HITACHI

PA	No. 0066
35UX85B/CZ68	
R/C: CLU-417UI	

SERVICE MANUAL

NTSC | A6LXU CHASSIS

CAUTION: Before servicing this chassis, it is important that the service technician read the "Safety Precautions" and "Product Safety Notices" in this Service Manual.

This television receiver will display television Closed Captioning (CC or ▭) in accordance with paragraph 15.119 of the FCC rules.

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SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

SOLID STATE COLOR TELEVISION

SEPTEMBER 1996 **HHEA - MANUFACTURING DIVISION**

SAFETY PRECAUTIONS

NOTICE: Comply with all cautions and safety related notes located on or inside the cabinet and on the chassis or picture tube.

WARNING: Since the chassis of this receiver is connected to one side of the AC power supply during operation, whenever the receiver is plugged in, service should not be attempted by anyone unfamiliar with the precautions necessary when working on this type of receiver.

The following precautions should be observed:

1. Do not install, remove, or handle the picture tube in any manner unless shatterproof goggles are worn. People not so equipped should be kept away from the picture tube while handling.

2. When service is required, an isolation transformer should be inserted between power line and the receiver before any service is performed on a "HOT" chassis receiver.

3. When replacing a chassis in the receiver, all the protective devices must be put back in place, such as barriers, nonmetallic knobs, adjustment and compartment covershields, isolation resistors, capacitors, etc.

4. When service is required, observe the original lead dress in the high voltage circuitry area.

5. Always use the manufacturer's replacement components. Critical components as indicated on the circuit diagram should not be replaced by another manufacturer's. Furthermore, where a short circuit has occurred, replace those components that indicate evidence of overheating.

6. Before returning a serviced receiver to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the receiver by the manufacturer has become defective, or inadvertently defeated during servicing.

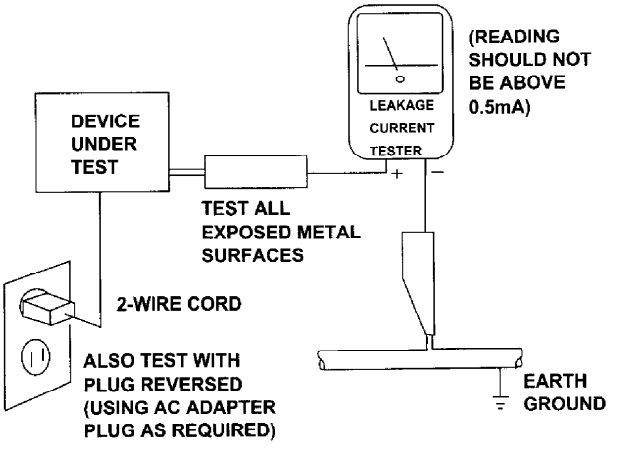
Therefore, the following checks should be performed for the continued protection of the customer and service technician.

Leakage Current Cold Check

With the AC plug removed from the 120V AC 60Hz source, place a jumper across the two plug prongs. Turn the AC power switch ON using an insulation tester (DC500V), connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (antennas, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis should have a minimum resistor reading of 0.24MΩ and a maximum resistor reading of 12MΩ . Any resistance value below or above this range indicates an abnormality which requires corrective action. Exposed metal part not having a return path to the chassis will indicate an open circuit.

Leakage Current Hot Check

Plug the AC line cord directly into an AC 120V 60Hz outlet (do not use an isolation transformer for this check). Turn the AC power ON. Using a "Leakage Current Tester (Simpson's Model 229 or equivalent)", measure for current from all exposed metal parts of the cabinet (antennas, screwheads, overlays, control shafts, etc.) particularly any exposed metal part having a return path to the chassis or to a known earth ground (water pipe, conduit, etc.). Any current measured must not exceed 0.5mA.



AC LEAKAGE TEST

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE RECEIVER TO THE CUSTOMER.

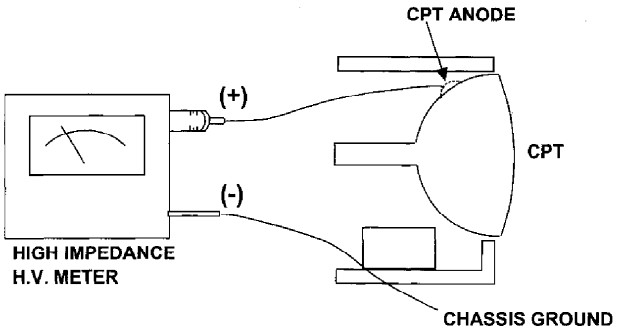
High Voltage

This receiver is provided with a hold down circuit for clearly indicating that voltage has increased in excess of a predetermined value. Comply with all notes described in this Service Manual regarding this hold down circuit when servicing, so that this hold down circuit is operated correctly.

Serviceman Warning

With minimum BRIGHTNESS and CONTRAST, the operating high voltage in this receiver is lower than 37.0KV. In case any component having influence on the high voltage is replaced, confirm that high voltage with minimum BRIGHTNESS and CONTRAST is lower than 37.0KV. To measure high voltage use a high impedance High Voltage Meter. Connect (-) to chassis earth and (+) to the CPT Anode button (See the following connection diagram).

NOTE: Turn the power switch OFF without fail before the connection to the Anode button is made.



PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in HITACHI television receivers have special safety related characteristics. These are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacements parts which have these special safety characteristics are identified in this Model Service Manual.

Electrical components having such features are identified with an ⚠ mark in the schematics and parts list in this Model Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the HITACHI recommended replacement one, shown in the parts list in this Model Service Manual, may create shock, fire, X-Radiation, or other hazards.

Production Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current HITACHI Service Manual. A subscription to, or additional copies of HITACHI Service Manual may be obtained at a nominal charge from HITACHI SALES CORPORATION.

X-Radiation

TUBE: The primary source of X-Radiation in this receiver is the picture tube. The tube utilized in this chassis is specially constructed to limit X-Radiation emission. For continued X-Radiation protection, the replacement tube must be the same type as the original HITACHI approved type.

When troubleshooting and making test measurements in a receiver with an excessive high voltage problem, avoid coming unnecessarily close to the picture tube and the high voltage component.

Do not operate the chassis longer than is necessary to locate the cause of the excessive voltage.

This Service Manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the product and its safety. Consumers should not risk trying to do the necessary repairs and should instead refer to a qualified service technician.

WARNING

Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health and Safety Code, Section 25249.5).

When servicing or handling circuit boards and other components with lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

SAFETY NOTICE
USE ISOLATION TRANSFORMER WHEN SERVICING

Components having special safety characteristics are identified by ⚠ on the parts list in this Model Service Manual and its supplements and bulletins. Before servicing this, it is important that the service technician read and follow the "Safety Precautions" and the "Product Safety Notices" in this Service Manual.

