

TOSHIBA

FILE NO. 060-200214

SERVICE MANUAL

COLOUR TELEVISION

S2E Chassis

14V2E, 14V2M
14VMJ

TABLE OF CONTENTS

CHAPTER 1 GENERAL ADJUSTMENTS

SAFETY INSTRUCTIONS	3
SET-UP ADJUSTMENT	4
SERVICE MODE	6
DESIGN MODE	9
ELECTRICAL ADJUSTMENTS	10
CIRCUIT CHECK	12

CHAPTER 2 SPECIFIC INFORMATIONS

SETTING & ADJUSTING DATA	13
LOCATION OF CONTROLS	14
PROGRAMMING CHANNEL MEMORY	15
CHASSIS AND CABINET REPLACEMENT PARTS LIST	17
PC BOARDS BOTTOM VIEW	23
TERMINAL VIEW OF TRANSISTORS	26
CIRCUIT BLOCK DIAGRAM	28
SPECIFICATIONS	END

APPENDIX:

CIRCUIT DIAGRAM

CHAPTER 1 GENERAL ADJUSTMENTS

SAFETY INSTRUCTIONS

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE “X-RAY RADIATION PRECAUTION”, “SAFETY PRECAUTION” AND “PRODUCT SAFETY NOTICE” INSTRUCTIONS BELOW.

X-RAY RADIATION PRECAUTION

1. Excessive high voltage can produce potentially hazardous X-RAY RADIATION. To avoid such hazards, the high voltage must not be above the specified limit. The nominal value of the high voltage of this receiver is (A) kV at zero beam current (minimum brightness) under a (C) V AC power source. The high voltage must not, under any circumstances, exceed (B) kV.
2. The only source of X-RAY RADIATION in this TV receiver is the picture tube. For continued X-RAY RADIATION protection, the replacement tube must be exactly the same type tube as specified in the parts list.
3. Some part in this receiver have special safety-related characteristics for X-RAY RADIATION protection. For continued safety, parts replacement should be undertaken only after referring to the PRODUCT SAFETY NOTICE below.

Refer to table-1 for high voltage (A), (B) & AC voltage (C).
(See SETTING & ADJUSTING DATA on page 13)

Each time a receiver requires servicing, the high voltage should be checked following the HIGH VOLTAGE CHECK procedure in this manual. It is recommended that the reading of the high voltage be recorded as a part of the service record. It is important to use an accurate and reliable high voltage meter.

SAFETY PRECAUTION

WARNING : Service should not be attempted by anyone unfamiliar with the necessary precautions on this receiver. The following are the necessary precautions to be observed before servicing this chassis.

1. An isolation transformer should be connected in the power line between the receiver and the AC line before any service is performed on the receiver.
2. Always discharge the picture tube anode to the CRT conductive coating before handling the picture tube. The picture tube is highly evacuated and if broken, glass fragments will be violently expelled. Use shatter proof goggles and keep picture tube away from the unprotected body while handling.
3. When replacing a chassis in the cabinet, always be certain that all the protective devices are put back in place, such as; non-metallic control knobs, insulating covers, shields, isolation resistor-capacitor network etc.

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the international hazard symbols on the schematic diagram and the parts list.

Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire, X-ray radiation or other hazards.

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 3 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 1.

Mounting position of the purity magnet assembly should fit to same position as old one because slightly difference to the position depend on a kind of tube.

- * There are no adjustment of purity and convergence in some picture tube (Unified with purity magnet)

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 2.) 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.

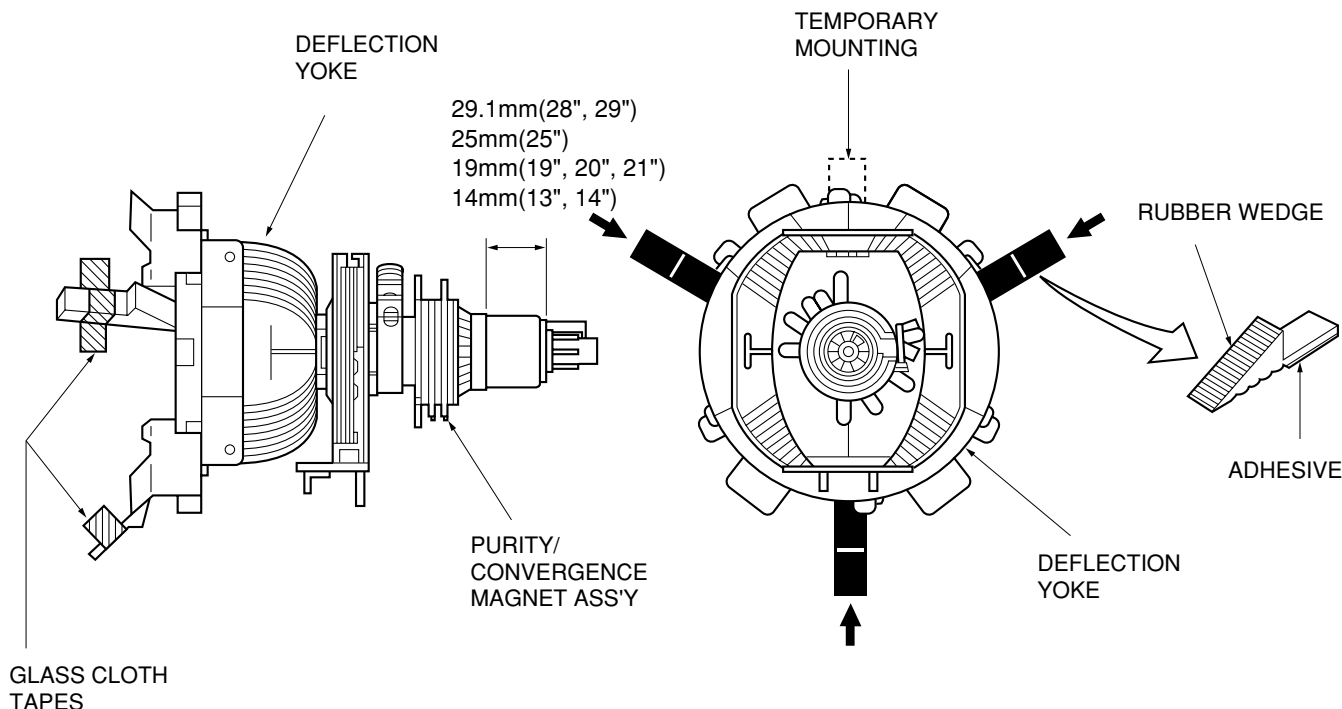


Figure 1.

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 2.) 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.

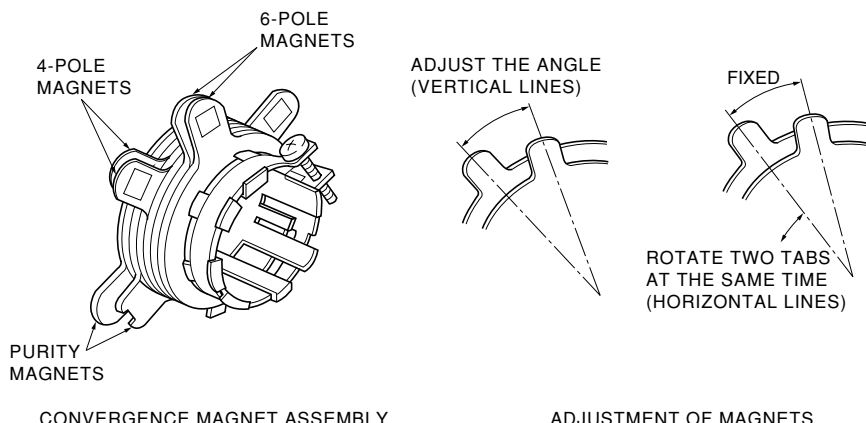
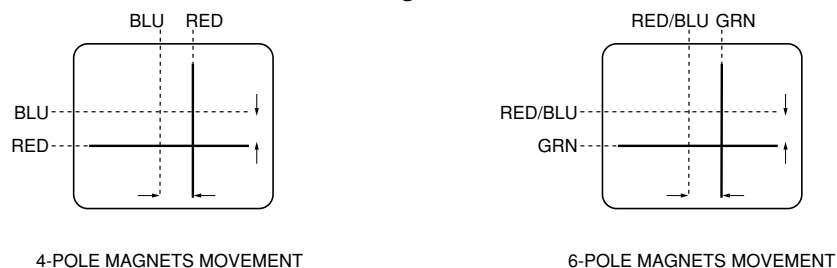


Figure 2.



Center Convergence by Convergence Magnets



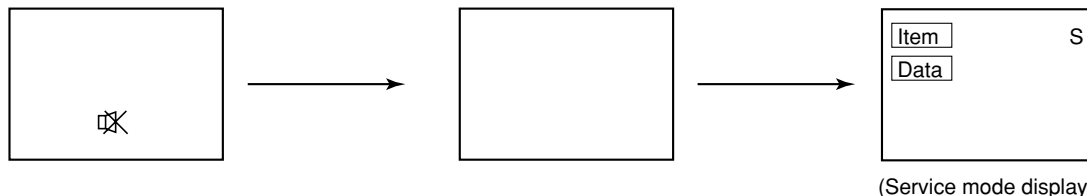
Circumference Convergence by DEF Yoke

Figure 3. Dot Movement Pattern

SERVICE MODE

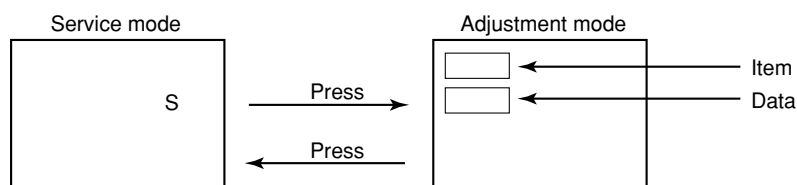
1. ENTERING TO SERVICE MODE

- 1) Press  button once on Remote Control.
- 2) Press  button again to keep pressing.
- 3) While pressing the  button, press MENU button on TV set.



2. DISPLAYING THE ADJUSTMENT MENU

- 1) Press MENU button on TV.



3. KEY FUNCTION IN THE SERVICE MODE

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

A single horizontal line ON/OFF:

Test signal selection :

Selection of the adjustment items :

Change of the data value :

Adjustment menu mode ON/OFF :

Initialization of the memory (QA02) :

Reset the count of operating protect circuit to "00":

"RCUT" selection :

"GCUT" selection :

"BCUT" selection :

"CNTX" (or "SCNT") selection :

"COLC" selection :

"TNTC" selection :

Test audio signal ON/OFF (1kHz) :

Self diagnostic display ON/OFF :

- / - - button (on Remote) or  button (on TV)

 button (on Remote)

Channel / (on TV or Remote)

Volume  +/- (on TV or Remote)

MENU button (on TV)

CALL + Channel button on TV ()

CALL + Channel button on TV ()

1 button

2 button

3 button

4 button

5 button- - - - Color thickness correction

6 button

8 button

9 button

note: Displayed differently as shown below, depending on the setting of the receiving color system.

COLP (PAL)

COLC (NTSC)

COLS (SECAM)

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

4. SELECTING THE ADJUSTING ITEMS

- 1) Every pressing of CHANNEL ▲ button in the service mode changes the adjustment items in the order of table-2. (▼ button for reverse order)

Refer to table-2 for preset data of adjustment mode.
(See SETTING & ADJUSTING DATA on page 13)

5. ADJUSTING THE DATA

- 1) 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.

6. EXIT FROM SERVICE MODE

- 1) Pressing POWER button to turn off the TV once.

■ INITIALIZATION OF MEMORY DATA OF QA02

After replacing QA02, the following initialization is required.

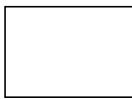
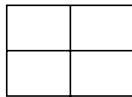
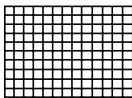
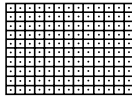
1. Enter the service mode, then select any register item.
2. Press and hold the CALL button on the Remote, then press the CHANNEL ▲ button on the TV. The initialization of QA02 has been completed.
3. Check the picture carefully. If necessary, adjust any adjustment item above.
Perform "Auto search Memory" on the owner's manual.

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

7. TEST SIGNAL SELECTION

- 1) Every pressing of –⊖ button on the Remote Control changes the built-in test patterns on screen as described below in SERVICE MODE.

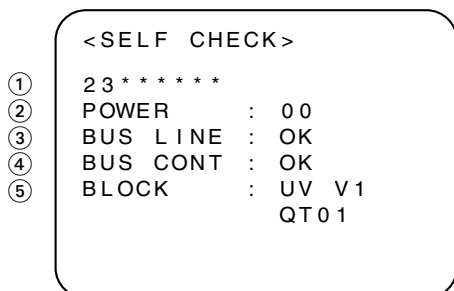
Signal off —→ NTSC signals (14 patterns)
 ↑ PAL signals (14 patterns) ←

Signals	Picture
• Red raster • Green raster • Blue raster • All Black • All White	
• Black & White	
• Black cross-bar • White cross-bar • Black cross-bar on green raster	
• Black cross-hatch • White cross-hatch	
• Black cross-dot • White cross-dot	
• H signal (white) • H signal (black)	

* The signals marked with ■ are not usable to display in the Test signal for some model.

8. SELF DIAGNOSTIC FUNCTION

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



- ① Part number of microprocessor(QA01)
- ② Operation number of protecting circuit ----"00" is normal.
When indication is other than "00", overcurrent apt to flow, and circuit parts may possibly be damaged.
- ③ BUS LINE CHECK ----"OK" is normal.
"SDA1-GND" ----- SDA-GND short circuit.
"SCL1-GND" ----- SCL-GND short circuit.
"SCL1-SDA1" ----- SCL-SDA short circuit.
- ④ BUS CONT ----"OK" is normal.
When indication shows "Q○○○ NG", the device with the number may possibly be damaged.
- ⑤ BLOCK
UV : TV reception mode
V1 : VIDEO input mode (→1)

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

Green : Normal

Red : The microprocessor 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 QT01.

QT01 : In case of indication green ---Normal
In case of indication red with input signal----
Failure may exist in output line including QV01.

NOTE: Component which controls character display on screen is QT01. If this display function fails to operate due to damage in QT01, self diagnosis procedure is as follows.

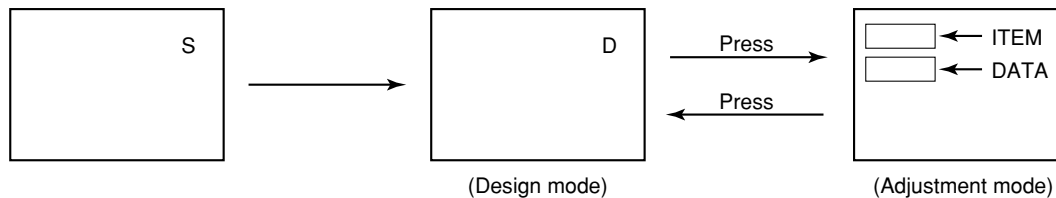
- (1) In case that power indicator is blinking with interval of 0.5 seconds; it means protecting circuit (Current limiter) is operating, and circuit components may possibly be damaged. Check related components.
- (2) In case that power indicator is blinking with interval of 1 second; Protecting circuit does not operate, but a part of Bus line does not operate normally. Check Bus line.

* The items marked with ■ are not usable to display in the SELF DIAGNOSTIC FUNCTION for some model.

DESIGN MODE

1. ENTERING TO DESIGN MODE

- 1) Select the Service mode.
- 2) While pressing $\times$ (or CALL) button on Remote and press MENU button on TV.
- 3) Press MENU button on TV.



When QA02 is initialized, items "OPT0" and "OPT1" of DESIGN MODE are set to the data of the representative model of this chassis family.

Therefore, because ON-SCREEN specification remains in the state of the representative of model. This model is required to reset the data of items "OPT0" and "OPT1".

