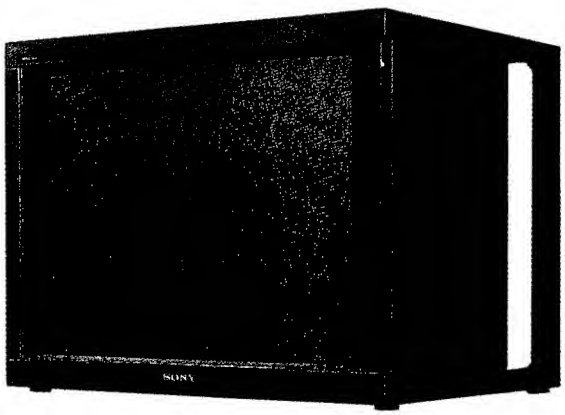
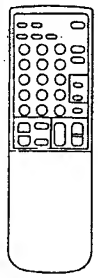
PVM-2950Q/2950QM

RM-854

SERVICE MANUAL





US Model
Canadian Model
PVM-2950Q
Chassis No. SCC-G61E-A

AEP Model
PVM-2950QM
Chassis No. SCC-G62D-A

Aus Model
PVM-2950QM
Chassis No. SCC-H03B-A

MODELS OF THE SAME SERIES	
PVM-2950Q/2950QM	

SPECIFICATIONS

Video signal

Picture tube	29" Super Trinitron tube Visible picture size : 675 mm (27" measured diagonally) AG pitch : 0.70 - 0.85 mm Anti-glare & Anti-static
Color system	NTSC, PAL, SECAM, NTSC4.43, PAL60
Resolution	600 TV lines at the center
Frequency response	VIDEO : 7 MHz (-3 dB) S VIDEO : 8 MHz (-3 dB) RGB : 10 MHz (-3 dB)

Picture performance

Color temperature	9300K/6500K (standard)/3200K switchable
Line pull range	Horizontal : ±500 Hz Vertical : -8 Hz
Overscan	7% preset (±3% variable)
Zooming	Within 5%

- Continued on next page -

MICROFILM

TRINITRON® COLOR VIDEO MONITOR

SONY®

Inputs and Outputs

VIDEO IN	BNC connector 1 Vp-p, sync negative 75-ohm (auto), loop through
Y/C IN	4-pin mini DIN connector Y : 1 Vp-p, sync negative C : 0.286 Vp-p (burst signal) (NTSC) 0.3 Vp-p (PAL) 75-ohm (auto), loop through
AUDIO IN (L, R)	Phono jack -5 dBs high impedance, loop through
R/R-Y, G/Y, B/B-Y IN	BNC connector R, G, B channels : 0.714 Vp-p,/non-composite, 75-ohm terminated (525 lines) 0.7 Vp-p,/non composite, 75-ohm terminated (625 lines) 1 Vp-p,/composite, 75-ohm terminated Y channel : 1.0 Vp-p,/composite, 75-ohm terminated 0.7 Vp-p,/non composite, 75-ohm terminated R-Y, B-Y channels : 0.7 Vp-p, 75-ohm terminated
Sync input	BNC connector H (or composite) SYNC, V SYNC, 0.5 - 5 Vp-p, 75-ohm terminated
Speaker output	8-16 ohm, 7 W + 7 W

General

Power requirements	PVM-2950Q 100 - 120 V AC, 50/60 Hz, MAX. 3.7 A PVM-2950QM 220 - 240 V AC, 50/60 Hz, MAX. 1.2 A
Operating temperature range	0 - 35° C (32 - 95° F)
Dimensions	687×538×529 mm (w/h/d) (27 1/8×21 1/4×20 7/8 inches)
Mass	52 kg (114 lb 10 oz)
Supplied accessories	AC power cord (1) AC plug holder (1) Remote commander RM-854 with a battery (1)
Optional accessories	
Speaker system	SS-X6A
TV tuner	ST-92TV (USA only)

Design and specifications are subject to change without notice.

(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.

(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.

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.

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.

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 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.

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 TEST

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 0.5mA (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 0.75V, 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 cold-water 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)

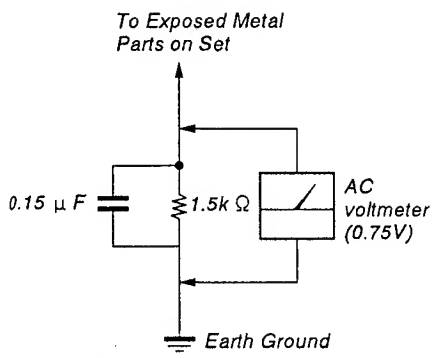


Fig. A. Using an AC voltmeter to check AC leakage.

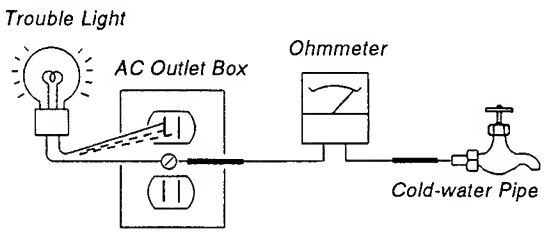


Fig B. Checking for earth ground.

TABLE OF CONTENTS

SECTION 1
GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remein as in the manual.

Features

Trinitron picture tube
The Trinitron picture tube provides a flat and high resolution picture. Horizontal resolution is more than 600 TV lines at the center of the picture.

Four color systems available
The monitor can display NTSC, PAL*, SECAM, NTSC4.43** signals. The appropriate color system is selected automatically.

* If you set PAL to ON in the menu, the monitor can also display the PAL60 signal.

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

Index number
You can operate a specific monitor among several monitors by using the index number features.

On-screen menus
You can adjust the settings by using the on-screen menus.

Control S
The CONTROL S signal allows remote control of several monitors and a VCR through a single monitor.

Blue only mode
In this mode, only a blue signal is displayed on the screen turning off the red and green signals. This facilitates color saturation and phase adjustments.

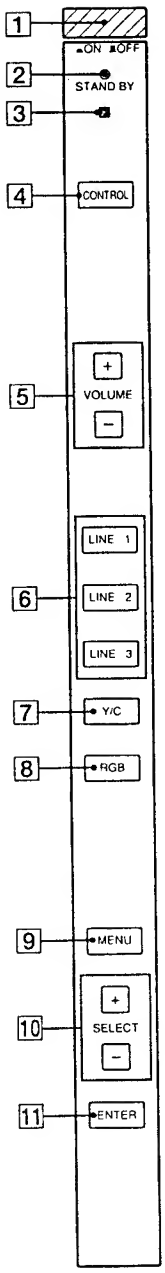
RGB/component input connectors
RGB or component (Y,R-Y,B-Y) signals from video equipment can be input through these connectors.

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.

This manual covers PVM-2950Q and PVM-2950QM. The model number is located on the rear.
The operating procedures of all models are the same.

Location and function of parts and controls

Front panel



1 POWER switch
Press to turn the monitor on. Press again to turn it off.

2 STANDBY indicator
Lights up when the monitor is turned off with the remote commander.

3 Remote sensor
Receives the beam from the remote commander.

4 CONTROL key
To operate the keys on the front panel, first press this key. Then the keys light up or flash that shows they can be operated. Press again to deactivate them.

5 VOLUME +/– keys
Press to obtain the desired volume.

6 LINE 1, LINE 2, LINE 3 keys*
Press to select the line inputs.

7 Y/C key*
Press to select the Y/C input of LINE 1 or LINE 2.

8 RGB key*
Press to select the RGB input of LINE 3.

9 MENU key
Press to make the menu appear or to go to the following menu.

10 SELECT +/– key
Press to move the cursor (▶) to an item or to adjust value in a menu.

11 ENTER key
Press to select the desired item in a menu.

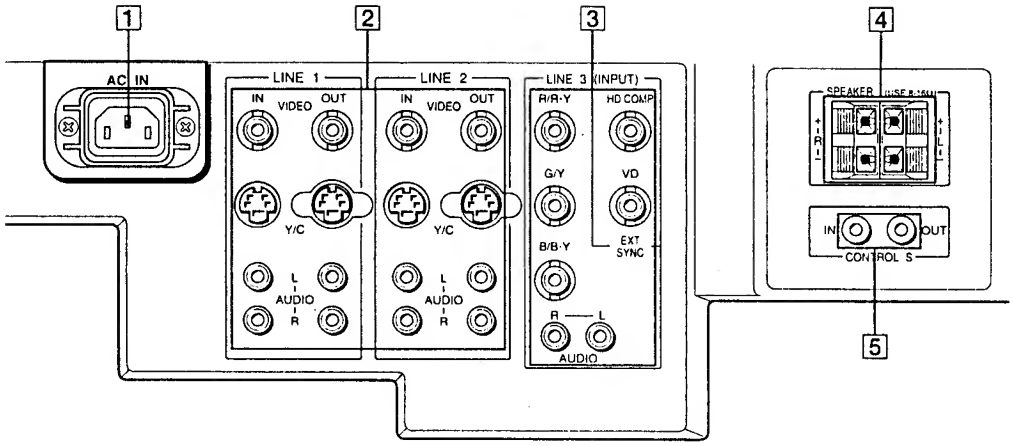
* Each key acts as follows.

CONTROL	On	Off
Selected key	Flash	Light up
Not selected key	Light up	Light off

Note

If the picture disappears suddenly and the STAND BY indicator flashes, there may be a failure in the monitor. Unplug the unit and call your authorized Sony dealer.

Rear panel



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

2 LINE 1, LINE 2 connectors

VIDEO IN (BNC)
Connect to the video output of video equipment, such as a VCR or a color video camera. For a loop-through connection, connect to the video output of another monitor.

VIDEO OUT (BNC)
Loop-through output of the VIDEO IN connector. Connect to the video input of a VCR or another monitor.

Y/C IN (4-pin mini DIN)
Connect to the Y/C separate output of a video camera, VCR or other video equipment.

Y/C OUT (4-pin mini DIN)
Loop-through output of the Y/C IN connector. Connect to the Y/C separate input of a VCR or another monitor.

AUDIO IN (phono)
Connect to the audio output of a VCR or to a microphone via a suitable microphone amplifier. For a loop-through connection, connect to the audio output of another monitor.

AUDIO OUT (phono)
Loop-through output of the AUDIO IN jack. Connect to the audio input of a VCR or another monitor.

3 LINE 3 connectors

R/R-Y IN, G/Y IN, B/B-Y IN (BNC)
When the RGB input is selected (RGB key on the front panel is lit), connect to the RGB signal outputs of a video camera. When the R-Y, G/Y, B-Y input is selected (RGB key is not lit), connect to the R-Y/Y/B-Y component signal outputs of a Sony Betacam video camera.

HD/COMP (BNC)
Connect to the H sync signal or composite sync signal output.

VD (BNC)
Connect to the V sync signal output.

Note

External sync signal is selected automatically. See the priority chart below.

Input connector	Input sync signals		
HD/COMP	H Sync	Comp Sync	—
VD	V Sync	—	—
G	Sync on G	Sync on G	Sync on G
Sync signals to be selected	H Sync V Sync	Comp Sync	Sync on G

AUDIO IN (phono)
Connect to the audio output of a VCR.

4 SPEAKER L/R terminals
Connect to speakers with 8 to 16 ohms impedance.

Note

Do not connect the speaker's cord to the monitor and to an amplifier simultaneously, or an excessive electric current might flow from the amplifier and damage the monitor.

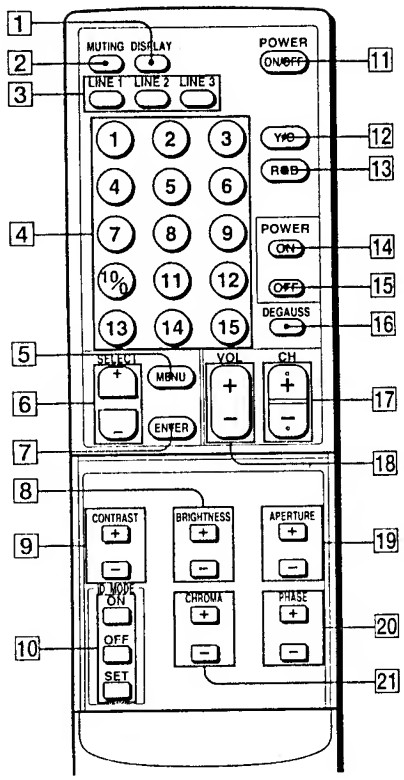
5 CONTROL S IN/OUT connectors
Connect to the CONTROL S connectors of a VCR or several monitors. Then you can control the system with a single remote commander.

Note

If you connect CONTROL S IN to the other equipment's CONTROL S OUT connector, you cannot operate the monitor with the supplied remote commander.

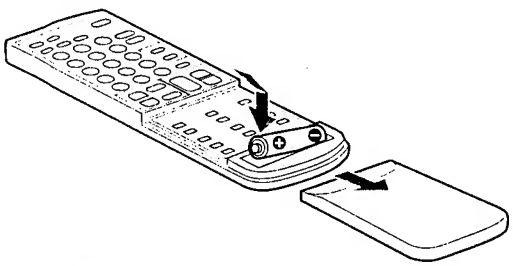
Location and function of parts and controls (continued)

Remote commander



Installing battery

Insert a size AA (R6) battery in correct polarity.



Notes

- In normal operation, a battery will last up to half a year. If the remote commander does not operate properly, the battery might be exhausted. Replace it with new one.
- To avoid damage from possible battery leakage, remove the battery if you do not plan to use the remote commander for a fairly long time.

1 DISPLAY button
Press to display the color system and the selected line input.

2 MUTING button
Press to mute the sound.

3 LINE 1/LINE 2/LINE 3 buttons
Press to choose the line input.

4 Number buttons
Press to select the index number. Cannot use the ⑪ to ⑮ buttons with the monitor.

5 MENU button
Press to make the menu appear or to go to the following menu.

6 SELECT +/– buttons
Press to move the cursor (▶) to an item or to adjust value in a menu.

7 ENTER button
Press to select the desired item in a menu.

8 BRIGHTNESS +/– buttons
Press the + button to make the picture brighter or the – button to make it darker.

9 CONTRAST +/– buttons
Press the + button to increase the contrast or the – button to decrease it.

10 ID MODE buttons
Press ON to make an index number appear on the screen. Then press the index number of the monitor you want to operate and press SET. After you finish the operation, press OFF to return to the normal mode.

11 POWER ON/OFF button
Press to turn on the monitor. Press again to turn it off.

12 Y/C button
Press to select the Y/C input of LINE 1 or LINE 2.

13 RGB button
Press to select the RGB input of LINE 3. If you do not press this button (RGB key is not lit), the component input is selected on LINE 3.

14 POWER ON button
Press to turn on the monitor. Use this button instead of the POWER ON/OFF button when you do not want to let another monitor be affected.

15 POWER OFF button
Press to turn off the monitor. Use this button instead of the POWER ON/OFF button when you do not want to let another monitor be affected.

16 DEGAUSS button
Press to demagnetize the screen. Wait for 10 minutes or more before activating this feature again. The same interval is needed after turning on the monitor.

17 CH +/– buttons
(Cannot use these buttons with the monitor.)

18 VOL +/– buttons
Press to obtain the desired volume.

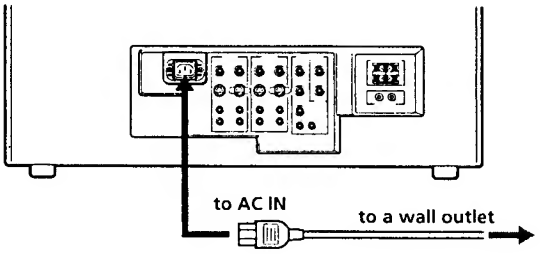
19 APERTURE +/– buttons
Press the + button for more sharpness or the – button for less sharpness. (This adjustment has no effect on the pictures of RGB signals.)

20 PHASE +/– buttons
Press the + button to make the skin tones greenish or the – button to make them purplish. (NTSC signal only)

21 CHROMA +/– buttons
Press the + button to increase the color intensity and the – button to decrease it. (This adjustment has no effect on the pictures of RGB signals.)

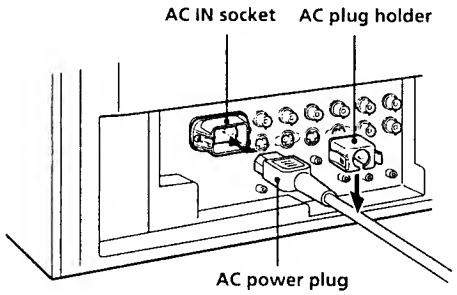
Power sources

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

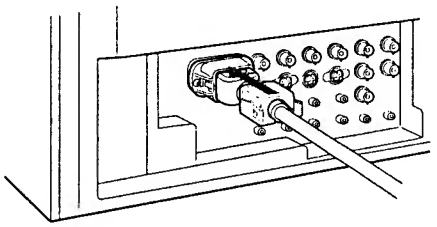


To connect an AC power cord securely with an AC plug holder

1 Plug the power cord into the AC IN socket. Then, attach the AC plug holder (supplied) to the AC power cord.



2 Slide the AC plug holder over the cord until it connects to the attached holder.



To remove the AC power cord

Squeeze the left and right sides and pull out the AC plug holder.

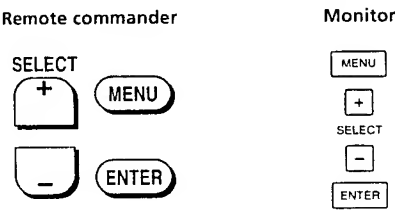
7

Using on-screen menus

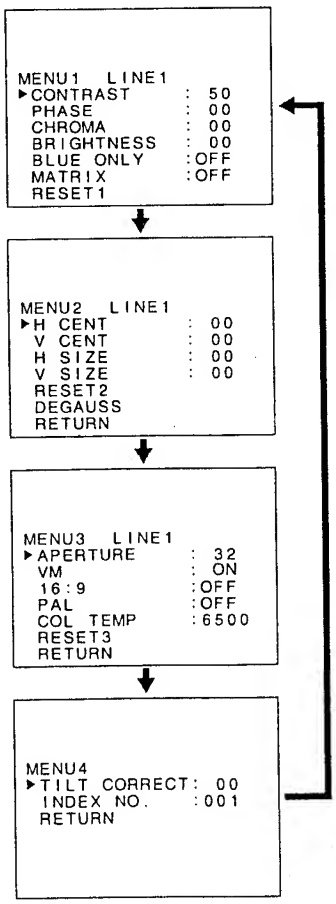
Operating through menus

There are four buttons (keys) on the monitor and the remote commander for menu operations.
To display a menu, first press MENU. Press + or – to move the cursor (▶) and press ENTER to select an item.
To return to the normal screen, press the selected line input button (key).

Menu operating buttons



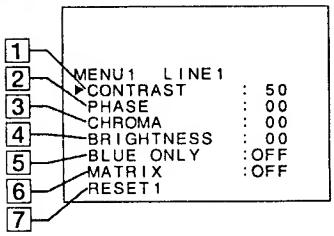
Each time you press MENU, the screen changes as shown below. For details see the following guide.



Menu guide

You can adjust the picture for each line input. Select the line input by pressing the line input button (key) before making adjustments.
The items on Menu 4 are common for all line inputs.

Menu 1



1 CONTRAST
Press + to increase the contrast and press – to decrease it.

2 PHASE
Press + to make the skin tones greenish and press – to make them purplish. (NTSC signal only)
(Set MATRIX to OFF when adjusting this item.)

3 CHROMA
Press + to increase the color intensity and press – to decrease it.
(Set MATRIX to OFF when adjusting this item.)

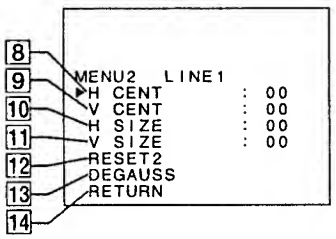
4 BRIGHTNESS
Press + to make the picture brighter and press – to make it darker.

5 BLUE ONLY
Select ON to turn off the red and green signals. Only a blue signal is displayed on the screen. This facilitates "chroma" and "phase"(NTSC signal only) control adjustments.

6 MATRIX
Select ON to activate the matrix circuit that may correct skin tones. (NTSC signal only)

7 RESET1
Select to restore the factory settings in MENU 1.

Menu 2



8 H CENT
Adjusts the horizontal centering. Press + to move the picture to the right and press – to move it to the left.

9 V CENT
Adjusts the vertical centering. Press + to move the picture up and press – to move it down.

10 H SIZE
Adjusts the horizontal picture size. Press + to enlarge the horizontal size and press – to diminish it.

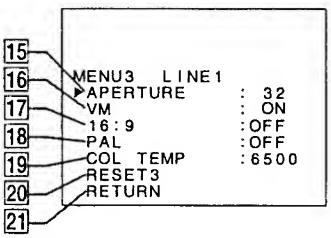
11 V SIZE
Adjusts the vertical picture size. Press + to enlarge the vertical size and press – to diminish it.

12 RESET2
Select to restore the factory settings in MENU 2.

13 DEGAUSS
Select to demagnetize the screen. Wait for 10 minutes or more before activating this feature again. The same interval is needed after turning on the monitor.

14 RETURN
Select to return to the MENU 1 screen.

Menu 3



15 APERTURE
Adjusts the picture sharpness. Press + for more sharpness or press – for less sharpness. (This adjustment has no effect on the pictures of RGB signals.)

16 VM
Select ON to emphasize sharpness and to reproduce a clear picture. (This adjustment has no effect on the pictures of RGB signals.)

17 16:9
Select ON for a 16:9 picture signal.

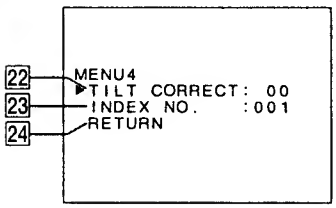
18 PAL
Select ON when the monitor does not recognize the PAL signal. (You must select ON when the PAL60 signal is input.)

19 COL TEMP
Select the color temperature from among 9300K, 6500K and 3200K.

20 RESET3
Select to restore the factory settings in MENU 3.

21 RETURN
Select to return to the MENU 2 screen.

Menu 4



22 TILT CORRECT
Adjusts the picture tilt due to the influence of the earth's magnetism. Press + to rotate the picture clockwise and press – to rotate it counterclockwise.

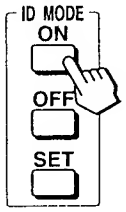
23 INDEX NO.
Sets the index number of the monitor. You cannot set the number with the remote commander. Use the keys on the monitor. For more information about the index number, see "Operating a specific monitor with the remote commander."

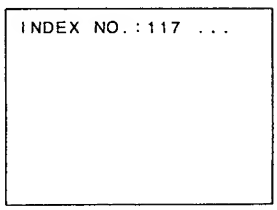
24 RETURN
Select to return to the MENU 3 screen.

Operating a specific monitor with the remote commander

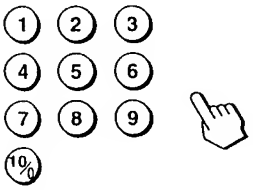
By following procedure, you can operate a specific monitor with the remote commander without affecting other monitors that are installed together.

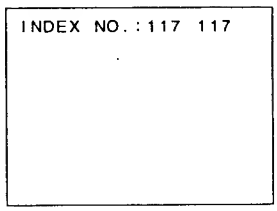
1 Press ID MODE ON on the remote commander.
Monitor index numbers appear in white characters on all the monitors. (Every monitor has its own index number from 1 to 255 as factory preset.)



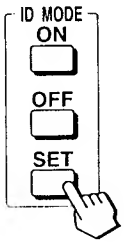


2 Input the index number of the monitor you want to operate using 0 – 9 buttons of the remote commander.
The input number appears right next to each monitor's own index number.



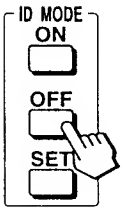


3 Press ID MODE SET.
The character on the selected monitor changes to cyan while others change to red.



Now you can operate only a specified monitor. (All operations available in ID mode except POWER ON/OFF.)

4 After necessary adjustment, press ID MODE OFF.
The monitor returns to the normal mode.



To change the index number

You can change the index number if necessary. You cannot change the number with the remote commander. Use the keys on the monitor.

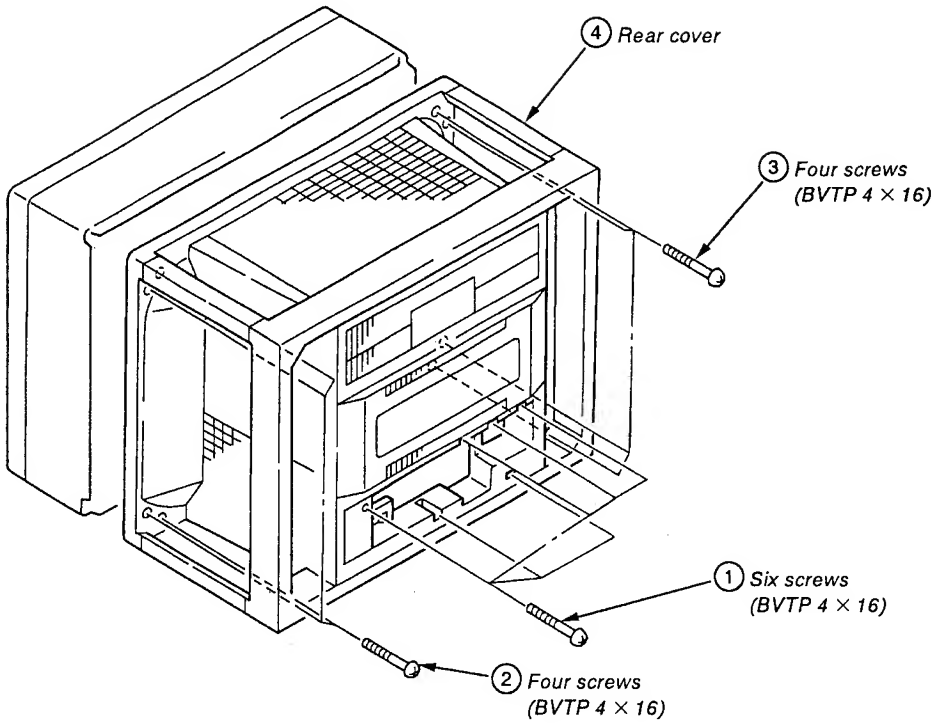
1 Display MENU 4 screen with pressing the MENU button.

2 Select INDEX NO. and press ENTER.

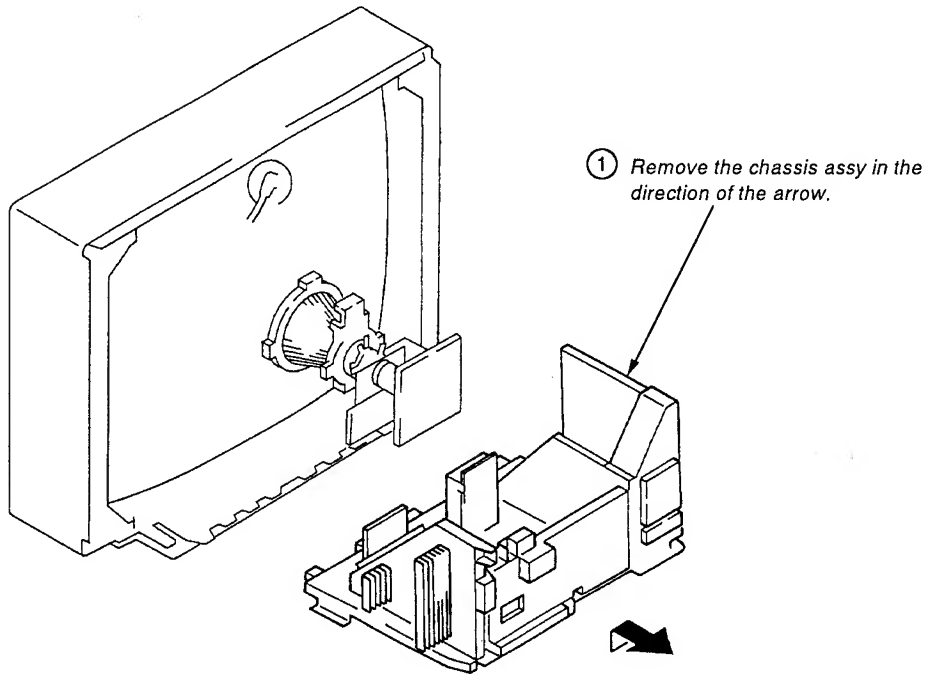
3 Select the index number with the SELECT +/– buttons and press ENTER.

SECTION 2
DISASSEMBLY

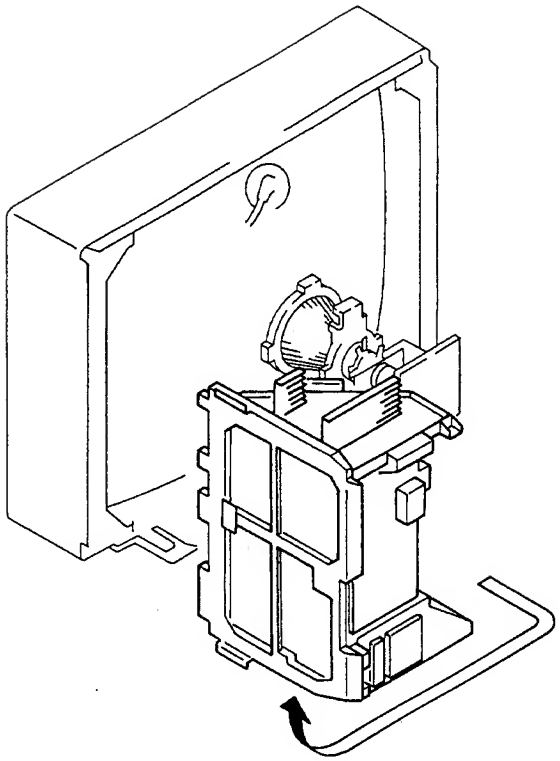
2-1. REAR COVER REMOVAL



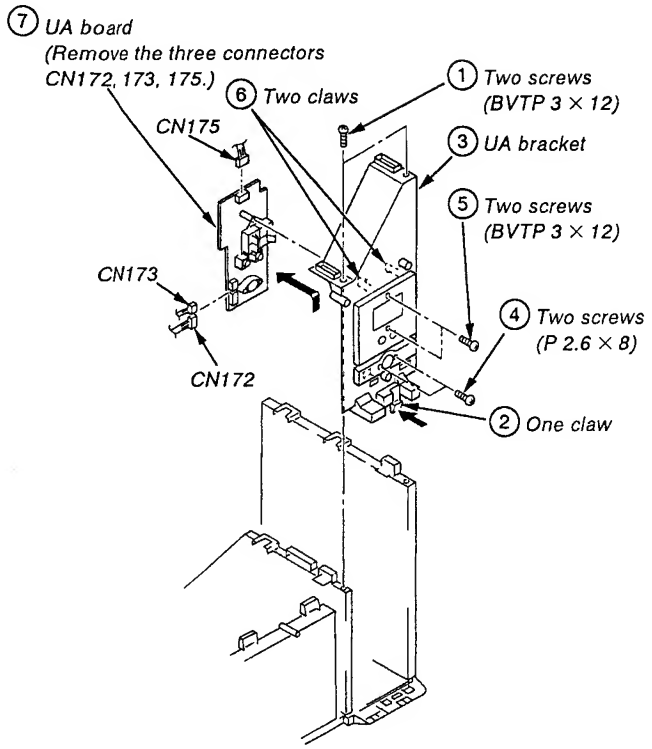
2-2. CHASSIS ASSY REMOVAL



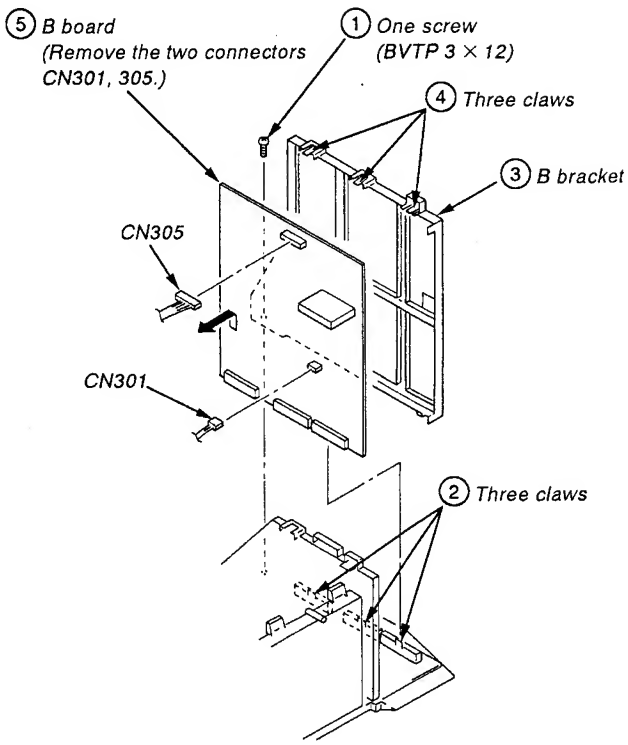
2-3. SERVICE POSITION



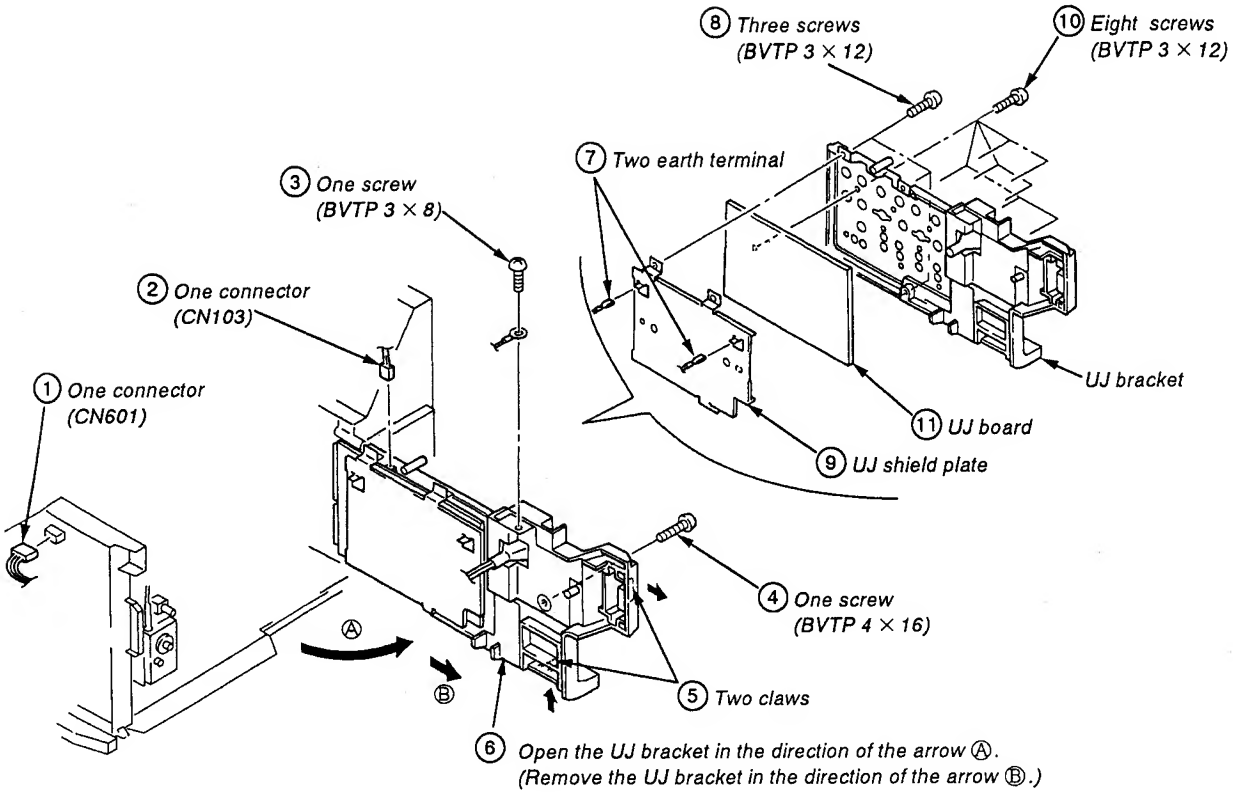
2-4. UA BOARD REMOVAL



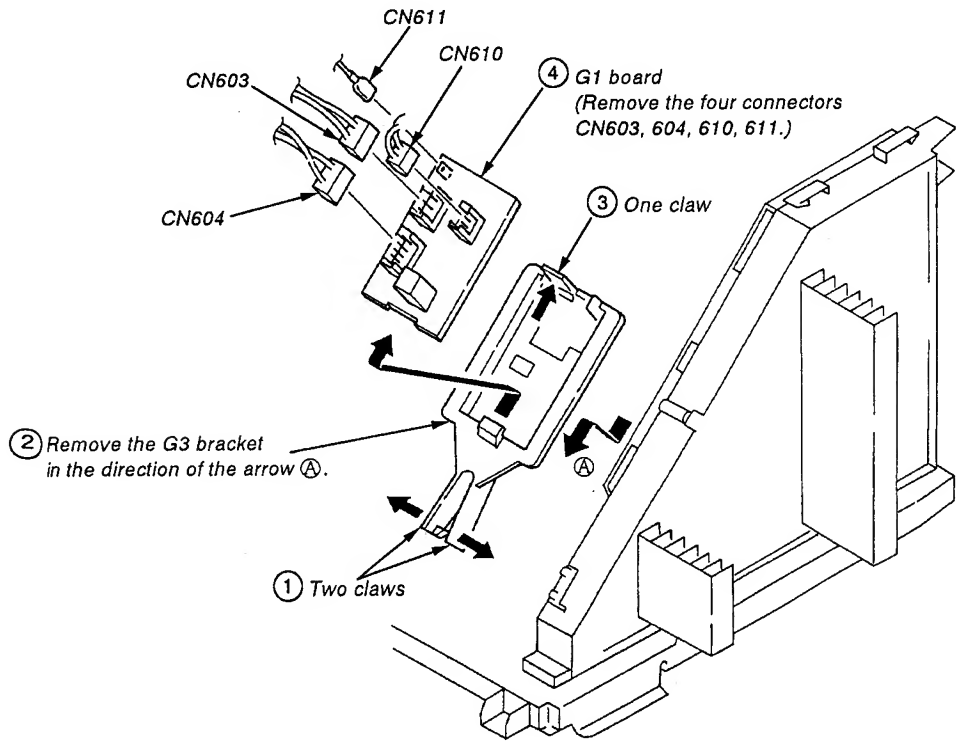
2-5. B BOARD REMOVAL



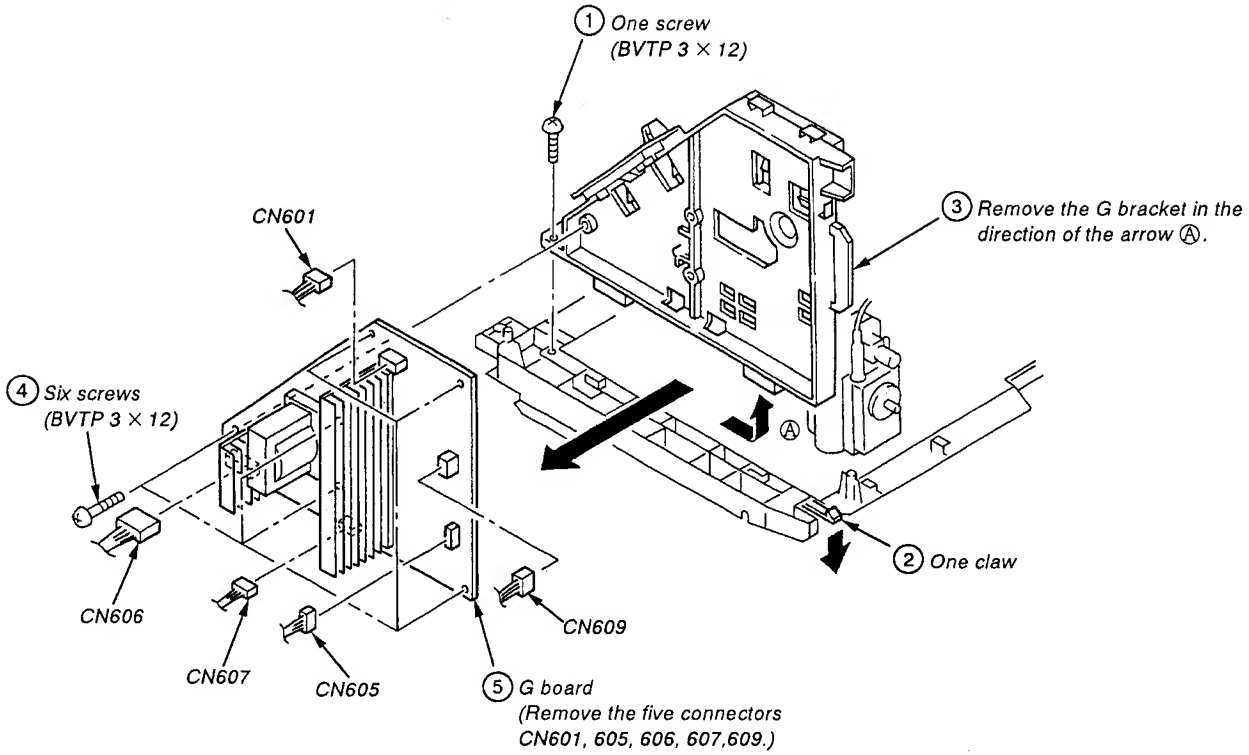
2-6. UJ BOARD REMOVAL



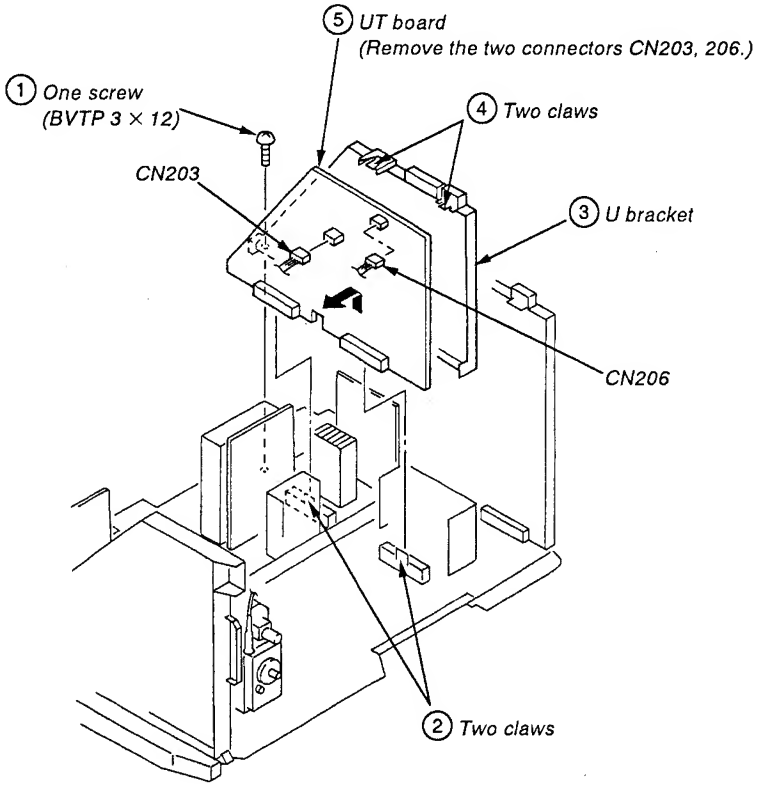
2-7. G1 BOARD REMOVAL



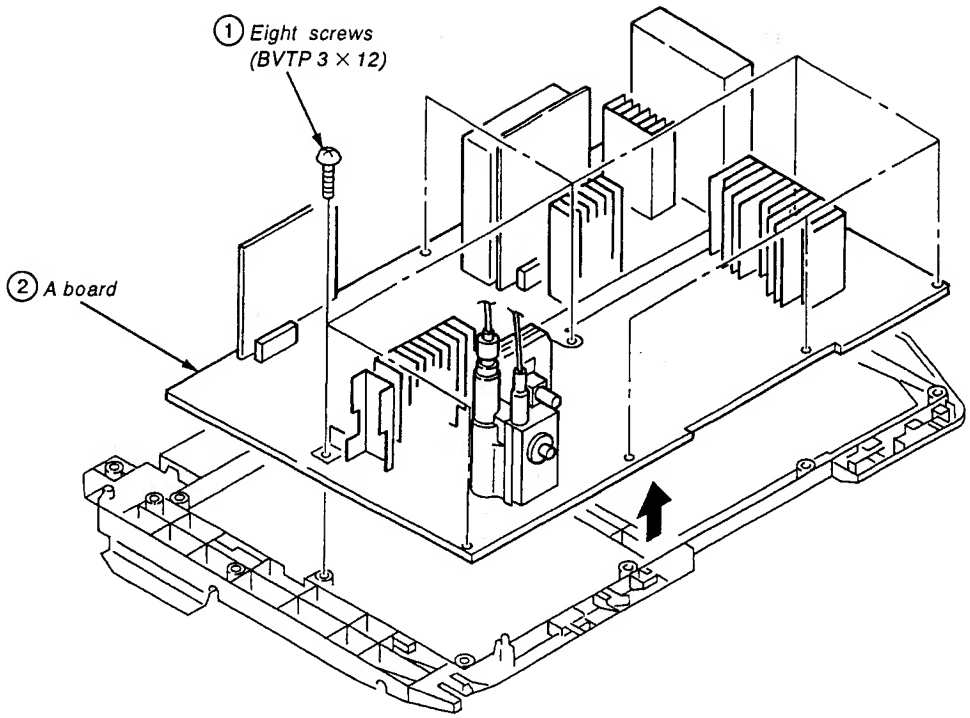
2-8. G BOARD REMOVAL



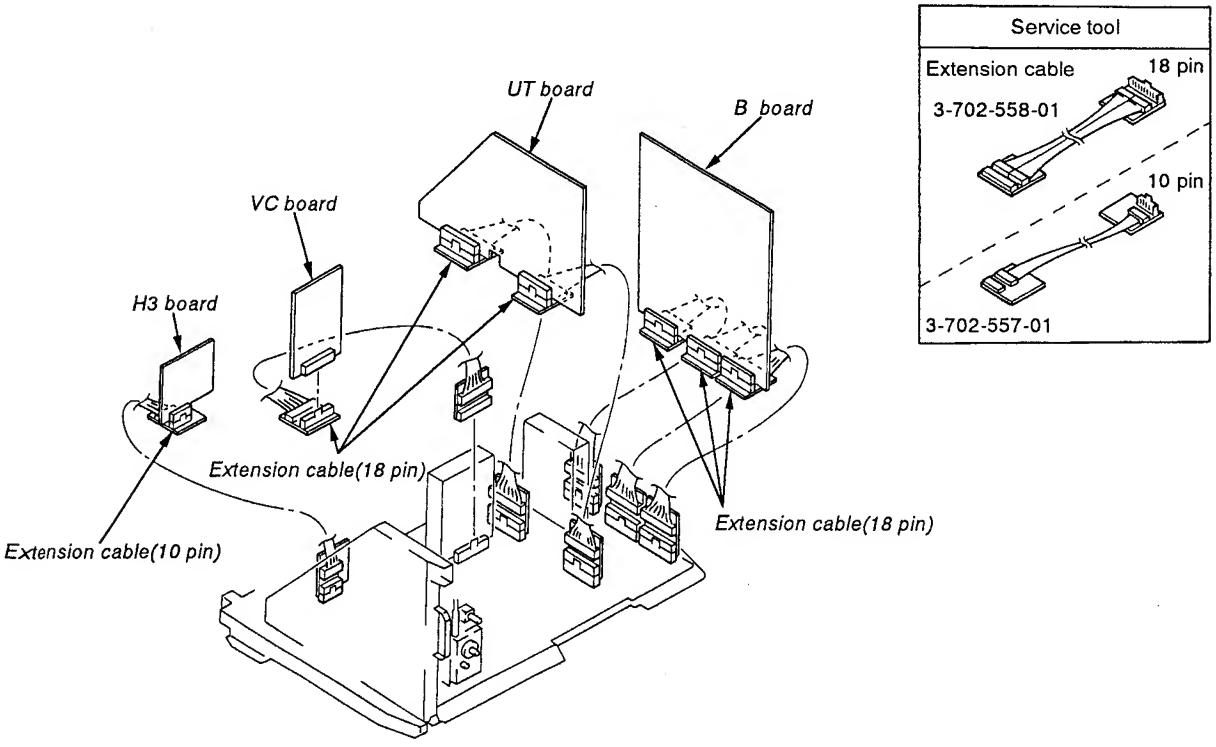
2-9. UT BOARD REMOVAL



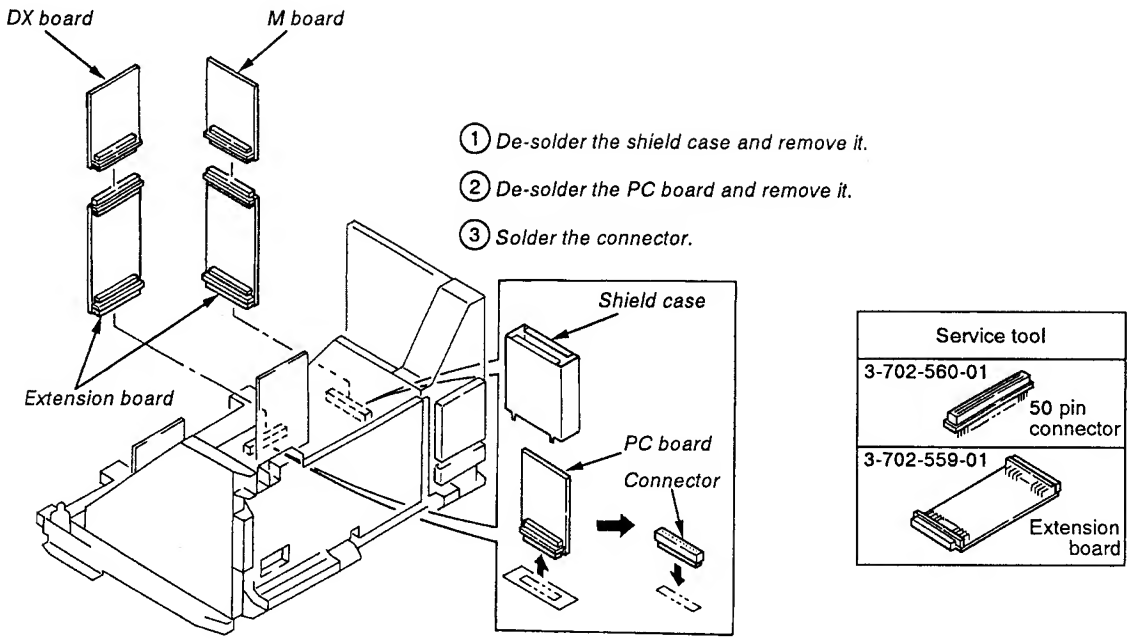
2-10. A BOARD REMOVAL



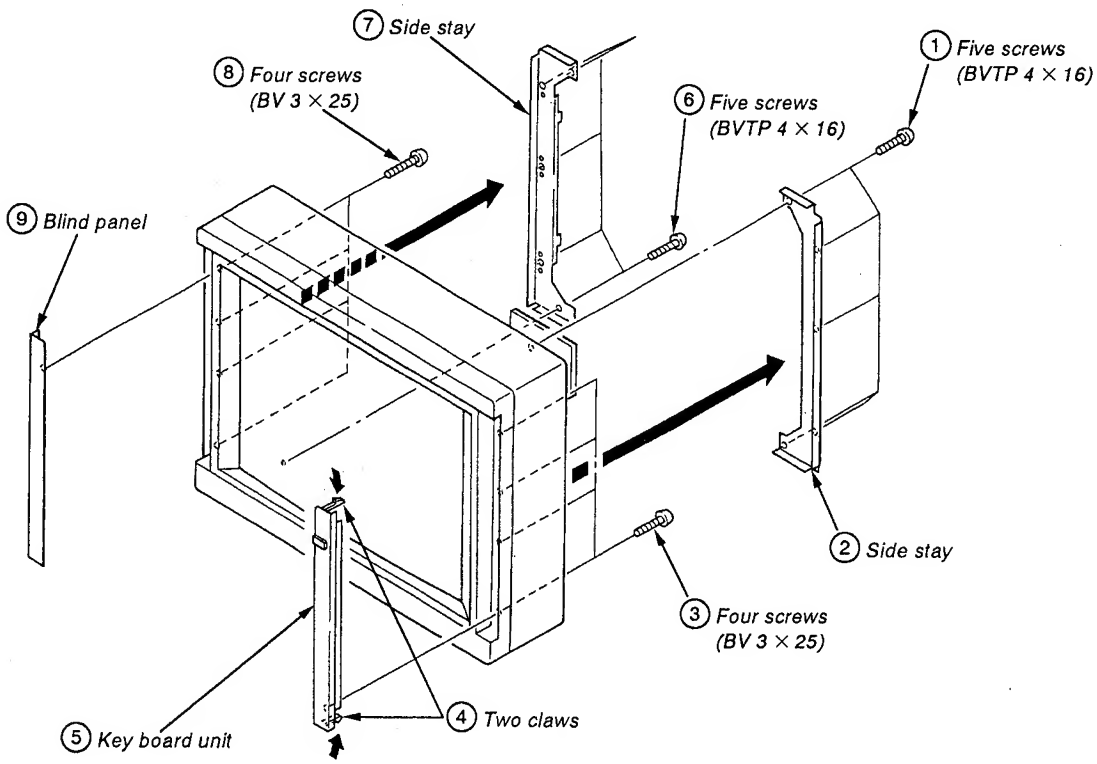
2-11. EXTENSION CABLE



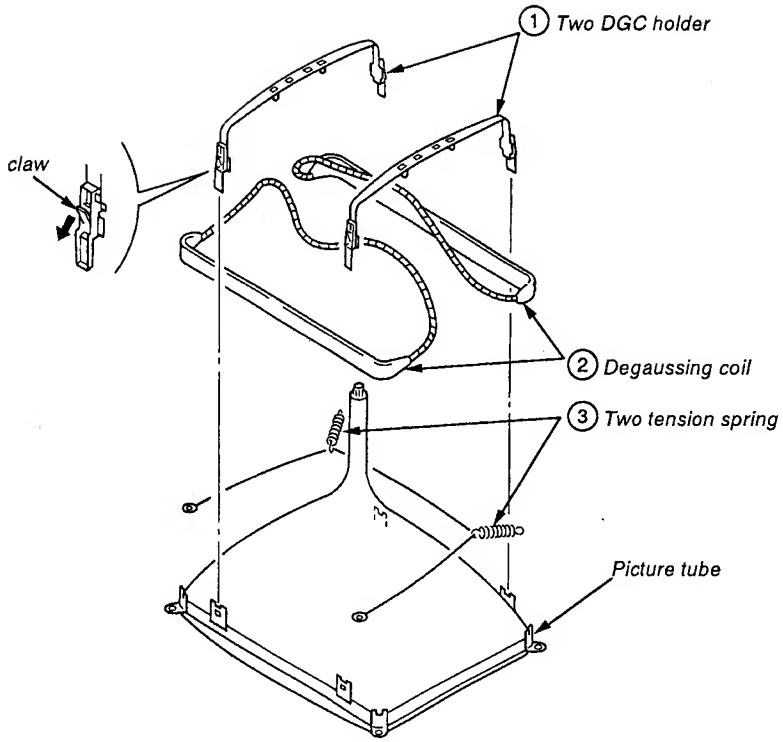
2-12. EXTENSION BOARD



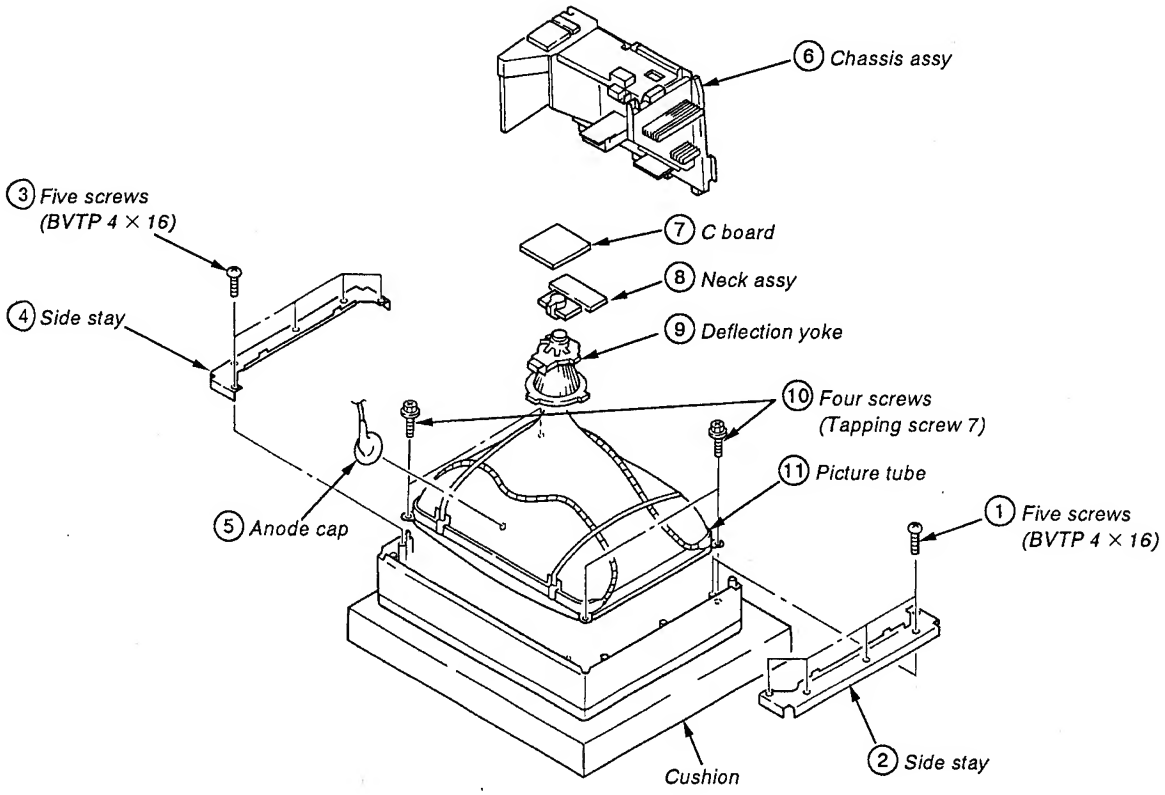
2-13. KEY BOARD UNIT AND BLIND PANEL REMOVAL



2-14. DEGAUSSING COIL REMOVAL

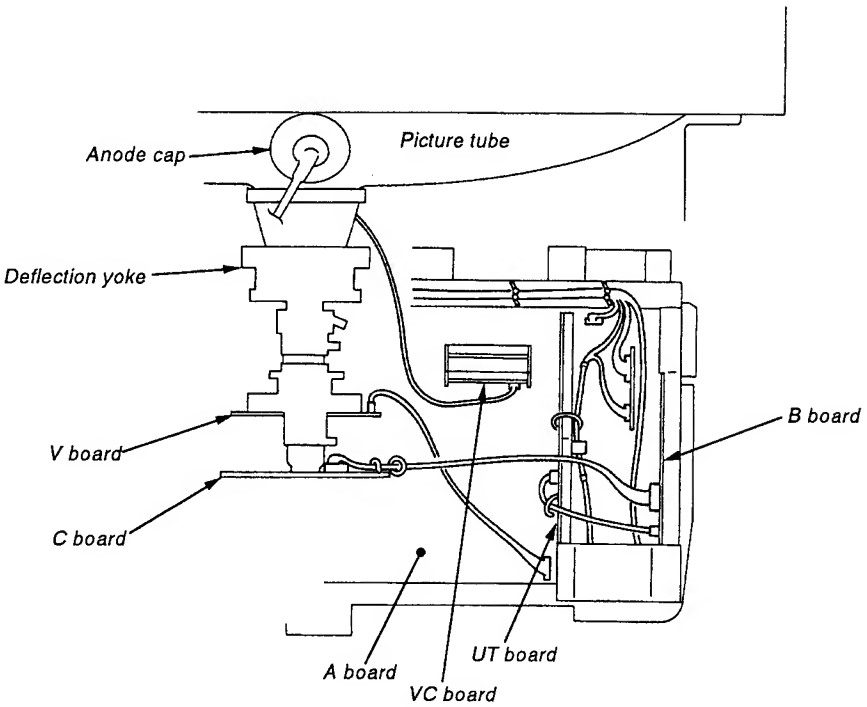


2-15. PICTURE TUBE REMOVAL

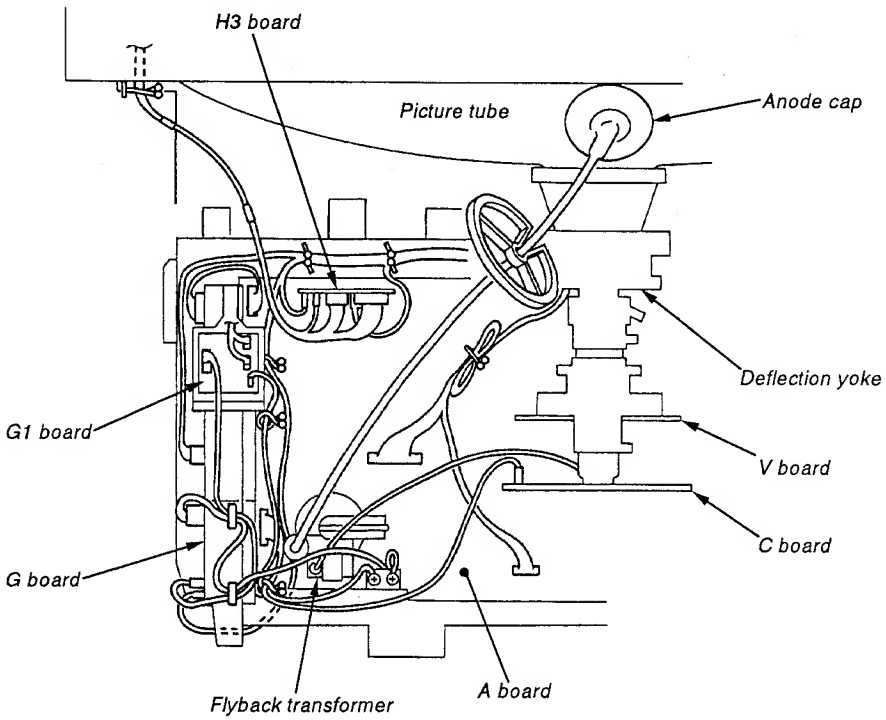


2-16. HARNESS LOCATION

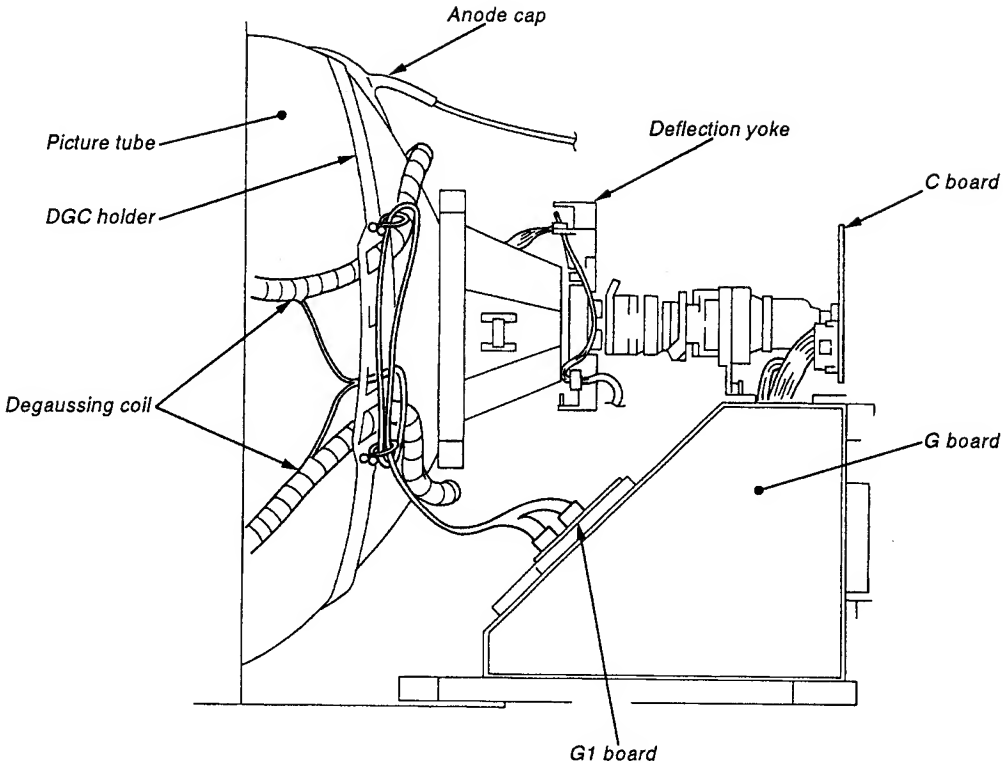
(1)TOP VIEW(RIGHT)



(2)TOP VIEW(LEFT)



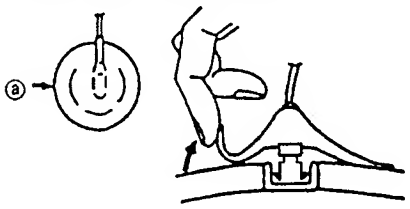
(3)LEFT SIDE VIEW



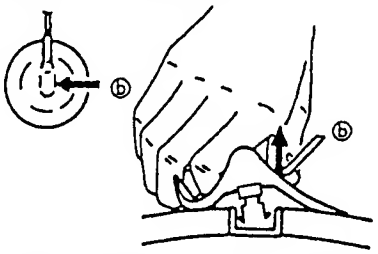
• REMOVAL OF ANODE-CAP

Note: 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.

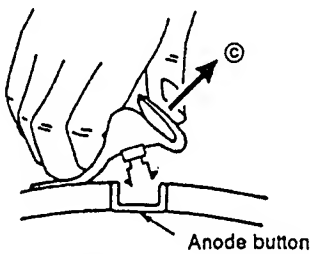
• REMOVING PROCEDURES



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



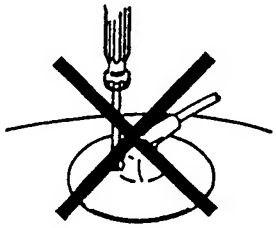
② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.

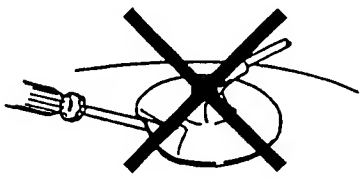


③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⓒ.

• 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 !
The shatter-hook terminal will stick out or hurt the rubber.





SECTION 3
SET-UP ADJUSTMENTS

- Carry out the following adjustments when readjustment is required or when attaching a new picture tube.
- These adjustments should be carried out at rated power supply voltage unless otherwise specified.

Controls and switches should be set in standard position as listed below unless otherwise specified.

Contrast ····· Standard
Brightness····· Standard

Carry out adjustments in the following order.

3-1 Landing adjustment (Beam Landing)
3-2 Convergence adjustment
3-3 Focus adjustment
3-4 White balance adjustment

Note: Instruments used

1. Color bar/pattern generator
2. Degausser

3-1. BEAM LANDING

Preparations

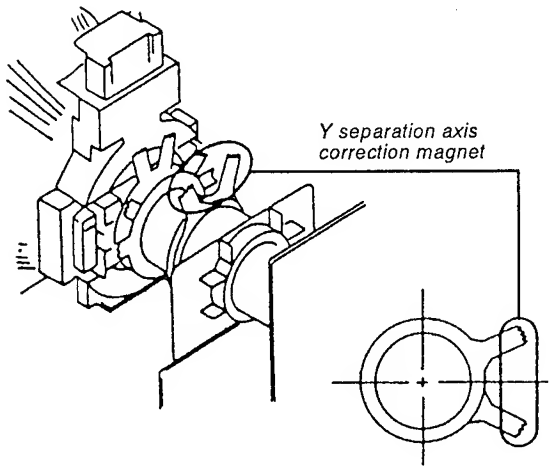
1. Face the picture tube screen of the set in an eastward or westward direction to reduce the influence of earth magnetism.
2. Turn the power switch on the set to ON to carry out demagnetizing.

