TOSHIBA

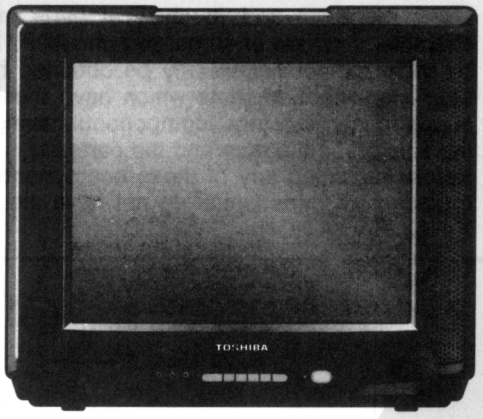
FILE NO. 040-9614

SERVICE MANUAL

COLOUR TELEVISION

S5S Chassis

2185XR

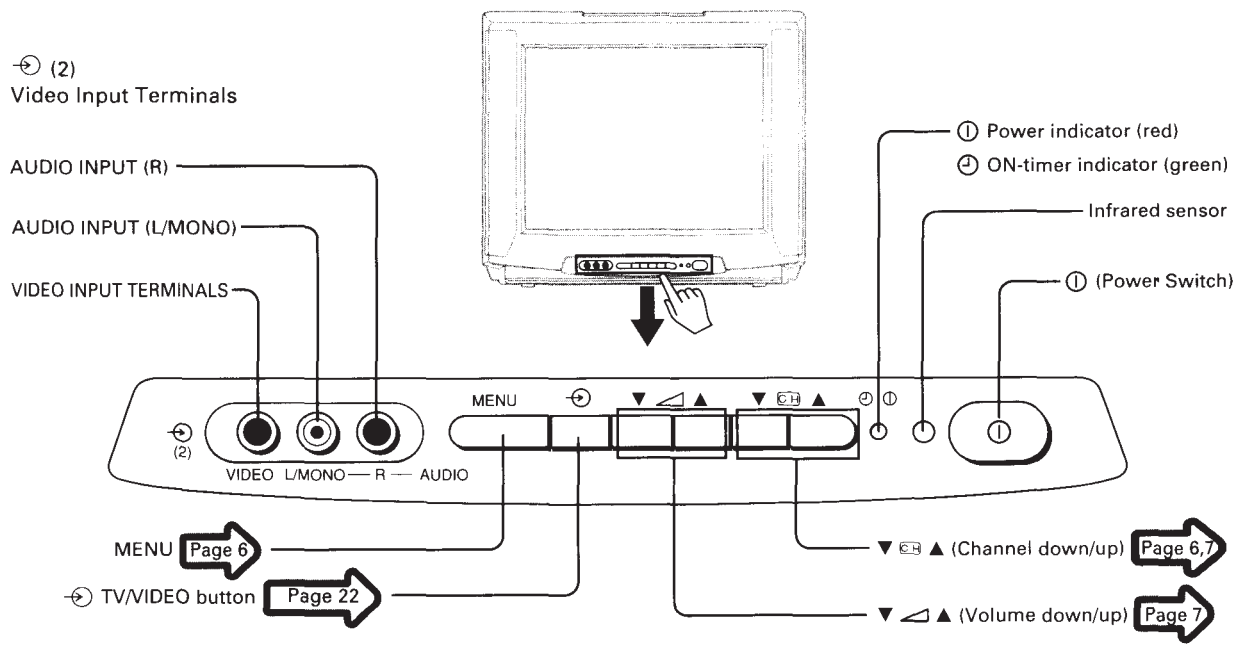


PRINTED IN JAPAN, Aug., 1996 (So)

Names and Functions of Controls

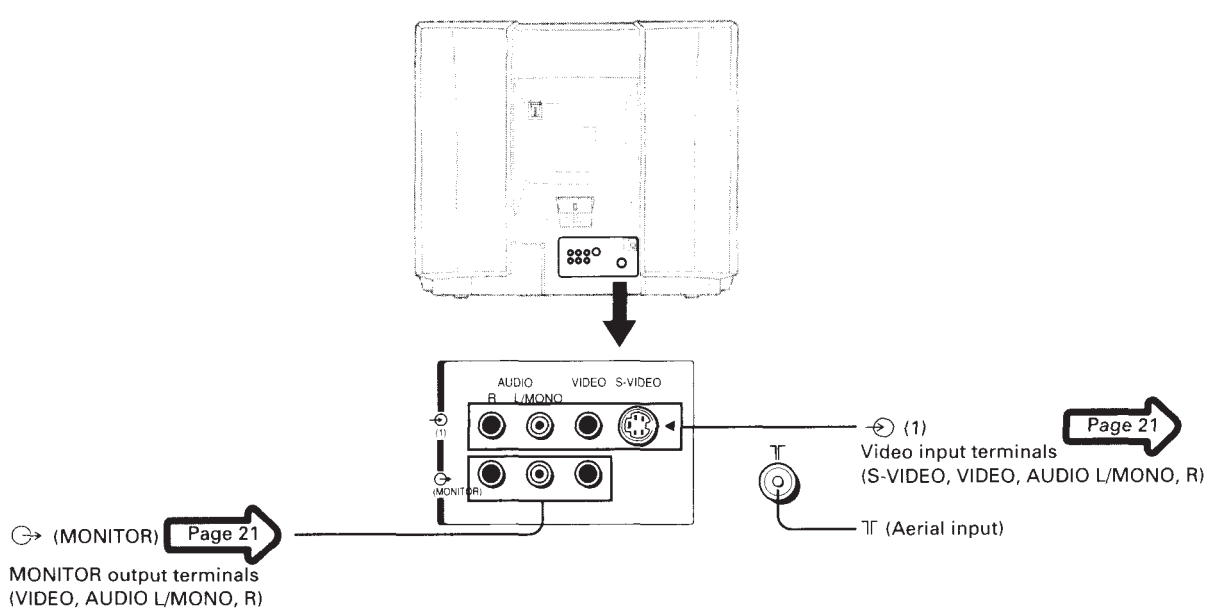
• The following describes the name of each part of the TV and Remote Controller.

Front

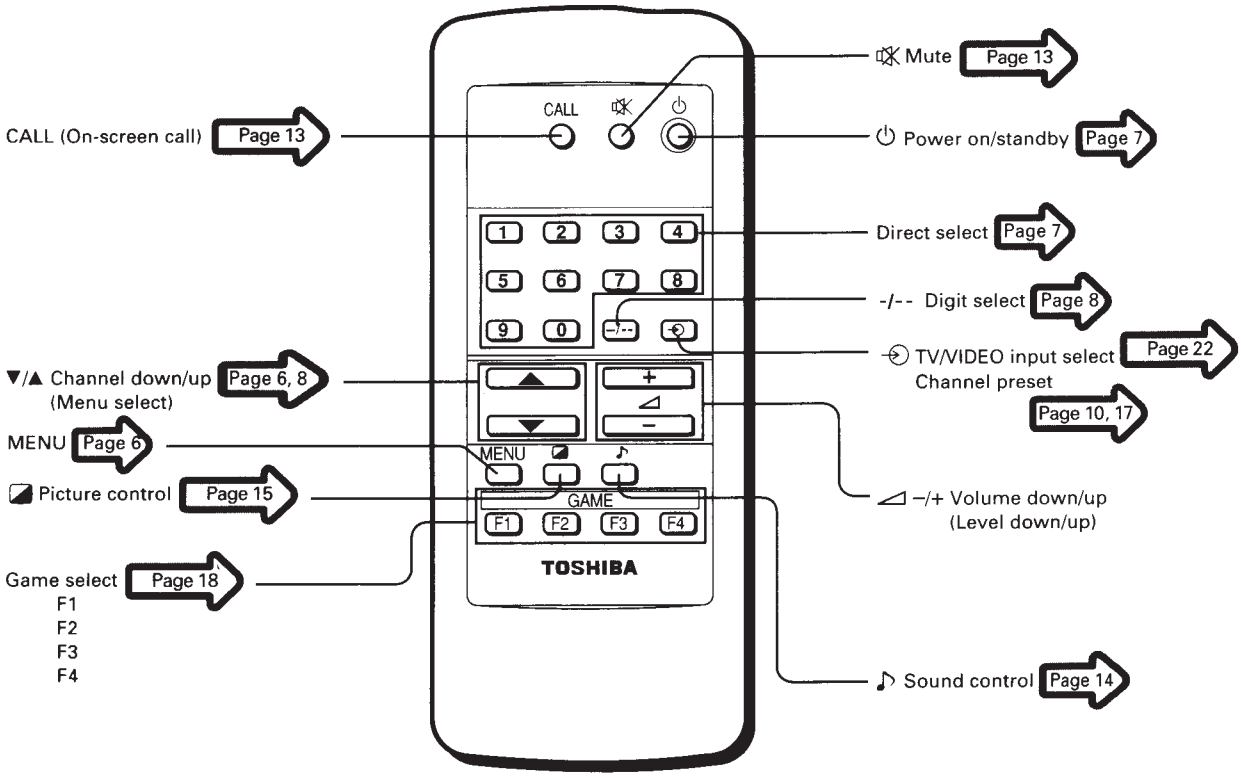


Note
Functions of MENU, ⊕, ▼ ◿ ▲ and ▼ CH ▲ are also provided to the Remote Controller.

Back

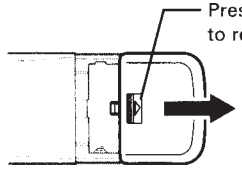


Remote Controller



Battery installation

1 Place the Remote Controller face down and remove the battery cover.

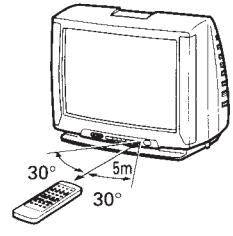


2 Insert two "AA" size batteries matching the + and – signs on each battery with the + and – signs of the battery compartment.

3 Slide the battery cover shut until the lock snaps.

Tips for remote operation

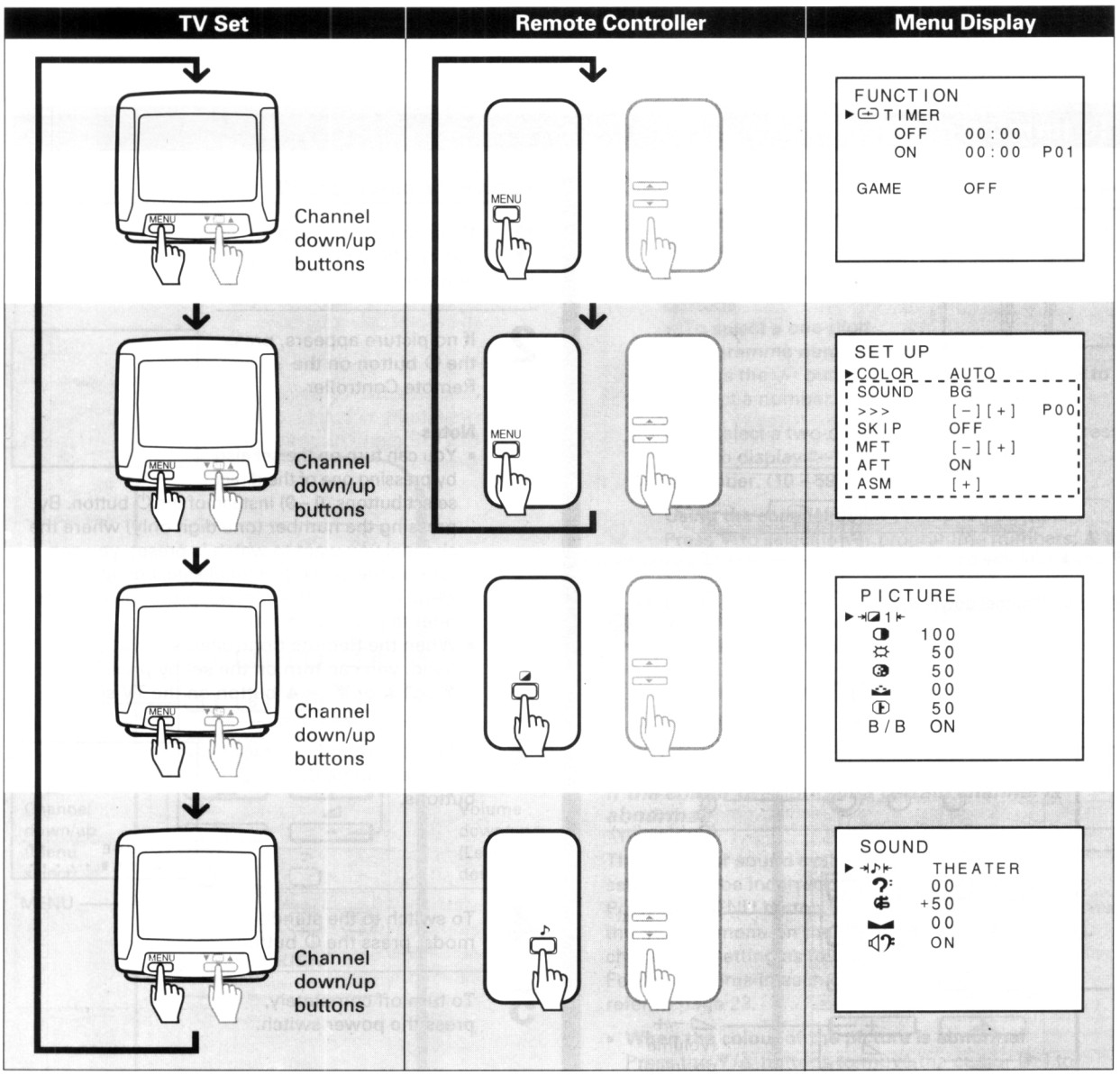
Effective range



- The battery life should be about one year under normal use.
- When the Remote Controller will not be used for a long period of time or when the batteries are worn out, remove the batteries to prevent leakage.
- Do not throw the batteries into a fire. Dispose of used batteries in the specified manner.
- Do not drop, dampen or disassemble the Remote Controller.

Menu Function

- Before watching the TV, please familiarize yourself the method to use the menu function of this TV set.



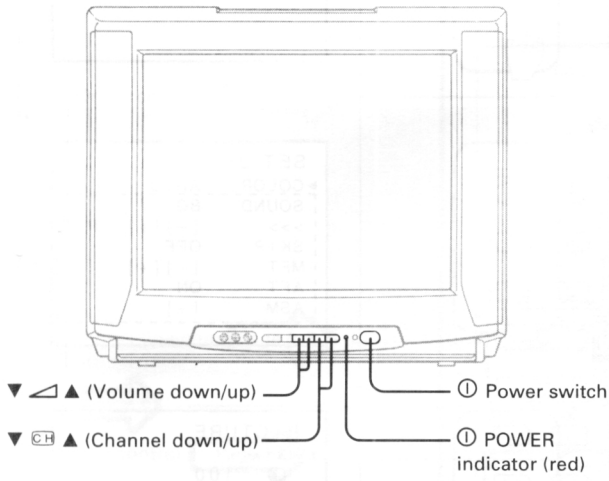
Notes

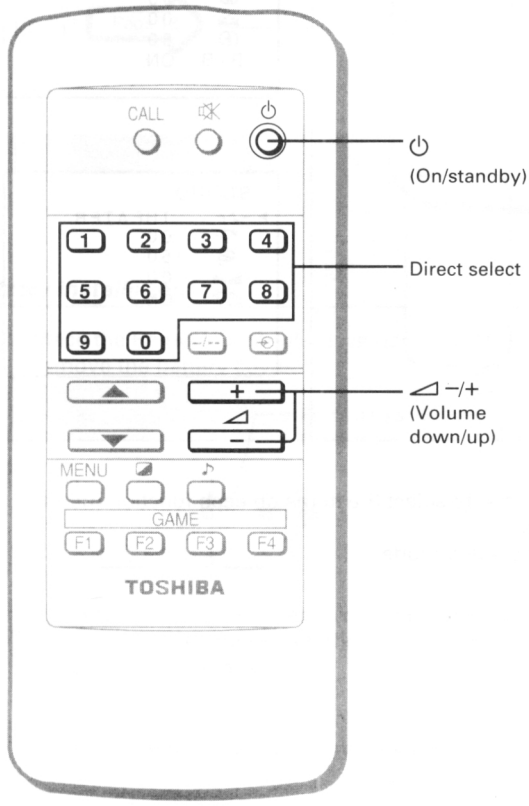
- The halftone illustrations above indicate that you press the button(s) to select the items on each function menu.
- To adjust or select (OFF/ON, etc) for each item, use – / + buttons.
- The ⋮⋮ area on the SET UP menu display does not appear in the video mode.

Turning the Power On/Off

- The following describes how to turn the TV on/off using the TV's main switch and the Remote Controller.

To turn the power on/off

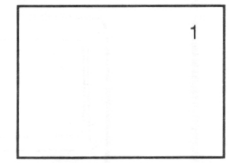




To turn the power on/off

1 Press the power switch. The red POWER indicator lights up.

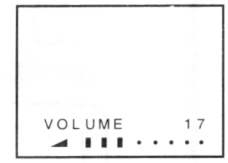
2 If no picture appears, press the ⏻ button on the Remote Controller.



Notes

- You can turn on the set also by pressing one of the direct select buttons (0 – 9) instead of the ⏻ button. By pressing the number (one digit only) where the channel you want to watch is preset, you can turn on the set and channel selection at the same time. (For the channel preset procedures, refer to pages 9 and 10.)
- When the Remote Controller is not at your hand, you can turn on the set by pressing the ▼ ◿ ▲ or ▼ CH ▲ button on the TV set.

3 Adjust the sound volume with the volume down/up buttons.



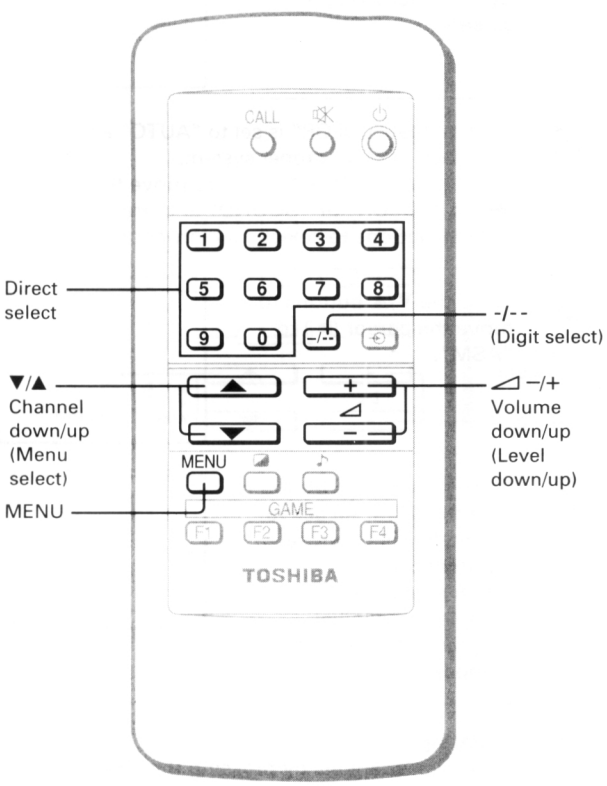
4 To switch to the standby mode, press the ⏻ button.

5 To turn off completely, press the power switch.

Watching TV Programmes

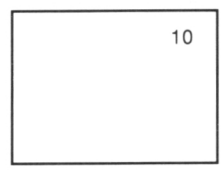
- You can watch TV programmes being broadcast on the preset channels.

To watch a TV programme



To select a TV programme

1 Select the desired programme.



Using the direct select buttons

- To select a one-digit programme number: press the -/-- button to display "–" and 0 – 9 to select a number. (0 – 9)
- To select a two-digit programme number: press -/-- to display "--" and press 0 – 9 to select a number. (10 – 59)

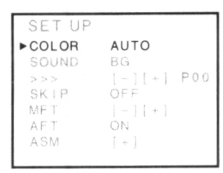
Using the channel down (▼)/up (▲) buttons
Press ▼ to select lower programme numbers; ▲ to select higher ones.

2 Adjust the sound volume with the ◿ −/+ buttons.



If the colour or sound of a certain channel is abnormal

The colour or sound system setting may be incorrect.
Press the MENU button to call up the SET UP menu on the right and change the setting as follows:
For the systems in each country, refer to page 23.



- **When the colour of the picture is abnormal**
  Press the ▼/▲ buttons to move the cursor (►) to COLOR and select the correct colour system with the ◿ −/+ buttons.
  AUTO, PAL, SECAM, 443NTSC and 358NTSC will appear cyclically.
- **When the sound is abnormal**
  Press the ▼/▲ buttons to move the cursor (►) to SOUND and select the correct sound system with the ◿ −/+ buttons.
  BG, I, DK and M will appear cyclically.

