4 A AND B BOARD \* MARK LIST

A BOARD

	KV-XA29M31	KV-XA29M50	KV-XA29M61	KV-XA34M31
C316	220	220	200	47
C321	0.22 :CHIP	0.22 :CHIP	0.22 :CHIP	#
C504	#	#	#	680P :CHIP
C507	4700P	4700P	4700P	220P :CHIP
C510	330P :CHIP	330P	330P	0.001 :CHIP
C513	330P :CHIP	330P	330P	0.01 :CHIP
C523	680P :CHIP	680P :CHIP	680P :CHIP	1000P :CHIP
C538	0.019 :PP	0.019 :PP	0.019 :PP	0.023 :PP
C539	0.056 :PP	0.056 :PP	0.056 :PP	0.051 :PP
C543	#	#	#	680P :CHIP
C554	0.0047 :PT	0.0047 :PT	0.0047 :PT	0.0056 :PT
C561	0.0022 :PP	0.0022 :PP	0.0022 :PP	0.0027 :PP
C563	0.1 :CHIP	0.1 :CHIP	0.1 :CHIP	0.01 :CHIP
C567	0.68 :PP	0.68 :PP	0.68 :PP	0.75 :PP
C570	1.0 :PP	1.0 :PP	1.0 :PP	1.8 :PP
C572	0.15 :PP	0.15 :PP	0.15 :PP	0.22 :PP
C577	0.15 :PP	0.15 :PP	0.15 :PP	0.23 :PP
C582	0.1 :PP	0.1 :PP	0.1 :PP	#
C584	100P :CHIP	100P :CHIP	100P :CHIP	#
C586	100P :CHIP	100P :CHIP	100P :CHIP	0 :CHIP
C624	2200P	2200P	2200P	1500P
C630	100	100	100	560
C632	2200	2200	2200	3300
C634	100	100	100	220
C659	680P :CHIP	680P :CHIP	680P :CHIP	330P :CHIP
CN301	7P	#	7P	7P
CN307	7P	#	7P	7P
CN501	1P	1P	1P	#
CN502	1P	1P	1P	#
CN508	#	#	#	1P :TAB
CN509	#	#	#	1P :TAB
CN510	#	#	#	4P
D100	1SS355TE-17	#	1SS355TE-17	1SS355TE-17
D315	#	#	#	1SS355TE-17
D316	RD7.5SB1-T1	RD7.5SB1-T1	RD7.5SB1-T1	RD9.1S-B
D509	10K :CHIP	10K :CHIP	10K :CHIP	RD5.6S-B
D517	RS3FS	RS3FS	RS3FS	ERC06-15S
D519	RS3FS	RS3FS	RS3FS	ERC06-15S
D520	#	#	#	1SS355TE-17
D521	EL1Z	EL1Z	EL1Z	D2L20U
D523	EL1Z	EL1Z	EL1Z	D2L20U
D534	1SS355TE-17	1SS355TE-17	1SS355TE-17	0 :CHIP
IC100	S-80743 AL-47-S	#	S-80743 AL-47-S	S-80743 AL-47-S
JR107	0 :CHIP	#	0 :CHIP	0 :CHIP
JR109	#	0 :CHIP	#	#
JR400	#	#	#	0 :CHIP
JW100	#	15.0 MM	#	#
L512	#	#	#	1MMH
L513	1.5MMH	1.5MMH	1.5MMH	1MMH
Q511	2SD2578-CA	2SD2578-CA	2SD2578-CA	2SC4927-01
Q603	UN2111	UN2111	UN2111	DTA114EKA-T146
R028	10K :CHIP	#	10K :CHIP	10K :CHIP
R101	100 :CHIP	#	100 :CHIP	100 :CHIP

	KV-XA29M31	KV-XA29M50	KV-XA29M61	KV-XA34M31
R102	100 :CHIP	#	100 :CHIP	100 :CHIP
R336	#	#	#	1K :CHIP
R345	22K :CHIP	22K :CHIP	22K :CHIP	10K :CHIP
R350	3.3K :CHIP	3.7K :CHIP	3.3K :CHIP	2.2K :CHIP
R351	1.5K :CHIP	1.5K :CHIP	1.5K :CHIP	1.0K :CHIP
R375	100 :CHIP	#	100 :CHIP	100 :CHIP
R505	100K :CHIP	100K :CHIP	100K :CHIP	470K :CHIP
R506	22K :CHIP	22K :CHIP	22K :CHIP	18K :CHIP
R508	27 :RS	27 :RS	27 :RS	47 :RS
R509	56 :RS	56 :RS	56 :RS	82 :RS
R510	56 :RS	56 :RS	56 :RS	39 :RS
R511	33 :RS	33 :RS	33 :RS	6.8 :RS
R515	100 :RS	100 :RS	100 :RS	1.0 :RS
R519	220 :RS	220 :RS	220 :RS	12 :RS
R525	470 :CHIP	470 :CHIP	470 :CHIP	IM :CHIP
R526	8.2K :CHIP	8.2K :CHIP	8.2K :CHIP	7.5K :CHIP
R532	#	#	#	10K :CHIP
R542	10K :CHIP	10K :CHIP	10K :CHIP	100K :CHIP
R544	1K :RS	1K :RS	1K :RS	820 :RS
R549	20K :RN	20K :RN	20K :RN	18K :RN
R551	100K	2.2K	100K	2.2K
R557	#	#	#	0.22 :RS
R564	39K :CHIP	39K :CHIP	39K :CHIP	47K :CHIP
R565	10K :CHIP	10K :CHIP	10K :CHIP	3.3K :CHIP
R567	220K :CHIP	220K :CHIP	220K :CHIP	#
R571	8.2K :RN	8.2K :RN	8.2K :RN	7.5K :RN
R573	27K :CHIP	27K :CHIP	27K :CHIP	#
R581	2.2K :CHIP	2.2K :CHIP	2.2K :CHIP	4.7K :CHIP
R582	#	#	#	0 :CHIP
R583	#	1.5M :CHIP	#	1.5M :CHIP
R585	2.2	2.2	2.2	1.0
R587	47K :CHIP	47K :CHIP	47K :CHIP	620K :CHIP
R588	220 :RS	220 :RS	220 :RS	100 :RS
R589	220 :RS	220 :RS	220 :RS	100 :RS
R592	39K :CHIP	39K :CHIP	39K :CHIP	100K :CHIP
R595	10K :CHIP	10K :CHIP	10K :CHIP	#
R596	680 :RS	680 :RS	680 :RS	820 :RS
R601	1.8K	1.8K	1.8K	1K
R615	1.0 :RS	1.0 :RS	1.0 :RS	0.56 :RS
R654	#	#	#	1.0 :RS
TU101	BTF-WG441	BTF-LG433	BTF-WG441	BTF-WG441

Note) The parts indicated as "#" in this circuit diagram are not listed here, as they are not used for these models.

B BOARD

	KV-XA29M31	KV-XA29M50	KV-XA29M61	KV-XA34M31
C6244	0.0047 B :CHIP	0.0047 B :CHIP	0.0047 B :CHIP	0.0068 B :CHIP
C6245	0.0047 B :CHIP	0.0047 B :CHIP	0.0047 B :CHIP	0.0068 B :CHIP
R1343	1.0K :CHIP	1.0K :CHIP	1.0K :CHIP	#

6-5 VOLTAGE MEASUREMENTS (For KV-XA29M31/XA29M50/XA29M61)

A (1/2) BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
IC001	1	0	IC003	1	0		49	5.3(4.3)
	2	4.9		2	0		50	0
	3	0.7		3	0		51	0
	4	4.9		4	0		52	2.9
	5	4.9		5	4.9	IC302	1	0.9(1.6)
	6	0		6	4.9		2	0
	7	3.9		7	0		3	1.3
	8	4.8		8	4.9		4	0
	9	0.5	IC100	1	4.9		5	4.9(1.7)
	10	4.8		2	4.9		6	4.9
	11	4.9		3	0		7	1.1[0]
	12	0	IC301	1	3.3		8	0[0.6]
	13	2.2		2	5.0		9	0.6(0)
	14	2.1		3	5.5[6.3]<4.8>		10	4.8(1.1)
	15	4.9		4	5.0		11	0.1(4.9)
	16	4.9		5	4.9		12	1.4(4.9)
	17	0		6	4.32		13	0
	18	4.9(0)		7	1.8		14	1.7[0]
	19	2.7[2.1]		8	3.7		15	0
	20	2.7		9	4.7		16	1.7(0.9)
	21	4.9		10	3.8	IC502	1	0.9
	22	0		11	5.0		2	3.6
	23	4.9		12	0		3	1.7
	24	0.6		13	3.7		4	0
	25	4.9		14	2.4		5	2.9
	26	4.9		15	3.6		6	2.4
	27	4.8		16	3.5		7	6.9
	28	4.9	17	5.4	8		8.8	
	29	0	18	7.7	IC503	1	1.6	
	30	0	19	0.8		2	13.2	
	31	0	20	3.6		3	13.4	
	32	0	21	3.1		4	14.7	
	33	4.9	22	3.9		5	0.3	
	34	0	23	2.9<3.6>		6	13.3	
	35	0	24	1.5		7	1.6	
	36	2.5	25	1.5	IC601	1	1.9	
	37	2.5	26	1.5		2	0.1	
	38	4.8[5.0]	27	0		3	288.5	
	39	4.9	28	4.5		4	17.0	
	40	0[0.1]	29	4.5		5	0	
	41	0.4	30	4.5	IC602	1	122.4	
	42	0.9	31	8.8		2	135.1	
	43	0[0.1]	32	4.1		3	0	
	44	4.9	33	4.1	IC603	I	7.5[12.36]	
	45	4.9	34	3.6		3	3.8	
	46	4.4	35	8.7		4	17.0	
	47	4.9	36	4.4	PH600	1	129.1	
	48	4.4	37	4.5		2	128.1	
	49	0	38	4.6		3	3.8	
	50	2.7	39	4.6		4	17.0	
	51	0.1	40	5.1	Q002	B	0	
	52	4.7(0.1)	41	5.1		C	4.9	
IC002	1	0	42	0		E	0	
	2	4.9	43	5.0				
	3	4.9	44	4.9				
	4	7.2	45	8.6				
	5	4.9	46	5.0				
	6	0	47	8.7				
	7	0	48	2.1(0.2)				

A (2/2) BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
Q101	B	2.8	Q311	B	0	Q509	B	0.6
	C	8.8		C	8.9		C	0.1
	E	2.2		E	0		E	0
Q301	B	12.4	Q313	B	0	Q511	B	-0.1
	C	0		C	12.2		C	123.1
	E	12.2		E	0		E	122.9(0)
Q302	B	1.7	Q314	B	0.5	Q600	B	0
	C	8.1		C	0		C	12.4
	E	1.1		E	1.1		E	0
Q303	B	8.1	Q315	B	0	Q601	B	-0.8
	C	1.8		C	1.6		C	-0.5
	E	8.7		E	0		E	-0.7
Q304	B	3.6	Q316	B	0(4.0)	Q602	B	0
	C	0		C	0		C	16.
	E	4.3		E	4.7		E	0
Q305	B	0(8.1)	Q501	B	3.5	Q603	B	16.9
	C	1.9(1.5)		C	0		C	0
	E	8.7		E	4.0		E	17.0
Q306	B	1.7	Q502	B	4.2	Q604	B	133.9
	C	8.1		C	2.4		C	0
	E	1.1		E	4.0		E	133.9
Q307	B	4.3	Q503	B	0	Q605	D	391.8
	C	8.7		C	3.6		G	112.7
	E	3.7		E	0		S	112.4
Q308	B	3.5	Q505	D	16.4	Q606	B	113.2
	C	0.5		G	6.9		C	113.2
	E	0.8		S	0		E	112.3
Q309	B	4.8(0)	Q506	B	-0.6	Q607	B	0.8
	C	0(4.9)		C	90.2		C	0.1
	E	0		E	0		E	0
Q310	B	2.1(0)[0.2]	Q507	B	12.7	Q608	B	0
	C	4.9		C	0(0.4)		C	0.8
	E	1.2(0)		E	13.2		E	0

B1 BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
IC1502	1	3.1	Q1502	B	2.3	Q1511	B	0.7
	2	3.0		C	2.3		C	0.7
	3	3.2		E	2.5		E	0
	4	4.6	Q1503	B	0.6	Q1514	B	0.6
	5	4.6		C	0.6		C	0.6
	6	0		E	0.6		E	0.6
	7	0	Q1505	B	0.6	Q1515	B	0.6
	8	0		C	0.8		C	0.6
	9	8.1		E	0		E	0.6
	10	7.9	Q1507	B	0.7	Q1516	B	0.5
	11	7.9		C	0.8		C	0.5
	12	7.6		E	0.7		E	0.5
	13	7.6	Q1509	B	0.8	Q1520	B	0.5
	14	7.3		C	0.8		C	0.4
	15	7.6		E	0		E	0
	Q1501	B	2.5	Q1510	B	0.7	Q1522	B
2.4			C		0.7	C		0
2.4			E		0	E		0.5
						Q1523	B	0.4
						C	0	
						E	0.5	

B (1/2) BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
IC1401	1	3.9	IC1404	I	12.1	IC3205	1	0.1
	2	3.9		G	0		2	0.1
	3	3.9		O	8.8		3	8.7
	4	3.9	IC3200	1	4.4		4	0.4
	5	3.9		2	4.4		5	0.4
	6	8.1		3	4.4		6	0.4
	7	3.9		4	0		7	0.4
	8	3.9		5	4.4		8	0
	9	3.9		6	4.4		9	2.2
	10	3.9		7	4.4		10	2.3
	11	3.9		8	8.8		11	0
	12	8.1	IC3201	1	0.1		12	0
	13	3.9		2	0.1		13	8.8
	14	3.9		3	8.8		14	4.5
	15	3.9		4	4.4		15	4.4
	16	3.9		5	4.4		16	8.8
	17	3.9		6	4.4	IC3206	1	0
	18	8.1		7	4.4		2	0
	19	4.4		8	0		3	0(0.1)
	20	4.4	9	4.4	4		4.4	
	21	0	10	4.4	5		0(4.4)	
	22	3.9	11	4.4	6		4.4	
	23	3.8	12	4.4	7		4.4	
	24	3.9	13	4.4	8		4.4	
	25	3.8	14	4.4	9		4.4	
	26	3.9	15	4.4	10		4.4	
	27	3.8	16	4.4	11		4.4	
	28	3.9	IC3202	1	4.4		12	4.4
	29	3.8		2	4.4	13	0(1.6)	
	30	3.8		3	4.3	14	2.0	
	31	3.9		4	0	15	8.8	
	32	3.9		5	4.3	16	0.1	
	33	3.8		6	4.4	17	4.4	
	34	0		7	4.4	18	4.4	
	35	3.8		8	8.8	19	2.0	
	36	0	IC3203	1	4.4	20	1.6[0.1]	
	37	3.8		2	4.4	21	4.4	
	38	3.9		3	4.4	22	4.4	
	39	3.9		4	4.4	23	4.4	
	40	3.8		5	8.7	24	0(4.4)	
	41	3.8		6	0.4	25	4.4	
	42	4.0		7	0	26	4.4	
	43	3.7		8	0.3	27	4.4	
	44	8.8		9	0.3	28	4.4	
	45	3.8		10	0.3	29	4.4	
	46	3.8		11	0.3	30	4.4	
	47	3.8		12	0.3	31	3.1	
	48	3.8	13	8.7	32	4.4		
IC1402	1	4.8	14	8.8	IC6200	1	1.6	
	2	2.4	IC3204	1		4.4	2	0
	3	2.4		2		4.4	3	0
	4	0		3		4.2	4	0
	5	2.4		4		0	5	1.6
	6	2.4		5		4.3	6	9.8
	7	4.9		6	4.4			
	8	9.0		7	4.4			
				8	8.8			
IC1403	I	7.4						
	G	0						
	O	8.8						

B (2/2) BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
	7	13.6	Q1372	B	2.4	Q1409	B	2.4
	8	5.0		C	8.8		C	5.6
	9	28.9		E	1.8		E	1.8
	10	0	Q1401	B	3.8	Q1410	B	3.8
	11	4.1		C	8.8		C	8.7
	12	13.2		E	3.1		E	3.2
Q1316	B	8.2	Q1402	B	3.8	Q3201	D	4.2
	C	4.9		C	0		G	39
	E	8.8		E	4.4		S	4.2
Q1317	B	4.9	Q1403	B	3.7	Q3203	B	4.0
	C	8.8		C	8.8		C	8.6
	E	4.3		E	3.1		E	3.5
Q1318	B	3.1	Q1404	B	3.8	Q3204	D	4.2
	C	6.9		C	8.8		G	3.9
	E	2.4		E	3.1		S	4.3
Q1323	B	4.9(2.7)	Q1405	B	3.9	Q6201	B	0
	C	8.8		C	5.6		C	4.1
	E	4.3(2.1)		E	3.2		E	0
Q1324	B	6.9	Q1406	B	3.9	Q6203	B	0
	C	8.8		C	5.6		C	0
	E	6.3		E	3.2		E	0
Q1365	B	3.1	Q1408	B	5.6	Q6204	B	0
	C	6.3		C	8.8		C	0
	E	2.4		E	5.0		E	0
						Q6208	B	0
							C	9.7
							E	0

D3 BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No.	Voltage[v]
IC2800	I	13.3	Q2800	B	0.3
	G	0		C	0.3
	O	9.1		E	0
IC2801	1	4.5	Q2801	B	0.3
	2	4.5		C	1.9
	3	4.5		E	0
	4	0	Q2802	B	13.3
	5	0.5		C	13.3
	6	0.5		E	13.3
	7	7.9	Q2803	B	12.7
	8	9.1		C	13.3
				E	13.3
			Q2804	B	2.1
				C	12.7
				E	1.5

C6 BOARD VOLTAGE LIST

Ref	Pin No	Voltage(V)	Ref	Pin No	Voltage(V)
IC1800	1	4.8	Q708	B	159.1(161)[162.5]<152.7>
	2	4.7		C	4.2(3.6)[3.4]<5.0>
	3	5.6		E	155.2(156.5)[158.2]<148.7>
	4	5.6	Q709	B	162.6[165.7]<155.9>
	5	0		C	3.4[3.2]<4.6>
	6	5.8		E	158.5(160.1)[162.1]<151.8>
	7	5.8	Q710	B	1.5<1.7>
	8	7.2		C	8.3
	9	7.2		E	1.2
	10	12.7	Q711	B	1.6(1.5)
Q701	B	157.8[161.1]<152.1>		C	8.3
	C	202.5[202.3]		E	1.2(1.1)
	E	158.3[161.3]<152.3>	Q712	B	1.5(1.4)
Q702	B	158.8(160.9) [162.4]<153.2>		C	8.3
	C	202.6[202.4]		E	1.1
	E	158.6(160)[162.4]<152.7>	Q714	B	0.7(0.5)
Q703	B	162.8(164) [166.1]<155.8>		C	0.2(0)
	C	202.4		E	0<0.1>
	E	163.1[165.7]<155.9>	Q1800	B	3.9
Q704	B	8.9[8.7]		C	0
	C	156.4(158.3)[160.3]<150.7>		E	4.6
	E	8.3[8.1]	Q1802	B	0.5
Q705	B	8.9		C	2.0
	C	158.8(161)[162.4]<152.8>		E	0
	E	8.3	Q1803	B	0
Q706	B	8.9(8.6)		C	4.9
	C	162.8[166.1]<155.7>		E	0
	E	8.3(8.1)	J701	KR	16.1[162.4]<152.5>
Q707	B	159.1[161.2]<152.5>		KG	156[158.7]<149.3>
	C	3.9[4.7]<3.2>		KB	156[157.8]<149.8>
	E	155.1[157.9]<148.6>		HI	0
			G2	301.1(303.6)[305.5]<298.6>	

VM1 BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No.	Voltage[v]
Q5901	B	2.6	Q5906	B	0
	C	8.8		C	0.2
	E	2.0		E	0
Q5902	B	0.5	Q5907	B	0.8
	C	0.1		C	0
	E	0.5		E	0
Q5903	B	2.6	Q5908	B	4.3
	C	4.6		C	0
	E	2.0		E	0
Q5904	B	4.6	Q5909	B	0
	C	0		C	8.8
	E	5.0		E	4.3
Q5905	B	5.6			
	C	8.8			
	E	5.0			

H BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]
IC3901	1	4.9
	2	4.9
	3	0
Q3901	B	0.1
	C	4.9
	E	0.1
Q3902	B	4.7
	C	2.2
	E	1.8

V1 BOARD VOLTAGE LIST (KV-XA29M31 and KV-XA29M61 only)

Ref	Pin No	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
IC801	1	0.4		27	0	Q801	B	0
	2	4.9		28	0		C	4.9
	3	0.4		29	0.4		E	0
	4	0.4		30	2.0	Q803	B	0
	5	4.9		31	2.0		C	0
	6	4.9		32	0		E	0.6
	7	0		33	0	Q805	B	0.4
	8	0		34	0		C	0.9
	9	4.8		35	0		E	0
	10	0		36	0.9	Q806	B	0
	11	2.4		37	0.1		C	4.9
	12	2.3		38	4.9		E	0
	13	0		38	4.9	Q807	B	0
	14	4.9		39	4.9		C	4.9
	15	4.9		40	0		E	0
	16	0.2		41	2.3	Q808	B	0
	17	0.9		42	2.4		C	4.9
	18	0		43	0		E	0
	19	0		44	4.8	Q810	B	0.2
	20	0.5		45	0		C	4.0
	21	0.5		46	0		E	0
	22	0		47	4.9	Q811	B	5.5
	23	2.2		48	0		C	6.3
	24	0.5		49	4.4		E	4.9
	25	2.0		50	4.5	Q817	B	2.8
	26	2.4		51	0		C	0.1
		52	0	E	0			

**VOLTAGE MEASUREMENTS (For KV-XA34M31)**

A (1/2) BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
IC001	1	0	IC003	1	0		49	5.3(4.3)
	2	4.8		2	0		50	0
	3	0.5		3	0		51	0
	4	4.9		4	0		52	3.0
	5	4.9		5	4.9	IC302	1	0.9
	6	4.9		6	4.9		2	0
	7	3.8		7	0		3	1.2
	8	4.8		8	4.9		4	0
	9	0.5	IC100	1	4.9[0]		5	4.8
	10	4.8		2	4.9		6	4.8
	11	4.9		3	0		7	1.0
	12	0	IC301	1	3.3<3.8>		8	0
	13	2.2		2	5.0		9	0.7
	14	2.1		3	1.5		10	4.8(0)
	15	4.9		4	5.0		11	0[4.9]
	16	4.9		5	4.8		12	1.4
	17	0		6	4.3		13	0
	18	4.9[0]		7	1.8(1.6)		14	1.6
	19	1.9[2.6]		8	3.7		15	0
	20	2.5		9	4.6		16	1.7
	21	4.9		10	3.8	IC502	1	1.3
	22	0		11	5.0		2	5.9
	23	4.9		12	0		3	1.2
	24	4.9		13	3.9		4	0
	25	4.9		14	2.4		5	2.5
	26	4.9		15	3.5		6	1.6
	27	4.8		16	3.5		7	6.5
	28	4.9	17	5.4	8		8.9	
	29	0	18	7.7	IC503	1	1.5	
	30	0	19	0.8		2	13.1	
	31	0	20	3.6		3	-13.4	
	32	0	21	3.4		4	-14.8	
	33	4.9	22	3.9		5	0.2	
	34	0	23	3.4		6	13.3	
	35	0	24	1.7		7	1.5	
	36	2.4	25	1.7	IC601	1	2.0	
	37	2.5	26	1.6		2	0.1	
	38	4.9	27	0		3	272.1(294.8)	
	39	5.0	28	4.5		4	16.8	
	40	0.1	29	4.5		5	0	
	41	0.3	30	4.5	IC602	1	122.3	
	42	0.3	31	8.8		2	135.2	
	43	0.1	32	4.1		3	0	
	44	5.0	33	4.1	IC603	I	12.3	
	45	5.1	34	3.6		G	0	
	46	4.5	35	8.7		O	8.9	
	47	5.1	36	4.4	IC604	I	7.4	
	48	4.6	37	4.4		G	0	
	49	0.1	38	4.6		O	5.0	
	50	2.2	39	4.7	PH600	1	129.2	
	51	0.1	40	5.1		2	128.2	
	IC002	1	4.8[0.1]	41		5.1	3	3.4
42				0		4	16.8	
43				5.0				
44				4.9				
45				6.9(7.4)				
46				5.0				
47				8.7				
48				2.1(0.2)				

A (2/2) BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
Q003	B	0	Q311	B	0	Q509	B	0.6
	C	4.9		C	8.9		C	0.1
	E	0		E	0		E	0
Q101	B	2.8(2.0)	Q313	B	0	Q511	B	-0.2
	C	8.8		C	11.9[12.1]		C	100.1(122.8)
	E	2.2(2.6)		E	0		E	0.1
Q301	B	12.2	Q314	B	0.5	Q600	B	0
	C	0		C	0		C	12.3
	E	12.0		E	1.0		E	0
Q302	B	1.7	Q315	B	0	Q601	B	0.7
	C	8.1		C	2.0<2.3>		3C	0.4
	E	1.1		E	0		E	0.7
Q303	B	8.1	Q316	B	4.1	Q602	B	0.2
	C	1.8		C	0		C	16.8
	E	8.7		E	4.7(5.0)		E	0
Q304	B	3.6	Q501	B	3.5	Q603	B	16.8
	C	0		C	0		C	3.4
	E	4.3		E	4.0		E	16.8
Q305	B	8.1	Q502	B	4.3	Q604	B	134.0
	C	1.7		C	1.6		C	0.1
	E	8.7		E	4.0		E	134.5
Q306	B	1.6	Q503	B	0.1	Q605	D	394.7(397.4)
	C	8.1		C	3.6		G	[388.6]
	E	1.0		E	0		S	111.8(112.3)
Q307	B	4.3	Q505	D	15.6	Q606	B	112.3<111.8>
	C	8.7		G	6.5		C	112.8<111.8>
	E	3.7		S	0		E	111.7<10.8>
Q308	B	3.6	Q506	B	-0.8	Q607	B	0.7
	C	0.5		C	91.3		C	0
	E	0.8		E	0		E	0
Q309	B	4.8[0]	Q507	B	12.6	Q608	B	0
	C	0[4.9]		C	0.5		C	0.7
	E	0		E	13.1		E	0
Q310	B	2.0(0.2)						
	C	4.9						
	E	0(1.2)						

