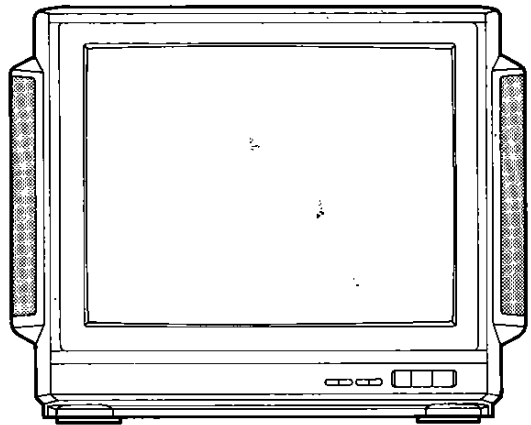


TOSHIBA

COLOUR TELEVISION

2104XS1



SPECIFICATIONS

Input Power Rating:	79 watts (nominal), AC 110 ~ 245 volts, 50/60 Hz
Aerial Input Impedance:	75 ohm unbalanced type for VHF and UHF
Receiving Channels:	PAL B/G, SECAM B/G system VHF channels 2 to 12 UHF channels 21 to 69 PAL D/K, SECAM D/K system VHF channels 1 to 12 UHF channels 21 to 69 PAL I system UHF channels 21 to 69 NTSC 4.43/5.5 MHz (Modified NTSC) NTSC 3.58/4.5 MHz (VIDEO IN)
Intermediate Frequencies:	Picture I-F carrier frequency 38.0 MHz Sound I-F carrier frequency 32.5 / 32.0 / 31.5 MHz
Picture Tube:	21 inches, A51KSU93X(VM) (510 mm measured on diagonal of viewable picture area), 90° Deflection
Sound Output:	5 watts (at 10% distortion)
Speakers:	60 mm x 120 mm 2 pcs
Dimensions:	Height 474 mm Width 600 mm Depth 475 mm
Weight:	21.5 kg
Features:	Clearness tube, VIDEO and AUDIO input terminals, Off/On timer, Remote Control

Specifications are subject to change without notice.



SAFETY INSTRUCTIONS

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" DESCRIBED 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 27.5kV at zero beam current (minimum brightness) under 110 ~ 245V AC power source. The high voltage must not, under any circumstances, exceed 27.5kV. Each time a receiver requires servicing, the high voltage should be checked following the HIGH VOLTAGE CHECK procedure in this manual. It is recommended 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.
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 parts 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.

SAFETY PRECAUTION

1. Potentials as high as 27kV are present when this receiver is operating. Operation of the receiver outside the cabinet or with back board removed involves a shock hazard from the receiver.
 1. Servicing should not be attempted by anyone who is not thoroughly familiar with the precautions necessary when working on high-voltage equipment.
 2. Always discharge the picture tube anode to the receiver chassis to keep off the shock hazard before removing the anode cap.
 3. Perfectly discharge the high potential of the picture tube before handling the tube. The picture tube is highly evacuated and if broken, glass fragments will be violently expelled.
2. If any Fuse in this TV receiver is blown, replace it with the Fuse specified in the chassis parts list.
3. When replacing parts or circuit boards, wind the lead wires around terminals before soldering.
4. When replacing a high wattage resistor (oxide metal film resistor) in circuit board, keep the resistor 10mm away from circuit board.
5. Keep wires away from high voltage or high temperature components.
6. This receiver can be operated under AC 110 ~ 245 volts, 50/60Hz. NEVER connect to DC supply or any other power.

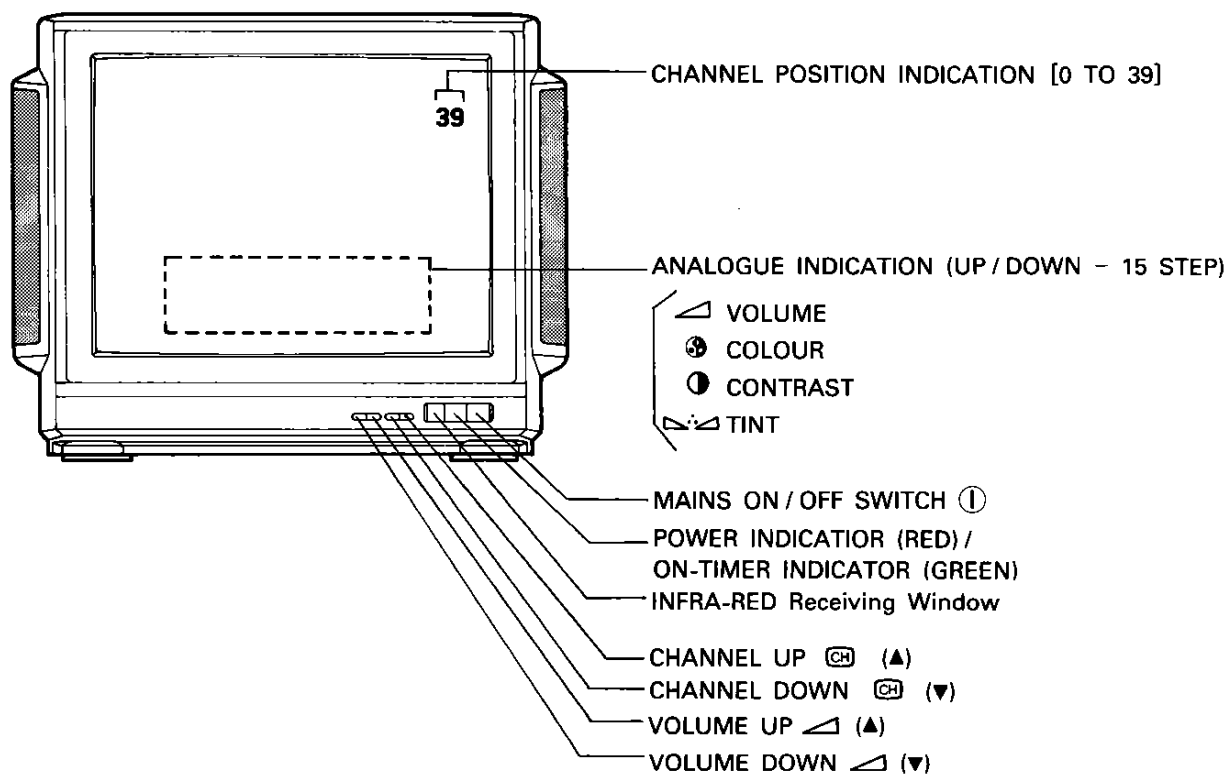
PRODUCT SAFETY NOTICE

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 X-RAY RADIATION 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.

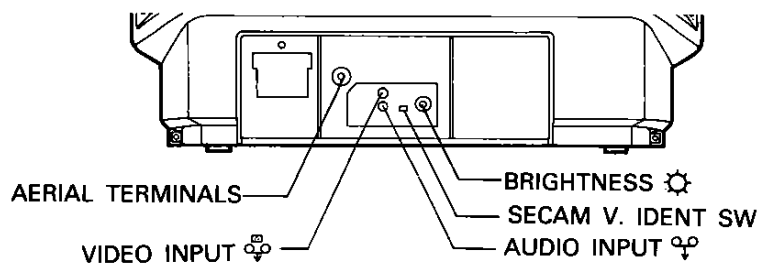
Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create X-RAY RADIATION.

LOCATION OF CONTROLS

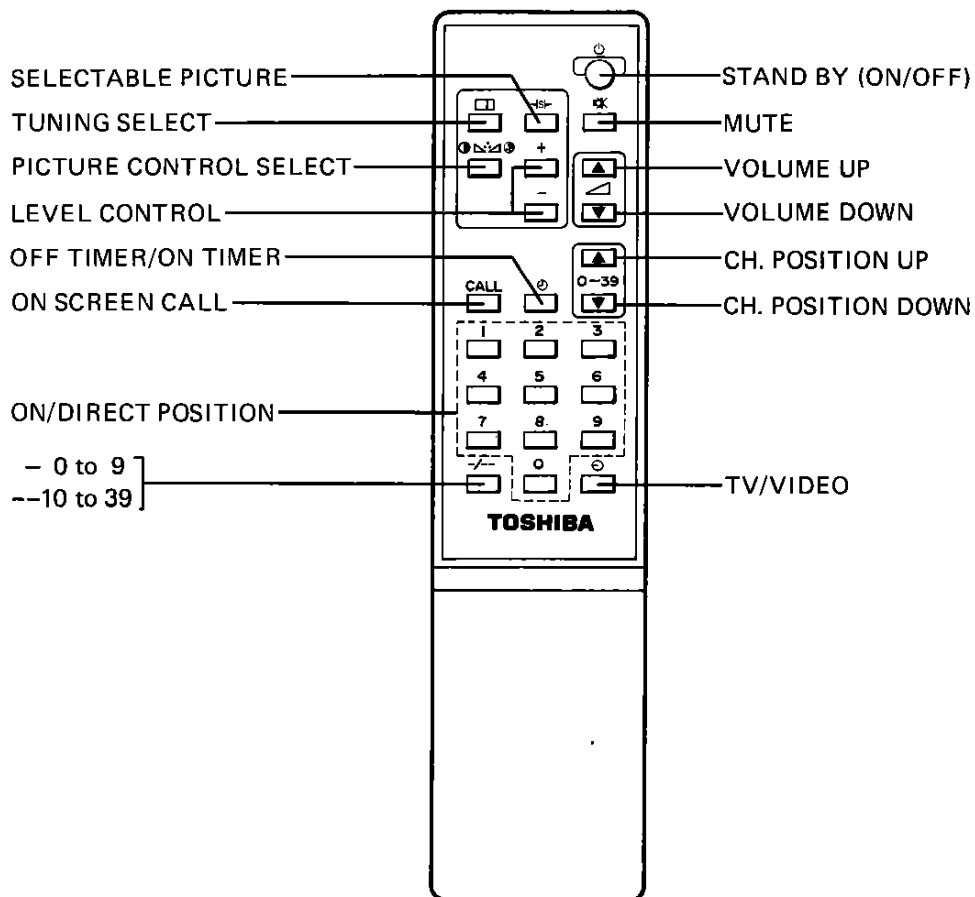
FRONT VIEW



REAR VIEW



■ REMOTE CONTROL HAND UNIT



Before operating

INSTALLING THE BATTERIES

1. Remove the battery cover.
2. Insert the two "AA" (pencil size) 1.5V batteries making sure the polarity (+ or -) of the batteries matches the polarity marks inside the unit.
3. Close the battery cover.

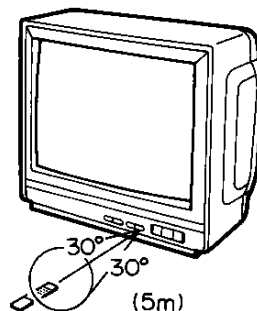


Press and slide to open.

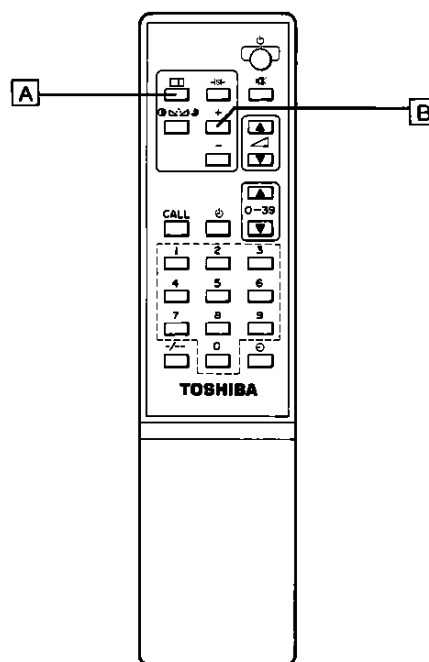
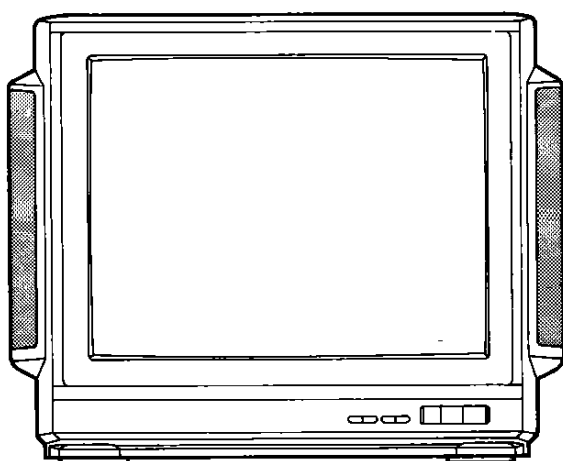
TIPS FOR REMOTE OPERATION

- If intermittent remote control operation occurs, replace the batteries according to "INSTALLING THE BATTERIES."
- The battery life should be about a year under normal use.
- When the Remote Control Hand Unit is not used for a long period of time or when the batteries are worn out, take out the batteries to prevent liquid leak.
- Do not throw the batteries into a fire. Dispose of used batteries in the specified places.
- Take care not to drop, dampen, disassemble the Remote Control Hand Unit.

Effective Range

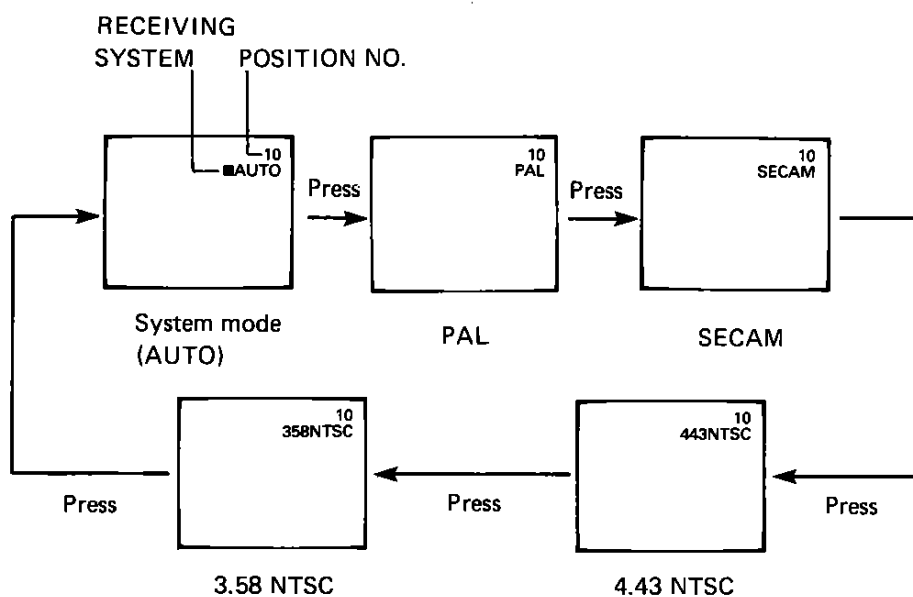


COLOUR SYSTEM SELECTION



1. Press the TUNING SELECT Button **A** to select the system mode. (AUTO mode)
2. Press the ▲ (+) of LEVEL Button **B**.

One pressing shifts the system mode to next one as shown below.