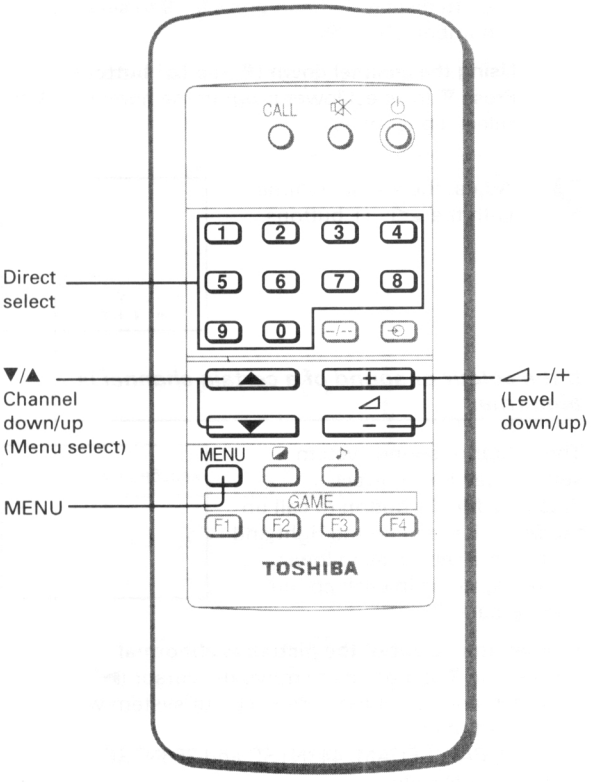
If the sound or picture of every channel is abnormal

Preset the channels using the ASM (Automatic Search Memory). See page 9.

Tuning in

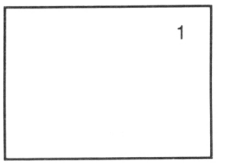
- First, use the ASM (Automatic Search Memory) function to preset all active channels in your area automatically.
  Then, arrange the preset channels with the SEARCH (>>>), SKIP, MFT (Manual Fine Tuning) and AFT (Auto Fine Tuning) functions so that you can tune into only desired channels.
- This section shows how to tune in channels using mainly the Remote Controller. You can also perform the system select, SEARCH (>>>), SKIP, MFT, AFT and ASM operations using the buttons on the TV set. See page 6.

To preset channels (ASM)

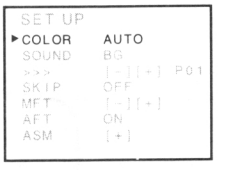


ASM (Automatic Search Memory)

1 Select the head of the programme number to start the ASM with the channel down (▼)/up (▲) buttons or the direct select buttons.

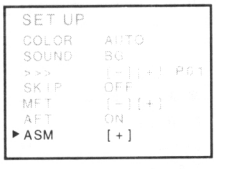


2 Press the MENU button repeatedly to call up the SET UP menu on the screen.

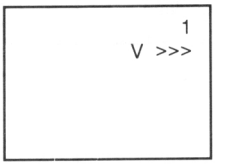


3 Confirm that "COLOR" is set to "AUTO" and "SOUND" is set to proper system.
If not, press the ▼/▲ buttons to move the cursor (▶) to "COLOR" or "SOUND" and press the ◿ −/+ buttons to select each proper system.

4 Press the ▼/▲ buttons to move the cursor (▶) to "ASM".



5 Press the ◿ "+" button to start the ASM. All active channels will be preset automatically.
When presetting is complete, the initial programme number will reappear.



After presetting

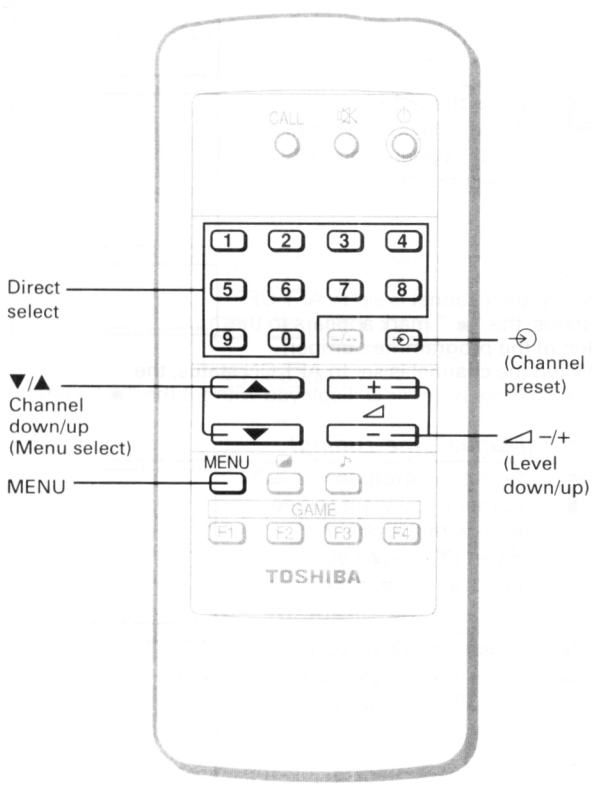
Check the preset channels by pressing the channel down (▼)/up (▲) buttons.

- If the picture or sound of a certain channel is not good, re-tune the channel using the ASM or SEARCH or MFT function. See page 11.
- If the colour of a certain channel is abnormal, automatic colour system selection (AUTO) may malfunction, or sound system selection is wrong. In such a case, select another colour and/or sound system.

Tuning in (continued)

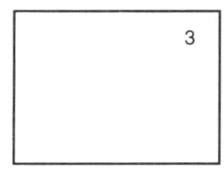
- Use the SEARCH function if desired channels cannot be preset with the ASM or if you would like to preset the desired channels to specific programme numbers one by one.
- The following describes how to tune in channels with the SEARCH (<<<) function using mainly the Remote Controller. You can also perform the SEARCH operation using the buttons on the TV set. See page 6.

To preset channels (Manual search)

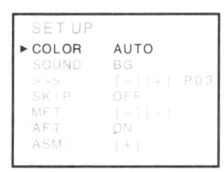


***Manual search* (>>>)**

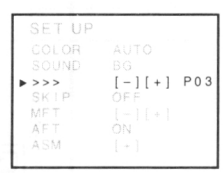
1 Select a programme number with the channel down (▼)/up (▲) or direct select buttons.



2 Press the MENU button repeatedly to call up the SET UP menu on the screen.

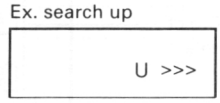


3 Press the ▼/▲ buttons to move the cursor (▶) to ">>>".

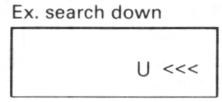


4 Press the ◿ –/+ buttons to start searching.
The ◿ – button searches for lower-numbered channels; the ◿ + button for higher-numbered channels.
Repeat this process until you can get the desired channel.

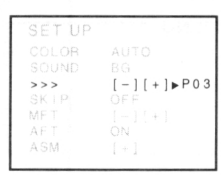
Ex. search up



Ex. search down

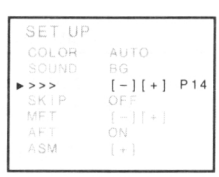


5 When the desired programme is shown, press the ⊕ (Channel preset) button to move the cursor (▶) to "P03". Then, press the ◿ –/+ buttons to set the programme number.



When you	◿ –/+	Programme number
press once	+	increased by 1
	–	decreased by 1
hold down	+	increased by 10
	–	decreased by 10

6 When you press the ⊕ (Channel preset) button again, the channel is memorized at the current programme number.

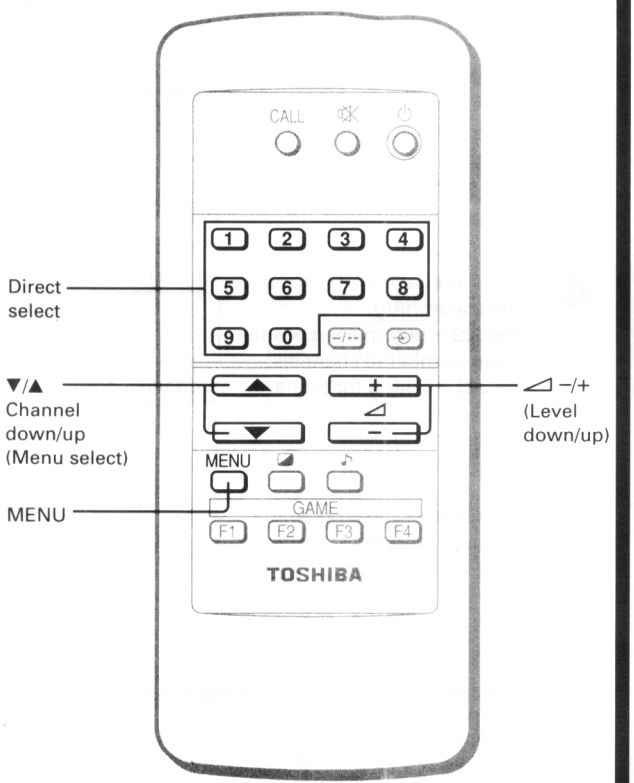


7 Repeat steps 3 through 6 to preset other channels.

- The AFT (Auto Fine Tuning) function automatically corrects slight fluctuations when receiving signals.
- The adjustments below are not necessary under normal conditions. However, in areas of inferior broadcast conditions where adjustment is necessary for a better picutre, adjust the tuning with the MFT (Manual Fine Tuning). The AFT OFF status automatically keeps the condition adjusted with the MFT function.

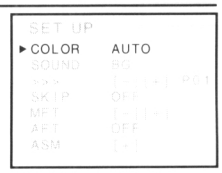
* Receiving frequencies may change due to aging.

AFT (Auto Fine Tuning) and MFT (Manual Fine Tuning)

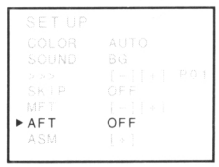


AFT (Auto Fine Tuning)

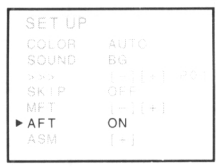
1 Press the MENU button repeatedly to call up the SET UP menu on the screen.



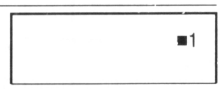
2 Press the ▼/▲ buttons to move the cursor (▶) to "AFT".



3 Press the ◿ −/+.
The displays "OFF" and "ON" appear alternately.
Select the "ON" indication.

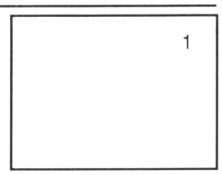


Note
When the channel is set to AFT OFF status, the "■" mark appears to the left of the programme number.
When the channel is set to AFT ON status, the programme number is displayed without the "■" mark.

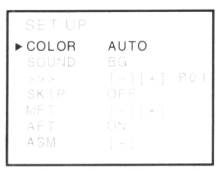


MFT (Manual Fine Tuning)

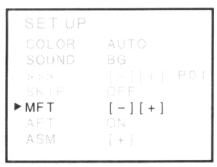
1 Select the programme number you want to fine-tune with the channel down (▼)/up (▲) buttons or direct select buttons.



2 Press the MENU button repeatedly to call up the SET UP menu on the screen.



3 Press the ▼/▲ buttons to move the cursor (▶) to "MFT".



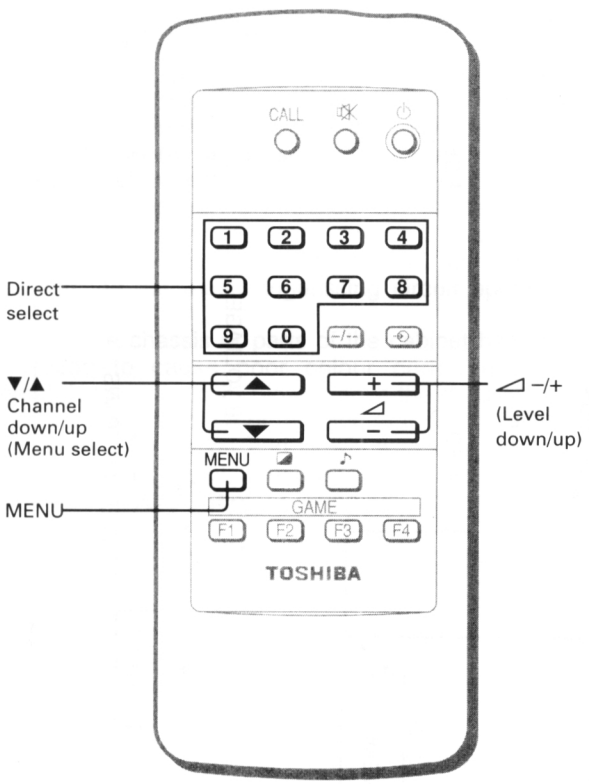
4 Press the ◿ −/+ buttons until the best possible picture and sound are obtained.

Note
When operating the MFT function, the AFT status is automatically set to OFF.

Tuning in (continued)

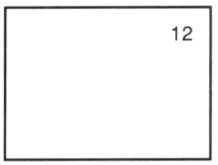
To skip unnecessary programme numbers

After presetting the channels, you may skip unnecessary programme numbers so that only the channels you want to watch are selected.

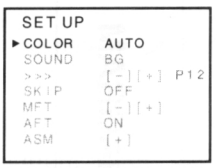


To skip a programme number

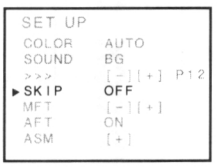
1 Select the programme number to be skipped with the channel down (▼)/up (▲) buttons or direct select buttons.



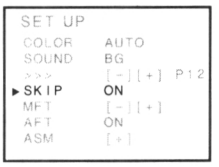
2 Press the MENU button repeatedly to call up the SET UP menu on the screen.



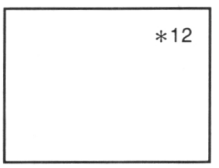
3 Press the ▼/▲ buttons to move the cursor (►) to "SKIP".



4 Press the ◿ −/+ buttons to select "SKIP ON".



5 Press the MENU button to turn off the SET UP menu display.
Select the programme number to be skipped with the direct select buttons. The * mark appears to the left of the programme number.
The programme number will then be skipped when you select the programme with the channel down (▼)/up (▲) buttons.



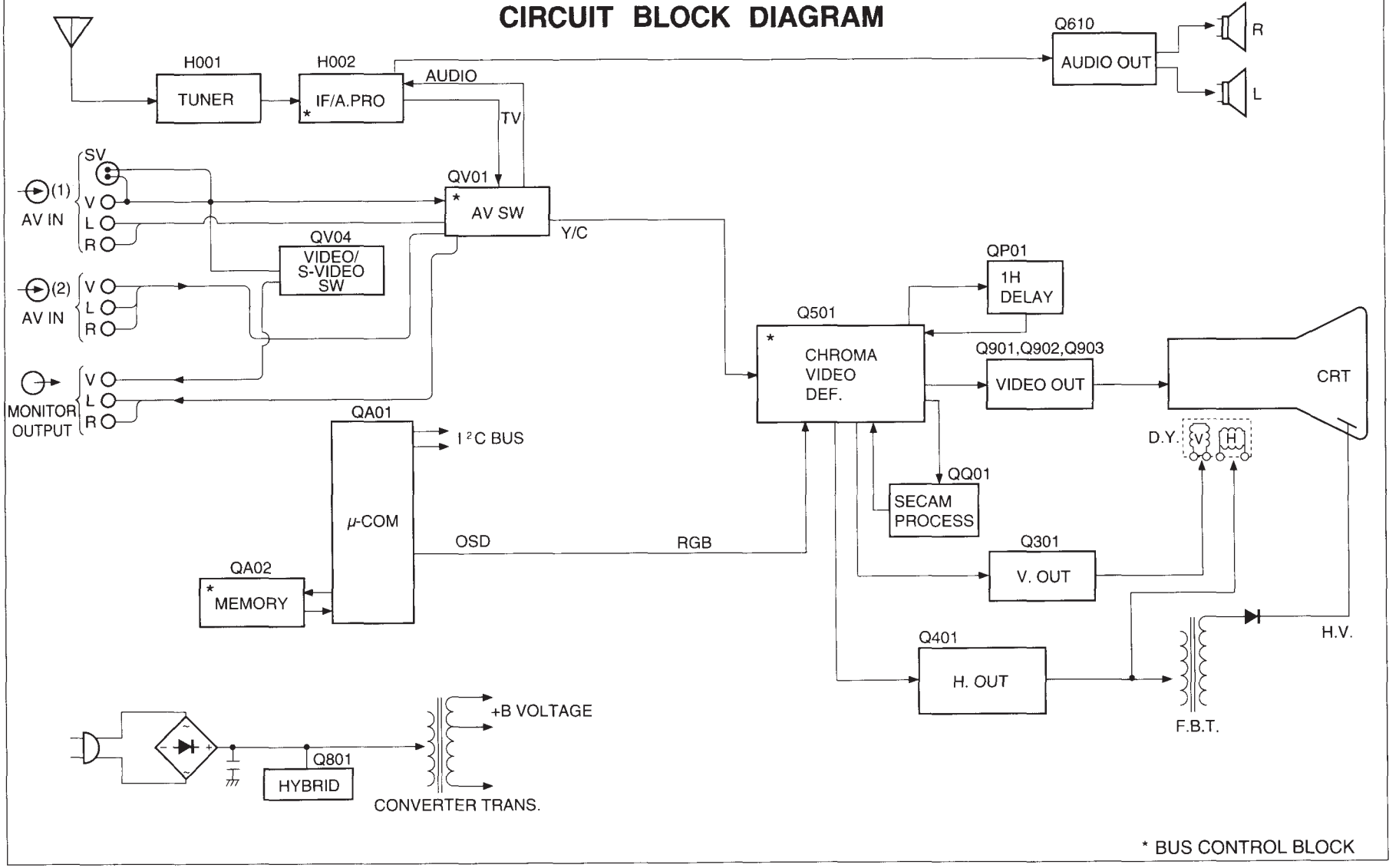
To restore a skipped programme number

1 Select the programme number you want to restore with the direct select (and/or digit select) buttons.

2 Press the MENU button to call up the SET UP menu display and press the ▼/▲ buttons to move the cursor (►) to "SKIP".

3 Press the ◿ −/+ buttons to select "SKIP OFF".

CIRCUIT BLOCK DIAGRAM



* BUS CONTROL BLOCK

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

INSTALLATION AND SERVICE ADJUSTMENTS

GENERAL INFORMATION

All adjustments are thoroughly checked and corrected when the receiver leaves the factory. Therefore the receiver should operate normally and produce proper colour and B/W pictures upon installation. However, several minor adjustments may be required depending on the particular location in which the receiver is operated.

This receiver is shipped completely in cardboard carton. Carefully draw out the receiver from the carton and remove all packing materials. Plug the power cord into a convenient 220 ~ 240 volts 50/60Hz AC two pin power outlet.

Turn the receiver ON and adjust the FINE TUNING for best picture detail with the AFC turned OFF.

Check and adjust all the customer controls such as BRIGHTNESS, CONTRAST and COLOUR Controls to obtain natural colour or B/W picture.

AUTOMATIC DEGAUSSING

A degaussing coil is mounted around the picture tube so that external degaussing after moving the receiver is normally unnecessary, providing the receiver is properly degaussed upon installation. The degaussing coil operates for about 1 second after the power to the receiver is switched ON. If the set is moved or faced in a different direction, the power switch must be switched off at least 30 minutes in order that the automatic degaussing circuit operates properly.

Should the chassis or parts of the cabinet become magnetized to cause poor colour purity, use an external degaussing coil Slowly move the degaussing coil around the faceplate of the picture tube, the sides and front of the receiver and slowly withdraw the coil to a distance of about 2 m before disconnecting it from AC source If colour shading still persists, perform the COLOUR PURITY ADJUSTMENT and CONVERGENCE ADJUSTMENTS procedures, as mentioned later.

HIGH VOLTAGE CHECK

CAUTION: There is no HIGH VOLTAGE ADJUSTMENT on this chassis.

1. Connect an accurate high voltage meter to the second anode of the picture tube.
2. Turn on the receiver. Set the BRIGHTNESS and CONTRAST Controls to minimum (zero beam current).
3. High voltage will be measured below 29kV.
4. Rotate the BRIGHTNESS Control to both extremes to be sure the high voltage does not exceed the limit of 29kV under any conditions.

HORIZONTAL CENTRE ADJUSTMENT

1. Receive the WG PHILIPS pattern.
2. Adjust HPOS (Bus control) so the pattern centre can be located at the screen centre.

HEIGHT ADJUSTMENT

1. Receive the WG PHILIPS pattern, and set the contrast to max and set the colour and the brightness to center.
2. Adjust HEIGHT Control (R350) so that white blocks at top and bottom of picture are just masked.

FOCUS ADJUSTMENT

Adjust FOCUS Control on FLYBACK TRANS. (T461) for well defined scanning lines in the centre area on the screen.

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUSTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

SET-UP ADJUSTMENT

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
  Perform the adjustments in order as follows :
  1. Color Purity
  2. Convergence
  3. White Balance

  Note: The PURITY/CONVERGENCE MAGNET assembly and rubber wedges need mechanical positioning. Refer to figure 2.

COLOR PURITY ADJUSTMENT

NOTE : Before attempting any purity adjustments, the receiver should be operated for at least fifteen minutes.

1. Demagnetize the picture tube and cabinet using a degaussing coil.
2. Set the brightness and contrast to maximum.
3. Use a green raster from among the built-in test signals.
4. Loosen the clamp screw holding the yoke and slide the yoke backward or forward to provide vertical green belt (zone) in the picture screen.
5. Remove the Rubber Wedges.
6. Rotate and spread the tabs of the purity magnet (See figure 3.) around the neck of the picture tube until the green belt is in the center of the screen. At the same time, enter the raster vertically.
7. Slowly move the yoke forward or backward until a uniform green screen is obtained. Tighten the clamp screw of the yoke temporarily.
8. Check the purity of the red and blue raster.