B (1/2) BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
IC1401	1	3.9	IC1403	I	7.3		6	4.3
	2	3.9		G	0		7	4.3
	3	3.9		O	5.0		8	8.7
	4	3.9	IC1404	I	11.9	IC3205	1	8.2
	5	3.9		G	0		2	0.1
	6	3.1(8.1)		O	8.8		3	0.4
	7	3.9	IC3200	1	4.4		4	0.4
	8	3.9		2	4.4		5	0.4
	9	3.9		3	4.4		6	0.4
	10	3.9		4	0		7	0.4
	11	3.9		5	4.4		8	0
	12	8.1		6	4.4		9	2.2
	13	3.9		7	4.4		10	2.2
	14	3.9		8	8.7		11	0
	15	3.9	IC3201	1	0.1		12	0
	16	0(3.9)		2	8.2		13	8.7
	17	3.9		3	8.7		14	2.2
	18	3.1(8.1)		4	4.4		15	4.4
	19	4.4		5	4.4		16	0(8.7)
	20	4.5		6	4.4	IC3206	1	0
	21	0		7	4.4		2	0
	22	3.9		8	0		3	0
	23	3.9	9	4.4	4		4.4	
	24	3.9	10	4.4	5		4.3	
	25	3.9	11	4.4	6		4.4	
	26	3.9	12	4.4	7		4.4	
	27	3.9	13	4.4	8		4.4	
	28	3.9	14	4.4	9		4.4	
	29	3.8	15	4.4	10		4.4	
	30	3.8	16	4.4	11		4.3	
	31	3.9	IC3202	1	4.4		12	4.4
	32	3.9		2	4.4		13	1.7
	33	3.9		3	4.3		14	1.4
	34	0		4	0		15	8.7
	35	3.9		5	4.3		16	0
	36	0		6	4.4	17	4.4	
	37	3.8		7	4.4	18	4.5	
	38	3.9		8	8.7	19	1.9	
	39	3.9	IC3203	1	4.4	20	1.7	
	40	3.8		2	4.4	21	4.4	
	41	3.8		3	4.4	22	4.3	
	42	3.9		4	4.4	23	0(4.3)	
	43	3.8		5	0.4	24	0(4.3)	
	44	3.8(8.8)		6	0.2	25	0(4.3)	
	45	3.8		7	0	26	4.4	
	46	3.9		8	0.2	27	4.3	
	47	3.8	9	0.2	28	0(4.3)		
	48	3.9	10	0.2	29	4.3		
IC1402	1	4.9	11	0.2	30	4.4		
	2	2.4	12	0.2	31	4.0		
	3	2.4	13	0.4	32	4.3		
	4	0	14	8.7				
	5	2.4	IC3204	1	4.3			
	6	2.4		2	4.3			
	7	0(4.9)		3	4.3			
	8	8.8		4	0			
			5	4.3				

B (2/2) BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
IC6200	1	1.6	Q1365	B	3.1	Q1409	B	2.4
	2	0		C	6.4		C	5.8
	3	0		E	2.5		E	1.8
	4	0	Q1372	B	2.4	Q1410	B	3.8
	5	1.6		C	8.8		C	8.7
	6	9.3		E	1.8		E	3.2(3.8)
	7	12.6	Q1401	B	3.8	Q3201	D	4.2
	8	5.2		C	8.8		G	3.9
	9	27.6		E	3.2		S	4.2
	10	0	Q1402	B	3.8	Q3203	B	3.9
	11	4.3		C	0		C	8.5
	12	12.2		E	4.5		E	3.4
Q1316	B	8.2	Q1403	B	3.7	Q3204	D	4.2
	C	4.4		C	8.8		G	3.9
	E	8.8		E	3.1		S	4.3
Q1317	B	4.4	Q1404	B	3.9	Q6201	B	0
	C	8.8		C	8.8		C	4.3
	E	3.7		E	3.2		E	0
Q1318	B	3.1	Q1405	B	3.9	Q6203	B	0
	C	6.9		C	5.5		C	0
	E	2.4		E	3.3		E	0
Q1323	B	2.7	Q1406	B	3.9	Q6204	B	0
	C	8.2		C	5.6		C	0
	E	2.0		E	3.3		E	0
Q1324	B	6.9	Q1408	B	5.8	Q6208	B	0
	C	0(8.8)		C	8.8		C	9.2
	E	6.2		E	5.1		E	0

C6 BOARD VOLTAGE LIST

Ref	Pin No	Voltage(V)	Ref	Pin No	Voltage(V)	Ref	Pin No	Voltage(V)
IC1800	1	6.5	Q703	B	151.3<145.3>	Q710	B	1.6
	2	6.5		C	206.3		C	8.3
	3	6.5		E	152.9<146.4>		E	1.2[1.4]
	4	6.4	Q704	B	8.9	Q711	B	1.8
	5	0		C	154.2(151.0)		C	8.2
	6	6.4	E	8.3	E	1.4		
	7	6.4	Q705	B	8.9	Q712	B	1.6
	8	6.4		C	153.4(148.7)		C	8.3
	9	6.4		E	8.3		E	1.3
	10	12.6	Q706	B	8.9	Q714	B	0.7
J701	KR	152.8<146.9>		C	152.4<144.1>		C	0.1[0.2]
	KG	148.5<142.8>		E	8.3		E	0
	KB	154.8[151.4]<147.8>	Q707	B	1155.6<148.8>	Q1800	B	3.8
HI	0.35	C		5.4	C		0	
G2	284.0(284.8)	E		155.8<145.5>	E		4.5	
Q701	B	154.2[150.7]	Q708	B	151.3[146.6]	Q1802	B	0.4
	C	206.3		C	6.0		C	3.4
	E	157.1(152.1)		E	150.3(148.1)		E	0
Q702	B	151.2(148.6)<148.5>	Q709	B	154.1<145.7>	Q1803	B	0
	C	206.4		C	5.4		C	6.5
	E	151.3(148.5)		E	153.7(150.4)<144.5>		E	0

VM1 BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
Q5901	B	2.7	Q5904	B	4.6	Q5907	B	0
	C	8.8		C	0		C	0.7
	E	2.0		E	5.1		E	0
Q5902	B	-0.7	Q5905	B	5.6	Q5908	B	3.8
	C	-0.4		C	8.8		C	0
	E	-0.8		E	5.1		E	0
Q5903	B	2.7	Q5906	B	0	Q5909	B	0
	C	4.6		C	0.5		C	8.8
	E	2.0		E	0		E	3.8

D2 BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]	Ref	Pin No.	Voltage[v]
IC2801	1	5.7	Q2806	B	1.6
	2	6.3		C	8.1
	3	6.3		E	1.6
	4	0	Q2805	B	1.6
	5	6.4		C	0
	6	6.3		E	1.6
	7	0	Q2807	B	1.4
	8	14.8		C	0
		E		0	
IC2805	1	0	Q2811	B	5.7
	2	0		C	0
	3	0		E	5.5
	4	0	Q2813	B	2.3
	5	4.4		C	12.0
	6	4.4		E	1.8
	7	4.4	Q2822	B	11.5
	8	4.4		C	12.1
		E		3.3	
Q2802	B	1.6	Q2823	B	3.3
	C	0		C	12.1
	E	2.3		E	2.7

H BOARD VOLTAGE LIST

Ref	Pin No	Voltage[v]
IC3901	1	4.8
	2	4.8
	3	0
Q3901	B	0.2
	C	5.0
	E	0.2
Q3902	B	4.7
	C	2.1
	E	1.8

V1 BOARD VOLTAGE LIST

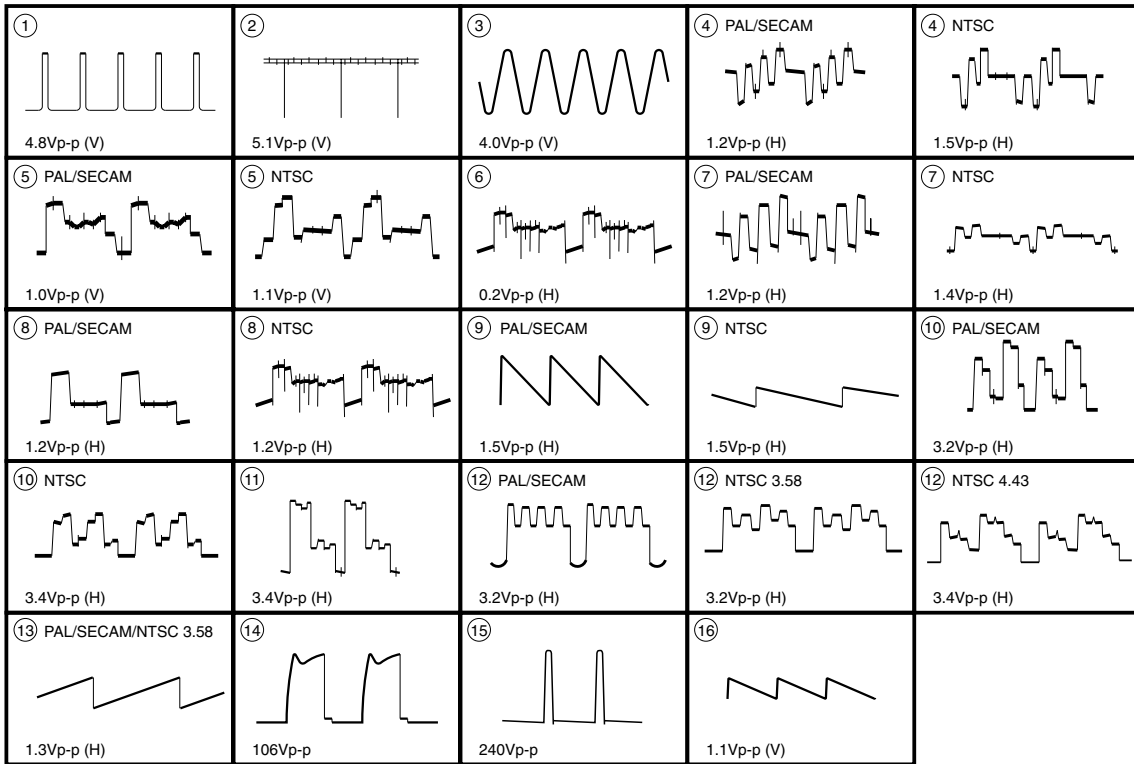
Ref	Pin No	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
IC801	1	0.4		27	0	Q801	B	0
	2	4.9		28	0		C	4.9
	3	0.4		29	0.4		E	0
	4	0.4		30	2.0	Q803	B	0
	5	4.9		31	2.0		C	0
	6	4.9		32	0		E	0.6
	7	0		33	0	Q805	B	0.4
	8	0		34	0		C	0.9
	9	4.8		35	0		E	0
	10	0		36	0.9	Q806	B	0
	11	2.4		37	0.1		C	4.9
	12	2.3		38	4.9		E	0
	13	0		38	4.9	Q807	B	0
	14	4.9		39	4.9		C	4.9
	15	4.9		40	0		E	0
	16	0.2		41	2.3	Q808	B	0
	17	0.9		42	2.4		C	4.9
	18	0		43	0		E	0
	19	0		44	4.8	Q810	B	0.2
	20	0.5		45	0		C	4.0
	21	0.5		46	0		E	0
	22	0		47	4.9	Q811	B	5.5
	23	2.2		48	0		C	6.3
	24	0.5		49	4.4		E	4.9
	25	2.0		50	4.5	Q817	B	2.8
	26	2.4		51	0		C	0.1
		52	0		E	0		

B1 BOARD VOLTAGE LIST

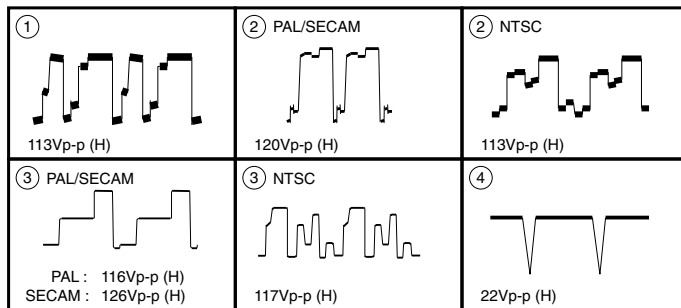
Ref	Pin No	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
IC1502	1	3.1	Q1502	B	2.3	Q1511	B	0.7
	2	3.0		C	2.3		C	0.7
	3	3.2		E	2.5		E	0
	4	4.6	Q1503	B	0.6	Q1514	B	0.6
	5	4.6		C	0.6		C	0.6
	6	0		E	0.6		E	0.6
	7	0	Q1505	B	0.6	Q1515	B	0.6
	8	0		C	0.8		C	0.6
	9	8.1		E	0		E	0.6
	10	7.9	Q1507	B	0.7	Q1516	B	0.5
	11	7.9		C	0.8		C	0.5
	12	7.6		E	0.7		E	0.5
	13	7.6	Q1509	B	0.8	Q1520	B	0.5
	14	7.3		C	0.8		C	0.4
	15	7.6		E	0		E	0
	Q1501	B C E	2.5 2.4 2.4	Q1510	B	0.7	Q1522	B
C					0.7	C		0
E					0	E		0.5
Q1523					B	0.4		
					C	0		
E	0.5							

6-6 WAVEFORMS (For KV-XA29M31/XA29M50/XA29M61)

**A BOARD WAVEFORMS**

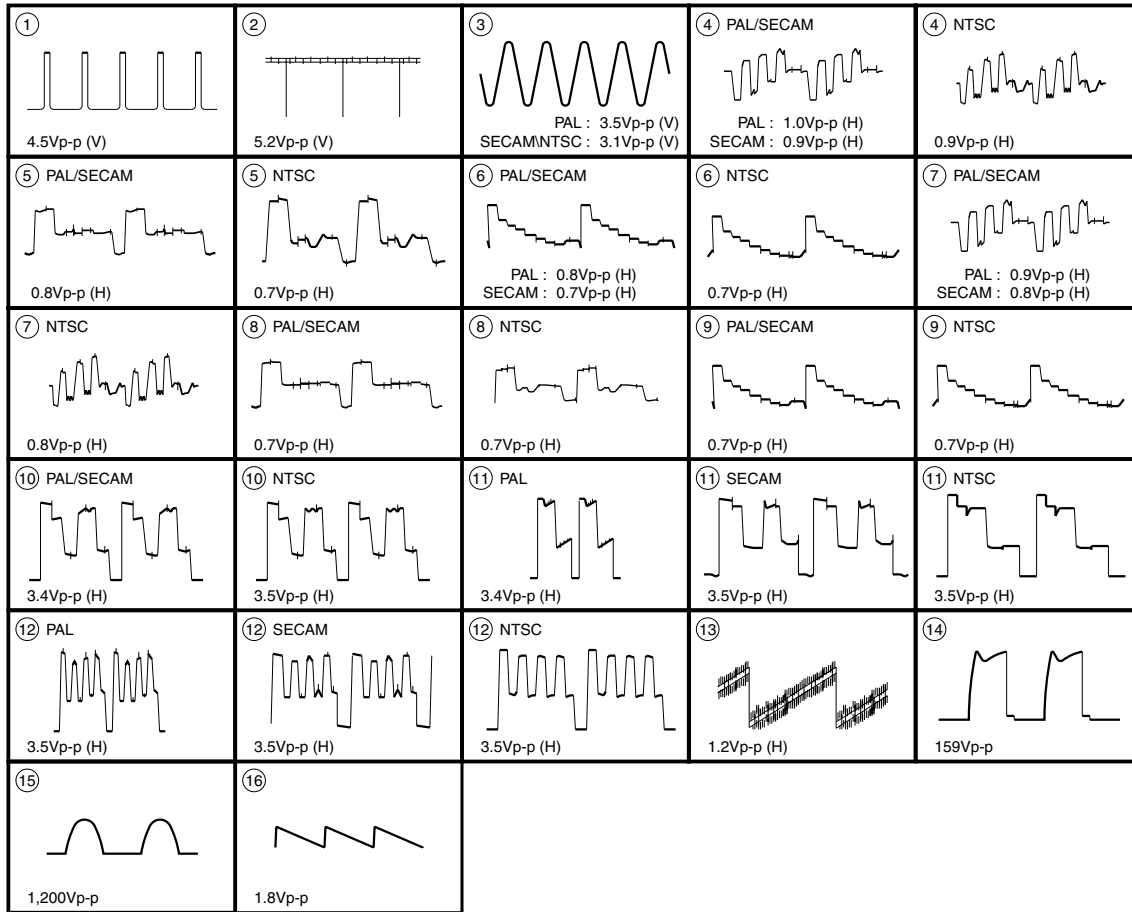


**C6 BOARD WAVEFORMS**

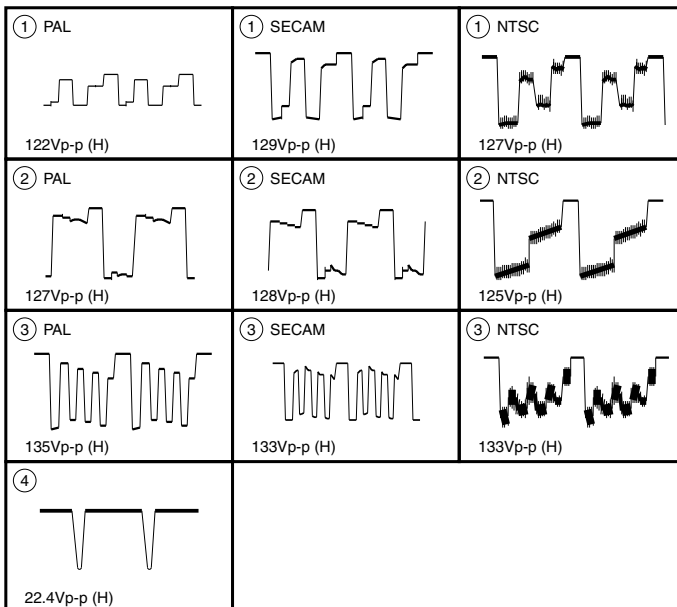


6-5-2 WAVEFORMS (For KV-XA34M31)

A BOARD WAVEFORMS



C6 BOARD WAVEFORMS



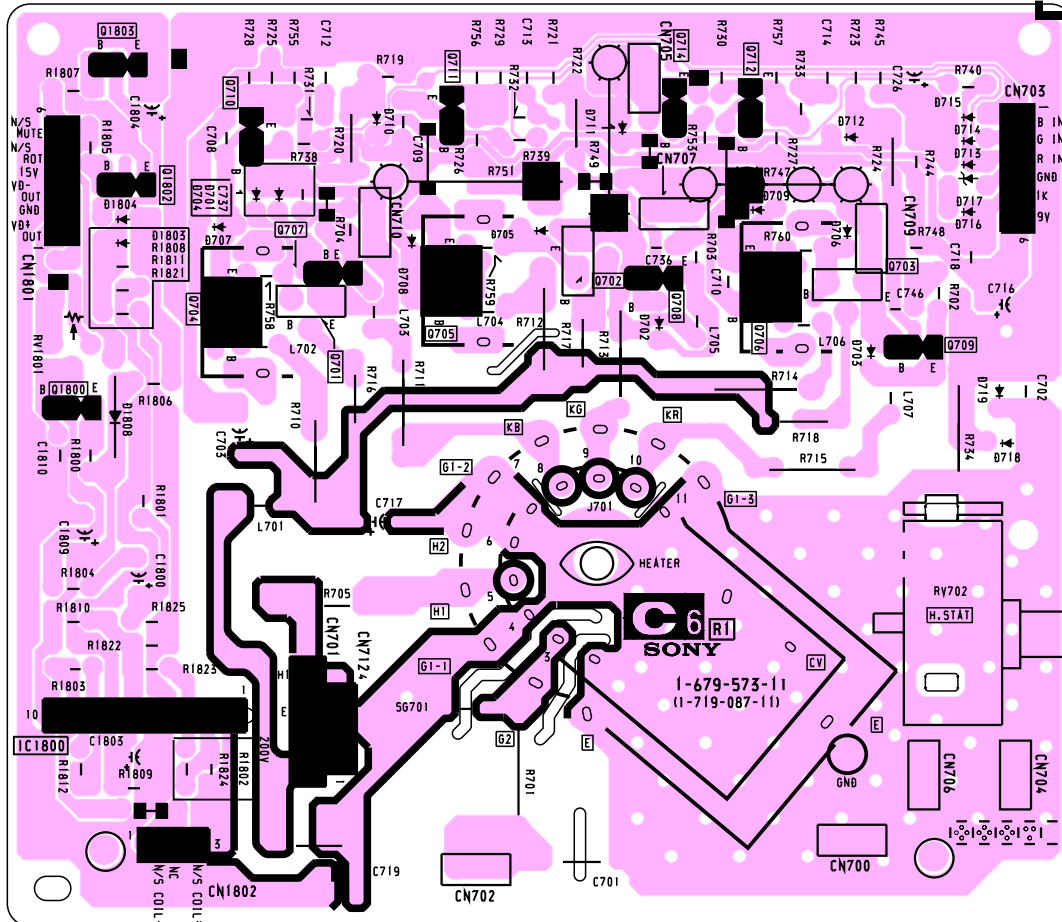
6-7. PRINTED WIRING BOARDS AND PARTS LOCATION

PRINTED WIRING BOARDS

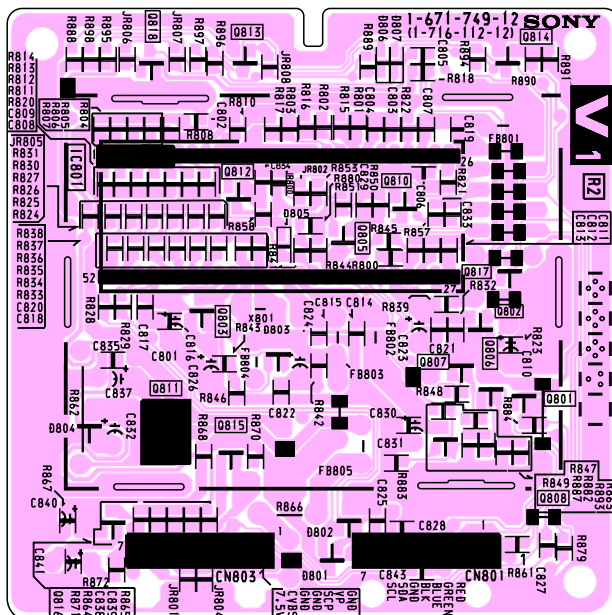
**C6** [VIDEO AMP, ROTATION CIRCUIT]

**V1** [TELETEXT]

- C6 Board -



- V1 Board - (KV-XA29M31/XA29M61/XA34M31)

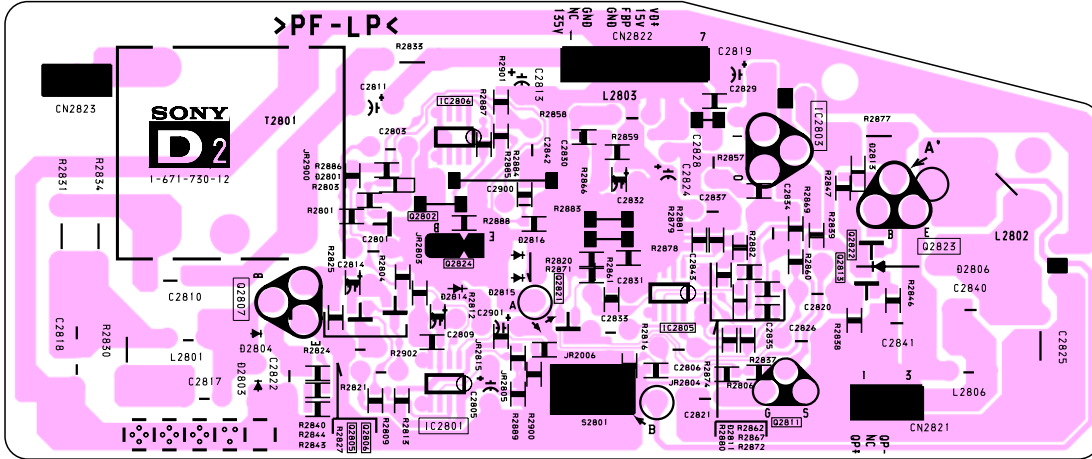


PRINTED WIRING BOARDS

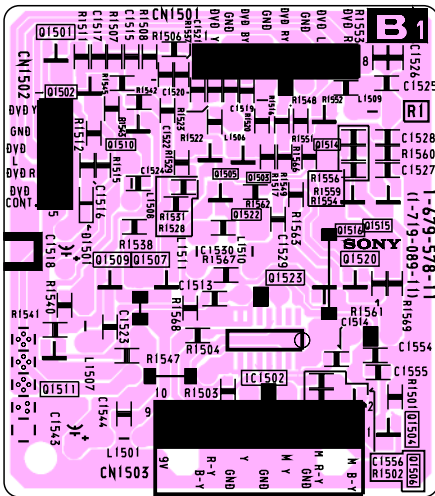
**D2** [DF, DQP DRIVE]

