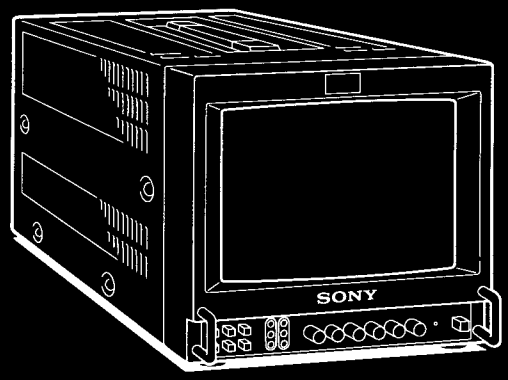
PVM-8041Q/8044Q

SERVICE MANUAL

US Model
Canadian Model

PVM-8041Q
Chassis No. SCC-E96A-A
PVM-8044Q
Chassis No. SCC-E96C-A



SPECIFICATIONS

Video signal

Color system	PAL, SECAM, NTSC3.58, NTSC4.43
Resolution	**PVM-8044Q :** 450 TV lines **PVM-8041Q :** 250 TV lines
Aperture correction	–4.0 dB – +6.0 dB (at 3.0 MHz)
Frequency response	6.0 MHz (–3.0 dB) at all inputs
Synchronization	AFC time constant 1.0 msec.

Picture performance

Normal scan	6% over scan of CRT effective screen area
Underscan	3% underscan of CRT effective screen area
H. linearity	Less than 7.0% (typical)
V. linearity	Less than 7.0% (typical)
Convergence	Central area: 0.43mm (typical) Peripheral area: 0.53mm (typical)
Raster size stability	H: 1.0%, V: 1.5%
High voltage regulation	3.0%
Color temperature	D65

Inputs and Outputs

Inputs	Y/C IN: 4-pin mini DIN connector (See the pin assignment on page 2.) VIDEO IN: BNC connector 1Vp-p ± 6dB, sync negative AUDIO IN: phono jack, –5 dBs, less than 47k ohms R/R-Y, G/Y, B/B-Y: BNC connector R, G, B channels: 0.7 Vp-p, ±6 dB Sync on green : 0.3 Vp-p, negative, 75 ohms terminated R-Y, B-Y channels: 0.7 Vp-p, ±6 dB Y channel: 0.7 Vp-p, ± 6 dB (Standard color bar signal of 75% chrominance) EXT SYNC IN: BNC connector Composite sync 4 Vp-p, ±6 dB, negative
Loop-through outputs	Y/C OUT: 4-pin mini DIN connector VIDEO OUT: BNC connector, 75 ohms terminated AUDIO OUT: phono jack EXT SYNC OUT: BNC connector, 75 ohms terminated AUDIO OUTPUT 0.5W
Tally/remote input	TALLY/REMOTE: 8-pin mini DIN connector (See the pin assignment on page 2.)

General

Power consumption	45 W Max at AC operation 38 W at DC operation

— Continued on next page —

MICROFILM

TRINITRON® COLOR VIDEO MONITOR

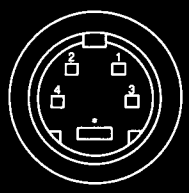
SONY®

Power requirements	120V AC, 50/60 Hz 12V DC, with the Sony NP-1A/1B battery pack (not supplied) or AC-500 AC power adaptor (not supplied)
Operating temperature range	0 – 35 °C
Storage temperature range	–10 – +40 °C
Humidity	0 – 90%
Dimensions	Approx. 217 x 217 x 352.5 mm (w/h/d) (8 5/8 x 8 5/8 x 14 inches) not incl. projecting parts and controls
Weight	Approx. 7.8 kg (17 lb 3 oz) not incl. battery packs
Accessory supplied	AC power cord (1)

Design and specifications are subject to change without notice.

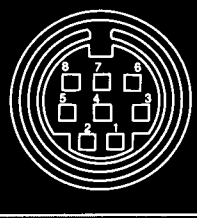
Pin Assignment

Y/C IN connector (4-pin mini DIN)



Pin No.	Signal	Description
1	Y-input	1 Vp-p, sync negative, 75 ohms
2	CHROMA sub-carrier-input	300 mVp-p, burst Delay time between Y and C: within 0±100 nsec., 75 ohms
3	GND for Y-input	GND
4	GND for CHROMA-input	GND

TALLY/REMOTE connector (8-pin mini DIN)



Pin No.	Signal
1	Blue only
2	H/V delay
3	GND
4	INT/EXT SYNC
5	Tally
6	Underscan/normal scan
7	A/B or RGB/component
8	RGB/LINE

For remote control, connect the pin of the desired function to pin 3 (GND).

SAFETY CHECK-OUT

(US Model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.

2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.

3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.

4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair Point them out to the customer and recommend their replacement.

5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.

6. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.

7. Check the condition of the monopole antenna (if any). Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.

8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.

9. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a coldwater pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

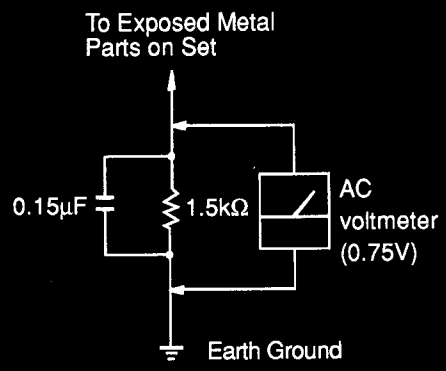


Fig. A. Using an AC voltmeter to check AC leakage.

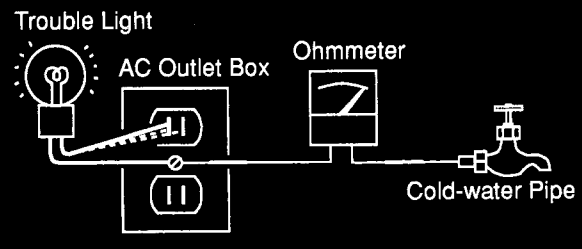


Fig. B. Checking for earth ground.

TABLE OF CONTENTS

(CAUTION)

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING!!

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

SAFETY-RELATED COMPONENT WARNING !!

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

(ATTENTION)

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURTCIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION!!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÁSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ Á L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS ÁLA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MAPQUE ⚠ SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIECES CONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.

SECTION 1
GENERAL

1-1. FEATURES

Four color systems available

The monitor can display PAL, SECAM, NTSC3.58 and NTSC4.43* signals. The appropriate color system is selected automatically.

* A signal of NTSC4.43 is used for playing back NTSC recorded video cassettes with a video tape recorder/player especially designed for use with this system.

Super Fine Pitch Trinitron picture tube

(PVM-8044Q only)

The Super Fine Pitch Trinitron picture tube provides a high resolution picture. Horizontal resolution is more than 450 TV lines at the center of the picture.

Blue only picture

The picture can be displayed in blue and black only. This facilitates hue adjustment and the observation of video noise.

Analog RGB/component input connectors

Analog RGB or component (Y, R-Y and B-Y) signals from video equipment can be input through these connectors.

Y/C input connector

The video signal, split into the chrominance signal (C) and the luminance signal (Y), can be input through this connector, eliminating the interference between the two signals, which tends to occur in a composite video signal, assuring video quality.

Beam current feedback circuit

The built-in beam current feedback circuit assures stable white balance.

Comb filter

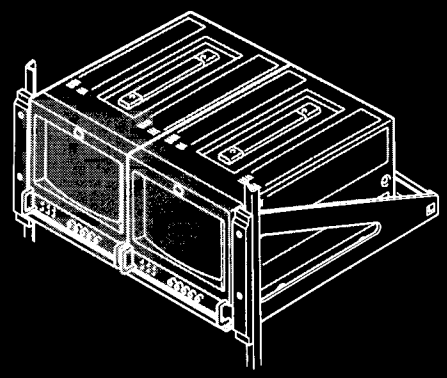
When NTSC video signals are received, a comb filter activates to increase the resolution, resulting in fine picture detail without color spill or color noise.

Automatic termination

The Y/C, VIDEO IN and EXT SYNC IN connectors are terminated at 75 ohms inside, when no cable is connected to the loop-through output connectors. When a cable is connected to an output connector, the 75-ohm termination is automatically released.

EIA standard 19-inch rack mounting

By using an MB-507 mounting bracket (not supplied), the monitor can be mounted in an EIA standard 19-inch rack. For details on mounting, see the instruction manual of the MB-507.



For the Customers in the USA

INFORMATION

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

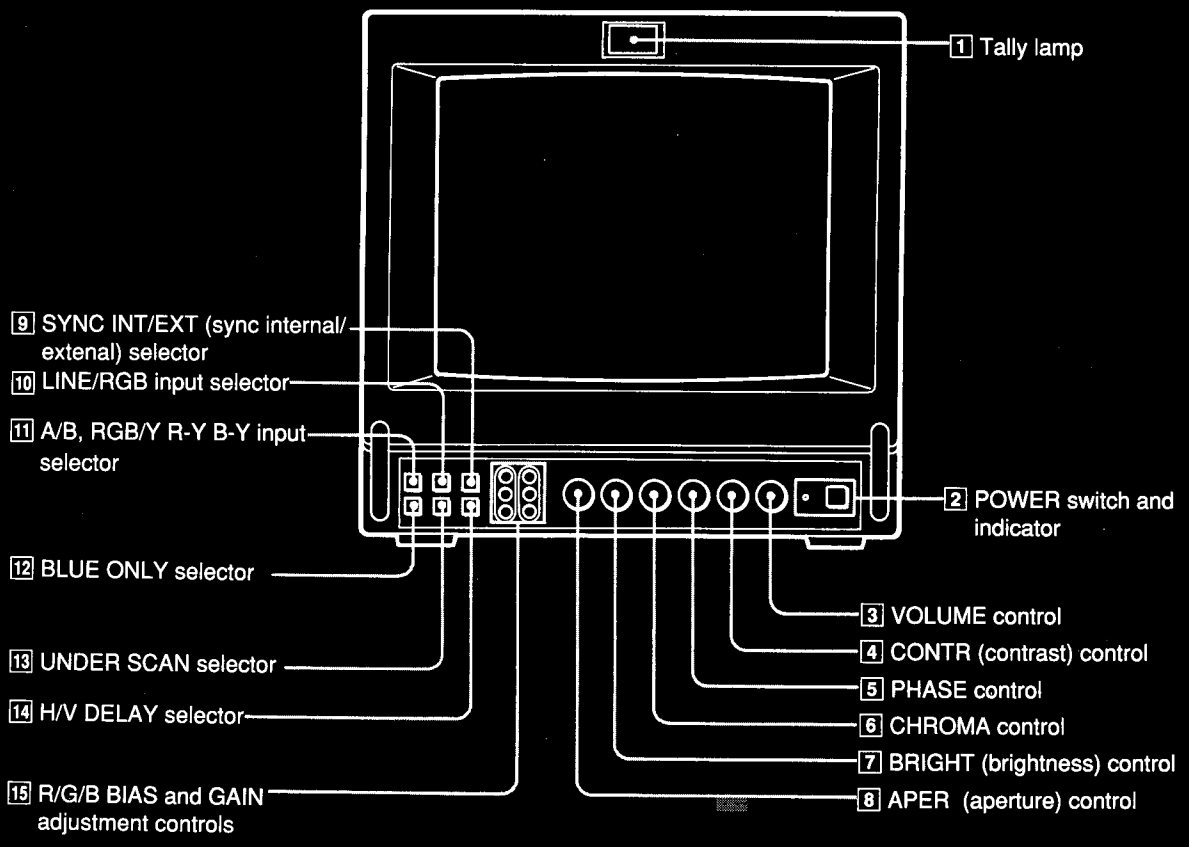
You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

For the Customers in Canada

This apparatus complies with the Class A limits for radio noise emissions set out in Radio Interference Regulations.

1-2. LOCATION AND FUNCTION OF PARTS AND CONTROLS

Front



1 Tally lamp

2 POWER switch and indicator
Depress to turn the monitor on. The indicator will light up in green.
The POWER indicator also functions as the battery indicator. When the internal battery becomes weak or the power supplied through the DC12V IN jack decreases, the indicator flashes.

3 VOLUME control
Turn this control clockwise or counterclockwise to obtain the desired volume.

4 CONTR (contrast) control
Turn clockwise to make the contrast stronger and counterclockwise to make it weaker.

5 PHASE control
This control is effective only for the NTSC3.58 and NTSC4.43 color systems. Turn clockwise to make the skin tones greenish and counterclockwise to make them purplish.

Notes

- The PHASE, CHROMA and APER control settings have no effect on an analog RGB signal.
- The PHASE control has no effect on component singals.
- The PHASE control setting is effective only for the NTSC system.

6 CHROMA control
Turn clockwise to make the color intensity stronger and counterclockwise to make it weaker.

7 BRIGHT (brightness) control
Turn clockwise for more brightness and counterclockwise for less.

8 APER (aperture) control
Turn clockwise for more sharpness and counterclockwise for less.

9 SYNC INT/EXT (sync internal/external) selector
Keep this button released (INT) to operate the monitor on the sync signal from the displayed composite video signal.
Depress this button (EXT) to operate the monitor on an external sync signal fed through the EXT SYNC connector on the rear panel.

10 LINE/RGB input selector
Select the program to be monitored. Keep this button released (LINE) for a signal fed through the LINE A or LINE B connectors. Depress this button (RGB) for a signal fed through the RGB connectors.

11 A/B, RGB/Y R-Y B-Y input selector
When the LINE/RGB input selector is set to LINE, keep this button released (A) for a signal fed through the LINE A connectors. Depress this button (B) for a signal fed through the LINE B connectors.

When the LINE/RGB input selector is set to RGB, select the RGB signal or the component signal which is fed through the RGB input connectors. Keep this button released (RGB) for the RGB signal. Depress this button (Y R-Y B-Y) for the component signal.

12 BLUE ONLY selector
Depress this button to turn off the red and green signals. A blue signal is displayed as an apparent monochrome picture on the screen. This facilitates "chroma" and "phase" control adjustments and the observation of video noise.

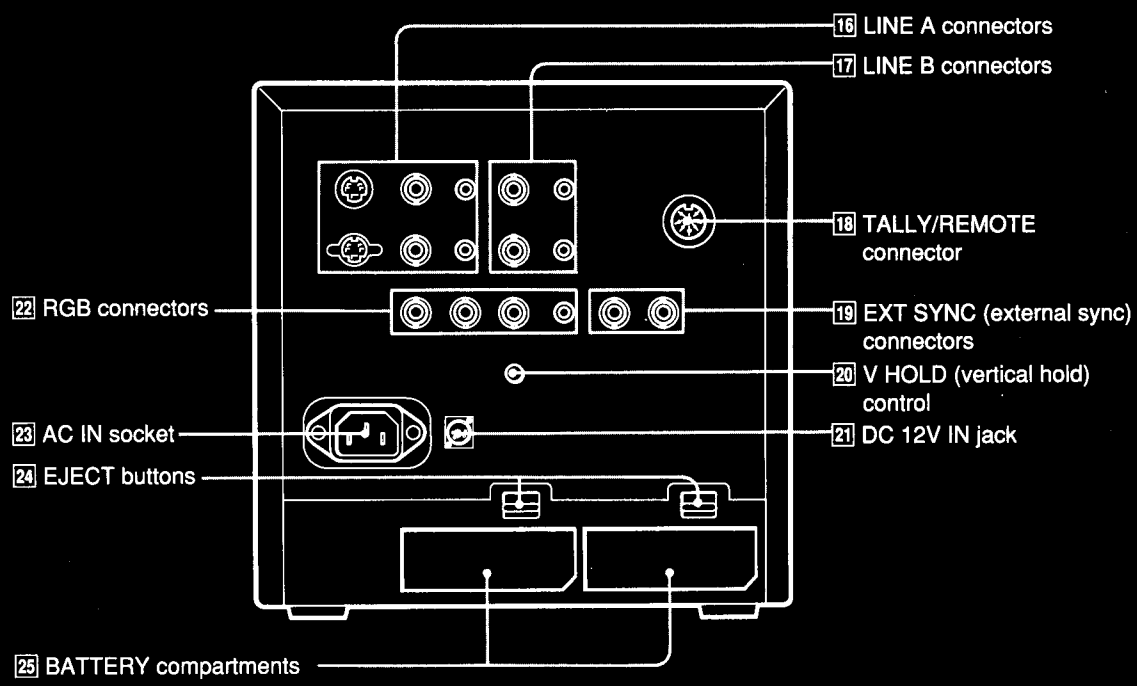
13 UNDER SCAN selector
Depress this button for underscanning. The display size is reduced by approximately 3% so that four corners of the raster are visible.

14 H/V DELAY selector
Depress this button to observe the horizontal and vertical sync signals at the same time. The horizontal sync signal is displayed in the left quarter of the screen; the vertical sync signal is displayed near the center of the screen.

15 R/G/B BIAS and GAIN adjustment controls
Used for white balance fine adjustment.
BIAS and GAIN controls are provided for the R (red), G (green) and B (blue) screens.

BIAS: Adjust the white balance and brightness of the screen at the lowlight.
GAIN: Adjust the white balance and brightness of the screen at the highlight.

Rear



16 LINE A connectors
To monitor the signal fed through these connectors, keep the LINE/RGB selector and the A/B, RGB/Y R-Y B-Y selector on the front panel released (LINE and A).

Note

The Y/C IN connector has a priority over the VIDEO IN connector.
When a plug is connected to the Y/C IN connector, the VIDEO IN connector is automatically disconnected.

17 LINE B connectors
To monitor the signal fed through these connectors, keep the LINE/RGB selector released (LINE) and depress the A/B, RGB/Y R-Y B-Y selector (B) on the front panel.

VIDEO IN (BNC): Connect to the video output of a video camera, VCR or other video equipment.
VIDEO OUT (BNC): Loop-through output of the VIDEO IN connector. Connect to the video input of a VCR or another monitor.
AUDIO IN (phono jack): Connect to the audio output of a VCR or a microphone (through a suitable microphone amplifier).
AUDIO OUT (phono jack): Loop-through output of the AUDIO IN connector. Connect to the audio input of a VCR or another monitor.

18 TALLY/REMOTE connector (8-pin mini DIN)
Connect to the tally output of a control console, special-effect generator, etc. The tally lamp on the front panel will be turned on and off by the connected equipment. This connector can be used for connecting a remote controller. For the pin assignment of this connector, see "Specifications" on page 2.

19 EXT SYNC (external sync) connectors
IN (BNC): When this monitor operates on an external sync signal, connect the reference signal from a sync generator to this connector. In this case, depress the SYNC INT/EXT selector (EXT) on the front panel.
OUT (BNC): Loop-through output of the EXT SYNC IN connector. Connect to the external sync input of video equipment to be synchronized with this monitor.

20 V HOLD (vertical hold) control
Turn to stabilize the picture if it rolls vertically.

21 DC 12V IN jack (XLR, 4 pin)
Connect the Sony AC-500 AC power adaptor (not supplied).

22 RGB/component input connectors

R/R-Y, G/Y, B/B-Y (BNC), AUDIO (phono):
To monitor a signal fed through these connectors, depress the LINE/RGB selector on the front panel (RGB). When the SYNC INT/EXT selector on the front panel is released (INT), the monitor operates on the sync signal from the G/Y channel.

To monitor the analog RGB signal
Connect to the analog RGB signal outputs of a video camera having no sync signal. Keep the A/B, RGB/Y R-Y B-Y selector on the front panel released (RGB).

To monitor the component signal
Connect to the R-Y/Y/B-Y component signal outputs of a Sony BetaCam video camera. Depress the A/B, RGB/Y R-Y B-Y selector on the front panel (Y R-Y B-Y).

23 AC IN socket
Connect the supplied AC power cord to this socket and to a wall outlet.

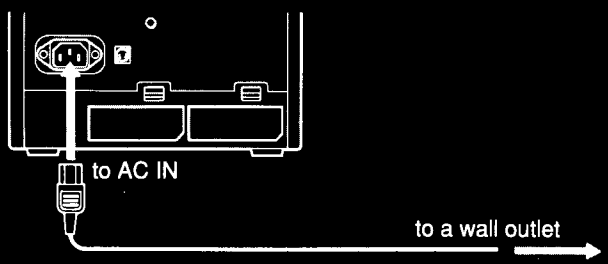
24 EJECT buttons
Press the EJECT button upwards to remove the battery pack.

25 BATTERY compartments
Insert the NP-1A/1B battery pack (not supplied).

1-3. POWER SOURCES

House Current

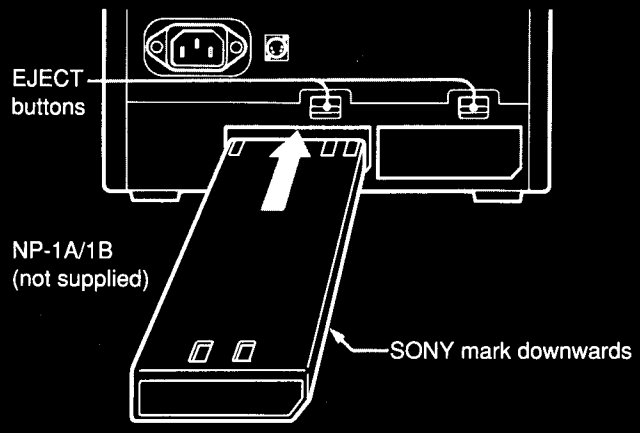
Connect the supplied AC power cord to the AC IN socket and to a wall outlet.



When the AC power cord is plugged into the AC IN socket, the battery pack (if installed) or the AC power adaptor (if connected) is automatically disconnected.

Rechargeable Battery

The monitor can operate with one or two battery packs. For extended use, two battery packs are recommended.



To remove the battery pack, press the EJECT button upwards.

For charging, use the BC-1WA battery charger (not supplied) for the NP-1A or the BC-1WB for the NP-1B.

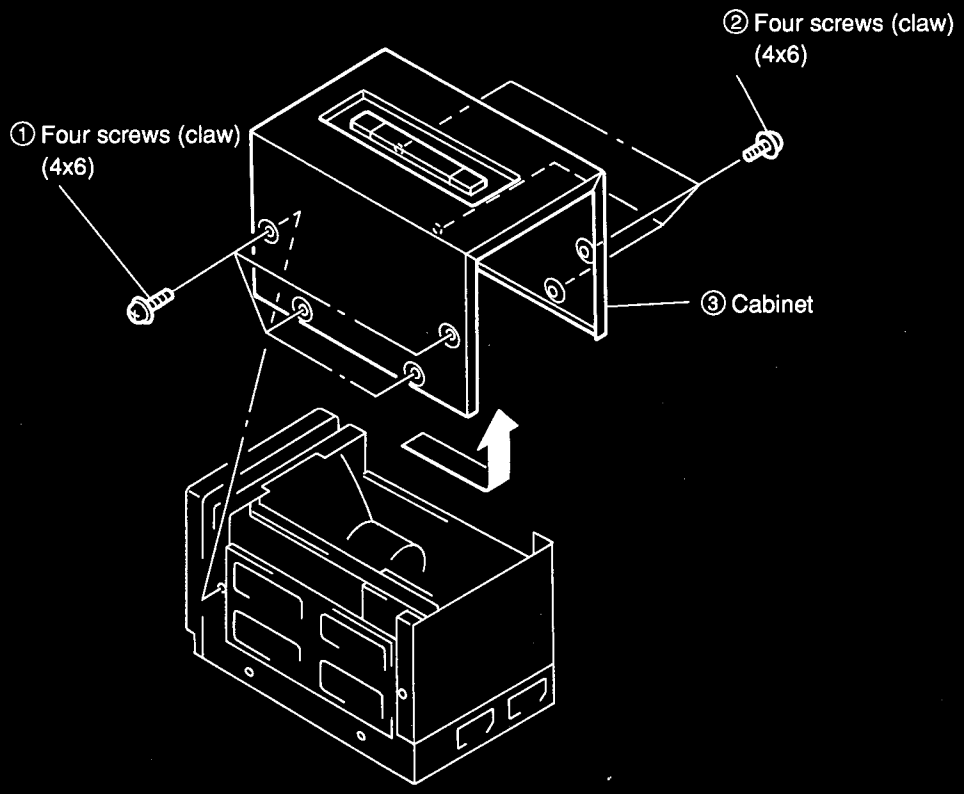
Note

Make sure that the AC power cord and the AC power adaptor are disconnected from the monitor. Otherwise, the monitor cannot operate on the battery pack(s).