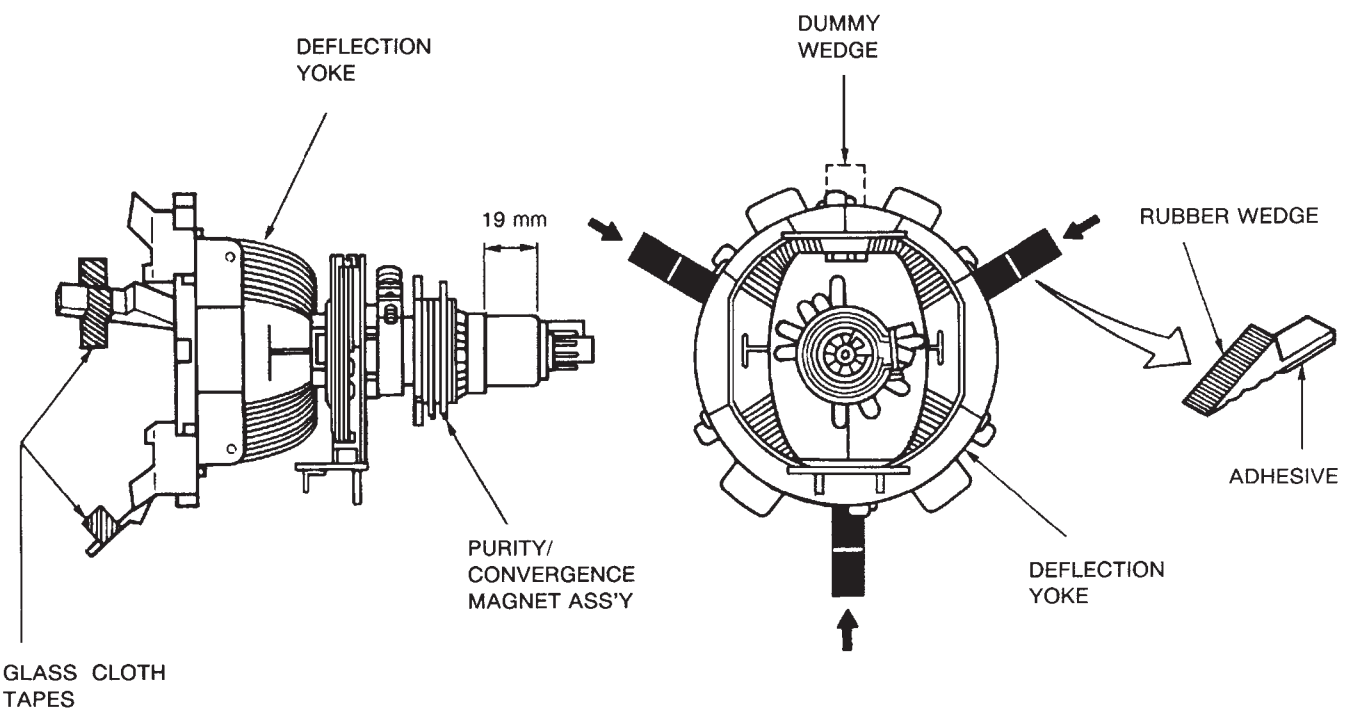


Figure 2.

CONVERGENCE ADJUSTMENTS

NOTE: Before attempting any convergence adjustments, the receiver should be operated for at least fifteen minutes.

■ CENTER CONVERGENCE ADJUSTMENT

1. Use the cross-dot pattern from among the built-in test signals.
2. Set the brightness and contrast for well defined pattern.
3. Adjust two tabs of the 4-Pole Magnets to change the angle between them (See figure 3.) and superimpose red and blue vertical lines in the center area of the picture screen.
4. Turn the both tabs at the same time keeping the angle constant to superimpose red and blue horizontal lines at the center of the screen.
5. Adjust two tabs of 6-Pole Magnets to superimpose red/blue line and green one. Adjusting the angle affects the vertical lines and rotating both magnets affects the horizontal lines.
6. Repeat adjustments 3, 4, 5 keeping in mind red, green and blue movement, because 4-Pole Magnets and 6-Pole Magnets have mutual interaction and make dot movement complex.

■ CIRCUMFERENCE CONVERGENCE ADJUSTMENT

1. Loosen the clamping screw of deflection yoke slightly to allow the yoke to tilt.
2. Temporarily put a wedge as shown in figure 2. (Do not remove cover paper on adhesive part of the wedge.)
3. Tilt front of the deflection yoke up or down to obtain better convergence in circumference. (See figure 4.) Push the mounted wedge into the space between picture tube and the yoke to fix the yoke temporarily.
4. Put other wedge into bottom space and remove the cover paper to stick.
5. Tilt front of the yoke right or left to obtain better convergence in circumference. (See figure 4.)
6. Keep the yoke position and put another wedge in either upper space. Remove cover paper and stick the wedge on picture tube to fix the yoke.
7. Detach the temporarily mounted wedge and put it in another upper space. Stick it on picture tube to fix the yoke.
8. After fixing three wedges, recheck overall convergence.
   Tighten the screw firmly to fix the yoke and check the yoke is firm.
9. Stick three adhesive tapes on wedges as shown in figure 2.

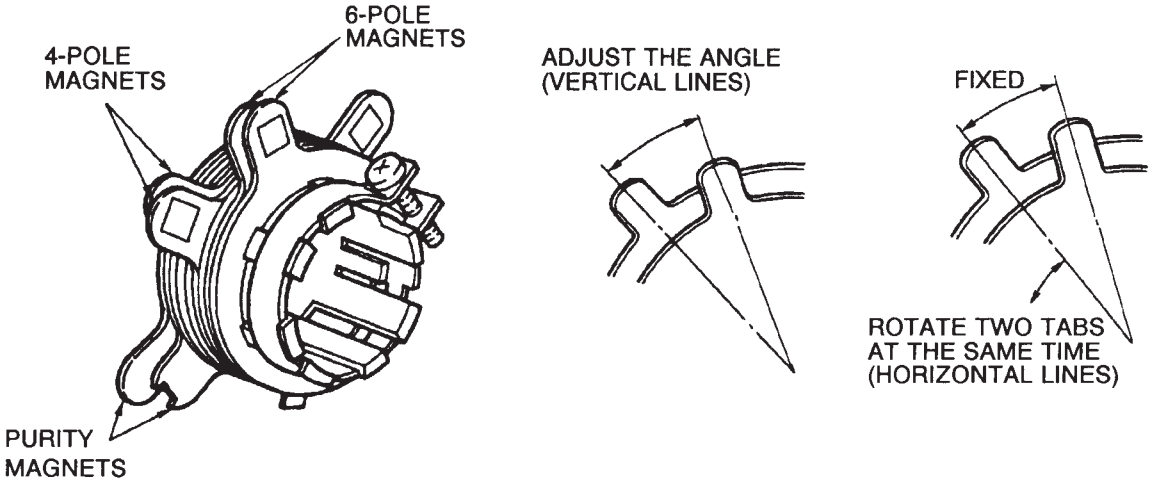
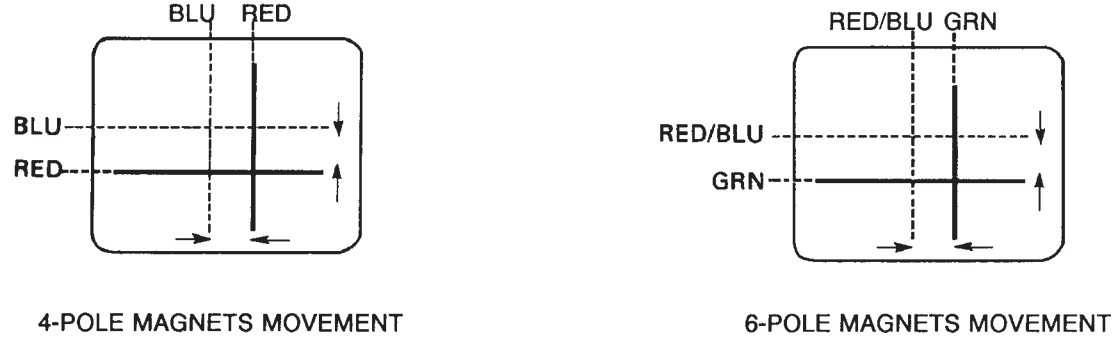
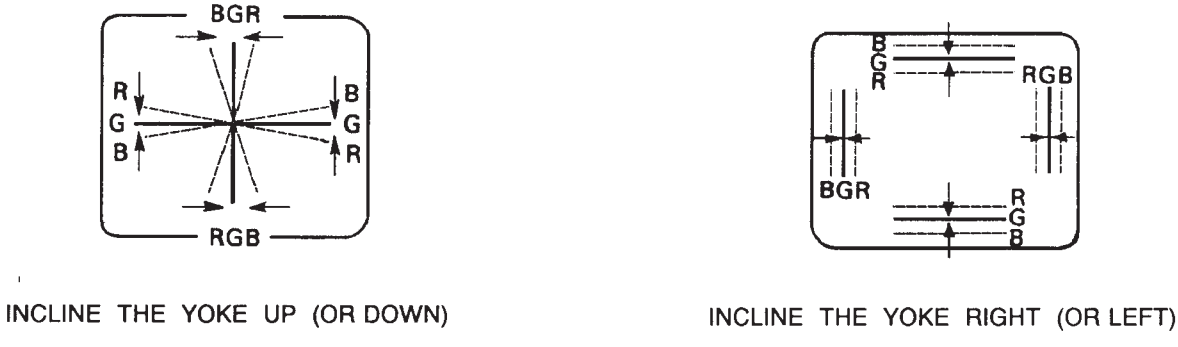


Figure 3.



Center Convergence by Convergence Magnets



Circumference Convergence by DEF Yoke

Figure 4. Dot Movement Pattern

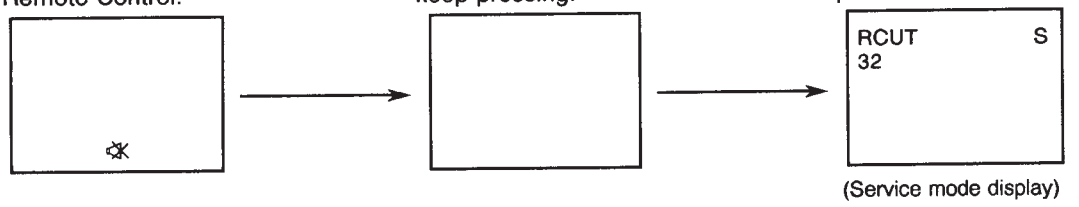
SERVICE MODE

1. ENTERING TO SERVICE MODE

1) Press ✲ button once on Remote Control.

2) Press ✲ button again to keep pressing.

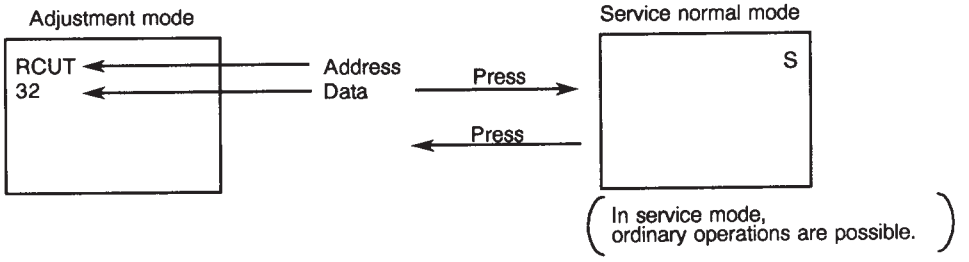
3) Keep pressing the ✲ button, press MENU button on TV set.



(Service mode display)

2. DISPLAYING THE ADJUSTMENT MENU

Press MENU button on TV.



3. SELECTING THE ADJUSTING ITEMS

Every pressing of CHANNEL ▲ button changes the adjustment items in the following order. (▼ button for reverse order.)

4. ADJUSTING THE DATA

Pressing of VOLUME ▲ or ▼ button will change the value of data in the range from 00 to FF. The variable range depends on the adjusting item.

5. EXIT FROM SERVICE MODE

Press POWER button on the remote control to turn off the TV once.

OTHER SERVICE FUNCTION

The following key entry during display of adjustment menu provides special functions.

CALL
○
+
□

CAUTION:
Never try to perform initialization unless you have changed the memory IC.

Position up button on the TV set

⬇

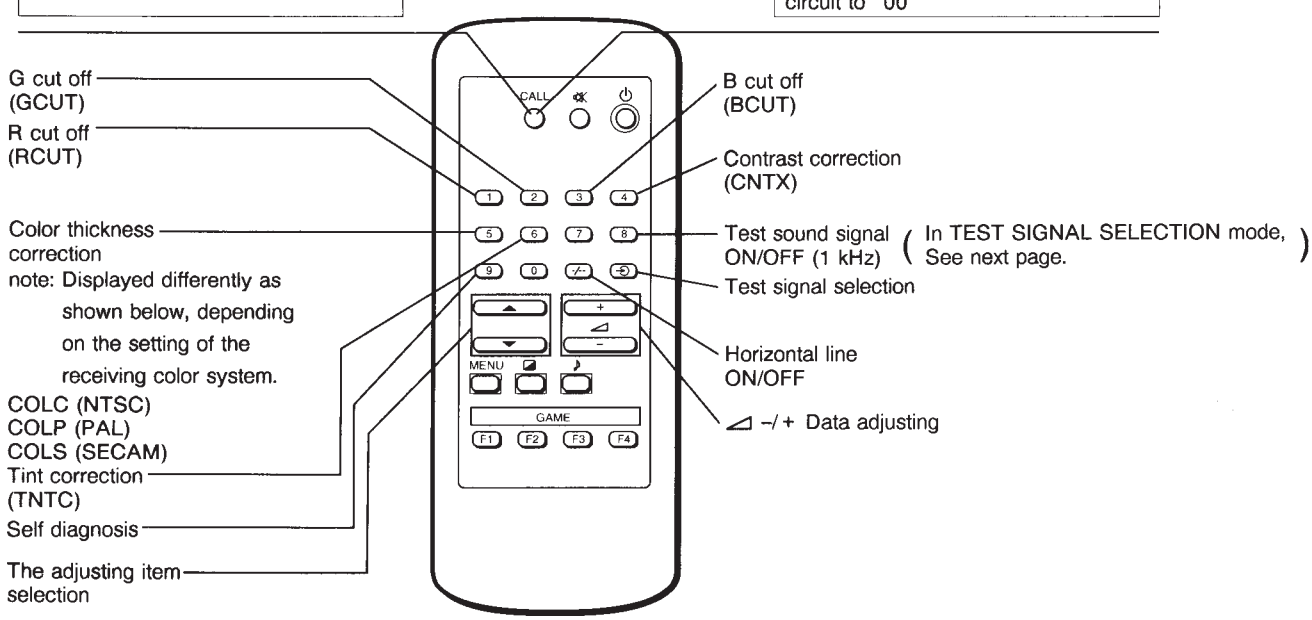
Initialization of the MEMORY (QA02)

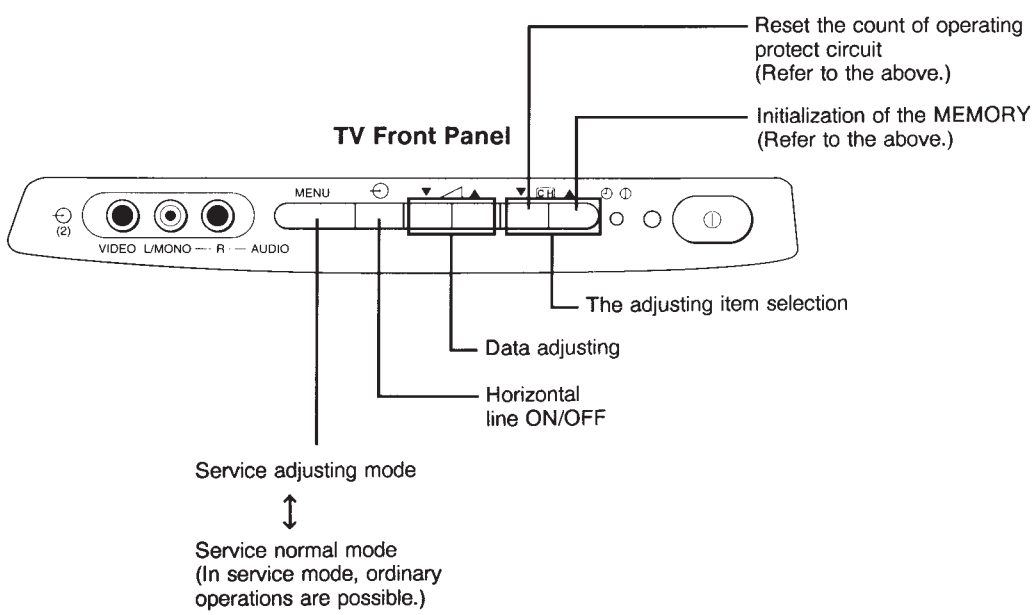
CALL
○
+
□

Position down button on the TV set

⬇

Reset the count of operating protect circuit to "00"





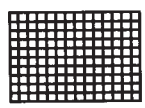
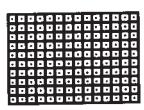
TEST SIGNAL SELECTION

Every pressing of ⊕ button changes the test patterns on screen as described below in service mode.

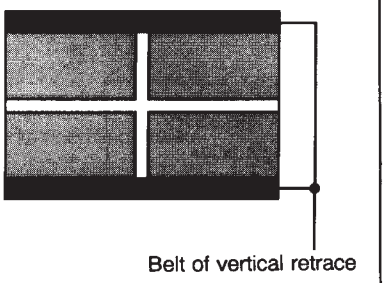
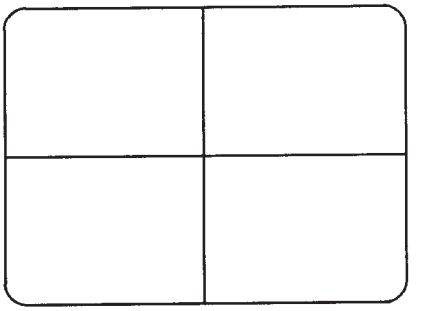
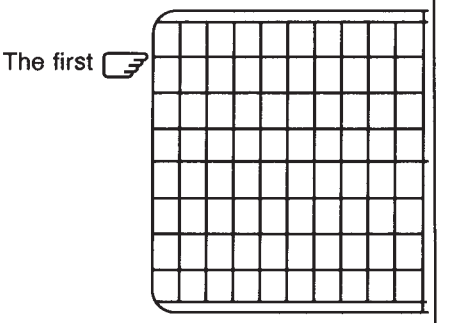
Signal off → NTSC signals (14 patterns)

↑ PAL signals (14 patterns) ←

- About inside signal: The inside signal is output at video input terminal from QA01, and is not output with the pin inserted into terminal. (Single color signal can be output.)

Signals	Picture	Using method
• Red single color • Green single color • Blue single color • Black single color • White single color		Purity and White uniformity of CRT Red single color. . . . Stopping G and B output of Q501 Green single color. . . . Stopping R and B output of Q501 Blue single color. . . . Stopping R and G output of Q501 Black single color. . . . Making black signal of approx. 1Vp-p in QA01 White single color. . . . Making white signal of approx. 1Vp-p in QA01
• W/B adjustment		White balance adjustment White part. . . . White balance adjustment/check in light area Black part. . . . White balance adjustment/check in dark area ※ Making approx. 1Vp-p signal in QA01.
• Black cross-bar • White cross-bar		Picture position (horizontal, vertical and slant) in CRT adjustment ※ Making approx. 1Vp-p signal in QA01.
• Black cross-hatch • White cross-hatch		Convergence and vertical amplitude adjustment ※ Making approx. 1Vp-p signal in QA01.
• Black cross-dot • White cross-dot		Convergence adjustment ※ Making approx. 1Vp-p signal in QA01.
• H signal (Left, right, white) • H signal (Left, right, black)		For checking (of purity drift) of white uniformity of CRT H signal (Left, right, white). . . . Check in light area H signal (Left, right, black). . . . Check in dark area The adjustment will be the best, if the time when unevenness of color in light area occurs, is a little longer than that in dark area. ※ Making approx. 1Vp-p signal in QA01.