**B1** [DVD SWITCH]

- D2 Board (For KV-XA34M31) -



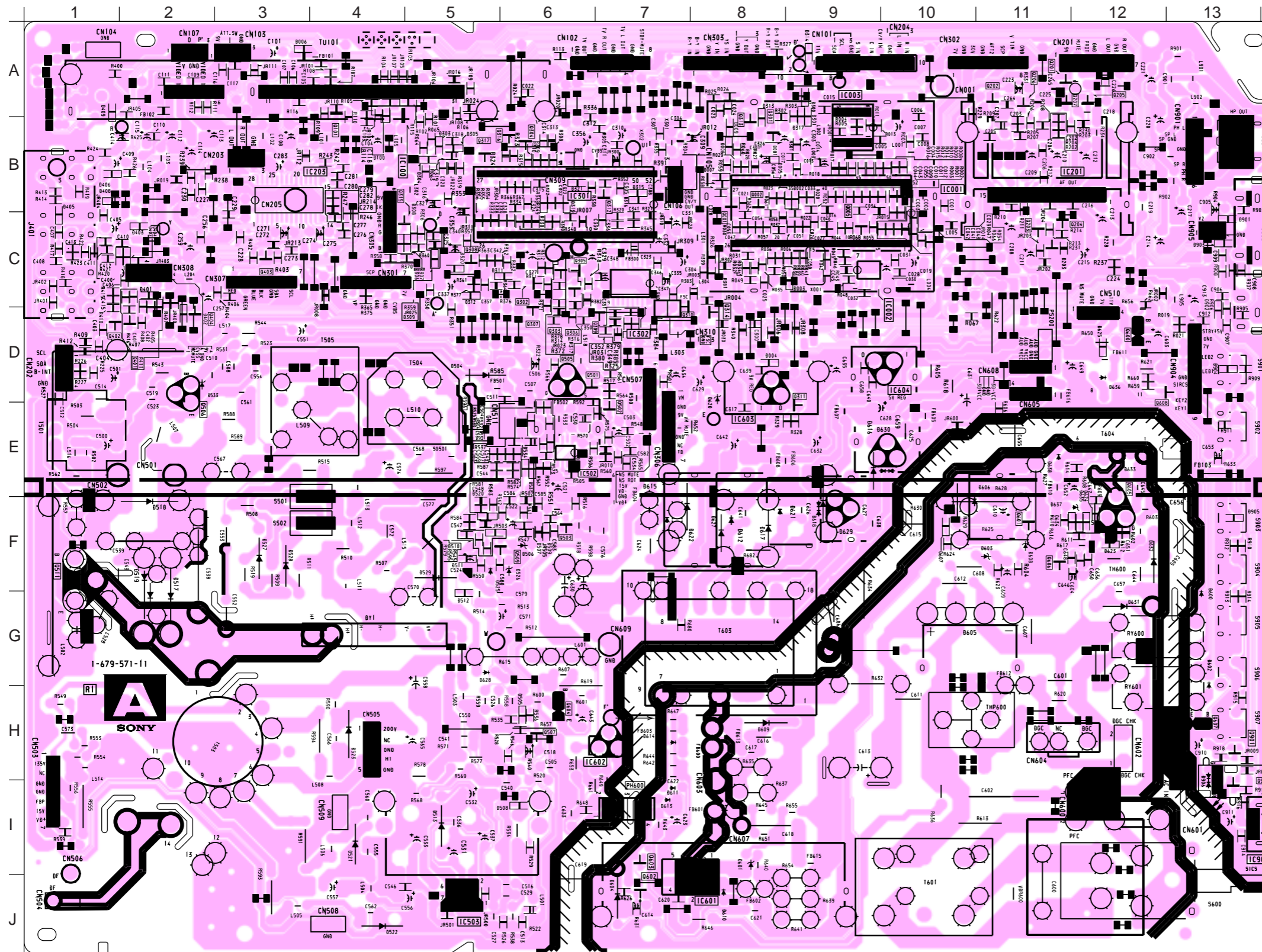
- B1 Board -



PRINTED WIRING BOARDS

**A** [SYSTEM CONTROLLER, Y/C JUNGLE,  
DEFLECTION, TUVIF, FRONT AMP, POWER SUPPLY]

- A Board



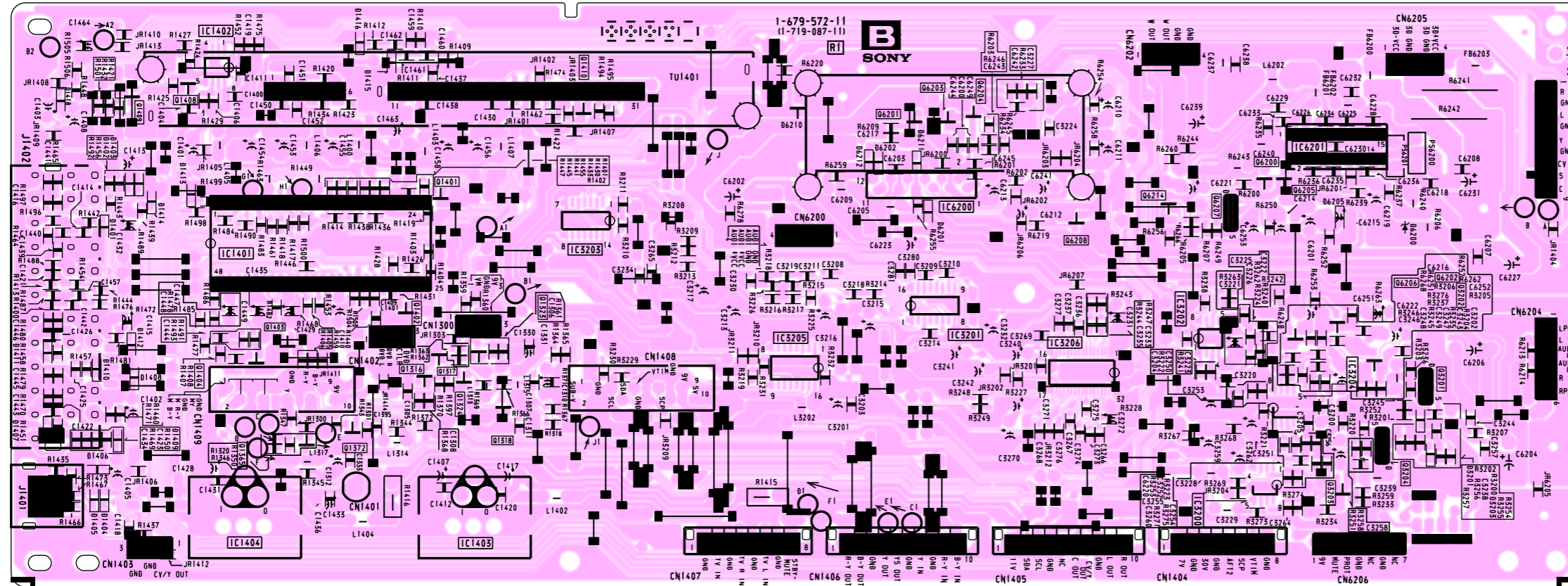
A BOARD

IC	Q606	F-11	D531	E-6
IC001	Q607	H-13	D533	D-2
IC002	Q608	D-12	D534	E-6
IC003	Q901	H-13	D600	G-13
IC100	Q902	H-13	D601	I-8
IC201	DIODE			
IC203	D001	B-8	D602	G-13
IC301	D003	C-9	D603	F-11
IC302	D004	D-8	D604	J-7
IC502	D005	B-8	D605	G-10
IC503	D006	A-3	D606	E-11
IC601	D007	B-8	D607	F-10
IC602	D008	B-8	D608	F-11
IC603	D009	B-8	D609	H-8
IC604	D100	B-4	D610	J-8
IC901	D203	C-11	D611	I-7
TRANSISTOR				
Q001	D300	A-9	D612	F-8
Q002	D301	B-9	D613	I-7
Q005	D303	B-5	D616	E-9
Q101	D304	B-5	D617	F-8
Q201	D305	B-5	D618	F-9
Q202	D306	C-5	D620	D-8
Q203	D307	C-5	D621	F-9
Q204	D308	B-5	D622	F-8
Q205	D309	D-5	D623	F-12
Q206	D312	C-5	D624	F-12
Q207	D313	A-8	D625	D-12
Q301	D314	A-9	D627	F-8
Q302	D315	B-7	D628	G-5
Q303	D317	B-9	D629	F-9
Q304	D319	B-6	D630	E-10
Q305	D320	C-5	D631	G-10
Q306	D321	B-6	D632	F-12
Q307	D322	B-6	D633	E-12
Q308	D401	C-2	D634	F-11
Q309	D402	D-2	D635	F-12
Q310	D403	C-2	D636	D-12
Q311	D404	C-2	D637	F-11
Q312	D406	B-1	D638	E-11
Q313	D407	C-2	D651	E-7
Q314	D408	B-1	D901	C-13
Q315	D409	A-1	D902	C-13
Q316	D504	D-5	D903	C-13
Q317	D505	H-6	D904	C-13
Q401	D506	F-6	D905	F-13
Q402	D507	F-6	D906	H-13
Q403	D508	I-7		
Q404	D509	F-6		
Q501	D510	F-5		
Q502	D511	F-5		
Q503	D512	G-5		
Q505	D513	I-5		
Q506	D517	F-2		
Q507	D518	F-2		
Q509	D519	F-2		
Q600	D520	E-5		
Q601	D521	I-4		
Q602	D522	J-4		
Q603	D523	H-4		
Q604	D525	F-5		
Q605	D526	F-6		
	D527	F-3		
	D528	F-3		
	D529	F-5		

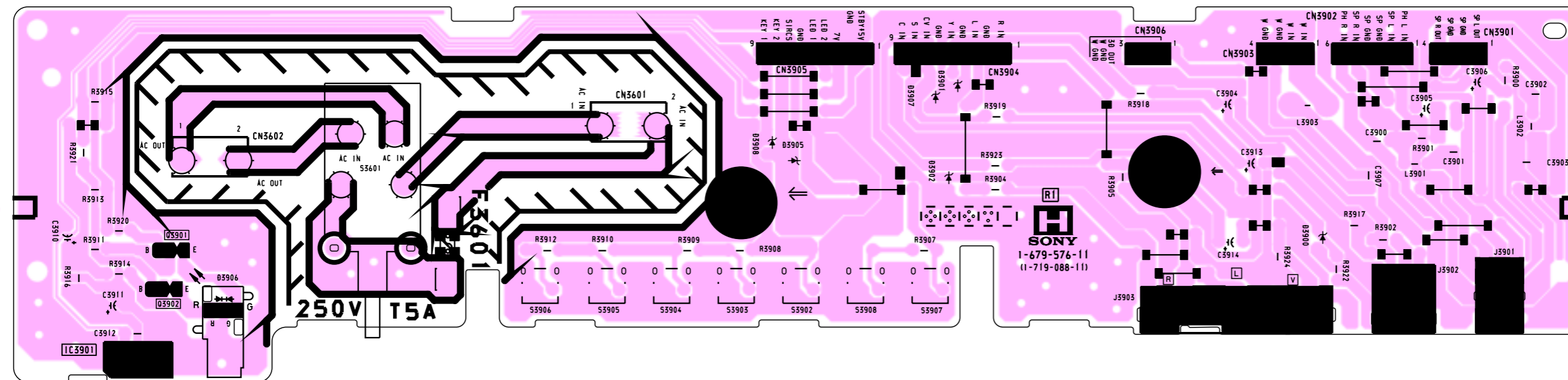
**B** [AUDIO PROCESSOR, AUDIO AMP,  
SUB TUNER, AV IN/OUT, VM DRIVER]

**H** [FRONT AV IN, SENSOR, POWER SW]

- B Board -



- H Board -

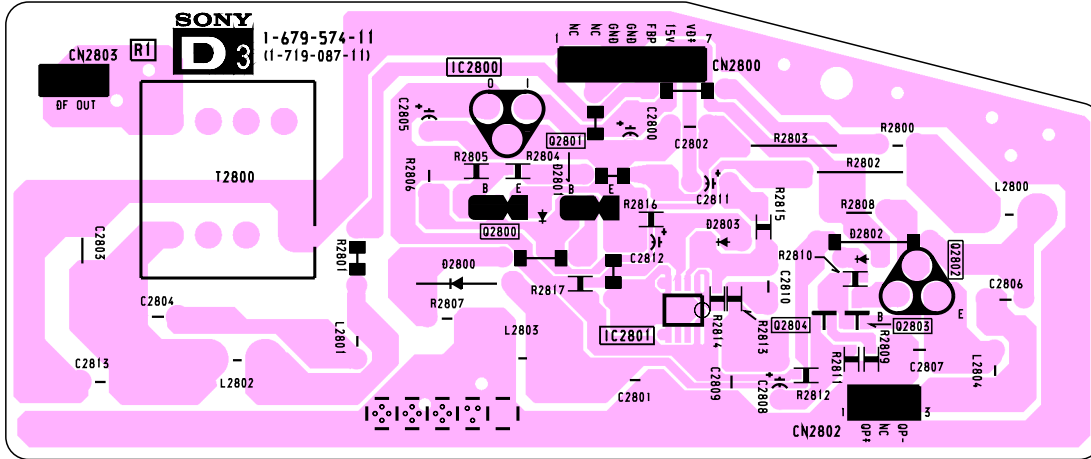


PRINTED WIRING BOARDS

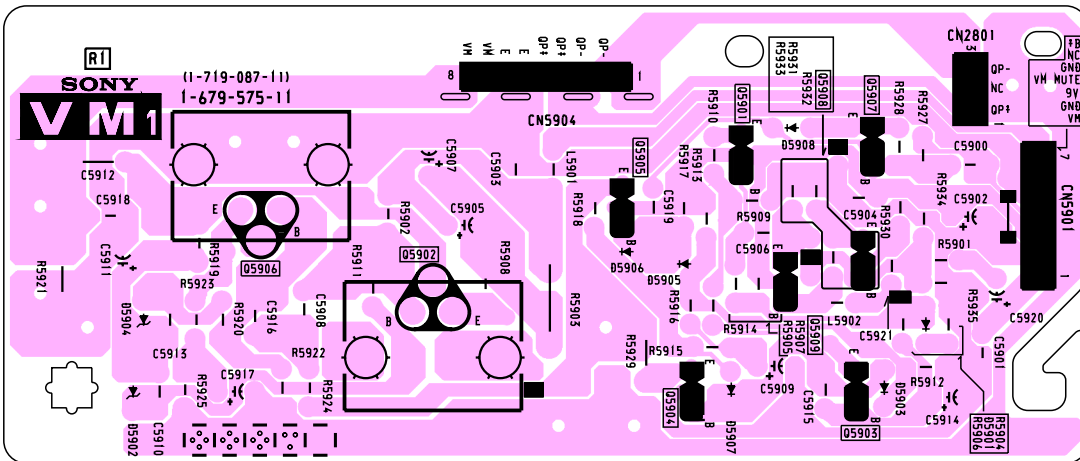
**D3** [DQP, DYNAMIC FOCUS]

**VM1** [VELOCITY MODULATION]

– D3 Board – (KV-XA29M31/XA29M50/XA29M61)



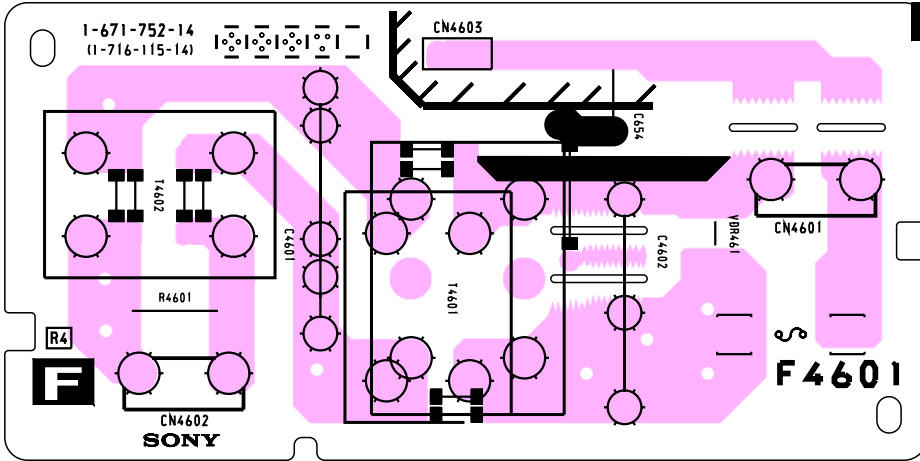
– VM1 Board –



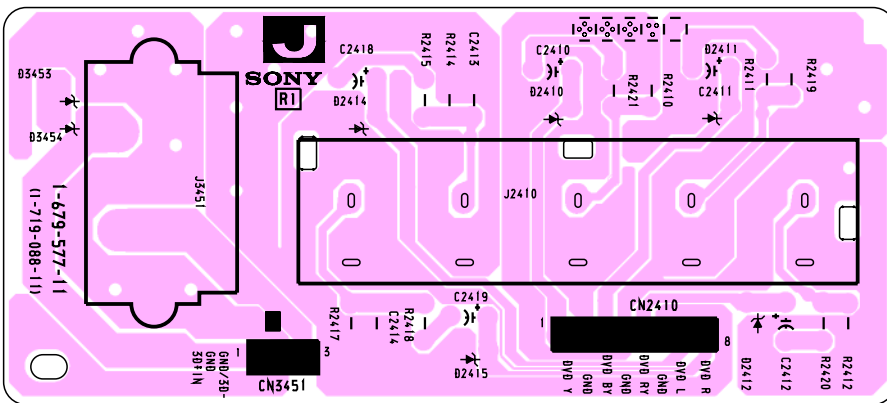
**F** [CISPR]

**J** [DVD, 3D TERMINAL]

– F Board –

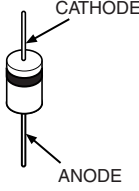
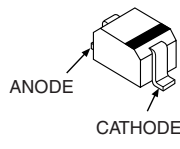
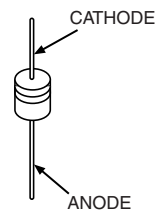
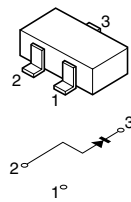
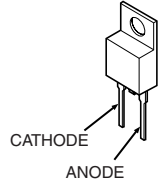


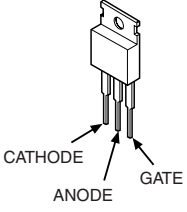
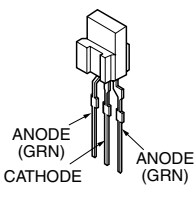
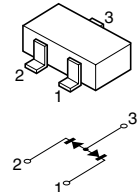
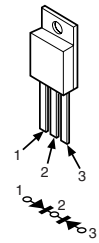
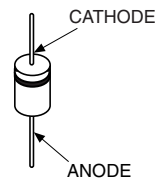
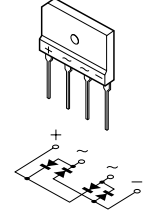
– J Board –

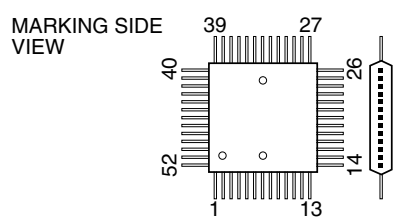

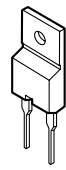


6-8 SEMICONDUCTORS

DIODE

					
AK0AV0 AU-01Z-V1 D2L20U EL1Z ERA22-08 ERC06-15S ERC04-06SE GP08D NNCD9.1A-T1	RD33EBST RD33EB3T RDP10GPKG23 RGP02-17EL-6433 RU4AM-T4 RS3FS	DTZ-TT11-15B DTZ10B MA111-(K8).S0 RD5.1SB-T2 RD5.6S-B RD9.1S-B UDZS-TE17-10B UDZ-TE17-5.1B 1SS355TE17	D1N20R D1NS4 NEQS04 RD6.1ES-B1 RD6.8ES-B1 RD20ES-B2 RD30ES-B2 RD39-ES-B2 1SS119-25	D3.3M-B2 RD5.6M-T1B2 1SS302	D5S6M

					
TF541M 5P-6M	SPB-26MVWF	DAP202K	FMX-12S	D1NL20U-TR	D3SB60

		
RU-1P	RN4Z	D3L60

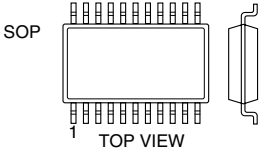
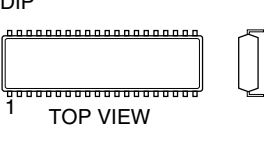
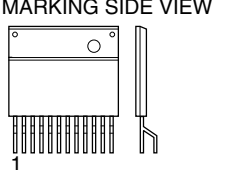
**TRANSISTOR**

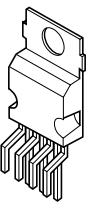
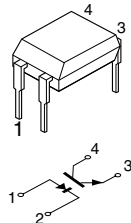
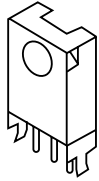
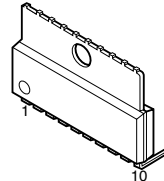
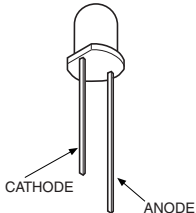
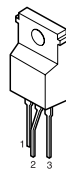
2SA1606-E 2SC4159-E 2SD2394-EF 2SC4793	2SC2458-YGR 2SC2551-0 2SA1091-0 2SD2144S-UVW	2SC2611 2SC3840(3)	DTC144ESA 2SA1175-HFE 2SC2785-HFE	2SB734-34 2SC2958	2SD2578-CA

IRF614	2SK2845-LB102	2SC2688-LK	2SC4927-01	TA8200AH	TA7805S

DTA114EKA-T149 DTC114EKA-T146 UN2213 UN2111	2SC2712-YG 2SC1623-L5L6 2SA1162-G 2SD2114K

IC

 <p>SOP TOP VIEW Single In -line Package Pin 8~98</p>		 <p>DIP TOP VIEW Dual In-line Package Pin 6~98</p>		 <p>MARKING SIDE VIEW Zig-zag In -line Package Pin 6~99</p>	
<p>BH3868AFS-E2 CXA1315M HEF4053BT LM358D MM1319AFBE NJUM4066BM</p>		<p>NJM2903M UPC358G2-E2 UPC4588G2</p>		<p>CXA1855S M24C08-BN6 SAA5261 TDA9181T</p>	
				<p>STR-F6656</p>	

					
<p>TDA8172</p>	<p>ON3171-R</p>	<p>SBX3081-(01)30</p>	<p>LA6510</p>	<p>NJM78M09FA</p>	<p>SE-135N</p>

## SECTION 7 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 remark column.

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

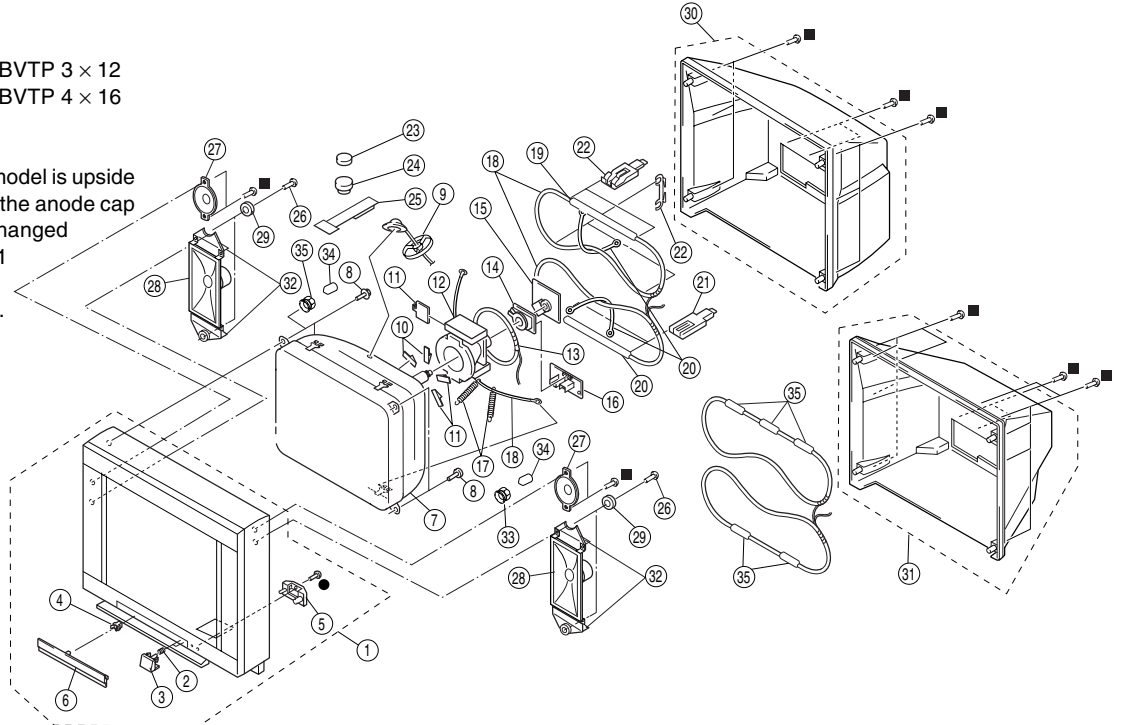
The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.

**7-1. PICTURE TUBE**

- : 7-685-648-79 SCREW +BVTP 3 × 12
- : 7-685-663-71 SCREW +BVTP 4 × 16

**NOTE:**

- The picture tube for OCE model is upside down, and the position for the anode cap and tension springs are changed accordingly. (KV-XA29M31 (OCE)/XA29M61 (OCE) and KV-XA34M31 (OCE)).

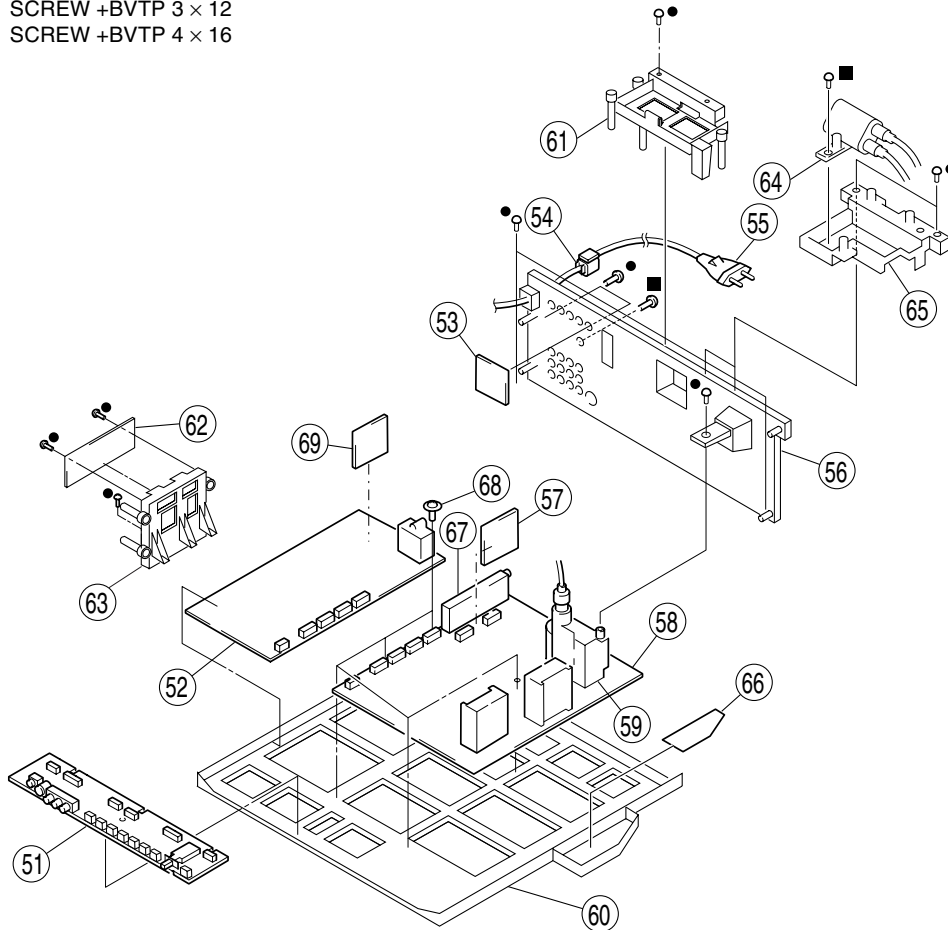


REF. NO.	PART NO.	DESCRIPTION	REMARK
1	X-4038-355-1	BEZNET ASSY (KV-XA29M31/M61)	2 - 6
	X-4038-367-1	BEZNET ASSY (KV-XA29M50)	2 - 6
	X-4038-356-1	BEZNET ASSY (KV-XA34M31)	2 - 6
2	4-036-405-11	SPRING, COMPRESSION	
3	4-075-747-11	BUTTON, POWER	
4	4-047-464-01	CATCHER, PUSH	
5	* 4-075-749-01	GUIDE, LIGHT	
6	4-078-944-11	CONTROL, DOOR (EXCEPT KV-XA29M50)	
	4-078-944-21	CONTROL, DOOR (KV-XA29M50)	
7	$\triangle$ 8-735-057-05	PICTURE TUBE (M68LNH070X) (KV-XA29M31)	
	$\triangle$ 8-735-056-05	PICTURE TUBE (M68LNH070X) (KV-XA29M50/M61)	
	$\triangle$ 8-735-062-05	PICTURE TUBE (A80LPD10X) (KV-XA34M31)	
8	4-046-765-12	SCREW, TAPPING 7+CROWN WASHER (EXCEPT KV-XA34M31)	
9	* 3-704-372-11	HOLDER, HV CABLE	
10	4-046-600-11	SPACER, DY	
11	4-077-228-01	PIECE, TLH CONVERGENCE	
12	$\triangle$ 8-451-494-31	DEFLECTION YOKE (Y29RSA-S) (EXCEPT KV-XA34M31)	
	$\triangle$ 8-451-499-21	DEFLECTION YOKE (Y34RSA-X) (KV-XA34M31)	
13	1-452-896-11	COIL, NA ROTATION (RT200) (EXCEPT KV-XA34M31)	
	1-452-896-61	COIL, NA ROTATION (RT200) (KV-XA34M31)	
14	8-453-011-11	NA299-M (EXCEPT KV-XA34M31)	
	8-453-007-31	NA324-M3 (KV-XA34M31)	
15	* A-1332-110-A	C6 BOARD, MOUNTED (EXCEPT KV-XA34M31)	
	* A-1332-128-A	C6 BOARD, MOUNTED (KV-XA34M31)	
16	* A-1342-580-A	VM1 BOARD MOUNTED	