2. SELECTING THE ADJUSTING ITEMS

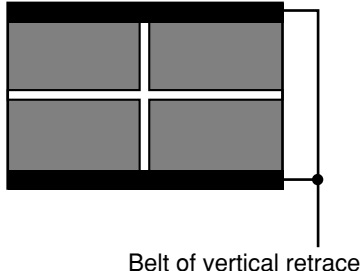
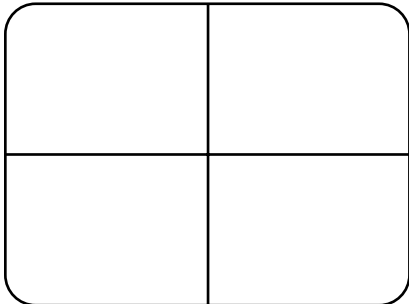
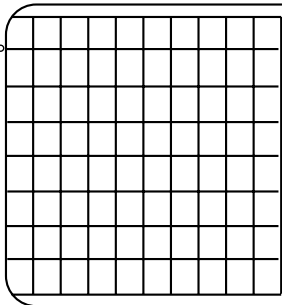
Every pressing of CHANNEL ▼ button in the design mode changes the adjustment items in the order of table-3. (▲ button for reverse order)

Refer to table-3 for data of design mode.
(See SETTING & ADJUSTING DATA on page 13)

3. ADJUSTING THE DATA

Pressing of VOLUME ▲ or ▼ button will change the value of data.

ELECTRICAL ADJUSTMENTS

ITEM	ADJUSTMENT PROCEDURE
FOCUS VR ADJ	1. Enter the service mode, then select any register item. 2. Press the TV/VIDEO button on the Remote until the black cross-bar pattern appears on the screen. 3. Adjust the FOCUS control (on T461) for well defined scanning lines on the picture screen.
SUB-BRIGHTNESS (BRTC) Note: Constrict the picture height until the vertical retrace line appears adjusting the item HIT (HEIGHT).	1. Set CONTRAST to minimum, and BRIGHTNESS to center 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 $\triangle - / +$ button to reduce the value so that white portion of inside pattern slightly light. 4. Adjust $\triangle - / +$ 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. 
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 $\blacktriangle, \blacktriangledown$ buttons, and adjust horizontal or vertical picture position in the center of screen with VOLUME $\triangle - / +$ 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 $\blacktriangle, \blacktriangledown$ buttons, and adjust vertical amplitude with VOLUME $\triangle - / +$ buttons so that vertical amplitude lacks a little. 3. Adjust vertical amplitude with VOLUME $\triangle - / +$ 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 Initial reference data, and to set GDRV and BDRV to Initial reference data 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)
NOTE: It is released built-in test pattern by changing the adjustment item for some model. In this case, select the adjustment item with channel ▲ ▼ buttons first and then select the built-in test pattern with  button.	

CIRCUIT CHECK

HIGH VOLTAGE CHECK

CAUTION: There is no HIGH VOLTAGE ADJUSTMENT on this chassis. Checking should be done following the steps below.

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 must be measured below (B) kV.

Refer to table-1 for high voltage (B).
(See SETTING & ADJUSTING DATA on page 13)

4. Vary the BRIGHTNESS control to both extremes to be sure the high voltage does not exceed the limit under any conditions.

CHAPTER 2 SPECIFIC INFORMATION

SETTING & ADJUSTING DATA

【 SAFETY INSTRUCTIONS 】

		14"
HIGH VOLTAGE AT ZERO BEAM:	(A)	23.6 kV
MAX HIGH VOLTAGE:	(B)	25.1 kV
AC VOLTAGE	(C)	110~240 V

Table-1

【 SERVICE MODE 】

ADJUSTING ITEMS AND DATAS IN THE SERVICE MODE:

Item	Adjustment	Reference data	Data
RCUT	R CUTOFF (B/W)	20H	←
GCUT	G CUTOFF (B/W)	20H	←
BCUT	B CUTOFF (B/W)	20H	←
GDRV	G DRIVE	40H	←
BDRV	B DRIVE	40H	←
BRTC	SUB BRIGHT CEN	40H	←
COLC	SUB COLOR CEN NTSC	30H	←
TNTC	SUB TINT CEN	45H	←
COLP	SUB COLOR CEN PAL	00H	09H
COLS	SUB COLOR CEN SECAM	30H	←
SCNT	SUB CONTRAST	08H	←
HPOS	50Hz H-POSITION	0DH	13H
VPOS	V-POSITION	04H	←
HIT	HEIGHT	1EH	24H
VLIN	V-LINEARITY	0AH	←
WID	PICTURE WIDTH	30H	34H
PARA	E-W PARABOLA	15H	15H
CNR	E-W CORNER	05H	←
TRAP	TRAPEZIUM	0DH	←
SRY	SECAM R-Y	08H	←
SBY	SECAM-B-Y	08H	←

Table-2

【 DESIGN MODE 】

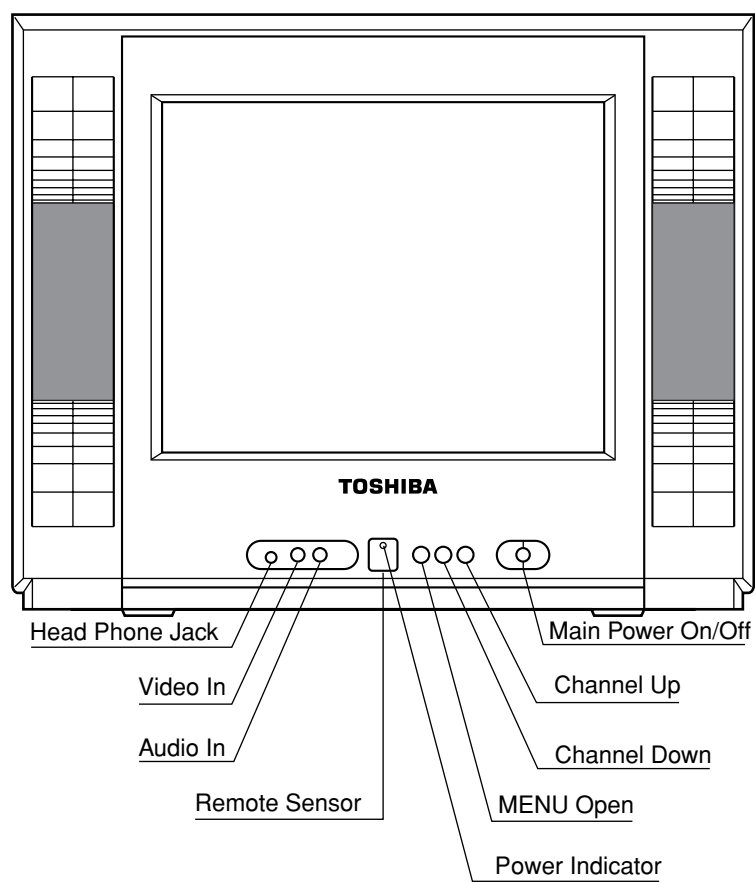
ADJUSTING ITEMS AND DATAS IN THE DESIGN MODE:

Item	Name of adjustment		Data	Remarks
		Preset Data	14"	
* There are no adjusting items in the design mode.				

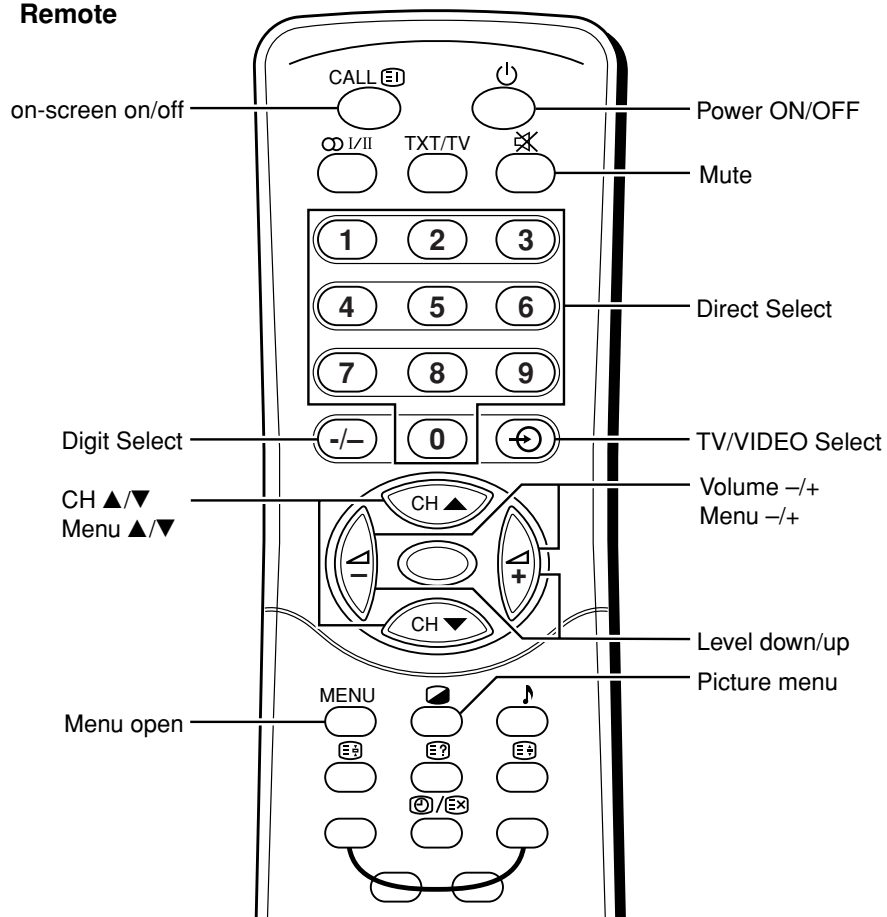
Table-3

LOCATION OF CONTROLS (Representative: 14V2E)

Front



Remote



PROGRAMMING CHANNEL MEMORY

- First, use the ASM (Automatic Search Memory) function to preset all the active channels in your area automatically. Then, arrange the preset channels with the SEARCH, 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, ASM, SEARCH, SKIP, MFT and AFT operations using the buttons on the TV set.

To preset channels (ASM)

ASM (Automatic Search Memory)

- 1** Select the head of the position number to start the ASM with the **CH ▲/▼** buttons or the digit/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 stored in the memory automatically. When programming is complete, the initial position number will reappear.

After presetting

Check the preset channels by pressing the **CH ▲/▼** buttons.

- If the picture or sound of a certain channel is not good, fine-tune the channel using the MFT function.
- 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.

To preset channels (Manual search, AFT, MFT)

Manual search

- 1** Select a position number with the **CH ▲/▼** or digit/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 "SERCH".
- 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.
- 5** When the desired programme is shown, press the **▲/▼** buttons to move the cursor (▶) "MEMORY".
- 6** Press the **+** button to memorize the channel at the current position.
- 7** When you desire to store another channel at another position, move the cursor (▶) to "POSITION" with the **▲/▼** buttons and select a desired position with the **-/+** buttons.
Then, press the **▲/▼** buttons to move the cursor (▶) to "SEARCH" and repeat the steps 4 to 7.

- Use the SEARCH function if desired channels could not be preset with the ASM, or if you would like to preset the desired channels to specific position numbers one by one.
- The adjustments below are not necessary under normal conditions. However, in areas of inferior broadcast conditions where adjustment is necessary for a better picture, adjust the tuning with the MFT (Manual Fine Tuning). The AFT OFF status automatically keeps the condition adjusted with the MFT function.
- The AFT (Auto Fine Tuning) function automatically corrects slight fluctuations when receiving signals.
- When using Manual Search to preset the channel, the AFT will automatically turn ON and SKIP to OFF.

MFT (Manual Fine Tuning)

- 1** Select the position number you want to fine-tune with the **CH ▲/▼** buttons or digit/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.

AFT (Auto Fine Tuning)

- 1** Select the position number you want to fine-tune with the **CH ▲/▼** buttons or digit/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 "AFT". Press the **–/+** buttons to select the "ON" indication.

Note

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

To skip unnecessary position numbers

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

To skip a position number

- 1** Select the position number to be skipped with the **CH ▲/▼** buttons or digit/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 position number to be skipped with the direct select buttons. The * mark appears to the left of the position number.
The position number will then be skipped when you select channels with the **CH ▲/▼** buttons.

To restore a skipped position number

- 1** Select the position 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".

* Please refer to owner's manual in detail.

CHASSIS AND CABINET REPLACEMENT PARTS LIST

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 3 OF THIS MANUAL.

CAUTION: The international hazard symbols " Δ " 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. 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.

Model : 14V2E, 14V2M, 14V2MJ

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 $\pm 5\%$, 50V and all resistors, $\pm 5\%$, 1/6W unless otherwise noted.)

Location No.	Parts No.	Description
CAPACITORS		
C101	24794101	ELECTROLYTIC, 16V 100UF M
C103	24212101	CERAMIC DISC, 50V B 100PF K
C106	24796479	ELECTROLYTIC, 35V 4.7UF M
C108	24539474	PLASTIC FILM, 50V 0.47UF J
C109	24794100	ELECTROLYTIC, 16V 10UF M
C110	24794221	ELECTROLYTIC, 16V 220UF M
C111	24232103	CERAMIC DISC, 50V F 0.01UF Z
C112	24797100	ELECTROLYTIC, 50V 10UF M
C116	24232103	CERAMIC DISC, 50V F 0.01UF Z
C118	24474102	CERAMIC, 50V B 1000PF K
C120	24794100	ELECTROLYTIC, 16V 10UF M
C121	24232103	CERAMIC DISC, 50V F 0.01UF Z
C123	24797010	ELECTROLYTIC, 50V 1UF M
C129	24474102	CERAMIC, 50V B 1000PF K
C130	24669479	ELECTROLYTIC, 50V 4.7UF M 3A
C131	24232103	CERAMIC DISC, 50V F 0.01UF Z
C132	24232103	CERAMIC DISC, 50V F 0.01UF Z
C133	24232103	CERAMIC DISC, 50V F 0.01UF Z
C134	24212101	CERAMIC DISC, 50V B 100PF K
C135	24212222	CERAMIC DISC, 50V B 2200PF K
C136	24206228	ELECTROLYTIC, 50V 0.22UF M 7L 3A
C137	24212103	CERAMIC DISC, 50V B 10000PF K
C138	24794470	ELECTROLYTIC, 16V 47UF M
C150	24232103	CERAMIC DISC, 50V F 0.01UF Z
C166	24232103	CERAMIC DISC, 50V F 0.01UF Z
C167	24763101	ELECTROLYTIC, 16V 100UF M
C170	24232103	CERAMIC DISC, 50V F 0.01UF Z
C171	24794100	ELECTROLYTIC, 16V 10UF M
C172	24794100	ELECTROLYTIC, 16V 10UF M
C173	24794100	ELECTROLYTIC, 16V 10UF M
C174	24436330	CERAMIC DISC, 50V SL 33PF J
C175	24436330	CERAMIC DISC, 50V SL 33PF J
C176	24436330	CERAMIC DISC, 50V SL 33PF J
C189	24797478	ELECTROLYTIC, 50V 0.47UF M
C192	24797478	ELECTROLYTIC, 50V 0.47UF M
C216	24797010	ELECTROLYTIC, 50V 1UF M
C224	24794100	ELECTROLYTIC, 16V 10UF M
C226	24539104	PLASTIC FILM, 50V 0.1UF J
C227	24539104	PLASTIC FILM, 50V 0.1UF J
C231	24232103	CERAMIC DISC, 50V F 0.01UF Z
C232	24232103	CERAMIC DISC, 50V F 0.01UF Z