(1) Adjustment of the Y separation axis correction magnet.

1. Receive the image of the crosshatch.
2. Adjust the picture to minimum and the brightness to standard.
3. Secure the neck assembly to the position shown in the figure (Fig. 3-2).
4. Move the DY until it comes in contact with the CRT and set it in a upright position.
5. Open and close the Y separation axis correction magnet on the neck assembly until there is up-down symmetry and adjust so that the upper and lower pins are symmetrical.
6. Return the DY to the original position.

(2) Landing

1. Receive the all-white signal of the pattern generator, adjusting the picture to maximum and the brightness to a level that is easy to view.
2. Carry out rough adjustment of the focus and horizontal convergence.
3. Loosen the retention device on the deflection yoke and adjust the purity adjustment knob in the center (Fig. 3-1).
4. Switch the pattern generator to the single color green.
5. Slide the deflection yoke to the back so that the center of the screen is green and use the purity magnet to achieve left-right symmetry (Fig. 3-3).
6. Slide the deflection yoke to the front so that the entire screen is the single color green.
7. Switch the pattern generator to the single colors red and blue and confirm that landing has been obtained.
8. Secure the retention device once the deflection yoke position has been determined.
9. If landing has not been obtained in the corner section, use the magnet to make corrections (Fig. 3-4).



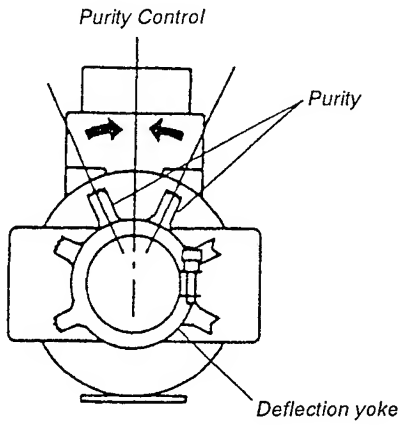


Fig. 3-1

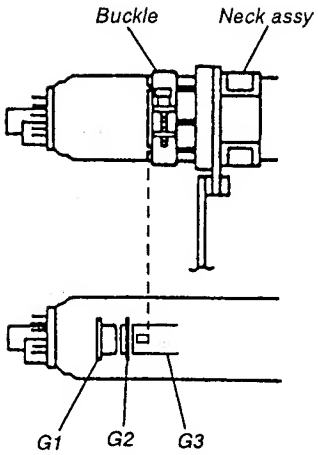


Fig. 3-2

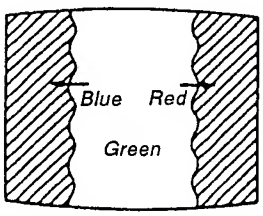


Fig. 3-3

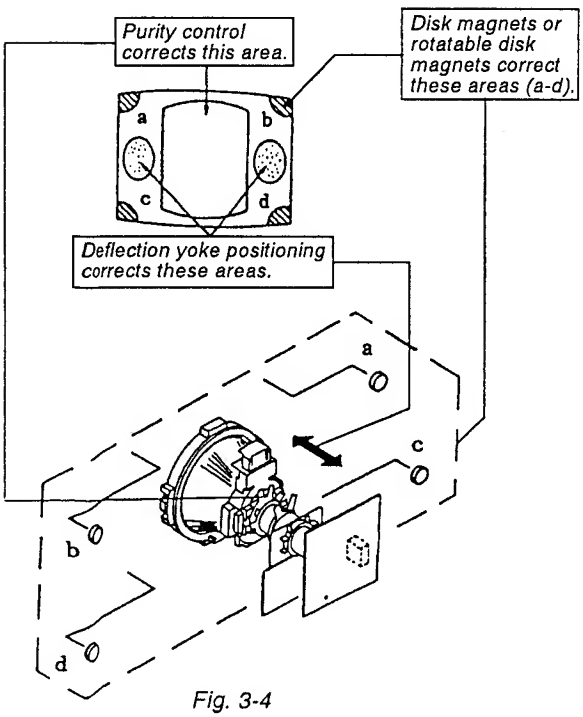


Fig. 3-4

3-2. CONVERGENCE ADJUSTMENT

(1) Screen Center Convergence Adjustment

(Static Convergence)

1. Receive the dot signal and adjust the picture to standard.
2. Use the horizontal static convergence knob to arrange the red, green and blue dots on top of each other in a horizontal direction in screen center.
3. Use the vertical static convergence magnet to arrange the red, green and blue dots on top of each other in a vertical direction in screen center.

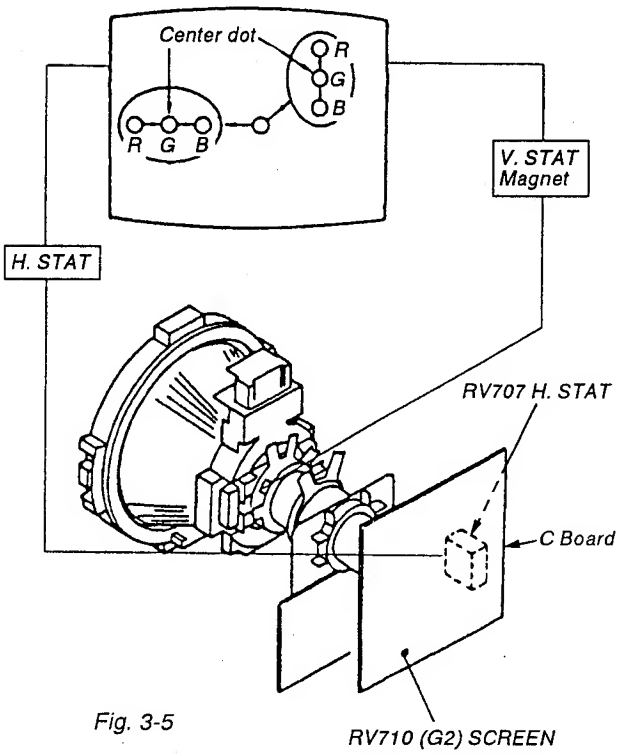


Fig. 3-5

※ If the dots do not become arranged in a horizontal direction within the adjustment range for the horizontal static convergence knob, simultaneously use the vertical static convergence magnet to adjust while taking tracking.
(Incline the vertical static convergence and adjust by opening and closing the knob.)

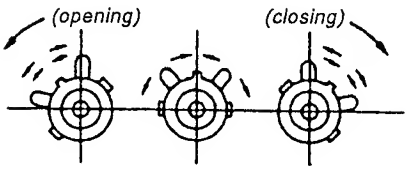


Fig. 3-6

4. Movement of the red, green and blue dots by inclination and opening/closing of the vertical static convergence magnet.
(1) Movement when opening and closing the vertical static convergence magnet.

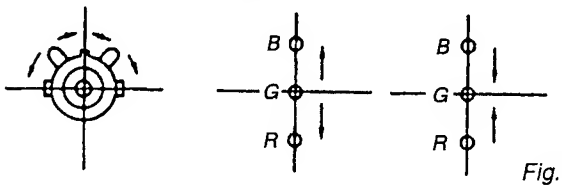


Fig. 3-7

(2) Movement when inclining the vertical static convergence magnet in a counter-clockwise direction.

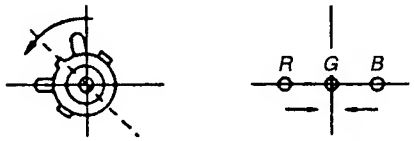


Fig. 3-8

(3) Movement when inclining the vertical static convergence magnet in a clockwise direction.

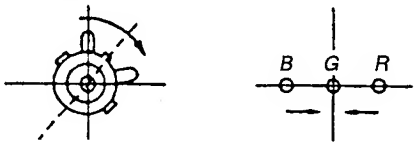


Fig. 3-9

(4) Movement when inclining the vertical static convergence magnet and opening and closing.

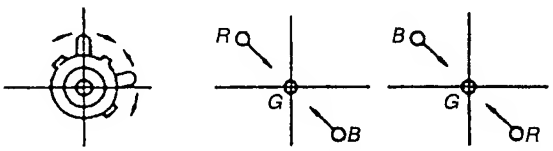


Fig. 3-10

※ If the blue dots do not line up in relation to the red and green dots, correct with the BMC (6-pole) magnet.

5. Correction of HMC (horizontal misconvergence) and VMC (vertical misconvergence) with the BMC (6-pole) magnet.
(1) HMC correction with the BMC (6-pole) magnet and movement of the electron beam.

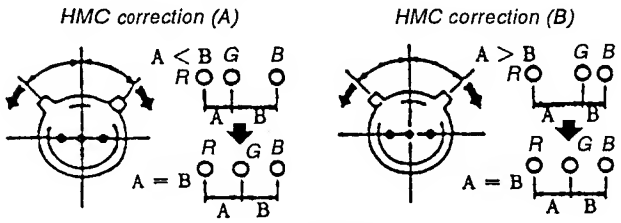


Fig. 3-11

(2) VMC correction with the BMC (6-pole) magnet and movement of the electron beam.

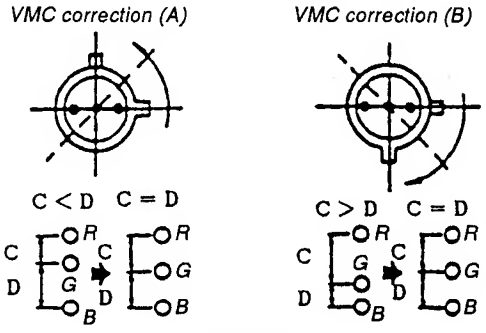


Fig. 3-12

Position of the knob

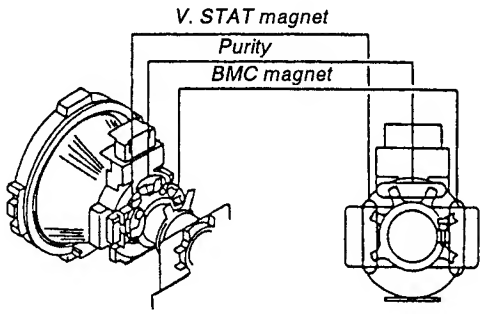


Fig. 3-13

(2) Convergence Adjustment on the Screen Periphery (Dynamic Convergence)

1. Use the horizontal static convergence VR (H.STAT) to adjust the convergence in a horizontal direction in screen center.
2. Change to the service mode and carry out the following dynamic convergence adjustments.
(Service Mode : Use the remote control to press the following buttons in succession : Screen display ➡ CH5 ➡ Volume + ➡ Power .
please refer to page 27 for selecting the item on how to adiust the dynamic convergence.

	Adjustment Items	Adjustment Range
01	DC SHIFT (H. STAT)	000-063
02	H. AMP	000-063
03	H. TILT	000-063
04	UP. Y. BOW	000-063
05	UP. C. BOW	000-063
06	UP. TILT	000-063
07	LO. Y. BOW	000-063
08	LO. C. BOW	000-063
09	LO. TILT	000-063

3. Press [1] and [4] on the remote control to select the items. Adjust with the [3] and [6] buttons.

1) Y.BOW adjustment on the upper side of the screen (UP.Y.BOW).

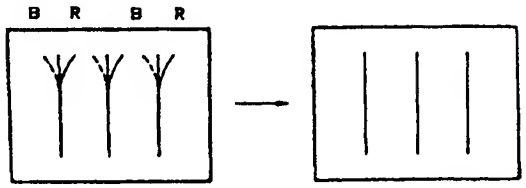


Fig. 3-14

2) Y.BOW adjustment on the lower side of the screen (LO.Y.BOW)

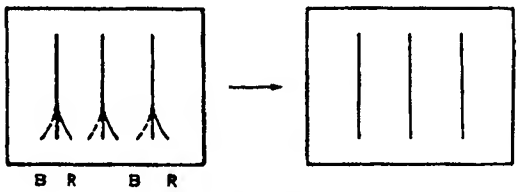


Fig. 3-15

3) H.AMP adjustment (HAMP).

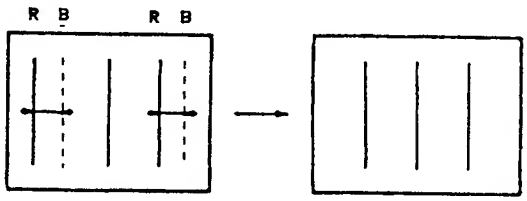


Fig. 3-16

4) TILT adjustment (HTLT)

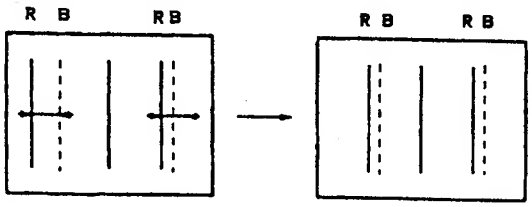


Fig. 3-17

5) C.BOW adjustment on the upper side of the screen (UP.C.BOW).

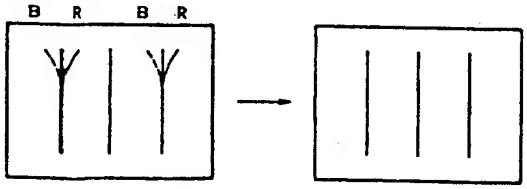


Fig. 3-18

6) TILT adjustment on the upper side of the screen (UP.TILT).

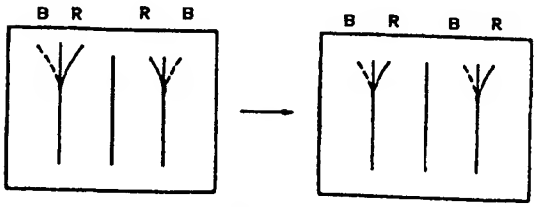


Fig. 3-19

7) C.BOW adjustment on the lower side of the screen (LO.C.BOW).

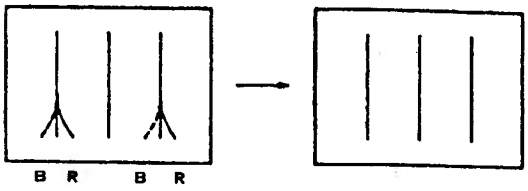


Fig. 3-20

8) TILT adjustment on the lower side of the screen (LO.TILT).

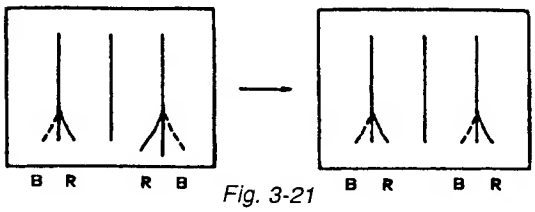
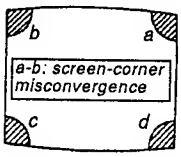


Fig. 3-21

4. If there is a misconvergence in the corner section of the screen, use permalloy to adjust.



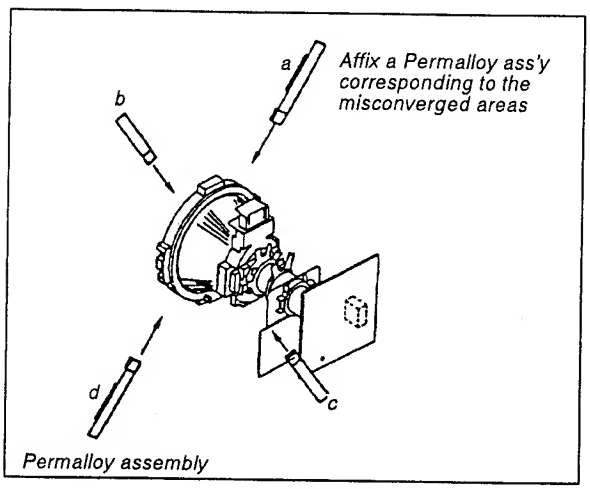


Fig. 3-22

3-3. FOCUS ADJUSTMENT

1. Receive a broadcast.
2. Adjust the picture to standard condition.
3. Adjust the focus volume of the flyback transformer until the focus is ideal in the center of the screen. If the focus is adjusted only to the center of the screen, a magenta ring will appear on the screen. In such a case adjust the focus so that is even on all parts of the screen.

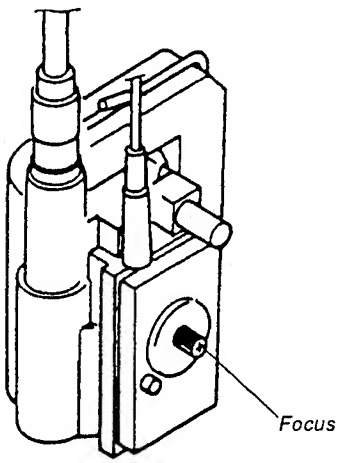


Fig. 3-23

3-4. SCREEN (G2) WHITE BALANCE ADJUSTMENT

G2 Adjustment (RV710)

1. Adjust the picture and brightness to standard.
2. Connect an oscilloscope to the cathode.
3. Remove CN305 connect pin 1, 2, 3 to an external power supply and adjust the cathode voltage to 176 ± 2V.
4. Adjust RV710 (G2) by adjusting to a position that is just prior to disappearance of the flyback line on the screen.

WHITE BALANCE ADJUSTMENT

(Caution ; Refer to Page 38)

1. Input the gray scale to Line 1 and select 9300 K on the screen menu.
2. Set so that the user control contrast is minimum and the brightness is reset.
3. Set in the service mode and adjust so that the 0 IRE of the gray scale is cut off and 10 IRE is slightly bright at a brightness of 01.
4. Change the signal to the all-white signal and change the signal level so that the center brightness is 10 nit.

Note : If fine adjustments of the brightness are not possible with the signal level, use contrast on the user control to adjust.

5. Use the G cutoff and B cutoff to adjust so that the color temperature is 9300K+8 MPCD ± 2JND.
6. Set the all-white signal level to 100 IRE.
7. Use the G drive and B drive to adjust so that the color temperature is 9300K+8 MPCD ± 2JND.
8. Adjust the brightness to 10 nit and confirm that the color temperature is 9300K+8 MPCD ± 2JND. Repeat steps 3 to 7 to adjust when necessary.
9. Return to step (1) and check whether the brightness has altered. If so, repeat steps 1-8 to adjust.
10. Input the gray signal of the Y color difference signal to Line 3.
11. Change the signal level so that the center brightness is 10 nit.
12. Adjust the G cutoff and B cutoff so that the color temperature is 9300K+8 MPCD ± 2JND.
13. Change the input to the RGB mode of Line 3 and input the RGB gray signal.
14. Change the signal level so that the brightness in screen center is 10 nit.
15. Adjust the G cutoff and B cutoff so that the color temperature is 900K+8 MPCD ± 2JND.
16. Save the adjustment data.
17. Change the input to Line 1, change the signal to the gray scale and go to the 6500K mode on the screen menu.
18. Carry out the same adjustments as in steps 2 to 8 so that the color temperature is 6500K+8 MPCD ± 2JND.
19. Save the adjustment data.
20. Change the input to the component mode of Line 3 and input the gray signal of the Y color difference signal.
21. Carry out exactly the same adjustments as in 11 and 12 so that the color temperature is 6500K+8 MPCD ± 2JND.
22. Save the adjustment data.
23. Change the input to the RGB mode of Line 3 and input the RGB gray signal.
24. Carry out exactly the same adjustments as in 14 and 15 so that the color temperature is 6500K+8 MPCD ± 2JND.
25. Save the adjustment data.
26. Change the input to Line 1, change the signal to the gray scale and go to the 3200K mode on the screen menu.
27. Carry out exactly the same adjustments as in steps 2 to 8 so that the color temperature is 3200K ± 2JND.
28. Save the adjustment data.
29. Change the input to the component mode of Line 3 and input the gray signal of the Y color difference signal.
30. Carry out exactly the same adjustments as in steps 11 and 12 so that the color temperature is 3200K ± 2JND.
31. Save the adjustment data.
32. Change the input to the RGB mode of Line 3 and input the gray signal of RGB.
33. Carry out exactly the same adjustments as in steps 14 and 15 so that the color temperature is 3200K ± 2JND.
34. Save the adjustment data.
35. Input a window signal of 100 IRE from Line 1 and go to the 9300K mode. In addition, set the contrast and brightness of the user control to the reset state.
36. Adjust with the picture control until the brightness at the center of the tube is 200 ± 10 nit.
37. Save the adjustment data.
38. Change to the 6500K mode.
39. Adjust the picture adjustment so that the brightness at the center of the tube is 200 ± 10 nit.
40. Save the adjustment data.
41. Change to the 3200K mode.
42. Adjust the picture adjustment so that the brightness at the center of the tube is 140 ± 10 nit.
43. Save the adjustment data.

SECTION 4
SAFETY RELATED ADJUSTMENTS

CONFIRMATION OF HOLD-DOWN(⊠R583)

Be sure to carry out the following adjustments after replacing the following parts (indicated with a ◪ sign in the circuit chart).

◪

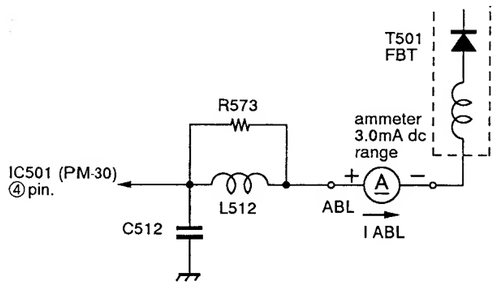
C574, D515, IC501, IC620, Q517, Q518, R578, R580, R581, R582, R583, R584, R585, T504

(1) Confirmation of B + line.

1. Input a voltage of $130^{+0.1}_{-0.0}$VAC and set picture and brightness to minimum level.
2. Confirm that the voltage on the B+ line is 135. 6VDC or less when receving the dot signal.

(2) Confirmation of hold-down operation

1. Set the power source voltage to AC120V and receive the all-white signal.
2. Adjust the picture and the brightness so that IABL is 1610 ± 50 μA.
3. Confirm that the hold-down circuit operates and the raster disappears at a voltage of DC 147.3V or less when applying voltage from external DC power source to the ② pin of IC501.



CONFIRMATION OF HOLD-DOWN(⊠R581)

Be sure to carry out the following adjustments after replacing the following parts (indicated with a ◪ sign in the circuit chart).

◪

C574, D515, IC501, IC620, Q517, Q518, R578, R580, R581, R582, R583, R584, R585, T504

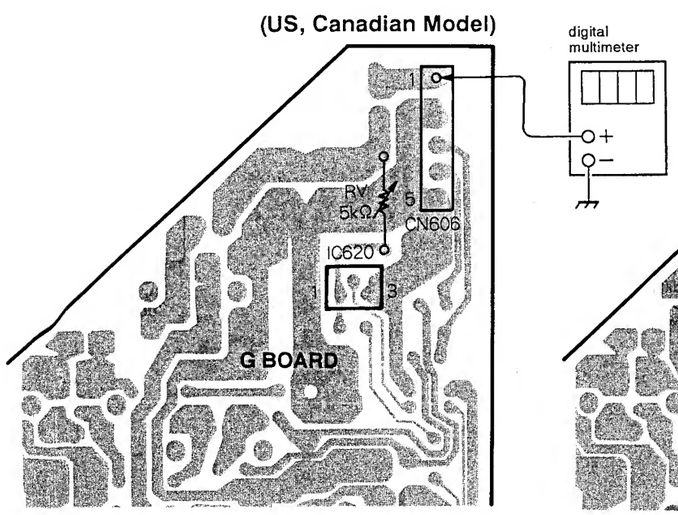
(1) Tertiary winding detection

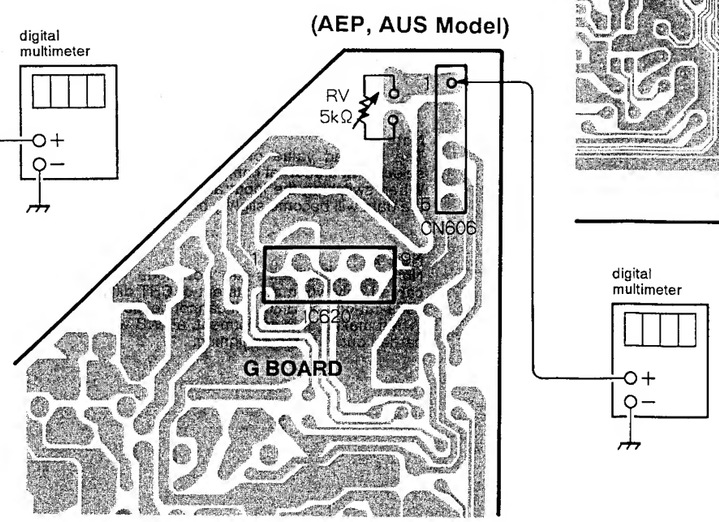
1. Set the power source votage to AC120V and receive the all-white signal.
2. Adjust the picture and brightness so that IABL is 1610 ± 50 μA.
3. Confirm that the hold-down circuit operates and the raster disappears at a voltage of DC147.9V or less when applying voltage from the external DC power source to the ⑪ pin of IC501on substrate A.

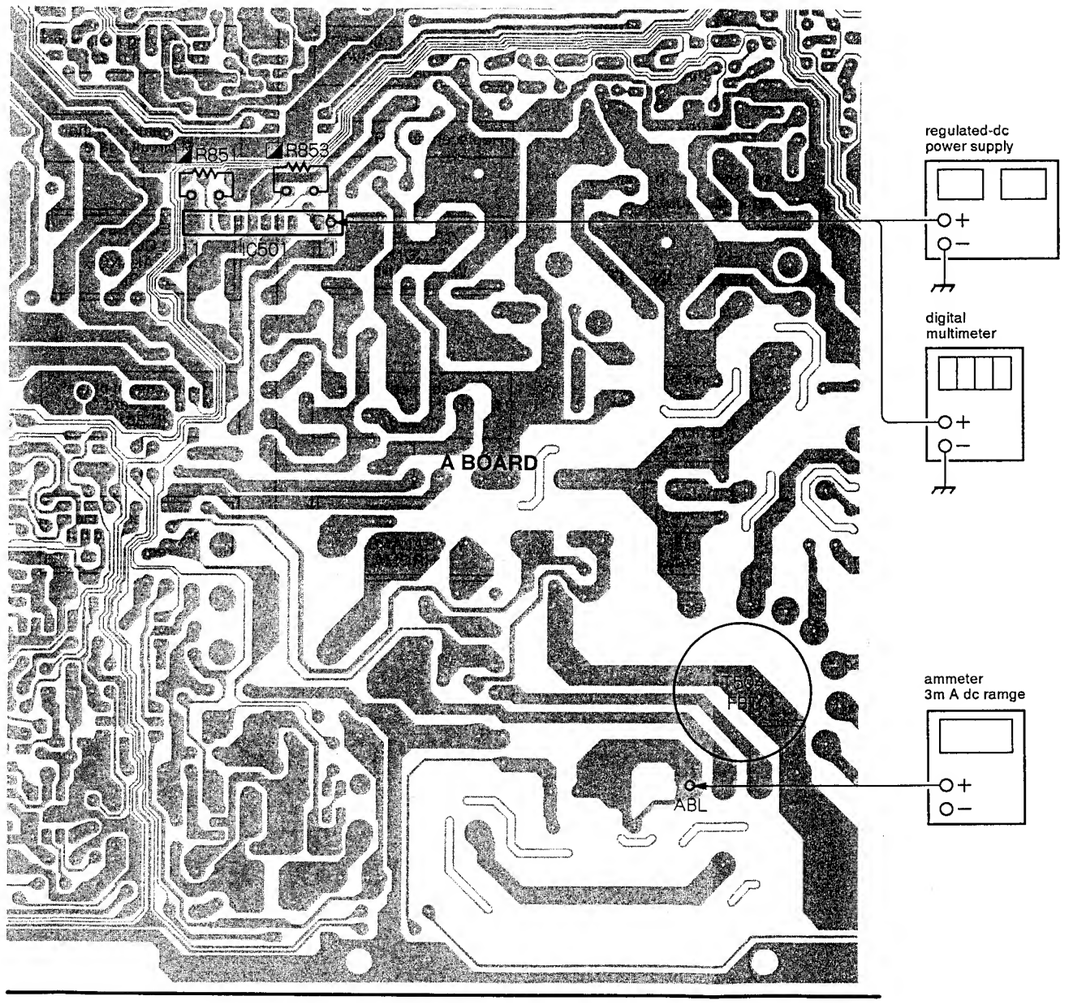
CONFIRMING THE +B VOLTAGE

The following confirmations must be carried out when replacing IC620.

1. Input AC$130^{+0.1}_{-0.0}$ V 60 Hz as the input voltage to the power source section.
2. Receive the dot signal and set CONT and BRT to MIN. At this time the voltage on the +B line should be 135. 6 V or less.







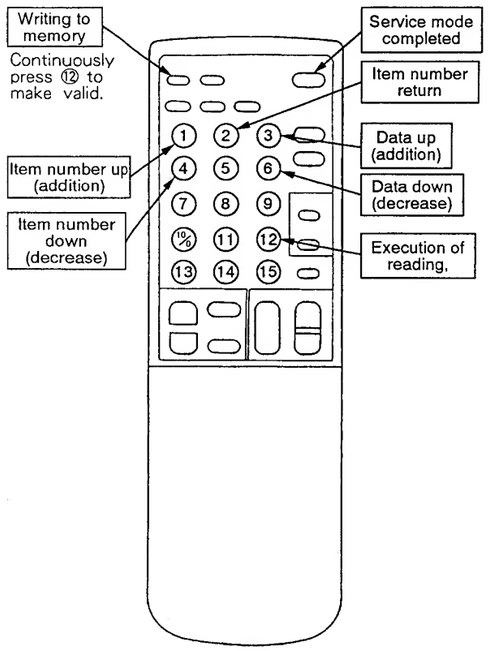
SECTION 5
ELECTRIC ADJUSTMENT IN THE SERVICE MODE

Electric adjustment can be carried out with the remote commander provided with the set (RM-854).
The places to be adjusted in the service mode are as follows.

RESET U MEN ····· All user controls shall be preset.
GEO DEST ····· Adjustment of screen distortion
D CONV ····· Convergence adjustment
W BALANCE ····· White balance adjustment
CHROMA ····· Adjustment of the components' primary color matrix

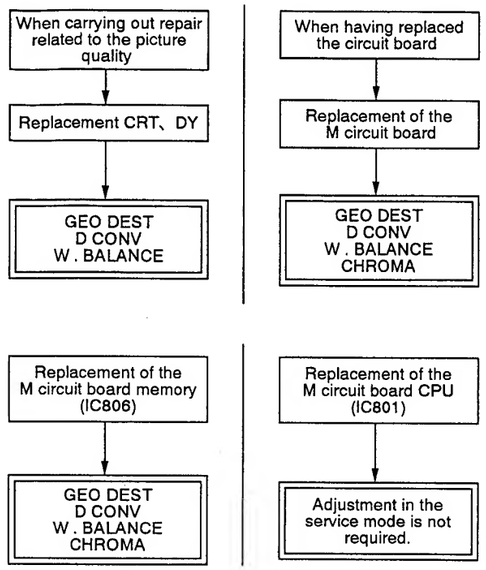
When entering the service mode, the set shall be in standby condition, and each switch shall be pressed in the order of 「Screen display → 5 → VOL+ → POWER」.

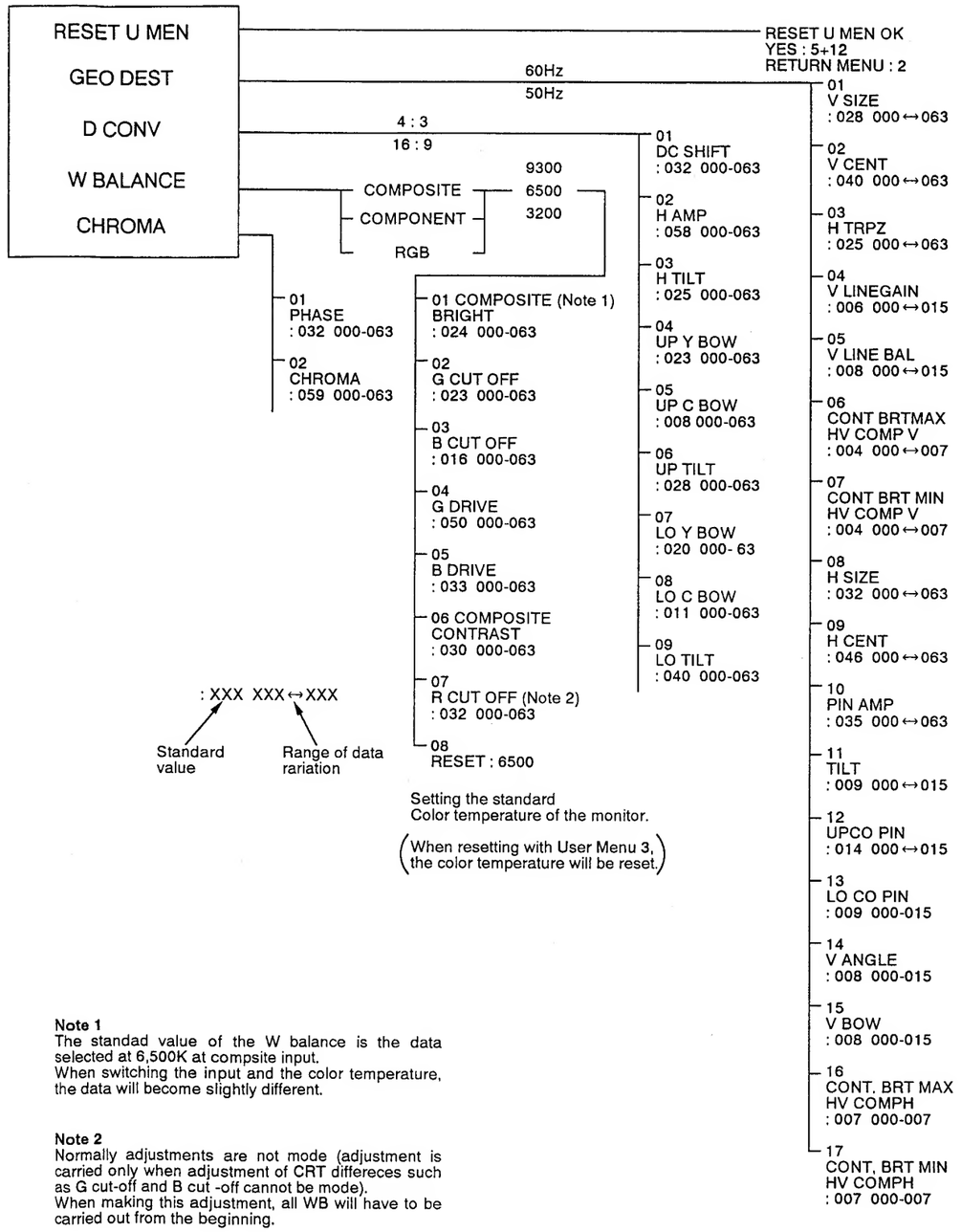
FUNCTIONS OF THE COMMANDER IN THE SERVICE MODE



• WHEN ADJUSTMENT IS REQUIRED IN THE SERVICE MODE

When carrying out the following repairs, please be aware that adjustment in the service mode is required.





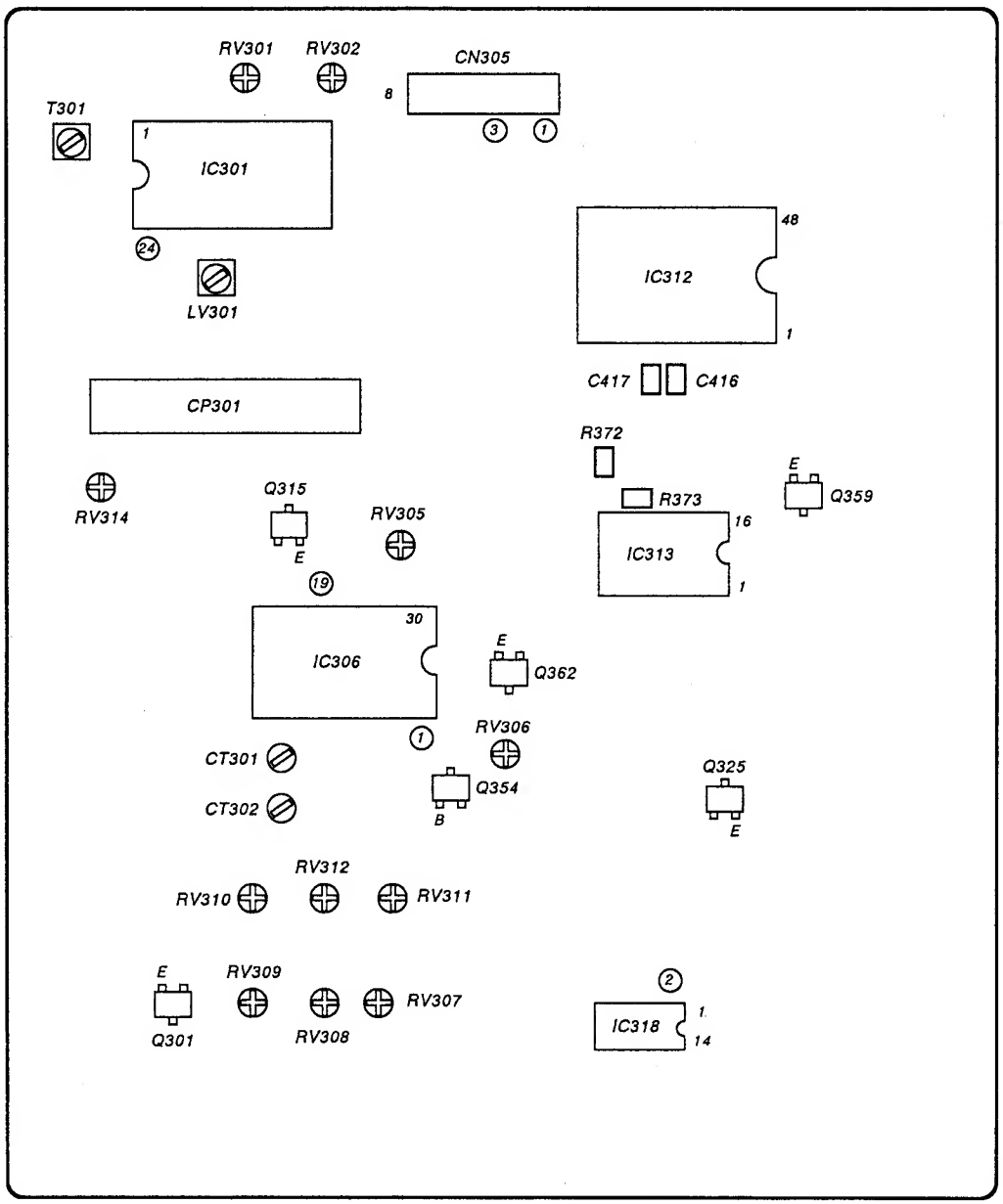
Note 1
The standad value of the W balance is the data selected at 6,500K at compsite input.
When switching the input and the color temperature, the data will become slightly different.

Note 2
Normally adjustments are not mode (adjustment is carried only when adjustment of CRT differeces such as G cut-off and B cut -off cannot be mode).
When making this adjustment, all WB will have to be carried out from the beginning.

SECTION 6
CIRCUIT ADJUSTMENTS

6-1. B BOARD ADJUSTMENTS

B BOARD – CONDUCTOR SIDE –



1. Call up the set menu and reset all the user control functions.
2. Connect the oscilloscope between UT board CN205 Pin ③ and ground and adjust RV201 so that the Y output is 2.0 ± 0.1 Vp-p (100% white signal).
3. Connect the oscilloscope between UT board CN205 Pin 1 and ground and adjust RV202 so that the Burst output is 200 ± 10 mVp-p (100% white signal)
4. Primary color matrix adjustment
   4-1. Input a component 75% color bar R-Y and sync signal to Line 3.
   4-2. Set service personnel mode.
   4-3. Connect the emitter of Q359 to +12V and the emitter of Q315 to ground.
   4-4. Connect the oscilloscope between CN305 Pin ③ and ground and adjust with the remote controller so that B-Out is 50 mVp-p max.

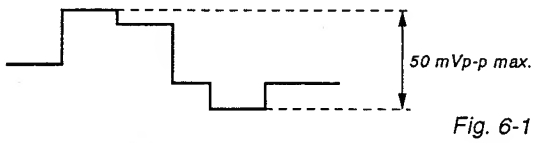


Fig. 6-1

4-5. Return Q359 and Q315 to their original connections.
4-6. Also input a B-Y/Y signal to Line 3. Adjust with the remote controller so that for the waveform at CN305 Pin ③ (B-Out), A=B.

5. Chroma decoder adjustment
5-1. Input NTSC color bars from Line 1.
5-2. Connect the oscilloscope to the emitter of Q325 and the emitter of Q326.
5-3. Connect the base of Q354 and ground.
5-4. Adjust RV306 so that the pulse position phase is as shown in the figure below.

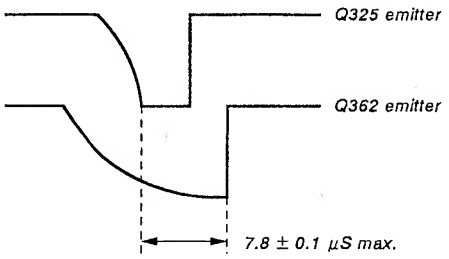


Fig. 6-2

5-5. Input an all-white NTSC signal to Line 1.
5-6. Return Q354 to its original connections.
5-7. Use the circuit in the figure below to supply +12 V to IC306 Pin ①.

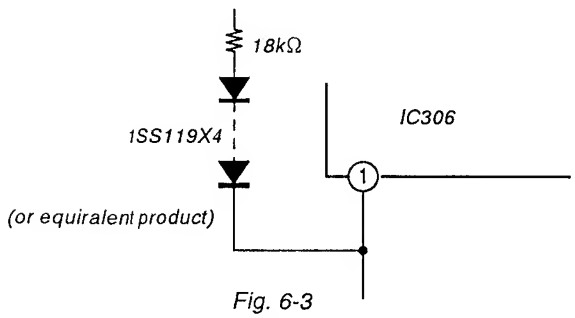


Fig. 6-3

5-8. Connect the emitter of Q301 to ground.
5-9. Connect IC318 Pin ② to ground.
5-10. Connect the frequency counter to IC306 Pin ⑲ and adjust CT301 so that the frequency is 3579545 ± 30 Hz.
5-11. Convert the signal to an all-white PAL signal.
5-12. Check that IC318 Pin ② is +5V.
5-13. Connect the frequency counter to IC306 Pin ⑲ and adjust CT302 so that the frequency is 4433619 ± 30 Hz.

6. NTSC Hue/Color Adjustment
6-1. Input color bars including only the burst and R-Y components from Line 1.
6-2. Connect the oscilloscope to the C417⊕ side and adjust RV308 so that the waveform is as shown in the figure below.

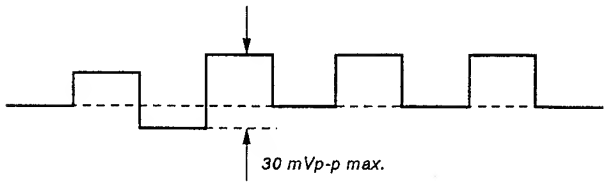


Fig. 6-4

6-3. Change the signal to NTSC 75% full color bars.
6-4. Connect the oscilloscope between C417 and R372 and adjust RV311 so that the waveform is as below.

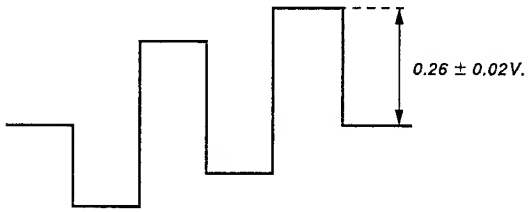


Fig. 6-5

6-5. Connect the oscilloscope between C416 and R373 and adjust RV305 so that the waveform is as below.

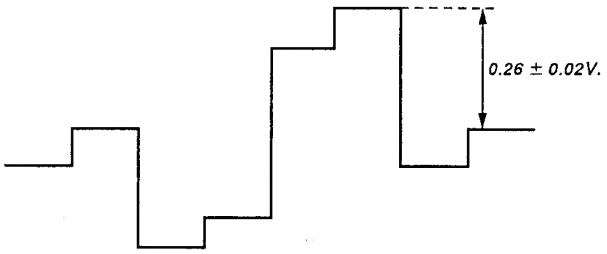
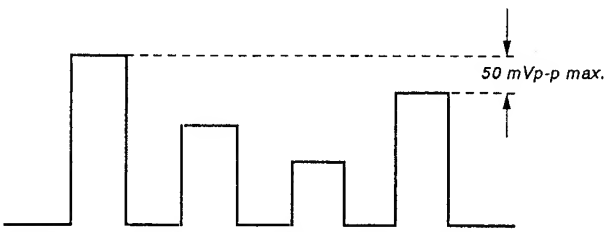


Fig. 6-6

6-6. Connect the oscilloscope to CN305 Pin ③ and adjust RV311 so that the waveform is as below.



Make the 1st waveform and the 4th waveform the same.

Fig. 6-7

6-7. Switch the signal to 4.43 NTSC 75% color bars.

6-8. Connect the oscilloscope to CN305 Pin ③ . Secure the tracking and adjust with RV307 and RV310 so that the heads of the waveforms line up.

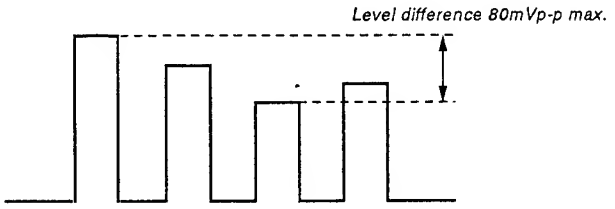


Fig. 6-8

7. PAL Color Demodulation Adjustment

7-1. Input the PAL special color bars from Line 1.

7-2. Connect the oscilloscope to C416 and R373 and adjust RV309 so that the anti-PAL signal is as in the figure below.

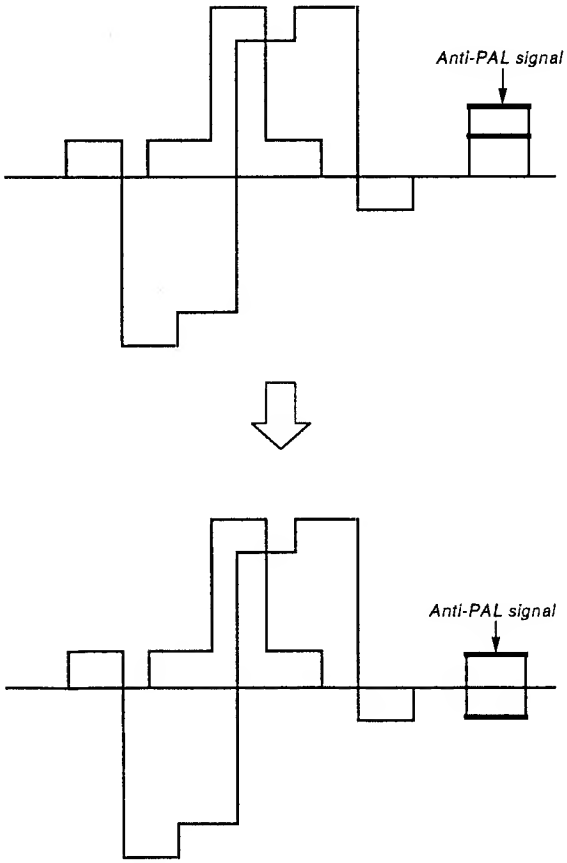
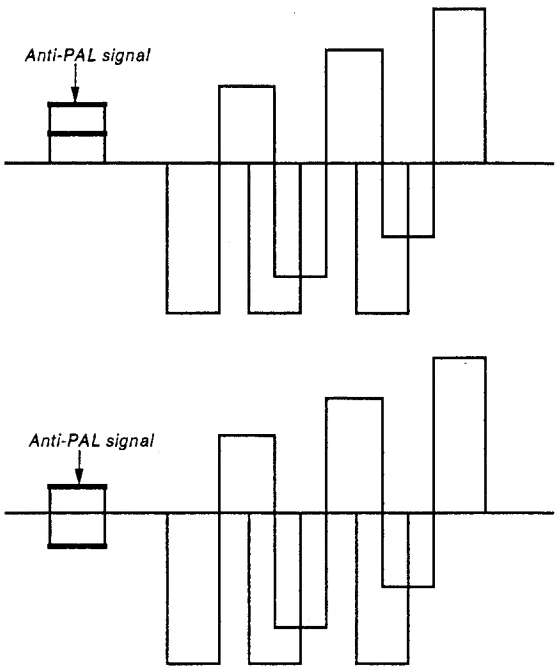


Fig. 6-9

7-3. Connect the oscilloscope to C417 and R372 and adjust RV2 on CP301 so that the anti-PAL signal is as in the figure below.

7-4. Secure the tracking for 7-2. and 7-3.



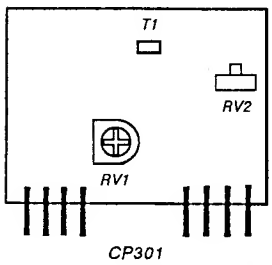


Fig. 6-10

7-5. Connect the oscilloscope to C416 and R373 and adjust RV312 so that the waveform is as in the figure below.

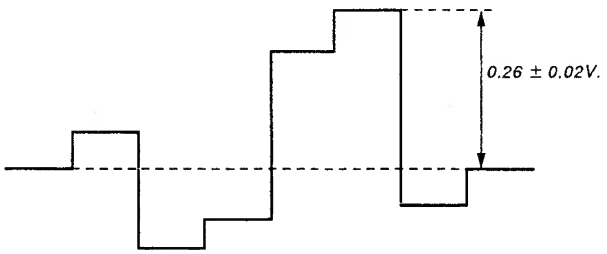


Fig. 6-11

7-6. Connect the oscilloscope to C417 and R372 and adjust RV314 so that the waveform is as in the figure below.

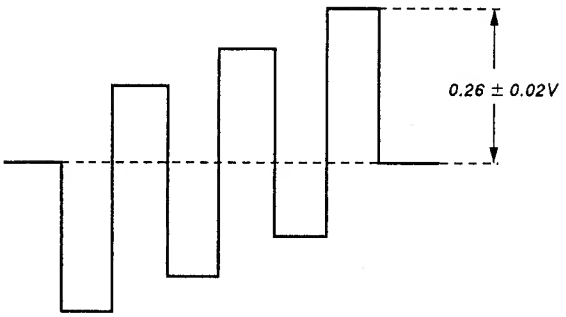


Fig. 6-12

7-7. Change the signal to PAL 75% color bars.
7-8. Connect the oscilloscope to CN305 Pin ③ and adjust RV312 so that the waveform is as in the figure below.

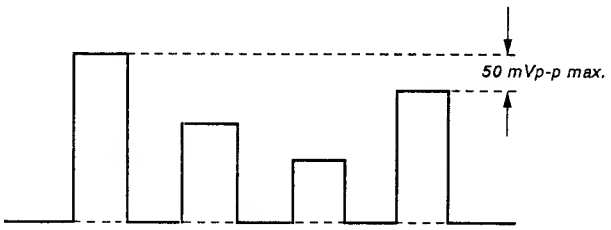


Fig. 6-13

8. Line crawling adjustment
8-1. Input 75% PAL color bars from Line 1.
8-2. Connect the oscilloscope to CN305 Pin ③ and check that the output difference per 1H for the waveform is under 5%.
8-3. If the difference is over 5%, measure between C416 and R373 and between C417 and R372, change the signal to a PAL SP CB signal and adjust T1 on CP301 to minimize the level difference per 1H of the anti-PAL signal.

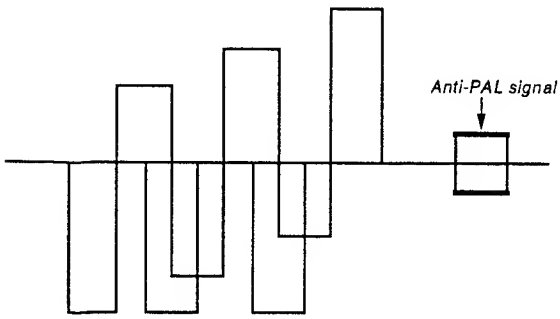


Fig. 6-14

8-4. Repeat the adjustment from 7-1.

9. SECAM bell filter adjustment
9-1. Input SECAM color bars to Line 1.
9-2. Connect the oscilloscope to IC303 Pin ㉔ and adjust T301 so that the waveform is as in the figure below.

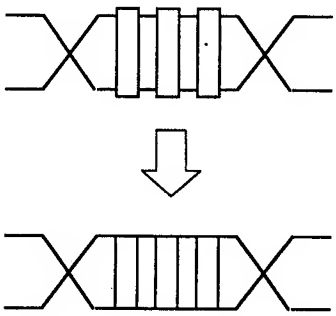


Fig. 6-15

9-3. Input SECAM color bars to Line 1 (100% white).
9-4. Connect the oscilloscope to the emitter of Q359 and adjust with RV313 so that the waveform is as in the figure below.

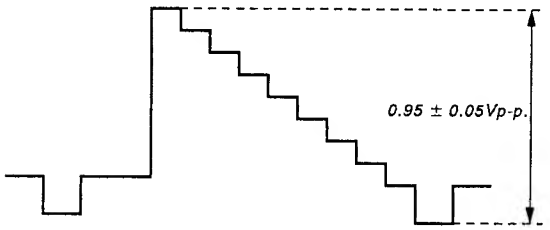


Fig. 6-16

9-5. Connect the oscilloscope between C417 and R372 and adjust LV301 so that the B-Y waveform no-color component level is a straight line.

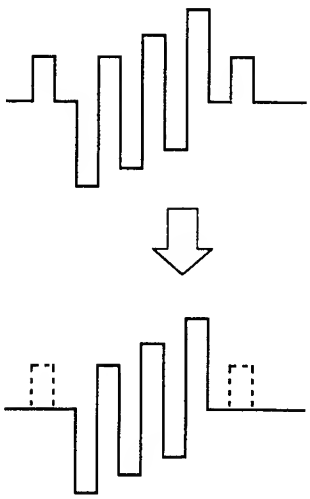


Fig. 6-17

9-6. Connect the oscilloscope between C416 and R373 and adjust LV301 so that the R-Y waveform no-color component level is a straight line.

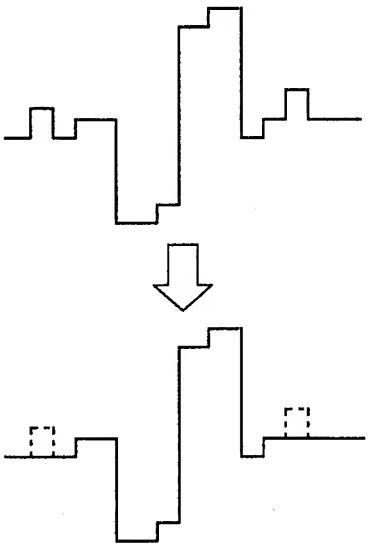


Fig. 6-18

9-7. Input SECAM color bars to Line 1 (75% chroma).

9-8. Connect the oscilloscope between C417 and R372 and adjust RV301 so that the B-Y waveform level is as in the figure below.

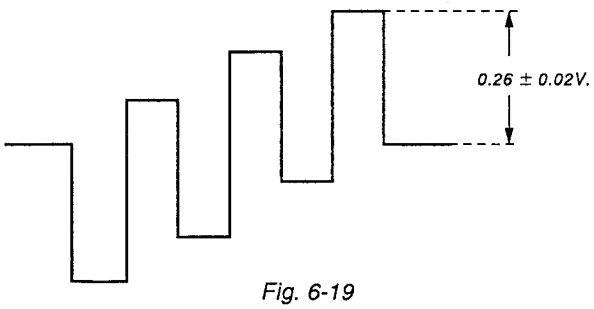


Fig. 6-19

9-9. Connect the oscilloscope between C416 and R373 and adjust RV302 so that the R-Y waveform level is as in the figure below.

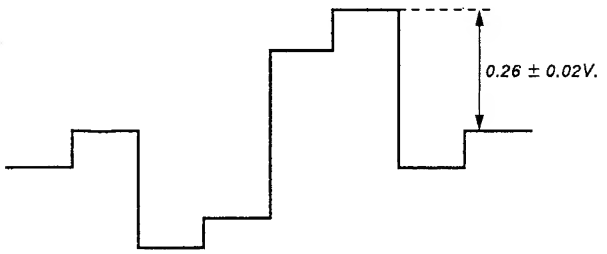
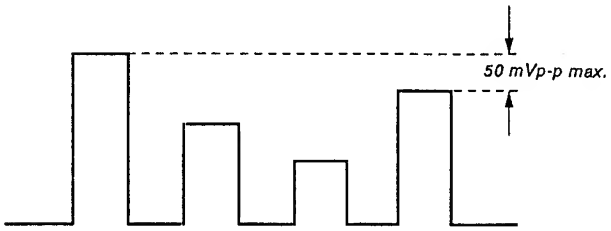


Fig. 6-20

9-10. Connect the oscilloscope to CN305 Pin ③ ¥ and adjust RV301 so that the heads of the B-Out waveforms line up.

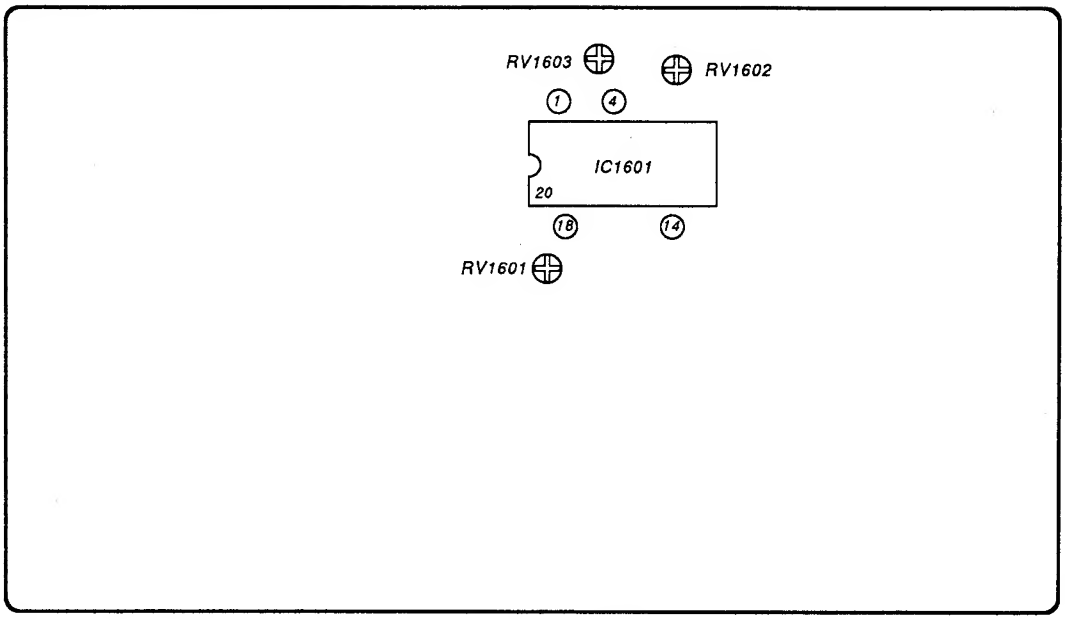


Adjust so that the 1st waveform and the 4th waveform are the same.

Fig. 6-21

6-2. A BOARD ADJUSTMENT

A BOARD – CONDUCTOR SIDE –



1. Hfo adjustment
   1-1. Input NTSC color bars.
   1-2. Short IC1601 Pin ① and Pin ⑭.
   1-3. Connect a frequency counter to IC1601 Pin 4.
   1-4. Adjust RV1602 so that the frequency is 15734 ± 50 Hz.
   1-5. Input PAL color bars.
   1-6. Adjust RV1603 so that the frequency is 15624 ± 50 Hz.
   1-7. Remove the jumper from IC1601.

2. V Oscillator adjustment
   2-1. Connect the oscilloscope to IC1601 Pin ⑱ and adjust RV1601 so that the waveform is as shown in the figure below.

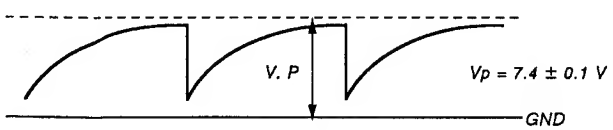
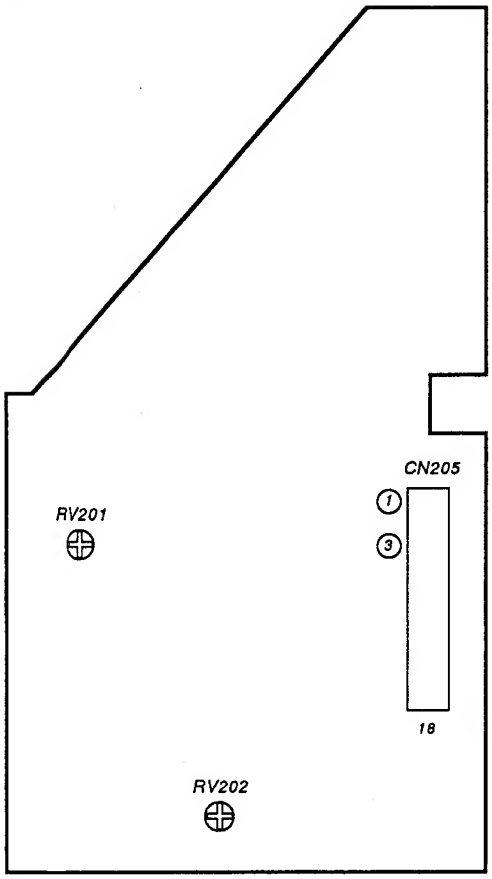


Fig. 6-22

6-3. UT BOARD ADJUSTMENT

UT BOARD – CONDUCTOR SIDE –



1. Y signal

1-1. Input a 75% white signal, 75% full field signal from SG1410.

1-2. Connect the oscilloscope to CN205 Pin ③ and adjust RV201 so that the Y level is as in the figure below.

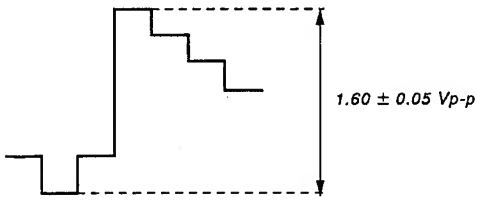


Fig. 6-23

1-3. Input a 14.31818MHz clock synchronized with the composite video signal to CN203 Pin ①.

1-4. Connect the oscilloscope to CN205 Pin ① and adjust RV202 so that the burst level is as shown in the diagram.

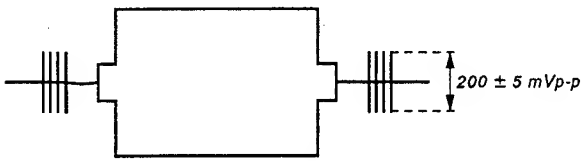
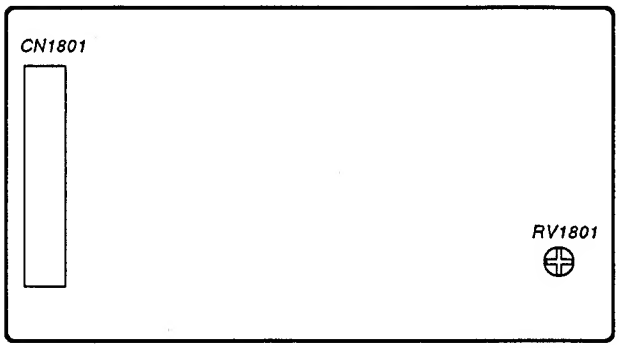


Fig. 6-24

6-4. VC BOARD ADJUSTMENT

VC BOARD – CONDUCTOR SIDE –



1.Use the circuit in the figure below

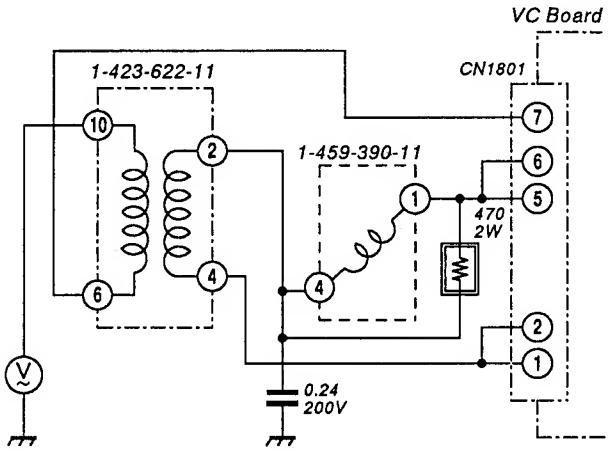


Fig. 6-25

2. Adjustment with RV1801 so that the reading of the voltmeter becomes maximum.

(Notes)

Regarding the white Balance Adjustment

Data memory for white balance adjustment is not available for all color temperatures of all signals.
Each data memory is assigned as shown in the table below. However, as variables are possible (adjustment of each item) for signals and color temperatures that have not been actually assigned, it is necessary to exercise care.

Example 1 :

At a setting of an input signal component and color temperature of 9300, a data variable of 01 : BRIGHT is possible, but as only one memory each is available for each color temperature, the BRIGHT data of the composite RGB may also change in the same manner when using this setting. (It is the same for the CONTRAST too.)

Example 2 :

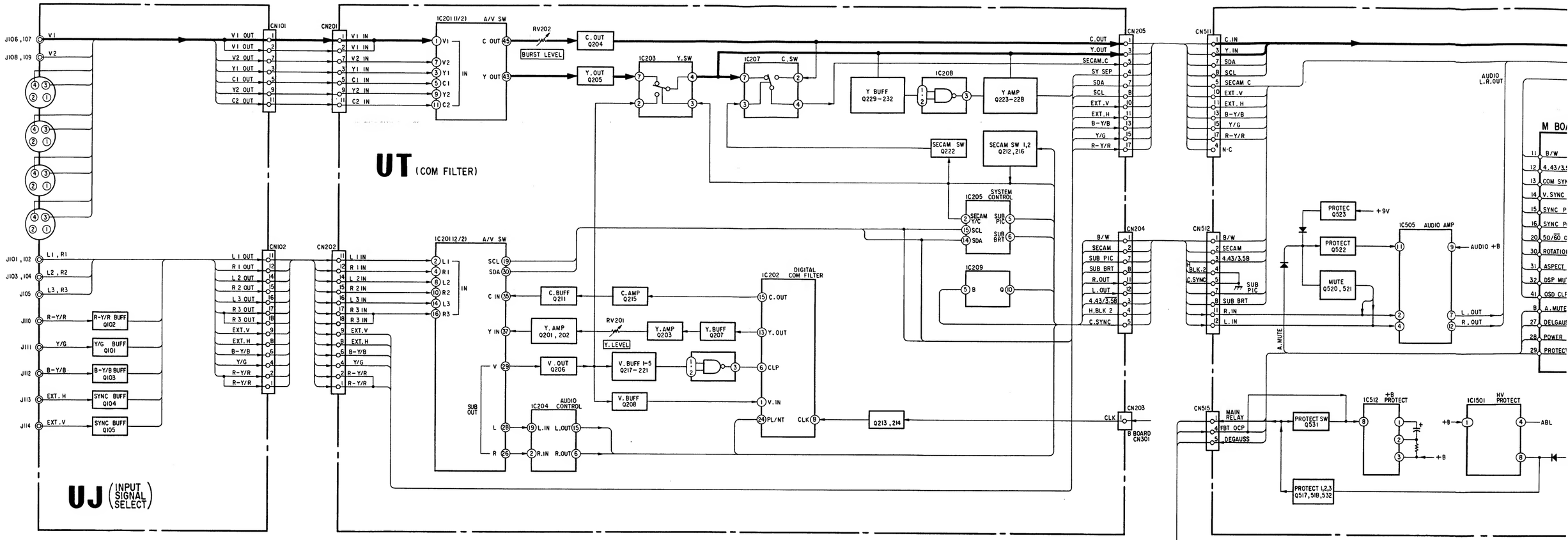
Due to variations in the characteristics of the R CUT OFF, these characteristics have to be adjusted only in cases in which the white balance cannot be adjusted, but normally they are not adjusted. As there is only one data memory each for all conditions, the black level of the red color for all signals and color temperatures (the white balance of the black side) change when changing this data.