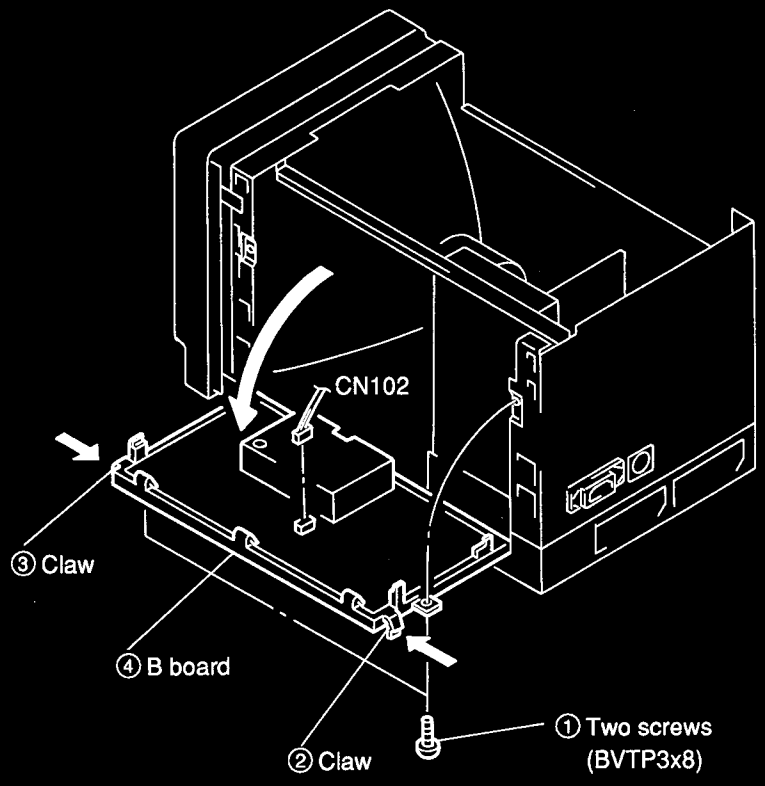
MEMO

SECTION 2
DISASSEMBLY

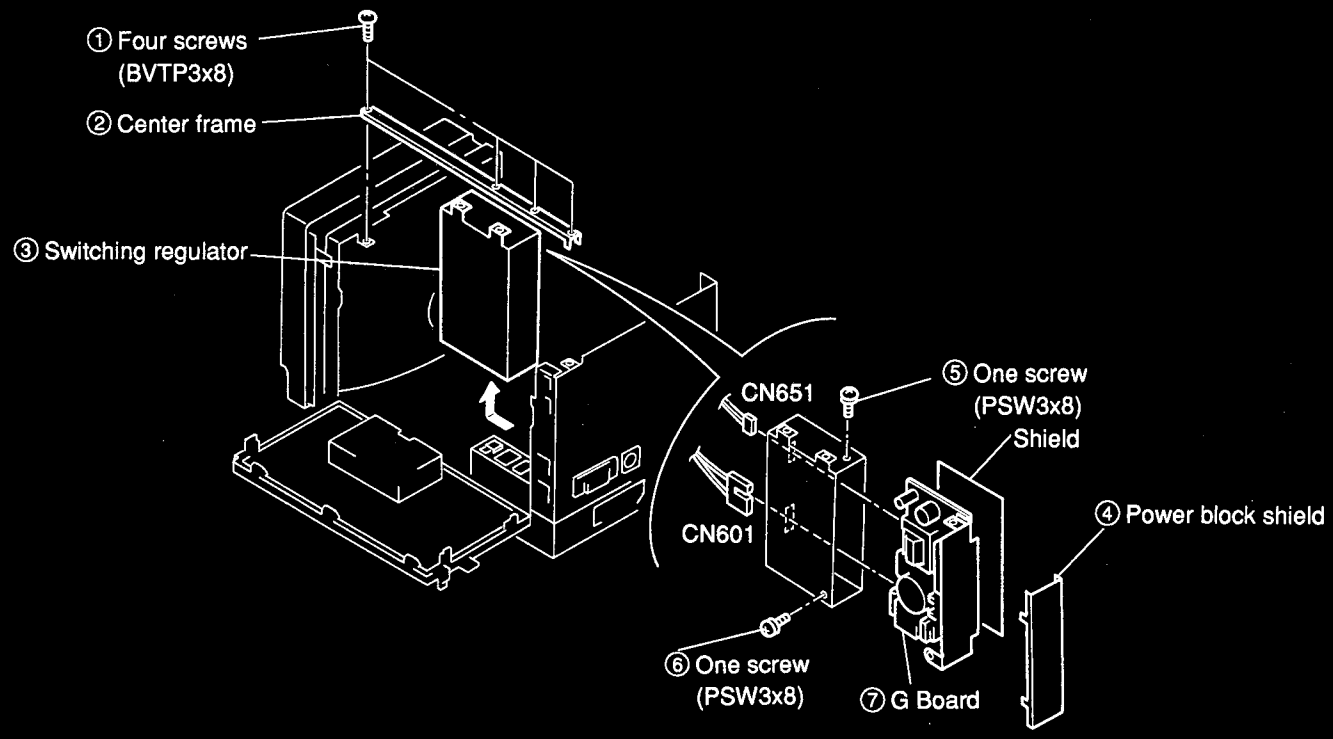
2-1. CABINET REMOVAL



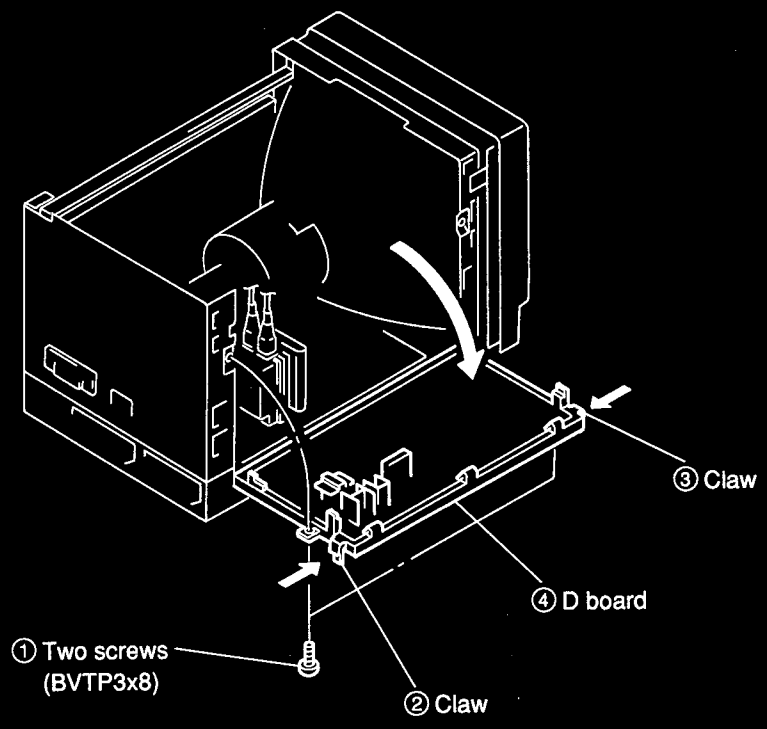
2-2. B BOARD REMOVAL



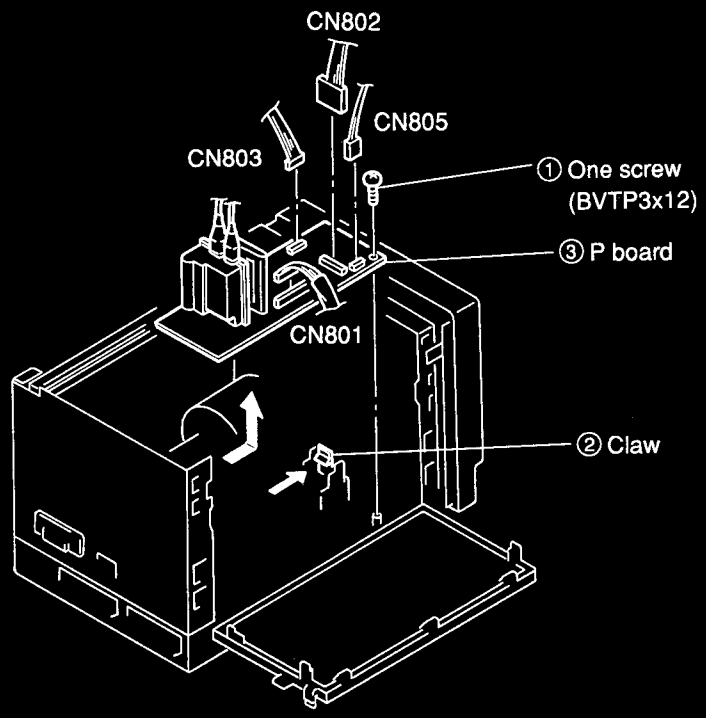
2-3. SWITCHING REGULATOR REMOVAL



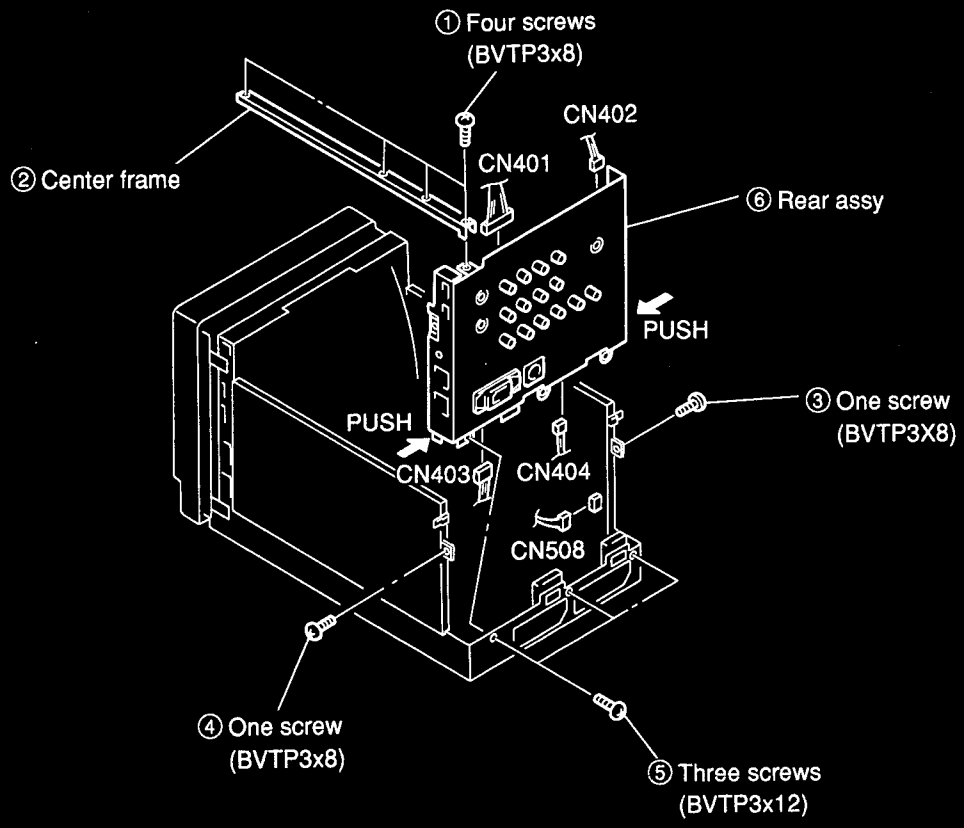
2-4. D BOARD REMOVAL



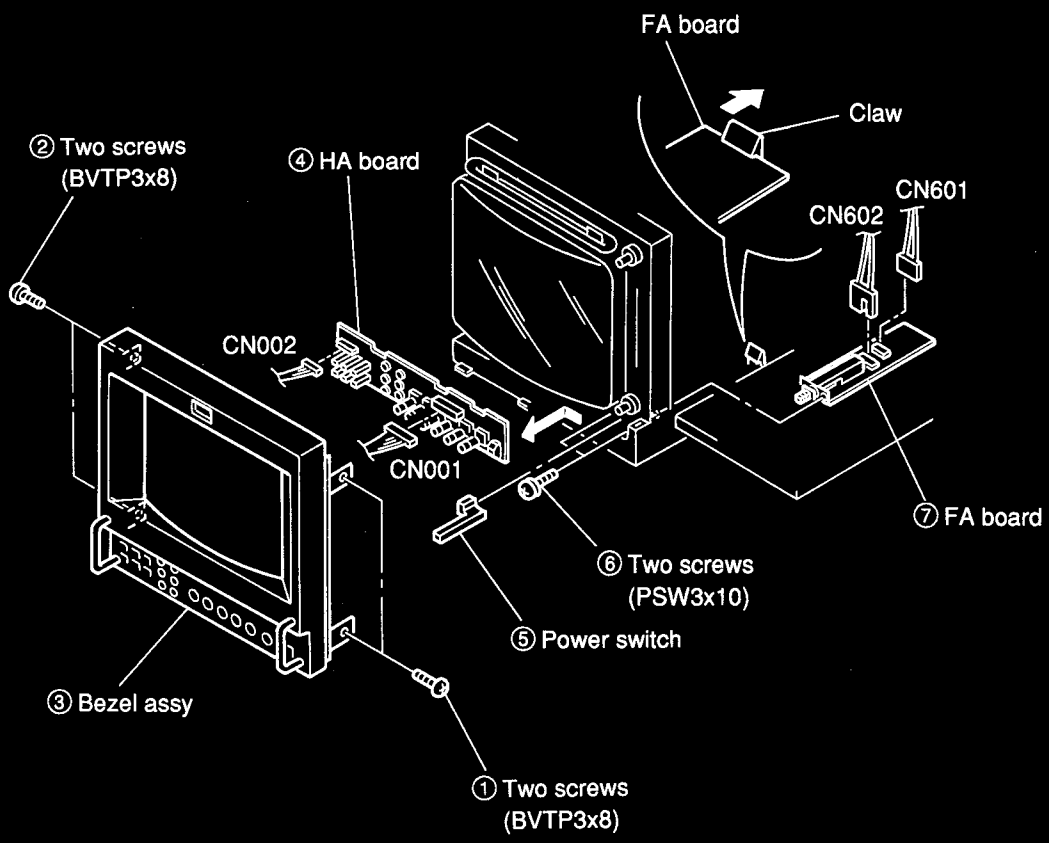
2-5. P BOARD REMOVAL



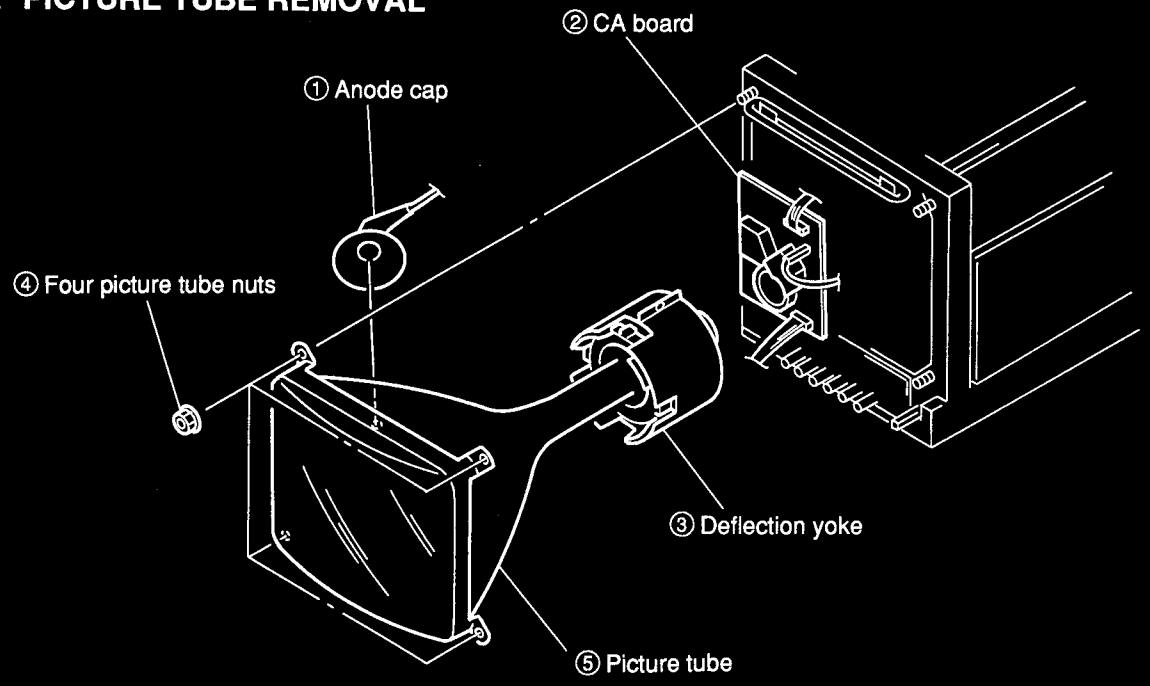
2-6. REAR ASSY REMOVAL



2-7. HA AND FA BOARDS REMOVAL



2-8. PICTURE TUBE REMOVAL



Note : Caution for ANODE CAP installation.
When you replace PICTURE TUBE or FBT, remove RTV on ANODE CAP so that PICTURE TUBE and FBT can be separated. Please adhere picture tube and anode cap in accordance with the following procedure.

ADHERING PROCEDURE OF ANODE CAP.

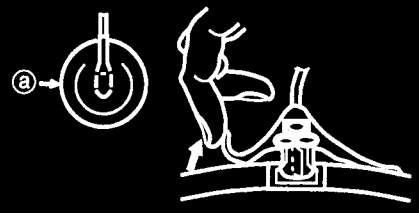
1. Clean PICTURE TUBE ANODE CAP with ethnaol to remove original RTV.
2. Dry clean face with air.
3. Use KE-490RTV (RTV silicone adhesive, SHIN-ETSU CHEMICAL).

Part. No.	Description
7-322-065-19	Silicone (RTV) KE-490W

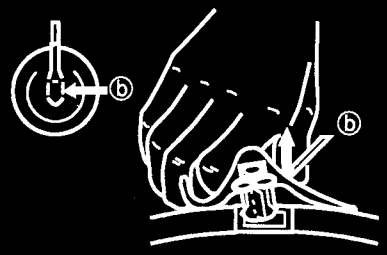
4. Install ANODE CAP.
5. Adeguately apply RTV to the entire picture tube anode area, piace the anode cap onto the picture tube and push it down securety so that no air pockets remain beneath the cap.
6. Dry more than 12 hours at room temperature.

• REMOVAL OF ANODE-CAP

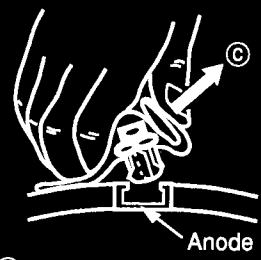
• REMOVING PROCEDURES



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



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



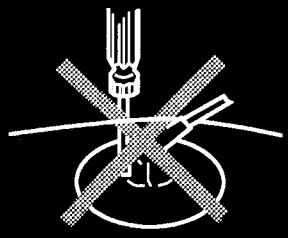
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⓒ.

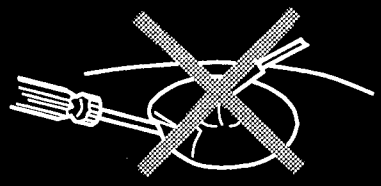
• HOW TO HANDLE AN ANODE-CAP

① Don't hurt the surface of anode-caps with sharp shaped material!

② Don't press the rubber hardly not to hurt inside of anode-caps!
A metal fitting called as shatter-hook terminal is built in the rubber.

③ Don't turn the foot of rubber over hardly!





SECTION 3
SET-UP ADJUSTMENTS

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

The control and switch below should be set as follows unless otherwise noted:

CONTRAST control 80%
BRIGHTNESS control 50%

Perform the adjustments in order as follows:

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

Note: Test equipment Required.

1. Color Bar/Pattern Generator
2. Degausser
3. Color Analyzer (Minolta)
4. Luminance Level Meter

3-1. BEAM LANDING

Precaution

1. Set the side of the unit with the PICTURE TUBE so that it faces east or west in order to reduce the influence of external magnetic force.
2. Turn the power switch for the unit ON and erase the magnetic force using a degausser.

(1) Beam Landing

1. Receive an entirely white signal with the pattern generator.
   CONTRAST ..... MAX.
   BRIGHTNESS ..... set easy to observe
2. Adjust the white balance, G2 voltage and convergence roughly.
3. Loosen the deflection yoke mounting screw, and set the purity control to the center as shown in Fig.3-1.
4. Switch over the pattern generator to green.
5. Move the deflection yoke backward, and adjust with the purity control so that green is in the center and blue and red are at the sides, evenly. (Fig.3-2)
6. Move the deflection yoke forward, and adjust so that the entire screen becomes green. Repeat 5 to 7 as to red and blue.
7. When landing at the corners is not right, correct by using the magnet. (Fig.3-3)
8. When the position of the deflection yoke is determined, tighten it with a deflection yoke mounting screw.

CAUTION: When correction magnet is used, be sure to degauss the unit.

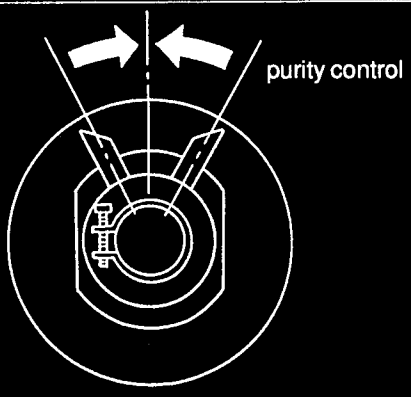


Fig.3-1

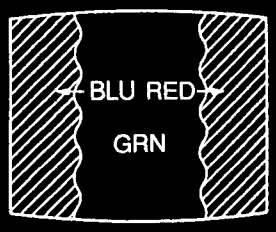


Fig.3-2

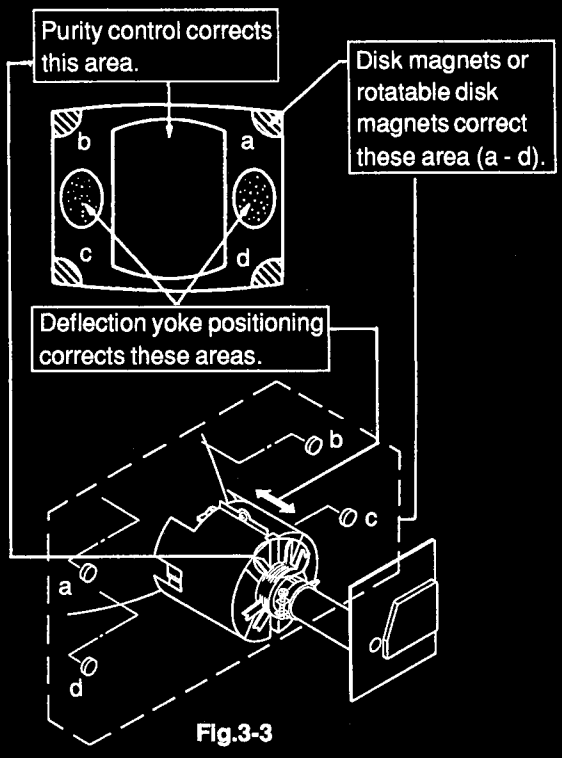
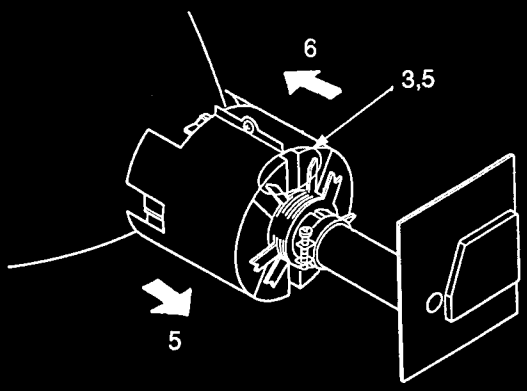


Fig.3-3



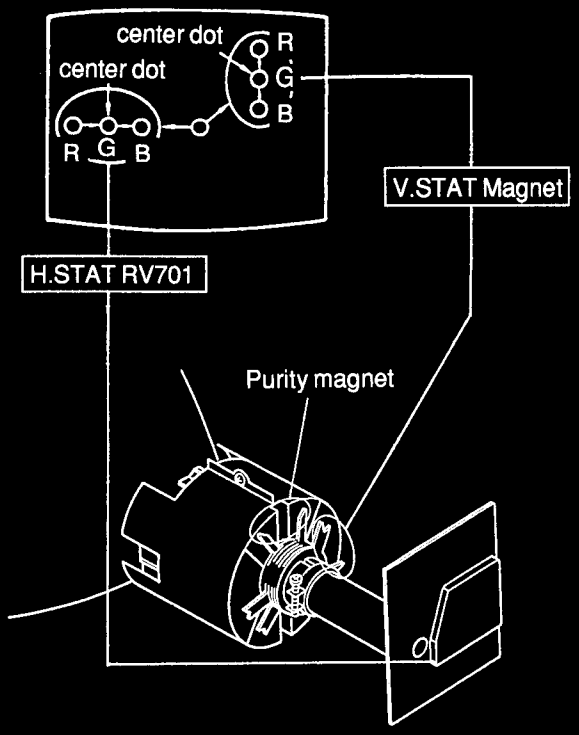
3-2. CONVERGENCE

(1) Horizontal and vertical Static Convergence Adjustment on the Center of Screen.