Location No.	Parts No.	Description
C305	24617915	ELECTROLYTIC, 50V 1UF K 3A LI
C306	24795102	ELECTROLYTIC, 25V 1000UF M
C307	24693473	PLASTIC FILM, 100V 0.047UF J
C308	24796101	ELECTROLYTIC, 35V 100UF M
C312	24796102	ELECTROLYTIC, 35V 1000UF M
C313	24082057	PLASTIC FILM, 100V 220000PF J
C314	24212152	CERAMIC DISC, 50V B 1500PF K
C315	24797478	ELECTROLYTIC, 50V 0.47UF M
C317	24214471	CERAMIC DISC, 500V B 470PF K
C320	24796101	ELECTROLYTIC, 35V 100UF M
C370	24794101	ELECTROLYTIC, 16V 100UF M
C371	24794220	ELECTROLYTIC, 16V 22UF M
C410	24693472	PLASTIC FILM, 100V 4700PF J
C417	24214102	CERAMIC DISC, 500V B 1000PF K
C420	24794220	ELECTROLYTIC, 16V 22UF M
C421	24666470	ELECTROLYTIC, 16V 47UF M 3A
C431	24797479	ELECTROLYTIC, 50V 4.7UF M
C432	24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
C433	24232103	CERAMIC DISC, 50V F 0.01UF Z
C434	24232103	CERAMIC DISC, 50V F 0.01UF Z
C435	24763102	ELECTROLYTIC, 16V 1000UF M
C436	24797478	ELECTROLYTIC, 50V 0.47UF M
C437	24212822	CERAMIC DISC, 50V B 8200PF K
C440	24082422	PLASTIC FILM, 1250VH 7200PF H
C442	24082972	PLASTIC FILM CF92 T 250V R51UF J
C445	24828563	PLASTIC FILM, 200V 56000PF J
C446	24679100	ELECTROLYTIC, 250V 10UF M 3A
C448	24640908	ELECTROLYTIC, 160V 33UF M 3A LI
C449	24794471	ELECTROLYTIC, 16V 470UF M
C463	24212152	CERAMIC DISC, 50V B 1500PF K
C470	24794220	ELECTROLYTIC, 16V 22UF M
C481	24539474	PLASTIC FILM, 50V 0.47UF J
C484	24591104	PLASTIC FILM, 50V 0.1UF J
C485	24591104	PLASTIC FILM, 50V 0.1UF J
C502	24591103	PLASTIC FILM, 50V 0.01UF J
C516	24232103	CERAMIC DISC, 50V F 0.01UF Z
C517	24794101	ELECTROLYTIC, 16V 100UF M
C523	24794100	ELECTROLYTIC, 16V 10UF M
C524	24794101	ELECTROLYTIC, 16V 100UF M
C526	24212102	CERAMIC DISC, 50V B 1000PF K
C528	24206478	ELECTROLYTIC, 50V 0.47UF M 7L 3A
C565	24232103	CERAMIC DISC, 50V F 0.01UF Z

Location No.	Parts No.	Description
C566	24794471	ELECTROLYTIC, 16V 470UF M
C567	24232103	CERAMIC DISC, 50V F 0.01UF Z
C606	24797229	ELECTROLYTIC, 50V 2.2UF M
C610	24795100	ELECTROLYTIC, 25V 10UF M
C613	24539104	PLASTIC FILM, 50V 0.1UF J
C615	24794101	ELECTROLYTIC, 16V 100UF M
C660	24797478	ELECTROLYTIC, 50V 0.47UF M
C661	24591104	PLASTIC FILM, 50V 0.1UF J
C663	24591682	PLASTIC FILM, 50V 6800PF J
C664	24797229	ELECTROLYTIC, 35V 2.2UF M
C665	24073060	ELECTROLYTIC, 25V 4700UF M 3A
C667	24591104	PLASTIC FILM, 50V 0.1UF J
C668	24795471	ELECTROLYTIC, 25V 470UF M
C669	24797100	ELECTROLYTIC, 50V 10UF M
△ C801	24503002	PLASTIC FILM, AC275V 0.22UF M
C808	24796101	ELECTROLYTIC, 35V 100UF M
C810	24086059	ELECTROLYTIC, 400V 270UF M 3D
△ C813	24092555	CERAMIC DISC, AC250V E 1000PF M
△ C814	24092555	CERAMIC DISC, AC250V E 1000PF M
C817	24092338	CERAMIC DISC, 2KV R 270PF K
C818	24092341	CERAMIC DISC, 2KV R 470PF K
C819	24539474	PLASTIC FILM, 50V 0.47UF J
C821	24214561	CERAMIC DISC, 500V B 560PF K
C822	24214102	CERAMIC DISC, 500V B 1000PF K
C823	24214471	CERAMIC DISC, 500V B 470PF K
C829	24212102	CERAMIC DISC, 50V B 1000PF K
C830	24667100	ELECTROLYTIC, 16V 10UF M 3A
C831	24794100	ELECTROLYTIC, 16V 10UF M
C832	24591224	PLASTIC FILM, 50V 0.22MF J
C862	24092339	CERAMIC DISC, 2KV 330PF K
C883	24214561	CERAMIC DISC, 500V B 560PF K
C884	24640018	ELECTROLYTIC, 160V 220UF
C885	24214471	CERAMIC DISC, 500V B 470PF K
C889	24667102	ELECTROLYTIC, 25V 1000UF M 3A
C893	24092338	CERAMIC DISC, 2KV R 270PF K
△ C896	24092563	CERAMIC DISC, AC250V B 220PF K
C899	24539224	PLASTIC FILM, 50V 0.22UF J
C902	24092345	CERAMIC DISC, 2KV 1000PF K
C904	24436391	CERAMIC DISC, 50V SL 390PF J
C905	24436331	CERAMIC DISC, 50V SL 330PF J
C907	24436391	CERAMIC DISC, 50V SL 390PF J
C910	24669478	ELECTROLYTIC, 50V 0.47UF M 3A
C912	24763102	ELECTROLYTIC, 16V 1000UF M
C913	24794100	ELECTROLYTIC, 16V 10UF M
C971	24794470	ELECTROLYTIC, 16V 47UF M
CA03	24353220	CERAMIC DISC, 50V CH 22PF J
CA04	24353220	CERAMIC DISC, 50V CH 22PF J
CA30	24353270	CERAMIC DISC, 50V CH 27PF J
CA42	24794100	ELECTROLYTIC, 16V 10UF M
CA45	24232103	CERAMIC DISC, 50V F 0.01UF Z
CA51	24212272	CERAMIC DISC, 50V B 2700PF K
CA52	24212152	CERAMIC DISC, 50V B 1500PF K
CA53	24353181	CERAMIC DISC, 50V CH 180PF J
CA54	24797330	ELECTROLYTIC, 50V 33UF M
CA55	24797010	ELECTROLYTIC, 50V 1UF M
CA58	24212101	CERAMIC DISC, 50V B 100PF K
CA60	24797479	ELECTROLYTIC, 50V 4.7UF M
CA68	24794100	ELECTROLYTIC, 16V 10UF M
CA69	24232103	CERAMIC DISC, 50V F 0.01UF Z
CB01	24794470	ELECTROLYTIC, 16V 47UF M
CC01	24232103	CERAMIC DISC, 50V F 0.01UF Z
CC02	24232103	CERAMIC DISC, 50V F 0.01UF Z
CS01	24794220	ELECTROLYTIC, 16V 22UF M
CS02	24794100	ELECTROLYTIC, 16V 10UF M
CV10	24794471	ELECTROLYTIC, 16V 470UF M
CV11	24794220	ELECTROLYTIC, 16V 22UF M
CV12	24212102	CERAMIC DISC, 50V B 1000PF K

Location No.	Parts No.	Description
RESISTORS		
R100	24366330	CARBON FILM, 1/6W 33 OHM J
R101	24366563	CARBON FILM, 1/6W 56K OHM J
R102	24366123	CARBON FILM, 1/6W 12K OHM J
R103	24366122	CARBON FILM, 1/6W 1.2K OHM J
R104	24366101	CARBON FILM, 1/6W 100 OHM J
R105	24366121	CARBON FILM, 1/6W 120 OHM J
R106	24366332	CARBON FILM, 1/6W 3.3K OHM J
R108	24366103	CARBON FILM, 1/6W 10K OHM J
R109	24366682	CARBON FILM, 1/6W 6.8K OHM J
R110	24366681	CARBON FILM, 1/6W 680 OHM J
R111	24366330	CARBON FILM, 1/6W 33 OHM J
R112	24366221	CARBON FILM, 1/6W 220 OHM J
R113	24366472	CARBON FILM, 1/6W 4.7K OHM J
R114	24366472	CARBON FILM, 1/6W 4.7K OHM J
R116	24366103	CARBON FILM, 1/6W 10K OHM J
R117	24366103	CARBON FILM, 1/6W 10K OHM J
R118	24366821	CARBON FILM, 1/6W 820 OHM J
R120	24366684	CARBON FILM, 1/6W 680K OHM J
R121	24366221	CARBON FILM, 1/6W 220 OHM J
R122	24366101	CARBON FILM, 1/6W 100 OHM J
R123	24366222	CARBON FILM, 1/6W 2.2K OHM J
R130	24366101	CARBON FILM, 1/6W 100 OHM J
R131	24366221	CARBON FILM, 1/6W 220 OHM J
R132	24366271	CARBON FILM, 1/6W 270 OHM J
R133	24366271	CARBON FILM, 1/6W 270 OHM J
R134	24366561	CARBON FILM, 1/6W 560 OHM J
R135	24366103	CARBON FILM, 1/6W 10K OHM J
R136	24366103	CARBON FILM, 1/6W 10K OHM J
R137	24366101	CARBON FILM, 1/6W 100 OHM J
R138	24366332	CARBON FILM, 1/6W 3.3K OHM J
R140	24366101	CARBON FILM, 1/6W 100 OHM J
R141	24366331	CARBON FILM, 1/6W 330 OHM J
R142	24366102	CARBON FILM, 1/6W 1K OHM J
R143	24367333	CARBON FILM, 1/6W 33K OHM G
R144	24366103	CARBON FILM, 1/6W 10K OHM J
R145	24366303	CARBON FILM, 1/6W 30K OHM J
R146	24366224	CARBON FILM, 1/6W 220K OHM J
R147	24366331	CARBON FILM, 1/6W 330 OHM J
R148	24366102	CARBON FILM, 1/6W 1K OHM J
R153	24366750	CARBON FILM, 1/6W 75 OHM J
R154	24366223	CARBON FILM, 1/6W 22K OHM J
R156	24553153	OXIDE METAL FILM, 1W 15K OHM J
R157	24366331	CARBON FILM, 1/6W 330 OHM J
R158	24366331	CARBON FILM, 1/6W 330 OHM J
R166	24366103	CARBON FILM, 1/6W 10K OHM J
R167	24366103	CARBON FILM, 1/6W 10K OHM J
R168	24366473	CARBON FILM, 1/6W 47K OHM J
R169	24366102	CARBON FILM, 1/6W 1K OHM J
R171	24366473	CARBON FILM, 1/6W 47K OHM J
R172	24366162	CARBON FILM, 1/6W 1.6K OHM J
R173	24366102	CARBON FILM, 1/6W 1K OHM J
R174	24366473	CARBON FILM, 1/6W 47K OHM J
R175	24366223	CARBON FILM, 1/6W 22K OHM J
R176	24366473	CARBON FILM, 1/6W 47K OHM J
R177	24366223	CARBON FILM, 1/6W 22K OHM J
R178	24366103	CARBON FILM, 1/6W 10K OHM J
R179	24366222	CARBON FILM, 1/6W 2.2K OHM J
R180	24366473	CARBON FILM, 1/6W 47K OHM J
R181	24366223	CARBON FILM, 1/6W 22K OHM J
R182	24366162	CARBON FILM, 1/6W 1.6K OHM J
R190	24366101	CARBON FILM, 1/6W 100 OHM J
R192	24366330	CARBON FILM, 1/6W 33 OHM J
R194	24366102	CARBON FILM, 1/6W 1K OHM J
R196	24366103	CARBON FILM, 1/6W 10K OHM J
R217	24366104	CARBON FILM, 1/6W 100K OHM J
R227	24366303	CARBON FILM, 1/6W 30K OHM J

Location No.	Parts No.	Description
R228	24366271	CARBON FILM, 1/6W 270 OHM J
R229	24366271	CARBON FILM, 1/6W 270 OHM J
R230	24366271	CARBON FILM, 1/6W 270 OHM J
R301	24366163	CARBON FILM, 1/6W 16K OHM J
R305	24323159	OXIDE METAL FILM, 2W 1.5 OHM J
R306	24366563	CARBON FILM, 1/6W 56K OHM J
R307	24366103	CARBON FILM, 1/6W 10K OHM J
R312	24552272	OXIDE METAL FILM, 1/2W 2.7K OHM J
R313	24366513	CARBON FILM, 1/6W 51K OHM J
R316	24366392	CARBON FILM, 1/6W 3.9K OHM J
R317	24366392	CARBON FILM, 1/6W 3.9K OHM J
R333	24339689	OXIDE METAL FILM, 2W 6.8 OHM J
R336	24383331	OXIDE METAL FILM, 2W 330 OHM J
R370	24321189	OXIDE METAL FILM, 1/2W 1.8 OHM J
R371	24366562	CARBON FILM, 1/6W 5.6K OHM J
R372	24366392	CARBON FILM, 1/6W 3.9K OHM J
R373	24366102	CARBON FILM, 1/6W 1K OHM J
R374	24366163	CARBON FILM, 1/6W 16K OHM J
R410	24366181	CARBON FILM, 1/6W 180 OHM J
R411	24366561	CARBON FILM, 1/6W 560 OHM J
R416	24019323	OXIDE METAL FILM, 5W 1.8K OHM J
R421	24366391	CARBON FILM, 1/6W 390 OHM J
R430	24366103	CARBON FILM, 1/6W 10K OHM J
R431	24531120	FUSIBLE, 1/2W 12 OHM J
R432	24366472	CARBON FILM, 1/6W 4.7K OHM J
R433	24366182	CARBON FILM, 1/6W 1.8K OHM J
R434	24552271	OXIDE METAL FILM, 1/2W 270 OHM J
R435	24366822	CARBON FILM, 1/6W 8.2K OHM J
R442	24383331	OXIDE METAL FILM, 2W 330 OHM J
R447	24553472	OXIDE METAL FILM, 1W 4.7K OHM J
R448	24321228	OXIDE METAL FILM, 1/2W 0.22 OHM J
R470	24322758	OXIDE METAL FILM, 1W 0.75 OHM J
R471	24552301	OXIDE METAL FILM, 1/2W 300 OHM J
R473	24366153	CARBON FILM, 1/6W 15K OHM J
R474	24376393	CARBON FILM, 1/2W 39K OHM J
R479	24366101	CARBON FILM, 1/6W 100 OHM J
R483	24552820	OXIDE METAL FILM, 1/2W 82 OHM J
R491	24366103	CARBON FILM, 1/6W 10K OHM J
R603	24366182	CARBON FILM, 1/6W 1.8K OHM J
R606	24366393	CARBON FILM, 1/6W 39K OHM J
R607	24366101	CARBON FILM, 1/6W 100 OHM J
R608	24366104	CARBON FILM, 1/6W 100K OHM J
R612	24366103	CARBON FILM, 1/6W 10K OHM J
R621	24366221	CARBON FILM, 1/6W 2.2K OHM J
R622	24366102	CARBON FILM, 1/6W 100 OHM J
R662	24552221	OXIDE METAL FILM, 1/2W 220 OHM J
R663	24552221	OXIDE METAL FILM, 1/2W 220 OHM J
R664	24366339	CARBON FILM, 1/6W 3.3 OHM J
R665	24366224	CARBON FILM, 1/6W 220K OHM J
R668	24366822	CARBON FILM, 1/6W 8.2K OHM J
△ R801	24009954	METAL FILM, 1/2W 2.2M OHM J
R802	24383104	OXIDE METAL FILM, 2W 100K OHM J
R805	24366681	CARBON FILM, 1/6W 680 OHM J
R807	24366684	CARBON FILM, 1/6W 680K OHM J
△ R808	24019476	THERMISTOR, POSITIVE, AC290V 18 OHM M
R809	24366433	CARBON FILM, 1/6W 43K OHM J
R810	24568229	CERAMIC COVERED, 7W 2.2 OHM J
R815	24366562	CARBON FILM, 1/6W 5.6K OHM J
R816	24366471	CARBON FILM, 1/6W 470 OHM J
R817	24366331	CARBON FILM, 1/6W 330 OHM J
R818	24366561	CARBON FILM, 1/6W 560 OHM J
R819	24366102	CARBON FILM, 1/6W 1K OHM J
R820	24988026	METAL FILM, 1W 0.39 OHM J
R821	24310479	OXIDE METAL FILM, 1/2W 4.7 OHM J
R822	24366562	CARBON FILM, 1/6W 5.6K OHM J
R823	24366472	CARBON FILM, 1/6W 4.7K OHM J
R829	24988026	METAL FILM, 1W 0.39 OHM J