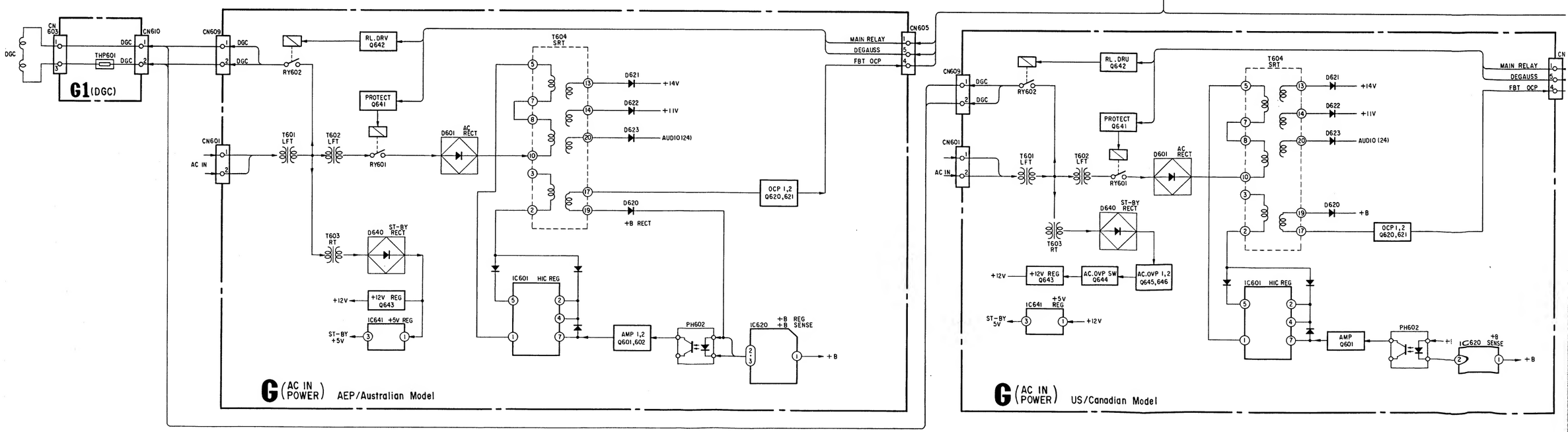
		1	2	3	4	5	6	7	8
		BRIGHT	G CUTOFF	B CUTOFF	G DRIVE	B DRIVE	CONTR.	R CUTOFF	RESET
COMPOS.	9,300	O	O	O	O	O	O	X	
	6,500	O	O	O	O	O	O	●	●
COMPONENT	9,300	X	O	O	X	X	X	X	
	6,500	X	O	O	X	X	X	X	
	3,200	X	O	O	X	X	X	X	
RGB	9,300	X	O	O	X	X	X	X	
	6,500	X	O	O	X	X	X	X	
	3,200	X	O	O	X	X	X	X	

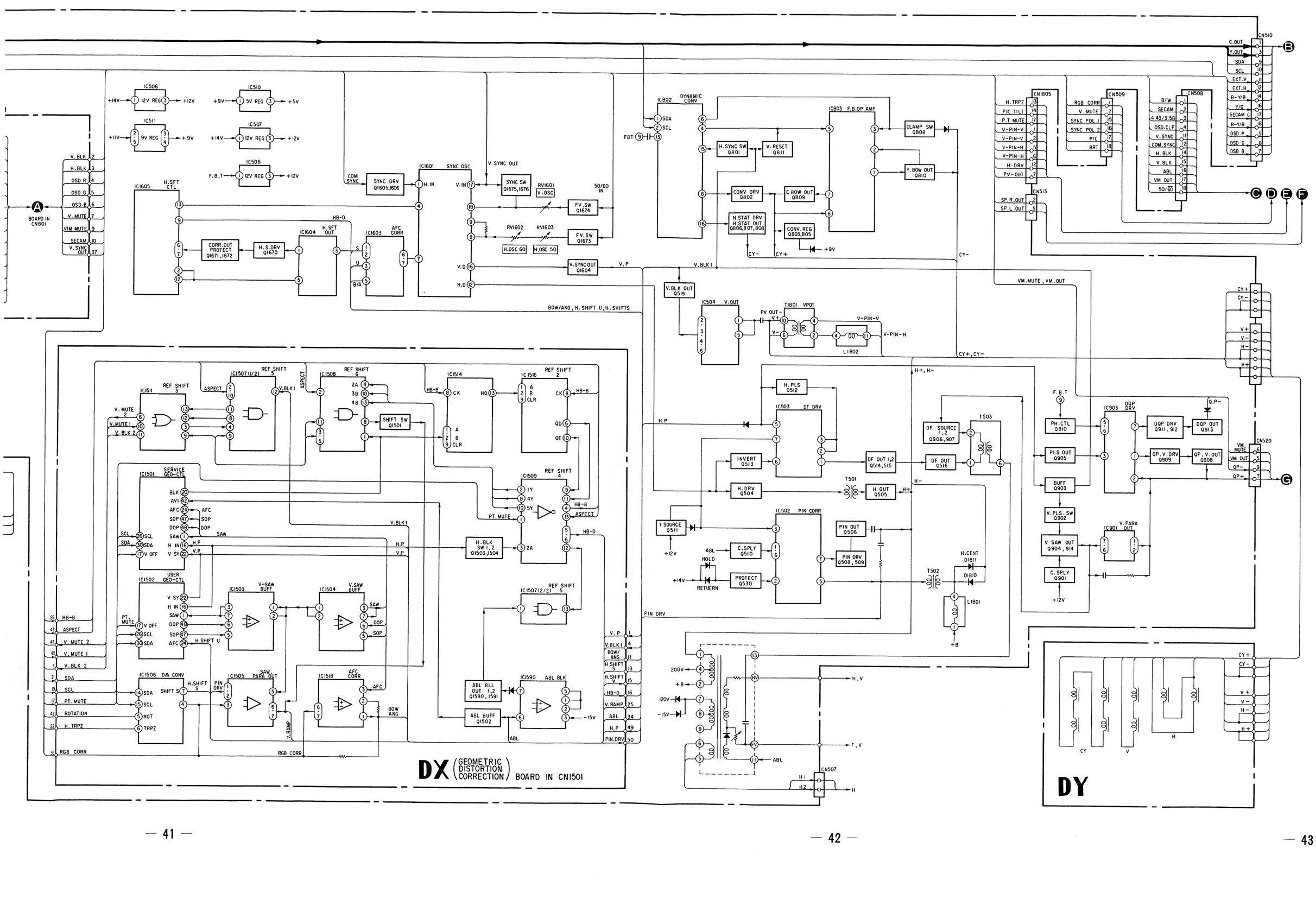
O: Memory is available for each color temperature of the composite signals.
O: Memory is available for each color temperature for each signal.
●: Only one memory is available for all color temperatures of all signals
X: No memory is available. Data variation is possible, but basically no adjustment is made under this condition.
(Please refer to Example 1 and Example 2 in the preceding text.)

SECTION 7 DIAGRAMS

7-1. BLOCK DIAGRAMS (1)

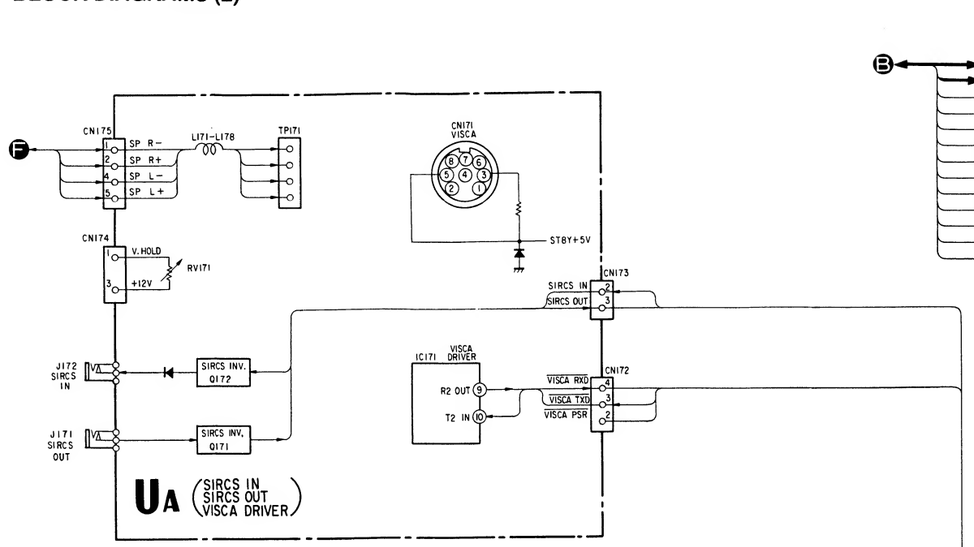


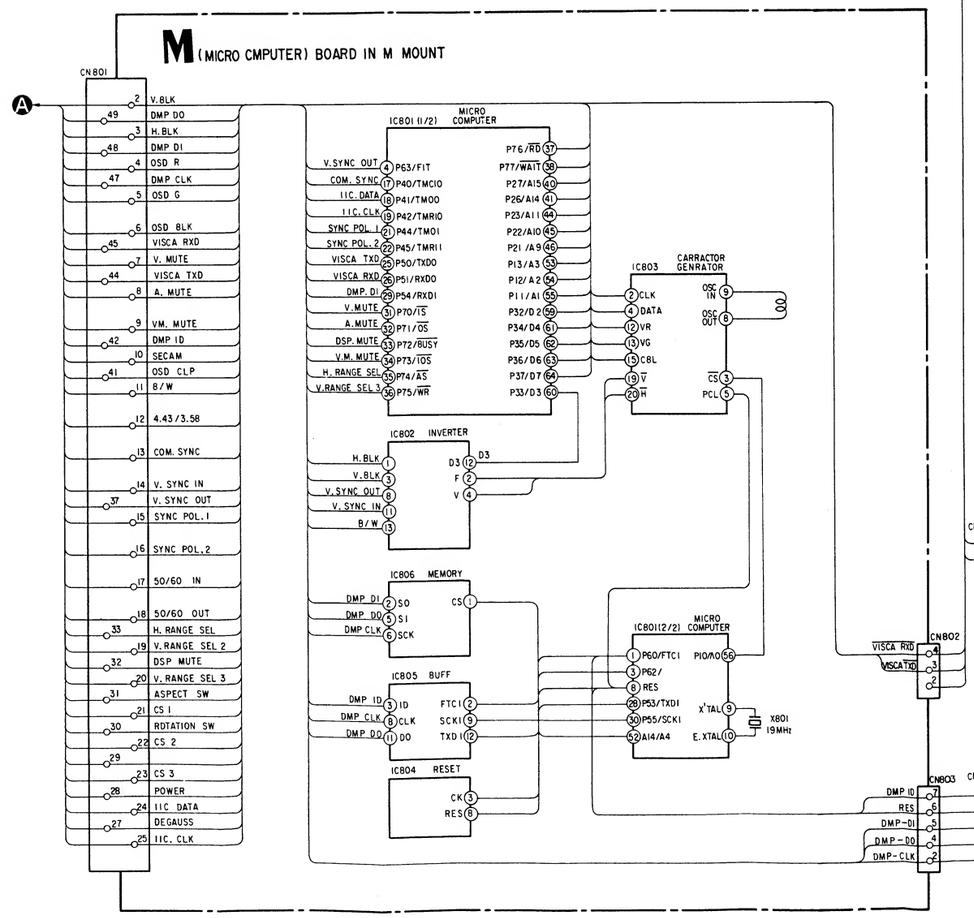


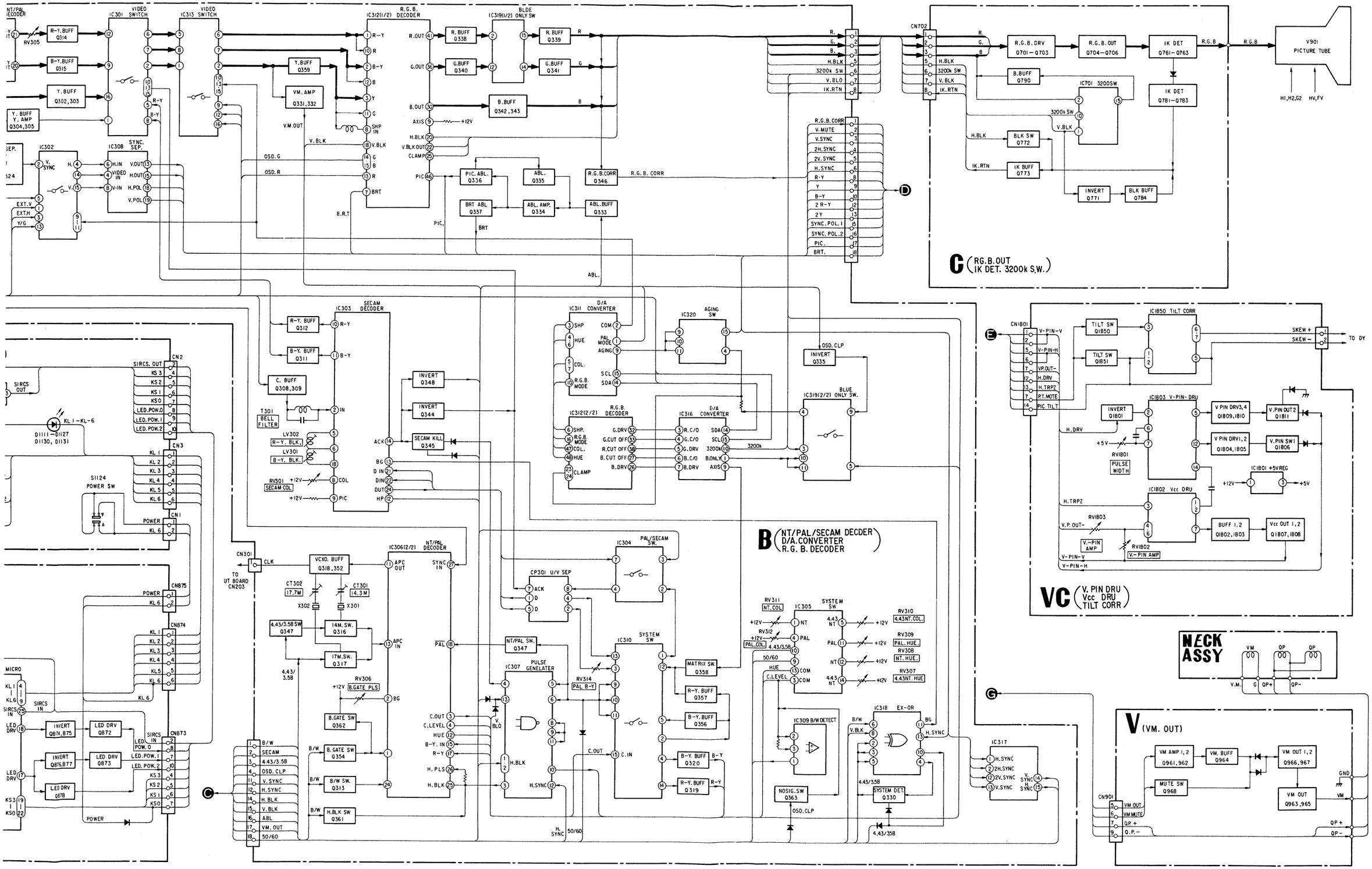

IC506 12V REG +12V
IC510 5V REG +5V
IC511 9V REG +9V
IC507 12V REG +12V
IC508 12V REG +12V
V.BLK 2
H.BLK 3
OSD R 4
OSD G 5
OSD B 6
V.MUTE 7
VIM MUTE 9
SECAM 10
V.SYNC OUT 37
BOARD IN CN801
IC1605 H.SFT CTL
COM SYNC
SYNC DRV Q1605,1606
IC1601 SYNC OSC
V.SYNC OUT
SYNC SW Q1675,1676
RV1601 V.OSC
50/60 IN
FV.SW Q1674
RV1602
RV1603
H.OSC 60
H.OSC 50
FV.SW Q1673
V.SYNC OUT Q1604
V.P
H.D
HB-D
CORR.OUT PROTECT Q1671,1672
H.S.DRV Q1670
IC1604 H.SFT OUT
IC1603 AFC CORR
BOW/ANG, H.SHIFT U, H.SHIFTS
IC1507(1/2) REF SHIFT 5
IC1511 REF SHIFT 3
IC1508 REF SHIFT 6
IC1514
IC1516 REF SHIFT 2
ASPECT
V.MUTE 2
V.MUTE 1
V.BLK 2
V.BLK 1
HB-B
HB-8
SHIFT SW Q1501
IC1509 REF SHIFT 4
PT.MUTE
IC1501 SERVICE GEO-CTL
BLK
AVI
AFC
SOP
DOP
SAW
H IN
V SY
SCL
SDA
H.P
V.P
H.BLK SW 1,2 Q1503,1504
IC1502 USER GEO-CTL
IC1503 V-SAW BUFF
IC1504 V.SAW BUFF
IC1507(2/2) REF SHIFT 5
ABL BLL OUT 1,2 Q1590,1591
ABL BUFF Q1502
IC1590 ABL BLK
-15V
ABL
IC1506 D/A CONV
SHIFT S
H.SHIFT S
IC1505 SAW PARA OUT
PIN DRV
IC1518 AFC CORR
AFC
BOW ANG
V.RAMP
RGB CORR
ROTATION
H.TRPZ
PT.MUTE
H.SHIFT U
V.P
V.BLK I
BOW/ANG
H.SHIFT S
H.SHIFT V
HB-D
V.RAMP
ABL
H.P
PIN.DRV
DX (GEOMETRIC DISTORTION CORRECTION) BOARD IN CN1501
IC802 DYNAMIC CONV
F.B.T
IC803 F.B.OP AMP
H.SYNC SW Q801
V.RESET Q811
CLAMP SW Q808
Y.BOW OUT Q810
CONV.ORV Q802
C.BOW OUT Q809
H.STAT DRV H.STAT OUT Q805,807,808
CONV.REG Q803,805
+9V
CY-
CY+
V.BLK I
V.BLK OUT Q519
IC504 V.OUT
T1801 VPOT
PV OUT-
V-PIN-V
V-PIN-H
L1802
CY+, CY-
H+, H-
H.PLS Q512
IC503 DF DRV
H.P
INVERT Q513
H.DRV Q504
DF OUT 1,2 Q514,515
DF SOURCE 1,2 Q906,907
DF OUT Q516
T503
T501
H.OUT Q505
I SOURCE Q511
+12V
ABL
HOLD
+14V
RETURN
C.SPLY Q510
PROTECT Q530
IC502 PIN CORR
PIN OUT Q506
PIN ORV Q508,509
T502
H.CENT
D1811
D1810
L1801
+B
PIN DRV
200V
+B
120V
-15V
H.V
F.V
ABL
CN507
H1
H2
H
CN1805
H.TRPZ
PIC.TILT
P.T MUTE
V-PIN-V
V-PIN-V
V-PIN-H
V-PIN-H
H-DRV
PV-OUT
CN513
SP.R.OUT
SP.L.OUT
CN509
RGB CORR
V.MUTE
SYNC POL 1
SYNC POL 2
PIC
BRT
CN508
B/W
SECAM
4.43/3.58
OSD.CLP
V.SYNC
COM.SYNC
H.BLK
V.BLK
ABL
VM OUT
50/60
CN510
C.OUT
Y.OUT
SDA
SCL
EXT.V
EXT.H
B-Y/B
Y/G
SECAM C
R-Y/R
DSD P
DSD G
DSB B
VM.MUTE, VM.OUT
F.B.T
PH.CTL Q910
PLS OUT Q905
BUFF Q903
V.PLS.SW Q902
V SAW OUT Q904, 914
C.SPLY Q901
IC903 DQP DRV
DQP DRV Q911, 912
DQP OUT Q913
QP.V.DRV Q909
QP.V.OUT Q908
Q.P-
CN520
VM MUTE
VM OUT
QP-
QP+
IC901 V.PARA OUT
CY+
CY-
V+
V-
H-
H+
CY
V
H
DY

PVM-2950Q/2950QM
RM-854

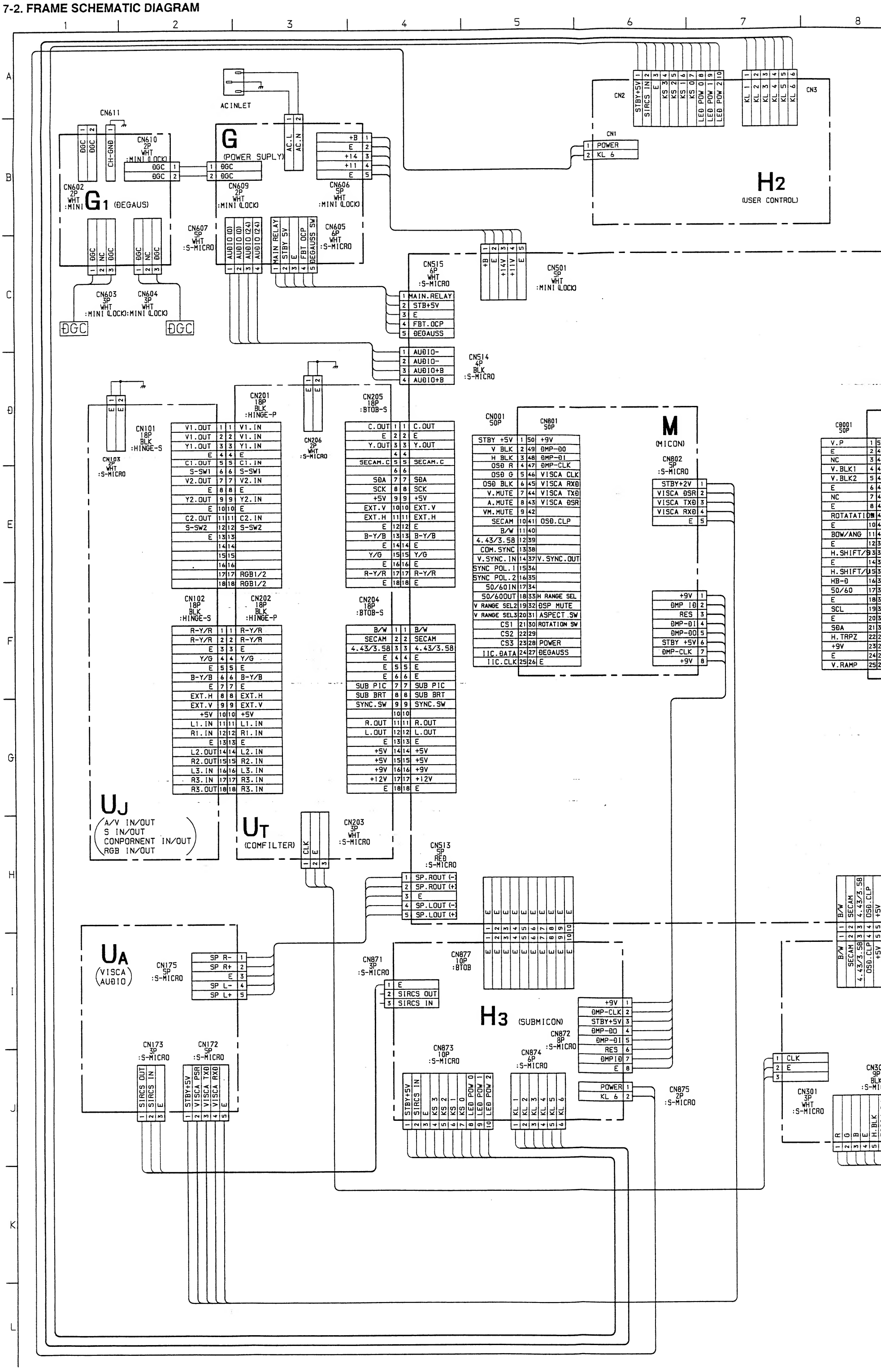
BLOCK DIAGRAMS (2)

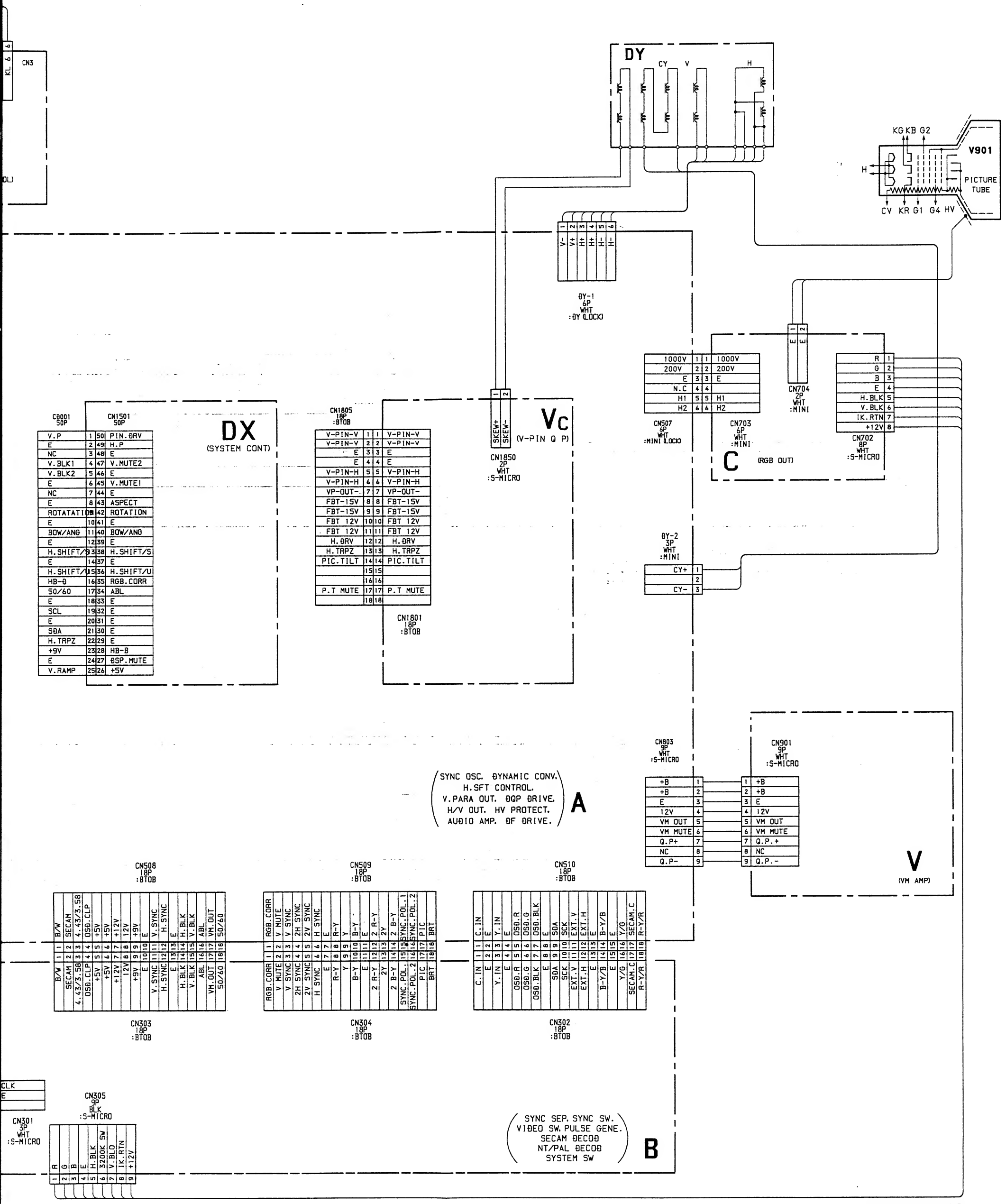





R-Y. BUFF Q314
RV305
B-Y. BUFF Q315
Y. BUFF Q302,303
Y. BUFF Y. AMP Q304,305
VIDEO SWITCH IC301
VIDEO SWITCH IC313
R.G.B. DECODER IC312(1/2)
BLDE IC319(1/2) ONLY SW
R. BUFF Q338
G. BUFF Q340
B. BUFF Q342,343
R. BUFF Q339
G. BUFF Q341
Y. BUFF Q359
VM. AMP Q331,332
V.M.OUT
V. BLK
OSD. G
OSD. R
IC302
V. SYNC
EXT. V
EXT. H
Y/G
IC308 SYNC. SEP.
V.OUT
H.OUT
H.POL
V.POL
H.IN
VIDEO IN
V-IN
PIC. ABL. Q336
ABL. Q335
BRT ABL Q337
ABL. AMP. Q334
ABL. BUFF Q333
R.G.B.CORR Q346
R.G.B. CORR
B.R.T
PIC.
BRT
ABL.
R.G.B.CORR
V. MUTE
V. SYNC
2H. SYNC
2V. SYNC
H. SYNC
R-Y
Y
B-Y
2 R-Y
2 Y
SYNC. POL. 1
SYNC. POL. 2
PIC.
BRT.
CN702
H.BLK
3200k SW
V. BLK
IK. RTN
R.G.B. DRV Q701 – Q703
R.G.B. OUT Q704 – Q706
IK DET Q761 – Q763
B. BUFF Q790
IC701 3200SW
IK DET Q781 – Q783
BLK SW Q772
IK BUFF Q773
INVERT Q771
BLK BUFF Q784
V901 PICTURE TUBE
H1, H2, G2
HV, FV
C (RG.B.OUT IK DET. 3200k S.W.)
CN2
SIRCS. OUT
KS 3
KS 2
KS 1
KS 0
LED. POW. 0
LED. POW. 1
LED. POW. 2
CN3
KL 1 – KL-6
D1111 – D1127
D1130, D1131
S1124 POWER SW
CN1
POWER
KL 6
CN875
CN874
CN873
MICRO
SIRCS IN
INVERT Q874, 875
LED DRV Q872
INVERT Q876, 877
LED DRV Q873
LED DRV Q878
R-Y. BUFF Q312
B-Y. BUFF Q311
C. BUFF Q308, 309
T301 BELL FILTER
LV302 R-Y. BLK.
LV301 B-Y. BLK.
RV301 SECAM COL
SECAM DECODER IC303
INVERT Q348
INVERT Q344
SECAM KILL Q345
D/A CONVERTER IC311
SHP
HUE
COL.
R.G.B. MODE
PAL MODE
AGING
SCL
SDA
AGING SW IC320
OSD. CLP
INIVERT Q335
BLUE IC3191(2/2) ONLY SW.
R.G.B. DECODER IC3121(2/2)
SHP.
COL.
CLAMP
G.CUT OFF
R.CUT OFF
B.CUT OFF
G.DRV
B.DRV
D/A CONVERTER IC316
R.C/O
G.C/O
B.C/O
3200k
B.ONLY
AXIS
B (NT/PAL/SECAM DECDER D/A.CONVERTER R.G.B. DECODER)
IC306(2/2) NT/PAL DECODER
VCXO. BUFF Q318, 352
CT302 17.7M
CT301 14.3M
X302
X301
4.43/3.58 SW Q347
14M. SW. Q316
17M. SW. Q317
4.43/3.58
B.GATE PLS
B.GATE SW Q362
B.GATE SW Q354
B/W SW. Q313
H.BLK SW Q361
APC OUT
APC IN
SYNC IN
PAL
C.OUT
C.LEVEL
HUE
B-Y. IN
R-Y
H. PLS
H. BLK
CP301 U/V SEP
ACK
D
PAL/SECAM SW. IC304
NT/PAL SW. Q347
PULSE GENELATER IC307
RV314 PAL B-Y
SYSTEM SW IC310
MATRIX SW. Q358
R-Y. BUFF Q357
B-Y. BUFF Q356
B-Y. BUFF Q320
R-Y. BUFF Q319
V. BLO
C. IN
H. SYNC
50/60
RV311 NT. COL
RV312 PAL. COL
SYSTEM SW IC305
RV310 4.43NT. COL.
RV309 PAL. HUE.
RV308 NT. HUE.
RV307 4.43NT. HUE
50/60
HUE
C. LEVEL
IC309 B/W DETECT
NOSIG. SW Q363
OSD. CLP
IC31B EX-OR
SYSTEM DET. Q330
4.43/358
IC317
V. SYNC
H. SYNC
2H. SYNC
2V. SYNC
CN1801
V-PIN-V
V-PIN-H
VP.OUT-
H.DRV
H.TRPZ
P.T.MOTE
PIC TILT
IC1B50 TILT CORR
TILT SW Q1B50
TILT SW Q1B51
SKEW +
SKEW –
TO DY
IC1B03 V-PIN-DRV
INVERT Q1B01
V PIN DRV3, 4 Q1B09, 1B10
V PIN DRV1, 2 Q1B04, 1B05
V.PIN OUT2 Q1811
V.PIN SW1 Q1806
RV1B01 PULSE WIDTH
IC1B01 +5V REG
IC1B02 Vcc DRV
RV1B03 V.P. OUT–
RV1B02 V.–PIN AMP
V.–PIN AMP
BUFF 1.2 Q1B02, 1B03
Vcc OUT 1, 2 Q1807, 1808
VC (V. PIN DRV Vcc DRV TILT CORR)
NECK ASSY
VM
QP
V (VM. OUT)
VM AMP 1, 2 Q961, 962
VM. BUFF Q964
VM OUT 1, 2 Q966, 967
MUTE SW Q968
VM OUT Q963, 965
CN901
VM OUT
VM MUTE
Q.P. +
Q.P. –
GND

7-2. FRAME SCHEMATIC DIAGRAM





B-SS3218<U/C>-KESSENZU

H2
(USER CONTROL)

CN2

STBY+5V	1	
SIRCS IN	2	
E	3	
KS 3	4	
KS 2	5	
KS 1	6	
KS 0	7	
LED POW 0	8	
LED POW 1	9	
LED POW 2	10	

CN3

KL 1	1	
KL 2	2	
KL 3	3	
KL 4	4	
KL 5	5	
KL 6	6	

CN1

1	POWER
2	KL 6

DY
CY V H

θY-1
6P
WHT
:θY (LOCK)

V-	1	
V+	2	
H+	3	
H+	4	
H-	5	
H-	6	

CN704
2P
WHT
:MINI

E	1	
E	2	

CN507
6P
WHT
:MINI (LOCK)

1000V	1	1000V
200V	2	200V
E	3	E
N.C	4	
H1	5	H1
H2	6	H2

CN703
6P
WHT
:MINI

C
(RGB OUT)

M
(MICON)

CN802
5P
:S-MICRO

STBY+2V		1
VISCA θSR		2
VISCA TXθ		3
VISCA RXθ		4
E		5

+9V		1
θMP Iθ		2
RES		3
θMP-θI		4
θMP-θO		5
STBY +5V		6
θMP-CLK		7
+9V		8

CN875
2P
:S-MICRO

POWER	1
KL 6	2

DX
(SYSTEM CONT)

C8001
50P

CN1501
50P

V.P	1	50	PIN.θRV
E	2	49	H.P
NC	3	48	E
V.BLK1	4	47	V.MUTE2
V.BLK2	5	46	E
E	6	45	V.MUTE1
NC	7	44	E
E	8	43	ASPECT
ROTATATIOθ	9	42	ROTATION
E	10	41	E
BOW/ANG	11	40	BOW/ANG
E	12	39	E
H.SHIFT/θ	13	38	H.SHIFT/S
E	14	37	E
H.SHIFT/U	15	36	H.SHIFT/U
HB-θ	16	35	RGB.CORR
50/60	17	34	ABL
E	18	33	E
SCL	19	32	E
E	20	31	E
SθA	21	30	E
H.TRPZ	22	29	E
+9V	23	28	HB-B
E	24	27	θSP.MUTE
V.RAMP	25	26	+5V

CN1805
18P
:BTOB

CN1801
18P
:BTOB

V-PIN-V	1	1	V-PIN-V
V-PIN-V	2	2	V-PIN-V
E	3	3	E
E	4	4	E
V-PIN-H	5	5	V-PIN-H
V-PIN-H	6	6	V-PIN-H
VP-OUT-	7	7	VP-OUT-
FBT-15V	8	8	FBT-15V
FBT-15V	9	9	FBT-15V
FBT 12V	10	10	FBT 12V
FBT 12V	11	11	FBT 12V
H.θRV	12	12	H.θRV
H.TRPZ	13	13	H.TRPZ
PIC.TILT	14	14	PIC.TILT
	15	15	
	16	16	
P.T MUTE	17	17	P.T MUTE
	18	18	

Vc
(V-PIN Q P)

CN1850
2P
WHT
:S-MICRO

SKEW+	1	
SKEW-	2	

θY-2
3P
WHT
:MINI

CY+	1
	2
CY-	3

CN803
9P
WHT
:S-MICRO

CN901
9P
WHT
:S-MICRO

+B	1	1	+B
+B	2	2	+B
E	3	3	E
12V	4	4	12V
VM OUT	5	5	VM OUT
VM MUTE	6	6	VM MUTE
Q.P+	7	7	Q.P.+
NC	8	8	NC
Q.P-	9	9	Q.P.-

A
(SYNC OSC. θYNAMIC CONV.
H.SFT CONTROL.
V.PARA OUT. θQP θRIVE.
H/V OUT. HV PROTECT.
AUθIO AMP. θF θRIVE.)

CN508
18P
:BTOB

CN303
18P
:BTOB

B/W	1	1	B/W
SECAM	2	2	SECAM
4.43/3.58	3	3	4.43/3.58
OSθ.CLP	4	4	OSθ.CLP
+5V	5	5	+5V
+5V	6	6	+5V
+12V	7	7	+12V
12V	8	8	12V
+9V	9	9	+9V
E	10	10	E
V.SYNC	11	11	V.SYNC
H.SYNC	12	12	H.SYNC
E	13	13	E
H.BLK	14	14	H.BLK
V.BLK	15	15	V.BLK
ABL	16	16	ABL
VM.OUT	17	17	VM.OUT
50/60	18	18	50/60

CN509
18P
:BTOB

CN304
18P
:BTOB

RGB.CORR	1	1	RGB.CORR
V MUTE	2	2	V MUTE
V SYNC	3	3	V SYNC
2H SYNC	4	4	2H SYNC
2V SYNC	5	5	2V SYNC
H SYNC	6	6	H SYNC
E	7	7	E
R-Y	8	8	R-Y
Y	9	9	Y
B-Y	10	10	B-Y
E	11	11	E
2 R-Y	12	12	2 R-Y
2Y	13	13	2Y
2 B-Y	14	14	2 B-Y
SYNC.POL.1	15	15	SYNC.POL.1
SYNC.POL.2	16	16	SYNC.POL.2
PIC	17	17	PIC
BRT	18	18	BRT

CN510
18P
:BTOB

CN302
18P
:BTOB

C.IN	1	1	C.IN
E	2	2	E
Y.IN	3	3	Y.IN
E	4	4	E
OSθ.R	5	5	OSθ.R
OSθ.G	6	6	OSθ.G
OSθ.BLK	7	7	OSθ.BLK
E	8	8	E
SθA	9	9	SθA
SCK	10	10	SCK
EXT.V	11	11	EXT.V
EXT.H	12	12	EXT.H
E	13	13	E
B-Y/B	14	14	B-Y/B
E	15	15	E
Y/G	16	16	Y/G
SECAM.C	17	17	SECAM.C
R-Y/R	18	18	R-Y/R

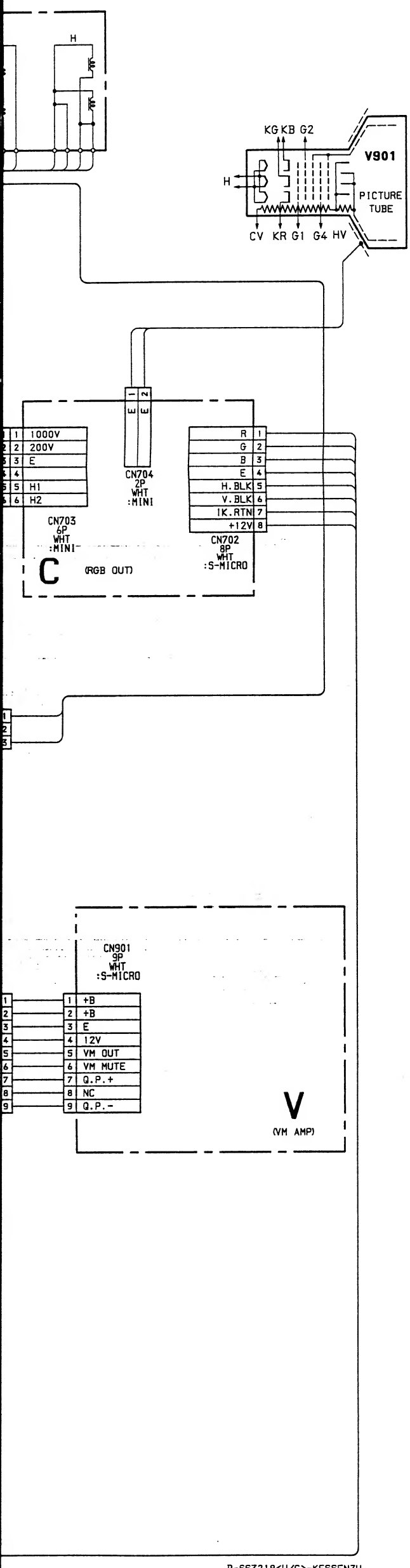
CN301
3P
WHT
:S-MICRO

1	CLK
2	E
3	

CN305
9P
BLK
:S-MICRO

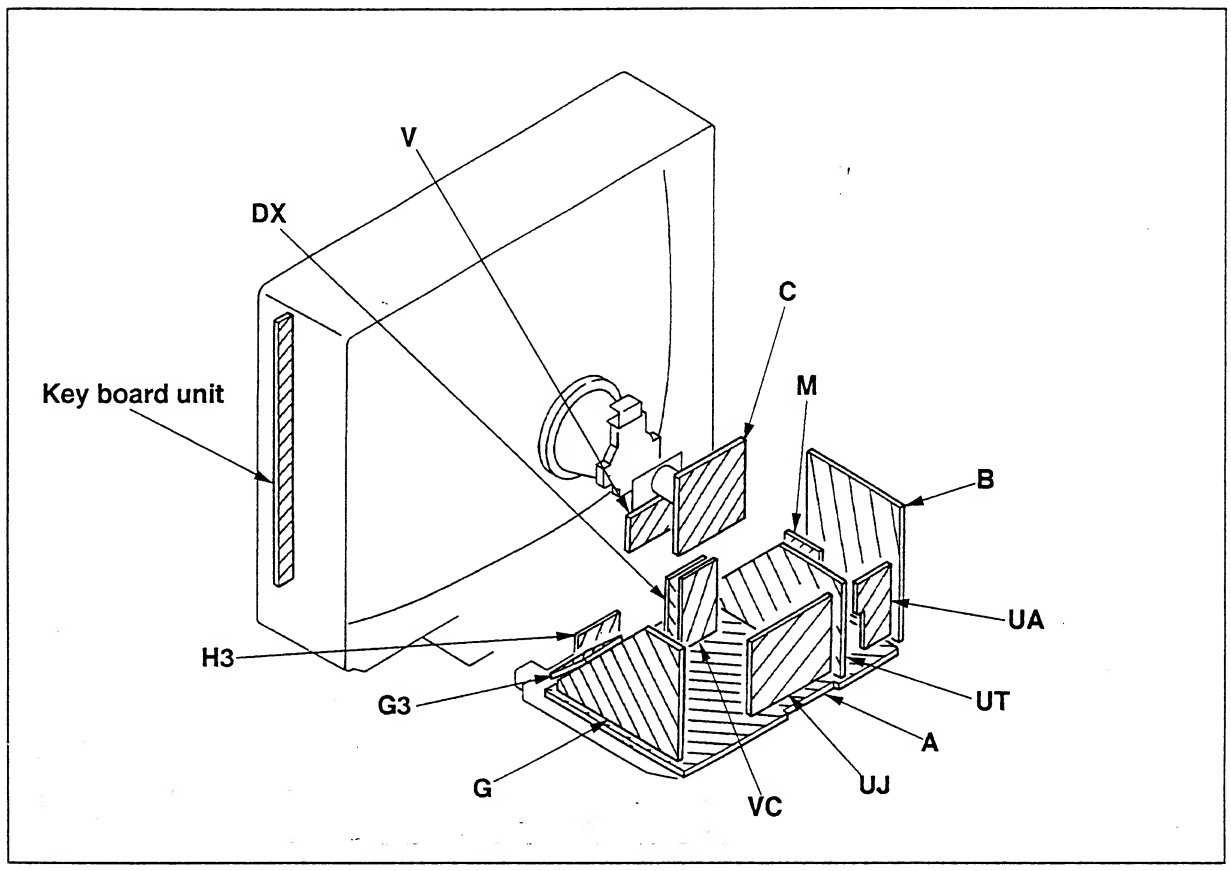
1	R
2	G
3	B
4	E
5	H.BLK
6	3200K SW
7	V.BLO
8	IK.RTN
9	+12V

B
(SYNC SEP. SYNC SW.
VIθEO SW. PULSE GENE.
SECAM θECOθ
NT/PAL θECOθ
SYSTEM SW)



B-SS3218<U/C>-KESSENZU

7-3. CIRCUIT BOARDS LOCATION



7-4. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

- All capacitors are in μF unless otherwise noted.
  pF: μμF 50WV or less are not indicated except for electrolytic and tantalums.
- All electrolytics are in 50V unless otherwise specified.
- All resistors are in ohms.
  KΩ = 1000Ω, MΩ = 1000KΩ
- Indication of resistance, which does not have one for rating electrical power, is as follows.

  Pitch: 5 mm
  Rating electrical power 1/4W
- Chips resistors are 1/10W.
- : nonflammable resistor.
- : internal component.
- : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise ncted.
- : earth-ground.
- : earth-chassis.
- : earth-chassis.
- 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.
- When replacing components identified by ◪ mark the necessary adjustments indicated. If results do not meet the specified value, change the component identified by ⋈ and repeat the adjustment until the specified value is achieved.
  (Refer to R581 and R583 on Page 28, 29 in the Service Manual.)
- When replacing the part in below table be sure to parform the related adjustment.

Part replaced (◪)	Adjustment (⋈)
C574, D515, IC501, Q517, Q518, R578, R580, R581, R582, R583, R584, R585, T504 ····· A BOARD IC620 ····· G BOARD	R581 (HOLD-DOWN)
C574, D515, IC501, Q517, Q518, R578, R580, R581, R582, R583, R584, R585, T504 ····· A BOARD IC620 ····· G BOARD	R583 (HOLD-DOWN)

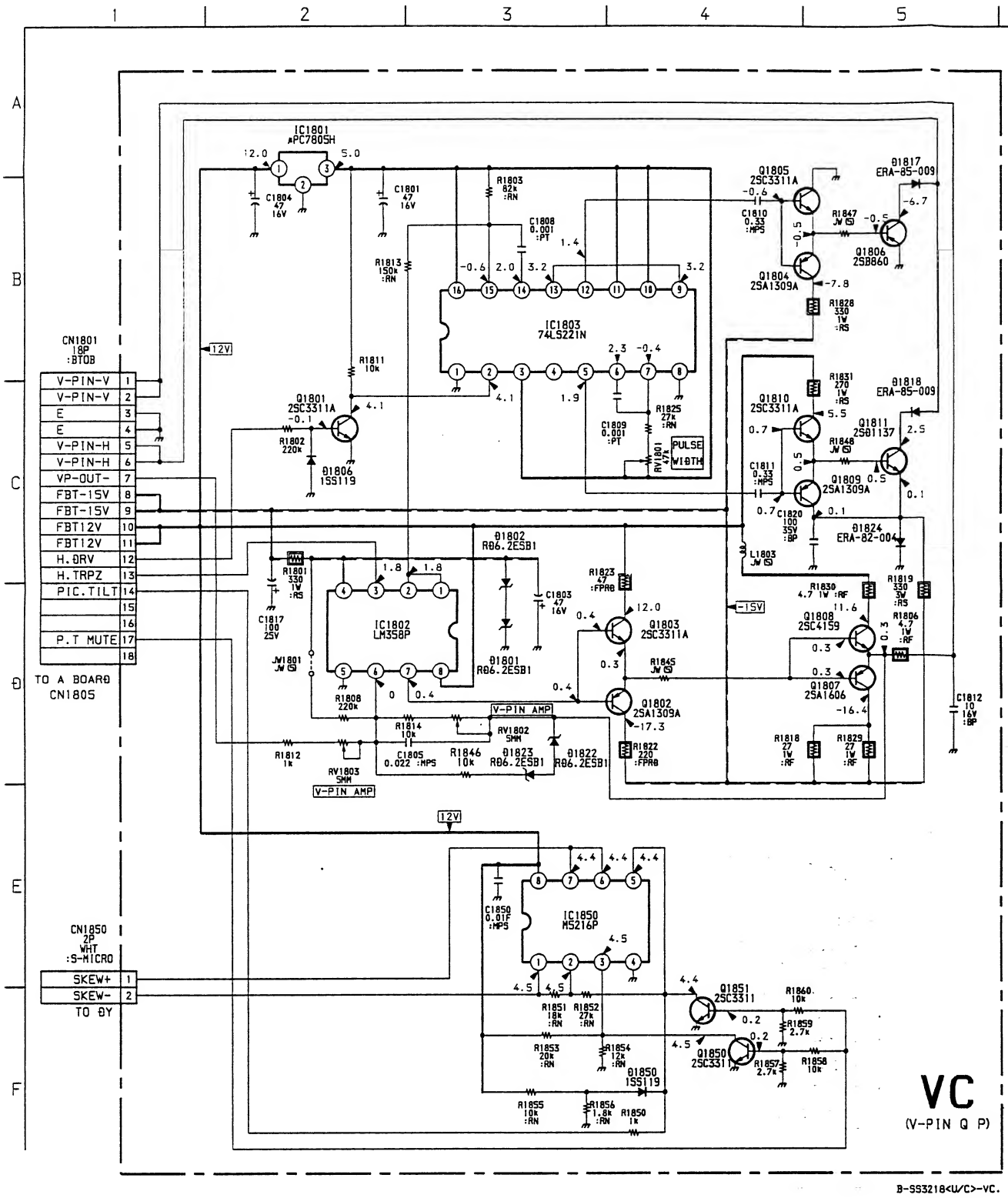
- Readings are taken with a color-bar signal input.
- Readings are taken with a 10 MΩ digital multimeter.
- Voltage are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerance.
- All voltages are in V.
- ▬▬ : B+ bus.
- ▬ ▬ ▬ : B- bus.
- ➡ : signal path.

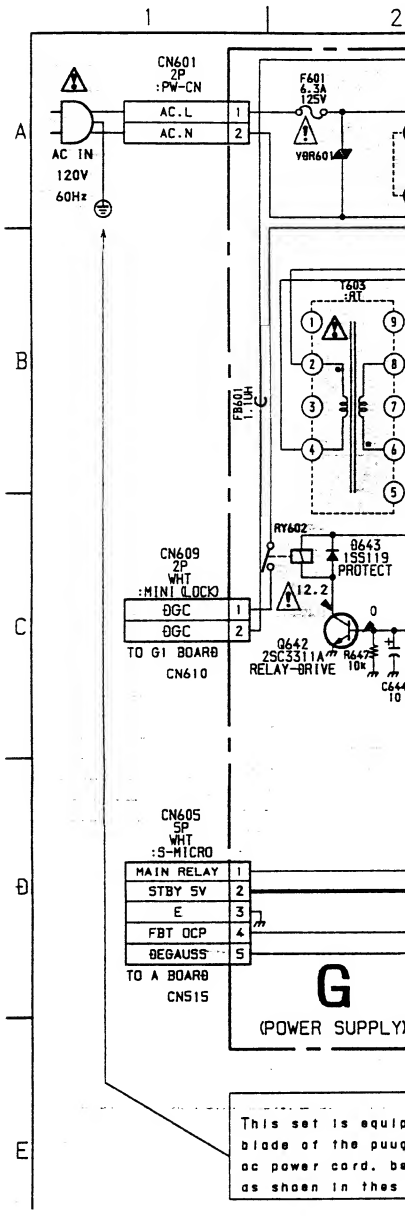
Reference information

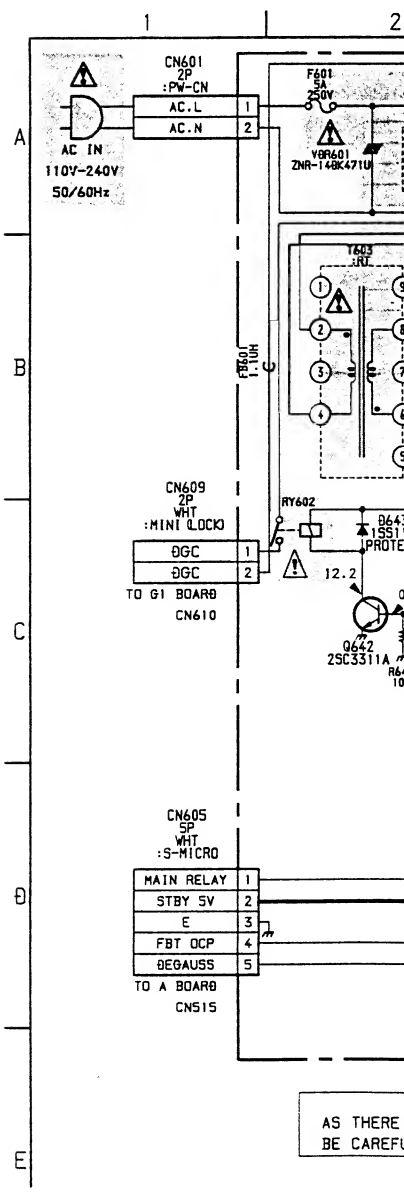
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RW	NONFLAMMABLE WIREWOUND
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: ※	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

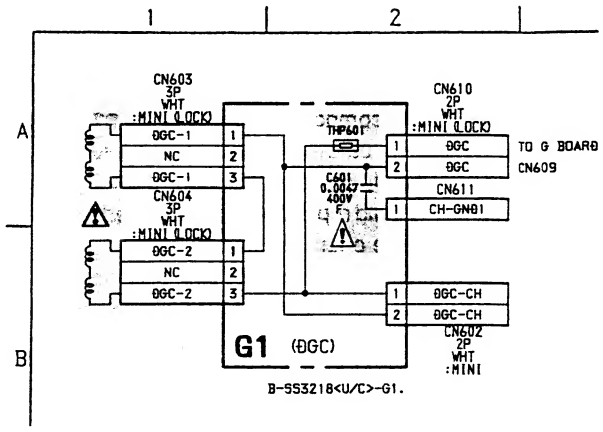
Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une trame et par une marque ⚠ sont d'une importance critique pour la sécurité. Ne les remplacer que par des pièces de numéro spécifié.









VC BOARD

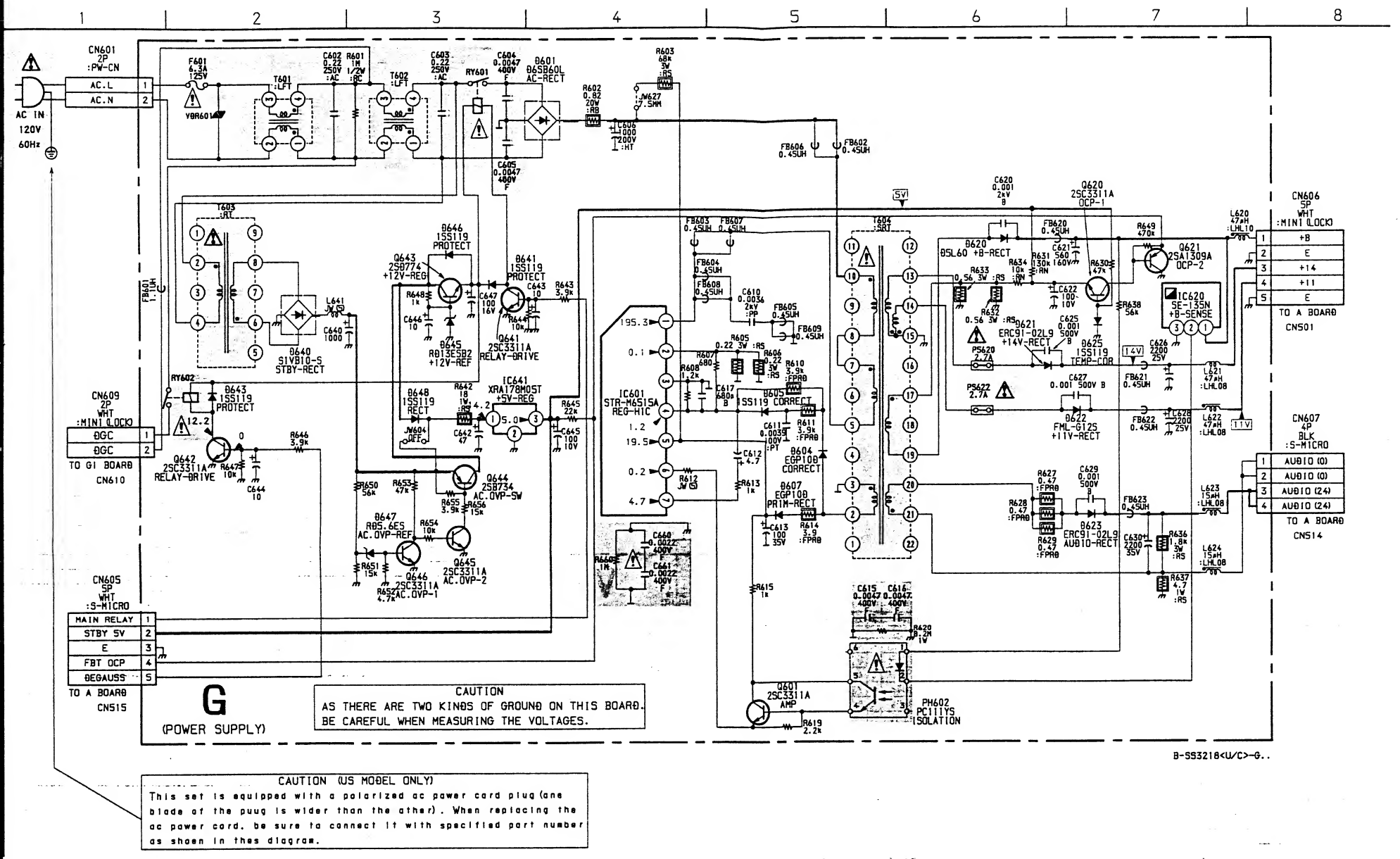
D1801	CLIP 2
D1802	CLIP 1
D1806	PROTECT
D1817	V PIN SW 1
D1818	V PIN SW 2
D1822	PIN GAMMA 1
D1823	PIN GAMMA 2
D1824	C SOURCE
D1850	MUTE SW
IC1801	5V REG
IC1802	VCC DRC
IC1803	V PIN DRV
IC1850	TILT CORR
Q1801	INVERT
Q1802	BUFF 2
Q1803	BUFF 1
Q1804	V PIN DRV 2
Q1805	V PIN DRV 1
Q1806	V PIN OUT 1
Q1807	VCC OUT 2
Q1808	VCC OUT 1
Q1809	V PIN DRV 4
Q1810	V PIN DRV 3
Q1811	V PIN OUT 2
Q1850	TILT SW
Q1851	TILT SW

Schematic diagrams

G G1 H2 boards ➡

H3 VC

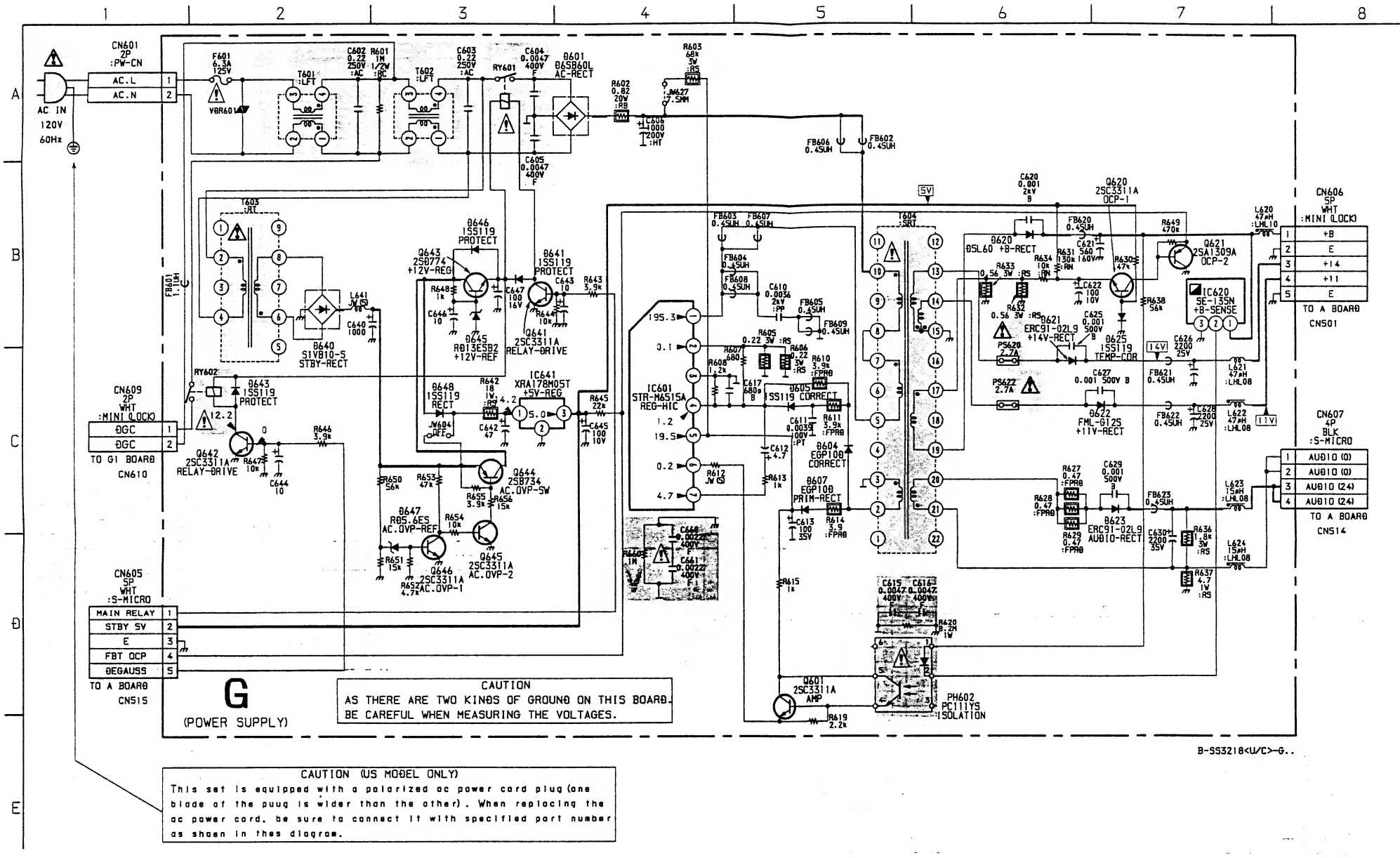
(US, Canadian Model)



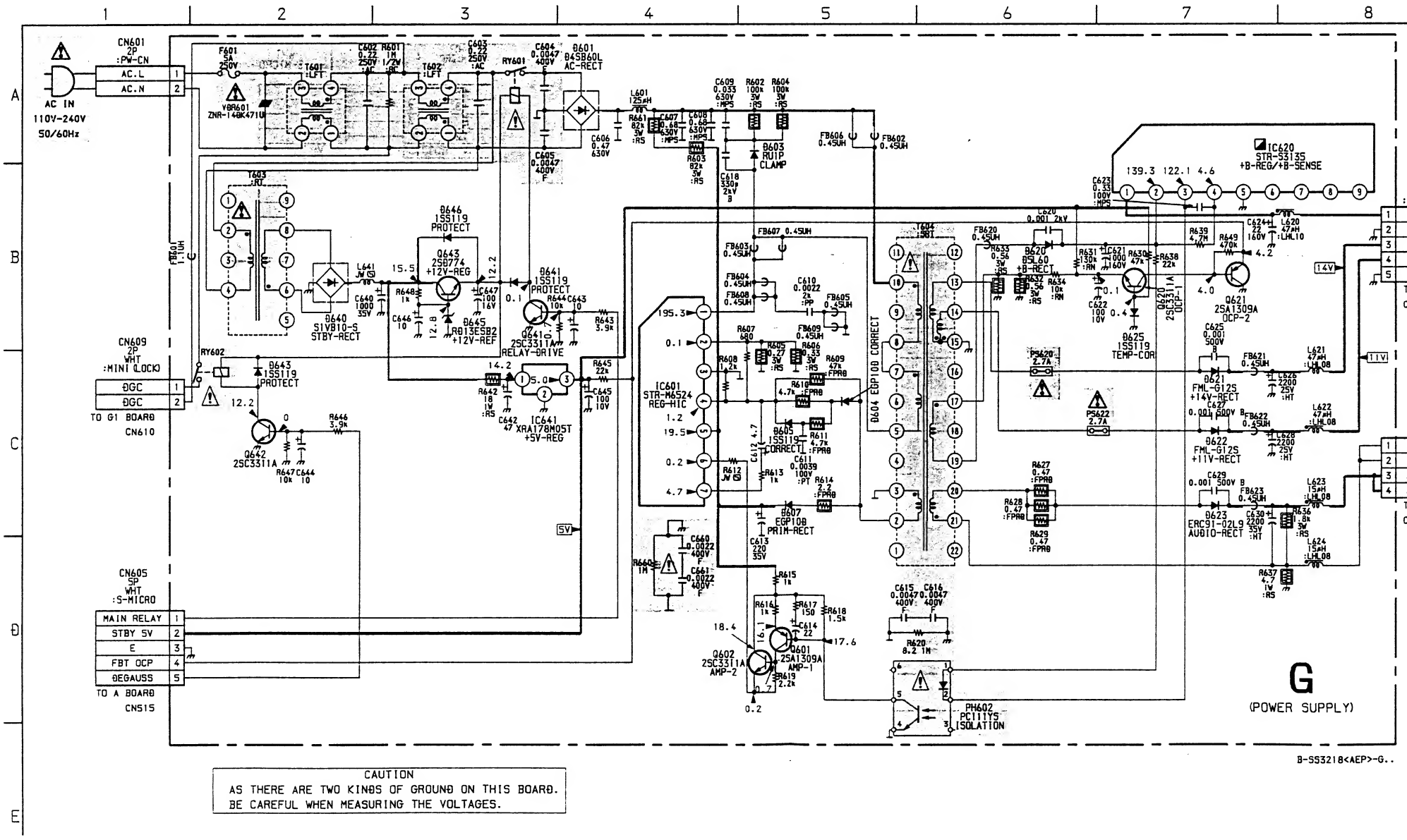
CAUTION (US MODEL ONLY)
This set is equipped with a polarized ac power card plug (one blade of the puug is wider than the other). When replacing the ac power cord, be sure to connect it with specified part number as shown in this diagram.