SERVICE MODE ADJUSTMENT

ITEM	ADJUSTMENT PROCEDURE
SUB-BRIGHTNESS (BRTC)	1. Set CONTRAST to "00", and BRIGHTNESS to "50" by adjusting user controls. 2. Set the TV in service mode to get white cross-bar of inside pattern. 3. Select BRTC (brightness correction), and adjust the ◿ – / + button to reduce the value so that white portion of inside pattern slightly light. 4. Rotate R350 to show the belt of vertical retrace. See figure right. 5. Adjust ◿ – / + button to increase the data value of BRTC, and set it just before the difference between the belt of vertical retrace and the border of black portion of inside pattern is visible. After that, return vertical height and contrast.  Belt of vertical retrace
HORIZONTAL POSITION ADJUSTMENT (HPOS) VERTICAL POSITION ADJUSTMENT (VPOS)	1. Set the TV in service mode, and get black or white cross-bar signal with VIDEO button on remote hand unit. 2. Select either HPOS (Horizontal picture phase) or VPOS (Vertical picture phase) with CHANNEL ▲, ▼ buttons, and adjust horizontal or vertical picture position in the center of screen with VOLUME ◿ – / + buttons. 
VERTICAL AMPLITUDE ADJUSTMENT (HIT)	1. Set the TV in service mode, and get black or white cross-hatch signal with VIDEO button on remote hand unit. 2. Select HIT (Vertical amplitude) with CHANNEL ▲, ▼ buttons, and adjust vertical amplitude with VOLUME ◿ – / + buttons so that vertical amplitude lacks a little. 3. Adjust vertical amplitude with VOLUME ◿ – / + buttons so that the first bar on cross-hatch signal touches edge of screen. 

ITEM	ADJUSTMENT PROCEDURE
WHITE BALANCE ADJUSTMENT • CUTOFF ADJUSTMENT (RCUT) (GCUT) (BCUT) • DRIVE ADJUSTMENT (GDRV) (BDRV)	1. Set Contrast to 40, and brightness to +20 by picture control. 2. Set the TV in service mode, and get the inside W/B adjusting signal with VIDEO button. 3. Select RCUT, GCUT and BCUT with CHANNEL ▲, ▼ buttons, to set individual values to 32, and to set GDRV and BDRV to 20 with VOLUME ◿ – / + buttons. 4. Press [-/--] button on the remote control and rotate Screen VR to get one slight horizontal line on screen. Note: Every pressing of [-/--] button provides Horizontal line picture and Normal picture alternately. 5. Press [-/--] button to release horizontal line picture, and select the two other colors which did not light in the above step with CHANNEL ▲, ▼ buttons. Then tap VOLUME ◿ – / + buttons so that three colors slightly light in the same level. ※ To correct white balance in light area, select GDRV and BDRV with CHANNEL ▲, ▼ buttons to adjust. ※ To correct white balance in dark area, perform fine adjustment of RCUT, GCUT and BCUT. Light area check (to show white) Dark area check (to show black)

SELF DIAGNOSTIC FUNCTION

1) Press "9" button on Remote Control during display of adjustment menu.
   The diagnosis will begin to check if interface among IC's are executed properly.
2) During diagnosis, the following displays are shown.

⟨SELF CHECK⟩
① 23905356
② POWER : 00
③ BUS LINE : OK
④ BUS CONT : OK
⑤ BLOCK : UV V1 V2
QV01

① Part number of microcomputer (QA01)
② Operation number of protecting circuit ----"00" is normal.
When indication is other than "00", overcurrent apts to flow, and circuit parts may possibly be damaged.
③ BUS LINE CHECK ----"OK" is normal.
"SDA1–GND" means that SDA line is shorted to ground.
"SCL1–GND" means that SCL line is shorted to ground.
"SCL1–SDA1" means that SDA line is shorted to SCL line.
④ BUS CONT ----"OK" is normal.
When indication shows "QOOO NG", the device with the number may possibly be damaged.

⑤ BLOCK
UV : TV reception mode
V1 : VIDEO 1 input mode (⊕ 1)
V2 : VIDEO 2 input mode (⊕ 2)

Indicated color of mode now selected : Green and Red
Indicated color of other modes : White

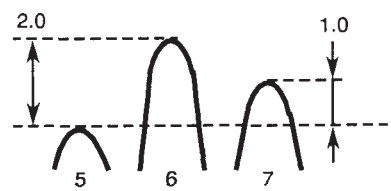
Green : Normal
Red : *The microcomputer operates to provide judgement of no video signal. The red color is still indicated though the signal is input, failure may exist in input signal line including QV01.*
QV01 : In case of indication green ---Normal
In case of indication red with input signal----
Failure may exist in output line including QV01.

ADJUSTMENT OF VIDEO-CHROMA SYSTEM (Factory adjustment)

Item	Name	Setting (User control)	Input signal	Measure-ment point	Adjustment procedure	Adjustment standard
Slave address [BRTC]	SUB BRIGHT CENTER	Contrast: MAX Bright : CENTER Color : MIN	Sub-bright signal	Screen adjustment	1. This adjustment must be done after [BRTC], screen VR and white balance adjustments have been completed. 2. Adjust number of black collapse lines of sub-bright signal.	5 ± 1.5
Slave address [COLC]	SUB COLOR CENTER NTSC	Contrast: MAX Bright : CENTER Color : CENTER Tint : CENTER	Sub-bright signal	IC501 #23... (B-OUT)	1. Select slave address 37 [COLC]. 2. When [COLC] is selected, Y-signal is muted and only color signals are outputted. (This adjustment must be done after [TNTC] has been adjusted.) 3. Adjust amplitude of the upper half of the rainbow color bar output.	1.4V(p-p) ± 0.2V(p-p)
Slave address [COLP]	SUB COLOR CENTER PAL	Contrast: MAX Bright : CENTER Color : CENTER	PHILIPS signal (PAL)	IC501 #23... (B-OUT)	1. Select slave address 39 [COLP]. 2. When [COLP] is selected, Y-signal is muted and only color signals are outputted. (This adjustment must be done after [COLC] has been adjusted.) 3. Adjust amplitude of the upper half of the color bar output.	1.4V(p-p) ± 0.2V(p-p)
Slave address [TNTC]	SUB TINT CENTER	Contrast: MAX Bright : CENTER Color : CENTER Tint : CENTER	Sub-bright signal	IC501 #23... (B-OUT)	1. Select slave address 38 [TNTC]. 2. When [TNTC] is selected, Y-signal is muted and only color signals are outputted. 3. Adjust it so that 6.25 of the rainbow color bar becomes max. (See Fig.-1.)	–5.0° ± 5.0°
RQ50 (R-Y axis) RQ51 (B-Y axis)	SECAM W/B R-Y axis B-Y axis	Contrast: MAX Bright : CENTER Color : CENTER	SECAM color bar signal	QQ01 #9 (R-Y axis) #10 (B-Y axis)	1. Coincide the level of black and white portion of color difference signal to that of H. BLK portion. 2. Adjust RQ50 for R-Y axis and adjust RQ51 for B-Y axis. 3. Repeat the above steps because RQ50 and RQ51 affect each other.	± 10mV or less on both axis
Slave address [COLS]	SUB COLOR CENTER SECAM	Contrast: MAX Bright : CENTER Color : CENTER	SECAM color bar signal	Q501 #23 (B-OUT)	1. Select slave address 3A [COLS]. 2. When [COLS] is selected, Y signal is muted, and only color signal is output. Perform this step after the adjustment of RQ50 and RQ51. 3. Adjust the peak amplitude of color bar.	1.9V(p-p) ± 0.2V(p-p)

Model Name: S5S

Item	Name	Setting (User control)	Input signal	Measure-ment point	Adjustment procedure	Adjustment standard
Slave address [RCUT] [GCUT] [BCUT] Screen VR	R cut-off G cut-off B cut-off Screen	RCUT, GCUT, BCUT: 32 Hexa-decimal GDRV, BDRV: 20 Hexa-decimal Select horizontal line mode by pressing [-/--] button on the remote control in service mode.		Screen adjustment	1. Set the controls as shown in the left column. 2. Gradually increase the screen VR (T461) until one of R, G or B line begins to brighten slightly. 3. Determine the position of the screen VR here. 4. Adjust RCUT, GCUT and BCUT, brighten other lines until they begin to light slightly. (Adjust DATA so that the line becomes almost white.) 5. Press ⊕ button on TV set to escape from the horizontal line mode.	–
Slave address [RCUT] [GCUT] [BCUT] [GDRV] [BDRV]	R cut-off G cut-off B cut-off G drive B drive (White balance)	Contrast: MAX Bright : CENTER Color : CENTER	Cross-hatch, etc.	Screen adjustment	1. This adjustment must be done after adjustment of the above-mentioned cut-off and screen VR's have been completed. 2. Adjust cut-off and drive DATA alternately. 3. Use a checker to adjust brightness by changing modulation factor.	HIGH LIGHT; (103cd/m^3) 11500K +0.0075uv DARK; (17cd/m^3) 10500K +0.0105uv
Slave address [PID]	ID ref		VIDEO No input	Pin 52 of IC501	1. Connect a resistor 220k ohm across pin 52 of IC501 and GND, and connect digital voltmeter. 2. Select slave address F0 [PID]. 3. Adjust DC voltage.	2.0V DC ±0.1V DC
Slave address [TRP]	Chroma trap f_0 adjusting	Contrast: MAX Bright : MIN Color : MIN	4.43NTSC color bar	Pin 23 of IC501 (B-OUT)	1. Select slave address F1 [TRP]. 2. Adjust chroma trap so that chroma level at pin 23 of IC501 becomes minimum.	Chroma level: MIN



[TNTC]
Status of 6.25th bar
Fig.-1

MULTI BUS E2PROM ADDRESS, ADJUSTING ADDRESS TABLE

Adjusting method	QA02 memory ADDR	Name of item	Value of initializing QA02 (Hexa-decimal)	Adjustments
F	06D	RCUT	32	R CUTOFF
↓	06E	GCUT	32	G CUTOFF
↓	06F	BCUT	32	B CUTOFF
↓	070	GDRV	20	G DRIVE
↓	071	BDRV	20	B DRIVE
↓	072	CNTX	39	SUB CONTRAST MAX
↓	073	BRTC	32	SUB BRIGHT CEN
↓	074	COLC	32	SUB COLOR CEN NTSC
↓	075	TNTC	39	SUB TINT CEN
↓	076	COLP	32	SUB COLOR CEN PAL
↓	077	COLS	32	SUB COLOR CEN SECAM
F	09B	HPOS	08	50Hz HORIZONTAL POSITION
F	0AF	PID	11	PAL IDENT LEVEL
F	0B0	TRP	01	CHROMA TRAP f_0

F ... This item may require adjustments by models after initialization, when QA02 is replaced.

SELECTING THE ADJUSTING ITEMS

Every pressing of CHANNEL ▲ button changes the adjustment items in the following order. (▼ button for reverse order.)

ADJUSTING THE DATA

Pressing of VOLUME ◅ – / + button will change the value of data in the range from 00H to FFH. The variable range depends on the adjusting item.

EXIT FROM SERVICE MODE

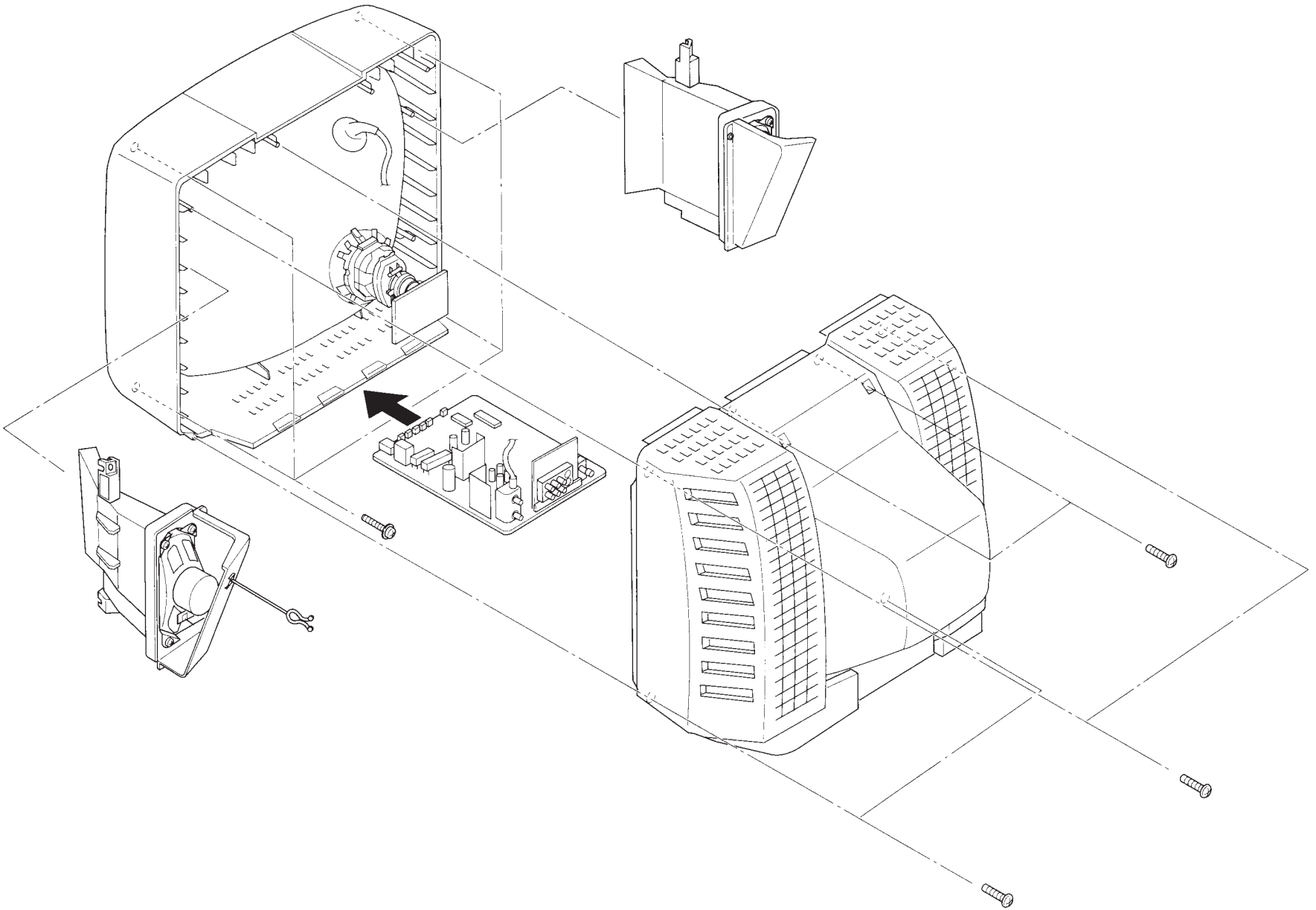
Press POWER button to turn off the TV once

INITIALIZATION OF MEMORY DATA OF QA02

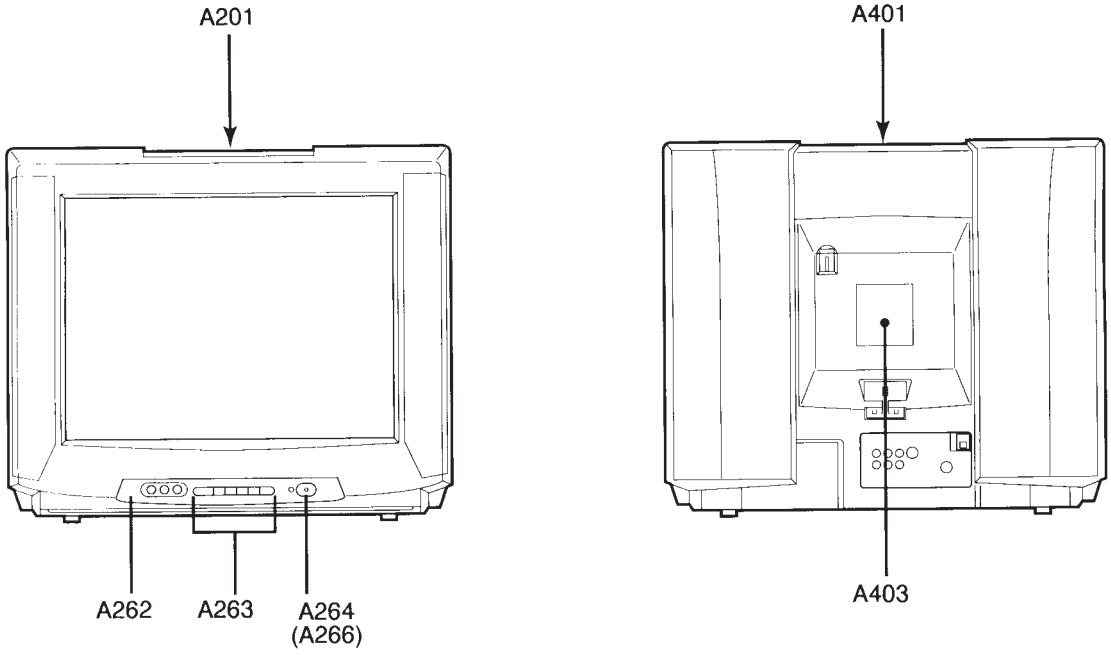
After replacing QA02, the following initialization is required.

1. Enter the service mode, then select any register item.
2. Press and hold the CALL button on the Remote, then press the CHANNEL ▲ button on the TV. The initialization of QA02 has been completed.
3. Check the picture carefully. If necessary, adjust any adjustment item above.
   Perform "AUTO Search memory" on page 9.

CAUTION: Never attempt to initialize the data unless QA02 has been replaced.



CABINET REPLACEMENT PARTS LIST



Location No.	Part No.	Description
A201	23410700	Front Cover
A262	23430246	Control Panel
A263	23443987	Button, Control
A264	23443988	Button, Power
A266	23836867	Coil, Spring
⚠A401	23426526	Back Cover
A403	23560141	Label, Model No. 2185XR

CHASSIS REPLACEMENT PARTS LIST

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

CAUTION: The international hazard symbols " ⚠ " in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 2. Do not degrade the safety of the receiver through improper servicing.

NOTICE:
- *The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.*
- *The PC board assembly with * mark is no longer available after the end of the production.*

ABBREVIATIONS:

Capacitors.....	CD	: Ceramic Disk	PF	: Plastic Film	EL	: Electrolytic
Resistors.....	CF	: Carbon Film	CC	: Carbon Composition	MF	: Metal Film
	OMF	: Oxide Metal Film	VR	: Variable Resistor	FR	: Fusible Resistor

(All CD and PF capacitors are ±5%, 50V and all resistors, ±5%, 1/6W unless otherwise noted.)

Location No.	Part No.	Description
CAPACITORS		
C101	24796479	EL, 4.7μF, ±20%, 35V
C102	24794221	EL, 220μF, ±20%, 16V
C103	24794101	EL, 100μF, ±20%, 16V
C105	24212102	CD, 1000pF, ±10%
C106	24669100	EL, 10μF, ±20%, 50V
C108	24793101	EL, 100μF, ±20%, 10V
C111	24669478	EL, 0.47μF, ±20%, 50V
C112	24669478	EL, 0.47μF, ±20%, 50V
C114	24474151	CD, 150pF, ±10%
C115	24206478	EL, 0.47μF, 50V
C116	24206478	EL, 0.47μF, 50V
C201	24085957	EL, 0.47μF, ±20%, 50V, NP
C207	24232103	CD, 0.01μF, +80%, −20%
C211	24793470	EL, 47μF, ±20%, 10V
C212	24794100	EL, 10μF, ±20%, 16V
C214	24794101	EL, 100μF, ±20%, 16V
C215	24793471	EL, 470μF, ±20%, 10V
C216	24232103	CD, 0.01μF, +80%, −20%
C220	24206108	EL, 0.1μF, 50V
C221	24206108	EL, 0.1μF, 50V
C222	24206108	EL, 0.1μF, 50V
C230	24794100	EL, 10μF, ±20%, 16V
C301	24474561	CD, 560pF, ±10%
C302	24590103	PF, 0.01μF
C303	24617915	EL, 1μF, ±10%, 50V
C304	24214471	CD, 470pF, ±10%, 500V
C305	24617912	EL, 2.2μF, ±10%, 50V
C306	24073044	EL, 3300μF, ±20%, 16V
C307	24214472	CD, 4700pF, ±10%, 500V
C308	24668101	EL, 100μF, ±20%, 35V
C310	24796102	EL, 1000μF, ±20%, 35V
C311	24434100	CD, 10pF, ±0.5pF, 500V
C313	24082057	PF, 0.22μF, 100V
C320	24668101	EL, 100μF, ±20%, 35V
C321	24666221	EL, 220μF, ±20%, 16V
C341	24794101	EL, 100μF, ±20%, 16V
C401	24669100	EL, 10μF, ±20%, 50V
C402	24590562	PF, 5600pF
C403	24590103	PF, 0.01μF
C404	24669010	EL, 1μF, ±20%, 50V