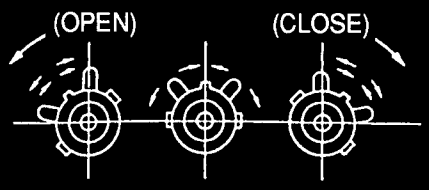
- Before starting, perform V. SIZE, V. CENT, H.SIZE, H.CENT and Screen Distortion Adjustment rightly.

(Static Convergence Adjustment)

1. Receive a dot signal, setting BRIGHTNESS minimum and set CONTRAST to normal.
2. Adjust H.STAT VR to coincide red, green and blue dots on the center of screen. (Horizontal movement)
3. Adjust V.STAT magnet to coincide red, green and blue dots on the center of screen. (Vertical movement)

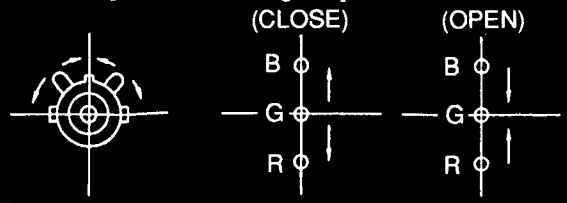


* If the red, green and blue dots do not coincide on the center of screen with H.STAT VR, perform adjustment using V.STAT at the same time while tracking.
(Tilt the V.STAT magnet and adjust static convergence to open or close the V.STAT magnet.)

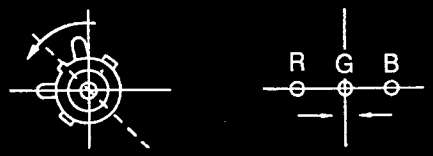


4. When the V.STAT magnet is moved in the direction of arrow A and b, red, green and blue dots move as shown below.

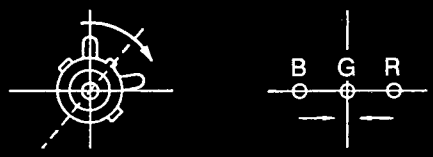
① When moving the V.STAT Magnet open or close.



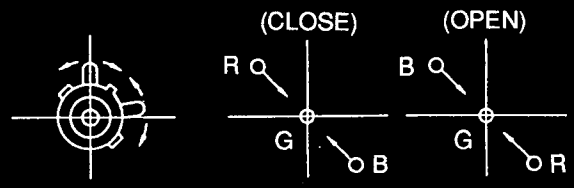
② When moving the V.STAT magnet counterclockwise.



③ When moving the V.STAT magnet clockwise.



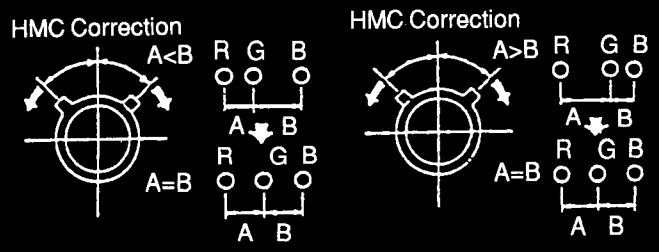
④ When tilt the V.STAT magnet and open or close.



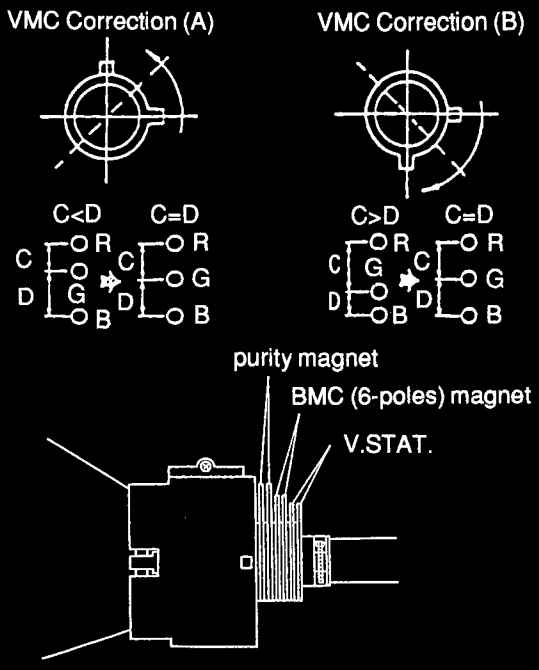
* If the red and green dots do not coincide with blue dot, adjustment with BMC (6-poles) magnet.

5. HMC and VMC correction for BMC (6-Poles) magnet.

① HMC (Horizontal Misconvergence) correction and motion of the Electron Beam with the BMC (6-poles) magnet.

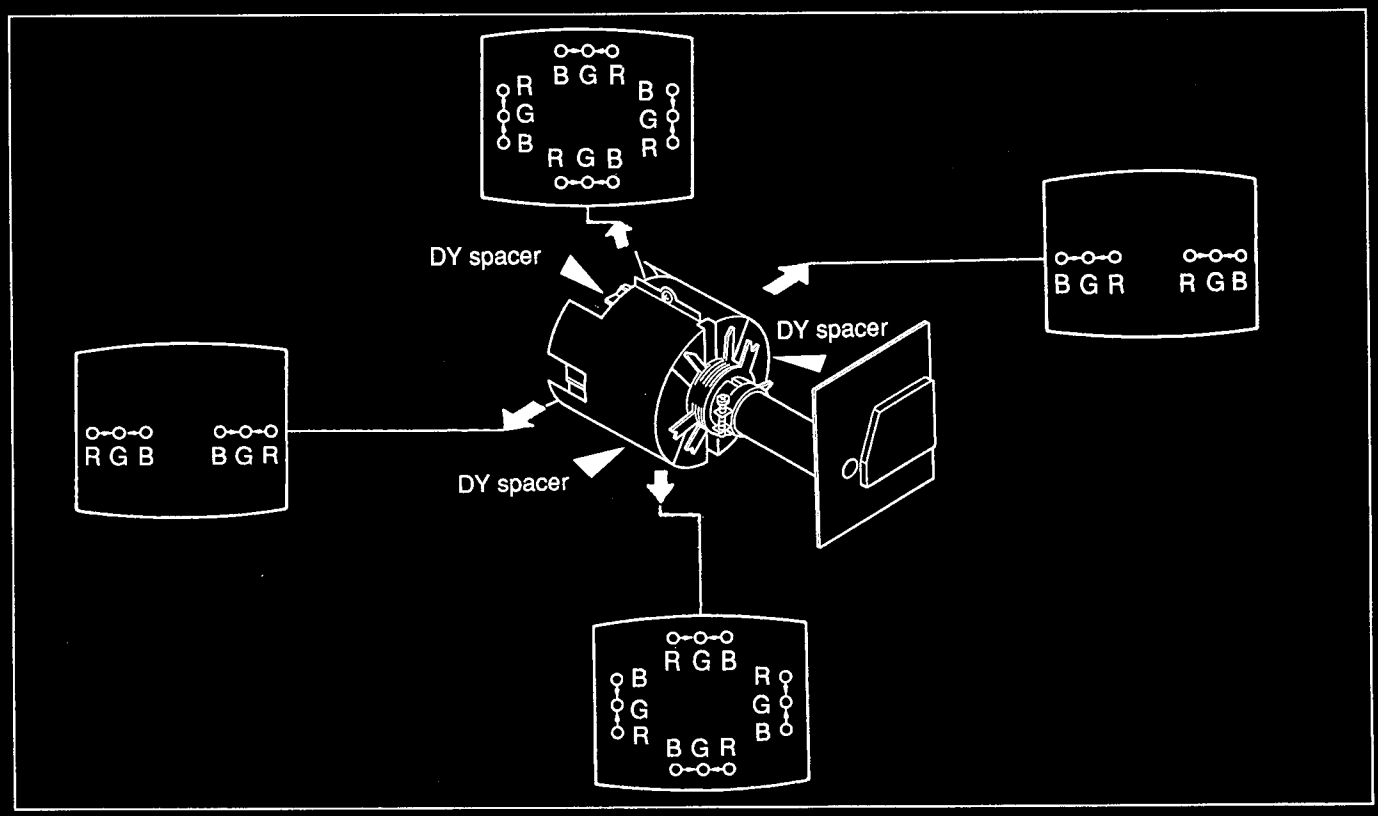


② VMC (Vertical Misconvergence) correction and motion of the Electron Beam with the BMC (6-poles) magnet.

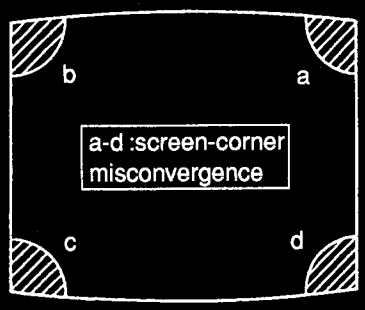


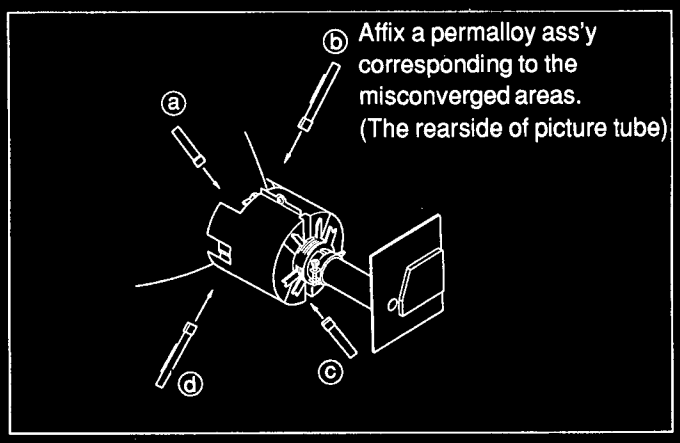
(2) Horizontal and Vertical Dynamic Convergence Adjustment at the Environs of the Screen (Dynamic Convergence Adjustment)

1. When there is misconvergence at the sides of screen, adjust for best convergence as follows by moving the deflection yoke.
2. Loosen deflection yoke screw. Remove deflection yoke spacers. Move the deflection yoke for best convergence. Tighten the deflection yoke screw. Install three deflection yoke spacers.



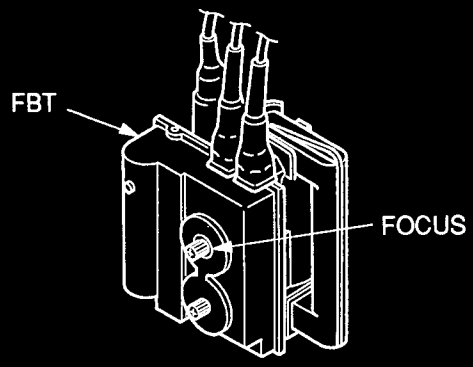
Screen-corner Convergence





3-3. FOCUS

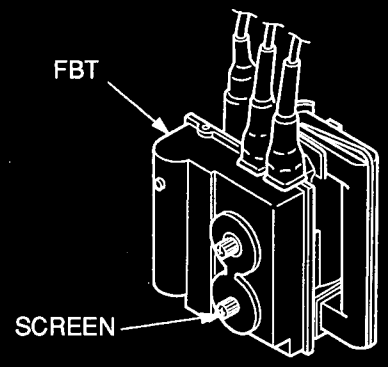
1. Receive the broadcast.
2. CONTRAST → Normal
3. Adjust FOCUS control so that the focus on the center of screen becomes to the best.



3-4. WHITE BALANCE

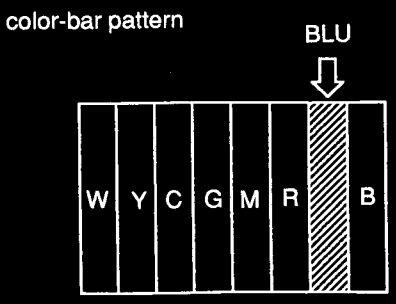
[Screen (G2) Voltage Adjustment]

1. Receive a dot signal with the pattern generator.
2. Adjust R. G. B cut-off controls so that respective cathode voltage against ground becomes 103V DC.
3. Observing the screen, adjust SCREEN control so that the background of the dot signal is bright dimly.



[White Balance]

1. Receive a color-bar pattern signal with the pattern generator. (Make black and white screen by chroma switch off.)
2. • BRIGHTNESS 50%
   • CONTRAST ..... Minimum
   • CHROMA 50%
   • DRIVE control ..... Mechanical center
   • BKG control ..... Mechanical center
3. Adjust RV118 (SUB BRT) on B board so that the blue stripe portion on the color-bar pattern signal is bright dimly.



4. Receive an entirely white signal from the pattern generator.
5. CONTRAST ..... 70% (90 degree clockwise from mechanical center.)
6. Using the luminance level meter, adjust the luminance level of the pattern generator becomes 3 Nits. (The condition the screen is bright dimly.)
7. Adjust white balance at cut-off using RV119 (G-C/O) and RV121 (B-C/0).
8. Change the all-white signal luminance level to 100 IREs.
9. Adjust white balance at high-light using RV120 (G-GAIN) and RV121 (B-GAIN).
10. Change the unit to blue ONLY mode.
11. Adjust white balance (at high-light) in blue ONLY mode using RV124 *R-GAIN/BL) and RV125 (G-GAIN/BL).
12. Using the luminance level meter, adjust the luminance level of the pattern generator becomes 8 Nits. Confirm that white balance at cut-off is satisfactory..

SECTION 4
SAFETY RELATED ADJUSTMENT

4-1. SAFETY RELATED ADJUSTMENTS

B+ MAX CONFIRMATION (☒ RV651)

The following adjustments should always be performed when replacing the following components (marked with ◪ on the schematic diagram).

◪ on G board : (Power supply block)
IC601, IC651, PH602, C655, R653, R655, R656, R657, RV651.

1. For US model, supply 130V $^{+0.5}_{-0}$ V AC with variable auto-transformer.
2. Receive a dot signal.
3. • CONTRAST ..... Minimum
   • BRIGHTNESS ..... Minimum
4. Connect a digital multimeter to RY1601 pin-⑦ of D board.
5. Turn RV651 on the G board fully clockwise. Confirm that the voltage of RY1601 pin-⑦ is less than 41.9V DC.
6. If step 5 is not satisfied, readjust the RV651. After adjusting, fasten RV651 in place with epoxy.

B+ MAX IN DC POWER INPUT MODE, CONFIRMATION (☒ RV1603)

The following adjustments should always be performed when replacing the following components (marked with ◪ on the schematic diagram).

◪ on D board :
Q1601, Q1602, Q1603, D1601, D1602, D1603, D1604, D1605, C1601, C1602, R1601, R1602, R1603, R1604, R1605, R1606, R1607, R1608, R1629, R1628, R1630, RV1601, RV1603.

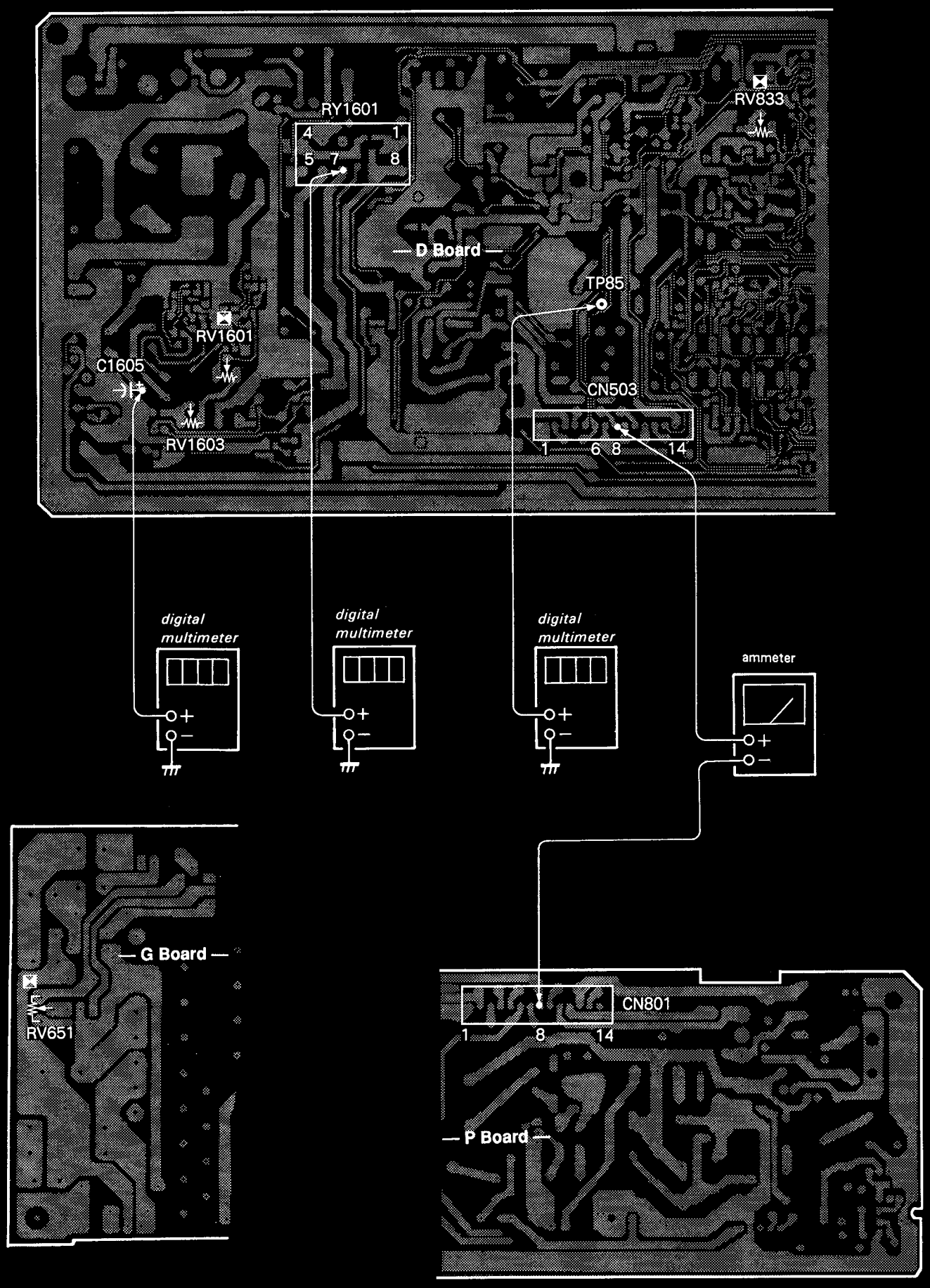
1. Supply DC 12V $^{+0.4}_{-0}$ V from DC 12V IN connector.
2. Receive a dot signal.
3. • CONTRAST ..... Minimum
   • BRIGHTNESS ..... Minimum
4. Connect a digital multimeter to C1605 positive + side of D board.
5. Turn RV1601 on the D board fully clockwise. Confirm that the voltage of C1605 + pin is less than 41.9V DC.
6. If step 5 is not satisfied, readjust the RV1603. After adjusting, fasten RV1603 in place with epoxy.

HOLD-DOWN CIRCUIT CONFIRMATION (☒ RV833) AND READJUSTMENTS

The following adjustments should always be performed when replacing the following components (marked with ◪ on the schematic diagram).

◪ on D board:
IC502, Q833, Q834, Q835, Q836, D835, D836, C519, C814, C843, C844, C845, C846, C847, C848, RV833, R523, R850, R851, R852, R853, R854, R855, R856, R857, R858, R859, R861, R862, R863, NL801.
◪ on P board: NL801, T802 (FBT)

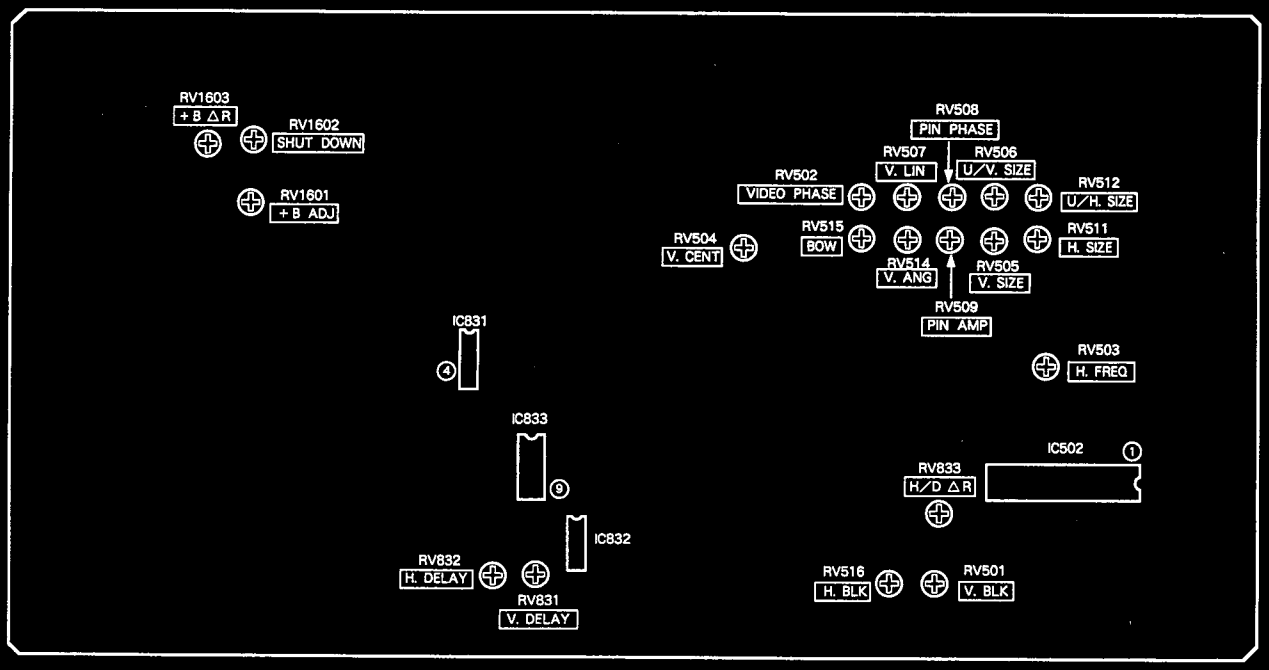
1. Receive an entire white signal.
2. • CONTRAST ..... Maximum
   • BRIGHTNESS ..... Maximum
3. Connect a digital multimeter to the TP85 (CN503 pin-⑥).
4. Confirm the voltage is 14.1 ± 3.0V DC.
5. Receive a dot signal.
6. Connect an ammeter between D board CN503 pin-⑧ and P board CN801 pin-⑧.
7. Adjust BRIGHTNESS and CONTRAST so that the current is IABL = 160 ± 30 μA.
8. Apply an external DC voltage gradually to TP85. When the voltage becomes 18.5V ± 0.1V DC, confirm the HOLD-DOWN circuit operates immediately and raster disappears.
9. When external DC voltage at TP85 becomes 17.5V ± 0.1V DC, confirm the HOLD-DOWN circuit doesn't operate.
10. Receive an entire white signal.
11. Adjust with BRIGHTNESS and CONTRAST controls so that the current is IABL = 520 ± 30 μA.
12. Apply DC voltage of 17.8V ± 0.1V to TP85. Confirm the HOLD-DOWN circuit operates immediately and raster disappears.
13. With the same set-up as steps 10 and 11, supply 16.8V ± 0.1V DC to TP85. Confirm that the HOLD-DOWN circuit doesn't operate.
14. When above specifications are not satisfied, readjust RV833. After adjusting, fasten RV833 in place with epoxy.


