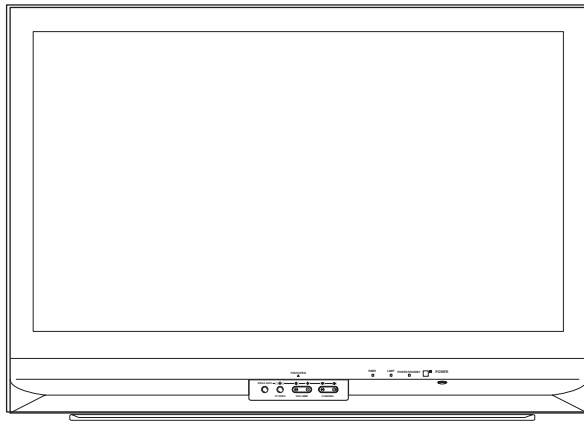


SERVICE MANUAL MIX5 CHASSIS

<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>
KF-E42A10	RM-GA004	OCE					
KF-E42A10	RM-GA004	E					
KF-E50A10	RM-GA004	OCE					
KF-E50A10	RM-GA004	E					



KF-E42A10/E50A10



RM-GA004

LCD PROJECTION TV

SONY®

Specifications

Display Unit

Power Requirement:

220-240 V AC, 50/60 Hz

Projection System

3 LCD (Liquid Crystal Display) Panels, 1 lens projection system

LCD Panel

Size 0.73 inch TFT LCD panel

Resolution 1,280 pixels 720 lines

Projection Lenses

High performance, large-diameter highbrid lens F2.4

Lamp

UHP lamp, 100 W, XL-2400

Screen Size:

KF-E50A10: 50 inches (approx. 125.5 cm measured diagonally)

KF-E42A10: 42 inches (approx. 105.2 cm measured diagonally)

Display Resolution:

1,280 pixels (horizontal) × 720 lines (vertical)

Power Consumption:

KF-E50A10: 195 W

KF-E42A10: 195 W

Standby Power Consumption:

KF-E50A10: 1 W or less

KF-E42A10: 1 W or less

Dimensions (w × h × d):

KF-E50A10:

Approx. 1,184 × 827 × 408 mm

KF-E42A10:

Approx. 999 × 722 × 357 mm

Weight:

KF-E50A10: Approx. 32 kg

KF-E42A10: Approx. 27 kg

TV System

I, D/K, B/G, M

Colour System

PAL, PAL60, SECAM, NTSC 4.43, NTSC 3.58

Antenna

75 ohm external terminal

Channel Coverage

B/G

VHF: E2 to E12 / UHF: E21 to E69 /

CATV: S01 to S03, S1 to S41

VHF: 0 to 12, 5A, 19A / UHF: 28 to 69 /

CATV: S01 to S03, S1 to S41(Australia only)

VHF: 1 to 11 / UHF: 21 to 69 /

CATV: S01 to S03, S1 to S41(New Zealand only)

I

UHF: B21 to B68 / CATV: S01 to S03, S1 to S41

D/K

VHF: C1 to C12, R1 to R12 / UHF: C13 to C57, R21 to R60 /


CATV: S01 to S03, S1 to S41, Z1 to Z39

M

VHF: A2 to A13 / UHF: A14 to A79 /


CATV: A8 to A2, A to W+4, W+6 to W+84

Terminals

S VIDEO 1 (4-pin mini DIN): S 

Y: 1.0 Vp-p, 75 ohms unbalanced, sync negative

C: 0.286 Vp-p (Burst signal), 75 ohms

VIDEO/AUDIO IN 1/3: 

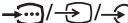
VIDEO: 

1 Vp-p, 75 ohms unbalanced, sync negative

AUDIO: 

500 mVrms

Impedance: 47 kilohms

VIDEO/AUDIO IN 2: 


Y, Pb/Cb, Pr/Cr (Component video) :

Y : 1.0 Vp-p, 75 ohms unbalanced, sync negative

P_R/C_R : 0.7 Vp-p, 75 ohms

P_B/C_B : 0.7 Vp-p, 75 ohms

Signal format : 480i, 576i, 480p, 576p, 720p, 1080i


VIDEO: 

1 Vp-p, 75 ohms unbalanced, sync negative

AUDIO: 

500 mVrms

Impedance: 47 kilohms

HD/DVD IN 1/2: 


Y, Pb/Cb, Pr/Cr (Component video) :

Y : 1.0 Vp-p, 75 ohms unbalanced, sync negative

P_R/C_R : 0.7 Vp-p, 75 ohms


P_B/C_B : 0.7 Vp-p, 75 ohms


Signal format : 480i, 576i, 480p, 576p, 720p, 1080i

AUDIO: 

500 mVrms

Impedance: 47 kilohms


VIDEO/AUDIO OUT: 

VIDEO: 

1 Vp-p, 75 ohms unbalanced, sync negative

AUDIO: 

More than 1 Vrms at the maximum volume setting

AUDIO OUT: 

More than 1 Vrms at the maximum volume setting


(Variable)

More than 500 mVrms (Fixed)

PC IN :

VIDEO:  (RGB)

D-sub 15-pin, analogue RGB, 0.7 Vp-p, 75 ohms, positive

AUDIO: 

Stereo minijack, 0.5 Vrms, 1 kilohm

See the PC Input Signal Compatibility Chart on page 27.


HDMI IN:

HDMI

Video: 480i, 480p, 576i, 576p, 720p, 1080i

Audio: Two channel linear PCM 32, 44.1 and

48 kHz, 16, 20 and 24 bits

AUDIO: 

500 mVrms (100% modulation)

Impedance: 47 kilohms

Headphones 

Stereo minijack

Impedance: 16 ohms

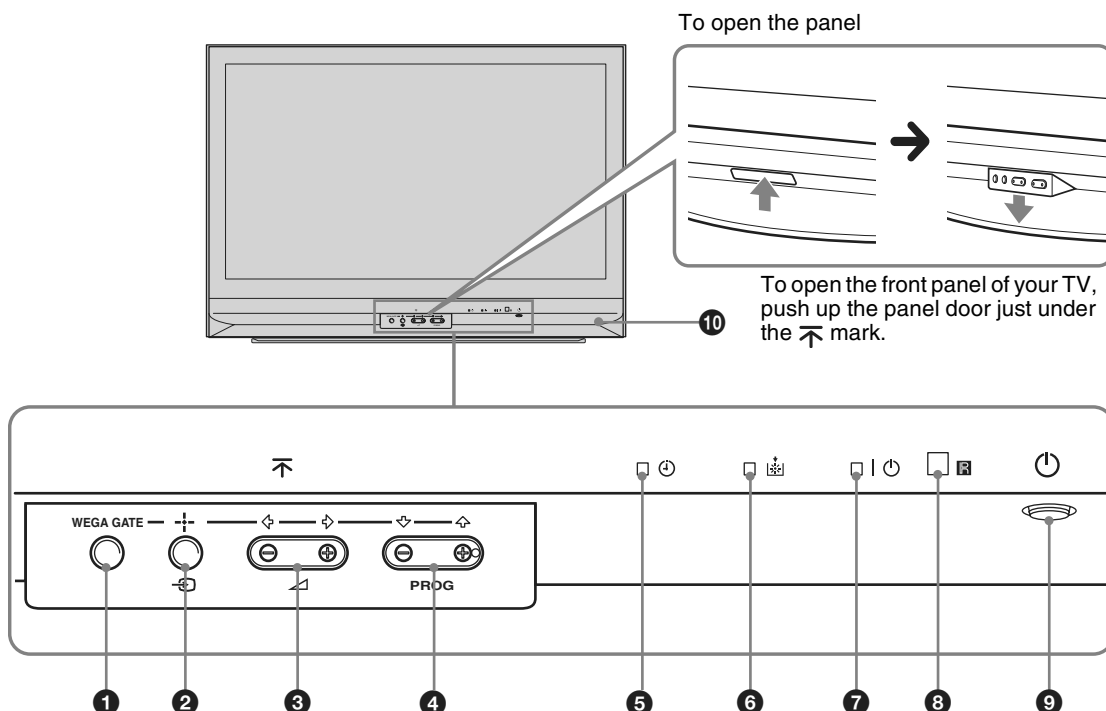
Sound Output

KF-E50A10: 12 W + 12 W

KF-E42A10: 12 W + 12 W

Design and specifications are subject to change without notice.

Overview of the TV buttons and indicators



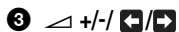
1 WEGA GATE

Displays WEGA GATE.



Confirms the selection or setting.

Selects the video equipment connected to the TV's video inputs.



Increases (+) or decreases (-) the volume.

In TV menu: Moves through the options left (←) or right (→).

4 PROG +/- ↑/↓

In TV mode: Selects the next (+) or previous (-) channel.

In TV menu: Moves through the options up (↑) or down (↓).

5 ⏰ indicator

Lights up in amber when the Sleep Timer/On Timer is set.

6 🔦 indicator

Flashes up in red when the lamp for the light source has burned out.

7 I ⏻ indicator

Flashes in green when the light source is preparing to turn on. Lights up in green when the TV is switched on.

Lights up in red when the TV is in standby mode. When the lamp door or the lamp itself is not securely attached, the red indicator will continue to flash in intervals of three blinks at a time.

8 Remote control sensor

Point the remote here.



Switches the TV on or off.

Projection Lamp

Your TV uses a projection lamp as its light source. As with any lamp, it has lifespan and needs to be replaced when the Lamp indicator flashes or the screen becomes darker.

Notes

After turning on your TV, it may take a while (1 minute or less) before the picture appears.

When the projection lamp wears out, the screen goes dark.

Replace the lamp with a new Sony XL-2400 replacement lamp (not supplied). How to replace the lamp, see page 5.

Warning

The light emitted from the lamp is quite bright when your TV is in use. To avoid eye discomfort or injury, do not look into the light housing when the power is on.

Replacing the lamp

The projection lamp, which illuminates the picture, has a limited life.

If the screen becomes dark, the color looks unusual, or the LAMP indicator on the front of the projection TV flashes, it is time to replace the lamp with a new one (not supplied).

WARNING

Electric appliances can cause fire or high temperature, resulting in injury or death. Be sure to follow the instructions below.

Use a Sony XL-2400 replacement lamp (not supplied) for replacement. Use of any other lamp may damage the projection TV.

Do not remove the lamp for any purpose other than replacement. Doing so may cause injury or fire.

Do not put flammable materials and metal objects inside the lamp receptacle of the TV after removing the lamp.

Doing so may cause fire or electrical shock. Do not touch the lamp receptacle once the lamp has been removed.

When the lamp eventually burns out, you may hear a noticeable pop sound. This is normal and it is inherent to this type of lamp.

In rare instances, the bulb may pop inside the lamp unit, but the lamp unit is designed to contain all of the broken glass pieces inside the lamp unit.

Disposing of the lamp

This product contains mercury. For disposal or recycling information, please contact your local authorities.

Do not leave the used lamp near flammable materials or within the reach of children.

Do not pour water onto the used lamp or put any object inside the lamp. Doing so may cause the lamp to burst.

1 Turn off the power on the main unit. Wait several minutes, then unplug the power cord.
(The cooling fan will continue to blow for about two minutes after turning the power off.)

2 Wait at least 30 minutes after unplugging the power cord to allow the lamp to cool down before replacing it. To avoid being burned, do not touch the lamp receptacle once the lamp has been removed.

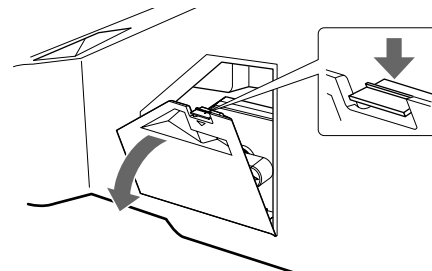
3 Take the new lamp out of the box. Do not touch the glass portion of the new lamp.

Notes

Do not shake the lamp. Vibration can damage the lamp or shorten its life.

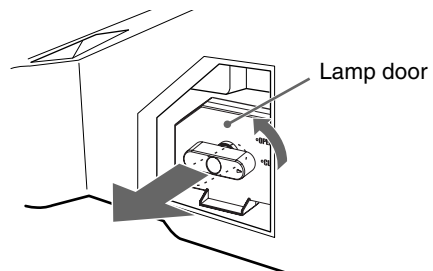
Avoid touching the front glass of a new lamp or the glass of the lamp receptacle. This may reduce picture quality or lamp life.

4 Remove the outside lamp cover.



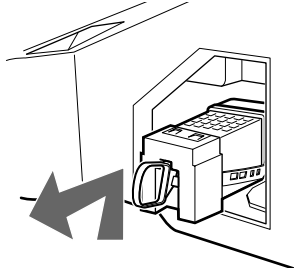
5 Remove the lamp door.

Turn the knob counterclockwise to OPEN and pull out the cover.



6 Pull out the lamp.

Hook a finger through the loop of the lamp handle and pull the handle upwards. Then pull the lamp straight out.

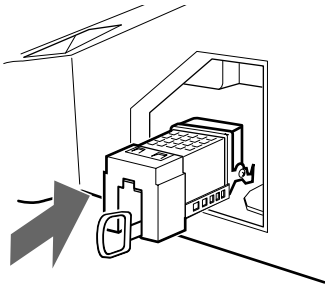


Notes

The lamp is very hot immediately after use. Never touch the glass portion of the lamp or the surrounding parts.
After the used lamp has cooled, place it into the empty box of the replacement lamp. Never put the used lamp into a plastic bag.

7 Put the new lamp into its place.

Mount the new lamp securely. Failure to do so may cause a fire or the screen to go dark.

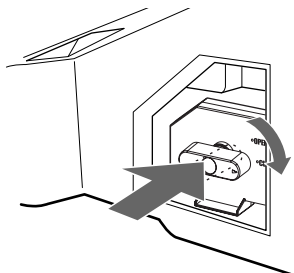


Note

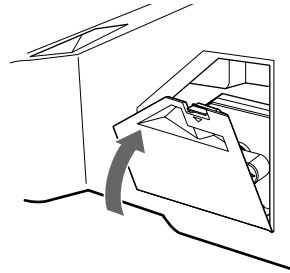
If the lamp is not securely reattached, the self-diagnostic function may be triggered and the POWER/STANDBY indicator flashes three times.

8 Reattach the lamp door.

Turn the knob back to CLOSE and secure the cover.



9 Put the outside lamp cover back in its place.



Notes

Consult your Sony dealer for a Sony XL-2400 replacement lamp.

Take great care when replacing the lamp or plugging in/unplugging the connecting cords. Rough handling may cause the TV to fall, damaging the TV, the TV stand and the floor.

CAUTION

These servicing instructions are for use by qualified service personnel only.

To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

WARNING!!

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

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK \triangle ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

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Section Title Page

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- T2 Board 60

SECTION 1 SELF DIAGNOSIS FUNCTION

1. Summary of Self-Diagnosis Function

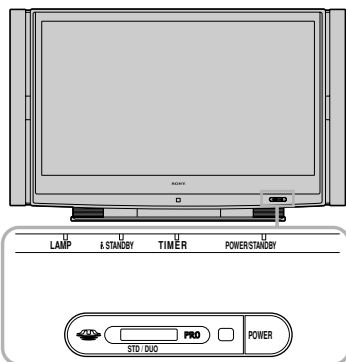
- This device includes a self-diagnosis function.
- In case of abnormalities, the POWER/STANDBY indicator automatically blinks. It is possible to predict the abnormality location by the number of blinks. The Instruction Manual describes blinking of the POWER/STANDBY indicator.
- If the symptom is not reproduced sometimes in case of a malfunction, there is recording of whether a malfunction was generated or not. Operate the remote command to confirm the matter on the screen and to predict the location of the abnormality.

2. Diagnosis Items and Prediction of Malfunction Location

- When a malfunction occurs the POWER/STANDBY indicator only blinks for one of the following diagnosis items. In case of two or more malfunctions, the item which first occurred blinks. If the malfunctions occurred simultaneously, the item with the lower blink count blinks first.
- The screen display displays the results regarding all the diagnosis items listed below. The display "0" means that no malfunctions occurred.

Diagnosis Item	Number of times POWER/STANDBY indicator blinks	Probable Cause Location	Defected symptoms
Lamp temp. over	2 times		
Lamp cover error	3 times	- Lamp cover is not attached securely.	- No picture/No sound
Fan stopped	4 times	- Fan1, Fan2, Fan3, Fan 4 or Fan 5 power is not supplied. - Fan connector is not attached securely.	- No picture/No sound
Lamp driver error	5 times	- Lamp driver is faulty.	- No picture/No sound
Low B error	6 times	- B_12V is not supplied.	- No picture/No sound
Lamp error	LAMP-LED flashes	- Lamp for the light source burns out.	- No picture/No sound

3. Blinking count display of POWER/STANDBY indicator



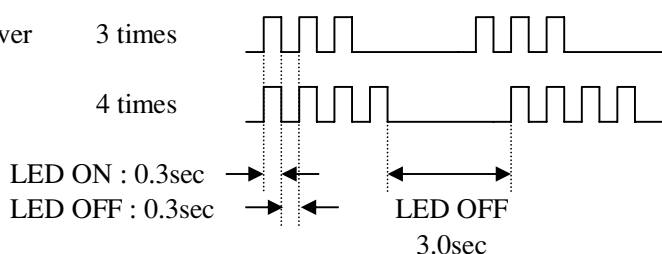
- One blink is not used for self-diagnosis.

- Example

Diagnosis item LED blinks

Lamp cover 3 times

Fan 4 times



- Release of POWER/STANDBY indicator blinking

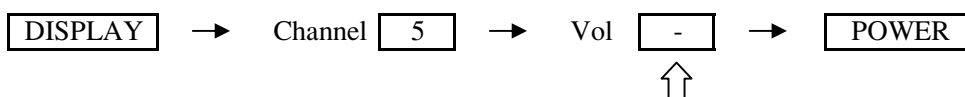
The POWER/STANDBY indicator blinking display is released by removing the plug from the power or leaving for 2 minutes.

4. Self-diagnosis screen displays

- In cases of malfunctions where it is not possible to determine the symptom such as when the power goes off occasionally or when the screen disappears occasionally, there is a screen display on whether the malfunction occurred or not in the past (and whether the detection circuit operated or not) in order to allow confirmation.

<Screen Display Method>

- Quickly press the remote command button in the following order from the standby state.



Be aware that this differs from the method of entering the service mode (Vol +).

SELF CHECK			
1	: LAMP_ERROR	0	
2	: LAMP_TEMP	0	
2	: TEMP_ERROR	0	No use
3	: LAMP_COVER	0	
4	: FAN_ERROR	0	
5	: LAMP_DRIVER	0	
6	: LOWB_ERROR	0	
7	: AUDIO_PROT	0	No use
8	: D_OVP	0	No use
10	: ATSC_OVP	0	No use

- Numeral "1" means a fault was detected one time
- Numeral "0" means that no fault was detected

- The results display is not automatically cleared. In case of repairs and after repairs, check the self-diagnosis screen and be sure to return the results display to "0".
- If the results display is not returned to "0" it will not be possible to judge a new malfunction after completing repairs.

<Method of Clearing Results Display>

1. Power off (Set to the standby mode)

2. DISPLAY → Channel 5 → Vol - → POWER

3. Channel 8 → ENTER

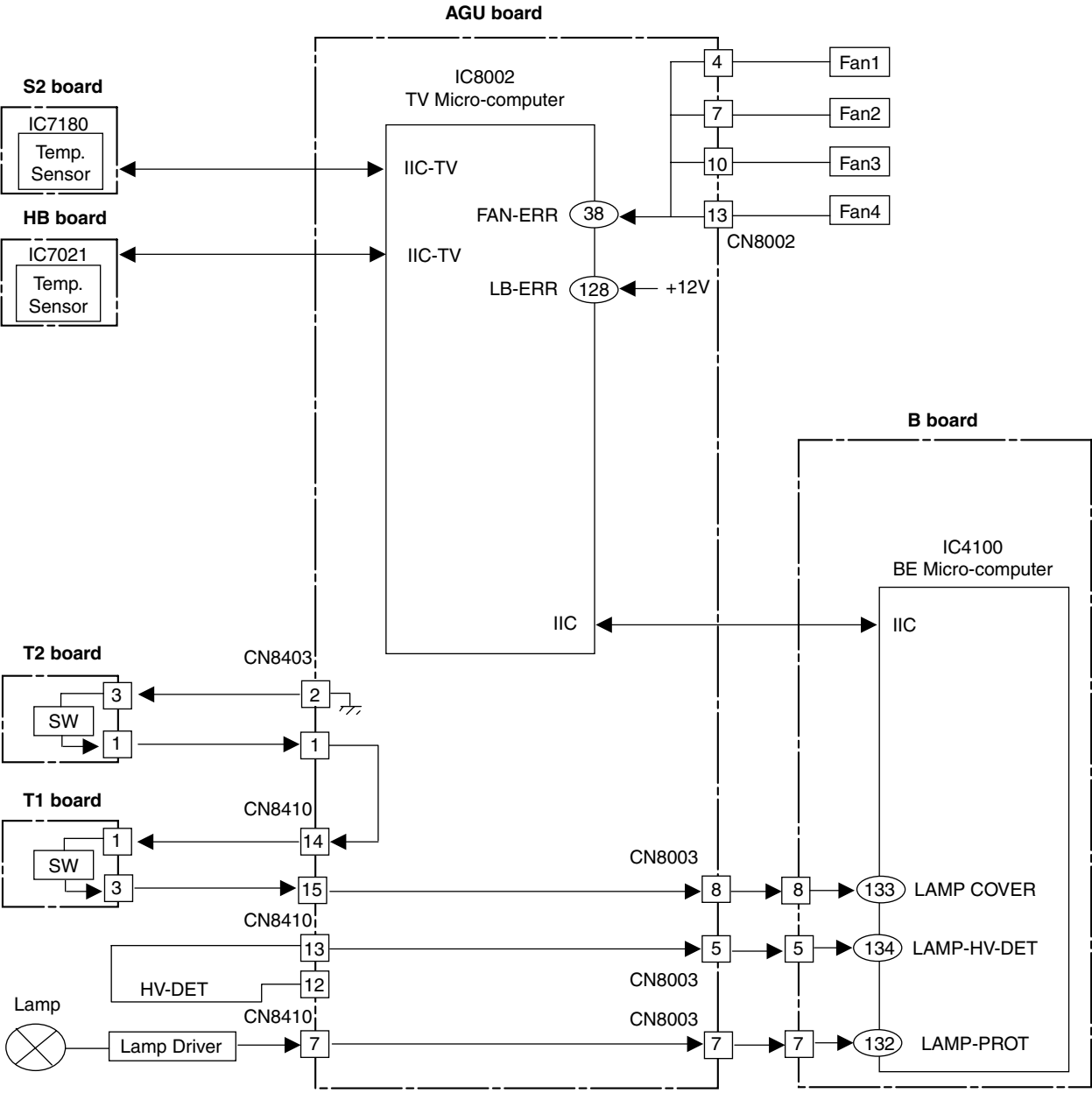
<Method of Ending Self-Diagnosis Screen>

- When ending the self-diagnosis screen completely, turn the power switch OFF on the remote commander or the main unit.

5. Self-Diagnosis function operation

1	: Lamp_ERROR	When the lamp is broken.
2	: lamp temp over	When the inside temperature sensed with IC7021, IC7180 and IC603 mounted on HB board, S2 board and C board respectively exceed the threshold, the lamp turns off.
3	: lamp cover	When the lamp cover is opened the connector of the lamp is not fixed, the lamp turns off.
4	: FAN	When any FAN (FAN1~FAN4) is stopping or harness is not connected correctly, the lamp turns off.
5	: Lamp Driver	When the ballast is not working with high voltage, the lamp turns off.
6	: Low B error	When the voltage B_12V is low, TVM(TV u-com) detects it and makes turn off the lamp.

BLOCK DIAGRAM



Reading Lamp and Panel time

Use the following to determine the lamp and panel time of a set.

Screen Display Method

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

1. Press **Display** → **Channel 5** → **Sound Volume +** → **Power ON**

2. To enter BE-micro service menu, press JUMP 2 times.

CONFIGRATION	00	SERVICE
CP18_COLOR_SYS	00 00A0	BE Micro

↓ Press Channel-4

3. To display the lamp time, press Channel-4.

The screen displays:
“ Total lamp time is 14 hours”

GW_SPECIAL	34	SERVICE
LAMP_TIME	02 00000014	BE Micro

↓ Press Channel-4

4. To display the panel time, press Channel-4.

The screen displays:
“ Total panel time is 14 hours”

GW_SPECIAL	34	SERVICE
PANEL_TIME	01 00000014	BE Micro

↓ Press Channel-5 7 times,
Channel-1

5. To display the lamp time clear, press Channel-5 7 times and Channel-1.

OPTION_E	20	SERVICE
LAMP	01 0000	BE Micro

To reset the lamp time press Channel-3 > MUTING > ENT.

WRITE (Character color is red) is momentarily displayed and the lamp time is reset to “0”.

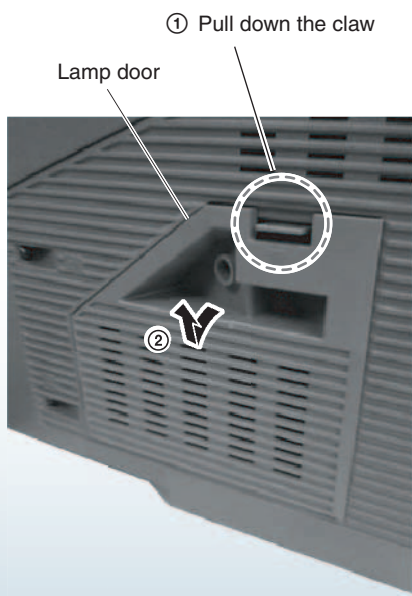
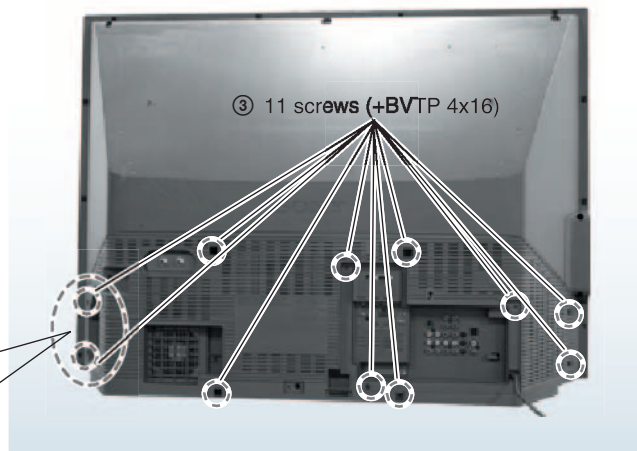
Exiting Service Mode

To exit the service mode, please turn off the set using the Remote Commander or the power switch.

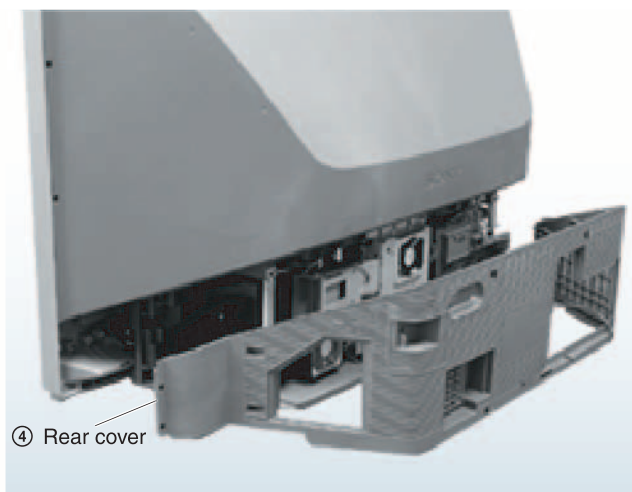
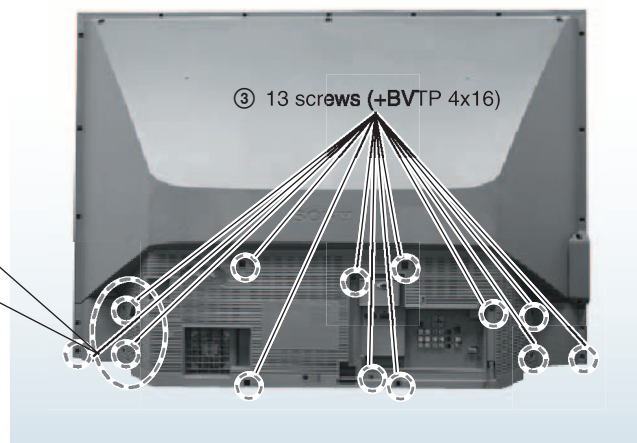
SECTION 2 DISASSEMBLY

2-1. REAR COVER

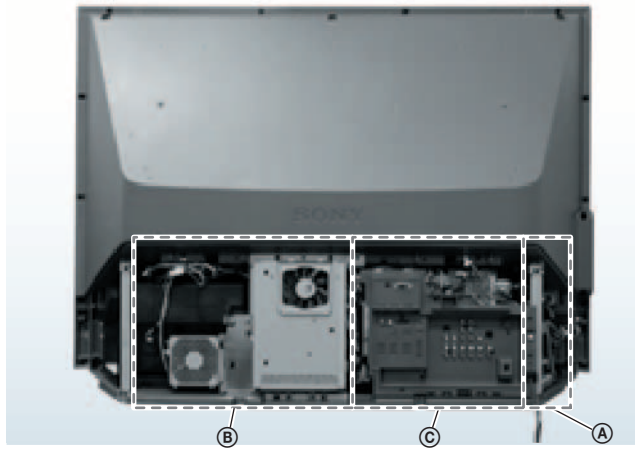
E42A10



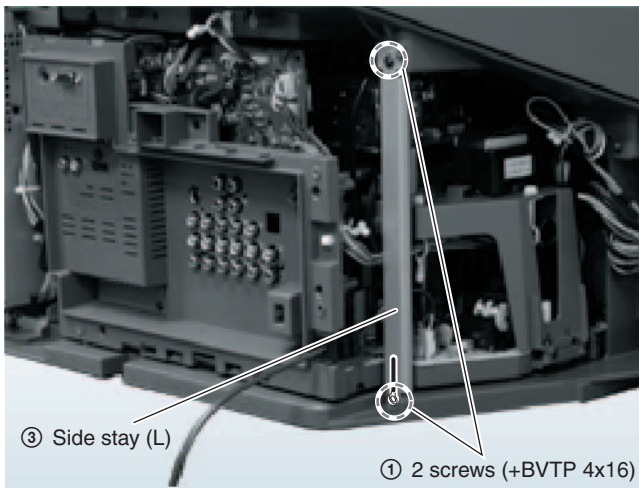
E50A10



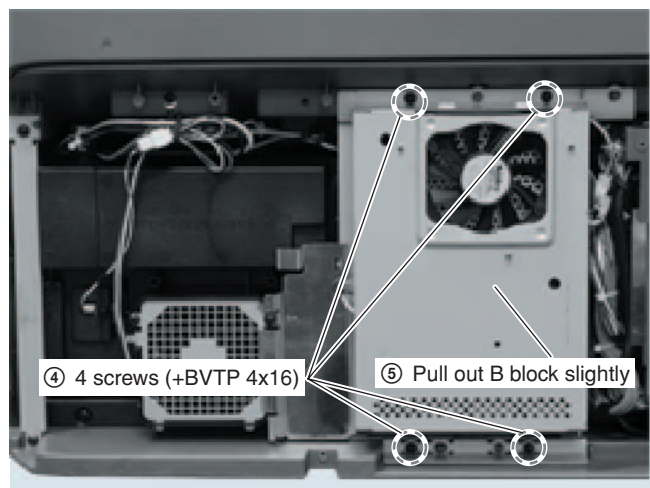
2-2. SERVICE POSITION



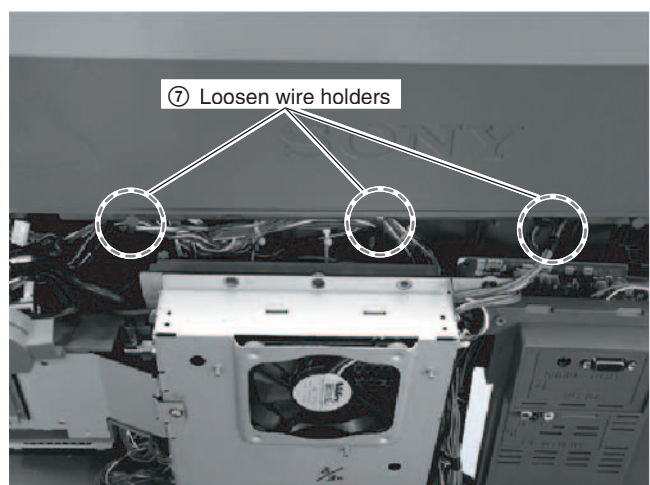
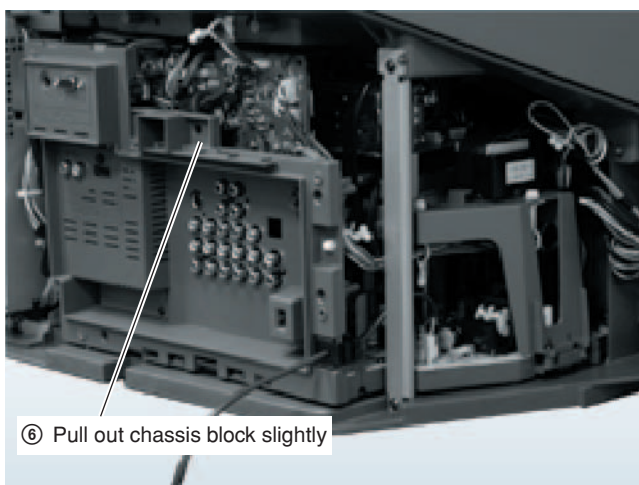
Ⓐ

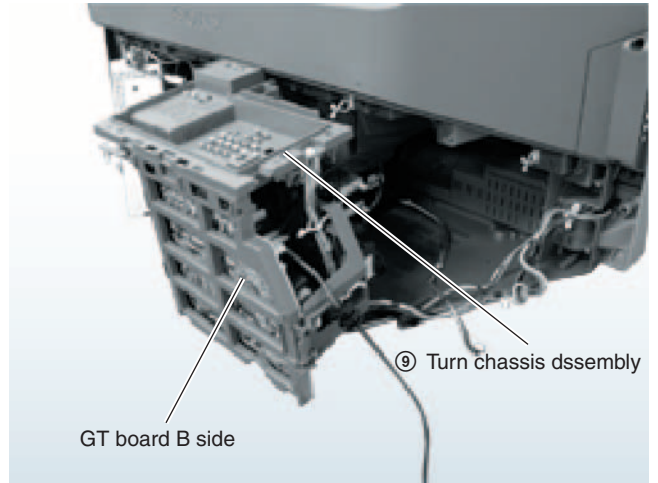
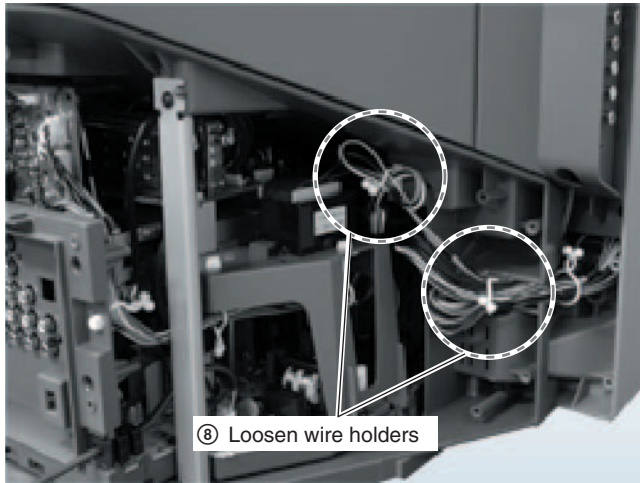


Ⓑ

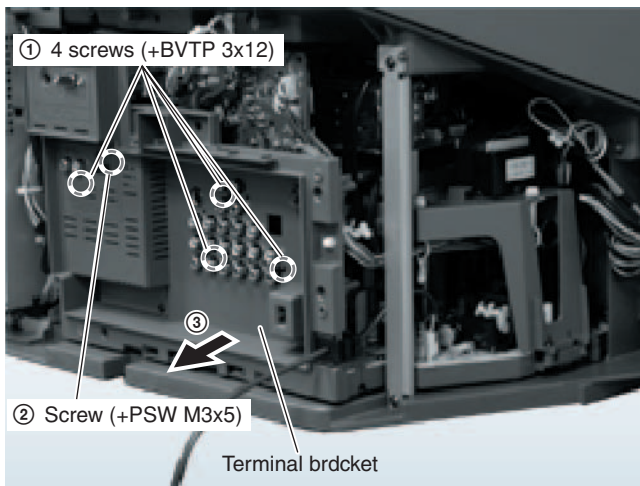


Ⓒ

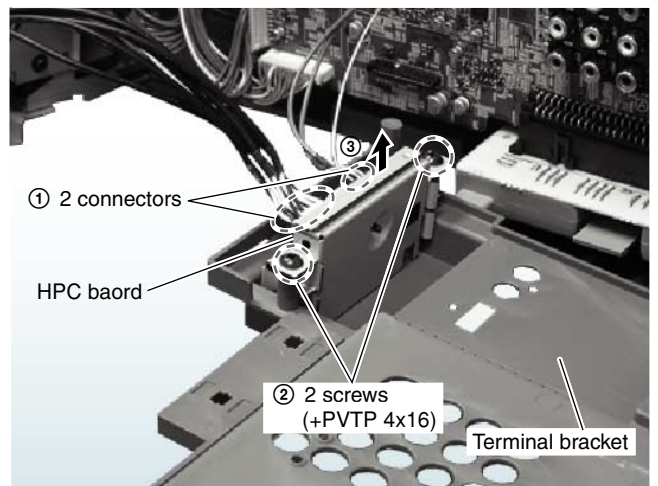




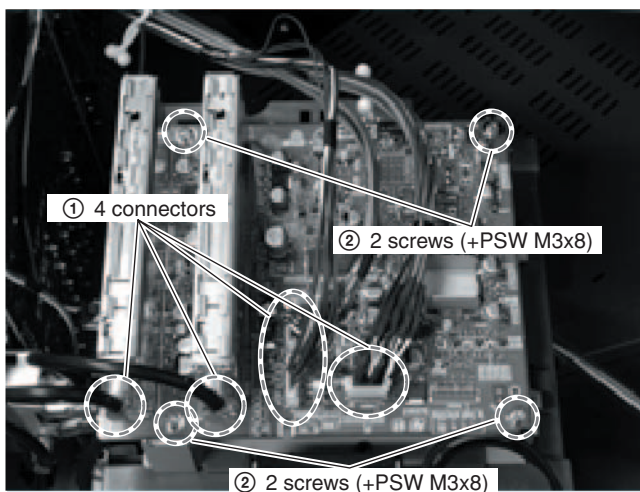
2-3. TERMINAL BRACKET



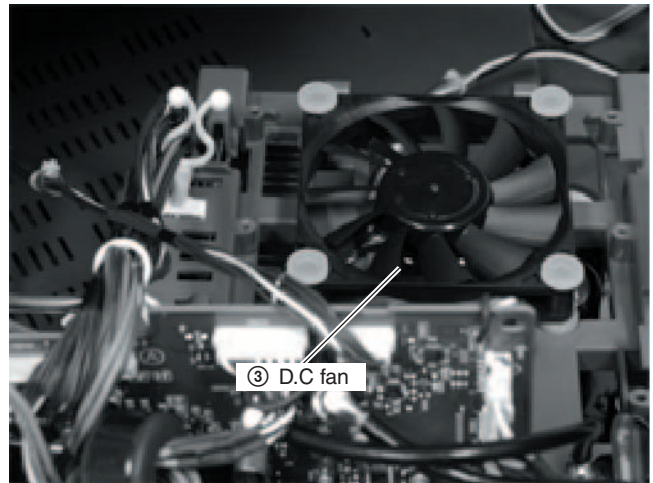
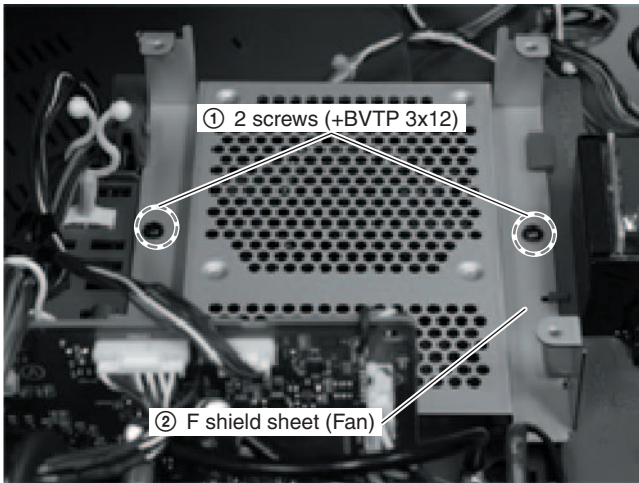
2-4. HPC BOARD