Location No.	Part No.	Description
C405	24212182	CD, 1800pF, ±10%
C406	24085958	EL, 1.0μF, ±20%, 50V, Non-Polar
C408	24212221	CD, 220pF, ±10%
C409	24214221	CD, 220pF, ±10%, 500V
C413	24214222	CD, 2200pF, ±10%, 500V
C417	24214391	CD, 390pF, ±10%, 500V
C419	24763221	EL, 220μF, ±20%, 16V
C421	24794470	EL, 47μF, ±20%, 16V
C430	24232103	CD, 0.01μF, +80%, −20%
C431	24794102	EL, 1000μF, ±20%, 16V
C438	24212221	CD, 220pF, ±10%
C440	24082576	PF, 6000pF, ±3%, 1500V
C441	24693562	PF, 5600pF, 100V
C442	24082669	PF, 0.33μF, 250V
C443	24795102	EL, 1000μF, ±20%, 25V
C444	24082460	PF, 6000pF, ±3%, 1500V
C445	24828563	PF, 0.056μF, 200V
C447	24700220	EL, 22μF, ±20%, 250V
C448	24640908	EL, 33μF, ±20%, 160V
C463	24212152	CD, 1500pF, ±10%
C467	24095881	PF, 0.018μF, ±3%, 630V
C470	24666220	EL, 22μF, ±20%, 16V
C472	24538474	PF, 0.47μF
C504	24353560	CD, 56pF
C505	24232103	CD, 0.01μF, +80%, −20%
C506	24590153	PF, 0.015μF
C507	24353101	CD, 100pF
C509	24474910	CD, 91pF, ±10%
C510	24797010	EL, 1μF, ±20%, 50V
C511	24212101	CD, 100pF, ±10%
C512	24212101	CD, 100pF, ±10%
C520	24436820	CD, 82pF
C530	24590473	PF, 0.047μF
C531	24590473	PF, 0.047μF
C560	24206228	EL, 0.22μF, 50V
C561	24212182	CD, 1800pF, ±10%
C610	24794470	EL, 47μF, ±20%, 16V
C612	24794470	EL, 47μF, ±20%, 16V
C661	24590102	PF, 1000pF
C662	24590102	PF, 1000pF

Location No.	Part No.	Description
C663	24794100	EL, 10μF, ±20%, 16V
C670	24667470	EL, 47μF, ±20%, 25V
C671	24667470	EL, 47μF, ±20%, 25V
C673	24669229	EL, 2.2μF, ±20%, 50V
C676	24591124	PF, 0.12μF
C677	24591124	PF, 0.12μF
C678	24669229	EL, 2.2μF, ±20%, 50V
C679	24667470	EL, 47μF, ±20%, 25V
C681	24668102	EL, 1000μF, ±20%, 35V
C682	24668101	EL, 100μF, ±20%, 35V
C683	24668102	EL, 1000μF, ±20%, 35V
⚠C801	24082374	PF, 0.22μF, AC250V
C805	24092281	CD, 4700pF, ±20%, AC250V
C806	24092281	CD, 4700pF, ±20%, AC250V
C810	24086936	EL, 270μF, ±20%, 450V
⚠C813	24092457	PF, 2200pF, ±20%, AC400V
⚠C814	24092457	PF, 2200pF, ±20%, AC400V
C831	24794470	EL, 47μF, ±20%, 16V
C841	24796100	EL, 10μF, ±20%, 35V
C842	24794100	EL, 10μF, ±20%, 16V
C843	24590104	PF, 0.1μF
C846	24538224	PF, 0.22μF
C860	24214103	CD, 0.01μF, ±10%, 500V
C861	24214471	CD, 470pF, ±10%, 500V
C862	24082857	PF, 680pF, ±2%
C863	24590104	PF, 0.1μF
C864	24092472	CD, 150pF, ±10%, 2kV
C866	24669100	EL, 10μF, ±20%, 50V
C867	24212682	CD, 6800pF, ±10%
C868	24676470	EL, 47μF, ±20%, 100V
C869	24678229	EL, 2.2μF, ±20%, 200V
C870	24820683	PF, 0.068μF, 630V
C871	24092346	CD, 1200pF, ±10%, 2kV
C876	24538474	PF, 0.47μF
C877	24667470	EL, 47μF, ±20%, 25V
C883	24538474	PF, 0.47μF
C884	24640018	EL, 220μF, ±20%, 160V
C885	24214471	CD, 470pF, ±10%, 500V
C886	24214471	CD, 470pF, ±10%, 500V
C889	24668222	EL, 2200μF, ±20%, 35V
C891	24082229	PF, 0.1μF, ±10%, 250V
C892	24790479	EL, 4.7μF, ±20%, 160V
C893	24092338	CD, 270pF, ±10%, 2kV
C894	24092338	CD, 270pF, ±10%, 2kV
C898	24212102	CD, 1000pF, ±10%
C901	24679479	EL, 4.7μF, ±20%, 250V
C902	24211102	CD, 1000pF, ±10%, 2kV
C941	24436681	CD, 680pF
C942	24436681	CD, 680pF
C943	24436681	CD, 680pF
C971	24763221	EL, 220μF, ±20%, 16V
C972	24666100	EL, 10μF, ±20%, 16V
C980	24763471	EL, 470μF, ±20%, 16V
C981	24797479	EL, 4.7μF, ±20%, 50V
CA02	24474271	CD, 270pF, ±10%
CA33	24232103	CD, 0.01μF, +80%, –20%
CA36	24474101	CD, 100pF, ±10%
CA37	24474101	CD, 100pF, ±10%
CA38	24474101	CD, 100pF, ±10%
CA42	24794100	EL, 10μF, ±20%, 16V
CA43	24232103	CD, 0.01μF, +80%, –20%
CA44	24232103	CD, 0.01μF, +80%, –20%
CA68	24794100	EL, 10μF, ±20%, 16V
CA69	24232103	CD, 0.01μF, +80%, –20%

Location No.	Part No.	Description
CB01	24794470	EL, 47μF, ±20%, 16V
CB20	24212101	CD, 100pF, ±10%
CP01	24590104	PF, 0.1μF
CP03	24590104	PF, 0.1μF
CP04	24590104	PF, 0.1μF
CP05	24590103	PF, 0.01μF
CP06	24590103	PF, 0.01μF
CP07	24793470	EL, 47μF, ±20%, 10V
CP08	24590223	PF, 0.022μF
CQ01	24794470	EL, 47μF, ±20%, 16V
CQ02	24538224	PF, 0.22μF
CQ03	24538474	PF, 0.47μF
CQ04	24590104	PF, 0.1μF
CQ05	24232103	CD, 0.01μF, +80%, –20%
CQ06	24232103	CD, 0.01μF, +80%, –20%
CS02	24206010	EL, 1μF, 50V
CS03	24206010	EL, 1μF, 50V
CS06	24206010	EL, 1μF, 50V
CS07	24206010	EL, 1μF, 50V
CS10	24203100	EL, 10μF, ±20%, 16V
CS11	24203100	EL, 10μF, ±20%, 16V
CS29	24203220	EL, 22μF, ±20%, 16V
CV01	24203101	EL, 100μF, ±20%, 16V
CV02	24203100	EL, 10μF, ±20%, 16V
CV03	24206010	EL, 1μF, 50V
CV04	24206100	EL, 10μF, 50V
CV05	24206010	EL, 1μF, 50V
CV06	24203100	EL, 10μF, ±20%, 16V
CV07	24232103	CD, 0.01μF, +80%, –20%
CV08	24203100	EL, 10μF, ±20%, 16V
CV09	24232103	CD, 0.01μF, +80%, –20%
CV10	24203100	EL, 10μF, ±20%, 16V
CV11	24232103	CD, 0.01μF, +80%, –20%
CV22	24203100	EL, 10μF, ±20%, 16V
CV33	24232103	CD, 0.01μF, +80%, –20%
CV34	24762471	EL, 470μF, ±20%, 10V
CV36	24763221	EL, 220μF, ±20%, 16V
CV39	24203100	EL, 10μF, ±20%, 16V

RESISTORS

R101	24382183	OMF, 18k ohm, 1W
R200	24366222	CF, 2200 ohm
R208	24366101	CF, 100 ohm
R209	24366101	CF, 100 ohm
R211	24366103	CF, 10k ohm
R212	24366224	CF, 220k ohm
R213	24366153	CF, 15k ohm
R214	24366103	CF, 10k ohm
R217	24367183	CF, 18k ohm, ±2%
R219	24366511	CF, 510 ohm
R228	24367752	CF, 7500 ohm, ±2%
R302	24366683	CF, 68k ohm
R303	24321109	MF, 1 ohm, 1/2W
R304	24366123	CF, 12k ohm
R305	24322129	MF, 1.2 ohm, 1W
R306	24366203	CF, 20k ohm
R307	24366114	CF, 110k ohm
R308	24552681	OMF, 680 ohm, 1/2W
R310	24366102	CF, 1k ohm
R311	24366822	CF, 8200 ohm
R312	24366433	CF, 43k ohm
R313	24366303	CF, 30k ohm
R314	24366561	CF, 560 ohm
R315	24366222	CF, 2200 ohm

Location No.	Part No.	Description
R327	24339569	MF, 5.6 ohm, 2W
R333	24545479	FR, 4.7 ohm, 1/4W
R336	24383271	OMF, 270 ohm, 2W
R337	24366473	CF, 47k ohm
R341	24366102	CF, 1k ohm
R342	24366562	CF, 5600 ohm
R343	24310159	MF, 1.5 ohm, 1/2W
R344	24366392	CF, 3900 ohm
R350	24066602	VR, 50k ohm, 1/10W
R365	24366244	CF, 240k ohm
R400	24366155	CF, 1.5M ohm
R401	24366473	CF, 47k ohm
R402	24366622	CF, 6200 ohm
R403	24366682	CF, 6800 ohm
R404	24366123	CF, 12k ohm
R405	24366104	CF, 100k ohm
R407	24366224	CF, 220k ohm
R409	24366101	CF, 100 ohm
R411	24366391	CF, 390 ohm
R413	24366151	CF, 150 ohm
R415	24382103	OMF, 10k ohm, 1W
R416	24019321	OMF, 1500 ohm, 5W
R417	24366182	CF, 1800 ohm
R420	24366221	CF, 220 ohm
R421	24321129	MF, 1.2 ohm, 1/2W
R422	24366221	CF, 220 ohm
R429	24552560	OMF, 56 ohm, 1/2W
R430	24366103	CF, 10k ohm
R431	24366103	CF, 10k ohm
R432	24382181	OMF, 180 ohm, 1W
R441	24532102	FR, 1k ohm, 1W
R447	24382472	OMF, 4700 ohm, 1W
R448	24338338	MF, 0.33 ohm, 1W
R461	24366561	CF, 560 ohm
R470	24338688	MF, 0.68 ohm, 1W
R471	24552820	OMF, 82 ohm, 1/2W
R479	24552820	OMF, 82 ohm, 1/2W
R501	24366102	CF, 1k ohm
R502	24366102	CF, 1k ohm
R503	24366102	CF, 1k ohm
R504	24366271	CF, 270 ohm
R505	24366271	CF, 270 ohm
R506	24366271	CF, 270 ohm
R507	24366332	CF, 3300 ohm
R509	24366102	CF, 1k ohm
R510	24366122	CF, 1200 ohm
R511	24366101	CF, 100 ohm
R512	24366272	CF, 2700 ohm
R515	24366332	CF, 3300 ohm
R516	24366101	CF, 100 ohm
R517	24366101	CF, 100 ohm
R520	24366475	CF, 4.7M ohm
R522	24366475	CF, 4.7M ohm
R525	24366102	CF, 1k ohm
R560	24366221	CF, 220 ohm
R561	24366564	CF, 560k ohm
R610	24366273	CF, 27k ohm
R612	24366103	CF, 10k ohm
R661	24366332	CF, 3300 ohm
R662	24366332	CF, 3300 ohm
R663	24366432	CF, 4300 ohm
R664	24366432	CF, 4300 ohm
R665	24366822	CF, 8200 ohm
R666	24366822	CF, 8200 ohm

Location No.	Part No.	Description
R667	24366103	CF, 10k ohm
R668	24366103	CF, 10k ohm
R669	24366103	CF, 10k ohm
R676	24366229	CF, 2.2 ohm
R677	24366229	CF, 2.2 ohm
⚠R801	24009954	Metal-Glazed Resistor, 2.2M ohm, 1/2W
⚠R808	24019340	PTC Thermistor, 18 ohm, 290V
R810	24569229	Cement, 2.2 ohm, 10W
⚠R811	24568271	Cement, 270 ohm, 7W
R830	24310399	MF, 3.9 ohm, 1/2W
R831	24366331	CF, 330 ohm
R840	24531120	FR, 12 ohm, 1/2W
R842	24552272	OMF, 2700 ohm, 1/2W
R847	24366472	CF, 4700 ohm
R861	24384223	OMF, 22k ohm, 3W
R862	24381220	OMF, 22 ohm, 1/2W
R863	24552432	OMF, 4300 ohm, 1/2W
R864	24552561	OMF, 560 ohm, 1/2W
R866	24381390	OMF, 39 ohm, 1/2W
R867	24000252	MF, 68k ohm, 1/4W
R868	24552103	OMF, 10k ohm, 1/2W
R870	24531180	FR, 18 ohm, 1/2W
R871	24310109	MF, 1.0 ohm, 1/2W
R872	24377224	CF, 220k ohm, 1W
R874	24366473	CF, 47k ohm
R875	24366224	CF, 220k ohm
R876	24366472	CF, 4700 ohm
R877	24377274	CF, 270k ohm, 1W
R878	24366823	CF, 82k ohm
R883	24552752	OMF, 7500 ohm, 1/2W
R884	24552752	OMF, 7500 ohm, 1/2W
R888	24322828	OMF, 0.82 ohm, 1W
R890	24381333	OMF, 33k ohm, 1/2W
R891	24366102	CF, 1k ohm
R892	24366101	CF, 100 ohm
⚠R899	24005007	Metal-Glazed Resistor, 8.2M ohm, 1W
R901	24376472	CF, 4700 ohm, 1/2W
R902	24376472	CF, 4700 ohm, 1/2W
R903	24376472	CF, 4700 ohm, 1/2W
R911	24366101	CF, 100 ohm
R912	24366101	CF, 100 ohm
R913	24366101	CF, 100 ohm
R920	24000568	FR, 4.7 ohm, 1W
R921	24366391	CF, 390 ohm
R922	24366391	CF, 390 ohm
R923	24366391	CF, 390 ohm
R931	24366152	CF, 1500 ohm
R932	24366152	CF, 1500 ohm
R933	24366152	CF, 1500 ohm
R961	24554183	OMF, 18k ohm, 2W
R962	24554183	OMF, 18k ohm, 2W
R963	24554183	OMF, 18k ohm, 2W
R971	24366682	CF, 6800 ohm
R972	24366102	CF, 1k ohm
R973	24366471	CF, 470 ohm
R980	24552560	OMF, 56 ohm, 1/2W
RA02	24366102	CF, 1k ohm
RA03	24366102	CF, 1k ohm
RA04	24366682	CF, 6800 ohm
RA07	24366102	CF, 1k ohm
RA08	24366102	CF, 1k ohm

Location No.	Part No.	Description
RA09	24366471	CF, 470 ohm
RA10	24366471	CF, 470 ohm
RA11	24366102	CF, 1k ohm
RA12	24366102	CF, 1k ohm
RA13	24366102	CF, 1k ohm
RA14	24366752	CF, 7500 ohm
RA15	24366103	CF, 10k ohm
RA16	24366102	CF, 1k ohm
RA17	24366102	CF, 1k ohm
RA18	24366102	CF, 1k ohm
RA19	24366221	CF, 220 ohm
RA22	24366302	CF, 3k ohm
RA23	24366302	CF, 3k ohm
RA24	24366302	CF, 3k ohm
RA25	24366102	CF, 1k ohm
RA26	24366102	CF, 1k ohm
RA27	24366102	CF, 1k ohm
RA33	24366103	CF, 10k ohm
RA34	24366103	CF, 10k ohm
RA35	24366102	CF, 1k ohm
RA36	24366153	CF, 15k ohm
RA37	24366331	CF, 330 ohm
RA38	24366331	CF, 330 ohm
RA61	24366103	CF, 10k ohm
RA62	24366103	CF, 10k ohm
RA64	24366333	CF, 33k ohm
RA67	24366103	CF, 10k ohm
RA68	24366103	CF, 10k ohm
RA70	24366333	CF, 33k ohm
RA71	24366683	CF, 68k ohm
RA72	24366223	CF, 22k ohm
RA73	24366103	CF, 10k ohm
RB01	24366271	CF, 270 ohm
RB02	24366221	CF, 220 ohm
RB03	24366101	CF, 100 ohm
RB09	24366470	CF, 47 ohm
RB11	24366103	CF, 10k ohm
RB12	24366223	CF, 22k ohm
RB26	24366103	CF, 10k ohm
RB27	24366103	CF, 10k ohm
RB28	24366104	CF, 100k ohm
RB30	24366103	CF, 10k ohm
RB40	24366183	CF, 18k ohm
RB41	24366182	CF, 1800 ohm
RB42	24366102	CF, 1k ohm
RB43	24366103	CF, 10k ohm
RB44	24366682	CF, 6800 ohm
RB45	24366102	CF, 1k ohm
RB46	24366331	CF, 330 ohm
RP02	24366105	CF, 1M ohm
RQ01	24366152	CF, 1500 ohm
RQ02	24366152	CF, 1500 ohm
RQ03	24366222	CF, 2200 ohm
RQ05	24366473	CF, 47k ohm
RQ08	24366473	CF, 47k ohm
RQ50	24066955	VR, 1k ohm, 1/10W
RQ51	24066952	VR, 10k ohm, 1/10W
RR11	24366222	CF, 2200 ohm
RR13	24366331	CF, 330 ohm
RR14	24366331	CF, 330 ohm
RR15	24366331	CF, 330 ohm
RR35	24366222	CF, 2200 ohm
RS01	24366103	CF, 10k ohm
RS02	24366104	CF, 100k ohm
RS03	24366103	CF, 10k ohm
RS04	24366104	CF, 100k ohm
RS05	24366104	CF, 100k ohm
RS06	24366104	CF, 100k ohm
RS14	24366101	CF, 100 ohm
RS15	24366101	CF, 100 ohm
RS19	24366101	CF, 100 ohm
RS20	24366222	CF, 2200 ohm
RS21	24366101	CF, 100 ohm
RS22	24366222	CF, 2200 ohm
RS23	24366102	CF, 1k ohm
RS24	24366102	CF, 1k ohm
RS27	24366561	CF, 560 ohm
RV02	24366472	CF, 4700 ohm
RV03	24366101	CF, 100 ohm
RV04	24366472	CF, 4700 ohm
RV05	24366223	CF, 22k ohm
RV06	24366272	CF, 2700 ohm
RV07	24366471	CF, 470 ohm
RV08	24366102	CF, 1k ohm
RV09	24366471	CF, 470 ohm
RV10	24366471	CF, 470 ohm
RV11	24366472	CF, 4700 ohm
RV12	24366101	CF, 100 ohm
RV13	24366472	CF, 4700 ohm
RV14	24366101	CF, 100 ohm
RV15	24366223	CF, 22k ohm
RV16	24366562	CF, 5600 ohm
RV17	24366471	CF, 470 ohm
RV18	24366223	CF, 22k ohm
RV19	24366562	CF, 5600 ohm
RV20	24366104	CF, 100k ohm
RV21	24366221	CF, 220 ohm
RV22	24366223	CF, 22k ohm
RV23	24366223	CF, 22k ohm
RV24	24552101	OMF, 100 ohm, 1/2W
RV25	24366750	CF, 75 ohm
RV26	24366101	CF, 100 ohm
RV27	24366103	CF, 10k ohm
RV30	24366750	CF, 75 ohm
RV31	24366750	CF, 75 ohm
RV37	24366750	CF, 75 ohm
RV87	24366332	CF, 3300 ohm
RV88	24366102	CF, 1k ohm
RV89	24366102	CF, 1k ohm
RV90	24366101	CF, 100 ohm
RV91	24366101	CF, 100 ohm

COILS & TRANSFORMERS

L201	23289100	Coil, Peaking, TRF4100AF
L301	23103859	Coil (Ferrite Bead), TEM2011
L303	23289100	Coil, Peaking, TRF4100AF
L400	23289100	Coil, Peaking, TRF4100AF
L401	23238714	Coil, Peaking, TRF4100AJ
L441	23233071	Coil, Linearity, TLN2112G
L462	23231056	Deflection Yoke, TDY-621WS
L509	23238704	Coil, Peaking, TRF4680AJ
L805	23261959	Coil, Choke, TRF9240
L806	23261959	Coil, Choke, TRF9240
L830	23289100	Coil, Peaking, TRF4100AF
L861	23103859	Coil (Ferrite Bead), TEM2011
L862	23103937	Coil (Ferrite Bead), TEM2004
L863	23103859	Coil (Ferrite Bead), TEM2011
L864	23103859	Coil (Ferrite Bead), TEM2011

Location No.	Part No.	Description
L883	23103775	Coil (Ferrite Bead), TEM2014
L884	23103775	Coil (Ferrite Bead), TEM2014
L885	23248073	Coil, Choke, TLN3299D
L886	23103859	Coil (Ferrite Bead), TEM2011
L887	23222694	Coil, Width, TLN2026
L888	23103859	Coil (Ferrite Bead), TEM2011
⚠L901	23200286	Coil, Degaussing, TSB-2301AG
LA01	23289100	Coil, Peaking, TRF4100AF
LP01	23289470	Coil, Peaking, TRF4470AF
T401	23224983	Transformer, Horiz. Drive, TLN1039
⚠T461	23236481	Transformer, Flyback, TFB4125CH
⚠T801	23211644	Line Filter, TRF3118G
T862	23217276	Transformer, Converter, TPW3319AE