RY1601
4
1
5
7
8
RV833
— D Board —
TP85
RV1601
C1605
CN503
RV1603
1
6
8
14
digital multimeter
digital multimeter
digital multimeter
ammeter
— G Board —
RV651
CN801
1
8
14
— P Board —

SECTION 5
CIRCUIT ADJUSTMENTS

5-1. D BOARD ADJUSTMENTS

—D BOARD (COMPONENT SIDE)—

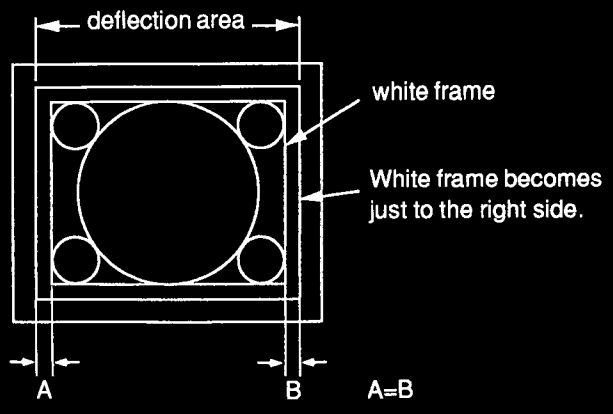


HORIZONTAL OSCILLATION FREQUENCY ADJUSTMENT (RV503)

1. Receive a monoscope signal.
2. Connect pin-① of IC502 to ground with 100μF/16V electrolytic capacitor.
3. Adjust RV503 (H.FREQ) so that the screen streaming to stops.

SCREEN PHASE ADJUSTMENTS (RV502, RV512, RV516)

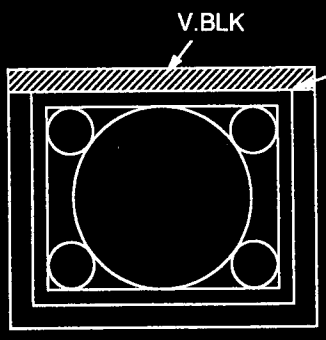
1. Receive a monoscope signal.
2. Set U/S (Under Scan) switch to Under mode.
3. • CONTRAST ..... Minimum
   • BRIGHTNESS ..... Maximum.
4. Adjust RV512 (U/H. SIZE) so that the white frame of monoscope signal becomes visible.
5. Adjust RV516 (H.BLK) for minimum BLKG width so that all the deflection area becomes visible.
6. Adjust RV502 (VIDEO PHASE) so that the monoscope's white frames should have equal width.



H.V BLK ADJUSTMENTS (RV501,RV516)

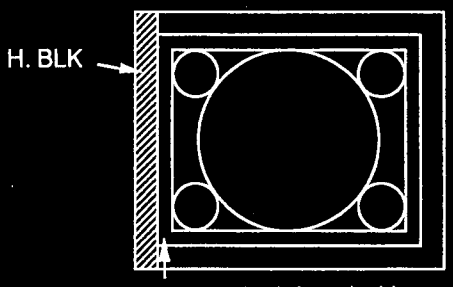
1. Receive a monoscope signal.
2. Set U/S (Under Scan) switch to Under mode.
3. • CONTRAST ..... Minimum
   • BRIGHTNESS ..... Maximum.
4. V. BLK Adjustment (RV501)

(I) Adjust RV501(V. BLK) so that the upper side white frame of monoscope signal is not blanked.



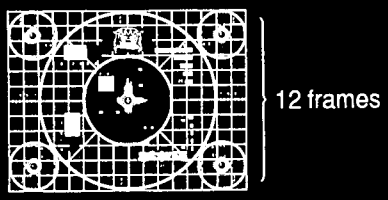
5. H. BLK Adjustment (RV516)

(I) Adjust with RV516 (H. BLK) so that the left end white vertical line of the white frame of monoscope signal is not blanked as following figure.

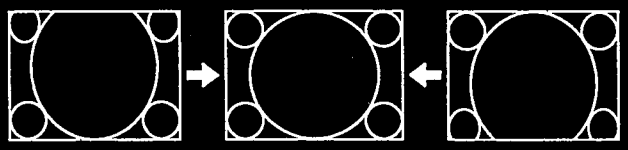


VERTICAL DEFLECTION PART ADJUSTMENTS (RV504, RV505, RV506, RV507)

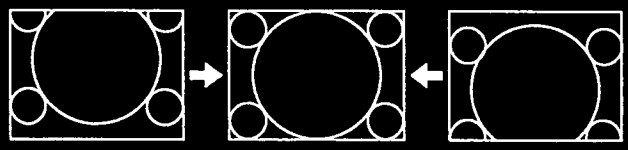
1. Receive a monoscope signal.
2. • CONTRAST 70%
   • BRIGHTNESS 50%
3. Adjust RV505 (V. SIZE) so that the vertical size of monoscope signal becomes 12 frames.



4. Adjust RV507 (V.LIN) the vertical linearity.



5. Adjust RV504 (V. CENT) the vertical position.



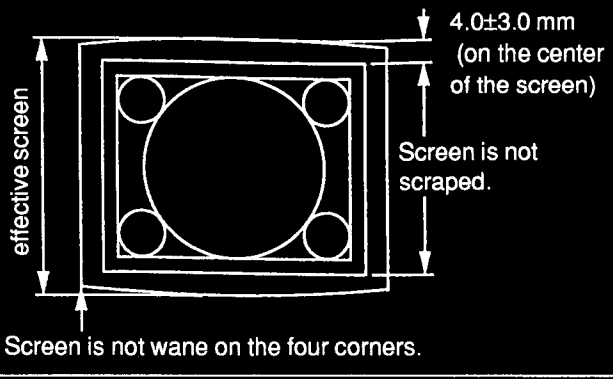
6. V. SIZE ADJUSTMENT (RV505)

(1) Adjust RV505 (V. SIZE) so that the vertical size of monoscope signal becomes 11.75 +0.2 frames.

7. V.SIZE IN UNDERSCAN MODE ADJUSTMENT (RV506)

(1) Set U/S (Under Scan) switch to Under mode.

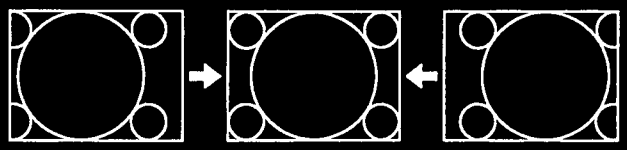
(2) Adjust the Under V.SIZE with RV506 (U/V. SIZE) as follows.



HORIZONTAL DEFLECTION PART ADJUSTMENTS (RV508, RV509, RV511, RV514, RV515, RV801/P board)

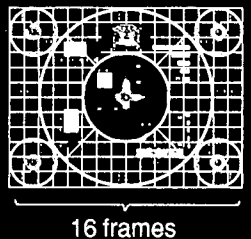
1. Receive a monoscope signal.
2. • CONTRAST 70%
   • BRIGHTNESS 50%
3. H. CENT Adjustment (RV801 on P board)

(1) Adjust RV801 on P board (H. CENT) the horizontal position.



4. H. SIZE Adjustment (RV511)

(1) Adjust RV511 (H. SIZE) the horizontal size of 16 frames of monoscope signal.



5. PIN AMP. PIN PHASE, V. ANG, BOW ADJUSTMENTS (RV508 RV509, RV514, RV515)

Adjust RV514 (V. ANG) and RV515 (BOW) to correct vertical angular distortion and bow distortion. Adjust RV509 (PIN AMP) and RV508 (PIN PHASE) so that vertical lines become straight.

- V. ANG (RV514)

- BOW (RV515)

- PIN AMP (RV509)

- PIN PHASE (RV508)

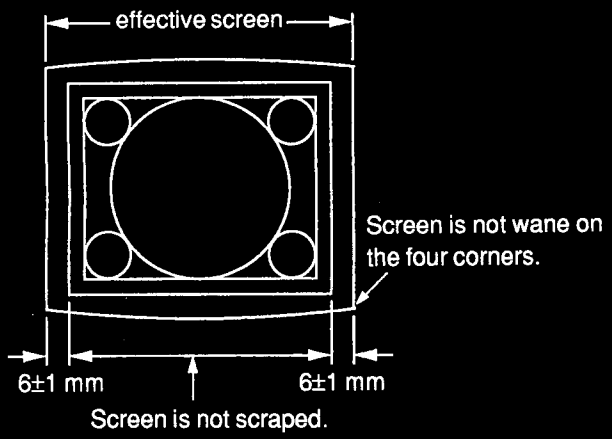
6. H. SIZE ADJUSTMENT (RV511)

(1) Adjust RV511 (H. SIZE) so that the horizontal size becomes 16 ± 0.2 frames.

7. UNDERSCAN MODE H.SIZE ADJUSTMENT (RV512)

(1) Set U/S (Under Scan) switch to Under mode.

(2) Adjust RV512 (U/H. SIZE) the Under H. SIZE as shown in the figure.

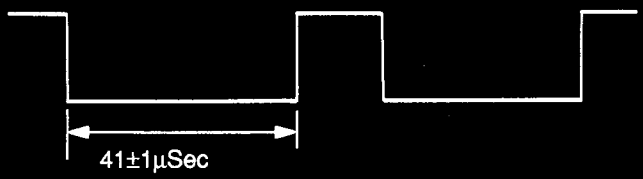


H V DELAY ADJUSTMENT (RV831, RV832)

1. Receive a monoscope signal.
2. • CONTRAST 70%
   • BRIGHTNESS 50%
3. Set H V DELAY switch to DELAY mode.
4. H. DELAY Adjustment (RV832)

(1) Connect an oscilloscope to pin-④ of IC831.

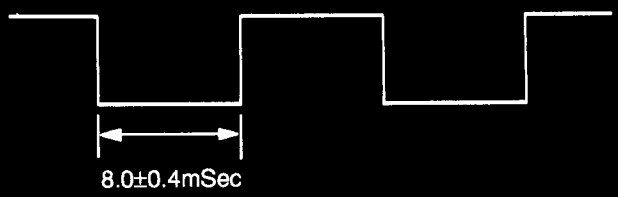
(2) Adjust RV832 (H. DELAY) to becomes 41 ± 1 µsec.



5. V. DELAY Adjustment (RV831)

(1) Connect an oscilloscope to pin-⑨ of IC833.

(2) Adjust RV831 to become 8.0 ± 0.4msec as follows.



SHUT-DOWN VOLTAGE ADJUSTMENT (RV1602)

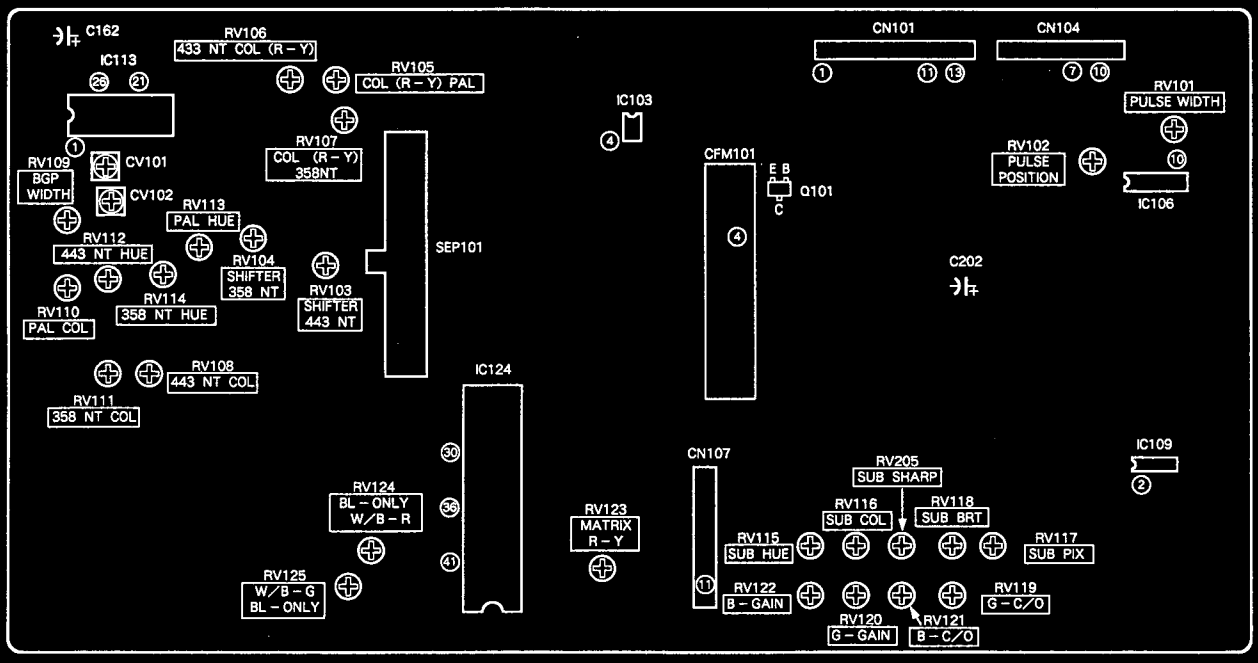
1. Fully rotate RV1602 in the direction that does not shut-down.
2. Supply a 9.4V $^{+0.1}_{-0}$V voltage to the C1602 side of L1602 on the D board.
3. Turn AC power switch ON.
4. Rotate D board RV1602 (SHT DOWN) slowly to the point that shuts-down the unit.

B+ VOLTAGE DURING DC OPERATE MODE, ADJUSTMENT (RV1601)

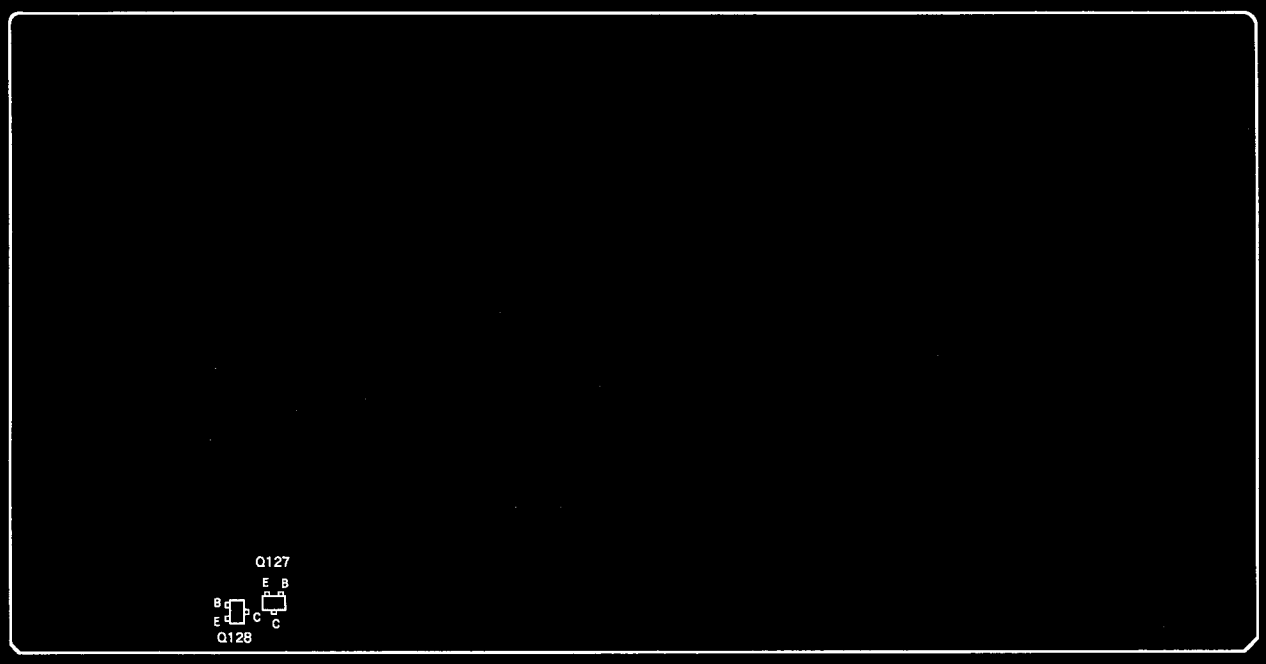
1. Supply DC12V±0.2V to DC 12V IN connector.
2. Receive a monoscope signal.
3. • CONTRAST 80%
   • BRIGHTNESS 50%
4. Connect a digital voltmeter to C1605 + positive side on D board.
5. Adjust RV1601 on the D board for 40.0±0.1V DC.

B BOARD ADJUSTMENT

-B BOARD (COMPONENT SIDE)-

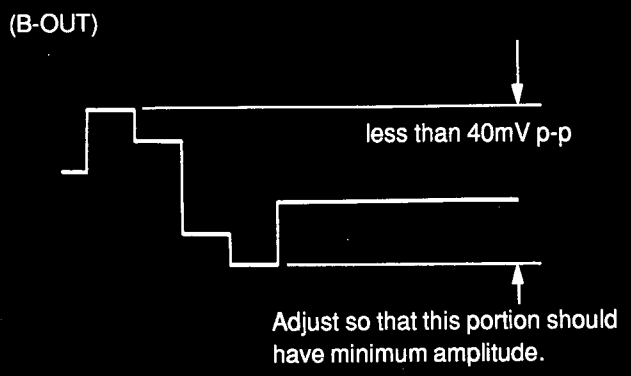


-B BOARD (CONDUCTOR SIDE)-

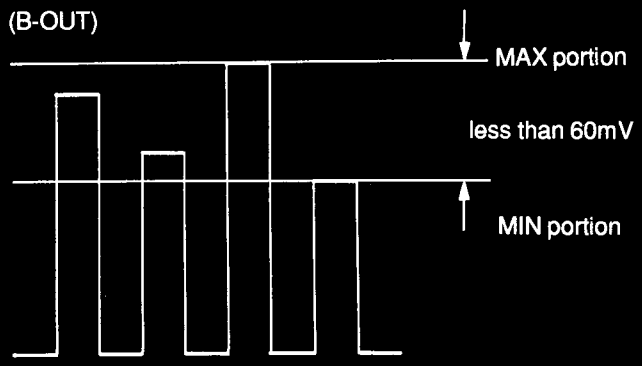


PRIMARY COLOR MATRIX ADJUSTMENT (RV115, RV116, RV123)

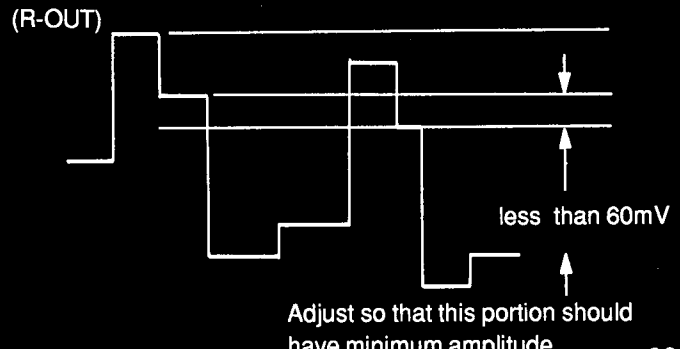
1. Supply component color bar signal (75% chroma color bar) to the equipment so that Y signal is supplied to EXT SYNC and R-Y signal to R-Y connectors Operate the equipment in external sync mode.
2. Connect oscilloscope to IC124 pin-㉚ (B-OUT).
3. Adjust RV115 (SUB HUE) to obtain the Blue output as shown in figure.



4. Supply component color bar signal (75% color bar) to the component input connector to feed R-Y and B-Y signals. Operate the equipment in internal SYNC mode.
5. Connect oscilloscope to IC124 pin-㉚ (SUB-COL). Adjust RV116 (SUB-COL) so that waveform peaks should have the same level.

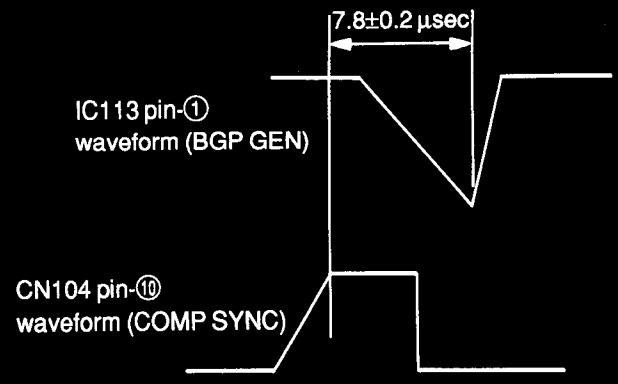


6. Connect oscilloscope to IC124 pin-㊶ (R-OUT).
7. Adjust RV123 ((R-Y)-IN) so that waveform peaks should have the same level.



BURST GATE PULSE WIDTH ADJUSTMENT (RV109)

1. Receive color bar signal.
2. Connect dual trace oscilloscope to CN104 connector pin-⑩ (COMP-SYNC) and IC113 (M51279) pin-① (BGP-WIDTH). Adjust RV109 (BGP-WIDTH) to obtain the relationship as shown in the figure.

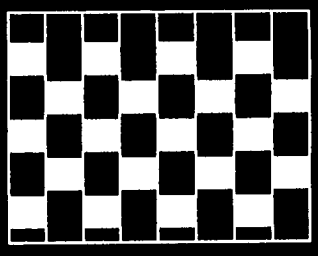


VXO ADJUSTMENT (CV101,CV102)

1. 3.58MHz VXO adjustment (CV101)

(1) Receive NTSC color bar signal.
(2) Connect +5V power line to IC113 pin-㉖ (ID-FILT-REF) via a 4700Ω resistor.
(3) Ground IC109 pin-② by connecting it to ground.
(4) Ground C162 – negative side by connecting it to ground.
(5) Connect frequency counter to IC113 pin-㉑. Adjust CV101 (358FO) for 3579545±20Hz.
(This adjustment can be alternatively done by observing screen as below.)

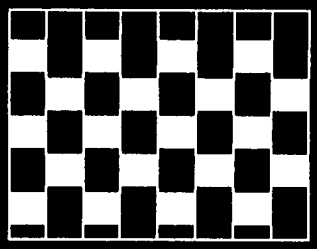
Adjust color synchronization by CV101 (358FO).



Adjust so that color stripes disappear and the hue change is stabilized extremely.

2. 4.43MHz VXO adjustment (CV102)
(1) Receive PAL colour bar signal.
(2) Connect +12V power line to IC109 pin-②.
(3) Connect frequency counter to IC113 pin-㉑. Adjust CV102 (443FO) for 4433619±20Hz.
(This adjustment can be alternatively done by observing screen as below.)

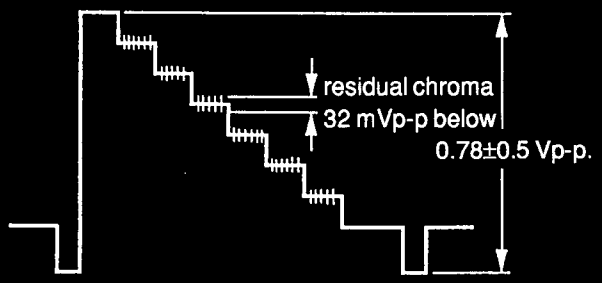
Adjust colour synchronization by CV102(443FO).



Adjust so that colour stripes disappear and the hue change is stabilized extremely.

NTSC COMB FILTER ADJUSTMENT (RV1,T1/CFM101 BOARD)

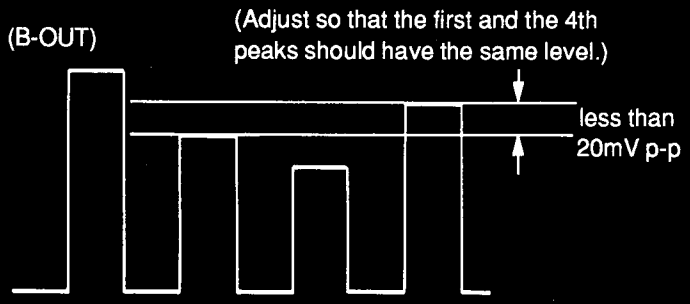
1. Receive NTSC 3.58 color bar signal.
2. Connect an oscilloscope to C202 – negative side.
3. Confirm the Y OUT is 0.78±0.5 Vp p.
4. Confirm the residual chroma is 32 mVp-p below. If it is above 35 mVp p, adjust with RV1 and T1 on CFM201 board while tracking.