RECEIVING SYSTEM

Receiving Systems	
7 System	Function
1. PAL B/G 2. PAL 1 3. PAL D/K 4. SECAM B/G 5. SECAM D/K	Reception of broadcast and playback for video cassette recorder
6. NTSC 4.43/5.5MHz 7. NTSC 3.58/ Video in	Playback for special video cassette recorder

- **AUTO** All signals of 7 systems can be received.
- **PAL** PAL Signal can be received.
- **SECAM** SECAM Signal can be received.
- **443NTSC** Signal from VCR on 4.43NTSC can be received.
- **358NTSC** VIDEO in NTSC standard.

Receiving channels

- Regular TV VHF BAND
2 – 12 (PAL/SECAM – B)
1 – 12 (PAL/SECAM – D)
- Regular TV UHF BAND
21 – 69 (PAL/SECAM – G, PAL I)
21 – 69 (SECAM – K)
13 – 56 (PAL – K)

■ COUNTERMEASURES AGAINST MALFUNCTION IN FRINGE AREA

1. In Case Abnormal Signals Were Memoried by Auto Search

If you mind this, reset the memory by MFT (Manual Fine Tuning) from the position after the one where the abnormal signals were memorized.

2. System Selection When System Malfunction Occurs

System malfunction may occur in auto maode when unfavourable receiving conditions prevail. In this event, use manual mode which matches the system of receiving signals.

Example:

- (1) In the case of receiving successive channels.
- (2) In using video tape reproduced repeatedly.
- (3) When receiving different systems in the vicinity of border where receiving conditions are bad.
- (4) In the area where strong and week electric fields are mixed in the channels.

TV PROGRAM RECEPTION

■ WHEN USING REMOTE CONTROL HAND UNIT

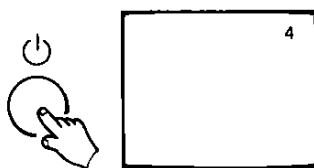
SET UP

Press the switch: Indicator lamp (RED) will be lit and the TV set is ready for viewing.

To turn off the TV: Press the button again.

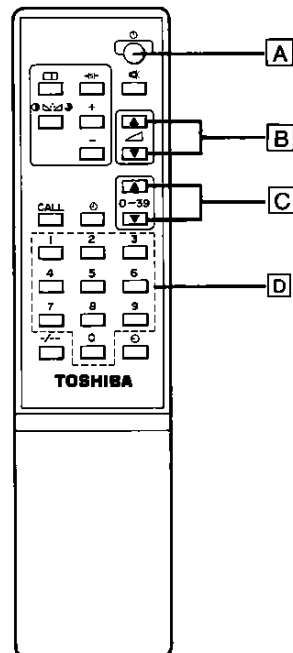
- Once the MAIN ON/OFF switch is turned on, you can remote-control the TV set.
- If the TV turned off by pressing the MAIN ON/OFF switch on the TV set, it will be turned "on" by pressing the MAIN ON/OFF switch only.

- 1** The TV set is turned on and off by pressing the ON/OFF button **A**. Also it is turned "on" directly by pressing the POSITION buttons **D**.

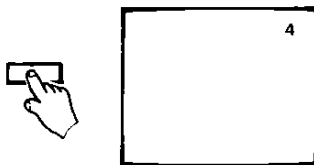


Press the button: The TV set will be turned "on" and the picture of previously viewed the channel is seen.

To turn off the TV: Press the button again.

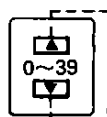


- 2** Channel is turned by pressing the CHANNEL button **D**.



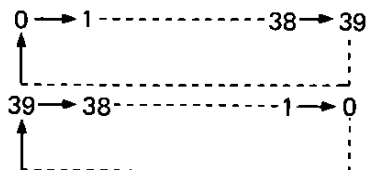
The picture will be changed over, and you will have the position No. displayed on the screen for a few seconds.

- Channel change can be performed by CHANNEL buttons **C** as well.

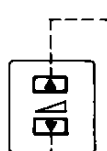


Change will take place in the direction from 0 to 39.

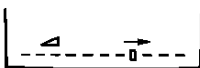
Change will take place in the direction from 39 to 0.



- 3** Sound volume is adjusted by VOLUME buttons **B**

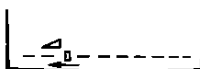


Sound becomes larger



Green square shifts rightwards, and the sound becomes larger.

Sound becomes smaller



Green square shifts leftwards, and the sound becomes smaller.

■ CONTROLLING THE TV SET PROPER

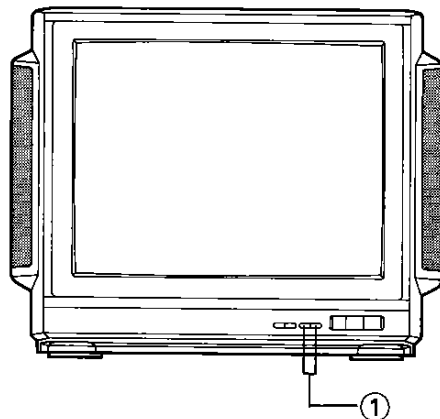
- In case the Remote Control Hand Unit is not near at hand, or batteries have been used up, you can control the TV on the receiver proper.

1 The TV set is turned on and off by operating the MAIN ON/OFF switch.

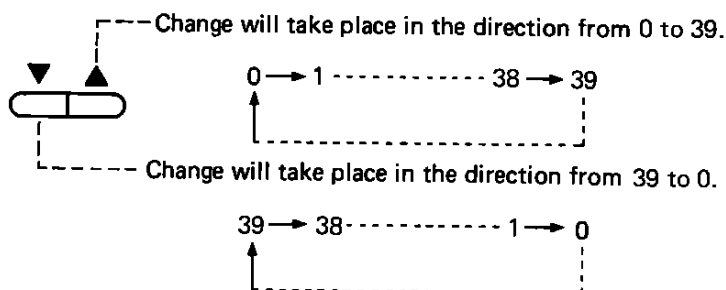
Press it: The TV set is turned on.

To turn off: Press the switch again.

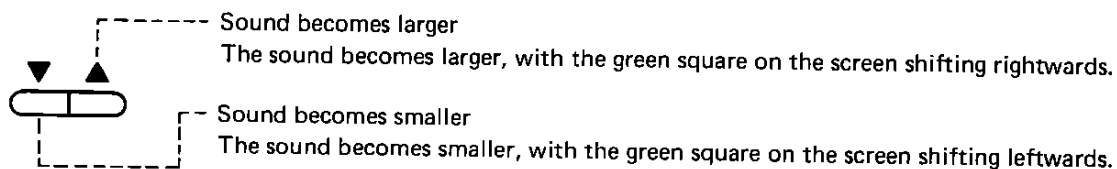
Note: When the TV set is not turned on with the MAIN ON/OFF switch pressed, press the CHANNEL buttons ①.



2 Channel is tuned by the CHANNEL buttons.



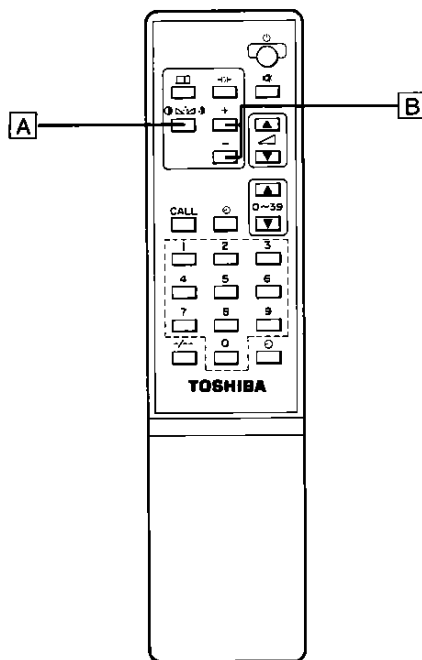
3 Sound volume is adjusted by VOLUME buttons.



Notes:

- In operating the Remote Control Hand Unit, direct it toward the receiving section of the receiver.
- Even if power is turned off by pressing the POWER button on the Remote Control Hand Unit, a trace of electric current stays flowing in the TV set. If television is not viewed for a long time, turn off the MAIN ON/OFF switch. When going out, take out the power plug from the wall outlet.

PICTURE AND SOUND CONTROLS



PICTURE CONTROL

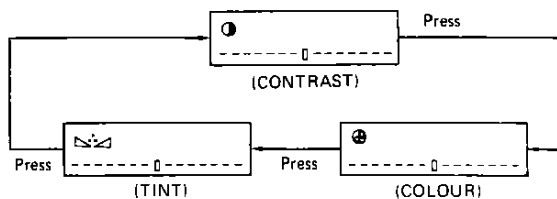
(CONTRAST, COLOUR, TINT)

To adjust picture for your preference, first select a function by the PICTURE Button **A**, then adjust the level by the LEVEL Buttons **B**.

FUNCTION SELECT

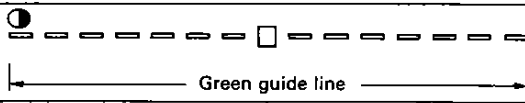
Press the PICTURE Button **A** to select a function to be adjusted among CONTRAST, COLOUR, TINT. One pressing shifts the function to the next one.

PICTURE CONTROL INDICATION

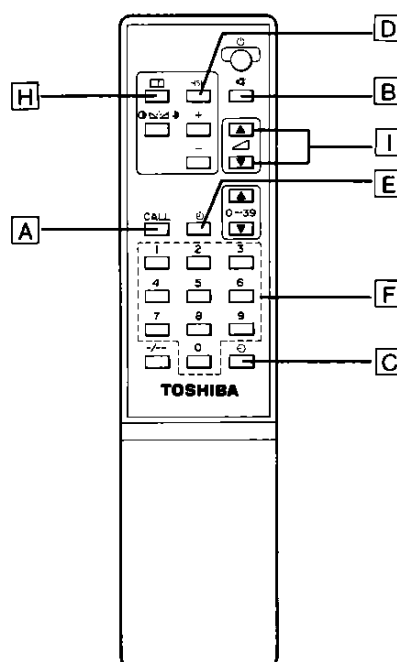
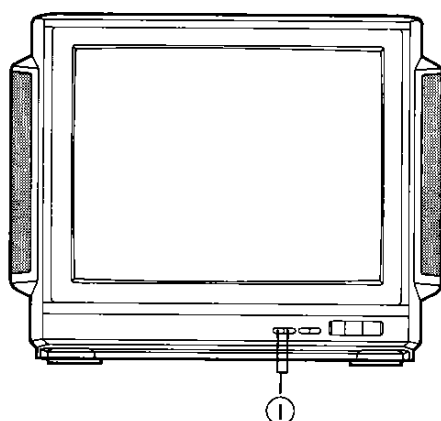


LEVEL ADJUSTMENT

- After the function selection above, immediately (within 4 seconds) press the ▲ (+) ▼ (-) Button of LEVEL Buttons **B**. Press continuously to shift the level to the next step, and release the button at your preferred picture. The LEVEL Buttons are effective only during the selected function is displayed.
- Above display will disappear if no additional pressing of CONTROL or LEVEL (▲ / ▼) Button is done within 3 seconds.
- The last adjusted value will be stored into memory when LEVEL (▲ or ▼) Button is released.
- Adjustment steps and indication:
Each function can be adjusted with 32 steps and it's approx. adjusted value is displayed with 15 steps.

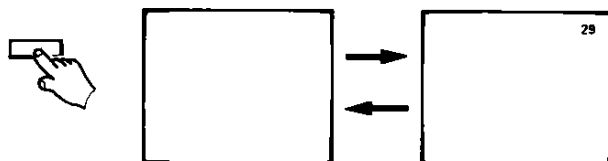
	FUNCTION	ON-SCREEN ADJUSTMENT DISPLAY	
			
PICTURE CONTROL Button	CONTRAST	CONTROL DOWN ▼ Button (The green square moves left)	CONTROL UP ▲ Button (The green square moves right)
	COLOUR	Weak	Strong
	TINT	Purplish	Greenish

AUXILIARY FUNCTIONS



1 CALL SWITCH button

- The display and erasure will alternate each time the CALL button **A** is pressed.



■ Displays on the screen:

2 MUTE

■ This feature is useful:

During phone call.



Be silent!



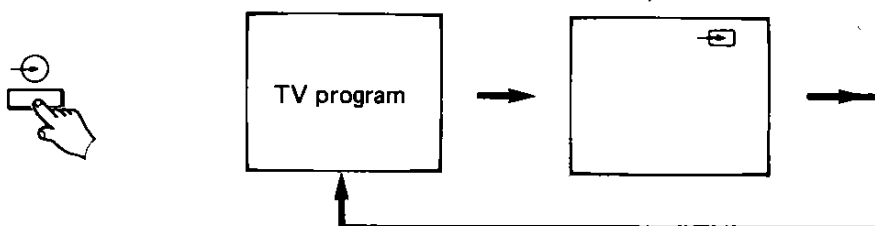
When receiving a visitor.



- The sound mute and restoration will alternate each time the MUTE button **[B]** is pressed.

3 TV/VIDEO SW

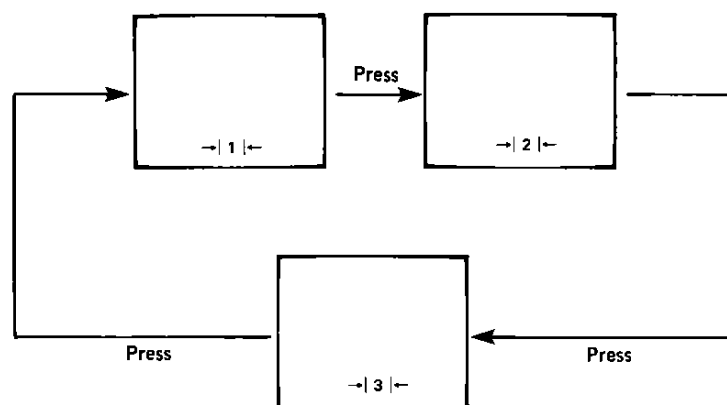
- Each time the video button **[C]** is pressed, selection will be changed over in sequence.
- The VIDEO button on the TV set operates in the same way.