SEMICONDUCTORS

Q301	23319459	IC, LA7837
Q303	A6002040	Transistor, RN1204
Q340	23114530	Transistor, 2SA933S-Q
Q402	A6330069	Transistor, 2SC2482 FA-1
Q403	A6333346	Transistor, 2SC2655-Y(C)
Q404	23314375	Transistor, ON4409(508D)
Q421	23314141	Transistor, 2SC3852
Q461	23114530	Transistor, 2SA933S-Q
Q501	23905395	IC, M52707SP-A
Q608	A6342206	Transistor, 2SC2878-A(TE
Q609	A6342206	Transistor, 2SC2878-A(TE
Q610	B0376856	IC, TA8211AH
Q612	23114530	Transistor, 2SA933S-Q
Q801	23905052	IC, STR-Z3202-L
Q830	23314141	Transistor, 2SC3852
Q840	23318299	IC, L78MR05
⚠Q862	A8643108	Photo Coupler, TLP621(GR-LF
Q872	23314141	Transistor, 2SC3852
Q873	23114528	Transistor, 2SC1740S-Q
Q874	23114528	Transistor, 2SC1740S-Q
Q901	A6330059	Transistor, 2SC2482(C)
Q902	A6330059	Transistor, 2SC2482(C)
Q903	A6330059	Transistor, 2SC2482(C)
Q971	23114530	Transistor, 2SA933S-Q
Q980	A6330059	Transistor, 2SC2482(C)
QA01	23905356	IC, M37222M6-C83SP
QA02	23904665	IC, NM24C04EN
QB01	23114528	Transistor, 2SC1740S-Q
QB02	23114530	Transistor, 2SA933S-Q
QB03	A6002050	Transistor, RN1205
QB21	23114528	Transistor, 2SC1740S-Q
QB30	23114528	Transistor, 2SC1740S-Q
QB40	23114528	Transistor, 2SC1740S-Q
QP01	23904954	IC, U3660M-B
QQ01	23905306	IC, M52325AP
QS01	23114528	Transistor, 2SC1740S-Q
QS02	23114528	Transistor, 2SC1740S-Q
QS03	A6342206	Transistor, 2SC2878-A(TE
QS04	A6342206	Transistor, 2SC2878-A(TE
QV01	23904747	IC, MM1250XD
QV02	23114528	Transistor, 2SC1740S-Q
QV03	23114528	Transistor, 2SC1740S-Q
QV04	23904943	IC, MM1111XS
QV05	23114530	Transistor, 2SA933S-Q
QV06	23114530	Transistor, 2SA933S-Q
QV07	23114528	Transistor, 2SC1740S-Q
QV08	23114528	Transistor, 2SC1740S-Q
QV09	23114528	Transistor, 2SC1740S-Q
QV10	23114528	Transistor, 2SC1740S-Q
QV13	23114530	Transistor, 2SA933S-Q
D101	23115922	Diode, Zener, μPC574J(M)
D201	23115537	Diode, 1SS131
D301	23118479	Diode, BYD33J
D304	23115537	Diode, 1SS131
D306	23316323	Diode, Zener, UZ9.1BSA
D308	23118479	Diode, BYD33J
D309	23316326	Diode, Zener, UZ10BSA
D332	23316794	Diode, SC570A
D340	23316302	Diode, Zener, UZ4.7BSB
D401	23316321	Diode, Zener, UZ8.2BSB
D402	23316333	Diode, Zener, UZ12BSB
D404	23115537	Diode, 1SS131
D406	23118479	Diode, BYD33J
D408	A7580658	Diode, 3JH41
D409	23316326	Diode, Zener, UZ10BSA
D421	23316305	Diode, Zener, UZ5.1BSA
D422	23316302	Diode, Zener, UZ4.7BSB
D440	23316254	Diode, ERC06-15
D441	23316677	Diode, Zener, MTZJ6.8A
D461	23118338	Diode, RU4AM
D500	23316323	Diode, Zener, UZ9.1BSA
D501	23316690	Diode, Zener, MTZJ10B
D502	23316690	Diode, Zener, MTZJ10B
D503	23316690	Diode, Zener, MTZJ10B
D610	23115537	Diode, 1SS131
D611	23115537	Diode, 1SS131
D612	23115537	Diode, 1SS131
D615	23115537	Diode, 1SS131
D616	23115537	Diode, 1SS131
D617	23115537	Diode, 1SS131
D618	23115537	Diode, 1SS131
D619	23115537	Diode, 1SS131
D801	23316795	Diode, D6SB60L, F05
D830	23316310	Diode, Zener, UZ5.6BSC
D862	23118094	Diode, EU2A
D864	23118094	Diode, EU2A
D871	23316345	Diode, Zener, UZ18BSB
D872	23316338	Diode, Zener, UZ15BSA
D875	23316345	Diode, Zener, UZ18BSB
D876	23115537	Diode, 1SS131
D878	23316360	Diode, Zener, UZ27BSC
D880	23115537	Diode, 1SS131
D883	23316813	Diode, EG1
D884	23316813	Diode, EG1
D885	23316766	Diode, RU2YX
D886	23316766	Diode, RU2YX
D890	23115537	Diode, 1SS131
D891	23316554	Diode, 1SS146
D980	23115537	Diode, 1SS131
D981	23316554	Diode, 1SS146
D982	23316554	Diode, 1SS146
D983	23316554	Diode, 1SS146
DB01	A8636650	Diode (LED), TLSG116
DB03	23358522	LED, SIR-56SB3F
DB30	23115537	Diode, 1SS131
DQ20	23115537	Diode, 1SS131

MISCELLANEOUS

E912	23848729	Rubber Wedge
⚠F470	23144875	Fuse, 0.63A

Location No.	Part No.	Description
F470A	23165433	Holder, Fuse
⚠F801	23144834	Fuse, 3.15A
F801A	23165433	Holder, Fuse
H002	23148248	Module, MVCM41B, MULTI, MONO
KB01	23904946	Remote Sensor, RPM-676CBR-S
L462A	23997351	Compensator, DY, TC-O
L462B	23199314	Compensator, DY, TC-E
L462C	23993623	Compensator, DY, TC-L
L462D	23997346	Compensator, CONV, TC-N
⚠P801	23372011	Power Cord
PV01	23365835	Jack, 1S6P
PV02	23363252	Pin Jack, Yellow
PV03	23365508	Jack, Phono
⚠S801	23344385	Switch, Power
SA01	23145227	Switch, Push, 1C1P
SA02	23145227	Switch, Push, 1C1P
SA03	23145227	Switch, Push, 1C1P
SA04	23145227	Switch, Push, 1C1P
SA05	23145227	Switch, Push, 1C1P
SA06	23145227	Switch, Push, 1C1P
⚠V901A	23902966	Socket, CRT
V901M	23102409	Magnet, P/C, MAG-1070
W661	23351107	Speaker, SPK-1374, 60x120mm, 8 ohm
W662	23351107	Speaker, SPK-1374, 60x120mm, 8 ohm
X401	23153423	Ceramic Resonator, 503KHz, TCR1073
X501	23153459	Crystal, 4.43MHz
X502	23153459	Crystal, 4.43MHz
XA01	23153325	Ceramic Resonator, 8.00M, TCR1056
Z801	23904997	IC, HIC1015
Z860	23144451	Protector, PRF5000, 125V, 5A

PC BOARD ASSEMBLIES

＊U901		CRT Drive Board, PB5555
＊U902		Main Board, PB6726
＊U903		Back Terminal Board, PB6727

PICTURE TUBE

⚠V901	A5549139	Picture Tube, A51KSU93X(VM)

TUNER

H001	23321158	Tuner, ECA11

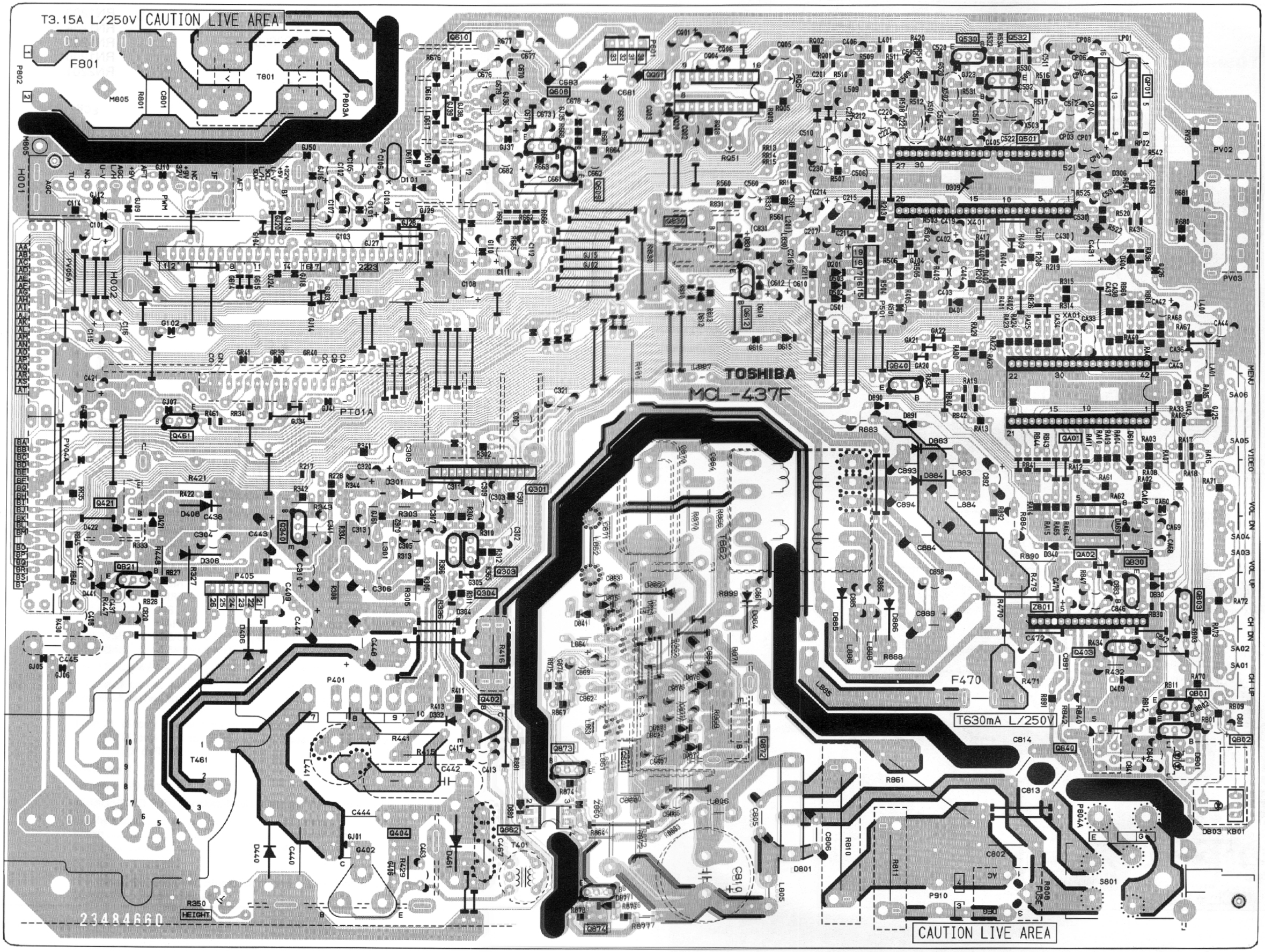
ACCESSORIES

K902	23306094	Remote Hand Unit, CT-9787
AT03	23305743	Battery Cover
Y101	23562900	Owner's Manual, Russian, 2185XR

Location No.	Part No.	Description

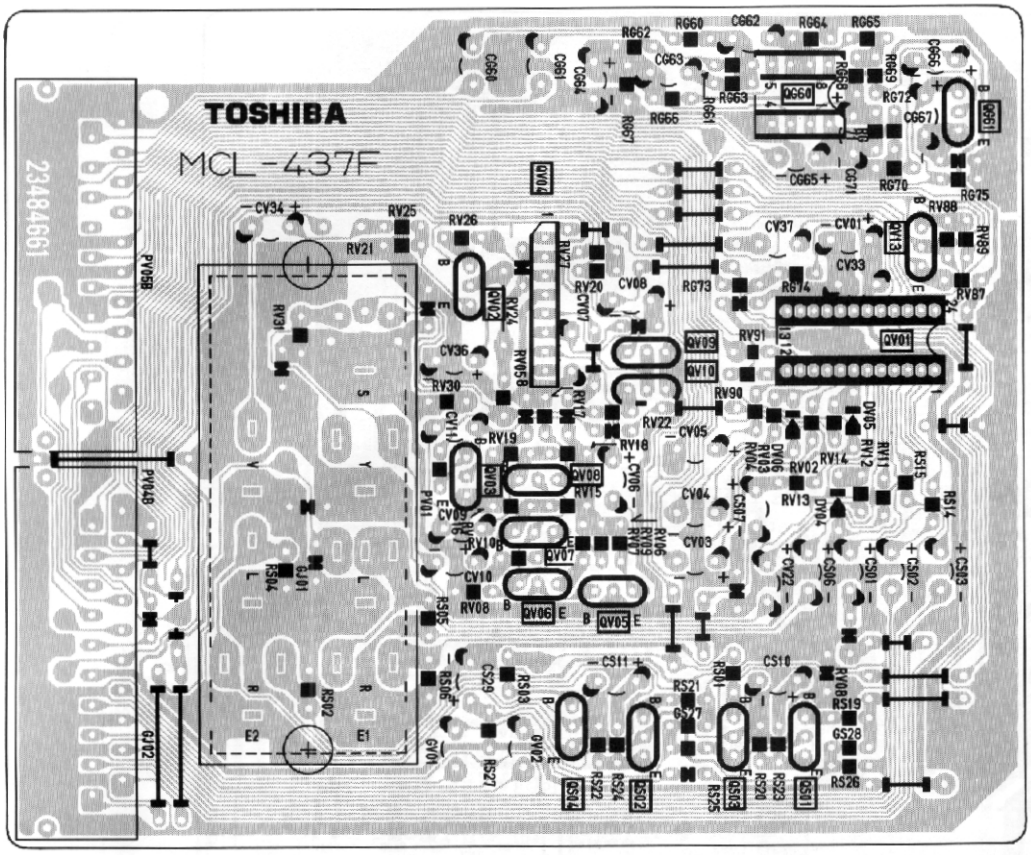
MAIN BOARD PB6726

BOTTOM (FOIL) SIDE



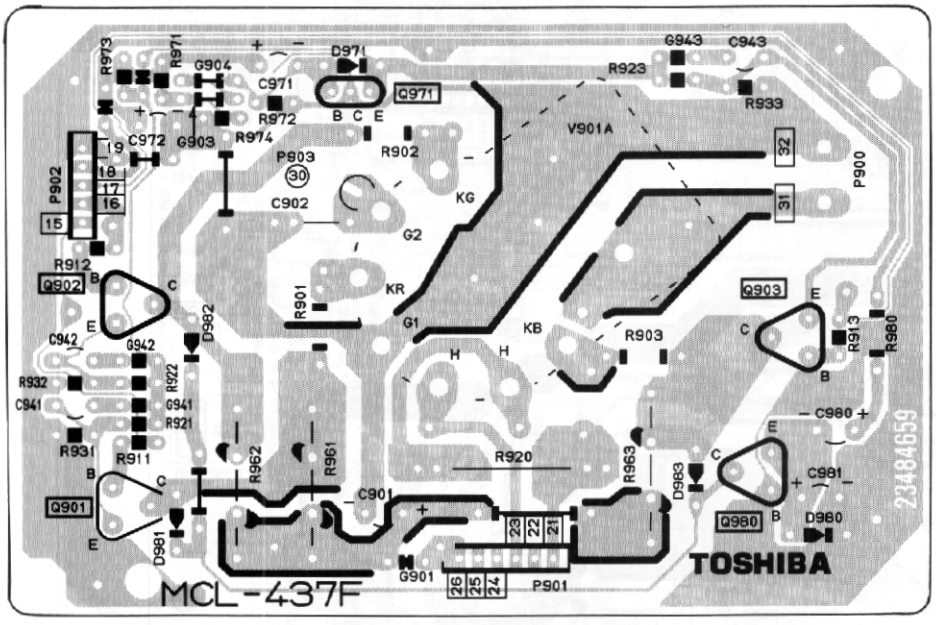
BACK TERMINAL BOARD PB6727

BOTTOM (FOIL) SIDE



CRT DRIVE BOARD PB5555

BOTTOM (FOIL) SIDE



TERMINAL VIEW OF TRANSISTOR, etc.

① 2SA1015
2SC388ATM
2SC1815
2SA562TM
2SC1959
2SC1627
2SC2878
2SC2482
2SA1300
2SC752GTM



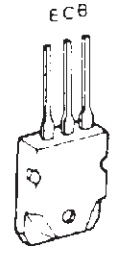
② 2SC2120
2SC2230
2SC2655



③ RN1203
RN1204
RN1205
RN1206
RN2201



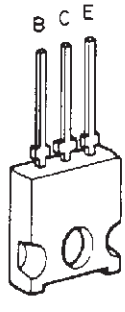
④ 2SA1265N



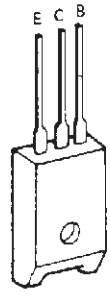
⑤ 2SD553
2SC1569
2SC2383
2SC3148
2SA1012



⑥ 2SC3619



⑦ ON4409



SPECIFICATIONS

Input Power Rating: 75 Watts, AC 220 ~ 240 Volts, 50/60 Hz

Aerial Input Impedance: 75 ohm unbalanced type for VHF, UHF and CATV

Television System and Channels:

System	Channel	VHF	UHF	CATV
PAL B/G	CCIR	2 ~ 12	21 ~ 69	X ~ Z + 2, S1 ~ S41
PAL D/K	CHINA	1 ~ 12	13 ~ 57	Z-1 ~ Z-38
PAL I	UK	–	21 ~ 69	–
SECAM B/G	CCIR	2 ~ 12	21 ~ 69	X ~ Z +2, S1 ~ S41
SECAM D/K	OIRT	1 ~ 12	21 ~ 69	X-1 ~ X-19
NTSC M	US	2 ~ 13	14 ~ 79	A-6 ~ A-1, A ~ W, AA ~ BBB
NTSC M	JAPAN	1 ~ 12	13 ~ 62	M1-M10, S1 ~ S41
4.43NTSC	5.5/6.0/6.5 MHz (Special RF signal)			
PAL 60Hz	5.5/6.0/6.5 MHz (Special RF signal)			

Colour System: PAL / SECAM / 4.43 NTSC / 3.58 NTSC / 60 Hz PAL / 50 Hz 3.58 NTSC

Intermediate Frequencies:
Picture I-F carrier frequency ..... 38.0 MHz
Sound I-F carrier frequency ..... 32.5 MHz-B/G, 33.5 MHz-M
32.0 MHz-i, 31.5 MHz-D/K

Picture Tube: Type 21 (54cm) Overall Picture tube measured diagonally
(51cm) Viewable Picture tube measured diagonally
90° deflection

Sound Output: 5 Watts × 2

Speakers: 60 mm x 120 mm 2 pc

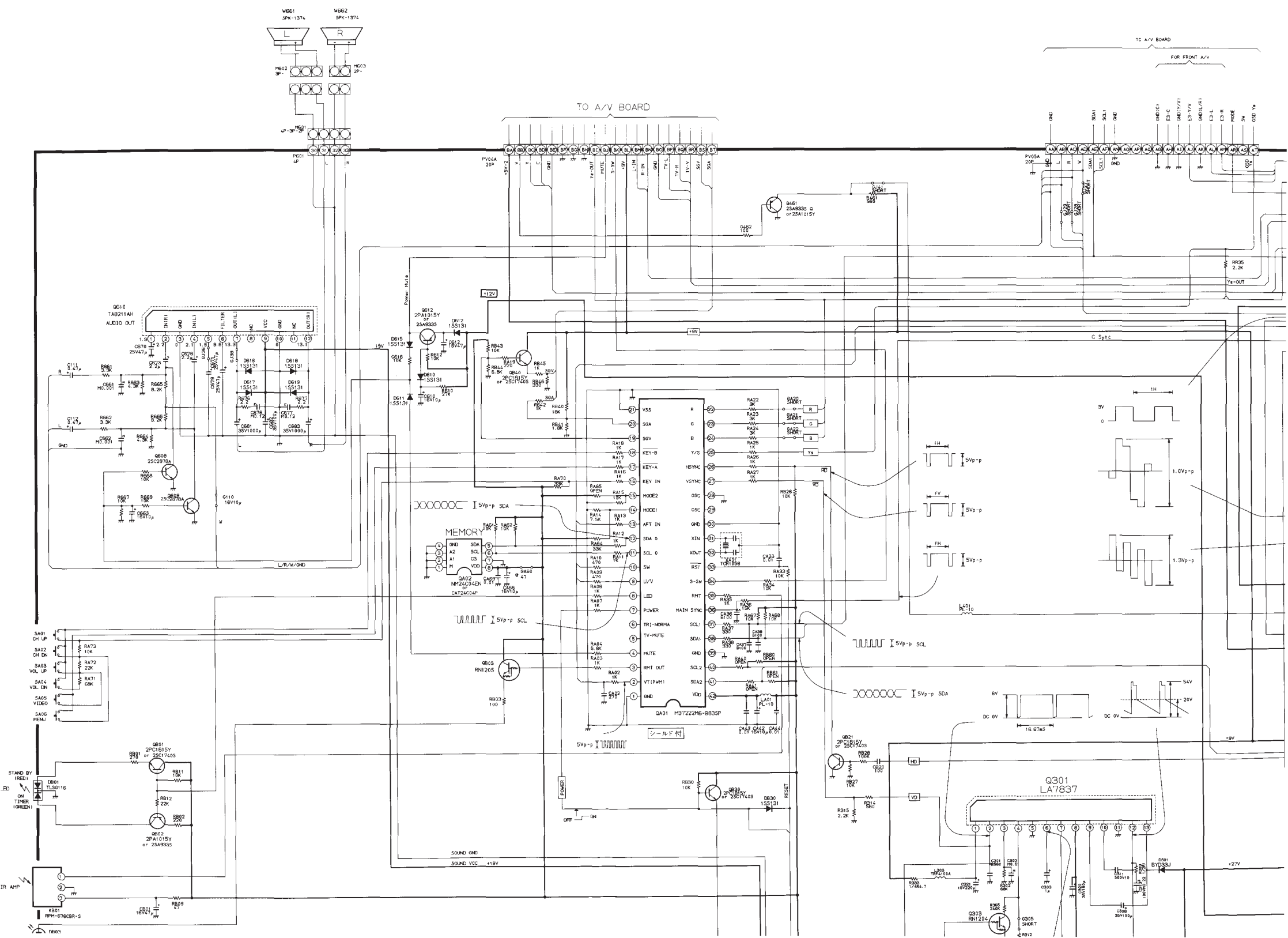
Aux. Terminals: AUDIO/VIDEO INPUT socket, MONITOR OUTPUT socket