Location No.	Parts No.	Description
R831	24531120	FUSIBLE, 1/2W 12 OHM J
R884	24366102	CARBON FILM, 1/6W 1K OHM J
R888	24546228	FUSIBLE, 1/2W 0.22 OHM J
△ R899	24005014	METAL FILM, 1W 8.2M OHM J
R901	24552122	OXIDE METAL FILM, 1/2W 1.2K OHM J
R902	24552122	OXIDE METAL FILM, 1/2W 1.2K OHM J
R903	24552122	OXIDE METAL FILM, 1/2W 1.2K OHM J
R904	24366472	CARBON FILM, 1/6W 4.7K OHM J
R905	24366150	CARBON FILM, 1/6W 15 OHM J
R914	24366101	CARBON FILM, 1/6W 100 OHM J
R915	24366681	CARBON FILM, 1/6W 680 OHM J
R917	24366102	CARBON FILM, 1/6W 1K OHM J
R920	24000568	FUSIBLE, 1W 4.7 OHM J
R921	24366101	CARBON FILM, 1/6W 100 OHM J
R922	24366681	CARBON FILM, 1/6W 680 OHM J
R925	24366102	CARBON FILM, 1/6W 1K OHM J
R928	24366101	CARBON FILM, 1/6W 100 OHM J
R929	24366681	CARBON FILM, 1/6W 680 OHM J
R931	24366229	CARBON FILM, 1/6W 2.2 OHM J
R936	24366272	CARBON FILM, 1/6W 2.7K OHM J
R937	24366102	CARBON FILM, 1/6W 1K OHM J
R938	24552560	OXIDE METAL FILM, 1/2W 56 OHM J
R960	24383183	OXIDE METAL FILM, 2W 18K OHM J
R961	24554183	OXIDE METAL FILM, 2W 18K OHM J
R963	24383183	OXIDE METAL FILM, 2W 18K OHM J
R972	24366331	CARBON FILM, 1/6W 330 OHM J
R974	24366102	CARBON FILM, 1/6W 1K OHM J
R977	24366681	CARBON FILM, 1/6W 680 OHM J
RA04	24366223	CARBON FILM, 1/6W 22K OHM J
RA05	24366102	CARBON FILM, 1/6W 1K OHM J
RA06	24366103	CARBON FILM, 1/6W 10K OHM J
RA35	24366102	CARBON FILM, 1/6W 1K OHM J
RA36	24366103	CARBON FILM, 1/6W 10K OHM J
RA37	24366223	CARBON FILM, 1/6W 22K OHM J
RA41	24366101	CARBON FILM, 1/6W 100 OHM J
RA42	24366222	CARBON FILM, 1/6W 2.2K OHM J
RA43	24366332	CARBON FILM, 1/6W 3.3K OHM J
RA51	24366392	CARBON FILM, 1/6W 3.9K OHM J
RA52	24366392	CARBON FILM, 1/6W 3.9K OHM J
RA53	24366123	CARBON FILM, 1/6W 12K OHM J
RA54	24366471	CARBON FILM, 1/6W 470 OHM J
RA55	24366683	CARBON FILM, 1/6W 68K OHM J
RA56	24366564	CARBON FILM, 1/6W 560K OHM J
RA57	24366681	CARBON FILM, 1/6W 680 OHM J
RA60	24366362	CARBON FILM, 1/6W 3.6K OHM J
RA61	24366103	CARBON FILM, 1/6W 10K OHM J
RA62	24366103	CARBON FILM, 1/6W 10K OHM J
RA63	24366332	CARBON FILM, 1/6W 3.3K OHM J
RA71	24367124	CARBON FILM, 1/6W 120K OHM G
RA72	24367473	CARBON FILM, 1/6W 47K OHM G
RA73	24367562	CARBON FILM, 1/6W 5.6K OHM G
RA74	24366103	CARBON FILM, 1/6W 10K OHM J
RA75	24366103	CARBON FILM, 1/6W 10K OHM J
RA76	24366472	CARBON FILM, 1/6W 4.7K OHM J
RA77	24366472	CARBON FILM, 1/6W 4.7K OHM J
RA89	24366470	CARBON FILM, 1/6W 47 OHM J
RB01	24366271	CARBON FILM, 1/6W 270 OHM J
RB09	24366470	CARBON FILM, 1/6W 47 OHM J
RB30	24366103	CARBON FILM, 1/6W 10K OHM J
RS02	24366471	CARBON FILM, 1/6W 470 OHM J
RS03	24366103	CARBON FILM, 1/6W 10K OHM J
RT07	24366102	CARBON FILM, 1/6W 1K OHM J
RV11	24366750	CARBON FILM, 1/6W 75 OHM J
RV12	24366181	CARBON FILM, 1/6W 180 OHM J
RV13	24366101	CARBON FILM, 1/6W 100 OHM J

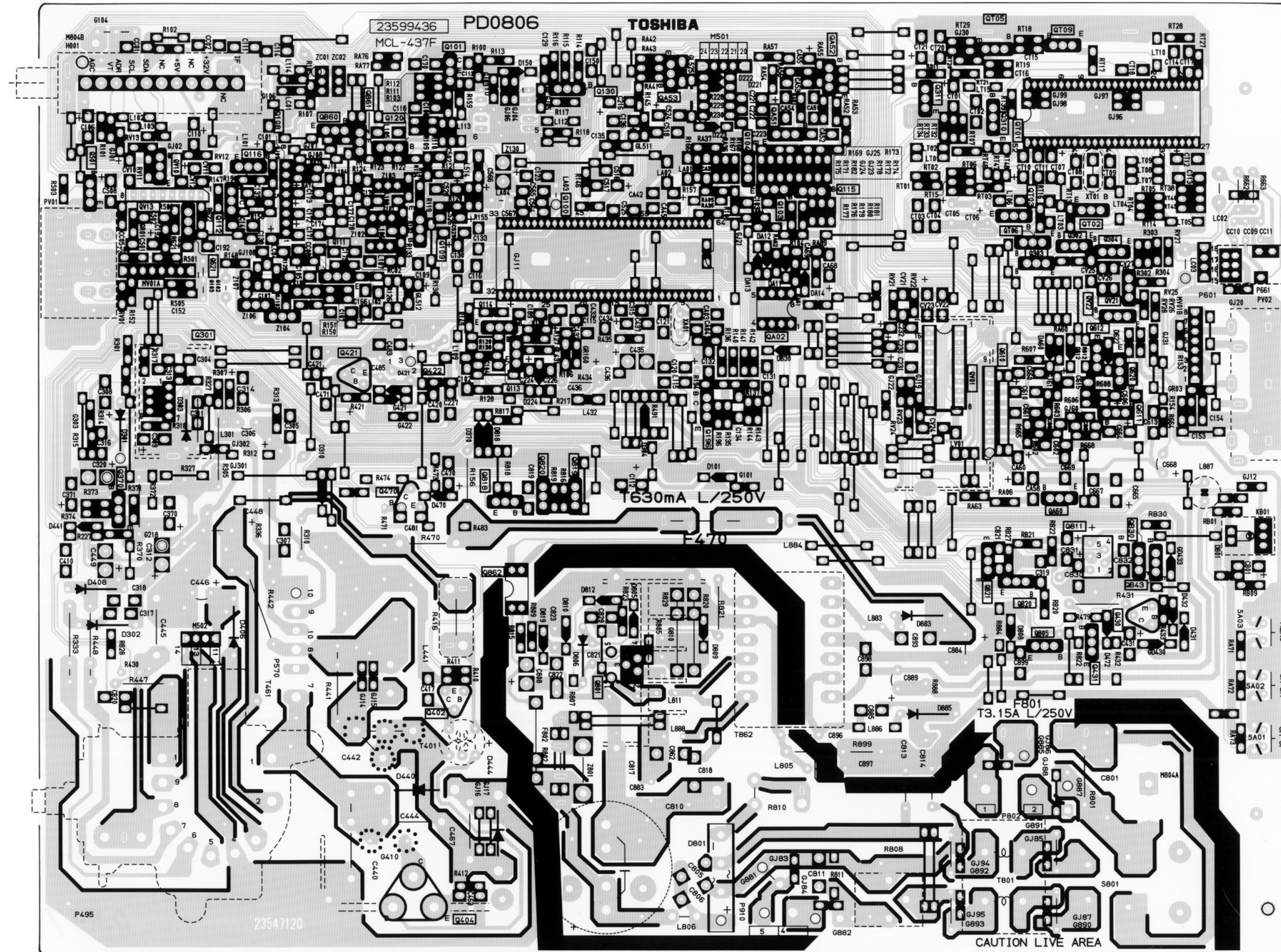
Location No.	Parts No.	Description
COILS & TRANSFORMERS		
L101	23248229	COIL, CHOKE, TLN3040AC
L102	23238506	COIL, PEAKING, TRF4229AJ
L103	23238506	COIL, PEAKING, TRF4229AJ
L105	23289100	COIL, PEAKING, TRF4100AF
L106	23238713	COIL, PEAKING, TRF4120AJ
L107	23238713	COIL, PEAKING, TRF4120AJ
L108	23238709	COIL, PEAKING, TRF4270AJ
L113	23238558	COIL, PEAKING, TRF4R47AJ
L115	23289100	COIL, PEAKING, TRF4100AF
L162	23289680	COIL, PEAKING, TRF4680AF
L301	23103249	CORE, FERRITE BEAD 3.5X4.5, TEM2011AO
L432	23289470	COIL, PEAKING, TRF4470AF
L462	23231263	COIL, DEFLECTION YOKE, TDY-314PV
L462C	23993623	COMPENSATOR, TC-L
L514	23289120	COIL, PEAKING, TRF4120AF
L805	23248234	COIL, CHOKE, TLN3481AC
L806	23248234	COIL, CHOKE, TLN3481AC
L811	23103249	CORE, FERRITE BEAD 3.5X4.5, TEM2011AO
L883	23103249	CORE, FERRITE BEAD 3.5X4.5, TEM2011AO
L884	23248230	COIL, CHOKE, TLN3142AC
L886	23103249	CORE, FERRITE BEAD 3.5X4.5, TEM2011AO
L888	23103248	COIL, FERRITR CHOKE, TEM2014AA
△ L901	23200511	COIL, DG 0.26CU 34T 11.6R, TSB-2360AK
LA01	23289100	COIL, PEAKING, TRF4100AF
LA02	23289100	COIL, PEAKING, TRF4100AF
LA03	23103248	COIL, FERRITR CHOKE, TEM2014AA
LA04	23103248	COIL, FERRITR CHOKE, TEM2014AA
T401	23224983	TRANSFORMER, HORIZONTAL DRIVE, TLN1039
△ T461	23236534	TRANSFORMER, HORIZ OUTPUT, TFB4122CY
T801	23211745	COIL, LINE FILTER, TRF3148BC
△ T862	23217591	TRANSFORMER, TPW3513AM
SEMICONDUCTORS		
Q100	23009344	IC, P/N 2IN1 VCD MICRO, TMPA8801CPCNG4G31 (14V2E)
Q100	23009343	IC, P/N 2IN1 VCD MICRO, TMPA8801CPCNG4FA6 (14V2M/14V2MJ)
Q101	23314378	TRANSISTOR, 2SC3355
Q103	23314965	TRANSISTOR, KTC3198 Y
Q104	23314965	TRANSISTOR, KTC3198 Y
Q108	23000174	IC, NJM2234L
Q109	23314962	TRANSISTOR, KTA1266 Y
Q112	23314965	TRANSISTOR, KTC3198 Y
Q115	23314965	TRANSISTOR, KTC3198 Y
Q116	23314962	TRANSISTOR, KTA1266 Y
Q120	23314965	TRANSISTOR, KTC3198 Y
Q130	23114623	TRANSISTOR, 2SC2878-A(TEM
Q196	23314965	TRANSISTOR, KTC3198 Y
Q301	23009352	IC, VERTICAL, AN5522 MATSUSHITA
Q301B	72471081	SCREW, 3X8MM
Q370	23314962	TRANSISTOR, KTA1266 Y
Q402	23114755	TRANSISTOR, 2SC2482FA-1
Q404	23314968	TRANSISTOR, 2SD2599(FA)
Q404B	72471082	SCREW, 3X10MM
Q421	23314141	TRANSISTOR, 2SC3852
Q422	23904521	IC, AN7805
Q422B	70391355	SCREW, BIND HEAD TAP-TITE B, BITTB 3X8 SZN
Q430	23314980	TRANSISTOR, 2SD2549 P
Q431	23114459	TRANSISTOR, RN1205
Q470	23114541	TRANSISTOR, 2SA1320
Q610	23904650	IC, TDA1013B
Q610B	70391355	SCREW, BIND HEAD TAP-TITE B, BITTB 3X8 SZN

Location No.	Parts No.	Description
Q611	23114623	TRANSISTOR, 2SC2878-A(TEM
Q612	23314962	TRANSISTOR, KTA1266 Y
Q620	23114478	TRANSISTOR, RN2004
Q621	23314965	TRANSISTOR, KTC3198 Y
Q801	23000907	IC, POW SW.REG.IC VDS=650V, PO= 2033RBZ, STR-G5653
Q801B	70391355	SCREW, BIND HEAD TAP-TITE B, BITTB 3X8 SZN
Q805	23114459	TRANSISTOR, RN1205
Q811	23318299	IC, L78MR05-FA
Q818	23114469	TRANSISTOR, RN2201
Q819	23314965	TRANSISTOR, KTC3198 Y
Q820	23314965	TRANSISTOR, KTC3198 Y
△ Q862	23906937	IC, PHOTO COUPLER, ON3171-R
Q901	23114756	TRANSISTOR, 2SC2482
Q903	23114756	TRANSISTOR, 2SC2482
Q905	23114756	TRANSISTOR, 2SC2482
Q907	23314962	TRANSISTOR, KTA1266 Y
Q908	23114429	TRANSISTOR, 2SC2120-Y(TE
QA02	23906922	IC, CAT24WC04P
QA51	23314965	TRANSISTOR, KTC3198 Y
QA52	23314962	TRANSISTOR, KTA1266 Y
QA53	23314962	TRANSISTOR, KTA1266 Y
QA60	23314965	TRANSISTOR, KTC3198 Y
QB30	23314965	TRANSISTOR, KTC3198 Y
QB43	23114459	TRANSISTOR, RN1205
QB60	23314965	TRANSISTOR, KTC3198 Y
QB61	23314965	TRANSISTOR, KTC3198 Y
QS01	23114623	TRANSISTOR, 2SC2878-A(TEM
QV10	23314962	TRANSISTOR, KTA1266 Y
QV13	23904943	IC, MM1111XS
D101	23316411	DIODE, ZENER, HZT33-12
D150	23115636	DIODE, ISS110
D221	23118517	DIODE, ZENER, RD9.1ES
D222	23118517	DIODE, ZENER, RD9.1ES
D223	23118517	DIODE, ZENER, RD9.1ES
D224	23357341	DIODE, 1SS133
D301	23118094	DIODE, EU2A
D302	23118479	DIODE, BYD33J
D303	23316794	DIODE, SC570A
D370	23118638	DIODE, ZENER, RD2.4ESA B1
D406	23118479	DIODE, BYD33J
D408	23118479	DIODE, BYD33J
D421	23118622	DIODE, ZENER, RD10ES B2
D431	23118622	DIODE, ZENER, RD10ES B2
D432	23357341	DIODE, 1SS133
D441	23118516	DIODE, ZENER, RD9.1ES B3
D470	23118511	DIODE, ZENER, RD12ES B2
D472	23357341	DIODE, 1SS133
D612	23357341	DIODE, 1SS133
D622	23357341	DIODE, 1SS133
D801	23357237	DIODE, TS4B05G-A1
D805	23357341	DIODE, 1SS133
D806	23118094	DIODE, EU2A
D808	23118526	DIODE, ZENER, RD6.8ES B2
D809	23118529	DIODE, ZENER, RD5.6ES B2
D810	23118616	DIODE, ZENER, RD27ESA B2
D812	23357341	DIODE, 1SS133
D818	23118507	DIODE, ZENER, RD13ESA B3
D819	23118526	DIODE, ZENER, RD6.8ES B2
D883	23118094	DIODE, EU2A
D885	23118094	DIODE, EU2A
D901	23357341	DIODE, 1SS133
D904	23357341	DIODE, 1SS133
D905	23357341	DIODE, 1SS133
D906	23357341	DIODE, 1SS133
DA60	23357341	DIODE, 1SS133