REF. NO.	PART NO.	DESCRIPTION	REMARK
17	4-369-318-61	SPRING, TENSION (EXCEPT KV-XA34M31)	
	4-078-766-01	SPRING, EXTENSION (KV-XA34M31)	
18	$\triangle$ 1-419-293-11	COIL, DEGAUSSING (KV-XA34M31)	
	$\triangle$ 1-419-323-11	COIL, DEGAUSSING (EXCEPT KV-XA34M31)	
19	4-063-935-21	CUSHION (50X550), DGC (EXCEPT KV-XA34M31)	
20	4-068-028-32	BAND, DGC (EXCEPT KV-XA34M31)	
	4-067-455-01	BAND, DGC (KV-XA34M31)	
21	* 4-062-970-12	CLIP (29RSN), DGC (EXCEPT KV-XA34M31)	
	* 4-069-493-12	CLIP, DGC (KV-XA34M31)	
22	4-064-883-03	HOLDER, DGC (EXCEPT KV-XA34M31)	
	4-061-369-01	HOLDER, DEGAUSE COIL (KV-XA34M31)	
23	1-452-032-00	MAGNET, DISC	
24	1-452-094-00	CIRCULAR DISC MAGNET B	
25	X-4387-214-3	PERMALOY ASSY, CORRECTION	
26	4-302-404-03	SCREW (WASHER HEAD) (+P 4X16)	
27	1-529-190-11	SPEAKER (5CM)	
28	1-529-563-11	SPEAKER (15X6.5CM)	
29	4-374-745-21	CUSHION (A)	
30	$\triangle$ X-4038-161-1	REAR COVER ASSY (EXCEPT KV-XA34M31) (■ 12)	
31	$\triangle$ X-4038-310-1	REAR COVER ASSY (KV-XA34M31) (■ 14)	
32	* 4-046-981-01	BRACKET, SPEAKER	
33	4-387-204-01	NUT, SPECIAL, CRT (KV-XA34M31)	
34	4-074-060-01	CAP SCREW (KV-XA34M31)	
35	* 4-074-512-21	CUSHION (S) DGC (KV-XA34M31)	

## 7-2. CHASSIS

- : 7-685-648-79 SCREW +BVTP 3 × 12
- : 7-685-663-71 SCREW +BVTP 4 × 16



REF. NO.	PART NO.	DESCRIPTION	REMARK
51	* A-1372-887-A	H BOARD, MOUNTED	
52	* A-1136-144-A	B BOARD, COMPLETE (EXCEPT KV-XA34M31)	
	* A-1136-170-A	B BOARD, COMPLETE (KV-XA34M31 ONLY)	
53	* A-1388-288-A	J BOARD, MOUNTED	
54	△ 4-022-115-00	HOLDER, AC CORD	
55	△ 1-574-358-11	CORD, POWER (WITH CONNECTOR) 7.5A/250V (KV-XA29M31/XA34M31)	
	△ 1-574-062-11	CORD, POWER (WITH CONNECTOR) 2.5A/250V (KV-XA29M50/M61)	
56	* 4-075-447-31	BRACKET, TERMINAL	
57	* A-1347-164-A	V1 BOARD, COMPLETE (EXCEPT KV-XA29M50)	
58	* A-1299-358-A	A BOARD, COMPLETE (KV-XA29M31)	
	* A-1299-363-A	A BOARD, COMPLETE (KV-XA29M50)	
	* A-1299-367-A	A BOARD, COMPLETE (KV-XA29M61)	
	* A-1299-368-A	A BOARD, COMPLETE (KV-XA34M31)	
59	△ 1-453-284-11	TRANSFORMER ASSY, FLYBACK (NX-4009//M314) (EXCEPT KV-XA34M31)	
	△ 1-453-298-31	TRANSFORMER ASSY, FLYBACK (NX-4009//M3P4) (KV-XA34M31)	
60	* 4-066-681-05	BRACKET, MAIN (6 SCREWS (3X12), (+ BVTAP)	

REF. NO.	PART NO.	DESCRIPTION	REMARK
61	* 4-066-683-11	HOLDER, PWB (EXCEPT KV-XA29M50)	
62	* A-1241-443-A	F BOARD, MOUNTED	
63	* 4-066-682-01	BRACKET, F PWB	
64	△ 1-467-525-31	CAP BLOCK, HIGH-VOLTAGE (KV-XA34M31 ONLY)	
65	4-866-680-02	BRACKET, HVC (KV-XA34M31 ONLY)	
66	* A-1343-946-A	D3 BOARD, MOUNTED (EXCEPT KV-XA34M31)	
	* A-1343-979-A	D2 BOARD, MOUNTED (KV-XA34M31)	
67	8-598-451-00	TUNER, FSS BTF-WG441 (EXCEPT KV-XA29M50)	
	8-598-449-100	TUNER, FSS BTF-LG433 (KV-XA29M50)	
68	4-046-797-01	SCREW (3X12), (+)BVTAP	
69	* A-1131-652-A	B1 BOARD, MOUNTED	

## SECTION 10 ELECTRICAL PARTS LIST



**NOTE:**

The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.

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

- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
  - All resistors are in ohms
  - F : nonflammable
  - All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
  - MF :  $\mu$ F, PF :  $\mu$  $\mu$ F
- CAPACITORS**
- MF :  $\mu$ F, PF :  $\mu$  $\mu$ F
- COILS**
- MMH : mH, UH :  $\mu$ H

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
	* A-1299-358-A	A BOARD COMPLETE (KV-XA29M31)		C112	1-104-664-11	ELECT	47UF 20.00% 16V
	* A-1299-363-A	A BOARD COMPLETE (KV-XA29M50)		C113	1-104-664-11	ELECT	47UF 20.00% 25V
	* A-1299-367-A	A BOARD COMPLETE (KV-XA29M61)		C114	1-126-967-11	ELECT	47UF 20.00% 50V
	* A-1299-368-A	A BOARD COMPLETE (KV-XA34M31)					
		*****					
	4-382-854-11	SCREW (M3X10), P, SW (+)		C118	1-110-501-11	CERAMIC CHIP	0.33UF 10.00% 16V
	4-382-854-21	SCREW (M3X14), P, SW (+)		C300	1-164-505-11	CERAMIC CHIP	2.2UF 16V
		<CAPACITOR>		C301	1-126-935-11	ELECT	470UF 20.00% 16V
C004	1-163-001-11	CERAMIC CHIP	220PF 10.00% 50V	C302	1-163-005-11	CERAMIC CHIP	470PF 10.00% 50V
C005	1-163-001-11	CERAMIC CHIP	220PF 10.00% 50V	C303	1-126-959-11	ELECT	0.47UF 20.00% 50V
C006	1-164-004-11	CERAMIC CHIP	0.1UF 10.00% 25V				
C007	1-104-664-11	ELECT	47UF 20.00% 16V	C304	1-126-967-11	ELECT	47UF 20.00% 50V
C013	1-163-021-91	CERAMIC CHIP	0.01UF 10.00% 50V	C305	1-164-004-11	CERAMIC CHIP	0.1UF 10.00% 25V
				C306	1-163-233-11	CERAMIC CHIP	18PF 5.00% 50V
C014	1-104-664-11	ELECT	47UF 20.00% 25V	C307	1-163-233-11	CERAMIC CHIP	18PF 5.00% 50V
C015	1-163-009-11	CERAMIC CHIP	0.001UF 10.00% 50V	C308	1-163-259-91	CERAMIC CHIP	220PF 5.00% 50V
C016	1-163-243-11	CERAMIC CHIP	47PF 5.00% 50V				
C017	1-163-113-00	CERAMIC CHIP	68PF 5.00% 50V	C309	1-126-957-11	ELECT	0.22UF 20.00% 50V
C019	1-104-664-11	ELECT	47UF 20.00% 25V	C311	1-126-964-11	ELECT	10UF 20.00% 50V
				C312	1-164-346-11	CERAMIC CHIP	1UF 16V
C020	1-163-259-91	CERAMIC CHIP	220PF 5.00% 50V	C313	1-164-346-11	CERAMIC CHIP	1UF 16V
C022	1-163-227-11	CERAMIC CHIP	10PF 0.50PF 50V	C314	1-164-346-11	CERAMIC CHIP	1UF 16V
C023	1-163-227-11	CERAMIC CHIP	10PF 0.50PF 50V				
C024	1-163-227-11	CERAMIC CHIP	10PF 0.50PF 50V	C315	1-164-004-11	CERAMIC CHIP	0.1UF 10.00% 25V
C026	1-164-004-11	CERAMIC CHIP	0.1UF 10.00% 25V	C316	1-126-934-11	ELECT	220UF 20.00% 16V
						(EXCEPT KV-XA34M31)	
C027	1-164-004-11	CERAMIC CHIP	0.1UF 10.00% 25V	C316	1-104-664-11	ELECT	47UF 20.00% 25V
C028	1-163-037-11	CERAMIC CHIP	0.022UF 10.00% 50V			(KV-XA34M31 ONLY)	
C030	1-126-965-11	ELECT	22UF 20.00% 50V	C317	1-164-004-11	CERAMIC CHIP	0.1UF 10.00% 25V
C031	1-164-004-11	CERAMIC CHIP	0.1UF 10.00% 25V	C318	1-163-031-11	CERAMIC CHIP	0.01UF 50V
C032	1-107-823-11	CERAMIC CHIP	0.47UF 10.00% 16V				
				C319	1-163-031-11	CERAMIC CHIP	0.01UF 50V
C041	1-163-251-11	CERAMIC CHIP	100PF 5.00% 50V	C320	1-163-031-11	CERAMIC CHIP	0.01UF 50V
C042	1-163-251-11	CERAMIC CHIP	100PF 5.00% 50V	C321	1-164-489-11	CERAMIC CHIP	0.22UF 10.00% 16V
C043	1-163-251-11	CERAMIC CHIP	100PF 5.00% 50V			(EXCEPT KV-XA34M31)	
C044	1-163-251-11	CERAMIC CHIP	100PF 5.00% 50V	C322	1-163-005-11	CERAMIC CHIP	470PF 10.00% 50V
C047	1-163-251-11	CERAMIC CHIP	100PF 5.00% 50V	C324	1-163-017-00	CERAMIC CHIP	0.0047UF 10.00% 50V
C048	1-163-251-11	CERAMIC CHIP	100PF 5.00% 50V	C325	1-126-960-11	ELECT	1UF 20.00% 50V
C050	1-163-251-11	CERAMIC CHIP	100PF 5.00% 50V	C327	1-126-965-11	ELECT	22UF 20.00% 50V
C051	1-163-251-11	CERAMIC CHIP	100PF 5.00% 50V	C328	1-164-004-11	CERAMIC CHIP	0.1UF 10.00% 25V
C053	1-163-251-11	CERAMIC CHIP	100PF 5.00% 50V	C329	1-126-963-11	ELECT	4.7UF 20.00% 50V
C056	1-163-263-11	CERAMIC CHIP	330PF 5.00% 50V	C330	1-164-004-11	CERAMIC CHIP	0.1UF 10.00% 25V
C103	1-164-004-11	CERAMIC CHIP	0.1UF 10.00% 25V	C331	1-126-963-11	ELECT	4.7UF 20.00% 50V
C104	1-104-665-11	ELECT	100UF 20.00% 10V	C332	1-126-963-11	ELECT	4.7UF 20.00% 50V
C107	1-163-005-11	CERAMIC CHIP	470PF 10.00% 50V	C335	1-164-004-11	CERAMIC CHIP	0.1UF 10.00% 25V
C108	1-104-664-11	ELECT	47UF 20.00% 16V	C336	1-164-004-11	CERAMIC CHIP	0.1UF 10.00% 25V
C109	1-163-005-11	CERAMIC CHIP	470PF 10.00% 50V	C337	1-126-961-11	ELECT	2.2UF 20.00% 50V
C110	1-163-005-11	CERAMIC CHIP	470PF 10.00% 50V	C341	1-115-340-11	CERAMIC CHIP	0.22UF 10.00% 25V
C111	1-163-005-11	CERAMIC CHIP	470PF 10.00% 50V	C342	1-163-259-91	CERAMIC CHIP	220PF 5.00% 50V
				C347	1-126-933-11	ELECT	100UF 20.00% 16V
				C348	1-164-004-11	CERAMIC CHIP	0.1UF 10.00% 25V
				C349	1-164-004-11	CERAMIC CHIP	0.1UF 10.00% 25V
				C350	1-163-031-11	CERAMIC CHIP	0.01UF 50V
				C351	1-126-964-11	ELECT	10UF 20.00% 50V

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

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C352	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	C554	1-137-417-11	MYLAR 0.0047UF	10.00% 200V (EXCEPT KV-XA34M31)
C353	1-126-960-11	ELECT 1UF	20.00% 50V	C554	1-106-361-00	MYLAR 0.0056UF	10.00% 100V (KV-XA34M31 ONLY)
C356	1-104-664-11	ELECT 47UF	20.00% 16V	C556	1-128-528-11	ELECT 470UF	20.00% 25V
C357	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	C557	1-126-941-11	ELECT 470UF	20.00% 25V
C502	1-163-145-00	CERAMIC CHIP 0.0015UF	5.00% 50V	C558	1-123-024-21	ELECT 33UF	160V
C503	1-126-964-11	ELECT 10UF	20.00% 50V	C560	1-102-228-00	CERAMIC 470PF	10.00% 500V
C504	1-163-007-11	CERAMIC CHIP 680PF	10.00% 50V (KV-XA34M31 ONLY)	C561	1-129-898-00	FILM 0.0022UF	5.00% 630V (EXCEPT KV-XA34M31)
C506	1-107-638-11	ELECT 33UF	20.00% 160V	C561	1-129-928-00	FILM 0.0027UF	5.00% 630V (KV-XA34M31 ONLY)
C507	1-161-830-00	CERAMIC 0.0047UF	500V (EXCEPT KV-XA34M31)	C562	1-102-228-00	CERAMIC 470PF	10.00% 500V
C507	1-102-244-00	CERAMIC 220PF	10.00% 500V (KV-XA34M31 ONLY)	C563	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V (EXCEPT KV-XA34M31)
C510	1-102-112-00	CERAMIC 330PF	10.00% 50V (EXCEPT KV-XA34M31)	C563	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V (KV-XA34M31 ONLY)
C510	1-102-074-00	CERAMIC 0.001UF	10.00% 50V (KV-XA34M31 ONLY)	C564	1-163-038-11	CERAMIC CHIP 0.1UF	25V
C512	1-163-989-11	CERAMIC CHIP 0.033UF	10.00% 25V	C565	1-107-655-11	ELECT 47UF	20.00% 250V
C513	1-163-263-11	CERAMIC CHIP 330PF	5.00% 50V (EXCEPT KV-XA34M31)	C566	1-102-244-00	CERAMIC 220PF	10.00% 500V
C513	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V (KV-XA34M31 ONLY)	C567	1-115-520-11	FILM 0.68UF	5.00% 250V (EXCEPT KV-XA34M31)
C514	1-106-383-00	MYLAR 0.047UF	10.00% 200V	C567	1-109-961-11	FILM 0.75UF	5.00% 250V (KV-XA34M31 ONLY)
C517	1-164-182-11	CERAMIC CHIP 0.0033UF	10.00% 50V	C568	1-102-228-00	CERAMIC 470PF	10.00% 500V
C518	1-126-933-11	ELECT 100UF	20.00% 16V	C570	1-115-522-11	FILM 1UF	5.00% 250V (EXCEPT KV-XA34M31)
C519	1-102-212-00	CERAMIC 820PF	10.00% 500V	C570	1-117-674-71	FILM 1.8UF	5.00% 250V (KV-XA34M31 ONLY)
C521	1-104-666-11	ELECT 220UF	20.00% 25V	C572	1-117-661-21	FILM 0.15UF	5.00% 250V (EXCEPT KV-XA34M31)
C522	1-126-933-11	ELECT 100UF	20.00% 16V	C572	1-115-514-11	FILM 0.22UF	5.00% 250V (KV-XA34M31 ONLY)
C523	1-102-002-00	CERAMIC 680PF	10.00% 500V (EXCEPT KV-XA34M31)	C573	1-106-387-00	MYLAR 0.068UF	10.00% 200V
C523	1-162-318-11	CERAMIC 0.001UF	10.00% 500V (KV-XA34M31 ONLY)	C574	1-104-709-11	ELECT 4.7UF	160V
C524	1-126-967-11	ELECT 47UF	20.00% 50V	C576	1-130-495-00	MYLAR 0.1UF	5.00% 50V
C526	1-130-495-00	MYLAR 0.1UF	5.00% 50V	C577	1-106-395-00	MYLAR 0.15UF	10.00% 200V (EXCEPT KV-XA34M31)
C527	1-102-820-00	CERAMIC 330PF	5.00% 50V	C577	1-115-516-11	FILM 0.33UF	5.00% 250V (KV-XA34M31 ONLY)
C528	1-162-116-00	CERAMIC 680PF	10.00% 2KV	C582	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V (EXCEPT KV-XA34M31)
C530	1-137-372-11	MYLAR 0.022UF	5.00% 50V	C584	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V (EXCEPT KV-XA34M31)
C531	1-107-903-11	ELECT 2.2UF	20.00% 50V	C586	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V (EXCEPT KV-XA34M31)
C532	1-128-528-11	ELECT 470UF	20.00% 25V	C586	1-216-295-11	SHORT 0	(KV-XA34M31 ONLY)
C533	1-128-528-11	ELECT 470UF	20.00% 25V	C600 $\Delta$	1-104-705-11	MYLAR 0.1UF	20.00% 250V
C534	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V	C601	1-129-720-00	FILM 0.033UF	5.00% 630V
C536	1-130-495-00	MYLAR 0.1UF	5.00% 50V	C602 $\Delta$	1-104-705-11	MYLAR 0.1UF	20.00% 250V
C537	1-107-911-11	ELECT 220UF	20.00% 50V	C603	1-126-967-11	ELECT 47UF	20.00% 50V
C538	1-127-717-11	CAP, METALIZED PP FILM	19000PF (EXCEPT KV-XA34M31)	C604	1-163-009-11	CERAMIC CHIP 0.001UF	10.00% 50V
C538	1-136-544-11	FILM 0.023UF	3.00% 2KV (KV-XA34M31 ONLY)	C605 $\Delta$	1-119-886-51	CERAMIC 470PF	10.00% 250V
C539	1-129-723-00	FILM 0.056UF	5.00% 630V (EXCEPT KV-XA34M31)	C606 $\Delta$	1-119-886-51	CERAMIC 470PF	10.00% 250V
C539	1-130-118-91	FILM 0.051UF	5.00% 400V (KV-XA34M31 ONLY)	C607	1-161-830-00	CERAMIC 0.0047UF	99% 500V
C540	1-136-171-00	FILM 0.33UF	5.00% 50V	C608	1-161-830-00	CERAMIC 0.0047UF	99% 500V
C543	1-162-116-00	CERAMIC 680PF	10.00% 2KV (KV-XA34M31 ONLY)	C609	1-126-968-11	ELECT 100UF	20.00% 50V
C546	1-165-319-11	CERAMIC CHIP 0.1UF	50V	C610	1-126-964-11	ELECT 10UF	20.00% 50V
C549	1-163-017-00	CERAMIC CHIP 0.0047UF	10.00% 50V	C611	1-161-830-00	CERAMIC 0.0047UF	99% 500V
C550	1-106-220-00	MYLAR 0.1UF	10.00% 100V				
C551	1-126-960-11	ELECT 1UF	20.00% 50V				
C552	1-162-116-00	CERAMIC 680PF	10.00% 2KV				
C553	1-162-116-00	CERAMIC 680PF	10.00% 2KV				

**KV-XA29M31/XA29M50/  
XA29M61/XA34M31  
RM-954**

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



REF. NO.	PART NO.	DESCRIPTION	REMARK
C612	1-161-830-00	CERAMIC	0.0047UF 99% 500V
C613	1-125-906-11	ELECT	560UF 20.00% 450V
C614	1-126-964-11	ELECT	10UF 20.00% 50V
C615	$\Delta$ 1-119-886-51	CERAMIC	470PF 10.00% 250V
C616	$\Delta$ 1-130-202-00	FILM	0.022UF 5.00% 400V
C617	1-107-792-11	CERAMIC	100PF 5.00% 1KV
C618	1-125-893-11	FILM	680PF 3.00% 1.5KV
C619	$\Delta$ 1-119-886-51	CERAMIC	470PF 10.00% 250V
C620	1-163-133-00	CERAMIC CHIP	470PF 5.00% 50V
C621	1-102-114-00	CERAMIC	470PF 10.00% 50V
C622	1-102-119-00	CERAMIC	0.0015UF 10.00% 50V
C623	1-104-665-11	ELECT	100UF 20.00% 25V
C624	1-104-331-11	CERAMIC	0.0022UF 10.00% 1KV
		(EXCEPT KV-XA34M31)	
C624	1-125-772-91	CERAMIC	1500PF 10.00% 2KV
		(KV-XA34M31 ONLY)	
C626	1-102-002-00	CERAMIC	680PF 10.00% 500V
C629	1-126-964-11	ELECT	10UF 20.00% 50V
C630	1-124-347-51	ELECT	100UF 20.00% 160V
		(EXCEPT KV-XA34M31)	
C630	1-125-494-11	ELECT(BLOCK)	560UF 20.00% 160V
		(KV-XA34M31 ONLY)	
C631	1-128-550-11	ELECT	2200UF 20.00% 50V
C632	1-128-339-11	ELECT	2200UF 20.00% 16V
		(EXCEPT KV-XA34M31)	
C632	1-126-936-11	ELECT	3300UF 20.00% 16V
		(KV-XA34M31 ONLY)	
C633	1-104-999-11	MYLAR	0.1UF 10.00% 200V
C634	1-126-933-11	ELECT	100UF 20.00% 16V
		(EXCEPT KV-XA34M31)	
C634	1-126-934-11	ELECT	220UF 20.00% 16V
		(KV-XA34M31 ONLY)	
C635	1-104-665-11	ELECT	100UF 20.00% 10V
C636	1-104-760-11	CERAMIC CHIP	0.047UF 10.00% 50V
C638	1-161-830-00	CERAMIC	0.0047UF 500V
C641	1-102-002-00	CERAMIC	680PF 10.00% 500V
C642	1-126-943-11	ELECT	2200UF 20.00% 25V
C643	1-126-933-11	ELECT	100UF 20.00% 16V
C644	1-104-331-11	CERAMIC	0.0022UF 10.00% 1KV
C645	1-137-605-11	MYLAR	0.01UF 10.00% 250V
C646	1-107-679-91	ELECT	10UF 20.00% 450V
C647	1-163-275-11	CERAMIC CHIP	0.001UF 5.00% 50V
C649	1-126-940-11	ELECT	330UF 20.00% 25V
C650	1-163-275-11	CERAMIC CHIP	0.001UF 5.00% 50V
C651	1-163-133-00	CERAMIC CHIP	470PF 5.00% 50V
C652	1-126-965-11	ELECT	22UF 20.00% 50V
C653	1-126-967-11	ELECT	47UF 20.00% 50V
C655	$\Delta$ 1-119-886-51	CERAMIC	470PF 10.00% 250V
C657	1-101-821-00	CERAMIC	0.0022UF 500V
C659	1-162-116-00	CERAMIC	680PF 10.00% 2KV
		(EXCEPT KV-XA34M31)	
C659	1-162-115-00	CERAMIC	330PF 10.00% 2KV
		(KV-XA34M31 ONLY)	
C912	1-164-004-11	CERAMIC CHIP	0.1UF 10.00% 25V
C913	1-104-665-11	ELECT	100UF 20.00% 10V
		<CONNECTOR>	
CN101	* 1-779-890-11	CONNECTOR, BOARD TO BOARD	10P
CN102	* 1-779-889-11	CONNECTOR, BOARD TO BOARD	8P

REF. NO.	PART NO.	DESCRIPTION	REMARK
CN104	1-695-915-11	TAB (CONTACT)	
CN105	1-695-915-11	TAB (CONTACT)	
CN106	* 1-564-506-11	PLUG, CONNECTOR	3P
CN201	* 1-564-508-11	PLUG, CONNECTOR	5P
CN202	* 1-508-847-00	PIN, CONNECTOR	4P
CN301	* 1-774-813-11	CONNECTOR, BOARD TO BOARD	7P
		(EXCEPT KV-XA29M50)	
CN303	* 1-779-890-11	CONNECTOR, BOARD TO BOARD	10P
CN305	* 1-564-509-11	PLUG, CONNECTOR	6P
CN306	1-564-507-11	PLUG, CONNECTOR	4P
CN307	* 1-774-813-11	CONNECTOR, BOARD TO BOARD	7P
		(EXCEPT KV-XA29M50)	
CN501	* 1-508-784-21	PIN, CONNECTOR (5MM PITCH)	1P
		(EXCEPT KV-XA34M31)	
CN502	* 1-508-784-21	PIN, CONNECTOR (5MM PITCH)	1P
		(EXCEPT KV-XA34M31)	
CN503	* 1-564-510-11	PLUG, CONNECTOR	7P
CN504	1-695-915-11	TAB (CONTACT)	
CN505	* 1-564-508-11	PLUG, CONNECTOR	5P
CN507	* 1-564-509-11	PLUG, CONNECTOR	6P
CN508	1-695-915-11	TAB (CONTACT) (KV-XA34M31 ONLY)	
CN509	1-695-915-11	TAB (CONTACT) (KV-XA34M31 ONLY)	
CN601	* 1-580-843-11	PIN, CONNECTOR (POWER)	
CN602	* 1-508-786-00	PIN, CONNECTOR (5MM PITCH)	2P
CN603	* 1-508-784-21	PIN, CONNECTOR (5MM PITCH)	1P
CN604	* 1-691-134-11	PIN, CONNECTOR (PC BOARD)	2P
CN608	* 1-564-507-11	PLUG, CONNECTOR	4P
CN904	* 1-564-512-11	PLUG, CONNECTOR	9P
		<DIODE>	
D001	8-719-988-61	1SS355TE-17	
D002	8-719-988-61	1SS355TE-17	
D004	1-216-295-11	SHORT	0
D005	8-719-988-61	1SS355TE-17	
D006	1-216-295-11	SHORT	0
D007	8-719-988-61	1SS355TE-17	
D008	8-719-988-61	1SS355TE-17	
D009	8-719-988-61	1SS355TE-17	
D100	8-719-988-61	1SS355TE-17 (EXCEPT KV-XA29M50)	
D300	1-216-295-11	SHORT	0
D301	8-719-988-61	1SS355TE-17	
D306	8-719-988-61	1SS355TE-17	
D307	8-719-988-61	1SS355TE-17	
D308	8-719-988-61	1SS355TE-17	
D309	8-719-159-10	RD5.1SB-T2	
D311	8-719-988-61	1SS355TE-17	
D312	8-719-988-61	1SS355TE-17	
D313	8-719-988-61	1SS355TE-17	
D315	8-719-988-61	1SS355TE-17 (KV-XA34M31 ONLY)	
D316	8-719-037-06	RD7.5SB1-T1 (EXCEPT KV-XA34M31)	
D316	8-719-158-35	RD9.1S-B (KV-XA34M31 ONLY)	
D320	8-719-158-35	RD9.1S-B	
D321	8-719-158-35	RD9.1S-B	
D504	8-719-302-43	EL1Z	
D505	8-719-988-61	1SS355TE-17	