- For continued X-Radiation protection, replace picture tube with original type or Hitachi equivalent type.

POWER SOURCE

This television receiver is designed to operate on 120 Volts/60Hz, AC house current. Insert the power cord into a 120 Volts/60Hz outlet.

NEVER CONNECT THE TV TO OTHER THAN THE SPECIFIED VOLTAGE OR TO DIRECT CURRENT.

TECHNICAL SPECIFICATIONS

Model:	35UX85B/CZ68
Picture Tube:	A89AGF11X10
Power Input:	120 volts AC, 60Hz
Power Consumption:	210 watts–Maximum 155 watts–Operating
Antenna Impedance:	75 ohm Unbalanced VHF/UHF/CATV

Receiving Channel:

	CH
VHF	2-13
EXT. Mid	(A-2)-(A-1), 4+
CATV Mid	A-I
CATV Super	J-W
CATV Hyper	(W+29)-(W+53)

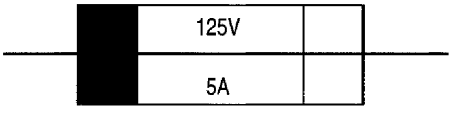
Intermediate Frequency:	Picture I-F Carrier 45.75 MHz Sound I-F Carrier 41.25 MHz Color Sub Carrier 42.17 MHz
Video Input:	1 Voltp-p 75 ohm
Video Output:	1 Voltp-p 75 ohm
Audio Input:	0.47 volt rms, 47 k ohm
Stereo Audio Output:	0.47 volt rms, 1 k ohm
Audio Output Power:	Front — 3 watts rms per channel, 8 ohm impedance. Max output — 5 watts Rear — 5 watts per channel, 8 ohm impedance. Max output — 5 watts

Dimension:	**35UX85B**
Height (in.)	$29^{17}/_{32}$
Width (in.)	35
Depth (in.)	$24^{13}/_{32}$
Weight (lbs.)	266

Circuit Board Assemblies:	CPT P.C.B. Signal P.C.B. Signal Sub P.C.B. Power/Deflection P.C.B. Power P.C.B. DF P.C.B. Deflection P.C.B. Control A P.C.B. Control B P.C.B. Surround A P.C.B. Surround B P.C.B. Terminal P.C.B.

CAUTION

The following symbol near the fuse indicates fast operating fuse (to be replaced). Fuse ratings appear within the symbol.
Example:



F901

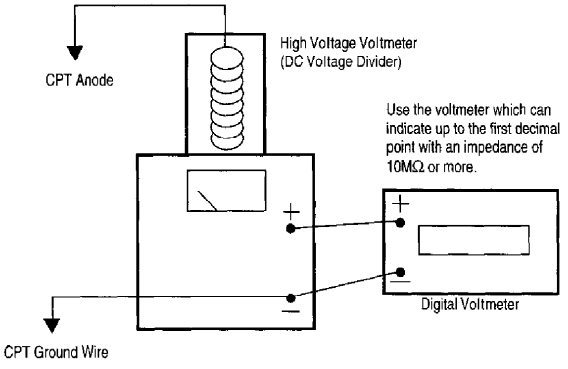
The rating of fuse F901 is 6.0A-125V.
Replace with the same type fuse for continued protection against fire.

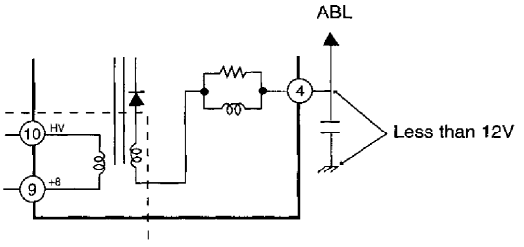
TECHNICAL CAUTIONS

High voltage limiter circuit operation check.

Adjustment Preparation

1. Connect a high voltage voltmeter between CPT anode terminal (anode capside) and the ground.
2. Set AC Input voltage to 120±3V.
3. Receive Circle Pattern or broadcast signal and set "BRIGHTNESS" and "CONTRAST" to maximum. Adjust the Screen VR so that Beam Current is I_B± 0. 1 mA. (The voltage of ABL terminal -C741- should be 12V or less.)





Adjustment Procedure

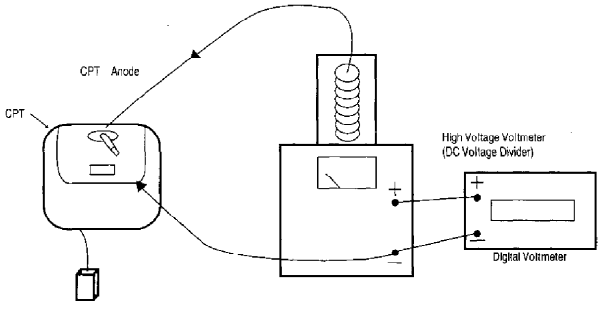
1. Check that the normal high voltage and +B voltage is as below.

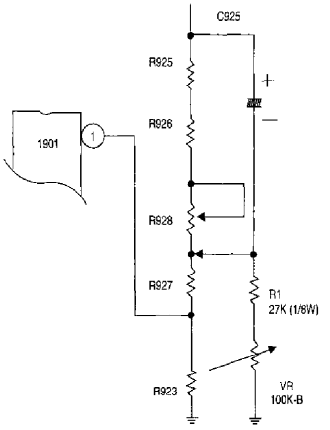
CHASSIS	E_{HT}	I_B	+B	E1
CZ68	30.0(KV) ±1KV	1.60mA ±0.1mA	140.0(V) ±0.3V	37.0 (KV) ±1.3 KV

Adjustment Preparation

4. Set AC input voltage to 120±3V. Then, connect the VR (100K-B) and R1(27K) to R927 and ground side as below.
   Note: At that time the value of VR should be maximum.

Use the voltmeter of input impedance 10M ohm or more with indication to the 1st decimal place.





Adjustment Procedure

2. Keep CONTRAST, BRIGHTNESS, and SCREEN VR as in item (3). Reduce the VR value gradually, and check that the picture disappears when high voltage is E1. Immediately after checking that it disappears, turn off the set switch. Remove the VR and high voltage voltmeter. When connecting or removing high voltage voltmeter to or from anode cap, be sure to turn off the switch of the set. Also, be sure to perform it after the chassis discharge of residual high voltage, because the high voltage of CPT anode may be left.

ADJUSTMENT SPECIFICATIONS

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ADJUSTMENT SPECIFICATIONS

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Refer to CHASSIS SERVICE MANUAL PA NO. 0073 for additional technical information.