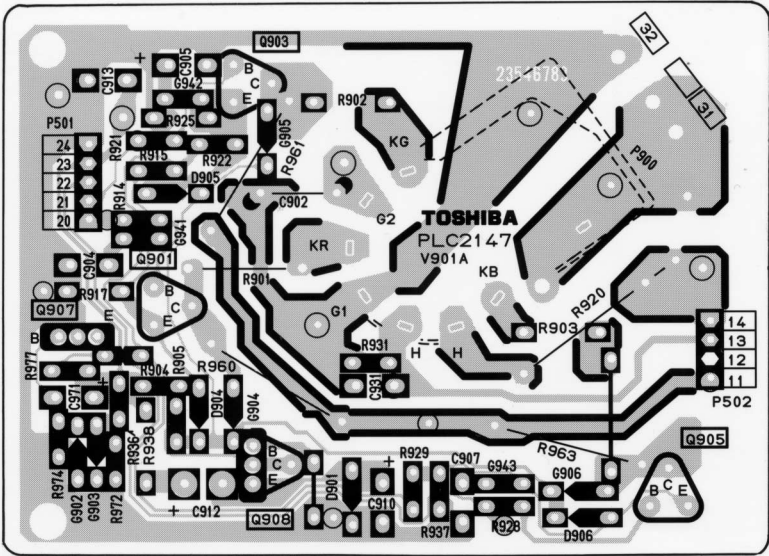
Location No.	Parts No.	Description
DB01	23358566	LED, LAMP RED, L-2523IT
DB30	23357341	DIODE, 1SS133
MISCELLANEOUS		
B405	23451788	HOLDER, POWER CORD, 1450TE
E501	23198605	WIRE, CRT EARTH, 1477TM
E912	23848729	WEDGE, YOKE HOLDING, 3 REQUIRED
△ F470	23144644	FUSE, CARTRIDGE 5X20, 250V 0.5A
F470A	23165433	FUSE HOLDER, 5.2 SOC
△ F801	23144652	FUSE, CARTRIDGE 5X20, 250V 3.15A
F801A	23165433	FUSE HOLDER, 5.2 SOC
G218	24366392	CARBON FILM, 1/6W 3.9K OHM J
G303	24321109	OXIDE METAL FILM, 1/2W 1 OHM J
G410	23103249	CORE, FERRITE BEAD 3.5X4.5, TEM2011AO
G810	23103249	CORE, FERRITE BEAD 3.5X4.5, TEM2011AO
GJ01	24366472	CARBON FILM, 1/6W 4.7K OHM J
GJ02	24366472	CARBON FILM, 1/6W 4.7K OHM J
GL511	23289100	COIL, PEAKING, TRF4100AF
GL512	23103248	COIL, FERRITE CHOKE, TEM2014AA
GR160	24366470	CARBON FILM, 1/6W 47 OHM J
KB01	23906805	IC, REMOTE PHOTO RECIEVER, PIC-TB17
N724	23965900	TAPE, GLASS-CLOTH, W/ADHESIVE W=18 T=0.18
P661	23363607	JACK, HEAD PHONE, 3.5MM
△ P801	23372159	POWER CORD, CEE 250V 2.5A SILV 201 (14V2E)
△ P801	23372160	POWER CORD, SSA 127V15A 250V6A CMC-02 (14V2M/14V2MJ)
P802	23368249	POWER CORD, 2P 11.88MM VH-JST
P910	23164725	CONNECTOR, PLUG 2P
PV01	23023036	JACK, PIN 0S4P, MSP-226V22-19 NI
PV02	23023047	JACK, PIN JACK 2P KUN, KM04036C01-01
△ S801	23344481	SWITCH, POWER, AAPY2211
SA01	23344443	SWITCH, TACTING SWITCH TSV TYP TSVB-1
SA02	23344443	SWITCH, TACTING SWITCH TSV TYP TSVB-1
SA03	23344443	SWITCH, TACTING SWITCH TSV TYP TSVB-1
△ V901A	23903142	SOCKET, CRT 22 SMK, CVT3325-0221R
V901M	23102409	MAGNET, PC, MAG-1070
W661	23351174	SPEAKER, 60X120 16-OHM 3W, SPK-1418AO
W662	23351174	SPEAKER, 60X120 16-OHM 3W, SPK-1418AO
XA01	23153752	CRYSTAL, 8.000 40PPM 50OHM
Z101	23303136	CERAMIC TRAP, TCF1097
Z102	23303085	CERAMIC TRAP, TCF1092
Z103	23303271	FILTER, TRAP 4.5MHZ, TCF1138AM
Z130	23303199	SAW FILTER 38MHZ PIF SIF, OFWK6269K
PC BOARD ASSEMBLIES		
* U901	23786768	CRT/D BOARD, PD0298
* U902	23788043	MAIN BOARD, PD0893 (14V2E)
* U902	23788097	MAIN BOARD, PD0933 (14V2M/14V2MJ)
PICTURE TUBE		
△ V901	23312944	PICTURE TUBE, 14 SQUARE N/C/S, A34LWG70X(VW)
TUNER		
H001	23321428	TUNER, ASIA MLT IICPLL SANYO, ECA33LX8
ACCESSORIES		
K902	23306459	REMOCON HAND UNIT IR, CTVPAL, CT-90119
AT03	23588765	BATTERY COVER, REMOCON, CT-90119
Y101A	23565777	OWNER'S MANUAL, ENGLISH/INDONESIAN, 14V2E
Y101A	23565806	OWNER'S MANUAL, ENGLISH/ARABIC/ PERSIAN, 14V2M/14V2MJ

Location No.	Parts No.	Description
Y108	23122780	AC ADAPTER, CCT5902-0801 (14V2M/14V2MJ)
Y120	23943846	BAG, POLY
Y126	23124084	ANTENNA, ROD ANTENNA, Y-700P-36HT (14V2M/14V2MJ)
CABINET PARTS		
A201	23530614	COVER, FRONT COVER ASSY
A264	23445654	KNOB, CONTROL KEY TSP2002032809
A265	23445653	KNOB, POWER BUTTON TSP2002032838
A280	23035412	SCREW, BTB4X12SZN
△ A401	23530569	COVER, BACK COVER PROPER 14V2E
A525	23037312	SCREW, BTBW3X12SZN
A701	23064941	CARTON, BOX (14V2E)
A701	23064999	CARTON, CASE 14V2M TSP2002070337 (14V2M)
A701	23067027	CARTON, CASE 14V2MJ TSP2002080108 (14V2MJ)
A702A	23946416	PACKING, TOP 14V2
A702B	23946415	PACKING, BOTTOM 14V2
A704	23945049	LAMIFILM BAG, 1460TE

MAIN BOARD PD0893
BOTTOM (FOIL) SIDE



CRT-D BOARD PD0298
BOTTOM (FOIL) SIDE



TERMINAL VIEW OF TRANSISTORS

① 2SD2253 (old) 2SC5243	② 2SC3852 2SD1763A 2SC1569 2SC4544 2SA1788 2SA1306 2SA1186A	③ 2SC752GTM 2SC2482 2SC2655 2SC4721P	④ 2SC752 2SA562TM 2SA1015 2SC1815 2SC2878 2SC1740S 2SC2120 2SA9335	⑤ 2SA1788
⑥ RN2203 RN2201 RN2004 RN1203 RN1204 RN2204 RN1205 RN1202 RN1201	⑦ 2SD1554 2SD2253 2SD1556 2SC5143 2SD2553	⑧ ON4409		

SCHEMATIC DIAGRAM

MODEL : 14V2E / 14V2M / 14V2MJ

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

CAUTION: The international hazard symbols " $\triangle$ " 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 the MANUAL for this model. Do not degrade the safety of the receiver through improper servicing.

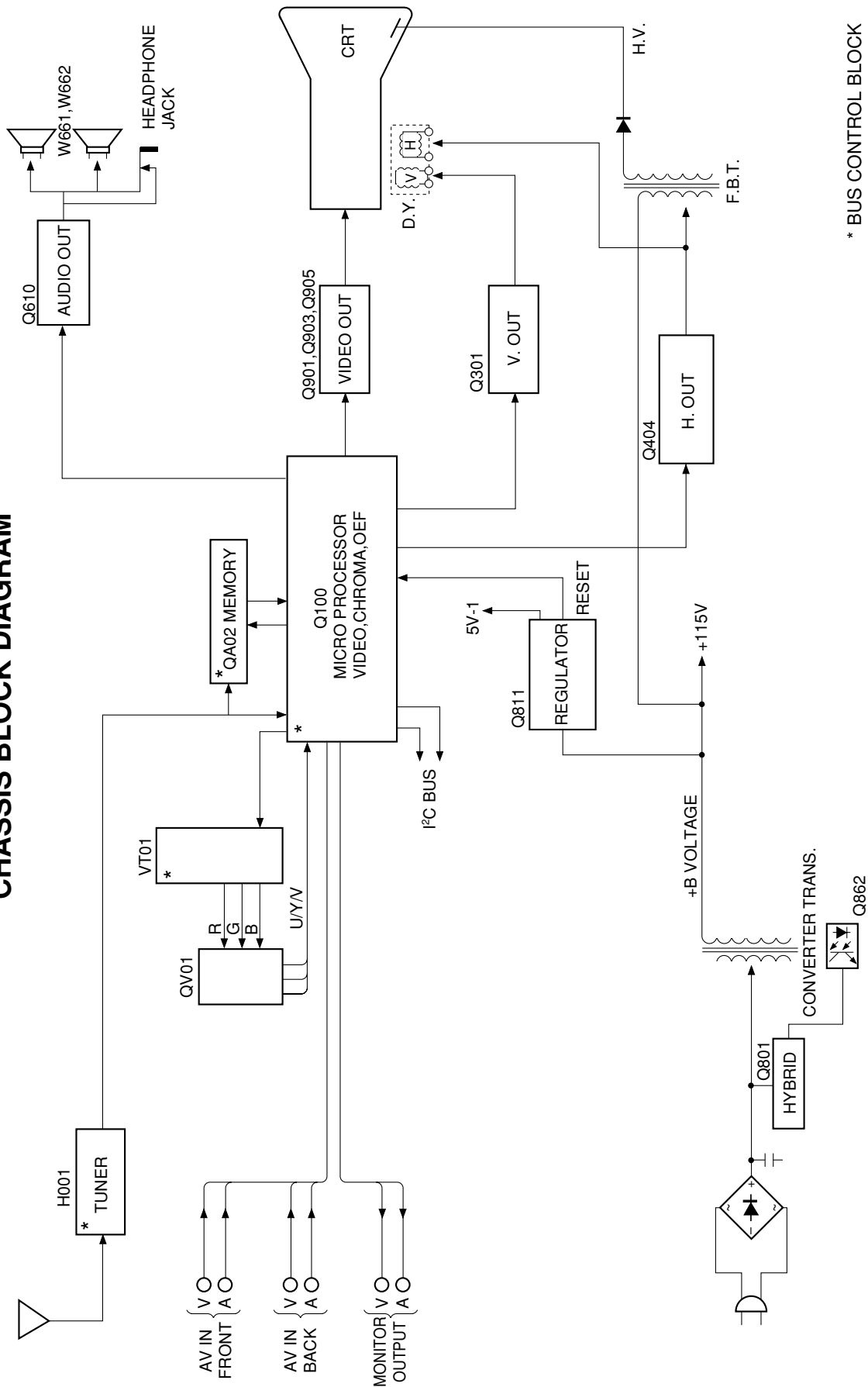
NOTE:

- 1. RESISTOR** Resistance is shown in ohm [K = 1.000, M = 1.000.000]. All resistors are 1/6W and 5% tolerance carbon resistor, unless otherwise noted as the following marks.
1/2R = Metal or Metal oxide of 1/2 watt 1/2S = Carbon composition of 1/2 watt
1RF = Fuse resistor of 1 watt 10W = Cement of 10 watt
K = $\pm 10\%$ G = $\pm 2\%$ F = $\pm 1\%$
- 2. CAPACITOR** Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in μF , and the values more than 1 in pF.
All capacitors are ceramic 50V, unless otherwise noted as the following marks.
 Electrolytic capacitor  Mylar capacitor
- 3.** The parts indicated with " $\triangle$ " have special characteristics, and should be replaced with identical parts only.
- 4.** Voltages read with DIGITAL MULTI-METER from point indicated to chassis ground, using a color bar signal with all controls at normal, line voltage 220 volts.
- 5.** Waveforms are taken receiving color bar signal with enough sensitivity.
- 6.** Voltage reading shown are nominal values and may vary $\pm 20\%$ except H.V.

■ SCHEMATIC DIAGRAM STRUCTURE:

MAIN / CRT DRIVE Circuit	1/2
DIFFERENCE TABLE	2/2

CHASSIS BLOCK DIAGRAM



SPECIFICATIONS (Representative: 14V2E)						
Rated voltage		AC 110 V – 240 V, 50/60 Hz				
Power consumption (at AC 220 V, 50 Hz)		60 W				
Dimensions		Width 478 mm × Height 362 mm × Depth 375 mm				
Mass		10.1 kg				
Picture tube		TYPE 14 (372.5 mm) Overall picture tube measured diagonally (335.4 mm) Viewable picture tube measured diagonally 90° deflection				
Television system (Aerial input)	Channel coverage	System	Channel	VHF	UHF	CATV
		PAL B/G	CCIR	2 – 12	21 – 69	X ~ Z+2, S1 ~ S41
		PAL I	UK	—	21 – 69	—
		PAL D/K	CHINA	1 – 12	13 – 57	Z-1 ~ Z-38
		SECAM B/G	CCIR	2 – 12	21 – 69	X ~ Z+2, S1 ~ S41
		SECAM D/K	OIRT	1 – 12	21 – 69	X1 ~ X19
		NTSC M	US	2 – 13	14 – 69	A-6 ~ A-1, A ~ W, AA ~ ZZ, AAA, BBB
		NTSC M	JAPAN	1 – 12	13 – 62	M1 ~ M10, S1 ~ S41
	Special RF signal	Colour system	Sound system			
		4.43NTSC	5.5/6.0/6.5 MHz			
PAL 60Hz		5.5/6.0/6.5 MHz				
Colour system (Video input)		PAL / SECAM / NTSC4.43 / NTSC3.58				
Audio power		5 W (10% THD)				
Speaker		60 × 120 mm 2 pcs				
Accessories		Remote Controller × 1 Battery (R03, AAA) × 2				

* Please refer to owner's manual in detail.