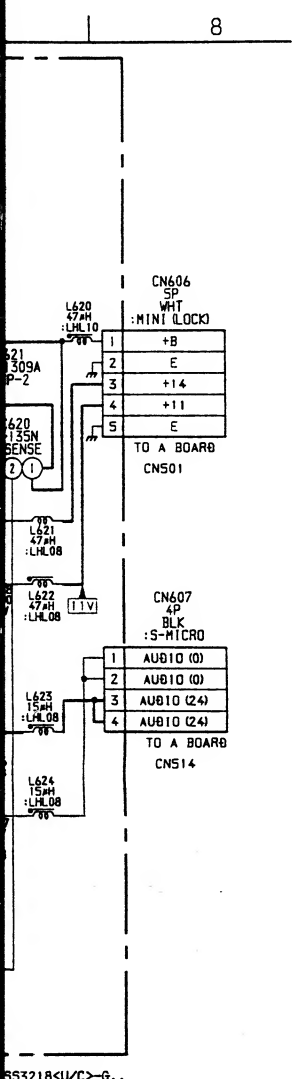
(AEP, AUS Model)

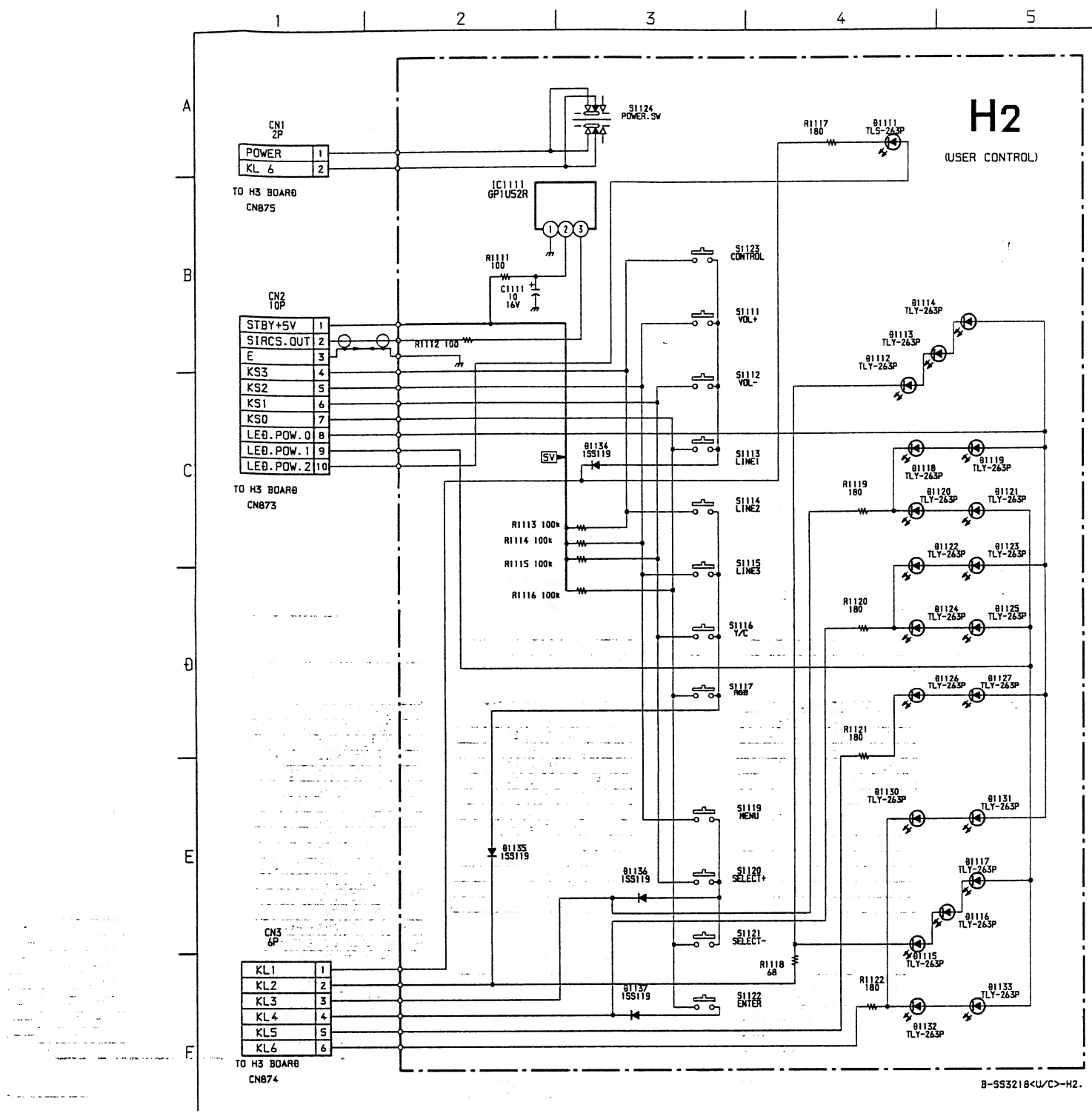
(US, Canadian Model)

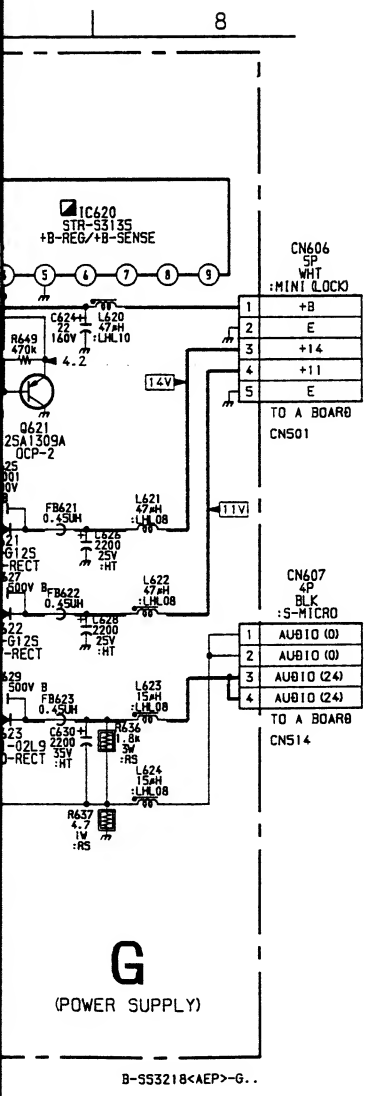


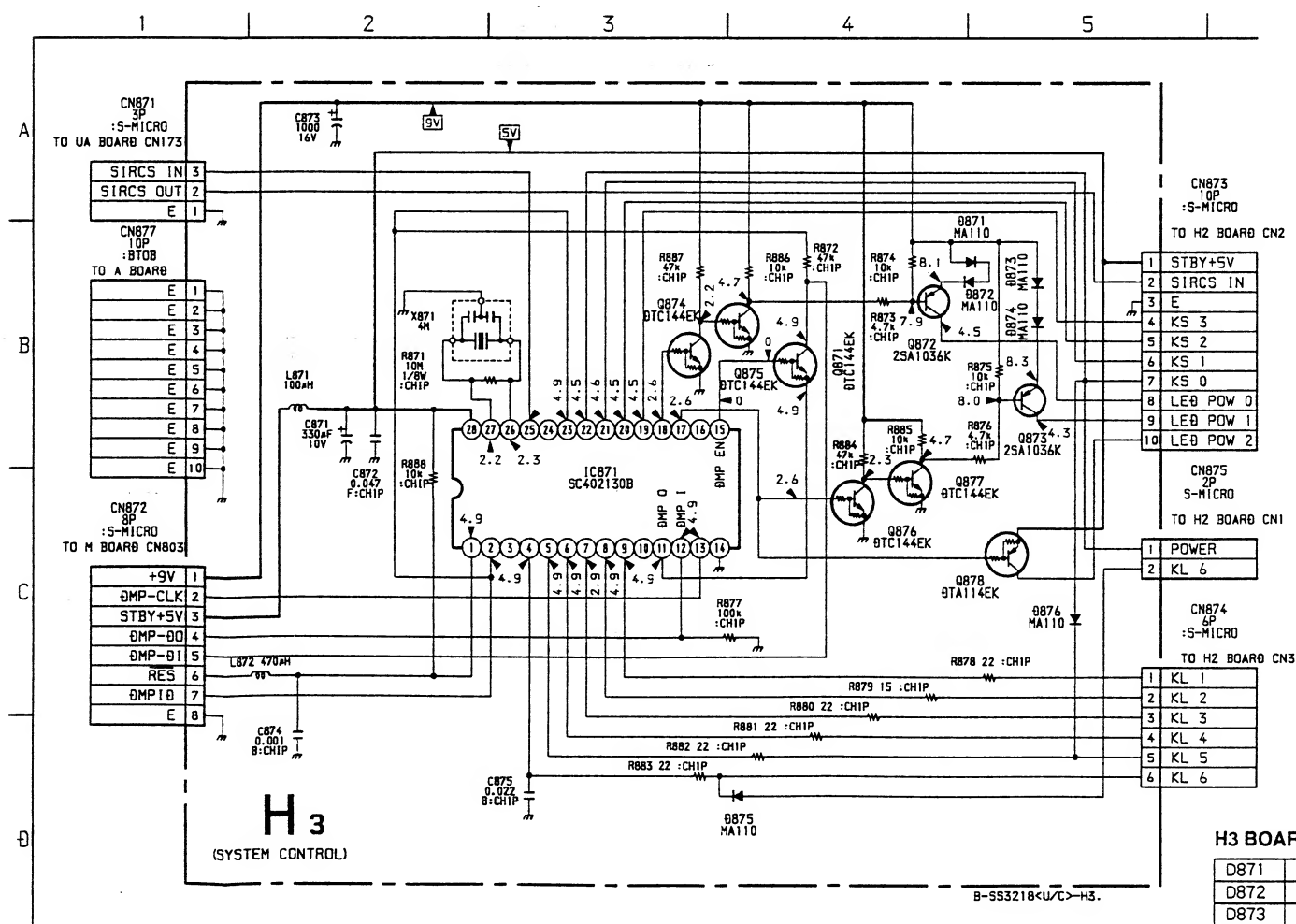
(AEP, AUS Model)









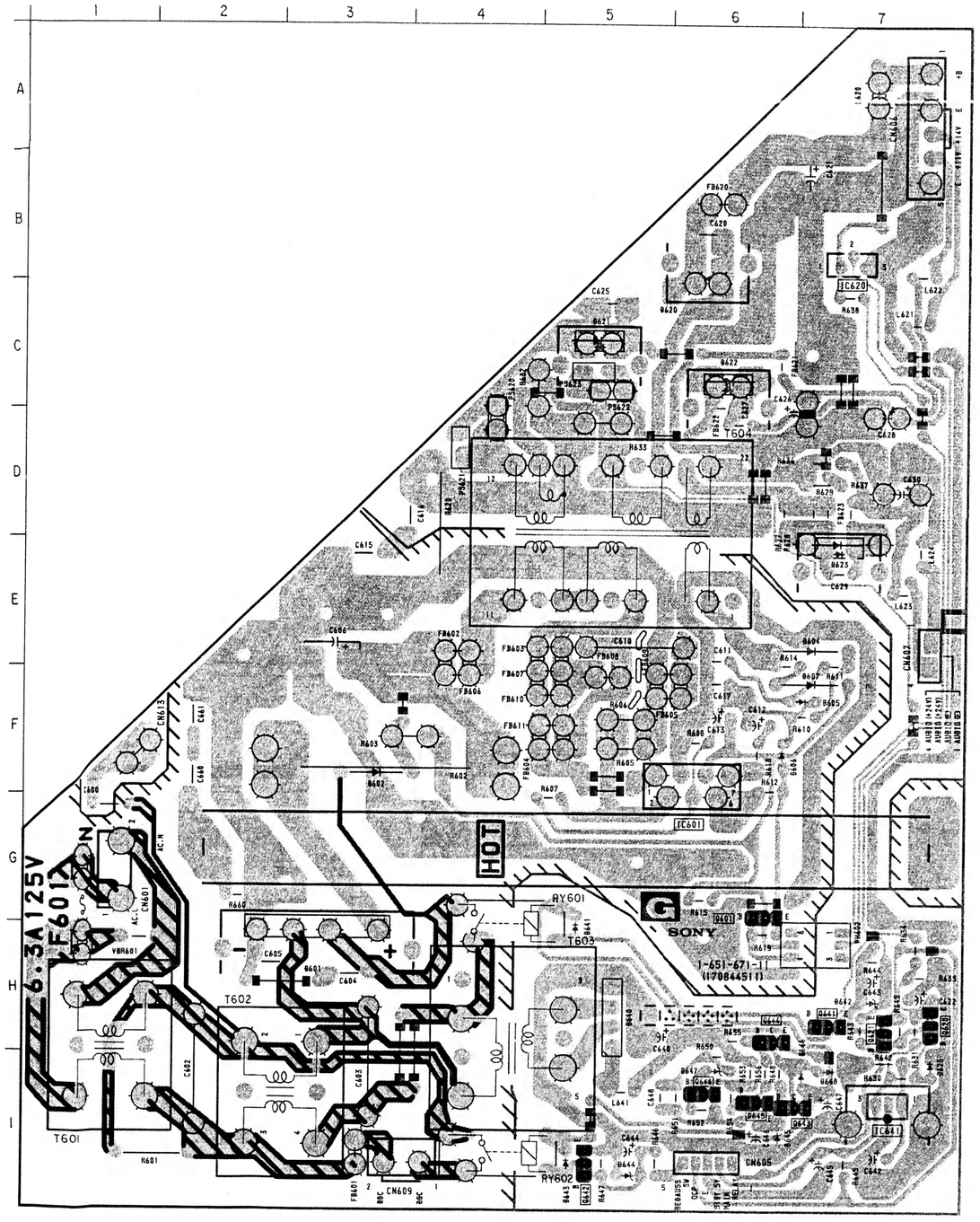


H3 BOARD

D871	DC SHIFT
D872	DC SHIFT
D873	DC SHIFT
D874	DC SHIFT
D875	KEY MATRIX
D876	KEY MATRIX
IC871	SUB MICRO
Q871	INVERT
Q872	LED DRIVER
Q873	LED DRIVER
Q874	INVERT
Q875	INVERT
Q876	INVERT
Q877	INVERT
Q878	LED DRIVER

G [POWER SUPPLY] **H3** [SYSTEM CONTROL] **G1** [DGC] **H2** [USER CONTROL] **VC** [V – PIN Q P]

– G BOARD – **(US, Canadian Model)**



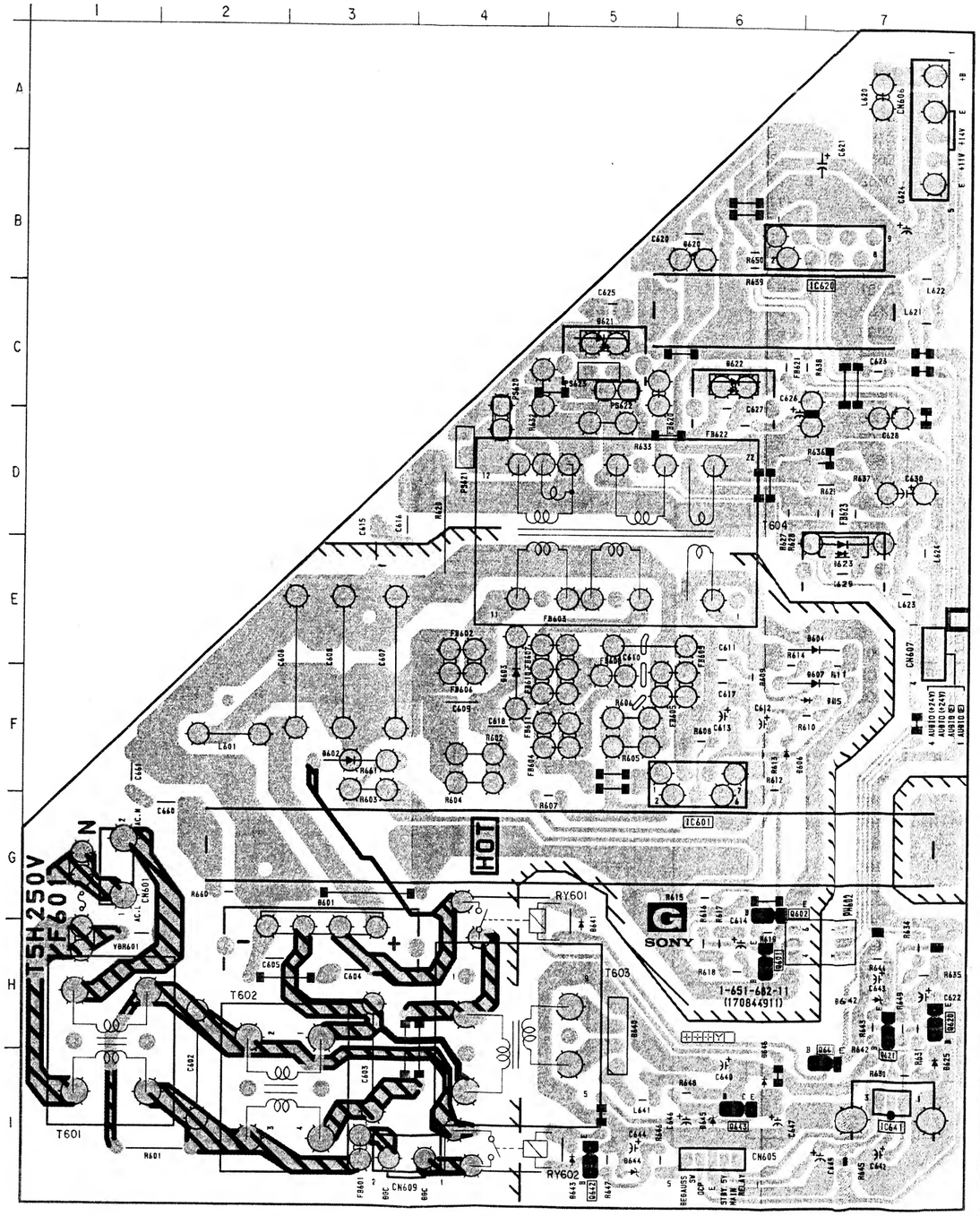
G BOARD

IC	
IC601	F – 6
IC620	B – 7
IC641	I – 7

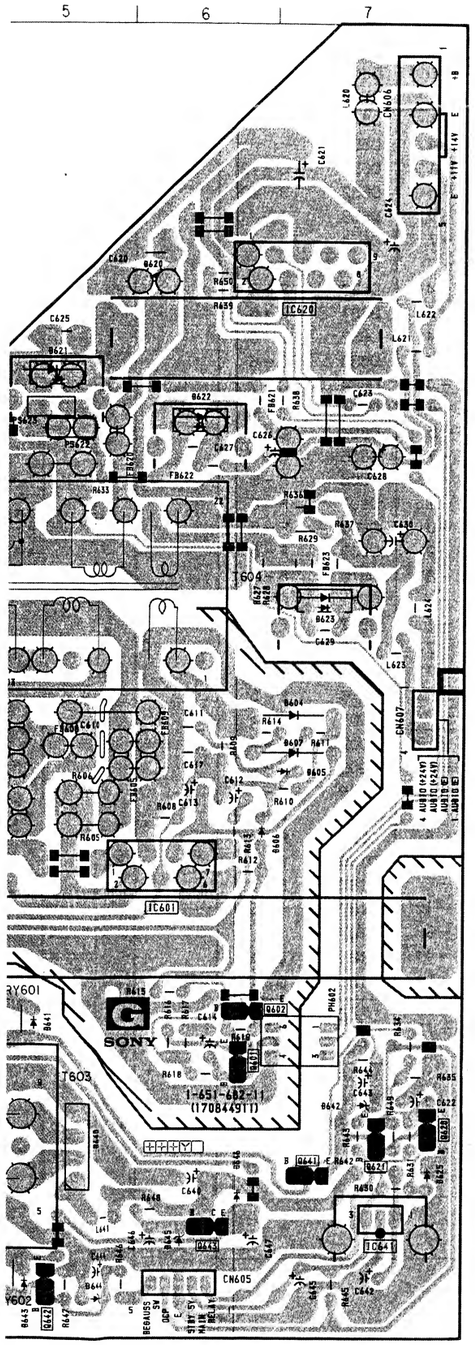
TRANSISTOR	
Q601	G – 6
Q620	H – 7
Q621	H – 7
Q641	H – 7
Q642	I – 5
Q643	I – 6
Q644	H – 6
Q645	I – 6
Q646	I – 6

DIODE	
D601	H – 3
D604	E – 7
D605	F – 7
D607	F – 7
D620	B – 6
D621	C – 5
D622	C – 6
D623	E – 7
D625	I – 7
D640	H – 5
D641	G – 5
D643	I – 5
D645	I – 6
D646	I – 7
D647	I – 6
D648	I – 7

– G BOARD – **(AEP, AUS Model)**



G BOARD

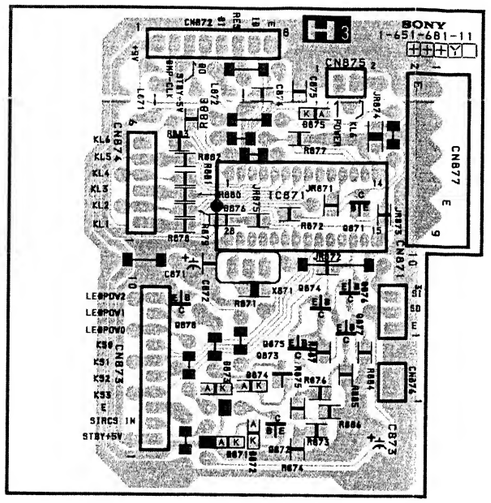


IC	
IC601	F – 6
IC620	B – 7
IC641	I – 7

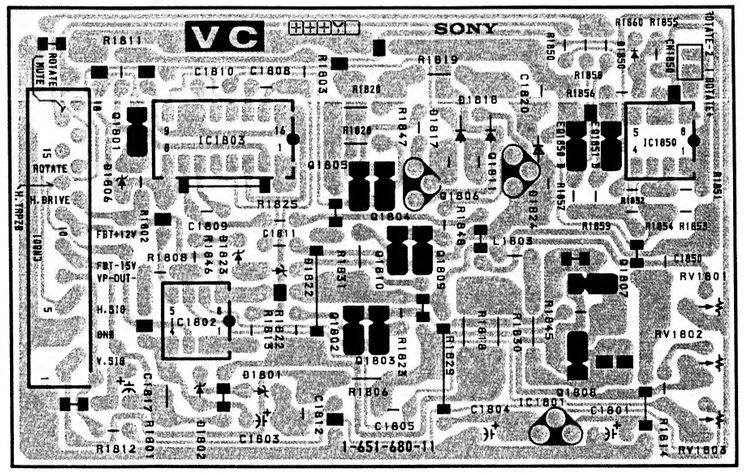
TRANSISTOR	
Q601	H – 6
D602	G – 6
Q620	H – 7
Q621	H – 7
Q641	I – 7
Q642	I – 5
Q643	I – 6

DIODE	
D601	H – 3
D603	F – 4
D604	E – 7
D605	F – 7
D607	F – 7
D620	B – 6
D621	C – 5
D622	C – 6
D623	E – 7
D625	I – 7
D640	H – 5
D641	G – 5
D643	I – 5
D645	I – 6
D646	I – 6

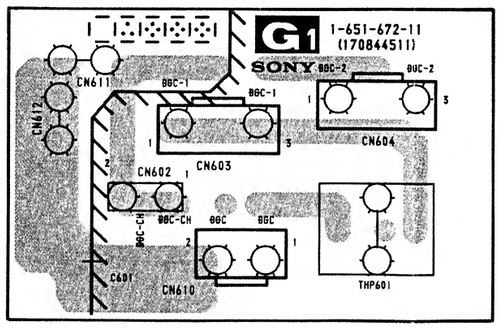
– H3 BOARD –



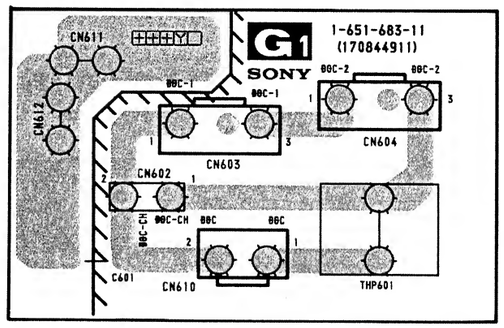
– VC BOARD –



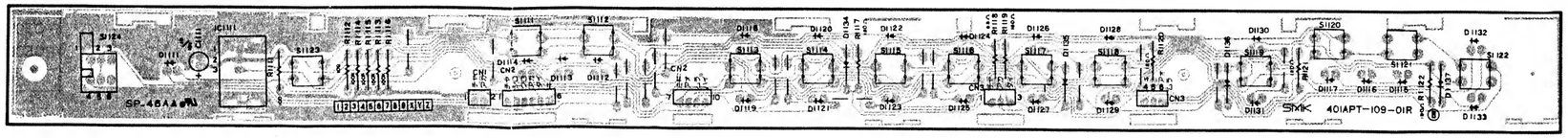
– G1 BOARD – (US, Canadian Model)



– G1 BOARD – (AEP, AUS Model)



– H2 BOARD –



A BOARD

IC	
IC501	D – 7
IC502	A – 10
IC503	C – 11
IC504	C – 5
IC505	E – 2
IC506	A – 2
IC507	A – 8
IC508	B – 4
IC510	A – 4
IC511	B – 2
IC512	C – 12
IC802	E – 6
IC803	G – 6
IC901	E – 4
IC903	D – 4
IC1601	B – 7
IC1603	A – 5
IC1604	B – 9
IC1605	A – 9

TRANSISTOR	
Q504	C – 10
Q505	D – 10
Q506	D – 11
Q508	B – 11
Q509	B – 11
Q510	A – 11
Q511	C – 11
Q512	B – 11
Q513	C – 10
Q514	C – 11
Q515	C – 11
Q516	G – 7
Q517	A – 4
Q518	A – 4
Q519	C – 4
Q520	C – 2
Q521	C – 2
Q522	C – 2
Q523	C – 3
Q530	B – 11
Q531	A – 1
Q532	A – 5
Q801	E – 6
Q802	F – 5
Q803	E – 5
Q804	F – 6
Q805	E – 5
Q806	F – 6
Q807	F – 6
Q808	F – 5
Q809	G – 6
Q810	G – 6
Q811	F – 6
Q901	E – 4
Q902	F – 4
Q903	F – 4
Q904	F – 4
Q905	C – 4
Q806	F – 7
Q907	F – 7
Q908	G – 4
Q909	D – 3
Q910	G – 4
Q911	D – 4
Q912	D – 4
Q913	E – 4
Q914	F – 5
Q1604	B – 7
Q1605	A – 7
Q1606	B – 7
Q1670	B – 9
Q1671	B – 9
Q1672	B – 8
Q1673	A – 7
Q1674	C – 7
Q1675	C – 7
Q1676	C – 7

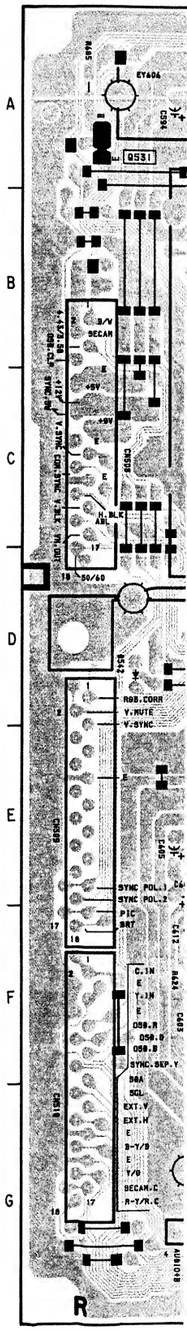
DIODE	
D505	C – 10
D506	B – 11
D507	B – 11
D508	F – 7
D509	G – 8
D510	F – 11
D511	F – 7
D512	G – 12
D513	E – 9
D515	G – 11
D516	E – 10
D517	B – 10
D519	B – 11
D520	D – 5
D521	C – 10
D522	C – 9
D523	F – 11
D524	C – 9
D525	C – 11
D526	B – 11
D530	E – 2
D531	E – 2
D532	E – 2
D533	B – 3
D534	C – 3
D535	D – 3
D542	D – 1
D550	
D650	C – 12
D652	B – 10
D653	A – 11
D654	A – 11
D655	A – 11
D680	B – 6
D681	B – 6
D682	B – 6
D683	C – 6
D684	C – 7
D801	F – 5
D804	G – 4
D805	G – 4
D806	F – 5
D807	F – 6
D808	F – 5
D809	F – 5
D810	F – 5
D811	G – 5
D812	F – 6
D813	C – 4
D814	E – 5
D816	E – 5
D901	E – 4
D902	F – 4
D903	F – 4
D906	F – 4
D907	D – 4
D908	F – 4
D1601	B – 7
D1670	B – 9
D1671	B – 9
D1672	
D1810	D – 8
D1811	D – 8

VARIABLE RESISTOR	
RV1601	B – 7
RV1602	A – 8
RV1603	A – 7

NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

A SYNC OSC, V. PARA. OU HV PROTEC

– A BOARD –



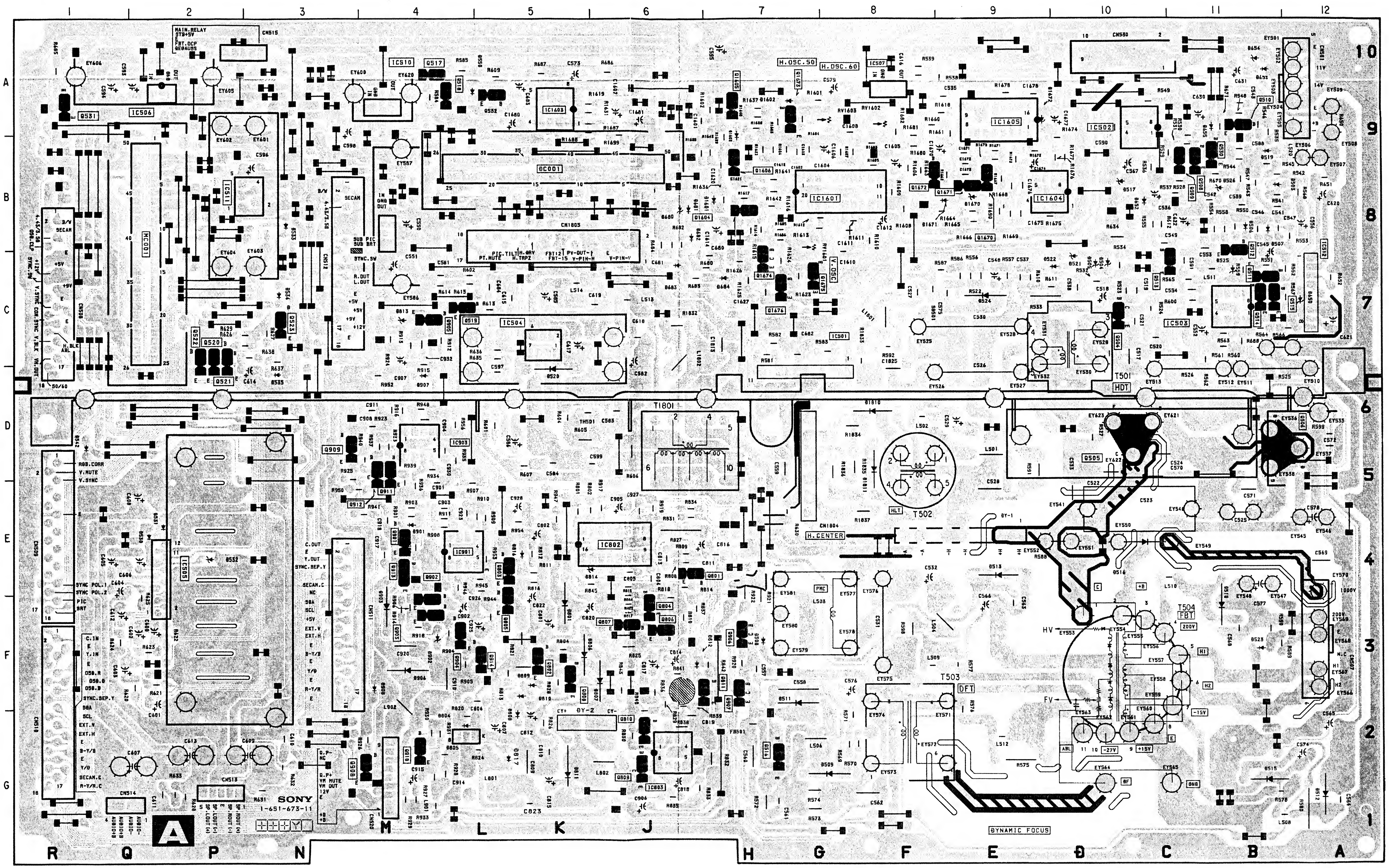
A [SYNC OSC, DYNAMIC CONV, H. SFT. CONTROL, V. PARA. OUT, DQP DRIVE, H/V OUT, HV PROTECT, AUDIO AMP, DF DRIVE]

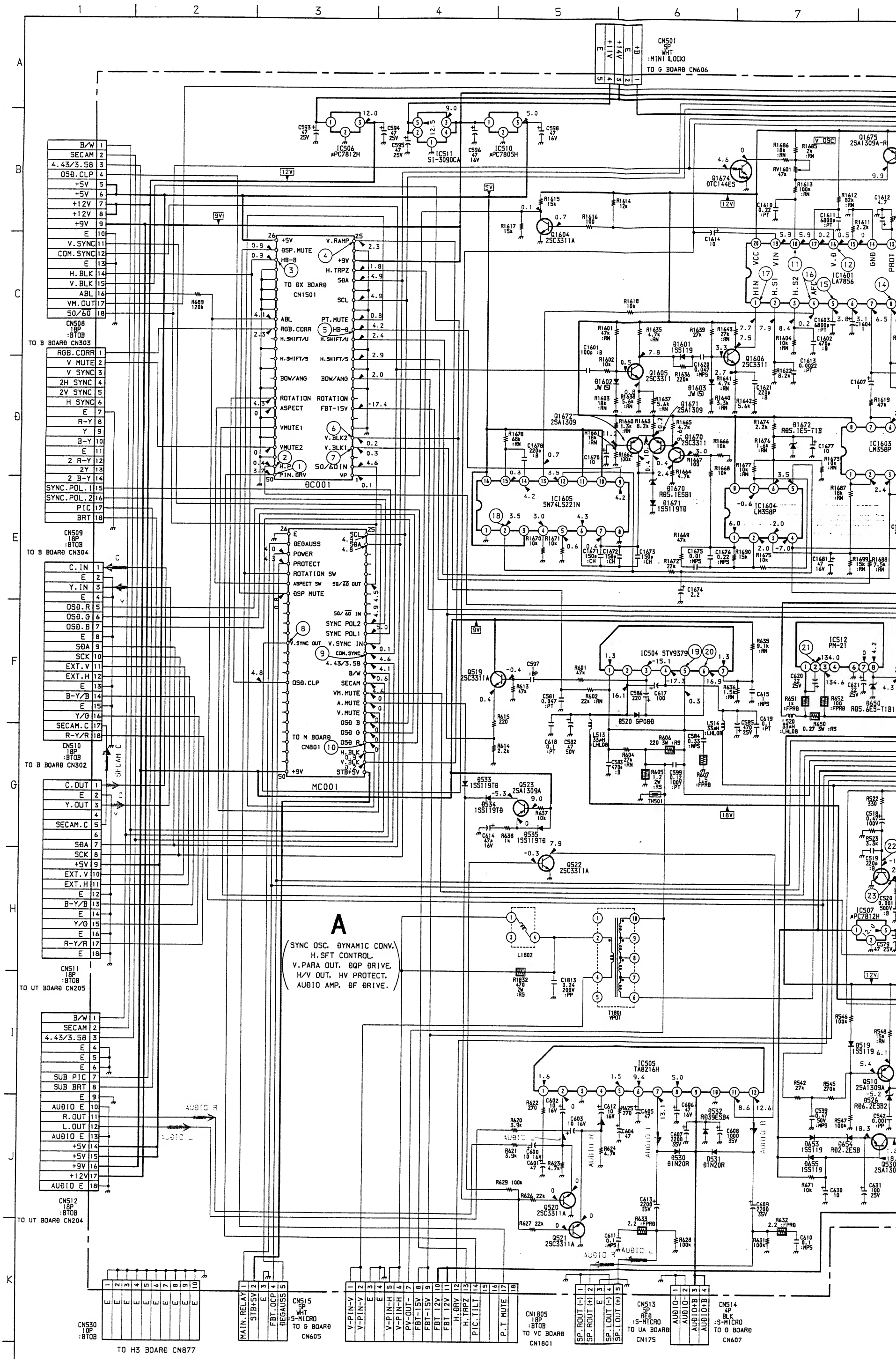
– A BOARD –

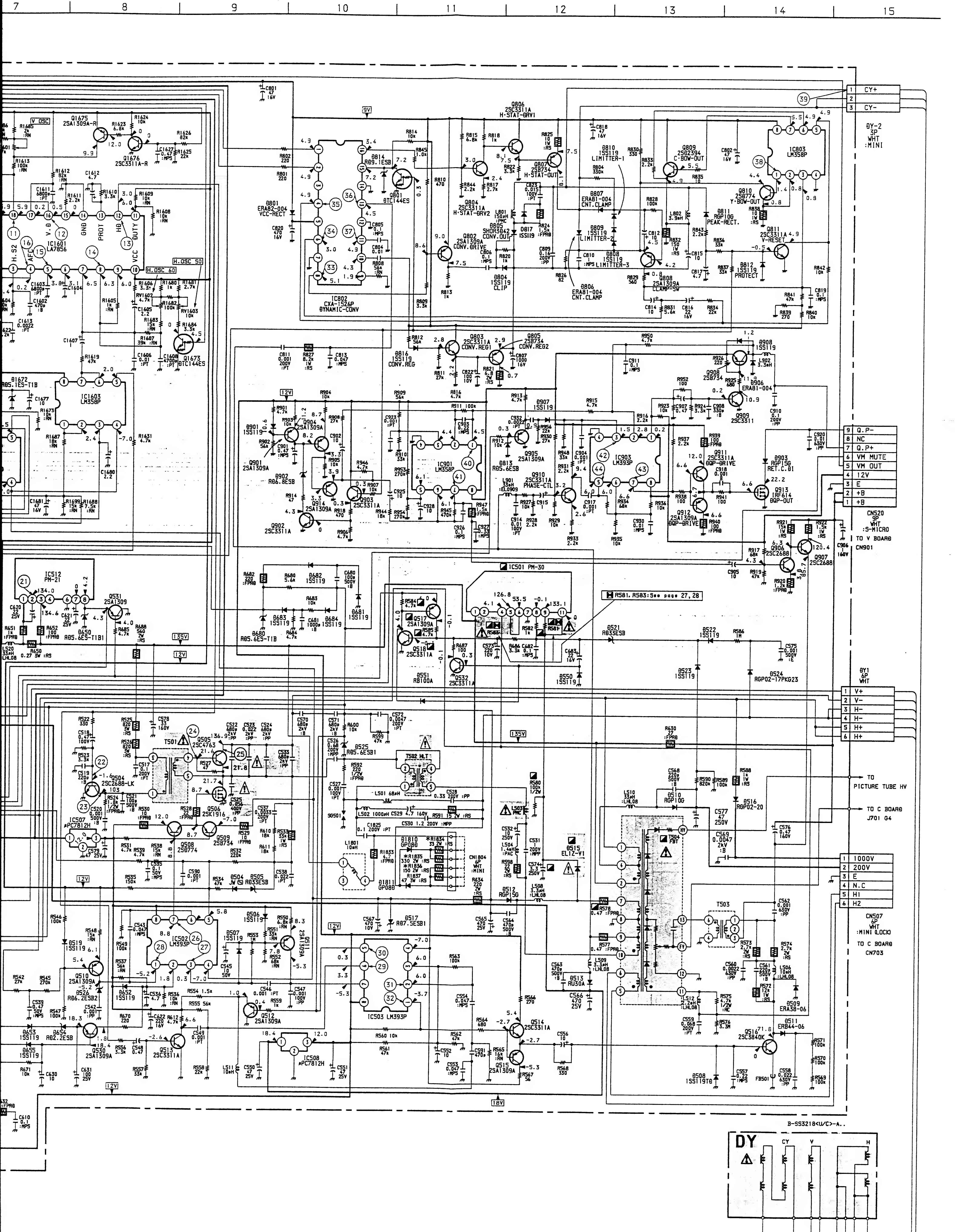
D532	E – 2
D533	B – 3
D534	C – 3
D535	D – 3
D542	D – 1
D550	
D650	C – 12
D652	B – 10
D653	A – 11
D654	A – 11
D655	A – 11
D680	B – 6
D681	B – 6
D682	B – 6
D683	C – 6
D684	C – 7
D801	F – 5
D804	G – 4
D805	G – 4
D806	F – 5
D807	F – 6
D808	F – 5
D809	F – 5
D810	F – 5
D811	G – 5
D812	F – 6
D813	C – 4
D814	E – 5
D816	E – 5
D901	E – 4
D902	F – 4
D903	F – 4
D906	F – 4
D907	D – 4
D908	F – 4
D1601	B – 7
D1670	B – 9
D1671	B – 9
D1672	
D1810	D – 8
D1811	D – 8

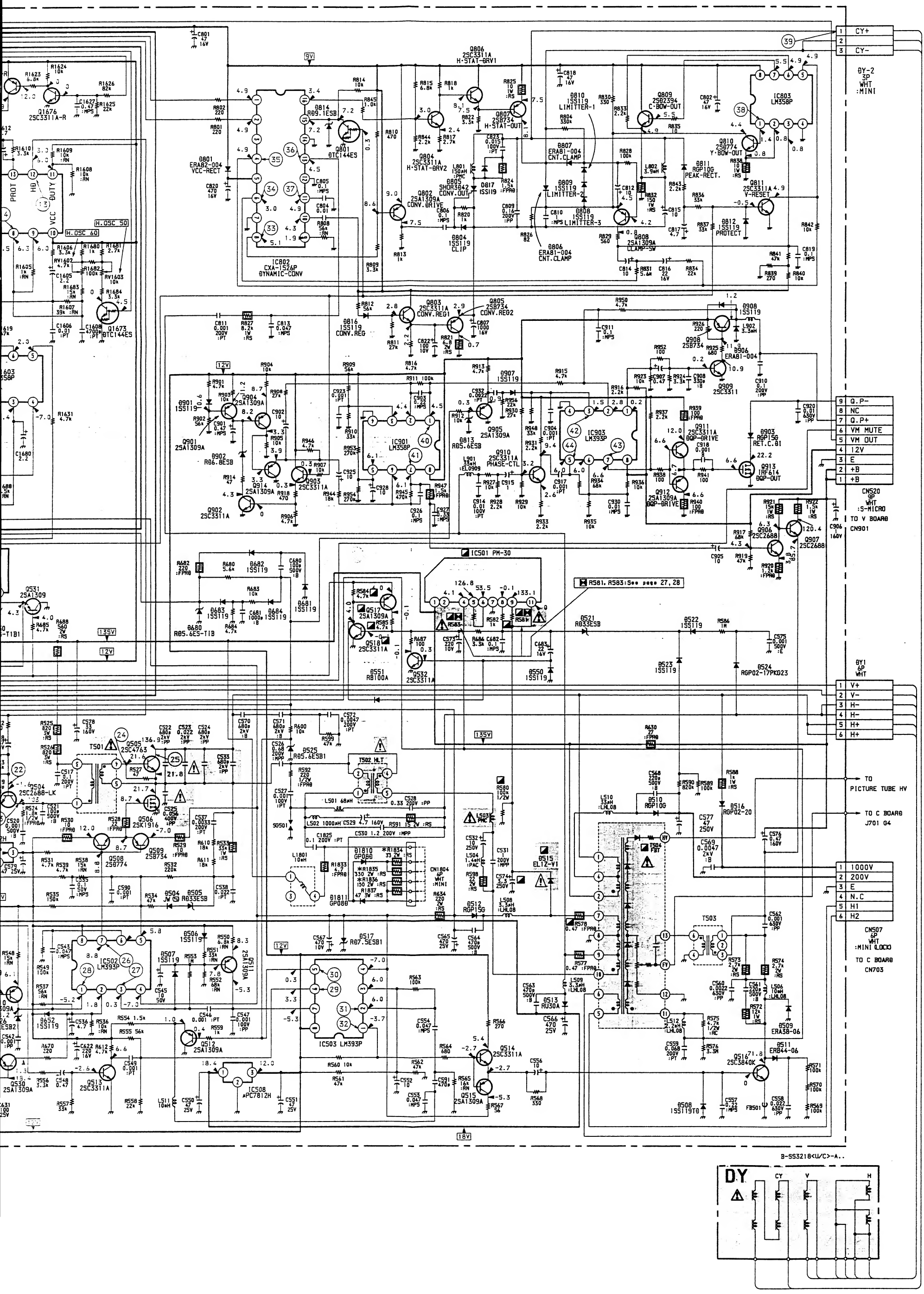
VARIABLE RESISTOR

RV1601	B – 7
RV1602	A – 8
RV1603	A – 7

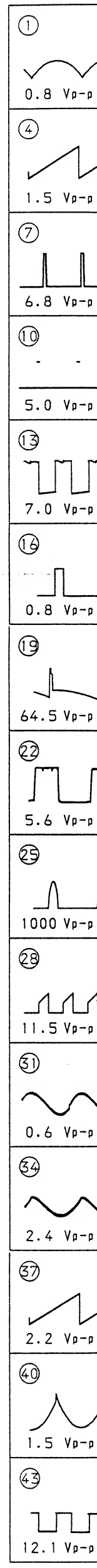



CN508 18P :BTOB
TO B BOARD CN303
B/W
SECAM
4.43/3.58
OSD.CLP
+5V
+5V
+12V
+12V
+9V
E
V.SYNC
COM.SYNC
E
H.BLK
V.BLK
ABL
VM.OUT
50/60
RGB.CORR
V MUTE
V SYNC
2H SYNC
2V SYNC
H SYNC
R-Y
Y
B-Y
2 R-Y
2Y
2 B-Y
SYNC.POL.1
SYNC.POL.2
PIC
BRT
CN509 18P :BTOB
TO B BOARD CN304
CN510 18P :BTOB
TO B BOARD CN302
CN511 18P :BTOB
TO UT BOARD CN205
CN512 18P :BTOB
TO UT BOARD CN204
C.IN
Y.IN
OSD.R
OSD.G
OSD.B
SDA
SCK
EXT.V
EXT.H
B-Y/B
Y/G
SECAM.C
R-Y/R
C.OUT
Y.OUT
SECAM.C
SUB PIC
SUB BRT
AUDIO E
R.OUT
L.OUT
AUDIO R
AUDIO L
MC001
DEGAUSS
POWER
PROTECT
ROTATION SW
ASPECT SW
OSP MUTE
V.SYNC OUT
V.SYNC IN
COM.SYNC
SYNC POL2
SYNC POL1
50/60 OUT
50/60 IN
TO M BOARD CN801
DC001
V.RAMP
H.TRPZ
SDA
SCL
PT.MUTE
HB-B
H.SHIFT/U
H.SHIFT/S
BOW/ANG
ROTATION
ASPECT
VMUTE1
VMUTE2
H.P
PIN.DRV
50/60IN
VP
V.BLK2
V.BLK1
FBT-15V
TO DX BOARD CN1501
CN501 SP WHT :MINI LOCK
TO G BOARD CN606
IC506 μPC7812H
IC511 SI-3090CA
IC510 μPC7805H
Q1674 DTC144ES
Q1675 2SA1309A-R
Q1604 2SC3311A
IC1601 LA7856
VCC
VIN
H.SI
H.S2
AFC
V.D
GND
PROT
HIN
Q1605 2SC3311
Q1606 2SC3311
Q1671 2SA1309
Q1672 2SA1309
D1601 1SS119
D1602 JW (5)
D1603 JW (5)
IC1605 SN74LS221N
Q1670 2SC3311
D1670 RB5.1ES1
D1671 1SS119TD
IC1604 LM358P
D1672 RB5.1ES-T1B
IC1603 LM358P
Q519 2SC3311A
IC504 STV9379
D520 GP08D
D650 RB5.6ES-T1B1
IC512 PM-21
Q533 1SS119TD
Q523 2SA1309A
Q534 1SS119TD
Q535 1SS119TD
Q522 2SC3311A
TH501
IC507 μPC7812H
L1802
T1801 VPOT
IC505 TA8216H
Q519 1SS119
Q510 2SA1309A
Q526 RB6.2ES82
Q532 RB39ES84
D530 D1N20R
D531 D1N20R
D653 1SS119
D654 RB2.2ES8
D655 1SS119
Q530 2SA130
Q520 2SC3311A
Q521 2SC3311A
A
SYNC OSC. DYNAMIC CONV.
H.SFT CONTROL.
V.PARA OUT. DQP DRIVE.
H/V OUT. HV PROTECT.
AUDIO AMP. DF DRIVE.
CN530 10P :BTOB
TO H3 BOARD CN877
CN515 5P WHT :S-MICRO
TO G BOARD CN605
CN1805 18P :BTOB
TO VC BOARD CN1801
CN513 5P RED :S-MICRO
TO UA BOARD CN175
CN514 4P BLK :S-MICRO
TO G BOARD CN607
V OSC
VCC
VIN
H.SI
H.S2
AFC
V.D
GND
PROT
HIN
5V
9V
12V
18V


7 8 9 10 11 12 13 14 15
IC1601 LA7856
IC1603 LM358P
IC802 CXA-1526P DYNAMIC-CONV
IC803 LM358P
IC901 LM358P
IC903 LM393P
IC501 PM-30
IC512 PM-21
IC502 LM393P
IC503 LM393P
IC507 µPC7812H
IC508 µPC7812H
Q1675 2SA1309A-R
Q1676 2SC3311A-R
Q1673 DTC144ES
Q801 DTC144ES
Q802 2SA1309A CONV.DRIVE
Q803 2SC3311A CONV.REG1
Q804 2SC3311A H·STAT-DRV2
Q805 2SB734 CONV.REG2
Q806 2SC3311A H·STAT-DRV1
Q807 2SB734 H·STAT-OUT
Q808 2SA1309A CLAMP-SW
Q809 2SD2394 C·BOW-OUT
Q810 2SB774 Y·BOW-OUT
Q811 2SC3311A V-RESET
Q905 2SA1309A
Q906 2SC2688
Q907 2SC2688
Q908 2SB734
Q909 2SC3311
Q910 2SC3311A PHASE-CTL
Q911 2SC3311A DQP-DRIVE
Q912 2SA1309A DQP-DRIVE
Q913 IRF614 DQP-OUT
Q504 2SC2688-LK
Q505 2SC4763
Q506 2SK1916
Q508 2SD774
Q509 2SB734
Q516 2SC3840K
T501
T502 HLT
T503
T504 FBT
DY-2 3P WHT :MINI
1 CY+
2
3 CY-
9 Q.P-
8 NC
7 Q.P+
6 VM MUTE
5 VM OUT
4 12V
3 E
2 +B
1 +B
CN520 9P WHT :S-MICRO
TO V BOARD CN901
DY1 6P WHT
1 V+
2 V-
3 H-
4 H-
5 H+
6 H+
R581, R583: See page 27, 28
TO PICTURE TUBE HV
TO C BOARD J701 G4
1 1000V
2 200V
3 E
4 N.C
5 H1
6 H2
CN507 6P WHT :MINI (LOCK)
TO C BOARD CN703
CN1804 6P WHT :MINI
B-SS3218<U/C>-A..
DY
CY
V
H



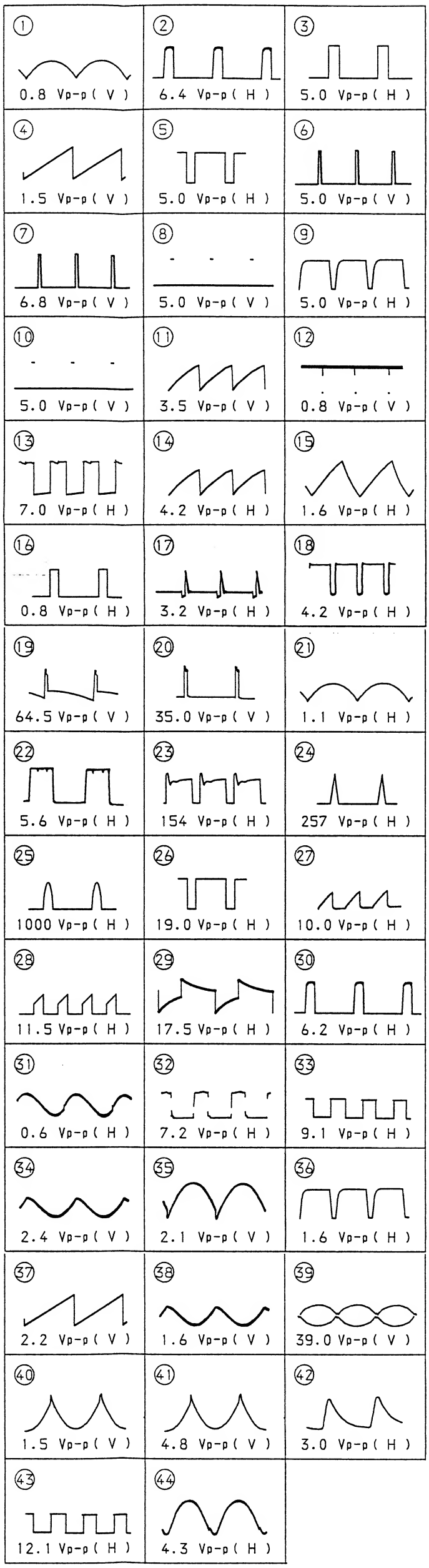
• A BOARD



A BOARD ※

Ref. No.	Location	
R1834	H - 11	
R1835	H - 11	
R1836	H - 11	

• A BOARD WAVEFORMS



A BOARD

D505	LIMITTER
D506	TEMP CORR
D507	CLAMP
D508	PROTECT
D509	DF AMP
D510	200V RECT
D511	SNUBER
D512	– 15V RECT
D513	15V RECT
D515	120V RECT
D516	G2 RECT
D517	REF VOLT
D519	TEMP CORR
D520	V BOOST
D521	PROTECT 4
D522	PROTECT 5
D523	PROTECT 6
D524	PEAK RECT
D525	H BLK 1
D526	DC SHIFT
D530	PROTECT
D531	PROTECT
D532	PROTECT
D533	SW
D534	SW
D535	SW
D542	ABL SW
D550	SW
D650	PROTECT
D652	PROTECT
D653	HOLD
D654	VOLT DROP
D655	RETURN
D680	H BLK 2
D681	RECT
D682	FP SW
D683	SW
D684	BP RECT
D801	VCC RECT
D804	CLIP
D805	CONT OUT
D806	CNT CLAMP
D807	CNT CLAMP
D808	LIMTTER 3
D809	LIMTTER 2
D810	LIMTTER 1
D811	PEAK RECT
D812	PROTECT
D813	PLS CLIP
D814	PROTECT
D816	CONV REG
D901	C SPLY
D902	6.8V CLAMP
D903	RET C DI
D906	QP V OUT
D907	S SAW SW
D908	QP V OUT
D1601	SYNC FILTER
D1670	PROTECT
D1671	PROTECT
D1672	REF VOLT
D1810	H CENT 1
D1811	H CENT 2
IC501	HV PROTECT
IC502	PIN CORR
IC503	DF DRV
IC504	V OUT
IC505	AUDIO AMP
IC506	12V REG
IC507	12V REG

IC508	12V REG
IC510	5V REG
IC511	9V REG
IC512	+ B PROTECT
IC802	D YNAMIC CONV
IC803	F.B.OP AMP
IC901	V PARA OUT
IC903	DQP-DRV
IC1601	SYNC OSC
IC1603	AFC CORR
IC1604	H SFT OUT
IC1605	H SFT OUT
Q504	H DRIVE
Q505	H OUT
Q506	PIN OUT
Q508	PIN DRV
Q509	PIN DRV
Q510	C SPLY
Q511	I SOURCE
Q512	H PLS
Q513	INVERT
Q514	DF OUT 1
Q515	DF OUT 2
Q516	DF OUT
Q517	PROTECT 1
Q518	PROTECT 2
Q519	V BLK OUT
Q520	MUTE
Q521	MUTE
Q522	PROTECT
Q523	PROTECT
Q530	PROTECT
Q531	PROTECT SW
Q532	PROTECT 3
Q801	H SYNC SW
Q802	CONV DRIVE
Q803	CONV REG 1
Q804	H STAT DRV 2
Q805	CONV REG 2
Q806	J STAT DRV 1
Q807	H STAT OUT
Q808	CLAMP SW
Q809	C BOW OUT
Q810	Y. BOW OUT
Q811	V RESET
Q901	C SPLY
Q902	V PULSE SW
Q903	BUFF
Q904	V SAW OUT
Q905	PLS OUT
Q906	DF SOURCE 1
Q907	DF SOURCE 2
Q908	QP V OUT
Q909	QP V DRV
Q910	PHASE CTL
Q911	DQP DRIVE
Q912	DQP DRIVE
Q913	DQP OUT
Q914	V SAW OUT
Q1604	V SYNC OUT
Q1605	SYNC DRIVE
Q1606	SYNC DRIVE
Q1670	H S DRV
Q1671	CURR OUT
Q1672	PROTECT
Q1673	FV SW
Q1674	FV SW
Q1675	SYNC SW
Q1676	SYNC SW

A BOARD IC1601 LA7856

A BOARD * MARK

Ref. No.	Location	PVM-2950Q (U/C) PVM-2950QM (AEP)	PVM-2950QM (AUS)
R1834	H – 11	33 2W : RS	0.22 2W : RS
R1835	H – 11	330 2W : RS	100 2W : RS
R1836	H – 11	150 2W : RS	330 2W RS

Schematic diagrams

← A board

B BOARD

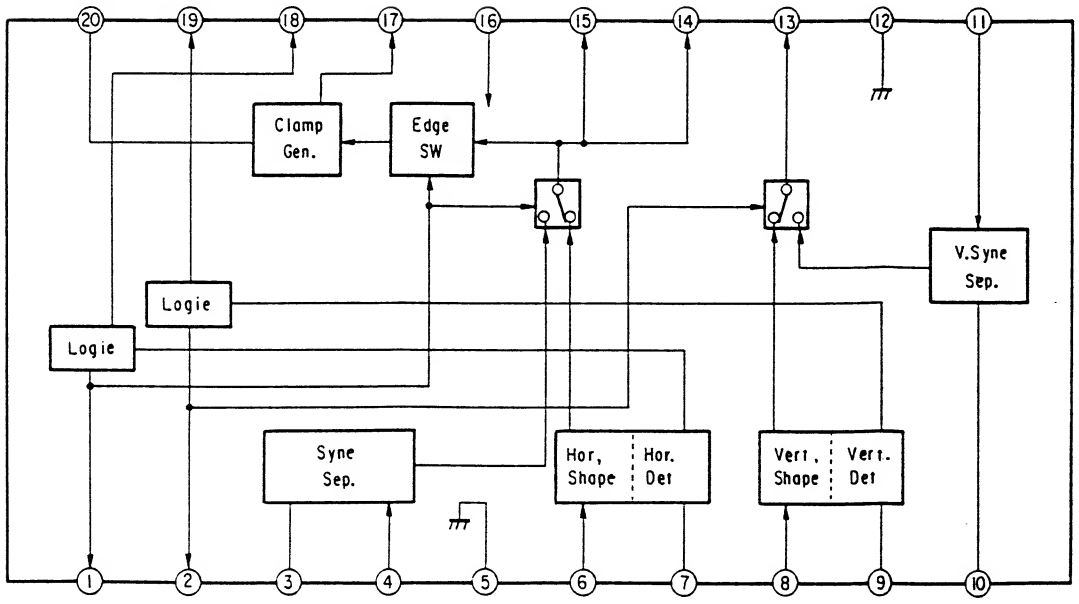
D303	PROTECT
D304	B/W SW
D306	B/W SW
D307	B/W SW
D308	PAL SW
D309	SECAM KILLEY SW
D310	PAL SW
D311	PAL SW
D312	PROTECT
D313	SYSTEM DETECT
D314	SYSTEM DETECT
D315	ABL
D316	
D317	PIC ABL
D318	PROTECT
D319	PROTECT
D320	PROTECT
D321	PROTECT
D322	PROTECT
D323	PROTECT
D324	PROTECT
D325	PROTECT
D326	PROTECT
D327	PROTECT
D328	PROTECT
D329	PROTECT
D331	SYSTEM SW
D333	PROTECT
D334	BLK SW
D335	BLK SW
D336	PROTECT
D337	NO SIGNAL SW
IC301	VIDEO SW
IC302	SYNC SW
IC303	SECAM DECODER
IC304	PAL/SECAM SW
IC305	SYSTEM SW
IC306	NT/PAL DECODER
IC307	PULSE GENELATER
IC308	SYNC SEP
IC309	B/W DETECT
IC310	SYSTEM SW
IC311	D/A CONVERTER
IC312	RGB DECORDER
IC313	VIDEO SW
IC316	D/A CONVERTER
IC318	EX OR
IC319	BLUE ONLY SW
IC320	AGING SW
Q301	C BUFF
Q302	Y BUFF
Q303	Y BUFF
Q304	Y BUFF

Q305	Y AMP
Q306	Y BUFF
Q307	Y BUFF
Q308	C BUFF
Q309	C BUFF
Q311	B-Y BUFF
Q312	R-Y BUFF
Q313	B/W SW
Q314	R-Y BUFF
Q315	B-Y BUFF
Q316	14M SW
Q317	17M SW
Q318	VCXO BUFF
Q319	R-Y BUFF
Q320	B-Y BUFF
Q321	BUFF
Q322	INVERT
Q323	V SYNC SEP
Q324	BUFF
Q325	BUFF
Q326	INVERT
Q327	SYNC SEP
Q328	SYNC BUFF
Q329	CLAMP
Q330	SYSTEM DETECT
Q331	BUFF
Q332	VM AMP
Q333	ABL BUFF
Q334	ABL AMP
Q335	ABL
Q336	PIC ABL
Q337	BRT ABL
Q338	R BUFF
Q339	R BUFF
Q340	G BUFF
Q341	G BUFF
Q342	B BUFF
Q343	B BUFF
Q344	INVERT
Q345	SECAM KILLER
Q346	RGB CORR
Q347	NT/PAL SW
Q348	INVERT
Q349	4.43/3.58 SW
Q352	VCXO BUFF
Q354	B GATE SW
Q355	INVERT
Q356	B-Y BUFF
Q357	R-Y BUFF
Q358	MATRIX SW
Q359	Y BUFF
Q360	SW
Q361	BLK SW
Q362	B GATE SW
Q363	NO SIGNAL SW

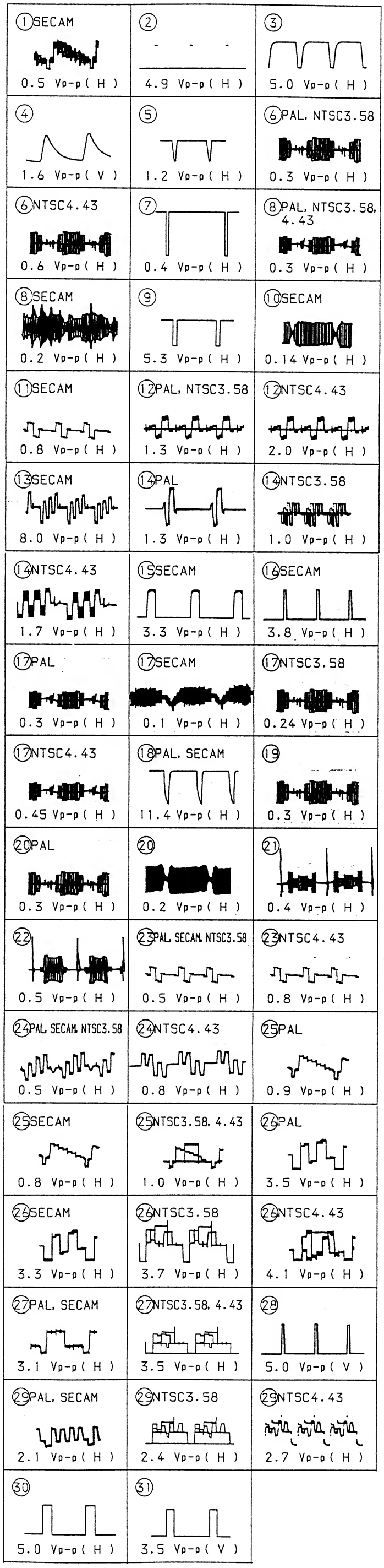
B BOARD * MARK

REF. NO		PAL	SECAM	NTSC 3.58	NTSC 4.43
IC301	⑩	11.0	0.1	11.0	11.0
	⑬	11.0	0.1	11.0	11.0
	⑮	11.0	0.1	11.0	11.0
IC302	⑨	0.3	0.4	0.6	0.2
	⑩	0.2	0.3	0.6	0.2
	⑪	0.2	0.4	0.5	0.2
IC303	⑭	0	3.7	0	0.1
	⑯	3.5	2.8	3.5	3.9
IC304	③	4.5	0	4.6	4.6
IC305	③	0.8	0.7	0.8	2.5
	⑨	4.1	4.1	4.1	0.3
	⑬	3.6	3.6	3.6	2.6
IC306	④	2.5	1.1	2.5	3.0
	⑧	0	0	0	0.9
	㉕	4.1	0.1	4.1	4.1
	㉖	3.7	3.7	3.7	4.1
	㉙	1.2	0.9	0.9	0.6
IC307	⑤	1.1	4.1	1.1	0.2
	⑥	1.1	4.1	1.1	0.2
IC308	⑦	0.7	1.2	1.2	1.2
	⑧	2.7	6.2	6.2	6.2
	⑨	3.0	3.0	3.0	2.5
	⑳	2.1	3.4	3.4	3.4
IC309	①	0.6	10.6	0.6	0.4
	②	2.6	1.1	2.6	3.0
	③	1.7	1.7	1.7	2.1
IC310	②	3.5	3.7	3.4	2.3
	④	1.5	1.5	1.5	2.9
	⑤	5.0	5.0	5.0	2.9
	⑨	4.0	4.1	4.0	0.3
	⑩	4.1	4.1	4.0	0.3
	⑪	4.1	4.1	4.0	0.3
	⑫	5.0	5.0	4.0	2.9
	⑭	1.8	1.8	1.8	2.9
IC311	①	0	11.9	0.6	0.6
	②	0.2	11.1	0.2	0.2
	③	4.6	4.1	4.1	4.6
	④	0	11.9	4.6	4.6
	⑤	4.6	0.1	4.6	4.6
	⑥	4.6	0	4.6	4.6
	⑦	0	0	0	8.0
	⑭	4.9	3.4	0.1	4.9
	⑮	4.9	4.1	4.9	4.5
IC312	㉘	6.4	6.7	6.7	7.6
	㉞	6.8	7.5	7.6	8.2
	㉟	7.0	7.4	7.4	8.6
IC316	②	0	2.5	0	0
	③	0.4	0.9	0.4	0.4
	④	1.9	0.2	0	0
	⑤	7.4	0.2	7.4	7.4
	⑥	1.8	0	1.8	1.8
	⑦	5.7	0	5.7	5.7
	⑭	0	2.4	4.9	4.9
	⑮	0	2.5	4.9	4.9
IC318	②	4.8	4.8	4.7	1.0
	④	5.0	0	5.0	5.0
	⑤	3.7	3.5	3.4	4.6
	⑥	0.4	4.6	0.5	0.2
	⑩	0	0.3	0.3	0.3
	⑪	0	0.3	0.3	0.3
	⑬	0	0.6	0.7	0.6
IC319	③	0	0.9	0.9	2.8
Q313	B	-0.4	0.5	-0.5	0.1
	C	4.9	0	4.9	4.9
Q319	B	1.8	1.8	1.8	1.9
	E	2.4	2.4	2.4	3.5
Q320	B	1.5	1.5	1.5	1.0
	E	2.1	2.1	2.1	0
Q324	B	1.8	1.8	1.8	1.8
Q330	B	2.0	0	1.9	0.9
	C	4.9	0.3	4.9	0
	E	4.8	4.1	4.8	4.6
Q344	B	0	3.7	0	0
	C	11.0	0.1	11.0	11.0
Q345	B	2.4	0.7	2.4	2.4
	C	0	3.7	0	0
Q347	B	4.0	4.1	4.1	0.3
	C	0	0	0	0.9
Q348	B	0	3.7	0	0
	C	4.6	0.1	0	4.6
Q354	C	0.8	0	0.9	0.7
	E	0	1.8	0	0
Q356	B	3.8	3.7	4.0	2.3
	E	5.0	5.0	5.0	2.9
Q357	B	3.8	3.8	3.6	2.3
	E	5.0	5.0	5.0	2.9
Q358	C	0.9	1.2	1.2	0.5
Q361	B	0.1	1.8	0.2	0.1
	C	4.1	0.1	4.1	4.1
Q363	B	0.5	0.5	0.4	0.1
	C	2.6	1.1	2.6	3.0

B BOARD IC308 M520365SP



• B BOARD WAVEFORMS

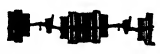


③

5.0 Vp-p (H)

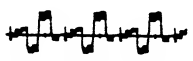
⑥PAL, NTSC3.58

0.3 Vp-p (H)

⑧PAL, NTSC3.58, 4.43

0.3 Vp-p (H)

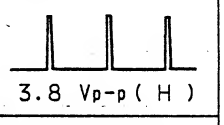
⑩SECAM

0.14 Vp-p (H)

⑫NTSC4.43

2.0 Vp-p (H)

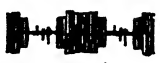
⑭NTSC3.58

1.0 Vp-p (H)

⑯SECAM

3.8 Vp-p (H)

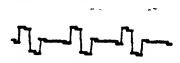
⑰NTSC3.58

0.24 Vp-p (H)

⑲

0.3 Vp-p (H)

㉑

0.4 Vp-p (H)

㉓NTSC4.43

0.8 Vp-p (H)

㉕PAL

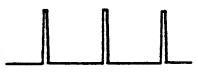
0.9 Vp-p (H)