Note:

1. MAIN CHASSIS ASSEMBLY ADJUSTMENT is done with precision equipment. Readjustment is only recommended if the service technician replaced a defective component related to the circuit.
2. COMMON SERVICE ADJUSTMENT is recommended for the service technician after final troubleshooting and repair is done. Quick check and fine tuning is advisable to verify that the problem is eliminated.

I. MAIN CHASSIS ASSEMBLY ADJUSTMENT

1. SIGNAL BLOCK ADJUSTMENT

1.1 Memory Initialization

Adjustment procedure

(1) Press memory initialize key using the R/C.
If you do not have this key, short the pins of the 2 pin connector PI1 for one second, then remove.
A beep will be heard.

(2) Check the OSD according to the chassis type.

Initialize OSD (Memory Switches)

MEMORY SWITCH		
PIP 1	[0]	1
PIP2	0	[1]
POWER ON1	0	[1]
POWER ON2	[0]	1
AUX 3	0	[1]
SUR 1	0	[1]
SUR 2	[0]	1
MAGIC F.	[0]	1
W. CONT	0	[1]
S. CONT	[0]	1
ANT	0	[1]
CTV/PTV	[0]	1
D. BASS	0	[1]
3D Y/C	[0]	1
NOTCH	0	[1]
PIP POSITION	HP 0111 (0000-1111)	
	VP 0111 (0000-1111)	
SHOOT BAL. ADJ 37 (0-63)		
SUB BRIGHT ADJ 127 (63-191)		

Note: The above table explains the A6LXU chassis specification for the memory switch arrangement.

(3) Press Memory Initialize key of the R/C one more time and check that the set is returned to factory shipping conditions.
If you do not have this key, short the pins of the 2 pin connector PI1 for one second, then remove.

Note: The TV will be set to factory shipping conditions.
Do not unplug set or press any buttons during this operation.

1.2 AFC Operation Check

Adjustment Preparation

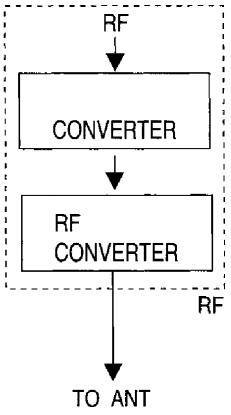
(1) Connect the jig shown below to the ANT (A) terminal.
(2) Turn on the sub-picture.

Adjustment Procedure

(1) Select main picture.
(2) Receive a standard carrier signal (not offset) with the channel UP/DOWN or direct selection buttons.
Check that it is pulled into the standard tuning point.
(3) Receive an offset signal of +1.5MHz.
Check that it is pulled into the standard tuning point.
(Perform the channel selection operation again.)
(4) Receive an offset signal of -1.5MHz.
Check that it is pulled into the standard tuning point.
(Perform the channel selection operation again.)
(5) Select sub-picture.
(6) Same as adjustment on items (2), (3) and (4).

Note: Modulation signal should be used at the circle pattern and the color bar signal.

Checking jig (All channel converter can be used)



1.3 Channel Selection Operation Check

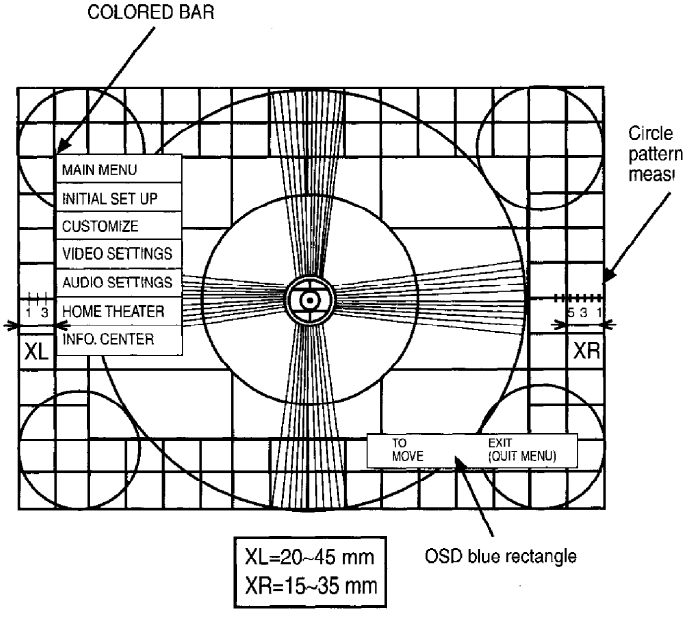
1.3.1 OSD Position check

Adjustment Preparation

(1) Receive Hitachi circle pattern or standard signal.
(2) Video setting in normal condition (center).

Adjustment Procedure

(1) Press MENU button.
(2) Check that the lower blue rectangle matches the circle pattern measure of 3.5±2 as it shows.
(3) Check that the COLORED BAR matches to circle pattern measure of 3.5±1 as it shows.
(4) If using a standard signal, check distance between edge of set and OSD (XL and XR) shown in table below.



1.3.2 Remo-Con Operation Check

1.3.2.1 Direct Channel Selection

Adjustment Procedure

(1) Input a channel number using the "0" to "9" buttons. Check that the input number matches the displayed channel number, and also the picture received matches the channel number.

1.3.2.2 LST-CH

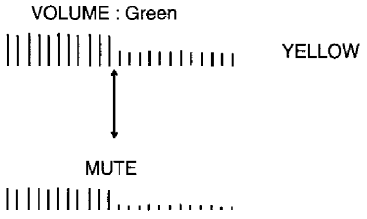
Adjustment Procedure

(1) Check that the channel being received alternates with the channel received immediately before every time the LST-CH button is pressed.

1.3.2.3 MUTE

Adjustment Procedure

(1) Check that sound alternates between mute and normal every time the MUTE button is pressed.



1.3.2.4 RECALL

Adjustment Procedure

(1) Check that the On-Screen Display is turned ON and OFF alternately every time the RECALL button is pressed.

1.3.3 Channel Selection Operation Check

1.3.3.1 POWER

Adjustment Preparation

(1) Set so that the VHF/UHF/CATV signal can be received.

Adjustment Procedure

(1) Every time the POWER button is pressed, the power should alternate between ON and OFF.

1.3.3.2 CH UP/DOWN

Adjustment Procedure

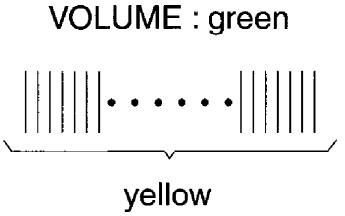
(1) Every time the CH UP (▲) or CH DOWN (▼) button is pressed, the normal reception should be displayed for VHF, UHF and CATV.
★ Check that the On-Screen Display corresponding to the received contents can be displayed.
★ ANT indication color.