TOSHIBA CORPORATION
1-1, SHIBAURA 1-CHOME, MINATO-KU, TOKYO 105-8001, JAPAN

SCHEMATIC DIAGRAM

MODEL : 14V2E / 14V2M / 14V2MJ

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

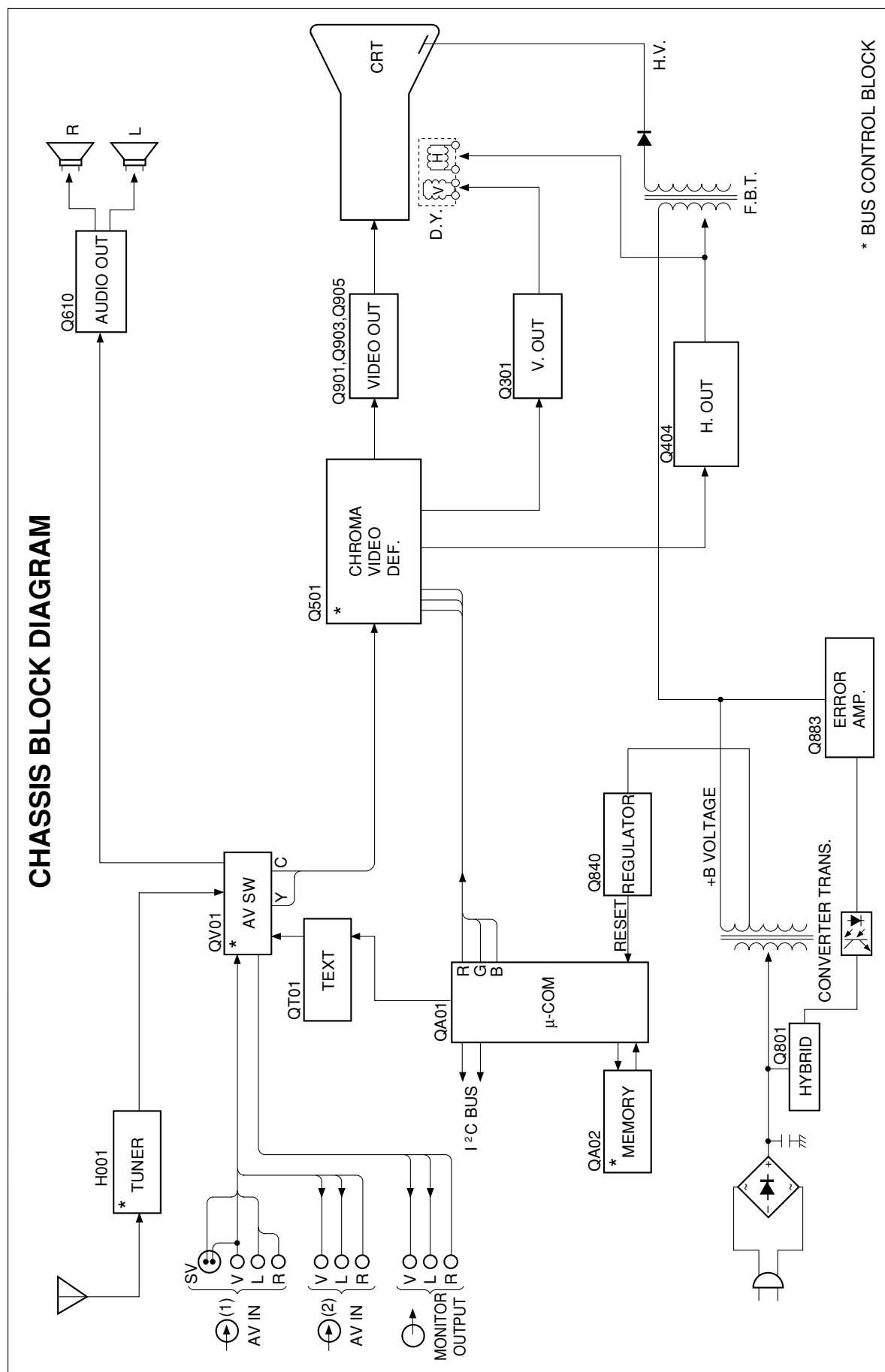
CAUTION: The international hazard symbols " $\triangle$ " in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting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

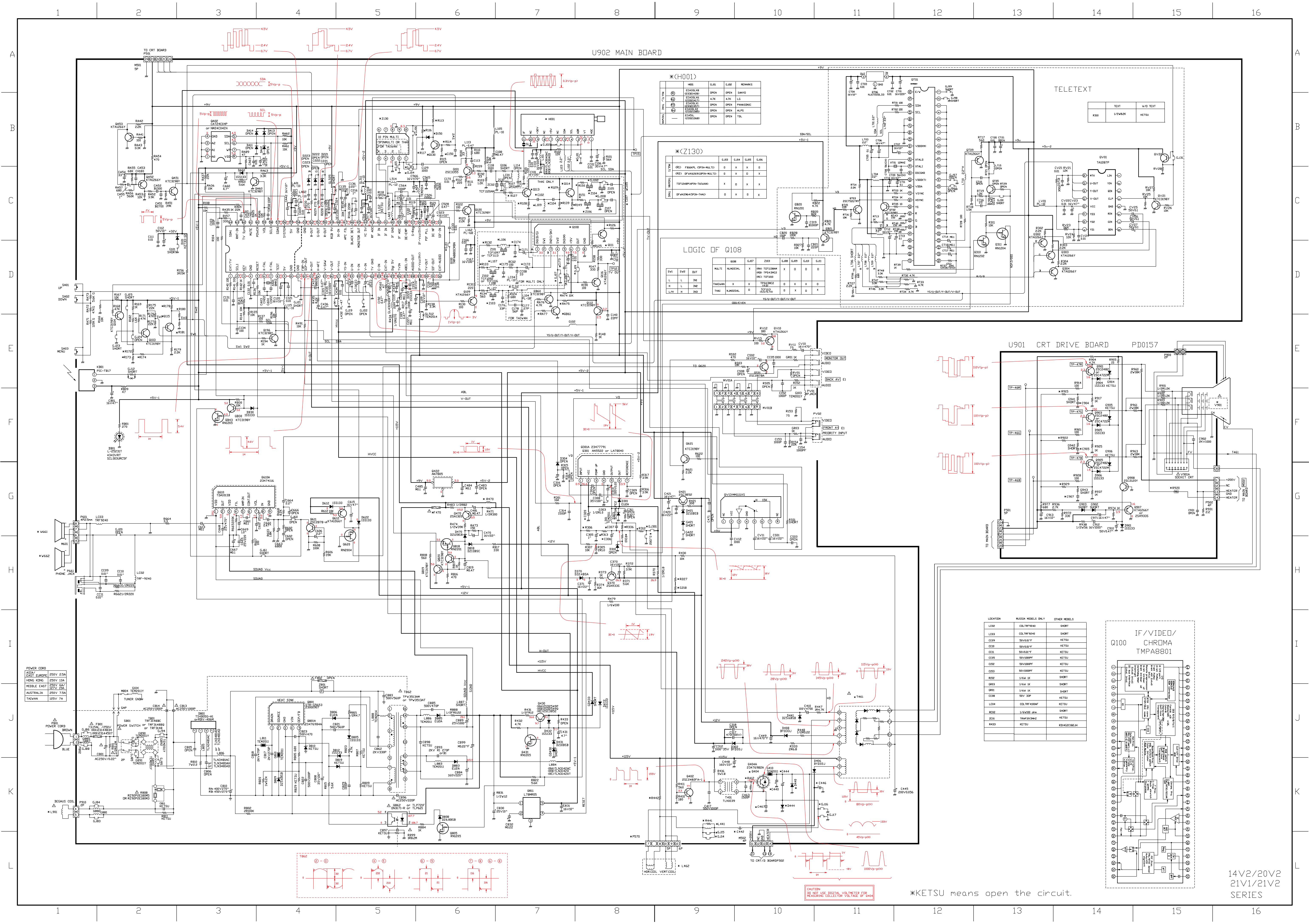
NOTE:

- 1. RESISTOR** Resistance is shown in ohm [K = 1.000, M = 1.000.000]. All resistors are 1/6W and 5% tolerance carbon resistor, unless otherwise noted as the following marks.
1/2R = Metal or Metal oxide of 1/2 watt 1/2S = Carbon composition of 1/2 watt
1RF = Fuse resistor of 1 watt 10W = Cement of 10 watt
K = $\pm 10\%$ G = $\pm 2\%$ F = $\pm 1\%$
- 2. CAPACITOR** Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in μF , and the values more than 1 in pF.
All capacitors are ceramic 50V, unless otherwise noted as the following marks.
 Electrolytic capacitor  Mylar capacitor
- 3.** The parts indicated with " $\triangle$ " have special characteristics, and should be replaced with identical parts only.
- 4.** Voltages read with DIGITAL MULTI-METER from point indicated to chassis ground, using a color bar signal with all controls at normal, line voltage 220 volts.
- 5.** Waveforms are taken receiving color bar signal with enough sensitivity.
- 6.** Voltage reading shown are nominal values and may vary $\pm 20\%$ except H.V.

■ SCHEMATIC DIAGRAM STRUCTURE:

MAIN / CRT DRIVE Circuit	1/2
DIFFERENCE TABLE	2/2





***H001**

LOC	Q101	Q102	REMARKS
Q101	EC432LW	OPEN	SAWID
Q102	EC432LW	OPEN	LG
Q103	EC432LW	OPEN	PANASONIC
Q104	EC432LW	OPEN	ALPS
Q105	EC432LW	OPEN	TAL

***Z130**

LOC	Q101	Q102	Q103	Q104
Q101	EC432LW	OPEN	SAWID	LG
Q102	EC432LW	OPEN	PANASONIC	ALPS
Q103	EC432LW	OPEN	TAL	

LOGIC OF Q108

SW1	SW2	OUT
L	L	2N
H	L	2N
L	H	2N
H	H	2N

LOCATION

LOCATION	RUSIA MODELS ONLY	OTHER MODELS
LOC2	COLTRF3040	SHORT
LOC3	COLTRF3040	SHORT
CC29	50V0.01	KETSU
CC30	50V0.01	KETSU
CC31	50V0.01	KETSU
CC32	50V0.01	KETSU
CC33	50V0.01	KETSU
CC34	50V0.01	KETSU
CC35	50V0.01	KETSU
CC36	50V0.01	KETSU
CC37	50V0.01	KETSU
CC38	50V0.01	KETSU
CC39	50V0.01	KETSU
CC40	50V0.01	KETSU
CC41	50V0.01	KETSU
CC42	50V0.01	KETSU
CC43	50V0.01	KETSU
CC44	50V0.01	KETSU
CC45	50V0.01	KETSU
CC46	50V0.01	KETSU
CC47	50V0.01	KETSU
CC48	50V0.01	KETSU
CC49	50V0.01	KETSU
CC50	50V0.01	KETSU
CC51	50V0.01	KETSU
CC52	50V0.01	KETSU
CC53	50V0.01	KETSU
CC54	50V0.01	KETSU
CC55	50V0.01	KETSU
CC56	50V0.01	KETSU
CC57	50V0.01	KETSU
CC58	50V0.01	KETSU
CC59	50V0.01	KETSU
CC60	50V0.01	KETSU
CC61	50V0.01	KETSU
CC62	50V0.01	KETSU
CC63	50V0.01	KETSU
CC64	50V0.01	KETSU
CC65	50V0.01	KETSU
CC66	50V0.01	KETSU
CC67	50V0.01	KETSU
CC68	50V0.01	KETSU
CC69	50V0.01	KETSU
CC70	50V0.01	KETSU
CC71	50V0.01	KETSU
CC72	50V0.01	KETSU
CC73	50V0.01	KETSU
CC74	50V0.01	KETSU
CC75	50V0.01	KETSU
CC76	50V0.01	KETSU
CC77	50V0.01	KETSU
CC78	50V0.01	KETSU
CC79	50V0.01	KETSU
CC80	50V0.01	KETSU
CC81	50V0.01	KETSU
CC82	50V0.01	KETSU
CC83	50V0.01	KETSU
CC84	50V0.01	KETSU
CC85	50V0.01	KETSU
CC86	50V0.01	KETSU
CC87	50V0.01	KETSU
CC88	50V0.01	KETSU
CC89	50V0.01	KETSU
CC90	50V0.01	KETSU
CC91	50V0.01	KETSU
CC92	50V0.01	KETSU
CC93	50V0.01	KETSU
CC94	50V0.01	KETSU
CC95	50V0.01	KETSU
CC96	50V0.01	KETSU
CC97	50V0.01	KETSU
CC98	50V0.01	KETSU
CC99	50V0.01	KETSU
CC100	50V0.01	KETSU

1

2

3

4

A

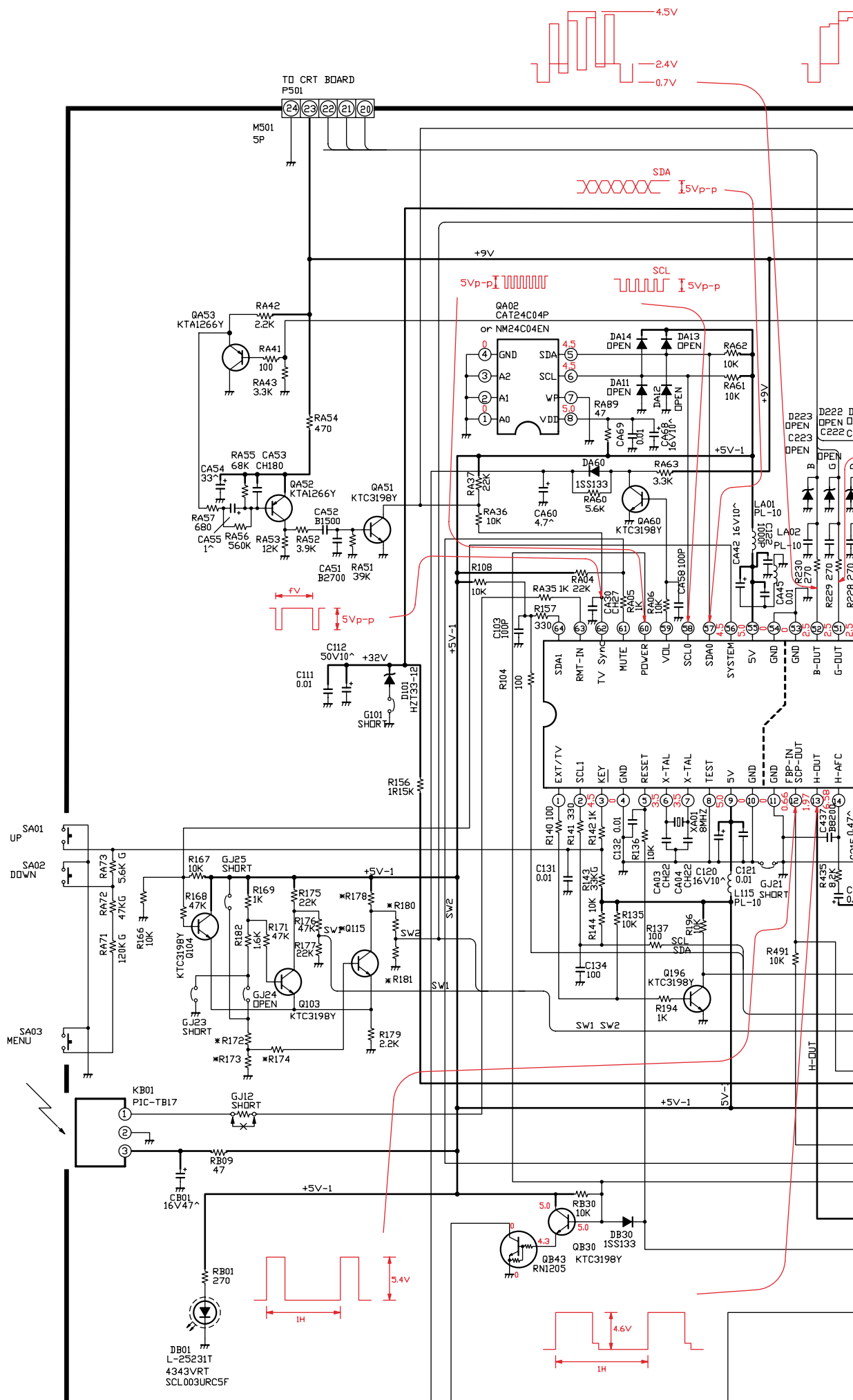
B

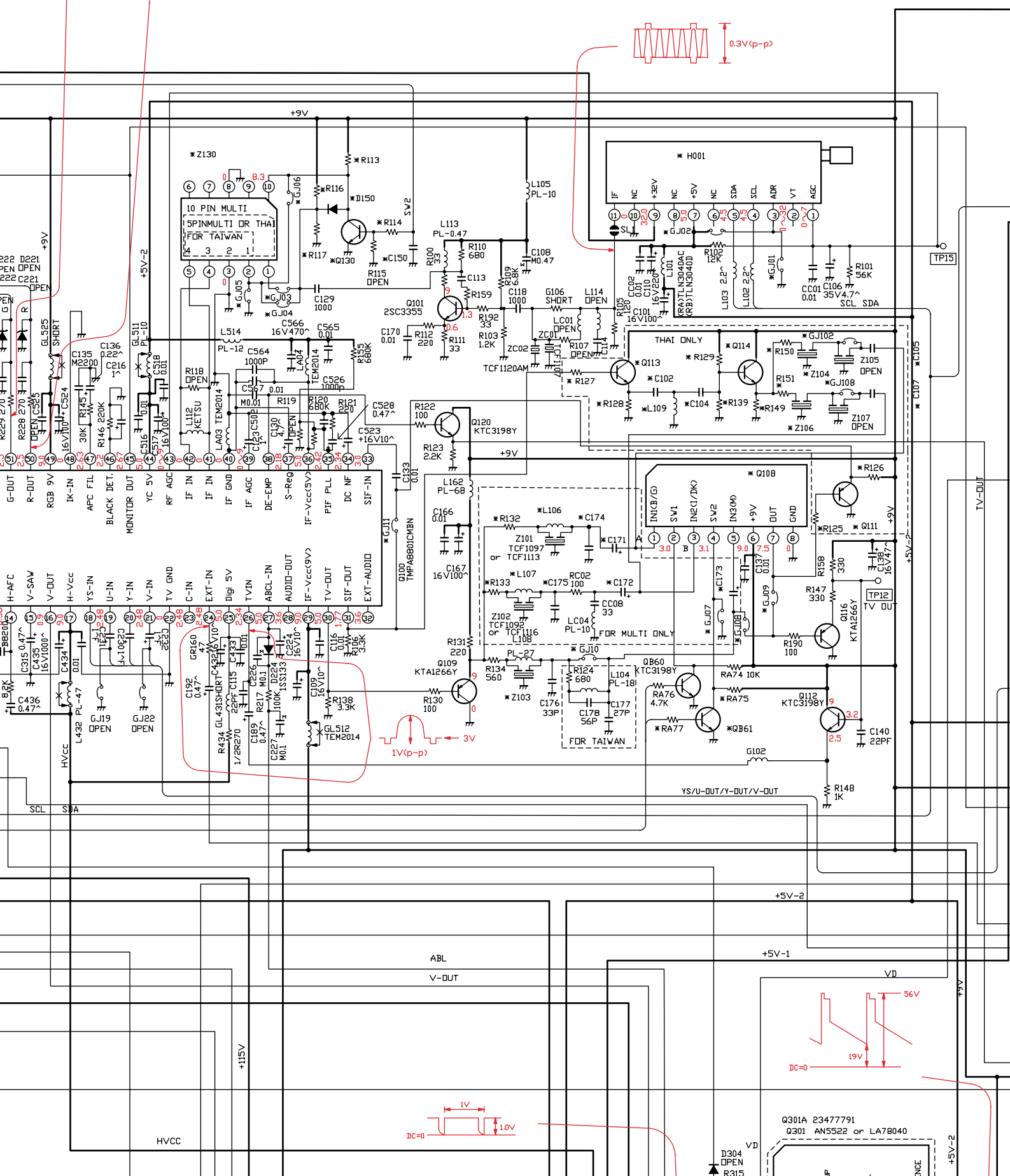
C

D

E

F





ARD

*(H001)