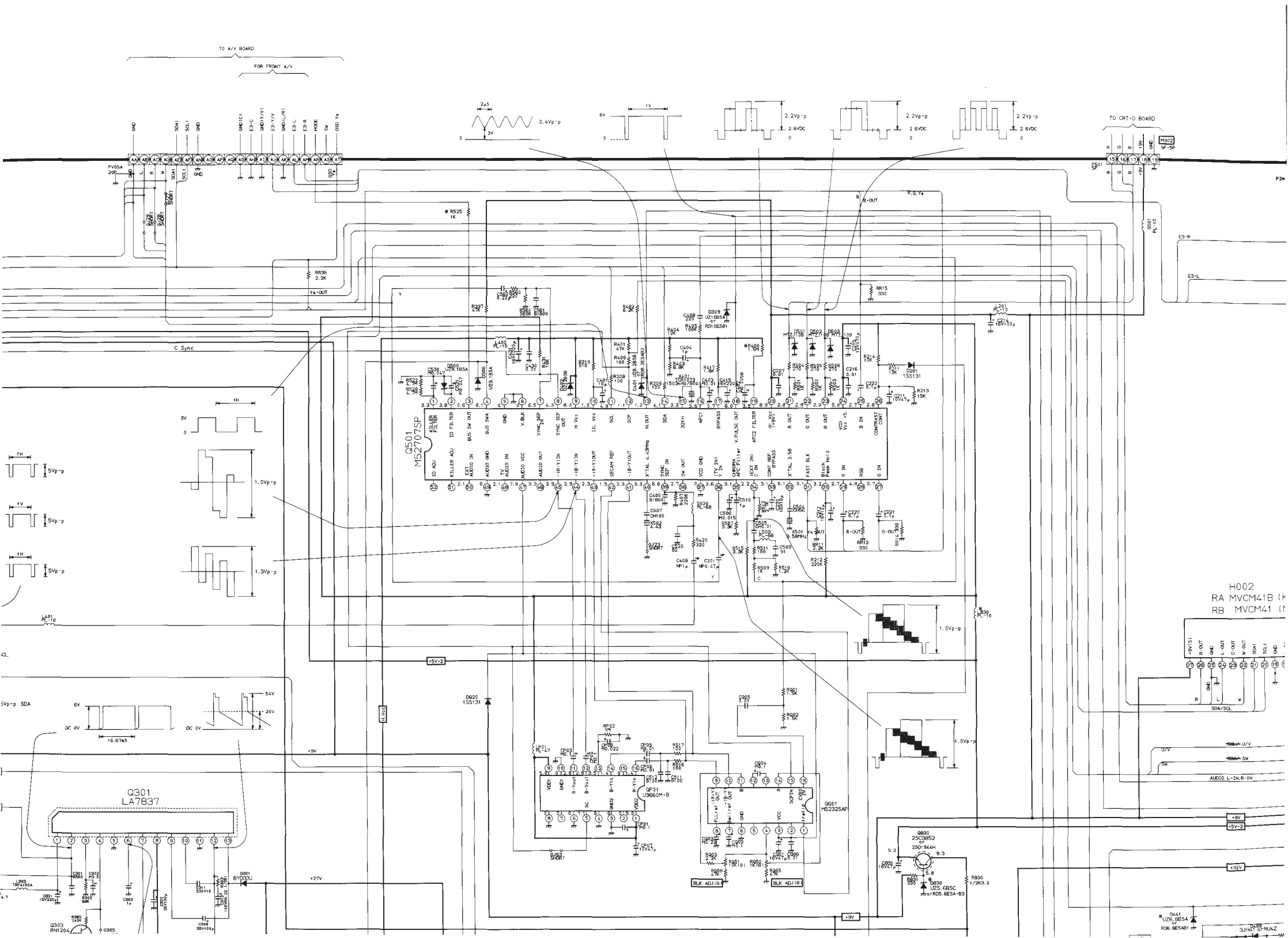
Dimensions:
Height ..... 484 mm
Width ..... 576 mm
Depth ..... 476 mm

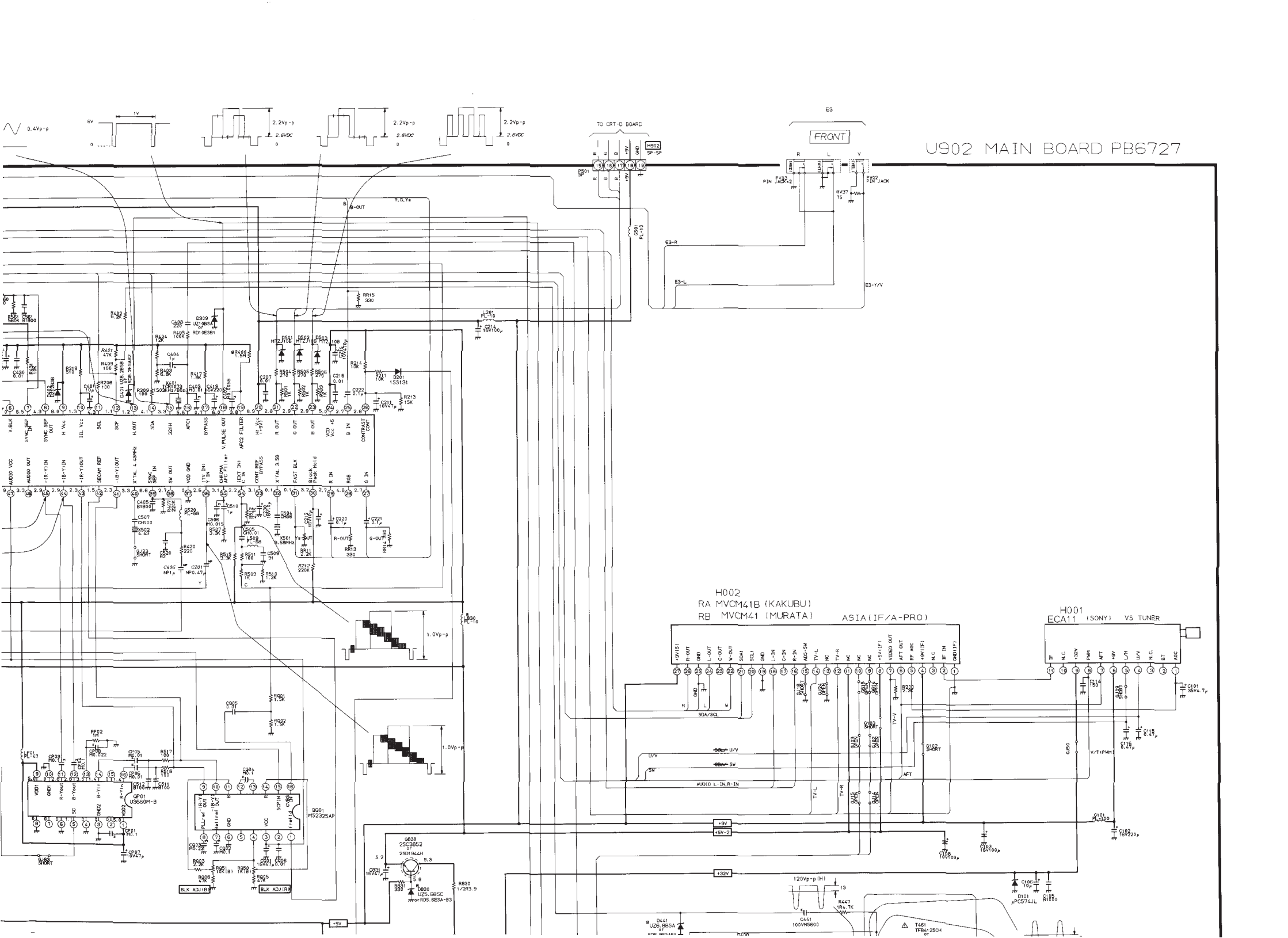
Mass: 22.5 kg

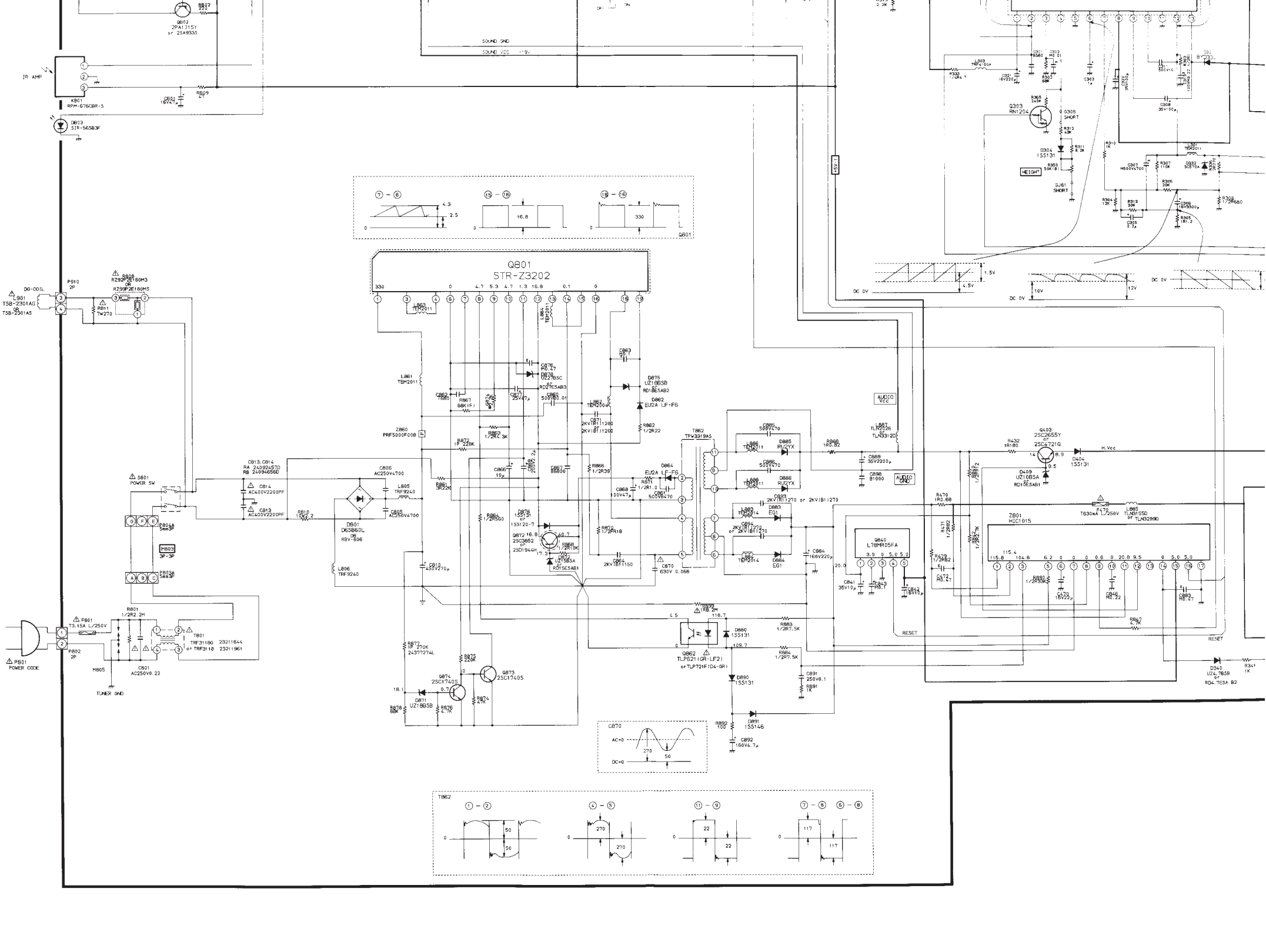
Features: OFF-timer, No signal off, Blue back screen, VIDEO and AUDIO input terminals, MONITOR output terminals

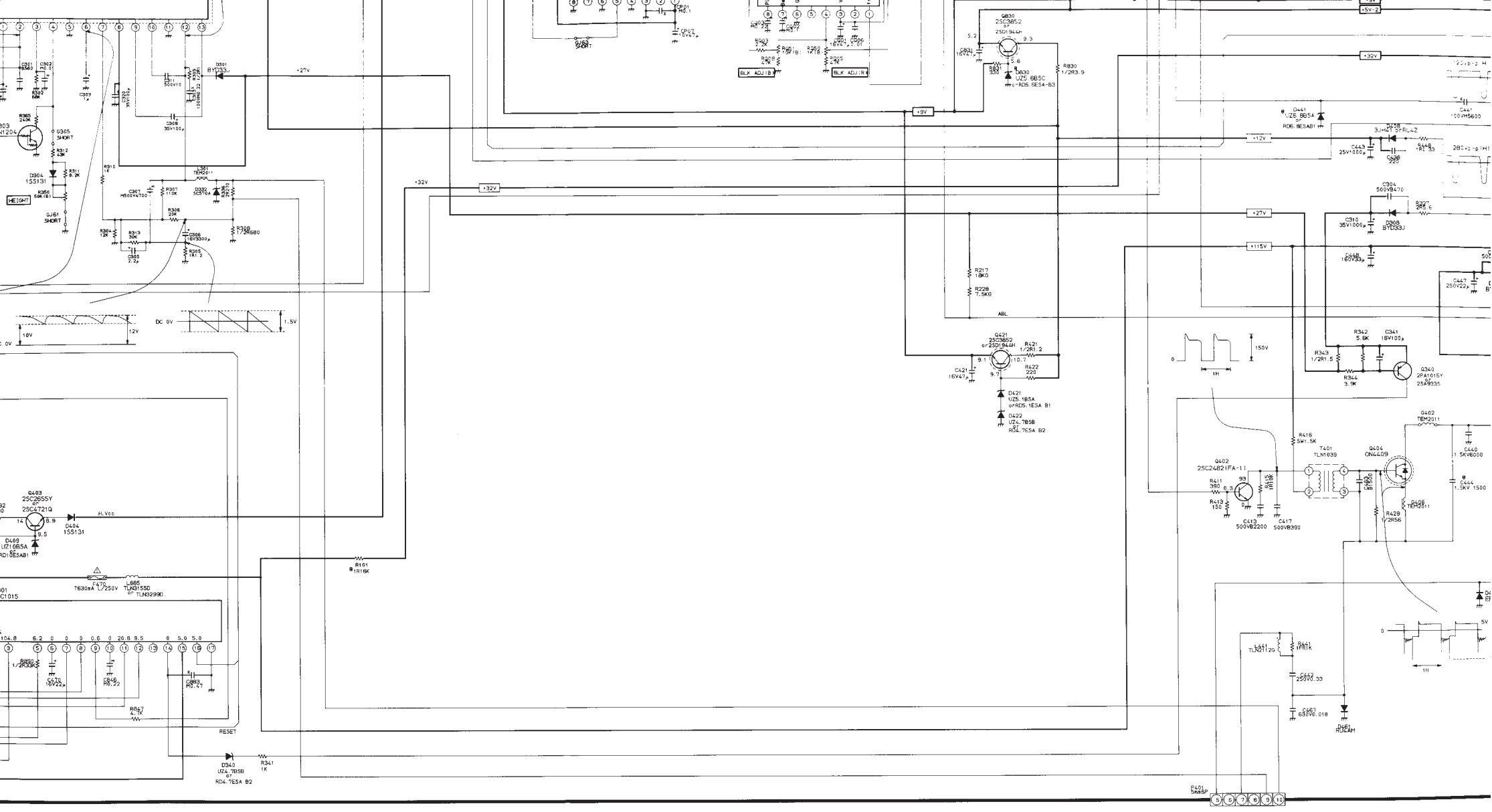
Specifications are subject to change without notice.

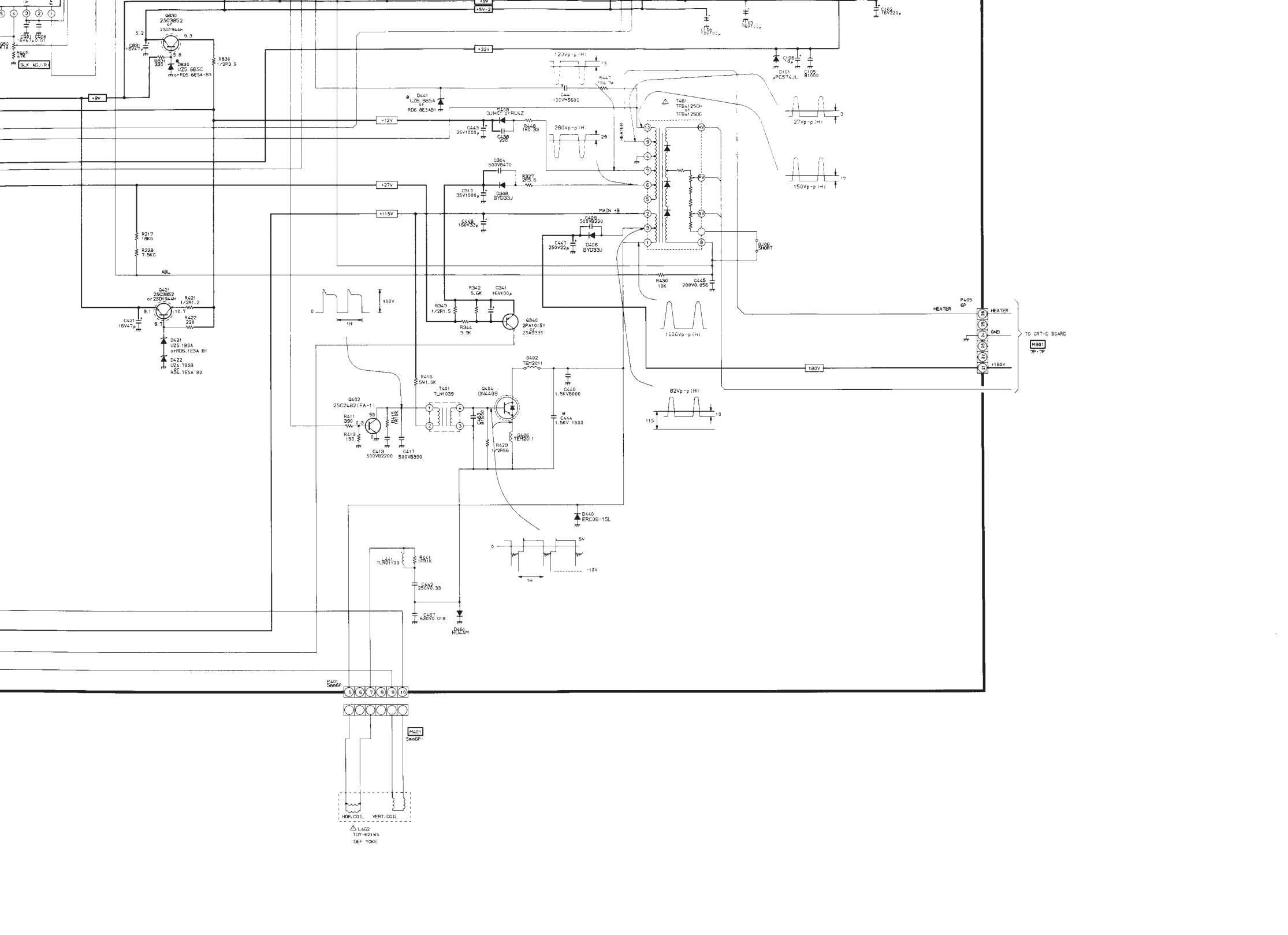

TO A/V BOARD
TO A/V BOARD
FOR FRONT A/V
W661 SPK-1374
W662 SPK-1374
L
R
M602 3P-
M603 3P-
M601 6P-3P-2P
P601 6P
PV06A 20P
PV05A 20P
Q610 TA8211AH AUDIO OUT
IN(R)
GND
IN(L)
FILTER
OUT(L)
NC
VCC
GND
NC
OUT(R)
Power Mute
+12V
+9V
+5V-2
Y
C
GND
Ys-OUT
MUTE
S-SW
+5V
L-IN
R-IN
GND
TV-L
TV-R
TV-V
SGV
SDA
Q612 2PA1015Y or 2SA9335
Q611 2SA9335 Q or 2SA1015Y
Q640 2SC1815Y or 2SC1740S
Q608 2SC2878A
Q609 2SC2878A
Q602 2PA1015Y or 2SA9335
Q603 RN1205
Q801 2PC1815Y or 2SC1740S
Q821 2PC1815Y or 2SC1740S
Q830 2PC1815Y or 2SC1740S
Q303 RN1204
Q305 SHORT
Q301 LA7837
QA01 M37222M6-883SP
QA02 NM24C04EN or CAT24C04P
MEMORY
SDA
SCL
VDD
VSS
SGA
SGV
KEY-B
KEY-A
KEY IN
MODE2
MODE1
AFT IN
SDA 0
SCL 0
SW
U/V
LED
POWER
TRI-NORMA
TV-MUTE
MUTE
RMT OUT
VT(PWM)
GND
R
G
B
Y/S
HSYNC
VSYNC
OSC
OSC
GND
XIN
XOUT
RST
S-SW
RMT
MAIN SYNC
SCL1
SDA1
GND
SCL2
SDA2
VDD
C Sync
Ys
HD
VD
1H
1fH
1fV
5Vp-p SDA
5Vp-p SCL
5Vp-p
1.0Vp-p
1.3Vp-p
3V
0
6V
DC 0V
16.67mS
54V
20V
+27V
SA01 CH UP
SA02 CH DN
SA03 VOL UP
SA04 VOL DN
SA05 VIDEO
SA06 MENU
STAND BY (RED)
ON TIMER (GREEN)
LED
IR AMP
KB01 RPM-676C8R-S
D803
D801 TLSG116
POWER
RESET
OFF
ON
SOUND GND
SOUND VCC +19V
L/R/W/GND
TC A/V BOARD
FOR FRONT A/V
GND
SDA1
SCL1
GND
GND(C)
E3-C
GND(Y/V)
E3-Y/V
GND(L/R)
E3-L
E3-R
MODE
SW
OSD Ys
SHORT
RR35 2.2K
Ys-OUT