ANT	CH Display Color
ANT A	Green
ANT B	Yellow

1.3.3.3 VOL UP/DOWN

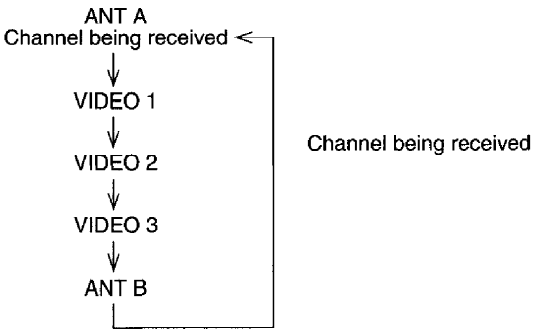
Adjustment Procedure

(1) Every time the VOL UP (▲) or VOL DOWN (▼) button is pressed, the volume should increase/decrease continuously.
★ Check that the On-Screen Display changes.



1.3.3.4 AVX Selection

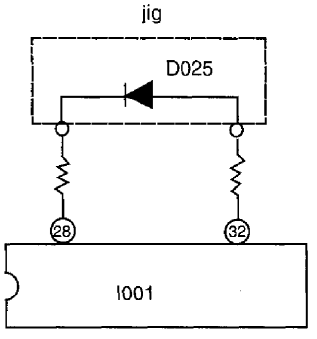
(1) Every time the AVX selection button is pressed, the input of the picture displayed on the screen changes in sequence as shown below.



★ Check that the contents of the picture displayed on the screen matches the current On-Screen Display.
★ With VIDEO 1 and VIDEO 3, if the S input is used, "(S-IN)" is displayed.

1.3.3.5 Clock Set

No.	Item		Specification	Remarks
1	Initial set-up mode	(1)	Press Menu and select initial set up using ▼▲ keys.	
		(2)	Select clock set using ▼▲ keys.	
		(3)	Then press ▶ key to set clock.	
		(4)	The clock set should be set using the cursor buttons. The clock is started when the ◀ key is pressed to go back to clock set menu.	* The addition diode intends to check the operation with check counting operation as 60 times mode.
		(5)	Connect the jig. D025 to I001 between (28) and (32).	
		(6)	Check that clock indication is displayed using the RECALL button. And the clock indication is going by 1 second per minute.	



1.3.4 AI mode operation check

Adjustment Preparation

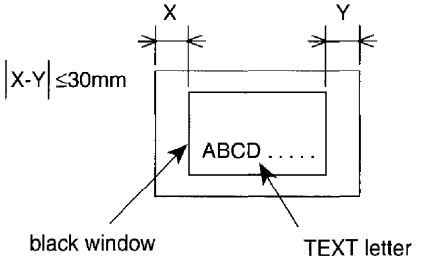
(1) Receive the color bar signal.
(2) Select the VIDEO SETTINGS option using the ▶ button.
(3) Select Advance settings option using the ▶ button.
(4) Set the Ultra AI mode using the ▲▼ buttons.

Adjustment Procedure

(1) Set the AI:ON by pressing the ▶ key of the remote control transmitter, checking that the display becomes dark when the front of QM02 (light detector transistor on the control P.W.B.) is covered with hands.
(2) Set the AI:OFF by pressing the ▶ key and check the contrast of the display return.

1.3.5 CCD Mode Operation Check

Item	Specification		Remarks
CLOSED CAPTION	(1)	Press MENU and select CUSTOMIZE option using ▲▼ keys.	Receive signal having closed caption signal.
	(2)	Press ▶ button and select CLOSED CAPTION using ▲▼ keys.	
	(3)	Press ▶ button and select the closed caption mode.	
	(4)	The DISPLAY mode should be set ON using the ▶ key. The MODE should be set C.C. using the ▶ key. The CHANNEL mode should be set 1 using the ▶ key.	* Reading error should not occur on any mode. The contents of error. 1. Wrong letters are displayed. 2. Letter omitting. 3. Other abnormal display.
	(5)	Check the CAPTION corresponding to the setting is displayed on the screen.	
	(6)	Set CHANNEL to 2. Check that the CAPTION of CHANNEL 2 is displayed on the screen.	
	(7)	Set CHANNEL to 1. Check that the CAPTION of CHANNEL 1 (FIELD 2) is displayed on the screen.	
	(8)	Set the MODE to TEXT. Check that a black window appears and TEXT letters are displayed at the center of screen.	
	(9)	Repeat from (6) to (7), and check that TEXT letters are displayed.	
	(10)	Set the MODE to C.C. The black window should disappear.	
	(11)	Set the DISPLAY to OFF. Check that the CAPTION letters disappear.	



1.3.6 PinP Operation Check

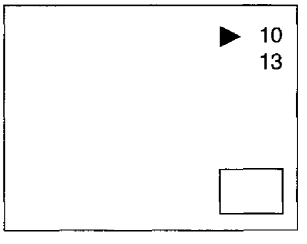
1.3.6.1 Sub Picture Operation

Adjustment Preparation

(1) Connect the signal to ANT and check.

Adjustment Procedure

(1) Press PinP key of R/C unit and PinP will appear on the screen.
(2) Press PinP key again and the size of the PinP window will be reduced.
(3) Press PinP key to remove PinP from the screen.



Main picture
Sub picture

1-3-6-2 PinP Shift mode check

Adjustment Preparation

(1) Press PinP key of R/C unit.

Adjustment Procedure

(1) Check that with each press of SHIFT key, the sub-picture moves counterclockwise.

Note: When sub-picture is in the upper part of the screen, the channel number of the main picture is in the lower right.

1-3-6-3 PinP Swap mode check

Adjustment Preparation

(1) Press PinP key of R/C unit.

Adjustment Procedure

(1) Check that with each press of "SWAP" key, the contents of the main picture and sub-picture are exchanged.

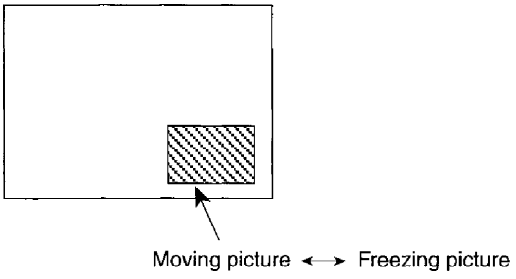
1.3.6.4 PinP Freeze (at PinP: ON)

Adjustment Preparation

(1) Connect the signal to ANT.
(2) Press PinP key of R/C unit.

Adjustment Procedure

(1) Check that each time "FREEZE" key is pressed, the sub-picture alternates between moving picture and freezing picture.