- If you press the CHANNEL button (0 to 39), the channel is changed over to the selected one.

4 SELECTABLE PICTURE

The SELECTABLE PICTURE (→|s|←) Button **[D]** changes the level corresponding to picture control function (CONTRAST, COLOUR and TINT) to three kinds of fixed values. You may select desired patterns of picture.



5 ON/OFF TIMER

This feature can turn ON/OFF the TV set automatically in a minute unit during 12 hours as you desire, and the ON TIMER can also set the POS numbers.

(1) OFF TIMER

Example: Set OFF at 11 hours 25 minutes later.

1. Press the ON/OFF TIMER button **[E]**.



2. Using the Number Key **[F]**, input the set time.

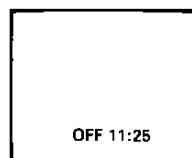
OFF TIMER

Input 1 OFF 1-:--

Input 1 OFF 11:--

Input 2 OFF 11:2-

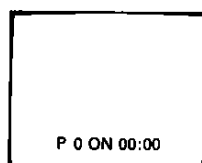
Input 5 OFF 11:25



(2) ON TIMER

Example: Set ON at 31 position 11 hours 42 minutes later.

1. Press the ON/OFF TIMER button **[E]** twice to select ON TIME MODE.



2. Using the **[F]** key, input the set position and time.

P 0 ON00:00

Input 3 P3- ON--:--

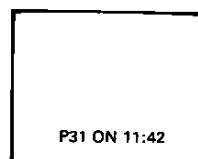
Input 1 P31 ON--:--

Input 1 P31 ON1-:--

Input 1 P31 ON11:--

Input 4 P31 ON11:4-

Input 2 P31 ON11:42



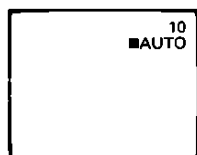
Caution:

1. When nothing inputs for 4 seconds, setting of ON TIMER/OFF TIMER is cancelled.
2. The display indicates rest time every 1 minute unit.
3. It is impossible to input a digital exceeding 12:00 or a digital of which POS number exceeds 39.
4. If the MAIN power is turned off or 4 digits of 0 are input, the setting will be cancelled.
5. Indicator lamp (GREEN) will be lit during ON TIMER operating.

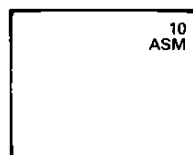
6 SOUND SW

Sound Disturbance Protective Switch at broadcasting of NICAM Multi-Sound-System and CATV (B/G System)
However, the other systems unless mentioned above shall be used in the NORMAL mode.

- (1) Press the TUNING SELECT Button **[H]** to select the system mode or ASM mode.

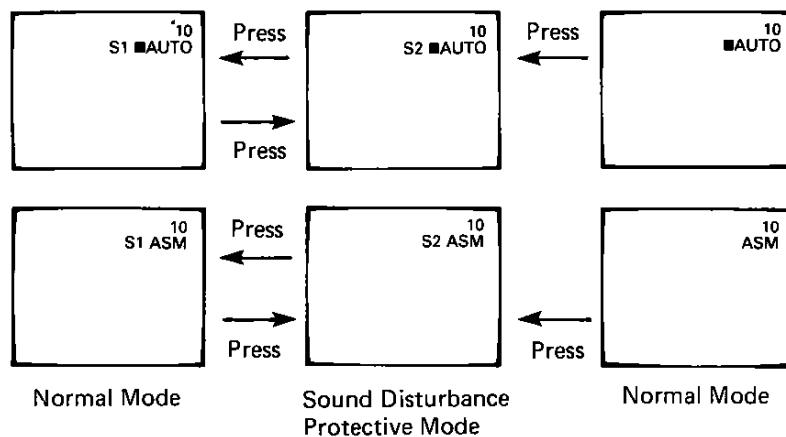


System Mode



ASM Mode

- (2) Press the (-) of LEVEL Button **[I]**, and change the mode into the cyclic mode as shown

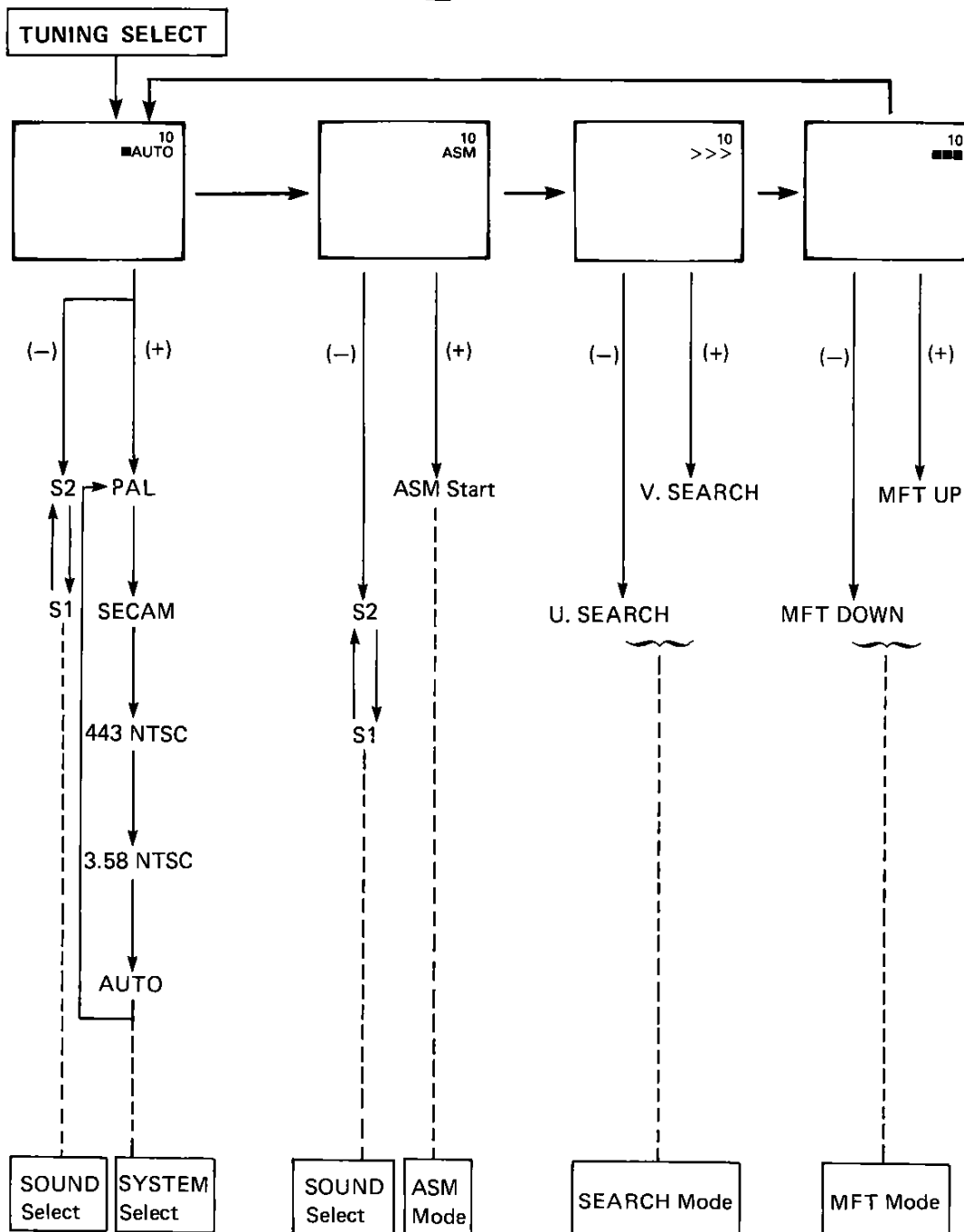


Caution:
4 seconds later, the display can disappear.

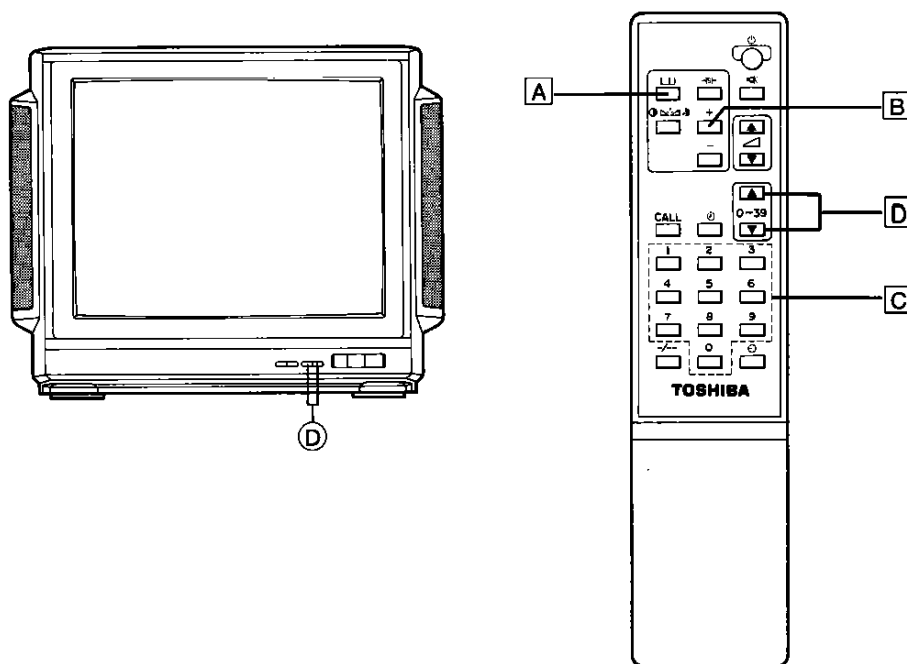
7 TUNING SELECT

Change-over of the system, selection and operation of tuning method.

- (1) Press the TUNING SELECT Button **[H]**.
- (2) Press the (-) and (+) of LEVEL Button **[I]**.



CHANNEL MEMORIZATION



This TV receiver can memorize 40 channels of station on the desired position number, 3 ways of channel memorization are prepared; namely ASM, U/V SEARCH and MFT.

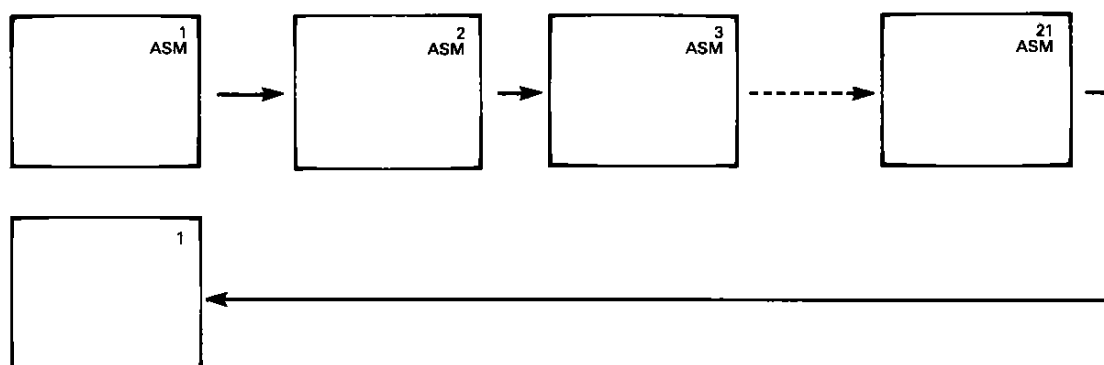
1 TO MEMORIZE ALL CHANNELS IN SEQUENCE AUTOMATICALLY

ASM: Free position Auto Search Memory

For example, to memorize channels from the position 1 automatically:

- (1) Select the position 1 with the DIRECT POSITION Button [C] on remote hand unit or the CHANNEL UP/DOWN Button [D] on TV receiver.
- (2) Press the TUNING SELECT Button [A] to select the ASM mode.
- (3) Press the (+) of LEVEL Button [B], and all active channels (stations) in your area are automatically memorized on the positions from smaller number to large one in sequence.

During the operation of AUTO SEARCH MEMORY, "ASM" are indicated with flickering in 0.2 seconds interval.



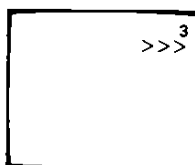
- (4) After all channels are memorized, the search goes to the position 20 and returns to the position 1 to end the operation.
- (5) When you desire to memorize the same contents to the position 21 and large, select the position 21 and repeat adjustment steps (2) and (3) as mentioned above. After the channels are memorized, the search goes to the position 29 and returns to the position 21 to end the operation.

2 TO MEMORIZE THE DESIRED CHANNEL ON A CERTAIN POSITION

V/U SEARCH

For example: The channel 3 on the position 3

- (1) Select the position 3 with the DIRECT POSITION Button [C] on the remote hand unit or the CHANNEL UP/DOWN Button [D] [D] on the TV.
- (2) Press the TUNING SELECT Button [A] to select the SEARCH mode.
- (3) Press the (+) of LEVEL Button [B].
Search begins on the channel 3.
- (4) Press repeatedly (+) of LEVEL Button [B] until the desired position 3 is received on the screen.
- (5) When you desire to memorize the UHF channels, in the above procedure, press (–) of LEVEL Button [B] together.
- (6) During the search operation, ">>>" is indicated with flickering in 0.2 seconds interval.
When the search reaches to the lowest frequency of TV VHF/UHF band, the search stops and ">>>" will be indicated with flickering in 1.0 second interval.
In this case, press the (+) or (–) of LEVEL Button again to restart the search operation.



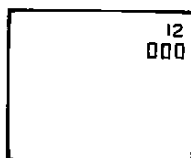
3 FINE TUNING

If the receiving condition in your area is poor, the detuning adjustment may be recommended for better viewing with the FINE TUNING Button.

Note: In the fine tuning mode, receiving picture may deviate slightly, because the automatic frequency control is deactivated.

At that time, readjust the fine tuning to correct the deviation.

- (1) Select the TUNING SELECT Button [A] to select the MFT mode.
"000" is indicated under the position number display.