		H001	GJ01	GJ02	REMARKS
MULTI / THAI	(R1)	ECA33LX8 (23321428)	OPEN	OPEN	SANYO
	(R2)	ECA33LX6 (23321417)	4.7K	4.7K	LG
	(R3)	ECA33LX1 (23321357)	OPEN	OPEN	PANASONIC
	(R4)	ECA33LX2 (23321365)	OPEN	OPEN	ALPS
TAIWAN	—	ECA51L (23321368)	OPEN	OPEN	TDL

*(Z130)

		GJ03	GJ04	GJ05	GJ06
MULTI	(R1) F816KPL (5PIN-MULTI)	0	X	X	0
	(R2) DFWK6269(10PIN-MULTI)	0	X	0	X
TAIWAN	TSF1248PK(4PIN-TAIWAN)	X	0	X	X
THAI	DFWK2964(3PIN-THAI)	0	X	0	X

LOGIC OF Q108

SW1	SW2	OUT
L	L	IN1
H	L	IN2
L/H	H	IN3

	Q108	GJ07	Z103	GJ08	GJ09	GJ10	GJ11
MULTI	NLM2234L	X	(RA) TCF1138AM (RB) TPS4.5MC2 (RC) TCF1010	X	0	0	0
	TAIWAN	X	TPS4.5MC2 (4.5)	0	X	X	0
	THAI	NLM2234L	TCF1113 (5.5/5.74)	0	X	0	X

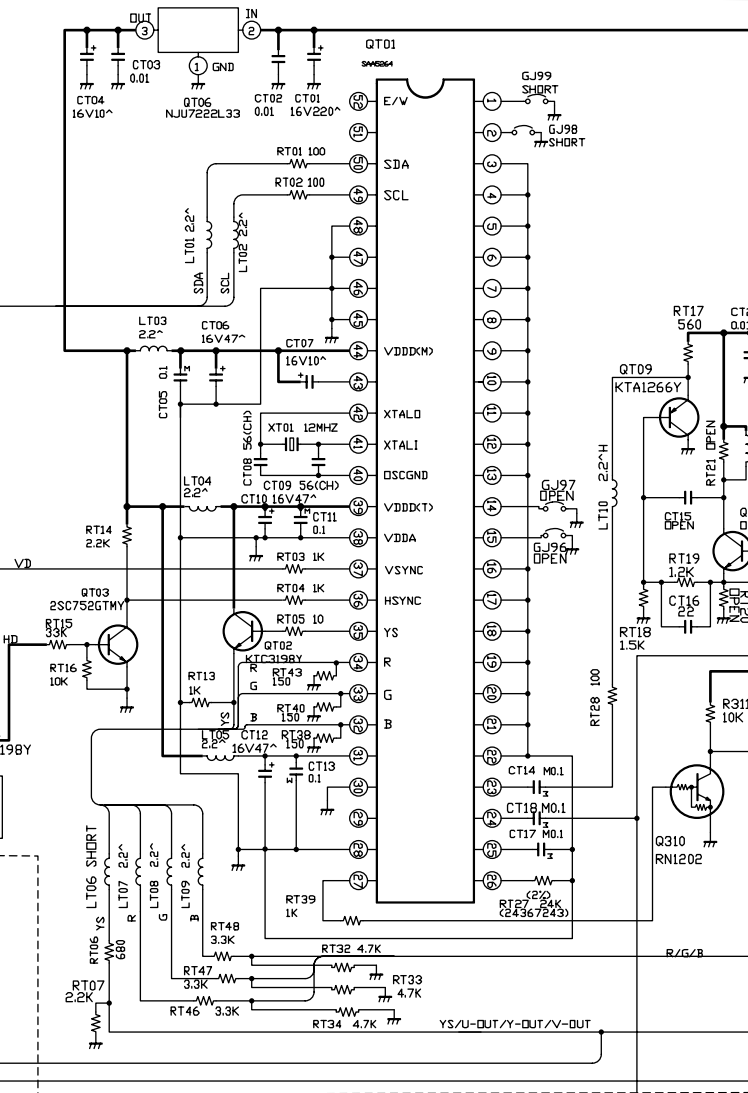
YS/U-OUT/Y-OUT/V-OUT

ODD/EVEN

+9V

SDA/SCL

+5V-1



+9V

RV12 180

QV10 KTA1266Y

RV11 75

CV10 16V470

RV10 100

RV11 3.2

RV12 100

RV13 100

RV14 100

RV15 100

RV16 100

RV17 100

RV18 100

RV19 100

RV20 100

RV21 100

RV22 100

RV23 100

RV24 100

RV25 100

RV26 100

RV27 100

RV28 100

RV29 100

RV30 100

RV31 100

RV32 100

RV33 100

RV34 100

RV35 100

RV36 100

RV37 100

RV38 100

RV39 100

RV40 100

RV41 100

RV42 100

RV43 100

RV44 100

RV45 100

RV46 100

RV47 100

RV48 100

RV49 100

RV50 100

RV51 100

RV52 100

RV53 100

RV54 100

RV55 100

RV56 100

RV57 100

RV58 100

RV59 100

RV60 100

RV61 100

RV62 100

RV63 100

RV64 100

RV65 100

RV66 100

RV67 100

RV68 100

RV69 100

RV70 100

RV71 100

RV72 100

RV73 100

RV74 100

RV75 100

RV76 100

RV77 100

RV78 100

RV79 100

RV80 100

RV81 100

RV82 100

RV83 100

RV84 100

RV85 100

RV86 100

RV87 100

RV88 100

RV89 100

RV90 100

RV91 100

RV92 100

RV93 100

RV94 100

RV95 100

RV96 100

RV97 100

RV98 100

RV99 100

RV100 100

RV101 100

RV102 100

RV103 100

RV104 100

RV105 100

RV106 100

RV107 100

RV108 100

RV109 100

RV110 100

RV111 100

RV112 100

RV113 100

RV114 100

RV115 100

RV116 100

RV117 100

RV118 100

RV119 100

RV120 100

RV121 100

RV122 100

RV123 100

RV124 100

RV125 100

RV126 100

RV127 100

RV128 100

RV129 100

RV130 100

RV131 100

RV132 100

RV133 100

RV134 100

RV135 100

RV136 100

RV137 100

RV138 100

RV139 100

RV140 100

RV141 100

RV142 100

RV143 100

RV144 100

RV145 100

RV146 100

RV147 100

RV148 100

RV149 100

RV150 100

RV151 100

RV152 100

RV153 100

RV154 100

RV155 100

RV156 100

RV157 100

RV158 100

RV159 100

RV160 100

RV161 100

RV162 100

RV163 100

RV164 100

RV165 100

RV166 100

RV167 100

RV168 100

RV169 100

RV170 100

RV171 100

RV172 100

RV173 100

RV174 100

RV175 100

RV176 100

RV177 100

RV178 100

RV179 100

RV180 100

RV181 100

RV182 100

RV183 100

RV184 100

RV185 100

RV186 100

RV187 100

RV188 100

RV189 100

RV190 100

RV191 100

RV192 100

RV193 100

RV194 100

RV195 100

RV196 100

RV197 100

RV198 100

RV199 100

RV200 100

RV201 100

RV202 100

RV203 100

RV204 100

RV205 100

RV206 100

RV207 100

RV208 100

RV209 100

RV210 100

RV211 100

RV212 100

RV213 100

RV214 100

RV215 100

RV216 100

RV217 100

RV218 100

RV219 100

RV220 100

RV221 100

RV222 100

RV223 100

RV224 100

RV225 100

RV226 100

RV227 100

RV228 100

RV229 100

RV230 100

RV231 100

RV232 100

RV233 100

RV234 100

RV235 100

RV236 100

RV237 100

RV238 100

RV239 100

RV240 100

RV241 100

RV242 100

RV243 100

RV244 100

RV245 100

RV246 100

RV247 100

RV248 100

RV249 100

RV250 100

RV251 100

RV252 100

RV253 100

RV254 100

RV255 100

RV256 100

RV257 100

RV258 100

RV259 100

RV260 100

RV261 100

RV262 100

RV263 100

RV264 100

RV265 100

RV266 100

RV267 100

RV268 100

RV269 100

RV270 100

RV271 100

RV272

A

B

C

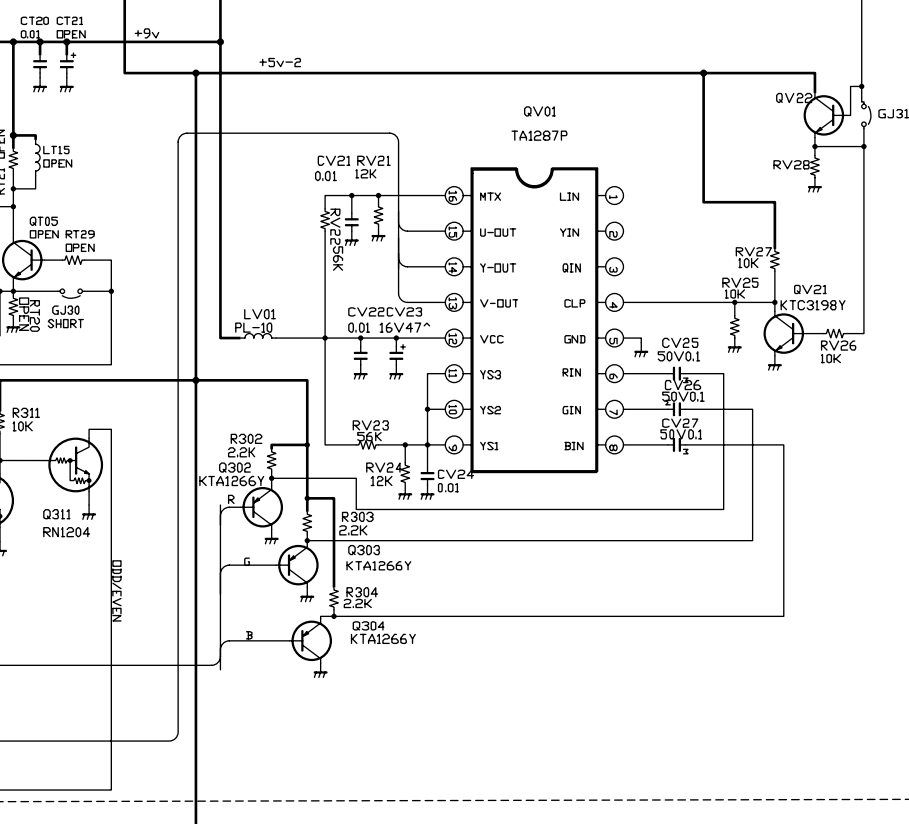
D

E

F

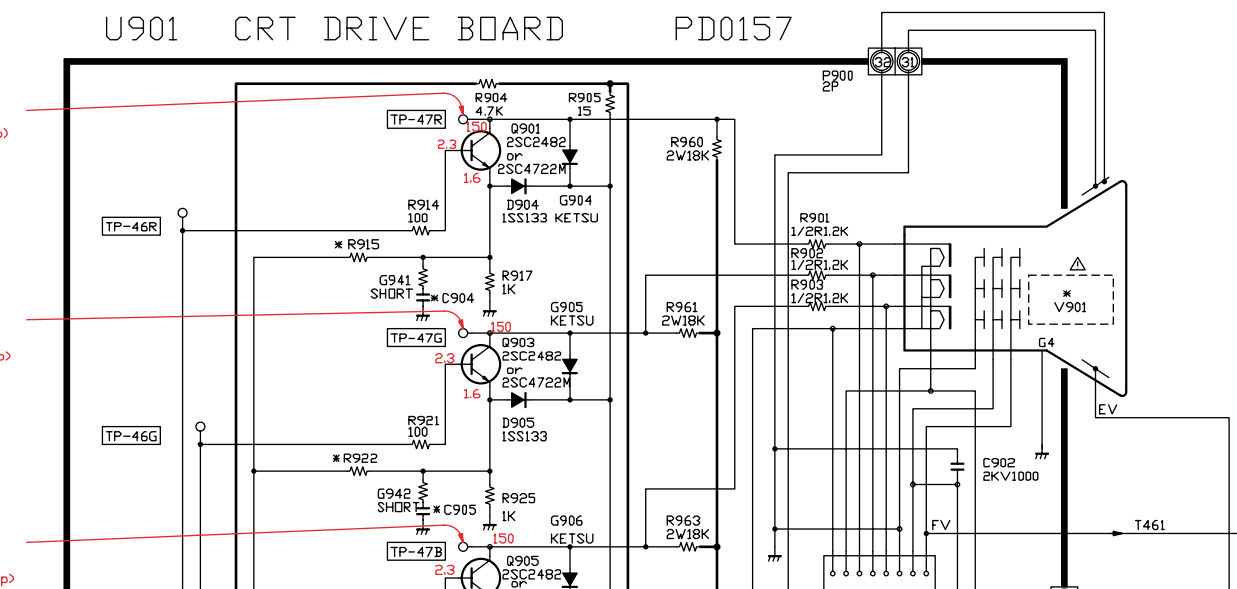
TELETEXT

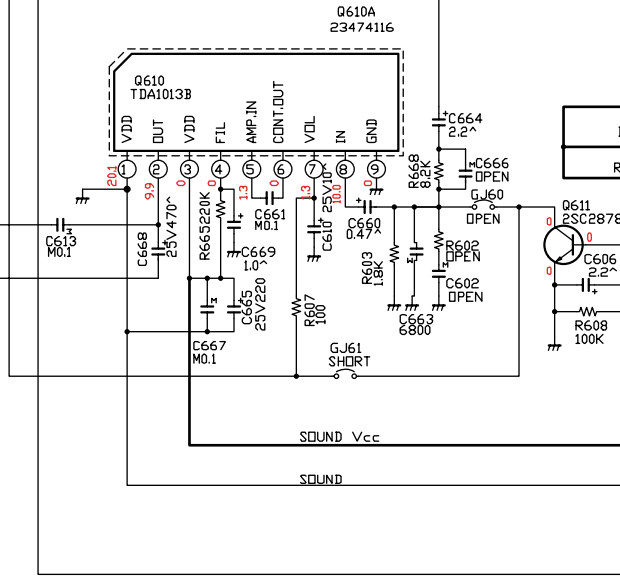
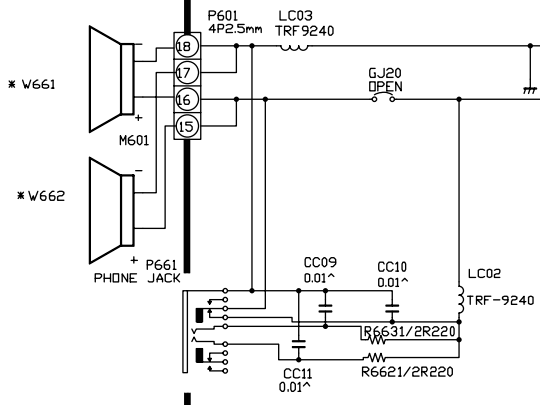
	TEXT	V/D TEXT
R310	1/2W82K	KETSU