(2) Press PinP key to remove PinP from screen.

1.3.6.5 PinP Freeze mode (at PinP: OFF)

Adjustment Preparation

(1) Connect the signal to ANT.
(2) PinP mode OFF.

Adjustment Procedure

(1) Press FREEZE key on the R/C unit.
(2) Check that freezing sub-picture appears.

1.4 Signal Circuit Operation Check

1.4.1 Auto Color Operation Check

Adjustment Preparation

(1) Receive the color-bar signal.
(2) Select the Video Setting option using the ▶ key.
(3) Select Advance Settings option using ▶ key.
(4) Select Auto Color mode by pressing ▲▼ key.

Adjustment Procedure

(1) Set COLOR CONTROL:MAX.
(2) Set AUTO COLOR:OFF by pressing the ▶ key, checking that the red part of color-bar signal grows deeper.
(3) Return the AUTO COLOR:ON by pressing the ▶ key.
(4) Return the COLOR CONTROL:TYPICAL.

1.4.2 Noise Reducer Operation Checking

Adjustment Preparation

(1) Receive the color-bar signal.
(2) Select the Video Setting option using ▶ key.
(3) Select Advance Settings option using ▶ key.
(4) Select Noise Reducer mode using ▲▼ key.

Adjustment Procedure

(1) Set NOISE REDUCER:ON by pressing the ▶ key of the remote control transmitter, checking noise is reduced.

1.4.3 Notch filter circuit operation check

Adjustment Preparation

(1) Receive the color-bar signal.
(2) Select the Notch Filter mode.

Adjustment Procedure

(1) Set the Notch Filter:ON by pressing the ▶ key and check that the dot interference on horizontal color borderline of the color-bar is reduced.
(2) Set the Notch Filter:OFF by pressing the ▶ key.

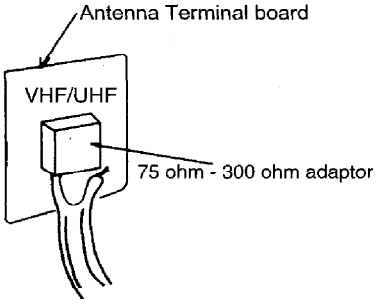
1.4.4 Weak electric field check

Adjustment Preparation

(1) Connect one side of the 300 ohm feeder to 75 ohm—300 ohm antenna adaptor. Beside, connect the antenna adaptor to the VHF antenna terminal board as shown below.
(2) Turn to No Signal condition.

Adjustment Procedure

(1) Check that phenomena such as oscillation and abnormal beat, etc. do not occur on any channel.



2. POWER SUPPLY P.W.B.

2.1 +B Voltage Adjustment

Adjustment Preparation

(1) Set the AC input power supply to120±1V (distortion 3% or less).
(2) Receive a color bar signal.
(3) Set the Contrast Brightness control to maximum.
(4) Measure about 30 seconds after the power is turned on.

Adjustment Procedure

(1) Connect the DC voltmeter to R908.
(2) Adjust R928 so that the indication of the DC voltmeter is 140.0±0.3V.

2.2 Protection Circuit Operation Check

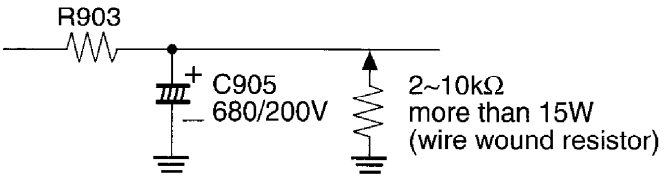
2. 2.1 +20V Audio Power Supply

Adjustment Preparation

(1) CONTRAST to maximum, BRIGHTNESS to center.

Adjustment Procedure

(1) Connect a 10kΩ resistor between Q945 base and GND and check that the picture disappears.
(2) Disconnect resistor immediately and the power cord.
(3) Discharge C905 as follows.



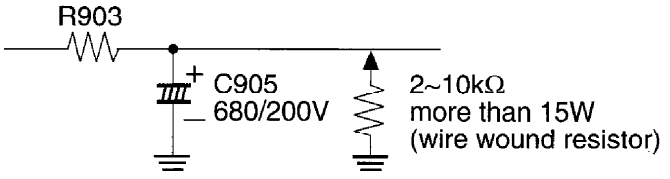
2.2.2 +26V Audio Power Supply

Preparation for Adjustment

(1) CONTRAST to maximum, BRIGHTNESS to center.

Adjustment Procedure

(1) Connect a 10kΩ resistor between Q963 base and GND and check that the picture disappears.
(2) Disconnect resistor immediately and the power cord.
(3) Discharge C905 as follows.



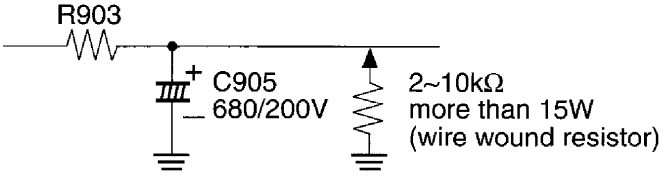
2.2.3 +12V Power Supply

Preparation for Adjustment

(1) CONTRAST to maximum, BRIGHTNESS to center.

Adjustment Procedure

(1) Connect a 10kΩ resistor between Q964 base and GND and check that the picture disappears.
(2) Disconnect resistor immediately and the power cord.
(3) Discharge C905 as follows.



2.2.4 +B Over Voltage

Preparation for Adjustment

(1) CONTRAST to maximum, BRIGHTNESS to center.

Adjustment Procedure

(1) Connect a 10Ω resistor to both ends of R955 and check that the +B voltage goes up and down.

2.3 FBT Protection Circuit Operation Check

Preparation for Adjustment

(1) Turn on the power of the set.

Adjustment Procedure

(1) Add 10KΩ (1/16w~1/8w) resistor between Q713 base and GND (ENH2 connector pin ③) and check the operation.
(2) After checking, remove AC PLUG and the 10K resistor to return the set to the previous state.
After about 15 seconds, discharge C906. Turn on the power again, and check the set operates normally.

2.4 High Voltage Limiter Circuit Operation Check

Checking Preparation

(1) Connect the assembly to a standard set.
(2) Connect a high voltage voltmeter between CPT anode terminal (anode cap side) and the ground.
(3) Set AC input voltage to 120±3V.
(4) Receive a circle pattern or color bar signal and set "BRIGHTNESS" and "CONTRAST" to maximum. Adjust screen VR so that beam current is I_B±0.1mA. (The voltage of ABL terminal -C741 both ends should be 12V or less.)