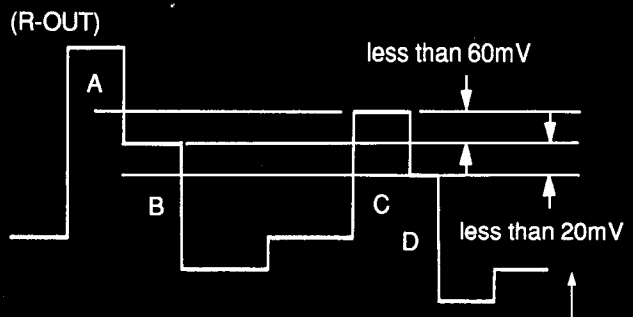
NTSC COLOR DEMODULATION ADJUSTMENT (RV114,RV111,RV104,RV107)

1. NTSC 3.58MHz - HUE adjustment (RV114)
(1) Supply NTSC color bar signal including burst and R-Y component. (For example, Tektronix 1410SG output color bar signal with B-Y component removed.)
(2) Connect an oscilloscope to Q128 emitter (B-Y OUT).
(3) Adjust RV114 (358NT - HUE) so that all the waveform peaks should have equal amplitude (look flat) except burst. (Level difference should be less than 10mV p-p.)

2. NTSC 3.58MHz - COLOR adjustment (RV111)
(1) Receive NTSC 3.58 color bar signal.
(2) Connect an oscilloscope to IC124 pin-㉚ (B-OUT).
(3) Adjust RV111(358NT-COL) so that waveform peaks should have the same level (most flat).



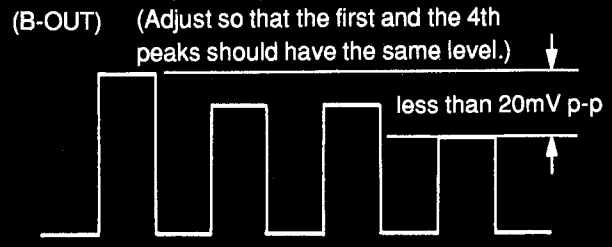
3. NTSC 3.58MHz - COLOR (R-Y) adjustment (RV104, RV107)
(1) Receive the color bar signal.
(2) Connect an oscilloscope to the Q127 emitter (R-Y OUT), and adjust RV104 (358NT-SHIFT) so that the output of the burst section (B-Y axis signal output) becomes 0.
(3) Connect an oscilloscope to IC124 pin-㊶ (R-OUT). Adjust RV107 (358NT-COL (R-Y)) so that the level difference should be minimum.



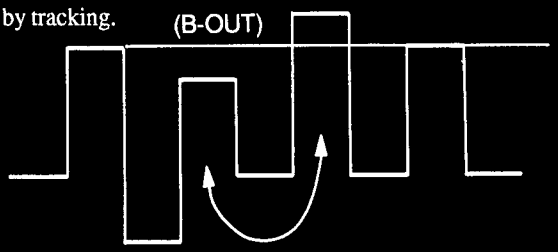
(Adjust for B=D. [less than 20mV] Also level difference between B and C should be less than 60mV.)

NTSC 4.43MHZ COLOR DEMODULATION ADJUSTMENT (RV108,RV112,RV103,RV106)

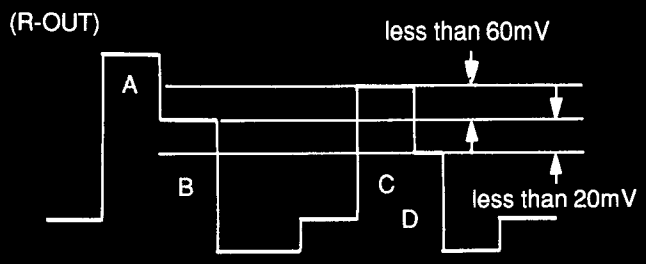
1. NTSC 4.43MHz - COLOR adjustment (RV108,RV112)
(1) Receive NTSC 4.43 color bar signal (75% color bar).
(2) Connect an oscilloscope to IC124 pin-㉚ (B-OUT).
(3) Adjust RV108 (443NT-COL) so that waveform peaks should have the same level (most flat).



(4) When cyan and magenta have level difference, adjust RV112 (443NT-HUE) and RV108 (443NT-COL) alternatively to remove, by tracking.



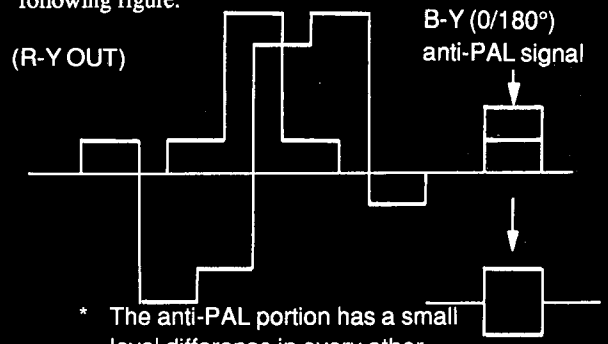
2. NTSC 4.43MHz - COLOR (R-Y) adjustment (RV103, RV106)
(1) Receive the NTSC 4.43 color bar signal (75%, chroma color bar).
(2) Connect an oscilloscope to the Q127 emitter (R-Y OUT), and adjust RV103(443NT-SHIFT) so that the output of the burst section (B-Y axis signal output) becomes 0.
(3) Connect an oscilloscope to IC124 pin-㊶ (R-OUT). Adjust RV106 (443NT-COL (R-Y)) so that the level difference should be minimum.



(Adjust for B=D. [less than 20mV] Also level difference between B and C should be less than 60mV.)

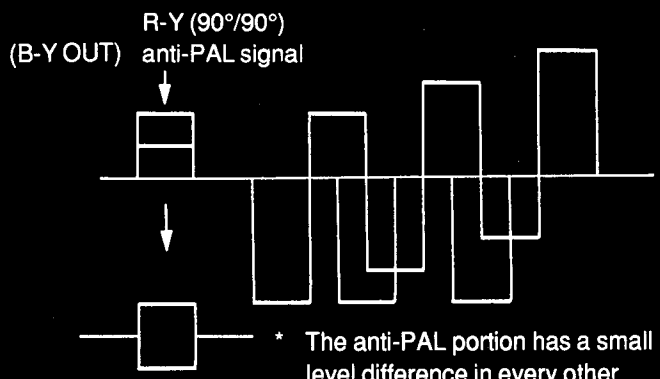
PAL COLOR DEMODULATION ADJUSTMENT (RV113,RV2/SEP101, RV110,RV105,RV205)

1. PAL PHASE Adjustment (RV113,RV2/SEP101)
(1) Receive the special PAL color-bar.
(2) Connect an oscilloscope to emitter of Q127 (R-Y OUT).
(3) Adjust RV113 (PAL-PHASE) so that B-Y (0/180°) anti-PAL portion (in the R-Y demodulated output) becomes "0" (flat) as following figure.



* The anti-PAL portion has a small level difference in every other horizontal period. So, adjust so that average becomes "0".

(4) Connect an oscilloscope to emitter of Q128 (B-Y OUT).
(5) Adjust RV2 inside SEP101 so that R-Y (90°/90°) anti-PAL portion (in B-Y demodulated output) becomes "0" (flat) as following figure.

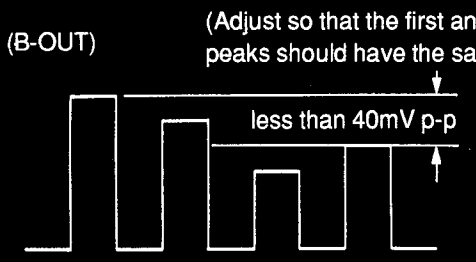


* The anti-PAL portion has a small level difference in every other horizontal period. So, adjust so that average becomes "0".

(For the adjustments of (3) and (5), it is also possible to set the color level to MAX with the chroma adjusting knob of the unit and erase the color of the anti-pal signal section.)

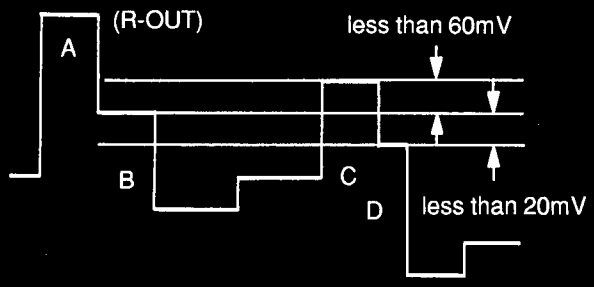
2. PAL COLOR ADJUSTMENT (RV110)

(1) Receive PAL color bar signal (75% color bar).
(2) Connect an oscilloscope to IC124 pin-㉚ (B-OUT).
(3) Adjust RV110 (PAL-COL) so that waveform peaks should have the same level (most flat).



3. PAL-COLOR-(R-Y) ADJUSTMENT (RV105)

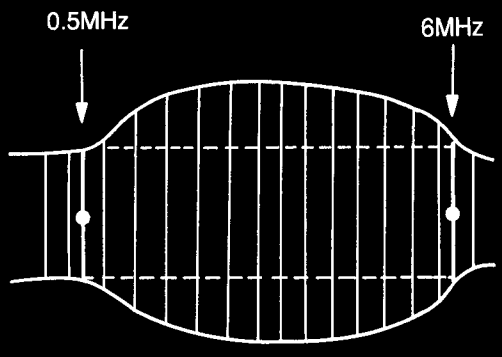
(1) Connect an oscilloscope to IC124 pin-㊶ (R-OUT).
(2) Adjust RV105 (PAL-COL-(R-Y)) so that waveform peaks should have the same level (most flat).



(Adjust for B=D. [less than 20mV] Also level difference between B and C should be less than 60mV.)

SUB-SHARP ADJUSTMENT (RV205)

(1) Receive a sweep signal (or multi-burst).
* • Bandwidth should be more than 10MHz (flat).
  • Composite sync should be included.
  • Turn burst off.
(2) Connect an oscilloscope to IC124 pin-㊱ (G-OUT).
(3) Adjust RV205 (SUB-SHARP) as shown.



Example of sweep signal output waveform

[specification]
6MHz/0.5MHz=0±0.5dB

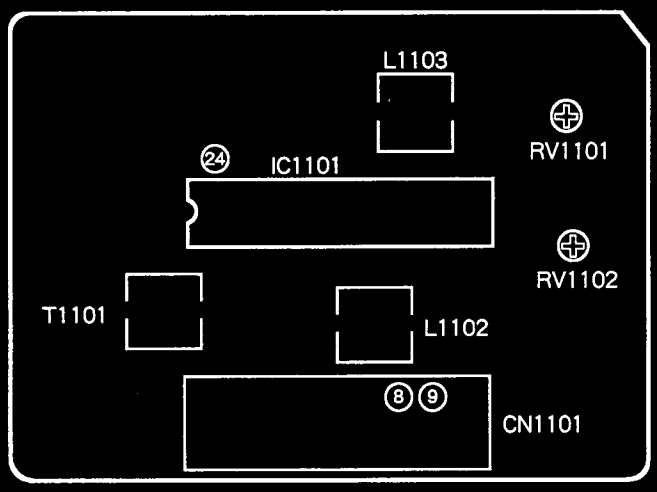
CHROMA H PULSE POSITION ADJUSTMENT (RV101,RV102)

(1) Receive the SECAM color bar signal.
(The left edge of the screen should not be colored.)
(2) Set to the under-scan mode.
(3) Adjust RV101 (PLUSE-WIDTH) until the point immediately before the color on the left edge of the screen disappears.
(4) Release the under-scan mode.
(5) Set the HV DELAY mode.
(6) Adjust RV102 (PULSE-POSI) untill the point immediately before the rising color of the image after back porch diappears.

Note : If image phase adjustment or HV DELAY amount adjustment during HV DELAY is performed after completing the adjustment in this section, re-adjustments will be required. Therefore, performed this adjustment after the two mentioned have been performed.

S BOARD ADJUSTMENTS

—S BOARD (COMPONENT SIDE)—

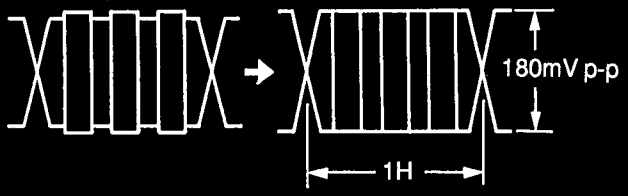


SECAM (T1101,L1102,L1103)

1. Receive SECAM color-bar.
2. Bell Filter Adjustment (T1101)

(1) Connect an oscilloscope to IC1101 pin-㉔.

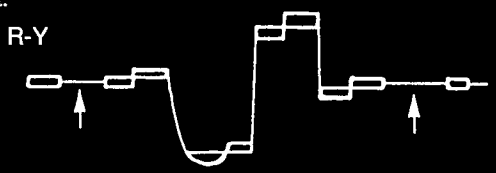
(2) Adjust T1101 (Bell Filter) so that the chroma waveform becomes smooth. (Uneven level should be minimum.)



3. Color Balance Adjustment (L1102,L1103)

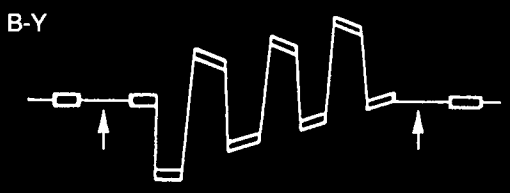
(1) Connect an oscilloscope to pin-⑨ (R-Y) of CN1101 connector.

(2) Adjust L1102 (R-Y) so that the non-colored portion level becomes flat.



(3) Connect an oscilloscope to pin-⑧ (B-Y) of CN1101 connector.

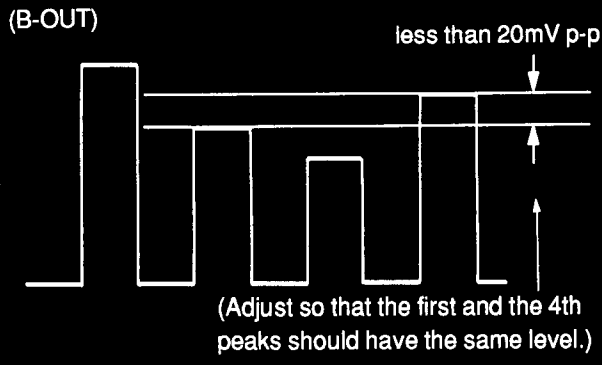
(4) Adjust L1103 (B-Y) so that the non-colored portion level becomes flat.



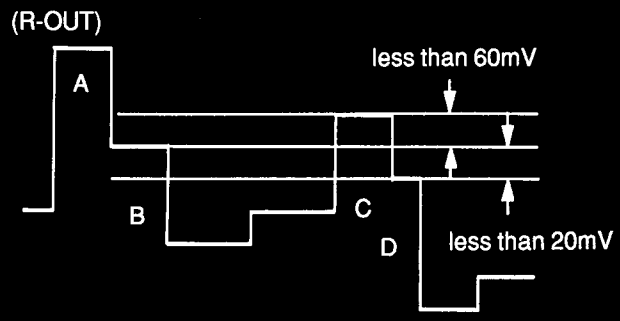
(5) When adjusting the color level of the unit to MAX or MIN using the chroma adjusting knob, check that the white balance of the colorless section does not change.

DEMODULATION LEVEL ADJUSTMENT (RV1101,RV1102)

1. Receive SECAM color-bar.
2. Connect an oscilloscope to IC124 pin-㉚ (B-OUT).
3. Adjust S board RV1101 (SEC-COL) so that waveform peaks should have the same level (most flat).



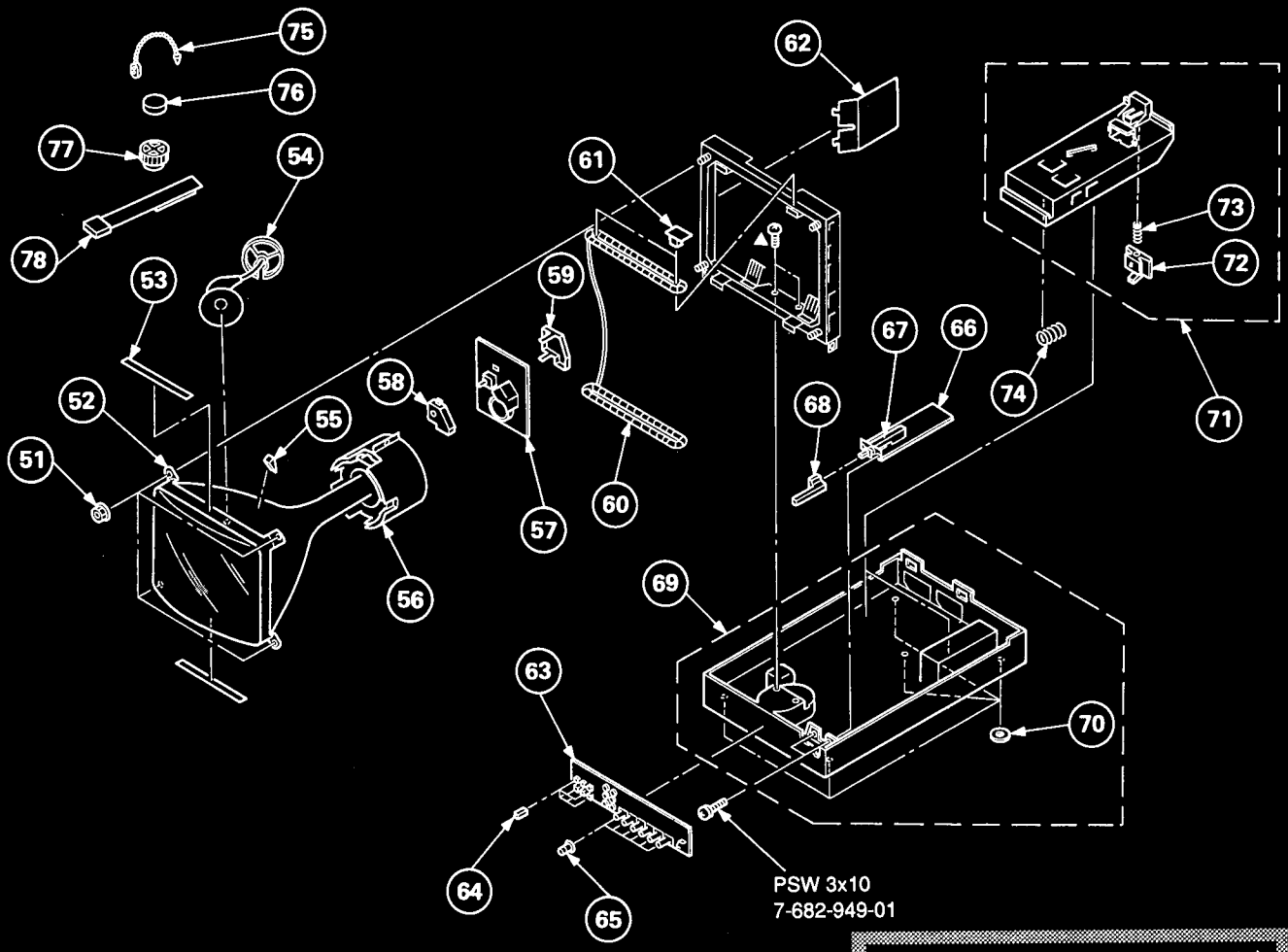
4. Connect an oscilloscope to IC124 pin-㊶ (R-OUT).
5. Adjust S board RV1102 (SEC-COL (R-Y)) so that the level difference should be minimum.



(Adjust for B=D. [less than 20mV] Also level difference between B and C should be less than 60mV.)

7-2. PICTURE TUBE

▲ : BVTP3x12 7-685-648-79



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

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
51	4-304-511-01	FLANGE NUT, 5MM	
52	⚠8-737-151-05	CRT (A20JKU10X) (PVM-8041Q ONLY)	
	⚠8-737-651-05	CRT (M20JMP10X) (PVM-8044Q ONLY)	
53	4-035-332-01	CLOTH, PROTECTION	
54	*4-034-856-01	HOLDER, HV CABLE	
55	4-309-369-03	SPACER, DEFLECTION YOKE	
56	⚠1-451-319-22	DEFLECTION YOKE (Y9FXC)	
57	*1-641-720-11	CA BOARD	
58	*4-376-133-11	COVER (MAIN), CV VOL	
59	*4-376-132-11	COVER (REAR LID), CV VOL	
60	1-426-043-00	COIL, DEGAUSSING	
61	4-380-534-01	CAP, DGC	
62	*4-034-850-02	INSULATOR	
63	*A-1371-782-A	HA BOARD, COMPLETE	
64	4-034-849-01	SWITCH (SMALL), PUSH	
65	X-4030-162-1	KNOB ASSY, CONTROL	
66	*1-641-723-11	FA BOARD	
67	1-692-049-11	SWITCH, PUSH (AC POWER) (1KEY)	
68	4-034-841-01	SWITCH, POWER	
69	*X-4030-166-1	CHASSIS ASSY, BOTTOM	70
70	4-034-840-01	RUBBER, FOOT	
71	*X-4030-163-1	GUIDE ASSY, BATTERY	72,73
72	4-034-861-01	KNOB, BATTERY	
73	4-876-347-01	SPRING, COMPRESSION	
74	3-669-594-00	SPRING, COMPRESSION	
75	4-308-870-00	CLIP, LEAD WIRE	
76	1-452-126-11	MAGNET	
77	1-452-094-00	MAGNET, ROTATABLE DISK; 15MMϕ	
78	X-4308-815-8	PERMALLOY ASSY, CONVERGENCE	

B

SECTION 8
ELECTRICAL PARTS LIST

NOTE:

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

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F: nonflammable

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

CAPACITORS
- MF: μF, PF: μμF

COILS
- MMH: mH, UH: μH

- The components identified by ☒ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
Should replacement be required, replace only with the value originally used.