U901 CRT DRIVE BOARD

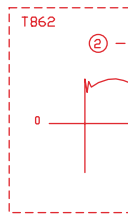
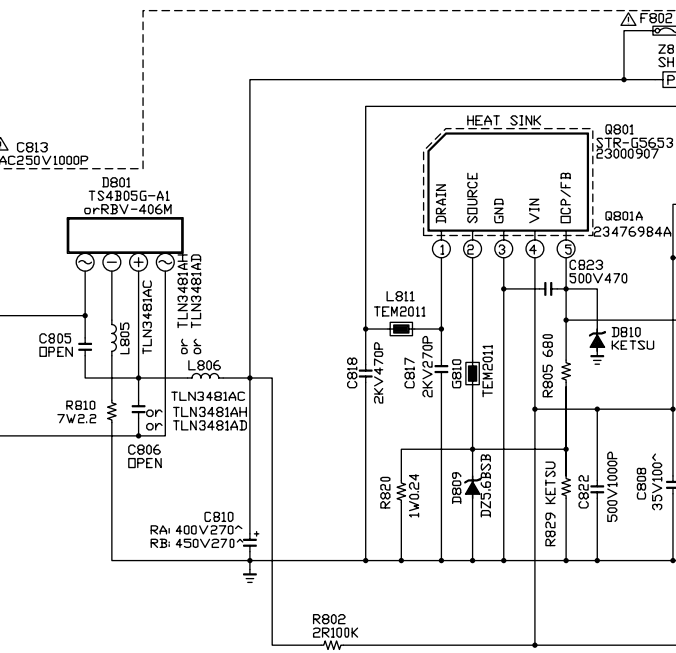
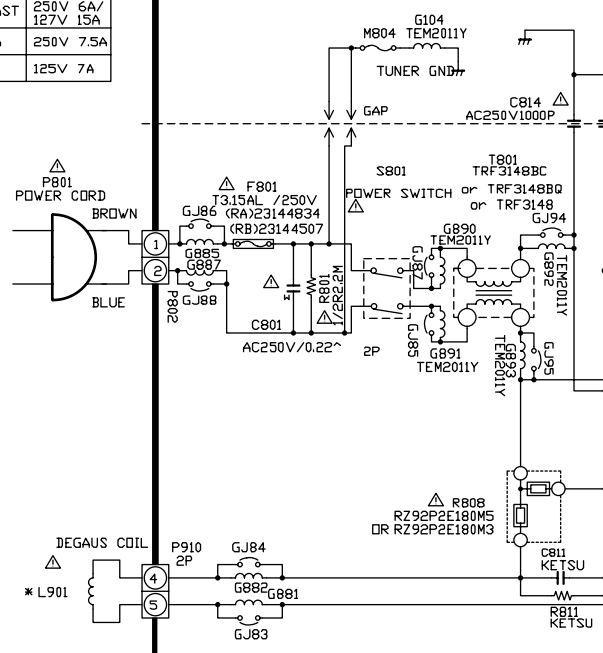
PD0157

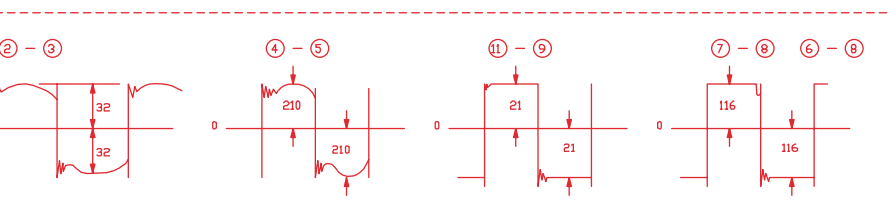


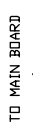


POWER CORD

ASIA/ EAST EUROPE	250V 2.5A
HONG KONG	250V 13A
MIDDLE EAST	250V 6A/ 127V 15A
AUSTRALIA	250V 7.5A
TAIWAN	125V 7A







*KETSU means op

[illegible]

4	L104	UPEN	UPEN	UPEN	UPEN	UPEN	UPEN	UPEN	UPEN
	R124	DPEN	DPEN	DPEN	DPEN	DPEN	DPEN	DPEN	DPEN
	C172	16V10^	16V10^	DPEN	DPEN	16V10^	16V10^	16V10^	16V10^
	C173	16V10^	16V10^	DPEN	DPEN	16V10^	16V10^	16V10^	16V10^
	C174	50V33P	50V33P	DPEN	DPEN	50V33P	50V33P	50V33P	50V33P
	C175	50V33P	50V33P	DPEN	DPEN	50V33P	50V33P	50V33P	50V33P
	L106	12^H	12^H	DPEN	DPEN	12^H	12^H	12^H	12^H
	L107	12^H	12^H	DPEN	DPEN	12^H	12^H	12^H	12^H
	QB61(RA)	KTC3198Y	KTC3198Y	DPEN	DPEN	KTC3198Y	KTC3198Y	KTC3198Y	KTC3198Y
	QB61(RB)	2SC1740S	2SC1740S	DPEN	DPEN	2SC1740S	2SC1740S	2SC1740S	2SC1740S
	R132	1/6W270	1/6W270	DPEN	DPEN	1/6W270	1/6W270	1/6W270	1/6W270
	R133	1/6W270	1/6W270	DPEN	DPEN	1/6W270	1/6W270	1/6W270	1/6W270
	RA75	1/6W10K	1/6W10K	DPEN	DPEN	1/6W10K	1/6W10K	1/6W10K	1/6W10K
	RA77	1/6W4.7K	1/6W4.7K	DPEN	DPEN	1/6W4.7K	1/6W4.7K	1/6W4.7K	1/6W4.7K
3	C150	50V0.01^F	50V0.01^F	DPEN	DPEN	50V0.01^F	50V0.01^F	50V0.01^F	50V0.01^F
	D150	1SS110	1SS110	DPEN	DPEN	1SS110	1SS110	1SS110	1SS110
	Q115(RA)	KTC3198	KTC3198	DPEN	DPEN	KTC3198	KTC3198	KTC3198	KTC3198
	Q115(RB)	2SC1740	2SC1740	DPEN	DPEN	2SC1740	2SC1740	2SC1740	2SC1740
	Q130	2SC2878A	2SC2878A	DPEN	DPEN	2SC2878A	2SC2878A	2SC2878A	2SC2878A
	R113	1/6W4.7K	1/6W4.7K	DPEN	DPEN	1/6W4.7K	1/6W4.7K	1/6W4.7K	1/6W4.7K
	R114	1/6W4.7K	1/6W4.7K	DPEN	DPEN	1/6W4.7K	1/6W4.7K	1/6W4.7K	1/6W4.7K
	R116	1/6W10K	1/6W10K	DPEN	DPEN	1/6W10K	1/6W10K	1/6W10K	1/6W10K
	R117	1/6W10K	1/6W10K	DPEN	DPEN	1/6W10K	1/6W10K	1/6W10K	1/6W10K
	R172	1/6W16K	1/6W16K	DPEN	DPEN	1/6W16K	1/6W16K	1/6W16K	1/6W16K
	R173	1/6W1K	1/6W1K	DPEN	DPEN	1/6W1K	1/6W1K	1/6W1K	1/6W1K
	R174	1/6W47K	1/6W47K	DPEN	DPEN	1/6W47K	1/6W47K	1/6W47K	1/6W47K
	R178	1/6W10K	1/6W10K	DPEN	DPEN	1/6W10K	1/6W10K	1/6W10K	1/6W10K
	R180	1/6W47K	1/6W47K	DPEN	DPEN	1/6W47K	1/6W47K	1/6W47K	1/6W47K
2	R181	1/6W22K	1/6W22K	DPEN	DPEN	1/6W22K	1/6W22K	1/6W22K	1/6W22K
	C171	16V10^	16V10^	DPEN	DPEN	16V10^	16V10^	16V10^	16V10^
	C810	400V270^	400V270^	DPEN	DPEN	400V270^	400V270^	400V270^	400V270^
	Q100	TMPA8801CMBN	TMPA8801CMBN	DPEN	DPEN	TMPA8801CMBN	TMPA8801CMBN	TMPA8801CMBN	TMPA8801CMBN
	L108	PL-27^H	PL-27^H	DPEN	DPEN	PL-27^H	PL-27^H	PL-27^H	PL-27^H
	R134	1/6W560	1/6W560	DPEN	DPEN	1/6W560	1/6W560	1/6W560	1/6W560
	R305	2W10	2W15	2W15	2W15	2W15	2W15	2W15	2W15
1									

8	GJ04	<R1>OPEN <R2>OPEN	<R1>OPEN <R2>OPEN	<R1>OPEN <R2>OPEN	<R1>OPEN <R2>OPEN
	GJ05	<R1>OPEN <R2>SHORT	<R1>OPEN <R2>SHORT	SHORT SHORT	<R1>OPEN <R2>SHORT
	GJ06	<R1>SHORT <R2>OPEN	<R1>SHORT <R2>OPEN	OPEN <R2>OPEN	<R1>SHORT <R2>OPEN
	H001	<R1>ECA33LX8 <R2>ECA33LX6 <R3>ECA33LX1 <R4>ECA33LX2	<R1>ECA33LX8 <R2>ECA33LX6 <R3>ECA33LX1 <R4>ECA33LX2	<R1>ECA33LX8 <R2>ECA33LX6 <R3>ECA33LX1 <R4>ECA33LX2	<R1>ECA33LX8 <R2>ECA33LX6 <R3>ECA33LX1 <R4>ECA33LX2
	GJ01	<R1>OPEN <R2>1/6W4.7K <R3>OPEN <R4>OPEN	<R1>OPEN <R2>1/6W4.7K <R3>OPEN <R4>OPEN	<R1>OPEN <R2>1/6W4.7K <R3>OPEN <R4>OPEN	<R1>OPEN <R2>1/6W4.7K <R3>OPEN <R4>OPEN
		<R1>OPEN <R2>1/6W4.7K <R3>OPEN <R4>OPEN	<R1>OPEN <R2>1/6W4.7K <R3>OPEN <R4>OPEN	<R1>OPEN <R2>1/6W4.7K <R3>OPEN <R4>OPEN	<R1>OPEN <R2>1/6W4.7K <R3>OPEN <R4>OPEN
7	GJ02	<R1>OPEN <R2>1/6W4.7K <R3>OPEN <R4>OPEN	<R1>OPEN <R2>1/6W4.7K <R3>OPEN <R4>OPEN	<R1>OPEN <R2>1/6W4.7K <R3>OPEN <R4>OPEN	<R1>OPEN <R2>1/6W4.7K <R3>OPEN <R4>OPEN
		<R1>OPEN <R2>1/6W4.7K <R3>OPEN <R4>OPEN	<R1>OPEN <R2>1/6W4.7K <R3>OPEN <R4>OPEN	<R1>OPEN <R2>1/6W4.7K <R3>OPEN <R4>OPEN	<R1>OPEN <R2>1/6W4.7K <R3>OPEN <R4>OPEN
	C102	OPEN	OPEN	50V47 μ	OPEN
	C104	OPEN	OPEN	50V47 μ	OPEN
	C105	OPEN	OPEN	50V0.01PF	OPEN
	C107	OPEN	OPEN	50V0.01PF	OPEN
6	GJ102	OPEN	OPEN	SHORT	OPEN
	GJ108	OPEN	OPEN	SHORT	OPEN
	L109	OPEN	OPEN	15 $\sim$ H	OPEN
	Q111	<RA>OPEN <RB>OPEN	<RA>OPEN <RB>OPEN	KTAI266Y 2SA1015Y	<RA>OPEN <RB>OPEN
	Q113	<RA>OPEN <RB>OPEN	<RA>OPEN <RB>OPEN	KTC3198Y 2SC1740S	<RA>OPEN <RB>OPEN
	Q114	<RA>OPEN <RB>OPEN	<RA>OPEN <RB>OPEN	KTC3198Y 2SC1740S	<RA>OPEN <RB>OPEN
5	R125	OPEN	OPEN	1/6W100	OPEN
	R126	OPEN	OPEN	1/6W1K	OPEN
	R127	OPEN	OPEN	1/6W100	OPEN
	R128	OPEN	OPEN	1/6W2.2K	OPEN
	R129	OPEN	OPEN	1/6W10K	OPEN
	R139	OPEN	OPEN	1/6W10K	OPEN
5	R149	OPEN	OPEN	1/6W1K	OPEN
	R150	OPEN	OPEN	1/6W220	OPEN
	R151	OPEN	OPEN	1/6W220	OPEN
	Z104	<RA>OPEN <RB>OPEN	<RA>OPEN <RB>OPEN	<RA>TCF113SAM5.5M <RB>TCF103I5.5M	<RA>OPEN <RB>OPEN
	Z105	OPEN	OPEN	OPEN	OPEN
	Z106	OPEN	OPEN	TCF10305.74M	OPEN
5	Z107	OPEN	OPEN	OPEN	OPEN
	C177	OPEN	OPEN	OPEN	OPEN
	C178	OPEN	OPEN	OPEN	OPEN
	L104	OPEN	OPEN	OPEN	OPEN
	R124	OPEN	OPEN	OPEN	OPEN
	R124	OPEN	OPEN	OPEN	OPEN

	OPEN
	16V10~
	16V10~
	50V33P
	50V33P
	12~H
	12~H
	KTC3198Y
	2SC1740S
	1/6W270
	1/6W270
	1/6W10K
	1/6W4.7K
	50V0.01~F
	1SS110
	KTC3198
	2SC1740
	2SC2878A
	1/6W4.7K
	1/6W4.7K
	1/6W10K
	1/6W10K
	1/6W1.6K
	1/6W1K
	1/6W47K
	1/6W10K
	1/6W47K
	1/6W22K
	16V10~
	400V270~
CMBN	TMPA8801CPNG4FA6
	PL-27~H
	1/6W560
	2W1.5

[illegible]

	(RC)TRF3148
	2SD2599(FA)
	DELETE
	OPEN
	DELETE
F	(R1)250V0.51~F
	DELETE
	DELETE
	DELETE
	TDY-314PV
	TDY-314PY
	A34LWG70X
	DELETE
	DELETE
	DELETE
	MAG-1070
	DELETE
	DELETE
	DELETE
	1/6W3.9K
	1/6W30K
AK	(RA)TSB-2360AK
AR	(RB)TSB-2360AR
60AL/AT	(RC)TSB-2360AL/AT
	PLUG6PIN
AD	(RA)SPK-1418AD
	(RB)SPK1389
AD	(RA)SPK-1418AD
	(RB)SPK1389
	NOT USED
	OPEN
	NJM2234L
M	(RA)TCF1138AM
2	(RB)TPS4.5MC2
	(RC)TCF1010
	OPEN
	OPEN
	SHORT
	SHORT
	SHORT
	SHORT
9K	(R1)DFWK6269K
	(R2)F816KPL
	(R1)SHORT
	(R2)SHORT

* MARKS DIFFERENCE REFER TO : MAIN

	14V2MJ
	50V390PF
	50V330PF
	50V390PF
	1W4.7
	1/6W680
	1/6W680
	1/6W680
	1/6W680
	25V1000~F
	100V0.047~F
	35V100~F
	1.25KV7200PF
	OPEN
	250V10~F
	OPEN
	OPEN
	OPEN
	OPEN
	SHORT
	SHORT
	SHORT
	SHORT
	SHORT
	OPEN
	SHORT
	OPEN
	OPEN
	1/6W56K
	1/2W2.7K
	1/6W51K
	2W330
	OPEN
	2W330
	1W0.75
	250V0.5A
TYPE	(RA)TFB4122CY
DES	(RB)TFB4122ES
ED	(RC)TFB4122ED
3C	(RA)TRF3148BC
3Q	(RB)TRF3148BQ
	(RC)TRF3148