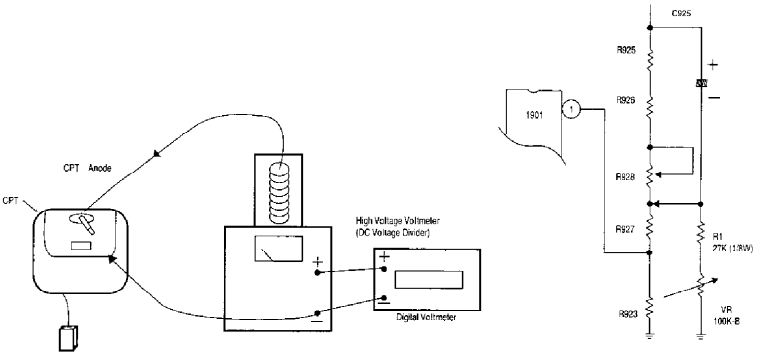
Adjustment Procedure

(5) Check that the normal high voltage and +B voltage is as below.

CHASSIS	E HT	I B	+B	E1
CZ68	30.0 (kv) ±1kv	1.6 (mA) ±0.1mA	140.0 (V) ±0.3V	37.0 (kv) ±1.3kv

Adjustment Preparation

(6) Set AC input voltage to 120±3V. Then, connect the VR(100K-B) and R1(27K) to R927 and ground side as below.
Note: At that time the value of VR should be maximum.



Use a voltmeter of input impedance 10M ohm or more with indication to the 1st decimal place.

Adjustment Procedure

(7) Keep CONTRAST, BRIGHTNESS, and Screen VR as in Item (4). Reduce the VR value gradually, and check that the picture disappears when high voltage is E1. Immediately after checking that it disappears, turn off the set switch. Remove the VR and high voltage voltmeter. When connecting or removing high voltage voltmeter to or from anode cap, be sure to turn off the switch of the set. Also, be sure to perform it after the chassis discharge or residual high voltage, because the high voltage of CPT anode may be left.

2.5 Side Pin Distortion Coarse Adjustment

Adjustment Preparation

(1) Receive a circle pattern signal or cross-hatch signal.
(2) Set the AC input power supply to 120±1V.
(3) For picture controls, set the BRIGHTNESS to center and set the other controls to their standard conditions.

Adjustment Procedure

(1) Vary R7HF so that the right and left vertical lines are straight.

2.6 H. size, H. Center Coarse Adjustment

Adjustment Preparation

(1) Receive a circle pattern signal or cross-hatch signal. (Cross-hatch signal: 20 vertical lines, 14 horizontal lines.)
(2) Set the AC input power supply to 120± 1V.
(3) Set CONTRAST to maximum and BRIGHTNESS to center.

Adjustment Procedure

(1) Vary R7H6 so that the horizontal size markers of the circle pattern at the right and left end are 1.5–1.5 on the average.
(2) If using the cross-hatch signal, vary R7H6 so that the far left and right vertical lines are at the screen edges.
(3) Vary R759 so that the difference of the horizontal size markers of the circle pattern at the right and left end are within 1.5.
(4) If using the cross-hatch signal, vary R759 so that the difference of the far left and right vertical lines at the screen edges are within 0.5 of a cross-hatch.

2.7 Vertical Amplitude Coarse Adjustment (R631)

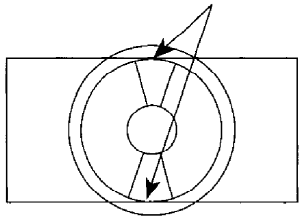
Adjustment Preparation

(1) Receive a circle pattern signal or cross-hatch signal. (Cross-hatch signal: 20 vertical lines, 14 horizontal lines.)
(2) Set the AC input power supply to 120± 1V.
(3) For picture controls, set the BRIGHTNESS to maximum and set the other controls to their standard conditions.

Adjustment Procedure

(1) Turn the vertical amplitude adjustment VR (R631) and adjust as shown below.
(2) If using the cross-hatch signal, vary R631 so that the top and bottom of the screen edge is 7 cross-hatch away from the exact center of the cross-hatch signal.

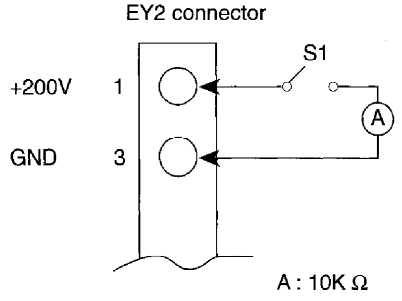
Adjustment position (inner edge of the outer circle)



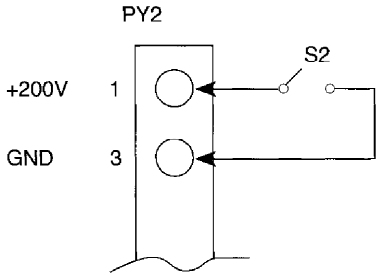
2.8 Discharge of 200V Line

Adjustment Preparation

(1) After the adjustment of assembled P.W.B. and after the checking of mounting, the jig below is connected.
(2) Deflection P.W.B.



(3) CPT P.W.B.



Adjustment Procedure

(1) After the adjustment and checking of the mounting, the power is turned off then close the S1, S2 switch (for 3~5 seconds) and discharge 200V line.

II. COMMON SERVICE ADJUSTMENT

1. DEFLECTION CIRCUIT ADJUSTMENT

1.1 Alteration Contents for CPT

(1) Keep DY sticked to CPT funnel.
(2) Receive white raster signal and adjust the white balance according to Item II, 2.1.
(3) Set BRIGHTNESS control and CONTRAST to maximum and apply heat-run to the TV set with circle pattern or white raster signal received for "T" minutes or more. (See Table 1-1.)

Table 1-1

MODEL	CPT (MAKER)	MINUTES (T)	NOTE
35UX85B (CZ68)	A89AGF11X10	40 min.	ITC CPT

1.2 Purity Check

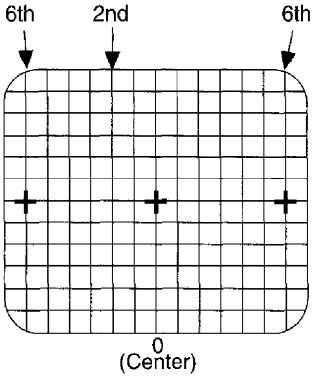
The magnetic field in artificial magnetic field should follow the magnetic field according to the destination, and the set should face as follows.
After degaussing in each direction, check these items visually and with a microscope.