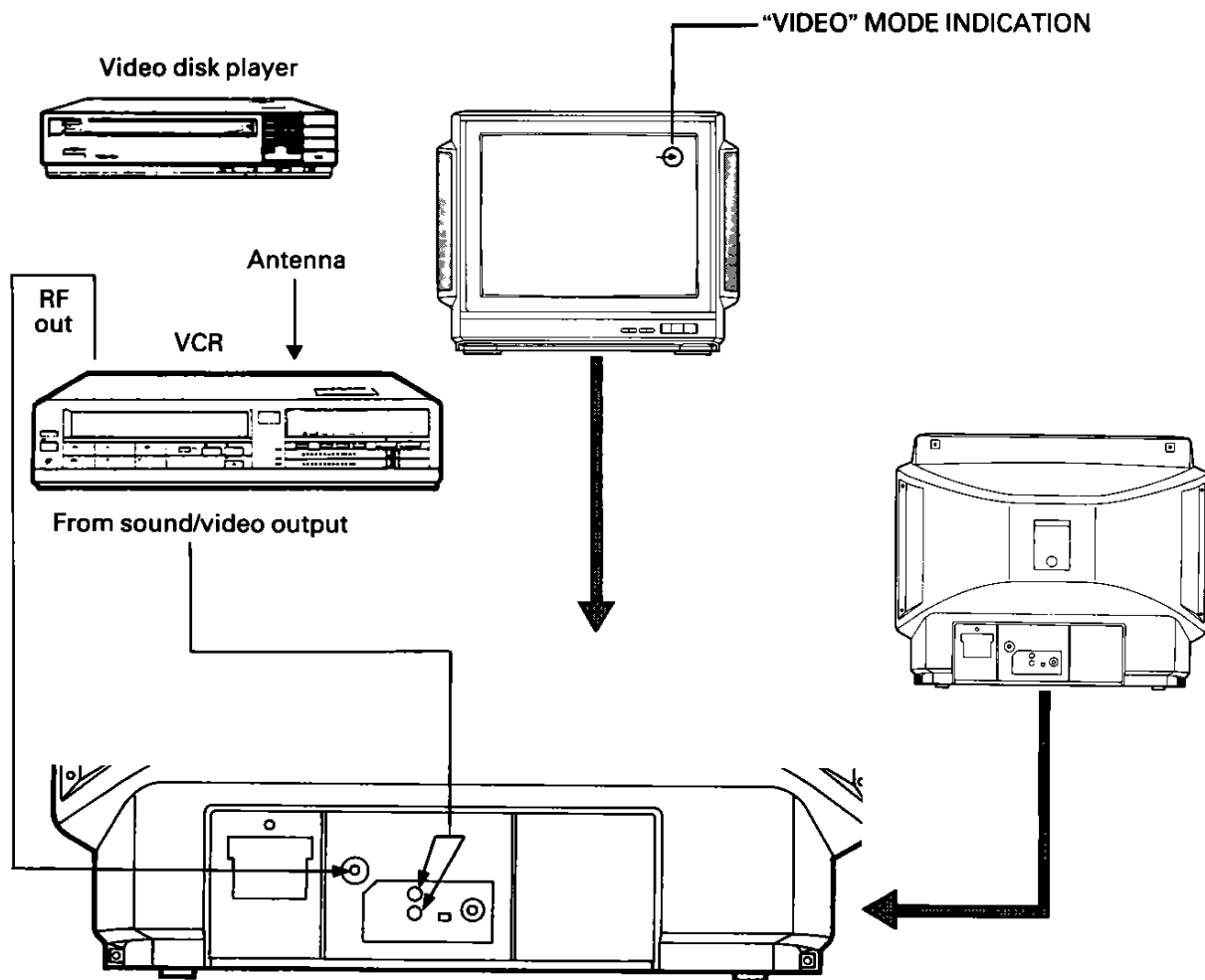


- (2) Press the (+) or (–) of LEVEL Button to adjust the picture for better one.
- (3) The fine tuning mode is released with the POSITION Button, TV/VIDEO Button or POWER ON/OFF Button pressed.

VIDEO AND AUDIO INPUT TERMINALS

VIDEO AND AUDIO INPUT TERMINALS

- This TV is provided with a video and audio input terminals, which can be connected with output from video equipment (VCR and video disk player).



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 110 ~ 245 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 one hour 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 27.5kV.
4. Rotate the BRIGHTNESS Control to both extremes to be sure the high voltage does not exceed the limit of 27.5kV under any conditions.

HEIGHT ADJUSTMENT

HEIGHT Control (R351) on Main Board changes the size of the picture or pattern, having an equal effect on the top and bottom. Make final adjustment to overscan the mask 2 cm at top and bottom.

FOCUS ADJUSTMENT

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

DELAYED R-F AGC ADJUSTMENT

1. Turn the set in the strongest station in your area.
2. Turn AGC DELAY Control (R151) on Main Board to fully counterclockwise position.
3. Adjust AGC DELAY Control clockwise until noise (snow) disappears on the screen.

AFC (Automatic Frequency Control) FIELD ALIGNMENT

1. Tune the set to an active channel and adjust fine tuning for best picture with MFT UP, DOWN buttons.
2. To activate AFC, temporarily tune in the next active channel with SEARCH button and return to the previous channel.
3. Adjust L152 for the best turned picture.
4. Detune to higher or lower side with MFT button. Then temporarily change to the next active channel with SEARCH button, and return to the previous channel to check for the best turned picture.

BELL COIL (LM01) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Connect the synchroscope to the terminal Pin 2 of LM01.
3. Adjust LM01 for the flat level of amplitude in each colour bar waveform on the scope. (See figure 1.)

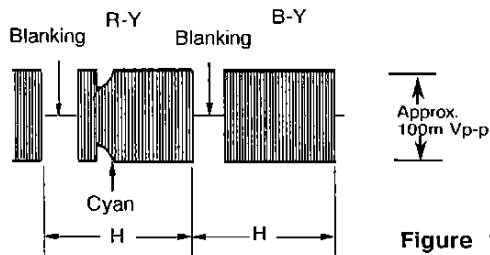


Figure 1.

IDENT COIL (LM04) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Connect the DC voltmeter (Digital Voltmeter) to the pin 23 of IC501.
3. Adjust LM04 for the maximum indication (approx. DC10V) on the meter.

B-Y, R-Y DEMOD COIL (LM02, LM03) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Set the COLOUR, BRIGHTNESS and CONTRAST Controls free.
3. Connect the synchroscope to the pin 62 of IC501.
4. Adjust LM02 so that the white level in picture part reaches to the vertical retrace line. (See figure 2.)
5. Then change the connection of synchroscope from the pin 62 to the pin 60 of IC501.
6. Adjust LM03 so that the white level in picture part reaches to the vertical retrace line. (See figure 3.)

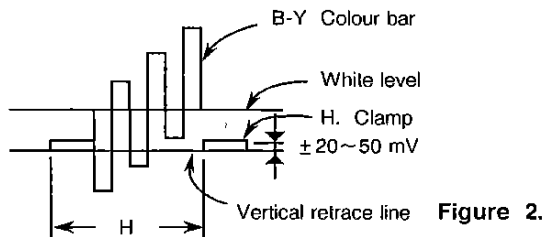


Figure 2.

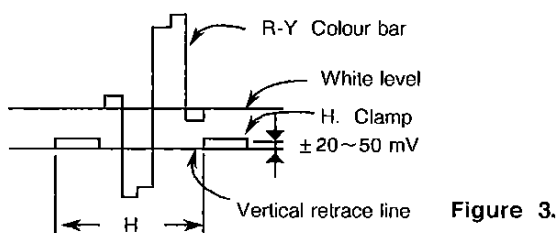


Figure 3.

PAL MATRIX ADJUSTMENT

1. Tune in the colour programme PAL Philips pattern.
2. Set the COLOUR Control to obtain the proper colour.
3. If the PAL MATRIX adjustment is incorrect, the venetian Blind would appear in the colour bars area. The case needs the adjustment.
4. At the first, adjust DL PHASE ADJ. Coil (L551) to minimize the Venetian Blind.
5. Next adjust 1H-DL ADJ. VR (R551) to minimize the Blind.
6. If the Venetian Blind still remains, adjust 1H-DL PHASE ADJ. Coil (L551) to minimize the Blind again.
7. Repeat the item 5 and 6 procedures, adjust the R551 and L551 until the Blind does not appear.

SIF DET. ADJUSTMENT L651 FOR 6.0MHz

1. Supply +12V to the +12V line of Main Board.
2. Supply 0V to pin 1 of IC101.
3. Connect the 6.0MHz signal (Modulation: 400Hz/15kHz deviation, 100dB μ) of SIF S.G. to pin 16 of IC101 through a capacitor 0.01 μ F.
4. Connect the millivoltmeter to pin 11 of IC101.
5. Adjust L651 for the maximum reading on the meter.

SIF CONV. ADJUSTMENT 6.0MHz OSC. COIL (L671)

1. Supply +12V to the +12V line of Main Board.
2. Supply 0V to pin 1 of IC101 to deactivate PIF circuit.
3. Apply the 6.5MHz signal (No modulation, 80dB μ) of SIF S.G. to pin 5 of IC671 through a capacitor 0.01 μ F.
4. Connect oscilloscope to output side of Z674.
5. Adjust L671 so that the response on oscilloscope can be maximum.

COLOUR PURITY ADJUSTMENT

Note : Before attempting any purity adjustments, the receiver should be operated for at least fifteen minutes. Purity adjustment requires Rubber Wedge kit.

1. Demagnetize the picture tube and cabinet using a degaussing coil.
2. Turn the CONTRAST and BRIGHTNESS Controls to maximum.
3. Adjust RED and BLUE CUT OFF controls (R557 and R559) to provide only a green raster. Advance the GREEN CUT OFF control (R558) if necessary.
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 5) around the neck of the picture tube until a green belt is obtained in the centre of the screen. And at the same time, centre the raster vertically by adjusting the magnet.
7. Move the yoke slowly forward or backward until a uniform green screen is obtained. Tighten the clamp screw.
8. Check the purity of the red and blue raster by adjusting the CUT OFF Controls.
9. Tighten the clamp screw of the yoke temporarily.
10. Obtain a white raster, referring to "CRT GREY SCALE ADJUSTMENT".
11. Proceed with convergence adjustment.

CRT GREY SCALE ADJUSTMENT

1. Tune in an active channel.
2. Turn the SCREEN Control (on T461) fully counter-clockwise.
3. By rotating the RED, GREEN and BLUE CUT OFF Controls (R557, R558, R559), clockwise from the minimum, set then to the mid position.
4. Set the GREEN and BLUE DRIVE Controls (R252, R253) to the mid position.
5. Set the CONTRAST, COLOUR Controls to minimum and BRIGHTNESS Control to centre position.
6. Set the SERVICE SW. (S201) in the H. line position.
7. Rotate the SCREEN Control gradually clockwise until the first horizontal line of a colour (RED, GREEN or BLUE) appears slightly on the screen.
Set the SCREEN Control to this position.
At the base of the colour, rotate the remaining two CUT OFF Controls gradually clockwise until the horizontal lines of each colour appear slightly on the screen.
8. Adjust the CUT OFF Controls to obtain the slightly lighted horizontal lines in the same levels of three colours (RED, GREEN and BLUE).
The lines may look like white if the CUT OFF Controls are adjusted properly.
9. Return the SERVICE SW. (S201) in the Receiving position.
10. Set the BRIGHTNESS Control to the maximum and COLOUR Control to the minimum.
11. Adjust the BLUE and GREEN DRIVE Controls (R252, R253) to obtain proper white-balanced picture in high light area.
12. Set the BRIGHTNESS and CONTRAST Controls to obtain dark grey raster. Then check the white balance in low brightness. If the white balance is not proper, retouch the CUT OFF Controls and DRIVE Controls to obtain a good white balance in both low and high light areas.

SUB-BRIGHTNESS ADJUSTMENT

1. Tune in a colour programme.
2. Set the CONTRAST Control to the maximum and the BRIGHTNESS Control to the centre.
3. Set the COLOUR Control to the centre.
4. Set the SUB-BRIGHT. Control (R255) to the centre and leave the receiver for five minutes in this state.
5. Watching the picture well, adjust the SUB-BRIGHT. Control in the position where the picture does not show evidence of blooming in high bright area and not appear too dark in low bright portion.
6. Check the proper picture variation by rotating the CONTRAST and BRIGHTNESS Controls to both extremes.
7. If the picture does not appear dark with the CONTRAST and BRIGHTNESS Controls turned to the minimum, or not appear bright with the controls turned to the maximum, adjust the SUB-BRIGHT. Control again for the acceptable picture.

CONVERGENCE ADJUSTMENTS

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

■ Centre Convergence Adjustment

1. Receive crosshatch pattern with a colour bar signal generator.
2. Adjust the BRIGHTNESS and CONTRAST Controls for well defined pattern.
3. Adjust two tabs of the 4-Pole Magnets to change the angle between them (See figure 5.) and superimpose red and blue vertical lines in the centre area of the picture screen. (See figure 6.)
4. Turn the both tabs at the same time keeping the constant angle to superimpose red and blue horizontal lines at the centre of the screen. (See figure 6.)
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 with understanding red, green and blue movement, because 4-Pole Magnets and 6-Pole Magnets have mutual affection and it makes dots movement complex.

■ Circumference Convergence Adjustment

1. Loosen the clamping screw of deflection yoke to allow the yoke to tilt.
2. Put a wedge as shown in figure 4. temporarily. (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 6.) Push the mounted wedge into the space between picture tube and 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 6.)
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 3 adhesive tapes on wedges.

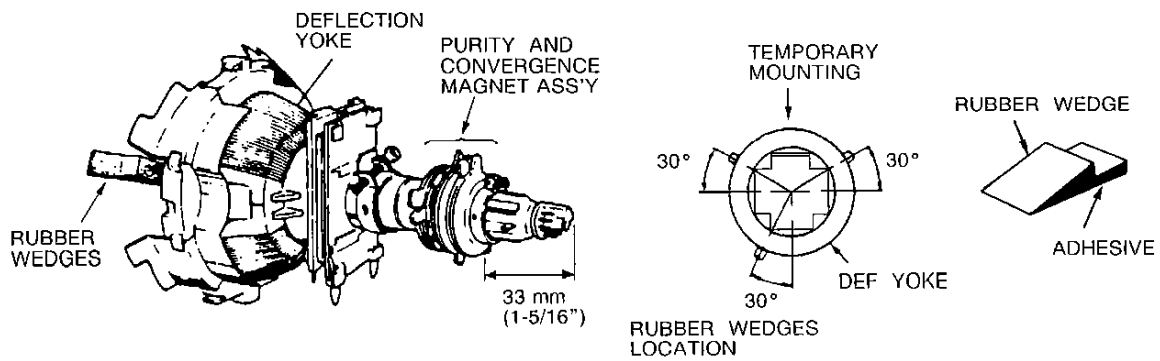


Figure 4.