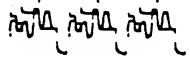
㉖PAL

3.5 Vp-p (H)

㉖NTSC4.43

4.1 Vp-p (H)

㉘

5.0 Vp-p (V)

㉙NTSC4.43

2.7 Vp-p (H)

CN301 3P WHT :S-MICRO
CLK 1
GND 2
3
TO UT BOARD CN203

CN302 18P :BTOB
C. IN 1
GND 2
Y. IN 3
GND 4
OSD. R 5
OSD. G 6
OSD. BLK 7
S. SEY. Y 8
SDA 9
SCK 10
EXT. V 11
EXT. H 12
GND 13
B-Y/B 14
GND 15
Y/G 16
SECAM. C 17
R-Y/R 18
TO A BOARD CN510

SECAM C

Q301 2SA1037K
Q302 2SC2412K
Q303 2SA1037K
Q304 2SC2412K
Q305 2SC2412K
Q306 2SC2412K
Q307 2SC2412K
Q308 2SC2412K
Q309 2SA1037K
Q310 MA110
Q311 2SA1037K
Q312 2SA1037K
Q313 2SC2412K
Q314 2SA1037K
Q318 2SC2412K
Q319 2SA1037K
Q320 2SA1037K
Q321 2SC2412K
Q322 2SC2412K
Q323 2SA1037K
Q324 2SA1037K
Q325 2SC2412K
Q326 2SC2412K
Q327 2SA1037K
Q330 2SA1037K
Q335 MA110
Q336 MA110
Q337 MA110
Q338 MA110
Q339 MA110
Q340 MA110
Q341 MA110
Q342 MA110
Q343 MA110
Q344 BTC144EK
Q345 BTC144EK
Q347 BTC144EK
Q348 BTC144EK
Q352 2SC2412K
Q354 BTC144EK
Q360 *
Q361 BTC144EK
Q362 2SC2412K

IC302 MC14053BF-T1
IC303 CXA1214P
IC304 LA7016
IC305 MC14052BF
IC306 M51279SP
IC307 MC14011BF

CP302
CP303
CP301

D301 1SS119
D302 1SS119
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D304 1SS119
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D307 1SS119
D308 1SS119
D309 MA110
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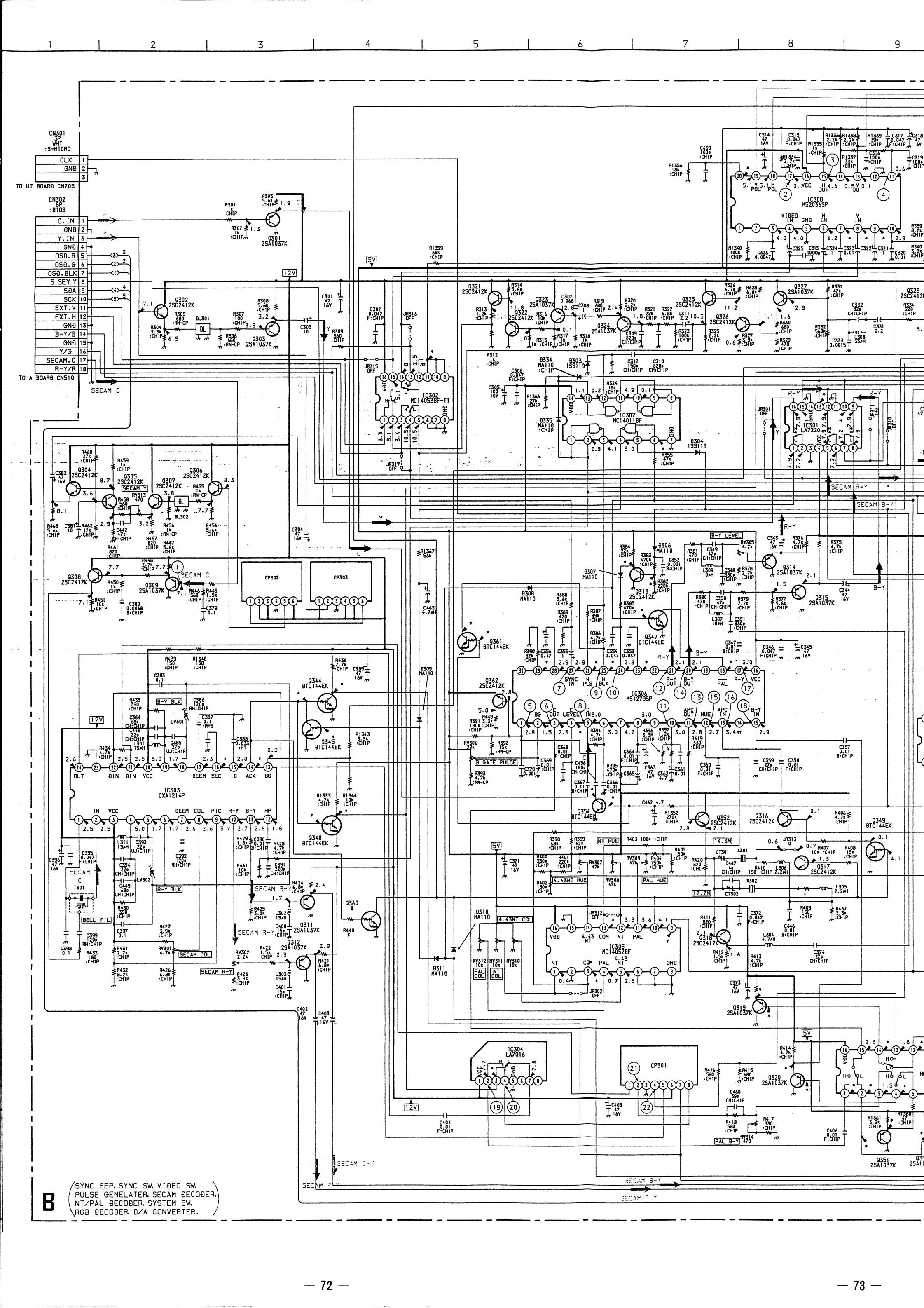
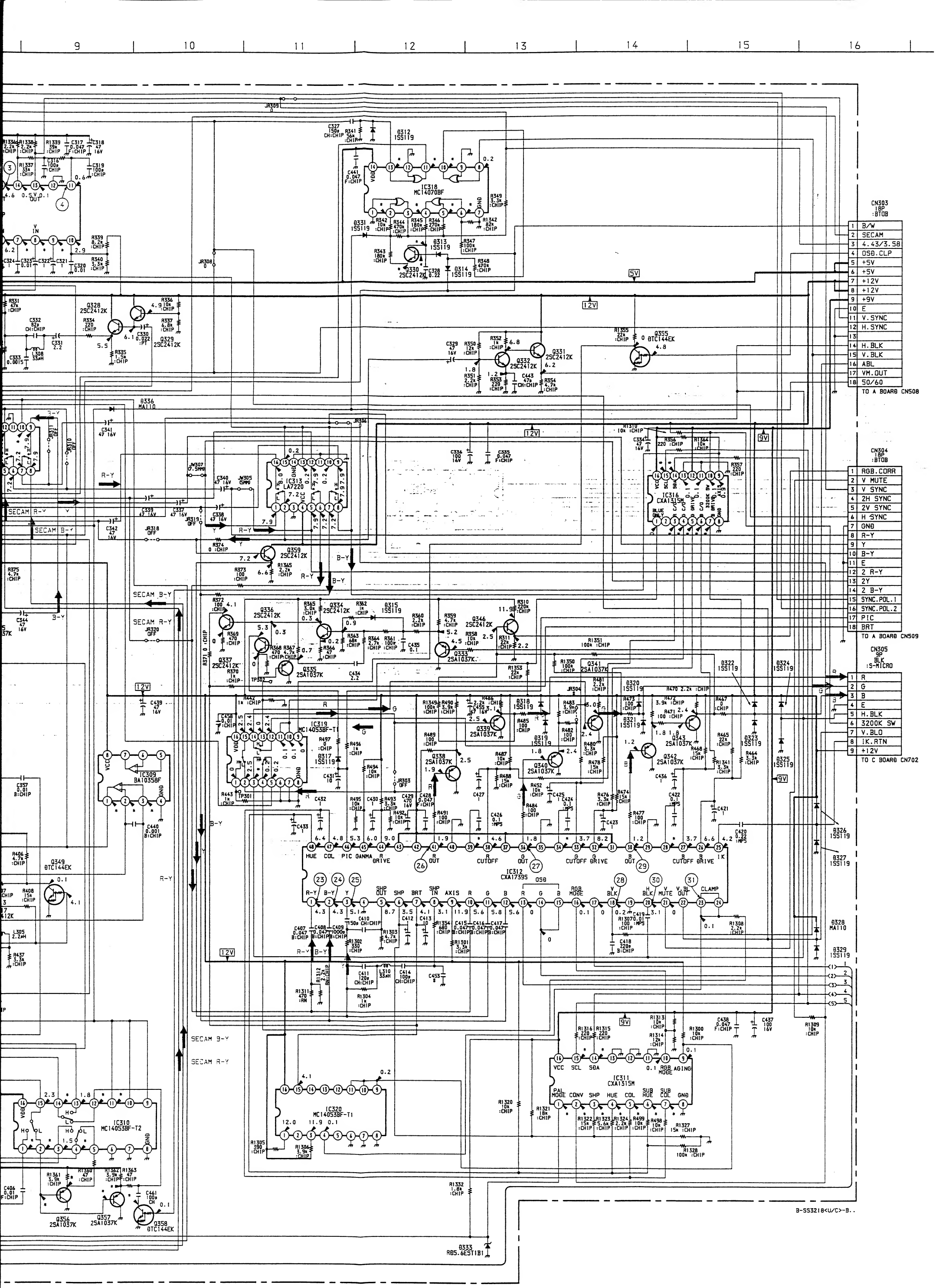
D1000 MA110

B (SYNC SEP. SYNC SW. VIDEO SW. PULSE GENELATER. SECAM DECODER. NT/PAL DECODER. SYSTEM SW. RGB DECODER. D/A CONVERTER.)


CN301
3P
WHT
:S-MICRO
CLK 1
GND 2
3
TO UT BOARD CN203
CN302
18P
:BTOB
C. IN 1
GND 2
Y. IN 3
GND 4
OSD. R 5
OSD. G 6
OSD. BLK 7
S. SEY. Y 8
SDA 9
SCK 10
EXT. V 11
EXT. H 12
GND 13
B-Y/B 14
GND 15
Y/G 16
SECAM. C 17
R-Y/R 18
TO A BOARD CN510
SECAM C
12V
5V
IC308
M52036SP
IC302
MC14053BF-T1
IC307
MC14011BF
IC301
LA7220
IC303
CXA1214P
IC306
M51279SP
IC305
MC14052BF
IC304
LA7016
CP301
CP302
CP303
SECAM Y
SECAM C
SECAM R-Y
SECAM B-Y
R-Y BLK
B-Y BLK
SECAM COL
BELL FIL
B GATE PULSE
B-Y LEVEL
NT HUE
4.43NT HUE
PAL HUE
4.43NT COL
PAL COL
NT COL
PAL B-Y
14.3M
17.7M
B
SYNC SEP. SYNC SW. VIDEO SW.
PULSE GENELATER. SECAM DECODER.
NT/PAL DECODER. SYSTEM SW.
RGB DECODER. D/A CONVERTER.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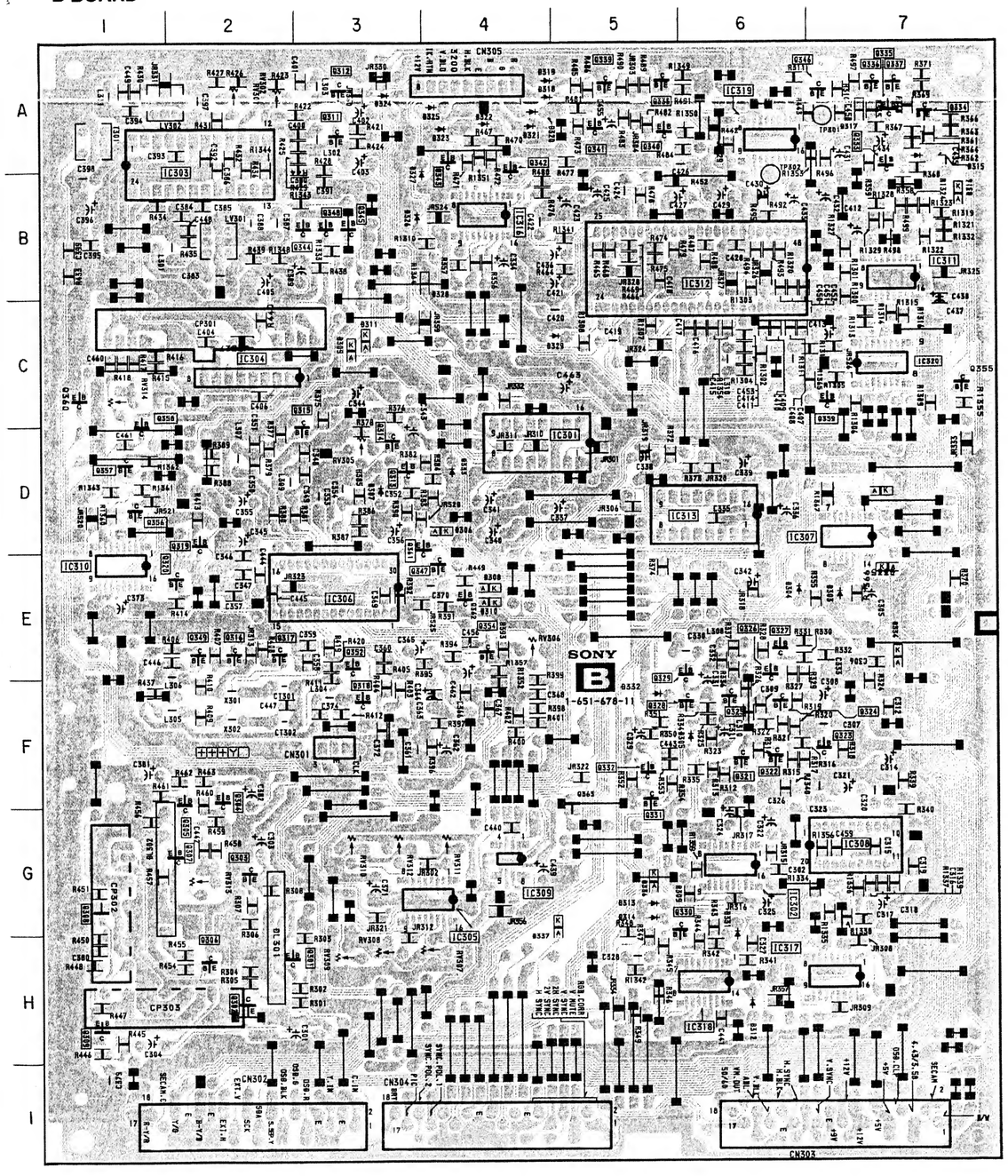
IC318 MC14070BF
IC313 LA7220
IC316 CXA1315M
IC319 MC14053BF-T1
IC309 BA10358F
IC312 CXA1739S
IC311 CXA1315M
IC310 MC14053BF-T2
IC320 MC14053BF-T1
CN303 18P :BTOB
1 B/W
2 SECAM
3 4.43/3.58
4 OSD.CLP
5 +5V
6 +5V
7 +12V
8 +12V
9 +9V
10 E
11 V.SYNC
12 H.SYNC
13
14 H.BLK
15 V.BLK
16 ABL
17 VM.OUT
18 50/60
TO A BOARD CN508
CN304 18P :BTOB
1 RGB.CORR
2 V MUTE
3 V SYNC
4 2H SYNC
5 2V SYNC
6 H SYNC
7 GND
8 R-Y
9 Y
10 B-Y
11 E
12 2 R-Y
13 2Y
14 2 B-Y
15 SYNC.POL.1
16 SYNC.POL.2
17 PIC
18 BRT
TO A BOARD CN509
CN305 9P BLK :S-MICRO
1 R
2 G
3 B
4 E
5 H.BLK
6 3200K SW
7 V.BLO
8 IK.RTN
9 +12V
TO C BOARD CN702
SECAM R-Y
SECAM B-Y
5V
12V
9V
B-SS3218<U/C>-B..

B [SYNC SEP, SYNC SW, VIDEO SW, PULSE GENELATER, SECAM DECODER, NT/PAL DECODER, SYSTEM SW, RGB DECODER, D/A CONVERTER,]

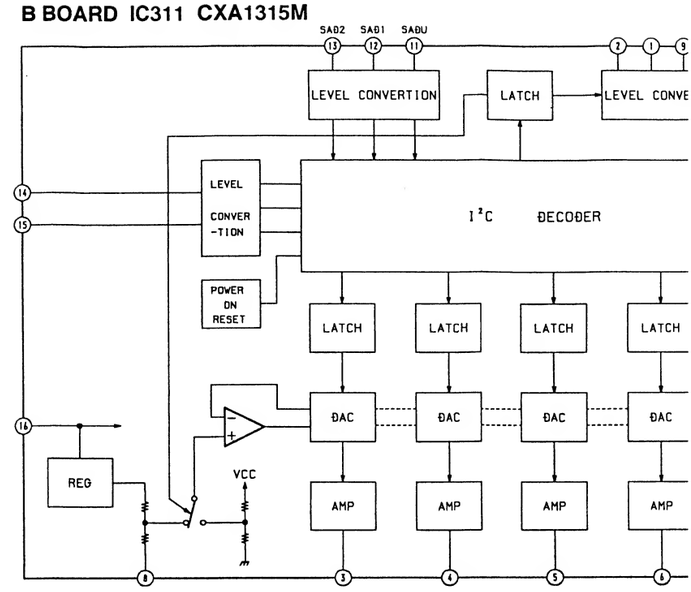
– B BOARD –



B BOARD

IC		Q332	F – 5	D325	A – 3
IC301	D – 4	Q333	A – 7	D326	B – 3
IC302	G – 6	Q334	A – 7	D327	A – 3
IC303	A – 1	Q335	A – 7	D328	B – 3
IC304	C – 2	Q336	A – 7	D329	C – 4
IC305	G – 3	Q337	A – 7	D331	G – 6
IC306	E – 3	Q338	A – 5	D333	D – 4
IC307	D – 7	Q339	A – 5	D334	E – 7
IC308	G – 7	Q340	A – 5	D335	E – 7
IC309	G – 4	Q341	A – 5	D336	G – 5
IC310	E – 1	Q342	A – 4		
IC311	B – 7	Q343	A – 4	VARIABLE RESISTOR	
IC312	B – 5	Q344	B – 2		
IC313	D – 5	Q345	B – 3	RV301	A – 2
IC316	B – 4	Q346	A – 6	RV302	A – 2
IC318	H – 6	Q347	E – 3	RV305	D – 3
IC319	A – 6	Q348	B – 3	RV306	E – 4
IC320	C – 7	Q349	E – 2	RV307	H – 3
		Q352	E – 3	RV308	H – 3
TRANSISTOR		Q354	E – 4	RV309	H – 3
		Q355	C – 7	RV310	G – 3
Q301	H – 2	Q356	D – 1	RV311	G – 4
Q302	H – 2	Q357	D – 1	RV312	G – 3
Q303	G – 2	Q358	C – 1	RV313	G – 2
Q304	F – 2	Q359	C – 7	RV314	C – 1
Q305	F – 1	Q360	C – 1		
Q306	H – 2	Q361	D – 3		
Q307	G – 1	Q362	E – 4		
Q308	G – 1				
Q309	H – 1	DIODE			
Q311	A – 3				
Q312	A – 3	D303	E – 7		
Q313	D – 3	D304	E – 6		
Q314	D – 3	D306	D – 3		
Q315	D – 2	D307	D – 3		
Q316	E – 2	D308	E – 4		
Q317	E – 2	D309	C – 3		
Q318	F – 3	D310	E – 4		
Q319	D – 2	D311	C – 3		
Q320	E – 1	D312	H – 6		
Q321	F – 6	D313	G – 5		
Q322	F – 6	D314	G – 5		
Q323	F – 7	D315	A – 7		
Q324	F – 6	D316	B – 7		
Q325	F – 6	D317	A – 7		
Q326	E – 6	D318	A – 4		
Q327	E – 6	D319	A – 4		
Q328	F – 5	D320	A – 4		
Q329	E – 5	D321	A – 4		
Q330	G – 5	D322	A – 4		
Q331	F – 5	D323	A – 3		
		D324	A – 3		

B BOARD IC311 CXA1315M



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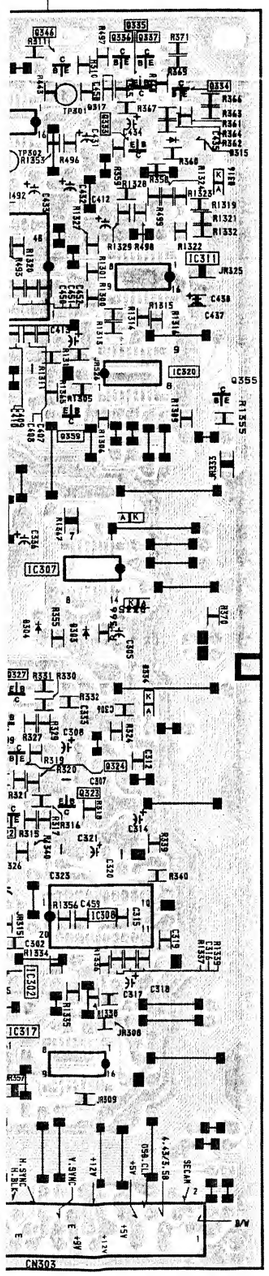


B BOARD

IC

IC301	D – 4
IC302	G – 6
IC303	A – 1
IC304	C – 2
IC305	G – 3
IC306	E – 3
IC307	D – 7
IC308	G – 7
IC309	G – 4
IC310	E – 1
IC311	B – 7
IC312	B – 5
IC313	D – 5
IC316	B – 4
IC318	H – 6
IC319	A – 6
IC320	C – 7

TRANSISTOR

Q301	H – 2
Q302	H – 2
Q303	G – 2
Q304	F – 2
Q305	F – 1
Q306	H – 2
Q307	G – 1
Q308	G – 1
Q309	H – 1
Q311	A – 3
Q312	A – 3
Q313	D – 3
Q314	D – 3
Q315	D – 2
Q316	E – 2
Q317	E – 2
Q318	F – 3
Q319	D – 2
Q320	E – 1
Q321	F – 6
Q322	F – 6
Q323	F – 7
Q324	F – 6
Q325	F – 6
Q326	E – 6
Q327	E – 6
Q328	F – 5
Q329	E – 5
Q330	G – 5
Q331	F – 5
Q332	F – 5
Q333	A – 7
Q334	A – 7
Q335	A – 7
Q336	A – 7
Q337	A – 7
Q338	A – 5
Q339	A – 5
Q340	A – 5
Q341	A – 5
Q342	A – 4
Q343	A – 4
Q344	B – 2
Q345	B – 3
Q346	A – 6
Q347	E – 3
Q348	B – 3
Q349	E – 2
Q352	E – 3
Q354	E – 4
Q355	C – 7
Q356	D – 1
Q357	D – 1
Q358	C – 1
Q359	C – 7
Q360	C – 1
Q361	D – 3
Q362	E – 4

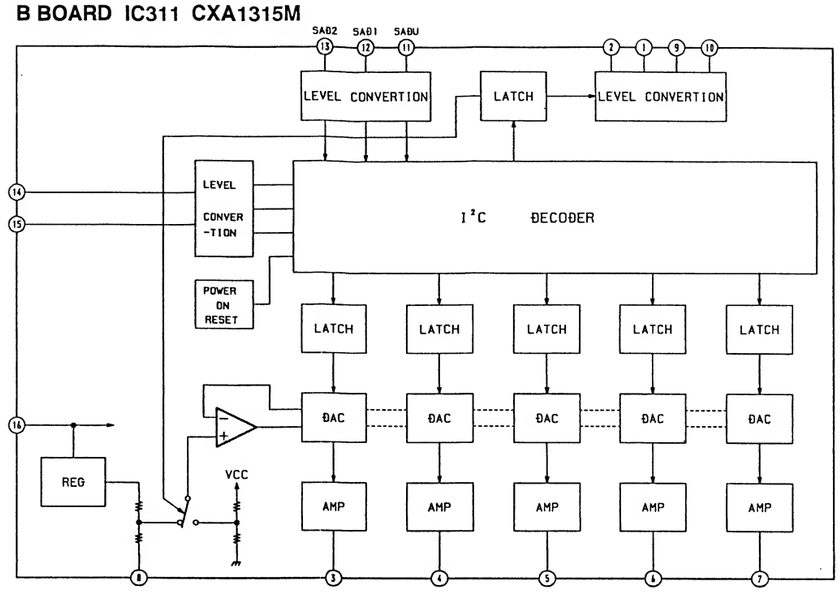
DIODE

D303	E – 7
D304	E – 6
D306	D – 3
D307	D – 3
D308	E – 4
D309	C – 3
D310	E – 4
D311	C – 3
D312	H – 6
D313	G – 5
D314	G – 5
D315	A – 7
D316	B – 7
D317	A – 7
D318	A – 4
D319	A – 4
D320	A – 4
D321	A – 4
D322	A – 4
D323	A – 3
D324	A – 3
D325	A – 3
D326	B – 3
D327	A – 3
D328	B – 3
D329	C – 4
D331	G – 6
D333	D – 4
D334	E – 7
D335	E – 7
D336	G – 5

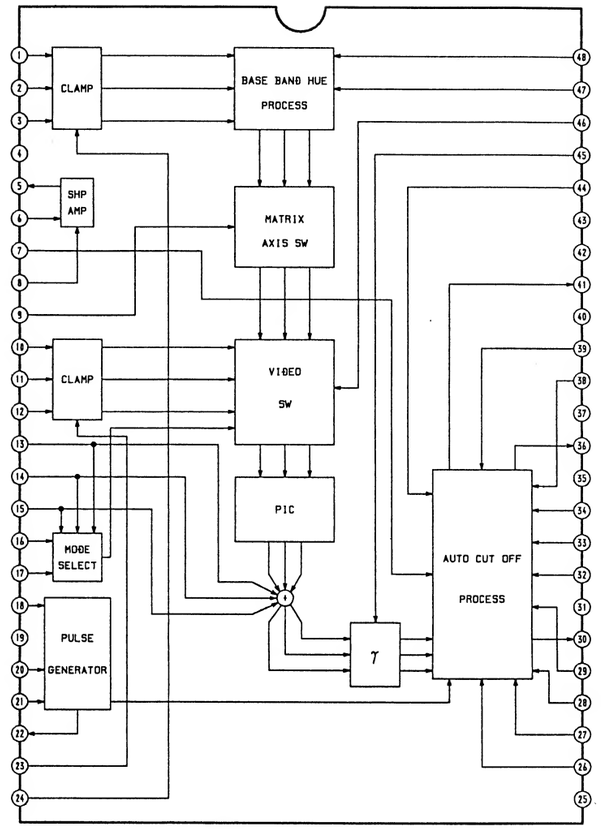
VARIABLE RESISTOR

RV301	A – 2
RV302	A – 2
RV305	D – 3
RV306	E – 4
RV307	H – 3
RV308	H – 3
RV309	H – 3
RV310	G – 3
RV311	G – 4
RV312	G – 3
RV313	G – 2
RV314	C – 1

B BOARD IC311 CXA1315M

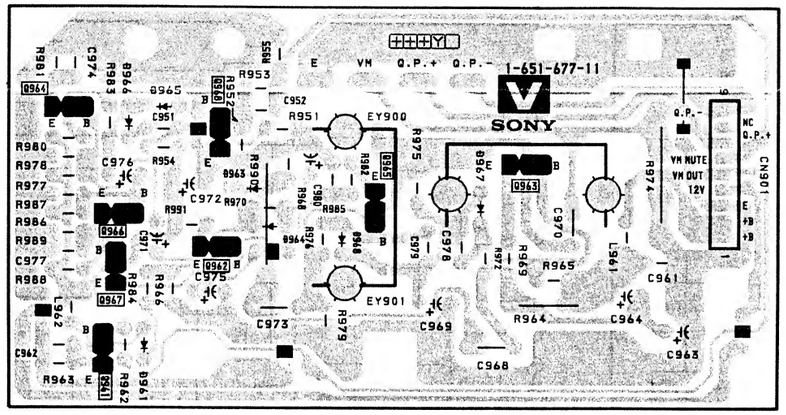


B BOARD IC312 CXA1739S



V [VM AMP] **DX** [SYSTEM CONT] **M** [CPU, MEM]

– V BOARD –



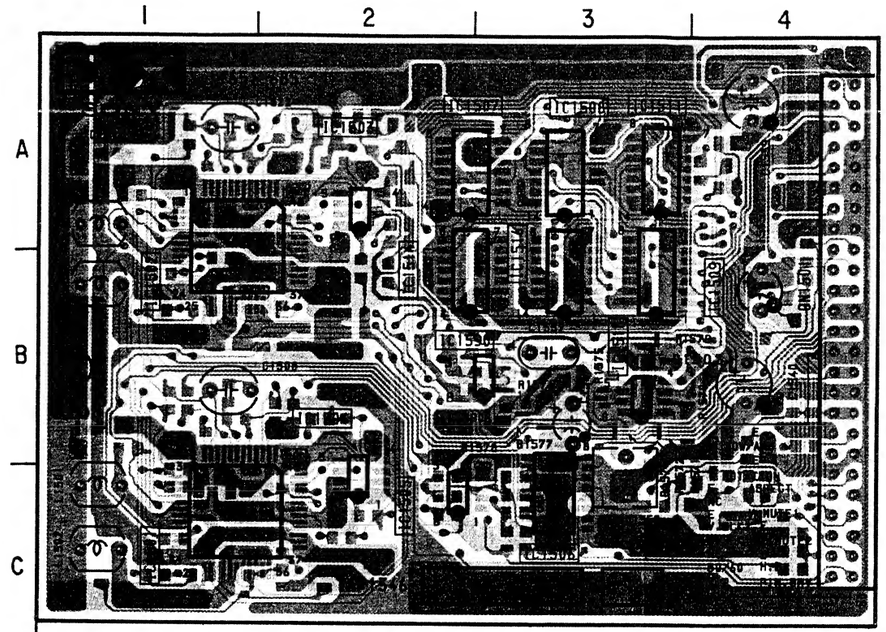
DX BOARD

IC	
IC1501	C – 1
IC1502	B – 1
IC1503	A – 2
IC1504	B – 2
IC1505	C – 2
IC1506	C – 3
IC1507	A – 3
IC1508	A – 3
IC1509	B – 3
IC1511	A – 3
IC1514	B – 3
IC1516	B – 3
IC1518	B – 3
IC1590	B – 3

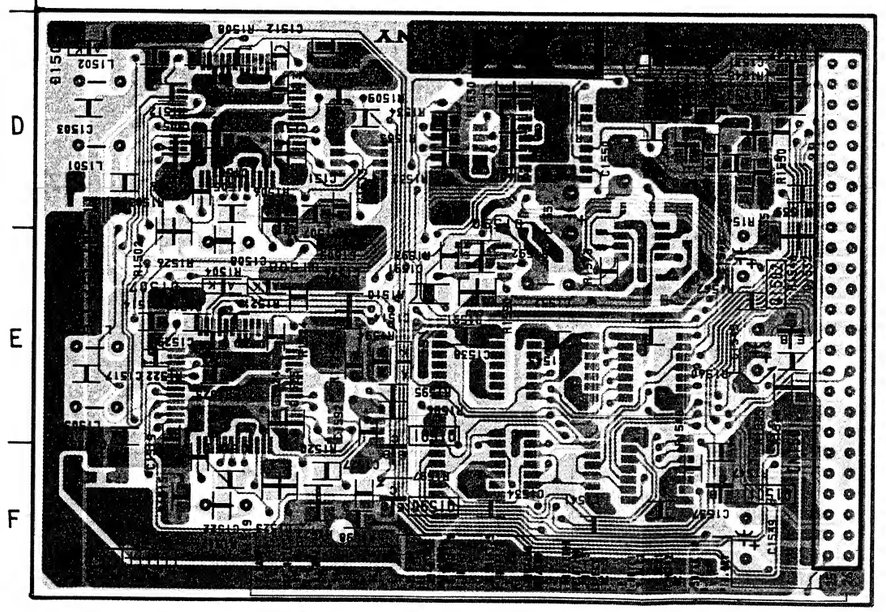
DIODE	
Q1501	F – 4
Q1502	E – 4
Q1503	D – 4
Q1504	D – 3
Q1590	F – 2
Q1591	E – 2

TRANSISTOR	
D1501	D – 4
D1502	B – 3
D1505	D – 1
D1506	D – 2
D1507	E – 1
D1508	E – 2
D1590	E – 3
D1591	E – 2

– DX BOARD – 〈Component Side〉



〈Conductor Side〉



Note :

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

M BOARD

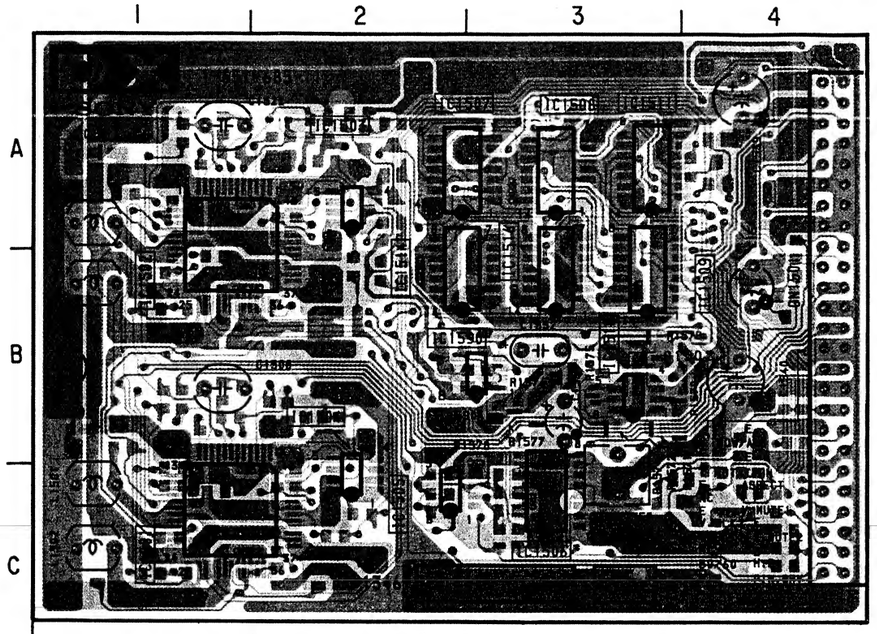
IC	
IIC801	A – 2, E – 2
C802	B – 4
IC803	B – 4
IC804	B – 1
IC805	B – 3
IC806	C – 2

DIODE	
D801	A – 4
D802	E – 3
D803	A – 4
D804	E – 3
D805	D – 1
D806	D – 1
D807	D – 1
D808	C – 1
D809	C – 3
D810	D – 1
D811	D – 3
D812	E – 3
D813	D – 3
D814	E – 3

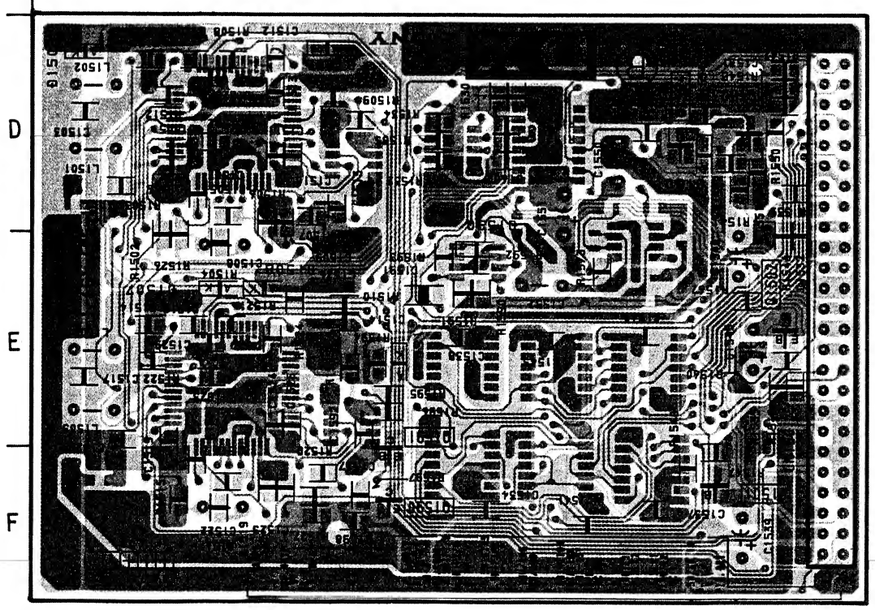
DX BOARD

IC	
IC1501	C – 1
IC1502	B – 1
IC1503	A – 2
IC1504	B – 2
IC1505	C – 2
IC1506	C – 3
IC1507	A – 3
IC1508	A – 3
IC1509	B – 3
IC1511	A – 3
IC1514	B – 3
IC1516	B – 3
IC1518	B – 3
IC1590	B – 3
DIODE	
Q1501	F – 4
Q1502	E – 4
Q1503	D – 4
Q1504	D – 3
Q1590	F – 2
Q1591	E – 2
TRANSISTOR	
D1501	D – 4
D1502	B – 3
D1505	D – 1
D1506	D – 2
D1507	E – 1
D1508	E – 2
D1590	E – 3
D1591	E – 2

– **DX BOARD** – 〈Component Side〉



〈Conductor Side〉



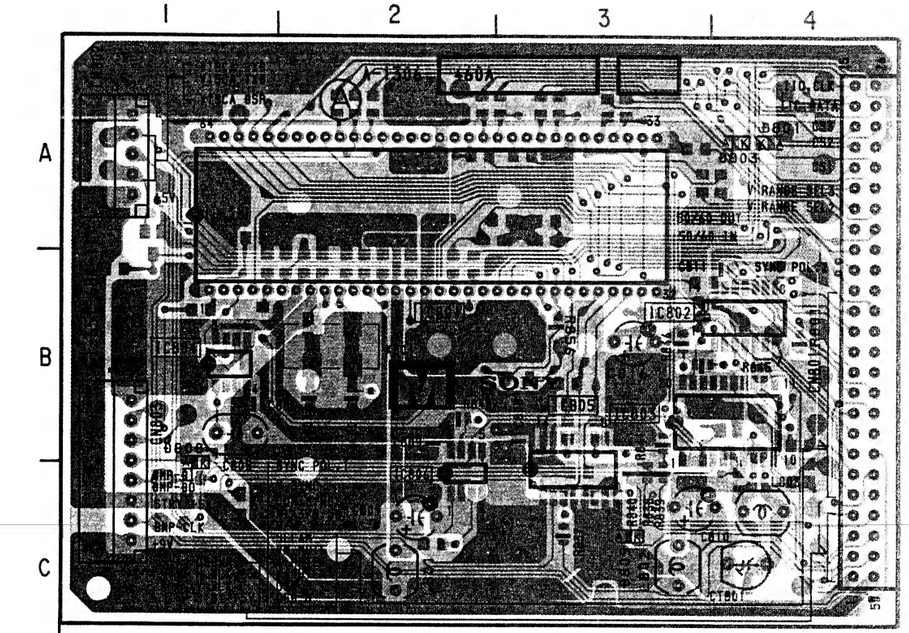
Note :

• : Pattern from the side which enables seeing.
• : Pattern of the rear side.

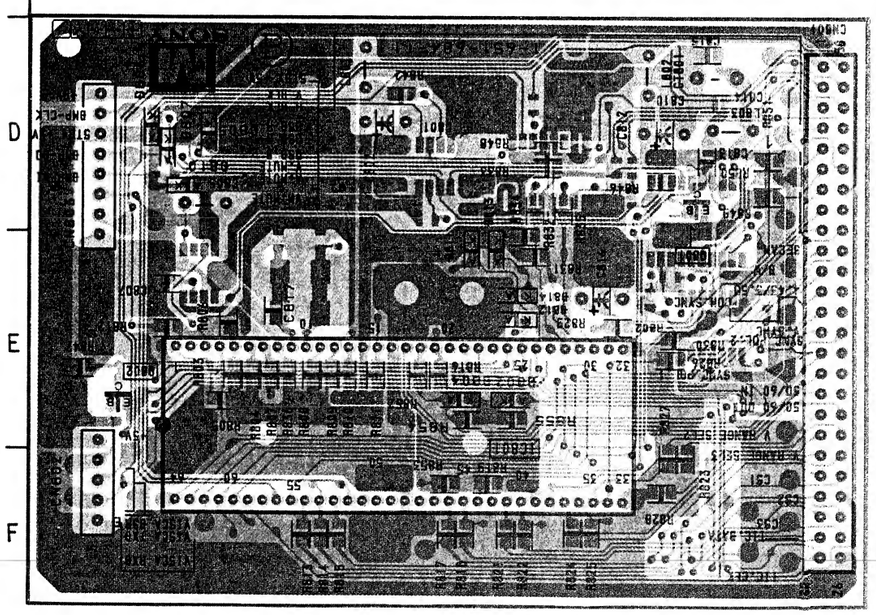
M BOARD

IC	
IIC801	A – 2, E – 2
C802	B – 4
IC803	B – 4
IC804	B – 1
IC805	B – 3
IC806	C – 2
DIODE	
D801	A – 4
D802	E – 3
D803	A – 4
D804	E – 3
D805	D – 1
D806	D – 1
D807	D – 1
D808	C – 1
D809	C – 3
D810	D – 1
D811	D – 3
D812	E – 3
D813	D – 3
D814	E – 3

– **M BOARD** – 〈Component Side〉



〈Conductor Side〉



Note :

• : Pattern from the side which enables seeing.
• : Pattern of the rear side.

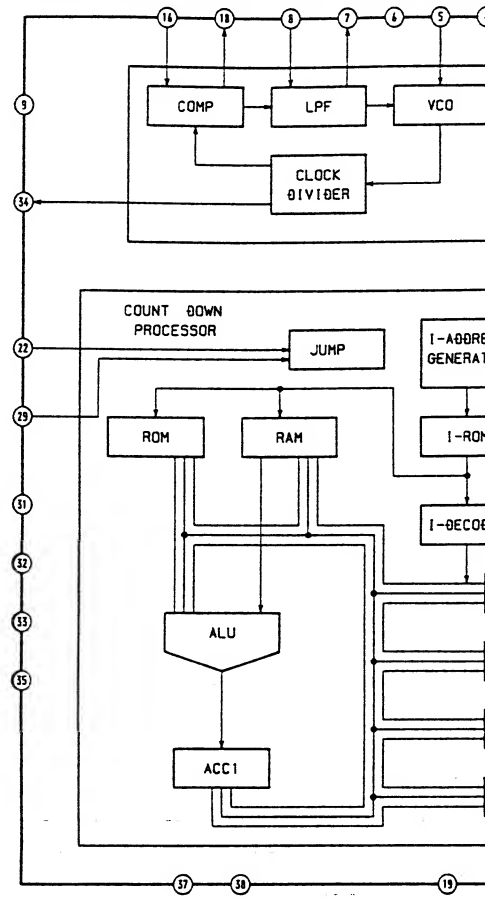
• DX BOARD WAVEFORMS

① 0.77 Vp-p (V)	② 1.6 Vp-p (V)	③ 1.4 Vp-p (V)
④ 1.4 Vp-p (V)	⑤ 1.4 Vp-p (V)	⑥ 5.1 Vp-p (V)
⑦ 5.1 Vp-p (V)	⑧ 5.0 Vp-p (V)	⑨ 7.2 Vp-p (V)
⑩ Vp-p ( )	⑪ 5.0 Vp-p (H)	⑫ 5.0 Vp-p (H)

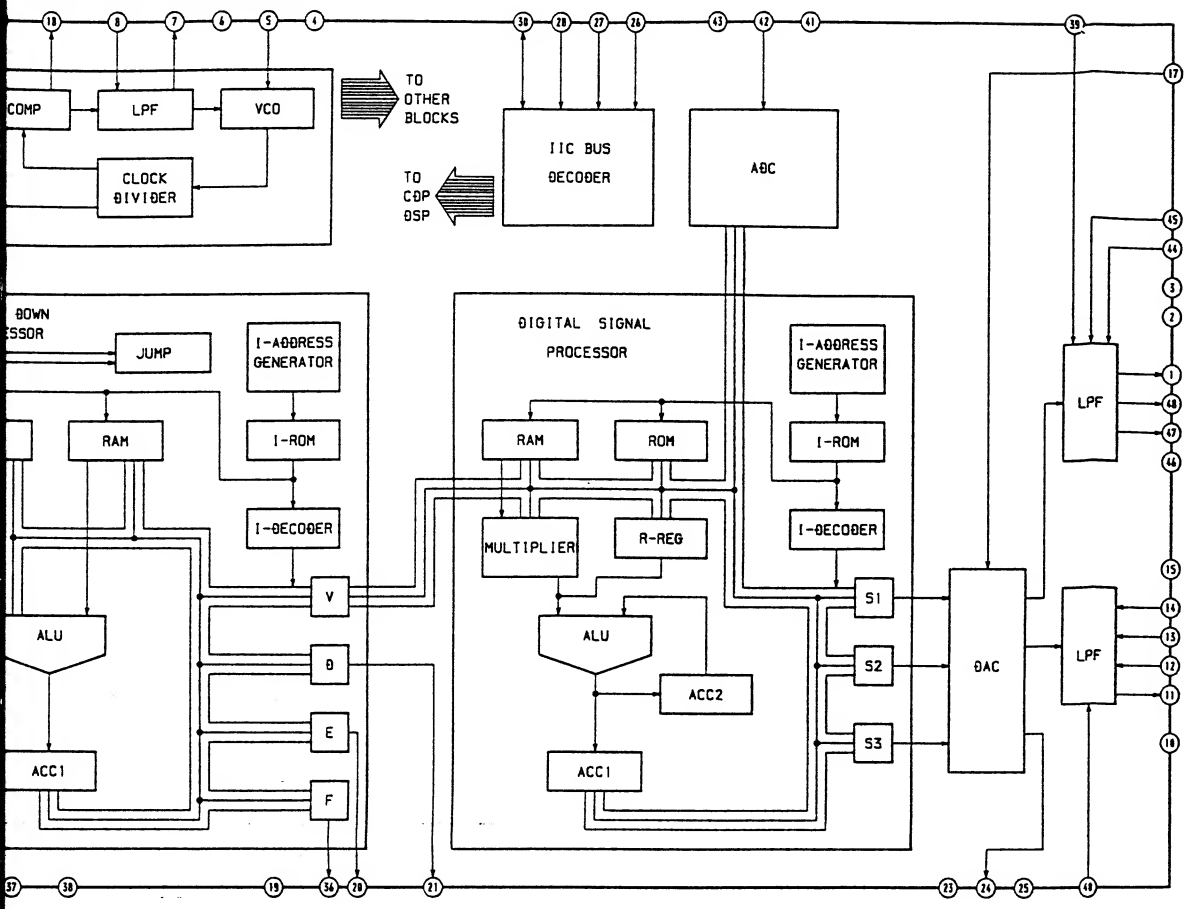
DX BOARD

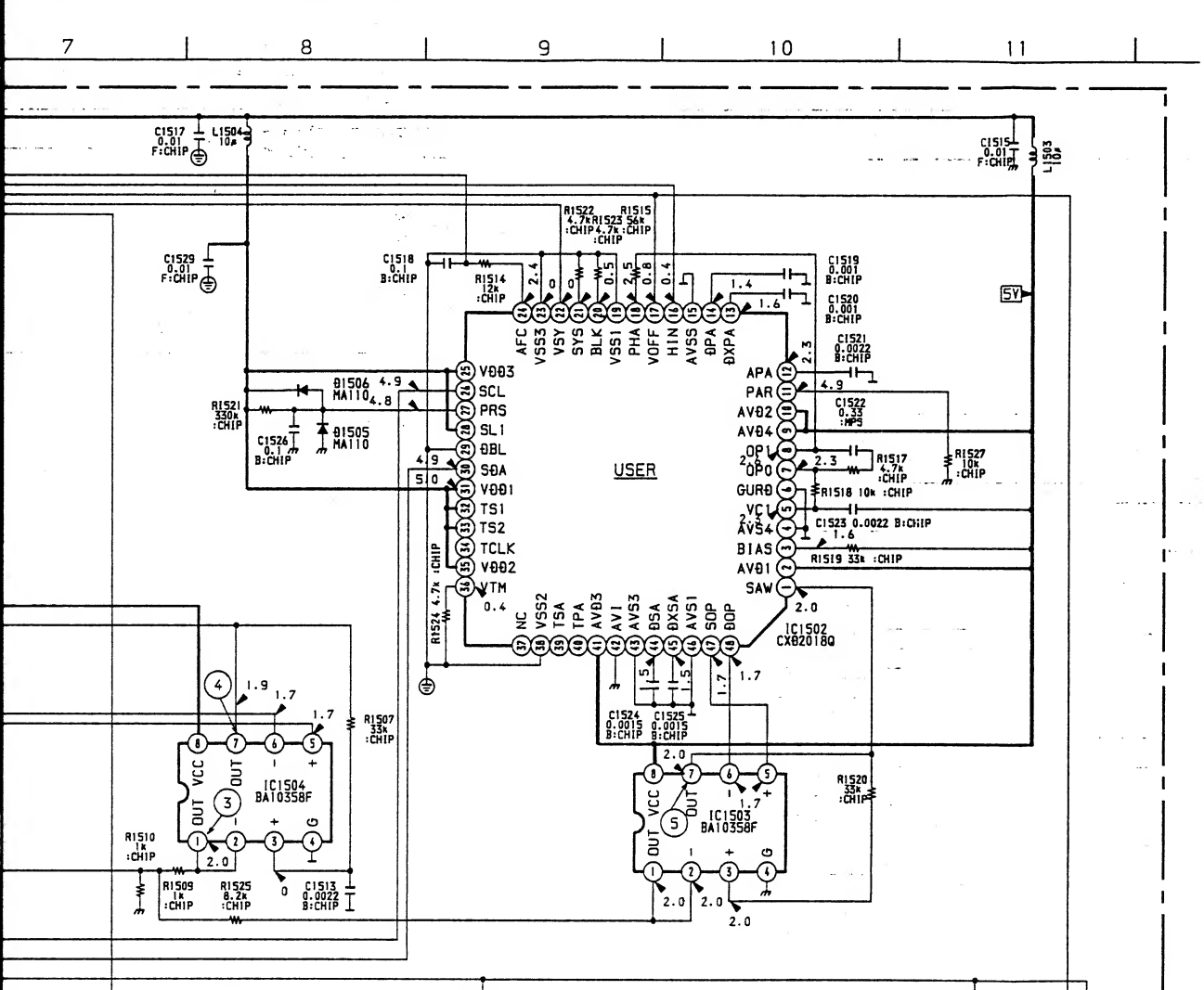
D1501	H BLK SW 3
D1502	6.8V CLAMP
D1505	PROTECT
D1506	PROTECT
D1507	PROTECT
D1508	PROTECT
D1590	REF VOLT
D1591	VOLT RECT
IC1501	SERVICE GEO CTRL
IC1502	USER GEO CTRL
IC1503	V SAW BUFF
IC1504	V SAW BUFF
IC1505	SAW PARA OUT
IC1506	D/A CONV
IC1507	REF SHIFT 5
IC1508	REF SHIFT 6
IC1509	REF SHIFT 4
IC1511	REF SHIFT 3
IC1514	REF SHIFT 1
IC1516	REF SHIFT 2
IC1518	AFC CORR
IC1590	ABL BLK
Q1501	SHIFT SW
Q1502	ABL BUFF
Q1503	H BLK SW 1
Q1504	H BLK SW 2
Q1590	ABL BLK OUT 1
Q1591	ABL BLK OUT 2

DX BOARD IC1501, 1502 CXD2018Q



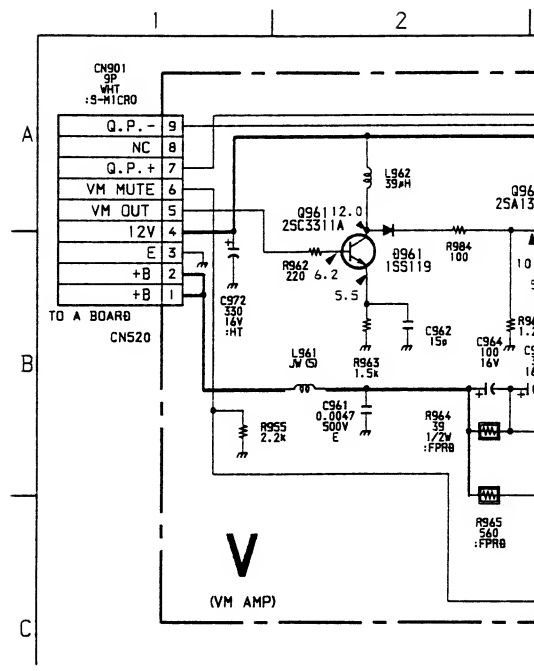
IC1501, 1502 CXD2018Q

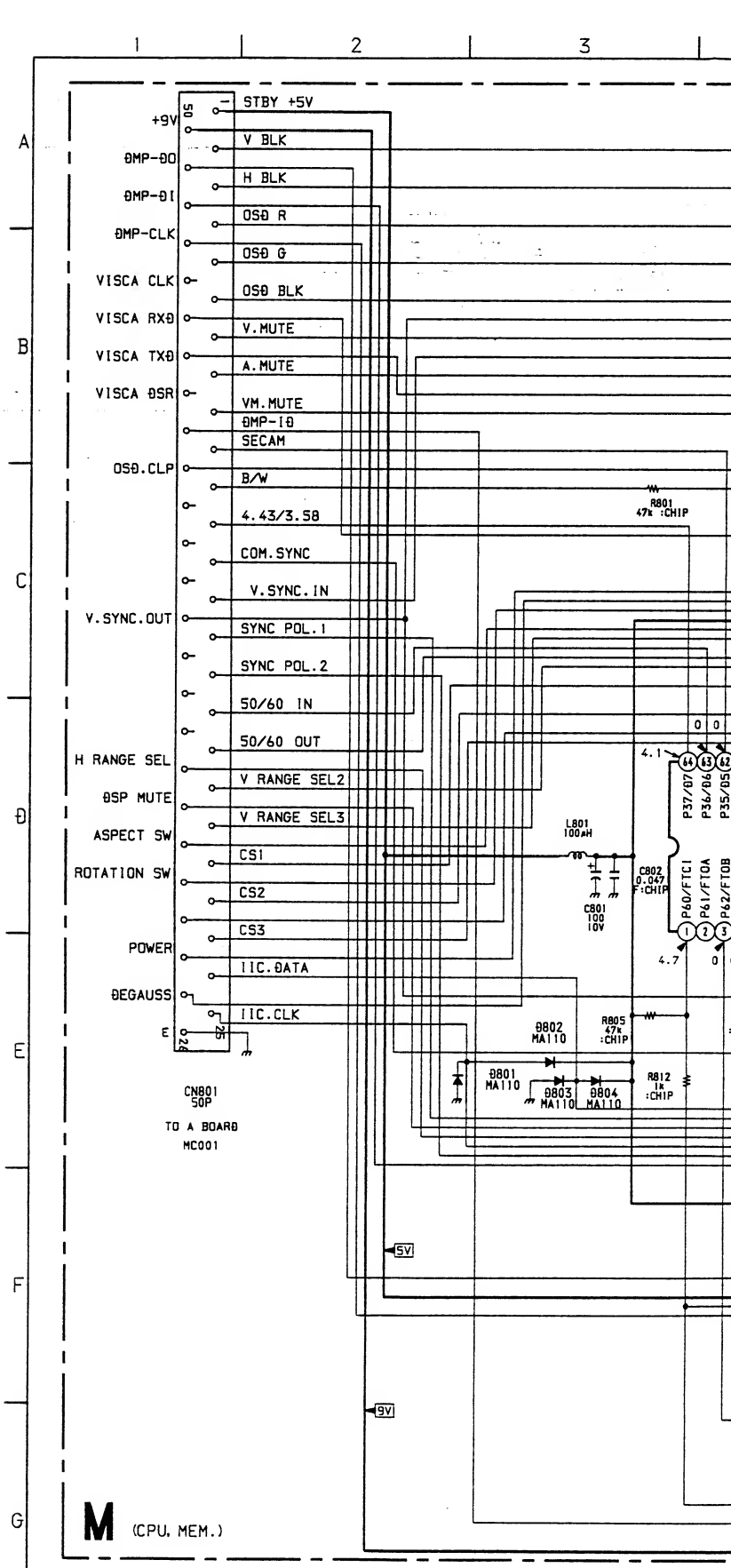


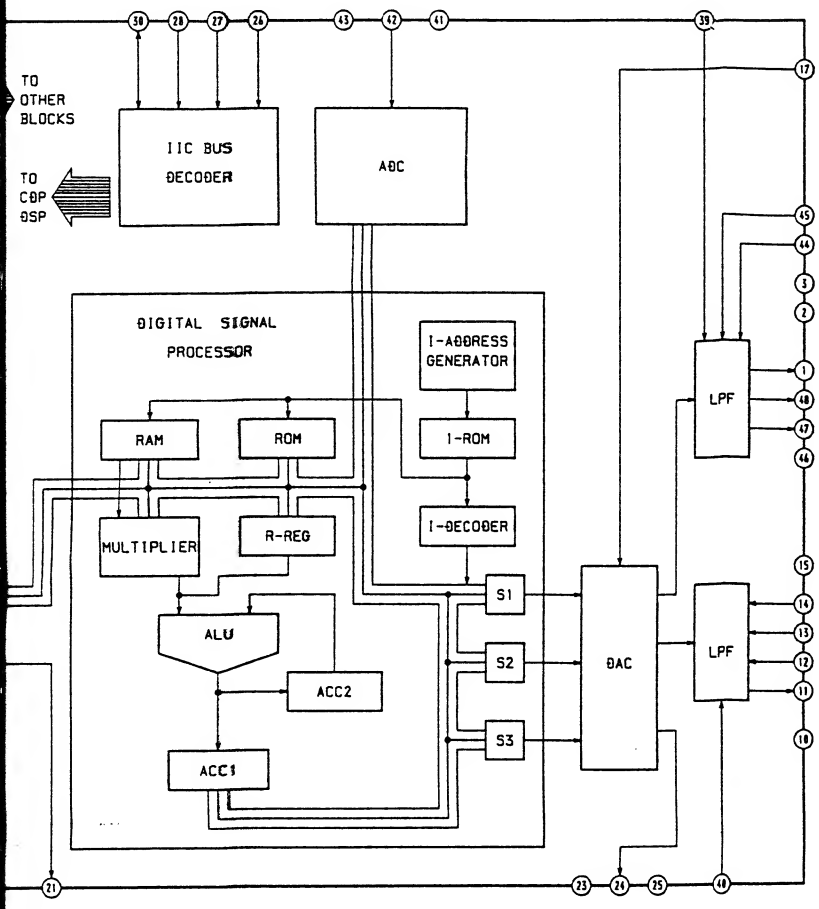


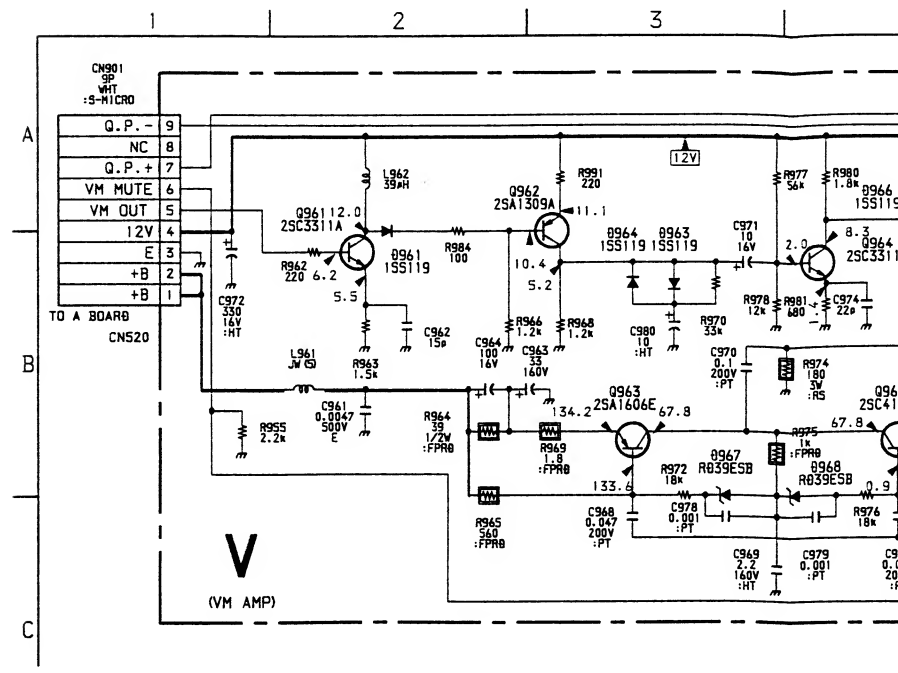
DX (SYSTEM CONT)

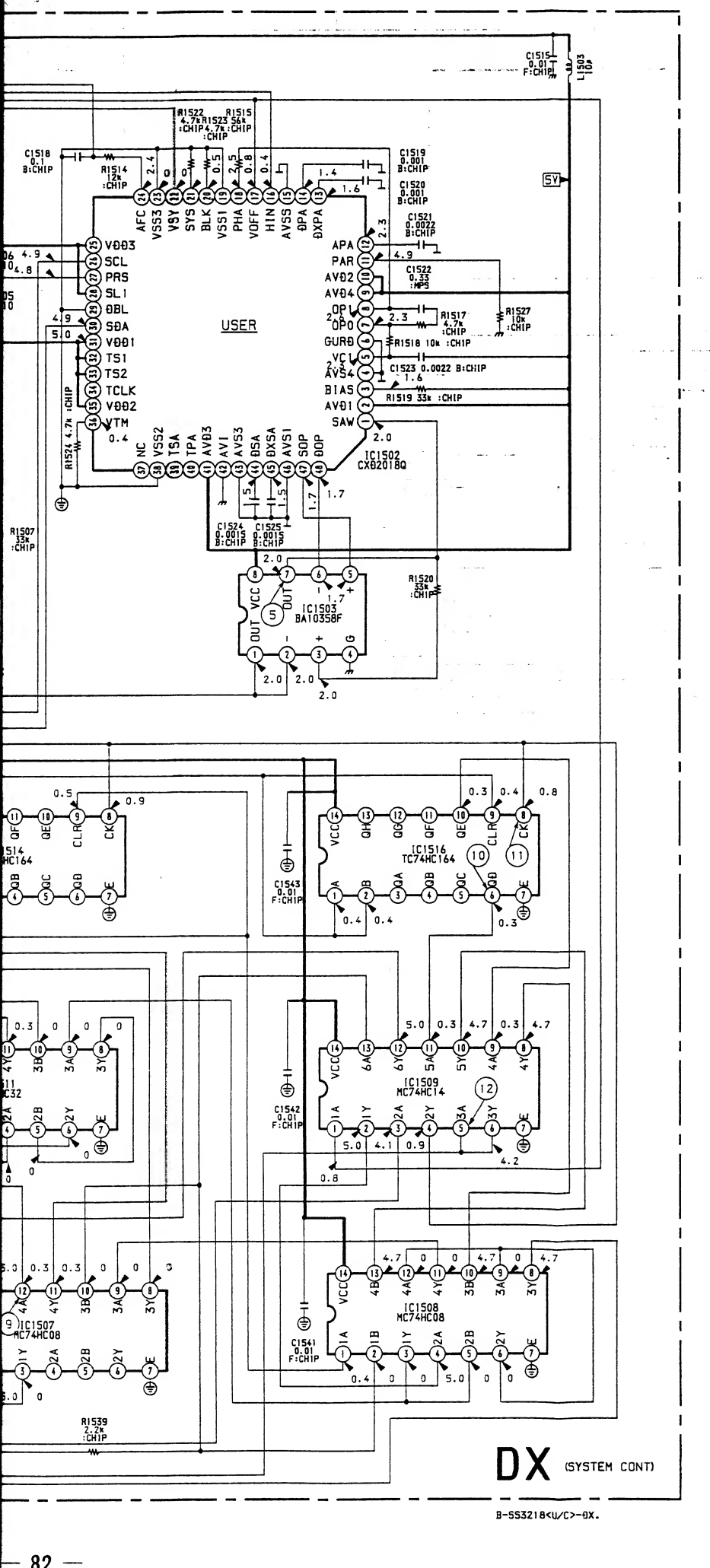
B-SS3218<U/C>-0X.