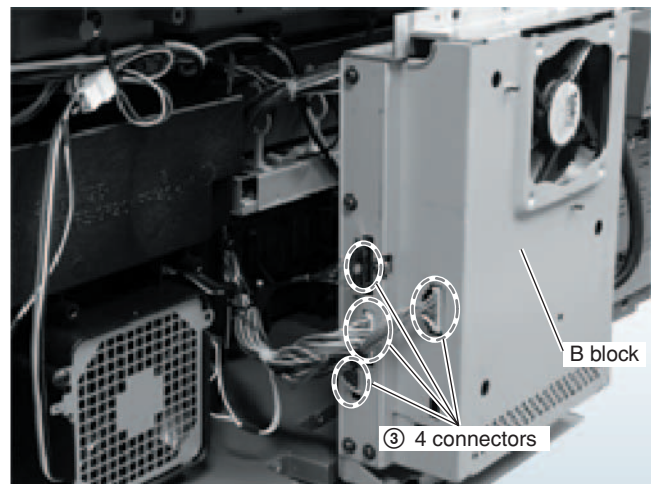
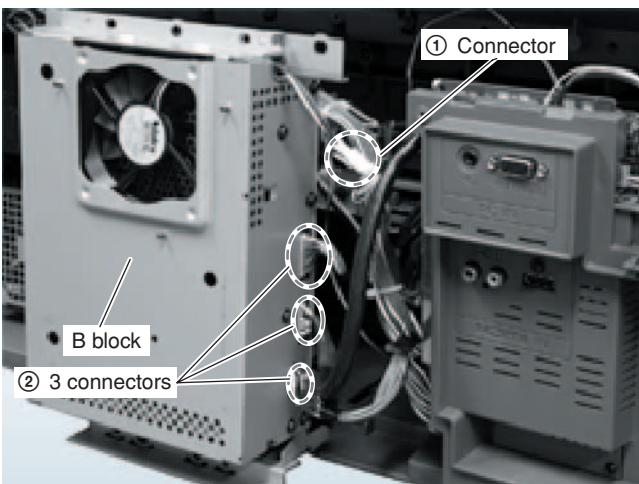
2-5. AS BOARD



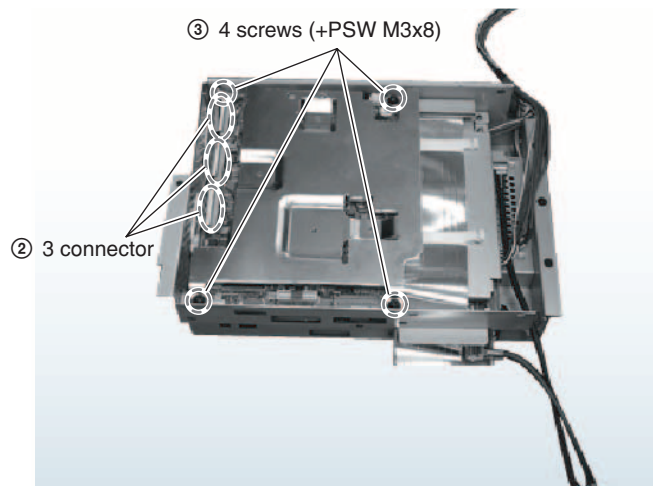
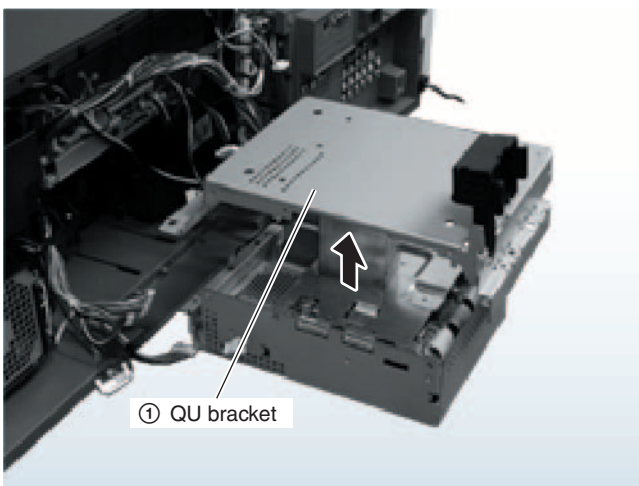
2-6. D.C FAN (UNDER THE AS BOARD)



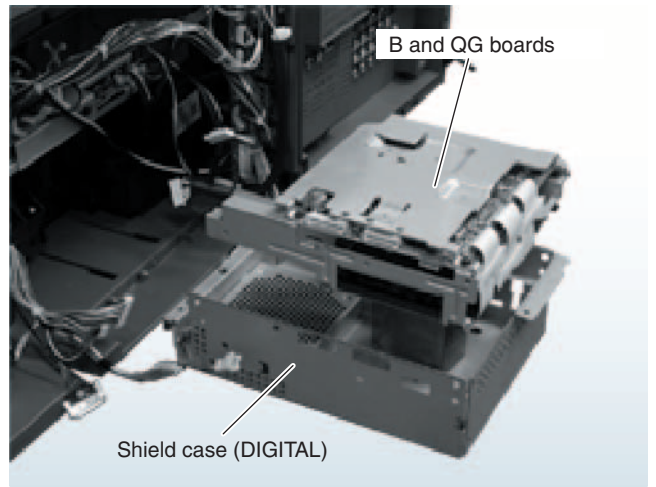
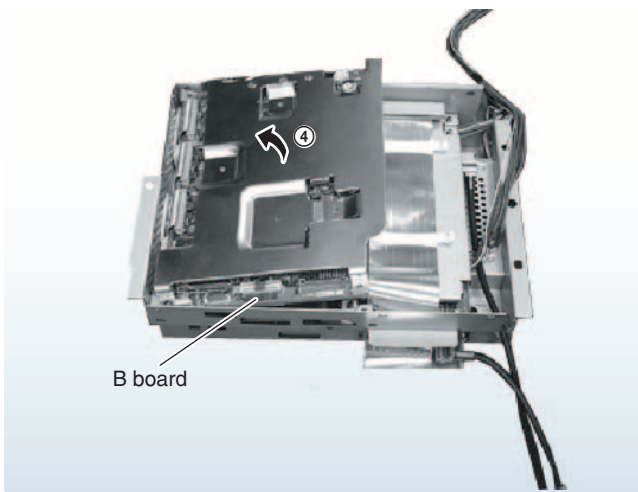
2-7. B BLOCK



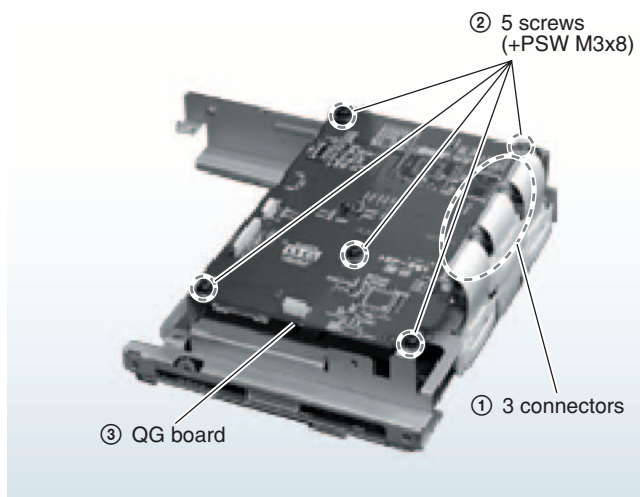
2-8. B BOARD



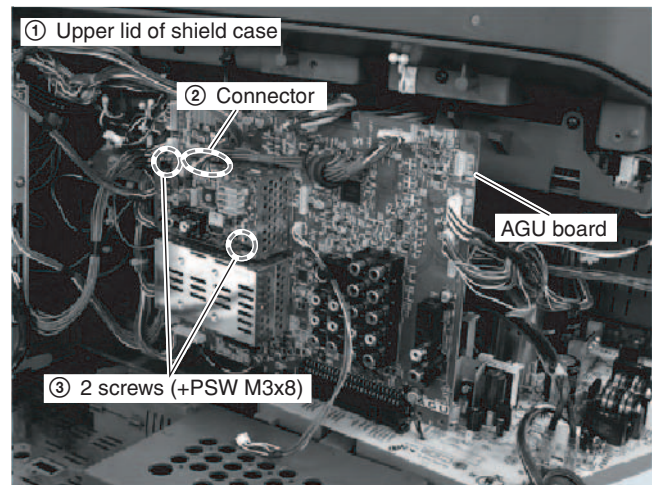
2-9. B AND QG BOARDS



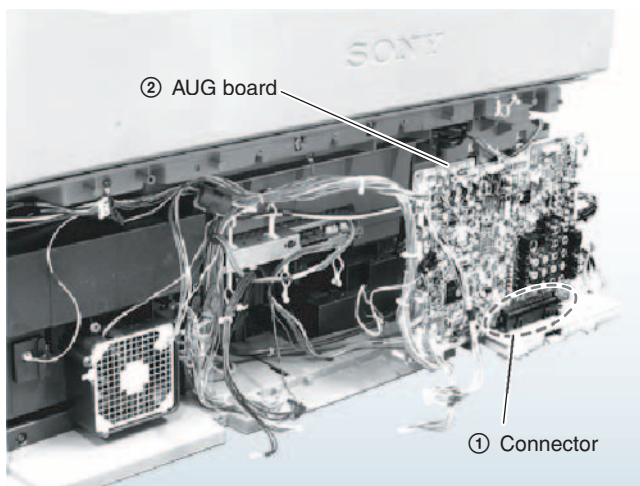
2-10. QG BOARD



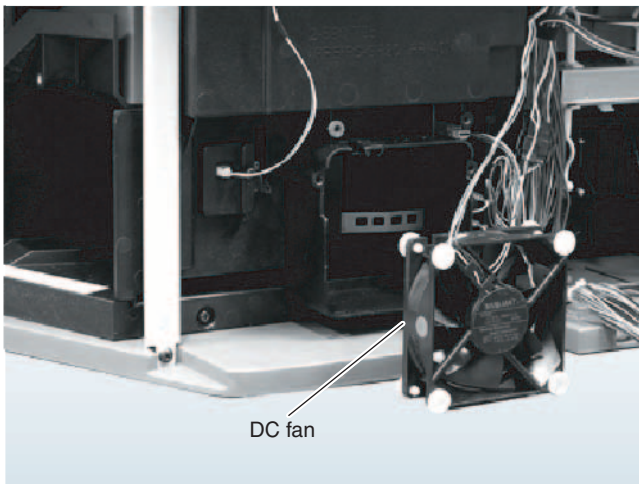
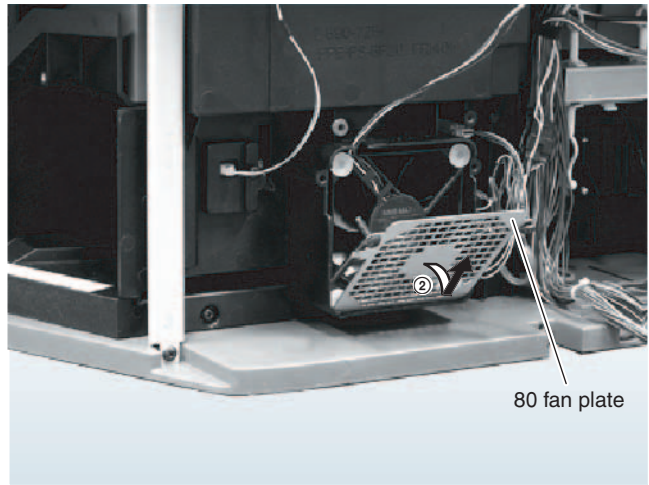
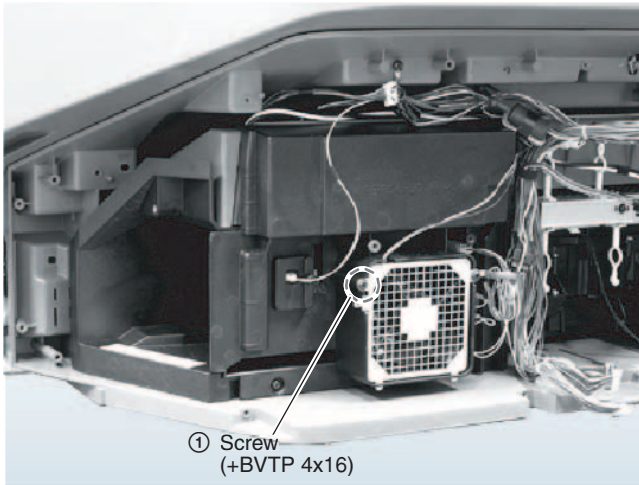
2-11. P BOARD



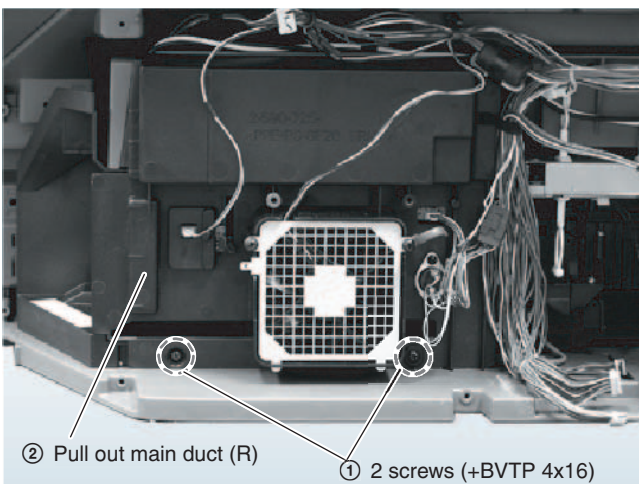
2-12. AGU BOARD



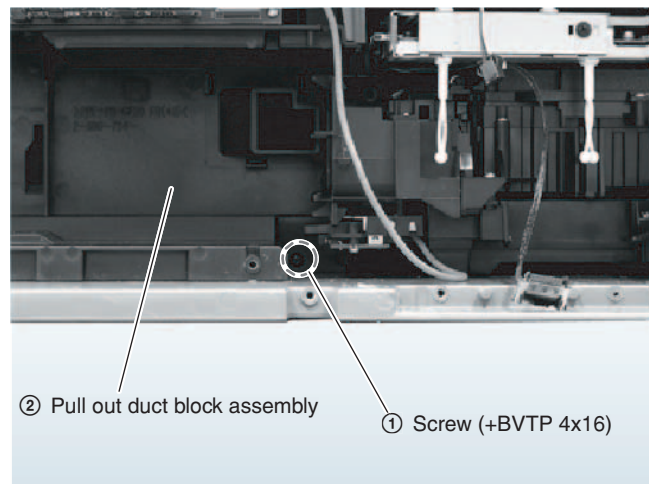
2-13. DC FAN



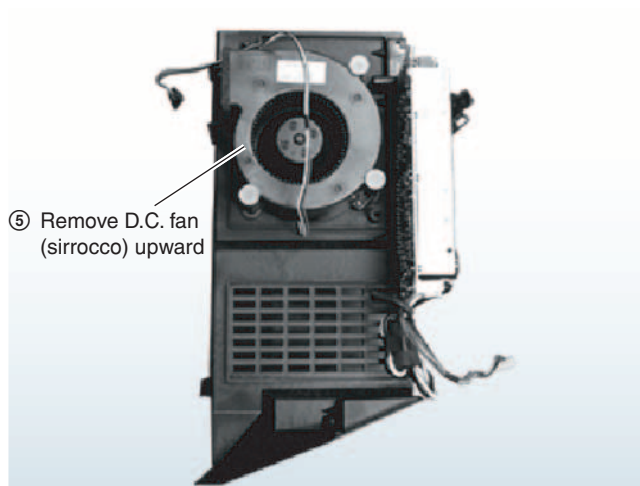
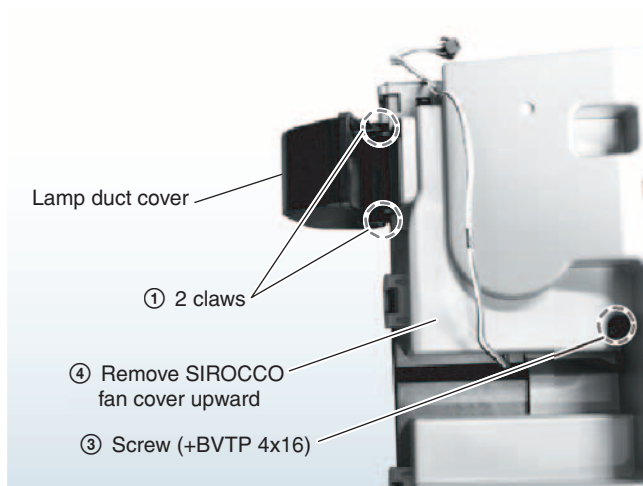
2-14. MAIN DUCT (R)



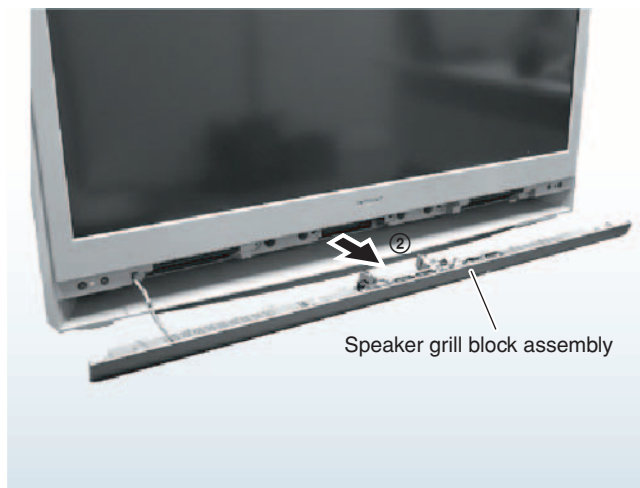
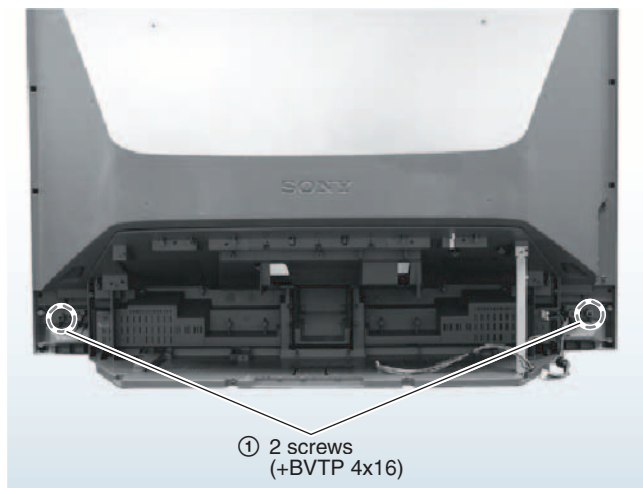
2-15. DUCT BLOCK ASSEMBLY (WITHOUT MAIN DUCT (R))



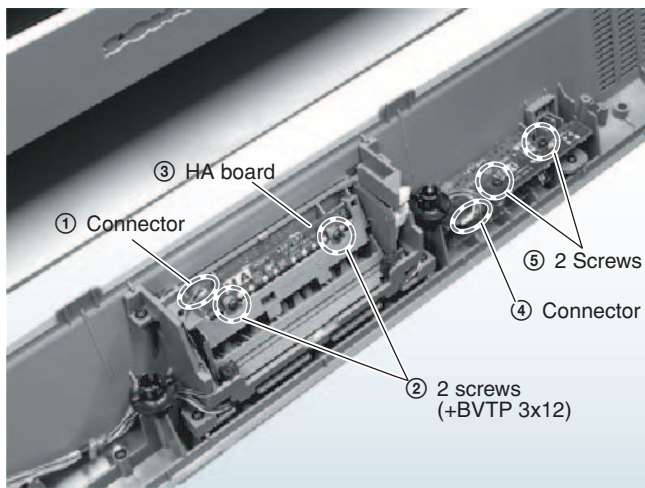
2-16. D.C. FAN (SIROCCO)



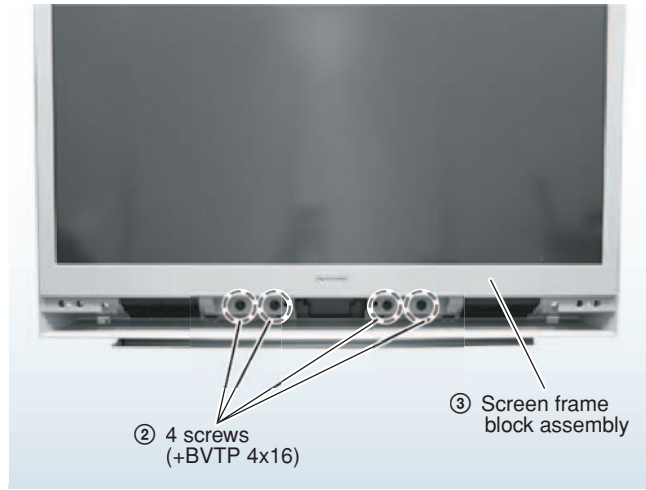
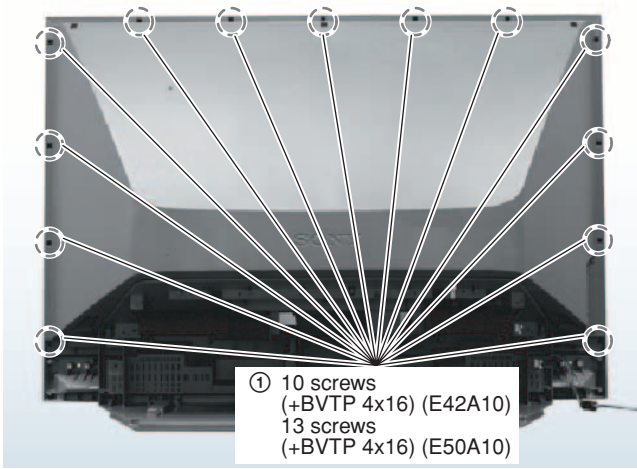
2-17. SPEAKER GRILL BLOCK ASSEMBLY



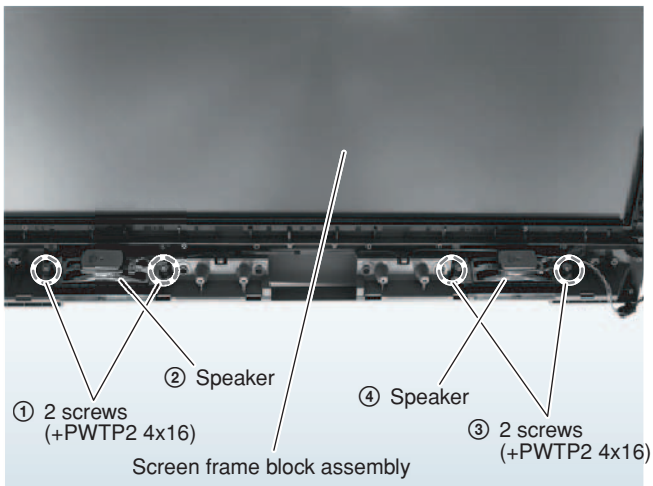
2-18. HA AND HB BOARDS



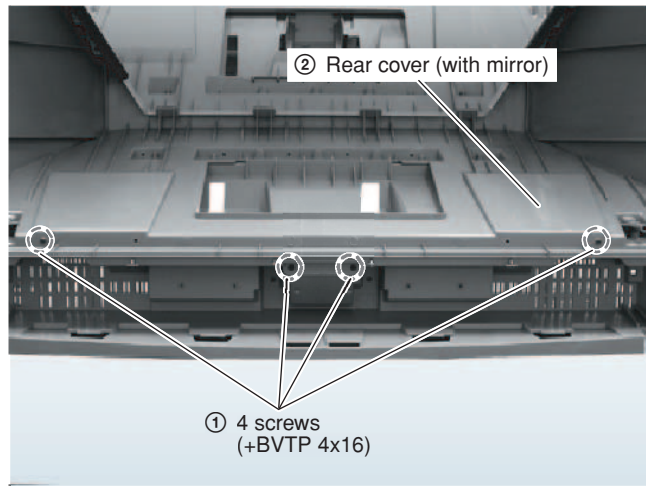
2-19. SCREEN FRAME BLOCK ASSEMBLY



2-20. SPEAKERS



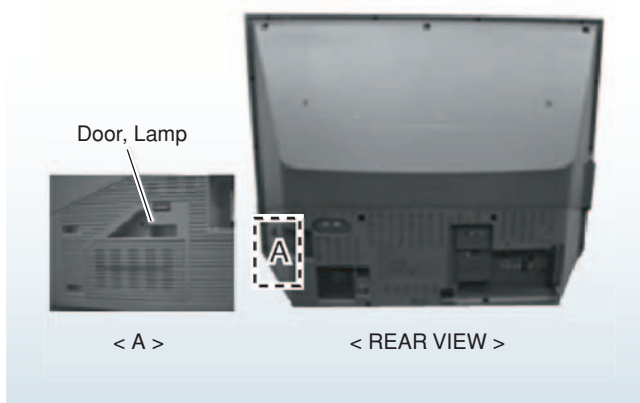
2-21. REAR COVER (WITH MIRROR)



2-22. HOW TO REPLACE OPTICS UNIT

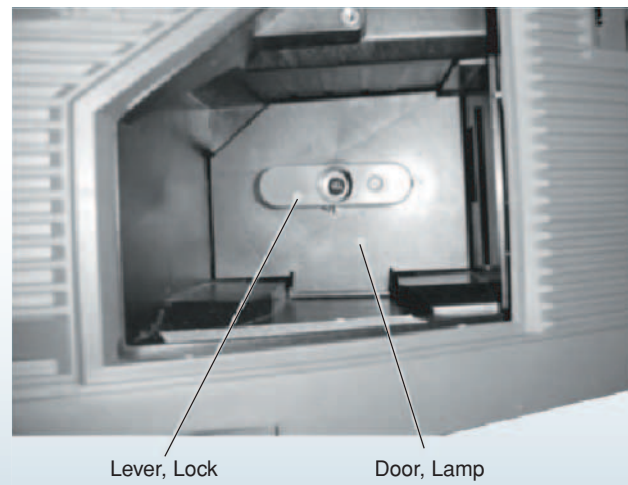
2-22-1. Remove Lamp Block (1)

Remove "Door, Lamp".



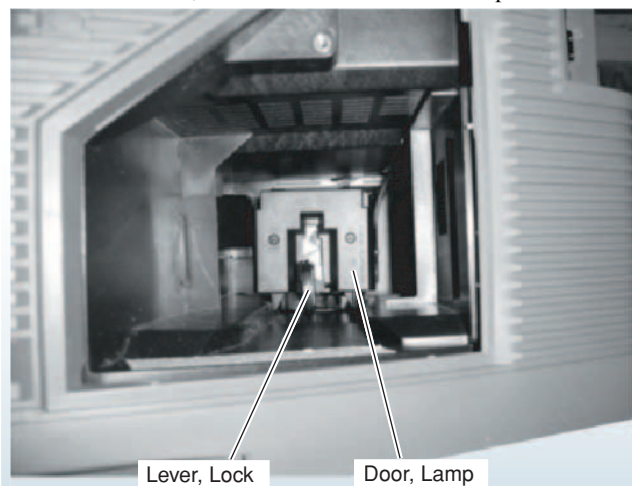
2-22-2. Remove Lamp Block (2)

Turn left "Lever, Lock" below, and then remove "Door, Lamp".



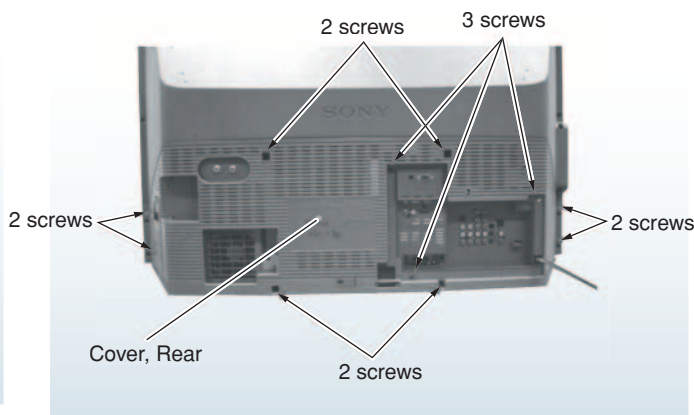
2-22-3. Remove Lamp Block (3)

Pull the "Lever, Lock" below to remove "Lamp block".



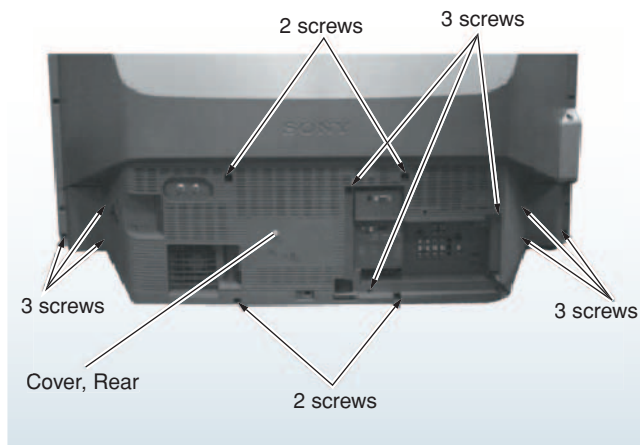
2-22-4. Remove Cover, Rear (1)

Take off 11 screws (42"), and then pull out "Cover, Rear".



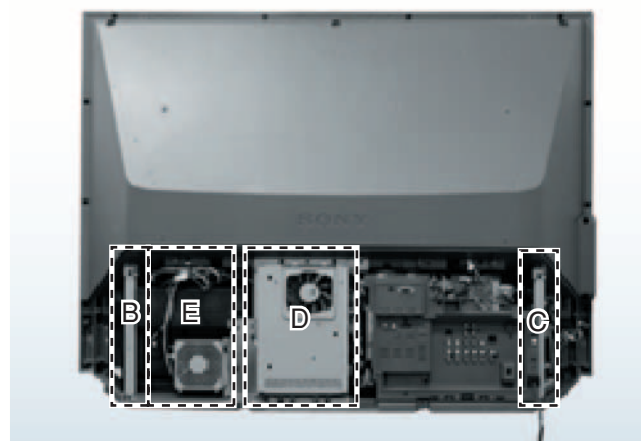
2-22-5. Remove Cover, Rear (1-2)

Take off 13 screws (50").



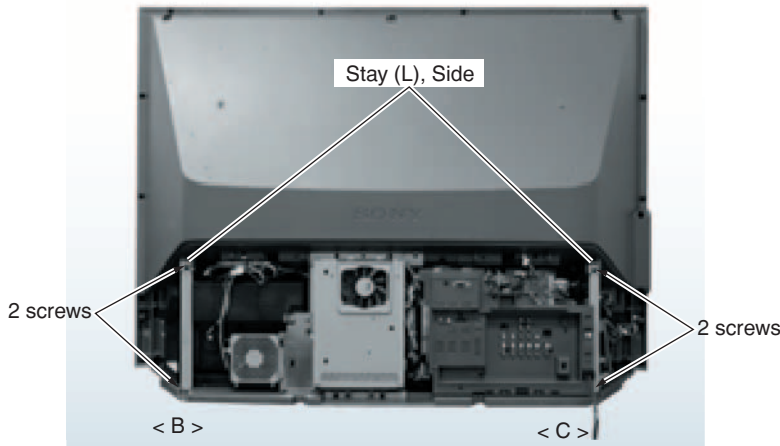
2-22-6. Remove Cover, Rear (2)

It is removed "Cover, Rear".



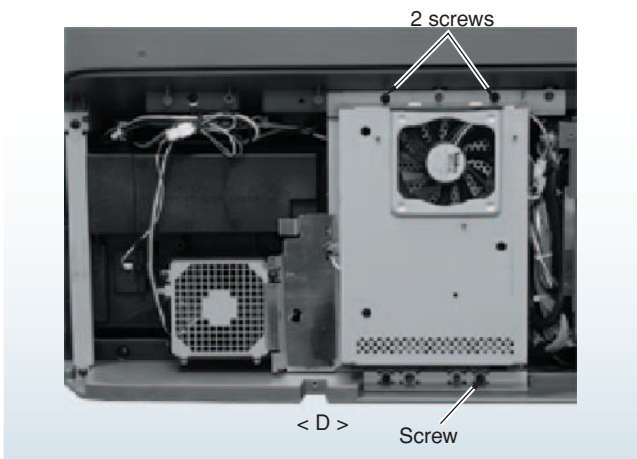
2-22-7. Remove Stay (L), Side

Take off 4 screws, and then remove 2 "Stay (L), Side".



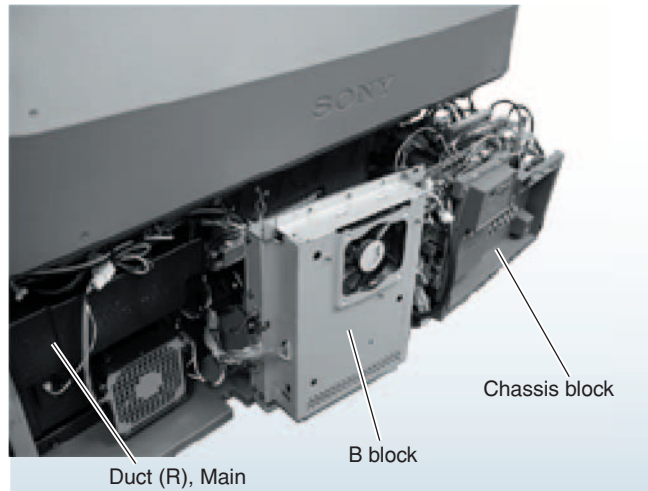
2-22-8. Pull Out Some Blocks (1)

Take off 4 screws.



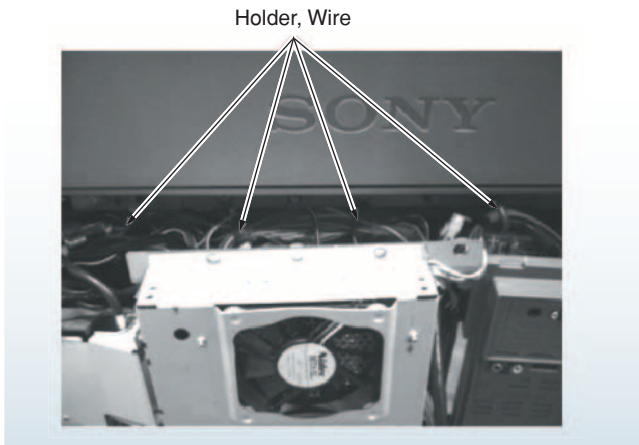
2-22-9. Pull Out Some Blocks (2)

Pull out "B block", "Chassis block", and "Duct (R), Main" a little bit.



2-22-10. Pull Out Some Blocks (3)

Unlock "Holder, Wire" as shown below.



2-22-11. Pull Out Some Blocks (4)

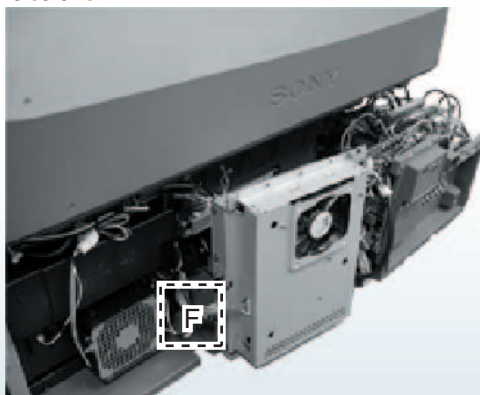
Take off 1 screw.



1 screw

< F >

3 screws



2-22-12. Pull Out Some Blocks (5)

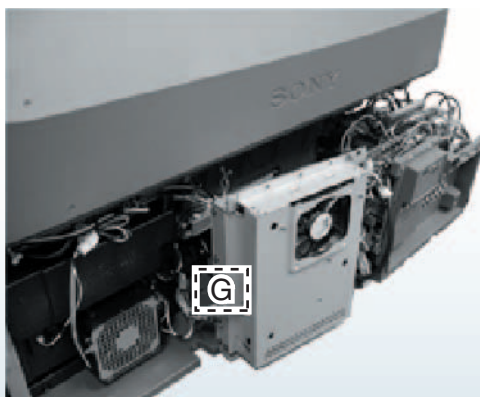
Loose 1 special screw. (This screw can not be taken off.)



Optics unit block

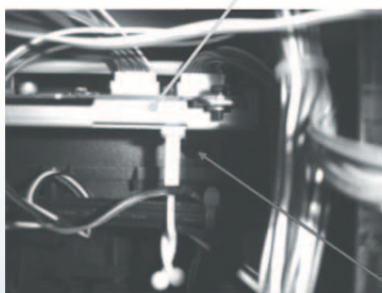
1 special screw

< G >



2-22-13. Pull Out Some Blocks (6)

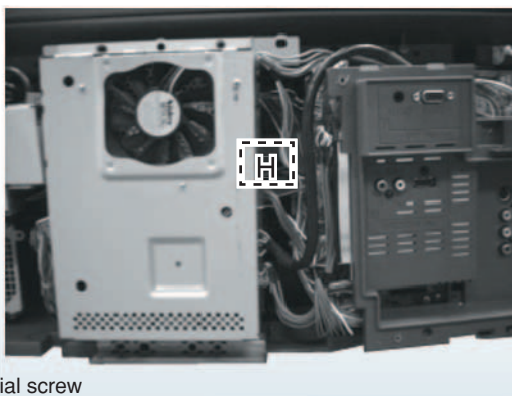
Take off 1 screw.



Optics unit block

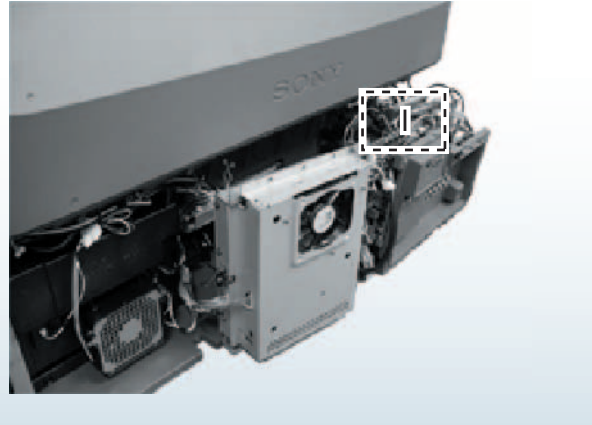
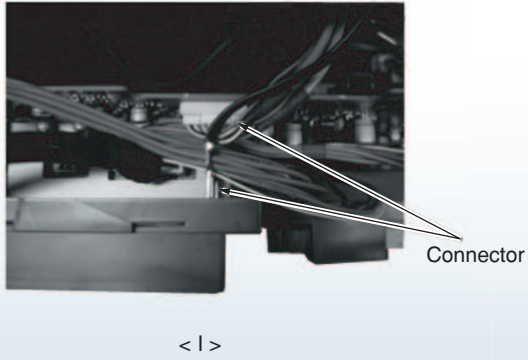
1 special screw

< H >



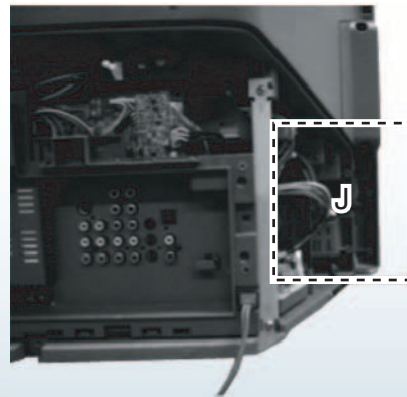
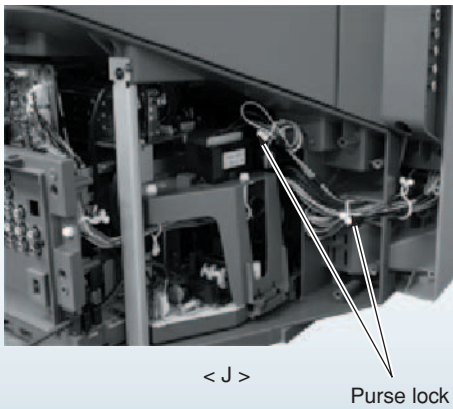
2-22-14. Pull Out Some Blocks (7)

Remove 2 connectors to pull out some blocks as shown below.



2-22-15. Pull Out Some Blocks (8)

Unlock "Purse Lock" to pull out some blocks as shown below.

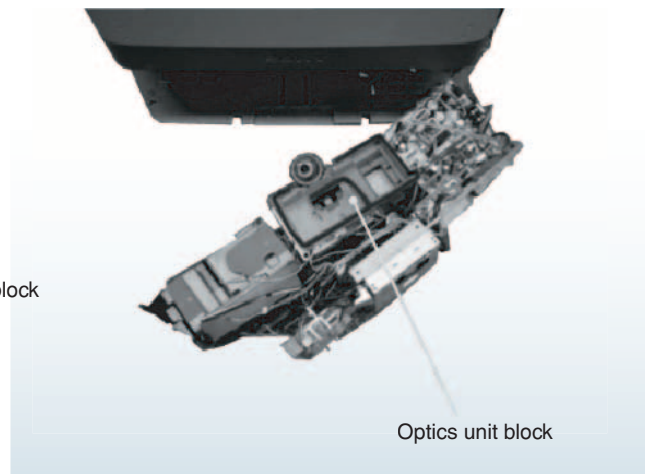
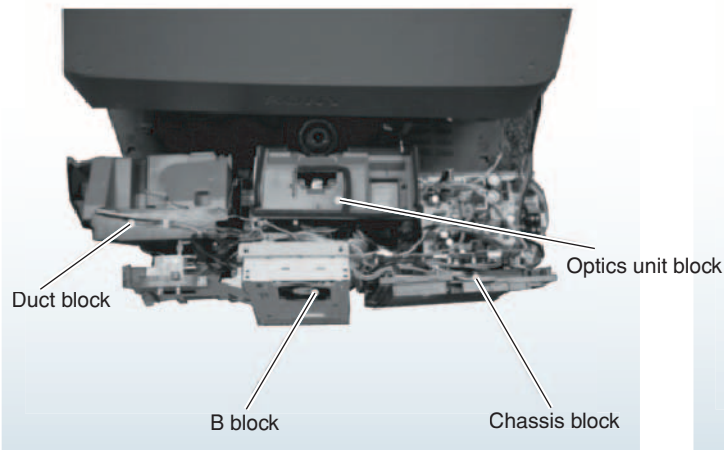


2-22-16. Pull Out Some Blocks (9)

Pull out "B block", "Chassis block", "Duct block", and "Optics Unit block".