REF.NO.	PART NO.	DESCRIPTION		REMARK
	A-1135-700-A	B BOARD, COMPLETE		
		**********		
	3-710-578-01	COVER, VOLUME, 6 MOLD		
		<BAND PASS FILTER>		
BPF101	1-236-363-11	FILTER, BAND PASS		
BPF102	1-236-364-11	FILTER, BAND PASS		
		<CAPACITOR>		
C101	1-124-589-11	ELECT 47MF	20%	16V
C102	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C103	1-126-320-11	ELECT 10MF	20%	16V
C104	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C105	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C106	1-124-477-11	ELECT 47MF	20%	16V
C107	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C108	1-124-477-11	ELECT 47MF	20%	16V
C109	1-124-477-11	ELECT 47MF	20%	16V
C110	1-124-120-11	ELECT 220MF	20%	16V
C111	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C112	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C113	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C114	1-124-477-11	ELECT 47MF	20%	16V
C115	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C116	1-124-477-11	ELECT 47MF	20%	16V
C117	1-124-477-11	ELECT 47MF	20%	16V
C118	1-124-477-11	ELECT 47MF	20%	16V
C119	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C120	1-124-477-11	ELECT 47MF	20%	16V
C121	1-124-477-11	ELECT 47MF	20%	16V
C122	1-124-477-11	ELECT 47MF	20%	16V
C123	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C124	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C125	1-124-477-11	ELECT 47MF	20%	16V
C126	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C127	1-124-477-11	ELECT 47MF	20%	16V
C128	1-124-477-11	ELECT 47MF	20%	16V
C129	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C130	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C131	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C132	1-124-589-11	ELECT 47MF	20%	16V
C133	1-124-589-11	ELECT 47MF	20%	16V
C134	1-163-275-11	CERAMIC CHIP 0.001MF	5%	50V
C135	1-163-113-00	CERAMIC CHIP 68PF	5%	50V
C137	1-163-115-00	CERAMIC CHIP 82PF	5%	50V
C138	1-124-589-11	ELECT 47MF	20%	16V
C139	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C140	1-163-688-91	CERAMIC CHIP 0.001MF	5%	50V
C141	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C142	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C143	1-163-121-00	CERAMIC CHIP 150PF	5%	50V
C144	1-163-101-00	CERAMIC CHIP 22PF	5%	50V
C145	1-163-131-00	CERAMIC CHIP 390PF	5%	50V
C146	1-126-157-11	ELECT 10MF	20%	16V
C147	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C148	1-126-160-11	ELECT 1MF	20%	50V
C149	1-163-022-00	CERAMIC CHIP 0.012MF	10%	50V
C150	1-124-589-11	ELECT 47MF	20%	16V
C151	1-163-131-00	CERAMIC CHIP 390PF	5%	50V
C152	1-163-101-00	CERAMIC CHIP 22PF	5%	50V
C153	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C154	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C155	1-163-133-00	CERAMIC CHIP 470PF	5%	50V
C156	1-164-299-11	CERAMIC CHIP 0.22MF	10%	25V
C157	1-163-229-11	CERAMIC CHIP 12PF	5%	50V
C158	1-124-477-11	ELECT 47MF	20%	16V
C159	1-163-229-11	CERAMIC CHIP 12PF	5%	50V
C160	1-163-229-11	CERAMIC CHIP 12PF	5%	50V
C161	1-124-902-00	ELECT 0.47MF	20%	50V
C162	1-124-903-11	ELECT 1MF	20%	50V
C163	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V
C164	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V
C165	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C166	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C167	1-124-477-11	ELECT 47MF	20%	16V
C168	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C169	1-163-243-11	CERAMIC CHIP 47PF	5%	50V
C170	1-163-129-00	CERAMIC CHIP 330PF	5%	50V
C171	1-163-243-11	CERAMIC CHIP 47PF	5%	50V
C172	1-163-129-00	CERAMIC CHIP 330PF	5%	50V
C173	1-124-589-11	ELECT 47MF	20%	16V
C174	1-124-477-11	ELECT 47MF	20%	16V
C175	1-108-792-11	MYLAR 0.001MF	5%	50V
C176	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C177	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C178	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C179	1-126-160-11	ELECT 1MF	20%	50V
C180	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C181	1-126-154-11	ELECT 47MF	20%	6.3V
C182	1-126-163-11	ELECT 4.7MF	20%	16V
C183	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C184	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C185	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C186	1-163-099-00	CERAMIC CHIP 18PF	5%	50V
C187	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C188	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C189	1-163-035-00	CERAMIC CHIP 0.047MF		50V
C190	1-163-121-00	CERAMIC CHIP 150PF	5%	50V
C191	1-163-031-11	CERAMIC CHIP 0.01MF		50V

REF.NO.	PART NO.	DESCRIPTION		REMARK
C192	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C193	1-124-589-11	ELECT 47MF	20%	16V
C194	1-124-589-11	ELECT 47MF	20%	16V
C195	1-124-589-11	ELECT 47MF	20%	16V
C196	1-124-589-11	ELECT 47MF	20%	16V
C197	1-124-589-11	ELECT 47MF	20%	16V
C198	1-124-589-11	ELECT 47MF	20%	16V
C199	1-124-589-11	ELECT 47MF	20%	16V
C202	1-124-589-11	ELECT 47MF	20%	16V
C203	1-124-589-11	ELECT 47MF	20%	16V
C204	1-124-589-11	ELECT 47MF	20%	16V
C205	1-163-101-00	CERAMIC CHIP 22PF	5%	50V
C206	1-164-298-11	CERAMIC CHIP 0.15MF	10%	25V
C207	1-164-298-11	CERAMIC CHIP 0.15MF	10%	25V
C208	1-163-101-00	CERAMIC CHIP 22PF	5%	50V
C209	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C210	1-124-589-11	ELECT 47MF	20%	16V
C211	1-124-589-11	ELECT 47MF	20%	16V
C212	1-124-589-11	ELECT 47MF	20%	16V
C213	1-124-589-11	ELECT 47MF	20%	16V
C214	1-126-157-11	ELECT 10MF	20%	16V
C215	1-126-157-11	ELECT 10MF	20%	16V
C216	1-126-157-11	ELECT 10MF	20%	16V
C217	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C218	1-164-298-11	CERAMIC CHIP 0.15MF	10%	25V
C219	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C220	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C221	1-124-903-11	ELECT 1MF	20%	50V
C222	1-163-093-00	CERAMIC CHIP 10PF	5%	50V
C223	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C225	1-124-477-11	ELECT 47MF	20%	16V
C226	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C227	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C228	1-163-986-00	CERAMIC CHIP 0.027MF	10%	25V
C229	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C230	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C231	1-163-986-00	CERAMIC CHIP 0.027MF	10%	25V
C232	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C233	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C234	1-163-038-00	CERAMIC CHIP 0.1MF		25V
C235	1-163-986-00	CERAMIC CHIP 0.027MF	10%	25V
C236	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C237	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C238	1-164-299-11	CERAMIC CHIP 0.22MF	10%	25V
C239	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V
C240	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V
C241	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V
C242	1-163-113-00	CERAMIC CHIP 68PF	5%	50V
C243	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C244	1-163-103-00	CERAMIC CHIP 27PF	5%	50V
C245	1-163-105-00	CERAMIC CHIP 33PF	5%	50V
C246	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V
C247	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V
C248	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V
C249	1-126-101-11	ELECT 100MF	20%	16V
C250	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V
C251	1-110-364-11	MYLAR 0.1MF	10%	200V
C252	1-123-935-00	ELECT 33MF	20%	160V
C253	1-124-477-11	ELECT 47MF	20%	16V
C254	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C255	1-124-477-11	ELECT 47MF	20%	16V
C256	1-163-129-00	CERAMIC CHIP 330PF	5%	50V
C257	1-163-129-00	CERAMIC CHIP 330PF	5%	50V
C258	1-163-129-00	CERAMIC CHIP 330PF	5%	50V
C259	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C260	1-124-465-00	ELECT 0.47MF	20%	50V
C261	1-137-193-11	FILM 0.39MF	5%	50V
C262	1-124-465-00	ELECT 0.47MF	20%	50V
C264	1-163-123-00	CERAMIC CHIP 180PF	5%	50V
C265	1-163-129-00	CERAMIC CHIP 330PF	5%	50V
C266	1-126-320-11	ELECT 10MF	20%	16V
C267	1-126-320-11	ELECT 10MF	20%	16V
C268	1-124-477-11	ELECT 47MF	20%	16V
C269	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C270	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C271	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V
C272	1-163-129-00	CERAMIC CHIP 330PF	5%	50V
C273	1-163-129-00	CERAMIC CHIP 330PF	5%	50V
C274	1-124-477-11	ELECT 47MF	20%	16V
C275	1-163-119-00	CERAMIC CHIP 120PF	5%	50V
C277	1-163-097-00	CERAMIC CHIP 15PF	5%	50V
C278	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V
C279	1-126-157-11	ELECT 10MF	20%	16V
C280	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C281	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C282	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C283	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C299	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C300	1-126-157-11	ELECT 10MF	20%	16V
C301	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V
C302	1-124-589-11	ELECT 47MF	20%	16V
C303	1-126-157-11	ELECT 10MF	20%	16V
C304	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C305	1-124-257-00	ELECT 2.2MF	20%	50V
C306	1-163-115-00	CERAMIC CHIP 82PF	5%	50V
C307	1-163-145-00	CERAMIC CHIP 0.0015MF	5%	50V
C308	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C309	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C310	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C312	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C313	1-163-115-00	CERAMIC CHIP 82PF	5%	50V
C314	1-126-157-11	ELECT 10MF	20%	16V
C315	1-164-299-11	CERAMIC CHIP 0.22MF	10%	25V
C316	1-126-157-11	ELECT 10MF	20%	16V
C317	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C318	1-163-095-00	CERAMIC CHIP 12PF	5%	50V
C319	1-163-095-00	CERAMIC CHIP 12PF	5%	50V
C320	1-163-095-00	CERAMIC CHIP 12PF	5%	50V
C321	1-163-121-00	CERAMIC CHIP 150PF	5%	50V
C322	1-163-121-00	CERAMIC CHIP 150PF	5%	50V
C324	1-163-121-00	CERAMIC CHIP 150PF	5%	50V
C340	1-163-688-91	CERAMIC CHIP 0.001MF	5%	50V
C344	1-163-092-00	CERAMIC CHIP 9PF	0.25PF	50V
C345	1-163-109-00	CERAMIC CHIP 47PF	5%	50V
C346	1-163-109-00	CERAMIC CHIP 47PF	5%	50V
C347	1-163-109-00	CERAMIC CHIP 47PF	5%	50V
C1293	1-163-119-00	CERAMIC CHIP 120PF	5%	50V
C1294	1-163-119-00	CERAMIC CHIP 120PF	5%	50V
C1295	1-163-119-00	CERAMIC CHIP 120PF	5%	50V
C1296	1-163-115-00	CERAMIC CHIP 82PF	5%	50V
C1297	1-163-103-00	CERAMIC CHIP 27PF	5%	50V
C1298	1-163-113-00	CERAMIC CHIP 68PF	5%	50V
C1299	1-163-093-00	CERAMIC CHIP 10PF	5%	50V
C1300	1-126-160-11	ELECT 1MF	20%	50V
C1301	1-126-160-11	ELECT 1MF	20%	50V
C1302	1-126-160-11	ELECT 1MF	20%	50V

B

REF.NO.	PART NO.	DESCRIPTION	REMARK
C1303	1-126-160-11	ELECT 1MF 20% 50V	
		<FILTER BLOCK>	
CFM101	1-464-880-11	FILTER BLOCK, COM (CFB-2)	
		<CONNECTOR>	
CN101	1-506-480-11	PIN, CONNECTOR 15P	
CN102	*1-564-506-11	PLUG, CONNECTOR 3P	
CN103	*1-565-503-11	CONNECTOR, BOARD TO BOARD 12P	
CN104	1-506-477-11	PIN, CONNECTOR 12P	
CN105	*1-564-509-11	PLUG, CONNECTOR 6P	
CN106	1-506-473-11	PIN, CONNECTOR 8P	
CN107	1-506-478-11	PIN, CONNECTOR 13P	
CN108	*1-564-506-11	PLUG, CONNECTOR 3P	
		<TRAP MODULE>	
CTR101	1-236-366-11	MODULE, TRAP	
CTR102	1-236-365-11	MODULE, TRAP	
		<TRIMMER>	
CV101	1-141-245-00	CAP, TRIMMER	
CV102	1-141-245-00	CAP, TRIMMER	
		<DIODE>	
D101	8-719-404-46	DIODE MA110	
D102	8-719-404-46	DIODE MA110	
D103	8-719-404-46	DIODE MA110	
D104	8-719-404-46	DIODE MA110	
D105	8-719-404-46	DIODE MA110	
D106	8-719-404-46	DIODE MA110	
D107	8-719-404-46	DIODE MA110	
D108	8-719-404-46	DIODE MA110	
D109	8-719-404-46	DIODE MA110	
D110	8-719-404-46	DIODE MA110	
D111	8-719-404-46	DIODE MA110	
D112	8-719-404-46	DIODE MA110	
D113	8-719-404-46	DIODE MA110	
D114	8-719-404-46	DIODE MA110	
D115	8-719-404-46	DIODE MA110	
D116	8-719-404-46	DIODE MA110	
D117	8-719-404-46	DIODE MA110	
D118	8-719-404-46	DIODE MA110	
D119	8-719-404-46	DIODE MA110	
D120	8-719-404-46	DIODE MA110	
D121	8-719-404-46	DIODE MA110	
D122	8-719-404-46	DIODE MA110	
D123	8-719-404-46	DIODE MA110	
D125	8-719-404-46	DIODE MA110	
D126	8-719-404-46	DIODE MA110	
D127	8-719-404-46	DIODE MA110	
D128	8-719-400-18	DIODE MA152WK	
D129	8-719-404-46	DIODE MA110	
D130	8-719-800-76	DIODE 1SS226	
D131	8-719-800-76	DIODE 1SS226	
D132	8-719-800-76	DIODE 1SS226	
D133	8-719-404-46	DIODE MA110	
D134	8-719-404-46	DIODE MA110	
D135	8-719-404-46	DIODE MA110	
D136	8-719-404-46	DIODE MA110	
D137	8-719-404-46	DIODE MA110	
D138	8-719-404-46	DIODE MA110	
D139	8-719-404-46	DIODE MA110	
D142	8-719-404-46	DIODE MA110	
D143	8-719-404-46	DIODE MA110	
D144	8-719-404-46	DIODE MA110	
D145	8-719-404-46	DIODE MA110	
D146	8-719-404-46	DIODE MA110	
D147	8-719-404-46	DIODE MA110	
D148	8-719-404-46	DIODE MA110	
D149	8-719-404-46	DIODE MA110	
D150	8-719-404-46	DIODE MA110	
D151	8-719-404-46	DIODE MA110	
D152	8-719-404-46	DIODE MA110	
D153	8-719-977-20	DIODE DTZ8.2B	
D154	8-719-404-46	DIODE MA110	
D155	8-719-404-46	DIODE MA110	
D156	8-719-404-46	DIODE MA110	
D157	8-719-901-83	DIODE 1SS83	
D158	8-719-901-83	DIODE 1SS83	
D159	8-719-901-83	DIODE 1SS83	
D160	8-719-404-46	DIODE MA110	
D161	8-719-404-46	DIODE MA110	
D162	8-719-404-46	DIODE MA110	
D170	8-719-404-46	DIODE MA110	
D171	8-719-404-46	DIODE MA110	
D172	8-719-404-46	DIODE MA110	
D285	8-719-404-46	DIODE MA110	
D289	8-719-404-46	DIODE MA110	
D341	8-719-404-46	DIODE MA110	
D342	8-719-104-34	DIODE 1S2836	
D343	8-719-800-76	DIODE 1SS226	
D344	8-719-105-99	DIODE RD6.2M-B1	
D345	8-719-901-83	DIODE 1SS83	
D346	8-719-901-83	DIODE 1SS83	
D347	8-719-901-83	DIODE 1SS83	
D348	8-719-800-76	DIODE 1SS226	
D349	8-719-800-76	DIODE 1SS226	
D350	8-719-800-76	DIODE 1SS226	
D393	8-719-404-46	DIODE MA110	
		<DELAY LINE>	
DL101	1-415-632-11	DELAY LINE, Y	
DL102	1-415-633-11	DELAY LINE, Y	
		<IC>	
IC101	8-759-048-09	IC MM1148XF	
IC102	8-759-501-21	IC MM1149XF	
IC103	8-759-501-21	IC MM1149XF	
IC104	8-759-501-21	IC MM1149XF	
IC105	8-759-048-09	IC MM1148XF	
IC106	8-759-009-51	IC MC14538BF	
IC107	8-759-509-57	IC XRU4584BF	
IC108	8-759-509-17	IC XRU4053BF	
IC109	8-759-509-37	IC XRU4070BF	
IC110	8-759-509-17	IC XRU4053BF	
IC111	8-759-509-17	IC XRU4053BF	
IC112	8-759-924-12	IC LM7805CT	

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC113	8-759-631-08	IC M51279FP	
IC114	8-759-509-13	IC XRU4052BF	
IC115	8-759-509-13	IC XRU4052BF	
IC116	8-759-509-05	IC XRU4066BF	
IC117	8-759-711-32	IC NJM2245M	
IC118	8-759-711-32	IC NJM2245M	
IC119	8-759-711-32	IC NJM2245M	
IC120	8-759-509-05	IC XRU4066BF	
IC121	8-759-509-17	IC XRU4053BF	
IC122	8-759-998-98	IC LM358D	
IC123	8-759-998-98	IC LM358D	
IC124	8-752-052-62	IC CXA1478S	
IC125	8-759-509-05	IC XRU4066BF	
IC126	8-759-509-17	IC XRU4053BF	
IC127	8-759-998-98	IC LM358D	
IC128	8-759-998-98	IC LM358D	
IC129	8-759-998-98	IC LM358D	
		<COIL>	
L101	1-410-470-11	INDUCTOR 10UH	
L102	1-410-090-41	INDUCTOR 18MMH	
L103	1-412-002-31	INDUCTOR CHIP 4.7UH	
L104	1-412-002-31	INDUCTOR CHIP 4.7UH	
L105	1-412-002-31	INDUCTOR CHIP 4.7UH	
L106	1-410-470-11	INDUCTOR 10UH	
L107	1-410-470-11	INDUCTOR 10UH	
L108	1-408-418-00	INDUCTOR 56UH	
L109	1-408-418-00	INDUCTOR 56UH	
L110	1-408-418-00	INDUCTOR 56UH	
L112	1-408-419-00	INDUCTOR 68UH	
L113	1-410-947-31	INDUCTOR CHIP 33UH	
L114	1-410-947-31	INDUCTOR CHIP 33UH	
L115	1-410-947-31	INDUCTOR CHIP 33UH	
L116	1-412-011-31	INDUCTOR CHIP 27UH	
L117	1-412-011-31	INDUCTOR CHIP 27UH	
L118	1-412-011-31	INDUCTOR CHIP 27UH	
L250	1-410-997-31	INDUCTOR CHIP 2.2UH	
L251	1-410-999-11	INDUCTOR CHIP 3.3UH	
L252	1-410-478-11	INDUCTOR 47UH	
L300	1-410-482-31	INDUCTOR 100UH	
		<TRANSISTOR>	
Q101	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q102	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q103	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q104	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q105	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q106	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q107	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q108	8-729-216-22	TRANSISTOR 2SA1162-G	
Q109	8-729-901-01	TRANSISTOR DTC144EK	
Q112	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q113	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q114	8-729-216-22	TRANSISTOR 2SA1162-G	
Q115	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q116	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q117	8-729-216-22	TRANSISTOR 2SA1162-G	
Q118	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q119	8-729-216-22	TRANSISTOR 2SA1162-G	
Q120	8-729-216-22	TRANSISTOR 2SA1162-G	
Q121	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q122	8-729-216-22	TRANSISTOR 2SA1162-G	
Q123	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q124	8-729-216-22	TRANSISTOR 2SA1162-G	
Q125	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q126	8-729-901-01	TRANSISTOR DTC144EK	
Q127	8-729-216-22	TRANSISTOR 2SA1162-G	
Q128	8-729-216-22	TRANSISTOR 2SA1162-G	
Q129	8-729-901-01	TRANSISTOR DTC144EK	
Q130	8-729-216-22	TRANSISTOR 2SA1162-G	
Q131	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q132	8-729-216-22	TRANSISTOR 2SA1162-G	
Q133	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q134	8-729-901-01	TRANSISTOR DTC144EK	
Q135	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q136	8-729-907-26	TRANSISTOR IMX1	
Q137	8-729-907-26	TRANSISTOR IMX1	
Q138	8-729-907-26	TRANSISTOR IMX1	
Q139	8-729-216-22	TRANSISTOR 2SA1162-G	
Q140	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q141	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q142	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q143	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q144	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q145	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q146	8-729-255-12	TRANSISTOR 2SC2551-O	
Q147	8-729-255-12	TRANSISTOR 2SC2551-O	
Q148	8-729-216-22	TRANSISTOR 2SA1162-G	
Q149	8-729-200-17	TRANSISTOR 2SA1091-O	
Q150	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q151	8-729-216-22	TRANSISTOR 2SA1162-G	
Q152	8-729-200-17	TRANSISTOR 2SA1091-O	
Q153	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q154	8-729-216-22	TRANSISTOR 2SA1162-G	
Q155	8-729-200-17	TRANSISTOR 2SA1091-O	
Q157	8-729-326-11	TRANSISTOR 2SC2611	
Q158	8-729-326-11	TRANSISTOR 2SC2611	
Q159	8-729-326-11	TRANSISTOR 2SC2611	
Q160	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q161	8-729-216-22	TRANSISTOR 2SA1162-G	
Q162	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q163	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q164	8-729-901-01	TRANSISTOR DTC144EK	
Q165	8-729-216-22	TRANSISTOR 2SA1162-G	
Q166	8-729-216-22	TRANSISTOR 2SA1162-G	
Q167	8-729-216-22	TRANSISTOR 2SA1162-G	
Q168	8-729-216-22	TRANSISTOR 2SA1162-G	
Q170	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q171	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q172	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q173	8-729-216-22	TRANSISTOR 2SA1162-G	
Q174	8-729-216-22	TRANSISTOR 2SA1162-G	
Q175	8-729-216-22	TRANSISTOR 2SA1162-G	
Q176	8-729-216-22	TRANSISTOR 2SA1162-G	
Q177	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q178	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q179	8-729-901-01	TRANSISTOR DTC144EK	
Q190	8-729-216-22	TRANSISTOR 2SA1162-G	
Q191	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q192	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q193	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q194	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q195	8-729-216-22	TRANSISTOR 2SA1162-G	
Q196	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q197	8-729-216-22	TRANSISTOR 2SA1162-G	

B

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q198	8-729-216-22	TRANSISTOR 2SA1162-G	
Q199	8-729-216-22	TRANSISTOR 2SA1162-G	
Q200	8-729-901-06	TRANSISTOR DTA144EK	
Q201	8-729-216-22	TRANSISTOR 2SA1162-G	
Q202	8-729-216-22	TRANSISTOR 2SA1162-G	
Q203	8-729-216-22	TRANSISTOR 2SA1162-G	
Q204	8-729-216-22	TRANSISTOR 2SA1162-G	
Q205	8-729-216-22	TRANSISTOR 2SA1162-G	
Q206	8-729-216-22	TRANSISTOR 2SA1162-G	
Q207	8-729-901-01	TRANSISTOR DTC144EK	
Q208	8-729-216-22	TRANSISTOR 2SA1162-G	
Q209	8-729-255-12	TRANSISTOR 2SC2551-O	
Q210	8-729-255-12	TRANSISTOR 2SC2551-O	
Q211	8-729-255-12	TRANSISTOR 2SC2551-O	
Q212	8-729-109-44	TRANSISTOR 2SK94-X4	
Q299	8-729-920-74	TRANSISTOR 2SC2412K-QR	

<RESISTOR>

JR105	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR110	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR118	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR133	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR138	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR178	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R101	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R102	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R103	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R104	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R105	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R106	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R107	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R108	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R109	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R110	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R111	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R112	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R113	1-249-401-11	CARBON	47	5%	1/4W	F
R114	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R115	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R117	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R118	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R119	1-216-647-11	METAL CHIP	680	0.50%	1/10W	
R120	1-216-647-11	METAL CHIP	680	0.50%	1/10W	
R121	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R122	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R123	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R124	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R125	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R126	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R127	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R128	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R129	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R130	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R131	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R132	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R133	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R134	1-216-645-11	METAL CHIP	560	0.50%	1/10W	
R135	1-216-645-11	METAL CHIP	560	0.50%	1/10W	
R136	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R137	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R138	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W	
R139	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R140	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W	
R141	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R142	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R143	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R145	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R146	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R147	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R148	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R155	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W	
R157	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R158	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R160	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R161	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R163	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R164	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R165	1-216-107-00	METAL GLAZE	270K	5%	1/10W	
R166	1-216-681-11	METAL CHIP	18K	0.50%	1/10W	
R167	1-216-635-11	METAL CHIP	220	0.50%	1/10W	
R168	1-216-103-00	METAL GLAZE	180K	5%	1/10W	
R169	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R170	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R171	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R172	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R173	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R174	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R175	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R176	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R177	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R178	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R179	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R180	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R181	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R182	1-216-683-11	METAL CHIP	22K	0.50%	1/10W	
R183	1-216-691-11	METAL CHIP	47K	0.50%	1/10W	
R184	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R185	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R186	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R187	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R188	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R189	1-216-103-00	METAL GLAZE	180K	5%	1/10W	
R190	1-216-107-00	METAL GLAZE	270K	5%	1/10W	
R191	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R192	1-216-103-00	METAL GLAZE	180K	5%	1/10W	
R193	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R194	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R195	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R196	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R197	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R198	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R199	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R200	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R201	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R202	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R203	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R204	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R205	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R206	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R207	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R208	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R209	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R210	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R211	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R212	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R213	1-216-043-00	METAL GLAZE	560	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R214	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R215	1-216-125-00	METAL GLAZE	1.5M	5%	1/10W	
R216	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R217	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R218	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R219	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R220	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R221	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R222	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R223	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R224	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R225	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R226	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R227	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R228	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R229	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R230	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R231	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R232	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R233	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R234	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R235	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R236	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R237	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R238	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R239	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R240	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R241	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R242	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R243	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R244	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R245	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R246	1-216-103-00	METAL GLAZE	180K	5%	1/10W	
R247	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R248	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R249	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R250	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R251	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R252	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R253	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R254	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R255	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R256	1-216-107-00	METAL GLAZE	270K	5%	1/10W	
R258	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R259	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R260	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R261	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R262	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R263	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R264	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R265	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R266	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R267	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R268	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R269	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R270	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R271	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R272	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R273	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R275	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R276	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R277	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R278	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R279	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R280	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R281	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R282	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R283	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R284	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R285	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R286	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R287	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R288	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R289	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R290	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R291	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R292	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R293	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R295	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R296	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R297	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R298	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R300	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R301	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R302	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R303	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R304	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R305	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R306	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R307	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R308	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R309	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R310	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R311	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R312	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R313	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R314	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R315	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R316	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R317	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R318	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R319	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R320	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R321	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R322	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R323	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R324	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R325	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R326	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R328	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R329	1-216-107-00	METAL GLAZE	270K	5%	1/10W	
R330	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R331	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R332	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R333	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R334	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R335	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R336	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R337	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R338	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R339	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R340	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R341	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R342	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R343	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	