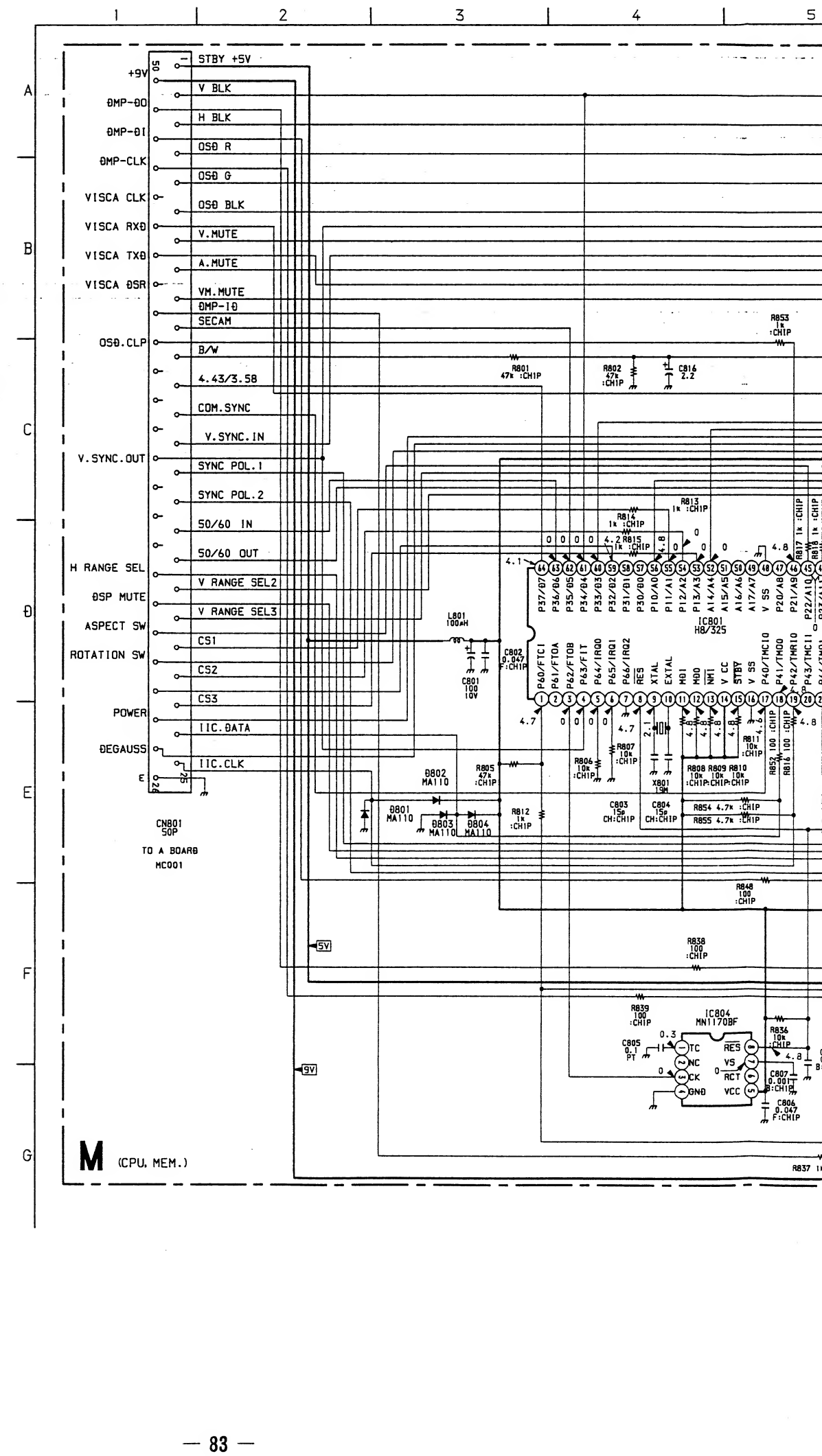




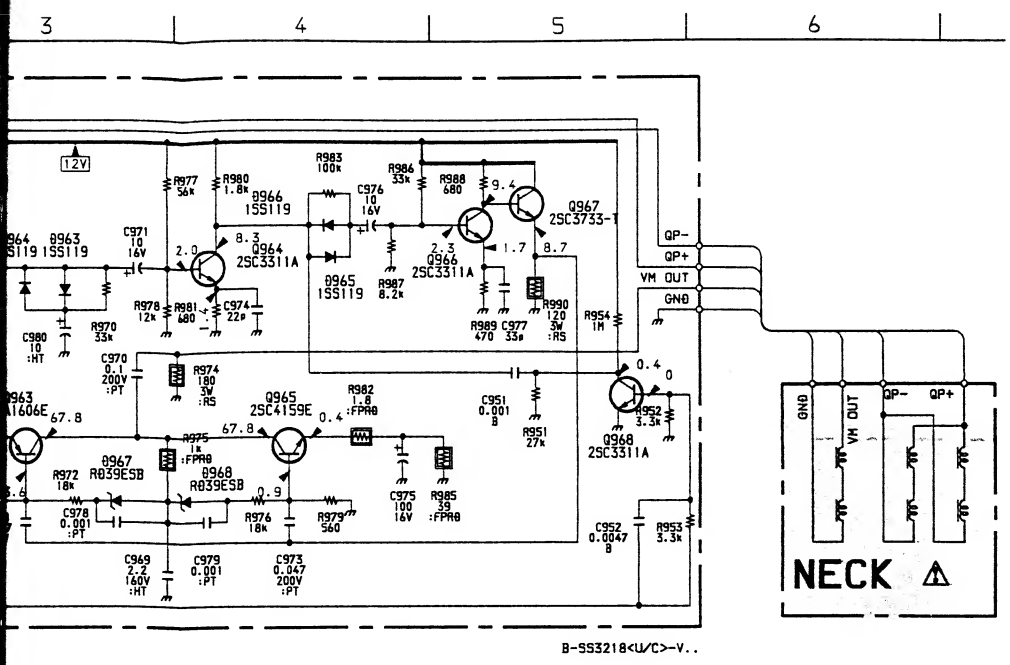






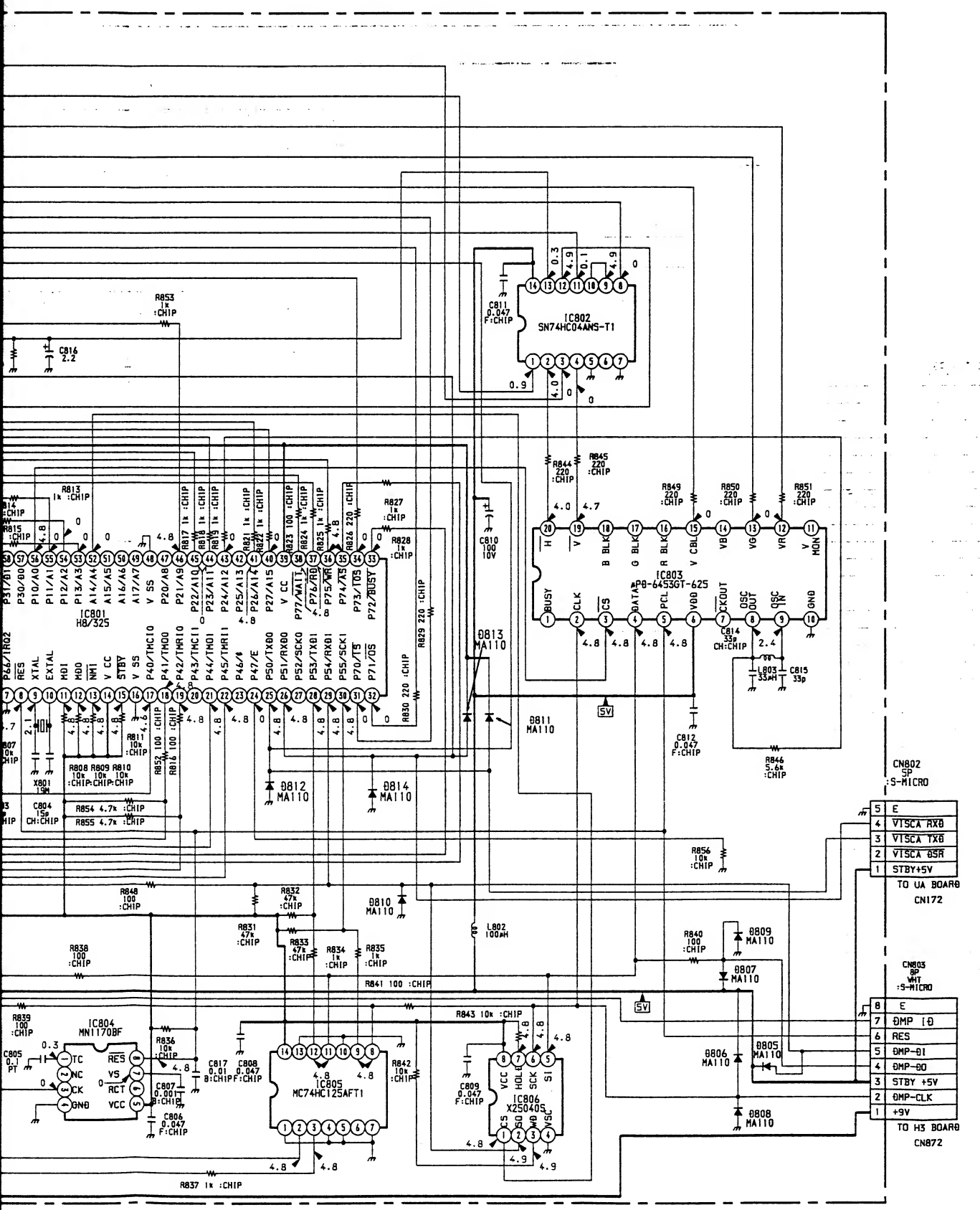


B-5S3218<U/C>-0X.



V BOARD

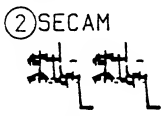
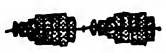
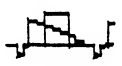
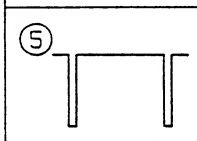
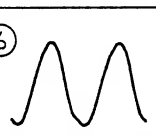
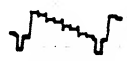
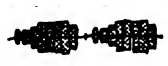
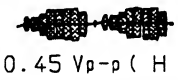
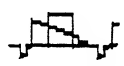
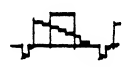
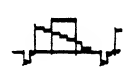
D961	DC BIAS
D963	SLI CE
D964	SLI CE
D965	CLIP
D966	CLIP
D967	PROT
D968	PROT
Q961	VM AMP 1
Q962	VM AMP 2
Q963	VM OUT
Q964	VM BUFF
Q965	VM OUT
Q966	VM OUT 1
Q967	VM OUT 2
Q968	MUTE SW



M BOARD

D801	PROTECT
D802	PROTECT
D803	PROTECT
D804	PROTECT
D805	PROTECT
D806	PROTECT
D807	PROTECT
D808	PROTECT
D809	PROTECT
D810	PROTECT
D811	PROTECT
D812	PROTECT
D813	PROTECT
D814	PROTECT
IC801	MICOM
IC802	INVERTER
IC803	CHARACTER GEN
IC804	RESET
IC805	BUFF
IC806	MEMORY

• UT BOARD WAVEFORMS

①PAL  1.1 Vp-p (H)	①SECAM  0.95 Vp-p (H)	①NTSC3.58, 4.43  1.0 Vp-p (H)
②PAL  0.66 Vp-p (H)	②SECAM  0.35 Vp-p (H)	②NTSC3.58  0.64 Vp-p (H)
②NTSC4.43  0.6 Vp-p (H)	③PAL  1.9 Vp-p (H)	③SECAM  1.7 Vp-p (H)
③NTSC3.58  2.1 Vp-p (H)	③NTSC4.43  2.26 Vp-p (H)	④PAL  1.65 Vp-p (H)
④SECAM  1.4 Vp-p (H)	④NTSC3.58  1.6 Vp-p (H)	④NTSC4.43  1.72 Vp-p (H)
⑤  5.1 Vp-p (H)	⑥  4.8 Vp-p (17.5MHZ)	⑦PAL  1.5 Vp-p (H)
⑦SECAM  1.36 Vp-p (H)	⑦NTSC3.58, 4.43  1.7 Vp-p (H)	⑧PAL  0.85 Vp-p (H)
⑧SECAM  0.4 Vp-p (H)	⑧NTSC3.58  0.9 Vp-p (H)	⑧NTSC4.43  0.82 Vp-p (H)
⑨PAL  0.5 Vp-p (H)	⑨SECAM  0.35 Vp-p (H)	⑨NTSC3.58  0.55 Vp-p (H)
⑨NTSC4.43  0.45 Vp-p (H)	⑩PAL  1.9 Vp-p (H)	⑩SECAM  1.8 Vp-p (H)
⑩NTSC3.58, 4.43  2.1 Vp-p (H)	⑪PAL  1.9 Vp-p (H)	⑪SECAM  1.9 Vp-p (H)
⑪NTSC3.58, 4.43 2.1 Vp-p (H)	⑫PAL 2.1 Vp-p (H)	⑫SECAM 1.9 Vp-p (H)
⑫NTSC3.58, 4.43  2.0 Vp-p (H)	⑬PAL  1.9 Vp-p (H)	⑬SECAM  1.8 Vp-p (H)
⑬NTSC3.58, 4.43  2.1 Vp-p (H)	⑭PAL  1.9 Vp-p (H)	⑭SECAM  1.7 Vp-p (H)
⑭NTSC3.58, 4.43  2.1 Vp-p (H)		

UT BOARD

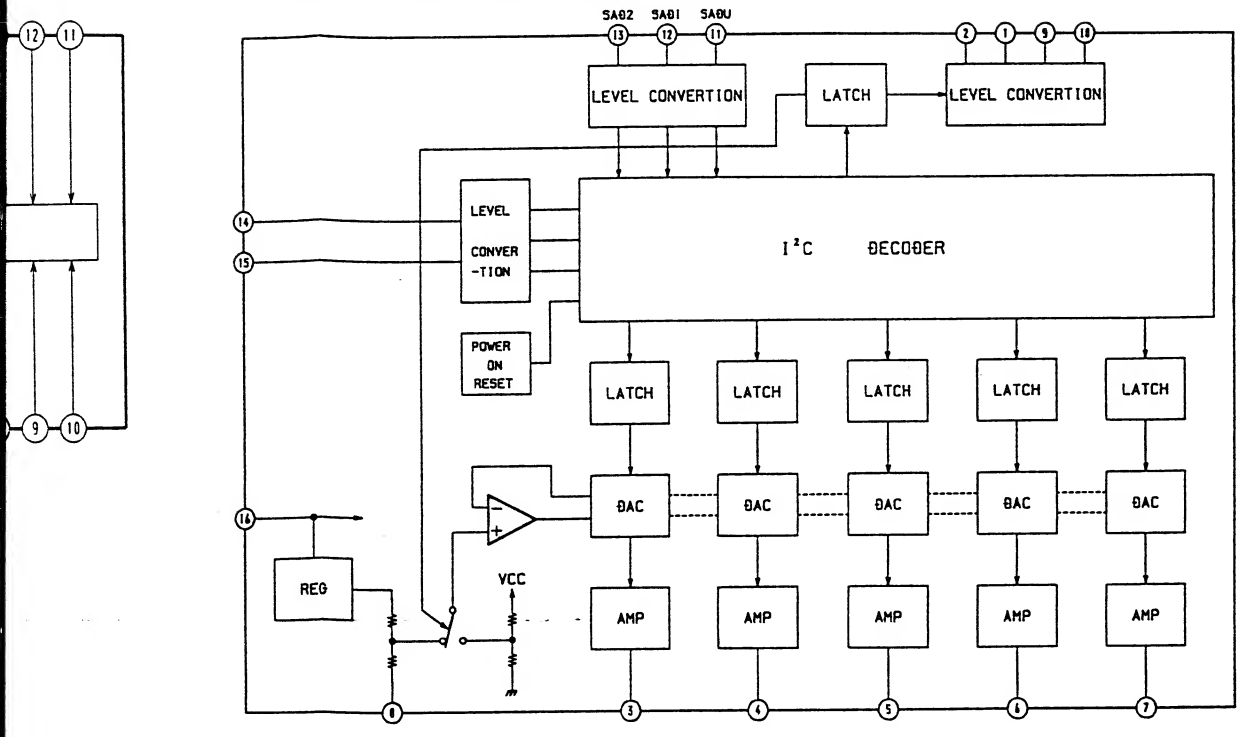
D202	SECAM SW
D203	CLAMP
D205	CLAMP
D206	PROTECT
IC201	A/V SW
IC202	DIGITAL COMFILTER
IC203	Y SW
IC204	AUDIO CONT
IC205	SYSTEM CONT
IC206	V SW
IC207	C SW
IC208	Y SW
Q201	Y AMP
Q202	Y AMP
Q203	Y AMP
Q204	C OUT
Q205	Y OUT
Q206	V OUT
Q207	Y BUFF
Q208	V BUFF
Q211	C BUFF
Q212	SECAM SW 2
Q213	CLK AMP
Q214	CLK AMP
Q215	C AMP
Q216	SECAM SW 1
Q217	V BUFF 1
Q218	V BUFF 2
Q219	V BUFF 3
Q220	V BUFF 4
Q221	V BUFF 5
Q222	SECAM SW
Q223	Y AMP
Q224	Y AMP
Q225	Y AMP
Q226	Y AMP
Q227	Y BUFF
Q228	Y SW
Q229	Y SW
Q230	Y BUFF
Q231	Y AMP
Q232	Y BUFF

UT BOARD * MARK

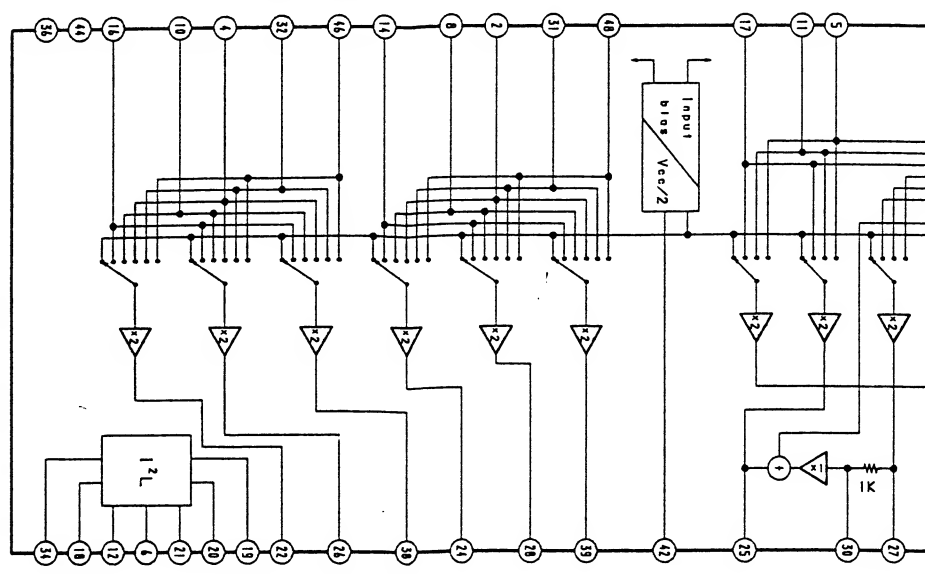
REF. NO	PAL	SECAM	NTSC 3.58	NTSC 4.43
IC202 ㉔	4.0	4.1	0.1	4.1
IC203 ③	1.5	3.5	1.5	1.5
IC206 ④	5.0	5.0	5.0	2.3
IC208 ④	11.9	11.9	0	11.9
Q212 B	0	5.0	0	0
E	0	4.4	0	0
Q216 B	4.6	0	4.6	4.6
C	0	5.0	0	0
Q222 C	1.5	3.5	1.5	1.5
Q227 C	12.0	11.9	0	11.9

UT BOARD IC204 TA8184P

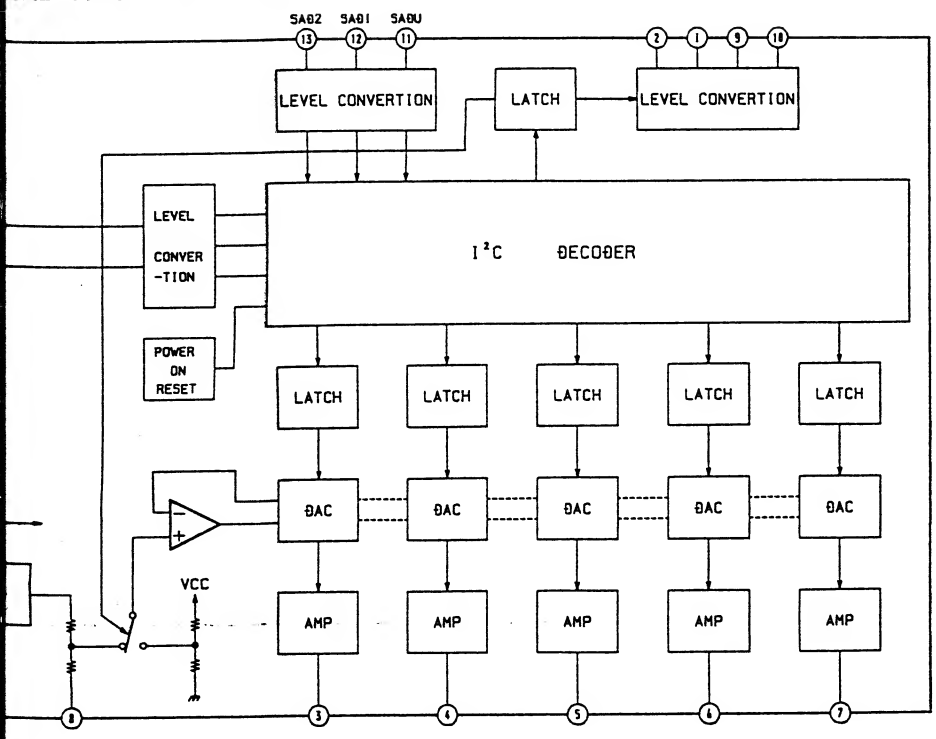
UT BOARD IC205 CXA1315M



UT BOARD IC201 CXA1545AS



ARD IC205 CXA1315M



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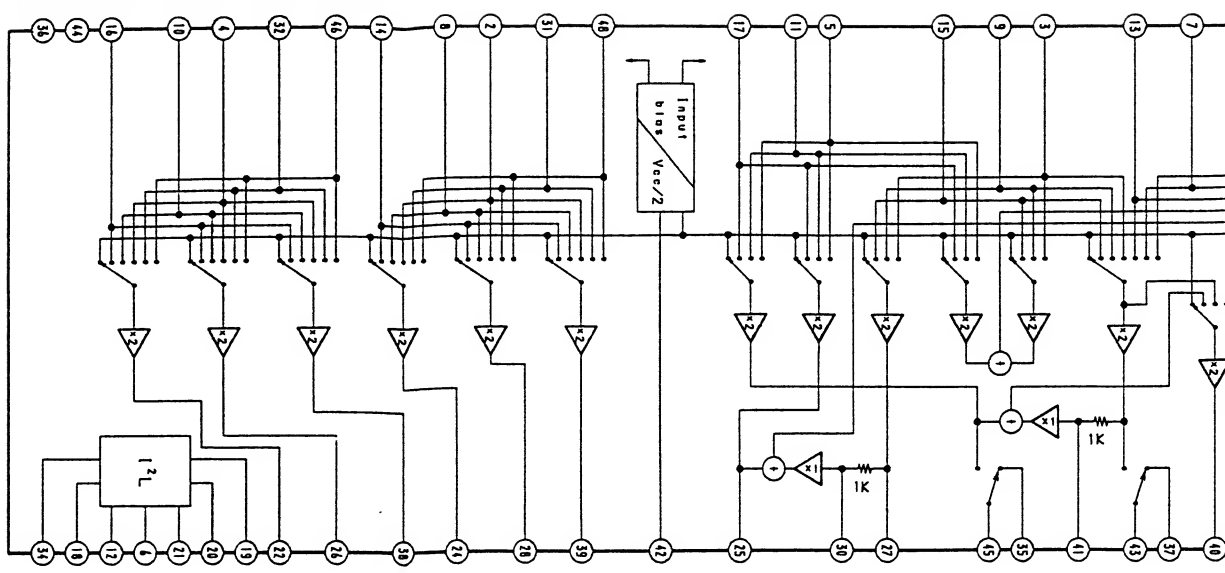
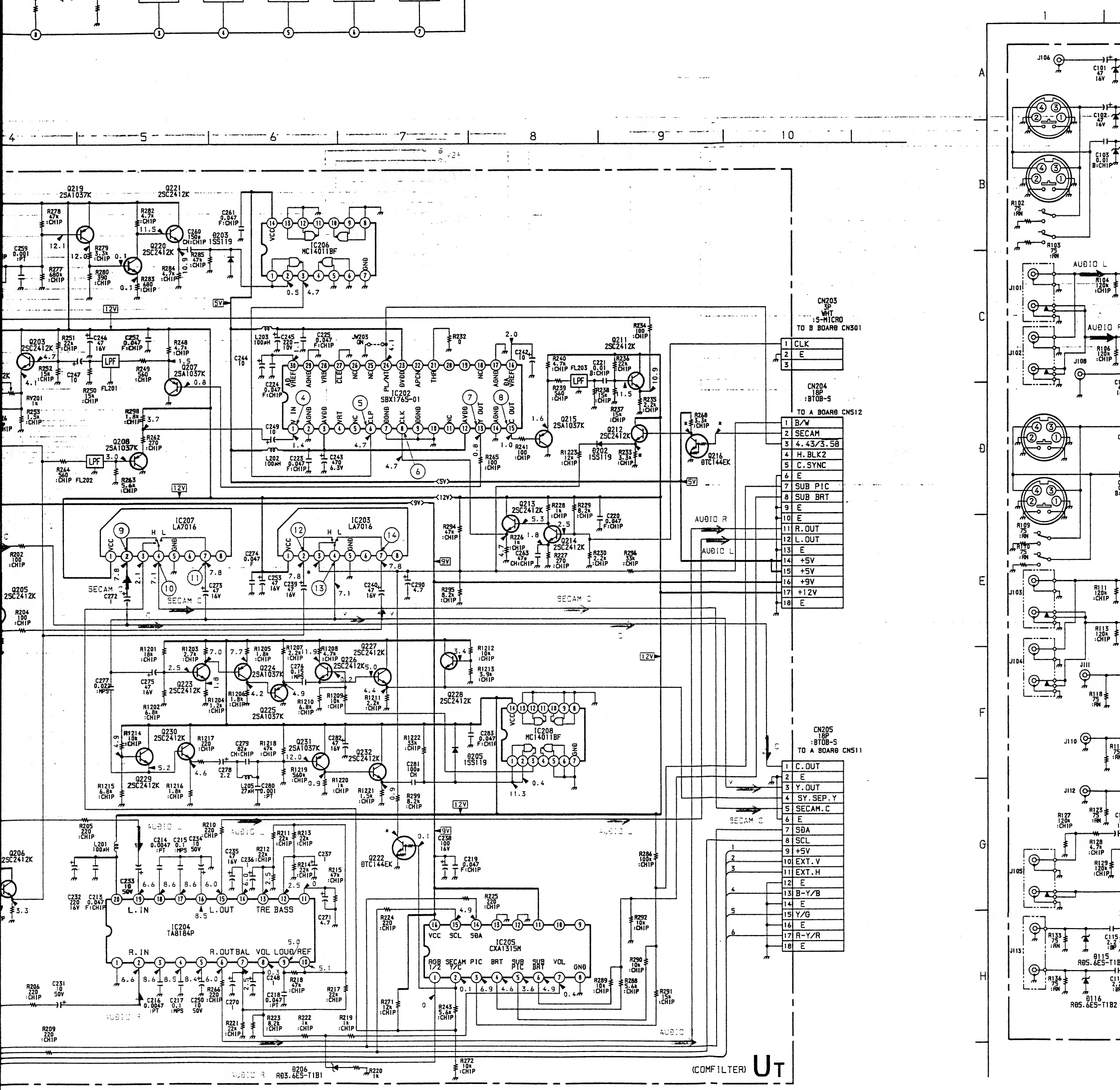
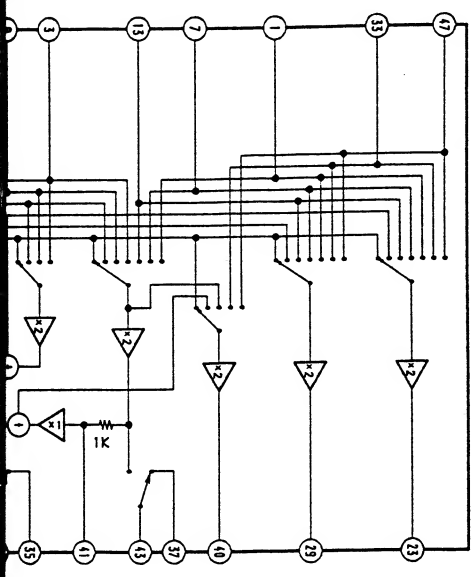
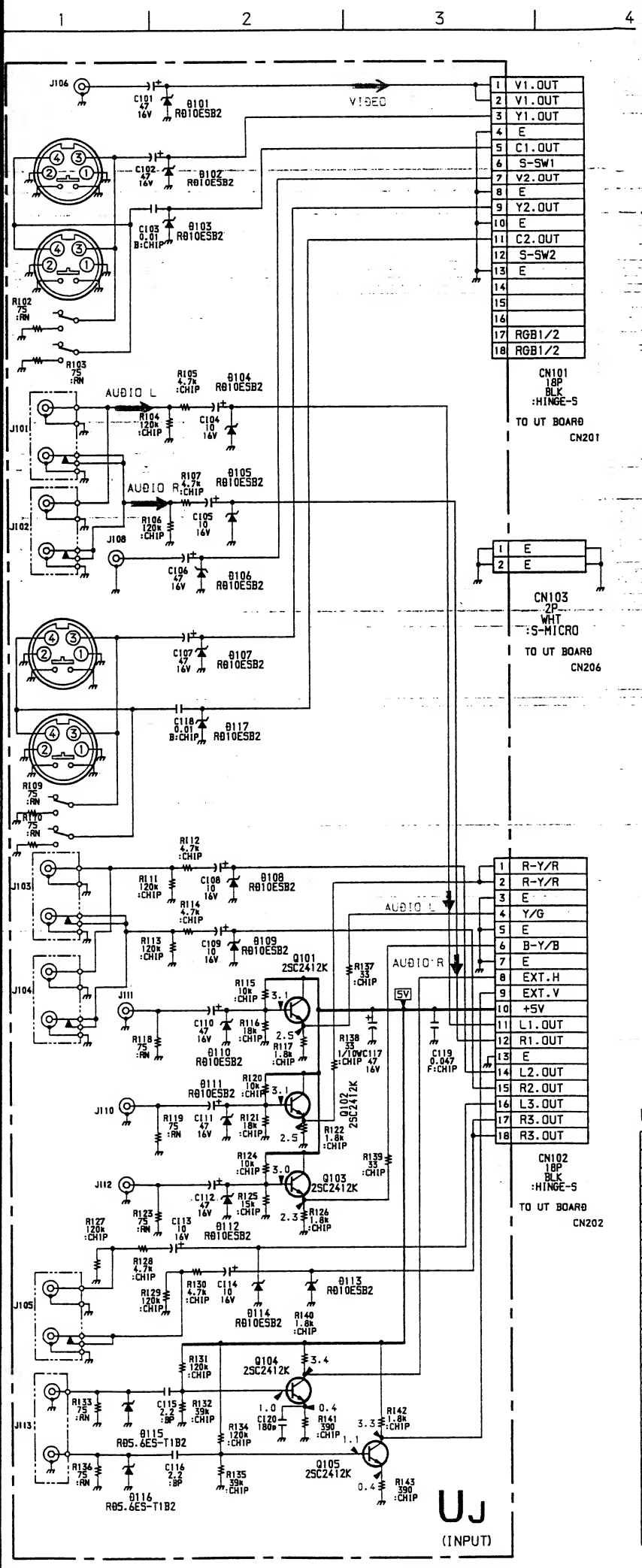






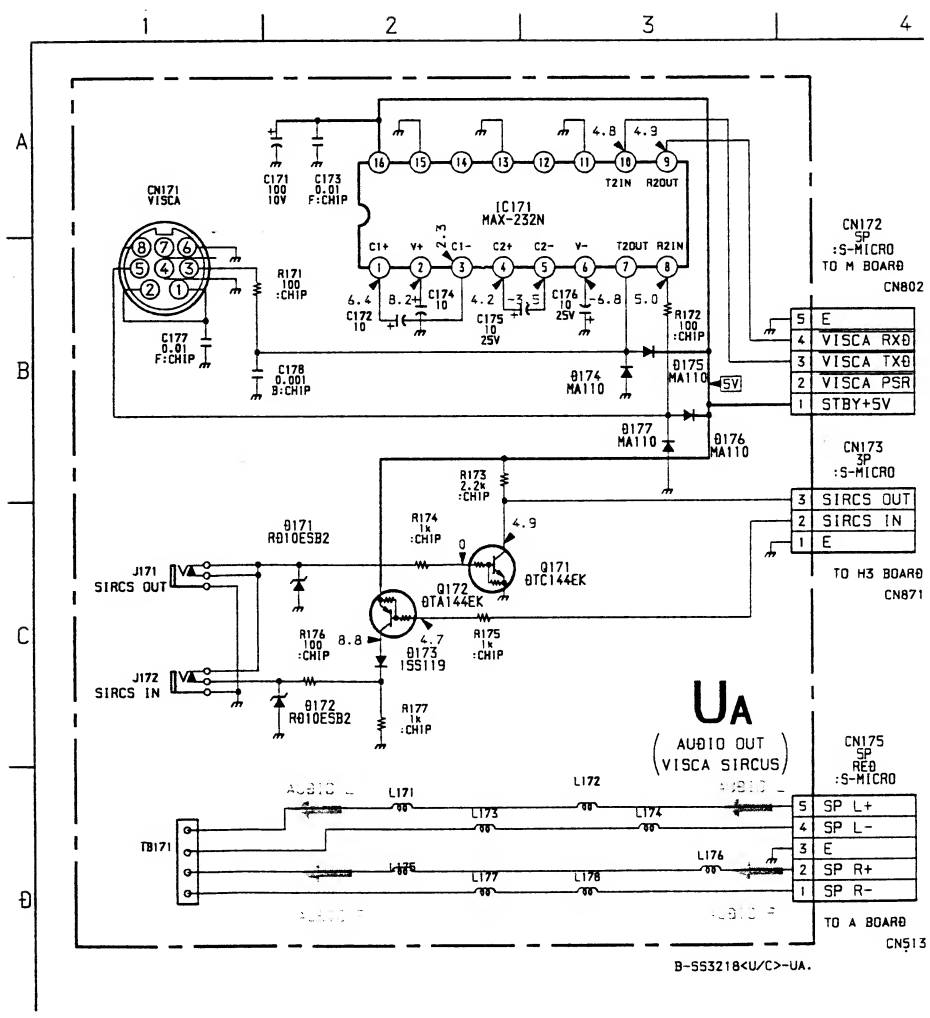


UJ BOARD

D101	PROTECT
D102	PROTECT
D103	PROTECT
D104	PROTECT
D105	PROTECT
D106	PROTECT
D107	PROTECT
D108	PROTECT
D109	PROTECT
D110	PROTECT
D111	PROTECT
D112	PROTECT
D113	PROTECT
D114	PROTECT
D115	PROTECT
D116	PROTECT
D117	PROTECT
Q101	R-Y/R BUFF
Q102	R-Y/R BUFF
Q103	B-Y/B BUFF
Q104	SYNC BUFF
Q105	SYNC BUFF

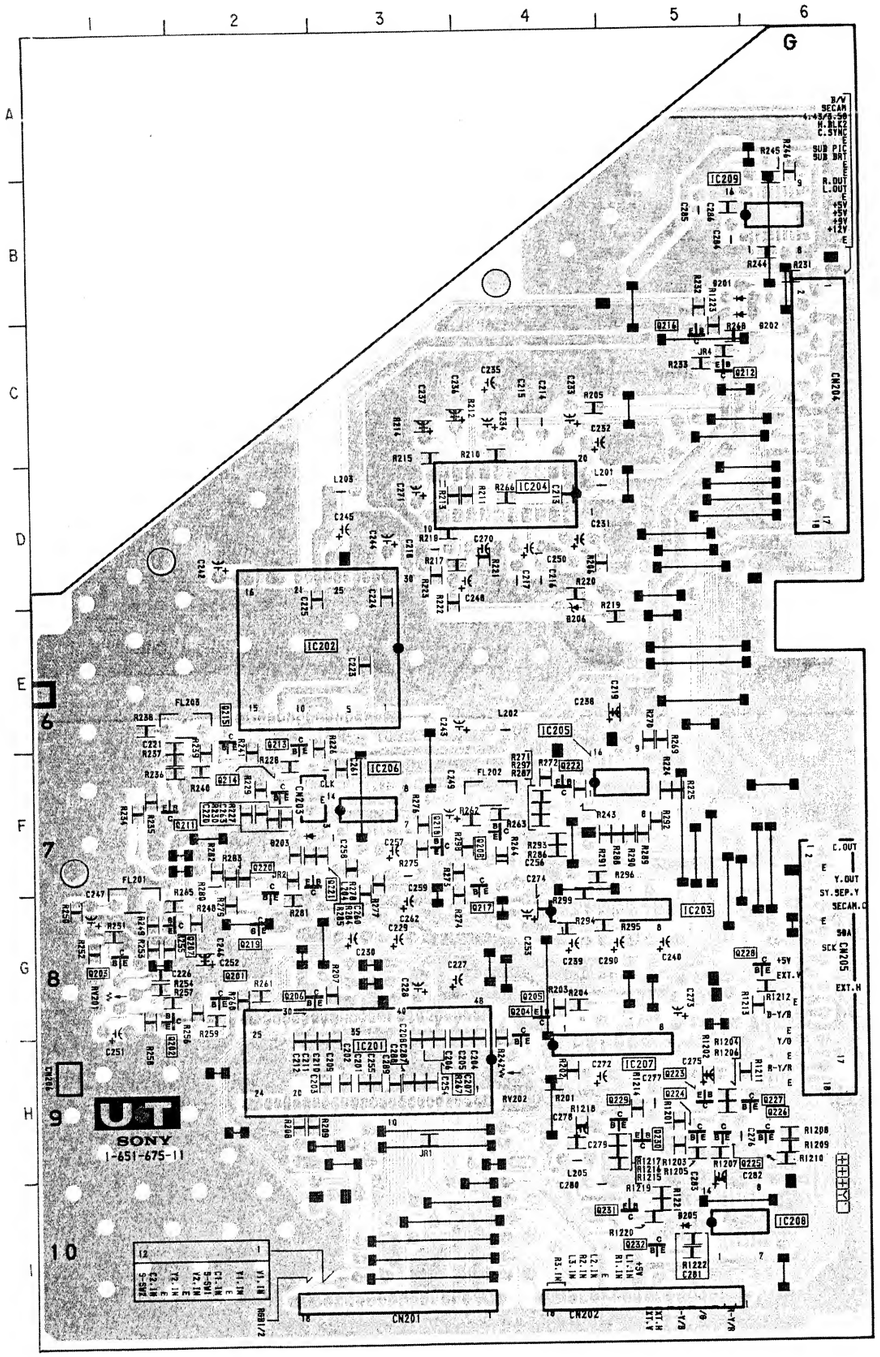
UA BOARD

D171	PROTECT
D172	PROTECT
D173	PROTECT
D174	PROTECT
D175	PROTECT
D176	PROTECT
D177	PROTECT
IC171	VISCA DRIVER
Q171	SIRCS INVERT
Q172	SIRCS INVERT



UT [COM FILTER] **UJ** [INPUT] **UA** [AUDIO OUT, VISCA, SIRCS]

– UTBOARD –



UT BOARD

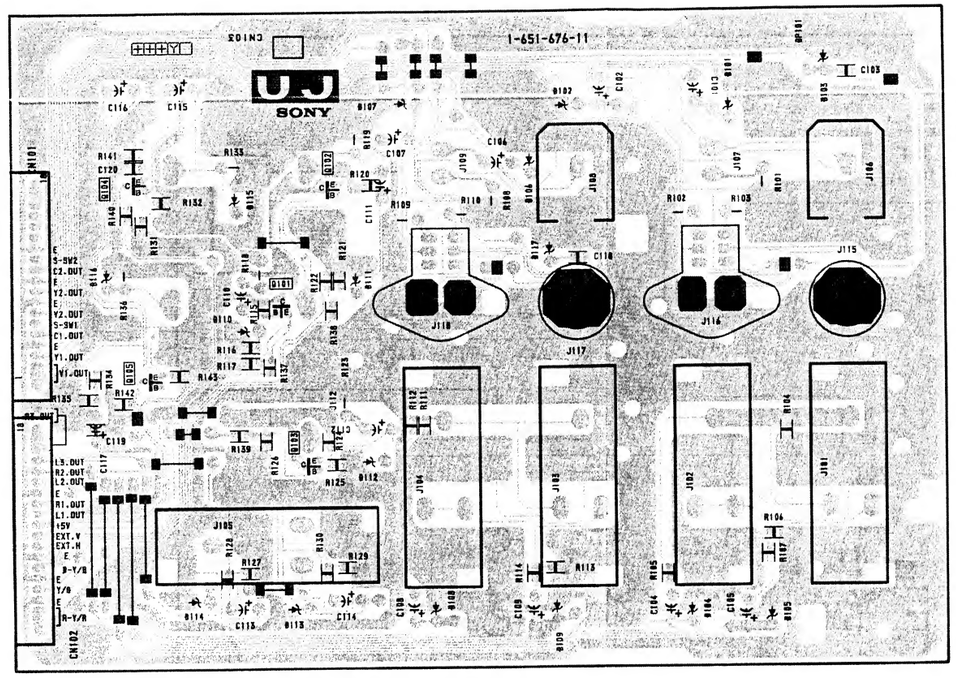
IC	
IC201	H – 3
IC202	E – 2
IC203	G – 5
IC204	D – 4
IC205	F – 5
IC206	F – 3
IC207	H – 5
IC208	I – 5

DIODE	
D202	C – 5
D203	F – 2
D205	I – 5
D206	E – 4

TRANSISTOR	
Q201	G – 2
Q202	G – 1
Q203	G – 1
Q204	H – 4
Q205	G – 4
Q206	G – 2
Q207	G – 1
Q208	F – 4
Q211	F – 1
Q212	C – 5
Q213	E – 2
Q214	F – 2
Q215	E – 2
Q216	C – 5
Q217	F – 4
Q218	F – 3
Q219	G – 2
Q220	F – 2
Q221	F – 2
Q222	F – 4
Q223	H – 5
Q224	H – 5
Q225	H – 5
Q226	H – 6
Q227	H – 5
Q228	G – 5
Q229	H – 5
Q230	H – 5
Q231	I – 5
Q232	I – 5

VARIABLE RESISTOR	
RV201	G – 1
RV202	H – 4

– UJ BOARD –



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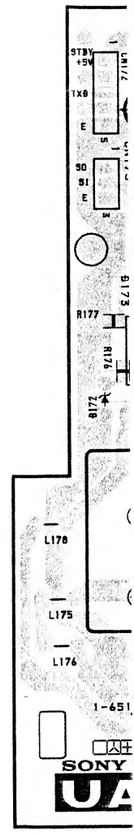


UT BOARD

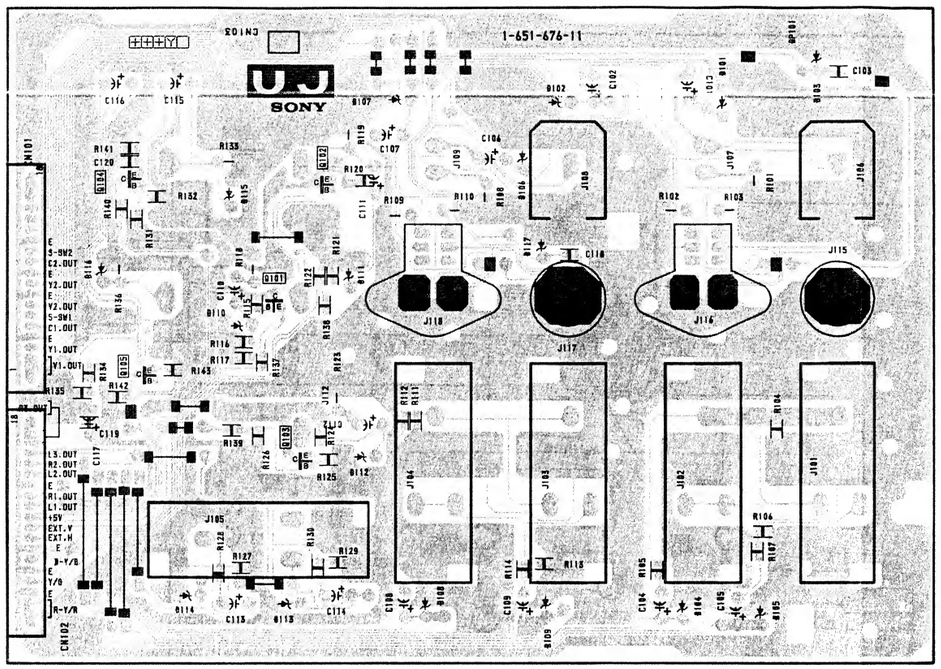
IC	
IC201	H – 3
IC202	E – 2
IC203	G – 5
IC204	D – 4
IC205	F – 5
IC206	F – 3
IC207	H – 5
IC208	I – 5

DIODE	
D202	C – 5
D203	F – 2
D205	I – 5
D206	E – 4

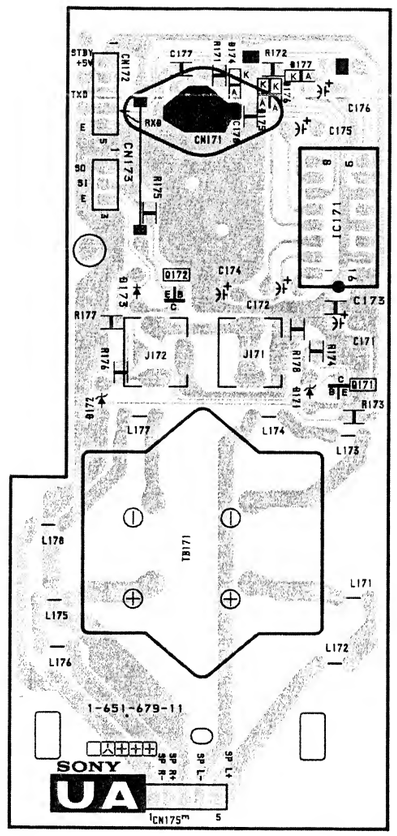
TRANSISTOR	
Q201	G – 2
Q202	G – 1
Q203	G – 1
Q204	H – 4
Q205	G – 4
Q206	G – 2
Q207	G – 1
Q208	F – 4
Q211	F – 1
Q212	C – 5
Q213	E – 2
Q214	F – 2
Q215	E – 2
Q216	C – 5
Q217	F – 4
Q218	F – 3
Q219	G – 2
Q220	F – 2
Q221	F – 2
Q222	F – 4
Q223	H – 5
Q224	H – 5
Q225	H – 5
Q226	H – 6
Q227	H – 5
Q228	G – 5
Q229	H – 5
Q230	H – 5
Q231	I – 5
Q232	I – 5

VARIABLE RESISTOR	
RV201	G – 1
RV202	H – 4

– UJ BOARD –



– UA BOARD –



Schematic diagrams
C board ➡

PVM-2950Q/2950QM
RM-85

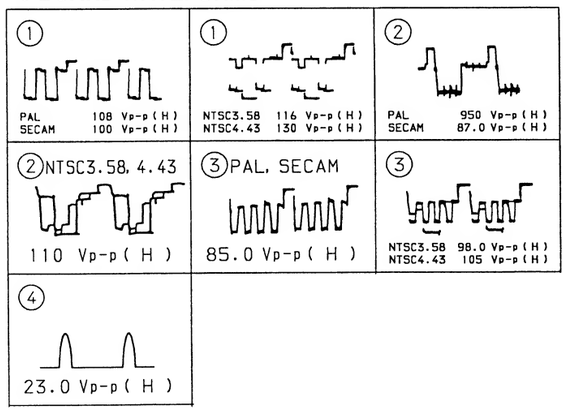
C BOARD

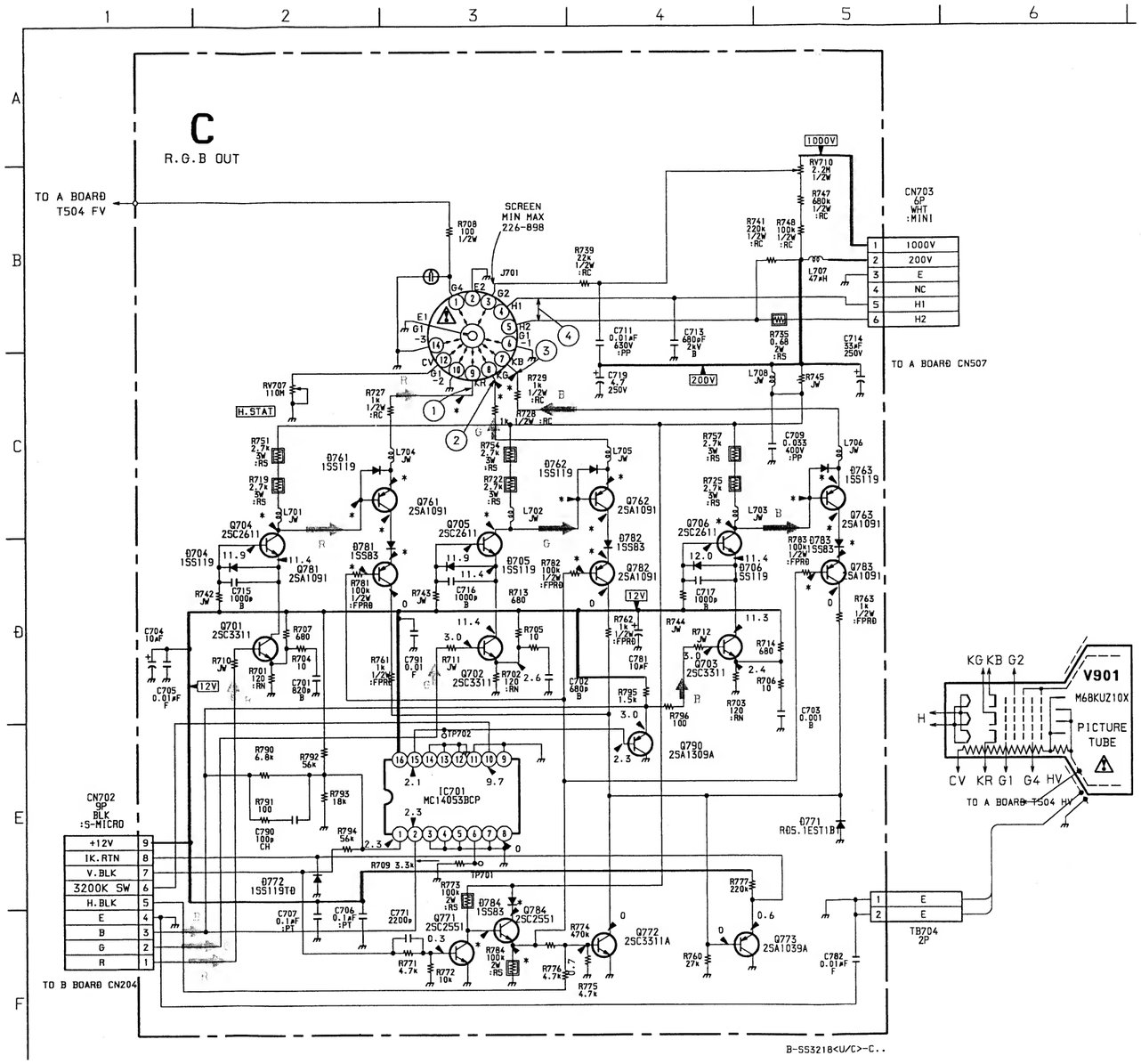
D704	PROTECT
D705	PROTECT
D706	PROTECT
D761	SPEED UP
D762	SPEED UP
D763	SPEED UP
D771	PROTECT
D772	PROTECT
D781	PROTECT
D782	PROTECT
D783	PROTECT
D784	BLK BUFF
IC701	3200 SW
Q701	R DRIVE
Q702	G DRIVE
Q703	B DRIVE
Q704	R OUT
Q705	G OUT
Q706	B OUT
Q761	IK DET
Q762	IK DET
Q763	IK DET
Q771	INVERT
Q772	BLK SW
Q773	IK BUFF
Q781	IK DET
Q782	IK DET
Q783	IK DET
Q784	BLK BUFF
Q790	B BUFF

C BOARD * MARK

REF. NO	PAL	SECAM	NTSC 3.58	NTSC 4.43
J701 KB	165.8	166.9	164.9	163.7
RG	154.6	156.6	155.3	154.8
KR	143.7	144.6	145.6	146.2
Q704 C	145.2	146.5	147.2	147.3
Q705 C	158.4	160.7	159.1	158.3
Q706 C	168.1	169.2	166.6	165.6
Q761 B	145.1	146.2	147.3	147.3
C	129.2	133.0	129.8	128.8
E	143.0	144.0	145.1	145.5
Q762 B	158.3	160.5	159.3	158.5
C	140.8	143.4	139.6	139.4
E	154.3	156.4	155.2	154.6
Q763 B	168.0	169.2	166.9	165.7
C	153.6	154.6	149.3	148.6
E	165.6	166.9	164.7	163.5
Q771 C	182.0	182.2	179.0	179.8
Q781 B	181.5	181.5	178.9	178.9
E	169.9	172.0	167.8	172.4
Q783 B	181.4	181.5	178.9	179.0
E	169.7	171.0	167.3	168.2
Q784 B	182.1	182.2	179.5	179.6
C	197.7	197.8	197.2	197.3
E	183.2	183.4	180.6	180.7

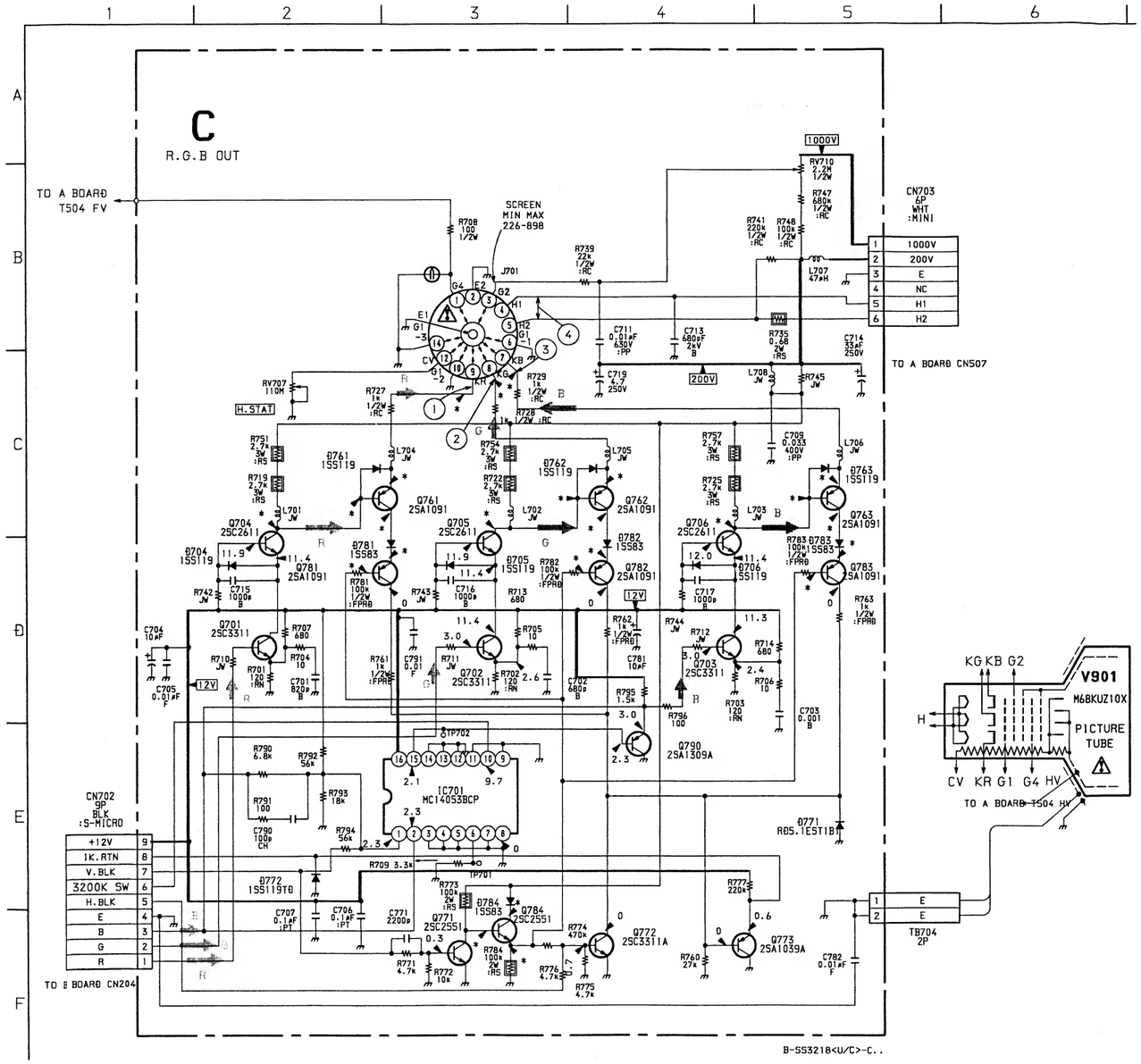
• C BOARD WAVEFORMS





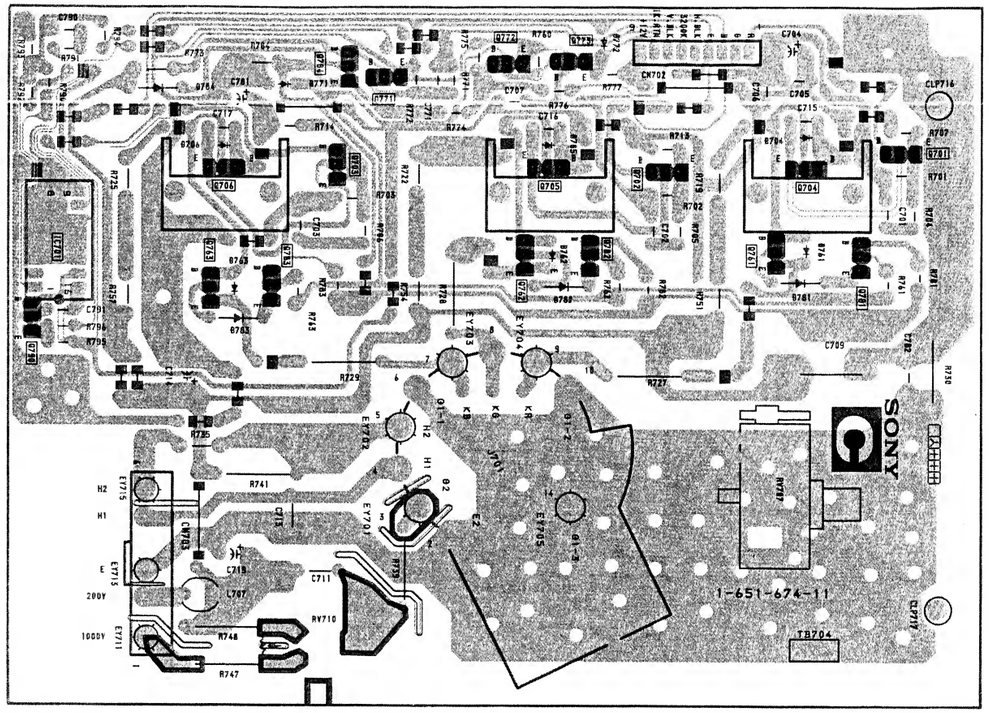
C [R. G. B

– C BOARD –



C [R. G. B OUT]

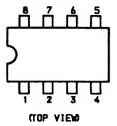
– C BOARD –



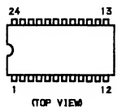
7-5. SEMICONDUCTORS

BA10358F
X25040SI

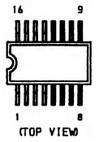
BA10358
BA10393
LM358N
LM358P
LM393P
MM1170BFB
M5216P
μPC353C
μPC393C



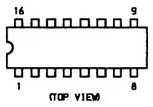
CXA1214P



CXA1315M
MC14053BFP
MC74HC08AF-T2

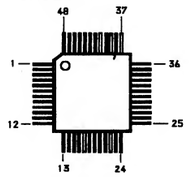


CXA1526P
LA7220
MAX232N
MC14053BCP
SN74LS221N
μPD4053BC



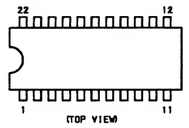
CXA1545AS
CXA1739S

CXD2018Q

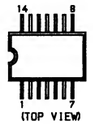


LA7016

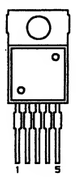
LA7851MK
LA7856



MC14011BF-T2
MC14070BF
MC74HC125AF
MC74HC14AF-T2
MC74HC32AF
SN74HC04ANS
SN74HC14ANS



MC14052BF

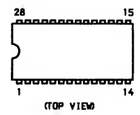


M51279SP

PM-21

PM-30

SC402130B



SBX1765-01

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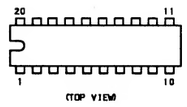

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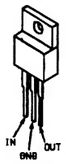
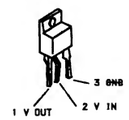
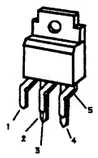
TA7805S
TA7812S
μPC7805H
μPC7812H
XRA178M05T



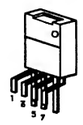
SE-135N



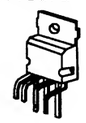
SI-3090CA



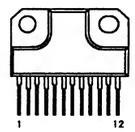
STR-M6515A



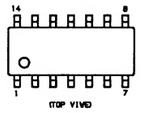
STV9379



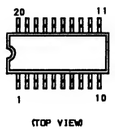
TA8200AH
TA8216H



TC74HC164AF (EL)



μPC645GT-625-E1



ĐTA114EK
ĐTA144EK
ĐTC144EK
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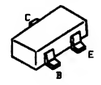
2SA1037-QR
2SA1162G
2SC1623-L5L6
2SC2412K-QR



ĐTC144ES

IRF614
2SA1606-E
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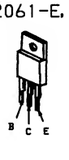
2SĐ1137
2SĐ2012
2SĐ2061-E, F



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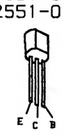
2SC2551-O



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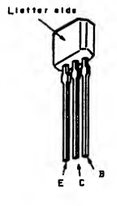
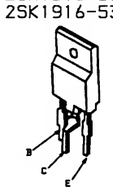
2SA1309A
2SC2785-HFE
2SC3311A



2SB733-34
2SB734-4
2SC3733
2SĐ774-34

2SC2611
2SC2688-LK
2SC3840K

2SC4763 (LB SONY)
2SK1916-53-F50
2SK1916-53-F87



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ERA38-06
ERA81-004
ERA82-004
REA83-006
ERA85-009
RĐ10ESB2
RĐ13ESB2
RĐ2.2ESB
RĐ2.2ESB2
RĐ3.6ESB1
RĐ33ESB2
RĐ39ESB2
RĐ39ESB4
RĐ5.1ESB
RĐ5.1ESB1
RĐ5.1SB1-T1
RĐ5.6ESB
RĐ5.6ESB1
RĐ5.6ESB2
RĐ6.2ESB2
RĐ6.8ESB1
RĐ6.8SB1-T1
RĐ7.5ESB
RĐ7.5ESB2
RĐ9.1ESB
RĐ9.1ESL
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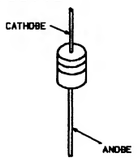
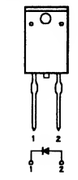
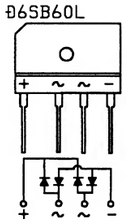


FML-G12S
ĐSL60



ĐSSB60L



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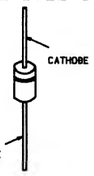
ERC91-02
RGP02-20EL-6394



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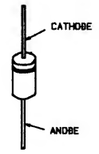
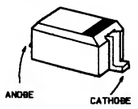
1SS83



MA110



PC-111YS

RU-3AM

SHORTĐ42

S1BV10-S
S1BV40

SECTION 8
EXPLODED VIEWS

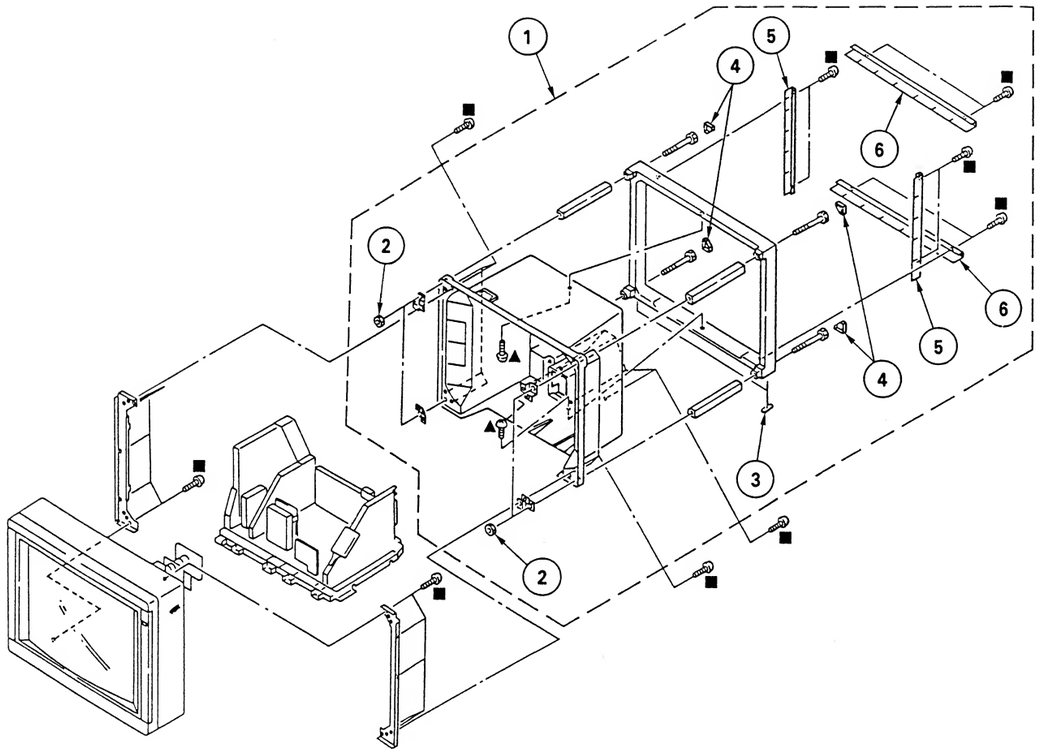
NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ 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.