2-22-17. Remove Optics Unit

Remove all connectors to remove "Optics Unit block" and then it.



SECTION 3

ELECTRICAL ADJUSTMENTS

3-1. ELECTRICAL ADJUSTMENT BY REMOTE COMMANDER

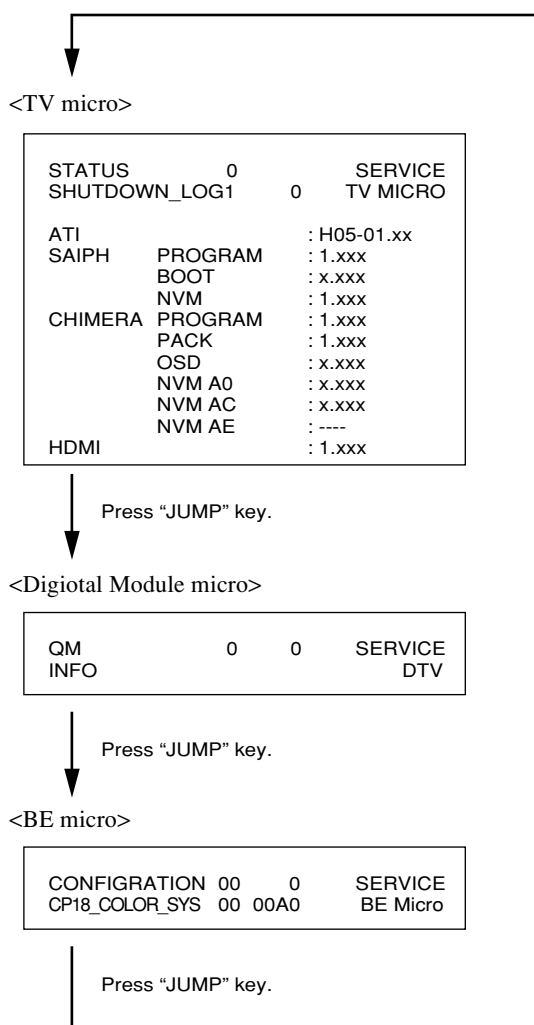
By using remote commander (RM-GA004), all circuit adjustments can be made.

NOTE : Test Equipment Required.

1. Pattern Generator (with component outputs)
2. Oscilloscope
3. Digital multimeter

3-1-1. Method of Setting the Service Adjustment Mode

1. Standby mode. (Power off)
2. **DISPLAY** → **5** → **VOL (+)** → **TV POWER** on the remote commander.
(Press each button within a second.)
The following service screen will appear.



3-1-2. Service Mode Adjustment

1. The SCREEN displays the item being adjusted.
2. Press "①" or "④" on the remote commander to select the adjustment item.
3. Press "③" or "⑥" on the remote commander to change the data.
4. Press "②" or "⑤" on the remote commander to select the category.
Every time you press "②" (Category up).
5. If you want to recover the latest values press "⑩" then "ENTER" to read the memory.
6. Press "MUTING" then "ENTER" to write into memory.
7. Turn power off.

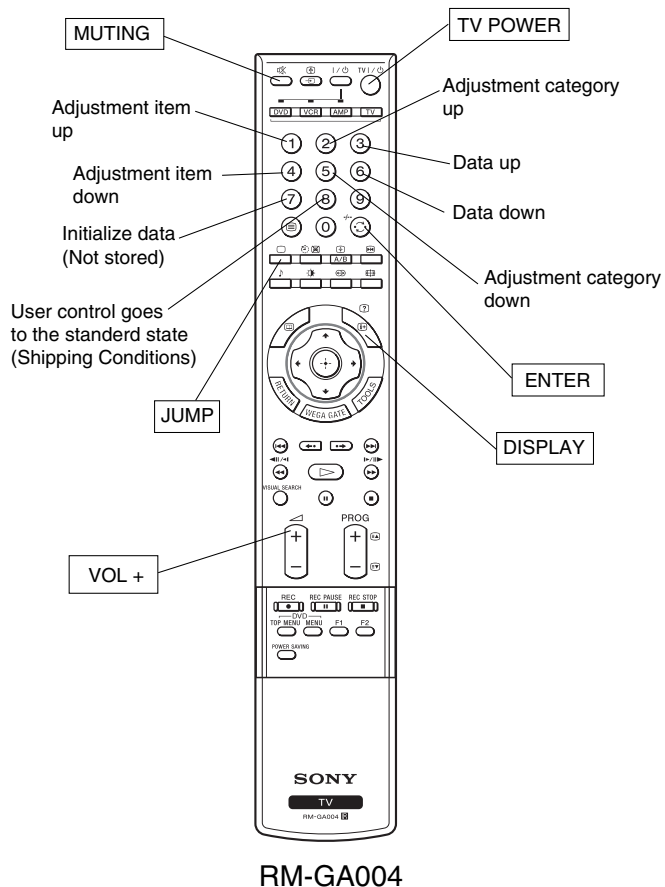
<Method of setting the shipping condition>

1. Service Adjustment mode.
2. Press "⑧" then "ENTER"
3. Wait until appearing "Initial Setup" display.
4. Disconnect AC plug and connect again to change factory reset condition completely.

3-1-3. Memory Write Confirmation Method

1. After adjustment, turn power off with the remote commander.
2. Turn power on and set to service mode.
3. Call the adjusted items again and confirm they were adjusted.

3-1-4. Adjusting Buttons and Indicator



FUNCTION OF KEYS ON COMMANDER

- ① : Changes adjustment item. (item No. moves up)
- ④ : Changes adjustment item. (item No. moves down)
- ② : Changes adjustment category. (category moves up)
- ⑤ : Changes adjustment category. (category moves down)
- ③ : Changes data value. (up)
- ⑥ : Changes data value. (down)

Commander Function

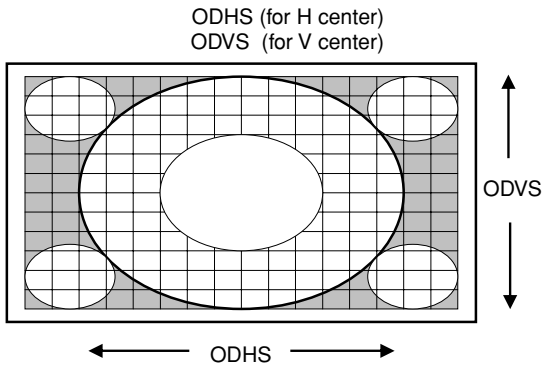
Button	Mode	Description
[MUTING] + [ENTER]	WRITE	Writes data to NVM.
① + [ENTER]	READ	Reads data from NVM.
⑧ + [ENTER]	RESET	Set the shipping condition.

3-2. H/V Center Confirmation and Adjustment

Please check the picture horizontal/vertical center after the replacement of the following parts .

- Optical block
- Top assembly

1. Check H/V center with 480i monoscope signal in “Full “ mode .
2. If the center is shifted , adjust it with the following service items .



3-3. IRIS Adjustment

Please check it after the replacement of the following parts.

- IRIS unit+Optics unit block+C board
- B board

Check values of the service data in NVM on C board

DBL_CTRL_AC	#0	BL_U_TOP
	#1	BL_U_BOTTOM
	#2	BL_MAX
	#3	BL_MIN
	#4	IRIS_GAIN
	#5	HALL_GAIN

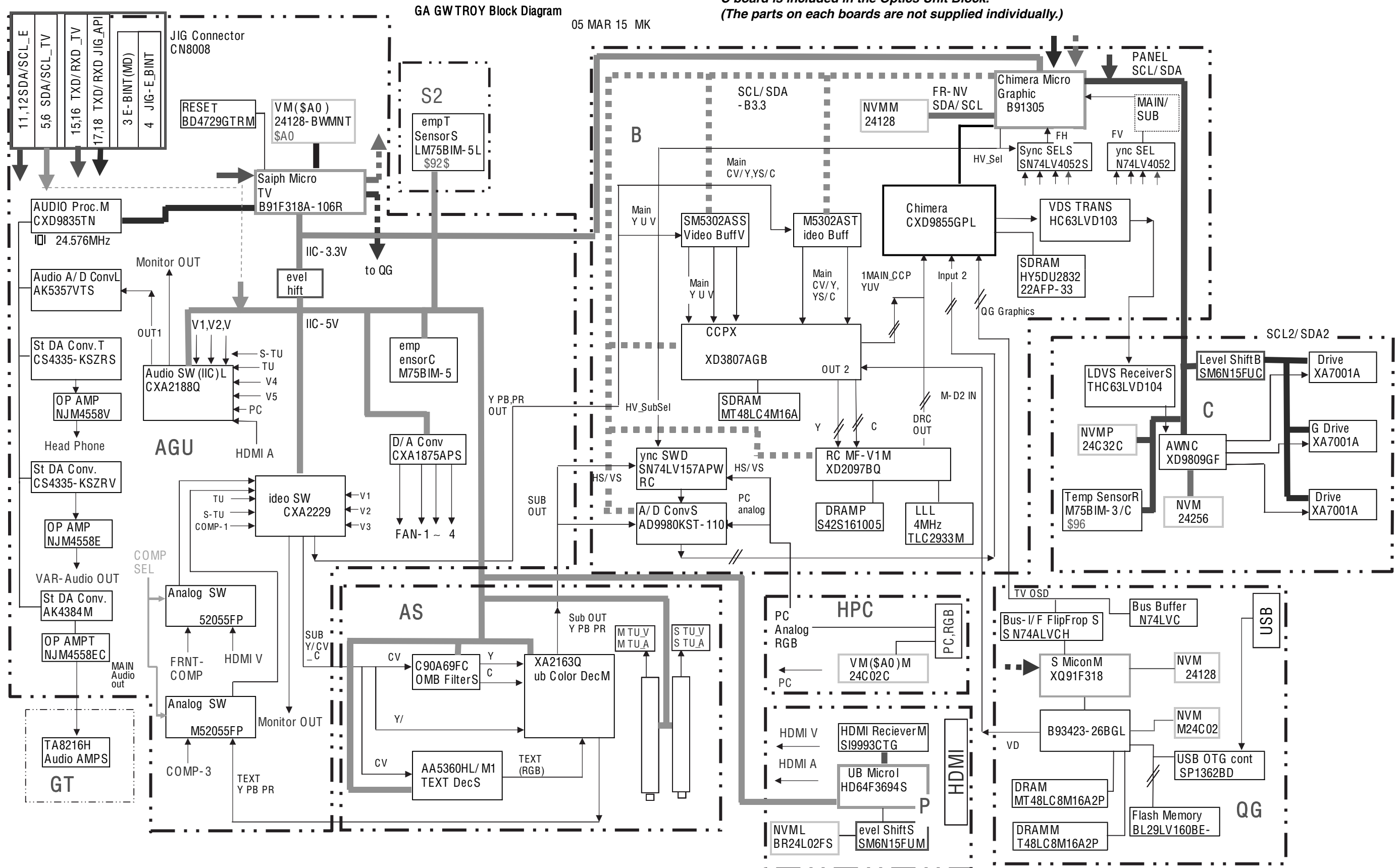
and write the same values on C board to the service data in NVM on B board.

DBL_CTRL	#0	BL_U_TOP
	#1	BL_U_BOTTOM
	#2	BL_MAX
	#3	BL_MIN
	#4	IRIS_GAIN
	#5	HALL_GAIN

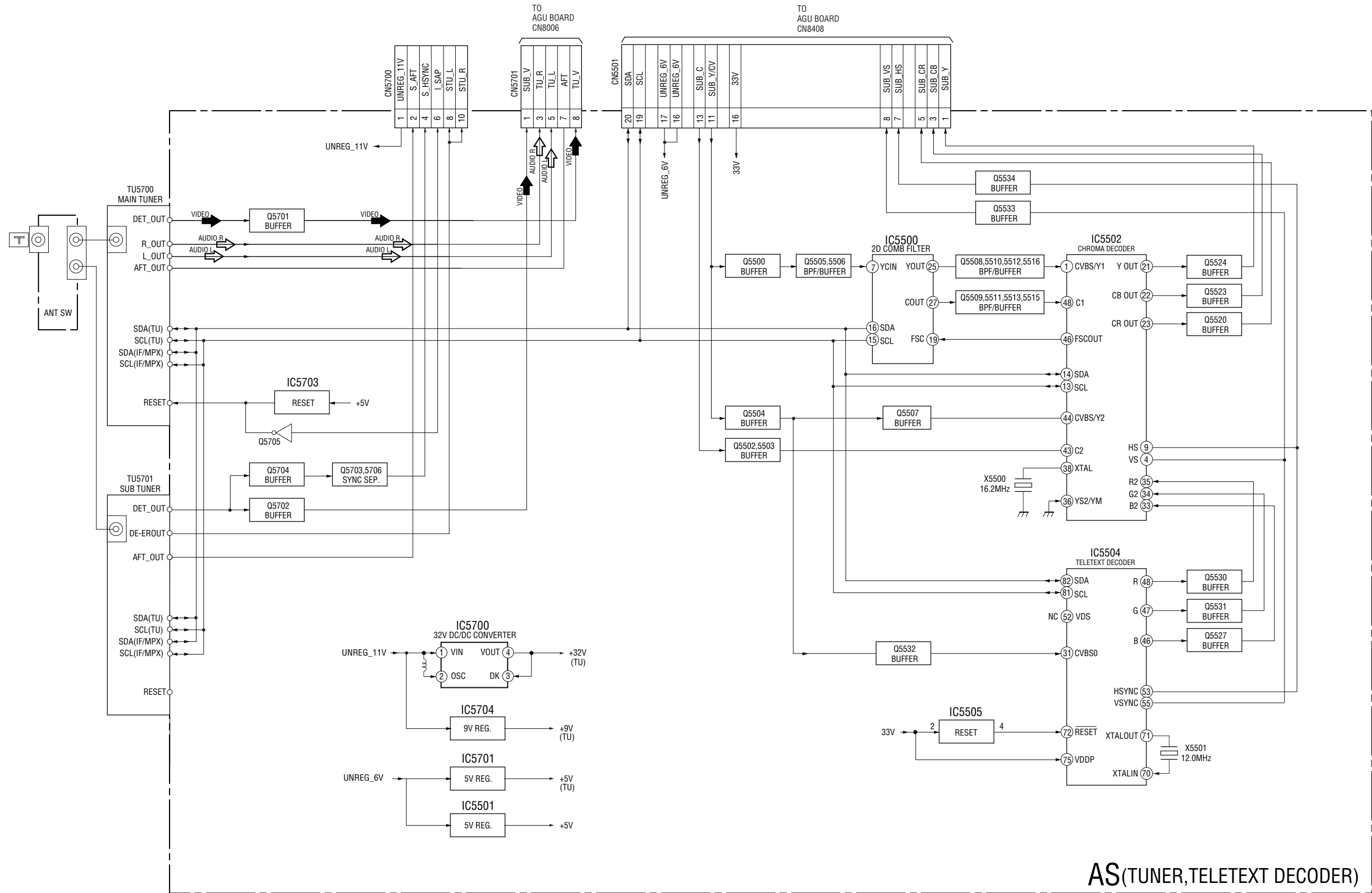
SECTION 4
DIAGRAMS

4-1. BLOCK DIAGRAM (1)

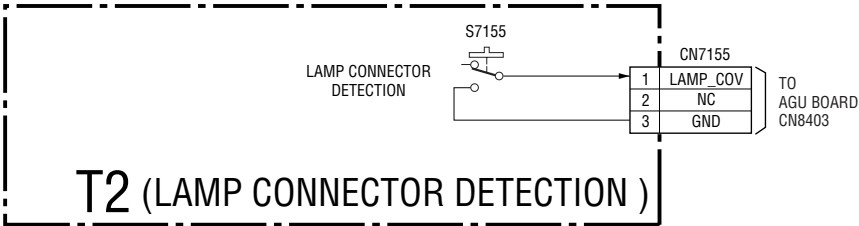
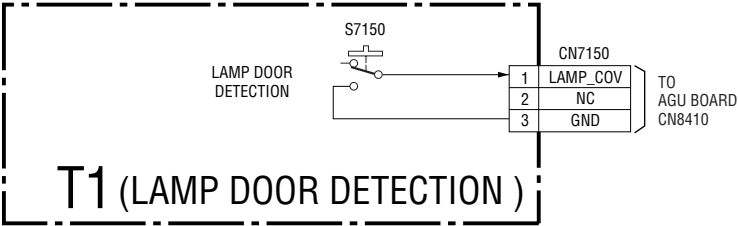
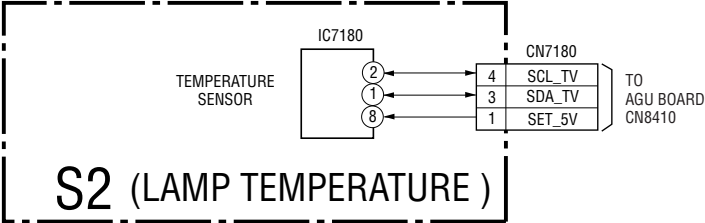
Note:
AGU, B, HPC, P and QG boards are supplied as the block for service.
C board is included in the Optics Unit Block.
(The parts on each boards are not supplied individually.)



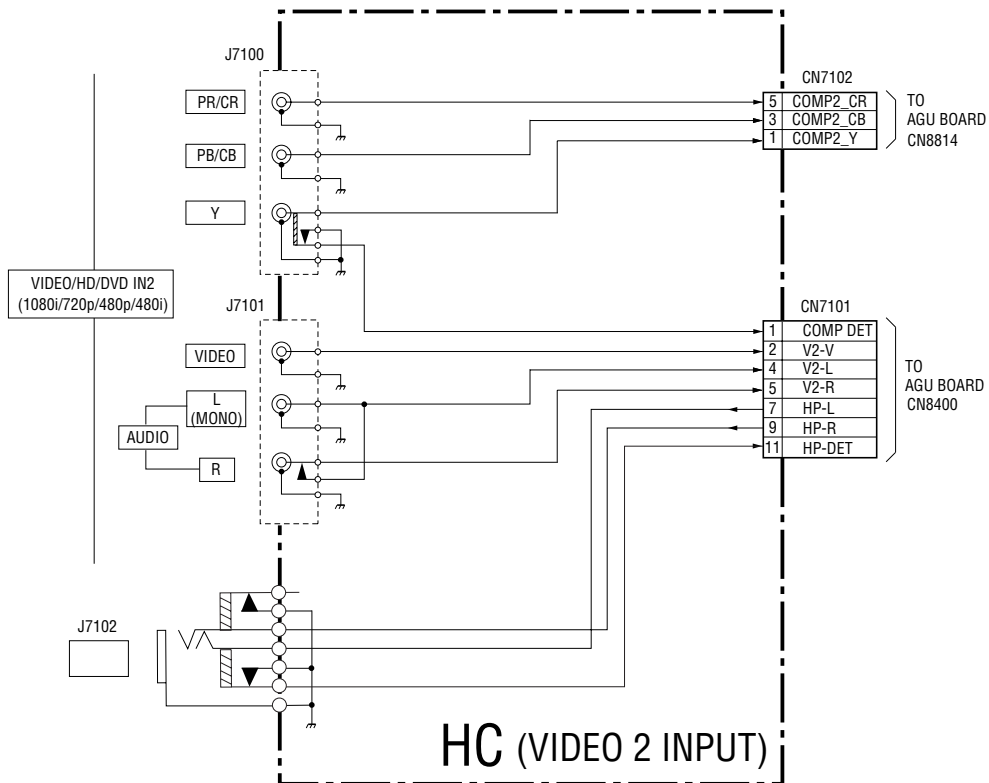
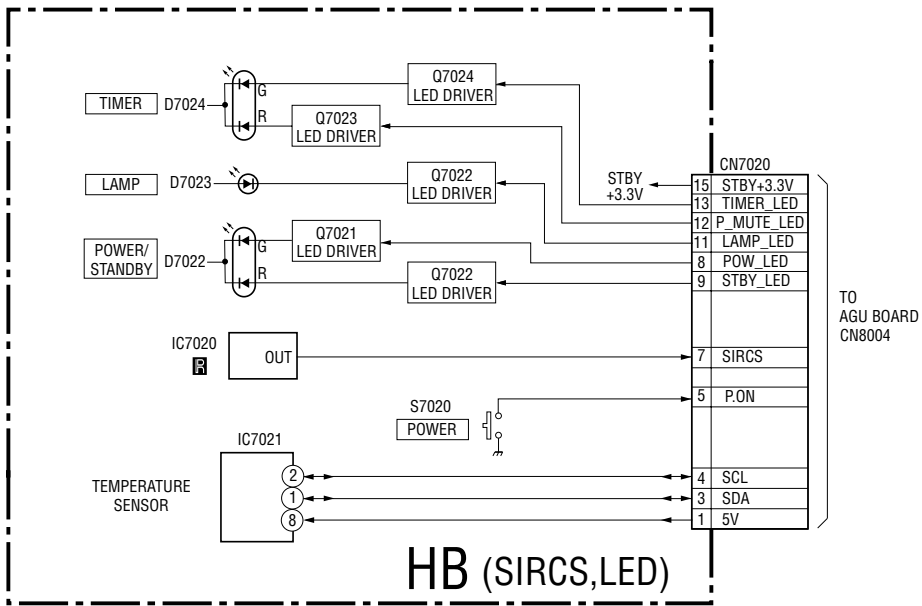
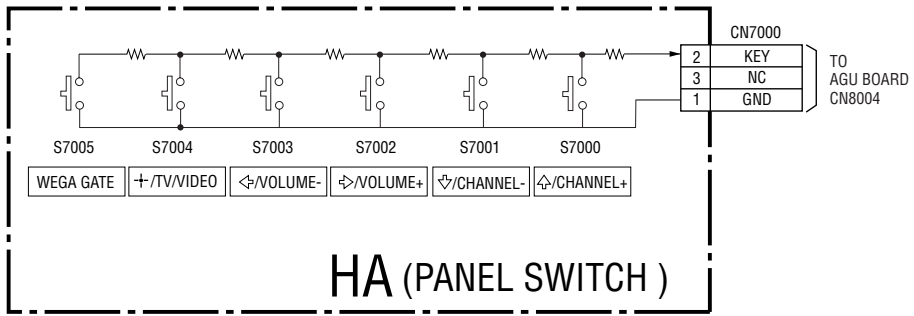
BLOCK DIAGRAM (2)



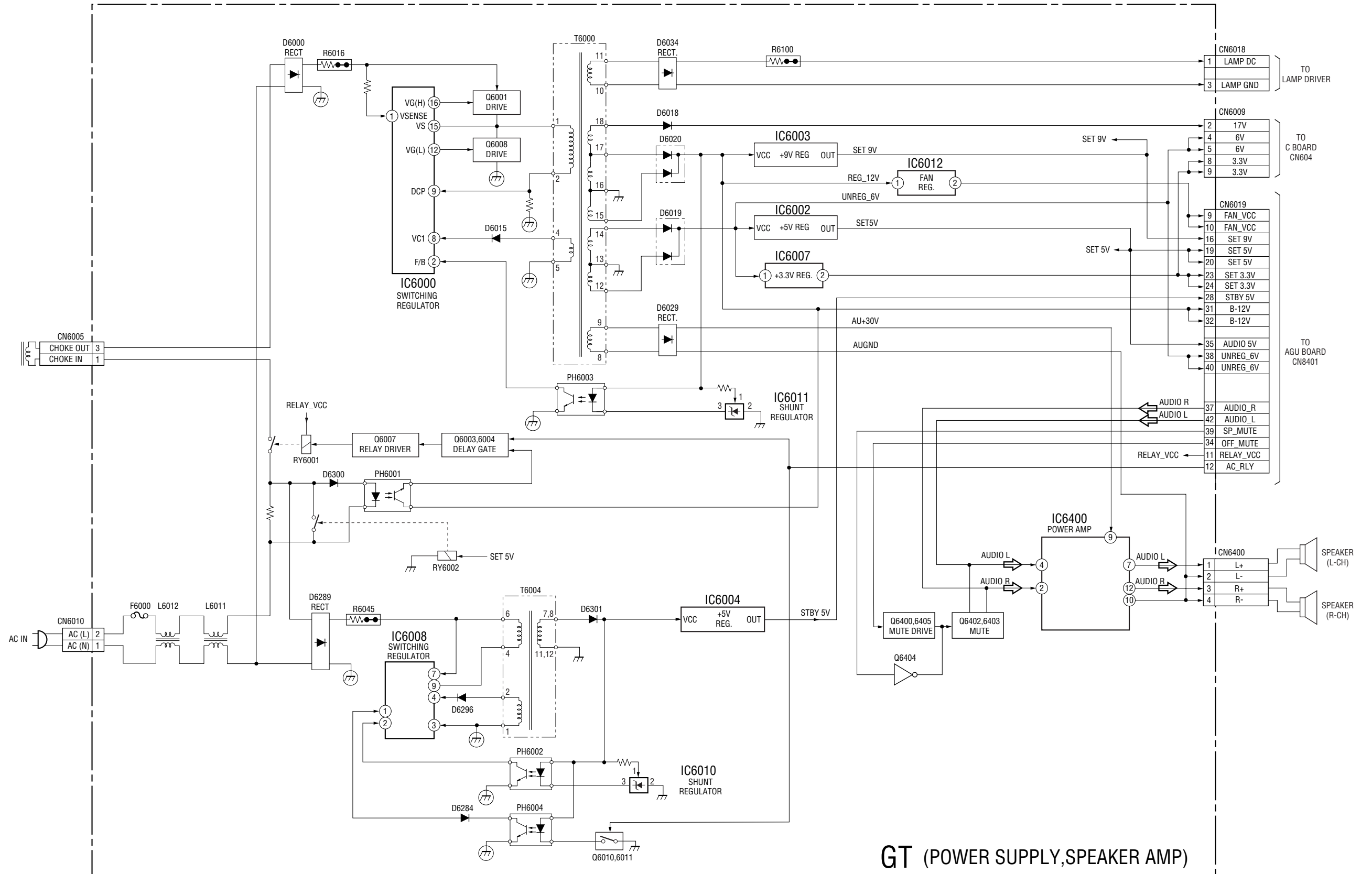
BLOCK DIAGRAM (3)



BLOCK DIAGRAM (4)

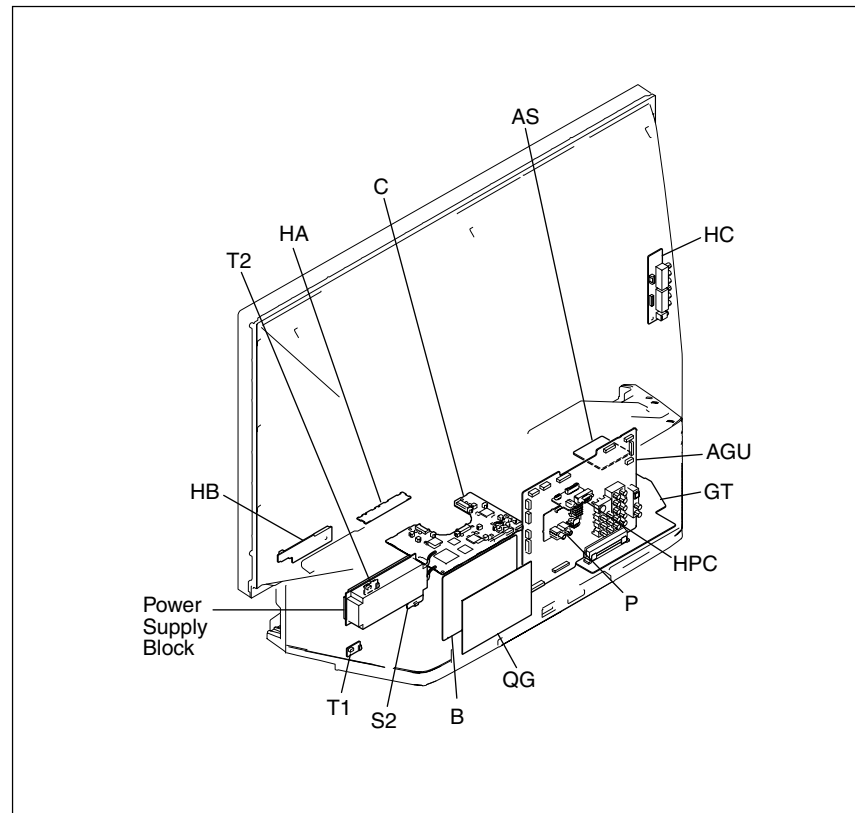


BLOCK DIAGRAM (5)



GT (POWER SUPPLY, SPEAKER AMP)

4-3. CIRCUIT BOARDS LOCATION



4-4. SCHEMATIC DIAGRAMS

Note:

- The parts marked “#” on schematic diagrams are not mounted.
- All capacitors are in μF unless otherwise noted. (pF: μpF) Capacitors without voltage indication are all 50 V.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

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

- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- Δ : internal component.
- : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- \perp : earth-ground.
- : earth-chassis.
- All voltages are in V.
- Readings are taken with a 10 M Ω digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- * : Can not 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
	: RW	NONFLAMMABLE WIREWOUND
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note: The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

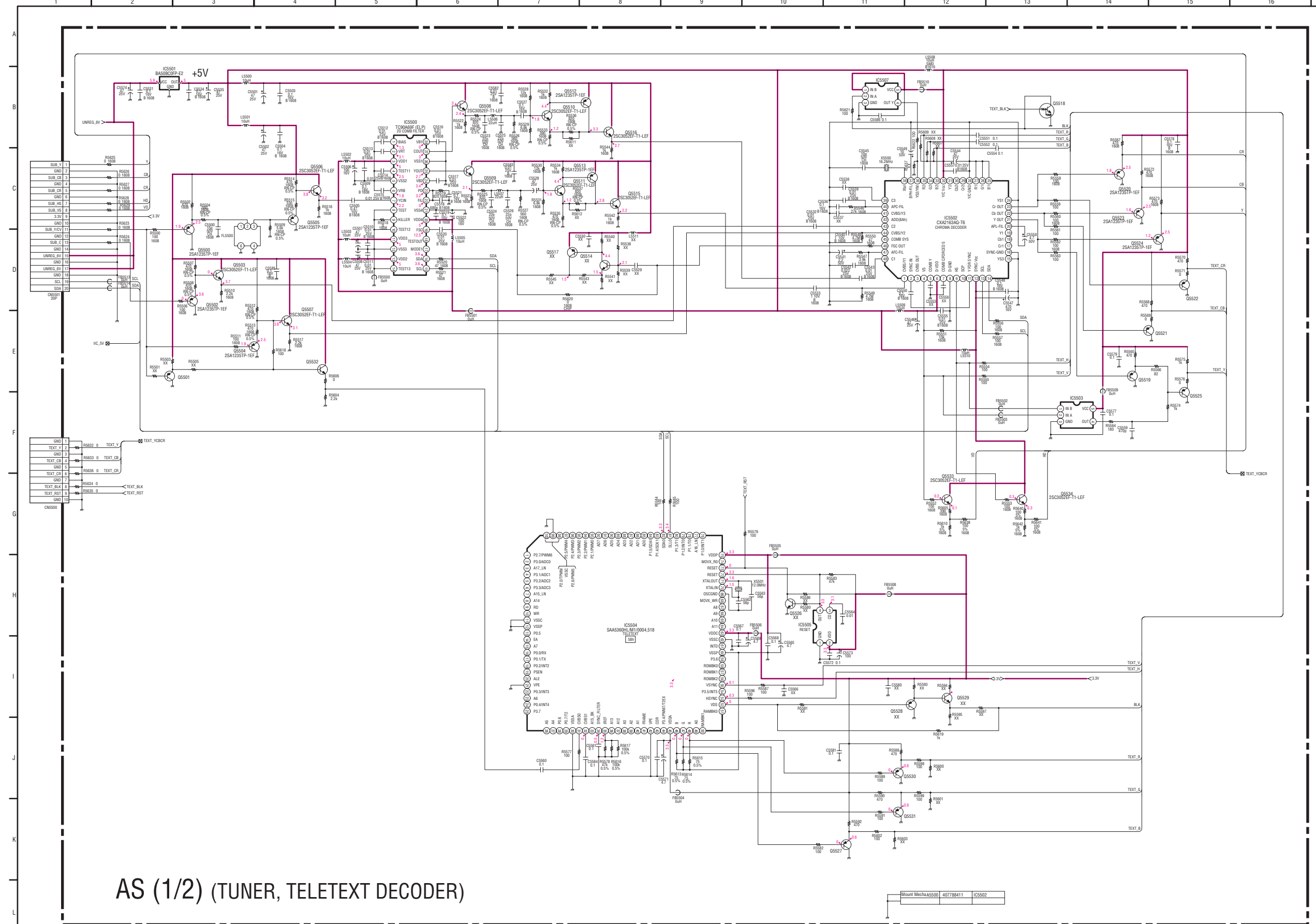
Terminal name of semiconductors in silk screen printed circuit (*)

Device	Printed symbol	Terminal name	Circuit
① Transistor		Collector Base Emitter	
② Transistor		Collector Base Emitter	
③ Diode		Cathode Anode	
④ Diode		Cathode Anode (NC)	
⑤ Diode		Cathode Anode (NC)	
⑥ Diode		Common Anode Cathode	
⑦ Diode		Common Anode Cathode	
⑧ Diode		Common Anode Anode	
⑨ Diode		Common Anode Anode	
⑩ Diode		Common Cathode Cathode	
⑪ Diode		Common Cathode Cathode	
⑫ Diode		Anode Cathode Anode	
⑬ Transistor (FET)		Drain Source Gate	
⑭ Transistor (FET)		Drain Source Gate	
⑮ Transistor (FET)		Source Drain Gate	
⑯ Transistor		Emitter Collector Base	
⑰ Transistor		C2 B1 E1 E2 B2 C1	
⑱ Transistor		C1 B2 E2 E1 B1 C2	
⑲ Transistor		C1 B2 E2 E1 B1 C2	
⑳ Transistor		C1 B2 E2 E1 B1 C2	
㉑ Transistor		E2 B1 E1 C2 C1(B2)	
㉒ Transistor		(B2) B1 E1 E2 C1 C2	
㉓ Transistor		(B2) E2 E1 B1 C2 C1	
-	Discrete semiconductor		

(Chip semiconductors that are not actually used are included.)

Ver.1.5

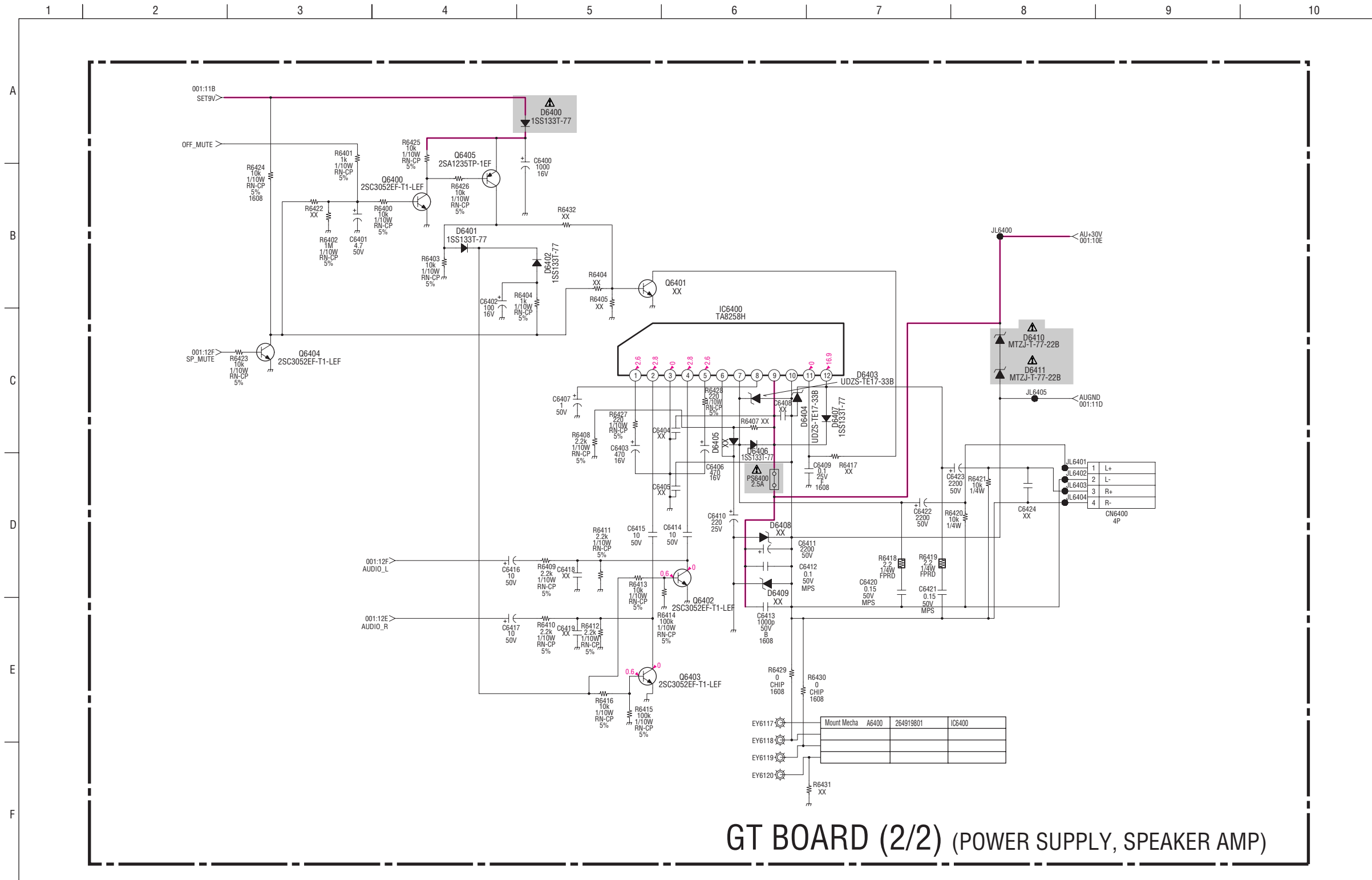
(1) Schematic Diagram of AS (1/2) Board



AS (1/2) (TUNER, TELETEXT DECODER)

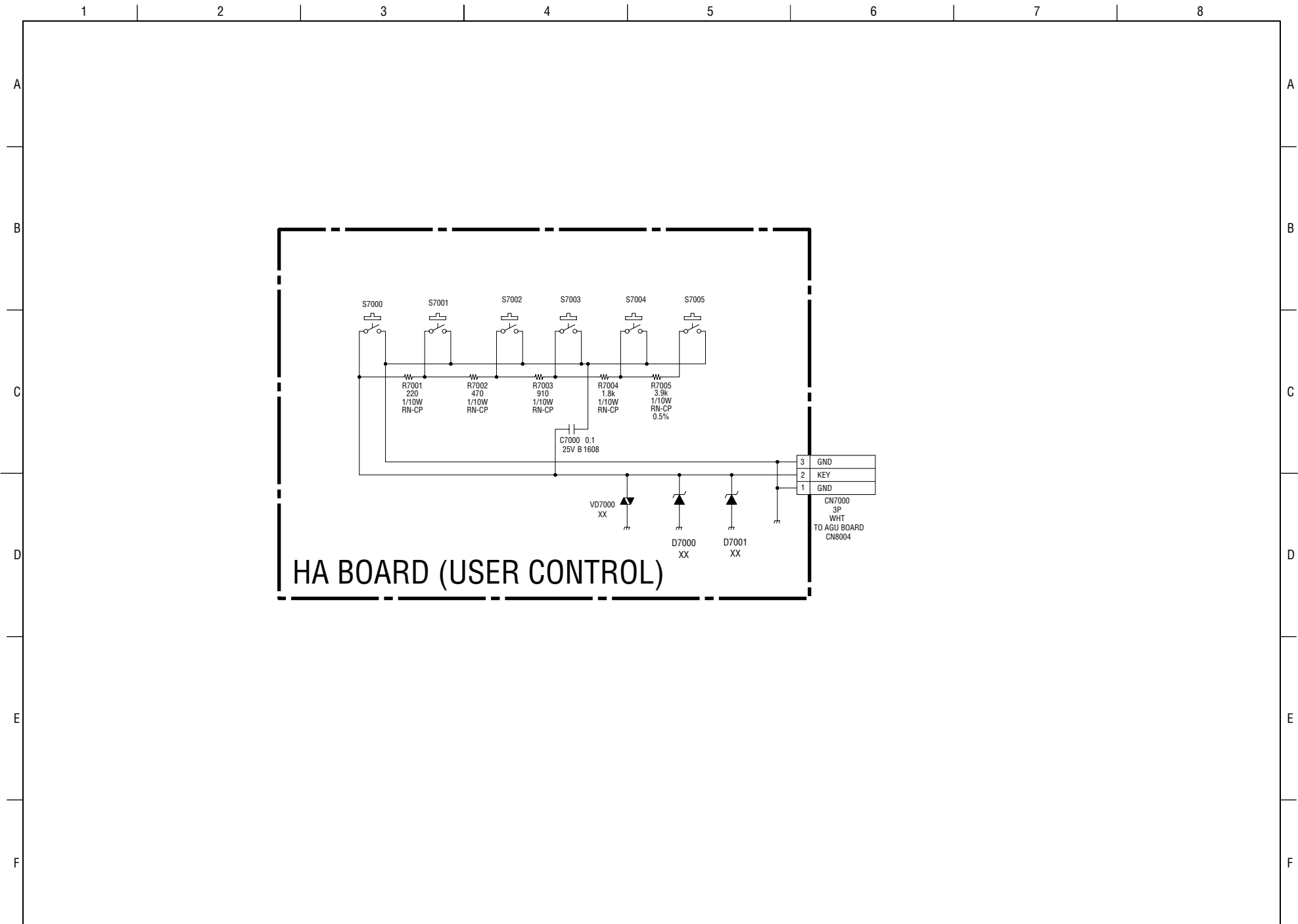
Mount MechaA5500	40778411	IC5502
------------------	----------	--------