B P FA

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

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

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<MODULE>				
SEP101	1-808-654-11	MODULE				
		<CRYSTAL>				
X101	1-527-722-00	OSCILLATOR, CRYSTAL				
X102	1-577-259-11	VIBRATOR, CRYSTAL				
**********						
	*A-1195-048-A	P BOARD, COMPLETE				
		**********				
		<CAPACITOR>				
C801	1-126-104-11	ELECT	470MF	20%	35V	
C802	1-162-318-11	CERAMIC	0.001MF	10%	500V	
C803	1-102-228-00	CERAMIC	470PF	10%	500V	
C804	1-123-935-00	ELECT	33MF	20%	160V	
C805	1-101-004-00	CERAMIC	0.01MF		50V	
C806	1-124-480-11	ELECT	470MF	20%	25V	
C807	1-102-228-00	CERAMIC	470PF	10%	500V	
C808	1-106-367-00	MYLAR	0.01MF	10%	100V	
C809	1-106-375-12	MYLAR	0.022MF	10%	100V	
C810	1-162-318-11	CERAMIC	0.001MF	10%	500V	
C811 ⚠	1-137-544-91	FILM	0.01MF	3%	600V	
C812 ⚠	1-137-545-91	FILM	0.013MF	3%	600V	
C813	1-106-385-00	MYLAR	0.056MF	5%	200V	
C814	1-106-383-00	MYLAR	0.047MF	10%	100V	
C815	1-126-233-11	ELECT	22MF	20%	50V	
C816	1-124-798-11	ELECT	1MF	20%	160V	
C817	1-130-800-00	FILM	2.2MF	10%	250V	
C818	1-102-228-00	CERAMIC	470PF	10%	500V	
C819	1-162-116-00	CERAMIC	680PF	10%	2KV	
C820	1-162-116-00	CERAMIC	680PF	10%	2KV	
		<CONNECTOR>				
CN801	*1-564-595-11	PLUG, CONNECTOR 14P				
CN802	*1-508-766-00	PIN, CONNECTOR (5MM PITCH) 4P				
CN803	*1-564-508-11	PLUG, CONNECTOR 5P				
CN805	*1-560-123-00	PLUG, CONNECTOR (2.5MM) 3P				
		<DIODE>				
D801	8-719-300-33	DIODE RU-3AM				
D802	8-719-300-33	DIODE RU-3AM				
D803	8-719-300-33	DIODE RU-3AM				
D804	8-719-979-85	DIODE EGP-20G				
D805	8-719-300-33	DIODE RU-3AM				
D806	8-719-300-33	DIODE RU-3AM				
D807	8-719-105-99	DIODE RD6.2M-B1				
D808	8-719-008-28	THYRISTOR CR0.2AM-8				
D809	8-719-911-55	DIODE U05G				
D810	8-719-911-55	DIODE U05G				
D811	8-719-911-55	DIODE U05G				
D813	8-719-300-33	DIODE RU-3AM				
		<COIL>				
L802	1-459-442-00	COIL (WITH CORE)				
L803	1-422-613-11	COIL, AIR CORE				
L804	1-459-109-00	COIL, DUST CORE				
L805 ⚠	1-460-225-11	COIL, HORIZONTAL LINEARITY				
L806	1-407-500-00	INDUCTOR	4.7MMH			
L807	1-407-500-00	INDUCTOR	4.7MMH			
		<NEON LAMP>				
NL801	1-519-108-XX	LAMP, NEON				
		<TRANSISTOR>				
Q801	8-729-195-82	TRANSISTOR 2SC2958-L				
Q802	8-729-201-62	TRANSISTOR 2SC2555-2				
	*4-363-404-00	HOLDER, IC; Q802				
	4-382-854-01	SCREW (M3X8), P, SW (+); Q802				
	4-879-937-00	SHEET, MICA; Q802				
Q803	8-729-906-24	TRANSISTOR 2SD835				
		<RESISTOR>				
R801	1-249-383-11	CARBON	1.5	5%	1/4W	F
R802	1-249-377-11	CARBON	0.47	5%	1/4W	F
R803	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R804	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R805	1-215-892-11	METAL OXIDE	1K	5%	2W	F
R807	1-216-425-11	METAL OXIDE	56	5%	1W	F
R808	1-202-881-91	SOLID	470K	20%	1/2W	
R809	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R810	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R811	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R812	1-249-439-11	CARBON	68K	5%	1/4W	F
R813	1-249-414-11	CARBON	560	5%	1/4W	F
R814	1-249-377-11	CARBON	0.47	5%	1/4W	F
		<VARIABLE RESISTOR>				
RV801	1-223-102-00	RES, ADJ, WIREWOUND 120				
		<TRANSFORMER>				
T801	1-437-082-31	HDT				
T802 ⚠	1-439-526-11	TRANSFORMER ASSY, FLYBACK				
**********						
	*1-641-723-11	FA BOARD				
		********				
	*4-341-751-01	EYELET	EY6,EY7			
	*4-341-752-01	EYELET	EY1,EY3,EY8,EY9			
		<CONNECTOR>				
CN601	*1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P				
CN602	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P				
CN603	*1-564-507-11	PLUG, CONNECTOR 4P				
		<FUSE>				
F601 ⚠	1-532-745-11	FUSE, GLASS TUBE (3.15A/125V)				
	1-533-223-11	CLIP, FUSE; F601				
		<RESISTOR>				
R602	1-202-721-00	SOLID	1.5M	10%	1/2W	
		<SWITCH>				

FA QA

REF.NO.	PART NO.	DESCRIPTION			REMARK
S601	1-692-049-11	SWITCH, PUSH (AC POWER) (1KEY)			
**********					
	A-1275-099-A	QA BOARD, COMPLETE			
		**********			
	1-537-408-11	TERMINAL BOARD, INPUT/OUTPUT			(LINE B)
	1-537-410-11	TERMINAL BOARD, INPUT/OUTPUT			(LINE A)
	*4-341-752-01	EYELET EY10,EY11			
		<CAPACITOR>			
C401	1-124-234-00	ELECT	22MF	20%	16V
C402	1-124-234-00	ELECT	22MF	20%	16V
C403	1-124-234-00	ELECT	22MF	20%	16V
C404	1-124-234-00	ELECT	22MF	20%	16V
C405	1-124-234-00	ELECT	22MF	20%	16V
C406	1-124-234-00	ELECT	22MF	20%	16V
C407	1-124-234-00	ELECT	22MF	20%	16V
C408	1-124-463-00	ELECT	0.1MF	20%	50V
C409	1-124-234-00	ELECT	22MF	20%	16V
C410	1-124-234-00	ELECT	22MF	20%	16V
C411	1-124-234-00	ELECT	22MF	20%	16V
C412	1-124-234-00	ELECT	22MF	20%	16V
C413	1-124-234-00	ELECT	22MF	20%	16V
C414	1-126-157-11	ELECT	10MF	20%	16V
C415	1-126-157-11	ELECT	10MF	20%	16V
C416	1-126-157-11	ELECT	10MF	20%	16V
C417	1-126-157-11	ELECT	10MF	20%	16V
C418	1-126-157-11	ELECT	10MF	20%	16V
C419	1-126-157-11	ELECT	10MF	20%	16V
C420	1-126-157-11	ELECT	10MF	20%	16V
C421	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C422	1-124-464-11	ELECT	0.22MF	20%	50V
C423	1-126-157-11	ELECT	10MF	20%	16V
C424	1-126-157-11	ELECT	10MF	20%	16V
C425	1-108-634-11	MYLAR	0.047MF	10%	100V
C426	1-128-499-61	ELECT	220MF	20%	16V
C427	1-128-499-61	ELECT	220MF	20%	16V
C428	1-124-589-11	ELECT	47MF	20%	16V
C429	1-124-234-00	ELECT	22MF	20%	16V
C430	1-163-033-00	CERAMIC CHIP	0.022MF		50V
C431	1-124-234-00	ELECT	22MF	20%	16V
C432	1-163-033-00	CERAMIC CHIP	0.022MF		50V
C433	1-124-234-00	ELECT	22MF	20%	16V
C434	1-163-033-00	CERAMIC CHIP	0.022MF		50V
C435	1-124-234-00	ELECT	22MF	20%	16V
C436	1-163-033-00	CERAMIC CHIP	0.022MF		50V
C437	1-163-033-00	CERAMIC CHIP	0.022MF		50V
C438	1-124-234-00	ELECT	22MF	20%	16V
C439	1-163-033-00	CERAMIC CHIP	0.022MF		50V
C440	1-163-033-00	CERAMIC CHIP	0.022MF		50V
C441	1-124-234-00	ELECT	22MF	20%	16V
C442	1-163-033-00	CERAMIC CHIP	0.022MF		50V
C443	1-163-033-00	CERAMIC CHIP	0.022MF		50V
C444	1-163-033-00	CERAMIC CHIP	0.022MF		50V
C445	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C446	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C447	1-126-301-11	ELECT	1MF	20%	50V
C448	1-124-234-00	ELECT	22MF	20%	16V
C449	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C450	1-124-234-00	ELECT	22MF	20%	16V
C451	1-163-033-00	CERAMIC CHIP	0.022MF		50V
C452	1-128-499-61	ELECT	220MF	20%	16V
C453	1-124-234-00	ELECT	22MF	20%	16V
C454	1-128-499-61	ELECT	220MF	20%	16V
C460	1-126-301-11	ELECT	1MF	20%	50V
C461	1-126-301-11	ELECT	1MF	20%	50V
C462	1-126-301-11	ELECT	1MF	20%	50V
C464	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C465	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C466	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C467	1-163-031-11	CERAMIC CHIP	0.01MF		50V
		<CONNECTOR>			
CN401	1-506-494-11	PIN, CONNECTOR 15P			
CN402	*1-564-518-11	PLUG, CONNECTOR 3P			
CN403	*1-580-690-11	PIN, CONNECTOR (PC BOARD) 4P			
CN404	*1-564-519-11	PLUG, CONNECTOR 4P			
		<DIODE>			
D401	8-719-404-46	DIODE MA110			
D402	8-719-404-46	DIODE MA110			
D403	8-719-110-09	DIODE RD8.2ES-B3			
D404	8-719-404-46	DIODE MA110			
D405	8-719-404-46	DIODE MA110			
D406	8-719-404-46	DIODE MA110			
D407	8-719-404-46	DIODE MA110			
D408	8-719-404-46	DIODE MA110			
D409	8-719-404-46	DIODE MA110			
D410	8-719-404-46	DIODE MA110			
D411	8-719-404-46	DIODE MA110			
D412	8-719-404-46	DIODE MA110			
D413	8-719-404-46	DIODE MA110			
D414	8-719-404-46	DIODE MA110			
D415	8-719-404-46	DIODE MA110			
D416	8-719-404-46	DIODE MA110			
D417	8-719-404-46	DIODE MA110			
D418	8-719-404-46	DIODE MA110			
D419	8-719-404-46	DIODE MA110			
D420	8-719-404-46	DIODE MA110			
D421	8-719-404-46	DIODE MA110			
D422	8-719-404-46	DIODE MA110			
D423	8-719-404-46	DIODE MA110			
D424	8-719-404-46	DIODE MA110			
D425	8-719-404-46	DIODE MA110			
D426	8-719-404-46	DIODE MA110			
D427	8-719-404-46	DIODE MA110			
D428	8-719-404-46	DIODE MA110			
D429	8-719-404-46	DIODE MA110			
D430	8-719-404-46	DIODE MA110			
D431	8-719-404-46	DIODE MA110			
		<IC>			
IC401	8-759-501-21	IC MM1149XF			
IC402	8-759-501-21	IC MM1149XF			
IC403	8-759-420-04	IC AN5265			
		<COIL>			
L401	1-410-682-31	INDUCTOR	470UH		
L402	1-410-682-31	INDUCTOR	470UH		

QA

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q401	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q402	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q403	8-729-216-22	TRANSISTOR 2SA1162-G	
Q404	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q405	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q406	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q407	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q408	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q409	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q410	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q411	8-729-216-22	TRANSISTOR 2SA1162-G	
Q412	8-729-216-22	TRANSISTOR 2SA1162-G	
Q413	8-729-216-22	TRANSISTOR 2SA1162-G	
Q414	8-729-216-22	TRANSISTOR 2SA1162-G	
Q416	8-729-145-18	TRANSISTOR 2SC3736	
Q417	8-729-901-06	TRANSISTOR DTA144EK	
Q418	8-729-901-06	TRANSISTOR DTA144EK	
Q419	8-729-901-06	TRANSISTOR DTA144EK	
Q420	8-729-901-01	TRANSISTOR DTC144EK	
Q421	8-729-901-06	TRANSISTOR DTA144EK	
Q422	8-729-901-01	TRANSISTOR DTC144EK	
Q423	8-729-901-06	TRANSISTOR DTA144EK	
Q424	8-729-901-06	TRANSISTOR DTA144EK	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R401	1-214-702-00	METAL	75	1%	1/4W	
R402	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R403	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R404	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R405	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R406	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R407	1-216-748-11	METAL GLAZE	39K	5%	1/10W	
R408	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R409	1-214-702-00	METAL	75	1%	1/4W	
R410	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R411	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R412	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R413	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R414	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R415	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R416	1-216-023-00	METAL GLAZE	82	5%	1/10W	
R417	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R418	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R419	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R420	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R421	1-216-027-00	METAL GLAZE	120	5%	1/10W	
R422	1-214-702-00	METAL	75	1%	1/4W	
R423	1-214-702-00	METAL	75	1%	1/4W	
R424	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R425	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R426	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R427	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R428	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R429	1-214-702-00	METAL	75	1%	1/4W	
R430	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R431	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R432	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R433	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R434	1-216-027-00	METAL GLAZE	120	5%	1/10W	
R435	1-214-702-00	METAL	75	1%	1/4W	
R436	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R437	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R438	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R439	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R440	1-216-027-00	METAL GLAZE	120	5%	1/10W	
R441	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R442	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R443	1-216-748-11	METAL GLAZE	39K	5%	1/10W	
R444	1-214-702-00	METAL	75	1%	1/4W	
R445	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R446	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R447	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R448	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R449	1-216-027-00	METAL GLAZE	120	5%	1/10W	
R450	1-214-702-00	METAL	75	1%	1/4W	
R451	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R452	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R453	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R454	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R455	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R456	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R457	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R458	1-247-707-11	CARBON	390	5%	1/4W	
R459	1-216-748-11	METAL GLAZE	39K	5%	1/10W	
R460	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R461	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R462	1-216-115-00	METAL GLAZE	560K	5%	1/10W	
R463	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R464	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R465	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R466	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R467	1-216-115-00	METAL GLAZE	560K	5%	1/10W	
R468	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R469	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R470	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R471	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R472	1-216-115-00	METAL GLAZE	560K	5%	1/10W	
R473	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R474	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R475	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R477	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R479	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R480	1-247-711-11	CARBON	680	5%	1/4W	
R481	1-247-720-11	CARBON	3.9K	5%	1/4W	
R482	1-249-455-11	CARBON	4.7	5%	1/4W	
R483	1-249-389-11	CARBON	4.7	5%	1/4W	F
R484	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R485	1-247-688-11	CARBON	10	5%	1/4W	F
R486	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R487	1-249-468-11	CARBON	82K	5%	1/4W	
R488	1-249-468-11	CARBON	82K	5%	1/4W	
R489	1-249-468-11	CARBON	82K	5%	1/4W	
R490	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R491	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R492	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R493	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R494	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R495	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R496	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R497	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R498	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R499	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1401	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1403	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R1404	1-216-097-00	METAL GLAZE	100K	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION			REMARK
		<VARIABLE RESISTOR>			
RV401	1-230-481-11	RES, VAR, CARBON 20K			
		**********			
	*1-641-720-11	CA BOARD			
		********			
	1-526-958-41	SOCKET, CRT			
		<CAPACITOR>			
C701	1-162-114-00	CERAMIC	0.0047MF	10% 2KV	
C702	1-102-050-00	CERAMIC	0.01MF	99% 500V	
C710	1-161-830-00	CERAMIC	0.0047MF	99% 500V	
		<CONNECTOR>			
CN701	*1-564-509-11	PLUG, CONNECTOR 6P			
CN702	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P			
CN703	*1-564-508-11	PLUG, CONNECTOR 5P			
		<COIL>			
L701	1-410-668-11	INDUCTOR	27UH		
		<RESISTOR>			
R701	1-202-871-91	SOLID	2.2K	20% 1/2W	
R702	1-202-871-91	SOLID	2.2K	20% 1/2W	
R703	1-202-871-91	SOLID	2.2K	20% 1/2W	
R704	1-202-877-91	SOLID	100K	20% 1/2W	
R705	1-202-885-91	SOLID	1M	20% 1/2W	
R706	1-202-878-91	SOLID	220K	20% 1/2W	
		<VARIABLE RESISTOR>			
RV701	1-230-164-00	RES, ADJ, METAL GLAZE 55M			
	*4-376-132-11	COVER (REAR LID), CV VOL; RV701			
	*4-376-133-11	COVER (MAIN), CV VOL; RV701			
		**********			
	A-1346-018-A	D BOARD, COMPLETE			
		**********			
	1-533-189-11	HOLDER, FUSE			
	3-710-578-01	COVER, VOLUME, 6 MOLD			
	*3-738-015-01	COVER, (DIA. 6) CARBON VR			
	4-382-854-01	SCREW (M3X8), P, SW (+)			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
		<CAPACITOR>			
C501	1-124-477-11	ELECT	47MF	20% 16V	
C502	1-124-907-11	ELECT	10MF	20% 50V	
C503	1-126-103-11	ELECT	470MF	20% 16V	
C504	1-124-902-00	ELECT	0.47MF	20% 50V	
C505	1-106-381-12	MYLAR	0.039MF	10% 100V	
C506	1-124-903-11	ELECT	1MF	20% 50V	
C507	1-106-367-00	MYLAR	0.01MF	10% 100V	
C508	1-124-903-11	ELECT	1MF	20% 50V	
C509	1-136-173-00	FILM	0.47MF	5% 50V	
C510	1-136-161-00	FILM	0.047MF	5% 50V	
C511	1-124-903-11	ELECT	1MF	20% 50V	
C512	1-106-375-12	MYLAR	0.022MF	10% 100V	
C513	1-106-375-12	MYLAR	0.022MF	10% 100V	
C514	1-106-371-00	MYLAR	0.015MF	10% 100V	
C515	1-124-925-11	ELECT	2.2MF	20% 50V	
C516	1-124-925-11	ELECT	2.2MF	20% 50V	
C517	1-130-480-00	FILM	0.0056MF	5% 50V	
C518	1-163-245-11	CERAMIC CHIP	56PF	5% 50V	
C519	1-124-927-11	ELECT	4.7MF	20% 50V	
C520	1-163-129-00	CERAMIC CHIP	330PF	5% 50V	
C521	1-124-907-11	ELECT	10MF	20% 50V	
C523	1-106-363-00	MYLAR	0.0068MF	10% 100V	
C524	1-102-116-00	CERAMIC	680PF	10% 50V	
C525	1-102-820-00	CERAMIC	330PF	5% 50V	
C526	1-102-973-00	CERAMIC	100PF	5% 50V	
C527	1-124-122-11	ELECT	100MF	20% 50V	
C528	1-102-125-00	CERAMIC	0.0047MF	10% 50V	
C529	1-124-910-11	ELECT	47MF	20% 50V	
C530	1-163-097-00	CERAMIC CHIP	15PF	5% 50V	
C531	1-131-370-00	TANTALUM	6.8MF	10% 16V	
C532	1-124-557-11	ELECT	1000MF	20% 25V	
C533	1-124-927-11	ELECT	4.7MF	20% 50V	
C534	1-124-768-11	ELECT	4.7MF	20% 50V	
C535	1-136-161-00	FILM	0.047MF	5% 50V	
C536	1-124-927-11	ELECT	4.7MF	20% 50V	
C537	1-124-484-11	ELECT	220MF	20% 35V	
C538	1-124-910-11	ELECT	47MF	20% 50V	
C539	1-136-113-00	FILM	2MF	5% 200V	
C540	1-163-017-00	CERAMIC CHIP	0.0047MF	10% 50V	
C541	1-163-035-00	CERAMIC CHIP	0.047MF	50V	
C542	1-126-103-11	ELECT	470MF	20% 16V	
C545	1-126-101-11	ELECT	100MF	20% 16V	
C546	1-124-907-11	ELECT	10MF	20% 50V	
C547	1-124-907-11	ELECT	10MF	20% 50V	
C548	1-124-907-11	ELECT	10MF	20% 50V	
C549	1-124-907-11	ELECT	10MF	20% 50V	
C550	1-124-907-11	ELECT	10MF	20% 50V	
C551	1-124-927-11	ELECT	4.7MF	20% 50V	
C552	1-101-004-00	CERAMIC	0.01MF	50V	
C553	1-126-103-11	ELECT	470MF	20% 16V	
C563	1-106-383-00	MYLAR	0.047MF	10% 100V	
C564	1-162-318-11	CERAMIC	0.001MF	10% 500V	
C567	1-124-907-11	ELECT	10MF	20% 50V	
C568	1-130-736-11	FILM	0.01MF	5% 50V	
C569	1-130-471-00	FILM	0.001MF	5% 50V	
C570	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C571	1-124-913-11	ELECT	470MF	20% 50V	
C572	1-101-004-00	CERAMIC	0.01MF	50V	
C574	1-106-351-00	MYLAR	0.0022MF	10% 100V	
C575	1-106-351-00	MYLAR	0.0022MF	10% 100V	
C831	1-124-907-11	ELECT	10MF	20% 50V	
C832	1-124-907-11	ELECT	10MF	20% 50V	
C833	1-163-009-11	CERAMIC CHIP	0.001MF	10% 50V	
C834	1-163-121-00	CERAMIC CHIP	150PF	5% 50V	
C835	1-163-209-00	CERAMIC CHIP	0.0015MF	5% 50V	
C836	1-124-907-11	ELECT	10MF	20% 50V	
C837	1-106-347-00	MYLAR	0.0015MF	10% 100V	
C838	1-136-163-00	FILM	0.068MF	5% 50V	
C839	1-106-351-00	MYLAR	0.0022MF	10% 100V	
C840	1-163-209-00	CERAMIC CHIP	0.0015MF	5% 50V	
C841	1-163-209-00	CERAMIC CHIP	0.0015MF	5% 50V	
C843	1-124-902-00	ELECT	0.47MF	20% 50V	
C844	1-124-902-00	ELECT	0.47MF	20% 50V	
C845	1-124-477-11	ELECT	47MF	20% 25V	
C846	1-124-907-11	ELECT	10MF	20% 50V	
C847	1-126-233-11	ELECT	22MF	20% 50V	

D

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

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

REF.NO.	PART NO.	DESCRIPTION			REMARK
C848	1-131-351-00	TANTALUM 4.7MF	10%	35V	
C849	1-164-182-11	CERAMIC CHIP 0.0033MF	10%	50V	
C1601	1-124-907-11	ELECT 10MF	20%	50V	
C1602	1-164-161-11	CERAMIC CHIP 0.0022MF	10%	50V	
C1603	1-124-903-11	ELECT 1MF	20%	50V	
C1604	1-128-500-51	ELECT 1000MF	20%	50V	
C1605	1-124-922-11	ELECT 1000MF	20%	50V	
C1606	1-102-074-00	CERAMIC 0.001MF	10%	50V	
C1607	1-124-907-11	ELECT 10MF	20%	50V	
C1608	1-126-233-11	ELECT 22MF	20%	50V	
C1609	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	
C1610	1-124-927-11	ELECT 4.7MF	20%	50V	
C1611	1-126-233-11	ELECT 22MF	20%	50V	
C1612	1-130-025-91	FILM 0.0039MF	5%	50V	
C1613	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	
C1614	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C1615	1-124-465-00	ELECT 0.47MF	20%	50V	
C1620	1-163-133-00	CERAMIC CHIP 470PF	5%	50V	
C1621	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	