8-1. REAR COVER

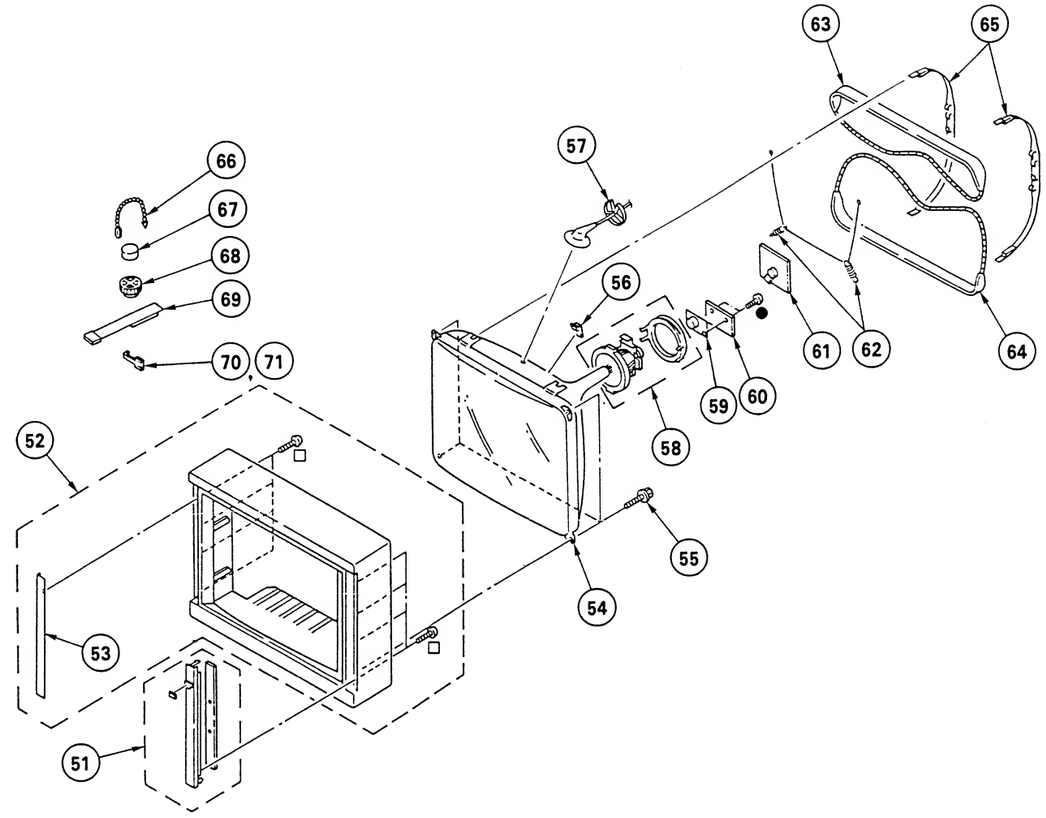
▲: BVTP 4 × 12 7-685-661-79
■: BVTP 4 × 16 7-685-663-79



REF.NO.	PART NO.	DESCRIPTION	REMARK
1	X-4032-023-1	COVER ASSY, REAR	2-6
2	4-304-511-00	NUT (M5), FLANGE	
3	4-392-860-01	CUSHION (B)	
4	4-039-913-01	CAP	
5	4-039-918-01	BRACKET (V), REAR FRAME	
6	4-039-917-01	BRACKET (H), REAR FRAME	

8-2. PICTURE TUBE

●: BVTP 3 × 12 7-685-648-79
□: BV 3 × 25 7-685-152-19



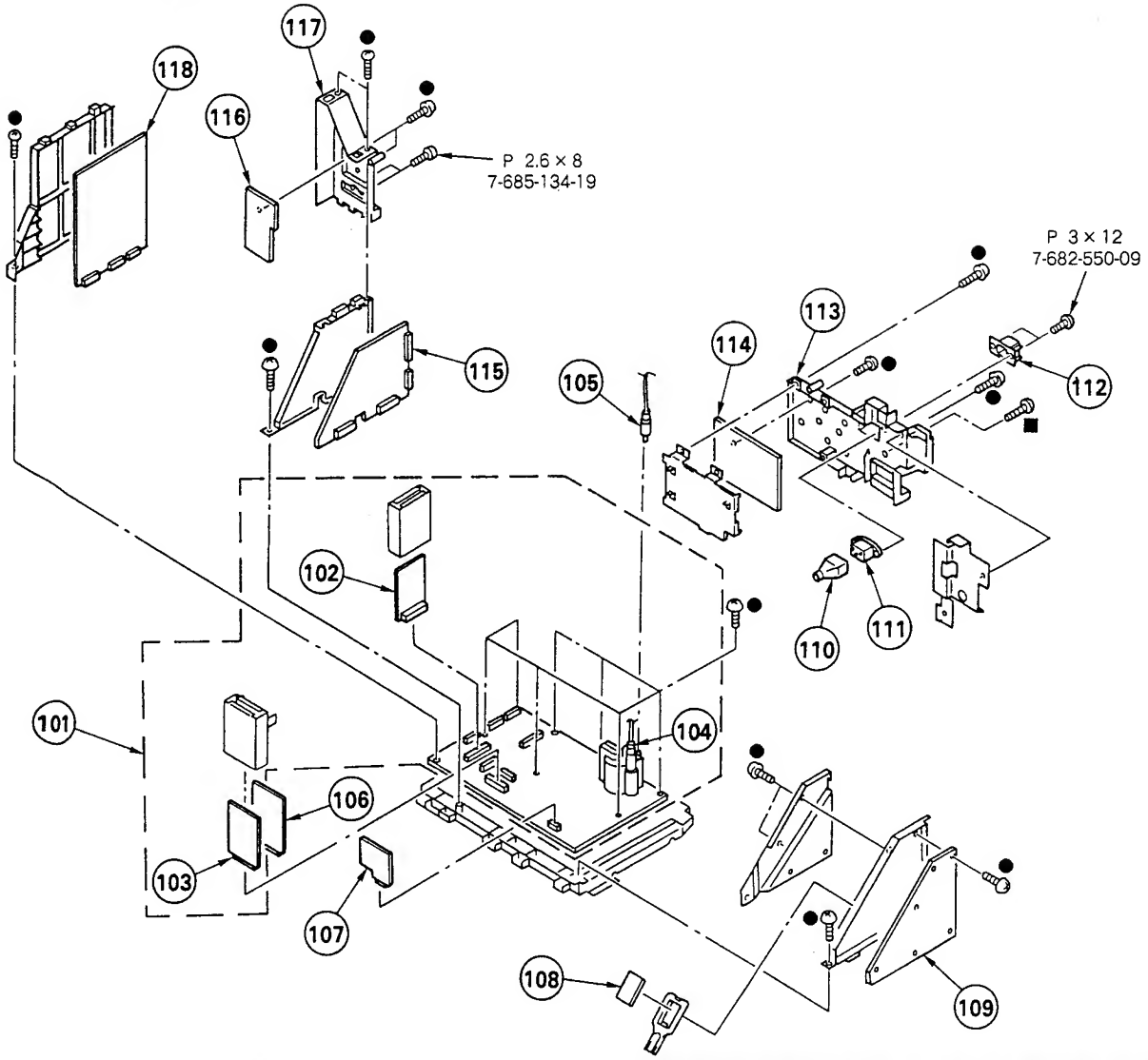
The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

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	1-467-794-11	KEY BOARD UNIT	
52	X-4032-024-1	BEZNET ASSY	53
53	4-045-431-01	PANEL, BLIND	
54	⚠8-733-845-05	PICTURE TUBE (M68KUZ10X)	
55	4-390-505-01	SCREW (7), TAPPING	
56	3-704-495-01	SPACER, DY	
57	*3-704-372-01	HOLDER, HV CABLE	
58	⚠8-451-394-31	DEFLECTION YOKE (Y29EXA)	
59	⚠1-452-616-13	NECK ASSY, PICTURE TUBE (NA323)	
60	*A-1342-246-A	V BOARD, COMPLETE	
61	*A-1331-344-A	C BOARD, COMPLETE	
62	4-369-318-00	SPRING, TENSION	
63	⚠1-402-715-21	COIL, DEMAGNETIZATION (PVM-2950QM)	
	⚠1-426-573-22	COIL, DEGAUSSING (PVM-2950Q)	
64	⚠1-402-716-21	COIL, DEMAGNETIZATION (PVM-2950QM)	
	⚠1-426-574-22	COIL, DEGAUSSING (PVM-2950Q)	
65	4-037-983-01	HOLDER, DGC	
66	4-308-870-00	CLIP, LEAD WIRE	
67	1-452-032-00	MAGNET, DISK; 10MM ϕ	
68	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM ϕ	
69	X-4306-312-0	PERMALLOY ASSY, CONVERGENCE	
70	4-034-272-01	PLATE, CORRECTION, TLV	
71	4-034-272-11	PLATE, CORRECTION, TLV	

8-3. CHASSIS

●: BVTP 3 × 12 7-685-648-79
■: BVTP 4 × 16 7-685-663-79



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
101	*A-1297-256-A	A BOARD, COMPLETE (PVM-2950QM(AEP))	102,103
	*A-1297-382-A	A BOARD, COMPLETE (PVM-2950QM(AUS))	102,103
	*A-1297-387-A	A BOARD, COMPLETE (PVM-2950Q)	102,103
102	*A-1301-950-A	M BOARD, COMPLETE	
103	*A-1341-764-A	DX BOARD, COMPLETE	
104	⚠ X-4032-250-1	TRANSFORMER ASSY, FLYBACK	
105	1-900-140-13	LEAD ASSY, FOCUS	
106	*A-1347-093-A	VC BOARD, COMPLETE	
107	*A-1372-005-A	H3 BOARD, COMPLETE	
108	*A-1311-363-A	G1 BOARD, COMPLETE (PVM-2950Q)	
	*A-1311-365-A	G1 BOARD, COMPLETE (PVM-2950QM)	
109	*A-1316-181-A	G BOARD, COMPLETE (PVM-2950Q)	
	*A-1316-182-A	G BOARD, COMPLETE (PVM-2950QM)	
110	4-601-466-11	COVER, 3P INLET	
111	⚠ 1-580-375-11	INLET 3P	
112	2-990-241-02	HOLDER (A), PLUG	
113	4-045-440-01	BRACKET, UJ	
114	*A-1373-468-A	UJ BOARD, COMPLETE	
115	*A-1394-545-A	UT BOARD, COMPLETE	
116	*A-1373-467-A	UA BOARD, COMPLETE	
117	4-045-439-01	BRACKET, UA	
118	*A-1135-787-A	B BOARD, COMPLETE	

SECTION 9
ELECTRICAL PARTS LIST

B

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

REF.NO.	PART NO.	DESCRIPTION			REMARK
	*A-1135-787-A	B BOARD, COMPLETE			
		**********			
		<CAPACITOR>			
C301	1-124-126-00	ELECT 47MF	20%	16V	
C302	1-163-035-00	CERAMIC CHIP 0.047MF		50V	
C303	1-126-964-11	ELECT 10MF	20%	50V	
C304	1-124-126-00	ELECT 47MF	20%	16V	
C305	1-126-933-11	ELECT 100MF	20%	10V	
C306	1-163-035-00	CERAMIC CHIP 0.047MF		50V	
C307	1-137-375-11	FILM 0.068MF	5%	50V	
C308	1-124-903-11	ELECT 1MF	20%	50V	
C309	1-163-139-00	CERAMIC CHIP 820PF	5%	50V	
C310	1-163-139-00	CERAMIC CHIP 820PF	5%	50V	
C311	1-124-925-11	ELECT 2.2MF	20%	50V	
C312	1-163-121-00	CERAMIC CHIP 150PF	5%	50V	
C314	1-124-126-00	ELECT 47MF	20%	16V	
C315	1-163-035-00	CERAMIC CHIP 0.047MF		50V	
C316	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C317	1-163-035-00	CERAMIC CHIP 0.047MF		50V	
C318	1-124-126-00	ELECT 47MF	20%	16V	
C319	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C320	1-130-483-00	MYLAR 0.01MF	5%	50V	
C321	1-124-903-11	ELECT 1MF	20%	50V	
C322	1-124-903-11	ELECT 1MF	20%	50V	
C323	1-130-483-00	MYLAR 0.01MF	5%	50V	
C324	1-124-903-11	ELECT 1MF	20%	50V	
C325	1-124-903-11	ELECT 1MF	20%	50V	
C326	1-137-368-11	FILM 0.0047MF	5%	50V	
C327	1-163-121-00	CERAMIC CHIP 150PF	5%	50V	
C328	1-137-378-11	FILM 0.22MF	5%	50V	
C329	1-124-126-00	ELECT 47MF	20%	16V	
C330	1-137-372-11	FILM 0.022MF	5%	50V	
C331	1-124-925-11	ELECT 2.2MF	20%	50V	
C332	1-163-249-11	CERAMIC CHIP 82PF	5%	50V	
C333	1-137-365-11	FILM 0.0015MF	5%	50V	
C334	1-124-126-00	ELECT 47MF	20%	16V	
C335	1-163-035-00	CERAMIC CHIP 0.047MF		50V	
C336	1-126-933-11	ELECT 100MF	20%	16V	
C337	1-124-126-00	ELECT 47MF	20%	16V	
C338	1-124-126-00	ELECT 47MF	20%	16V	
C339	1-124-126-00	ELECT 47MF	20%	16V	
C340	1-124-126-00	ELECT 47MF	20%	16V	
C341	1-124-126-00	ELECT 47MF	20%	16V	
C342	1-124-126-00	ELECT 47MF	20%	16V	
C343	1-124-126-00	ELECT 47MF	20%	16V	
C344	1-124-126-00	ELECT 47MF	20%	16V	
C345	1-124-126-00	ELECT 47MF	20%	16V	
C346	1-163-035-00	CERAMIC CHIP 0.047MF		50V	
C347	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C348	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	
C349	1-163-243-11	CERAMIC CHIP 47PF	5%	50V	
C350	1-163-243-11	CERAMIC CHIP 47PF	5%	50V	
C351	1-163-129-00	CERAMIC CHIP 330PF	5%	50V	
C352	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	
C353	1-137-374-11	FILM 0.047MF	5%	50V	
C354	1-137-374-11	FILM 0.047MF	5%	50V	
C355	1-124-903-11	ELECT 1MF	20%	50V	
C356	1-124-902-00	ELECT 0.47MF	20%	50V	
C357	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C358	1-163-031-11	CERAMIC CHIP 0.01MF		50V	
C359	1-163-237-11	CERAMIC CHIP 27PF	5%	50V	
C360	1-163-031-11	CERAMIC CHIP 0.01MF		50V	
C361	1-130-483-00	MYLAR 0.01MF	5%	50V	
C362	1-124-927-11	ELECT 4.7MF	20%	50V	
C363	1-124-126-00	ELECT 47MF	20%	16V	
C364	1-163-031-11	CERAMIC CHIP 0.01MF		50V	
C365	1-124-903-11	ELECT 1MF	20%	50V	
C366	1-163-031-11	CERAMIC CHIP 0.01MF		50V	
C367	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C368	1-163-031-11	CERAMIC CHIP 0.01MF		50V	
C369	1-163-031-11	CERAMIC CHIP 0.01MF		50V	
C370	1-137-364-11	FILM 0.001MF	5%	50V	
C371	1-124-126-00	ELECT 47MF	20%	16V	
C372	1-163-035-00	CERAMIC CHIP 0.047MF		50V	
C373	1-124-126-00	ELECT 47MF	20%	16V	
C374	1-163-235-11	CERAMIC CHIP 22PF	5%	50V	
C379	1-137-399-11	FILM 0.1MF	5%	50V	
C380	1-163-019-00	CERAMIC CHIP 0.0068MF	10%	50V	
C381	1-126-964-11	ELECT 10MF	20%	50V	
C382	1-124-126-00	ELECT 47MF	20%	16V	
C383	1-137-399-11	FILM 0.1MF	5%	50V	
C384	1-163-113-00	CERAMIC CHIP 68PF	5%	50V	
C385	1-163-103-00	CERAMIC CHIP 27PF	5%	50V	
C386	1-163-119-00	CERAMIC CHIP 120PF	5%	50V	
C387	1-136-165-00	FILM 0.1MF	5%	50V	
C388	1-130-489-00	FILM 0.033MF	5%	50V	
C389	1-124-126-00	ELECT 47MF	20%	16V	
C390	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C391	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	
C392	1-163-119-00	CERAMIC CHIP 120PF	5%	50V	
C393	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	
C394	1-163-235-11	CERAMIC CHIP 22PF	5%	50V	
C395	1-163-035-00	CERAMIC CHIP 0.047MF		50V	
C396	1-124-126-00	ELECT 47MF	20%	16V	
C397	1-137-399-11	FILM 0.1MF	5%	50V	
C398	1-137-399-11	FILM 0.1MF	5%	50V	
C399	1-163-119-00	CERAMIC CHIP 120PF	5%	50V	
C400	1-163-097-00	CERAMIC CHIP 15PF	5%	50V	
C401	1-163-097-00	CERAMIC CHIP 15PF	5%	50V	
C402	1-124-126-00	ELECT 47MF	20%	16V	

B

REF.NO.	PART NO.	DESCRIPTION			REMARK
C403	1-124-126-00	ELECT	47MF	20%	16V
C404	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C405	1-124-126-00	ELECT	47MF	20%	16V
C406	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C407	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
* C408	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C409	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C410	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C411	1-163-253-11	CERAMIC CHIP	120PF	5%	50V
* C412	1-124-903-11	ELECT	1MF	20%	50V
C413	1-126-964-11	ELECT	10MF	20%	50V
C414	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C415	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C416	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C417	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C418	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C419	1-136-153-00	FILM	0.01MF	5%	50V
C420	1-136-169-00	FILM	0.22MF	5%	50V
C421	1-124-903-11	ELECT	1MF	20%	50V
C422	1-136-165-00	FILM	0.1MF	5%	50V
C423	1-124-903-11	ELECT	1MF	20%	50V
C424	1-136-165-00	FILM	0.1MF	5%	50V
C425	1-124-903-11	ELECT	1MF	20%	50V
C426	1-136-165-00	FILM	0.1MF	5%	50V
C427	1-124-903-11	ELECT	1MF	20%	50V
C428	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C429	1-126-935-11	ELECT	470MF	20%	16V
C430	1-124-903-11	ELECT	1MF	20%	50V
C431	1-126-964-11	ELECT	10MF	20%	50V
C432	1-124-903-11	ELECT	1MF	20%	50V
C433	1-124-903-11	ELECT	1MF	20%	50V
C434	1-124-767-00	ELECT	2.2MF	20%	50V
C435	1-137-399-11	FILM	0.1MF	5%	50V
C436	1-124-903-11	ELECT	1MF	20%	50V
C437	1-126-933-11	ELECT	100MF	20%	16V
C438	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C439	1-124-126-00	ELECT	47MF	20%	16V
C440	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C441	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C442	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C443	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C446	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C447	1-163-087-00	CERAMIC CHIP	4PF	0.25PF	50V
C448	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C449	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C455	1-124-126-00	ELECT	47MF	20%	16V
C456	1-163-257-11	CERAMIC CHIP	180PF	5%	50V
C458	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C459	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C460	1-163-241-11	CERAMIC CHIP	39PF	5%	50V
C461	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C462	1-124-927-11	ELECT	4.7MF	20%	50V
* C463	1-124-927-11	ELECT	4.7MF	20%	50V

<CONNECTOR>

CN301	*1-564-506-11	PLUG, CONNECTOR 3P	
CN302	1-573-300-11	CONNECTOR, BOARD TO BOARD 18P	
CN303	1-573-300-11	CONNECTOR, BOARD TO BOARD 18P	
CN304	1-573-300-11	CONNECTOR, BOARD TO BOARD 18P	
CN305	*1-564-512-11	PLUG, CONNECTOR 9P	

<COMPOSITION CIRCUIT BLOCK>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CP301	1-808-654-11	MODULE	
CP302	1-236-365-11	MODULE, TRAP	
CP303	1-236-366-11	MODULE, TRAP	

<TRIMMER>

CT301	1-141-443-11	TRIMMER, CERAMIC	
CT302	1-141-304-21	TRIMMER, CERAMIC	

<DIODE>

D303	8-719-911-19	DIODE 1SS119	
D304	8-719-911-19	DIODE 1SS119	
D306	8-719-404-46	DIODE MA110	
D307	8-719-911-19	DIODE 1SS119	
D308	8-719-404-46	DIODE MA110	
D309	8-719-404-46	DIODE MA110	
D310	8-719-404-46	DIODE MA110	
D311	8-719-404-46	DIODE MA110	
D312	8-719-911-19	DIODE 1SS119	
D313	8-719-911-19	DIODE 1SS119	
D314	8-719-911-19	DIODE 1SS119	
D315	8-719-911-19	DIODE 1SS119	
D318	8-719-911-19	DIODE 1SS119	
D319	8-719-911-19	DIODE 1SS119	
D320	8-719-911-19	DIODE 1SS119	
D321	8-719-911-19	DIODE 1SS119	
D322	8-719-911-19	DIODE 1SS119	
D323	8-719-911-19	DIODE 1SS119	
D324	8-719-911-19	DIODE 1SS119	
D325	8-719-911-19	DIODE 1SS119	
D326	8-719-911-19	DIODE 1SS119	
D327	8-719-911-19	DIODE 1SS119	
D328	8-719-404-46	DIODE MA110	
D329	8-719-911-19	DIODE 1SS119	
D331	8-719-911-19	DIODE 1SS119	
D333	8-719-109-88	DIODE RD5.6ESB1	
D334	8-719-404-46	DIODE MA110	
D335	8-719-404-46	DIODE MA110	
D336	8-719-404-46	DIODE MA110	
D337	8-719-404-46	DIODE MA110	

<DELAY LINE>

DL301	1-402-699-11	DELAY LINE	
DL302	1-402-679-11	DELAY LINE	

<IC>

IC301	8-759-801-61	IC LA7220	
IC302	8-759-300-71	IC HD14053BFP	
IC303	8-752-056-67	IC CXA1214P	
IC304	8-759-800-81	IC LA7016	
IC305	8-759-009-06	IC MC14052BF	
IC306	8-759-605-38	IC M51279SP	
IC307	8-759-009-82	IC MC14011BF-T2	
IC308	8-759-637-31	IC M52036SP	
IC309	8-759-970-89	IC BA10358F	
IC310	8-759-300-71	IC HD14053BFP	
IC311	8-752-058-68	IC CXA1315M	
IC312	8-752-067-05	IC CXA1739S	
IC313	8-759-801-61	IC LA7220	
IC316	8-752-058-68	IC CXA1315M	
IC318	8-759-009-11	IC MC14070BF	

B

REF.NO.	PART NO.	DESCRIPTION		REMARK
IC319	8-759-300-71	IC HD14053BFP		
IC320	8-759-300-71	IC HD14053BFP		
		<COIL>		
L301	1-408-411-00	INDUCTOR	15UH	
L302	1-408-411-00	INDUCTOR	15UH	
L303	1-408-411-00	INDUCTOR	15UH	
L304	1-408-405-00	INDUCTOR	4.7UH	
L305	1-408-401-00	INDUCTOR	2.2UH	
L306	1-408-401-00	INDUCTOR	2.2UH	
L307	1-408-409-00	INDUCTOR	10UH	
L308	1-410-476-11	INDUCTOR	33UH	
L309	1-408-409-00	INDUCTOR	10UH	
L310	1-408-609-41	INDUCTOR	33UH	
L311	1-408-411-00	INDUCTOR	15UH	
		<VARIABLE COIL>		
LV301	1-404-496-00	COIL		
LV302	1-404-496-00	COIL		
		<TRANSISTOR>		
Q301	8-729-216-22	TRANSISTOR 2SA1162-G		
Q302	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q303	8-729-216-22	TRANSISTOR 2SA1162-G		
Q304	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q305	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q306	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q307	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q308	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q309	8-729-216-22	TRANSISTOR 2SA1162-G		
Q311	8-729-216-22	TRANSISTOR 2SA1162-G		
Q312	8-729-216-22	TRANSISTOR 2SA1162-G		
Q313	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q314	8-729-216-22	TRANSISTOR 2SA1162-G		
Q315	8-729-216-22	TRANSISTOR 2SA1162-G		
Q316	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q317	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q318	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q319	8-729-216-22	TRANSISTOR 2SA1162-G		
Q320	8-729-216-22	TRANSISTOR 2SA1162-G		
Q321	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q322	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q323	8-729-216-22	TRANSISTOR 2SA1162-G		
Q324	8-729-216-22	TRANSISTOR 2SA1162-G		
Q325	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q326	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q327	8-729-216-22	TRANSISTOR 2SA1162-G		
Q328	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q329	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q330	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q331	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q332	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q333	8-729-216-22	TRANSISTOR 2SA1162-G		
Q334	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q335	8-729-216-22	TRANSISTOR 2SA1162-G		
Q336	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q337	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q338	8-729-216-22	TRANSISTOR 2SA1162-G		
Q339	8-729-216-22	TRANSISTOR 2SA1162-G		
Q340	8-729-216-22	TRANSISTOR 2SA1162-G		
Q341	8-729-216-22	TRANSISTOR 2SA1162-G		
Q342	8-729-216-22	TRANSISTOR 2SA1162-G		
Q343	8-729-216-22	TRANSISTOR 2SA1162-G		
Q344	8-729-901-01	TRANSISTOR DTC144EK		
Q345	8-729-901-01	TRANSISTOR DTC144EK		
Q346	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q347	8-729-901-01	TRANSISTOR DTC144EK		
Q348	8-729-901-01	TRANSISTOR DTC144EK		
Q349	8-729-901-01	TRANSISTOR DTC144EK		
Q352	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q354	8-729-901-01	TRANSISTOR DTC144EK		
Q355	8-729-901-01	TRANSISTOR DTC144EK		
Q356	8-729-216-22	TRANSISTOR 2SA1162-G		
Q357	8-729-216-22	TRANSISTOR 2SA1162-G		
Q358	8-729-901-01	TRANSISTOR DTC144EK		
Q359	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q361	8-729-901-01	TRANSISTOR DTC144EK		
Q362	8-729-120-28	TRANSISTOR 2SC1623-L5L6		
Q363	8-729-901-01	TRANSISTOR DTC144EK		
		<RESISTOR>		
JR306	1-216-295-91	METAL GLAZE	0 5% 1/10W	
JR308	1-216-295-91	METAL GLAZE	0 5% 1/10W	
JR309	1-216-295-91	METAL GLAZE	0 5% 1/10W	
JR321	1-216-295-91	METAL GLAZE	0 5% 1/10W	
JR322	1-216-295-91	METAL GLAZE	0 5% 1/10W	
JR323	1-216-296-91	METAL GLAZE	0 5% 1/8W	
JR324	1-216-296-91	METAL GLAZE	0 5% 1/8W	
JR325	1-216-296-91	METAL GLAZE	0 5% 1/8W	
JR326	1-216-296-91	METAL GLAZE	0 5% 1/8W	
JR327	1-216-296-91	METAL GLAZE	0 5% 1/8W	
JR328	1-216-296-91	METAL GLAZE	0 5% 1/8W	
JR329	1-216-296-91	METAL GLAZE	0 5% 1/8W	
JR330	1-216-295-91	METAL GLAZE	0 5% 1/10W	
JR331	1-216-296-91	METAL GLAZE	0 5% 1/8W	
JR332	1-216-295-91	METAL GLAZE	0 5% 1/10W	
JR333	1-216-296-91	METAL GLAZE	0 5% 1/8W	
JR334	1-216-296-91	METAL GLAZE	0 5% 1/8W	
JR356	1-216-296-91	METAL GLAZE	0 5% 1/8W	
JR360	1-216-295-91	METAL GLAZE	0 5% 1/10W	
JR520	1-216-296-91	METAL GLAZE	0 5% 1/8W	
JR521	1-216-295-91	METAL GLAZE	0 5% 1/10W	
JR524	1-216-296-91	METAL GLAZE	0 5% 1/8W	
JR525	1-216-295-91	METAL GLAZE	0 5% 1/10W	
JR526	1-216-295-91	METAL GLAZE	0 5% 1/10W	
JR529	1-216-295-91	METAL GLAZE	0 5% 1/10W	
R301	1-216-049-00	METAL GLAZE	1K 5% 1/10W	
R302	1-216-049-00	METAL GLAZE	1K 5% 1/10W	
R303	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	
R304	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	
R305	1-216-647-11	METAL CHIP	680 0.50% 1/10W	
R306	1-216-647-11	METAL CHIP	680 0.50% 1/10W	
R307	1-216-025-00	METAL GLAZE	100 5% 1/10W	
R308	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	
R309	1-216-043-00	METAL GLAZE	560 5% 1/10W	
R310	1-216-105-00	METAL GLAZE	220K 5% 1/10W	
R311	1-216-081-00	METAL GLAZE	22K 5% 1/10W	
R312	1-216-049-00	METAL GLAZE	1K 5% 1/10W	
R313	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	
R314	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	
R315	1-216-049-00	METAL GLAZE	1K 5% 1/10W	
R316	1-216-075-00	METAL GLAZE	12K 5% 1/10W	
R317	1-216-049-00	METAL GLAZE	1K 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R318	1-216-133-00	METAL GLAZE	3.3M	5%	1/10W	
R319	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R320	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R321	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R322	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
* R323	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R324	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R325	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R326	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
* R327	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R328	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R329	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R330	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R331	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R332	1-216-115-00	METAL GLAZE	560K	5%	1/10W	
R334	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R335	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R336	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R337	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R339	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R340	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R341	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R342	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R343	1-216-103-91	METAL GLAZE	180K	5%	1/10W	
R344	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R345	1-216-103-91	METAL GLAZE	180K	5%	1/10W	
R346	1-216-107-00	METAL GLAZE	270K	5%	1/10W	
R347	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R348	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R349	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R350	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R351	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R352	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R353	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R354	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R355	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R356	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R357	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R358	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R359	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R360	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R361	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R362	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R363	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R364	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R365	1-216-662-11	METAL CHIP	3K	0.50%	1/10W	
R366	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R367	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R368	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R369	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R370	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R371	1-216-295-91	METAL GLAZE	0	5%	1/10W	
* R372	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R373	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R374	1-216-295-91	METAL GLAZE	0	5%	1/10W	
* R375	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R376	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R377	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R378	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R379	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R380	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R381	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R382	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R383	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R384	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R385	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R386	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R387	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R388	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R389	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R390	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R391	1-216-103-91	METAL GLAZE	180K	5%	1/10W	
R392	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R393	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R394	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R395	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R396	1-216-133-00	METAL GLAZE	3.3M	5%	1/10W	
R397	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R398	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R399	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R400	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R401	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R402	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R403	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R404	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R405	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R406	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R407	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R408	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R409	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R410	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R411	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R412	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R413	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R414	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R415	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R416	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R417	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R418	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R419	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R420	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R421	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R422	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R423	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R424	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R425	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R426	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R427	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R428	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R429	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R430	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R431	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R432	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R433	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R434	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R435	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R437	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R438	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R439	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R441	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R442	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R443	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R445	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R446	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R447	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R448	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R449	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	

B

REF.NO.	PART NO.	DESCRIPTION				REMARK
R450	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R451	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R452	1-216-222-00	METAL GLAZE	10K	5%	1/8W	
R454	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R455	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R456	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R457	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R458	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R459	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R460	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R461	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R462	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R463	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R464	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R465	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R467	1-216-295-91	METAL GLAZE	0	5%	1/10W	
R468	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R470	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R471	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R472	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R473	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R474	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R476	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R477	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R478	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R480	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R481	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R482	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R483	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R484	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R485	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R486	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R487	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R488	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R489	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R490	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R491	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R492	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R493	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R494	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R495	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R496	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R497	1-216-295-91	METAL GLAZE	0	5%	1/10W	
R498	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R499	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1300	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1301	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1302	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1303	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1304	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1305	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R1306	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R1307	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1308	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1309	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1310	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1311	1-215-413-00	METAL	470	1%	1/4W	
R1312	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R1313	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1314	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1315	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1316	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1320	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1321	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R1322	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R1323	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1324	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1327	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R1328	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1332	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R1333	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1334	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1335	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1336	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1337	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R1338	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1339	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R1340	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1341	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1342	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R1343	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1344	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1348	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R1349	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1350	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1351	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1352	1-216-103-91	METAL GLAZE	180K	5%	1/10W	
R1353	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1354	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1355	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1356	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R1359	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R1360	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R1361	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R1362	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R1363	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R1364	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1365	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1366	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R1367	1-216-240-00	METAL GLAZE	56K	5%	1/8W	

<VARIABLE RESISTOR>

RV301	1-241-763-11	RES, ADJ, CARBON 4.7K
RV302	1-241-628-11	RES, ADJ, CARBON 2.2K
RV305	1-241-763-11	RES, ADJ, CARBON 4.7K
RV306	1-241-765-11	RES, ADJ, CARBON 22K
RV307	1-238-019-11	RES, ADJ, CARBON 47K
RV308	1-238-019-11	RES, ADJ, CARBON 47K
RV309	1-238-019-11	RES, ADJ, CARBON 47K
RV310	1-241-630-11	RES, ADJ, CARBON 10K
RV311	1-241-630-11	RES, ADJ, CARBON 10K
RV312	1-241-630-11	RES, ADJ, CARBON 10K
RV313	1-241-760-11	RES, ADJ, CARBON 470
RV314	1-241-760-11	RES, ADJ, CARBON 470

<TRANSFORMER>

T301	1-404-584-11	COIL

<CRYSTAL>

X301	1-527-722-00	OSCILLATOR, CRYSTAL
X302	1-579-057-11	VIBRATOR, CRYSTAL

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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
	*A-1297-256-A	A BOARD, COMPLETE (PVM-2950QM(AEP))				
		**********				
	*A-1297-382-A	A BOARD, COMPLETE (PVM-2950QM(AUS))				
		**********				
	*A-1297-387-A	A BOARD, COMPLETE (PVM-2950Q)				
		**********				
		(INCLUDIG M,DX BOARD)				
	4-382-854-01	SCREW (M3X8), P, SW (+)				
		<CAPACITOR>				
C517	1-106-391-12	MYLAR	0.1MF	10%	200V	
C518	1-128-577-11	ELECT	0.47MF	20%	100V	
C519	1-102-110-00	CERAMIC	220PF	10%	50V	
C520	1-162-318-11	CERAMIC	0.001MF	10%	500V	
C521	1-162-117-00	CERAMIC	100PF	10%	500V	
C522 ⚠	1-162-116-00	CERAMIC	680PF	10%	2KV	
C523 ⚠	1-137-604-11	FILM	0.022MF	2%	2KV	
C524 ⚠	1-162-116-00	CERAMIC	680PF	10%	2KV	
C525 ⚠	1-137-515-11	FILM	0.056MF	3%	400V	
C526	1-137-114-11	FILM	0.68MF	5%	200V	
C527	1-106-343-00	MYLAR	0.001MF	10%	100V	
C528	1-136-105-00	FILM	0.33MF	5%	200V	
C529	1-104-709-11	ELECT	4.7MF	0	160V	
C530	1-137-516-11	FILM	1.2MF	5%	200V	
C531	1-137-116-11	FILM	1MF	5%	200V	
C532	1-107-652-11	ELECT	10MF	20%	250V	
C533 ⚠	1-162-116-00	CERAMIC	680PF	10%	2KV	
C535	1-136-165-00	FILM	0.1MF	5%	50V	
C536	1-124-927-11	ELECT	4.7MF	20%	50V	
C537	1-106-355-12	MYLAR	0.0033MF	10%	200V	
C538	1-130-487-00	MYLAR	0.022MF	5%	50V	
C539	1-136-173-00	FILM	0.47MF	5%	50V	
C542	1-130-471-00	FILM	0.001MF	5%	50V	
C543	1-136-161-00	FILM	0.047MF	5%	50V	
C545	1-126-964-11	ELECT	10MF	20%	50V	
C546	1-130-471-00	MYLAR	0.001MF	5%	50V	
C547	1-106-343-00	FILM	0.001MF	5%	100V	
C548	1-124-902-00	ELECT	0.47MF	20%	50V	
C549	1-130-471-00	MYLAR	0.001MF	5%	50V	
C550	1-104-664-11	ELECT	47MF	20%	25V	
C551	1-104-664-11	ELECT	47MF	20%	25V	
C552	1-126-964-11	ELECT	10MF	20%	50V	
C553	1-136-161-00	FILM	0.047MF	5%	50V	
C554	1-136-161-00	FILM	0.047MF	5%	50V	
C556	1-126-964-11	ELECT	10MF	20%	50V	
C557	1-136-169-00	FILM	0.22MF	5%	50V	
C558	1-129-718-00	FILM	0.022MF	5%	630V	
C559	1-106-387-00	MYLAR	0.068MF	10%	200V	
C560	1-129-898-00	FILM	0.0022MF	5%	630V	
C561	1-102-244-00	CERAMIC	220PF	10%	500V	
C562	1-129-702-00	FILM	0.001MF	10%	630V	
C563	1-102-228-00	CERAMIC	470PF	10%	500V	
C564	1-102-228-00	CERAMIC	470PF	10%	500V	
C565	1-126-941-11	ELECT	470MF	20%	25V	
C566	1-128-528-11	ELECT	470MF	20%	25V	
C567	1-126-925-11	ELECT	470MF	20%	10V	
C568	1-102-244-00	CERAMIC	220PF	10%	500V	
C569	1-162-114-00	CERAMIC	0.0047MF		2KV	
C570	1-162-116-00	CERAMIC	680PF	10%	2KV	
C571	1-162-116-00	CERAMIC	680PF	10%	2KV	
C572	1-106-359-00	MYLAR	0.0047MF	10%	200V	
C573	1-126-923-11	ELECT	220MF	20%	10V	
C574	1-107-650-11	ELECT	3.3MF	20%	250V	
C575	1-102-038-00	CERAMIC	0.001MF		500V	
C576	1-124-797-11	ELECT	0.47MF	20%	160V	
C577	1-123-950-00	ELECT	47MF	20%	250V	
C578	1-123-024-21	ELECT	33MF		160V	
C579	1-104-664-11	ELECT	47MF	20%	25V	
C581	1-130-491-00	MYLAR	0.047MF	5%	50V	
C582	1-126-803-11	ELECT	47MF	20%	50V	
C583	1-102-114-00	CERAMIC	470PF	10%	50V	
C584	1-136-171-00	FILM	0.33MF	5%	50V	
C585	1-128-528-11	ELECT	470MF	20%	25V	
C586	1-126-969-11	ELECT	220MF	20%	50V	
C590	1-130-471-00	MYLAR	0.001MF	5%	50V	
C591	1-130-467-00	MYLAR	470PF	5%	50V	
C593	1-104-664-11	ELECT	47MF	20%	25V	
C594	1-104-664-11	ELECT	47MF	20%	25V	
C595	1-104-664-11	ELECT	47MF	20%	25V	
C596	1-124-126-00	ELECT	47MF	20%	16V	
C597	1-109-889-11	ELECT	1MF	20%	50V	
C598	1-124-126-00	ELECT	47MF	20%	16V	
C599	1-106-222-00	MYLAR	0.12MF	10%	100V	
C600	1-126-157-11	ELECT	10MF	20%	16V	
C601	1-126-967-11	ELECT	47MF	20%	50V	
C602	1-126-157-11	ELECT	10MF	20%	16V	
C603	1-126-157-11	ELECT	10MF	20%	16V	
C604	1-126-967-11	ELECT	47MF	20%	50V	
C605	1-126-967-11	ELECT	47MF	20%	50V	
C606	1-124-126-00	ELECT	47MF	20%	16V	
C607	1-126-953-11	ELECT	2200MF	20%	35V	
C608	1-126-952-11	ELECT	1000MF	20%	35V	
C609	1-126-953-11	ELECT	2200MF	20%	35V	
C610	1-136-165-00	FILM	0.1MF	5%	50V	
C611	1-136-165-00	FILM	0.1MF	5%	50V	
C612	1-126-157-11	ELECT	10MF	20%	16V	
C613	1-126-953-11	ELECT	2200MF	20%	35V	
C614	1-124-126-00	ELECT	47MF	20%	16V	
C615	1-136-177-00	FILM	1MF	5%	50V	
C617	1-107-910-11	ELECT	100MF	20%	50V	
C618	1-130-495-00	MYLAR	0.1MF	5%	50V	
C619	1-130-495-00	MYLAR	0.1MF	5%	50V	
C620	1-124-598-11	ELECT	22MF	20%	25V	
C621	1-124-598-11	ELECT	22MF	20%	25V	
C622	1-126-934-11	ELECT	220MF	20%	16V	
C630	1-126-964-11	ELECT	10MF	20%	50V	
C631	1-104-665-11	ELECT	100MF	20%	25V	
C680	1-162-117-00	CERAMIC	100PF	10%	500V	
C681	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C682	1-136-165-00	FILM	0.1MF	5%	50V	
C683	1-124-234-00	ELECT	22MF	20%	16V	
C684	1-102-119-00	CERAMIC	0.0015MF	10%	50V	
C801	1-124-126-00	ELECT	47MF	20%	16V	
C802	1-124-126-00	ELECT	47MF	20%	16V	
C804	1-136-153-00	FILM	0.01MF	5%	50V	
C805	1-136-165-00	FILM	0.1MF	5%	50V	
C806	1-136-165-00	FILM	0.1MF	5%	50V	
C807	1-126-952-11	ELECT	1000MF	20%	16V	
C809	1-136-104-00	FILM	0.16MF	5%	200V	
C810	1-136-177-00	FILM	1MF	5%	50V	
C811	1-106-343-00	MYLAR	0.001MF	10%	200V	
C812	1-126-964-11	ELECT	10MF	20%	50V	
C813	1-136-161-00	FILM	0.047MF	5%	50V	
C814	1-126-964-11	ELECT	10MF	20%	50V	
C815	1-126-964-11	ELECT	10MF	20%	50V	

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REF.NO.	PART NO.	DESCRIPTION			REMARK
C816	1-124-234-00	ELECT	22MF	20%	16V
C817	1-124-927-11	ELECT	4.7MF	20%	50V
C818	1-124-126-00	ELECT	47MF	20%	16V
C819	1-136-165-00	FILM	0.1MF	5%	50V
C820	1-126-935-11	ELECT	470MF	20%	16V
C822	1-126-933-11	ELECT	100MF	20%	10V
C823	1-106-371-00	MYLAR	0.015MF	10%	100V
C901	1-136-173-00	FILM	0.47MF	5%	50V
C902	1-126-964-11	ELECT	10MF	20%	50V
C903	1-136-169-00	FILM	0.22MF	5%	50V
C904	1-130-471-00	MYLAR	0.001MF	5%	50V
C905	1-126-964-11	ELECT	10MF	20%	50V
C906	1-124-798-11	ELECT	1MF	20%	160V
C907	1-124-902-00	ELECT	0.47MF	20%	50V
C908	1-102-112-00	CERAMIC	330PF	10%	50V
C910	1-136-103-00	FILM	0.1MF	5%	200V
C911	1-136-165-00	FILM	0.1MF	5%	50V
C914	1-106-367-00	MYLAR	0.01MF	10%	100V
C915	1-124-903-11	ELECT	1MF	20%	50V
C917	1-130-471-00	MYLAR	0.001MF	5%	50V
C918	1-102-074-00	CERAMIC	0.001MF	10%	50V
C920	1-136-601-11	FILM	0.01MF	5%	630V
C923	1-130-471-00	MYLAR	0.001MF	5%	50V
C925	1-126-964-11	ELECT	10MF	20%	50V
C926	1-136-165-00	FILM	0.1MF	5%	50V
C927	1-136-171-00	FILM	0.33MF	5%	50V
C928	1-126-964-11	ELECT	10MF	20%	50V
C930	1-136-153-00	FILM	0.01MF	5%	50V
C932	1-130-475-00	MYLAR	0.0022MF	5%	50V
C1601	1-102-106-00	CERAMIC	100PF	10%	50V
C1602	1-102-114-00	CERAMIC	470PF	10%	50V
C1603	1-130-481-00	MYLAR	0.0068MF	5%	50V
C1604	1-124-903-11	ELECT	1MF	20%	50V
C1605	1-124-925-11	ELECT	2.2MF	20%	50V
C1606	1-130-483-00	MYLAR	0.01MF	5%	50V
C1607	1-124-903-11	ELECT	1MF	20%	50V
C1608	1-130-479-00	MYLAR	0.0047MF	5%	50V
C1610	1-130-499-00	MYLAR	0.22MF	5%	50V
C1611	1-130-481-00	MYLAR	0.0068MF	5%	50V
C1612	1-124-927-11	ELECT	4.7MF	20%	50V
C1613	1-130-475-00	MYLAR	0.0022MF	5%	50V
C1614	1-126-964-11	ELECT	10MF	20%	50V
C1620	1-136-161-00	FILM	0.047MF	5%	50V
C1621	1-102-110-00	CERAMIC	220PF	10%	50V
C1627	1-136-173-00	FILM	0.47MF	5%	50V
C1670	1-126-964-11	ELECT	10MF	20%	50V
C1671	1-101-361-00	CERAMIC	150PF	5%	50V
C1672	1-101-361-00	CERAMIC	150PF	5%	50V
C1673	1-101-361-00	CERAMIC	150PF	5%	50V
C1674	1-124-925-11	ELECT	2.2MF	20%	50V
C1675	1-136-153-00	FILM	0.01MF	5%	50V
C1676	1-136-169-00	FILM	0.22MF	5%	50V
C1677	1-126-964-11	ELECT	10MF	20%	50V
C1678	1-102-110-00	CERAMIC	220PF	10%	50V
C1680	1-124-925-11	ELECT	2.2MF	20%	50V
C1681	1-124-126-00	ELECT	47MF	20%	16V
C1813	1-136-756-11	FILM	0.24MF	5%	200V
C1825	1-106-391-12	MYLAR	0.1MF	10%	200V

<CONNECTOR>

CN501	*1-573-986-11	PIN, CONNECTOR (PC BOARD) 5P
CN507	*1-573-964-11	PIN, CONNECTOR (PC BOARD) 6P
CN508	1-573-297-11	CONNECTOR, BOARD TO BOARD 18P
CN509	1-573-297-11	CONNECTOR, BOARD TO BOARD 18P
CN510	1-573-297-11	CONNECTOR, BOARD TO BOARD 18P
CN511	1-573-297-11	CONNECTOR, BOARD TO BOARD 18P
CN512	1-573-297-11	CONNECTOR, BOARD TO BOARD 18P
CN513	*1-564-508-11	PLUG, CONNECTOR 5P
CN514	*1-564-507-11	PLUG, CONNECTOR 4P
CN515	*1-564-508-11	PLUG, CONNECTOR 5P
CN520	*1-564-512-11	PLUG, CONNECTOR 9P
CN530	1-573-296-11	CONNECTOR, BOARD TO BOARD 10P
CN1804	*1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P
CN1805	1-573-297-11	CONNECTOR, BOARD TO BOARD 18P
DY1	*1-580-798-11	CONNECTOR PIN (DY) 6P
DY-2	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P

<DIODE>

D505	8-719-110-78	DIODE RD33ESB2
D506	8-719-911-19	DIODE 1SS119
D507	8-719-911-19	DIODE 1SS119
D508	8-719-911-19	DIODE 1SS119
D509	8-719-970-87	DIODE ERA38-06
D510	8-719-302-43	DIODE EL1Z
D511	8-719-300-33	DIODE RU-3AM
D512	8-719-979-85	DIODE EGP20G
D513	8-719-312-72	DIODE RU30A
D515	8-719-302-43	DIODE EL1Z
D516	8-719-018-82	DIODE RGP02-20EL-6394
D517	8-719-110-03	DIODE RD7.5ESB2
D519	8-719-911-19	DIODE 1SS119
D520	8-719-908-03	DIODE GP08D
D521	8-719-110-78	DIODE RD33ESB2
D522	8-719-911-19	DIODE 1SS119
D523	8-719-911-19	DIODE 1SS119
D524	8-719-028-72	DIODE RGP02-17EL-6433
D525	8-719-109-88	DIODE RD5.6ESB1
D526	8-719-109-93	DIODE RD6.2ESB2
D530	8-719-510-48	DIODE D1N20R
D531	8-719-510-48	DIODE D1N20R
D532	8-719-110-90	DIODE RD39ESB4
D533	8-719-911-19	DIODE 1SS119
D534	8-719-911-19	DIODE 1SS119
D535	8-719-911-19	DIODE 1SS119
D550	8-719-911-19	DIODE 1SS119
D551	8-719-981-50	DIODE RB-100A
D650	8-719-109-88	DIODE RD5.6ESB1
D652	8-719-911-19	DIODE 1SS119
D653	8-719-911-19	DIODE 1SS119
D654	8-719-109-54	DIODE RD2.2ESB2
D655	8-719-911-19	DIODE 1SS119
D680	8-719-109-88	DIODE RD5.6ESB1
D681	8-719-911-19	DIODE 1SS119
D682	8-719-911-19	DIODE 1SS119 (PVM-2950Q/2950QM(AUS))
D683	8-719-911-19	DIODE 1SS119 (PVM-2950Q/2950QM(AUS))
D684	8-719-911-19	DIODE 1SS119
D801	8-719-987-87	DIODE ERA85-009
D804	8-719-911-19	DIODE 1SS119
D805	8-719-801-35	THYRISTOR SHOR3D42
D806	8-719-980-78	DIODE ERA83-006
D807	8-719-980-78	DIODE ERA83-006
D808	8-719-911-19	DIODE 1SS119
D809	8-719-911-19	DIODE 1SS119
D810	8-719-911-19	DIODE 1SS119
D811	8-719-302-43	DIODE EL1Z

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
D812	8-719-911-19	DIODE 1SS119	
D813	8-719-109-88	DIODE RD5.6ESB1	
D814	8-719-121-24	DIODE RD9.1ESL	
D816	8-719-911-19	DIODE 1SS119	
D817	8-719-911-19	DIODE 1SS119	
• D901	8-719-911-19	DIODE 1SS119	
D902	8-719-109-96	DIODE RD6.8ESB1	
D903	8-719-302-43	DIODE EL1Z	
D906	8-719-980-78	DIODE ERA83-006	
• D907	8-719-911-19	DIODE 1SS119	
D908	8-719-911-19	DIODE 1SS119	
D1601	8-719-911-19	DIODE 1SS119	
D1670	8-719-109-84	DIODE RD5.1ESB1	
D1671	8-719-911-19	DIODE 1SS119	
D1672	8-719-109-84	DIODE RD5.1ESB1	
D1810	8-719-908-03	DIODE GP08D	
D1811	8-719-908-03	DIODE GP08D	
		<FERRITE BEAD>	
FB501	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
		<IC>	
IC501	1-809-845-11	MODULE, PROTECTOR PM-30	
IC502	8-759-103-93	IC UPC393C	
IC503	8-759-103-93	IC UPC393C	
IC504	8-759-192-71	IC STV9379	
	4-382-854-01	SCREW (M3X8), P, SW (+); IC504	
IC505	8-759-168-24	IC TA8200AH	
IC506	8-759-231-58	IC TA7812S	
IC507	8-759-231-58	IC TA7812S	
IC508	8-759-231-58	IC TA7812S	
IC510	8-759-231-53	IC TA7805S	
IC511	8-749-920-58	IC SI-3090CA	
IC512	1-809-054-11	MODULE, PROTECTOR PM-21	
IC802	8-752-052-88	IC CXA1526P	
IC803	8-759-135-80	IC UPC358C	
IC901	8-759-135-80	IC UPC358C	
IC903	8-759-103-93	IC UPC393C	
IC1601	8-759-083-85	IC LA7856A	
IC1603	8-759-135-80	IC UPC358C	
IC1604	8-759-135-80	IC UPC358C	
IC1605	8-759-902-21	IC SN74LS221N	
		<COIL>	
L501	1-402-830-11	COIL, CHOKE 68UH	
L502	1-412-549-31	INDUCTOR 1MMH	
L503	⚠1-460-197-11	COIL, FERRITE (PMC)	
L504	1-459-123-00	COIL, DUST CORE (PAC)	
L506	1-459-104-00	COIL, DUST CORE	
• L508	1-412-519-11	INDUCTOR 3.3UH	
L509	1-412-519-11	INDUCTOR 3.3UH	
L510	1-412-531-31	INDUCTOR 33UH	
L511	1-410-071-11	INDUCTOR 10MMH	
• L512	1-412-552-31	INDUCTOR 2.2MMH	
L513	1-412-531-31	INDUCTOR 33UH	
L514	1-412-531-31	INDUCTOR 33UH	
L520	1-412-531-31	INDUCTOR 33UH	
L801	1-459-592-11	COIL (WITH CORE) (PMC)	
L802	1-459-087-00	COIL, HCC DUST CORE 3.9MMH	
L901	1-410-093-11	INDUCTOR 33MMH	
L902	1-459-075-00	COIL, DYNAMIC CONVERSION CHOKE	
L1801	1-459-104-00	COIL, DUST CORE	
L1802	1-459-390-00	COIL (WITH CORE)	
		<TRANSISTOR>	
Q504	8-729-119-80	TRANSISTOR 2SC2688-LK	
Q505	8-729-011-07	TRANSISTOR 2SC4763(LBSONY)	
	4-382-854-01	SCREW (M3X8), P, SW (+); Q505	
Q506	8-729-019-71	TRANSISTOR 2SK1916-53-F50	
	4-382-854-01	SCREW (M3X8), P, SW (+); Q506	
Q508	8-729-140-96	TRANSISTOR 2SD774-34	
Q509	8-729-140-93	TRANSISTOR 2SB733-34	
Q510	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q511	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q512	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q513	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q514	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q515	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q516	8-729-011-06	TRANSISTOR 2SC3840K	
Q517	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q518	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q519	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q520	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q521	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q522	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q523	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q530	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q531	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q532	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q801	8-729-900-89	TRANSISTOR DTC144ES	
Q802	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q803	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q804	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q805	8-729-140-93	TRANSISTOR 2SB733-34	
Q806	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q807	8-729-140-97	TRANSISTOR 2SB734-34	
Q808	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q809	8-729-019-01	TRANSISTOR 2SD2394-EF	
Q810	8-729-140-96	TRANSISTOR 2SD774-34	
Q811	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q901	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q902	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q903	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q904	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q905	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q906	8-729-119-80	TRANSISTOR 2SC2688-LK	
Q907	8-729-119-80	TRANSISTOR 2SC2688-LK	
Q908	8-729-140-97	TRANSISTOR 2SB734-34	
Q909	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q910	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q911	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q912	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q913	8-729-931-45	TRANSISTOR IRF614	
Q914	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1604	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1605	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1606	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1670	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1671	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1672	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1673	8-729-900-89	TRANSISTOR DTC144ES	
Q1674	8-729-900-89	TRANSISTOR DTC144ES	
Q1675	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1676	8-729-119-78	TRANSISTOR 2SC2785-HFE	

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

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<RESISTOR>				
R522	1-249-411-11	CARBON	330	5%	1/4W	
R523	1-249-423-11	CARBON	3.3K	5%	1/4W	
R524	1-260-331-11	CARBON	1.8K	5%	1/2W	
R525	1-216-480-11	METAL OXIDE	820	5%	3W	F
R526	1-216-480-11	METAL OXIDE	820	5%	3W	F
R527	1-249-401-11	CARBON	47	5%	1/4W	
R528	1-249-397-11	CARBON	22	5%	1/4W	F
R529	1-249-393-11	CARBON	10	5%	1/4W	F
R530	1-249-393-11	CARBON	10	5%	1/4W	F
R531	1-249-425-11	CARBON	4.7K	5%	1/4W	
R532	1-247-887-00	CARBON	220K	5%	1/4W	
R533	1-215-878-00	METAL OXIDE	33K	5%	1W	F
R534	1-249-437-11	CARBON	47K	5%	1/4W	
R535	1-215-473-00	METAL	150K	1%	1/4W	
R536	1-215-445-00	METAL	10K	1%	1/4W	
R537	1-215-463-00	METAL	56K	1%	1/4W	
R538	1-215-449-00	METAL	15K	1%	1/4W	
R539	1-249-425-11	CARBON	4.7K	5%	1/4W	
R542	1-249-434-11	CARBON	27K	5%	1/4W	
R545	1-247-889-00	CARBON	270K	5%	1/4W	
R546	1-249-441-11	CARBON	100K	5%	1/4W	
R547	1-249-441-11	CARBON	100K	5%	1/4W	
R548	1-215-449-00	METAL	15K	1%	1/4W	
R549	1-249-441-11	CARBON	100K	5%	1/4W	
R550	1-215-441-00	METAL	6.8K	1%	1/4W	
R551	1-215-457-00	METAL	33K	1%	1/4W	
R552	1-215-465-00	METAL	68K	1%	1/4W	
R553	1-247-903-00	CARBON	1M	5%	1/4W	
R554	1-249-419-11	CARBON	1.5K	5%	1/4W	
R555	1-249-438-11	CARBON	56K	5%	1/4W	
R556	1-249-423-11	CARBON	3.3K	5%	1/4W	
R557	1-249-435-11	CARBON	33K	5%	1/4W	
R558	1-249-433-11	CARBON	22K	5%	1/4W	
R559	1-249-417-11	CARBON	1K	5%	1/4W	
R560	1-249-429-11	CARBON	10K	5%	1/4W	
R561	1-249-437-11	CARBON	47K	5%	1/4W	
R562	1-249-437-11	CARBON	47K	5%	1/4W	
R563	1-249-441-11	CARBON	100K	5%	1/4W	
R564	1-249-415-11	CARBON	680	5%	1/4W	
R565	1-215-450-00	METAL	16K	1%	1/4W	
R566	1-249-410-11	CARBON	270	5%	1/4W	
R567	1-249-402-11	CARBON	56	5%	1/4W	
R568	1-249-411-11	CARBON	330	5%	1/4W	
R569	1-249-441-11	CARBON	100K	5%	1/4W	
R570	1-249-441-11	CARBON	100K	5%	1/4W	
R571	1-249-441-11	CARBON	100K	5%	1/4W	
R572	1-216-439-00	METAL OXIDE	12K	5%	1W	F
R573	1-216-459-00	METAL OXIDE	2.7K	5%	2W	F
R574	1-216-459-00	METAL OXIDE	2.7K	5%	2W	F
R575	1-202-826-00	SOLID	4.7K	20%	1/2W	
R576	1-259-882-11	CARBON	3.3M	5%	1/4W	
R577	1-249-443-11	CARBON	0.47	5%	1/4W	F
R578	1-249-443-11	CARBON	0.47	5%	1/4W	F
R580	1-249-496-11	CARBON	100K	5%	1/2W	
⧓R581 ⚠						
R582	1-249-417-11	CARBON	1K	5%	1/4W	
⧓R583 ⚠						
R584	1-249-425-11	CARBON	4.7K	5%	1/4W	
R585	1-249-425-11	CARBON	4.7K	5%	1/4W	
R586	1-247-903-00	CARBON	1M	5%	1/4W	
R587	1-249-440-11	CARBON	82K	5%	1/4W	
R588	1-215-869-11	METAL OXIDE	1K	5%	1W	F
R589	1-249-441-11	CARBON	100K	5%	1/4W	
R590	1-247-901-11	CARBON	820K	5%	1/4W	
R591	1-215-881-11	METAL OXIDE	15	5%	2W	F
R592	1-260-320-11	CARBON	220	5%	1/2W	
R598	1-215-882-00	METAL OXIDE	22	5%	2W	F
R599	1-249-437-11	CARBON	47K	5%	1/4W	
R600	1-249-429-11	CARBON	10K	5%	1/4W	
R601	1-249-437-11	CARBON	47K	5%	1/4W	
R602	1-215-453-00	METAL	22K	1%	1/4W	
R604	1-215-455-00	METAL	27K	1%	1/4W	
R605	1-216-370-11	METAL OXIDE	1.2	5%	2W	F
R606	1-215-913-11	METAL OXIDE	220	5%	3W	F
R607	1-249-383-11	CARBON	1.5	5%	1/4W	F
R610	1-249-432-11	CARBON	18K	5%	1/4W	
R611	1-249-432-11	CARBON	18K	5%	1/4W	
R612	1-249-425-11	CARBON	4.7K	5%	1/4W	
R613	1-249-437-11	CARBON	47K	5%	1/4W	
R614	1-249-421-11	CARBON	2.2K	5%	1/4W	
R615	1-249-409-11	CARBON	220	5%	1/4W	
R620	1-249-424-11	CARBON	3.9K	5%	1/4W	
R621	1-249-424-11	CARBON	3.9K	5%	1/4W	
R622	1-249-410-11	CARBON	270	5%	1/4W	
R623	1-249-425-11	CARBON	4.7K	5%	1/4W	
R624	1-249-425-11	CARBON	4.7K	5%	1/4W	
R625	1-249-410-11	CARBON	270	5%	1/4W	
R626	1-249-433-11	CARBON	22K	5%	1/4W	
R627	1-249-433-11	CARBON	22K	5%	1/4W	
R628	1-249-441-11	CARBON	100K	5%	1/4W	
R629	1-247-883-00	CARBON	150K	5%	1/4W	
R630	1-249-398-11	CARBON	27	5%	1/4W	F
R631	1-249-441-11	CARBON	100K	5%	1/4W	
R632	1-249-385-11	CARBON	2.2	5%	1/4W	F
R633	1-249-385-11	CARBON	2.2	5%	1/4W	F
R634	1-215-888-00	METAL OXIDE	220	5%	2W	F
R635	1-215-444-00	METAL	9.1K	1%	1/4W	
R636	1-215-425-00	METAL	1.5K	1%	1/4W	
R637	1-249-429-11	CARBON	10K	5%	1/4W	
R638	1-249-417-11	CARBON	1K	5%	1/4W	
R650	1-216-382-11	METAL OXIDE	0.27	5%	3W	F
R651	1-249-417-11	CARBON	1K	5%	1/4W	F
R652	1-249-405-11	CARBON	100	5%	1/4W	F
R670	1-249-409-11	CARBON	220	5%	1/4W	
R671	1-249-429-11	CARBON	10K	5%	1/4W	
R680	1-249-426-11	CARBON	5.6K	5%	1/4W	
R682	1-249-409-11	CARBON	220	5%	1/4W	F
R683	1-249-429-11	CARBON	10K	5%	1/4W	
R684	1-249-425-11	CARBON	4.7K	5%	1/4W	
R685	1-249-425-11	CARBON	4.7K	5%	1/4W	
R686	1-249-423-11	CARBON	3.3K	5%	1/4W	
R687	1-247-807-31	CARBON	100	5%	1/4W	
R688	1-216-455-11	METAL OXIDE	560	5%	2W	F
R689	1-215-471-00	METAL	120K	1%	1/4W	
R801	1-249-409-11	CARBON	220	5%	1/4W	
R802	1-249-409-11	CARBON	220	5%	1/4W	
R804	1-247-891-00	CARBON	330K	5%	1/4W	
R808	1-215-463-00	METAL	56K	1%	1/4W	
R809	1-249-423-11	CARBON	3.3K	5%	1/4W	
R810	1-249-413-11	CARBON	470	5%	1/4W	
R811	1-249-434-11	CARBON	27K	5%	1/4W	
R812	1-249-438-11	CARBON	56K	5%	1/4W	
R813	1-249-417-11	CARBON	1K	5%	1/4W	
R814	1-249-429-11	CARBON	10K	5%	1/4W	
R815	1-249-427-11	CARBON	6.8K	5%	1/4W	
R816	1-249-425-11	CARBON	4.7K	5%	1/4W	

• 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.