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
D506	8-719-911-19	ISS119-25				<CONNECTOR>	
D507	8-719-988-61	ISS355TE-17					
D508	8-719-988-61	ISS355TE-17		DY1	* 1-580-798-11	CONNECTOR PIN (DY) 6P	
D509	1-216-073-00	RES-CHIP	10K 5% 1/10W (EXCEPT KV-XA34M31)			<FERRITE BEAD>	
D509	8-719-158-15	RD5.6S-B (KV-XA34M31 ONLY)					
D510	8-719-988-61	ISS355TE-17		FB300	1-412-911-31	FERRITE	0UH
D511	8-719-988-61	ISS355TE-17		FB501	1-410-397-21	FERRITE	1.1UH
D512	8-719-988-61	ISS355TE-17		FB502	1-410-397-21	FERRITE	1.1UH
D513	8-719-908-03	GP08D		FB600	1-410-397-21	FERRITE	1.1UH
D517	8-719-945-80	ERC06-15S (EXCEPT KV-XA34M31)		FB601	1-410-397-21	FERRITE	1.1UH
D517	8-719-945-80	ERC06-15S (KV-XA34M31 ONLY)		FB602	1-410-397-21	FERRITE	1.1UH
D518	8-719-074-35	RU4AM-T4		FB603	1-410-397-21	FERRITE	1.1UH
D519	8-719-312-71	RS3FS (EXCEPT KV-XA34M31)		FB604	1-412-911-31	FERRITE	0UH
D519	8-719-945-80	ERC06-15S (KV-XA34M31 ONLY)		FB605	1-412-911-31	FERRITE	0UH
D520	8-719-988-61	ISS355TE-17 (KV-XA34M31 ONLY)		FB606	1-412-911-31	FERRITE	0UH
D521	8-719-302-43	EL1Z (EXCEPT KV-XA34M31)		FB608	1-412-911-31	FERRITE	0UH
D521	8-719-028-45	D2L20U (KV-XA34M31 ONLY)		FB611	1-410-397-21	FERRITE	1.1UH
D522	8-719-028-45	D2L20U		FB612	1-410-397-21	FERRITE	1.1UH
D523	8-719-302-43	EL1Z (EXCEPT KV-XA34M31)		FB613	1-410-397-21	FERRITE	1.1UH
D523	8-719-028-45	D2L20U (KV-XA34M31 ONLY)		FB615	1-410-397-21	FERRITE	1.1UH
D527	8-719-908-03	GP08D				<IC>	
D528	8-719-908-03	GP08D					
D531	8-719-988-61	ISS355TE-17		IC001	8-752-917-80	CXP750097-032S	
D532	8-719-988-61	ISS355TE-17		IC002	8-759-371-21	MM1319AFBE	
D534	8-719-988-61	ISS355TE-17 (EXCEPT KV-XA34M31)		IC003	8-759-672-78	M24C08-BN6(A)	
D534	1-216-295-11	SHORT	0 (KV-XA34M31 ONLY)	IC100	8-759-042-02	S-80743AL-A7-S (EXCEPT KV-XA29M50)	
D600	8-719-911-19	ISS119-25		IC301	8-752-095-72	CXA2159S	
D602	8-719-911-19	ISS119-25					
D603	8-719-150-92	RD33EB3T		IC302	8-759-666-90	TDA9181T	
D604	8-719-028-72	RGP02-17EL-6433		IC502	8-759-700-07	NJM2903M	
D605	8-719-510-22	D3SB60		IC503	8-759-980-58	TDA8172	
D606	8-719-108-18	5P-6M		IC601	8-749-014-48	STR-F6656	
D607	8-719-073-01	MA111-(K8).S0		IC602	8-749-920-61	SE-135N	
D608	8-719-110-53	RD20ES-B2		IC603	8-759-701-59	NJM78M09FA	
D609	8-719-311-31	RU-1P		IC604	8-759-231-53	TA7805S	
D610	8-719-043-76	AK04V0				<CHIP CONDUCTOR>	
D611	8-719-046-74	AU-01Z-V1		JR001	1-216-295-11	SHORT	0
D612	8-719-071-38	D5S6M		JR002	1-216-295-11	SHORT	0
D613	8-719-046-74	AU-01Z-V1		JR003	1-216-295-11	SHORT	0
D614	8-719-046-74	AU-01Z-V1		JR004	1-216-295-11	SHORT	0
D617	8-719-067-18	RN4Z		JR006	1-216-295-11	SHORT	0
D620	8-719-110-72	RD30ESB2					
D622	8-719-077-49	D3L60		JR007	1-216-295-11	SHORT	0
D623	8-719-978-65	DTZ-TT11-15B		JR008	1-216-295-11	SHORT	0
D624	8-719-073-01	MA111-(K8).S0		JR010	1-216-295-11	SHORT	0
D625	8-719-977-28	DTZ10B		JR012	1-216-295-11	SHORT	0
D628	8-719-911-19	ISS119-25		JR014	1-216-295-11	SHORT	0
D630	8-719-052-74	FMX-12S					
D631	8-719-068-00	ERC04-06SE		JR015	1-216-295-11	SHORT	0
D632	8-719-068-00	ERC04-06SE		JR016	1-216-295-11	SHORT	0
D633	8-719-948-45	ERA22-08		JR020	1-216-295-11	SHORT	0
D634	8-719-073-01	MA111-(K8).S0		JR022	1-216-295-11	SHORT	0
D635	8-719-073-01	MA111-(K8).S0		JR023	1-216-295-11	SHORT	0
D636	8-719-510-02	D1NS4					
D637	8-719-109-96	RD6.8ES-B1		JR024	1-216-295-11	SHORT	0
D638	8-719-510-48	D1N20R		JR025	1-216-295-11	SHORT	0
				JR028	1-216-295-11	SHORT	0
				JR030	1-216-295-11	SHORT	0
				JR031	1-216-295-11	SHORT	0

**KV-XA29M31/XA29M50/  
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The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.



REF. NO.	PART NO.	DESCRIPTION	REMARK
JR102	1-216-295-11	SHORT	0
JR107	1-216-295-11	SHORT	0 (EXCEPT KV-XA29M50)
JR109	1-216-295-11	SHORT	0 (KV-XA29M50 ONLY)
JR214	1-216-295-11	SHORT	0
JR304	1-216-295-11	SHORT	0
JR308	1-216-295-11	SHORT	0
JR309	1-216-295-11	SHORT	0
JR310	1-216-295-11	SHORT	0
JR311	1-216-295-11	SHORT	0
JR400	1-216-295-11	SHORT	0 (KV-XA34M31 ONLY)
JR500	1-216-295-11	SHORT	0
JR501	1-216-295-11	SHORT	0
JR502	1-216-295-11	SHORT	0
JR503	1-216-295-11	SHORT	0
JR600	1-216-295-11	SHORT	0
<COIL>			
L002	1-414-856-11	INDUCTOR	10UH
L003	1-414-180-11	INDUCTOR	3.3UH
L005	1-414-233-22	INDUCTOR	0UH
L101	1-414-856-11	INDUCTOR	10UH
L102	1-414-856-11	INDUCTOR	10UH
L103	1-414-856-11	INDUCTOR	10UH
L104	1-414-856-11	INDUCTOR	10UH
L105	1-414-856-11	INDUCTOR	10UH
L301	1-414-189-31	INDUCTOR	100UH
L302	1-414-185-41	INDUCTOR	22UH
L303	1-414-189-31	INDUCTOR	100UH
L304	1-414-189-31	INDUCTOR	100UH
L501	1-412-525-31	INDUCTOR	10UH
L502	1-422-613-11	COIL, AIR CORE	
L503	1-412-525-31	INDUCTOR	10UH
L504	1-412-525-31	INDUCTOR	10UH
L507	1-459-111-00	INDUCTOR	10MH
L511	1-406-977-71	INDUCTOR	0UH
L512	1-412-549-31	INDUCTOR	1MH (KV-XA34M31 ONLY)
L513	1-412-551-31	INDUCTOR	1.5MH (EXCEPT KV-XA34M31)
L513	1-412-549-31	INDUCTOR	1MH (KV-XA34M31 ONLY)
L515	1-459-104-00	COIL, WITH CORE	
L518	1-414-187-11	INDUCTOR	47UH
L601	1-412-527-11	INDUCTOR	15UH
L905	1-414-856-11	INDUCTOR	10UH
<PHOTO COUPLER>			
PH600 $\triangle$	8-749-924-35	ON3171-R	
<TRANSISTOR>			
Q001	8-729-216-22	2SA1162-G	
Q002	8-729-230-49	2SC2712-YG	
Q101	8-729-230-49	2SC2712-YG	
Q301	8-729-216-22	2SA1162-G	
Q302	8-729-230-49	2SC2712-YG	
Q303	8-729-216-22	2SA1162-G	
Q304	8-729-216-22	2SA1162-G	
Q305	8-729-216-22	2SA1162-G	

REF. NO.	PART NO.	DESCRIPTION	REMARK
Q306	8-729-230-49	2SC2712-YG	
Q307	8-729-230-49	2SC2712-YG	
Q308	8-729-216-22	2SA1162-G	
Q309	8-729-421-19	UN2213	
Q310	8-729-230-49	2SC2712-YG	
Q311	8-729-230-49	2SC2712-YG	
Q312	8-729-216-22	2SA1162-G	
Q313	8-729-230-49	2SC2712-YG	
Q314	8-729-216-22	2SA1162-G	
Q315	8-729-421-19	UN2213	
Q316	8-729-216-22	2SA1162-G	
Q317	8-729-216-22	2SA1162-G	
Q501	8-729-216-22	2SA1162-G	
Q502	8-729-216-22	2SA1162-G	
Q503	8-729-230-49	2SC2712-YG	
Q505	8-729-931-45	IRF614	
Q506	8-729-119-80	2SC2688-LK	
Q507	8-729-216-22	2SA1162-G	
Q509	8-729-230-49	2SC2712-YG	
Q511	8-729-016-32	2SC4927-01	
Q600	8-729-119-78	2SC2785-HFE	
Q601	8-729-023-22	2SD2114K	
Q602	8-729-230-49	2SC2712-YG	
Q603	8-729-424-08	UN2111 (EXCEPT KV-XA34M31)	
Q603	8-729-027-23	DTA114EKA-T146 (KV-XA34M31 ONLY)	
Q604	8-729-200-17	2SA1091-O	
Q605	8-729-044-30	2SK2845-LB102	
Q606	8-729-230-49	2SC2712-YG	
Q607	8-729-922-37	2SD2144S-UVW	
Q608	8-729-230-49	2SC2712-YG	
<RESISTOR>			
R001	1-414-233-22	INDUCTOR	0UH
R002	1-216-025-11	RES-CHIP	100 5% 1/10W
R003	1-216-073-00	RES-CHIP	10K 5% 1/10W
R004	1-216-025-11	RES-CHIP	100 5% 1/10W
R005	1-216-025-11	RES-CHIP	100 5% 1/10W
R008	1-216-065-91	RES-CHIP	4.7K 5% 1/10W
R010	1-216-065-91	RES-CHIP	4.7K 5% 1/10W
R011	1-216-065-91	RES-CHIP	4.7K 5% 1/10W
R012	1-216-065-91	RES-CHIP	4.7K 5% 1/10W
R013	1-216-065-91	RES-CHIP	4.7K 5% 1/10W
R014	1-216-025-11	RES-CHIP	100 5% 1/10W
R015	1-216-025-11	RES-CHIP	100 5% 1/10W
R018	1-216-033-00	RES-CHIP	220 5% 1/10W
R019	1-216-073-00	RES-CHIP	10K 5% 1/10W
R020	1-216-045-00	RES-CHIP	680 5% 1/10W
R021	1-216-073-00	RES-CHIP	10K 5% 1/10W
R022	1-216-295-11	SHORT	0
R023	1-216-049-11	RES-CHIP	1K 5% 1/10W
R024	1-216-063-91	RES-CHIP	3.9K 5% 1/10W
R025	1-216-063-91	RES-CHIP	3.9K 5% 1/10W
R026	1-216-063-91	RES-CHIP	3.9K 5% 1/10W
R027	1-216-049-11	RES-CHIP	1K 5% 1/10W
R028	1-216-073-00	RES-CHIP	10K 5% 1/10W



REF. NO.	PART NO.	DESCRIPTION		REMARK	REF. NO.	PART NO.	DESCRIPTION		REMARK
R029	1-216-049-11	RES-CHIP	1K	5% 1/10W	R318	1-216-039-00	RES-CHIP	390	5% 1/10W
R031	1-216-049-11	RES-CHIP	1K	5% 1/10W	R319	1-216-025-11	RES-CHIP	100	5% 1/10W
R032	1-216-025-11	RES-CHIP	100	5% 1/10W	R320	1-216-065-91	RES-CHIP	4.7K	5% 1/10W
R034	1-216-049-11	RES-CHIP	1K	5% 1/10W	R321	1-216-073-00	RES-CHIP	10K	5% 1/10W
R035	1-216-025-11	RES-CHIP	100	5% 1/10W	R322	1-216-033-00	RES-CHIP	220	5% 1/10W
R036	1-216-025-11	RES-CHIP	100	5% 1/10W	R323	1-216-053-00	RES-CHIP	1.5K	5% 1/10W
R037	1-216-025-11	RES-CHIP	100	5% 1/10W	R324	1-216-053-00	RES-CHIP	1.5K	5% 1/10W
R038	1-216-049-11	RES-CHIP	1K	5% 1/10W	R326	1-216-029-00	RES-CHIP	150	5% 1/10W
R040	1-216-025-11	RES-CHIP	100	5% 1/10W	R327	1-216-033-00	RES-CHIP	220	5% 1/10W
R041	1-216-025-11	RES-CHIP	100	5% 1/10W	R328	1-216-065-91	RES-CHIP	4.7K	5% 1/10W
R042	1-216-295-11	SHORT	0		R329	1-216-041-00	RES-CHIP	470	5% 1/10W
R043	1-216-049-11	RES-CHIP	1K	5% 1/10W	R331	1-216-295-11	SHORT	0	
R044	1-216-025-11	RES-CHIP	100	5% 1/10W	R332	1-216-033-00	RES-CHIP	220	5% 1/10W
R045	1-414-233-22	INDUCTOR	0UH		R335	1-216-045-00	RES-CHIP	680	5% 1/10W
R046	1-216-049-11	RES-CHIP	1K	5% 1/10W	R336	1-216-049-11	RES-CHIP	1.0K	5% 1/10W
R047	1-414-233-22	INDUCTOR	0UH				(KV-XA34M31 ONLY)		
R048	1-216-073-00	RES-CHIP	10K	5% 1/10W	R338	1-216-037-00	RES-CHIP	330	5% 1/10W
R050	1-216-073-00	RES-CHIP	10K	5% 1/10W	R339	1-216-033-00	RES-CHIP	220	5% 1/10W
R053	1-216-049-11	RES-CHIP	1K	5% 1/10W	R340	1-216-025-11	RES-CHIP	100	5% 1/10W
R058	1-216-295-11	SHORT	0		R345	1-216-081-00	RES-CHIP	22K	5% 1/10W
R059	1-216-295-11	SHORT	0				(EXCEPT KV-XA34M31)		
R060	1-216-295-11	SHORT	0		R345	1-216-073-00	RES-CHIP	10K	5% 1/10W
R061	1-216-295-11	SHORT	0				(KV-XA34M31 ONLY)		
R062	1-216-041-00	RES-CHIP	470	5% 1/10W	R348	1-208-806-11	METAL CHIP	10K	0.5% 1/10W
R063	1-216-041-00	RES-CHIP	470	5% 1/10W	R349	1-216-073-00	RES-CHIP	10K	5% 1/10W
R064	1-216-041-00	RES-CHIP	470	5% 1/10W	R350	1-216-061-00	RES-CHIP	3.3K	5% 1/10W
R065	1-216-041-00	RES-CHIP	470	5% 1/10W			(EXCEPT KV-XA34M31)		
R066	1-216-049-11	RES-CHIP	1K	5% 1/10W	R350	1-216-057-00	RES-CHIP	2.2K	5% 1/10W
R067	1-216-049-11	RES-CHIP	1K	5% 1/10W			(KV-XA34M31 ONLY)		
R068	1-216-041-00	RES-CHIP	470	5% 1/10W	R351	1-216-053-00	RES-CHIP	1.5K	5% 1/10W
R101	1-216-025-11	RES-CHIP	100	5% 1/10W			(EXCEPT KV-XA34M31)		
		(KV-XA29M50 ONLY)			R351	1-216-049-11	RES-CHIP	1K	5% 1/10W
R102	1-216-025-11	RES-CHIP	100	5% 1/10W			(KV-XA34M31 ONLY)		
		(KV-XA29M50 ONLY)			R354	1-216-057-00	RES-CHIP	2.2K	5% 1/10W
R105	1-216-295-11	SHORT	0		R355	1-216-057-00	RES-CHIP	2.2K	5% 1/10W
R109	1-216-041-00	RES-CHIP	470	5% 1/10W	R356	1-216-057-00	RES-CHIP	2.2K	5% 1/10W
R111	1-216-025-11	RES-CHIP	100	5% 1/10W	R357	1-216-079-00	RES-CHIP	18K	5% 1/10W
R112	1-216-025-11	RES-CHIP	100	5% 1/10W	R358	1-216-049-11	RES-CHIP	1K	5% 1/10W
R113	1-216-025-11	RES-CHIP	100	5% 1/10W	R359	1-216-033-00	RES-CHIP	220	5% 1/10W
R225	1-216-033-00	RES-CHIP	220	5% 1/10W	R360	1-216-033-00	RES-CHIP	220	5% 1/10W
R226	1-216-033-00	RES-CHIP	220	5% 1/10W	R361	1-216-073-00	RES-CHIP	10K	5% 1/10W
R227	1-216-033-00	RES-CHIP	220	5% 1/10W	R362	1-216-075-00	RES-CHIP	12K	5% 1/10W
R237	1-216-295-11	SHORT	0		R363	1-216-079-00	RES-CHIP	18K	5% 1/10W
R301	1-216-113-00	RES-CHIP	470K	5% 1/10W	R364	1-216-295-11	SHORT	0	
R302	1-216-295-11	SHORT	0		R365	1-216-033-00	RES-CHIP	220	5% 1/10W
R303	1-216-049-11	RES-CHIP	1K	5% 1/10W	R366	1-216-073-00	RES-CHIP	10K	5% 1/10W
R304	1-216-073-00	RES-CHIP	10K	5% 1/10W	R367	1-216-073-00	RES-CHIP	10K	5% 1/10W
R308	1-216-025-11	RES-CHIP	100	5% 1/10W	R368	1-216-073-00	RES-CHIP	10K	5% 1/10W
R309	1-216-025-11	RES-CHIP	100	5% 1/10W	R370	1-216-033-00	RES-CHIP	220	5% 1/10W
R310	1-216-025-11	RES-CHIP	100	5% 1/10W	R371	1-216-083-00	RES-CHIP	27K	5% 1/10W
R311	1-216-041-00	RES-CHIP	470	5% 1/10W	R372	1-216-091-00	RES-CHIP	56K	5% 1/10W
R312	1-216-039-00	RES-CHIP	390	5% 1/10W	R375	1-216-025-11	RES-CHIP	100	5% 1/10W
R313	1-216-037-00	RES-CHIP	330	5% 1/10W			(EXCEPT KV-XA29M50)		
R314	1-216-083-00	RES-CHIP	27K	5% 1/10W	R376	1-216-081-00	RES-CHIP	22K	5% 1/10W
R315	1-216-053-00	RES-CHIP	1.5K	5% 1/10W	R377	1-216-121-11	RES-CHIP	1M	5% 1/10W
R316	1-216-037-00	RES-CHIP	330	5% 1/10W	R378	1-216-053-00	RES-CHIP	1.5K	5% 1/10W
R317	1-216-091-00	RES-CHIP	56K	5% 1/10W	R379	1-218-179-11	RES-CHIP	10M	5% 1/10W
					R381	1-216-295-11	SHORT	0	

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**A**

REF. NO.	PART NO.	DESCRIPTION	REMARK
R382	1-216-065-91	RES-CHIP 4.7K	5% 1/10W
R383	1-216-049-11	RES-CHIP 1K	5% 1/10W
R384	1-216-041-00	RES-CHIP 470	5% 1/10W
R385	1-216-029-00	RES-CHIP 150	5% 1/10W
R391	1-216-295-11	SHORT 0	
R500	1-249-417-11	CARBON 1K	5% 1/4W
R501	1-216-049-11	RES-CHIP 1K	5% 1/10W
R505	1-208-830-11	METAL CHIP 100K (EXCEPT KV-XA34M31)	0.5% 1/10W
R505	1-216-113-00	RES-CHIP 470K (KV-XA34M31 ONLY)	5% 1/10W
R506	1-216-081-00	RES-CHIP 22K (EXCEPT KV-XA34M31)	5% 1/10W
R506	1-216-079-00	RES-CHIP 18K (KV-XA34M31 ONLY)	5% 1/10W
R507	1-249-389-11	CARBON 4.7	5% 1/4W
R508	1-216-471-11	METAL OXIDE 27 (EXCEPT KV-XA34M31)	5% 3W
R508	1-215-909-11	METAL OXIDE 47 (KV-XA34M31 ONLY)	5% 3W
R509	1-216-473-11	METAL OXIDE 56 (EXCEPT KV-XA34M31)	5% 3W
R509	1-216-474-11	METAL OXIDE 82 (KV-XA34M31 ONLY)	5% 3W
R510	1-216-449-11	METAL OXIDE 56 (EXCEPT KV-XA34M31)	5% 2W
R510	1-216-424-11	METAL OXIDE 39 (KV-XA34M31 ONLY)	5% 1W
R511	1-215-908-00	METAL OXIDE 33 (EXCEPT KV-XA34M31)	5% 3W
R511	1-216-399-00	METAL OXIDE 6.8 (KV-XA34M31 ONLY)	5% 3W
R515	1-215-911-11	METAL OXIDE 100 (EXCEPT KV-XA34M31)	5% 3W
R515	1-216-349-00	METAL OXIDE 1 (KV-XA34M31 ONLY)	5% 1W
R517	1-208-798-11	METAL CHIP 4.7K	0.5% 1/10W
R518	1-247-807-31	CARBON 100	5% 1/4W
R519	1-215-913-11	METAL OXIDE 220 (EXCEPT KV-XA34M31)	5% 3W
R519	1-216-469-11	METAL OXIDE 12 (KV-XA34M31 ONLY)	5% 3W
R520	1-215-445-00	METAL 10K	1% 1/4W
R522	1-208-806-11	METAL CHIP 10K	0.5% 1/10W
R523	1-249-411-11	CARBON 330	5% 1/4W
R525	1-208-846-11	METAL CHIP 470K (EXCEPT KV-XA34M31)	0.5% 1/10W
R525	1-208-854-11	METAL CHIP 1M (KV-XA34M31 ONLY)	0.5% 1/10W
R526	1-208-804-11	METAL CHIP 8.2K (EXCEPT KV-XA34M31)	0.5% 1/10W
R526	1-208-803-11	METAL CHIP 7.5K (KV-XA34M31 ONLY)	0.5% 1/10W
R527	1-216-001-00	RES-CHIP 10	5% 1/10W
R528	1-208-814-91	METAL CHIP 22K	0.5% 1/10W
R529	1-216-635-11	METAL CHIP 220	0.5% 1/10W
R531	1-247-843-11	CARBON 3.3K	5% 1/4W
R532	1-216-073-00	RES-CHIP 10K (KV-XA34M31 ONLY)	5% 1/10W
R533	1-249-417-11	CARBON 1K	5% 1/4W
R534	1-216-364-11	METAL OXIDE 0.39	5% 2W

REF. NO.	PART NO.	DESCRIPTION	REMARK
R535	1-216-067-00	RES-CHIP 5.6K	5% 1/10W
R536	1-216-067-00	RES-CHIP 5.6K	5% 1/10W
R537	1-208-804-11	METAL CHIP 8.2K	0.5% 1/10W
R539	1-216-049-11	RES-CHIP 1K	5% 1/10W
R540	1-216-065-91	RES-CHIP 4.7K	5% 1/10W
R541	1-216-065-91	RES-CHIP 4.7K	5% 1/10W
R542	1-216-073-00	RES-CHIP 10K (EXCEPT KV-XA34M31)	5% 1/10W
R542	1-216-097-11	RES-CHIP 100K (KV-XA34M31 ONLY)	5% 1/10W
R543	1-216-437-00	METAL OXIDE 5.6K	5% 1W
R544	1-215-917-11	METAL OXIDE 1K (EXCEPT KV-XA34M31)	5% 3W
R544	1-216-480-11	METAL OXIDE 820 (KV-XA34M31 ONLY)	5% 3W
R545	1-216-077-91	RES-CHIP 15K	5% 1/10W
R546	1-216-077-91	RES-CHIP 15K	5% 1/10W
R547	1-216-085-00	RES-CHIP 33K	5% 1/10W
R548	1-208-796-11	METAL CHIP 3.9K	0.5% 1/10W
R549	1-215-452-00	METAL 20K (EXCEPT KV-XA34M31)	1% 1/4W
R549	1-215-451-00	METAL 18K (KV-XA34M31 ONLY)	1% 1/4W
R550	1-216-097-11	RES-CHIP 100K	5% 1/10W
R551	1-249-441-11	CARBON 100K (EXCEPT KV-XA34M31)	5% 1/4W
R551	1-249-421-11	CARBON 2.2K (KV-XA34M31 ONLY)	5% 1/4W
R552	1-216-057-00	RES-CHIP 2.2K	5% 1/10W
R553	1-215-453-00	METAL 22K	1% 1/4W
R554	1-215-453-00	METAL 22K	1% 1/4W
R556	1-215-437-00	METAL 4.7K	1% 1/4W
R557	1-216-361-00	METAL OXIDE 0.22 (KV-XA34M31 ONLY)	5% 2W
R558	1-247-843-11	CARBON 3.3K	5% 1/4W
R559	1-249-429-11	CARBON 10K	5% 1/4W
R560	1-216-073-00	RES-CHIP 10K	5% 1/10W
R561	1-216-049-11	RES-CHIP 1K	5% 1/10W
R562	1-249-401-11	CARBON 47	5% 1/4W
R564	1-208-820-11	METAL CHIP 39K (EXCEPT KV-XA34M31)	0.5% 1/10W
R564	1-208-822-11	METAL CHIP 47K (KV-XA34M31 ONLY)	0.5% 1/10W
R565	1-216-073-00	RES-CHIP 10K (EXCEPT KV-XA34M31)	5% 1/10W
R565	1-216-061-00	RES-CHIP 3.3K (KV-XA34M31 ONLY)	5% 1/10W
R567	1-216-105-91	RES-CHIP 220K (EXCEPT KV-XA34M31)	5% 1/10W
R568	1-249-383-11	CARBON 1.5	5% 1/4W
R570	1-216-069-00	RES-CHIP 6.8K	5% 1/10W
R571	1-215-443-00	METAL 8.2K (EXCEPT KV-XA34M31)	1% 1/4W
R571	1-215-442-00	METAL 7.5K (KV-XA34M31 ONLY)	1% 1/4W
R573	1-216-083-00	RES-CHIP 27K (EXCEPT KV-XA34M31)	5% 1/10W
R575	1-208-796-11	METAL CHIP 3.9K	0.5% 1/10W
R577	1-215-913-11	METAL OXIDE 220	5% 3W
R578	1-216-369-00	METAL OXIDE 1	5% 2W