(4) Schematic Diagram of GT (2/2) Board

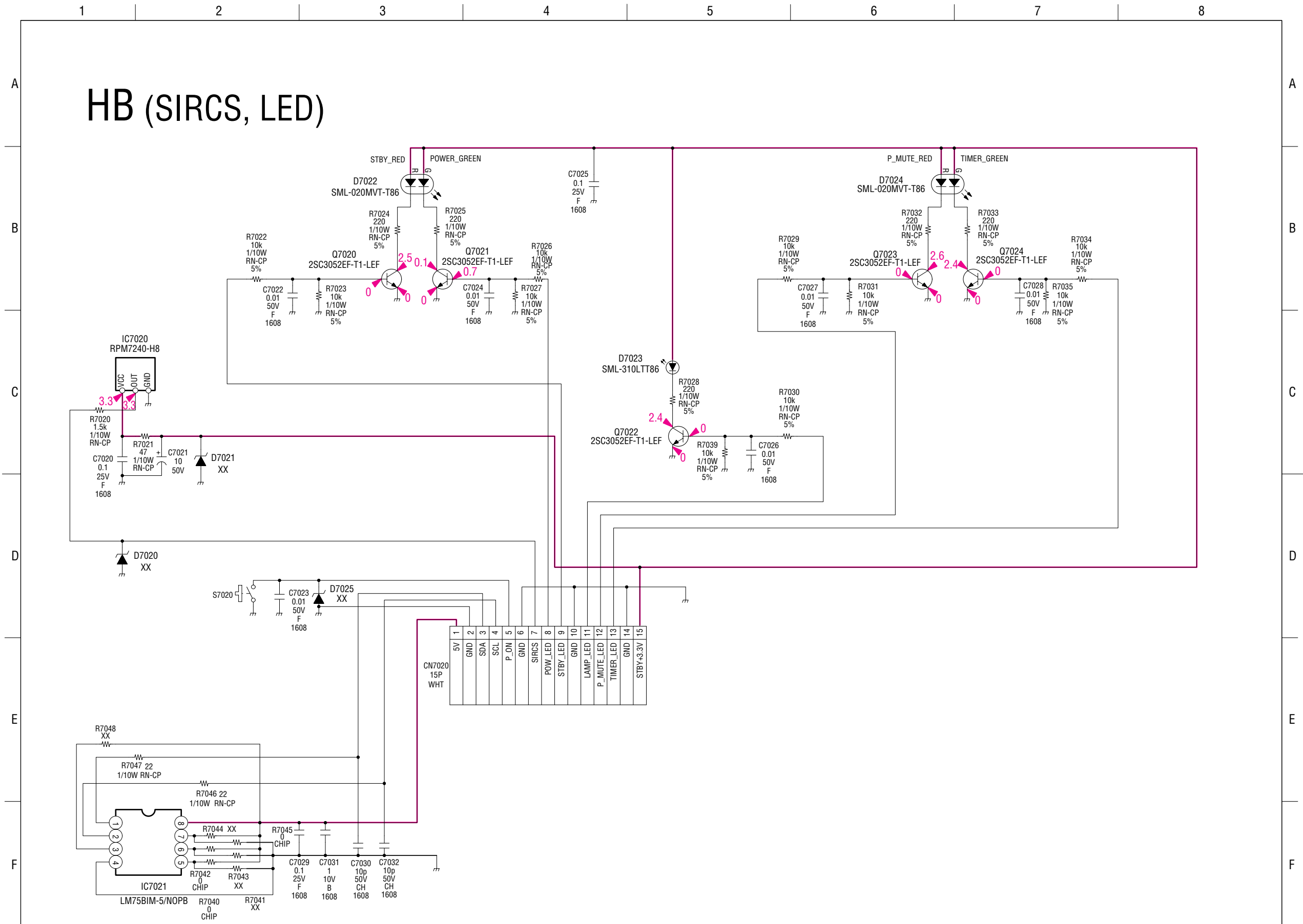


GT BOARD (2/2) (POWER SUPPLY, SPEAKER AMP)

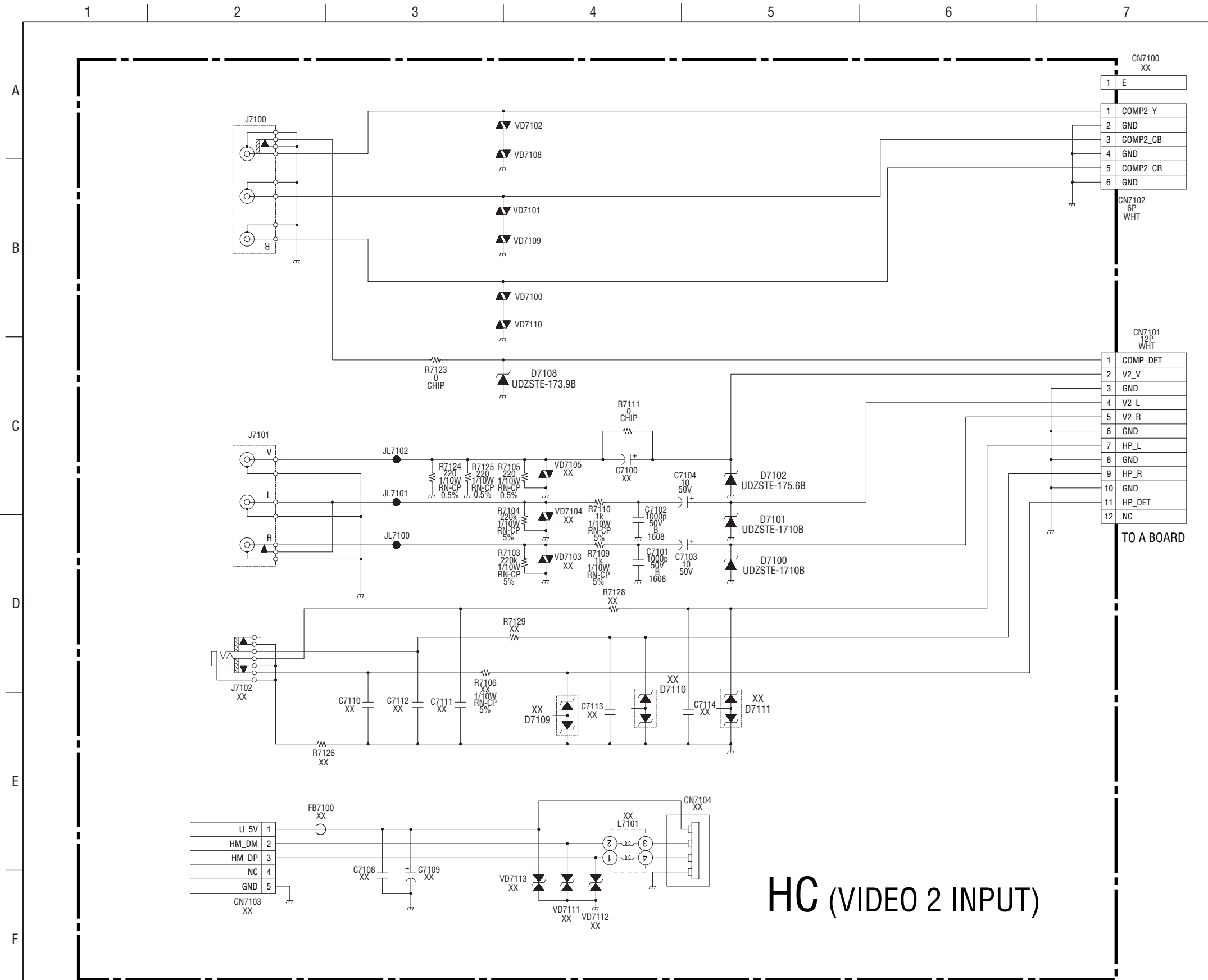
(5) Schematic Diagram of HA Board



(6) Schematic Diagram of HB Board

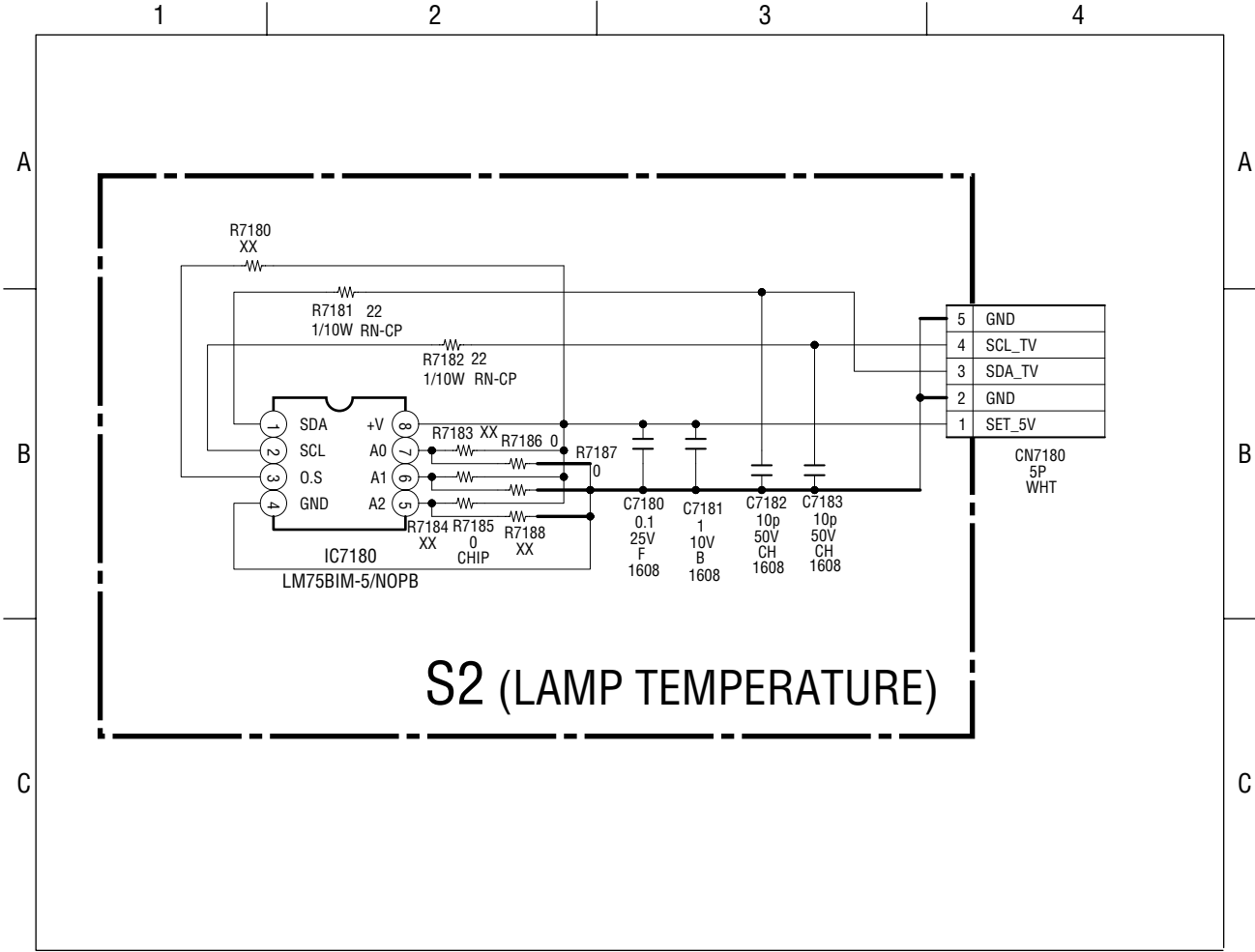


(7) Schematic Diagram of HC Board

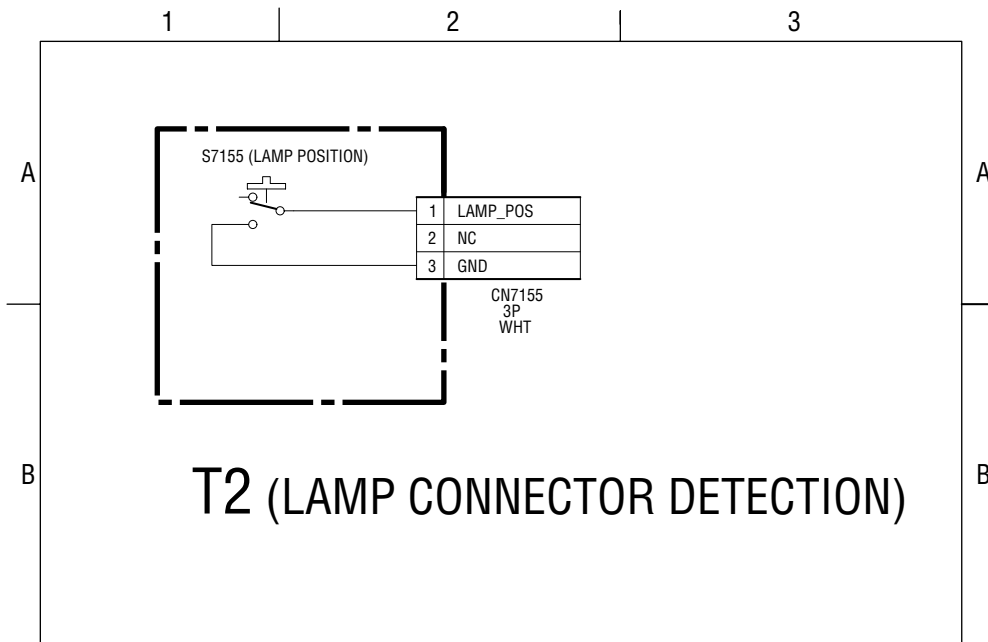
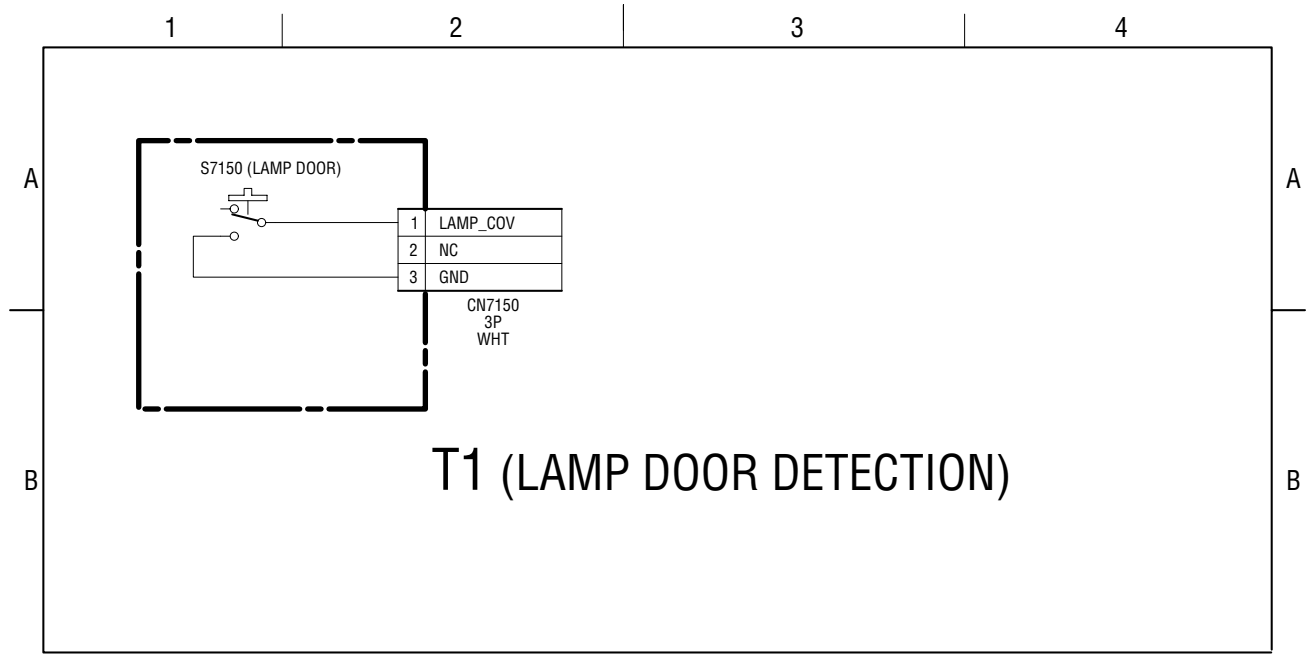


HC (VIDEO 2 INPUT)

(8) Schematic Diagram of S2 Board

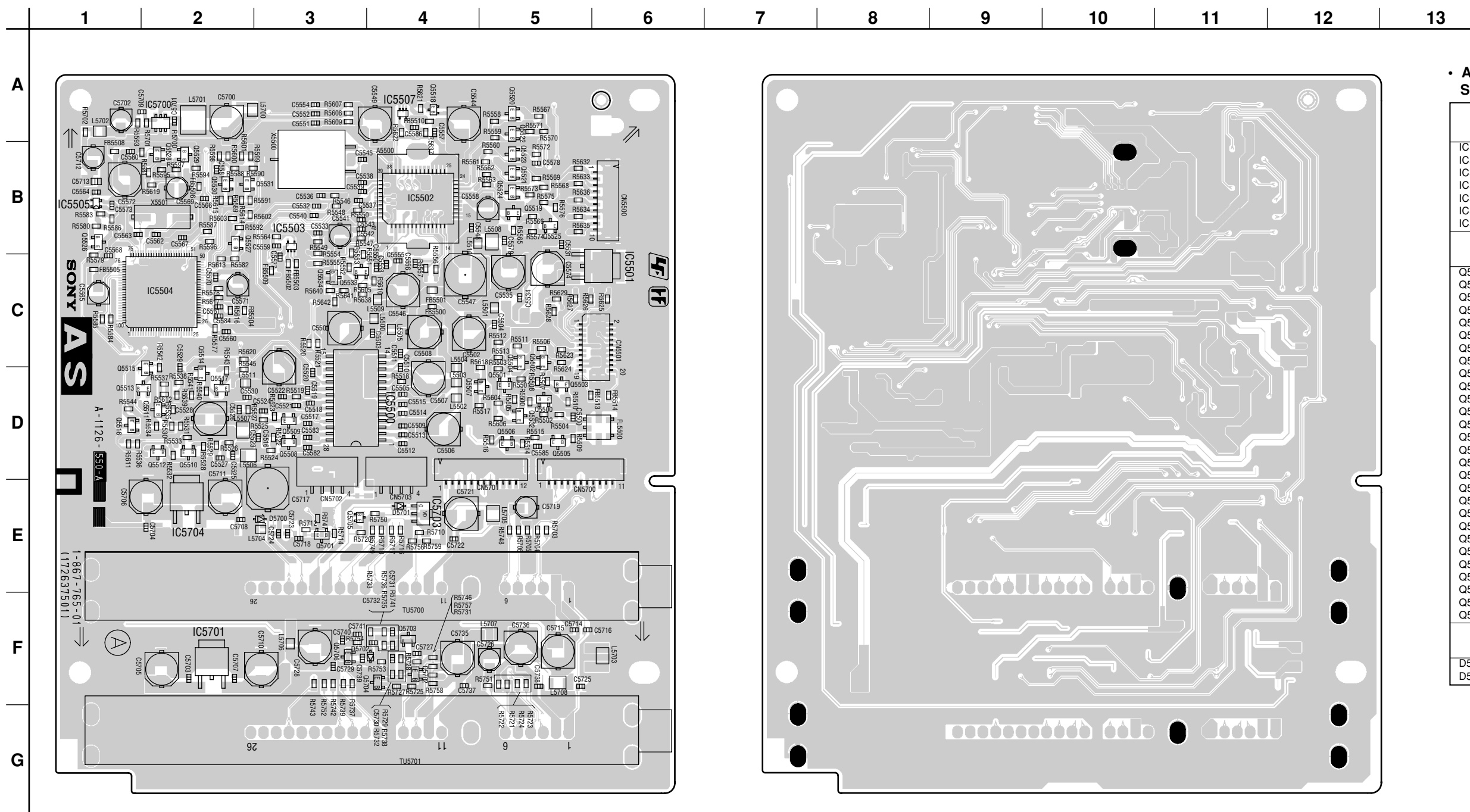


(9) Schematic Diagram of T1, T2 Boards



4-5. PRINTED WIRING BOARDS

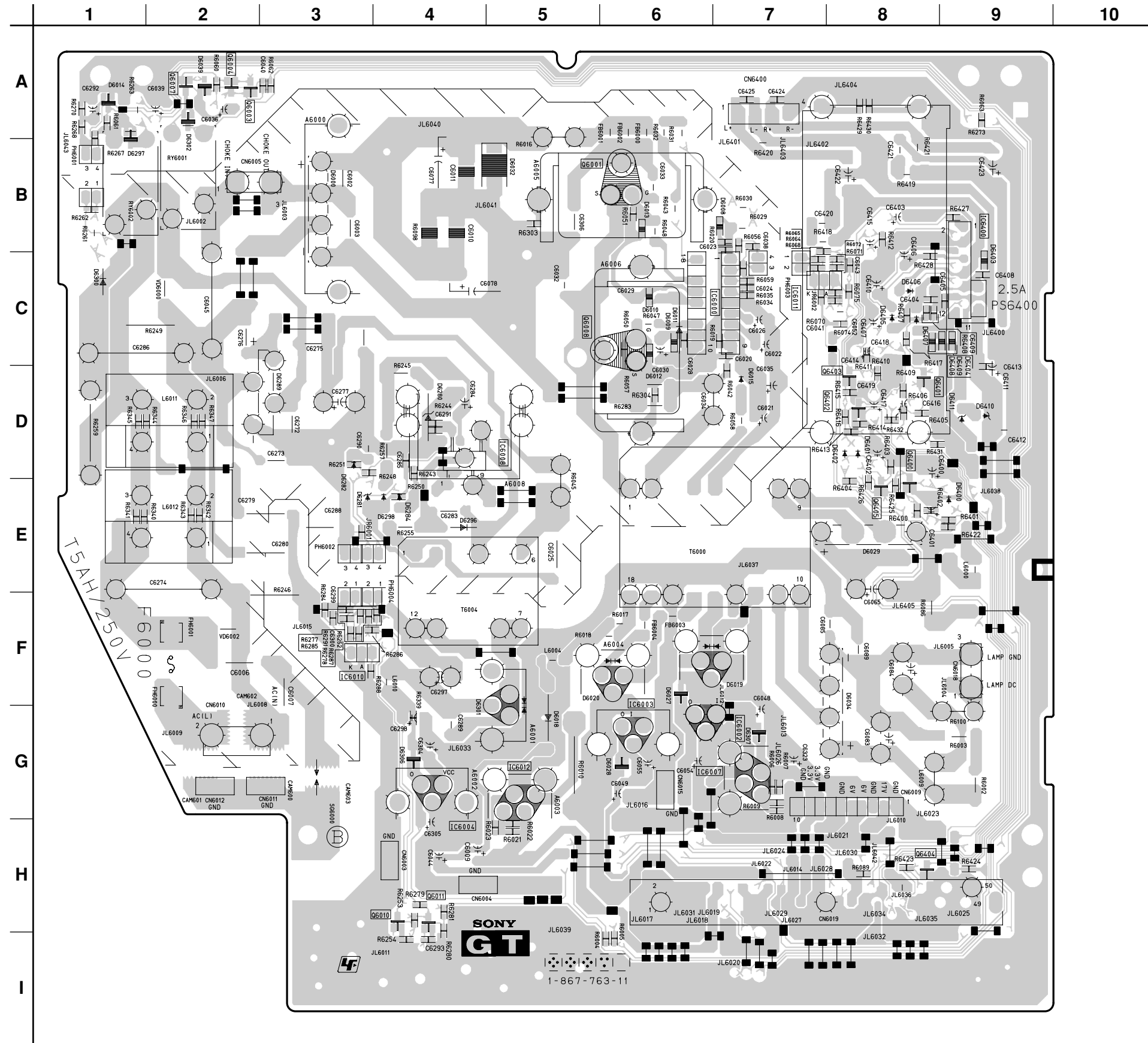
(1) AS Board



• AS BOARD SEMICONDUCTOR LOCATION

IC	
Side A	Side B
IC5500	A-2
IC5501	C-6
IC5502	B-4
IC5700	B-3
IC5701	C-2
IC5703	B-1
IC5704	E-2
TRANSISTOR	
Side A	Side B
Q5500	D-5
Q5502	C-5
Q5503	D-5
Q5504	C-5
Q5505	D-5
Q5506	D-5
Q5507	D-5
Q5508	D-3
Q5509	D-3
Q5510	D-2
Q5511	D-2
Q5512	D-2
Q5513	D-2
Q5514	D-2
Q5515	D-2
Q5516	D-1
Q5517	D-2
Q5520	A-5
Q5523	B-5
Q5524	B-5
Q5533	C-3
Q5534	C-3
Q5701	E-3
Q5702	F-4
Q5703	F-4
Q5704	F-4
Q5705	E-3
Q5706	F-3
DIODE	
Side A	Side B
D5701	E-4
D5702	F-4

(2) GT Board

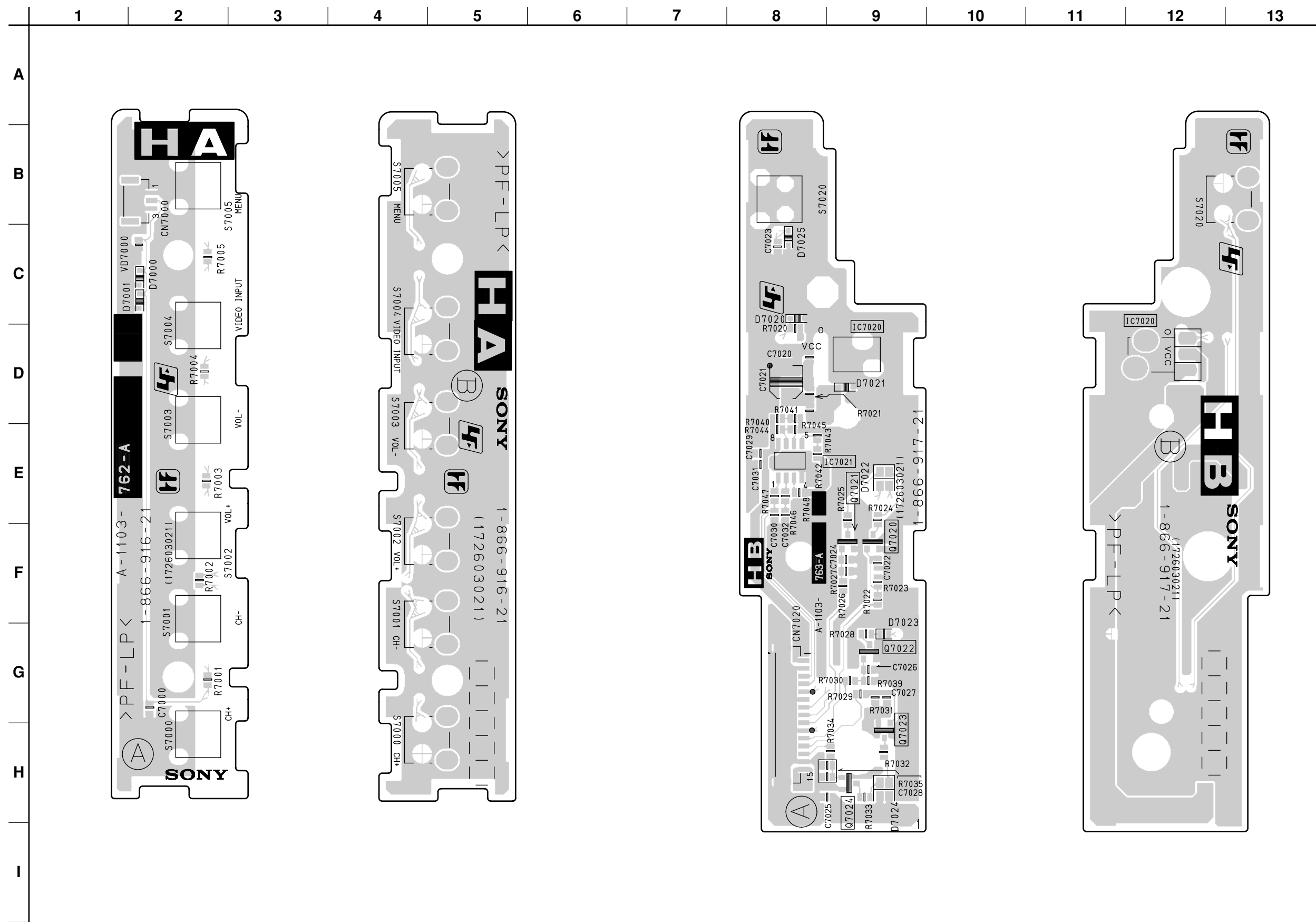


• GT BOARD SEMICONDUCTOR LOCATION

IC	Side		*
	A	B	
IC6000	C-6		
IC6002	G-6		
IC6003	G-6		
IC6004	G-4		
IC6007	G-7		
IC6008	D-5		
IC6010	F-3		
IC6011	C-7		
IC6012	G-5		
IC6400	B-9		
TRANSISTOR	Side		*
	A	B	
Q6001	B-5		
Q6003	A-2	①	
Q6004	A-2	①	
Q6007	A-2	①	
Q6008	C-5		
Q6010	H-4	①	
Q6011	H-4	①	
Q6400	D-8	①	
Q6401	D-9	①	
Q6402	D-8	①	
Q6403	D-8	①	
Q6404	H-8	①	
Q6405	E-8	①	
DIODE	Side		*
	A	B	
D6000	B-3		
D6011	C-6		
D6014	A-1	④	
D6015	D-7		
D6018	G-5		
D6019	F-7		
D6020	F-6		
D6027	F-6	④	
D6028	G-6	④	
D6029	E-8		
D6034	F-8		
D6039	A-2	④	
D6280	D-4		
D6281	E-3		
D6282	D-3		
D6284	E-4		
D6289	D-3		
D6296	E-4		
D6297	A-1	④	
D6298	E-4		
D6300	C-1		
D6301	F-5		
D6302	A-2	④	
D6306	G-4	④	
D6307	G-7	④	
D6400	E-9		
D6401	D-8		
D6402	D-8		
D6403	B-9	③	
D6404	C-9	③	
D6405	C-8		
D6406	C-8		
D6407	C-8		
D6410	D-9		
D6411	D-9		

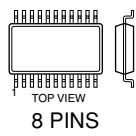
*: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 37)

(3) HA, HB Boards

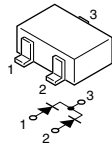


4-6. SEMICONDUCTORS

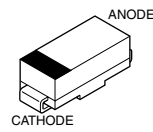
LM75BIM-5/NOPB
M24C02-WMN6T(B)



1SS184



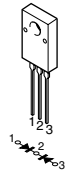
P6SMB39AT3
S3G



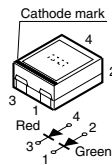
MCZ3001DB



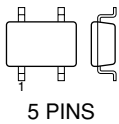
D10SC4M-F
D10SC6M-4012



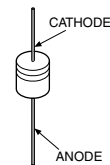
SML-020MVT-T86



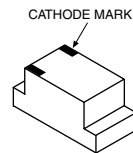
MM1431ATT
NJM2870F18 (TE2)
XXC6219B182MR



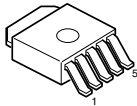
D2L20U-TA
RD8.2ES-B2



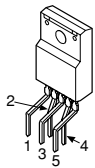
SML-210MT-T86
SML-210VTT86
SML-310LTT86



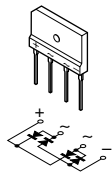
NJM2387DL2-TE1



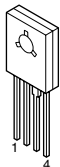
PQ1CG2032FZ



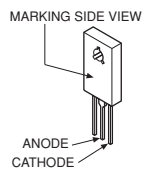
D2SB60A-F04
D2SB60L
D4SBL40
D4SBS6-F



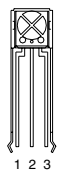
PQ30RV11



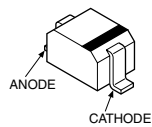
D5LC20U-4012



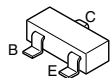
RPM7240-H8



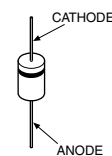
DTZ10B
HZU5.6GTRF
MA111-TX
UDZS-TE17-5.6B



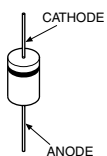
2SC1623-L5L6
UPA1716G



ERA22-08TP3



10ERB20-TB3
UF4005/23



SECTION 5

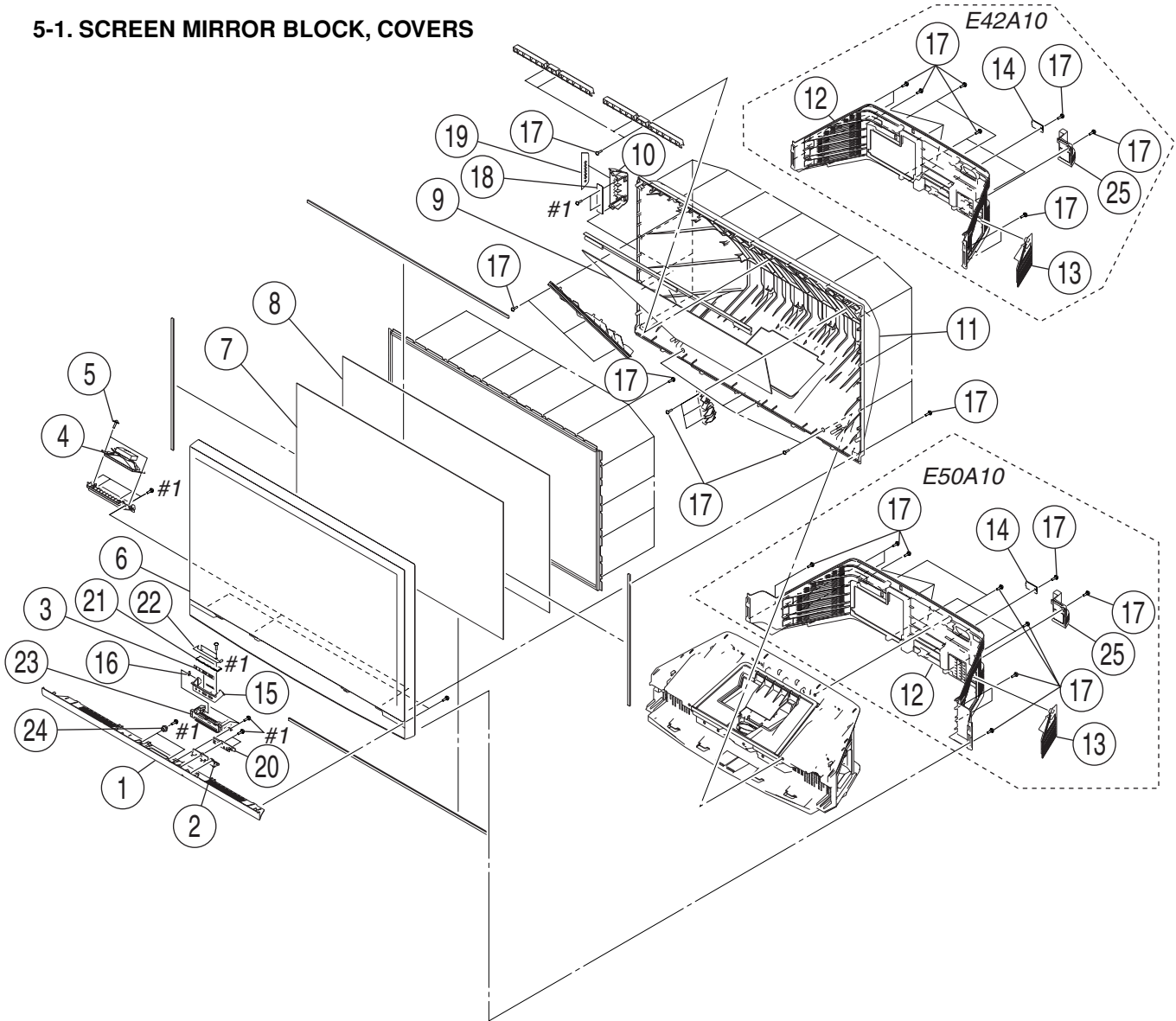
EXPLODED VIEWS

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.