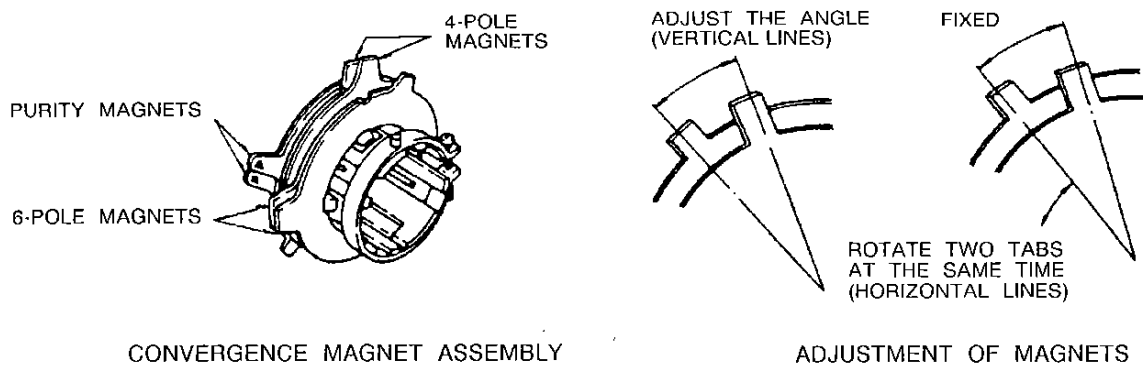


Figure 5.



Center Convergence by Convergence Magnets

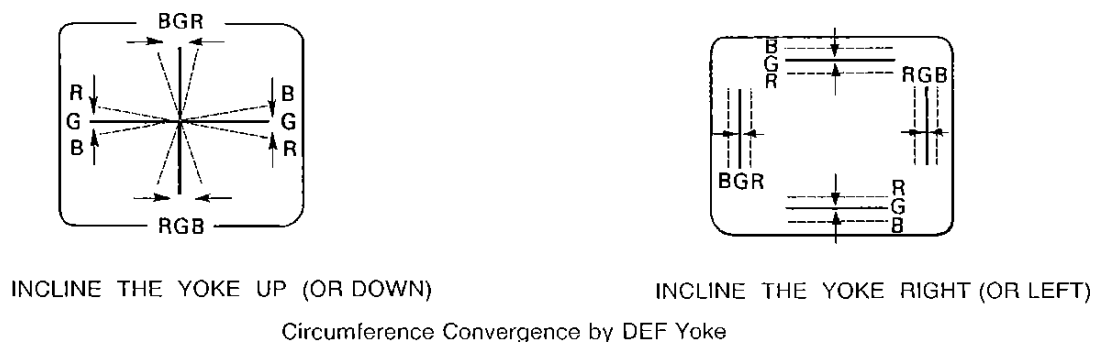


Figure 6. Dot Movement Pattern

PICTURE I-F SWEEP ALIGNMENT

- GENERAL..... Refer to figure 7 for test equipment connection.
- PRELIMINARY STEPS 1. Disconnect the solder link (See figure 7.) on the foil side of the Main Board.
 2. Supply +12 volts to the Main Board.
 3. Supply adjustable bias (5~6V) to the pin 1 of IC101 on the Main Board.
 4. Turn AGC DELAY Control (R151) fully clockwise.
- SWEEP/MARKER GENERATOR..... Connect to IF circuit as shown in figure 7.
 Signal: IF Sweep 70~80 dB
- OSCILLOSCOPE..... Connect through the resistor 100k ohm to the pin 18 of IC101.

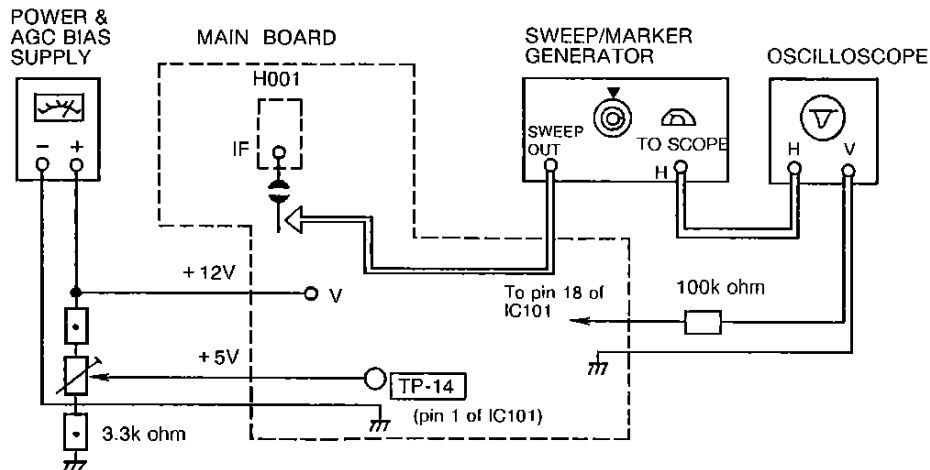


Figure 7. Picture IF Sweep Alignment

STEP	SWEEP/MARGER GENERATOR	ADJUST	REMARKS
L151 ALIGNMENT Control the sweep output for easy alignment			
Detector Coil (L151)	38.0 MHz Marker "ON"	L151	<ul style="list-style-type: none"> Adjust L151 so that 38.0 MHz marker point is placed at the minimum of response (See figure 11.)
After completing the above steps, disconnect the equipment and re-solder the solder links. Switch on the receiver, and adjust the AGC Delay control (R151) following DELAYED R-F AGC ADJUSTMENTS.			

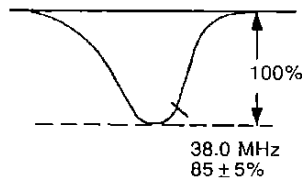


Figure 8.

AFC ALIGNMENT

- GENERAL Refer to figure 9 for test equipment connection.
- PRELIMINARY STEPS 1. Disconnect the solder link (See figure 9.) on the foil side of the Main Board.
 2. Supply +12 volts to the Main Board.
 3. Turn AGC DELAY Control (R151) fully clockwise.
 4. No external bias supply is required.
- DVM Connect to the intersection of R171 and R172 (point d) and ground.

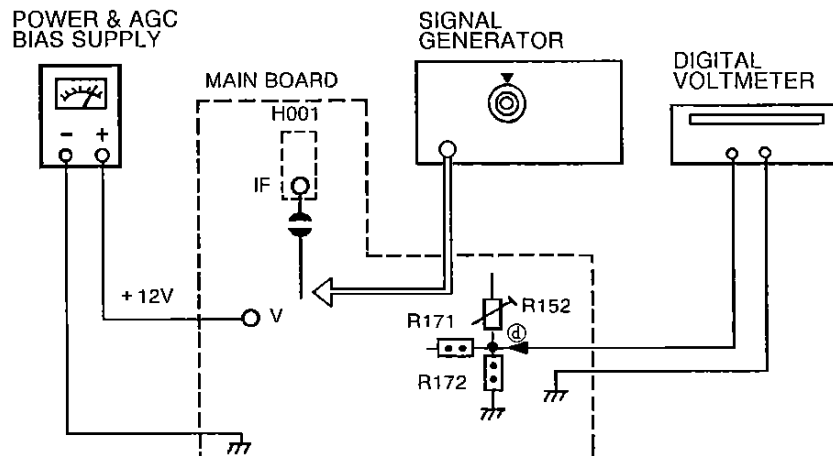
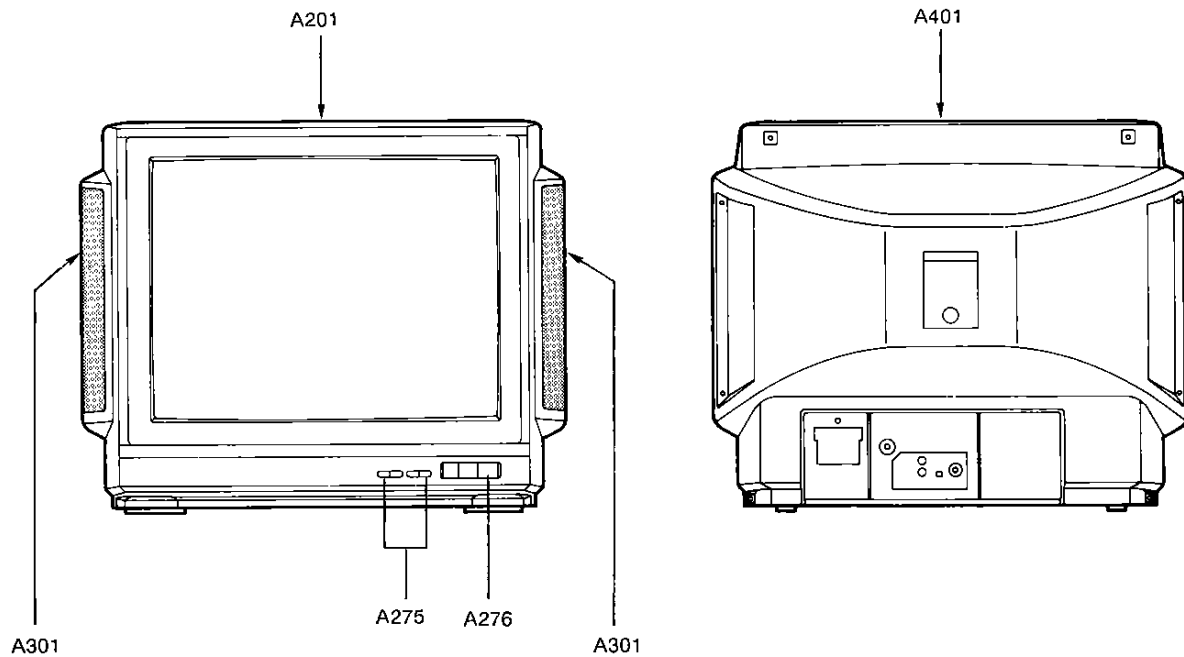


Figure 9. AFC Alignment

STEP	SIGNAL GENERATOR	ADJUST	REMARKS
1. AFC Balance	NO SIGNAL	R152	<ul style="list-style-type: none"> Short the pin 1 of IC101 to ground. Adjust R152 for $4.5 \pm 0.2V$ at the point ①. After the adjustment, remove the shorting at pin 1 of IC101.
2. AFC Detector	38.0 MHz CARRIER WAVE 70 ~ 80 dB	L152	<ul style="list-style-type: none"> Connect IF carrier wave (60 dBμs or more) to the IF input in figure 12. Adjust L152 for $2.5 \pm 0.5V$ at the point ②.
After completing the above steps, disconnect the equipment and re-solder the solder links. Check AFC operation is normal. Readjust AGC DELAY control (R151) following DELAYED R-F AGC ADJUSTMENTS.			

CABINET REPLACEMENT PARTS LIST



Location No.	Part No.	Description
A201	23419523	Front Cover
A263	23460218	Deco. Board
A275	23443513	Knob, CONTROL
A276	23443512	Knob, POWER
A277	23836666	Spring
A301	23416176	Frame, Speaker
A401	23423802	Back Cover
A403	23568234	Label, Model No., B/C
A701	23524052	Carton Box
A702A	23934142	Packing, Top
A702B	23934143	Packing, Bottom



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.

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

Location No.	Part No.	Description
CAPACITORS		
C101	24212102	CD, 1000pF, $\pm 10\%$
C102	24538103	PF, 0.01 μ F
C103	24232103	CD, 0.01 μ F, +80%, -20%
C104	24206228	EL, 0.22 μ F, 50V
C105	24232103	CD, 0.01 μ F, +80%, -20%
C106	24232103	CD, 0.01 μ F, +80%, -20%
C107	24232102	CD, 1000pF, +80%, -20%
C109	24085988	EL, 1 μ F, $\pm 20\%$, 50V, Non-Polar
C111	24794470	EL, 47 μ F, $\pm 20\%$, 16V
C112	24232103	CD, 0.01 μ F, +80%, -20%
C115	24232103	CD, 0.01 μ F, +80%, -20%
C122	24794101	EL, 100 μ F, $\pm 20\%$, 16V
C124	24232103	CD, 0.01 μ F, +80%, -20%
C127	24591272	PF, 2700pF
C161	24232102	CD, 1000pF, +80%, -20%
C162	24232103	CD, 0.01 μ F, +80%, -20%
C163	24212102	CD, 1000pF, $\pm 10\%$
C171	24436240	CD, 24pF
C172	24212102	CD, 1000pF, $\pm 10\%$
C201	24797100	EL, 10 μ F, $\pm 20\%$, 50V
C202	24797101	EL, 100 μ F, $\pm 20\%$, 50V
C203	24232103	CD, 0.01 μ F, +80%, -20%
C204	24797220	EL, 22 μ F, $\pm 20\%$, 50V
C205	24797478	EL, 0.47 μ F, $\pm 20\%$, 50V
C208	24212101	CD, 100pF, $\pm 10\%$
C209	24232103	CD, 0.01 μ F, +80%, -20%
C210	24797100	EL, 10 μ F, $\pm 20\%$, 50V
C240	24538474	PF, 0.47 μ F
C301	24766229	EL, 2.2 μ F, $\pm 20\%$, 50V
C302	24212152	CD, 1500pF, $\pm 10\%$
C303	24617915	EL, 1 μ F, $\pm 10\%$, 50V
C304	24474102	CD, 1000pF, $\pm 10\%$
C307	24232103	CD, 0.01 μ F, +80%, -20%
C311	24796102	EL, 1000 μ F, $\pm 20\%$, 35V
C313	24669101	EL, 100 μ F, $\pm 20\%$, 50V
C315	24214221	CD, 220pF, $\pm 10\%$, 500V
C316	24794332	EL, 3300 μ F, $\pm 20\%$, 16V
C317	24617915	EL, 1 μ F, $\pm 10\%$, 50V
C320	24095678	PF, 0.22 μ F, $\pm 10\%$, 100V
C321	24214561	CD, 560pF, $\pm 10\%$, 500V