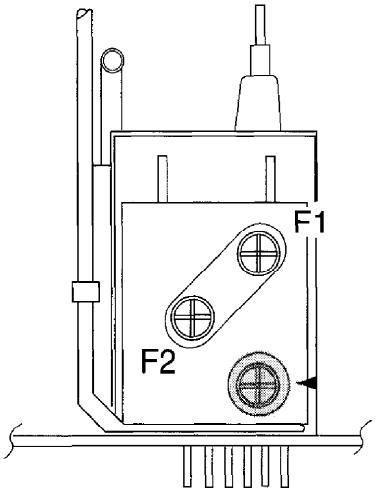
(A) No problem in white uneveness.
(B) Each single color must not hit any other colors.
(C) If white or each single color is defective, apply a magnet(S) on CPT for correction. If any magnet is applied, check it after degaussing.

MODEL	CPT (MAKER)	CHECK FACE
35UX85B (CZ68)	A89AGF11X10	North South

1.3 Focus Adjustment

NO.	MODEL	CPT	Condition	Focus VR Setting Position
1	35UX85B	A89AGF11X10	• Receive the cross-hatch signal • Contrast Control: Maximum • Sharpness Control: Center • Brightness Control: Center	a) Turn the Focus VR (F2) gradually to adjust 6th vertical line becomes best. b) Turn the Focus VR (F1) gradually to adjust center horizontal line becomes best. c) Turn to Item (a)/(b) again and finish.





1.4 Deflection Circuit Picture Adjustment

1.4.1 Horizontal Center Picture Adjustment (R759)

Adjustment Preparation

(1) Receive circle pattern signal or cross-hatch signal. (Cross-hatch signal: 20 vertical lines, 14 horizontal lines.) Set CONTRAST control to maximum and BRIGHTNESS control to center.

Adjustment Procedure

(1) Adjust H. Center VR (R759) so that the difference of the horizontal size markers of the circle pattern at the right and left end are within 0.5.

(2) If using the cross-hatch signal, vary R759 so that the difference of the far left and right vertical lines at the screen edges are within 0.25 of a cross-hatch.

1.4.2 Vertical Size Adjustment (R631)

Adjustment Preparation

(1) The TV set should face North or South.

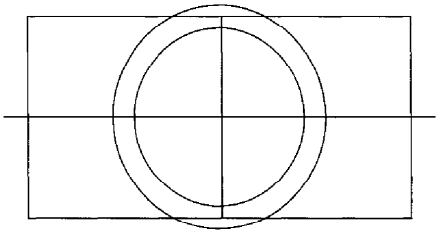
(2) Receive circle pattern signal or cross-hatch signal. (Cross-hatch signal: 20 vertical lines, 14 horizontal lines.) Set CONTRAST control to maximum and BRIGHTNESS control to center.

Adjustment Procedure

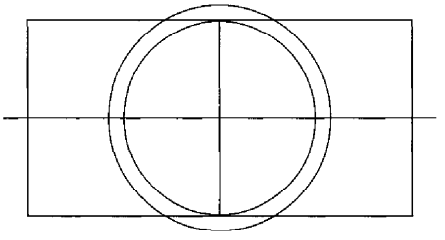
(1) Adjust V. size VR (R631) so that the outer circle pattern is like figure.

Note: Perform this adjustment more than 5 minutes after applying the power ON.

i) When the picture center is below CPT center.
Adjust so that 1/2 of the width of outer circle comes to the screen.
*If using the cross-hatch signal, adjust so that the top and bottom of the screen edge is 7.25 cross-hatch away from the exact center of the cross-hatch signal.

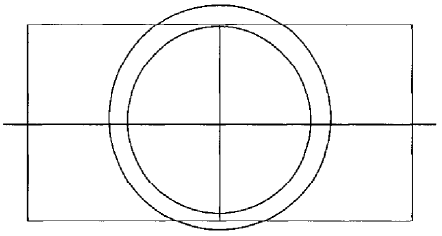


ii) Standard condition
Adjust so that the inner circle comes in contact with the top and bottom of the screen.
*If using the cross-hatch signal, adjust so that the top and bottom of the screen edge is 7 cross-hatch away from the exact center of the cross-hatch signal.



iii) When the picture center is above CPT center.
(1) When the picture center is 0~2 mm above CPT center, adjust so that the bottom of the inner circle comes in contact with the TOP of the screen.
*If using the cross-hatch signal, adjust so that the top and bottom of the screen edge is 7 cross-hatch away from the exact center of the cross-hatch signal.

(2) Except for the above, adjust so that 1/2 of the width of the outer circle comes to the BOTTOM of the screen.
*If using the cross-hatch signal, adjust so that the top and bottom of the screen edge is 7.25 cross-hatch away from the exact center of the cross-hatch signal.



1.4.3 Side Pin Distortion Adjustment (R7HF)

Adjustment Preparation

(1) Receive cross-hatch signal. Set CONTRAST control to maximum and BRIGHTNESS control to the point where the background is set.

Adjustment Procedure

(1) Adjust R7HF so that the line of the right and left is straight (Specification: Dt. $D_R \leq 7$mm 35V)

1.4.4 Horizontal Size Adjustment (R7H6)

Adjustment Preparation

(1) Receive circle pattern signal or cross-hatch signal. (Cross-hatch signal: 20 vertical lines, 14 horizontal lines.)
(2) Set CONTRAST control to maximum and BRIGHTNESS control to center.

Adjustment Procedure

(1) Adjust R7H6 so that the average reading of right and left is 1.5. The reading of each side should be at least 1.
Acceptable Tolerance: 1.5±0.5
(2) If using cross-hatch signal, adjust R7H6 so that the far left and right vertical lines are at the screen edge, within 0.25 of a cross-hatch.

2. SIGNAL CIRCUIT ADJUSTMENT

2.1 White Balance Adjustment

Adjustment Preparation

(1) Apply heat-run 20 min. or more after the power is turned on.
(2) Check that the purity adjustment has been completed.
(3) Set the vertical incident illumination on the CPT surface to 20 lux or less.
(4) Receive white raster signal and set the color temperature control (white control) to STD.
(5) Set drive adjustment VRs (R860, R864) to the mechanical center.
(6) Turn low brightness white balance adjusting VRs (R866, R868, R870) fully counterclockwise.
(7) Turn the screen adjusting VR fully counterclockwise.
(8) The picture is switched to a lateral line by the switch S851.