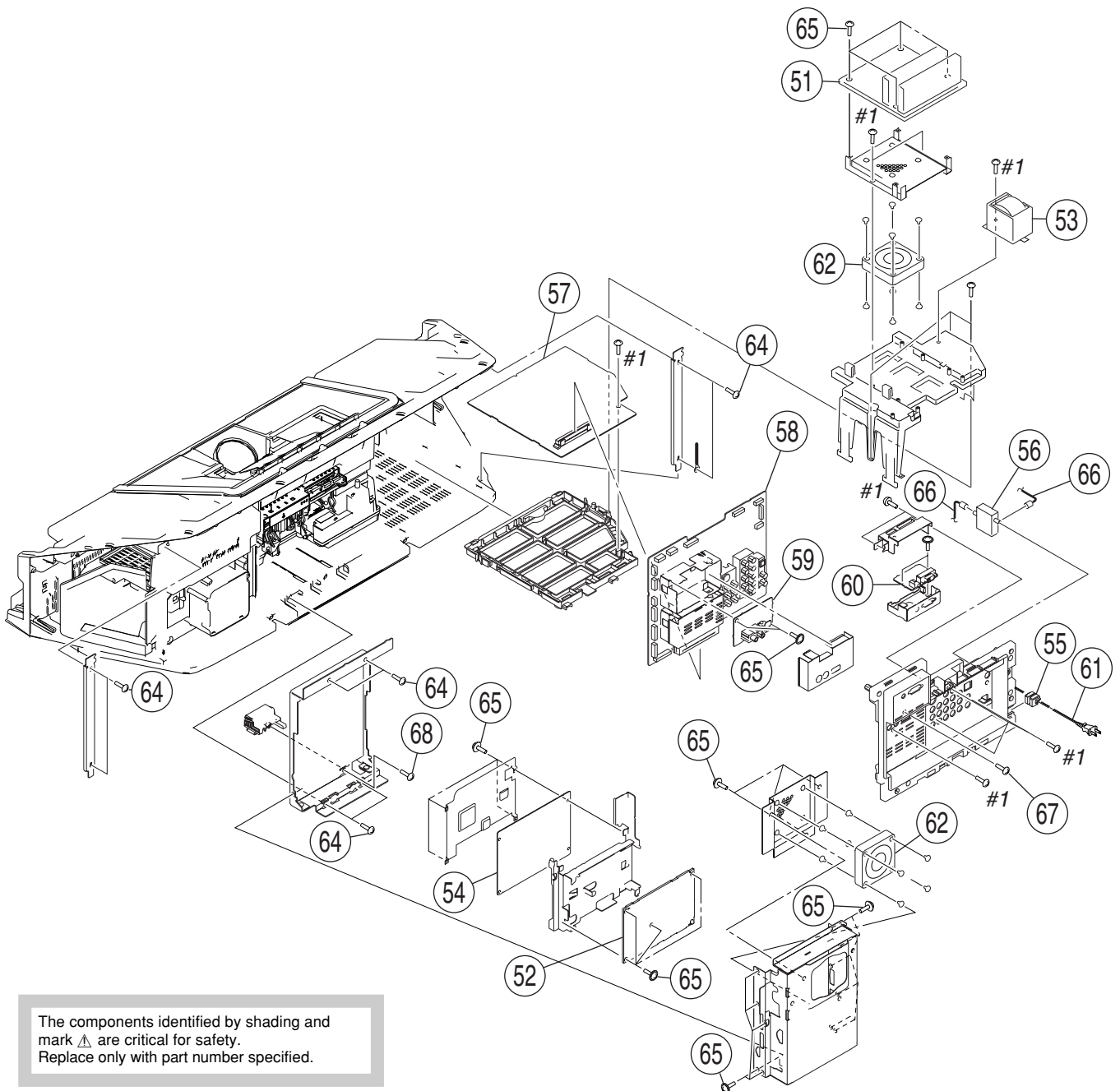
The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

5-1. SCREEN MIRROR BLOCK, COVERS



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
1	2-631-805-01	GRILLE, SPEAKER(42)	(E42A10)	12	2-631-703-01	COVER, REAR	(E50A10)
1	2-631-807-02	GRILLE, SPEAKER(50)	(E50A10)	12	2-631-703-11	COVER, REAR	(E42A10)
2	2-590-913-11	BUTTON, POWER		13	2-591-156-11	DOOR, LAMP	
3	2-590-914-11	BUTTON, MULTI		14	2-591-161-11	COVER, ADJUSTER	
4	1-826-219-11	LOUDSPEAKER (5.5X15cm)		15	2-590-915-11	TRAY, CONTROL	
5	2-580-654-01	SCREW, +PWTP2 4X16		16	2-593-048-01	DAMPER	
6	A-1158-303-A	FRAME, SCREEN (50) ASSY	(E50A10)	17	2-580-640-01	SCREW, +BVTP2 4X16	
6	A-1158-304-A	FRAME, SCREEN (42) ASSY	(E42A10)	18	A-1146-553-A	HC BOARD, COMPLETE	
7	2-590-449-31	PLATE (42L), DIFFUSION	(E42A10)	19	2-636-391-01	LABEL, HC(50)	(E50A10)
7	2-590-451-31	PLATE (50L), DIFFUSION	(E50A10)	19	2-636-418-01	LABEL, HC(42)	(E42A10)
8	2-590-450-31	PLATE (42F), DIFFUSION	(E42A10)	20	A-1146-561-A	HB BOARD, COMPLETE	
8	2-590-452-11	PLATE (50F), DIFFUSION	(E50A10)	21	A-1146-560-A	HA BOARD, COMPLETE	
9	A-1161-262-A	MIRROR ASSY (50)	(E50A10)	22	2-590-916-11	TRAY, CONTROL (TOP)	
9	A-1161-263-A	MIRROR ASSY (42)	(E42A10)	23	2-590-917-11	BRACKET, CONTROL TRAY	
10	2-590-904-11	BRACKET, HC (42)	(E42A10)	24	2-593-049-01	LATCH ASSY	
10	2-590-909-11	BRACKET, HC (50)	(E50A10)	25	2-591-157-11	COVER, POD	
11	A-1151-527-A	MIRROR COVER ASSY (50)	(E50A10)	#1	7-685-648-79	SCREW +BVTP 3X12 TYPE2 IT-3	
11	A-1151-531-A	MIRROR COVER ASSY (42)	(E42A10)				

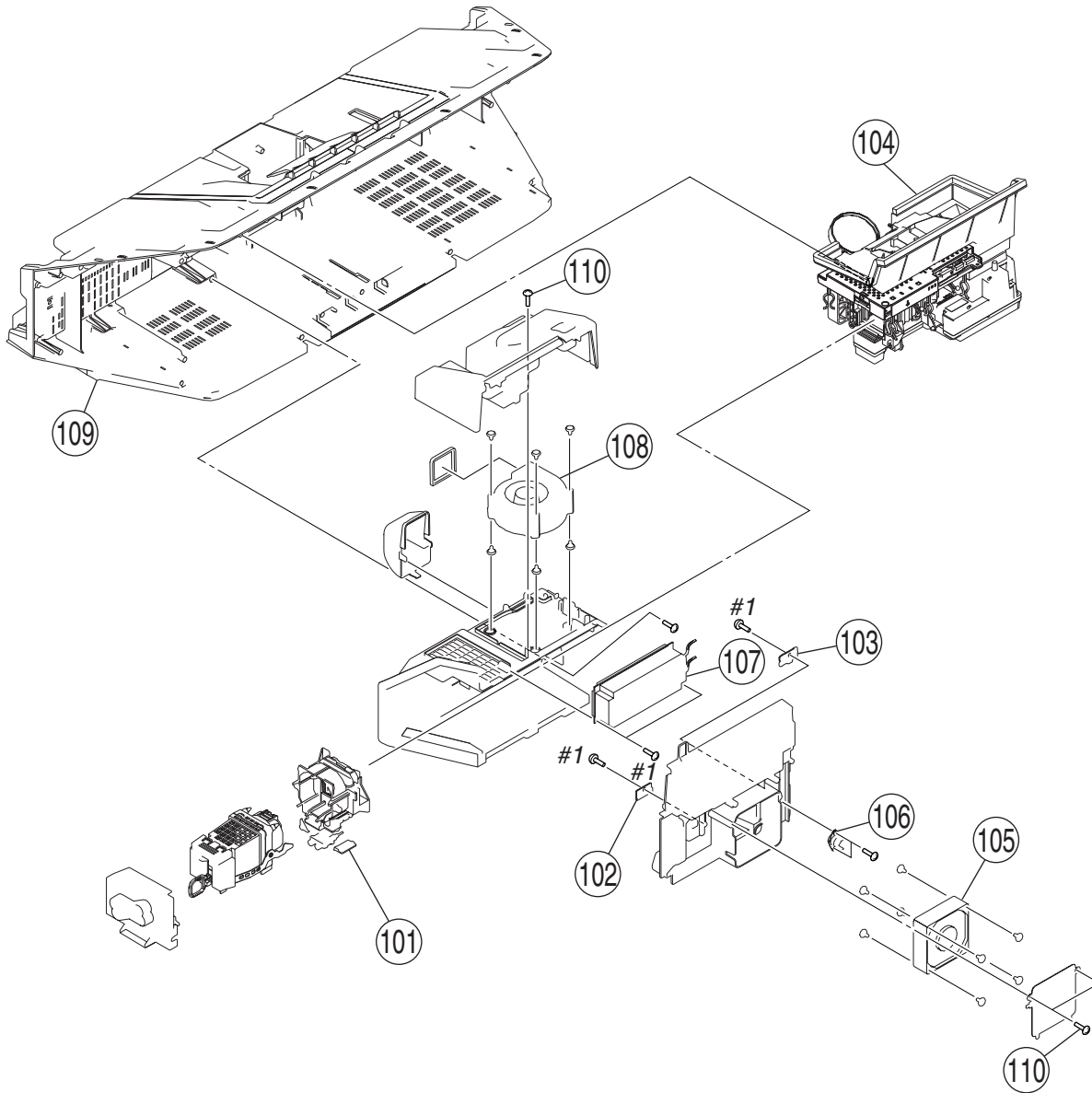
5-2. B BLOCK, CHASSIS ASSEMBLY



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

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
51	A-1146-533-A	AS BOARD, COMPLETE		61	Δ 1-574-358-61	CORD, POWER (WITH NOISE FILTER)(OCE)	
52	A-1152-781-A	QG BOARD, COMPLETE		62	Δ 1-787-333-11	D.C. FAN	
54	A-1152-782-A	B BOARD, COMPLETE		63	3-701-810-72	SCREW, TERMINAL	
55	* 2-159-364-01	HOLDER, AC CORD		64	2-580-640-01	SCREW, +BVTP2 4X16	
56	1-251-658-41	SPLITTER RF		65	2-580-593-01	SCREW, +PSW M3X8 (E)	
57	A-1146-538-A	GT BOARD, COMPLETE		66	1-829-361-81	RF CABLE	
58	A-1152-780-A	AGU (50) BOARD, COMPLETE	(E50A10)	67	2-580-590-01	SCREW, +PSW M3X5	
58	A-1152-783-A	AGU (42) BOARD, COMPLETE	(E42A10)	68	2-580-622-01	SCREW, +PWH M4X20	
59	A-1152-778-A	P BOARD, COMPLETE		#1	7-685-648-79	SCREW +PSW 3X12 TYPE2 IT-3	
60	A-1152-779-A	HPC BOARD, COMPLETE					
61	Δ 1-574-062-61	CORD, POWER (WITH CONNECTOR) (E)					

5-3. LAMP DUCT ASSEMBLY, OPTICS UNIT BLOCK



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

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
101	A-1146-550-A	T2 BOARD, COMPLETE		107	\triangle 1-468-936-12	POWER SUPPLY BLOCK	
102	A-1146-549-A	T1 BOARD, COMPLETE		108	\triangle 1-787-231-11	D.C. FAN (SIROCCO)	
103	A-1146-548-A	S2 BOARD, COMPLETE		109	X-2059-881-2	CABINET ASSY, BOTTOM (42)	(E42A10)
104	\triangle A-1152-676-A	OPT UNIT BLOCK ASSY (50)	(E50A10)	109	X-2059-879-2	CABINET ASSY, BOTTOM (50)	(E50A10)
104	\triangle A-1152-677-A	OPT UNIT BLOCK ASSY (42)	(E42A10)	110	2-580-640-01	SCREW, +BVTP2 4X16	
105	\triangle 1-787-373-11	D.C. FAN		#1	7-685-648-79	SCREW +BVTP 3X12 TYPE2 IT-3	
106	\triangle 1-576-912-11	THERMOSTAT					

SECTION 6

ELECTRICAL PARTS LIST



The components identified by shading and mark Δ 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 variable and adjustable resistors have characteristic curve B, unless otherwise noted.

• RESISTORS
All resistors are in ohms
F : nonflammable

• CAPACITORS
PF : $\mu\mu\text{F}$

• There are some cases the reference number on one board overlaps on the other board. Therefore, when ordering parts by the reference number, please include the board name.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
	A-1146-533-A	AS BOARD, COMPLETE					

		< CAPACITOR >					
C5500	1-162-917-11	CERAMIC CHIP	15pF 5% 50V	C5548	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V
C5501	1-128-992-21	ELECT CHIP	47 μF 20% 25V	C5549	1-126-197-11	ELECT CHIP	10 μF 20% 50V
C5502	1-128-992-21	ELECT CHIP	47 μF 20% 25V	C5550	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V
C5503	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V	C5551	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V
C5504	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V	C5552	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V
				C5554	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V
C5505	1-125-891-11	CERAMIC CHIP	0.47 μF 10% 10V	C5555	1-162-970-11	CERAMIC CHIP	0.01 μF 10% 25V
C5506	1-117-681-11	ELECT CHIP	100 μF 20% 16V	C5557	1-162-970-11	CERAMIC CHIP	0.01 μF 10% 25V
C5507	1-128-992-21	ELECT CHIP	47 μF 20% 25V	C5558	1-128-996-11	ELECT CHIP	4.7 μF 20% 50V
C5508	1-128-992-21	ELECT CHIP	47 μF 20% 25V	C5559	1-162-962-11	CERAMIC CHIP	470pF 10% 50V
C5509	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V	C5560	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V
				C5561	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V
C5510	1-162-970-11	CERAMIC CHIP	0.01 μF 10% 25V	C5562	1-162-924-11	CERAMIC CHIP	56pF 5% 50V
C5511	1-162-970-11	CERAMIC CHIP	0.01 μF 10% 25V	C5563	1-162-924-11	CERAMIC CHIP	56pF 5% 50V
C5512	1-162-970-11	CERAMIC CHIP	0.01 μF 10% 25V	C5564	1-162-970-11	CERAMIC CHIP	0.01 μF 10% 25V
C5513	1-162-970-11	CERAMIC CHIP	0.01 μF 10% 25V	C5565	1-128-996-11	ELECT CHIP	4.7 μF 20% 50V
C5514	1-162-970-11	CERAMIC CHIP	0.01 μF 10% 25V				
				C5567	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V
C5515	1-162-970-11	CERAMIC CHIP	0.01 μF 10% 25V	C5568	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V
C5516	1-162-970-11	CERAMIC CHIP	0.01 μF 10% 25V	C5569	1-128-996-11	ELECT CHIP	4.7 μF 20% 50V
C5517	1-162-970-11	CERAMIC CHIP	0.01 μF 10% 25V	C5570	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V
C5518	1-162-963-11	CERAMIC CHIP	680pF 10% 50V	C5571	1-128-996-11	ELECT CHIP	4.7 μF 20% 50V
C5519	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V				
				C5572	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V
C5520	1-162-970-11	CERAMIC CHIP	0.01 μF 10% 25V	C5573	1-117-681-11	ELECT CHIP	100 μF 20% 16V
C5521	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V	C5574	1-128-992-21	ELECT CHIP	47 μF 20% 25V
C5522	1-117-681-11	ELECT CHIP	100 μF 20% 16V	C5577	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V
C5523	1-162-919-11	CERAMIC CHIP	22pF 5% 50V	C5578	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V
C5524	1-162-919-11	CERAMIC CHIP	22pF 5% 50V				
				C5579	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V
C5525	1-162-919-11	CERAMIC CHIP	22pF 5% 50V	C5581	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V
C5526	1-162-919-11	CERAMIC CHIP	22pF 5% 50V	C5582	1-162-970-11	CERAMIC CHIP	0.01 μF 10% 25V
C5527	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V	C5583	1-162-970-11	CERAMIC CHIP	0.01 μF 10% 25V
C5528	1-128-992-21	ELECT CHIP	47 μF 20% 25V	C5584	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V
C5531	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V				
				C5585	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V
C5532	1-162-970-11	CERAMIC CHIP	0.01 μF 10% 25V	C5586	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V
C5533	1-165-908-11	CERAMIC CHIP	1 μF 10% 10V	C5700	1-128-992-21	ELECT CHIP	47 μF 20% 25V
C5534	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V	C5701	1-164-227-11	CERAMIC CHIP	0.022 μF 10% 25V
C5535	1-128-992-21	ELECT CHIP	47 μF 20% 25V	C5702	1-164-227-11	CERAMIC CHIP	0.022 μF 10% 25V
C5536	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V				
				C5703	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V
C5539	1-162-970-11	CERAMIC CHIP	0.01 μF 10% 25V	C5704	1-100-566-91	CERAMIC CHIP	0.1 μF 10% 25V
C5540	1-165-908-11	CERAMIC CHIP	1 μF 10% 10V	C5705	1-128-992-21	ELECT CHIP	47 μF 20% 25V
C5541	1-126-601-11	ELECT CHIP	2.2 μF 20% 50V	C5706	1-128-992-21	ELECT CHIP	47 μF 20% 25V
C5542	1-164-227-11	CERAMIC CHIP	0.022 μF 10% 25V	C5707	1-107-826-11	CERAMIC CHIP	0.1 μF 10% 16V
C5543	1-162-970-11	CERAMIC CHIP	0.01 μF 10% 25V				
				C5708	1-100-566-91	CERAMIC CHIP	0.1 μF 10% 25V
C5544	1-128-992-21	ELECT CHIP	47 μF 20% 25V	C5709	1-128-996-11	ELECT CHIP	4.7 μF 20% 50V
C5545	1-162-915-11	CERAMIC CHIP	10pF 0.5pF 50V	C5710	1-128-992-21	ELECT CHIP	47 μF 20% 25V
C5546	1-128-992-21	ELECT CHIP	47 μF 20% 25V	C5711	1-128-992-21	ELECT CHIP	47 μF 20% 25V
C5547	1-127-931-21	ELECT CHIP	470 μF 20% 16V	C5712	1-128-996-11	ELECT CHIP	4.7 μF 20% 50V
				C5713	1-115-339-11	CERAMIC CHIP	0.1 μF 10% 50V
				C5714	1-162-966-11	CERAMIC CHIP	0.0022 μF 10% 50V



REF. NO.	PART NO.	DESCRIPTION	REMARK
C5715	1-117-681-11	ELECT CHIP 100µF 20%	16V
C5716	1-162-966-11	CERAMIC CHIP 0.0022µF 10%	50V
C5717	1-127-931-21	ELECT CHIP 470µF 20%	16V
C5718	1-162-966-11	CERAMIC CHIP 0.0022µF 10%	50V
C5719	1-124-779-00	ELECT CHIP 10µF 20%	16V
C5721	1-117-681-11	ELECT CHIP 100µF 20%	16V
C5722	1-100-566-91	CERAMIC CHIP 0.1µF 10%	25V
C5723	1-165-908-11	CERAMIC CHIP 1µF 10%	10V
C5724	1-165-908-11	CERAMIC CHIP 1µF 10%	10V
C5725	1-162-966-11	CERAMIC CHIP 0.0022µF 10%	50V
C5726	1-124-779-00	ELECT CHIP 10µF 20%	16V
C5727	1-107-826-11	CERAMIC CHIP 0.1µF 10%	16V
C5728	1-117-681-11	ELECT CHIP 100µF 20%	16V
C5729	1-107-826-11	CERAMIC CHIP 0.1µF 10%	16V
C5730	1-164-227-11	CERAMIC CHIP 0.022µF 10%	25V
C5731	1-162-968-11	CERAMIC CHIP 0.0047µF 10%	50V
C5732	1-162-966-11	CERAMIC CHIP 0.0022µF 10%	50V
C5735	1-117-681-11	ELECT CHIP 100µF 20%	16V
C5736	1-117-681-11	ELECT CHIP 100µF 20%	16V
C5737	1-100-566-91	CERAMIC CHIP 0.1µF 10%	25V
C5738	1-162-962-11	CERAMIC CHIP 470pF 10%	50V
C5739	1-127-715-91	CERAMIC CHIP 0.22µF 10%	16V
C5740	1-125-837-91	CERAMIC CHIP 1µF 10%	6.3V
C5741	1-107-826-11	CERAMIC CHIP 0.1µF 10%	16V
< DIODE >			
D5701	8-719-081-97	DIODE MMDL914T1	
D5702	8-719-081-97	DIODE MMDL914T1	
< FERRITE BEAD >			
FB5500	1-414-228-11	FERRITE 0µH	
FB5501	1-414-234-22	FERRITE 0µH	
FB5502	1-469-179-21	FERRITE 0µH	
FB5503	1-469-179-21	FERRITE 0µH	
FB5504	1-414-921-11	FERRITE 0µH	
FB5505	1-414-921-11	FERRITE 0µH	
FB5506	1-414-921-11	FERRITE 0µH	
FB5508	1-414-921-11	FERRITE 0µH	
FB5509	1-469-179-21	FERRITE 0µH	
FB5510	1-469-179-21	FERRITE 0µH	
FB5513	1-414-445-11	FERRITE 0µH	
FB5514	1-414-445-11	FERRITE 0µH	
< FILTER >			
FL5500	1-239-848-11	FILTER, LOW PASS	
< IC >			
IC5500	6-701-972-01	IC TC90A69F (ELP)	
IC5501	6-705-469-01	IC BA50BC0FP-E2	
IC5502	8-753-212-10	IC CXA2163AQ-T6	
IC5503	6-706-475-01	IC TC7SET02FU(T5RSOJF)	
IC5504	6-803-172-11	IC SAA5360HL/M1/0004,518	
IC5505	6-703-175-01	IC PST3629UL	
IC5507	6-706-478-01	IC TC7SET08FU(T5RSOJF)	
IC5700	8-749-925-00	IC TK11819MTL	
IC5701	6-705-469-01	IC BA50BC0FP-E2	
IC5703	6-703-781-01	IC S-80843CLUA-B64T2G	
IC5704	8-759-460-79	IC BA09FP-E2	

REF. NO.	PART NO.	DESCRIPTION	REMARK
< COIL >			
L5500	1-469-555-21	INDUCTOR 10µH	
L5501	1-469-555-21	INDUCTOR 10µH	
L5502	1-469-555-21	INDUCTOR 10µH	
L5503	1-469-555-21	INDUCTOR 10µH	
L5504	1-469-555-21	INDUCTOR 10µH	
L5505	1-469-555-21	INDUCTOR 10µH	
L5506	1-412-060-11	INDUCTOR 22µH	
L5507	1-412-060-11	INDUCTOR 22µH	
L5508	1-412-058-11	INDUCTOR 10µH	
L5509	1-469-555-21	INDUCTOR 10µH	
L5510	1-469-555-21	INDUCTOR 10µH	
L5700	1-414-755-11	INDUCTOR 22µH	
L5701	1-400-815-21	INDUCTOR 1.2MH	
L5702	1-414-755-11	INDUCTOR 22µH	
L5703	1-412-058-11	INDUCTOR 10µH	
L5704	1-469-555-21	INDUCTOR 10µH	
L5705	1-412-058-11	INDUCTOR 10µH	
L5706	1-469-555-21	INDUCTOR 10µH	
L5707	1-412-058-11	INDUCTOR 10µH	
L5708	1-412-058-11	INDUCTOR 10µH	
< TRANSISTOR >			
Q5500	8-729-600-22	TRANSISTOR 2SA1235-F	
Q5501	8-729-600-22	TRANSISTOR 2SA1235-F	
Q5502	8-729-600-22	TRANSISTOR 2SA1235-F	
Q5503	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q5504	8-729-600-22	TRANSISTOR 2SA1235-F	
Q5505	8-729-600-22	TRANSISTOR 2SA1235-F	
Q5506	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q5507	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q5508	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q5509	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q5510	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q5511	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q5512	8-729-600-22	TRANSISTOR 2SA1235-F	
Q5513	8-729-600-22	TRANSISTOR 2SA1235-F	
Q5515	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q5516	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q5518	8-729-907-00	TRANSISTOR DTC114EU	
Q5519	8-729-600-22	TRANSISTOR 2SA1235-F	
Q5520	8-729-600-22	TRANSISTOR 2SA1235-F	
Q5521	8-729-600-22	TRANSISTOR 2SA1235-F	
Q5522	8-729-600-22	TRANSISTOR 2SA1235-F	
Q5523	8-729-600-22	TRANSISTOR 2SA1235-F	
Q5524	8-729-600-22	TRANSISTOR 2SA1235-F	
Q5525	8-729-600-22	TRANSISTOR 2SA1235-F	
Q5527	8-729-600-22	TRANSISTOR 2SA1235-F	
Q5530	8-729-600-22	TRANSISTOR 2SA1235-F	
Q5531	8-729-600-22	TRANSISTOR 2SA1235-F	
Q5532	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q5533	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q5534	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q5701	8-729-600-22	TRANSISTOR 2SA1235-F	
Q5702	8-729-600-22	TRANSISTOR 2SA1235-F	
Q5703	8-729-600-22	TRANSISTOR 2SA1235-F	
Q5704	8-729-600-22	TRANSISTOR 2SA1235-F	
Q5705	8-729-907-00	TRANSISTOR DTC114EU	
Q5706	8-729-120-28	TRANSISTOR 2SC1623-L5L6	



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
		< RESISTOR >					
R5500	1-216-809-11	METAL CHIP	100 5% 1/10W	R5571	1-216-864-11	SHORT CHIP	0
R5502	1-216-817-11	METAL CHIP	470 5% 1/10W	R5572	1-216-817-11	METAL CHIP	470 5% 1/10W
R5504	1-218-841-11	METAL CHIP	560 0.5% 1/10W	R5573	1-216-817-11	METAL CHIP	470 5% 1/10W
R5506	1-216-809-11	METAL CHIP	100 5% 1/10W	R5574	1-216-821-11	METAL CHIP	1K 5% 1/10W
R5507	1-218-839-11	METAL CHIP	470 0.5% 1/10W	R5575	1-216-821-11	METAL CHIP	1K 5% 1/10W
				R5576	1-216-864-11	SHORT CHIP	0
R5508	1-218-839-11	METAL CHIP	470 0.5% 1/10W	R5577	1-216-809-11	METAL CHIP	100 5% 1/10W
R5509	1-218-865-11	METAL CHIP	5.6K 0.5% 1/10W	R5578	1-218-887-11	METAL CHIP	47K 0.5% 1/10W
R5510	1-216-825-11	METAL CHIP	2.2K 5% 1/10W				
R5511	1-216-809-11	METAL CHIP	100 5% 1/10W	R5579	1-216-809-11	METAL CHIP	100 5% 1/10W
R5512	1-218-839-11	METAL CHIP	470 0.5% 1/10W	R5582	1-216-809-11	METAL CHIP	100 5% 1/10W
				R5583	1-216-841-11	METAL CHIP	47K 5% 1/10W
R5513	1-218-839-11	METAL CHIP	470 0.5% 1/10W	R5584	1-216-809-11	METAL CHIP	100 5% 1/10W
R5514	1-218-839-11	METAL CHIP	470 0.5% 1/10W	R5585	1-216-809-11	METAL CHIP	100 5% 1/10W
R5515	1-218-835-11	METAL CHIP	330 0.5% 1/10W				
R5516	1-216-821-11	METAL CHIP	1K 5% 1/10W	R5587	1-216-809-11	METAL CHIP	100 5% 1/10W
R5517	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R5588	1-216-817-11	METAL CHIP	470 5% 1/10W
				R5589	1-216-809-11	METAL CHIP	100 5% 1/10W
R5518	1-216-864-11	SHORT CHIP	0	R5590	1-216-817-11	METAL CHIP	470 5% 1/10W
R5519	1-216-820-11	METAL CHIP	820 5% 1/10W	R5591	1-216-809-11	METAL CHIP	100 5% 1/10W
R5520	1-216-805-11	METAL CHIP	47 5% 1/10W				
R5521	1-216-805-11	METAL CHIP	47 5% 1/10W	R5592	1-216-817-11	METAL CHIP	470 5% 1/10W
R5522	1-216-821-11	METAL CHIP	1K 5% 1/10W	R5596	1-216-809-11	METAL CHIP	100 5% 1/10W
				R5598	1-216-809-11	METAL CHIP	100 5% 1/10W
R5523	1-216-821-11	METAL CHIP	1K 5% 1/10W	R5599	1-216-809-11	METAL CHIP	100 5% 1/10W
R5524	1-218-845-11	METAL CHIP	820 0.5% 1/10W	R5602	1-216-809-11	METAL CHIP	100 5% 1/10W
R5525	1-218-845-11	METAL CHIP	820 0.5% 1/10W				
R5526	1-218-841-11	METAL CHIP	560 0.5% 1/10W	R5604	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R5527	1-218-841-11	METAL CHIP	560 0.5% 1/10W	R5605	1-216-816-11	METAL CHIP	390 5% 1/10W
				R5606	1-216-864-11	SHORT CHIP	0
R5528	1-216-834-11	METAL CHIP	12K 5% 1/10W	R5610	1-216-821-11	METAL CHIP	1K 5% 1/10W
R5529	1-218-867-11	METAL CHIP	6.8K 0.5% 1/10W	R5613	1-211-990-11	METAL CHIP	75 0.5% 1/10W
R5530	1-216-834-11	METAL CHIP	12K 5% 1/10W				
R5531	1-218-867-11	METAL CHIP	6.8K 0.5% 1/10W	R5614	1-211-990-11	METAL CHIP	75 0.5% 1/10W
R5532	1-216-821-11	METAL CHIP	1K 5% 1/10W	R5615	1-211-990-11	METAL CHIP	75 0.5% 1/10W
				R5616	1-218-895-11	METAL CHIP	100K 0.5% 1/10W
R5533	1-218-837-11	METAL CHIP	390 0.5% 1/10W	R5617	1-218-895-11	METAL CHIP	100K 0.5% 1/10W
R5534	1-216-821-11	METAL CHIP	1K 5% 1/10W	R5618	1-216-809-11	METAL CHIP	100 5% 1/10W
R5535	1-218-839-11	METAL CHIP	470 0.5% 1/10W				
R5536	1-218-845-11	METAL CHIP	820 0.5% 1/10W	R5619	1-216-821-11	METAL CHIP	1K 5% 1/10W
R5537	1-218-845-11	METAL CHIP	820 0.5% 1/10W	R5620	1-216-864-11	SHORT CHIP	0
				R5621	1-216-809-11	METAL CHIP	100 5% 1/10W
R5542	1-216-821-11	METAL CHIP	1K 5% 1/10W	R5622	1-216-809-11	METAL CHIP	100 5% 1/10W
R5544	1-216-821-11	METAL CHIP	1K 5% 1/10W	R5623	1-216-864-11	SHORT CHIP	0
R5546	1-216-838-11	METAL CHIP	27K 5% 1/10W				
R5547	1-218-871-11	METAL CHIP	10K 0.5% 1/10W	R5624	1-216-864-11	SHORT CHIP	0
R5548	1-220-397-11	METAL CHIP	4.7M 5% 1/10W	R5625	1-216-864-11	SHORT CHIP	0
				R5626	1-216-864-11	SHORT CHIP	0
R5549	1-220-397-11	METAL CHIP	4.7M 5% 1/10W	R5627	1-216-864-11	SHORT CHIP	0
R5550	1-216-805-11	METAL CHIP	47 5% 1/10W	R5628	1-216-864-11	SHORT CHIP	0
R5551	1-218-871-11	METAL CHIP	10K 0.5% 1/10W				
R5552	1-216-809-11	METAL CHIP	100 5% 1/10W	R5629	1-216-864-11	SHORT CHIP	0
R5553	1-216-809-11	METAL CHIP	100 5% 1/10W	R5632	1-216-864-11	SHORT CHIP	0
				R5633	1-216-864-11	SHORT CHIP	0
R5554	1-216-809-11	METAL CHIP	100 5% 1/10W	R5634	1-216-864-11	SHORT CHIP	0
R5555	1-216-809-11	METAL CHIP	100 5% 1/10W	R5635	1-216-864-11	SHORT CHIP	0
R5556	1-216-809-11	METAL CHIP	100 5% 1/10W				
R5557	1-216-809-11	METAL CHIP	100 5% 1/10W	R5636	1-216-864-11	SHORT CHIP	0
R5558	1-216-809-11	METAL CHIP	100 5% 1/10W	R5638	1-216-809-11	METAL CHIP	100 5% 1/10W
				R5640	1-216-809-11	METAL CHIP	100 5% 1/10W
R5559	1-216-809-11	METAL CHIP	100 5% 1/10W	R5641	1-216-809-11	METAL CHIP	100 5% 1/10W
R5560	1-216-809-11	METAL CHIP	100 5% 1/10W	R5642	1-216-821-11	METAL CHIP	1K 5% 1/10W
R5561	1-216-809-11	METAL CHIP	100 5% 1/10W				
R5562	1-216-809-11	METAL CHIP	100 5% 1/10W	R5700	1-216-821-11	METAL CHIP	1K 5% 1/10W
R5563	1-216-809-11	METAL CHIP	100 5% 1/10W	R5701	1-216-845-11	METAL CHIP	100K 5% 1/10W
				R5702	1-216-809-11	METAL CHIP	100 5% 1/10W
R5564	1-216-812-11	METAL CHIP	180 5% 1/10W	R5703	1-216-809-11	METAL CHIP	100 5% 1/10W
R5565	1-216-817-11	METAL CHIP	470 5% 1/10W	R5704	1-216-809-11	METAL CHIP	100 5% 1/10W
R5566	1-216-808-11	METAL CHIP	82 5% 1/10W				
R5567	1-216-817-11	METAL CHIP	470 5% 1/10W	R5705	1-216-809-11	METAL CHIP	100 5% 1/10W
R5568	1-216-817-11	METAL CHIP	470 5% 1/10W	R5710	1-216-864-11	SHORT CHIP	0
				R5712	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R5569	1-216-864-11	SHORT CHIP	0	R5714	1-216-809-11	METAL CHIP	100 5% 1/10W
R5570	1-216-817-11	METAL CHIP	470 5% 1/10W	R5716	1-216-809-11	METAL CHIP	100 5% 1/10W

KF-E42A10/E50A10

RM-GA004 RM-GA004

AS **GT**

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

REF. NO.	PART NO.	DESCRIPTION	REMARK
R5717	1-216-809-11	METAL CHIP	100 5% 1/10W
R5718	1-216-864-11	SHORT CHIP	0
R5720	1-216-864-11	SHORT CHIP	0
R5721	1-216-809-11	METAL CHIP	100 5% 1/10W
R5723	1-216-809-11	METAL CHIP	100 5% 1/10W
R5724	1-216-809-11	METAL CHIP	100 5% 1/10W
R5725	1-216-809-11	METAL CHIP	100 5% 1/10W
R5727	1-216-809-11	METAL CHIP	100 5% 1/10W
R5728	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R5729	1-216-864-11	SHORT CHIP	0
R5731	1-216-864-11	SHORT CHIP	0
R5732	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R5733	1-216-828-11	METAL CHIP	3.9K 5% 1/10W
R5735	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R5736	1-216-826-11	METAL CHIP	2.7K 5% 1/10W
R5737	1-216-809-11	METAL CHIP	100 5% 1/10W
R5738	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R5739	1-216-809-11	METAL CHIP	100 5% 1/10W
R5741	1-216-857-11	METAL CHIP	1M 5% 1/10W
R5743	1-216-864-11	SHORT CHIP	0
R5746	1-216-805-11	METAL CHIP	47 5% 1/10W
R5747	1-216-805-11	METAL CHIP	47 5% 1/10W
R5748	1-216-864-11	SHORT CHIP	0
R5750	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R5751	1-216-864-11	SHORT CHIP	0
R5753	1-216-857-11	METAL CHIP	1M 5% 1/10W
R5754	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R5756	1-218-871-11	METAL CHIP	10K 0.5% 1/10W
R5757	1-218-871-11	METAL CHIP	10K 0.5% 1/10W
R5758	1-218-879-11	METAL CHIP	22K 0.5% 1/10W
R5759	1-218-879-11	METAL CHIP	22K 0.5% 1/10W
< TUNER >			
TU5700	8-597-532-00	TUNER, FSS	BTF-BG402
TU5701	8-597-534-00	TUNER, FSS	BTF-BG412
< VIBRATOR >			
X5500	1-781-914-21	VIBRATOR, CRYSTAL	
X5501	1-760-337-21	VIBRATOR, CRYSTAL	

A-1146-538-A GT BOARD, COMPLETE			

Δ 1-533-223-11	FUSE HOLDER		
2-580-592-01	SCREW, +PSW M3X8		
4-052-843-01	COVER, FUSE		
< CAPACITOR >			
C6006	1-119-895-51	CERAMIC	4700pF 20% 250V
C6007	1-119-895-51	CERAMIC	4700pF 20% 250V
C6009	1-126-935-11	ELECT	470µF 20% 16V
C6020	1-162-970-11	CERAMIC CHIP	0.01µF 10% 25V
C6021	1-107-909-11	ELECT	47µF 20% 50V
C6022	1-107-904-11	ELECT	3.3µF 20% 50V
C6023	1-162-970-11	CERAMIC CHIP	0.01µF 10% 25V
C6024	1-100-831-91	CERAMIC CHIP	0.001µF 2% 50V
C6025	1-119-888-51	CERAMIC	2200pF 20% 250V
C6026	1-107-906-11	ELECT	10µF 20% 50V
C6028	1-162-970-11	CERAMIC CHIP	0.01µF 10% 25V
C6029	1-136-497-81	FILM	0.1µF 5% 50V
C6030	1-107-888-11	ELECT	47µF 20% 25V

REF. NO.	PART NO.	DESCRIPTION	REMARK
C6032	1-107-824-11	CERAMIC	220pF 5% 1KV
C6033	1-107-824-11	CERAMIC	220pF 5% 1KV
C6034	1-165-954-11	FILM	56000pF 3% 800V
C6035	1-107-911-11	ELECT	220µF 20% 50V
C6036	1-126-963-11	ELECT	4.7µF 20% 50V
C6039	1-126-963-11	ELECT	4.7µF 20% 50V
C6040	1-107-826-11	CERAMIC CHIP	0.1µF 10% 16V
C6041	1-162-970-11	CERAMIC CHIP	0.01µF 10% 25V
C6044	1-126-940-11	ELECT	330µF 20% 25V
C6045 Δ	1-165-530-31	MYLAR	0.47µF 10 0V
C6048	1-128-951-31	ELECT	2200µF 20% 16V
C6049	1-128-951-31	ELECT	2200µF 20% 16V
C6052	1-137-190-91	FILM	0.22µF 5% 50V
C6054	1-128-528-11	ELECT	470µF 20% 25V
C6055	1-107-888-11	ELECT	47µF 20% 25V
C6065	1-128-550-11	ELECT	2200µF 20% 50V
C6077 Δ	1-137-673-11	ELECT	330µF 20% 450V
C6078	1-137-673-11	ELECT	330µF 20% 450V
C6083	1-100-714-11	ELECT	100µF 20% 400V
C6084	1-100-714-11	ELECT	100µF 20% 400V
C6085	1-161-830-00	CERAMIC	0.0047µF 500V
C6272 Δ	1-161-964-91	CERAMIC	0.0047µF 250V
C6273 Δ	1-161-964-91	CERAMIC	0.0047µF 250V
C6274 Δ	1-165-530-31	MYLAR	0.47µF 10 0V
C6275 Δ	1-161-964-91	CERAMIC	0.0047µF 250V
C6276 Δ	1-161-964-91	CERAMIC	0.0047µF 250V
C6277	1-100-780-31	ELECT	22µF 20% 450V
C6279 Δ	1-113-889-11	CERAMIC	1000pF 20% 250V
C6280 Δ	1-113-889-11	CERAMIC	1000pF 20% 250V
C6283	1-165-602-91	CERAMIC	220pF 10 2KV
C6284	1-126-950-11	ELECT	330µF 20% 35V
C6285	1-164-217-11	CERAMIC CHIP	150pF 5% 50V
C6286 Δ	1-165-530-31	MYLAR	0.47µF 10 0V
C6289	1-137-397-11	MYLAR	0.047µF 5% 100V
C6290	1-137-365-11	MYLAR	0.0015µF 5% 50V
C6291	1-162-964-11	CERAMIC CHIP	0.001µF 10% 50V
C6292	1-126-934-11	ELECT	220µF 20% 16V
C6297	1-137-852-31	ELECT	3300µF 20% 16V
C6298	1-126-935-11	ELECT	470µF 20% 16V
C6299	1-164-227-11	CERAMIC CHIP	0.022µF 10% 25V
C6300	1-110-563-11	CERAMIC CHIP	0.068µF 10% 16V
C6304	1-126-947-11	ELECT	47µF 20% 35V
C6305	1-126-947-11	ELECT	47µF 20% 35V
C6323	1-128-528-11	ELECT	470µF 20% 25V
C6400	1-126-767-11	ELECT	1000µF 20% 16V
C6401	1-126-963-11	ELECT	4.7µF 20% 50V
C6402	1-126-933-11	ELECT	100µF 20% 16V
C6403	1-126-935-11	ELECT	470µF 20% 16V
C6406	1-126-935-11	ELECT	470µF 20% 16V
C6407	1-126-960-11	ELECT	1µF 20% 50V
C6409	1-164-156-11	CERAMIC CHIP	0.1µF 25V
C6410	1-104-666-11	ELECT	220µF 20% 25V
C6411	1-128-550-11	ELECT	2200µF 20% 50V
C6412	1-136-497-81	FILM	0.1µF 5% 50V
C6413	1-162-964-11	CERAMIC CHIP	0.001µF 10% 50V
C6414	1-107-906-11	ELECT	10µF 20% 50V
C6415	1-107-906-11	ELECT	10µF 20% 50V
C6416	1-107-906-11	ELECT	10µF 20% 50V
C6417	1-107-906-11	ELECT	10µF 20% 50V
C6420	1-136-167-00	FILM	0.15µF 5% 50V
C6421	1-136-167-00	FILM	0.15µF 5% 50V
C6422	1-128-550-11	ELECT	2200µF 20% 50V
C6423	1-128-550-11	ELECT	2200µF 20% 50V