**KV-XA29M31/XA29M50/  
XA29M61/XA34M31**

**RM-954**

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



REF. NO.	PART NO.	DESCRIPTION	REMARK
T504	1-431-475-11	TRANSFORMER, HORIZONTAL LINEAR	
T505	1-426-981-11	TRANSFORMER, FERRITE (PMT)	
T601	$\Delta$ 1-424-505-11	TRANSFORMER, LINE FILTER (KV-XA29M50/XA29M61)	
	$\Delta$ 1-429-707-12	TRANSFORMER, LINE FILTER (KV-XA29M31/XA34M31)	
T603	$\Delta$ 1-431-976-11	TRANSFORMER, CONVERTER (SRT)	
T604	$\Delta$ 1-431-852-11	TRANSFORMER, CONVERTER (SRT)	
		<THERMISTOR>	
TH600	1-803-586-11	THERMISTOR, NTC	
		<THERMISTOR>	
THP600	1-803-540-11	THERMISTOR	
		<TUNER>	
TU101	8-598-449-10	TUNER, FSS BTF-LG433 (KV-XA29M50 ONLY)	
TU101	8-598-451-00	TUNER, FSS BTF-WG441 (EXCEPT KV-XA29M50)	
		<CRYSTAL>	
X001	1-781-174-21	VIBRATOR, CERAMIC	
X301	1-781-134-21	VIBRATOR, CRYSTAL	
X302	1-781-132-21	VIBRATOR, CRYSTAL	
*****			
	* A-1136-144-A	B BOARD COMPLETE (EXCEPT KV-XA34M31)	
	* A-1136-170-A	B BOARD COMPLETE (KV-XA34M31 ONLY)	
		*****	
	4-382-854-11	SCREW (M3X10), P, SW (+)	
		<CAPACITOR>	
C1305	1-163-038-11	CERAMIC CHIP 0.1UF	25V
C1307	1-164-346-11	CERAMIC CHIP 1UF	16V
C1310	1-104-664-11	ELECT 47UF	20.00% 16V
C1312	1-104-664-11	ELECT 47UF	20.00% 16V
C1330	1-126-964-11	ELECT 10UF	20.00% 50V
C1333	1-163-038-11	CERAMIC CHIP 0.1UF	25V
C1395	1-163-249-11	CERAMIC CHIP 82PF	5.00% 50V
C1401	1-104-661-91	ELECT 330UF	20.00% 16V
C1402	1-104-664-11	ELECT 47UF	20.00% 25V
C1403	1-104-664-11	ELECT 47UF	20.00% 25V
C1404	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V
C1405	1-104-664-11	ELECT 47UF	20.00% 25V
C1406	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V
C1408	1-126-964-11	ELECT 10UF	20.00% 50V
C1410	1-104-664-11	ELECT 47UF	20.00% 25V
C1411	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V
C1413	1-126-935-11	ELECT 470UF	20.00% 16V
C1414	1-164-346-11	CERAMIC CHIP 1UF	16V

REF. NO.	PART NO.	DESCRIPTION	REMARK
C1415	1-104-664-11	ELECT 47UF	20.00% 25V
C1416	1-164-346-11	CERAMIC CHIP 1UF	16V
C1418	1-163-031-11	CERAMIC CHIP 0.01UF	50V
C1419	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V
C1421	1-164-346-11	CERAMIC CHIP 1UF	16V
C1422	1-164-346-11	CERAMIC CHIP 1UF	16V
C1423	1-164-346-11	CERAMIC CHIP 1UF	16V
C1425	1-164-346-11	CERAMIC CHIP 1UF	16V
C1426	1-164-346-11	CERAMIC CHIP 1UF	16V
C1428	1-104-665-11	ELECT 100UF	20.00% 25V
C1429	1-104-663-11	ELECT 33UF	20.00% 25V
C1431	1-163-038-11	CERAMIC CHIP 0.1UF	25V
C1432	1-126-933-11	ELECT 100UF	20.00% 16V
C1433	1-104-664-11	ELECT 47UF	20.00% 16V
C1434	1-163-133-00	CERAMIC CHIP 470PF	5.00% 50V
C1435	1-163-038-11	CERAMIC CHIP 0.1UF	25V
C1436	1-163-038-11	CERAMIC CHIP 0.1UF	25V
C1439	1-163-133-00	CERAMIC CHIP 470PF	5.00% 50V
C1440	1-163-133-00	CERAMIC CHIP 470PF	5.00% 50V
C1441	1-163-133-00	CERAMIC CHIP 470PF	5.00% 50V
C1442	1-163-133-00	CERAMIC CHIP 470PF	5.00% 50V
C1443	1-163-133-00	CERAMIC CHIP 470PF	5.00% 50V
C1444	1-164-005-11	CERAMIC CHIP 0.47UF	25V
C1445	1-163-133-00	CERAMIC CHIP 470PF	5.00% 50V
C1446	1-163-133-00	CERAMIC CHIP 470PF	5.00% 50V
C1447	1-126-964-11	ELECT 10UF	20.00% 50V
C1448	1-164-005-11	CERAMIC CHIP 0.47UF	25V
C1449	1-126-933-11	ELECT 100UF	20.00% 16V
C1457	1-164-346-11	CERAMIC CHIP 1UF	16V
C1459	1-163-133-00	CERAMIC CHIP 470PF	5.00% 50V
C1460	1-163-133-00	CERAMIC CHIP 470PF	5.00% 50V
C1461	1-164-346-11	CERAMIC CHIP 1UF	16V
C1462	1-164-346-11	CERAMIC CHIP 1UF	16V
C1464	1-126-933-11	ELECT 100UF	20.00% 16V
C3201	1-126-964-11	ELECT 10UF	20.00% 50V
C3202	1-136-171-00	FILM 0.33UF	5.00% 50V
C3203	1-115-339-11	CERAMIC CHIP 0.1UF	10.00% 50V
C3208	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3209	1-164-489-11	CERAMIC CHIP 0.22UF	10.00% 16V
C3210	1-163-017-00	CERAMIC CHIP 0.0047UF	10.00% 50V
C3211	1-164-489-11	CERAMIC CHIP 0.22UF	10.00% 16V
C3213	1-104-665-11	ELECT 100UF	20.00% 25V
C3214	1-115-339-11	CERAMIC CHIP 0.1UF	10.00% 50V
C3215	1-126-964-11	ELECT 10UF	20.00% 50V
C3216	1-126-964-11	ELECT 10UF	20.00% 50V
C3217	1-104-665-11	ELECT 100UF	20.00% 25V
C3218	1-163-017-00	CERAMIC CHIP 0.0047UF	10.00% 50V
C3219	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C3220	1-163-037-11	CERAMIC CHIP 0.022UF	10.00% 50V
C3221	1-163-037-11	CERAMIC CHIP 0.022UF	10.00% 50V
C3222	1-163-037-11	CERAMIC CHIP 0.022UF	10.00% 50V
C3223	1-163-037-11	CERAMIC CHIP 0.022UF	10.00% 50V
C3224	1-164-505-11	CERAMIC CHIP 2.2UF	16V
C3225	1-163-038-11	CERAMIC CHIP 0.1UF	25V
C3226	1-126-964-11	ELECT 10UF	20.00% 50V
C3227	1-164-505-11	CERAMIC CHIP 2.2UF	16V
C3228	1-107-698-11	ELECT 10UF	20.00% 25V

B

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C3229	1-107-698-11	ELECT	10UF	20.00%	25V		
C3230	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V		
C3231	1-126-960-11	ELECT	1UF	20.00%	50V		
C3232	1-126-960-11	ELECT	1UF	20.00%	50V		
C3233	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V		
C3234	1-117-720-11	CERAMIC CHIP	4.7UF		10V		
C3235	1-117-720-11	CERAMIC CHIP	4.7UF		10V		
C3236	1-115-185-11	CERAMIC CHIP	0.033UF	10.00%	50V		
C3237	1-164-182-11	CERAMIC CHIP	0.0033UF	10.00%	50V		
C3238	1-164-005-11	CERAMIC CHIP	0.47UF		25V		
C3239	1-136-171-00	FILM	0.33UF	5.00%	50V		
C3240	1-126-963-11	ELECT	4.7UF	20.00%	50V		
C3241	1-126-963-11	ELECT	4.7UF	20.00%	50V		
C3242	1-126-965-11	ELECT	22UF	20.00%	50V		
C3243	1-163-989-11	CERAMIC CHIP	0.033UF	10.00%	25V		
C3244	1-164-346-11	CERAMIC CHIP	1UF		16V		
C3245	1-164-005-11	CERAMIC CHIP	0.47UF		25V		
C3246	1-163-243-11	CERAMIC CHIP	47PF	5.00%	50V		
C3247	1-126-963-11	ELECT	4.7UF	20.00%	50V		
C3248	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V		
C3249	1-164-505-11	CERAMIC CHIP	2.2UF		16V		
C3250	1-164-346-11	CERAMIC CHIP	1UF		16V		
C3251	1-126-964-11	ELECT	10UF	20.00%	50V		
C3252	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V		
C3253	1-126-933-11	ELECT	100UF	20.00%	16V		
C3254	1-164-505-11	CERAMIC CHIP	2.2UF		16V		
C3255	1-163-243-11	CERAMIC CHIP	47PF	5.00%	50V		
C3256	1-126-963-11	ELECT	4.7UF	20.00%	50V		
C3257	1-164-346-11	CERAMIC CHIP	1UF		16V		
C3258	1-163-989-11	CERAMIC CHIP	0.033UF	10.00%	25V		
C3259	1-126-963-11	ELECT	4.7UF	20.00%	50V		
C3260	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V		
C3262	1-104-664-11	ELECT	47UF	20.00%	16V		
C3264	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V		
C3265	1-117-720-11	CERAMIC CHIP	4.7UF		10V		
C3266	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V		
C3267	1-164-182-11	CERAMIC CHIP	0.0033UF	10.00%	50V		
C3268	1-163-009-11	CERAMIC CHIP	0.001UF	10.00%	50V		
C3269	1-163-009-11	CERAMIC CHIP	0.001UF	10.00%	50V		
C3270	1-126-963-11	ELECT	4.7UF	20.00%	50V		
C3271	1-126-963-11	ELECT	4.7UF	20.00%	50V		
C3272	1-104-665-11	ELECT	100UF	20.00%	25V		
C3273	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V		
C3274	1-117-720-11	CERAMIC CHIP	4.7UF		10V		
C3275	1-115-185-11	CERAMIC CHIP	0.033UF	10.00%	50V		
C3276	1-115-185-11	CERAMIC CHIP	0.033UF	10.00%	50V		
C3277	1-115-185-11	CERAMIC CHIP	0.033UF	10.00%	50V		
C3280	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V		
C3281	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V		
C6200	1-216-295-11	SHORT	0				
C6202	1-128-550-11	ELECT	2200UF	20.00%	50V		
C6203	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V		
C6204	1-128-550-11	ELECT	2200UF	20.00%	50V		
C6205	1-130-495-00	MYLAR	0.1UF	5.00%	50V		
C6206	1-128-550-11	ELECT	2200UF	20.00%	50V		
C6209	1-130-495-00	MYLAR	0.1UF	5.00%	50V		
C6210	1-126-924-11	ELECT	330UF	20.00%	10V		
C6211	1-126-924-11	ELECT	330UF	20.00%	10V		
C6212	1-104-664-11	ELECT	47UF	20.00%	25V		
C6213	1-126-964-11	ELECT	10UF	20.00%	50V		
C6217	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V		
C6220	1-164-505-11	CERAMIC CHIP	2.2UF		16V		
C6222	1-164-505-11	CERAMIC CHIP	2.2UF		16V		
C6223	1-126-960-11	ELECT	1UF	20.00%	50V		
C6241	1-126-964-11	ELECT	10UF	20.00%	50V		
C6244	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V	(EXCEPT KV-XA34M31)	
C6244	1-163-019-00	CERAMIC CHIP	0.0068UF	10.00%	50V	(KV-XA34M31 ONLY)	
C6245	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V	(EXCEPT KV-XA34M31)	
C6245	1-163-019-00	CERAMIC CHIP	0.0068UF	10.00%	50V	(KV-XA34M31 ONLY)	
C6249	1-216-295-11	SHORT	0				
CN1300*	1-564-506-11	PLUG, CONNECTOR	3P				
CN1400*	1-564-512-11	PLUG, CONNECTOR	9P				
CN1401*	1-508-784-21	PIN, CONNECTOR	(5MM PITCH) 1P				
CN1403*	1-564-506-11	PLUG, CONNECTOR	3P				
CN1405*	1-779-892-11	CONNECTOR, BOARD TO BOARD	10P				
CN1406*	1-779-892-11	CONNECTOR, BOARD TO BOARD	10P				
CN1407*	1-779-891-11	CONNECTOR, BOARD TO BOARD	8P				
CN1409	1-764-818-11	CONNECTOR, BOARD TO BOARD	10P				
CN6200*	1-564-507-11	PLUG, CONNECTOR	4P				
CN6204*	1-564-509-11	PLUG, CONNECTOR	6P				
CN6206*	1-564-508-11	PLUG, CONNECTOR	5P				
D1401	8-719-158-35	RD9.1S-B					
D1402	8-719-158-35	RD9.1S-B					
D1403	8-719-158-35	RD9.1S-B					
D1404	8-719-158-35	RD9.1S-B					
D1405	8-719-158-35	RD9.1S-B					
D1406	8-719-158-35	RD9.1S-B					
D1407	8-719-158-35	RD9.1S-B					
D1408	8-719-158-35	RD9.1S-B					
D1409	8-719-158-35	RD9.1S-B					
D1410	8-719-158-35	RD9.1S-B					
D1411	8-719-158-35	RD9.1S-B					
D1412	8-719-158-35	RD9.1S-B					
D1415	8-719-158-35	RD9.1S-B					
D1416	8-719-158-35	RD9.1S-B					
D1418	8-719-158-35	RD9.1S-B					
D3201	8-719-988-61	1SS355TE-17					
D3203	8-719-988-61	1SS355TE-17					
D6210	8-719-820-41	1SS302					
D6211	8-719-988-61	1SS355TE-17					
D6212	8-719-988-61	1SS355TE-17					
IC1401	8-752-068-46	CXA1855S					
IC1402	8-759-100-96	UPC4558G2					

**B**

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
IC1404	8-759-701-59	NJM78M09FA		Q1365	8-729-230-49	2SC2712-YG	
IC3200	8-759-100-96	UPC4558G2		Q1372	8-729-230-49	2SC2712-YG	
IC3200	8-759-100-96	UPC4558G2		Q1402	8-729-216-22	2SA1162-G	
IC3200	8-759-100-96	UPC4558G2		Q1403	8-729-230-49	2SC2712-YG	
IC3200	8-759-100-96	UPC4558G2		Q1404	8-729-230-49	2SC2712-YG	
IC3201	8-759-689-71	NJM2188M-TE2		Q1408	8-729-230-49	2SC2712-YG	
IC3202	8-759-100-96	UPC4558G2		Q1409	8-729-230-49	2SC2712-YG	
IC3202	8-759-100-96	UPC4558G2		Q3201	8-729-224-62	2SK246-GR	
IC3202	8-759-100-96	UPC4558G2		Q3202	8-729-230-49	2SC2712-YG	
IC3202	8-759-100-96	UPC4558G2		Q3203	8-729-230-49	2SC2712-YG	
IC3203	8-759-711-10	NJU4066BM		Q3204	8-729-224-62	2SK246-GR	
IC3204	8-759-100-96	UPC4558G2		Q6201	8-729-421-19	UN2213	
IC3205	8-752-058-68	CXA1315M		Q6203	8-729-421-19	UN2213	
IC3206	8-759-678-92	BH3868AFS-E2		Q6204	8-729-421-19	UN2213	
IC6200	8-759-168-24	TA8200AH		Q6208	8-729-421-19	UN2213	
		<JACK>				<RESISTOR>	
J1401	1-784-646-11	TERMINAL, S		R1301	1-216-041-00	RES-CHIP 470	5% 1/10W
J1402	1-778-387-11	JACK BLOCK, PIN 12P		R1318	1-216-033-00	RES-CHIP 220	5% 1/10W
		<CHIP CONDUCTOR>		R1320	1-216-081-00	RES-CHIP 22K	5% 1/10W
JR1303	1-216-295-11	SHORT 0		R1343	1-216-049-11	RES-CHIP 1K	5% 1/10W
JR1405	1-216-295-11	SHORT 0				(EXCEPT KV-XA34M31)	
JR1406	1-216-295-11	SHORT 0		R1344	1-216-025-11	RES-CHIP 100	5% 1/10W
JR1407	1-216-295-11	SHORT 0		R1345	1-216-041-00	RES-CHIP 470	5% 1/10W
JR1409	1-216-295-11	SHORT 0		R1346	1-216-041-00	RES-CHIP 470	5% 1/10W
JR1410	1-216-295-11	SHORT 0		R1347	1-216-025-11	RES-CHIP 100	5% 1/10W
JR1411	1-216-295-11	SHORT 0		R1350	1-216-085-00	RES-CHIP 33K	5% 1/10W
JR3202	1-216-295-11	SHORT 0		R1359	1-216-025-11	RES-CHIP 100	5% 1/10W
JR3204	1-216-295-11	SHORT 0		R1360	1-216-041-00	RES-CHIP 470	5% 1/10W
JR3209	1-216-295-11	SHORT 0		R1361	1-216-041-00	RES-CHIP 470	5% 1/10W
JR3210	1-216-295-11	SHORT 0		R1362	1-216-055-00	RES-CHIP 1.8K	5% 1/10W
JR3211	1-216-295-11	SHORT 0		R1363	1-216-033-00	RES-CHIP 220	5% 1/10W
JR3212	1-216-295-11	SHORT 0		R1364	1-216-089-11	RES-CHIP 47K	5% 1/10W
JR6200	1-216-295-11	SHORT 0		R1365	1-216-081-00	RES-CHIP 22K	5% 1/10W
JR6202	1-216-295-11	SHORT 0		R1366	1-216-295-11	SHORT 0	
JR6203	1-216-295-11	SHORT 0		R1368	1-216-049-11	RES-CHIP 1K	5% 1/10W
JR6204	1-216-295-11	SHORT 0		R1369	1-216-025-11	RES-CHIP 100	5% 1/10W
JR6206	1-216-295-11	SHORT 0		R1370	1-216-041-00	RES-CHIP 470	5% 1/10W
		<COIL>		R1371	1-216-039-00	RES-CHIP 390	5% 1/10W
L1313	1-414-187-11	INDUCTOR 47UH		R1372	1-216-041-00	RES-CHIP 470	5% 1/10W
L1314	1-414-856-11	INDUCTOR 10UH		R1397	1-216-045-00	RES-CHIP 680	5% 1/10W
L1315	1-414-856-11	INDUCTOR 10UH		R1400	1-216-105-91	RES-CHIP 220K	5% 1/10W
L1317	1-414-856-11	INDUCTOR 10UH		R1403	1-216-033-00	RES-CHIP 220	5% 1/10W
L1404	1-412-537-31	INDUCTOR 100UH		R1404	1-216-295-11	SHORT 0	
L3202	1-414-856-11	INDUCTOR 10UH		R1406	1-216-013-00	RES-CHIP 33	5% 1/10W
		<TRANSISTOR>		R1407	1-216-033-00	RES-CHIP 220	5% 1/10W
Q1316	8-729-216-22	2SA1162-G		R1408	1-216-031-00	RES-CHIP 180	5% 1/10W
Q1317	8-729-230-49	2SC2712-YG		R1409	1-216-105-91	RES-CHIP 220K	5% 1/10W
Q1318	8-729-230-49	2SC2712-YG		R1410	1-216-105-91	RES-CHIP 220K	5% 1/10W
Q1323	8-729-230-49	2SC2712-YG		R1411	1-216-089-11	RES-CHIP 47K	5% 1/10W
Q1324	8-729-230-49	2SC2712-YG		R1412	1-216-089-11	RES-CHIP 47K	5% 1/10W
				R1413	1-216-105-91	RES-CHIP 220K	5% 1/10W
				R1414	1-216-025-11	RES-CHIP 100	5% 1/10W
				R1417	1-216-025-11	RES-CHIP 100	5% 1/10W
				R1418	1-216-025-11	RES-CHIP 100	5% 1/10W
				R1421	1-216-057-00	RES-CHIP 2.2K	5% 1/10W

**B**

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R1424	1-216-073-00	RES-CHIP	10K 5%	R1485	1-216-025-11	RES-CHIP	100 5%
R1425	1-216-047-91	RES-CHIP	820 5%	R1486	1-216-067-00	RES-CHIP	5.6K 5%
R1426	1-216-025-11	RES-CHIP	100 5%	R1487	1-216-057-00	RES-CHIP	2.2K 5%
R1427	1-216-063-91	RES-CHIP	3.9K 5%	R1488	1-216-057-00	RES-CHIP	2.2K 5%
R1428	1-216-025-11	RES-CHIP	100 5%	R1489	1-216-022-00	RES-CHIP	75 5%
R1429	1-216-089-11	RES-CHIP	47K 5%	R1490	1-216-025-11	RES-CHIP	100 5%
R1430	1-216-025-11	RES-CHIP	100 5%	R1491	1-216-025-11	RES-CHIP	100 5%
R1431	1-216-025-11	RES-CHIP	100 5%	R1492	1-216-021-00	RES-CHIP	68 5%
R1432	1-216-041-00	RES-CHIP	470 5%	R1493	1-216-067-00	RES-CHIP	5.6K 5%
R1433	1-216-025-11	RES-CHIP	100 5%	R1496	1-216-041-00	RES-CHIP	470 5%
R1435	1-216-022-00	RES-CHIP	75 5%	R1497	1-216-041-00	RES-CHIP	470 5%
R1436	1-216-025-11	RES-CHIP	100 5%	R1498	1-216-025-11	RES-CHIP	100 5%
R1437	1-216-022-00	RES-CHIP	75 5%	R1499	1-216-025-11	RES-CHIP	100 5%
R1438	1-216-025-11	RES-CHIP	100 5%	R1500	1-216-025-11	RES-CHIP	100 5%
R1439	1-216-295-11	SHORT	0	R1501	1-216-045-00	RES-CHIP	680 5%
R1441	1-216-025-11	RES-CHIP	100 5%	R1503	1-216-073-00	RES-CHIP	10K 5%
R1442	1-216-049-11	RES-CHIP	1K 5%	R1504	1-216-073-00	RES-CHIP	10K 5%
R1443	1-216-049-11	RES-CHIP	1K 5%	R1505	1-216-022-00	RES-CHIP	75 5%
R1444	1-216-089-11	RES-CHIP	47K 5%	R1506	1-216-033-00	RES-CHIP	220 5%
R1445	1-216-025-11	RES-CHIP	100 5%	R3200	1-216-121-11	RES-CHIP	1M 5%
R1446	1-216-105-91	RES-CHIP	220K 5%	R3201	1-216-121-11	RES-CHIP	1M 5%
R1447	1-216-025-11	RES-CHIP	100 5%	R3202	1-216-097-11	RES-CHIP	100K 5%
R1448	1-216-043-91	RES-CHIP	560 5%	R3203	1-216-121-11	RES-CHIP	1M 5%
R1449	1-249-429-11	CARBON	10K 5%	R3204	1-216-061-00	RES-CHIP	3.3K 5%
R1450	1-216-073-00	RES-CHIP	10K 5%	R3205	1-216-069-00	RES-CHIP	6.8K 5%
R1451	1-216-073-00	RES-CHIP	10K 5%	R3206	1-216-039-00	RES-CHIP	390 5%
R1452	1-216-089-11	RES-CHIP	47K 5%	R3207	1-216-073-00	RES-CHIP	10K 5%
R1453	1-216-025-11	RES-CHIP	100 5%	R3208	1-216-055-00	RES-CHIP	1.8K 5%
R1454	1-216-091-00	RES-CHIP	56K 5%	R3209	1-216-057-00	RES-CHIP	2.2K 5%
R1455	1-216-073-00	RES-CHIP	10K 5%	R3210	1-216-055-00	RES-CHIP	1.8K 5%
R1456	1-216-113-00	RES-CHIP	470K 5%	R3211	1-216-057-00	RES-CHIP	2.2K 5%
R1457	1-216-073-00	RES-CHIP	10K 5%	R3212	1-216-053-00	RES-CHIP	1.5K 5%
R1458	1-216-073-00	RES-CHIP	10K 5%	R3213	1-216-053-00	RES-CHIP	1.5K 5%
R1459	1-216-025-11	RES-CHIP	100 5%	R3214	1-216-055-00	RES-CHIP	1.8K 5%
R1460	1-216-033-00	RES-CHIP	220 5%	R3215	1-216-095-00	RES-CHIP	82K 5%
R1461	1-216-025-11	RES-CHIP	100 5%	R3216	1-216-129-00	RES-CHIP	2.2M 5%
R1463	1-249-429-11	CARBON	10K 5%	R3217	1-216-085-00	RES-CHIP	33K 5%
R1464	1-216-113-00	RES-CHIP	470K 5%	R3218	1-216-091-00	RES-CHIP	56K 5%
R1465	1-216-113-00	RES-CHIP	470K 5%	R3219	1-216-073-00	RES-CHIP	10K 5%
R1466	1-216-033-00	RES-CHIP	220 5%	R3220	1-216-097-11	RES-CHIP	100K 5%
R1467	1-216-057-00	RES-CHIP	2.2K 5%	R3221	1-216-073-00	RES-CHIP	10K 5%
R1468	1-216-093-91	RES-CHIP	68K 5%	R3222	1-216-073-00	RES-CHIP	10K 5%
R1469	1-216-105-91	RES-CHIP	220K 5%	R3223	1-216-045-00	RES-CHIP	680 5%
R1470	1-216-105-91	RES-CHIP	220K 5%	R3224	1-216-101-00	RES-CHIP	150K 5%
R1471	1-216-022-00	RES-CHIP	75 5%	R3225	1-216-053-00	RES-CHIP	1.5K 5%
R1472	1-216-033-00	RES-CHIP	220 5%	R3226	1-216-095-00	RES-CHIP	82K 5%
R1473	1-216-033-00	RES-CHIP	220 5%	R3227	1-216-091-00	RES-CHIP	56K 5%
R1475	1-216-089-11	RES-CHIP	47K 5%	R3228	1-216-085-00	RES-CHIP	33K 5%
R1476	1-216-091-00	RES-CHIP	56K 5%	R3229	1-216-025-11	RES-CHIP	100 5%
R1477	1-216-047-91	RES-CHIP	820 5%	R3230	1-216-025-11	RES-CHIP	100 5%
R1478	1-216-051-00	RES-CHIP	1.2K 5%	R3231	1-216-073-00	RES-CHIP	10K 5%
R1479	1-216-105-91	RES-CHIP	220K 5%	R3232	1-216-073-00	RES-CHIP	10K 5%
R1480	1-216-105-91	RES-CHIP	220K 5%	R3233	1-216-069-00	RES-CHIP	6.8K 5%
R1481	1-216-022-00	RES-CHIP	75 5%	R3234	1-216-039-00	RES-CHIP	390 5%
R1482	1-216-025-11	RES-CHIP	100 5%	R3235	1-216-101-00	RES-CHIP	150K 5%
R1483	1-216-025-11	RES-CHIP	100 5%	R3236	1-216-113-00	RES-CHIP	470K 5%
R1484	1-216-025-11	RES-CHIP	100 5%	R3237	1-216-045-00	RES-CHIP	680 5%
				R3238	1-216-073-00	RES-CHIP	10K 5%