<CONNECTOR>

CN501	*1-564-506-11	PLUG, CONNECTOR 3P	
CN502	1-506-477-11	PIN, CONNECTOR 12P	
CN504	*1-564-507-11	PLUG, CONNECTOR 4P	
CN505	*1-564-509-11	PLUG, CONNECTOR 6P	
CN507	*1-564-511-11	PLUG, CONNECTOR 8P	
CN508	*1-564-104-00	PIN, CONNECTOR (B3P-VH) 3P	
CN509	*1-564-506-11	PLUG, CONNECTOR 3P	

<DIODE>

D501	8-719-404-46	DIODE MA110	
D502	8-719-404-46	DIODE MA110	
D503	8-719-404-46	DIODE MA110	
D504	8-719-404-46	DIODE MA110	
D505	8-719-404-46	DIODE MA110	
D506	8-719-911-55	DIODE UO5G	
D507	8-719-404-46	DIODE MA110	
D508	8-719-404-46	DIODE MA110	
D509	8-719-404-46	DIODE MA110	
D510	8-719-404-46	DIODE MA110	
D511	8-719-404-46	DIODE MA110	
D512	8-719-404-46	DIODE MA110	
D514	8-719-404-46	DIODE MA110	
D831	8-719-404-46	DIODE MA110	
D832	8-719-404-46	DIODE MA110	
D833	8-719-404-46	DIODE MA110	
D834	8-719-404-46	DIODE MA110	
D835	8-719-109-89	DIODE RD5.6ES-B2	
D836	8-719-977-69	DIODE DTZ24B	
D837	8-719-404-46	DIODE MA110	
D838	8-719-404-46	DIODE MA110	
D1601	8-719-105-XX	DIODE RD6.2M-B1	
D1602	8-719-404-46	DIODE MA110	
D1603	8-719-977-61	DIODE DTZ20B	
D1604	8-719-404-46	DIODE MA110	
D1605	8-719-404-46	DIODE MA110	
D1606	8-719-981-00	DIODE ERC81-004	
D1607	8-719-981-00	DIODE ERC81-004	
D1608	8-719-977-02	DIODE DTZ5.6A	
D1609	8-719-977-49	DIODE DTZ15B	
D1610	8-719-404-46	DIODE MA110	
D1611	8-729-101-31	TRANSISTOR N13T1	
D1612	8-719-404-46	DIODE MA110	
D1613	8-719-404-46	DIODE MA110	
D1614	8-719-404-46	DIODE MA110	
D1615	8-719-404-46	DIODE MA110	
D1616	8-719-404-46	DIODE MA110	
D1617	8-719-977-49	DIODE DTZ15B	
D1618	8-719-977-49	DIODE DTZ15B	
D1621	8-719-510-12	DIODE D10SC4M	
D1625	8-719-404-46	DIODE MA110	
D1626	8-719-404-46	DIODE MA110	
D1627	8-719-404-46	DIODE MA110	
D1628	8-719-404-46	DIODE MA110	
D1635	8-719-404-46	DIODE MA110	
D1699	8-719-404-46	DIODE MA110	

<FUSE>

F1601	1-532-777-21	FUSE, MICRO (SECONDARY) (1.25A/125V)	

<IC>

IC501	8-759-909-70	IC CX23025	
IC502	8-759-100-60	IC UPC1377C	
IC503	8-759-801-98	IC LA7830	
IC504	8-759-929-62	IC MC7812CT	
IC505	8-759-009-51	IC MC14538BF	
IC831	8-759-509-29	IC XRU4011BF	
IC832	8-759-509-37	IC XRU4070BF	
IC833	8-759-009-51	IC MC14538BF	
IC1601	8-759-509-91	IC XRA10393F	

<COIL>

L501	1-410-093-11	INDUCTOR 33MMH	
L502	1-410-665-31	INDUCTOR 15UH	
L503	1-424-625-11	COIL, CHOKE (PMC) 381.4UH	
L506	1-412-530-31	INDUCTOR 27UH	
L1601	1-459-155-00	COIL (WITH CORE) 47UH	
L1602	1-424-626-12	COIL, CHOKE 390UH	
L1603	1-410-397-21	FERRITE BEAD INDUCTOR	

<TRANSISTOR>

Q501	8-729-901-01	TRANSISTOR DTC144EK	
Q502	8-729-901-01	TRANSISTOR DTC144EK	
Q503	8-729-901-06	TRANSISTOR DTA144EK	
Q504	8-729-901-01	TRANSISTOR DTC144EK	
Q505	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q506	8-729-901-01	TRANSISTOR DTC144EK	
Q507	8-729-901-01	TRANSISTOR DTC144EK	
Q508	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q509	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q510	8-729-901-06	TRANSISTOR DTA144EK	
Q511	8-729-901-01	TRANSISTOR DTC144EK	
Q512	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q513	8-729-216-22	TRANSISTOR 2SA1162-G	
Q514	8-729-216-22	TRANSISTOR 2SA1162-G	
Q515	8-729-313-42	TRANSISTOR 2SD1134-C	
Q516	8-729-901-01	TRANSISTOR DTC144EK	
Q517	8-729-901-01	TRANSISTOR DTC144EK	
Q518	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q519	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q525	8-729-920-74	TRANSISTOR 2SC2412K-QR	

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q532	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q533	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q833	8-729-216-22	TRANSISTOR 2SA1162-G	
Q834	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q835	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q836	8-729-309-08	TRANSISTOR 2SC1890A	
Q1601	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1602	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1603	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1604	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1605	8-729-119-80	TRANSISTOR 2SC2688-LK	
Q1606	8-729-133-42	TRANSISTOR 2SC2334-L	
Q1607	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1608	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1609	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1610	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1611	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1612	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1613	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1614	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1615	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1616	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1617	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1618	8-729-216-22	TRANSISTOR 2SA1162-G	

<RESISTOR>

D1619	1-216-295-00	METAL GLAZE	0	5%	1/10W	
D1620	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR510	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R501	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R502	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R503	1-249-437-11	CARBON	47K	5%	1/4W	F
R504	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R505	1-249-393-11	CARBON	10	5%	1/4W	F
R506	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R507	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R508	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R509	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R510	1-216-683-11	METAL CHIP	22K	0.50%	1/10W	
R511	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R512	1-218-761-11	METAL CHIP	240K	0.50%	1/10W	
R513	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R514	1-216-099-00	METAL CHIP	120K	0.50%	1/10W	
R515	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R516	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R517	1-216-107-00	METAL CHIP	270K	0.50%	1/10W	
R518	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R519	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R520	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R521	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R522	1-216-107-00	METAL GLAZE	270K	5%	1/10W	
R523	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R524	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R525	1-216-434-11	METAL OXIDE	1.8K	5%	1W	F
R526	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R527	1-249-437-11	CARBON	47K	5%	1/4W	F
R528	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R529	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R530	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R531	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R532	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R533	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R534	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R535	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R536	1-212-881-11	FUSIBLE	100	5%	1/4W	F
R537	1-215-867-00	METAL OXIDE	470	5%	1W	F
R538	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R539	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R540	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R541	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R542	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R543	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R544	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R545	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R546	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R547	1-216-121-00	METAL GLAZE	1M	5%	1/10W	
R548	1-216-107-00	METAL GLAZE	270K	5%	1/10W	
R549	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R550	1-216-356-00	METAL OXIDE	3.9	5%	1W	F
R552	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R553	1-216-748-11	METAL GLAZE	39K	5%	1/10W	
R554	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R555	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R557	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R558	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R559	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R560	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R561	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R562	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R563	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R564	1-249-415-11	CARBON	680	5%	1/4W	F
R565	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R566	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R567	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R568	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R569	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R570	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R571	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R572	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R573	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R574	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R575	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R576	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R577	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R578	1-249-457-11	CARBON	6.8	5%	1/4W	F
R579	1-249-457-11	CARBON	6.8	5%	1/4W	F
R591	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R592	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R831	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R832	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R833	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R834	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R835	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R836	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R837	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R838	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R839	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R840	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R841	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R842	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R843	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R844	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R847	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R850	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R851	1-216-669-11	METAL CHIP	5.6K	0.50%	1/10W	
R852	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R853	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R854	1-216-099-00	METAL CHIP	120K	0.50%	1/10W	
R855	1-216-697-11	METAL CHIP	82K	0.50%	1/10W	

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• The components identified by ☒ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
Should replacement be required, replace only with the value originally used.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

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

REF.NO.	PART NO.	DESCRIPTION				REMARK
R856	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R857	1-216-686-11	METAL CHIP	30K	0.50%	1/10W	
R858	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R859	1-216-436-00	METAL OXIDE	3.9K	5%	1W	F
R860	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R861	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R862	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R863	1-249-435-11	CARBON	33K	5%	1/4W	F
R1503	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1504	1-216-695-11	METAL CHIP	68K	0.50%	1/10W	
R1505	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1506	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R1507	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1508	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1509	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1510	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R1511	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1512	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1513	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R1519	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R1520	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R1601	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R1602	1-216-681-11	METAL CHIP	18K	0.50%	1/10W	
R1603	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R1604	1-249-433-11	CARBON	22K	5%	1/4W	F
R1605	1-216-070-00	METAL GLAZE	7.5K	5%	1/10W	
R1606	1-216-070-00	METAL GLAZE	7.5K	5%	1/10W	
R1607	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1608	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1609	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1610	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1611	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1612	1-215-913-11	METAL OXIDE	220	5%	3W	F
R1613	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1614	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1615	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W	
R1616	1-216-629-11	METAL CHIP	120	0.50%	1/10W	
R1617	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R1618	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1620	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1621	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1622	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1623	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1624	1-216-246-00	METAL GLAZE	100K	5%	1/8W	
R1625	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1626	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1627	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1628	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1629	1-216-683-11	METAL CHIP	22K	0.50%	1/10W	
R1630	1-216-683-11	METAL CHIP	22K	0.50%	1/10W	
R1631	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1632	1-216-042-00	METAL GLAZE	510	5%	1/10W	
R1633	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R1634	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R1635	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1636	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1640	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R1641	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1642	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1643	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1644	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1645	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1646	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1647	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R1648	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1649	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1650	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1651	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1652	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1653	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1654	1-216-681-11	METAL CHIP	18K	0.50%	1/10W	
R1655	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1656	1-216-643-11	METAL CHIP	470	0.50%	1/10W	
R1657	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1658	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R1659	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1660	1-216-649-11	METAL CHIP	820	0.50%	1/10W	
R1661	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	

<VARIABLE RESISTOR>

RV501	1-238-019-11	RES, ADJ, CARBON 47K
RV502	1-238-017-11	RES, ADJ, CARBON 22K
RV503	1-241-701-11	RES, ADJ, CERMET 4.7K
RV504	1-224-250-99	RES, ADJ, METAL GLAZE 2.2K
RV505	1-238-009-11	RES, ADJ, CARBON 220
RV506	1-238-012-11	RES, ADJ, CARBON 1K
RV507	1-238-013-11	RES, ADJ, CARBON 2.2K
RV508	1-238-012-11	RES, ADJ, CARBON 1K
RV509	1-238-021-11	RES, ADJ, CARBON 220K
RV511	1-238-015-11	RES, ADJ, CARBON 4.7K
RV512	1-238-015-11	RES, ADJ, CARBON 4.7K
RV514	1-238-019-11	RES, ADJ, CARBON 47K
RV515	1-238-021-11	RES, ADJ, CARBON 220K
RV516	1-241-701-11	RES, ADJ, CERMET 4.7K
RV831	1-228-997-00	RES, ADJ, METAL GLAZE 100K
RV832	1-241-702-11	RES, ADJ, CERMET 10K
☒RV833⚠		RES, ADJ, CERMET
RV1601	1-241-700-11	RES, ADJ, CERMET 2.2K
RV1602	1-238-012-11	RES, ADJ, CARBON 1K
☒RV1603⚠		RES, ADJ, CERMET

<RELAY>

RY1601	1-515-481-21	RELAY (G2R-212P-V)

<TRANSFORMER>

T1601	1-437-216-11	TRANSFORMER, DRIVE

****

	*A-1371-782-A	HA BOARD, COMPLETE
		**********
	*4-348-208-00	HOLDER, LED
	*4-341-752-01	EYELET EY5

<CONNECTOR>

CN001	1-506-478-11	PIN, CONNECTOR 13P
CN002	1-506-473-11	PIN, CONNECTOR 8P

<DIODE>

D001	8-719-920-05	DIODE SLP281C-50
D002	8-719-109-68	DIODE RD3.6ESB1

HA X S

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<RESISTOR>				
JW009	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JW024	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R001	1-247-713-11	CARBON	1K	5%	1/4W	
R002	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R003	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R004	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
		<VARIABLE RESISTOR>				
RV001	1-241-846-11	RES, VAR, CARBON 20K				
RV002	1-241-846-11	RES, VAR, CARBON 20K				
RV003	1-241-845-11	RES, VAR, CARBON 20K				
RV004	1-241-845-11	RES, VAR, CARBON 20K				
RV005	1-241-845-11	RES, VAR, CARBON 20K				
RV006	1-241-845-11	RES, VAR, CARBON 20K				
RV007	1-226-773-11	RES, ADJ, METAL GLAZE 22K				
RV008	1-226-773-11	RES, ADJ, METAL GLAZE 22K				
RV009	1-226-773-11	RES, ADJ, METAL GLAZE 22K				
RV010	1-226-773-11	RES, ADJ, METAL GLAZE 22K				
RV011	1-226-773-11	RES, ADJ, METAL GLAZE 22K				
RV012	1-226-773-11	RES, ADJ, METAL GLAZE 22K				
		<SWITCH>				
S001	1-554-419-00	SWITCH, PUSH (1 KEY)				
S002	1-554-419-00	SWITCH, PUSH (1 KEY)				
S003	1-554-419-00	SWITCH, PUSH (1 KEY)				
S004	1-554-419-00	SWITCH, PUSH (1 KEY)				
S005	1-554-419-00	SWITCH, PUSH (1 KEY)				
S006	1-554-419-00	SWITCH, PUSH (1 KEY)				
**********						
	*1-641-724-11	X BOARD				
		*******				
		<CONNECTOR>				
CN21	*1-564-518-11	PLUG, CONNECTOR 3P				
		<DIODE>				
D21	8-719-023-78	DIODE SEL3810DLC05				
D22	8-719-023-78	DIODE SEL3810DLC05				
D23	8-719-023-78	DIODE SEL3810DLC05				
**********						
	A-1394-343-A	S BOARD, COMPLETE				
		**********				
		<CAPACITOR>				
C1101	1-163-119-00	CERAMIC CHIP	120PF	5%	50V	
C1102	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V	
C1103	1-124-589-11	ELECT	47MF	20%	16V	
C1104	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C1105	1-163-114-00	CERAMIC CHIP	75PF	5%	50V	
C1106	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C1107	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V	
C1108	1-163-119-00	CERAMIC CHIP	120PF	5%	50V	
C1109	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C1110	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C1111	1-163-018-00	CERAMIC CHIP	0.0056MF	10%	50V	
C1112	1-126-160-11	ELECT	1MF	20%	50V	
C1113	1-163-119-00	CERAMIC CHIP	120PF	5%	50V	
C1114	1-163-103-00	CERAMIC CHIP	27PF	5%	50V	
C1115	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V	
C1116	1-163-114-00	CERAMIC CHIP	75PF	5%	50V	
C1117	1-124-589-11	ELECT	47MF	20%	16V	
C1118	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V	
C1119	1-163-020-00	CERAMIC CHIP	0.0082MF	10%	50V	
C1120	1-163-097-00	CERAMIC CHIP	15PF	5%	50V	
C1121	1-163-097-00	CERAMIC CHIP	15PF	5%	50V	
C1122	1-163-222-11	CERAMIC CHIP	5PF	0.25PF	50V	
C1123	1-163-097-00	CERAMIC CHIP	15PF	5%	50V	
C1130	1-163-097-00	CERAMIC CHIP	15PF	5%	50V	
C1131	1-163-097-00	CERAMIC CHIP	15PF	5%	50V	
		<CONNECTOR>				
CN1101	*1-565-488-11	CONNECTOR, BOARD TO BOARD 12P				
		<DIODE>				
D1101	8-719-404-46	DIODE MA110				
D1102	8-719-404-46	DIODE MA110				
		<IC>				
IC1101	8-752-056-67	IC CXA1214P				
		<COIL>				
L1101	1-408-411-00	INDUCTOR	15UH			
L1102	1-404-496-00	COIL				
L1103	1-404-496-00	COIL				
L1104	1-408-411-00	INDUCTOR	15UH			
L1110	1-412-008-31	INDUCTOR CHIP	15UH			
L1111	1-412-008-31	INDUCTOR CHIP	15UH			
		<TRANSISTOR>				
Q1101	8-729-216-22	TRANSISTOR 2SA1162-G				
Q1102	8-729-920-74	TRANSISTOR 2SC2412K-QR				
Q1103	8-729-216-22	TRANSISTOR 2SA1162-G				
Q1104	8-729-216-22	TRANSISTOR 2SA1162-G				
Q1105	8-729-901-01	TRANSISTOR DTC144EK				
Q1106	8-729-901-01	TRANSISTOR DTC144EK				
Q1107	8-729-109-44	TRANSISTOR 2SK94-X4				
Q1108	8-729-920-74	TRANSISTOR 2SC2412K-QR				
		<RESISTOR>				
R1101	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R1102	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1103	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1104	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1105	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R1106	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1107	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1108	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R1109	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R1110	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1111	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1112	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R1113	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	

S G

The components identified by ⊠ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
Should replacement be required, replace only with the value originally used.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

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

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1114	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R1115	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1116	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1117	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1118	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1119	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1120	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1121	1-216-121-00	METAL GLAZE	1M	5%	1/10W	
R1122	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R1123	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1124	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R1125	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R1126	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R1127	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R1128	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1129	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R1130	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R1131	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1132	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1133	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1134	1-216-091-00	METAL GLAZE	56K	5%	1/10W	

<VARIABLE RESISTOR>

RV1101	1-238-015-11	RES, ADJ, CARBON 4.7K
RV1102	1-238-013-11	RES, ADJ, CARBON 2.2K

<TRANSFORMER>

T1101	1-404-584-11	COIL

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G BOARD (SOPS-1021)
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	4-812-134-11	RIVET NYLON, 3.5φ

<CAPACITOR>

C601	⚠1-136-889-11	METALIZED FILM	0.22MF	20%	250V
C602	⚠1-136-889-11	METALIZED FILM	0.22MF	20%	250V
C603	⚠1-161-973-51	CERAMIC	220PF	10%	400V
C604	⚠1-161-973-51	CERAMIC	220PF	10%	400V
C605	⚠1-161-973-51	CERAMIC	220PF	10%	400V
C608	⚠1-161-742-51	CERAMIC	0.0022MF	20%	400V
C609	⚠1-161-742-51	CERAMIC	0.0022MF	20%	400V
C610	⚠1-125-724-11	ELECT	180MF	20%	400V
C611	⚠1-136-206-21	METALIZED FILM	0.033MF	10%	630V
C612	⚠1-124-910-51	ELECT	47MF	20%	50V
C613	⚠1-137-190-91	METALIZED FILM	0.22MF	5%	50V
C614	⚠1-137-190-91	METALIZED FILM	0.22MF	5%	50V
C615	⚠1-130-471-91	PE TEREPHTHALATE	0.001MF	5%	50V
C651	⚠1-161-925-11	CERAMIC	100PF B	10%	500V
C652	⚠1-128-486-51	ELECT	680MF	20%	50V
C653	⚠1-128-485-51	ELECT	220MF	20%	50V
C654	⚠1-130-483-91	PE TEREPHTHALATE	0.01MF	5%	50V

<CONNECTOR>

CN610	⚠1-560-436-11	HORIZONTAL PIN ASSY 3P
CN651	⚠1-564-518-11	PLUG, CONNECTOR 3P

<DIODE>

D201	⚠8-719-971-08	DIODE ESAC39M 06C
D601	⚠8-719-510-27	DIODE D3SB60
D602	⚠8-719-921-20	DIODE 1SS119TD
D603	⚠8-719-981-47	DIODE ERA38-06TP1
D604	⚠8-719-981-47	DIODE ERA38-06TP1
D605	⚠8-719-113-44	DIODE RD20ES-T1B3
D651	⚠8-719-971-08	DIODE ESAC39M 06C

<IC>

IC601	⚠1-809-086-12	HIC CM-1018
IC651	⚠8-759-908-15	IC TL431CLP
PH601	⚠8-759-045-81	IC TLP732GR-LF2

<COIL>

L601	⚠1-424-616-11	TRANSFORMER, LINE FILTER
L602	⚠1-424-574-11	L.F.T
L651	⚠1-424-255-41	COIL, CHOKE (MOLDE) 10UH
L652	⚠1-424-615-11	COIL, CHOKE

<TRANSISTOR>

Q601	⚠8-729-322-18	TRANSISTOR 2SK1402A

<RESISTOR>

R601	⚠1-205-940-51	CEMENT	1.5	5%	5W	F
R602	⚠1-205-940-51	CEMENT	1.5	5%	5W	F
R603	⚠1-215-904-11	METAL OXIDE	100K	5%	2W	F
R604	⚠1-215-904-11	METAL OXIDE	100K	5%	2W	F
R605	⚠1-212-865-61	FUSIBLE	22	5%	1/4W	F
R606	⚠1-247-805-91	CARBON	82	5%	1/4W	
R607	⚠1-260-128-91	CARBON	270K	5%	1/2W	
R608	⚠1-260-128-91	CARBON	270K	5%	1/2W	
R609	⚠1-215-904-51	METAL OXIDE	100K	5%	2W	F
R610	⚠1-207-455-11	WIRE	0.22	10%	1/2W	
R611	⚠1-247-789-91	CARBON	18	5%	1/4W	
R612	⚠1-247-795-91	CARBON	33	5%	1/4W	
R613	⚠1-215-904-51	METAL OXIDE	100K	5%	2W	F
R614	⚠1-247-815-91	CARBON	220	5%	1/4W	
R651	⚠1-215-886-51	METAL OXIDE	100	5%	2W	F
R652	⚠1-215-886-51	METAL OXIDE	100	5%	2W	F
R653	⚠1-260-107-91	CARBON	4.7K	5%	1/2W	
R654	⚠1-260-107-91	CARBON	4.7K	5%	1/2W	
R655	⚠1-247-867-91	CARBON	33K	5%	1/4W	
R656	⚠1-247-867-91	CARBON	33K	5%	1/4W	
R657	⚠1-247-837-91	CARBON	1.8K	5%	1/4W	

<VARIABLE RESISTOR>

⊠RV651	⚠1-237-443-11	RES, ADJ, CARBON 1K

<TRANSFORMER>

T601	⚠1-450-760-11	TRANSFORMER, CONVERTER

****

MISCELLANEOUS
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	⚠1-413-720-11	SWITCHING REGULATOR (SOPS-1021)
	⚠1-413-720-31	SWITCHING REGULATOR (SOPS-1021)

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

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Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
	1-426-043-00	COIL, DEGAUSSING	
⚠	1-451-319-22	DEFLECTION YOKE (Y9FXC)	
	1-452-126-11	MAGNET	
⚠	1-532-747-11	FUSE, GLASS TUBE (5A/125V)	
	1-544-252-11	SPEAKER	
	1-555-724-00	WIRE, GROUND	
⚠	8-737-151-05	CRT (A20JKU10X)	(PVM-8041Q ONLY)
⚠	8-737-651-05	CRT (M20JMP10X)	(PVM-8044Q ONLY)

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ACCESSORIES & PACKING MATERIALS
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PART NO.	DESCRIPTION	REMARK
⚠ 1-551-812-11	CORD, POWER (10A/125V)	
1-690-871-11	CABLE (MINI DIN) 8P	
2-990-241-02	HOLDER (A), PLUG	
2-990-242-01	HOLDER (B), PLUG	
*3-704-301-01	BAG (STANDARD), PROTECTION	
3-754-506-11	MANUAL, INSTRUCTION	
4-034-835-01	PLATE, TALLY	
*4-034-954-01	INDIVIDUAL CARTON	(PVM-8041Q ONLY)
*4-034-955-01	CUSHION (UPPER) (ASSY)	
*4-034-956-01	CUSHION (LOWER) (ASSY)	
*4-035-602-01	INDIVIDUAL CARTON	(PVM-8044Q ONLY)

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