Location No.	Part No.	Description
C322	24591103	PF, 0.01 μ F
C402	24353271	CD, 270pF
C403	24797339	EL, 3.3 μ F, $\pm 20\%$, 50V
C405	24591184	PF, 0.18 μ F
C406	24591183	PF, 0.018 μ F
C407	24591243	PF, 0.024 μ F
C409	24474103	CD, 0.01 μ F, $\pm 30\%$, 16V
C410	24794470	EL, 47 μ F, $\pm 20\%$, 16V
C411	24617929	EL, 18 μ F, $\pm 20\%$, 50V
C415	24212561	CD, 560pF, $\pm 10\%$
C416	24214271	CD, 270pF, $\pm 10\%$, 500V
C420	24693272	PF, 2700pF, 100V
△C440	24095635	PF, 7000pF, $\pm 3\%$, 1600V
C441	24214221	CD, 220pF, $\pm 10\%$, 500V
C442	24095948	PF, 0.36 μ F, 200V
C443	24214221	CD, 220pF, $\pm 10\%$, 500V
C445	24828223	PF, 0.022 μ F, 200V
C446	24214102	CD, 1000pF, $\pm 10\%$, 500V
C447	24700100	EL, 10 μ F, $\pm 20\%$, 250V
C448	24794222	EL, 2200 μ F, $\pm 20\%$, 16V
C449	24794471	EL, 470 μ F, $\pm 20\%$, 16V
C451	24640908	EL, 33 μ F, $\pm 20\%$, 160V
C463	24212222	CD, 2200pF, $\pm 10\%$
C501	24797101	EL, 100 μ F, $\pm 20\%$, 50V
C502	24212102	CD, 1000pF, $\pm 10\%$
C503	24436181	CD, 180pF
C504	24353150	CD, 15pF
C505	24590273	PF, 0.027 μ F
C506	24591273	PF, 0.027 μ F
C507	24591103	PF, 0.01 μ F
C508	24085028	EL, 2.2 μ F, 25V, Non-Polar
C509	24353330	CD, 33pF
C510	24232103	CD, 0.01 μ F, +80%, -20%
C511	24232103	CD, 0.01 μ F, +80%, -20%
C512	24353200	CD, 20pF
C514	24436181	CD, 180pF
C515	24797479	EL, 4.7 μ F, $\pm 20\%$, 50V
C516	24591104	PF, 0.1 μ F
C517	24591104	PF, 0.1 μ F
C518	24232103	CD, 0.01 μ F, +80%, -20%
C520	24797229	EL, 2.2 μ F, $\pm 20\%$, 50V

Location No.	Part No.	Description
C521	24538474	PF, 0.47 μ F
C522	24538474	PF, 0.47 μ F
C523	24538474	PF, 0.47 μ F
C524	24794100	EL, 10 μ F, \pm 20%, 16V
C525	24436820	CD, 82pF
C526	24436820	CD, 82pF
C527	24436820	CD, 82pF
C528	24797220	EL, 22 μ F, \pm 20%, 50V
C529	24353300	CD, 30pF
C530	24232103	CD, 0.01 μ F, +80%, -20%
C531	24436271	CD, 270pF
C532	24436241	CD, 240pF
C533	24436271	CD, 270pF
C534	24763471	EL, 470 μ F, \pm 20%, 16V
C536	24797478	EL, 0.47 μ F, \pm 20%, 50V
C540	24474103	CD, 0.01 μ F, \pm 30%, 16V
C541	24232103	CD, 0.01 μ F, +80%, -20%
C561	24797100	EL, 10 μ F, \pm 20%, 50V
C570	24232103	CD, 0.01 μ F, +80%, -20%
C571	24797010	EL, 1 μ F, \pm 20%, 50V
C572	24797010	EL, 1 μ F, \pm 20%, 50V
C603	24797479	EL, 4.7 μ F, \pm 20%, 50V
C604	24795220	EL, 22 μ F, \pm 20%, 25V
C605	24232103	CD, 0.01 μ F, +80%, -20%
C606	24538104	PF, 0.1 μ F
C607	24794470	EL, 47 μ F, \pm 20%, 16V
C608	24667102	EL, 1000 μ F, \pm 20%, 25V
C609	24797010	EL, 1 μ F, \pm 20%, 50V
C610	24591682	PF, 6800pF
C611	24591224	PF, 0.22 μ F
C612	24353510	CD, 51pF
C613	24667101	EL, 100 μ F, \pm 20%, 25V
C664	24797010	EL, 1 μ F, \pm 20%, 50V
C672	24232103	CD, 0.01 μ F, +80%, -20%
C673	24212561	CD, 560pF, \pm 10%
C674	24212561	CD, 560pF, \pm 10%
C675	24794470	EL, 47 μ F, \pm 20%, 16V
C676	24232103	CD, 0.01 μ F, +80%, -20%
C677	24435680	CD, 68pF, 500V
C681	24435470	CD, 47pF, 500V
C682	24435470	CD, 47pF, 500V
△C801	24095951	PF, 0.1 μ F, \pm 20%, AC250V
△C802	24094653	CD, 220pF, \pm 20%, AC400V
△C803	24094653	CD, 220pF, \pm 20%, AC400V
△C804	24095951	PF, 0.1 μ F, \pm 20%, AC250V
C805	24092281	CD, 4700pF, \pm 20%, AC250V
C806	24092281	CD, 4700pF, \pm 20%, AC250V
C807	24092281	CD, 4700pF, \pm 20%, AC250V
C808	24092281	CD, 4700pF, \pm 20%, AC250V
C809	24086937	EL, 120 μ F, \pm 20%, 450V
C820	24591822	PF, 8200pF
C821	24794102	EL, 1000 μ F, \pm 20%, 16V
C822	24591822	PF, 8200pF
C823	24092341	CD, 470pF, \pm 10%, 2kV
C824	24092347	CD, 1500pF, \pm 10%, 2kV
C826	24795471	EL, 470 μ F, \pm 20%, 25V
C828	24212102	CD, 1000pF, \pm 10%
C829	24796222	EL, 2200 μ F, \pm 20%, 35V
C830	24092337	CD, 220pF, \pm 10%, 2kV
C831	24640932	EL, 100 μ F, \pm 20%, 160V
C832	24797479	EL, 4.7 μ F, \pm 20%, 50V
C833	24591242	PF, 2400pF
C834	24794470	EL, 47 μ F, \pm 20%, 16V
C835	24538104	PF, 0.1 μ F

Location No.	Part No.	Description
C836	24794100	EL, 10 μ F, \pm 20%, 16V
C837	24591333	PF, 0.033 μ F
C838	24797100	EL, 10 μ F, \pm 20%, 50V
C839	24214471	CD, 470pF, \pm 10%, 500V
C840	24214561	CD, 560pF, \pm 10%, 500V
C841	24435330	CD, 33pF, 500V
C842	24435330	CD, 33pF, 500V
△C844	24094656	CD, 2200pF, \pm 20%, AC400V
C845	24666471	EL, 470 μ F, \pm 20%, 16V
C846	24591104	PF, 0.1 μ F
C848	24214561	CD, 560pF, \pm 10%, 500V
C849	24436150	CD, 15pF
C902	24095931	PF, 2200pF, 1600V
CA01	24797100	EL, 10 μ F, \pm 20%, 50V
CA02	24794100	EL, 10 μ F, \pm 20%, 16V
CA03	24797010	EL, 1 μ F, \pm 20%, 50V
CA05	24212102	CD, 1000pF, \pm 10%
CA09	24212221	CD, 220pF, \pm 10%
CA10	24212221	CD, 220pF, \pm 10%
CA11	24591104	PF, 0.1 μ F
CA12	24591104	PF, 0.1 μ F
CA13	24232103	CD, 0.01 μ F, +80%, -20%
CA14	24232103	CD, 0.01 μ F, +80%, -20%
CA15	24232103	CD, 0.01 μ F, +80%, -20%
CA16	24797479	EL, 4.7 μ F, \pm 20%, 50V
CA17	24591104	PF, 0.1 μ F
CA18	24797229	EL, 2.2 μ F, \pm 20%, 50V
CA19	24232103	CD, 0.01 μ F, +80%, -20%
CA20	24794100	EL, 10 μ F, \pm 20%, 16V
CA22	24232103	CD, 0.01 μ F, +80%, -20%
CA28	24212102	CD, 1000pF, \pm 10%
CA29	24590472	PF, 4700pF
CA30	24436561	CD, 560pF
CA31	24797010	EL, 1 μ F, \pm 20%, 50V
CA32	24232103	CD, 0.01 μ F, +80%, -20%
CA36	24232103	CD, 0.01 μ F, +80%, -20%
CA37	24212101	CD, 100pF, \pm 10%
CA38	24212102	CD, 1000pF, \pm 10%
CA39	24212101	CD, 100pF, \pm 10%
CA40	24797100	EL, 10 μ F, \pm 20%, 50V
CA46	24794221	EL, 220 μ F, \pm 20%, 16V
CA75	24591104	PF, 0.1 μ F
CM01	24436201	CD, 200pF
CM02	24436201	CD, 200pF
CM03	24340080	CD, 8pF, \pm 0.25pF
CM04	24340080	CD, 8pF, \pm 0.25pF
CM05	24232103	CD, 0.01 μ F, +80%, -20%
CM06	24357270	CD, 27pF
CM07	24538563	PF, 0.056 μ F
CM08	24232103	CD, 0.01 μ F, +80%, -20%
CM09	24232103	CD, 0.01 μ F, +80%, -20%
CM10	24436270	CD, 27pF
CN10	24474101	CD, 100pF, \pm 10%
CN11	24473330	CD, 33pF
CN13	24474103	CD, 0.01 μ F, \pm 30%, 16V
CN14	24473330	CD, 33pF
CN15	24473330	CD, 33pF
CN16	24473330	CD, 33pF
CN17	24436471	CD, 470pF
CV05	24538474	PF, 0.47 μ F
CV14	24232103	CD, 0.01 μ F, +80%, -20%
CV15	24797100	EL, 10 μ F, \pm 20%, 50V
CV16	24232103	CD, 0.01 μ F, +80%, -20%
CV17	24794102	EL, 1000 μ F, \pm 20%, 16V

Location No.	Part No.	Description
CV18	24591224	PF, 0.22 μ F
CV19	24797010	EL, 1 μ F, \pm 20%, 50V
CV20	24797100	EL, 10 μ F, \pm 20%, 50V
CV21	24232103	CD, 0.01 μ F, +80%, -20%
CV22	24232103	CD, 0.01 μ F, +80%, -20%
CV23	24232103	CD, 0.01 μ F, +80%, -20%
CX02	24591104	PF, 0.1 μ F
CX03	24591104	PF, 0.1 μ F
CX04	24591104	PF, 0.1 μ F
CY03	24591104	PF, 0.1 μ F
RESISTORS		
R101	24366152	CF, 1500 ohm
R102	24366101	CF, 100 ohm
R103	24366152	CF, 1500 ohm
R104	24366103	CF, 10k ohm
R105	24366104	CF, 100k ohm
R106	24366822	CF, 8200 ohm
R107	24366682	CF, 6800 ohm
R108	24366222	CF, 2200 ohm
R109	24366332	CF, 3300 ohm
R110	24366472	CF, 4700 ohm
R111	24366103	CF, 10k ohm
R112	24366562	CF, 5600 ohm
R113	24366102	CF, 1k ohm
R114	24366201	CF, 200 ohm
R122	24383620	OMF, 62 ohm, 2W
R151	24066953	VR, 5k ohm, 1/10W
R152	24066946	VR, 1M ohm, 1/10W
R161	24366131	CF, 130 ohm
R162	24366102	CF, 1k ohm
R163	24366562	CF, 5600 ohm
R164	24552201	OMF, 200 ohm, 1/2W
R166	24366270	CF, 27 ohm
R167	24366680	CF, 68 ohm
R168	24366471	CF, 470 ohm
R171	24366102	CF, 1k ohm
R172	24366184	CF, 180k ohm
R208	24366101	CF, 100 ohm
R209	24366103	CF, 10k ohm
R210	24366203	CF, 20k ohm
R211	24366622	CF, 6200 ohm
R212	24366103	CF, 10k ohm
R213	24366152	CF, 1500 ohm
R214	24366821	CF, 820 ohm
R216	24366333	CF, 33k ohm
R217	24366393	CF, 39k ohm
R218	24366472	CF, 4700 ohm
R219	24366472	CF, 4700 ohm
R225	24366471	CF, 470 ohm
R226	24366182	CF, 1800 ohm
R229	24366132	CF, 1300 ohm
R230	24366152	CF, 1500 ohm
R231	24366272	CF, 2700 ohm
R242	24366133	CF, 13k ohm
R243	24366183	CF, 18k ohm
R252	24066599	VR, 5k ohm, 1/10W
R253	24066599	VR, 5k ohm, 1/10W
R255	24066601	VR, 20k ohm, 1/10W
R257	24069929	VR, 10k ohm, 0.08W, CC
R301	24366301	CF, 300 ohm
R302	24366244	CF, 240k ohm
R303	24366303	CF, 30k ohm
R304	24366102	CF, 1k ohm