TO A/V BOARD
FOR FRONT A/V
TO CRT-D BOARD
Q501
M52707SP
Q301
LA7837
QP01
U3660M-B
QQ01
M52325AP
Q303
RN1204
Q830
2SD2652
or
2SD1944
Q831
2SC3852
or
2SC2458
H002
RA MVCM41B
RB MVCM41
C_Sync
Ys-OUT
R,G,Ys
B-OUT
E3-R
E3-L
PIN
1H
5Vp-p
1.0Vp-p
1.3Vp-p
2.2Vp-p
0.4Vp-p
+5V-2
+9V
+27V
+32V
H.Vcc
BLK ADJ(B)
BLK ADJ(R)
R-OUT
G-OUT
SDA/SCL
AUDIO L-IN,R-IN

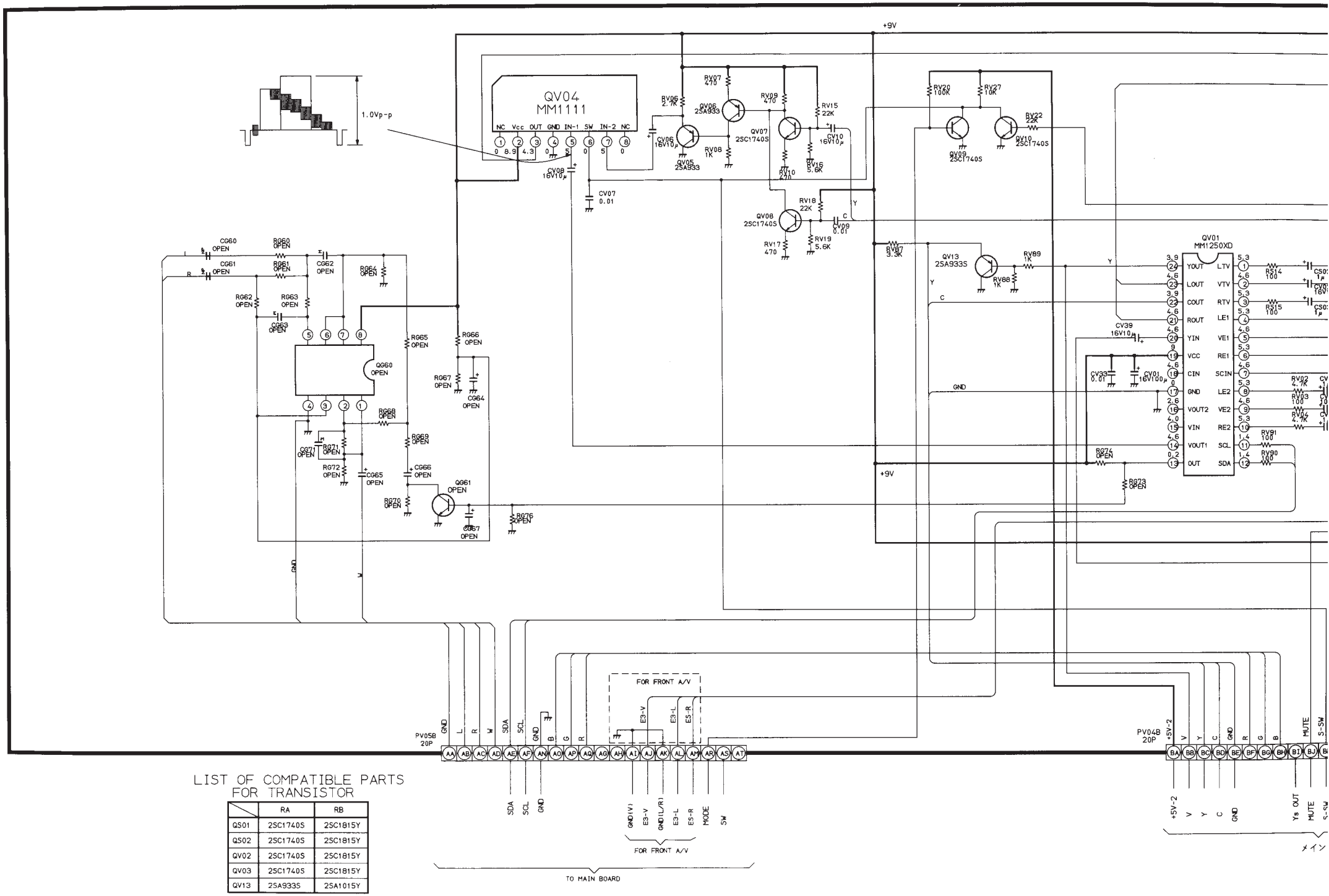

U902 MAIN BOARD PB6727
TO CRT-D BOARD
M902
SP-SP
E3
FRONT
E3-R
E3-L
E3-Y/V
H002
RA MVCM41B (KAKUBU)
RB MVCM41 (MURATA)
ASIA(IF/A-PRO)
H001
ECA11 (SONY) VS TUNER
QP01
U3660M-B
QQ01
M52325AP
Q830
2SC3852
or
2SD1944H
D830
UZ5.6BSC
or
RD5.6ESA-B3
BLK ADJ(B)
BLK ADJ(R)
SDA/SCL
U/V
SW
AUDIO L-IN,R-IN
AFT
V/T(PWM)
120Vp-p(H)
+9V
+15V-2
+32V


Q801
STR-Z3202
IR AMP
KB01
RPM-676GBR-5
D803
SIR-565B3F
Q802
2PA1315Y
or 2SA933S
SOUND GND
SOUND VCC
+5V
DC 0V
AUDIO Vcc
AUDIO GND
H.Vcc
RESET
TUNER GND
POWER CODE
S801
POWER SW
T801
TRF3118G 23211644
or TRF3118 23211961
Z801
HIC1015
Q862
TLP621(GR-LF2)
orTLP721F(D4-GR)
Q840
L78MR05FA
Q873
2SC1740S
Q874
2SC1740S
D601
D6SB60L
or
RBV-606
D890
1SS131
D891
1SS146
D340
UZ4.7BSB
or
RD4.7ESA B2
D404
1SS131
D409
UZ10BSA
or
RD10ESAB1
D304
1SS131
Q303
RN1204
Q305
SHORT
WEIGHT
SW61
SHORT
Q403
2SC2655Y
or
2SC4721Q
Q801
(7) - (6)
(15) - (16)
(18) - (16)
C870
AC-0
DC-0
TB62
(1) - (2)
(4) - (5)
(11) - (9)
(7) - (8)
(5) - (8)


+27V
+32V
+9V
+12V
+115V
+5V-2
HEIGHT
ABL
BLK ADJ(B)
BLK ADJ(R)
RESET
H.Vcc
150V
10V
12V
1.5V
5V
1H
HOR.COIL
VERT.COIL
L462
TDY-621WS
DEF YOKE
M401
5mmBP-
R401
5mmBP
Q403
2SC2655Y
or
2SC4721Q
Q404
1SS131
D409
UZ10B5A
or
RD10ESAB1
D340
UZ4.7BSB
or
RD4.7ESA B2
D421
UZ5.1BSA
orRD5.1ESA B1
D422
UZ4.7BSB
or
RD4.7ESA B2
Q421
2SC3852
or2SD1944H
Q402
2SC2482IFA-1.1
Q404
CN4409
Q405
TEM2011
Q340
2PA1015Y
or
2SA933S
T401
TLN1039
L685
TLN3155D
or TLN32990
L441
TLN21129
D441
UZ6.8B5A
or
RD6.8ESAB1
D430
UZ5.6B5C
or RD5.6ESA-B3
D308
BYD33J
D304
1SS131
D305
SHORT
GJ61
SHORT
GJ62
SHORT
D441
RU1AM

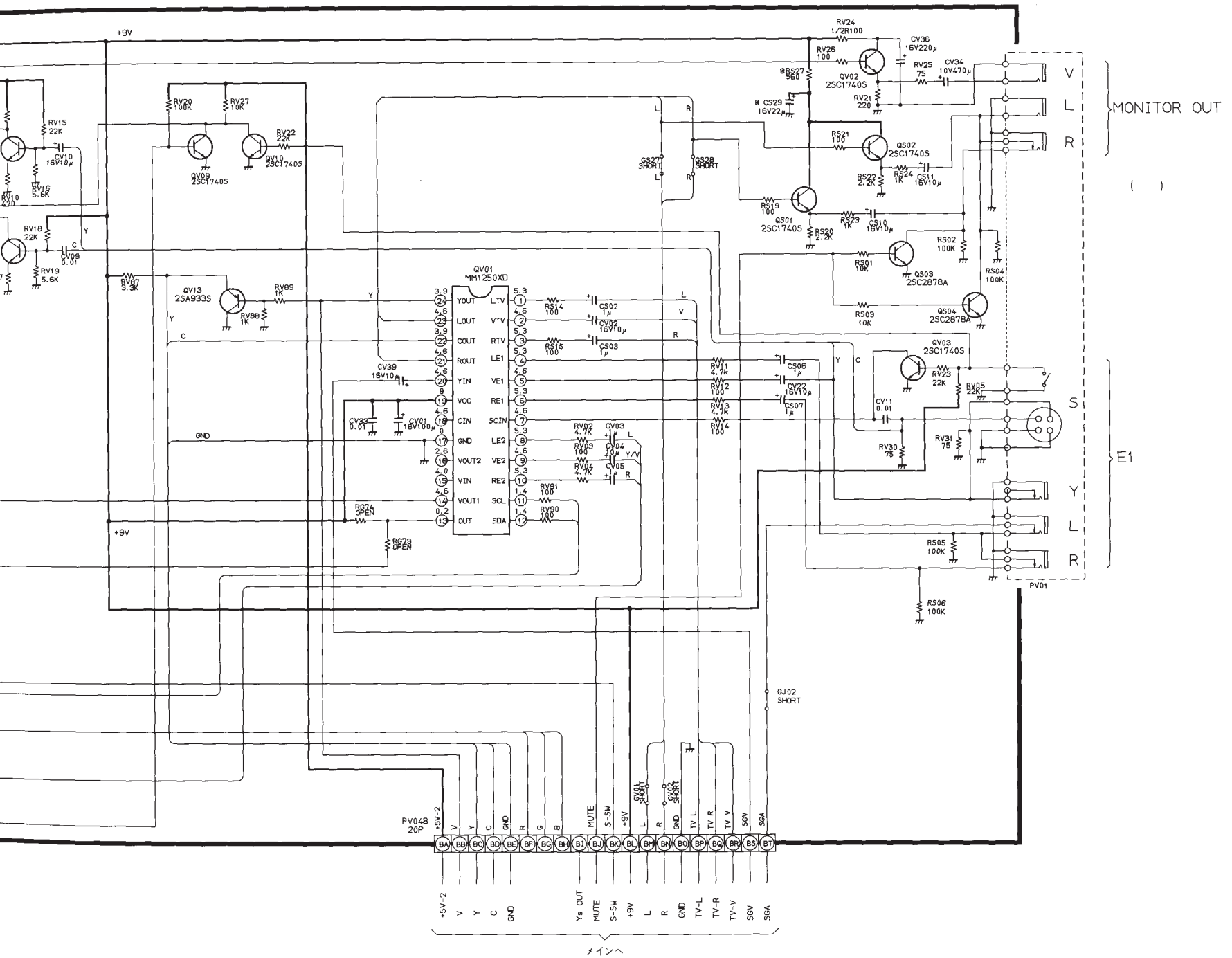

+5V-2
+32V
+9V
+12V
+27V
+115V
MAIN +B
ABL
BLK ADJ.R
HEATER
GND
+180V
TO CRT-C BOARD
M901
7P-7P
P405
6P
HOR.COIL
VERT.COIL
L462
TOY-621WS
DEF YOKE
P401
5mm6P
M401
5mm6P-
Q830
2SC3852
or
2SD1944
D830
UZ5.6BSC
orRD5.6ESA-B3
D441
UZ6.8BSA
or
RD6.8ES4B1
D408
3JH42 or RU4Z
T461
TFB41250
or
TFB41500
Q421
2SC3852
or
2SD1944
D421
UZ5.1BSA
orRD5.1ESA B1
D422
UZ4.7BSB
or
RD4.7ESA B2
Q340
2PA1015Y
or
2SA933S
Q402
TEM2011
Q404
ON4409
Q406
TEM2011
Q402
2SC2482(FA-1)
T401
TLN1039
L441
TLN0126
D440
ERC06-15L
D461
RU1AM
Q408
SHORT
D406
BYD33J
D408
BYD33J
150V
1H
1000Vp-p(H)
82Vp-p(H)
280Vp-p(H)
120Vp-p(H)
27Vp-p(H)
150Vp-p(H)
5V
-10V

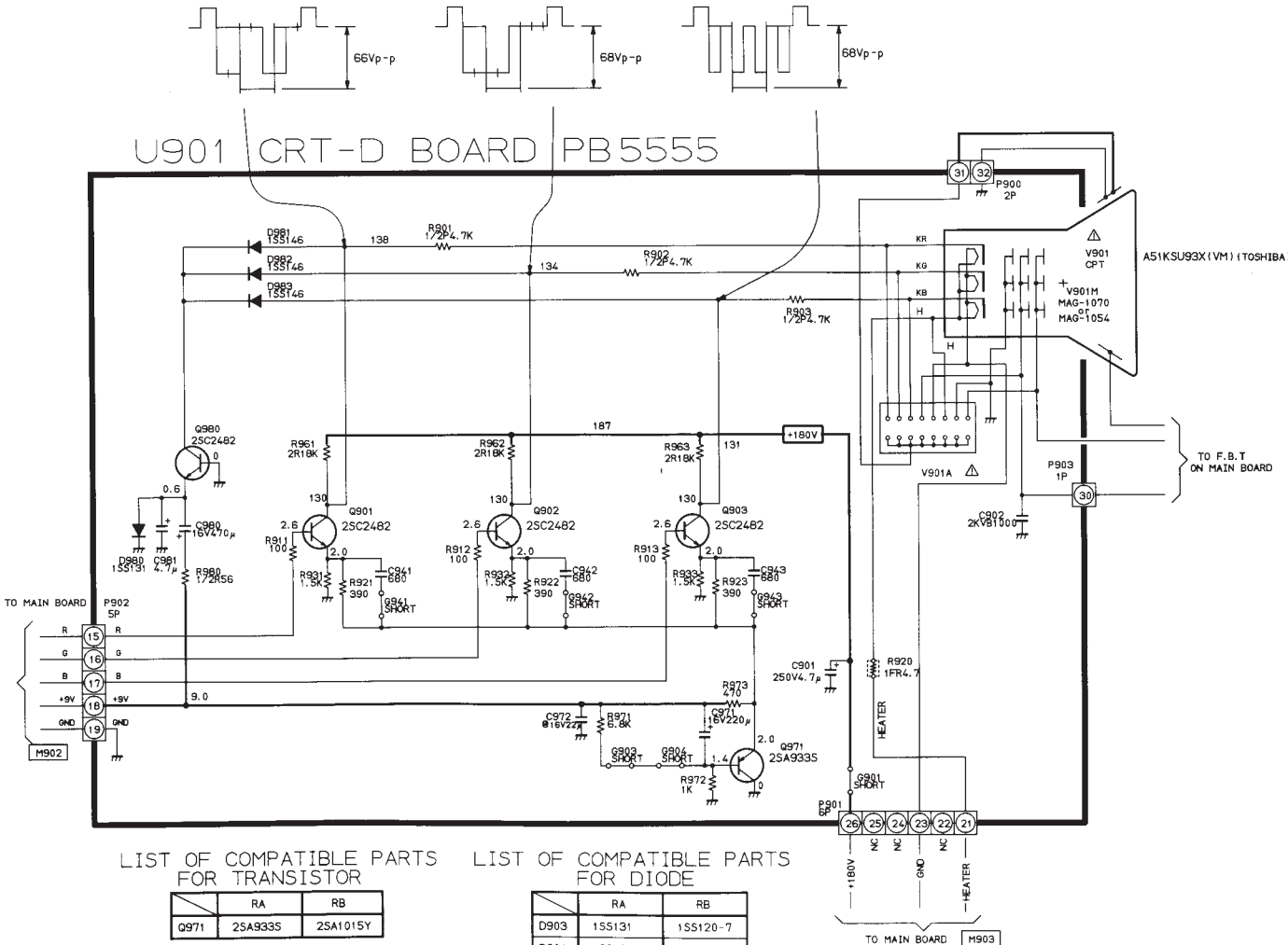
U903 BACK TERMINAL BOARD PB6721



LIST OF COMPATIBLE PARTS FOR TRANSISTOR

	RA	RB
QS01	2SC1740S	2SC1815Y
QS02	2SC1740S	2SC1815Y
QV02	2SC1740S	2SC1815Y
QV03	2SC1740S	2SC1815Y
QV13	2SA933S	2SA1015Y


+9V
RV24 1/2R100
CV36 16V220μ
RV26 100
QV02 2SC1740S
RV25 75
CV34 10V470μ
RV21 220
@RS27 560
@CS29 16V22μ
V
L
R
MONITOR OUT
( )
GS27 SHORT
GS28 SHORT
RS21 100
QS02 2SC1740S
RS22 2.2K
RS24 1K
CS11 16V10μ
RS19 100
QS01 2SC1740S
RS20 2.2K
RS23 1K
CS10 16V10μ
RS02 100K
RS01 10K
QS03 2SC2878A
RS04 100K
RS03 10K
QS04 2SC2878A
QV01 MM1250XD
YOUT
LOUT
COUT
ROUT
YIN
VCC
CIN
GND
VOUT2
VIN
VOUT1
OUT
LTV
VTV
RTV
LE1
VE1
RE1
SCIN
LE2
VE2
RE2
SCL
SDA
RS14 100
RS15 100
RS16 100
CS02 1μ
CV02 16V10μ
CS03 1μ
CV39 16V10μ
CV33 0.01
CV01 16V100μ
RV02 4.7K
RV03 100
RV04 4.7K
CV03 10μ
CV04 10μ
CV05 10μ
RV01 100
RV00 100
RG74 OPEN
RG73 OPEN
RV11 4.7K
RV12 100
RV13 4.7K
RV14 100
CS06 1μ
CV22 16V10μ
CS07 1μ
QV03 2SC1740S
RV23 22K
RV05 22K
CV11 0.01
RV30 75
RV31 75
S
E1
Y
L
R
RS05 100K
RS06 100K
PV01
GJ02 SHORT
PV04B 20P
+5V-2
V
Y
C
GND
R
G
B
MUTE
S-SW
+9V
L
R
GND
TV L
TV R
TV V
SGV
SGA
GV01 SHORT
GV02 SHORT
Ys OUT
TV-L
TV-R
TV-V
メインへ



LIST OF COMPATIBLE PARTS FOR TRANSISTOR

	RA	RB
Q971	2SA933S	2SA1015Y

LIST OF COMPATIBLE PARTS FOR DIODE

	RA	RB
D903	1SS131	1SS120-7
D904	1SS131	1SS120-7
D980	1SS131	1SS120-7