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R817	1-249-422-11	CARBON	2.7K	5%	1/4W	
R818	1-249-417-11	CARBON	1K	5%	1/4W	
R820	1-249-417-11	CARBON	1K	5%	1/4W	
R821	1-216-379-11	METAL OXIDE	6.8	5%	2W	F
R822	1-249-423-11	CARBON	3.3K	5%	1/4W	
* R824	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R825	1-215-857-11	METAL OXIDE	10	5%	1W	F
R826	1-249-404-00	CARBON	82	5%	1/4W	
* R827	1-216-438-11	METAL OXIDE	8.2K	5%	1W	F
R828	1-249-441-11	CARBON	100K	5%	1/4W	
R829	1-249-414-11	CARBON	560	5%	1/4W	
R830	1-249-411-11	CARBON	330	5%	1/4W	
R831	1-249-426-11	CARBON	5.6K	5%	1/4W	
R832	1-215-864-00	METAL OXIDE	150	5%	1W	F
R833	1-249-421-11	CARBON	2.2K	5%	1/4W	
R834	1-249-433-11	CARBON	22K	5%	1/4W	
R835	1-249-393-11	CARBON	10	5%	1/4W	
R836	1-249-435-11	CARBON	33K	5%	1/4W	
R837	1-249-435-11	CARBON	33K	5%	1/4W	
R838	1-215-857-11	METAL OXIDE	10	5%	1W	F
R839	1-249-410-11	CARBON	270	5%	1/4W	
R840	1-249-429-11	CARBON	10K	5%	1/4W	
R841	1-249-437-11	CARBON	47K	5%	1/4W	
R842	1-249-429-11	CARBON	10K	5%	1/4W	
R843	1-249-421-11	CARBON	2.2K	5%	1/4W	
R844	1-249-421-11	CARBON	2.2K	5%	1/4W	
R845	1-249-417-11	CARBON	1K	5%	1/4W	
R901	1-249-425-11	CARBON	4.7K	5%	1/4W	
R902	1-249-438-11	CARBON	56K	5%	1/4W	
R903	1-249-429-11	CARBON	10K	5%	1/4W	
R904	1-249-429-11	CARBON	10K	5%	1/4W	
R905	1-249-429-11	CARBON	10K	5%	1/4W	
R906	1-249-425-11	CARBON	4.7K	5%	1/4W	
R907	1-249-429-11	CARBON	10K	5%	1/4W	
R908	1-249-434-11	CARBON	27K	5%	1/4W	
R909	1-215-465-00	METAL	68K	1%	1/4W	
R910	1-215-457-00	METAL	33K	1%	1/4W	
R911	1-249-441-11	CARBON	100K	5%	1/4W	
R912	1-249-429-11	CARBON	10K	5%	1/4W	
R913	1-249-425-11	CARBON	4.7K	5%	1/4W	
R914	1-249-401-11	CARBON	47	5%	1/4W	
R915	1-249-425-11	CARBON	4.7K	5%	1/4W	
R916	1-249-421-11	CARBON	2.2K	5%	1/4W	
R917	1-249-439-11	CARBON	68K	5%	1/4W	
R918	1-249-413-11	CARBON	470	5%	1/4W	
R919	1-249-437-11	CARBON	47K	5%	1/4W	
R920	1-249-418-11	CARBON	1.2K	5%	1/4W	F
R921	1-215-876-00	METAL OXIDE	15K	5%	1W	F
R922	1-215-870-11	METAL OXIDE	1.5K	5%	1W	F
R923	1-249-429-11	CARBON	10K	5%	1/4W	
R924	1-249-423-11	CARBON	3.3K	5%	1/4W	
R925	1-249-415-11	CARBON	680	5%	1/4W	
R926	1-249-409-11	CARBON	220	5%	1/4W	
R927	1-249-429-11	CARBON	10K	5%	1/4W	
R928	1-249-421-11	CARBON	2.2K	5%	1/4W	
* R929	1-249-429-11	CARBON	10K	5%	1/4W	
R930	1-249-434-11	CARBON	27K	5%	1/4W	
R931	1-249-421-11	CARBON	2.2K	5%	1/4W	
R933	1-249-421-11	CARBON	2.2K	5%	1/4W	
R934	1-249-439-11	CARBON	68K	5%	1/4W	
R935	1-249-429-11	CARBON	10K	5%	1/4W	
R936	1-249-429-11	CARBON	10K	5%	1/4W	
R937	1-249-421-11	CARBON	2.2K	5%	1/4W	
R938	1-247-807-31	CARBON	100	5%	1/4W	
R939	1-249-405-11	CARBON	100	5%	1/4W	F
R940	1-249-405-11	CARBON	100	5%	1/4W	F
R941	1-247-807-31	CARBON	100	5%	1/4W	
R944	1-249-432-11	CARBON	18K	5%	1/4W	
R945	1-247-895-00	CARBON	470K	5%	1/4W	
R946	1-249-425-11	CARBON	4.7K	5%	1/4W	
R947	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R948	1-249-435-11	CARBON	33K	5%	1/4W	
R950	1-249-425-11	CARBON	4.7K	5%	1/4W	
R952	1-247-807-31	CARBON	100	5%	1/4W	
R953	1-247-889-00	CARBON	270K	5%	1/4W	
R954	1-247-889-00	CARBON	270K	5%	1/4W	
R956	1-249-433-11	CARBON	22K	5%	1/4W	
R1601	1-215-461-00	METAL	47K	1%	1/4W	
R1602	1-249-429-11	CARBON	10K	5%	1/4W	
R1603	1-215-451-00	METAL	18K	1%	1/4W	
R1604	1-215-445-00	METAL	10K	1%	1/4W	
R1605	1-215-421-00	METAL	1K	1%	1/4W	
R1606	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1607	1-249-436-11	CARBON	39K	5%	1/4W	
R1608	1-215-445-00	METAL	10K	1%	1/4W	
R1609	1-215-445-00	METAL	10K	1%	1/4W	
R1610	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1611	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1612	1-215-467-00	METAL	82K	1%	1/4W	
R1613	1-215-469-00	METAL	100K	1%	1/4W	
R1614	1-249-430-11	CARBON	12K	5%	1/4W	
R1615	1-249-431-11	CARBON	15K	5%	1/4W	
R1616	1-247-807-31	CARBON	100	5%	1/4W	
R1617	1-249-431-11	CARBON	15K	5%	1/4W	
R1618	1-249-429-11	CARBON	10K	5%	1/4W	
R1619	1-249-437-11	CARBON	47K	5%	1/4W	
R1622	1-249-428-11	CARBON	8.2K	5%	1/4W	
R1623	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1624	1-249-429-11	CARBON	10K	5%	1/4W	
R1625	1-249-433-11	CARBON	22K	5%	1/4W	
R1626	1-249-440-11	CARBON	82K	5%	1/4W	
R1631	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1635	1-215-437-00	METAL	4.7K	1%	1/4W	
R1636	1-247-887-00	CARBON	220K	5%	1/4W	
R1637	1-215-439-00	METAL	5.6K	1%	1/4W	
R1638	1-215-439-00	METAL	5.6K	1%	1/4W	
R1639	1-249-434-11	CARBON	27K	5%	1/4W	
R1640	1-215-433-00	METAL	3.3K	1%	1/4W	
R1641	1-215-437-00	METAL	4.7K	1%	1/4W	
R1642	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1643	1-215-455-00	METAL	27K	1%	1/4W	
R1660	1-215-424-00	METAL	1.3K	1%	1/4W	
R1661	1-215-451-00	METAL	18K	1%	1/4W	
R1662	1-249-441-11	CARBON	100K	5%	1/4W	
R1663	1-249-428-11	CARBON	8.2K	5%	1/4W	
R1664	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1665	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1666	1-249-429-11	CARBON	10K	5%	1/4W	
R1667	1-247-807-31	CARBON	100	5%	1/4W	
R1668	1-249-429-11	CARBON	10K	5%	1/4W	
R1669	1-249-437-11	CARBON	47K	5%	1/4W	
R1670	1-249-429-11	CARBON	10K	5%	1/4W	
R1671	1-249-429-11	CARBON	10K	5%	1/4W	
R1672	1-249-433-11	CARBON	22K	5%	1/4W	
R1673	1-215-445-00	METAL	10K	1%	1/4W	
R1674	1-249-421-11	CARBON	2.2K	5%	1/4W	

A M

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
R1675	1-249-429-11	CARBON	10K	5%	1/4W	
R1676	1-215-426-00	METAL	1.6K	1%	1/4W	
R1677	1-215-445-00	METAL	10K	1%	1/4W	
R1678	1-215-465-00	METAL	68K	1%	1/4W	
R1680	1-249-417-11	CARBON	1K	5%	1/4W	
R1681	1-249-422-11	CARBON	2.7K	5%	1/4W	
R1682	1-249-441-11	CARBON	100K	5%	1/4W	
R1683	1-215-449-00	METAL	15K	1%	1/4W	
R1684	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1685	1-215-428-00	METAL	2K	1%	1/4W	
R1686	1-215-451-00	METAL	18K	1%	1/4W	
R1687	1-215-451-00	METAL	18K	1%	1/4W	
R1688	1-215-442-00	METAL	7.5K	1%	1/4W	
R1690	1-249-431-11	CARBON	15K	5%	1/4W	
R1699	1-215-449-00	METAL	15K	1%	1/4W	
R1832	1-215-890-11	METAL OXIDE	470	5%	2W	F
R1833	1-249-389-11	CARBON	4.7	5%	1/4W	F
R1834	1-215-883-11	METAL OXIDE	33	5%	2W	F (PVM-2950Q/2950QM(AEP))
	1-216-361-00	METAL OXIDE	0.22	5%	2W	F (PVM-2950QM(AUS))
R1835	1-215-889-00	METAL OXIDE	330	5%	2W	F (PVM-2950Q/2950QM(AEP))
	1-216-886-11	METAL OXIDE	100	5%	2W	F (PVM-2950QM(AUS))
R1836	1-215-887-00	METAL OXIDE	150	5%	2W	F (PVM-2950Q/2950QM(AEP))
	1-215-889-00	METAL OXIDE	330	5%	2W	F (PVM-2950QM(AUS))
R1837	1-215-909-11	METAL OXIDE	47	5%	3W	F

<VARIABLE RESISTOR>

RV1601	1-228-996-00	RES, ADJ, METAL GLAZE	47K
RV1602	1-228-993-00	RES, ADJ, METAL GLAZE	4.7K
RV1603	1-228-994-00	RES, ADJ, METAL GLAZE	10K

<SPARK GAP>

SG501	1-519-422-11	GAP, SPARK	

<TRANSFORMER>

T501	1-437-217-11	TRANSFORMER, HORIZONTAL DRIVE	
T502 ⚠	1-460-199-11	TRANSFORMER (HLT)	
T503	1-424-584-11	TRANSFORMER, DYNAMIC FOCUS	
T504 ⚠	X-4032-250-1	TRANSFORMER ASSY, FLYBACK	
T1801	1-423-622-11	TRANSFORMER, FERRITE (VPOT)	

<THERMISTOR>

TH501	1-807-925-11	THERMISTOR	

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*A-1301-950-A	M BOARD, COMPLETE		
	**********		
*1-526-950-11	SOCKET, IC 64P		

<CAPACITOR>

C801	1-126-933-11	ELECT	100MF	20%	10V
C802	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C803	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C804	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C805	1-137-399-11	FILM	0.1MF	5%	50V
C806	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C807	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C808	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C809	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C810	1-126-933-11	ELECT	100MF	20%	10V
C811	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C812	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C814	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C815	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C816	1-124-925-11	ELECT	2.2MF	20%	50V
C817	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V

<CONNECTOR>

CN801	1-573-965-21	PIN, CONNECTOR (PC BOARD) 50P
CN802	*1-564-520-11	PLUG, CONNECTOR 5P
CN803	1-564-523-11	PLUG, CONNECTOR 8P

<DIODE>

D801	8-719-404-46	DIODE MA110
D802	8-719-404-46	DIODE MA110
D803	8-719-404-46	DIODE MA110
D804	8-719-404-46	DIODE MA110
D805	8-719-404-46	DIODE MA110
D806	8-719-404-46	DIODE MA110
D807	8-719-404-46	DIODE MA110
D808	8-719-404-46	DIODE MA110
D809	8-719-404-46	DIODE MA110
D810	8-719-404-46	DIODE MA110
D811	8-719-404-46	DIODE MA110
D812	8-719-404-46	DIODE MA110
D813	8-719-404-46	DIODE MA110
D814	8-719-404-46	DIODE MA110

<IC>

IC801	8-759-261-31	IC HD6473256P10-PVM1
IC802	8-759-925-74	IC SN74HC04ANS
IC803	8-759-083-63	IC UPD6453GT-625-E1
IC804	8-759-162-80	IC MM1170BFB
IC805	8-759-032-26	IC MC74HC125AF
IC806	8-759-156-54	IC X25040SI

<COIL>

L801	1-408-421-00	INDUCTOR	100UH
L802	1-408-421-00	INDUCTOR	100UH
L803	1-410-476-11	INDUCTOR	33UH

<RESISTOR>

R801	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R802	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R805	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R806	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R807	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R808	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R809	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R810	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R811	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R812	1-216-049-00	METAL GLAZE	1K	5%	1/10W

REF.NO.	PART NO.	DESCRIPTION				REMARK
R813	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R814	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R815	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R816	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R817	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R818	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R819	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R821	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R822	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R823	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R824	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R825	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R826	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R827	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R828	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R829	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R830	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R831	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R832	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R833	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R834	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R835	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R836	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R837	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R838	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R839	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R840	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R841	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R842	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R843	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R844	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R845	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R846	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R848	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R849	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R850	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R851	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R852	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R853	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R854	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R855	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R856	1-216-073-00	METAL GLAZE	10K	5%	1/10W	

<CRYSTAL>

X801	1-760-040-11	VIBRATOR, CRYSTAL

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*A-1341-764-A DX BOARD, COMPLETE
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<CAPACITOR>

C1501	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1502	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1503	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1504	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C1505	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C1506	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C1507	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C1508	1-136-171-00	FILM	0.33MF	5%	50V
C1509	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C1510	1-163-011-11	CERAMIC CHIP	0.0015MF	10%	50V
C1511	1-163-011-11	CERAMIC CHIP	0.0015MF	10%	50V
C1512	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1513	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C1515	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1517	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1518	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1519	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C1520	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C1521	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C1522	1-136-171-00	FILM	0.33MF	5%	50V
C1523	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C1524	1-163-011-11	CERAMIC CHIP	0.0015MF	10%	50V
C1525	1-163-011-11	CERAMIC CHIP	0.0015MF	10%	50V
C1526	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1528	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1529	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1534	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1537	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1538	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1539	1-104-665-11	ELECT	100MF	20%	25V
C1540	1-104-665-11	ELECT	100MF	20%	25V
C1541	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1542	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1543	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1545	1-124-927-11	ELECT	4.7MF	20%	50V
C1550	1-136-177-00	FILM	1MF	5%	50V
C1551	1-126-157-11	ELECT	10MF	20%	16V
C1552	1-136-159-00	FILM	0.033MF	5%	50V
C1590	1-162-638-11	CERAMIC CHIP	1MF		16V
C1591	1-162-638-11	CERAMIC CHIP	1MF		16V
C1592	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V

<CONNECTOR>

CN1501	1-573-965-21	PIN, CONNECTOR (PC BOARD) 50P

<DIODE>

D1501	8-719-404-46	DIODE MA110
D1502	8-719-037-03	DIODE RD6.8SB1-T1
D1505	8-719-404-46	DIODE MA110
D1506	8-719-404-46	DIODE MA110
D1507	8-719-404-46	DIODE MA110
D1508	8-719-404-46	DIODE MA110
D1590	8-719-033-52	DIODE RD5.1SB1-T1
D1591	8-719-404-46	DIODE MA110

<IC>

IC1501	8-752-347-92	IC CXD2018Q
IC1502	8-752-347-92	IC CXD2018Q
IC1503	8-759-970-89	IC BA10358F
IC1504	8-759-970-89	IC BA10358F
IC1505	8-759-970-89	IC BA10358F
IC1506	8-752-058-68	IC CXA1315M
IC1507	8-759-032-16	IC MC74HC08AF-T2
IC1508	8-759-032-16	IC MC74HC08AF-T2
IC1509	8-759-925-80	IC SN74HC14ANS
IC1511	8-759-032-20	IC MC74HC32AF
IC1514	8-759-236-47	IC TC74HC164AF(EL)
IC1516	8-759-236-47	IC TC74HC164AF(EL)
IC1518	8-759-970-89	IC BA10358F
IC1590	8-759-970-89	IC BA10358F

DX G1 G (PVM-2950Q)

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

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<COIL>				
L1501	1-408-409-00	INDUCTOR	10UH			
L1502	1-408-409-00	INDUCTOR	10UH			
L1503	1-408-409-00	INDUCTOR	10UH			
L1504	1-408-409-00	INDUCTOR	10UH			
		<TRANSISTOR>				
Q1501	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q1502	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q1503	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q1504	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q1590	8-729-216-22	TRANSISTOR 2SA1162-G				
Q1591	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
		<RESISTOR>				
R1501	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1502	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R1503	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1504	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1505	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1506	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R1507	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R1508	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R1509	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1510	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1512	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1513	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1514	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1515	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R1517	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1518	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1519	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R1520	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R1521	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R1522	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1523	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1524	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1525	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1526	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1527	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1528	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R1529	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R1530	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R1532	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R1533	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1534	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1535	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1536	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1539	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1541	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1542	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1547	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1548	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R1549	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1550	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1551	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1552	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1553	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1554	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1560	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1561	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R1562	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1570	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R1571	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1572	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1573	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1574	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1575	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R1576	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1577	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1578	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1579	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1590	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R1591	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R1592	1-216-668-11	METAL CHIP	5.1K	0.50%	1/10W	
R1593	1-216-668-11	METAL CHIP	5.1K	0.50%	1/10W	
R1594	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1595	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1596	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1597	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1598	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
		**********				
	*A-1311-363-A	G1 BOARD, COMPLETE (PVM-2950Q)				
		**********				
	*A-1311-365-A	G1 BOARD, COMPLETE (PVM-2950QM)				
		**********				
		<CAPACITOR>				
C601	⚠1-162-599-12	CERAMIC	0.0047MF	20%	400V	
		<CONNECTOR>				
CN602	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P				
CN603	*1-573-963-11	PIN, CONNECTOR (PC BOARD) 3P				
CN604	*1-573-963-11	PIN, CONNECTOR (PC BOARD) 3P				
CN610	*1-691-134-11	PIN, CONNECTOR (PC BOARD) 2P				
CN611	*1-537-711-11	TAB, FASTEN (PCB)				
		<THERMISTOR>				
THP601	⚠1-809-539-11	THERMISTOR, POSITIVE (PVM-2950Q)				
	⚠1-809-827-11	THERMISTOR, POSITIVE (PVM-2950QM)				
		**********				
	*A-1316-181-A	G BOARD, COMPLETE (PVM-2950Q)				
		**********				
	1-533-223-11	CLIP, FUSE				
	4-382-854-11	SCREW (M3X10), P, SW (+)				
		<CAPACITOR>				
C602	⚠1-104-706-11	FILM	0.22MF	20%	250V	
C603	⚠1-104-706-11	FILM	0.22MF	20%	250V	
C604	⚠1-162-599-12	CERAMIC	0.0047MF	20%	400V	
C605	⚠1-162-599-12	CERAMIC	0.0047MF	20%	400V	
C606	1-104-346-11	ELECT	1000MF		200V	
C610	1-136-067-00	FILM	0.0036MF	3%	2KV	
C611	1-106-357-00	MYLAR	0.0039MF	10%	100V	
C612	1-124-927-11	ELECT	4.7MF	20%	50V	
C613	1-126-948-11	ELECT	100MF	20%	35V	
C615	⚠1-162-599-12	CERAMIC	0.0047MF	20%	400V	

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G (PVM-2950Q)

REF.NO.	PART NO.	DESCRIPTION			REMARK
C616	⚠1-162-599-12	CERAMIC	0.0047MF	20%	400V
C617	1-102-116-00	CERAMIC	680PF	10%	50V
C620	1-161-754-00	CERAMIC	0.001MF	10%	2KV
C621	1-125-494-11	ELECT(BLOCK)	560MF	20%	160V
C622	1-126-933-11	ELECT	100MF	20%	10V
C625	1-162-318-11	CERAMIC	0.001MF	10%	500V
C626	1-126-943-11	ELECT	2200MF	20%	25V
C627	1-162-318-11	CERAMIC	0.001MF	10%	500V
C628	1-126-943-11	ELECT	2200MF	20%	25V
C629	1-162-318-11	CERAMIC	0.001MF	10%	500V
C630	1-126-953-11	ELECT	2200MF	20%	35V
C640	1-126-972-31	ELECT	1000MF	20%	50V
C642	1-126-967-11	ELECT	47MF	20%	50V
C643	1-126-964-11	ELECT	10MF	20%	50V
C644	1-126-964-11	ELECT	10MF	20%	50V
C645	1-126-933-11	ELECT	100MF	20%	10V
C646	1-126-964-11	ELECT	10MF	20%	50V
C647	1-126-933-11	ELECT	100MF	20%	16V
C660	⚠1-161-742-00	CERAMIC	0.0022MF	20%	400V
C661	⚠1-161-742-00	CERAMIC	0.0022MF	20%	400V

<CONNECTOR>

CN601	*1-580-843-11	PIN, CONNECTOR (POWER)
CN605	*1-564-508-11	PLUG, CONNECTOR 5P
CN606	*1-573-986-11	PIN, CONNECTOR (PC BOARD) 5P
CN607	*1-564-507-11	PLUG, CONNECTOR 4P
CN609	*1-691-134-11	PIN, CONNECTOR (PC BOARD) 2P

<DIODE>

D601	8-719-022-99	DIODE D6SB60L
D604	8-719-979-58	DIODE EGP10D
D605	8-719-911-19	DIODE 1SS119
D607	8-719-979-58	DIODE EGP10D
D620	8-719-029-04	DIODE D5L60
D621	8-719-920-67	DIODE ERC91-02
D622	8-719-045-48	DIODE FML-G12S
D623	8-719-920-67	DIODE ERC91-02
D625	8-719-911-19	DIODE 1SS119
D640	8-719-511-40	DIODE S1VB40
D641	8-719-911-19	DIODE 1SS119
D643	8-719-911-19	DIODE 1SS119
D645	8-719-110-36	DIODE RD13ESB2
D646	8-719-911-19	DIODE 1SS119
D647	8-719-109-89	DIODE RD5.6ESB2
D648	8-719-911-19	DIODE 1SS119

<FUSE>

F601	⚠1-532-748-11	FUSE, GLASS TUBE (6.3A/125V)

<FERRITE BEAD>

FB601	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH
FB602	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH
FB603	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH
FB604	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH
FB605	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH
FB606	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH
FB607	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH
FB608	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH
FB609	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH
FB620	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH
FB621	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH
FB622	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH
FB623	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH

<IC>

IC601	8-749-010-03	IC STR-M6515A
IC620	8-749-920-61	IC SE-135N
IC641	8-759-701-56	IC NJM78M05FA

<COIL>

L620	1-406-663-21	COIL, CHOKE	47UH
L621	1-412-533-21	INDUCTOR	47UH
L622	1-412-533-21	INDUCTOR	47UH
L623	1-412-527-11	INDUCTOR	15UH
L624	1-412-527-11	INDUCTOR	15UH

<PHOTO COUPLER>

PH602	⚠8-749-923-50	PHOTO COUPLER PC111YS

<IC LINK>

PS620	⚠1-532-686-21	LINK, IC 2.7A
PS622	⚠1-532-686-21	LINK, IC 2.7A

<TRANSISTOR>

Q601	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q620	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q621	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q641	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q642	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q643	8-729-140-96	TRANSISTOR 2SD774-34
Q644	8-729-140-97	TRANSISTOR 2SB734-34
Q645	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q646	8-729-119-78	TRANSISTOR 2SC2785-HFE

<RESISTOR>

R601	⚠1-202-719-00	SOLID	1M	20%	1/2W	
R602	1-202-981-11	WIREWOUND	0.82	5%	20W	
R603	1-215-928-71	METAL OXIDE	68K	5%	3W	F
R605	1-216-381-11	METAL OXIDE	0.22	5%	3W	F
R606	1-216-381-11	METAL OXIDE	0.22	5%	3W	F
R607	1-249-415-11	CARBON	680	5%	1/4W	
R608	1-249-418-11	CARBON	1.2K	5%	1/4W	
R610	1-249-424-11	CARBON	3.9K	5%	1/4W	F
R611	1-249-424-11	CARBON	3.9K	5%	1/4W	F
R613	1-249-417-11	CARBON	1K	5%	1/4W	
R614	1-249-388-11	CARBON	3.9	5%	1/4W	F
R615	1-249-417-11	CARBON	1K	5%	1/4W	
R619	1-249-421-11	CARBON	2.2K	5%	1/4W	
R620	⚠1-218-265-11	METAL	8.2M	5%	1W	
R627	1-249-377-11	CARBON	0.47	5%	1/4W	F
R628	1-249-377-11	CARBON	0.47	5%	1/4W	F
R629	1-249-377-11	CARBON	0.47	5%	1/4W	F
R630	1-249-437-11	CARBON	47K	5%	1/4W	
R631	1-215-472-00	METAL	130K	1%	1/4W	
R632	1-216-386-11	METAL OXIDE	0.56	5%	3W	F
R633	1-216-386-11	METAL OXIDE	0.56	5%	3W	F
R634	1-215-445-00	METAL	10K	1%	1/4W	
R636	1-216-482-11	METAL OXIDE	1.8K	5%	3W	F
R637	1-216-357-00	METAL OXIDE	4.7	5%	1W	F

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G (PVM-2950Q) G (PVM-2950QM)

REF.NO.	PART NO.	DESCRIPTION				REMARK
R638	1-249-438-11	CARBON	56K	5%	1/4W	
R642	1-216-422-11	METAL OXIDE	18	5%	1W	F
R643	1-249-424-11	CARBON	3.9K	5%	1/4W	
R644	1-249-429-11	CARBON	10K	5%	1/4W	
R645	1-249-433-11	CARBON	22K	5%	1/4W	
R646	1-249-424-11	CARBON	3.9K	5%	1/4W	
R647	1-249-429-11	CARBON	10K	5%	1/4W	
R648	1-249-417-11	CARBON	1K	5%	1/4W	
R649	1-247-895-00	CARBON	470K	5%	1/4W	
R650	1-249-438-11	CARBON	56K	5%	1/4W	
R651	1-249-431-11	CARBON	15K	5%	1/4W	
R652	1-249-425-11	CARBON	4.7K	5%	1/4W	
R653	1-249-437-11	CARBON	47K	5%	1/4W	
R654	1-249-429-11	CARBON	10K	5%	1/4W	
R655	1-249-424-11	CARBON	3.9K	5%	1/4W	
R656	1-249-431-11	CARBON	15K	5%	1/4W	
R660 ⚠	1-247-903-00	CARBON	1M	5%	1/4W	
		<RELAY>				
RY601 ⚠	1-515-738-11	RELAY				
RY602 ⚠	1-515-738-11	RELAY				
		<TRANSFORMER>				
T601 ⚠	1-424-248-11	TRANSFORMER, LINE FILTER				
T602 ⚠	1-424-248-11	TRANSFORMER, LINE FILTER				
T603 ⚠	1-426-946-11	TRANSFORMER, POWER				
T604 ⚠	1-426-943-11	TRANSFORMER, CONVERTER (SRT)				
		<VARISTOR>				
VDR601 ⚠	1-809-786-11	VARISTOR				
		**********				
	*A-1316-182-A	G BOARD, COMPLETE (PVM-2950QM)				
		**********				
	1-533-223-11	CLIP, FUSE				
	4-382-854-11	SCREW (M3X10), P, SW (+)				
		<CAPACITOR>				
C602 ⚠	1-104-706-11	FILM	0.22MF	20%	250V	
C603 ⚠	1-104-706-11	FILM	0.22MF	20%	250V	
C604 ⚠	1-162-599-12	CERAMIC	0.0047MF	20%	400V	
C605 ⚠	1-162-599-12	CERAMIC	0.0047MF	20%	400V	
C607	1-137-485-11	FILM	0.68MF	10%	630V	
C608	1-137-485-11	FILM	0.68MF	10%	630V	
C609	1-136-206-11	FILM	0.033MF	10%	630V	
C610	1-136-539-11	FILM	0.0022MF	3%	2KV	
C611	1-106-357-00	MYLAR	0.0039MF	10%	100V	
C612	1-124-927-11	ELECT	4.7MF	20%	50V	
C613	1-126-949-11	ELECT	220MF	20%	35V	
C614	1-126-233-11	ELECT	22MF	20%	50V	
C615 ⚠	1-162-599-12	CERAMIC	0.0047MF	20%	400V	
C616 ⚠	1-162-599-12	CERAMIC	0.0047MF	20%	400V	
C618	1-162-115-00	CERAMIC	330PF	10%	2KV	
C620	1-161-754-00	CERAMIC	0.001MF	10%	2KV	
C621	1-125-473-11	ELECT(BLOCK)	1000MF	20%	160V	
C622	1-126-933-11	ELECT	100MF	20%	10V	
C623	1-130-783-00	MYLAR	0.33MF	10%	100V	
C624	1-107-637-11	ELECT	22MF	20%	160V	
C625	1-162-318-11	CERAMIC	0.001MF	10%	500V	
C626	1-104-868-11	ELECT	2200MF	20%	25V	
C627	1-162-318-11	CERAMIC	0.001MF	10%	500V	
C628	1-104-868-11	ELECT	2200MF	20%	25V	
C629	1-162-318-11	CERAMIC	0.001MF	10%	500V	
C630	1-104-877-11	ELECT	2200MF	20%	35V	
C640	1-126-952-11	ELECT	1000MF	20%	35V	
C642	1-126-967-11	ELECT	47MF	20%	50V	
C643	1-126-964-11	ELECT	10MF	20%	50V	
C644	1-126-964-11	ELECT	10MF	20%	50V	
C645	1-126-933-11	ELECT	100MF	20%	10V	
C646	1-126-964-11	ELECT	10MF	20%	50V	
C647	1-126-933-11	ELECT	100MF	20%	16V	
C660 ⚠	1-161-742-00	CERAMIC	0.0022MF	20%	400V	
C661 ⚠	1-161-742-00	CERAMIC	0.0022MF	20%	400V	
		<CONNECTOR>				
CN601	*1-580-843-11	PIN, CONNECTOR (POWER)				
CN605	*1-564-508-11	PLUG, CONNECTOR 5P				
CN606	*1-573-986-11	PIN, CONNECTOR (PC BOARD) 5P				
CN607	*1-564-507-11	PLUG, CONNECTOR 4P				
CN609	*1-691-134-11	PIN, CONNECTOR (PC BOARD) 2P				
		<DIODE>				
D601	8-719-510-53	DIODE D4SB60L				
D603	8-719-311-31	DIODE RU-1P				
D604	8-719-979-58	DIODE EGP10D				
D605	8-719-911-19	DIODE 1SS119				
D607	8-719-979-58	DIODE EGP10D				
D620	8-719-029-04	DIODE D5L60				
D621	8-719-045-48	DIODE FML-G12S				
D622	8-719-045-48	DIODE FML-G12S				
D623	8-719-920-67	DIODE ERC91-02				
D625	8-719-911-19	DIODE 1SS119				
D640	8-719-511-40	DIODE S1VB40				
D641	8-719-911-19	DIODE 1SS119				
D643	8-719-911-19	DIODE 1SS119				
D645	8-719-110-36	DIODE RD13ESB2				
D646	8-719-911-19	DIODE 1SS119				
		<FUSE>				
F601 ⚠	1-576-232-21	FUSE (H.B.C.) (5.0A/250V)				
		<FERRITE BEAD>				
FB601	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH				
FB602	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH				
FB603	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH				
FB604	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH				
FB605	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH				
FB606	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH				
FB607	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH				
FB608	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH				
FB609	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH				
FB620	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH				
FB621	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH				
FB622	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH				
FB623	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH				
		<IC>				
IC601	8-749-925-03	IC STR-M6524				
IC620	8-749-010-02	IC STR-S3135				

The components identified by shading and mark ⚠ are critical for safety.
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Ne les remplacer que par une piece portant le numero specifie.

G (PVM-2950QM) C

REF.NO.	PART NO.	DESCRIPTION				REMARK
IC641	8-759-701-56	IC NJM78M05FA				
		<COIL>				
L601	1-459-946-11	COIL, NOISE FILTER				
L620	1-406-663-21	COIL, CHOKE	47UH			
L621	1-412-533-21	INDUCTOR	47UH			
L622	1-412-533-21	INDUCTOR	47UH			
L623	1-412-527-11	INDUCTOR	15UH			
L624	1-412-527-11	INDUCTOR	15UH			
		<PHOTO COUPLER>				
PH602 ⚠	8-749-923-50	PHOTO COUPLER PC111YS				
		<IC LINK>				
PS620 ⚠	1-532-686-21	LINK, IC 2.7A				
PS622 ⚠	1-532-686-21	LINK, IC 2.7A				
		<TRANSISTOR>				
Q601	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q602	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q620	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q621	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q641	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q642	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q643	8-729-140-96	TRANSISTOR 2SD774-34				
		<RESISTOR>				
R601 ⚠	1-202-719-00	SOLID	1M	20%	1/2W	
R602	1-215-929-11	METAL OXIDE	100K	5%	3W	F
R603	1-216-492-11	METAL OXIDE	82K	5%	3W	F
R604	1-215-929-11	METAL OXIDE	100K	5%	3W	F
R605	1-216-382-11	METAL OXIDE	0.27	5%	3W	F
R606	1-216-383-11	METAL OXIDE	0.33	5%	3W	F
R607	1-249-415-11	CARBON	680	5%	1/4W	
R608	1-249-418-11	CARBON	1.2K	5%	1/4W	
R609	1-249-437-11	CARBON	47K	5%	1/4W	F
R610	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R611	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R613	1-249-417-11	CARBON	1K	5%	1/4W	
R614	1-249-385-11	CARBON	2.2	5%	1/4W	F
R615	1-249-417-11	CARBON	1K	5%	1/4W	
R616	1-249-417-11	CARBON	1K	5%	1/4W	
R617	1-247-811-31	CARBON	150	5%	1/4W	
R618	1-249-419-11	CARBON	1.5K	5%	1/4W	
R619	1-249-421-11	CARBON	2.2K	5%	1/4W	
R627	1-249-377-11	CARBON	0.47	5%	1/4W	F
R628	1-249-377-11	CARBON	0.47	5%	1/4W	F
R629	1-249-377-11	CARBON	0.47	5%	1/4W	F
R630	1-249-437-11	CARBON	47K	5%	1/4W	
R631	1-215-472-00	METAL	130K	1%	1/4W	
R632	1-216-386-11	METAL OXIDE	0.56	5%	3W	F
R633	1-216-386-11	METAL OXIDE	0.56	5%	3W	F
R634	1-215-445-00	METAL	10K	1%	1/4W	
R636	1-216-482-11	METAL OXIDE	1.8K	5%	3W	F
R637	1-216-357-00	METAL OXIDE	4.7	5%	1W	F
R638	1-249-433-11	CARBON	22K	5%	1/4W	
R639	1-259-884-11	CARBON	4.7M	5%	1/4W	
R642	1-216-422-11	METAL OXIDE	18	5%	1W	F
R643	1-249-424-11	CARBON	3.9K	5%	1/4W	
R644	1-249-429-11	CARBON	10K	5%	1/4W	
R645	1-249-433-11	CARBON	22K	5%	1/4W	
R646	1-249-424-11	CARBON	3.9K	5%	1/4W	
R647	1-249-429-11	CARBON	10K	5%	1/4W	
R648	1-249-417-11	CARBON	1K	5%	1/4W	
R649	1-247-895-00	CARBON	470K	5%	1/4W	
R650	1-259-881-11	CARBON	2.7M	5%	1/4W	
R660 ⚠	1-247-903-00	CARBON	1M	5%	1/4W	
R661	1-216-492-11	METAL OXIDE	82K	5%	3W	F
		<RELAY>				
RY601 ⚠	1-515-738-11	RELAY				
RY602 ⚠	1-515-738-11	RELAY				
		<TRANSFORMER>				
T601 ⚠	1-426-716-11	TRANSFORMER, LINE FILTER (LFT)				
T602 ⚠	1-426-716-11	TRANSFORMER, LINE FILTER (LFT)				
T603 ⚠	1-426-945-11	TRANSFORMER, POWER				
T604 ⚠	1-426-947-11	TRANSFORMER, CONVERTER (SRT)				
		<VARISTOR>				
VDR601 ⚠	1-810-271-21	VARISTOR ZNR-14DK471U				
		**********				
	*A-1331-344-A	C BOARD, COMPLETE				
		**********				
	4-382-854-11	SCREW (M3X10), P, SW (+)				
		<CAPACITOR>				
C701	1-102-212-00	CERAMIC	820PF	10%	500V	
C702	1-102-116-00	CERAMIC	680PF	10%	50V	
C703	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C704	1-126-964-11	ELECT	10MF	20%	50V	
C705	1-101-004-00	CERAMIC	0.01MF		50V	
C706	1-130-495-00	MYLAR	0.1MF	5%	50V	
C707	1-130-495-00	MYLAR	0.1MF	5%	50V	
C709	1-129-720-00	FILM	0.033MF	10%	400V	
C711	1-136-601-11	FILM	0.01MF	10%	630V	
C713	1-162-116-00	CERAMIC	680PF	10%	2KV	
C714	1-107-654-11	ELECT	33MF	20%	250V	
C715	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C716	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C717	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C719	1-107-651-11	ELECT	4.7MF	20%	250V	
C771	1-102-121-00	CERAMIC	0.0022MF	10%	50V	
C781	1-126-964-11	ELECT	10MF	20%	50V	
C782	1-101-004-00	CERAMIC	0.01MF		50V	
C790	1-102-973-00	CERAMIC	100PF	5%	50V	
C791	1-101-004-00	CERAMIC	0.01MF		50V	
		<CONNECTOR>				
CN702	*1-564-512-11	PLUG, CONNECTOR 9P				
CN703	*1-573-964-11	PIN, CONNECTOR (PC BOARD) 6P				
		<DIODE>				
D704	8-719-911-19	DIODE 1SS119				

C V

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

REF.NO.	PART NO.	DESCRIPTION	REMARK
D705	8-719-911-19	DIODE 1SS119	
D706	8-719-911-19	DIODE 1SS119	
D761	8-719-911-19	DIODE 1SS119	
D762	8-719-911-19	DIODE 1SS119	
D763	8-719-911-19	DIODE 1SS119	
D771	8-719-109-84	DIODE RD5.1ESB1	
D772	8-719-911-19	DIODE 1SS119	
D781	8-719-901-83	DIODE 1SS83	
D782	8-719-901-83	DIODE 1SS83	
D783	8-719-901-83	DIODE 1SS83	
D784	8-719-901-83	DIODE 1SS83	
		<IC>	
IC701	8-759-140-53	IC UPD4053BC	
		<JACK>	
J701	⚠ 1-540-223-11	SOCKET, PICTURE TUBE	
		<COIL>	
L707	1-410-671-31	INDUCTOR 47UH	
		<TRANSISTOR>	
Q701	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q703	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q704	8-729-326-11	TRANSISTOR 2SC2611	
Q705	8-729-326-11	TRANSISTOR 2SC2611	
Q706	8-729-326-11	TRANSISTOR 2SC2611	
Q761	8-729-200-17	TRANSISTOR 2SA1091-O	
Q762	8-729-200-17	TRANSISTOR 2SA1091-O	
Q763	8-729-200-17	TRANSISTOR 2SA1091-O	
Q771	8-729-255-12	TRANSISTOR 2SC2551-O	
Q772	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q773	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q781	8-729-200-17	TRANSISTOR 2SA1091-O	
Q782	8-729-200-17	TRANSISTOR 2SA1091-O	
Q783	8-729-200-17	TRANSISTOR 2SA1091-O	
Q784	8-729-255-12	TRANSISTOR 2SC2551-O	
Q790	8-729-119-76	TRANSISTOR 2SA1175-HFE	
		<RESISTOR>	
R701	1-249-406-11	CARBON 120 5% 1/4W	
R702	1-249-406-11	CARBON 120 5% 1/4W	
R703	1-249-406-11	CARBON 120 5% 1/4W	
R704	1-249-393-11	CARBON 10 5% 1/4W	
R705	1-249-393-11	CARBON 10 5% 1/4W	
R706	1-249-393-11	CARBON 10 5% 1/4W	
R707	1-249-415-11	CARBON 680 5% 1/4W	
R713	1-249-415-11	CARBON 680 5% 1/4W	
R714	1-249-415-11	CARBON 680 5% 1/4W	
R719	1-216-483-11	METAL OXIDE 2.7K 5% 3W	F
R722	1-216-483-11	METAL OXIDE 2.7K 5% 3W	F
R725	1-216-483-11	METAL OXIDE 2.7K 5% 3W	F
R727	1-202-818-00	SOLID 1K 20% 1/2W	
R728	1-202-818-00	SOLID 1K 20% 1/2W	
R729	1-202-818-00	SOLID 1K 20% 1/2W	
R730	1-202-549-00	SOLID 100 10% 1/2W	
R735	1-216-367-11	METAL OXIDE 0.68 5% 2W	F

REF.NO.	PART NO.	DESCRIPTION	REMARK
R739	1-202-813-00	SOLID 22K 20% 1/2W	
R741	1-202-842-11	SOLID 220K 20% 1/2W	
R747	1-202-883-11	SOLID 680K 20% 1/2W	
R748	1-202-838-00	SOLID 100K 20% 1/2W	
R751	1-216-483-11	METAL OXIDE 2.7K 5% 3W	F
R754	1-216-483-11	METAL OXIDE 2.7K 5% 3W	F
R757	1-216-483-11	METAL OXIDE 2.7K 5% 3W	F
R760	1-249-434-11	CARBON 27K 5% 1/4W	
R761	1-260-328-11	CARBON 1K 5% 1/2W	
R762	1-260-328-11	CARBON 1K 5% 1/2W	
R763	1-260-328-11	CARBON 1K 5% 1/2W	
R771	1-249-425-11	CARBON 4.7K 5% 1/4W	
R772	1-249-429-11	CARBON 10K 5% 1/4W	
R773	1-215-904-11	METAL OXIDE 100K 5% 2W	F
R774	1-247-895-00	CARBON 470K 5% 1/4W	
R775	1-249-425-11	CARBON 4.7K 5% 1/4W	
R776	1-249-425-11	CARBON 4.7K 5% 1/4W	
R777	1-247-887-00	CARBON 220K 5% 1/4W	
R781	1-260-352-11	CARBON 100K 5% 1/2W	
R782	1-260-352-11	CARBON 100K 5% 1/2W	
R783	1-260-352-11	CARBON 100K 5% 1/2W	
R784	1-215-904-11	METAL OXIDE 100K 5% 2W	F
R790	1-249-427-11	CARBON 6.8K 5% 1/4W	
R791	1-247-807-31	CARBON 100 5% 1/4W	
R792	1-249-438-11	CARBON 56K 5% 1/4W	
R793	1-249-432-11	CARBON 18K 5% 1/4W	
R794	1-249-438-11	CARBON 56K 5% 1/4W	
R795	1-249-419-11	CARBON 1.5K 5% 1/4W	
R796	1-247-807-31	CARBON 100 5% 1/4W	
		<VARIABLE RESISTOR>	
RV707	1-241-714-11	RES, ADJ, METAL FILM 110M	
RV710	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M	
		<TAB>	
TB704	1-695-915-11	TAB (CONTACT)	

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	*A-1342-246-A	V BOARD, COMPLETE
		**********
	4-382-854-11	SCREW (M3X10), P, SW (+)
		<CAPACITOR>
C951	1-102-074-00	CERAMIC 0.001MF 10% 50V
C952	1-102-125-00	CERAMIC 0.0047MF 10% 50V
C961	1-161-830-00	CERAMIC 0.0047MF 500V
C962	1-102-951-00	CERAMIC 15PF 5% 50V
C963	1-107-638-11	ELECT 33MF 20% 160V
C964	1-126-933-11	ELECT 100MF 20% 16V
C968	1-106-383-00	MYLAR 0.047MF 200V
C969	1-124-668-11	ELECT 2.2MF 20% 160V
C970	1-106-391-12	MYLAR 0.1MF 10% 200V
C971	1-126-157-11	ELECT 10MF 20% 16V
C972	1-107-883-11	ELECT 330MF 20% 16V
C973	1-106-383-00	MYLAR 0.047MF 200V
C974	1-102-959-00	CERAMIC 22PF 5% 50V
C975	1-126-933-11	ELECT 100MF 20% 16V
C976	1-126-157-11	ELECT 10MF 20% 16V
C977	1-102-963-00	CERAMIC 33PF 5% 50V

V VC

REF.NO.	PART NO.	DESCRIPTION				REMARK
C978	1-130-471-00	MYLAR	0.001MF	5%	50V	
C979	1-130-471-00	MYLAR	0.001MF	5%	50V	
C980	1-126-964-11	ELECT	10MF	20%	50V	
		<CONNECTOR>				
CN901	*1-564-512-11	PLUG, CONNECTOR 9P				
		<DIODE>				
D961	8-719-911-19	DIODE 1SS119				
D963	8-719-911-19	DIODE 1SS119				
D964	8-719-911-19	DIODE 1SS119				
D965	8-719-911-19	DIODE 1SS119				
D966	8-719-911-19	DIODE 1SS119				
D967	8-719-110-88	DIODE RD39ESB2				
D968	8-719-110-88	DIODE RD39ESB2				
		<COIL>				
L962	1-408-416-00	INDUCTOR	39UH			
		<TRANSISTOR>				
Q961	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q962	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q963	8-729-809-26	TRANSISTOR 2SA1606-E				
Q964	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q965	8-729-809-29	TRANSISTOR 2SC4159-E				
Q966	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q967	8-729-142-86	TRANSISTOR 2SC3733				
Q968	8-729-119-78	TRANSISTOR 2SC2785-HFE				
		<RESISTOR>				
R951	1-249-434-11	CARBON	27K	5%	1/4W	
R952	1-249-423-11	CARBON	3.3K	5%	1/4W	
R953	1-249-423-11	CARBON	3.3K	5%	1/4W	
R954	1-247-903-00	CARBON	1M	5%	1/4W	
R955	1-249-421-11	CARBON	2.2K	5%	1/4W	
R962	1-249-409-11	CARBON	220	5%	1/4W	
R963	1-249-419-11	CARBON	1.5K	5%	1/4W	
R964	1-260-311-11	CARBON	39	5%	1/2W	
R965	1-249-414-11	CARBON	560	5%	1/4W	F
R966	1-249-418-11	CARBON	1.2K	5%	1/4W	
R968	1-249-418-11	CARBON	1.2K	5%	1/4W	
R969	1-249-384-11	CARBON	1.8	5%	1/4W	F
R970	1-249-435-11	CARBON	33K	5%	1/4W	
R972	1-249-432-11	CARBON	18K	5%	1/4W	
R974	1-216-476-11	METAL OXIDE	180	5%	3W	F
R975	1-249-417-11	CARBON	1K	5%	1/4W	F
R976	1-249-432-11	CARBON	18K	5%	1/4W	
R977	1-249-438-11	CARBON	56K	5%	1/4W	
R978	1-249-430-11	CARBON	12K	5%	1/4W	
R979	1-249-414-11	CARBON	560	5%	1/4W	
R980	1-249-420-11	CARBON	1.8K	5%	1/4W	
R981	1-249-415-11	CARBON	680	5%	1/4W	
R982	1-249-384-11	CARBON	1.8	5%	1/4W	F
R983	1-249-441-11	CARBON	100K	5%	1/4W	
R984	1-247-807-31	CARBON	100	5%	1/4W	
R985	1-249-400-11	CARBON	39	5%	1/4W	F
R986	1-249-435-11	CARBON	33K	5%	1/4W	
R987	1-249-428-11	CARBON	8.2K	5%	1/4W	
R988	1-249-415-11	CARBON	680	5%	1/4W	
R989	1-249-413-11	CARBON	470	5%	1/4W	
R990	1-216-475-11	METAL OXIDE	120	5%	3W	F
R991	1-249-409-11	CARBON	220	5%	1/4W	

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*A-1347-093-A VC BOARD, COMPLETE
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		<CAPACITOR>				
C1801	1-124-126-00	ELECT	47MF	20%	16V	
C1803	1-124-126-00	ELECT	47MF	20%	16V	
C1804	1-124-126-00	ELECT	47MF	20%	16V	
C1805	1-136-157-00	FILM	0.022MF	5%	50V	
C1808	1-130-471-00	MYLAR	0.001MF	5%	50V	
C1809	1-130-471-00	MYLAR	0.001MF	5%	50V	
C1810	1-136-171-00	FILM	0.33MF	5%	50V	
C1811	1-136-171-00	FILM	0.33MF	5%	50V	
C1812	1-126-320-11	ELECT	10MF	20%	16V	
C1817	1-104-665-11	ELECT	100MF	20%	25V	
C1820	1-107-710-11	ELECT	100MF	20%	35V	
C1850	1-136-153-00	FILM	0.01MF	5%	50V	
		<CONNECTOR>				
CN801	1-573-300-11	CONNECTOR, BOARD TO BOARD 18P				
CN1850	1-564-517-11	PLUG, CONNECTOR 2P				
		<DIODE>				
D1801	8-719-109-93	DIODE RD6.2ESB2				
D1802	8-719-109-93	DIODE RD6.2ESB2				
D1806	8-719-911-19	DIODE 1SS119				
D1817	8-719-987-87	DIODE ERA85-009				
D1818	8-719-987-87	DIODE ERA85-009				
D1822	8-719-109-93	DIODE RD6.2ESB2				
D1823	8-719-109-93	DIODE RD6.2ESB2				
D1824	8-719-987-87	DIODE ERA85-009				
D1850	8-719-911-19	DIODE 1SS119				
		<IC>				
IC1801	8-759-231-53	IC TA7805S				
IC1802	8-759-135-80	IC UPC358C				
IC1803	8-759-902-21	IC SN74LS221N				
IC1850	8-759-603-37	IC M5216P				
		<TRANSISTOR>				
Q1801	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1802	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q1803	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1804	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q1805	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1806	8-729-385-82	TRANSISTOR 2SB858-C				
Q1807	8-729-809-26	TRANSISTOR 2SA1606-E				
Q1808	8-729-809-29	TRANSISTOR 2SC4159-E				
Q1809	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q1810	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1811	8-729-208-71	TRANSISTOR 2SC3298B-O				
Q1850	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1851	8-729-119-78	TRANSISTOR 2SC2785-HFE				

VC H3

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<RESISTOR>				
R1801	1-215-866-11	METAL OXIDE	330	5%	1W	F
R1802	1-247-887-00	CARBON	220K	5%	1/4W	
R1803	1-215-467-00	METAL	82K	1%	1/4W	
R1806	1-217-477-00	FUSIBLE	4.7	5%	1W	F
R1808	1-247-887-00	CARBON	220K	5%	1/4W	
R1811	1-249-429-11	CARBON	10K	5%	1/4W	
R1812	1-249-417-11	CARBON	1K	5%	1/4W	
R1813	1-215-473-00	METAL	150K	1%	1/4W	
R1814	1-249-429-11	CARBON	10K	5%	1/4W	
R1818	1-213-070-00	FUSIBLE	27	5%	1W	F
R1819	1-215-913-11	METAL OXIDE	220	5%	3W	F
R1820	1-216-451-11	METAL OXIDE	120	5%	2W	F
R1822	1-249-409-11	CARBON	220	5%	1/4W	F
R1823	1-249-401-11	CARBON	47	5%	1/4W	F
R1825	1-215-455-00	METAL	27K	1%	1/4W	
R1828	1-215-866-11	METAL OXIDE	330	5%	1W	F
R1829	1-213-070-00	FUSIBLE	27	5%	1W	F
R1830	1-217-477-00	FUSIBLE	4.7	5%	1W	F
R1831	1-216-429-00	METAL OXIDE	270	5%	1W	F
R1846	1-249-429-11	CARBON	10K	5%	1/4W	
R1850	1-249-417-11	CARBON	1K	5%	1/4W	
R1851	1-215-451-00	METAL	18K	1%	1/4W	
R1852	1-215-455-00	METAL	27K	1%	1/4W	
R1853	1-215-452-00	METAL	20K	1%	1/4W	
R1854	1-215-447-00	METAL	12K	1%	1/4W	
R1855	1-215-445-00	METAL	10K	1%	1/4W	
R1856	1-215-427-00	METAL	1.8K	1%	1/4W	
R1857	1-249-422-11	CARBON	2.7K	5%	1/4W	
R1858	1-249-429-11	CARBON	10K	5%	1/4W	
R1859	1-249-422-11	CARBON	2.7K	5%	1/4W	
R1860	1-249-429-11	CARBON	10K	5%	1/4W	
		<VARIABLE RESISTOR>				
RV1801	1-241-766-11	RES, ADJ, CERMET 47K				

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*A-1372-005-A H3 BOARD, COMPLETE
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		<CAPACITOR>			
C871	1-126-924-11	ELECT	330MF	20%	10V
C872	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C873	1-126-952-11	ELECT	1000MF	20%	16V
C874	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C875	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
		<CONNECTOR>			
CN871	*1-564-506-11	PLUG, CONNECTOR 3P			
CN872	1-564-511-11	PLUG, CONNECTOR 8P			
CN873	*1-564-513-11	PLUG, CONNECTOR 10P			
CN874	*1-564-509-11	PLUG, CONNECTOR 6P			
CN875	1-564-505-11	PLUG, CONNECTOR 2P			
CN877	*1-573-299-11	CONNECTOR, BOARD TO BOARD 10P			
		<DIODE>			
D871	8-719-404-46	DIODE MA110			
D872	8-719-404-46	DIODE MA110			
D873	8-719-404-46	DIODE MA110			
D874	8-719-404-46	DIODE MA110			
D875	8-719-404-46	DIODE MA110			
D876	8-719-404-46	DIODE MA110			
		<IC>			
IC871	8-759-165-26	IC SC402130B			
		<COIL>			
L871	1-408-421-00	INDUCTOR	100UH		
L872	1-408-429-00	INDUCTOR	470UH		
		<TRANSISTOR>			
Q871	8-729-901-01	TRANSISTOR DTC144EK			
Q872	8-729-901-98	TRANSISTOR 2SA1036K-R			
Q873	8-729-901-98	TRANSISTOR 2SA1036K-R			
Q874	8-729-901-01	TRANSISTOR DTC144EK			
Q875	8-729-901-01	TRANSISTOR DTC144EK			
Q876	8-729-901-01	TRANSISTOR DTC144EK			
Q877	8-729-901-01	TRANSISTOR DTC144EK			
Q878	8-729-901-04	TRANSISTOR DTA114EK			
		<RESISTOR>			
JR871	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR872	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR873	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR874	1-216-296-91	METAL GLAZE	0	5%	1/8W
JR875	1-216-295-91	METAL GLAZE	0	5%	1/10W
R871	1-216-294-00	METAL GLAZE	10M	5%	1/8W
R872	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R873	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R874	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R875	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R876	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R877	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R878	1-216-009-00	METAL GLAZE	22	5%	1/10W
R879	1-216-005-00	METAL GLAZE	15	5%	1/10W
R880	1-216-009-00	METAL GLAZE	22	5%	1/10W
R881	1-216-009-00	METAL GLAZE	22	5%	1/10W
R882	1-216-009-00	METAL GLAZE	22	5%	1/10W
R883	1-216-009-00	METAL GLAZE	22	5%	1/10W
R884	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R885	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R886	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R887	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R888	1-216-073-00	METAL GLAZE	10K	5%	1/10W
		<CRYSTAL>			
X871	1-577-082-11	VIBRATOR, CERAMIC			

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UA UJ

REF.NO.	PART NO.	DESCRIPTION			REMARK
	*A-1373-467-A	UA BOARD, COMPLETE			
		**********			
		<CAPACITOR>			
C171	1-126-933-11	ELECT	100MF	20% 10V	
C172	1-126-964-11	ELECT	10MF	20% 50V	
C173	1-163-031-11	CERAMIC CHIP	0.01MF	50V	
C174	1-126-964-11	ELECT	10MF	20% 50V	
C175	1-126-096-11	ELECT	10MF	20% 25V	
C176	1-126-096-11	ELECT	10MF	20% 25V	
C177	1-163-031-11	CERAMIC CHIP	0.01MF	50V	
C178	1-163-009-11	CERAMIC CHIP	0.001MF	10% 50V	
		<CONNECTOR>			
CN171	1-691-803-11	SOCKET, DIN			
CN172	*1-564-520-11	PLUG, CONNECTOR 5P			
CN173	*1-564-518-11	PLUG, CONNECTOR 3P			
CN175	*1-564-520-11	PLUG, CONNECTOR 5P			
		<DIODE>			
D171	8-719-110-17	DIODE RD10ESB2			
D172	8-719-110-17	DIODE RD10ESB2			
D173	8-719-911-19	DIODE 1SS119			
D174	8-719-404-46	DIODE MA110			
D175	8-719-404-46	DIODE MA110			
D176	8-719-404-46	DIODE MA110			
D177	8-719-404-46	DIODE MA110			
		<IC>			
IC171	8-759-065-85	IC MAX232N			
		<JACK>			
J171	1-563-760-11	JACK, MINIATUER (DIA. 3.5)			
J172	1-563-760-11	JACK, MINIATUER (DIA. 3.5)			
		<COIL>			
L171	1-422-613-11	COIL, AIR CORE			
L172	1-422-613-11	COIL, AIR CORE			
L173	1-422-613-11	COIL, AIR CORE			
L174	1-422-613-11	COIL, AIR CORE			
L175	1-422-613-11	COIL, AIR CORE			
L176	1-422-613-11	COIL, AIR CORE			
L177	1-422-613-11	COIL, AIR CORE			
L178	1-422-613-11	COIL, AIR CORE			
		<TRANSISTOR>			
Q171	8-729-901-01	TRANSISTOR DTC144EK			
Q172	8-729-901-06	TRANSISTOR DTA144EK			
		<RESISTOR>			
R171	1-216-025-00	METAL GLAZE	100	5% 1/10W	
R172	1-216-025-00	METAL GLAZE	100	5% 1/10W	
R173	1-216-057-00	METAL GLAZE	2.2K	5% 1/10W	
R174	1-216-049-00	METAL GLAZE	1K	5% 1/10W	
R175	1-216-049-00	METAL GLAZE	1K	5% 1/10W	
R176	1-216-025-00	METAL GLAZE	100	5% 1/10W	
R177	1-216-049-00	METAL GLAZE	1K	5% 1/10W	
		<TAB>			
TB171	1-537-187-11	TERMINAL, PUSH (4P)			
	*A-1373-468-A	UJ BOARD, COMPLETE			
		**********			
		<CAPACITOR>			
C101	1-124-589-11	ELECT	47MF	20% 16V	
C102	1-124-589-11	ELECT	47MF	20% 16V	
C103	1-164-232-11	CERAMIC CHIP	0.01MF	10% 50V	
C104	1-126-157-11	ELECT	10MF	20% 16V	
C105	1-126-157-11	ELECT	10MF	20% 16V	
C106	1-124-589-11	ELECT	47MF	20% 16V	
C107	1-124-589-11	ELECT	47MF	20% 16V	
C108	1-126-157-11	ELECT	10MF	20% 16V	
C109	1-126-157-11	ELECT	10MF	20% 16V	
C110	1-124-589-11	ELECT	47MF	20% 16V	
C111	1-124-589-11	ELECT	47MF	20% 16V	
C112	1-124-589-11	ELECT	47MF	20% 16V	
C113	1-126-157-11	ELECT	10MF	20% 16V	
C114	1-126-157-11	ELECT	10MF	20% 16V	
C115	1-124-767-00	ELECT	2.2MF	20% 50V	
C116	1-124-767-00	ELECT	2.2MF	20% 50V	
C117	1-124-589-11	ELECT	47MF	20% 16V	
C118	1-164-232-11	CERAMIC CHIP	0.01MF	10% 50V	
C119	1-163-035-00	CERAMIC CHIP	0.047MF	50V	
C120	1-163-123-00	CERAMIC CHIP	180PF	5% 50V	
		<CONNECTOR>			
CN101	*1-566-641-11	CONNECTOR, HINGE (TAB) 18P			
CN102	*1-566-641-11	CONNECTOR, HINGE (TAB) 18P			
CN103	1-564-517-11	PLUG, CONNECTOR 2P			
		<DIODE>			
D101	8-719-110-17	DIODE RD10ESB2			
D102	8-719-110-17	DIODE RD10ESB2			
D103	8-719-110-17	DIODE RD10ESB2			
D104	8-719-110-17	DIODE RD10ESB2			
D105	8-719-110-17	DIODE RD10ESB2			
D106	8-719-110-17	DIODE RD10ESB2			
D107	8-719-110-17	DIODE RD10ESB2			
D108	8-719-110-17	DIODE RD10ESB2			
D109	8-719-110-17	DIODE RD10ESB2			
D110	8-719-110-17	DIODE RD10ESB2			
D111	8-719-110-17	DIODE RD10ESB2			
D112	8-719-110-17	DIODE RD10ESB2			
D113	8-719-110-17	DIODE RD10ESB2			
D114	8-719-110-17	DIODE RD10ESB2			
D115	8-719-109-89	DIODE RD5.6ESB2			
D116	8-719-109-89	DIODE RD5.6ESB2			
D117	8-719-110-17	DIODE RD10ESB2			
		<JACK>			
J101	1-573-969-11	JACK BLOCK, PIN			
J102	1-573-969-11	JACK BLOCK, PIN			

UJ UT

REF.NO.	PART NO.	DESCRIPTION	REMARK
J103	1-573-969-11	JACK BLOCK, PIN	
J104	1-573-969-11	JACK BLOCK, PIN	
J105	1-573-969-11	JACK BLOCK, PIN	
J106	1-537-764-11	TERMINAL BOARD ASSY, I/O	
J108	1-537-764-11	TERMINAL BOARD ASSY, I/O	
J110	1-537-765-11	TERMINAL BOARD ASSY, I/O	

<TRANSISTOR>

Q101	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q102	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q103	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q104	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q105	8-729-120-28	TRANSISTOR 2SC1623-L5L6	

<RESISTOR>

R101	1-215-394-00	METAL	75	1%	1/4W	
R102	1-215-394-00	METAL	75	1%	1/4W	
R103	1-215-394-00	METAL	75	1%	1/4W	
R104	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R105	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R106	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R107	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R108	1-215-394-00	METAL	75	1%	1/4W	
R109	1-215-394-00	METAL	75	1%	1/4W	
R110	1-215-394-00	METAL	75	1%	1/4W	
R111	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R112	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R113	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R114	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R115	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R116	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R117	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R118	1-215-394-00	METAL	75	1%	1/4W	
R119	1-215-394-00	METAL	75	1%	1/4W	
R120	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R121	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R122	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R123	1-215-394-00	METAL	75	1%	1/4W	
R124	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R125	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R126	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R127	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R128	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R129	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R130	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R131	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R132	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R133	1-215-394-00	METAL	75	1%	1/4W	
R134	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R135	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R136	1-215-394-00	METAL	75	1%	1/4W	
R137	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R138	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R139	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R140	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R141	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R142	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R143	1-216-039-00	METAL GLAZE	390	5%	1/10W	

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REF.NO.	PART NO.	DESCRIPTION			REMARK
*A-1394-545-A		UT BOARD, COMPLETE			
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<CAPACITOR>

C201	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C202	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C203	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C204	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C205	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C206	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C207	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C208	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C209	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C210	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C211	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C212	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C213	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C214	1-137-368-11	FILM	0.0047MF	5%	50V
C215	1-136-165-00	FILM	0.1MF	5%	50V
C216	1-137-368-11	FILM	0.0047MF	5%	50V
C217	1-136-165-00	FILM	0.1MF	5%	50V
C218	1-137-374-11	FILM	0.047MF	5%	50V
C219	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C220	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C221	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C223	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C224	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C225	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C226	1-163-241-11	CERAMIC CHIP	39PF	5%	50V
C227	1-126-940-11	ELECT	330MF	20%	16V
C228	1-124-126-00	ELECT	47MF	20%	16V
C229	1-126-964-11	ELECT	10MF	20%	50V
C230	1-126-964-11	ELECT	10MF	20%	50V
C231	1-126-964-11	ELECT	10MF	20%	50V
C232	1-126-934-11	ELECT	220MF	20%	16V
C233	1-126-964-11	ELECT	10MF	20%	50V
C234	1-126-964-11	ELECT	10MF	20%	50V
C235	1-124-126-00	ELECT	47MF	20%	16V
C236	1-124-903-11	ELECT	1MF	20%	50V
C237	1-124-903-11	ELECT	1MF	20%	50V
C238	1-126-933-11	ELECT	100MF	20%	16V
C239	1-124-126-00	ELECT	47MF	20%	16V
C240	1-124-126-00	ELECT	47MF	20%	16V
C242	1-126-964-11	ELECT	10MF	20%	50V
C243	1-126-935-11	ELECT	470MF	20%	6.3V
C244	1-126-964-11	ELECT	10MF	20%	50V
C245	1-126-923-11	ELECT	220MF	20%	10V
C246	1-124-126-00	ELECT	47MF	20%	16V
C247	1-126-964-11	ELECT	10MF	20%	50V
C248	1-124-903-11	ELECT	1MF	20%	50V
C249	1-126-964-11	ELECT	10MF	20%	50V
C250	1-126-964-11	ELECT	10MF	20%	50V
C251	1-126-964-11	ELECT	10MF	20%	50V
C252	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C253	1-124-126-00	ELECT	47MF	20%	16V
C254	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C255	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C256	1-136-171-00	FILM	0.33MF	5%	50V
C257	1-124-925-11	ELECT	2.2MF	20%	50V
C258	1-163-249-11	CERAMIC CHIP	82PF	5%	50V
C259	1-137-364-11	FILM	0.001MF	5%	50V
C260	1-163-121-00	CERAMIC CHIP	150PF	5%	50V

REF.NO.	PART NO.	DESCRIPTION			REMARK
C261	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C262	1-124-126-00	ELECT	47MF	20%	16V
C263	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C270	1-124-903-11	ELECT	1MF	20%	50V
C271	1-124-927-11	ELECT	4.7MF	20%	50V
C272	1-124-903-11	ELECT	1MF	20%	50V
C273	1-124-126-00	ELECT	47MF	20%	16V
C274	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C275	1-124-126-00	ELECT	47MF	20%	16V
C276	1-136-167-00	FILM	0.15MF	5%	50V
C277	1-136-157-00	FILM	0.022MF	5%	50V
C278	1-124-925-11	ELECT	2.2MF	20%	50V
C279	1-163-249-11	CERAMIC CHIP	82PF	5%	50V
C280	1-137-364-11	FILM	0.001MF	5%	50V
C281	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C282	1-124-126-00	ELECT	47MF	20%	16V
C283	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C290	1-124-927-11	ELECT	4.7MF	20%	50V

<CONNECTOR>

CN201	*1-566-367-11	CONNECTOR, HINGE (RECEPTACLE)
CN202	*1-566-367-11	CONNECTOR, HINGE (RECEPTACLE)
CN203	*1-564-506-11	PLUG, CONNECTOR 3P
CN204	1-573-300-11	CONNECTOR, BOARD TO BOARD 18P
CN205	1-573-300-11	CONNECTOR, BOARD TO BOARD 18P
CN206	1-564-505-11	PLUG, CONNECTOR 2P

<DIODE>

D202	8-719-911-19	DIODE 1SS119
D203	8-719-911-19	DIODE 1SS119
D205	8-719-911-19	DIODE 1SS119
D206	8-719-109-68	DIODE RD3.6ESB1

<FILTER>

FL201	1-239-550-11	FILTER, LOW PASS
FL202	1-239-550-11	FILTER, LOW PASS
FL203	1-239-550-11	FILTER, LOW PASS

<IC>

IC201	8-752-067-28	IC CXA1545AS
IC202	8-741-765-01	IC SBX1765-01
IC203	8-759-800-81	IC LA7016
IC204	8-759-245-75	IC TA8184P
IC205	8-752-058-68	IC CXA1315M
IC206	8-759-009-82	IC MC14011BF-T2
IC207	8-759-800-81	IC LA7016
IC208	8-759-009-82	IC MC14011BF-T2

<COIL>

L201	1-408-421-00	INDUCTOR	100UH
L202	1-408-421-00	INDUCTOR	100UH
L203	1-408-421-00	INDUCTOR	100UH
L204	1-408-414-00	INDUCTOR	27UH
L205	1-408-414-00	INDUCTOR	27UH

<TRANSISTOR>

Q201	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q202	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q203	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q204	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q205	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q206	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q207	8-729-216-22	TRANSISTOR 2SA1162-G
Q208	8-729-216-22	TRANSISTOR 2SA1162-G
Q211	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q212	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q213	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q214	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q215	8-729-216-22	TRANSISTOR 2SA1162-G
Q216	8-729-901-01	TRANSISTOR DTC144EK
Q217	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q218	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q219	8-729-216-22	TRANSISTOR 2SA1162-G
Q220	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q221	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q222	8-729-901-01	TRANSISTOR DTC144EK
Q223	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q224	8-729-216-22	TRANSISTOR 2SA1162-G
Q225	8-729-216-22	TRANSISTOR 2SA1162-G
Q226	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q227	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q228	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q229	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q230	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q231	8-729-216-22	TRANSISTOR 2SA1162-G
Q232	8-729-120-28	TRANSISTOR 2SC1623-L5L6

<RESISTOR>

JR1	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR2	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR4	1-216-295-91	METAL GLAZE	0	5%	1/10W
R201	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R202	1-216-025-00	METAL GLAZE	100	5%	1/10W
R203	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R204	1-216-025-00	METAL GLAZE	100	5%	1/10W
R205	1-216-033-00	METAL GLAZE	220	5%	1/10W
R206	1-216-033-00	METAL GLAZE	220	5%	1/10W
R207	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R208	1-216-033-00	METAL GLAZE	220	5%	1/10W
R209	1-216-033-00	METAL GLAZE	220	5%	1/10W
R210	1-216-033-00	METAL GLAZE	220	5%	1/10W
R211	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R212	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R213	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R214	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R215	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R217	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R218	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R219	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R220	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R221	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R222	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R223	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R224	1-216-033-00	METAL GLAZE	220	5%	1/10W
R225	1-216-033-00	METAL GLAZE	220	5%	1/10W
R226	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R227	1-216-035-00	METAL GLAZE	270	5%	1/10W
R228	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R229	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R230	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R232	1-216-295-91	METAL GLAZE	0	5%	1/10W
R233	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W

UT H

REF.NO.	PART NO.	DESCRIPTION				REMARK
R234	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R235	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R236	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R237	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R238	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R239	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R240	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R241	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R242	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R243	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R248	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R249	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R250	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R251	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R252	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R253	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R254	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R255	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R256	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R257	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R258	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R259	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R260	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R261	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R262	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R263	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R264	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R265	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R266	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R267	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R268	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R271	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R272	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R273	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R274	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R275	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R276	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R277	1-216-117-00	METAL GLAZE	680K	5%	1/10W	
R278	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R279	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R280	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R282	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R283	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R284	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R285	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R286	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R288	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R289	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R290	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R291	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R292	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R294	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R295	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R296	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R298	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R299	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1201	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R1202	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1203	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1204	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R1205	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R1206	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R1207	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1208	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1209	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1210	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1211	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1212	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1213	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R1214	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1215	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1216	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R1217	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1218	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R1219	1-216-115-00	METAL GLAZE	560K	5%	1/10W	
R1220	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1221	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R1222	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R1223	1-216-075-00	METAL GLAZE	12K	5%	1/10W	

<VARIABLE RESISTOR>

RV201	1-241-761-11	RES, ADJ, CARBON 1K
RV202	1-241-763-11	RES, ADJ, CARBON 4.7K

****

H BOARD, COMPLETE
****

	9-908-867-01	HOLDER, LED
	9-908-869-01	KEY TOP
	9-990-891-01	BOARD, REFLECTION A
	9-990-892-01	BOARD, DISPENSION A

<CAPACITOR>

C1111	1-126-157-11	ELECT	10MF	20%	16V

<DIODE>

D1111	9-908-868-01	DIODE TLS263P
D1112	8-719-802-17	DIODE TLY263P
D1113	8-719-802-17	DIODE TLY263P
D1114	8-719-802-17	DIODE TLY263P
D1115	8-719-802-17	DIODE TLY263P
D1116	8-719-802-17	DIODE TLY263P
D1117	8-719-802-17	DIODE TLY263P
D1118	8-719-802-17	DIODE TLY263P
D1119	8-719-802-17	DIODE TLY263P
D1120	8-719-802-17	DIODE TLY263P
D1121	8-719-802-17	DIODE TLY263P
D1122	8-719-802-17	DIODE TLY263P
D1123	8-719-802-17	DIODE TLY263P
D1124	8-719-802-17	DIODE TLY263P
D1125	8-719-802-17	DIODE TLY263P
D1126	8-719-802-17	DIODE TLY263P
D1127	8-719-802-17	DIODE TLY263P
D1130	8-719-802-17	DIODE TLY263P
D1131	8-719-802-17	DIODE TLY263P
D1132	8-719-802-17	DIODE TLY263P
D1133	8-719-802-17	DIODE TLY263P
D1134	8-719-911-19	DIODE 1SS119
D1135	8-719-911-19	DIODE 1SS119
D1136	8-719-911-19	DIODE 1SS119
D1137	8-719-911-19	DIODE 1SS119

<IC>

H

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
IC1111	9-902-229-01	IC GP1U52R				
		<RESISTOR>				
R1111	1-247-807-11	CARBON	100	5%	1/4W	
R1112	1-247-807-11	CARBON	100	5%	1/4W	
R1113	1-247-879-11	CARBON	100K	5%	1/4W	
R1114	1-247-879-11	CARBON	100K	5%	1/4W	
R1115	1-247-879-11	CARBON	100K	5%	1/4W	
R1116	1-247-879-11	CARBON	100K	5%	1/4W	
R1117	1-249-408-11	CARBON	180	5%	1/4W	
R1118	1-249-403-11	CARBON	68	5%	1/4W	
R1119	1-249-408-11	CARBON	180	5%	1/4W	
R1120	1-249-408-11	CARBON	180	5%	1/4W	
R1121	1-249-408-11	CARBON	180	5%	1/4W	
R1122	1-249-408-11	CARBON	180	5%	1/4W	
		<SWITCH>				
S1111	1-554-303-21	SWITCH, KEY BOARD				
S1112	1-554-303-21	SWITCH, KEY BOARD				
S1113	1-554-303-21	SWITCH, KEY BOARD				
S1114	1-554-303-21	SWITCH, KEY BOARD				
S1115	1-554-303-21	SWITCH, KEY BOARD				
S1116	1-554-303-21	SWITCH, KEY BOARD				
S1117	1-554-303-21	SWITCH, KEY BOARD				
S1119	1-554-303-21	SWITCH, KEY BOARD				
S1120	1-554-303-21	SWITCH, KEY BOARD				
S1121	1-554-303-21	SWITCH, KEY BOARD				
S1122	1-554-303-21	SWITCH, KEY BOARD				
S1123	1-554-303-21	SWITCH, KEY BOARD				
S1124	1-554-118-00	SWITCH, PUSH (1 KEY)				
		**********				
		MISCELLANEOUS				
		**********				
	⚠1-402-715-21	COIL, DEMAGNETIZATION (PVM-2950QM)				
	⚠1-402-716-21	COIL, DEMAGNETIZATION (PVM-2950QM)				
	⚠1-426-573-22	COIL, DEGAUSSING (PVM-2950Q)				
	⚠1-426-574-22	COIL, DEGAUSSING (PVM-2950Q)				
	⚠1-452-616-13	NECK ASSY, PICTURE TUBE (NA323)				
	1-467-794-11	KEY BOARD UNIT				
	⚠1-580-375-11	INLET 3P				
	1-900-140-13	LEAD ASSY, FOCUS				
	⚠8-451-394-31	DEFLECTION YOKE (Y29EXA)				
V901	⚠8-733-845-05	PICTURE TUBE (M68KUZ10X)				
		**********				
		ACCESSORIES AND PACKING MATERIALS				
		**********				
	⚠1-557-377-11	CORD, POWER (3 CORE) (10.0A/125V) (PVM-2950Q)				
	⚠1-590-151-11	CORD SET, POWER (10.0A/250V) (PVM-2950QM)				
	2-990-242-01	HOLDER (B), PLUG(PVM-2950Q/2950QM(AEP))				
	3-170-078-01	HOLDER (B), PLUG (PVM-2950QM(AUS))				
	3-759-190-21	MANUAL, INSTRUCTION				
	*4-039-562-02	CUSHION (RIGHT UPPER FRONT)				
	*4-039-566-02	CUSHION (LEFT UPPER LOWER)				
	*4-039-570-01	CUSHION (UPPER) (ASSY)				
	*4-039-571-01	CUSHION (LOWER) (ASSY)				
	*4-044-688-01	INDIVIDUAL CARTON (PVM-2950QM)				
	*4-044-689-01	INDIVIDUAL CARTON (PVM-2950Q)				
	*4-388-954-01	BAG, PROTECTION				
		REMOTE COMMNDER				
	1-467-798-11	REMOTE COMMANDER (RM-854)				
	9-901-890-11	COVER, BATTERY (FOR RM-854)				

Sony Corporation
Consumer A&V Products Company
TV & Display Products Div.

9-978-431-01

English
94FK02282-1
Printed in Japan