Location No.	Part No.	Description
R305	24366161	CF, 160 ohm
R306	24366561	CF, 560 ohm
R311	24552242	OMF, 2400 ohm, 1/2W
R313	24366102	CF, 1k ohm
△ R315	24366203	CF, 20k ohm
R316	24366243	CF, 24k ohm
R317	24383271	OMF, 270 ohm, 2W
△ R318	24366244	CF, 240k ohm
R319	24552222	OMF, 2200 ohm, 1/2W
R320	24366184	CF, 180k ohm
R323	24322229	OMF, 2.2 ohm, 1W
△ R327	24982689	MF, 6.8 ohm, 1/2W
R333	24366471	CF, 470 ohm
R351	24066602	VR, 50k ohm, 1/10W
R401	24366510	CF, 51 ohm
R402	24366273	CF, 27k ohm
R403	24366302	CF, 3k ohm
R404	24552432	OMF, 4300 ohm, 1/2W
R405	24366511	CF, 510 ohm
R406	24366360	CF, 36 ohm
R407	24366750	CF, 75 ohm
R408	24366332	CF, 3300 ohm
R409	24366103	CF, 10k ohm
R410	24366331	CF, 330 ohm
R411	24366391	CF, 390 ohm
R412	24366121	CF, 120 ohm
R413	24366103	CF, 10k ohm
R414	24366472	CF, 4700 ohm
R415	24366135	CF, 1.3M ohm
△ R416	24007640	Cement, 1500 ohm, 5W
R417	24366564	CF, 560k ohm
R418	24366332	CF, 3300 ohm
R420	24552472	OMF, 4700 ohm, 1/2W
R421	24376154	CF, 150k ohm, 1/2W
△ R440	24366363	CF, 36k ohm
△ R441	24366243	CF, 24k ohm
R442	24322109	OMF, 1 ohm, 1W
R443	24322109	OMF, 1 ohm, 1W
△ R446	24377102	CF, 1k ohm, 1W
R447	24377331	CF, 330 ohm, 1W
△ R448	24547279	FR, 2.7 ohm, 1W
R502	24366683	CF, 68k ohm
R503	24366202	CF, 2k ohm
R504	24366471	CF, 470 ohm
R505	24366822	CF, 8200 ohm
R507	24366822	CF, 8200 ohm
R508	24366561	CF, 560 ohm
R509	24366183	CF, 18k ohm
R511	24366562	CF, 5600 ohm
R512	24366152	CF, 1500 ohm
R513	24366152	CF, 1500 ohm
R515	24366221	CF, 220 ohm
R516	24366221	CF, 220 ohm
R517	24366221	CF, 220 ohm
R518	24366475	CF, 4.7M ohm
R519	24366683	CF, 68k ohm
R520	24366332	CF, 3300 ohm
R521	24366102	CF, 1k ohm
R522	24366185	CF, 1.8M ohm
R526	24366561	CF, 560 ohm
R536	24366151	CF, 150 ohm
R538	24366221	CF, 220 ohm
R540	24366153	CF, 15k ohm
R541	24366221	CF, 220 ohm

Location No.	Part No.	Description
R542	24366221	CF, 220 ohm
R543	24366221	CF, 220 ohm
R544	24366561	CF, 560 ohm
R545	24366561	CF, 560 ohm
R546	24366561	CF, 560 ohm
R547	24366101	CF, 100 ohm
R549	24366101	CF, 100 ohm
R551	24066955	VR, 1k ohm, 1/10W
R557	24066598	VR, 2k ohm, 1/10W
R558	24066598	VR, 2k ohm, 1/10W
R559	24066598	VR, 2k ohm, 1/10W
R561	24366561	CF, 560 ohm
R562	24366561	CF, 560 ohm
R563	24366102	CF, 1k ohm
R564	24366122	CF, 1200 ohm
R565	24366241	CF, 240 ohm
R571	24366153	CF, 15k ohm
R572	24366153	CF, 15k ohm
R573	24366153	CF, 15k ohm
R574	24366153	CF, 15k ohm
R575	24366133	CF, 13k ohm
R576	24366153	CF, 15k ohm
R577	24366102	CF, 1k ohm
R578	24366153	CF, 15k ohm
R579	24366123	CF, 12k ohm
R580	24366223	CF, 22k ohm
R591	24382183	OMF, 18k ohm, 1W
R592	24382183	OMF, 18k ohm, 1W
R593	24382183	OMF, 18k ohm, 1W
R602	24366223	CF, 22k ohm
R603	24366103	CF, 10k ohm
R604	24366102	CF, 1k ohm
R605	24366103	CF, 10k ohm
R606	24366103	CF, 10k ohm
R607	24366132	CF, 1300 ohm
R609	24366222	CF, 2200 ohm
R611	24366339	CF, 3.3 ohm
R613	24366273	CF, 27k ohm
R614	24366473	CF, 47k ohm
R668	24366362	CF, 3600 ohm
R676	24366105	CF, 1M ohm
R677	24366223	CF, 22k ohm
R678	24366681	CF, 680 ohm
R679	24366222	CF, 2200 ohm
R680	24366432	CF, 4300 ohm
R681	24366102	CF, 1k ohm
R684	24366471	CF, 470 ohm
R685	24366223	CF, 22k ohm
R686	24366123	CF, 12k ohm
R687	24366102	CF, 1k ohm
R688	24552391	OMF, 390 ohm, 1/2W
R689	24366221	CF, 220 ohm
R690	24366102	CF, 1k ohm
R691	24366102	CF, 1k ohm
R692	24366152	CF, 1500 ohm
R694	24366472	CF, 4700 ohm
R695	24366223	CF, 22k ohm
R696	24366124	CF, 120k ohm
△ R801	24946565	CC, 5.6M ohm, ±10%, 1/2W
R802	24007932	Cement, 6.2 ohm, 10W
R810	24366301	CF, 300 ohm
R811	24366181	CF, 180 ohm
R812	24366333	CF, 33k ohm
R813	24366111	CF, 110 ohm

Location No.	Part No.	Description
R814	24366222	CF, 2200 ohm
R815	24552511	OMF, 510 ohm, 1/2W
R817	24366332	CF, 3300 ohm
R822	24383680	OMF, 68 ohm, 2W
R823	24552102	OMF, 1k ohm, 1/2W
R825	24366391	CF, 390 ohm
R826	24383200	OMF, 20 ohm, 2W
R827	24366331	CF, 330 ohm
R828	24377274	CF, 270k ohm, 1W
R830	24366332	CF, 3300 ohm
R833	24366560	CF, 56 ohm
R834	24366510	CF, 51 ohm
R835	24552511	OMF, 510 ohm, 1/2W
R836	24552331	OMF, 330 ohm, 1/2W
R837	24366103	CF, 10k ohm
R839	24322338	OMF, 0.33 ohm, 1W
△ R841	24982479	MF, 4.7 ohm, 1/2W
R842	24366560	CF, 56 ohm
R843	24383682	MF, 2k ohm, ±1%, 1/4W
R844	24322688	OMF, 0.68 ohm, 1W
△ R845	24321278	OMF, 0.27 ohm, 1/2W
R846	24366220	CF, 22 ohm
R847	24366152	CF, 1500 ohm
R848	24367332	CF, 3300 ohm, ±2%
R849	24553393	OMF, 39k ohm, 1W
R850	24366102	CF, 1k ohm
R851	24366152	CF, 1500 ohm
R852	24366273	CF, 27k ohm
R853	24367332	CF, 3300 ohm, ±2%
R854	24367332	CF, 3300 ohm, ±2%
R855	24366103	CF, 10k ohm
R856	24366561	CF, 560 ohm
R857	24366472	CF, 4700 ohm
R858	24383242	OMF, 2400 ohm, 2W
R859	24383242	OMF, 2400 ohm, 2W
R860	24366472	CF, 4700 ohm
R861	24366473	CF, 47k ohm
R862	24366222	CF, 2200 ohm
R863	24366103	CF, 10k ohm
R867	24366102	CF, 1k ohm
R868	24377274	CF, 270k ohm, 1W
R869	24366153	CF, 15k ohm
R876	24366560	CF, 56 ohm
R884	24321919	OMF, 9.1 ohm, 1/2W
R890	24000875	PTC Thermistor, 18 ohm, ±20%, 290V
R891	24541271	Cement, 270 ohm, 10W
R901	24946272	CC, 2700 ohm, ±10%, 1/2W
R902	24946272	CC, 2700 ohm, ±10%, 1/2W
R903	24946272	CC, 2700 ohm, ±10%, 1/2W
R920	24000891	FR, 1.3 ohm, 1W
RA01	24366272	CF, 2700 ohm
RA02	24366102	CF, 1k ohm
RA03	24366101	CF, 100 ohm
RA04	24366101	CF, 100 ohm
RA05	24366101	CF, 100 ohm
RA06	24366101	CF, 100 ohm
RA07	24366471	CF, 470 ohm
RA08	24366471	CF, 470 ohm
RA09	24366102	CF, 1k ohm
RA10	24366102	CF, 1k ohm
RA11	24366102	CF, 1k ohm
RA14	24366471	CF, 470 ohm
RA15	24366471	CF, 470 ohm

Location No.	Part No.	Description
RA16	24366471	CF, 470 ohm
RA17	24366471	CF, 470 ohm
RA18	24366222	CF, 2200 ohm
RA19	24366223	CF, 22k ohm
RA20	24366223	CF, 22k ohm
RA21	24366102	CF, 1k ohm
RA22	24366472	CF, 4700 ohm
RA25	24366102	CF, 1k ohm
RA27	24366471	CF, 470 ohm
RA29	24366102	CF, 1k ohm
RA30	24366102	CF, 1k ohm
RA40	24366223	CF, 22k ohm
RA41	24366103	CF, 10k ohm
RA42	24366392	CF, 3900 ohm
RA43	24366332	CF, 3300 ohm
RA44	24366753	CF, 75k ohm
RA45	24366564	CF, 560k ohm
RA46	24366751	CF, 750 ohm
RA47	24366103	CF, 10k ohm
RA48	24366102	CF, 1k ohm
RA52	24366222	CF, 2200 ohm
RA53	24366332	CF, 3300 ohm
RA54	24366333	CF, 33k ohm
RA55	24366223	CF, 22k ohm
RA56	24366333	CF, 33k ohm
RA57	24366333	CF, 33k ohm
RA58	24366333	CF, 33k ohm
RA59	24366223	CF, 22k ohm
RA64	24366471	CF, 470 ohm
RA65	24366221	CF, 220 ohm
RA66	24366222	CF, 2200 ohm
RA67	24366271	CF, 270 ohm
RA68	24366103	CF, 10k ohm
RA69	24366103	CF, 10k ohm
RA71	24366332	CF, 3300 ohm
RA72	24366392	CF, 3900 ohm
RA73	24366223	CF, 22k ohm
RA74	24366153	CF, 15k ohm
RA75	24554103	OMF, 10k ohm, 2W
RA76	24366273	CF, 27k ohm
RA77	24946226	CC, 22M ohm, $\pm 10\%$, 1/2W
RA78	24366102	CF, 1k ohm
RA79	24366225	CF, 2.2M ohm
RA83	24366471	CF, 470 ohm
RA84	24366471	CF, 470 ohm
RA85	24366471	CF, 470 ohm
RA87	24366222	CF, 2200 ohm
RA92	24366103	CF, 10k ohm
RA93	24366242	CF, 2400 ohm
RA94	24366391	CF, 390 ohm
RA95	24366471	CF, 470 ohm
RA98	24366473	CF, 47k ohm
RB01	24366471	CF, 470 ohm
RB11	24366473	CF, 47k ohm
RB12	24366102	CF, 1k ohm
RB25	24366103	CF, 10k ohm
RB26	24366223	CF, 22k ohm
RB27	24366102	CF, 1k ohm
RB28	24366102	CF, 1k ohm
RM03	24366182	CF, 1800 ohm
RM04	24366242	CF, 2400 ohm
RM05	24366221	CF, 220 ohm
RM06	24366185	CF, 1.8M ohm
RM07	24366471	CF, 470 ohm

Location No.	Part No.	Description
RM16	24366333	CF, 33k ohm
RN04	24366103	CF, 10k ohm
RN05	24366103	CF, 10k ohm
RN11	24366103	CF, 10k ohm
RN12	24366272	CF, 2700 ohm
RN13	24366103	CF, 10k ohm
RN14	24366103	CF, 10k ohm
RN16	24366103	CF, 10k ohm
RN17	24366471	CF, 470 ohm
RN18	24366201	CF, 200 ohm
RN19	24366102	CF, 1k ohm
RN21	24366332	CF, 3300 ohm
RN22	24366223	CF, 22k ohm
RN26	24366103	CF, 10k ohm
RN31	24366103	CF, 10k ohm
RN32	24366392	CF, 3900 ohm
RV01	24366101	CF, 100 ohm
RV03	24366121	CF, 120 ohm
RV04	24366821	CF, 820 ohm
RV10	24366910	CF, 91 ohm
RV11	24366104	CF, 100k ohm
RV12	24366223	CF, 22k ohm
RV13	24366223	CF, 22k ohm
RV14	24366331	CF, 330 ohm
RV15	24366223	CF, 22k ohm
RV17	24366181	CF, 180 ohm
RV18	24366181	CF, 180 ohm
RV24	24366473	CF, 47k ohm
RV28	24366271	CF, 270 ohm
RV42	24366223	CF, 22k ohm
RV43	24366203	CF, 20k ohm
RV44	24366103	CF, 10k ohm
RV45	24366103	CF, 10k ohm
RV47	24366103	CF, 10k ohm
RV48	24366103	CF, 10k ohm
RV49	24366272	CF, 2700 ohm
RV51	24366102	CF, 1k ohm
RV53	24366101	CF, 100 ohm
RV54	24552181	OMF, 180 ohm, 1/2W
RV55	24552181	OMF, 180 ohm, 1/2W
RV63	24366101	CF, 100 ohm
RV64	24366682	CF, 6800 ohm
RV65	24552331	OMF, 330 ohm, 1/2W
RV67	24366223	CF, 22k ohm
RX01	24366103	CF, 10k ohm
RX02	24366102	CF, 1k ohm
RX07	24366472	CF, 4700 ohm
RX13	24366102	CF, 1k ohm
RY01	24366473	CF, 47k ohm
RY02	24366473	CF, 47k ohm
RY06	24366333	CF, 33k ohm
RY08	24366104	CF, 100k ohm
RY10	24366104	CF, 100k ohm
RY11	24366333	CF, 33k ohm
RY12	24366105	CF, 1M ohm
RY15	24366302	CF, 3k ohm
RY16	24366331	CF, 330 ohm

COILS & TRANSFORMERS

L102	23262855	Coil, PIF, TRF1453
L103	23238923	Coil, Peaking, TRF4829AC
L105	23238928	Coil, Peaking, TRF4339AC
L106	23238714	Coil, Peaking, TRF4100AJ
L151	23262813	Coil, IF, TRF1077D