**KV-XA29M31/XA29M50/  
XA29M61/XA34M31  
RM-954**



REF. NO.	PART NO.	DESCRIPTION	REMARK
R3239	1-216-073-00	RES-CHIP 10K	5% 1/10W
R3240	1-216-081-00	RES-CHIP 22K	5% 1/10W
R3241	1-216-093-91	RES-CHIP 68K	5% 1/10W
R3242	1-216-081-00	RES-CHIP 22K	5% 1/10W
R3243	1-216-121-11	RES-CHIP 1M	5% 1/10W
R3244	1-216-121-11	RES-CHIP 1M	5% 1/10W
R3245	1-216-097-11	RES-CHIP 100K	5% 1/10W
R3246	1-216-045-00	RES-CHIP 680	5% 1/10W
R3247	1-216-065-91	RES-CHIP 4.7K	5% 1/10W
R3248	1-216-089-11	RES-CHIP 47K	5% 1/10W
R3249	1-216-025-11	RES-CHIP 100	5% 1/10W
R3251	1-216-101-00	RES-CHIP 150K	5% 1/10W
R3252	1-216-113-00	RES-CHIP 470K	5% 1/10W
R3253	1-216-045-00	RES-CHIP 680	5% 1/10W
R3254	1-216-073-00	RES-CHIP 10K	5% 1/10W
R3255	1-216-121-11	RES-CHIP 1M	5% 1/10W
R3256	1-216-121-11	RES-CHIP 1M	5% 1/10W
R3257	1-216-097-11	RES-CHIP 100K	5% 1/10W
R3258	1-216-121-11	RES-CHIP 1M	5% 1/10W
R3259	1-216-061-00	RES-CHIP 3.3K	5% 1/10W
R3262	1-216-101-00	RES-CHIP 150K	5% 1/10W
R3263	1-216-093-91	RES-CHIP 68K	5% 1/10W
R3267	1-216-049-11	RES-CHIP 1K	5% 1/10W
R3268	1-216-049-11	RES-CHIP 1K	5% 1/10W
R3269	1-216-057-00	RES-CHIP 2.2K	5% 1/10W
R3271	1-216-063-91	RES-CHIP 3.9K	5% 1/10W
R3273	1-216-057-00	RES-CHIP 2.2K	5% 1/10W
R3274	1-216-063-91	RES-CHIP 3.9K	5% 1/10W
R6201	1-216-065-91	RES-CHIP 4.7K	5% 1/10W
R6202	1-216-065-91	RES-CHIP 4.7K	5% 1/10W
R6203	1-216-295-11	SHORT 0	
R6209	1-216-049-11	RES-CHIP 1K	5% 1/10W
R6213	1-216-073-00	RES-CHIP 10K	5% 1/10W
R6214	1-216-073-00	RES-CHIP 10K	5% 1/10W
R6219	1-216-089-11	RES-CHIP 47K	5% 1/10W
R6220	1-163-009-11	CERAMIC CHIP 0.001UF	10.00% 50V
R6245	1-216-065-91	RES-CHIP 4.7K	5% 1/10W
R6246	1-216-065-91	RES-CHIP 4.7K	5% 1/10W
R6254	1-216-021-00	RES-CHIP 68	5% 1/10W
R6255	1-216-308-00	RES-CHIP 4.7	5% 1/10W
R6258	1-216-021-00	RES-CHIP 68	5% 1/10W
R6259	1-216-308-00	RES-CHIP 4.7	5% 1/10W
*****			
* A-1131-652-A B1 BOARD MOUNTED *****			
<CAPACITOR>			
C1513	1-163-038-11	CERAMIC CHIP 0.1UF	25V
C1514	1-163-038-11	CERAMIC CHIP 0.1UF	25V
C1515	1-163-243-11	CERAMIC CHIP 47PF	5.00% 50V
C1517	1-164-005-11	CERAMIC CHIP 0.47UF	25V
C1518	1-126-967-11	ELECT 47UF	20.00% 50V

REF. NO.	PART NO.	DESCRIPTION	REMARK
C1519	1-163-249-11	CERAMIC CHIP 82PF	5.00% 50V
C1520	1-163-249-11	CERAMIC CHIP 82PF	5.00% 50V
C1522	1-164-005-11	CERAMIC CHIP 0.47UF	25V
C1523	1-163-255-11	CERAMIC CHIP 150PF	5.00% 50V
C1524	1-163-113-00	CERAMIC CHIP 68PF	5.00% 50V
C1525	1-163-249-11	CERAMIC CHIP 82PF	5.00% 50V
C1526	1-163-249-11	CERAMIC CHIP 82PF	5.00% 50V
C1528	1-164-005-11	CERAMIC CHIP 0.47UF	25V
C1529	1-163-255-11	CERAMIC CHIP 150PF	5.00% 50V
C1530	1-163-113-00	CERAMIC CHIP 68PF	5.00% 50V
C1543	1-126-933-11	ELECT 100UF	20.00% 16V
C1544	1-165-319-11	CERAMIC CHIP 0.1UF	50V
C1554	1-126-933-11	ELECT 100UF	20.00% 16V
<CONNECTOR>			
CN1501*	1-564-511-11	PLUG, CONNECTOR 8P	
CN1502*	1-564-508-11	PLUG, CONNECTOR 5P	
CN1503	1-764-811-11	CONNECTOR, BOARD TO BOARD 10P	
<DIODE>			
D1501	8-719-158-35	RD9.1S-B	
<IC>			
IC1502	8-759-439-64	HEF4053BT	
<COIL>			
L1501	1-414-856-11	INDUCTOR 10UH	
L1506	1-414-857-11	INDUCTOR 100UH	
L1507	1-414-187-11	INDUCTOR 47UH	
L1508	1-414-187-11	INDUCTOR 47UH	
L1509	1-414-857-11	INDUCTOR 100UH	
L1510	1-414-187-11	INDUCTOR 47UH	
L1511	1-414-187-11	INDUCTOR 47UH	
<TRANSISTOR>			
Q1501	8-729-230-49	2SC2712-YG	
Q1502	8-729-216-22	2SA1162-G	
Q1503	8-729-230-49	2SC2712-YG	
Q1504	8-729-230-49	2SC2712-YG	
Q1505	8-729-230-49	2SC2712-YG	
Q1506	8-729-230-49	2SC2712-YG	
Q1507	8-729-216-22	2SA1162-G	
Q1509	8-729-230-49	2SC2712-YG	
Q1510	8-729-230-49	2SC2712-YG	
Q1511	8-729-216-22	2SA1162-G	
Q1514	8-729-230-49	2SC2712-YG	
Q1515	8-729-230-49	2SC2712-YG	
Q1516	8-729-216-22	2SA1162-G	
Q1520	8-729-230-49	2SC2712-YG	
Q1522	8-729-230-49	2SC2712-YG	
Q1523	8-729-216-22	2SA1162-G	



REF. NO.	PART NO.	DESCRIPTION	REMARK
<RESISTOR>			
R1501	1-216-049-11	RES-CHIP 1K 5%	1/10W
R1502	1-216-049-11	RES-CHIP 1K 5%	1/10W
R1503	1-216-025-11	RES-CHIP 100 5%	1/10W
R1504	1-216-025-11	RES-CHIP 100 5%	1/10W
R1506	1-216-025-11	RES-CHIP 100 5%	1/10W
R1507	1-216-081-00	RES-CHIP 22K 5%	1/10W
R1508	1-216-073-00	RES-CHIP 10K 5%	1/10W
R1511	1-216-033-00	RES-CHIP 220 5%	1/10W
R1512	1-216-005-00	RES-CHIP 15 5%	1/10W
R1515	1-216-041-00	RES-CHIP 470 5%	1/10W
R1516	1-216-025-11	RES-CHIP 100 5%	1/10W
R1517	1-216-075-00	RES-CHIP 12K 5%	1/10W
R1520	1-216-079-00	RES-CHIP 18K 5%	1/10W
R1522	1-216-049-11	RES-CHIP 1K 5%	1/10W
R1523	1-216-049-11	RES-CHIP 1K 5%	1/10W
R1528	1-216-033-00	RES-CHIP 220 5%	1/10W
R1529	1-216-053-00	RES-CHIP 1.5K 5%	1/10W
R1531	1-216-045-00	RES-CHIP 680 5%	1/10W
R1537	1-216-041-00	RES-CHIP 470 5%	1/10W
R1538	1-216-041-00	RES-CHIP 470 5%	1/10W
R1540	1-216-049-11	RES-CHIP 1K 5%	1/10W
R1541	1-216-041-00	RES-CHIP 470 5%	1/10W
R1542	1-216-041-00	RES-CHIP 470 5%	1/10W
R1543	1-216-049-11	RES-CHIP 1K 5%	1/10W
R1545	1-216-041-00	RES-CHIP 470 5%	1/10W
R1547	1-216-049-11	RES-CHIP 1K 5%	1/10W
R1548	1-216-025-11	RES-CHIP 100 5%	1/10W
R1549	1-216-075-00	RES-CHIP 12K 5%	1/10W
R1551	1-216-081-00	RES-CHIP 22K 5%	1/10W
R1552	1-216-049-11	RES-CHIP 1K 5%	1/10W
R1553	1-216-049-11	RES-CHIP 1K 5%	1/10W
R1554	1-216-033-00	RES-CHIP 220 5%	1/10W
R1556	1-216-049-11	RES-CHIP 1K 5%	1/10W
R1559	1-216-041-00	RES-CHIP 470 5%	1/10W
R1560	1-216-041-00	RES-CHIP 470 5%	1/10W
R1561	1-216-041-00	RES-CHIP 470 5%	1/10W
R1562	1-216-049-11	RES-CHIP 1K 5%	1/10W
R1563	1-216-041-00	RES-CHIP 470 5%	1/10W
R1566	1-216-041-00	RES-CHIP 470 5%	1/10W
R1567	1-216-049-11	RES-CHIP 1K 5%	1/10W
R1568	1-216-041-00	RES-CHIP 470 5%	1/10W
R1569	1-216-049-11	RES-CHIP 1K 5%	1/10W

\*\*\*\*\*  
 \* A-1332-110-A C6 BOARD MOUNTED (EXCEPT KV-XA34M31)  
 \* A-1332-128-A C6 BOARD MOUNTED (KV-34M31 ONLY)  
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4-352-844-01 PIN, LEAD, COATING (EXCEPT KV-XA34M31)  
 4-382-854-11 SCREW (M3X10), P, SW (+)

<CAPACITOR>

C701	1-162-114-00	CERAMIC 0.0047UF	2KV
C702	1-102-074-00	CERAMIC 0.001UF	10.00% 50V

REF. NO.	PART NO.	DESCRIPTION	REMARK
C708	1-102-114-00	CERAMIC 470PF	10.00% 50V
C709	1-102-114-00	CERAMIC 470PF	10.00% 50V
C710	1-102-114-00	CERAMIC 470PF	10.00% 50V
C712	1-102-115-00	CERAMIC 560PF	10.00% 50V
C713	1-102-112-00	CERAMIC 330PF	10.00% 50V
C714	1-102-113-00	CERAMIC 390PF	10.00% 50V
C716	1-126-933-11	ELECT 100UF	20.00% 16V
C717	1-107-651-11	ELECT 4.7UF	20.00% 250V
C718	1-102-106-00	CERAMIC 100PF	10.00% 50V
C1800	1-126-964-11	ELECT 10UF	20.00% 50V
C1803	1-126-964-11	ELECT 10UF	20.00% 50V
C1804	1-126-964-11	ELECT 10UF	20.00% 50V
C1809	1-126-942-61	ELECT 1000UF	20.00% 25V
C1810	1-102-106-00	CERAMIC 100PF	10.00% 50V

<#####>

CLP7004-352-844-01 PIN, LEAD, COATING (KV-XA34M31 ONLY)  
 CLP7014-352-844-01 PIN, LEAD, COATING (KV-XA34M31 ONLY)

<CONNECTOR>

CN700	1-695-915-11	TAB (CONTACT)
CN702	1-695-915-11	TAB (CONTACT)
CN703 *	1-564-509-11	PLUG, CONNECTOR 6P
CN704	1-695-915-11	TAB (CONTACT)
CN712	1-564-507-11	PLUG, CONNECTOR 4P
CN1801 *	1-564-509-11	PLUG, CONNECTOR 6P
CN1802 *	1-564-506-11	PLUG, CONNECTOR 3P

<DIODE>

D701	8-719-911-19	1SS119-25
D702	8-719-911-19	1SS119-25
D703	8-719-911-19	1SS119-25
D704	8-719-911-19	1SS119-25
D705	8-719-911-19	1SS119-25
D706	8-719-911-19	1SS119-25
D707	8-719-911-19	1SS119-25
D708	8-719-911-19	1SS119-25
D709	8-719-911-19	1SS119-25
D710	8-719-911-19	1SS119-25
D711	8-719-911-19	1SS119-25
D712	8-719-911-19	1SS119-25
D716	8-719-911-19	1SS119-25
D717	8-719-070-16	NNCD9.1A-T1
D1803	8-719-911-19	1SS119-25

D1804 8-719-911-19 1SS119-25  
 D1808 8-719-908-03 GP08D

<IC>

IC1800 8-759-822-38 LA6510

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

**C6** **D2 (KV-XA34M31)**

REF. NO.	PART NO.	DESCRIPTION	REMARK
		<JACK>	
J701	$\Delta$ 1-540-071-22	SOCKET, CRT	
		<COIL>	
L701	1-410-667-31	INDUCTOR 22UH	
L703	1-414-186-31	INDUCTOR 33UH	
L705	1-414-186-31	INDUCTOR 33UH	
L707	1-414-187-11	INDUCTOR 47UH	
		<TRANSISTOR>	
Q701	8-729-326-11	2SC2611	
Q702	8-729-326-11	2SC2611	
Q703	8-729-326-11	2SC2611	
Q704	8-729-326-11	2SC2611	
Q705	8-729-326-11	2SC2611	
Q706	8-729-326-11	2SC2611	
Q707	8-729-200-17	2SA1091-O	
Q708	8-729-200-17	2SA1091-O	
Q709	8-729-200-17	2SA1091-O	
Q710	8-729-119-78	2SC2785-HFE	
Q711	8-729-119-78	2SC2785-HFE	
Q712	8-729-119-78	2SC2785-HFE	
Q714	8-729-255-12	2SC2551-O	
Q1800	8-729-119-76	2SA1175-HFE	
Q1802	8-729-119-78	2SC2785-HFE	
		<RESISTOR>	
R701	1-249-496-11	CARBON 100K 5% 1/2W	
R705	1-216-392-11	METAL OXIDE 1.8 5% 3W	
R710	1-215-923-00	METAL OXIDE 10K 5% 3W	
R711	1-260-099-11	CARBON 1K 5% 1/2W	
R712	1-215-923-00	METAL OXIDE 10K 5% 3W	
R713	1-260-330-11	CARBON 1.5K 5% 1/2W	
R714	1-215-923-00	METAL OXIDE 10K 5% 3W	
R715	1-260-330-11	CARBON 1.5K 5% 1/2W	
R716	1-249-405-11	CARBON 100 5% 1/4W	
R717	1-249-405-11	CARBON 100 5% 1/4W	
R718	1-249-405-11	CARBON 100 5% 1/4W	
R719	1-215-469-00	METAL 100K 1% 1/4W	
R720	1-249-923-11	CARBON 1K 5% 1/4W	
R722	1-249-923-11	CARBON 1K 5% 1/4W	
R723	1-215-469-00	METAL 100K 1% 1/4W	
R724	1-249-923-11	CARBON 1K 5% 1/4W	
R725	1-249-424-11	CARBON 3.9K 5% 1/4W	
R726	1-249-424-11	CARBON 3.9K 5% 1/4W	
R727	1-249-424-11	CARBON 3.9K 5% 1/4W	
R728	1-249-408-11	CARBON 180 5% 1/4W	
R729	1-249-408-11	CARBON 180 5% 1/4W	
R730	1-249-408-11	CARBON 180 5% 1/4W	
R731	1-249-401-11	CARBON 47 5% 1/4W	
R732	1-249-401-11	CARBON 47 5% 1/4W	
R733	1-249-401-11	CARBON 47 5% 1/4W	
R734	1-247-739-11	CARBON 100 5% 1/2W	
R738	1-247-807-31	CARBON 100 5% 1/4W	
R739	1-247-807-31	CARBON 100 5% 1/4W	

REF. NO.	PART NO.	DESCRIPTION	REMARK
R740	1-247-807-31	CARBON 100 5% 1/4W	
R747	1-215-926-00	METAL OXIDE 33K 5% 3W	
R749	1-215-927-00	METAL OXIDE 47K 5% 3W	
R751	1-215-926-00	METAL OXIDE 33K 5% 3W	
R753	1-249-429-11	CARBON 10K 5% 1/4W	
R755	1-249-427-11	CARBON 6.8K 5% 1/4W	
R756	1-249-427-11	CARBON 6.8K 5% 1/4W	
R757	1-249-427-11	CARBON 6.8K 5% 1/4W	
R758	1-249-419-11	CARBON 1.5K 5% 1/4W	
R759	1-249-419-11	CARBON 1.5K 5% 1/4W	
R760	1-249-419-11	CARBON 1.5K 5% 1/4W	
R1800	1-249-417-11	CARBON 1K 5% 1/4W	
R1801	1-249-426-11	CARBON 5.6K 5% 1/4W	
R1802	1-249-382-11	CARBON 1.2 5% 1/4W	
R1803	1-249-382-11	CARBON 1.2 5% 1/4W	
R1805	1-249-429-11	CARBON 10K 5% 1/4W	
R1806	1-249-425-11	CARBON 4.7K 5% 1/4W	
R1808	1-249-425-11	CARBON 4.7K 5% 1/4W	
R1809	1-249-435-11	CARBON 33K 5% 1/4W	
R1810	1-249-435-11	CARBON 33K 5% 1/4W	
R1811	1-249-433-11	CARBON 22K 5% 1/4W	
R1812	1-249-435-11	CARBON 33K 5% 1/4W	
R1821	1-249-433-11	CARBON 22K 5% 1/4W	
R1822	1-249-435-11	CARBON 33K 5% 1/4W	
R1823	1-249-426-11	CARBON 5.6K 5% 1/4W	
R1824	1-249-435-11	CARBON 33K 5% 1/4W	
R1825	1-247-843-11	CARBON 3.3K 5% 1/4W	
		<VARIABLE RESISTOR>	
RV702	1-241-656-11	RES, ADJ, METAL FILM 110M	
RV1801	1-238-019-11	RES, ADJ, CARBON 47K	
*****			
	* A-1343-979-A	D2 BOARD MOUNTED (KV-XA34M31 ONLY)	
		*****	
		<CAPACITOR>	
C2801	1-130-479-00	MYLAR 0.0047UF 5.00% 50V	
C2803	1-136-357-11	MYLAR 680PF 5.00% 50V	
C2805	1-104-664-11	ELECT 47UF 20.00% 25V	
C2806	1-136-559-11	MYLAR 0.0047UF 10.00% 400V	
C2809	1-126-964-11	ELECT 10UF 20.00% 50V	
C2810	1-102-228-00	CERAMIC 470PF 10.00% 500V	
C2811	1-107-938-11	ELECT 0.47UF 20.00% 160V	
C2813	1-107-636-11	ELECT 10UF 20.00% 160V	
C2814	1-126-964-11	ELECT 10UF 20.00% 50V	
C2817	1-102-244-00	CERAMIC 220PF 10.00% 500V	
C2818	1-129-928-00	FILM 0.0027UF 5.00% 630V	
C2819	1-104-664-11	ELECT 47UF 20.00% 25V	
C2820	1-107-714-11	ELECT 10UF 20.00% 16V	
C2821	1-130-469-00	MYLAR 680PF 5.00% 50V	
C2822	1-106-375-12	MYLAR 0.022UF 10.00% 250V	
C2824	1-104-664-11	ELECT 47UF 20.00% 25V	
C2825	1-130-338-91	FILM 0.01UF 5.00% 630V	

**D2 (KV-XA34M31)**

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C2826	1-137-194-81	FILM	0.47UF 5.00% 50V	Q2806	8-729-230-49	2SC2712-YG	
C2828	1-107-714-11	ELECT	10UF 20.00% 16V	Q2807	8-729-043-95	2SC3840(3)	
C2829	1-164-161-11	CERAMIC CHIP	0.0022UF 10.00% 50V	Q2811	8-729-931-45	IRF614	
C2830	1-130-480-00	MYLAR	0.0056UF 5.00% 50V	Q2813	8-729-230-49	2SC2712-YG	
C2832	1-126-960-11	ELECT	1UF 20.00% 50V	Q2821	8-729-230-49	2SC2712-YG	
C2833	1-137-366-11	MYLAR	0.0022UF 5.00% 50V	Q2822	8-729-216-22	2SA1162-G	
C2834	1-106-220-00	MYLAR	0.1UF 10.00% 100V	Q2823	8-729-017-06	2SC4793	
C2835	1-216-295-11	SHORT	0	Q2824	8-729-140-97	2SB734-34	
C2837	1-102-129-00	CERAMIC	0.01UF 10.00% 50V			<RESISTOR>	
C2840	1-137-466-11	MYLAR	0.082UF 5.00% 100V	R2801	1-216-051-00	RES-CHIP	1.2K 5% 1/10W
C2841	1-136-177-00	FILM	1UF 5.00% 50V	R2803	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
C2842	1-130-477-00	MYLAR	0.0033UF 5.00% 50V	R2804	1-216-041-00	RES-CHIP	470 5% 1/10W
C2843	1-107-714-11	ELECT	10UF 20.00% 16V	R2806	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
C2900	1-130-480-00	MYLAR	0.0056UF 5.00% 50V	R2809	1-216-073-00	RES-CHIP	10K 5% 1/10W
C2901	1-126-964-11	ELECT	10UF 20.00% 50V				
		<CONNECTOR>		R2812	1-216-097-11	RES-CHIP	100K 5% 1/10W
CN2821*	1-564-506-11	PLUG, CONNECTOR 3P		R2813	1-216-089-11	RES-CHIP	47K 5% 1/10W
CN2822*	1-564-510-11	PLUG, CONNECTOR 7P		R2816	1-216-097-11	RES-CHIP	100K 5% 1/10W
CN2823	1-695-915-11	TAB (CONTACT)		R2820	1-216-089-11	RES-CHIP	47K 5% 1/10W
		<DIODE>		R2821	1-249-412-11	CARBON	390 5% 1/4W
D2801	8-719-073-01	MA111-(K8).S0		R2824	1-249-393-11	CARBON	10 5% 1/4W
D2803	8-719-063-73	D1NL20U-TR		R2825	1-216-037-00	RES-CHIP	330 5% 1/10W
D2804	8-719-063-73	D1NL20U-TR		R2827	1-216-041-00	RES-CHIP	470 5% 1/10W
D2806	8-719-302-43	ELIZ		R2830	1-215-899-11	METAL OXIDE	15K 5% 2W
D2813	8-719-073-01	MA111-(K8).S0		R2831	1-215-873-00	METAL OXIDE	4.7K 5% 1W
D2814	8-719-210-21	11EQS04		R2833	1-216-460-11	METAL OXIDE	3.9K 5% 2W
D2815	8-719-911-19	ISS119-25		R2834	1-215-873-00	METAL OXIDE	4.7K 5% 1W
D2816	8-719-911-19	ISS119-25		R2837	1-216-063-91	RES-CHIP	3.9K 5% 1/10W
		<IC>		R2838	1-208-806-11	METAL CHIP	10K 0.5% 1/10W
IC2801	8-759-700-07	NJM2903M		R2839	1-216-081-00	RES-CHIP	22K 5% 1/10W
IC2803	8-759-701-59	NJM78M09FA		R2840	1-216-097-11	RES-CHIP	100K 5% 1/10W
IC2805	8-759-144-72	UPC358G2-E2		R2843	1-216-097-11	RES-CHIP	100K 5% 1/10W
IC2806	8-759-700-07	NJM2903M		R2844	1-216-097-11	RES-CHIP	100K 5% 1/10W
		<CHIP CONDUCTOR>		R2846	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
JR2006	1-216-295-11	SHORT	0	R2847	1-216-049-11	RES-CHIP	1K 5% 1/10W
JR2803	1-216-295-11	SHORT	0	R2857	1-208-802-11	METAL CHIP	6.8K 0.5% 1/10W
JR2804	1-216-295-11	SHORT	0	R2858	1-216-051-00	RES-CHIP	1.2K 5% 1/10W
JR2805	1-216-295-11	SHORT	0	R2859	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
		<COIL>		R2860	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
L2801	1-406-677-11	INDUCTOR	10MH	R2861	1-216-107-00	RES-CHIP	270K 5% 1/10W
L2802	1-459-111-00	INDUCTOR	10MH	R2862	1-216-107-00	RES-CHIP	270K 5% 1/10W
L2803	1-414-502-21	INDUCTOR	33MH	R2866	1-216-073-00	RES-CHIP	10K 5% 1/10W
L2806	1-406-678-11	INDUCTOR	15MH	R2867	1-216-689-11	RES-CHIP	39K 5% 1/10W
		<TRANSISTOR>		R2869	1-216-113-00	RES-CHIP	470K 5% 1/10W
Q2802	8-729-216-22	2SA1162-G		R2871	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
Q2805	8-729-216-22	2SA1162-G		R2872	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
				R2874	1-216-085-00	RES-CHIP	33K 5% 1/10W
				R2877	1-216-421-11	METAL OXIDE	12 5% 1W
				R2878	1-216-081-00	RES-CHIP	22K 5% 1/10W
				R2879	1-216-081-00	RES-CHIP	22K 5% 1/10W
				R2880	1-216-073-00	RES-CHIP	10K 5% 1/10W
				R2882	1-216-069-00	RES-CHIP	6.8K 5% 1/10W
				R2883	1-216-067-00	RES-CHIP	5.6K 5% 1/10W
				R2884	1-216-067-00	RES-CHIP	5.6K 5% 1/10W
				R2885	1-216-089-11	RES-CHIP	47K 5% 1/10W
				R2886	1-216-063-91	RES-CHIP	3.9K 5% 1/10W
				R2887	1-208-782-11	METAL CHIP	1K 0.5% 1/10W

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

**D2 (KV-XA34M31)**

**D3 (EXCEPT KV-XA34M31)**

**F**

REF. NO.	PART NO.	DESCRIPTION	REMARK
R2888	1-216-049-11	RES-CHIP 1K	5% 1/10W
R2889	1-216-101-00	RES-CHIP 150K	5% 1/10W
R2900	1-216-089-11	RES-CHIP 47K	5% 1/10W
R2901	1-216-089-11	RES-CHIP 47K	5% 1/10W
R2902	1-216-089-11	RES-CHIP 47K	5% 1/10W
<SWITCH>			
S2801	1-572-707-11	SWITCH, LEVER	
<TRANSFORMER>			
T2801	1-424-584-11	TRANSFORMER, DYNAMIC FOCUS	
*****			
* A-1343-946-A D3 BOARD MOUNTED (EXCEPT KV-XA34M31)			
*****			
<CAPACITOR>			
C2800	1-104-664-11	ELECT 47UF	20.00% 25V
C2801	1-106-220-00	MYLAR 0.1UF	10.00% 100V
C2802	1-136-155-00	FILM 0.015UF	5.00% 50V
C2803	1-129-723-00	FILM 0.056UF	5.00% 630V
C2805	1-104-664-11	ELECT 47UF	20.00% 25V
C2806	1-106-383-00	MYLAR 0.047UF	5.00% 100V
C2807	1-137-194-81	FILM 0.47UF	5.00% 50V
C2808	1-126-964-11	ELECT 10UF	20.00% 50V
C2809	1-137-194-81	FILM 0.47UF	5.00% 50V
C2810	1-106-375-12	MYLAR 0.022UF	10.00% 250V
C2811	1-126-964-11	ELECT 10UF	20.00% 50V
C2812	1-126-964-11	ELECT 10UF	20.00% 50V
C2813	1-129-708-61	FILM 0.0033UF	5.00% 630V
<CONNECTOR>			
CN2800*	1-564-510-11	PLUG, CONNECTOR 7P	
CN2802*	1-564-506-11	PLUG, CONNECTOR 3P	
CN2803	1-695-915-11	TAB (CONTACT)	
<DIODE>			
D2800	8-719-302-43	ELIZ	
D2801	8-719-911-19	ISS119-25	
D2802	8-719-911-19	ISS119-25	
D2803	8-719-911-19	ISS119-25	
<IC>			
IC2800	8-759-701-59	NJM78M09FA	
IC2801	8-759-998-98	LM358D	