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

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RM-GA004 RM-GA004

GT

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C6424	1-162-966-11	CERAMIC CHIP	0.0022 μ F 10% 50V			< IC >	
C6425	1-162-966-11	CERAMIC CHIP	0.0022 μ F 10% 50V				
< CONNECTOR >							
CN6003	1-695-915-11	TAB (CONTACT)					
Δ CN6010*	1-580-843-11	PIN, CONNECTOR (POWER)					
CN6011	1-695-915-11	TAB (CONTACT)					
CN6012	1-695-915-11	TAB (CONTACT)					
CN6015	1-695-915-11	TAB (CONTACT)					
CN6018*	1-691-960-21	PIN, CONNECTOR (PC BOARD) 3P					
CN6400*	1-580-838-11	PIN, CONNECTOR (PC BOARD) 4P					
< DIODE >							
D6000 Δ	8-719-026-63	DIODE	D10XB60S				
D6011	8-719-979-64	DIODE	UF4005/23				
D6014	6-500-335-01	DIODE	MC2838-T112-1				
D6015	6-500-567-31	DIODE	10ERB20-TB3				
D6018	8-719-028-45	DIODE	D2L20U-TA				
D6019	8-719-057-96	DIODE	D10SC6M-4012				
D6020	8-719-075-66	DIODE	D5LC20U-4012				
D6027	6-500-335-01	DIODE	MC2838-T112-1				
D6028	6-500-335-01	DIODE	MC2838-T112-1				
D6029	8-719-060-89	DIODE	D4SBS6-F				
D6034	8-719-064-49	DIODE	D4SBL40				
D6039	6-500-335-01	DIODE	MC2838-T112-1				
D6280	8-719-160-65	DIODE	RD16FB2				
D6281	8-719-110-08	DIODE	RD8.2ESB2				
D6282	6-500-567-31	DIODE	10ERB20-TB3				
D6284	6-500-567-31	DIODE	10ERB20-TB3				
D6289 Δ	8-719-077-76	DIODE	D2SB60A-F04				
D6296	8-719-948-45	DIODE	ERA22-08				
D6297	6-500-335-01	DIODE	MC2838-T112-1				
D6298	6-500-567-31	DIODE	10ERB20-TB3				
D6300	8-719-948-45	DIODE	ERA22-08				
D6301	8-719-057-96	DIODE	D10SC6M-4012				
D6302	6-500-335-01	DIODE	MC2838-T112-1				
D6306	6-500-335-01	DIODE	MC2838-T112-1				
D6307	6-500-335-01	DIODE	MC2838-T112-1				
D6400	8-719-991-33	DIODE	1SS133T-77				
D6401	8-719-991-33	DIODE	1SS133T-77				
D6402	8-719-991-33	DIODE	1SS133T-77				
D6403	8-719-083-87	DIODE	UDZS-TE17-33B				
D6404	8-719-083-87	DIODE	UDZS-TE17-33B				
D6406	8-719-991-33	DIODE	1SS133T-77				
D6407	8-719-991-33	DIODE	1SS133T-77				
D6410	8-719-924-13	DIODE	MTZJ-T-77-22B				
D6411	8-719-924-13	DIODE	MTZJ-T-77-22B				
< FUSE >							
F6000 Δ	1-576-232-51	FUSE	5A 250V				
< FERRITE BEAD >							
FB6000	1-410-396-41	FERRITE	0.45 μ H				
FB6001	1-410-396-41	FERRITE	0.45 μ H				
FB6002	1-410-396-41	FERRITE	0.45 μ H				
FB6003	1-412-911-11	FERRITE	0 μ H				
FB6004	1-412-911-11	FERRITE	0 μ H				
IC6000	6-705-810-01	IC	MCZ3001DB				
IC6002	6-705-464-01	IC	BA50BC0T				
IC6003	6-705-466-01	IC	BA90BC0T				
IC6004	6-705-464-01	IC	BA50BC0T				
IC6007	6-708-388-01	IC	KA278RA05CYDTU				
IC6008	6-708-175-01	IC	MR4010-7103				
IC6010	8-759-682-42	IC	MM1431ATT				
IC6011	8-759-682-42	IC	MM1431ATT				
IC6012	6-708-388-01	IC	KA278RA05CYDTU				
IC6400	6-702-490-01	IC	TA8258HQ				
< JUMPER RESISTOR >							
JR6001	1-216-864-11	SHORT CHIP	0				
JR6002	1-216-864-11	SHORT CHIP	0				
< COIL >							
L6000	1-406-659-11	INDUCTOR	10 μ H				
L6004	1-412-525-31	INDUCTOR	10 μ H				
L6009	1-406-983-11	INDUCTOR	1MH				
L6010	1-406-661-21	INDUCTOR	22 μ H				
L6011 Δ	1-443-402-11	TRANSFORMER, LINE FILTER					
L6012 Δ	1-443-402-11	TRANSFORMER, LINE FILTER					
< PHOTOCOUPLER >							
PH6001 Δ	6-600-187-01	PHOTOCOUPLER	PC123Y22JOOF				
PH6002 Δ	6-600-187-01	PHOTOCOUPLER	PC123Y22JOOF				
PH6003 Δ	6-600-187-01	PHOTOCOUPLER	PC123Y22JOOF				
PH6004 Δ	6-600-187-01	PHOTOCOUPLER	PC123Y22JOOF				
< IC LINK >							
PS6400	1-576-390-91	IC LINK	2.5A 50V				
< TRANSISTOR >							
Q6001	6-550-882-01	TRANSISTOR	2SK3568(LBS2SONY,Q				
Q6003	8-729-600-22	TRANSISTOR	2SA1235-F				
Q6004	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
Q6007	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
Q6008	6-550-882-01	TRANSISTOR	2SK3568(LBS2SONY,Q				
Q6010	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
Q6011	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
Q6400	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
Q6402	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
Q6403	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
Q6404	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
Q6405	8-729-600-22	TRANSISTOR	2SA1235-F				
< RESISTOR >							
R6002	1-215-904-11	METAL OXIDE	100K 5% 2W				
R6003	1-215-904-11	METAL OXIDE	100K 5% 2W				
R6005	1-216-864-11	SHORT CHIP	0				
R6006	1-218-871-11	METAL CHIP	10K 0.5% 1/10W				
R6007	1-218-855-11	METAL CHIP	2.2K 0.5% 1/10W				
R6009	1-218-863-11	METAL CHIP	4.7K 0.5% 1/10W				
R6010	1-205-998-11	CEMENTED	1 5% 10W				
R6016	1-202-933-61	FUSIBLE	0.1 10% 1/2W				
R6017	1-249-377-11	CARBON	0.47 5% 1/4W				
R6018	1-249-377-11	CARBON	0.47 5% 1/4W				

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RM-GA004 RM-GA004



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

REF. NO.	PART NO.	DESCRIPTION	REMARK
R6019	1-218-823-11	METAL CHIP	100 0.5% 1/10W
R6020	1-218-870-11	METAL CHIP	9.1K 0.5% 1/10W
R6022	1-218-859-11	METAL CHIP	3.3K 0.5% 1/10W
R6023	1-218-831-11	METAL CHIP	220 0.5% 1/10W
R6029	1-245-472-21	METAL	270K 1% 1/4W
R6030	1-245-471-21	METAL	240K 1% 1/4W
R6031	1-245-471-21	METAL	240K 1% 1/4W
R6032	1-245-471-21	METAL	240K 1% 1/4W
R6035	1-218-877-11	METAL CHIP	18K 0.5% 1/10W
R6042	1-211-991-11	METAL CHIP	82 0.5% 1/10W
R6043	1-212-897-00	FUSIBLE	470 5% 1/4W
R6045	1-220-926-81	FUSIBLE	0.47 10% 1/2W
R6047	1-211-775-11	FUSIBLE	10 5% 1/4W
R6048	1-211-775-11	FUSIBLE	10 5% 1/4W
R6050	1-218-871-11	METAL CHIP	10K 0.5% 1/10W
R6051	1-218-871-11	METAL CHIP	10K 0.5% 1/10W
R6056	1-216-817-11	METAL CHIP	470 5% 1/10W
R6057	1-243-979-71	METAL OXIDE	0.1 5% 2W
R6058	1-249-385-11	CARBON	2.2 5% 1/4W
R6059	1-216-864-11	SHORT CHIP	0
R6060	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R6061	1-216-833-11	METAL CHIP	10K 5% 1/10W
R6062	1-216-833-11	METAL CHIP	10K 5% 1/10W
R6063	1-216-821-11	METAL CHIP	1K 5% 1/10W
R6064	1-216-821-11	METAL CHIP	1K 5% 1/10W
R6065	1-216-821-11	METAL CHIP	1K 5% 1/10W
R6068	1-216-864-11	SHORT CHIP	0
R6070	1-216-833-11	METAL CHIP	10K 5% 1/10W
R6072	1-218-877-11	METAL CHIP	18K 0.5% 1/10W
R6074	1-218-863-11	METAL CHIP	4.7K 0.5% 1/10W
R6086	1-216-350-11	METAL OXIDE	1.2 5% 1W
R6089	1-216-864-11	SHORT CHIP	0
R6098	1-220-340-11	METAL CHIP	470K 5% 1/2W
R6100	1-202-933-61	FUSIBLE	0.1 10% 1/2W
R6243	1-216-835-11	METAL CHIP	15K 5% 1/10W
R6244	1-218-875-11	METAL CHIP	15K 0.5% 1/10W
R6245	1-215-865-11	METAL OXIDE	220 5% 1W
R6246 Δ	1-247-289-00	METAL	8.2M 5% 1W
R6248	1-216-828-11	METAL CHIP	3.9K 5% 1/10W
R6249	1-219-759-11	METAL	1M 5% 1/2W
R6250	1-216-827-11	METAL CHIP	3.3K 5% 1/10W
R6251	1-216-828-11	METAL CHIP	3.9K 5% 1/10W
R6252	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R6253	1-216-833-11	METAL CHIP	10K 5% 1/10W
R6254	1-216-833-11	METAL CHIP	10K 5% 1/10W
R6255	1-216-344-00	METAL OXIDE	0.39 5% 1W
R6257	1-216-349-00	METAL OXIDE	1 5% 1W
R6259	1-240-251-11	CEMENTED	6.8 5% 10W
R6261	1-249-417-11	CARBON	1K 5% 1/4W
R6262	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R6263	1-249-389-11	CARBON	4.7 5% 1/4W
R6267	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R6268	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R6273	1-249-389-11	CARBON	4.7 5% 1/4W
R6277	1-216-821-11	METAL CHIP	1K 5% 1/10W
R6278	1-216-827-11	METAL CHIP	3.3K 5% 1/10W
R6279	1-216-833-11	METAL CHIP	10K 5% 1/10W
R6280	1-216-833-11	METAL CHIP	10K 5% 1/10W
R6281	1-216-833-11	METAL CHIP	10K 5% 1/10W
R6283	1-243-979-71	METAL OXIDE	0.1 5% 2W
R6284	1-216-864-11	SHORT CHIP	0
R6285	1-216-832-11	METAL CHIP	8.2K 5% 1/10W
R6286	1-216-834-11	METAL CHIP	12K 5% 1/10W
R6287	1-218-875-11	METAL CHIP	15K 0.5% 1/10W

REF. NO.	PART NO.	DESCRIPTION	REMARK
R6288	1-218-863-11	METAL CHIP	4.7K 0.5% 1/10W
R6291	1-216-864-11	SHORT CHIP	0
R6339	1-216-864-11	SHORT CHIP	0
R6400	1-216-833-11	METAL CHIP	10K 5% 1/10W
R6401	1-216-821-11	METAL CHIP	1K 5% 1/10W
R6402	1-216-857-11	METAL CHIP	1M 5% 1/10W
R6403	1-216-833-11	METAL CHIP	10K 5% 1/10W
R6404	1-216-821-11	METAL CHIP	1K 5% 1/10W
R6409	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R6410	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R6411	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R6412	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R6413	1-216-833-11	METAL CHIP	10K 5% 1/10W
R6414	1-216-845-11	METAL CHIP	100K 5% 1/10W
R6415	1-216-845-11	METAL CHIP	100K 5% 1/10W
R6416	1-216-833-11	METAL CHIP	10K 5% 1/10W
R6418	1-249-385-11	CARBON	2.2 5% 1/4W
R6419	1-249-385-11	CARBON	2.2 5% 1/4W
R6420	1-249-429-11	CARBON	10K 5% 1/4W
R6421	1-249-429-11	CARBON	10K 5% 1/4W
R6423	1-216-833-11	METAL CHIP	10K 5% 1/10W
R6424	1-216-833-11	METAL CHIP	10K 5% 1/10W
R6425	1-216-833-11	METAL CHIP	10K 5% 1/10W
R6426	1-216-833-11	METAL CHIP	10K 5% 1/10W
R6427	1-216-813-11	METAL CHIP	220 5% 1/10W
R6428	1-216-813-11	METAL CHIP	220 5% 1/10W
R6429	1-216-864-11	SHORT CHIP	0
R6430	1-216-864-11	SHORT CHIP	0
< RELAY >			
		RY6001 Δ 1-755-388-11	RELAY (AC POWER)
		RY6002 Δ 1-755-388-11	RELAY (AC POWER)
< SPARK GAP >			
SG6000	1-576-487-11	ELEMENT, SPARK	
< TRANSFORMER >			
		T6000 Δ 1-443-817-11	CONVERTER TRANSFORMER (PIT)
		T6004 Δ 1-443-748-11	CONVERTER TRANSFORMER (SRT)
< VARISTOR >			
		VD6000 Δ 1-804-996-21	VARISTOR
		VD6001	1-804-996-21 VARISTOR
		VD6002 Δ 1-804-996-21	VARISTOR

		A-1146-560-A	HA BOARD, COMPLETE

< CAPACITOR >			
C7000	1-100-597-91	CERAMIC CHIP	0.1 μ F 10% 25V
< RESISTOR >			
R7001	1-218-676-11	METAL CHIP	220 0.5% 1/10W
R7002	1-218-684-11	METAL CHIP	470 0.5% 1/10W
R7003	1-218-691-11	METAL CHIP	910 0.5% 1/10W
R7004	1-218-698-11	METAL CHIP	1.8K 0.5% 1/10W



REF. NO.	PART NO.	DESCRIPTION	REMARK		
R7005	1-218-706-11	METAL CHIP	3.9K	0.5%	1/10W
< SWITCH >					
S7000	1-692-431-21	SWITCH, TACTILE			
S7001	1-692-431-21	SWITCH, TACTILE			
S7002	1-692-431-21	SWITCH, TACTILE			
S7003	1-692-431-21	SWITCH, TACTILE			
S7004	1-692-431-21	SWITCH, TACTILE			
S7005	1-692-431-21	SWITCH, TACTILE			

A-1146-561-A HB BOARD, COMPLETE *****					
< CAPACITOR >					
C7020	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7021	1-128-991-21	ELECT CHIP	10µF	20%	50V
C7022	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C7023	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C7024	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C7025	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7026	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C7027	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C7028	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C7029	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7030	1-162-915-11	CERAMIC CHIP	10pF	0.5pF	50V
C7031	1-165-908-11	CERAMIC CHIP	1µF	10%	10V
C7032	1-162-915-11	CERAMIC CHIP	10pF	0.5pF	50V
< DIODE >					
D7022	6-500-861-01	DIODE SML-020MVT-T86			
D7023	8-719-064-07	DIODE SML-310LTT86			
D7024	6-500-861-01	DIODE SML-020MVT-T86			
< IC >					
IC7020	6-703-744-01	IC GPIUE26SXKOF			
IC7021	6-707-223-01	IC LM75BIM-5/NOPB			
< TRANSISTOR >					
Q7020	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q7021	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q7022	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q7023	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q7024	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
< RESISTOR >					
R7020	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R7021	1-216-805-11	METAL CHIP	47	5%	1/10W
R7022	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7023	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7024	1-216-813-11	METAL CHIP	220	5%	1/10W
R7025	1-216-813-11	METAL CHIP	220	5%	1/10W
R7026	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7027	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7028	1-216-813-11	METAL CHIP	220	5%	1/10W
R7029	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7030	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7031	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7032	1-216-813-11	METAL CHIP	220	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION	REMARK		
R7033	1-216-813-11	METAL CHIP	220	5%	1/10W
R7034	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7035	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7039	1-216-833-11	METAL CHIP	10K	5%	1/10W
R7040	1-216-864-11	SHORT CHIP	0		
R7042	1-216-864-11	SHORT CHIP	0		
R7045	1-216-864-11	SHORT CHIP	0		
R7046	1-216-801-11	METAL CHIP	22	5%	1/10W
R7047	1-216-801-11	METAL CHIP	22	5%	1/10W
R7049	1-216-864-11	SHORT CHIP	0		
< SWITCH >					
S7020	1-692-431-21	SWITCH, TACTILE			

A-1146-553-A HC BOARD, COMPLETE *****					
< CAPACITOR >					
C7101	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C7102	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C7103	1-126-964-11	ELECT	10µF	20%	50V
C7104	1-126-964-11	ELECT	10µF	20%	50V
C7111	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C7112	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C7113	1-164-227-11	CERAMIC CHIP	0.022µF	10%	25V
C7114	1-164-227-11	CERAMIC CHIP	0.022µF	10%	25V
< DIODE >					
D7100	8-719-977-28	DIODE DTZ10B			
D7101	8-719-977-28	DIODE DTZ10B			
D7102	8-719-069-55	DIODE UdzSTE-175.6B			
D7108	8-719-083-58	DIODE UdzSTE-173.9B			
D7109	8-719-062-19	DIODE MA3200WA-TX			
D7110	8-719-062-19	DIODE MA3200WA-TX			
D7111	8-719-062-19	DIODE MA3200WA-TX			
< JACK >					
J7100	1-819-355-11	PHONO JACK 3P			
J7101	1-819-356-11	PHONO JACK 3P			
J7102	1-568-267-11	JACK			
< RESISTOR >					
R7103	1-216-849-11	METAL CHIP	220K	5%	1/10W
R7104	1-216-849-11	METAL CHIP	220K	5%	1/10W
R7105	1-218-676-11	METAL CHIP	220	0.5%	1/10W
R7106	1-216-809-11	METAL CHIP	100	5%	1/10W
R7109	1-216-821-11	METAL CHIP	1K	5%	1/10W
R7110	1-216-821-11	METAL CHIP	1K	5%	1/10W
R7111	1-216-864-11	SHORT CHIP	0		
R7123	1-216-864-11	SHORT CHIP	0		
R7124	1-218-676-11	METAL CHIP	220	0.5%	1/10W
R7125	1-218-676-11	METAL CHIP	220	0.5%	1/10W
R7126	1-216-864-11	SHORT CHIP	0		
R7128	1-216-797-11	METAL CHIP	10	5%	1/10W
R7129	1-216-797-11	METAL CHIP	10	5%	1/10W

KF-E42A10/E50A10

RM-GA004 RM-GA004



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

REF. NO.	PART NO.	DESCRIPTION	REMARK
< VARISTOR >			
VD7100	1-803-974-21	VARISTOR, CHIP (1608)	
VD7101	1-803-974-21	VARISTOR, CHIP (1608)	
VD7102	1-803-974-21	VARISTOR, CHIP (1608)	
VD7108	1-803-974-21	VARISTOR, CHIP (1608)	
VD7109	1-803-974-21	VARISTOR, CHIP (1608)	
VD7110	1-803-974-21	VARISTOR, CHIP (1608)	

A-1146-548-A		S2 BOARD, COMPLETE	

< CAPACITOR >			
C7180	1-164-156-11	CERAMIC CHIP 0.1 μ F	25V
C7181	1-165-908-11	CERAMIC CHIP 1 μ F	10% 10V
C7182	1-162-915-11	CERAMIC CHIP 10pF	0.5pF 50V
C7183	1-162-915-11	CERAMIC CHIP 10pF	0.5pF 50V
< IC >			
IC7180	6-707-223-01	IC LM75BIM-5/NOPB	
< RESISTOR >			
R7181	1-216-801-11	METAL CHIP 22	5% 1/10W
R7182	1-216-801-11	METAL CHIP 22	5% 1/10W
R7185	1-216-864-11	SHORT CHIP 0	
R7186	1-216-864-11	SHORT CHIP 0	
R7187	1-216-864-11	SHORT CHIP 0	

A-1146-549-A		T1 BOARD, COMPLETE	

< SWITCH >			
S7150	1-786-591-11	SWITCH, MICRO	

A-1146-550-A		T2 BOARD, COMPLETE	

< SWITCH >			
S7155	1-786-591-11	SWITCH, MICRO	

REF. NO.	PART NO.	DESCRIPTION	REMARK
MISCELLANEOUS			

Δ	A-1152-676-A	OPT UNIT BLOCK ASSY (50) (E50A10)	
Δ	A-1152-677-A	OPT UNIT BLOCK ASSY (42) (E42A10)	
	1-251-658-41	SPLITTER RF	
Δ	1-468-936-12	POWER SUPPLY BLOCK	
Δ	1-574-062-61	CORD, POWER (WITH CONNECTOR) (E)	
Δ	1-574-358-61	CORD, POWER (WITH NOISE FILTER)	(OCE)
Δ	1-576-912-11	THERMOSTAT	
Δ	1-787-231-11	D.C. FAN (SIROCCO)	
Δ	1-787-333-11	D.C. FAN	
Δ	1-787-373-11	D.C. FAN	
	1-826-219-11	LOUDSPEAKER (5.5X15cm)	
	1-829-361-81	RF CABLE	

ACCESSORIES & PACKING MATERIALS			

	2-638-411-11	MANUAL, INSTRUCTION	(OCE, E)
	2-638-411-21	MANUAL, INSTRUCTION	(E)
	2-650-452-11	GUIDE, QUICK SETUP	(OCE)
	2-650-452-21	GUIDE, QUICK SETUP	(E)
*	4-030-895-01	JOINT	
< REMOTE COMMANDER >			
	1-479-451-11	REMOTE COMMANDER (RM-GA004)	
	9-885-083-75	COVER, BATTERY	
	9-885-089-77	COVER, SLIDE	
< OPTIONAL ACCESSORIIS >			
	93-0875-20	LAMP XL-2400 (OCE)	
	93-0875-30	LAMP XL-2400 (E)	

LCD Projection TV



Operating Instructions _____

GB

- ⚠ Before operating the TV, please read the “Safety Information” section of this manual.
Retain this manual for future reference.

KF-E50A10
KF-E42A10

GRAND
WEGA



Introduction

Thank you for choosing this Sony product.
Before operating the TV, please read this manual thoroughly and retain it for future reference.

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- TruSurround XT, SRS and  symbol are trademarks of SRS Labs, Inc.
- TruSurround XT technology is incorporated under license from SRS Labs, Inc.
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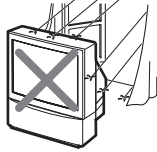
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Safety Information

To prevent fire or shock hazard, do not expose the LCD projection TV to rain or moisture. Dangerously high voltages are present inside the LCD projection TV. Do not open the cabinet. Refer servicing to qualified personnel only.

For general safety:

- Do not expose the LCD projection TV to rain or moisture.



- Do not open the rear cover.



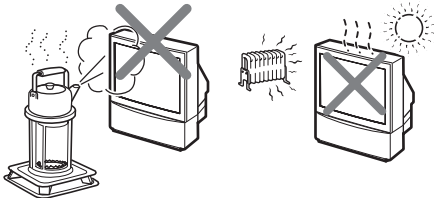
- This set should be operated only from the type of power source indicated on the serial/model plate. If you are not sure of the type of electrical power supplied to your home, consult your dealer or local power company. For those sets designed to operate from battery power, refer to the operating instructions.

For safe installation:

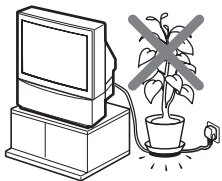
- Never cover the slots and openings with a cloth or other materials.



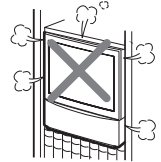
- Do not block the ventilation openings.
- Do not use power-line operated sets near water — for example, near a bathtub, washbowl, kitchen sink, swimming pool, etc.
- Do not install the LCD projection TV in hot, humid or excessively dusty places.



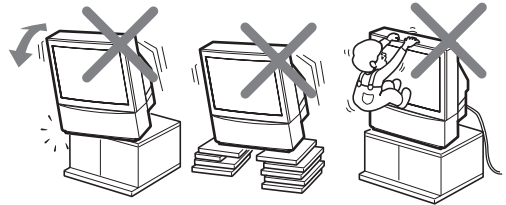
- Do not allow anything to rest on or roll over the power cord, and do not place the set where the power cord is subject to wear or abuse.
- Do not install the LCD projection TV where it may be exposed to mechanical vibrations.



- Avoid operating the LCD projection TV at temperatures below 5°C.
- If the LCD projection TV is transported directly from a cold to a warm location, or if the room temperature has changed suddenly, the picture may be blurred or show poor color. This is because moisture has condensed on the mirror or lenses inside. If this happens, let the moisture evaporate before using the LCD projection TV.
- If direct sunlight or other strong illumination shines on the screen, part of the screen may appear white due to reflections from behind the screen. This is a structural property of the LCD projection TV. Do not expose the screen to direct illumination or sunlight.
- Do not install the appliance in a confined space, such as a bookcase or built-in cabinet.



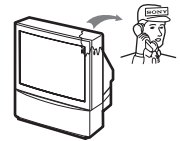
- Do not place the set on an unstable cart, stand, table or shelf. The set may fall, causing serious injury to a child or an adult and serious damage to the set. Use only a cart or stand recommended by the manufacturer for the specific model of LCD projection TV. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



- When the set exhibits a distinct change in performance, it indicates a need for service.

For safe operations:

- Do not operate the LCD projection TV on anything but 220-240 V AC, 50/60 Hz.
- Do not operate the LCD projection TV if any liquid or solid object falls in it — have it checked immediately.

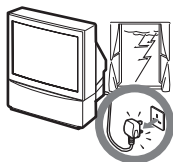


- Never push objects of any kind into the set through the cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the set.
- Leave enough space between the LCD projection TV or furniture and an outlet so that you can plug in/out easily.

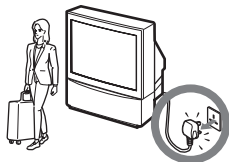


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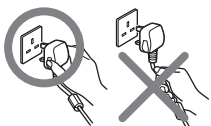
- Unplug the AC power cord during lightning storm.



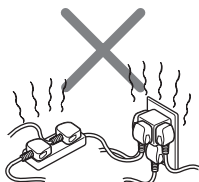
- Do not keep the LCD projection TV plugged in if you are not going to use it for several days. Even if your LCD projection TV is turned off, it is still connected to AC power when plugged into an outlet.



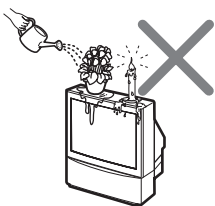
- Do not pull the power cord to disconnect the LCD projection TV. Pull it out by the plug.



- Do not plug in too many appliances to the same power jack. Do not damage the power cord.



- Do not place any objects on the LCD projection TV. The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

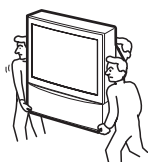


- To prevent fire, keep inflammable objects or naked lights (e.g. candles) away from the LCD projection TV.
- If a snapping or popping sound from a TV set is continuous or frequent while the TV is operating, unplug the TV and consult your dealer or service technician. It is normal for some TV sets to make occasional snapping or popping sounds, particularly when being turned on or off.
- Give careful consideration to the environment when disposing of batteries.

Carry the LCD projection TV in the specified manner

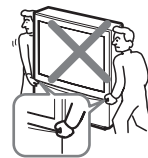
If you carry the LCD projection TV in a manner other than the specified manner and without the specified number of persons, it may drop and a serious injury may be caused. Be sure to follow the instructions mentioned below.

- Carry the LCD projection TV with the specified number of persons (see page 12).



- Do not carry the LCD projection TV holding the speaker grill.
- Hold the LCD projection TV tightly when carrying it.

- Before carrying the LCD projection TV, disconnect any accessories or cables.
- Do not carry the LCD projection TV holding the screen edges.



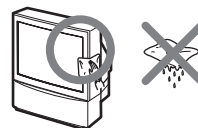
Caution

Do not use the LCD projection TV at altitudes higher than 4000 m, as doing so might cause malfunctions.

Cleaning

Clean the rear cover area of the LCD projection TV regularly. Dust in rear cover area may cause a problem with the cooling system of the LCD projection TV set.

- To remove hard contamination, use a cloth moistened with a solution of mild detergent and water. Do not use a spray cleaning solution directly to the TV. It should only be used to moisten the cleaning cloth.
- Clean the cabinet of the LCD projection TV with a dry soft cloth. To remove dust from the screen, wipe it gently with a soft cloth. Stubborn stains may be removed with a cloth slightly dampened with a solution of mild soap and warm water. Never use strong solvents such as thinner or benzene for cleaning. If picture brightness decreases over time, it may be necessary to clean the inside of the LCD projection TV. Consult qualified service personnel.
- Unplug the AC power cord when cleaning this unit. If not, it may result in electric shock.
- Do not rub, touch, or tap the surface of the screen with sharp or abrasive items, like a ball point pen or a screw driver. This type of contact may result in a scratched screen.



About the LCD projection TV

Although the LCD projection TV is made with high-precision technology, black dots may appear or bright points of light (red, blue, or green) may appear constantly on the screen. This is a structural property of the panel and is not a malfunction.

Projection lamp

- Your LCD projection TV uses a projection lamp as its light source. It is time to replace the lamp with a new one (not supplied) when:
 - the lamp replacement indicator on the front panel blinks in red,
 - screen images become dark,
 - no image appears on the display after prolonged use.
- In rare instances, the bulb may pop inside the lamp unit, but the lamp unit is designed to contain all of broken glass pieces inside the lamp unit. (See “Replacing the lamp” on page 48.)
- When the lamp eventually burns out, you may hear a noticeable pop sound. This is normal and is inherent in this type of lamp.

Cooling fan

This LCD projection TV uses a cooling fan. You may hear some fan noise (depending on the placement of the LCD projection TV), which may be more noticeable during the night, or when ambient noise is particularly low.

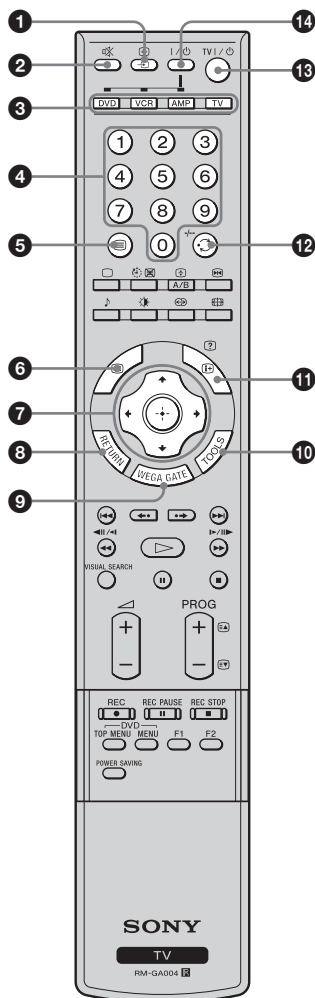
Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)



This symbol is on the remote control.

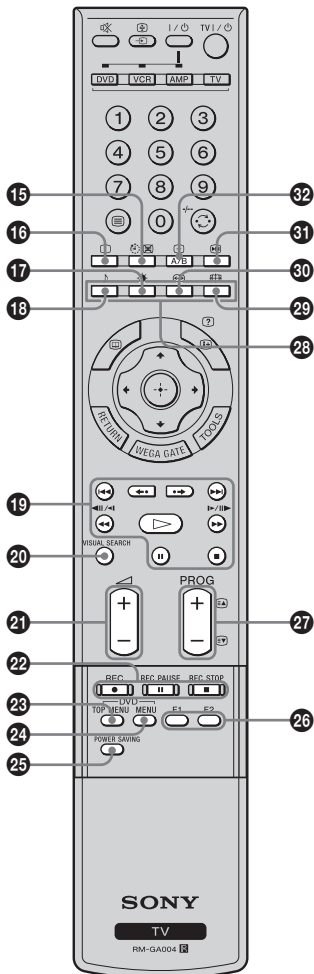


Overview of the remote



- 1** – **Input select / Text hold**
 In TV mode (page 21): Selects the input source from equipment connected to the TV jacks.
 In Text mode (page 19): Holds the current page.
- 2** – **Muting (page 18)**
 Mutes the sound.
- 3** **Function buttons (page 45)**

 - Selects the connected equipment you want to operate with this remote. The button of the equipment which the remote can operate lights up when operation buttons are pressed.
 - Used to program the remote to operate Sony video/audio equipment.
- 4** **Number buttons**
 In TV mode (page 18): Selects channels.
 In Text mode (page 19): Enters the three-digit page number to select the page.
- 5** – **Text (page 19)**
 Displays Text.
- 6**
 This button does not work with this model.
- 7** (page 24)
 Selects the item and setting when operating WEGA GATE.
- 8** **RETURN**
 Returns to the previous page when operating WEGA GATE.
- 9** **WEGA GATE (page 24)**
 Displays WEGA GATE which includes TV List, External Inputs, and Settings.
- 10** **TOOLS (page 20)**
 Enables you to access various viewing options and change/make adjustments according to the source and screen mode.
- 11** – **Info / Text reveal**
 In TV mode (page 18): Displays information such as current channel number and screen mode.
 In Text mode (page 19): Reveals hidden information (e.g., answers to quizzes).
- 12** – **Previous channel (page 18)**
 Returns to the previous channel watched (for more than five seconds).
 When operating DVD, it works as the “Execute” button (page 46).
- 13** – **TV standby (page 18)**
 Switches off the TV temporarily. The (standby) indicator on the front of the TV lights up. Press again to switch on the TV from the standby mode.
- 14** – **Power (page 46)**
 Switches the VCR, DVD, or audio equipment connected to the TV on or off.

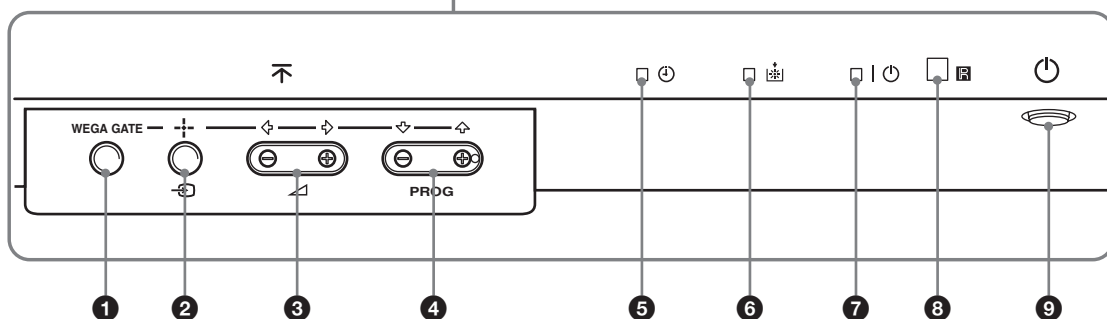
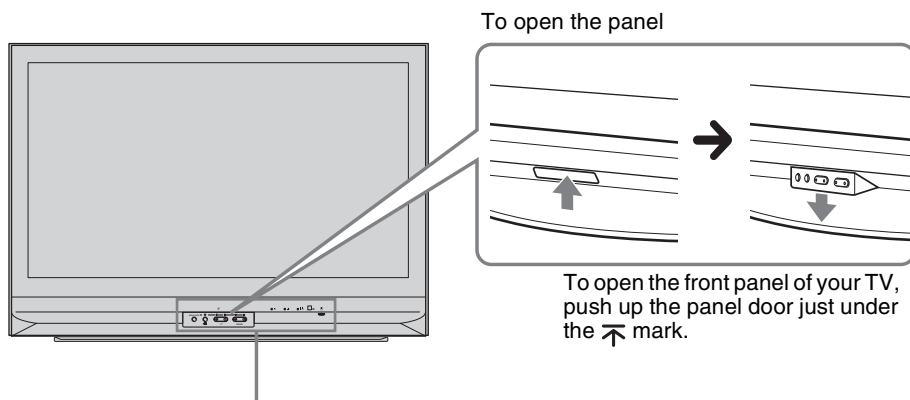


- 15** – **Sleep Timer (page 41)**
In TV mode (page 41): Activates Sleep Timer.
In Text mode (page 19): Exits the Text service.
- 16** – **TV mode (page 21)**
Exits Text mode, or returns to TV mode.
- 17** – **Picture mode (page 28)**
Selects the picture mode.
- 18** – **Sound mode (page 31)**
Selects the sound mode.
- 19** **DVD/VCR operating buttons (page 45)**
Operates the connected DVD and VCR.
- 20** **VISUAL SEARCH (page 46)**
Works with connected equipment which has the visual search function.
- 21** – **Volume (page 18)**
Adjusts the volume.
- 22** **DVD/VCR record buttons (page 45)**
REC: Records the source
REC PAUSE: Pauses recording
REC STOP: Stops recording
- 23** **DVD TOP MENU (page 46)**
Displays the top menu of the connected DVD equipment.
- 24** **DVD MENU (page 46)**
Displays the menu of a DVD.
- 25** **POWER SAVING**
This function does not work with this model.
- 26** **F1/F2 (page 46)**
Selects the function of connected equipment.
- 27** **PROG +/-/E1/E2 (page 18)**
In TV mode (page 18): Selects the next (+) or previous (-) channel.
In Text mode (page 19): Selects the next (+) or previous (-) page.
- 28** **Colored buttons**
In Text mode (page 19): Used for Fastext.
- 29** – **Screen mode (page 20)**
Selects the type of the wide mode.
- 30** – **Surround (page 32)**
Selects the surround sound effect.
- 31** – **Picture Freeze (page 19)**
Freezes the current picture to display it on the left screen.
- 32** **A/B/** – **Text enlarge**
In TV mode (page 18): Switches the sound between stereo and mono, or languages in bilingual programs.
In Text mode (page 19): Switches the text size.

Tip

The PROG+, > (Play), A/B and number 5 buttons have tactile dots. Use the tactile dots as references when operating the TV.

Overview of the TV buttons and indicators

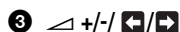


1 WEGA GATE (page 24)

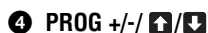
Displays WEGA GATE.



Confirms the selection or setting.
Selects the video equipment connected to the TV's video inputs.



Increases (+) or decreases (-) the volume.
In TV menu: Moves through the options left (←) or right (→).



In TV mode: Selects the next (+) or previous (-) channel.
In TV menu: Moves through the options up (↑) or down (↓).



Lights up in amber when the Sleep Timer/On Timer is set.



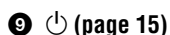
Flashes up in red when the lamp for the light source has burned out.



Flashes in green when the light source is preparing to turn on. Lights up in green when the TV is switched on.
Lights up in red when the TV is in standby mode. When the lamp door or the lamp itself is not securely attached, the red indicator will continue to flash in intervals of three blinks at a time (see page 49).



Point the remote here.



Switches the TV on or off.

Projection Lamp

Your TV uses a projection lamp as its light source. As with any lamp, it has lifespan and needs to be replaced when the lamp indicator flashes or the screen becomes darker.

Notes

After turning on your TV, it may take a while (1 minute or less) before the picture appears.

When the projection lamp wears out, the screen goes dark.

Replace the lamp with a new Sony XL-2400 replacement lamp (not supplied). How to replace the lamp, see page 48.

Warning

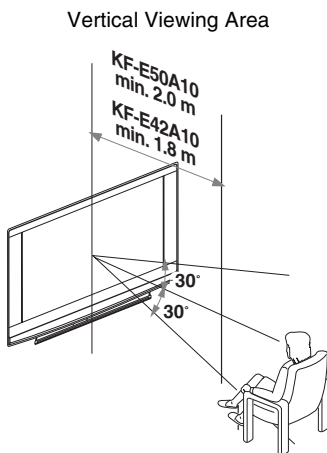
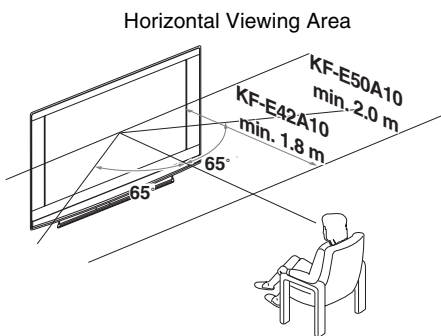
The light emitted from the lamp is quite bright when your TV is in use. To avoid eye discomfort or injury, do not look into the light housing when the power is on.

1: Installing the TV

Recommended Viewing Area

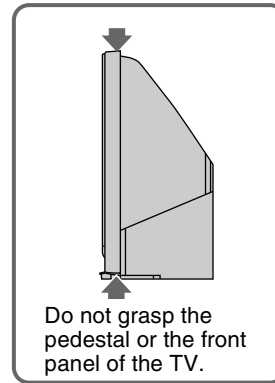
Your viewing position may affect the picture quality. For the best picture quality, install your TV within the areas shown below.

Model	Viewing distance
KF-E42A10	min. 1.8 m
KF-E50A10	min. 2.0 m



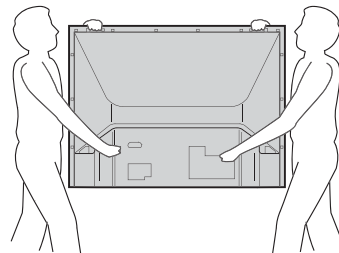
Carrying Your TV

Carrying the TV requires at least two people. Do not hold by the pedestal or the front panel of the TV. Doing so may cause these parts to break off.

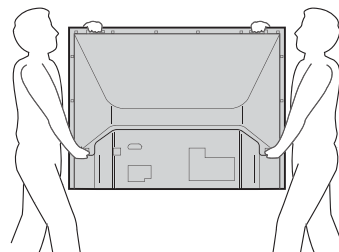


When moving the TV, place one hand in the hole on the lower portion of the TV while grasping the top with the other hand, as shown in the illustration below.

KF-E42A10



KF-E50A10



If you have connected cables and cords, be sure to unplug them before moving the TV.

Notes

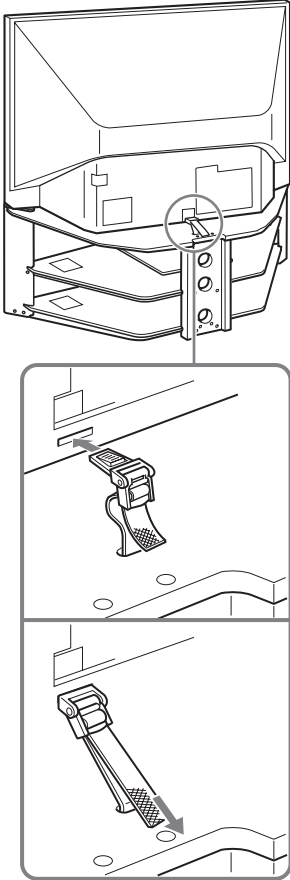
- To ensure the safety of children and the TV, keep children away from the TV during installation. Climbing on or pushing the TV or its stand may cause it to fall and damage the TV.
- When installing your TV against a wall, keep your TV at least 10 cm away from the wall to provide proper ventilation.

Preventing the TV from Toppling Over

As a protective measure, secure the TV as follows.

Using the TV stand with support belts

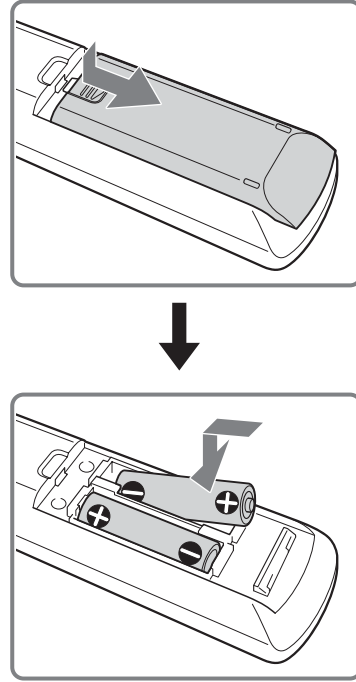
Sony strongly recommends using the TV stand SU-RG11S (for KF-E42A10)/SU-RG11M (for KF-E50A10) with a support belt designed for your TV.



Note

When using the SU-RG11S for KF-E42A10 (not supplied)/SU-RG11M for KF-E50A10 (not supplied) stand for your TV, you must use the support belt.