Location No.	Part No.	Description
L152	23262813	Coil, IF, TRF1077D
L162	23261985	Coil, RF Choke, TRF9221
L203	23237973	Coil, Peaking, TRF4151AC
L301	23238922	Coil, Peaking, TRF4100AC
L311	23261974	Coil, Choke, HC5-035
L406	23103859	Coil (Ferrite Bead), TEM2011
L408	23221722	Coil, Choke, TLN3142D
△ L411	23233065	Coil, Linearity, TLN2111
△ L462	23231016	Deflection Yoke, TDY-621TS
L503	23238922	Coil, Peaking, TRF4100AC
L551	23250972	Coil, 1H-Delay Matching, TRF5418D
L651	23232946	Coil, Variable, TRF3073D
L671	23232946	Coil, Variable, TRF3073D
L681	23237986	Coil, Peaking, TRF4120AC
L821	23222694	Coil, Width, TLN2026
L822	23103941	Coil (Ferrite Bead), TEM2000
L823	23261975	Coil, Choke, TRF9229
L824	23103859	Coil (Ferrite Bead), TEM2011
L826	23221722	Coil, Choke, TLN3142D
L827	23103859	Coil (Ferrite Bead), TEM2011
L829	23103859	Coil (Ferrite Bead), TEM2011
△ L901	23200671	Coil, Degaussing, TSB2283
LA01	23237999	Coil, Peaking, TRF4109AC
LA02	23262776	Coil, IF, TRF1114
LA04	23221803	Coil, Choke, TLN3040D
LM01	23262797	Coil, IF, TRF1093D
LM02	23272988	Coil, Chroma Demod, TRF5414
LM03	23272988	Coil, Chroma Demod, TRF5414
LM04	23262798	Coil, IF, TRF1092D
LN02	23238920	Coil, Peaking, TRF4150AC
LN03	23238918	Coil, Peaking, TRF4220AC
LV01	23238928	Coil, Peaking, TRF4339AC
LV02	23237929	Coil, Peaking, TRF4360AC
△ T401	23224983	Transformer, Horiz. Drive, TLN1039
△ T461	23236256	Transformer, Flyback, TFB4101AH
T801	23211867	Line Filter, TRF3148
T802	23211898	Line Filter, TRF3165
△ T803	23217093	Transformer, Converter, TPW3172
SEMICONDUCTORS		
IC101	23318201	IC, T51496P
IC303	23119548	IC, AN5515
IC501	B0379475	IC, TA8659AN
IC601	23119668	IC, TDA2611A
IC671	B0383400	IC, TA8710S
IC830	B0349250	IC, TA75393S
IC835	23318299	IC, L78MR05-FA
ICA01	23319012	IC, TMP47C434N-3528Z
ICA02	B0491325	IC, TC89101P(Z)
ICA30	23119441	IC, LA7910
ICV01	B0379280	IC, TA8628N
Q102	23314055	Transistor, 2SA564A-Q
Q161	A6708871	Transistor, 2SC388ATM
Q205	23114552	Transistor, 2SC1685-Q
Q402	A6330069	Transistor, 2SC2482 FA-1
△ Q404	23314375	Transistor, ON4409(508D)
Q505	A6330059	Transistor, 2SC2482
Q507	A6330059	Transistor, 2SC2482
Q509	A6330059	Transistor, 2SC2482
Q510	A6330059	Transistor, 2SC2482

Location No.	Part No.	Description
Q511	A6509127	Transistor, 2SA562TM-O
Q602	A6342206	Transistor, 2SC2878-A(TE)
Q603	23314055	Transistor, 2SA564A-Q
Q673	23114552	Transistor, 2SC1685-Q
Q685	23114552	Transistor, 2SC1685-Q
Q686	23114552	Transistor, 2SC1685-Q
Q820	A6333346	Transistor, 2SC2655-Y(C)
Q821	A6330438	Transistor, 2SC2500-C(C)
Q822	A6546473	Transistor, 2SA1300-GR(T)
Q823	23314543	Transistor, 2SC3927LF135
Q824	A6319311	Transistor, 2SC1959-Y(TE)
Q825	23114552	Transistor, 2SC1685-Q
△ Q826	A8643106	Photo Coupler, TLP621(GR)
Q827	A6907777	Transistor, S1854 FA-4
Q828	A6325067	Transistor, 2SC2230A-Y
△ Q829	A8643106	Photo Coupler, TLP621(GR)
Q831	23114552	Transistor, 2SC1685-Q
Q832	23114552	Transistor, 2SC1685-Q
Q833	A6317764	Transistor, 2SC1815-GR
Q834	A6002060	Transistor, RN1206
Q838	23314055	Transistor, 2SA564A-Q
Q839	A6509154	Transistor, 2SA562TM-Y(T)
Q840	23114552	Transistor, 2SC1685-Q
Q841	A6547250	Transistor, 2SA1320
QA05	A6534053	Transistor, 2SA1015-Y(TE)
QA06	A6534053	Transistor, 2SA1015-Y(TE)
QA07	A6317440	Transistor, 2SC1815-Y
QA08	23114552	Transistor, 2SC1685-Q
QA09	23114552	Transistor, 2SC1685-Q
QA10	23114552	Transistor, 2SC1685-Q
QA11	A6534077	Transistor, 2SA1015-GR(T)
QA12	23114552	Transistor, 2SC1685-Q
QA17	A6012010	Transistor, RN2201
QA75	23114552	Transistor, 2SC1685-Q
QA76	23114552	Transistor, 2SC1685-Q
QB12	23114552	Transistor, 2SC1685-Q
QN01	A6002060	Transistor, RN1206
QN02	23314055	Transistor, 2SA564A-Q
QN03	23314055	Transistor, 2SA564A-Q
QN04	23114552	Transistor, 2SC1685-Q
QN06	A6002040	Transistor, RN1204
QN07	A6342206	Transistor, 2SC2878-A(TE)
QN08	A6002060	Transistor, RN1206
QN13	23114552	Transistor, 2SC1685-Q
QV03	23314055	Transistor, 2SA564A-Q
QV04	23114552	Transistor, 2SC1685-Q
QV05	23114552	Transistor, 2SC1685-Q
QV06	23314055	Transistor, 2SA564A-Q
QV07	23114552	Transistor, 2SC1685-Q
QV10	A6342206	Transistor, 2SC2878-A(TE)
QV11	23114552	Transistor, 2SC1685-Q
QY01	23114552	Transistor, 2SC1685-Q
QY03	23114552	Transistor, 2SC1685-Q
QY04	23114552	Transistor, 2SC1685-Q
QY05	A6041860	Transistor, 2SK117-GR
D241	A7150041	Diode, 1SS104
D302	23118479	Diode, BYD33J
D305	A7568460	Diode, TVR-1B
D315	A7116715	Diode, Zener, 04AZ7.5Y
D401	23316325	Diode, Zener, UZ9.1BSC
D402	A7117225	Diode, Zener, 04AZ12Z
D403	23316333	Diode, Zener, UZ12BSB
D405	A7117015	Diode, Zener, 04AZ10Y
D406	23118479	Diode, BYD33J

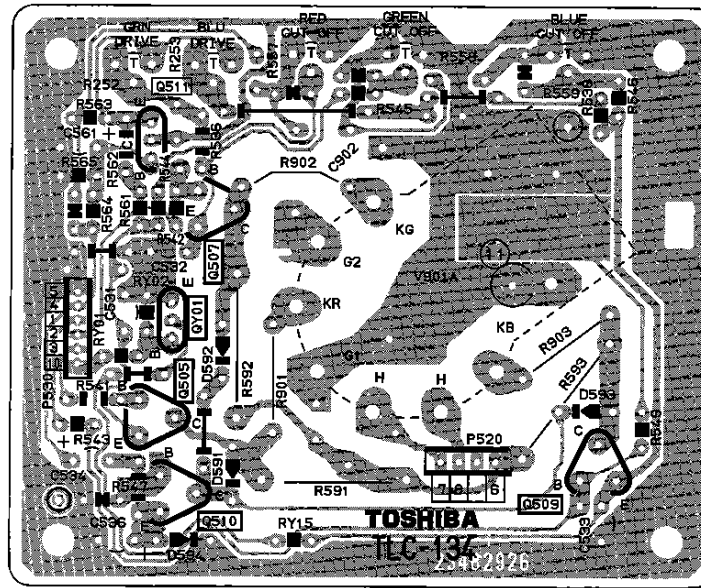
Location No.	Part No.	Description
D408	A7568300	Diode, 1S1835
D409	23316327	Diode, Zener, UZ10BSB
D410	23316321	Diode, Zener, UZ8.2BSB
D571	A7150258	Diode, 1SS176
D572	A7150258	Diode, 1SS176
D573	A7150258	Diode, 1SS176
D574	A7150258	Diode, 1SS176
D591	23316554	Diode, 1SS146
D592	23316554	Diode, 1SS146
D593	23316554	Diode, 1SS146
D594	A7150258	Diode, 1SS176
D601	A7150258	Diode, 1SS176
D602	A7150258	Diode, 1SS176
D603	A7150258	Diode, 1SS176
D801	23316391	Diode, D3SB60 (4103)
D820	A7978850	Diode, S5295G
D821	23316327	Diode, Zener, UZ10BSB
D823	A7117305	Diode, Zener, 04AZ13X
D824	A7571020	Diode, TVR5G LC7-5
D825	A7275400	Diode, 1S2462
D826	23316306	Diode, Zener, UZ5.1BSB
D827	A7150258	Diode, 1SS176
D830	23118095	Diode, ERB44-06
D832	23118095	Diode, ERB44-06
D834	A7150258	Diode, 1SS176
D838	A7150258	Diode, 1SS176
D839	A7150258	Diode, 1SS176
D840	A7150258	Diode, 1SS176
D842	A7150258	Diode, 1SS176
D843	A7150258	Diode, 1SS176
D844	A7117015	Diode, Zener, 04AZ10Y
D845	A7150258	Diode, 1SS176
D848	A7118115	Diode, Zener, 04AZ30Y
DA07	A7150258	Diode, 1SS176
DA08	A7150258	Diode, 1SS176
DA10	A7150258	Diode, 1SS176
DA11	A7150258	Diode, 1SS176
DA14	A7150258	Diode, 1SS176
DA25	A7150258	Diode, 1SS176
DA26	A7150258	Diode, 1SS176
DA30	23115878	Diode, Zener, μ PC574J, (L)
DA31	A7150258	Diode, 1SS176
DA32	A7150258	Diode, 1SS176
DA68	A7150258	Diode, 1SS176
DB01	A7150258	Diode, 1SS176
DN06	A7288601	Diode, 1S2186 FA-1
DN07	A7288601	Diode, 1S2186 FA-1
DS55	A8636650	Diode (LED), TLSG116, Green
DV02	A7150258	Diode, 1SS176
MISCELLANEOUS		
△ F801	23144832	Fuse, 2.0A
F801A	23165433	Holder, Fuse
△ F802	23144826	Fuse, 0.5A
F802A	23165433	Holder, Fuse
K901	23120303	Remote Sensor, IR-9109-K
L462A	23997351	Compensator, DY, TC-O
L462B	23199314	Compensator, DY, TC-E
L462C	23993623	Compensator, DY, TC-L
L462D	23199308	Compensator, DY, TC-C
P530	23368081	Plug, 6P
△ P801	23176590	Power Cord
P803	23164725	Plug, 2P
PV01	23365605	Pin Jack, 2P

Location No.	Part No.	Description
S201	23344333	Switch, Lever, 1C3P
S510	23145409	Switch, Slide, 2C2P
△ S801	23145434	Switch, Power, 2C2P
SA01	23145227	Switch, Push, 1C1P
SA02	23145227	Switch, Push, 1C1P
SA03	23145227	Switch, Push, 1C1P
SA04	23145227	Switch, Push, 1C1P
△ V901A	23902022	Socket, CRT, 8P
V901M	23102910	Magnet, Purity-Convergence, MAG-1054
W201	23250135	Coil, Delay-Line, TRF2131
W661	23351091	Speaker, SPK-1363, 120mmx60mm, 16 ohm
W662	23351091	Speaker, SPK-1363, 120mmx60mm, 16 ohm
X401	23153886	Ceramic Resonator, 503kHz, TCR1012
X501	23153979	Crystal, 4.43MHz
X502	23153797	1H-Delay Line, PAL/SECAM, ED645A41T
XN01	23153961	Crystal, 3.58MHz
Z101	A5611325	PIF Filter, F1036H
Z102	23107911	Ceramic Video Trap, 5.5 to 6MHz, TCF1019
Z103	23107913	Ceramic Video Trap, 6.5MHz, TCF1018
Z672	23107947	Ceramic Filter, 5.5MHz, SFE5.5MBF
Z673	23107948	Ceramic Filter, 6.0MHz, SFE6.0MBF
Z674	23107948	Ceramic Filter, 6.0MHz, SFE6.0MBF
Z675	23107949	Ceramic Filter, 6.5MHz, SFE6.5MBF
Z676	23153900	Ceramic Resonator, 500kHz, TCR1010
ZA01	24094651	Capacitor Block, 100pFx4, 50V
ZA02	24000320	Resistor Block, 10k ohmx3, 1/10W
ZA03	24094645	Capacitor Block, 0.01 μ Fx4, 50V
ZA09	23153741	Ceramic Resonator, TCR1029
ZP01	23144838	Fuse, 1.0A
ZV01	23107658	Ceramic Video Trap, 5.74MHz, TCF1052
ZV02	23107787	Ceramic Video Trap, 3.58MHz, TCF1044
PC BOARD ASSEMBLIES		
U901	23396947	CRT Drive Board, PB2833
U902	23337266	Main Board, PB0873
PICTURE TUBE		
△ V901	A5549139	Picture Tube, A51KSU93X(VM), SVC
TUNER		
H001	23121585	Tuner, VHF/UHF, EC421
ACCESSORIES		
K902	23120292	Remote Hand Unit, CT-9507
AT03	23300920	Battery Cover
Y101	23561013	Owner's Manual, English/Russian/Chinese, 2104XS1

MCL-437F

CAUTION
LIVE AREA

BOTTOM (FOIL) SIDE



TERMINAL VIEW OF TRANSISTOR, etc.

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



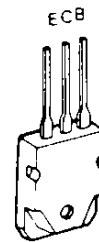
② 2SC2120
2SC2230
2SC2655



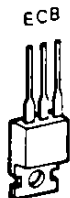
③ RN1203
RN1204
RN1205
RN1206
RN2201



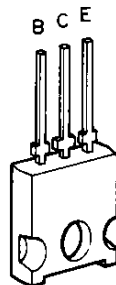
④ 2SA1265N



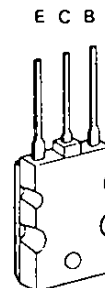
⑤ 2SD553
2SC1569
2SC2383
2SC3148
2SA1012



⑥ 2SC3619



⑦ 2SD1427
2SD1428



⑧ SF5J42