REF. NO.	PART NO.	DESCRIPTION	REMARK
<COIL>			
L2800	1-406-989-71	INDUCTOR 0UH	
L2802	1-406-987-21	INDUCTOR 4.7MH	
L2803	1-406-986-21	INDUCTOR 3.3UH	
L2804	1-406-678-11	INDUCTOR 15MH	
<TRANSISTOR>			
Q2800	8-729-119-78	2SC2785-HFE	
Q2801	8-729-195-82	2SC2958	
Q2802	8-729-017-06	2SC4793	
Q2803	8-729-216-22	2SA1162-G	
Q2804	8-729-230-49	2SC2712-YG	
<RESISTOR>			
R2800	1-249-405-11	CARBON 100	5% 1/4W
R2802	1-260-111-11	CARBON 10K	5% 1/2W
R2803	1-260-111-11	CARBON 10K	5% 1/2W
R2804	1-216-061-00	RES-CHIP 3.3K	5% 1/10W
R2805	1-216-097-11	RES-CHIP 100K	5% 1/10W
R2806	1-249-421-11	CARBON 2.2K	5% 1/4W
R2807	1-249-420-11	CARBON 1.8K	5% 1/4W
R2808	1-215-857-11	METAL OXIDE 10	5% 1W
R2809	1-216-059-00	RES-CHIP 2.7K	5% 1/10W
R2810	1-216-049-11	RES-CHIP 1K	5% 1/10W
R2811	1-216-069-00	RES-CHIP 6.8K	5% 1/10W
R2812	1-216-081-00	RES-CHIP 22K	5% 1/10W
R2813	1-216-059-00	RES-CHIP 2.7K	5% 1/10W
R2814	1-216-121-11	RES-CHIP 1M	5% 1/10W
R2815	1-216-085-00	RES-CHIP 33K	5% 1/10W
R2816	1-216-107-00	RES-CHIP 270K	5% 1/10W
R2817	1-216-107-00	RES-CHIP 270K	5% 1/10W
<TRANSFORMER>			
T2800	1-413-059-00	TRANSFORMER, FERRITE (DFT)	
*****			
* A-1241-443-A F BOARD MOUNTED			
*****			
1-533-223-11	CLIP, FUSE		
* 4-374-846-01	COVER, CAPACITOR, CAP TYPE		
<CAPACITOR>			
C654	$\Delta$ 1-117-703-11	CERAMIC 0.0047UF	99% 250V
C4601	$\Delta$ 1-104-708-11	MYLAR 0.47UF	20.00% 250V
C4602	$\Delta$ 1-109-835-11	MYLAR 0.68UF	20.00% 250V
<CONNECTOR>			
CN4601*	1-580-843-11	PIN, CONNECTOR (POWER)	
CN4602*	1-580-843-11	PIN, CONNECTOR (POWER)	
CN4603	1-695-915-11	TAB (CONTACT)	

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



REF. NO.	PART NO.	DESCRIPTION	REMARK
		<FUSE>	
F4601	$\Delta$ 1-532-299-00	FUSE, TIME-LAG 5A/250V	
		<RESISTOR>	
R4601	$\Delta$ 1-202-719-00	SOLID 1M 10% 1/2W	
		<TRANSFORMER>	
T4601	$\Delta$ 1-429-707-12	TRANSFORMER, LINE FILTER	
T4602	$\Delta$ 1-431-182-11	TRANSFORMER, LINE FILTER	
		<VARISTOR>	
VDR461	1-803-830-11	VARISTOR (ERZV14D621)	
*****			
	* A-1372-887-A	H BOARD MOUNTED *****	
	* 4-055-304-01	HOLDER, LED	
		<CAPACITOR>	
C3900	1-136-153-00	FILM	0.01UF 5.00% 50V
C3902	1-136-153-00	FILM	0.01UF 5.00% 50V
C3904	1-104-664-11	ELECT 47UF	20.00% 25V
C3905	1-126-963-11	ELECT 4.7UF	20.00% 50V
C3906	1-126-963-11	ELECT 4.7UF	20.00% 50V
C3910	1-104-664-11	ELECT 47UF	20.00% 16V
C3911	1-104-664-11	ELECT 47UF	20.00% 16V
C3912	1-102-114-00	CERAMIC 470PF	10.00% 50V
C3913	1-126-960-11	ELECT 1UF	20.00% 50V
		<CONNECTOR>	
CN3601*	1-580-844-11	PIN, CONNECTOR (POWER)	
CN3602*	1-580-844-11	PIN, CONNECTOR (POWER)	
CN3901*	1-564-507-11	PLUG, CONNECTOR 4P	
CN3902	1-564-509-11	PLUG, CONNECTOR 6P	
CN3904*	1-564-512-11	PLUG, CONNECTOR 9P	
CN3905*	1-564-512-11	PLUG, CONNECTOR 9P	
		<DIODE>	
D3900	8-719-070-16	NNCD9.1A-T1	
D3901	8-719-070-16	NNCD9.1A-T1	
D3905	8-719-070-16	NNCD9.1A-T1	
D3906	8-719-045-19	SPB-26MVWF	
D3907	8-719-070-16	NNCD9.1A-T1	
D3908	8-719-070-16	NNCD9.1A-T1	
		<IC>	
IC3901	8-742-205-30	SBX3081-01(30)	

REF. NO.	PART NO.	DESCRIPTION	REMARK
		<JACK>	
J3901	1-750-264-11	JACK	
J3902	1-784-646-11	TERMINAL, S	
J3903	1-770-329-11	JACK, PIN 3P	
		<COIL>	
L3901	1-414-183-41	INDUCTOR	10UH
L3902	1-414-183-41	INDUCTOR	10UH
		<TRANSISTOR>	
Q3901	8-729-030-02	DTC144ESA	
Q3902	8-729-030-02	DTC144ESA	
		<RESISTOR>	
R3900	1-249-411-11	CARBON 330	5% 1/4W
R3901	1-249-411-11	CARBON 330	5% 1/4W
R3902	1-247-804-11	CARBON 75	5% 1/4W
R3904	1-249-429-11	CARBON 10K	5% 1/4W
R3905	1-249-429-11	CARBON 10K	5% 1/4W
R3907	1-249-426-11	CARBON 5.6K	5% 1/4W
R3908	1-249-413-11	CARBON 470	5% 1/4W
R3909	1-249-417-11	CARBON 1K	5% 1/4W
R3910	1-249-420-11	CARBON 1.8K	5% 1/4W
R3911	1-249-411-11	CARBON 330	5% 1/4W
R3912	1-247-843-11	CARBON 3.3K	5% 1/4W
R3913	1-249-429-11	CARBON 10K	5% 1/4W
R3914	1-249-411-11	CARBON 330	5% 1/4W
R3915	1-249-429-11	CARBON 10K	5% 1/4W
R3916	1-249-401-11	CARBON 47	5% 1/4W
R3917	1-247-804-11	CARBON 75	5% 1/4W
R3918	1-249-409-11	CARBON 220	5% 1/4W
R3919	1-249-409-11	CARBON 220	5% 1/4W
R3920	1-247-807-31	CARBON 100	5% 1/4W
R3921	1-247-807-31	CARBON 100	5% 1/4W
R3922	1-249-421-11	CARBON 2.2K	5% 1/4W
		<SWITCH>	
S3601	$\Delta$ 1-571-433-21	SWITCH, PUSH (AC POWER)	
S3902	1-692-431-21	SWITCH, TACTILE	
S3903	1-692-431-21	SWITCH, TACTILE	
S3904	1-692-431-21	SWITCH, TACTILE	
S3905	1-692-431-21	SWITCH, TACTILE	
S3906	1-692-431-21	SWITCH, TACTILE	
S3907	1-692-431-21	SWITCH, TACTILE	
S3908	1-692-431-21	SWITCH, TACTILE	

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**KV-XA29M31/XA29M50/  
XA29M61/XA34M31  
RM-954**



REF. NO.	PART NO.	DESCRIPTION	REMARK
* A-1388-288-A J BOARD MOUNTED *****			
<CAPACITOR>			
C2410	1-126-967-11	ELECT 47UF	20.00% 50V
C2411	1-126-967-11	ELECT 47UF	20.00% 50V
C2412	1-126-967-11	ELECT 47UF	20.00% 50V
C2413	1-102-112-00	CERAMIC 330PF	10.00% 50V
C2414	1-102-112-00	CERAMIC 330PF	10.00% 50V
C2418	1-126-960-11	ELECT 1UF	20.00% 50V
C2419	1-126-960-11	ELECT 1UF	20.00% 50V
<CONNECTOR>			
CN2410*	1-564-523-11	PLUG, CONNECTOR 8P	
<DIODE>			
D2410	8-719-070-16	NNCD9.1A-T1	
D2411	8-719-070-16	NNCD9.1A-T1	
D2412	8-719-070-16	NNCD9.1A-T1	
D2414	8-719-070-16	NNCD9.1A-T1	
D2415	8-719-070-16	NNCD9.1A-T1	
<JACK>			
J2410	1-784-623-11	BLOCK, PIN JACK 5P	
<RESISTOR>			
R2410	1-247-804-11	CARBON 75	5% 1/4W
R2411	1-247-804-11	CARBON 75	5% 1/4W
R2412	1-247-804-11	CARBON 75	5% 1/4W
R2414	1-247-887-00	CARBON 220K	5% 1/4W
R2415	1-247-807-31	CARBON 100	5% 1/4W
R2417	1-247-887-00	CARBON 220K	5% 1/4W
R2418	1-247-807-31	CARBON 100	5% 1/4W
R2419	1-249-409-11	CARBON 220	5% 1/4W
R2420	1-249-409-11	CARBON 220	5% 1/4W
R2421	1-249-409-11	CARBON 220	5% 1/4W
*****			
* A-1342-580-A VM1 BOARD MOUNTED *****			
4-382-854-11	SCREW (M3X10), P, SW (+)		
<CAPACITOR>			
C5900	1-102-115-00	CERAMIC 560PF	10.00% 50V
C5902	1-104-661-91	ELECT 330UF	20.00% 16V
C5903	1-161-830-00	CERAMIC 0.0047UF	500V
C5905	1-126-925-11	ELECT 470UF	20.00% 10V
C5906	1-130-491-00	MYLAR 0.047UF	5.00% 50V
C5907	1-107-638-11	ELECT 33UF	20.00% 160V
C5908	1-106-383-00	MYLAR 0.047UF	10.00% 200V

REF. NO.	PART NO.	DESCRIPTION	REMARK
C5909	1-126-933-11	ELECT 100UF	20.00% 16V
C5910	1-130-471-00	MYLAR 0.001UF	5.00% 50V
C5911	1-107-949-11	ELECT 2.2UF	20.00% 160V
C5912	1-104-999-11	MYLAR 0.1UF	10.00% 200V
C5913	1-130-471-00	MYLAR 0.001UF	5.00% 50V
C5914	1-126-933-11	ELECT 100UF	20.00% 16V
C5916	1-130-491-00	MYLAR 0.047UF	5.00% 50V
C5917	1-126-925-11	ELECT 470UF	20.00% 10V
C5918	1-102-244-00	CERAMIC 220PF	10.00% 500V
C5919	1-136-165-00	FILM 0.1UF	5.00% 50V
<CONNECTOR>			
CN2801*	1-564-506-11	PLUG, CONNECTOR 3P	
CN5901*	1-564-510-11	PLUG, CONNECTOR 7P	
CN5904*	1-770-723-11	CONNECTOR, BOARD TO BOARD 8P	
<DIODE>			
D5901	8-719-911-19	ISS119-25	
D5902	8-719-110-88	RD39ES-B2	
D5903	8-719-911-19	ISS119-25	
D5904	8-719-110-88	RD39ES-B2	
D5905	8-719-911-19	ISS119-25	
D5906	1-249-406-11	CARBON 120	5% 1/4W
D5907	1-249-406-11	CARBON 120	5% 1/4W
<COIL>			
L5901	1-414-187-11	INDUCTOR 47UH	
<TRANSISTOR>			
Q5901	8-729-230-45	2SC2458-YGR	
Q5902	8-729-809-26	2SA1606-E	
Q5903	8-729-230-45	2SC2458-YGR	
Q5904	8-729-119-76	2SA1175-HFE	
Q5905	8-729-230-45	2SC2458-YGR	
Q5906	8-729-809-29	2SC4159-E	
Q5907	8-729-230-45	2SC2458-YGR	
<RESISTOR>			
R5901	1-249-401-11	CARBON 47	5% 1/4W
R5902	1-249-414-11	CARBON 560	5% 1/4W
R5903	1-247-734-11	CARBON 39	5% 1/2W
R5904	1-249-411-11	CARBON 330	5% 1/4W
R5905	1-249-417-11	CARBON 1K	5% 1/4W
R5906	1-249-417-11	CARBON 1K	5% 1/4W
R5907	1-249-417-11	CARBON 1K	5% 1/4W
R5908	1-249-383-11	CARBON 1.5	5% 1/4W
R5909	1-249-409-11	CARBON 220	5% 1/4W
R5910	1-249-403-11	CARBON 68	5% 1/4W
R5911	1-249-439-11	CARBON 68K	5% 1/4W
R5912	1-249-437-11	CARBON 47K	5% 1/4W
R5914	1-249-403-11	CARBON 68	5% 1/4W
R5915	1-249-429-11	CARBON 10K	5% 1/4W
R5916	1-249-419-11	CARBON 1.5K	5% 1/4W

**VM1** **V1 (EXCEPT KV-XA29M50)**

REF. NO.	PART NO.	DESCRIPTION	REMARK
R5917	1-249-416-11	CARBON 820	5% 1/4W
R5918	1-249-429-11	CARBON 10K	5% 1/4W
R5919	1-249-417-11	CARBON 1K	5% 1/4W
R5920	1-249-439-11	CARBON 68K	5% 1/4W
R5921	1-216-476-11	METAL OXIDE 180	5% 3W
R5922	1-249-414-11	CARBON 560	5% 1/4W
R5923	1-249-383-11	CARBON 1.5	5% 1/4W
R5925	1-249-400-11	CARBON 39	5% 1/4W
R5927	1-249-416-11	CARBON 820	5% 1/4W
R5929	1-215-880-00	METAL OXIDE 10	5% 2W
*****			
* A-1347-164-A V1 BOARD COMPLETE (EXCEPT KV-XA29M50)			
*****			
<CAPACITOR>			
C801	1-104-664-11	ELECT 47UF	20.00% 16V
C805	1-163-038-11	CERAMIC CHIP 0.1UF	25V
C806	1-163-038-11	CERAMIC CHIP 0.1UF	25V
C814	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V
C815	1-163-251-11	CERAMIC CHIP 100PF	5.00% 50V
C816	1-164-505-11	CERAMIC CHIP 2.2UF	16V
C817	1-164-004-11	CERAMIC CHIP 0.1UF	10.00% 25V
C818	1-163-239-11	CERAMIC CHIP 33PF	5.00% 50V
C820	1-163-239-11	CERAMIC CHIP 33PF	5.00% 50V
C821	1-163-038-11	CERAMIC CHIP 0.1UF	25V
C822	1-163-009-11	CERAMIC CHIP 0.001UF	10.00% 50V
C823	1-126-933-11	ELECT 100UF	20.00% 16V
C826	1-126-963-11	ELECT 4.7UF	20.00% 50V
C829	1-163-113-00	CERAMIC CHIP 68PF	5.00% 50V
C830	1-163-038-11	CERAMIC CHIP 0.1UF	25V
C831	1-126-933-11	ELECT 100UF	20.00% 16V
C832	1-126-964-11	ELECT 10UF	20.00% 50V
C835	1-163-038-11	CERAMIC CHIP 0.1UF	25V
C837	1-126-933-11	ELECT 100UF	20.00% 16V
<CONNECTOR>			
CN801	* 1-774-812-11	CONNECTOR, BOARD TO BOARD 7P	
CN803	* 1-774-812-11	CONNECTOR, BOARD TO BOARD 7P	
<DIODE>			
D802	8-719-914-44	DAP202K	
D803	8-719-105-46	RD3.3M-B2	
D804	8-719-105-91	RD5.6M-B2	
<FERRITE BEAD>			
FB801	1-410-397-21	FERRITE 1.1UH	
FB802	1-410-397-21	FERRITE 1.1UH	
FB803	1-410-397-21	FERRITE 1.1UH	
FB804	1-410-682-31	INDUCTOR 470UH	
FB805	1-410-397-21	FERRITE 1.1UH	

REF. NO.	PART NO.	DESCRIPTION	REMARK
<IC>			
IC801	8-759-476-87	SAA5261	
<CHIP CONDUCTOR>			
JR800	1-216-295-11	SHORT	0
JR801	1-216-295-11	SHORT	0
JR802	1-216-295-11	SHORT	0
JR804	1-216-295-11	SHORT	0
JR805	1-216-295-11	SHORT	0
<TRANSISTOR>			
Q801	8-729-120-28	2SC1623-L5L6	
Q803	8-729-120-28	2SC1623-L5L6	
Q805	8-729-120-28	2SC1623-L5L6	
Q806	8-729-120-28	2SC1623-L5L6	
Q807	8-729-120-28	2SC1623-L5L6	
Q808	8-729-120-28	2SC1623-L5L6	
Q810	8-729-120-28	2SC1623-L5L6	
Q811	8-729-019-01	2SD2394-EF	
Q817	8-729-900-53	DTC114EK	
<RESISTOR>			
R800	1-208-806-11	METAL CHIP 10K	0.5% 1/10W
R801	1-216-295-11	SHORT	0
R802	1-216-025-11	RES-CHIP 100	5% 1/10W
R803	1-216-295-11	SHORT	0
R804	1-216-295-11	SHORT	0
R805	1-216-295-11	SHORT	0
R807	1-216-295-11	SHORT	0
R813	1-216-295-11	SHORT	0
R820	1-216-073-00	RES-CHIP 10K	5% 1/10W
R821	1-216-083-00	RES-CHIP 27K	5% 1/10W
R822	1-216-025-11	RES-CHIP 100	5% 1/10W
R824	1-216-295-11	SHORT	0
R825	1-216-295-11	SHORT	0
R827	1-216-295-11	SHORT	0
R828	1-216-025-11	RES-CHIP 100	5% 1/10W
R829	1-216-025-11	RES-CHIP 100	5% 1/10W
R830	1-216-295-11	SHORT	0
R831	1-216-295-11	SHORT	0
R832	1-208-790-11	METAL CHIP 2.2K	0.5% 1/10W
R835	1-216-295-11	SHORT	0
R839	1-216-655-11	METAL CHIP 1.5K	0.5% 1/10W
R841	1-216-025-11	RES-CHIP 100	5% 1/10W
R842	1-216-065-91	RES-CHIP 4.7K	5% 1/10W
R843	1-216-065-91	RES-CHIP 4.7K	5% 1/10W
R844	1-216-057-00	RES-CHIP 2.2K	5% 1/10W
R845	1-216-049-11	RES-CHIP 1K	5% 1/10W
R846	1-216-049-11	RES-CHIP 1K	5% 1/10W
R847	1-216-049-11	RES-CHIP 1K	5% 1/10W
R848	1-216-049-11	RES-CHIP 1K	5% 1/10W
R849	1-216-049-11	RES-CHIP 1K	5% 1/10W
R850	1-216-105-91	RES-CHIP 220K	5% 1/10W
R851	1-216-057-00	RES-CHIP 2.2K	5% 1/10W

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

**V1 (EXCEPT KV-XA29M50)**

REF. NO.	PART NO.	DESCRIPTION	REMARK
R853	1-216-067-00	RES-CHIP 5.6K	5% 1/10W
R857	1-216-077-91	RES-CHIP 15K	5% 1/10W
R861	1-216-049-11	RES-CHIP 1K	5% 1/10W
R862	1-260-095-11	CARBON 470	5% 1/2W
R863	1-216-049-11	RES-CHIP 1K	5% 1/10W
R864	1-216-041-00	RES-CHIP 470	5% 1/10W
R866	1-215-880-00	METAL OXIDE 10	5% 2W
R871	1-216-037-00	RES-CHIP 330	5% 1/10W
R879	1-216-073-00	RES-CHIP 10K	5% 1/10W
R880	1-216-041-00	RES-CHIP 470	5% 1/10W
R882	1-216-049-11	RES-CHIP 1K	5% 1/10W
R884	1-216-025-11	RES-CHIP 100	5% 1/10W

<CRYSTAL>

X801	1-578-774-11	VIBRATOR, CRYSTAL	
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MISCELLANEOUS  
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$\Delta$ 1-419-293-11	COIL, DEGAUSSING (KV-XA34M31)
$\Delta$ 1-419-323-11	COIL, DEGAUSSING (EXCEPT KV-XA34M31)
1-452-094-00	CIRCULAR DISC MAGNET B
1-452-032-00	MAGNET,DISC
1-452-896-61	COIL, NA ROTATION (RT-200)
1-529-190-11	SPEAKER (5CM)
1-529-563-11	SPEAKER (15X6.5CM)
$\Delta$ 1-574-062-11	CORD, POWER (WITH CONNECTOR) 2.5A/250V (KV-XA29M50/XA29M61)
$\Delta$ 1-574-358-11	CORD, POWER (WITH CONNECTOR) 7.5A/250V (KV-XA29M31/XA34M31)
$\Delta$ 1-467-525-31	CAP BLOCK, HIGH-VOLTAGE (KV-XA34M31 ONLY)
1-202-818-00	RES, SOLID 1.0K
$\Delta$ 8-451-494-31	DEFLECTION YOKE (Y29RSA-S) (KV-XA29M31/KV-XA29M50/XA29M61)
$\Delta$ 8-451-499-21	DEFLECTION YOKE (Y34RSA-X)(KV-XA34M31)
$\Delta$ 8-735-056-05	PICTURE TUBE (M68LNH070X) (KV-XA29M50/XA29M61)

REF. NO.	PART NO.	DESCRIPTION	REMARK
$\Delta$ 8-735-057-05	PICTURE TUBE (M68LNH070X)(KV-XA29M31)		
$\Delta$ 8-735-062-05	PICTURE TUBE (A80LPD10X)(KV-XA34M61)		
8-453-007-31	NA324-M3 (KV-XA34M31)		
8-453-011-11	NA299-M (EXCEPT KV-XA34M31)		

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ACCESSORIES AND PACKING MATERIALS  
\*\*\*\*\*  
(EXCEPT KV-XA34M31)

3-701-910-00	SCREW, SPECIAL (DIA. 3.8 x20)
* 4-029-168-01	BAG, PROTECTION
4-065-210-01	JOINT
* 4-078-945-01	CUSHION (LOWER) (ASSY)
* 4-078-948-01	CUSHION (UPPER) (ASSY)
4-078-793-21	MANUAL, INSTRUCTION (KV-XA29M31)
4-078-793-31	MANUAL, INSTRUCTION (KV-XA29M50/XA29M61)
* 4-078-951-01	INDIVIDUAL CARTON
* 4-079-400-01	TRAY
4-392-003-11	BAND, HOLD
4-392-004-11	CLIP

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ACCESSORIES AND PACKING MATERIALS (KV-XA34M31)  
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4-065-210-01	JOINT
* 4-074-148-01	BAG, PROTECTION
* 4-079-605-01	CARTON
* 4-079-606-01	TRAY
* 4-079-607-01	CUSHION (LOWER)(ASSY)
* 4-079-610-01	CUSHION (UPPER)(ASSY)
4-078-793-21	MANUAL, INSTRUCTION
4-392-003-11	BAND, HOLD
3-701-910-00	SCREW, SPECIAL (DIA. 3.8X20)
4-392-004-11	CLIP

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REMOTE COMMANDER  
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1-418-038-11	REMOTE COMMANDER (RM-954)
9-933-895-01	BATTERY, COVER REMOTE COMMANDER (RM-954)

# SUPPLEMENT-1

# BG3R CHASSIS

<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>	<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>
<i>KV-XA29M31</i>	<i>RM-954</i>	<i>OCE</i>	<i>SCC-U44A-A</i>				
<i>KV-XA29M61</i>	<i>RM-954</i>	<i>Malaysia</i>	<i>SCC-U45A-A</i>				
<i>KV-XA29M50</i>	<i>RM-954</i>	<i>Malaysia</i>	<i>SCC-U45B-A</i>				
<i>KV-XA34M31</i>	<i>RM-954</i>	<i>OCE</i>	<i>SCC-U44B-A</i>				

**SUBJECT : PARTS CHANGE**

Note: The serial number starts from;

KV-XA29M31 = 1,012,846~,

KV-XA29M61 = 1,005,427~,

KV-XA29M50 = 1,007,487~,

KV-XA34M31 = 1,004,805~

## SECTION 8. ELECTRICAL PARTS LIST (see page 113)

<u>REF. NO</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REMARK</u>
IC603	6-700-830-01	IC KIA7809API	

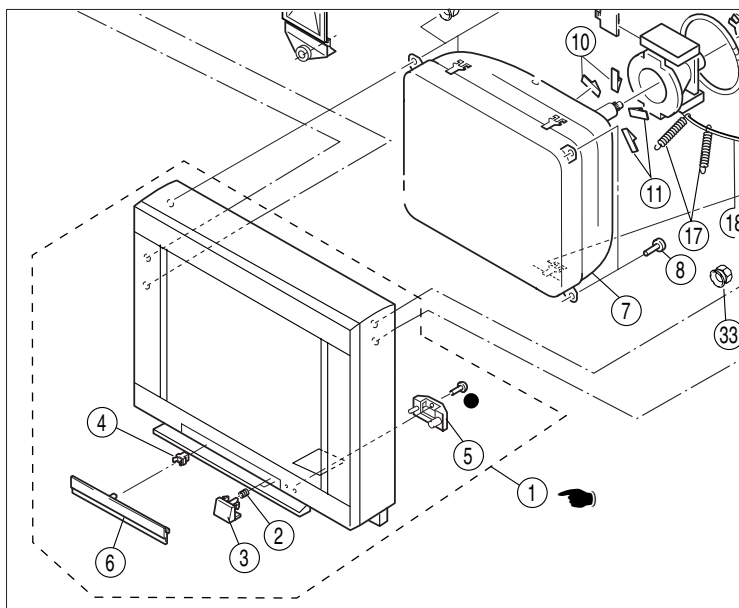
# SUPPLEMENT-2

# BG3R CHASSIS

<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>	<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>
<b>KV-XA29M31</b>	RM-954	OCE	SCC-U44A-A				
<b>KV-XA29M61</b>	RM-954	Malaysia	SCC-U45A-A				
<b>KV-XA29M50</b>	RM-954	Malaysia	SCC-U45B-A				
<b>KV-XA34M31</b>	RM-954	OCE	SCC-U44B-A				

**SUBJECT : DELETE DOOR FROM BEZNET ASSY**

**SECTION 7. EXPLODED VIEWS**  
**7-1. PICTURE TUBE**  
 (see page 108)



<u>REF. NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REMARK</u>
1	X-4038-718-1	BEZNET ASSY (KV-XA29M50)	2-6
	X-4038-717-1	BEZNET ASSY (KV-XA29M31)	2-6

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**Sony Technology Malaysia Sdn. Bhd.**  
**Visual Products**