2: Inserting batteries into the remote

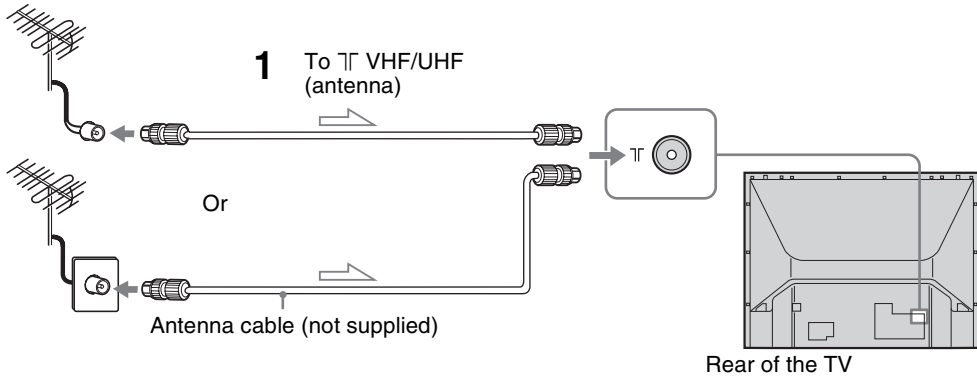


Notes

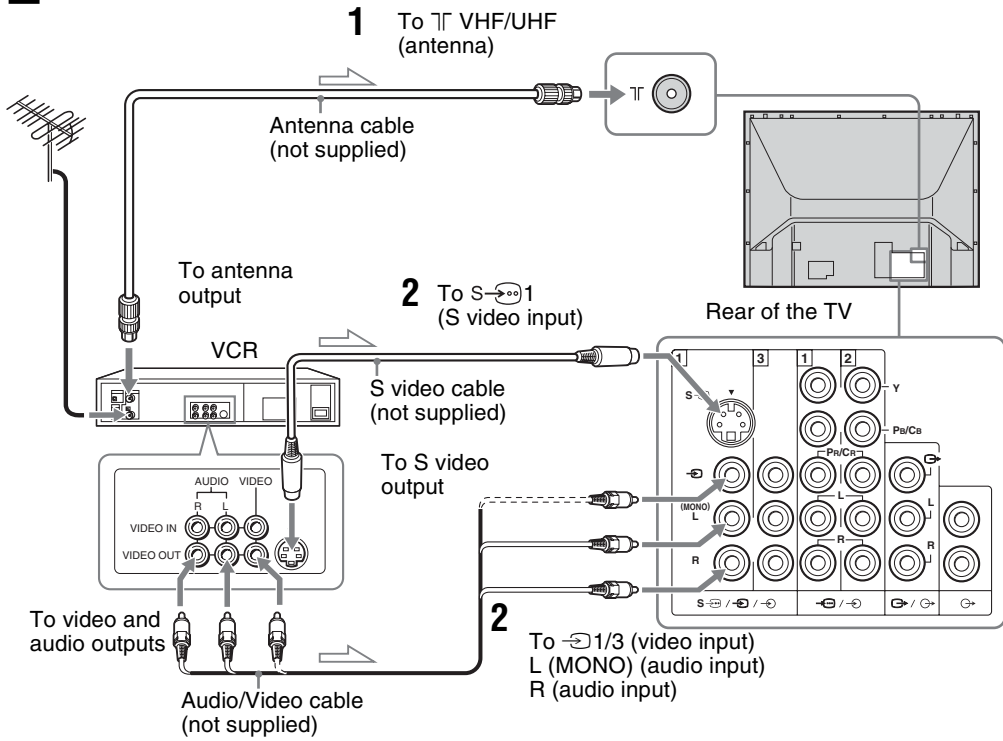
- Observe the correct polarity when inserting batteries.
- Dispose of batteries in an environmentally friendly way. Certain regions may regulate disposal of the battery. Please consult your local authority.
- Do not use different types of batteries together or mix old and new batteries.
- Handle the remote with care. Do not drop or step on it, or spill liquid of any kind onto it.
- Do not place the remote in a location near a heat source, or in a place subject to direct sunlight, or in a damp room.

3: Connecting an antenna/VCR

A



B



\Rightarrow : Signal flow

- 1 Connect your antenna with the antenna cable (not supplied).

If connecting to an antenna only (A)

Connect the male plug to the Υ VHF/UHF (antenna) jack on the rear of the TV.

Notes

- Note that one end of the cable has a male plug fitted while the other end is fitted with a female jack.
- Do not connect the power cord until all other connections are complete; otherwise, a minimal current leakage through the antenna and/or other terminals to the ground could occur.

If connecting to a VCR with an antenna (B)

Connect your antenna to the input jack on your VCR.

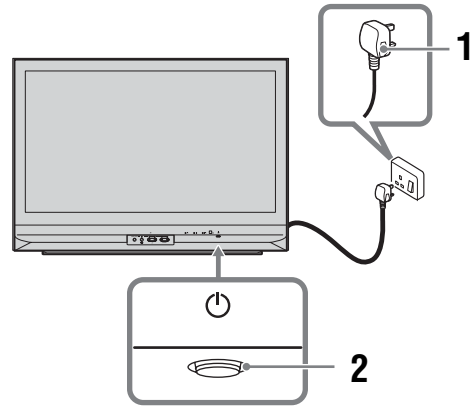
Notes

- If you connect a monaural VCR, connect the yellow plug to VIDEO (the yellow jack) and the black plug to AUDIO-L (MONO) (the white jack).
- If you connect a VCR to the Υ VHF/UHF (antenna) jack, preset the signal output from the VCR to the program number 0 on the TV.
- If the S video cable is connected to this TV and the VCR, the S video signal is automatically selected.

- 2 Connect your VCR.

Connect the output jack on your VCR to the input jack on the rear of the TV.

4: Switching on the TV



- 1 Connect the AC power cord to the AC power jack (220-240 V AC, 50/60 Hz).

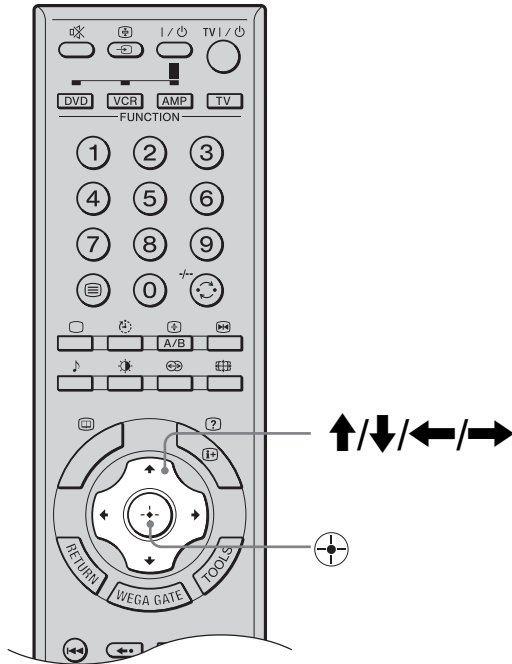
- 2 Press ⏻ on the TV (front side).

When you switch on the TV for the first time, the language menu appears on the screen, then go to “5: Selecting the language” on page 16.

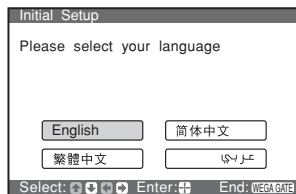
When the TV is in standby mode (⏻ indicator on the front of the TV is red), press TV ⏻ on the remote to switch on the TV.

5: Selecting the language

When you switch on the TV for the first time, the language menu appears on the screen.



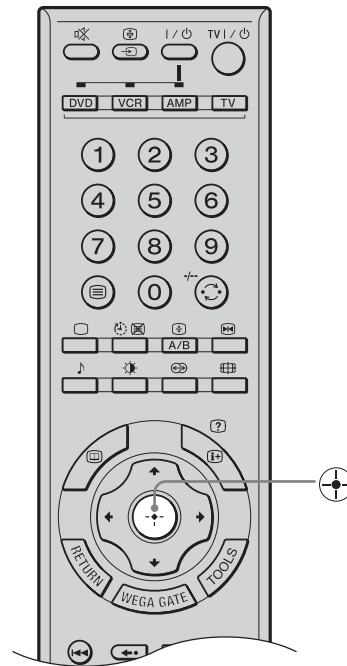
Press **↑/↓/←/→** to select the language displayed on the menu screens, then press **+**.



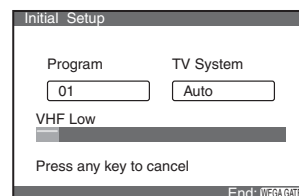
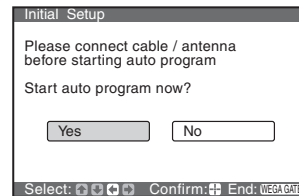
The message confirming that the TV starts auto program appears on the screen, then go to "6: Auto-programming the TV".

6: Auto-programming the TV

After selecting the language, a message confirming that the TV starts auto program appears on the screen. You must tune the TV to receive channels (TV broadcasts). Do the following to search and store all available channels.



Press **+** to select "Yes".




The TV starts searching for all available channels. This may take some time. Do not press any buttons on the TV or remote until it is completed. Once all available channels have been stored, the TV returns to normal operation, displaying the channel stored on channel number 1.

Tip

If you press any of the buttons during auto-programming, auto-programming operation is canceled. To perform auto-programming again, activate “Initial Reset” in the “Setup” menu (page 40).

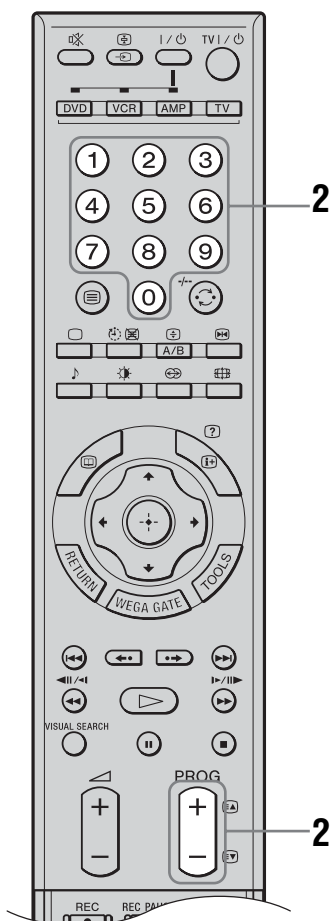
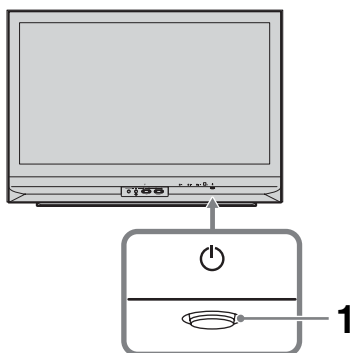
When a message appears for you to confirm the antenna connections

No channels are found. Check all the antenna connections and press  to start auto-program again.

To change the order in which the channels are stored on the TV

See page 37.

Watching TV



1 Press on the TV (front side) to switch on the TV.

When the TV is in standby mode (indicator on the front of the TV is red), press TV on the remote to switch on the TV.

2 Press the number buttons or PROG +/- to select a TV channel.

To select one-digit channel numbers, press 0 and the channel number.

Tips

- If you press the number button without pressing 0 to select a one-digit channel, you must wait for two seconds until receiving the channel.
- You can have one-digit channels selected immediately when you press the number buttons after setting “IDigit Direct” to “On” (page 36).

Additional operations

To	Do this
Turn off the TV temporarily (Standby mode)	Press TV .
Turn off the TV completely	Press on the front side of the TV.
Adjust the volume	Press + (increase) /- (decrease).
Mute the sound	Press . Press again to restore.
Return to the previous channel watched (for more than five seconds)	Press /-/-.
Select the surround sound effect	Press . For details, see page 32.
Switch the TV automatically to the standby mode after a specified time period – Sleep	Press . For details, see page 41.
Switch the sound between stereo and mono, or languages in bilingual programs	Press A/B/.
Display the on-screen information	Press /?.

To access Text

Press . Each time you press , the display changes cyclically as follows:

Text → Text over the TV picture (mix mode) → No Text (exit the Text service)

To select a page, press the number buttons or PROG +/-.

To hold a page, press / .

To reveal hidden information, press / .

To change the text size, press A/B/ .

To exit the Text service, press / .

Tips

- Ensure that the TV is receiving a good signal, or some text errors may occur.
- Most TV channels broadcast a Text service. For information on the use of the service, select the index page (usually page 100).
- When four colored items appear at the bottom of the Text page, Fastext is available. Fastext allows you to access pages quickly and easily. Press the corresponding colored button to access the page.

To enjoy stereo or bilingual programs

Switches the sound of NICAM or A2 (German) stereo system.

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

The sound will be indicated on the screen as follows.

Broadcasting	On-screen display
NICAM stereo	NICAM (stereo sound) ↓ Mono (regular sound)
NICAM bilingual	NICAM Main (main sound) ↓ NICAM Sub (sub sound) ↓ Mono (regular sound) ←
NICAM monaural	NICAM Main (main sound) ↓ Mono (regular sound)
A2 (German) stereo	Mono (regular sound) ↓ Stereo (stereo sound)
A2 (German) bilingual	Main (main sound) ↓ Sub (sub sound)

Tips

- NICAM is receivable in following countries/regions. Hong Kong, Singapore, New Zealand, Malaysia, Thailand, etc.
- A2 (German) is receivable in following countries/regions. 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 of a monaural program is noisy or distorted

Press A/B/ to change the on-screen display from “Auto” to “Mono”.

Notes


- The “Mono” or “Auto” setting is memorized for each program position.
- You cannot receive a stereo broadcast signal when “Mono” is selected for the program position.

Picture Freeze

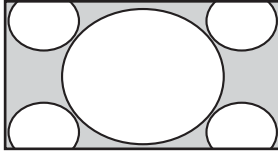
Freezes the TV picture (e.g. to make a note of a telephone number or recipe).

- 1 Press on the remote control.
- 2 Press again to return to normal TV mode.

To change the screen mode manually to suit the broadcast

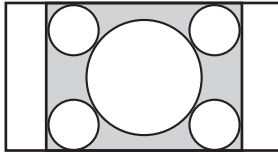
Press  repeatedly to select Wide Zoom, Normal, Full or Zoom.

Wide Zoom*



Enlarges the center portion of the picture. The left and right edges of the picture are stretched to fill the 16:9 screen.

Normal

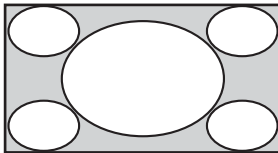


Displays the 4:3 picture in its original size. Side bars are shown to fill the 16:9 screen.

Note

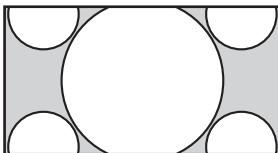
You cannot select “Normal” when input signals are 720p/1080i.

Full



Stretches the 4:3 picture horizontally, to fill the 16:9 screen.

Zoom*



Displays cinemascopic (letter box format) broadcasts in the correct proportions.

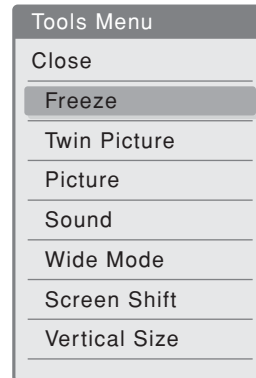
* Parts of the top and bottom of the picture may be cut off.







Tips

- Alternatively, you can set “Auto Wide” to “On”. The TV will automatically select the best mode to suit the broadcast (page 33).
- “Full 1”, “Full 2”, “Normal” and “Zoom” are available for Wide Mode when PC input is selected.

TOOLS operation (for TV)

You can access the following options quickly by pressing TOOLS. Available items differ depending on the screen mode and source.



Item	You can
Close	Close the Tools Menu.
Freeze	Freeze the screen (page 19).
Twin Picture	Display two screens (page 38).
Full Screen (Appears in Twin Picture mode.)	Returns to Full Screen.
Picture	Adjust picture (page 28).
Sound	Adjust sound (page 31).
Wide Mode	Select the screen mode (page 20).
Screen Shift	Adjust the screen position by pressing  /  /  /  (page 34).
Vertical Size	Adjust the picture size in vertical direction by pressing  /  (page 34). This menu appears only when the Zoom mode is selected.

Viewing pictures from connected equipment

Switch on the connected equipment, then press repeatedly until the correct input symbol (see below) appears on the screen.

On Screen Display	Input jacks
Video 1 or Video 1	Video : 1 (Rear) or Audio : 1 (Rear)
Video 2 or Video 2	Video : 2 (Side) Video : 2 (Side) Y, P _B /C _B , P _R /C _R Audio : 2 (Side)
Video 3	Video : 3 (Rear) Audio : 3 (Rear)
HD/DVD 1	Video : 1 (Rear) Y, P _B /C _B , P _R /C _R Audio : 1 (Rear)
HD/DVD 2	Video : 2 (Rear) Y, P _B /C _B , P _R /C _R Audio : 2 (Rear)
HDMI	Video/Audio : (Rear) HDMI IN Audio : (Rear)
PC	Video : (Rear) PC (RGB) Audio : (Rear) PC

To return to normal TV operation, press .

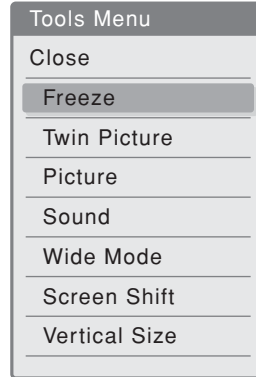
Note

To view the picture from the component input on the side panel, select "Auto" in "Video2(Component)" in "Setup" menu (page 40).

TOOLS operation (for connected equipment)

You can access the following options quickly by pressing TOOLS. Available items differ depending on the screen mode and source.

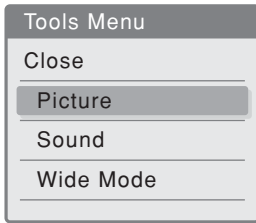
For video input



Item	You can
Close	Close the Tools Menu.
Freeze	Freeze the screen (page 19).
Twin Picture	Display two screens (page 38).
Full Screen (Appears in Twin Picture mode.)	Returns to Full Screen.
Picture	Adjust picture (page 28).
Sound	Adjust sound (page 31).
Wide Mode	Select the screen mode (page 20).
Screen Shift	Adjust the screen position by pressing /// (page 34).
Vertical Size	Adjust the picture size in vertical direction by pressing / (page 34). This menu appears only when the Zoom mode is selected.

Continued

For PC input




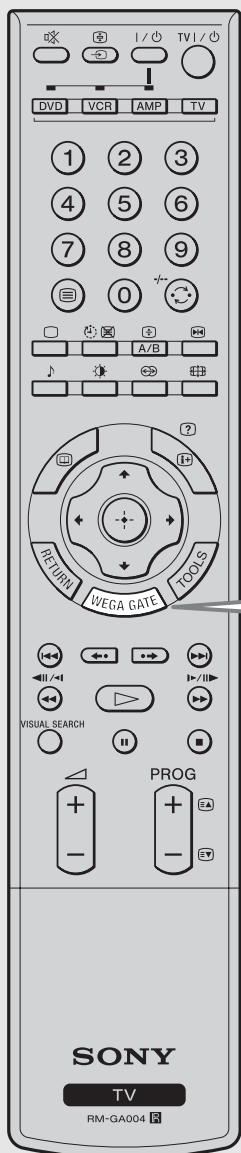
Item	You can
Close	Close the Tools Menu.
Picture	Adjust picture (page 28).
Sound	Adjust sound (page 31).
Wide Mode	Select the screen mode.

Introducing WEGA GATE

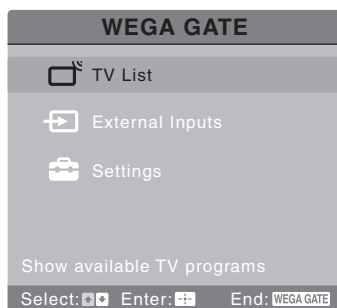
Overview of WEGA GATE

WEGA GATE provides one button access for controlling your TV. It enables you to perform a variety of tasks intuitively with a control panel on the screen rather than a variety of remote control button presses.

When you press , you can select from basic TV function: watching TV, viewing external equipment signals, adjusting TV settings.



- 1 Press **WEGA GATE** on the remote.
The **WEGA GATE** control panel appears.

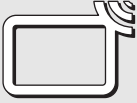


- 2 Press **↑/↓** to highlight the item you want.

- 3 Press **+** to select.

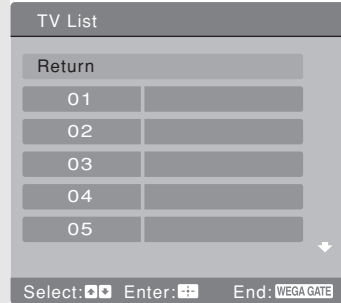
Press **WEGA GATE** to exit.

Using TV List in WEGA GATE



The TV List feature lets you select TV programs from a list of channel labels. You can assign a label to each channel. (page 36)

- 1 Select TV List from the WEGA GATE control panel and press **+**.
The TV List panel appears.
- 2 Press **↑/↓** to highlight the desired TV channel and press **+**.

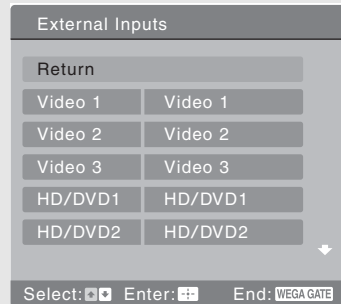


Using External Inputs in WEGA GATE



The External Inputs feature lets you select equipment that is connected to your TV, such as a DVD player/PC. You can assign a label to your equipment or skip unused inputs conveniently. (page 39)

- 1 Select External Inputs from the WEGA GATE control panel and press **+**.
The External Inputs panel appears.
- 2 Press **↑/↓** to highlight the desired external input and press **+**.



Using Settings in WEGA GATE

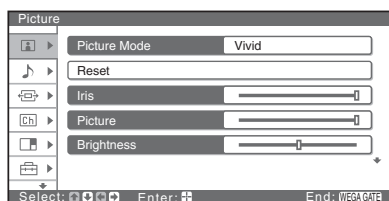


The Settings feature lets you adjust/set the Picture, Sound, Screen, Program, Twin Picture, Setup or Timer settings. For details, see page 26.

Overview of the Settings

The following options are available in each menu. Also, see page in parentheses for details of each menu.

Options for TV and video input



1 Picture

- Picture Mode (28)
- Reset (28)
- Iris/Picture/Brightness/Color/Hue (29)
- Color Temperature (29)
- Sharpness (29)
- Noise Reduction (29)
- DRC Mode (29)
- DRC Palette (30)
- Advanced Video (30)
 - Reset/Black Corrector/Advanced Iris/Gamma/Clear White/Live Color

2 Sound

- Sound Mode (31)
- Reset (31)
- Treble/Bass/Balance (31)
- Steady Sound (31)
- Volume Level (32)
- Effect (32)
- BBE (32)
- Speaker (32)
- Audio Out (32)

3 Screen

- Wide Mode (33)
- Auto Wide (33)
- 4:3 Default (33)
- Display Area (34)
- Screen Shift (34)
- Vertical Size (34)

4 Program

- Auto Program (35)
- Manual Program (35)
 - Program/TV System/Fine/Skip/Sensitivity/VHF Low/VHF High/UHF
- 1Digit Direct (36)
- Program Label (36)
- Program Block (36)
- Program Sorting (37)

5 Twin Picture

- On (38)
- Off (38)

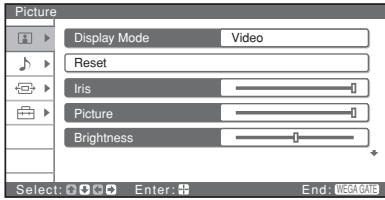
6 Setup

- Game Mode (39)
- Video Label (39)
- Language (39)
- Video2(Component) (40)
- Image Shift (40)
- High Altitude (40)
- Cinema Drive (40)
- Color System (40)
- Initial Reset (40)

7 Timer

- Sleep Timer (41)
- On Timer (41)

Options for PC input



1 Picture

- Display Mode (28)
- Reset (28)
- Iris/Picture/Brightness (29)
- Color Temperature (29)

2 Sound

- Sound Mode (31)
- Reset (31)
- Treble/Bass/Balance (31)
- Effect (32)
- Speaker (32)
- Audio Out (32)

3 Screen

- Wide Mode (33)
- Auto Adjustment (34)
- Phase/Pitch (34)
- Horizontal Center/Vertical Center (34)

6 Setup

- Power Management (39)
- Video Label (39)
- Language (39)
- Image Shift (40)
- High Altitude (40)

PC input signal compatibility chart

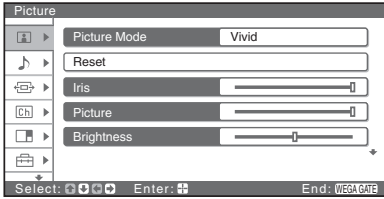
Signal	Resolution Horizontal (Pixel) × Vertical (Line)	Horizontal frequency (kHz)	Vertical frequency (Hz)	VESA standard
VGA	640 × 480	31.5	60	-*
	640 × 480	37.5	75	✓
	640 × 480	43.3	85	✓
	720 × 400	31.5	70	-*
SVGA	800 × 600	35.2	56	✓
	800 × 600	37.9	60	✓
	800 × 600	46.9	75	✓
	800 × 600	48.1	72	✓
XGA	1024 × 768	48.4	60	✓
	1024 × 768	56.5	70	✓
	1024 × 768	60	75	✓
WXGA	1280 × 768	47.4	60	✓
	1280 × 768	47.8	60	✓

* Corresponding to the VGA signal

Tips

- This TV's PC input does not support Sync on Green or Composite Sync.
- This TV's PC input does not support interlaced signals.
- This TV's PC input supports signals in the above chart with a 60 Hz vertical frequency. For other signals, "Unsupported Signal" will be displayed. For the best picture quality, it is recommended to use signals with a 60 Hz vertical frequency from a personal computer.

Picture menu



You can select the options listed below on the Picture menu.

To select options

- 1 Press .
- 2 Press \uparrow/\downarrow to select , then press \oplus .
- 3 Press \uparrow/\downarrow to select , then press \oplus .
- 4 Press \uparrow/\downarrow to highlight the option, then press \oplus .

Tip

The available options differ depending on the “Picture Mode” setting and input source.

- indicates the available options for TV.
- indicates the available options for video input.
- indicates the available options for PC input.

Picture Mode

Selects the picture mode.

Press \uparrow/\downarrow to select one of the following picture modes, then press \oplus .

Vivid: Enhanced picture contrast and sharpness.

Standard: Standard picture settings recommended for home entertainment.

Custom: Professional monitor like appearance settings.

Tip

You can also change the picture mode by pressing repeatedly.

Display Mode

Select the optimum display mode for video or text source.

Press \uparrow/\downarrow to select one of the following display modes, then press \oplus .

Video: Optimized to view video images.

Text: Optimized to view text, charts or tables.

Reset

Resets all the picture settings, except the “Advanced Video” setting, to the factory settings.

Press \leftarrow/\rightarrow to select “Ok”, then press \oplus .

Iris/Picture/Brightness **TV** **Video** **PC** / **Color/Hue** **TV** **Video**

“Iris” adjusts the contrast levels.

“Picture” increases picture contrast (the color becomes deeper), or decreases it (the color becomes softer).

“Brightness” brightens or darkens the picture.

“Color” increases or decreases color intensity.

“Hue” increases or decreases the green tone.

1 Press **+** to select the option.

2 Press **↑/↓** to set the level, then press **+**.

Tip

“Hue” can only be adjusted for an NTSC color signal (e.g., U.S.A. video tapes).

Color Temperature **TV** **Video** **PC**

Changes the color tone of the picture.

Press **↑/↓** to select one of the following, then press **+**.

Cool: Gives the white colors a blue tint.

Neutral: Gives the white colors a neutral tint.

Warm1/Warm2: Gives the white colors a red tint. Warm2 is redder than Warm1.

Tip

“Warm1/Warm2” only appears and can be adjusted if “Picture Mode” is set to “Custom”.

Sharpness **TV** **Video**

Sharpens or softens the picture.

Press **←/→** to set the level, then press **+**.

Noise Reduction **TV** **Video**

Reduces the picture noise (snowy picture) in a weak broadcast signal.

Press **↑/↓** to select one of the following, then press **+**.

Auto: Automatically reduces the picture noise.

High/Medium/Low: Modifies the effect of the noise reduction.

Off: Turns off the noise reduction feature.

Note

This option cannot be used in Twin Picture, Picture Freeze mode.

DRC Mode **TV** **Video**

Selects the density adjustment according to the source.

Press **↑/↓** to select one of the following, then press **+**.

High Density: Creates a high-resolution picture with four times density. Recommended for high quality sources such as DVD.

Progressive: Recommended for moving pictures.

Off: Deactivates the DRC Mode.

Notes

- This option cannot be used in Twin Picture, Picture Freeze mode.
- This option cannot be used for 480p, 576p, 720p, and 1080i sources.
- This option cannot be used when “Game Mode” is “On” (page 39).

DRC Palette **TV** **Video**

Allows you to customize the level of detail (Reality) and smoothness (Clarity) using the DRC palette displayed on the screen.

Press **↑/↓** to adjust Reality, or **←/→** to adjust Clarity, then press **⊕**.

Notes

- This option cannot be used in Twin Picture, Picture Freeze mode.
- This option cannot be used for 480p, 576p, 720p, and 1080i sources.
- This option cannot be used when “Noise Reduction” is “Auto” (page 29).
- This option cannot be used when “DRC Mode” is “Off” (page 29).
- This option cannot be used when “Game Mode” is “On” (page 39).

Advanced Video **TV** **Video**

You can adjust the following options.

“Reset” resets the settings of the options in “Advanced Video” to the factory settings.

“Black Corrector” enhances the contrast performance.

“Advanced Iris” controls Iris shutter automatically.

“Gamma” adjusts light and dark balance.

“Clear White” emphasizes the whiteness of the picture.

“Live Color” improves the vividness of colors.

1 Press **↑/↓** to select an option, then press **⊕**.

2 Press **↑/↓** to select a setting, then press **⊕**.

Black Corrector: High/Medium/Low/Off

Advanced Iris: High/Medium/Low/Off

Gamma: Max/High/Medium/Low/Off

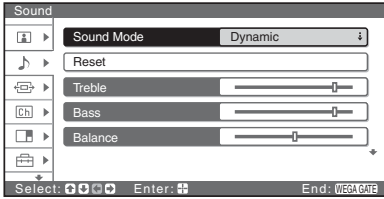
Clear White: High/Low/Off

Live Color: High/Medium/Low/Off

Tip

This option cannot be selected when “Picture Mode” is set to “Vivid” or “Standard”.

Sound menu



You can select the options listed below on the Sound menu.

To select options

- 1 Press .
- 2 Press \uparrow/\downarrow to select , then press \oplus .
- 3 Press \uparrow/\downarrow to select , then press \oplus .
- 4 Press \uparrow/\downarrow to highlight the option, then press \oplus .

TV

indicates the available options for TV.

Video

indicates the available options for video input.

PC

indicates the available options for PC input.

Note

You cannot operate the Sound menu when headphones are connected.

Sound Mode

TV

Video

PC

Selects the sound effects.

Press \uparrow/\downarrow to select one of the following sound effects, then press \oplus .

Dynamic: Enhances clarity, detail, and sound presence.

Standard: Suitable for spoken dialog.

Custom: Flat setting. Allows you to store your own preferred settings.

Tip

You can also change the sound mode by pressing repeatedly.

Reset

TV

Video

PC

Resets all the sound settings, except the “Sound Mode” setting, to the factory settings.

Press \uparrow/\downarrow to select “Reset”, then press \oplus .

Treble/Bass/Balance

TV

Video

PC

Adjusts higher-pitched sounds (Treble), adjusts lower-pitched sounds (Bass), and emphasizes left or right speaker balance (Balance).

1 Press \oplus to select the option.

2 Press \leftarrow/\rightarrow to set the level, then press \oplus .

Steady Sound

TV

Video

Keeps a constant volume level even when volume level gaps occur (e.g., advertisements tend to be louder than programs).

Press \uparrow/\downarrow to select “On”, then press \oplus .

Volume Level TV Video

Decreases or increases the sound level.

Press **←/→** to set the level, then press **⊕**.

Effect TV Video PC

Provides the surround sound effect.

Press **↑/↓** to select one of the following sound effects, then press **⊕**.

TruSurround XT: Activates the surround sound (for stereo programs only).

Simulated: Adds a surround-like effect to mono programs.

Off: For normal stereo or mono reception.

Tips

- Simulated function is using SRS 3D Mono.
- You can also select the surround sound effect by pressing **↔** repeatedly.

BBE TV Video

Gives sound impact by compensating for the phase effects in speakers.

Press **↑/↓** to select one of the following, then press **⊕**.

High: The sound is reproduced with more impact.

Low: The sound is reproduced with impact.

Off: For normal stereo or mono reception.

Speaker TV Video PC

Switches on/off the TV's internal speakers.

Press **↑/↓** to select "On" or "Off", then press **⊕**.

On: The sound of the TV is output through the TV's speakers.

Off: No sound is output through the TV's speakers. Select "Off" when you want to hear the sound only through the external audio equipment connected to the audio output jacks **⊖**.

Audio Out TV Video PC

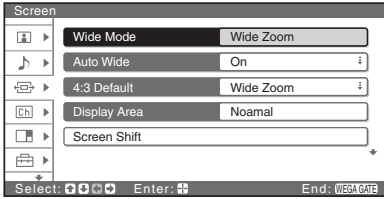
Sets the method used to adjust the volume from the connected audio system. This option can be selected only when "Speaker" is set to "Off".

Press **↑/↓** to select one of the following, then press **⊕**.

Variable: The audio output level from the connected audio system can be controlled by the TV's remote.










Fixed: The audio volume is fixed on the TV. Adjust the volume (and the audio settings) on the audio system.

Screen menu



You can select the options listed below on the Screen menu.

To select options

- 1 Press .
- 2 Press  to select , then press .
- 3 Press  to select , then press .
- 4 Press  to highlight the option, then press .

 indicates the available options for TV.

 indicates the available options for video input.



 indicates the available options for PC input.

Note

You cannot operate the Screen menu in Twin Picture or Picture Freeze mode.

Wide Mode


Selects the wide mode manually. For details about the wide mode, see page 20.

Press  to select “Wide Zoom”, “Normal”, “Full” or “Zoom” (see page 20 for details), then press .

Note



You cannot select “Normal” when input signals are 720p/1080i.

Tip

You can also select the wide mode manually by pressing  repeatedly.

Auto Wide

Automatically changes the screen format according to the broadcast signal.


Press  to select “On”, then press .

To keep your setting, select “Off”.

Note



You cannot select “Normal” when input signals are 720p/1080i.

Tip

Even if you have selected “On” or “Off” in “Auto Wide”, you can always modify the format of the screen by pressing  repeatedly.

4:3 Default

Sets the way to enlarge the 4:3 picture to fill the 16:9 screen.

Press  to select one of the following, then press .

Wide Zoom: Enlarges the 4:3 picture to fill the 16:9 screen, keeping the original image as much as possible.

Normal: Returns the 4:3 picture to its original size.

Full: Enlarges the 4:3 picture horizontally only.

Zoom: Displays cinematic (letter box format) broadcasts in the correct proportions.

Off: Continues using the current Wide Mode setting when the channel or input is changed.

Note

You cannot select “Normal” when input signals are 720p/1080i.

Display Area TV Video

Slightly enlarges the screen.

Press **↑/↓** to select “-1”, or “-2” to enlarge more, then press **⊕**.

To restore the original size, select “Normal”.

Screen Shift TV Video

Adjusts the screen position horizontally and vertically, however, vertical adjustment is available only in Zoom mode.

Press **↑/↓** to adjust the vertical position, or **←/→** to adjust the horizontal position, then press **⊕**.

Tip

You can access this option quickly by pressing TOOLS.

Vertical Size TV Video

Adjusts the vertical size of the picture in Zoom mode.

Press **↑/↓** to adjust the size, then press **⊕**.

Tip

You can access this option quickly by pressing TOOLS.

Auto Adjustment PC

Adjusts the display position of the picture automatically.

Press **←** to select “Start”, then press **⊕**.

To cancel this operation, select “Cancel”.

Phase/Pitch PC

“Phase” adjusts the phase to reduce flickering of the screen.

“Pitch” adjusts the pitch to make unwanted vertical stripes disappear.

1 Press **⊕** to select the option.

2 Press **↑/↓** to improve the screen appearance, then press **⊕**.

Horizontal Center/Vertical Center PC

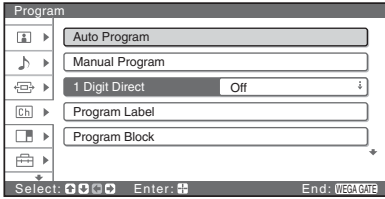
“Horizontal Center” adjusts the horizontal position of the picture.

“Vertical Center” adjusts the vertical position of the picture.

1 Press **⊕** to select the option.




2 Press **↑/↓** to adjust the position, then press **⊕**.




Program menu



You can select the options listed below on the Program menu.

To select options

- 1 Press .
- 2 Press \uparrow/\downarrow to select , then press \oplus .
- 3 Press \uparrow/\downarrow to select , then press \oplus .
- 4 Press \uparrow/\downarrow to highlight the option, then press \oplus .

-  indicates the available options for TV.
-  indicates the available options for video input.
-  indicates the available options for PC input.

Auto Program

Tunes in all the available channels.

Usually you do not need to perform this operation because the channels are already tuned in when the TV is first installed (page 16). However, this option allows you to repeat the process (e.g., to retune the TV after moving house, or to search for new channels that have been launched by broadcasters).


Follow the operation of “6: Auto-programming the TV” (page 16).

When all available channels have been tuned in, the TV returns to normal operation.

Manual Program

Allows you to preset, adjust, skip, and tune in channels manually.

Press \uparrow/\downarrow to select one of the following options, then press \oplus .

Option	Description
Program	Presets channels manually.
TV System	<ol style="list-style-type: none"> 1 Press \uparrow/\downarrow to select “Program”, then press \oplus. 2 Press \uparrow/\downarrow to select the program number you want to manually tune in, then press \leftarrow. 3 Press \uparrow/\downarrow to select “TV System”, then press \oplus. 4 Press \uparrow/\downarrow to select the best received TV broadcast systems, then press \leftarrow. Repeat the procedure above to preset other channels manually. 5 Press .
Fine	<p>Fine-tunes the selected program number manually if you feel that a slight tuning adjustment will improve the picture quality. (Normally, fine tuning is performed automatically.)</p> <p>Press \uparrow/\downarrow to adjust the fine tuning, then press \oplus.</p> <p>To restore automatic fine tuning, select “Auto”.</p>

Continued

Option	Description
Skip	Skips unused channels when you press PROG +/- to select channels. (You can still select a skipped channel using the number buttons.) Press ↑/↓ to select "On", then press ⊕ . To restore a skipped channel, select "Off".
Sensitivity	Adjusts the TV reception sensitivity if the TV signal is too strong and the picture is distorted. Press ↓ to select "Low", then press ⊕ .
VHF Low/ VHF High/ UHF	Tunes in a channel manually. Press ←/→ until the desired channel's broadcast appears on the TV screen, then press ⊕ . Tip The frequency range indication (VHF Low, VHF High, or UHF) switches automatically as you keep pressing ←/→ . Note If the TV reception is not satisfactory, adjust the above options.

1Digit Direct **TV**

Setting "1Digit Direct" to "On", you can switch the channel to the one assigned to a number button as soon as you press the button. To enjoy the benefit of this feature, assign the channels you frequently watch to the program positions which are equivalent to the number buttons using "Program Sorting" (page 37).

Press **↑/↓** to select "On", then press **⊕**.

Tip

If there are many two-digit channels and you select them using the number buttons, select "Off".

Program Label **TV**

Assigns a channel name of your choice up to five letters or numbers. The name will be displayed briefly on the screen when the channel is selected.

- 1 Press **↑/↓** to select the channel you want to name.
- 2 Press **←/→** to select the position to input a character, **↑/↓** to select the desired letter or number.
- 3 Repeat the procedure in step 2 until the name is complete, then press **⊕**.

Program Block **TV**

Blocks an individual channel from being watched.

- 1 Press **↑/↓** to select the channel you want to block, then press **⊕**.
- 2 Press **↑/↓** to select "Block", then press **⊕**.
To watch the channel, select "Allow".

Program Sorting

Channels are assigned to the program positions sequentially when they are tuned in during auto-programming. “Program Sorting” allows you to replace the channel assigned to a program position with another channel.

- 1** Press **↑/↓** to select the channel you want to assign to another program position, then press **⊕**.
- 2** Press **↑/↓** to select the program position you want to assign the channel to, then press **⊕**.
Repeat the procedure in steps 1 and 2 to reassign other channels, if required.

Twin Picture menu



To select options

- 1 Press .
- 2 Press to select , then press .
- 3 Press to select , then press .

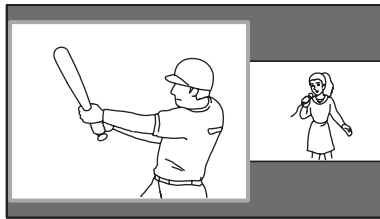
- indicates the available options for TV.
 indicates the available options for video input.
 indicates the available options for PC input.

Twin Picture

You can view different pictures at the same time.

Press to select “On”.

Two screens are displayed.



Note

PC input pictures are not displayed on the Twin Picture screens.

Tips

- You can select the same program for both screens.
- Pictures input through the HDMI and component jacks are not displayed on the right screen.
- You can access this option quickly by pressing TOOLS.

To switch the active screen (the screen framed in green)

Press .

To change the program on the active screen

Press PROG +/-.

To change the program on the inactive screen

Press .

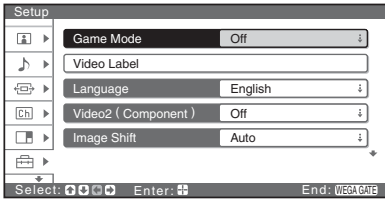
To change the input source

- 1 Select the active screen.
- 2 Press / repeatedly.

To return to Full screen

Press .

Setup menu



You can select the options listed below on the Setup menu.

To select options

- 1 Press .
- 2 Press to select , then press .
- 3 Press to select , then press .
- 4 Press to highlight the option, then press .

- indicates the available options for TV.
- indicates the available options for video input.
- indicates the available options for PC input.

Game Mode

The TV is optimized for playing games.

Press to select "On".

Power Management

Switches to standby mode when there is no signal input for 10 minutes.

Press to select "On", then press .

Tip

"TV will turn off soon" appears on the screen one minute before the TV switches to standby mode.

Video Label

Assigns a name (jack number or equipment type) to the equipment connected to the side and rear jacks. The name will be displayed briefly on the screen when the equipment is selected.

- 1 Press to select the jack you want to name, then press .
- 2 Press to select a desired name, then press .
- 3 Repeat steps 1 and 2 to name other jacks.

Tip

To make the jack that no equipment is connected not to be displayed, select "Skip" in step 2.

Language

Selects the language in which the menus are displayed.

Press to select the language, then press .

All menus will appear in the selected language.

Video2(Component) **TV** **Video**

Selects the type of the video jack to be used from those on the left side of the TV.

Press **↑/↓** to select one of the following, then press **⊕**.

Auto: Activates the component video jacks (Y, Pb/Cb, Pr/Cr), however, the composite video jack is selected when the component video jacks are not connected.

Off: Activates the composite video jack (**→**).

Image Shift **TV** **Video** **PC**

Corrects the image on your TV.

Before adjusting



After adjusting



Auto (Factory setting): Automatically corrects double images.

Level 1-4: Aligns the images and improve the picture. The adjusted value tends to move strongly away from Level 1, and towards Level 4.

High Altitude **TV** **Video** **PC**

Selects On when you use the TV at an altitude of 5,000 feet (1,500 m) or higher.

Press **↑/↓** to select “On”, then press **⊕**.

Cinema Drive **TV** **Video**

Provides an optimized display by automatically detecting the film content. Moving pictures will appear clearer and more natural-looking.

Press **↑/↓** to select “Auto”, then press **⊕**.

Tip

You can select this option for NTSC system pictures only.

Color System **TV** **Video**

Sets the color system of the TV to that of the source you want to play back.

Press **↑/↓** to select the color system, then press **⊕**.

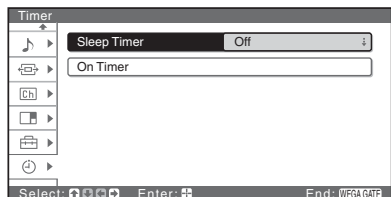
Usually select “Auto” so that an appropriate color system for the source is selected automatically.

Initial Reset **TV** **Video**

Resets all the manual settings to the factory settings.










Press **←** to select “Ok”, then press **⊕**. Repeat this operation once more.

Timer menu



You can select the options listed below on the Timer menu.

To select options

- 1 Press .
- 2 Press  to select , then press .
- 3 Press  to select , then press .
- 4 Press  to highlight the option, then press .



indicates the available options for TV.





indicates the available options for video input.



indicates the available options for PC input.



Sleep Timer

Sets a period of time after which the TV automatically switches itself into standby mode.

Press  to select the desired time period in minute (“15M”/“30M”/“45M”/“60M”/“90M”/“120M”), then press .

The  (Timer) indicator on the TV (front side) lights up in amber.

Tips

- You can set the sleep timer by pressing  repeatedly.
- If you switch off the TV and switch it on again, “Sleep Timer” is reset to “Off”.
- “TV will turn off soon” appears on the screen one minute before the TV switches to standby mode.
- If you press , the remaining time in minutes before the TV switches to standby mode is displayed on the screen.

On Timer



Sets a time when the TV automatically switches itself on.

1 Press  to select “Timer Set”, then press .

2 Press  to select “On”, then press .

The  (Timer) indicator on the TV (front side) lights up in amber.

3 To set the time, press  to select “Time”, then press .

4 Set the hour using , then press .

5 Set the minute using , then press .

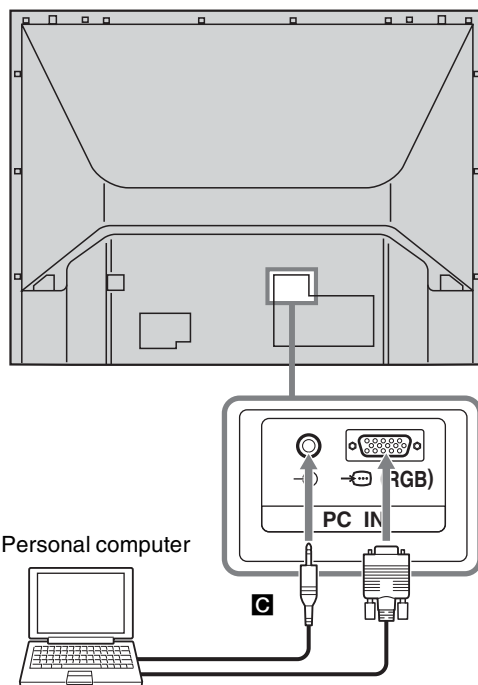
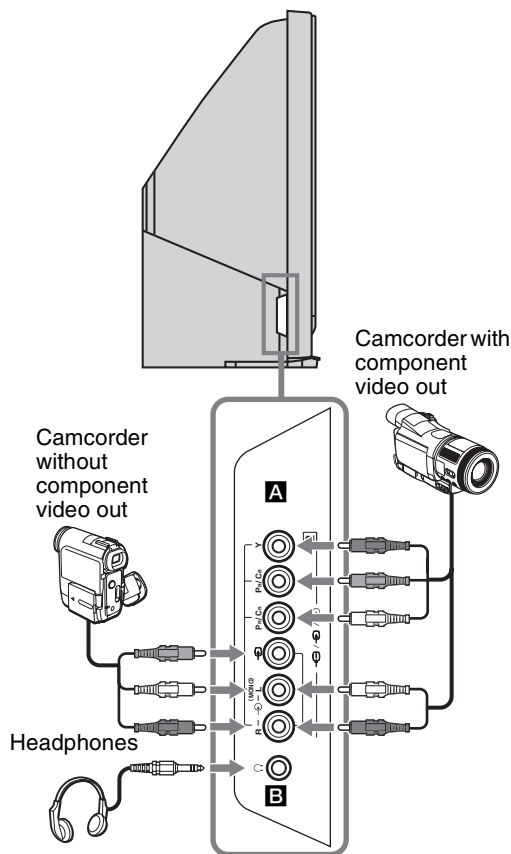
Tips

- To cancel the on-timer setting, select “Off” in step 2.
- You can set the on-timer in 10-minute increment for up to 12 hours later.
- If the TV is not operated for two hours after it is turned on by the on-timer, the TV automatically switches itself to standby mode.

Connecting optional equipment

You can connect a wide range of optional equipment to your TV.
Connect the cables, matching the colors of the plugs with those of the jack.

Connecting to the side/rear of the TV



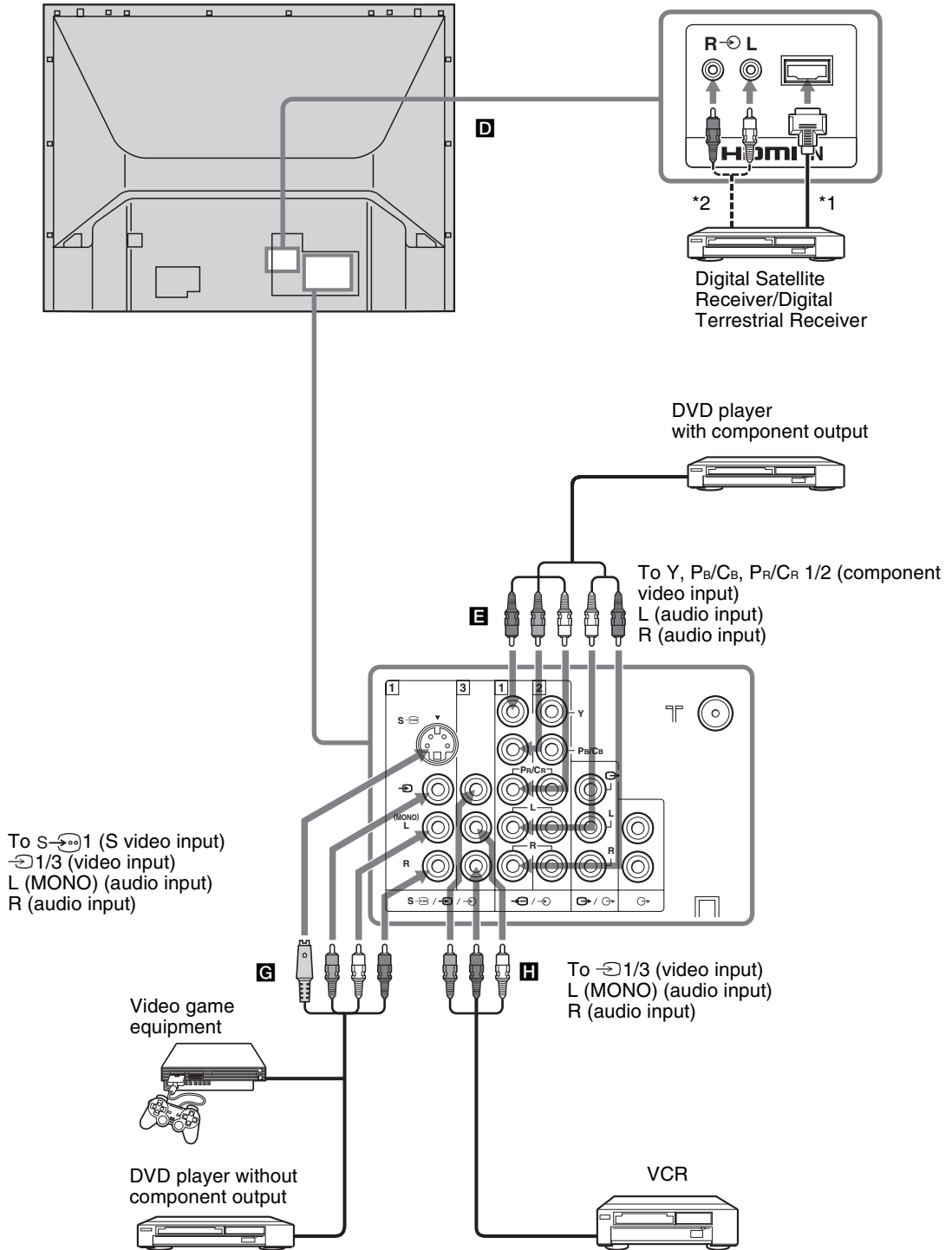
To connect	Do this
Personal computer C	Connect to the PC Input jack RGB and the audio jack on the rear of the TV.

To connect	Do this
Camcorder or video game equipment A	Connect to the video jack 2, or component jack 2, and the audio jacks 2. If you connect mono equipment, connect it to the L(MONO) jack 2 (page 43).
Headphones B	Connect to the jack to listen to sound from the TV on headphones.

Note

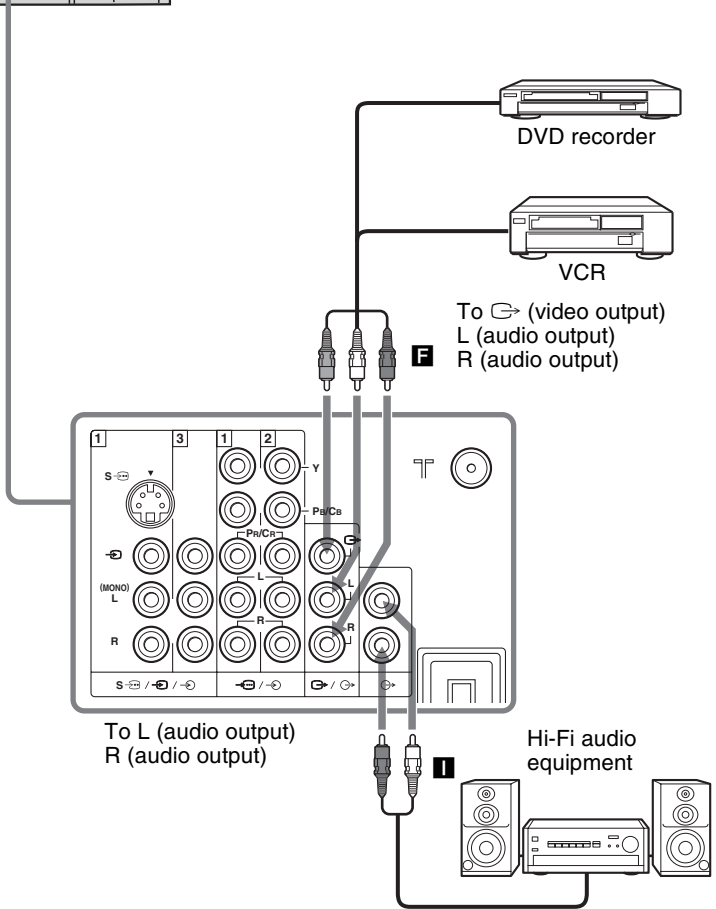
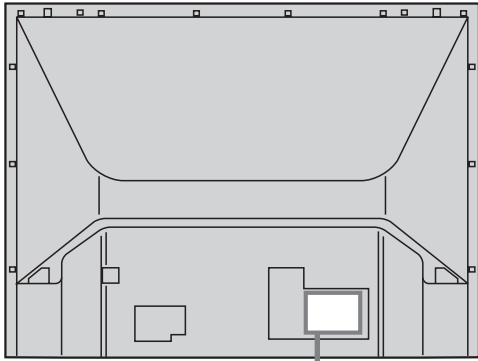
To see the image from Component input on the side panel, select "Auto" in "Video2(Component)" in "Setup" menu (page 40).

Connecting to the rear of the TV



*1 Use an HDMI cable, HDMI-to-DVI cable, or adaptor (not supplied).
 *2 When using an HDMI cable, it is not necessary to connect the audio cable. When using an HDMI-to-DVI cable or an adaptor, it is necessary to connect the audio cable.

Continued



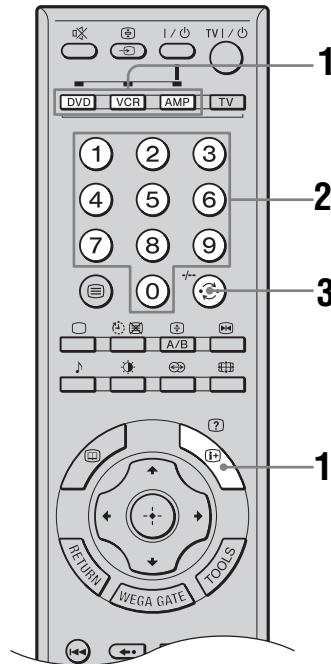
To connect	Do this
Digital satellite receiver or digital terrestrial receiver D	<p>Connect only to the HDMI IN jack. The digital video and audio signals are input from the digital receiver.</p> <p>Tip If the digital receiver has an HDMI jack, connecting via an HDMI cable will provide the best results.</p> <p>Note When using an HDMI-to-DVI cable or an adapter, be sure to connect the DVI output connector first; then connect to the HDMI jack on the TV.</p>
DVD player with component output E	<p>Connect to the component jack → 1, 2 and the audio jacks → 1, 2. For better picture quality, component connection is recommended if your DVD player has a component output.</p>
DVD recorder or VCR F	<p>Connect to the video output jacks → to record the image from the TV. Connect to the audio output jacks → to record to the sound from the TV on the DVD recorder or VCR. To turn off the sound of the TV speakers, set "Speaker" to "Off" (page 32).</p>
Video game equipment or DVD player without component output G H	<p>Connect to the S video jack S → 1 or the video jack → 1, 2 or 3, and the audio jacks → 1, 2 or 3. To avoid picture noise, do not connect the camcorder to the video jack → 1 and the S video jack S → 1 at the same time. If you connect mono equipment, connect to the L (MONO) jack → 1, 2 or 3.</p>
Hi-Fi audio equipment I	<p>Connect to the audio output jacks → to listen to the sound from the TV on the Hi-Fi audio equipment. To turn off the sound of the TV speakers, set "Speaker" to "Off" (page 32).</p>

Programming the remote

If you have Sony VCRs/DVDs and Sony DVD Home Theater Systems/Amplifiers, do the following procedure to program the remote so that you can operate them using this remote.

Note

Before you start, look up the three-digit code for your equipment on page 46. For equipment that has more than one code, try with the first code number.



- 1 Press and hold the DVD, VCR, or AMP function button you want to program on the remote and press the **(+/-)/?** button simultaneously.
The selected function button (DVD, VCR, or AMP) will flash.
- 2 Enter the three-digit code using the number buttons while the function button is lit. (approximately 10 seconds)
- 3 Press **(-/+)** or **(+)** to complete the programming.
When the programming is done successfully, the selected function button will flash twice slowly, and if not, will flash five times quickly.

Continued

To check if the code works

Aim the remote to the equipment, then press . If the equipment responds, the programming is completed. If not, try the next code listed.

Equipment's codes

Equipment	Code
VCR	001*, 002, 003, 004
DVD	101*, 151, 201, 202, 203
Amplifier	301, 302, 303, 304, 401*, 402, 403, 451

* Factory setting

To set the remote to restore operation of the TV automatically

In the factory setting, the remote is set to operate a piece of equipment selected by one of the function buttons. The remote operates the equipment until another function button is pressed.

You can set the remote to operate the TV automatically if the remote has not been used to operate the other equipment for 30 seconds.

You can select either setting by the following operation.

Holding TV down, press and PROG- simultaneously.

When the remote returns to operate the TV, the TV button will light up.

When the remote is set to operate a different piece of equipment, all four function buttons will light up simultaneously.

Using other equipment with the remote

To operate other connected equipment, first program the necessary code.

Note

Some functions cannot be operated with the TV's remote depending on the equipment. In that case, use the remote supplied with the equipment.

To operate a VCR

To	Press
activate the remote to operate VCR the VCR	
turn on/off	
change channels	PROG+/-
record	REC

To	Press
stop recording	REC STOP
pause recording	REC PAUSE (press again to resume recording)
play	
stop	
fast forward	
rewind the tape	
pause	(press again to resume normal playback)
search the picture forward or backward	or during playback (release to resume normal playback)

To operate a DVD player

To	Press
activate the remote to operate DVD the DVD	
turn on/off	
play	
stop	
pause	(press again to resume normal playback)
step through different tracks of the disc	to fast reverse, or to fast forward the disc during playback
step through different chapters of the disc	to step forward, or to step backward
select a track directly	0-9, /-/-
display the top menu	DVD TOP MENU
display the disc menu	DVD MENU
operate the DVD menu	,
select the SYSTEM MENU	WEGA GATE

To operate a 5.1ch DVD AV System (DAV)

To	Press
activate the remote to operate DVD the DVD	
turn on/off	
display the top menu	DVD TOP MENU
display the disc menu	DVD MENU
play	
stop	

To	Press
pause	⏸ (press again to resume normal playback)
search the picture forward or backward	▶▶ or ◀◀ during playback
specify the previous chapter/track	◀◀◀
specify the next chapter/track	▶▶▶
move highlight (cursor), and select	↑ ↓ ← →, ⊕
change volume	△+/-, ✖

To operate a DVD/VCR combo unit

To	Press
activate the remote to operate DVD or VCR the DVD or VCR	
turn on/off	⏻
display the top menu (DVD)	DVD TOP MENU
display the disc menu (DVD)	DVD MENU
play	▶
stop	■
pause	⏸ (press again to resume normal playback)
search the picture forward or backward	▶▶ or ◀◀ during playback
replay (DVD)	◀•
advance (DVD)	•▶
move highlight (cursor), and select (DVD)	↑ ↓ ← →, ⊕
Record (VCR)	REC ●
stop recording (VCR)	REC STOP ■
pause recording (VCR)	REC PAUSE ⏸ (press again to resume recording)
change channels (VCR)	PROG+/-, 0-9, ↻ / -/-- (using tuner)
adjust tracking (VCR)	PROG+/- (during tape playback)

To operate an HDD/DVD combo unit

To	Press
activate the remote to operate the HDD/DVD	
turn on/off	⏻
select the HDD	F1
select the DVD	F2
play	▶
stop	■
pause	⏸ (press again to resume normal playback)
search the picture forward or backward	▶▶ or ◀◀ during playback
replay (DVD)	◀•
advance (DVD)	•▶
move highlight (cursor), and select	↑ ↓ ← →, ⊕
specify the previous chapter/track	◀◀◀
specify the next chapter/track	▶▶▶
Record	REC ●
stop recording	REC STOP ■
pause recording	REC PAUSE ⏸ (press again to resume recording)
display the top menu (DVD)	DVD TOP MENU
display the disc menu (DVD)	DVD MENU
select the SYSTEM MENU	WEGA GATE
search a scene from the chapter list	VISUAL SEARCH
select another input signal connected to the input	→/⊕

To operate an AV Receiver/amplifier

To	Press
activate the remote to operate the amplifier	
turn on/off	⏻
master volume	△+/-, ✖
select other input connected to the AV receiver/amplifier	→/⊕

Replacing the lamp

The projection lamp, which illuminates the picture, has a limited life.

If the screen becomes dark, the color looks unusual, or the LAMP indicator on the front of the LCD projection TV flashes, it is time to replace the lamp with a new one (not supplied).

WARNING

Electric appliances can cause fire or high temperature, resulting in injury or death. Be sure to follow the instructions below.

- Use a Sony XL-2400 replacement lamp (not supplied) for replacement. Use of any other lamp may damage the LCD projection TV.
- Do not remove the lamp for any purpose other than replacement. Doing so may cause injury or fire.
- Do not put flammable materials and metal objects inside the lamp receptacle of the TV after removing the lamp. Doing so may cause fire or electrical shock. Do not touch the lamp receptacle once the lamp has been removed.
- When the lamp eventually burns out, you may hear a noticeable pop sound. This is normal and it is inherent to this type of lamp.
- In rare instances, the bulb may pop inside the lamp unit, but the lamp unit is designed to contain all of the broken glass pieces inside the lamp unit.

Disposing of the lamp

This product contains mercury. For disposal or recycling information, please contact your local authorities.

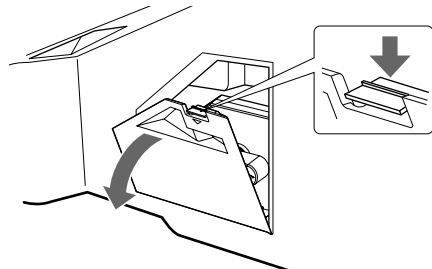
- Do not leave the used lamp near flammable materials or within the reach of children.
- Do not pour water onto the used lamp or put any object inside the lamp. Doing so may cause the lamp to burst.

- 1** Turn off the power on the main unit. Wait several minutes, then unplug the power cord.
(The cooling fan will continue to blow for about two minutes after turning the power off.)
- 2** Wait at least 30 minutes after unplugging the power cord to allow the lamp to cool down before replacing it. To avoid being burned, do not touch the lamp receptacle once the lamp has been removed.
- 3** Take the new lamp out of the box. Do not touch the glass portion of the new lamp.

Notes

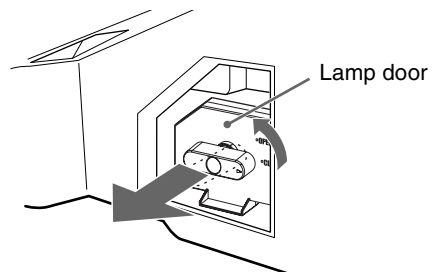
- Do not shake the lamp. Vibration can damage the lamp or shorten its life.
- Avoid touching the front glass of a new lamp or the glass of the lamp receptacle. This may reduce picture quality or lamp life.

- 4** Remove the outside lamp cover.



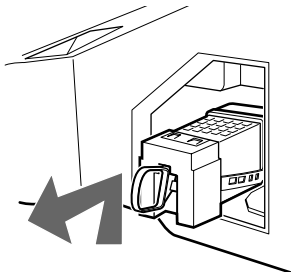
- 5** Remove the lamp door.

Turn the knob counterclockwise to OPEN and pull out the cover.



6 Pull out the lamp.

Hook a finger through the loop of the lamp handle and pull the handle upwards. Then pull the lamp straight out.

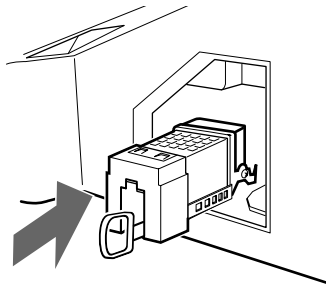


Notes


- The lamp is very hot immediately after use. Never touch the glass portion of the lamp or the surrounding parts.
- After the used lamp has cooled, place it into the empty box of the replacement lamp. Never put the used lamp into a plastic bag.

7 Put the new lamp into its place.

Mount the new lamp securely. Failure to do so may cause a fire or the screen to go dark.

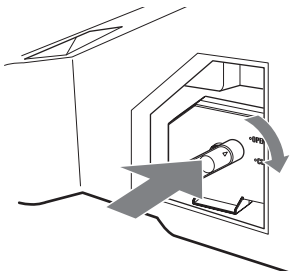


Note

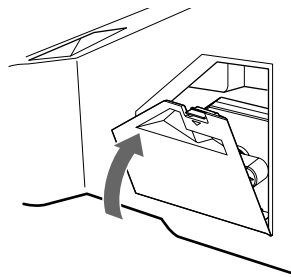
If the lamp is not securely reattached, the self-diagnostic function may be triggered and the  indicator flashes three times (see page 10).

8 Reattach the lamp door.

Turn the knob back to CLOSE and secure the cover.



9 Put the outside lamp cover back in its place.



Notes

- Consult your Sony dealer for a Sony XL-2400 replacement lamp.
- Take great care when replacing the lamp or plugging in/unplugging the connecting cords. Rough handling may cause the TV to fall, damaging the TV, the TV stand and the floor.

Specifications

Display Unit

Power Requirement:

220-240 V AC, 50/60 Hz

Projection System

3 LCD (Liquid Crystal Display) Panels, 1 lens projection system

LCD Panel

Size 0.73 inch TFT LCD panel

Resolution 1,280 pixels × 720 lines

Projection Lenses

High performance, large-diameter highbrid lens F2.4

Lamp

UHP lamp, 100 W, XL-2400

Screen Size:

KF-E50A10: 50 inches (approx. 125.5 cm measured diagonally)

KF-E42A10: 42 inches (approx. 105.2 cm measured diagonally)

Display Resolution:

1,280 pixels (horizontal) × 720 lines (vertical)

Power Consumption:

KF-E50A10: 195 W

KF-E42A10: 195 W

Standby Power Consumption:

KF-E50A10: 1 W or less

KF-E42A10: 1 W or less

Dimensions (w × h × d):

KF-E50A10:

Approx. 1,184 × 827 × 408 mm

KF-E42A10:

Approx. 999 × 722 × 357 mm

Weight:

KF-E50A10: Approx. 32 kg

KF-E42A10: Approx. 27 kg

TV System

I, D/K, B/G, M

Colour System

PAL, PAL60, SECAM, NTSC 4.43, NTSC 3.58

Antenna

75 ohm external terminal

Channel Coverage

B/G

VHF: E2 to E12 / UHF: E21 to E69 /

CATV: S01 to S03, S1 to S41

VHF: 0 to 12, 5A, 19A / UHF: 28 to 69 /

CATV: S01 to S03, S1 to S41(Australia only)

VHF: 1 to 11 / UHF: 21 to 69 /

CATV: S01 to S03, S1 to S41(New Zealand only)

I

UHF: B21 to B68 / CATV: S01 to S03, S1 to S41

D/K

VHF: C1 to C12, R1 to R12 / UHF: C13 to C57, R21 to R60 /


CATV: S01 to S03, S1 to S41, Z1 to Z39

M

VHF: A2 to A13 / UHF: A14 to A79 /


CATV: A8 to A2, A to W+4, W+6 to W+84

Terminals

S VIDEO 1 (4-pin mini DIN): S 

Y: 1.0 Vp-p, 75 ohms unbalanced, sync negative

C: 0.286 Vp-p (Burst signal), 75 ohms

VIDEO/AUDIO IN 1/3: 


VIDEO: 

1 Vp-p, 75 ohms unbalanced, sync negative

AUDIO: 

500 mVrms

Impedance: 47 kilohms

VIDEO/AUDIO IN 2: 


Y, Pb/Cb, Pr/Cr (Component video) :

Y : 1.0 Vp-p, 75 ohms unbalanced, sync negative

Pr/Cr : 0.7 Vp-p, 75 ohms

Pb/Cb : 0.7 Vp-p, 75 ohms

Signal format : 480i, 576i, 480p, 576p, 720p, 1080i


VIDEO: 

1 Vp-p, 75 ohms unbalanced, sync negative

AUDIO: 

500 mVrms

Impedance: 47 kilohms

HD/DVD IN 1/2: 


Y, Pb/Cb, Pr/Cr (Component video) :

Y : 1.0 Vp-p, 75 ohms unbalanced, sync negative

Pr/Cr : 0.7 Vp-p, 75 ohms


Pb/Cb : 0.7 Vp-p, 75 ohms

Signal format : 480i, 576i, 480p, 576p, 720p, 1080i

AUDIO: 

500 mVrms

Impedance: 47 kilohms


VIDEO/AUDIO OUT: 

VIDEO: 

1 Vp-p, 75 ohms unbalanced, sync negative

AUDIO: 

More than 1 Vrms at the maximum volume setting

AUDIO OUT: 

More than 1 Vrms at the maximum volume setting
(Variable)

More than 500 mVrms (Fixed)

PC IN :

VIDEO:  (RGB)

D-sub 15-pin, analogue RGB, 0.7 Vp-p, 75 ohms,
positive

AUDIO: 

Stereo minijack, 0.5 Vrms, 1 kilohm

See the PC Input Signal Compatibility Chart on page 27.

HDMI IN:

HDMI

Video: 480i, 480p, 576i, 576p, 720p, 1080i

Audio: Two channel linear PCM 32, 44.1 and
48 kHz, 16, 20 and 24 bits

AUDIO: 

500 mVrms (100% modulation)

Impedance: 47 kilohms

Headphones

Stereo minijack

Impedance: 16 ohms

Sound Output

KF-E50A10: 12 W + 12 W


KF-E42A10: 12 W + 12 W

Optional accessories

- TV stand
KF-E50A10: SU-RG11M, KF-E42A10: SU-RG11S



Design and specifications are subject to change
without notice.

Troubleshooting

Check whether the **I**  indicator is flashing in red.

When it is flashing






The self-diagnosis function is activated.

- 1 Measure how many times the **I**  indicator flashes and stops flashing.
For example, the indicator flashes for two seconds, stops flashing for one second, and flashes for two seconds.
- 2 Press  on the TV (front side) to switch it off, disconnect the AC power cord, and inform your dealer or Sony service center of how the indicator flashes (duration and interval).

When it is not flashing

- 1 Check the items in the tables, below.
- 2 If the problem still persists, have your TV serviced by qualified service personnel.

Picture

Problem	Cause/Remedy
No picture (screen is dark) and no sound	<ul style="list-style-type: none">• Check the power cord, antenna, and VCR connection.• The TV is not turned on. Press  on the TV (front side).• If the I  indicator lights up in red, press TV I/.
No picture or no menu information from equipment connected to the video input jack	<ul style="list-style-type: none">• Check that the optional equipment is on and press / repeatedly until the correct input symbol is displayed on the screen.• Check the connection between the optional equipment and the TV.
Distorted picture	<ul style="list-style-type: none">• Check if any connected optional equipment is installed in front of the TV or beside the TV. When installing optional equipment, leave some space between the optional equipment and the TV.• When changing channels, turn off any equipment connected to the video input jack on the rear of the TV.• Broadcast signals are too strong. Turn off or disconnect the booster if it is in use.
Double images or ghosting	<ul style="list-style-type: none">• Check antenna/cable connections.• Check the antenna location and direction. Contact a Sony dealer for advice.• Set Image Shift to an appropriate value. The default setting is Auto. If doubled images appear with Auto, select the best value from 1 to 4 (see page 40).• Broadcast signals are reflected by nearby mountains or building. Use the fine tuning (“Fine”) function (page 35). Otherwise, use a highly direction antenna.• Use of a booster is inappropriate. Turn off or disconnect the booster if it is in use.
Snowy picture and noisy sound	<ul style="list-style-type: none">• The antenna connection is loose or the antenna cable is damaged. Check the cable and connection on the TV, VCR, and on the wall (page 14).• Channel presetting is inappropriate or incomplete. Perform “Manual Program” in the “Program” menu to preset the channel again (page 35).• The antenna type is inappropriate. Check the antenna type (VHF/UHF). Contact a Sony dealer for advice.• The antenna direction needs adjustment. Adjust the antenna direction. Contact a Sony dealer for advice.• Signal transmission is low. Try using a booster.

Problem	Cause/Remedy
Only snow and noise appear on the screen	<ul style="list-style-type: none"> • Check if the antenna is broken or bent. • Check if the antenna has reached the end of its serviceable life (three to five years in normal use, one to two years at the seaside).
Picture noise (dotted lines or stripes)	<ul style="list-style-type: none"> • Keep the TV away from electrical noise sources such as cars, motorcycles, or hair-dryers, etc. • Make sure that the antenna is connected using the antenna cable (not supplied). • Keep the antenna cable away from other connecting cables. • Do not use a 300-ohm twin lead cable as interference may occur. • Adjust the antenna direction for the minimum interference. Contact a Sony dealer for advice.
Picture noise when viewing a TV channel	<ul style="list-style-type: none"> • Select “Manual Program” in the “Program” menu and adjust “Fine” to obtain better picture reception (page 35). • Select “Noise Reduction” in the “Picture” menu to reduce the noise in the picture (page 29).
Stripe noise during playback/recording of a VCR	<ul style="list-style-type: none"> • Video head interference. Keep your VCR away from the TV. • Leave a space of 30 cm between your VCR and the TV to avoid noise. • Avoid installing your VCR in front of the TV or beside the TV.
Good picture, but noisy sound	<ul style="list-style-type: none"> • The TV system setting is inappropriate. If the sound of all the channels are noisy, perform “Auto Program” in the “Program” menu to preset the channel again (page 35). If the sound of some channels is noisy, select the channel, then perform “Manual Program” in the “Program” menu, and select the appropriate TV system (“TV System”) (page 35).
Good picture, but no sound	<ul style="list-style-type: none"> • The volume level is too low. Press \triangleleft + to increase the volume level. • The sound is muted. Press MUTE, or \triangleleft + to cancel the muting. Set “Speaker” to “On” in the “Sound” menu (page 32). • The broadcast signal has a transmission problem. Press A/B until a better sound is heard. • “Speaker” is set to “Off”. Set to “On” in the “Sound” menu (page 32). • “Mono” is selected. Set to “Auto” by pressing A/B (page 19).
Some tiny black points and/or bright points on the screen	<ul style="list-style-type: none"> • The picture of a display unit is composed of pixels. Tiny black points and/or bright points (pixels) on the screen do not indicate a malfunction.
No color on programs	<ul style="list-style-type: none"> • Select “Reset” in the “Picture” menu to return to the factory settings (page 28).
No color	<ul style="list-style-type: none"> • The color intensity setting is too low. Select “Color” in the “Picture” menu to adjust the color intensity (page 29). • The color system setting is inappropriate. Select “Color System” in the “Setup” menu to select a correct color system (page 40). Usually set this to “Auto”. • The antenna direction needs adjustment. Adjust the antenna direction. Contact a Sony dealer for advice.
Lines moving across the TV screen	<ul style="list-style-type: none"> • There is interference from external sources, e.g., heavy machineries, broadcast station nearby. Use the fine tuning (“Fine”) function (page 35).

Problem	Cause/Remedy
No color or irregular color when viewing a signal from the Y, Pb/Cb, Pr/Cr jacks of 1, 2	<ul style="list-style-type: none"> • Check the connection of the Y, Pb/Cb, Pr/Cr jacks of 1, 2. • Make sure that the Y, Pb/Cb, Pr/Cr plugs of 1, 2 are firmly seated in their respective jacks.
When displaying the Twin Picture, the quality of the sub screen picture is not as good as that of the main screen picture	<ul style="list-style-type: none"> • The quality of the sub screen picture may be deteriorated depending on the combination of the input signals.

Sound

Problem	Cause/Remedy
No sound, but good picture	<ul style="list-style-type: none"> • Press \triangle +/- or Mute (Mute). • Check that "Speaker" is set to "On" in the "Sound" menu (page 32).
Noisy sound	<ul style="list-style-type: none"> • See the "Picture noise (dotted lines or stripes)" cause/remedy on page 53.
Low sound volume	<ul style="list-style-type: none"> • "Mono" is selected. Set to "Auto" by pressing A/B (page 19).
No stereo broadcast signal is received	<ul style="list-style-type: none"> • The stereo reception setting is inappropriate. Press A/B until "Auto" appears on the screen (page 19).
Stereo broadcast sound switches on and off, or is distorted; The sound switches between stereo and monaural frequently	<ul style="list-style-type: none"> • The antenna connection is loose or the antenna cable is damaged. Check the cable and connection on the TV, VCR, and on the wall (page 14). • Adjust the antenna direction for the minimum interference. Contact a Sony dealer for advice. • Signal transmission is low. Try using a booster. Otherwise, use the fine tuning ("Fine") function (page 35). • The broadcast signal has a transmission problem. Press A/B until a better sound is heard (page 19).
No sound from the computer	<ul style="list-style-type: none"> • Check the connection of the audio cable (page 42).

General

Problem	Cause/Remedy
The TV turns off automatically (the TV enters standby mode)	<ul style="list-style-type: none"> • Check to see if the Sleep Timer function is activated (page 41). • If the inside of TV becomes too warm, the TV automatically switches to standby mode.
Some input sources cannot be selected	<ul style="list-style-type: none"> • Select "Video Label" in the "Setup" menu and cancel "Skip" of the input source (page 39).
No picture but "PC" indication appears when the TV is turned on.	<ul style="list-style-type: none"> • The TV was set to the standby mode by the Power Management function (page 39). Select a channel.

Problem	Cause/Remedy
The remote does not function	<ul style="list-style-type: none"> • Check that the remote is set correctly for the equipment you are using (VCR, TV, or DVD). • If the remote does not operate the VCR or DVD even when the remote has been set correctly to VCR or DVD, enter the necessary code set as explained in “Programming the remote” (page 45). • Replace the batteries. • If the “High Temperature Warning!” message appears, turn off the TV and wait until the TV’s projection lamp cools down (approximately 5 minutes). If the remote control still does not work, make sure to dust the ventilation slots on the rear of the TV and the cooling fan to provide adequate ventilation around the TV.
The LAMP indicator blinks in red	<ul style="list-style-type: none"> • Replace the lamp (see page 48).
The TV does not turn on	<ul style="list-style-type: none"> • The TV cools down its projection lamp when the power is turned off. It takes up to two minutes for the picture to come back after the TV is turned on again. Wait for a while until the picture comes back.
The wide screen mode changes spontaneously when “Auto Wide” is “On”	<ul style="list-style-type: none"> • During a transition between two programs, the TV detects the optimum wide screen mode. During this period, an irregular wide screen mode may appear. • The wide mode is switched automatically according to the revised signal with a Wide ID signal. • The Auto Wide feature stops working temporarily when you press [[[, and resumes after a while. To fix in the manually selected wide screen mode, set “Auto Wide” to “Off” in the “Screen” menu (page 33).
“100” appears at the top of the screen after approximately 10 seconds and there is no teletext display	<ul style="list-style-type: none"> • The channel carries no Teletext broadcast.
Teletext display is incomplete (snowy picture or double images)	<ul style="list-style-type: none"> • Your area may not be able to receive Teletext. Teletext is displayed only in the area that is covered by Teletext services. • The antenna connection is loose or the antenna cable is damaged. Check the cable and connection on the TV, VCR, and on the wall (page 14). • The antenna direction needs adjustment. Adjust the antenna direction. Contact a Sony dealer for advice. • Signal transmission is too low. Try using a booster. Otherwise, use the fine tuning (“Fine”) function (page 35).
Cannot play shooting games	<ul style="list-style-type: none"> • Some shooting games which involve pointing a light beam at the TV screen with an electronic gun or rifle cannot be used with your TV. For details, see the instruction manual supplied with the video game software.
The TV cabinet creaks	<ul style="list-style-type: none"> • Changes in room temperature sometimes make the TV cabinet expand or contract, causing a noise. This does not indicate a malfunction.
Static discharge is felt when touching the TV cabinet	<ul style="list-style-type: none"> • This is the same static discharge that is felt when touching metal door handles or car doors especially when the air is dry, for example in winter. This does not indicate a malfunction.

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