Adjustment Procedure

(1) Turn the screen adjusting VR clockwise and set to the position where the bright colored line starts appearing on the CPT screen.
Do not turn thereafter the low brightness white balance VR (this is called VR-A) corresponding to the color first appearing.
When a bright colored line does not appear, set the screen VR fully clockwise.
(2) Turn fully clockwise the low brightness white balance VRs except VR-A and adjust so that red, green and blue bright colored lines appear on the screen equally.
(3) Return the switch S851 back to normal position.
(4) Set CONTRAST and BRIGHTNESS controls to minimum and turn sub-black level VR (R325) to set at the position where the white raster is just slightly seen.
(5) Set the white balance meter at the center of the screen.
(6) Adjust CONTRAST control so that the indication of the brightness meter is 80% of the full scale.
Then, turn the drive adjusting VRs (R860, R864) and adjust the high-brightness white balance.
(7) Adjust CONTRAST control to minimum and check that the low-brightness white balance is obtained by directly observing the CPT surface, without using a mirror.
(8) When the low brightness white balance is not obtained, adjust other low brightness white balance VRs except VR-A and return to item (6).

White balance color temperature setting: 7,200° K.

(9) Set white control (color temperature control) to cool, and check that color temperature is approximately 9,300°K.

2.2 Sub Brightness Adjustment

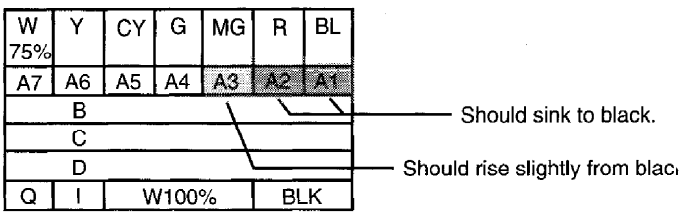
Adjustment Preparation

(1) Start adjustment 20 minutes or more after the power is turned on. Receive the color bar signal.
(2) Set the CONTRAST and color controls to minimum.
(3) The vertical incident illumination on the screen should be 20 lux or less.
Adjustment Specification: within ±0.3 step

Adjustment Procedure

(1) Press the memory initialize key on the R/C. If you do not have this key, short the pins of the 2 pin connector PI1 for one second, then remove. A beep will be heard.
(2) Press the ▲ button to select SUB-BRIGHTNESS Mode.
(3) Use the ◀▶ buttons to increase or decrease so that points A1and A2 sink to black and A3 rises slightly above it. (Visually adjust)
(4) After above adjustment, SUB-BRIGHTNESS will have value between 63 and 191. Adjustment is now complete.
(5) After adjustment is done, press the memory initialize key on the R/C one more time and the data is stored in memory. If you do not have this key, short the pins of the 2 pin connector PI1 for one second, then remove.

Note: When selecting SUB-BRIGHTNESS mode the µcon sets the CONTRAST and COLOR to min. automatically but make sure that the other conditions are center. Directly observe the CPT screen by eye without using a mirror.



Adjustment specification: within ±0.3 step

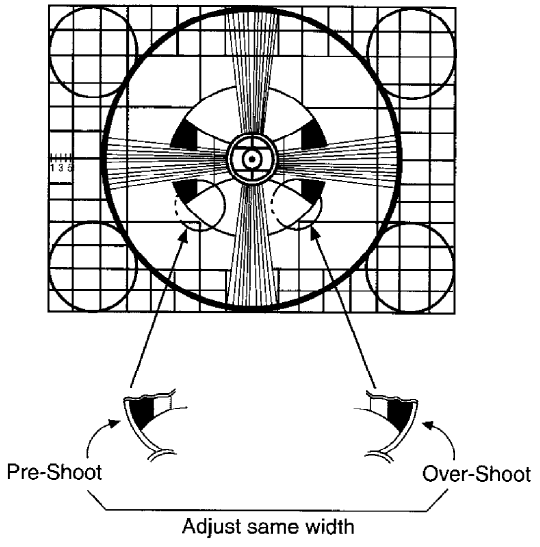
2.3 Shoot balance adjustment

Adjustment Preparation

(1) Receive the reverse cross-hatch pattern signal. (Cross-hatch lines are black.)
(2) Set the video condition to factory reset.

Adjustment Procedure

(1) Press the memory initialize key of the R/C. If you do not have this key, short the pins of the 2 pin connector PI1 for one second, then remove. A beep will be heard.
(2) Press the ▲ button and select SHOOT BALANCE mode.
(3) Using the ◀▶ buttons, gradually adjust so the widths of pre-shoot and over-shoot of the vertical line (black) shown in the circle pattern are balanced. (Visually adjust)
(4) After adjustment is done, press the memory initialize key on the R/C one more time and the data is stored in memory. If you do not have this key, short the pins of the 2 pin connector PI1 for one second, then remove.



Note: Directly observe the CPT screen by eye without using a mirror.

2.4 Sub Picture Adjustment

2.4.1 Sub Picture Black Level Check

Adjustment Preparation

(1) Start adjustment about 20 minutes after the power switch is turned ON.
(2) After displaying the white signal with main picture, display the sub picture and receive the color bar signal with it.

Condition : (CONTRAST-MAXIMUM / OTHERS-CENTER)

Adjustment Procedure

(1) Check the sub picture setting the part of A1 of the color bar pattern to black.
(Check specification ±0.5 steps.)

2.4.2 Sub Picture White Balance Adjustment

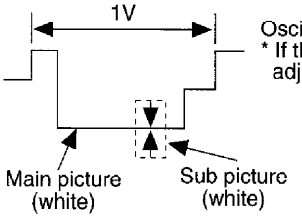
BLUE – Adjustment R5C7
GREEN – Adjustment R5C5
RED – Adjustment R5C3
] On the Signal P.W.B.

Preparation for Adjustment

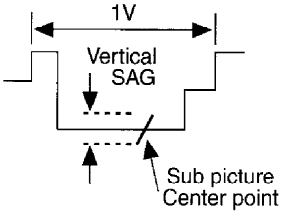
(1) Turn off the sub picture by pressing "P in P" key or remote controller. (Keeping the white signal with main picture.)
(2) Display and match the sub picture details with the main picture details by pressing "FREEZE" key of remote controller.
(3) Condition should be set as follows.
(CONTRAST — MAXIMUM / OTHERS — CENTER)
(4) White signal specification amplitude 1.0Vpp

Adjustment Procedure

(1) Observe Q857 collector on the CPT P.W.B. and turn the BLUE adjustment VR R5C7 and adjust so that the amplitude of the sub picture is the same as that of the main picture.
(2) Similarly, observe Q854 collector on the CPT P.W.B. and turn the GREEN adjustment VR R5C5 and adjust so that the amplitude of the sub picture is the same as that of the main picture.
(3) Similarly, observe Q851 collector on the CPT P.W.B. and turn the RED adjustment VR R5C3 and adjust so that the amplitude of the sub picture is the same as that of the main picture.
(4) Check that the white balance of the sub picture is the same as that of the main picture.
If it does not, return to step (1).
☆ Adjustment specification: ±1V
☆ Waveform of Q851/Q854/Q857 (R/G/B)=cathode (sub picture level compared with main picture level.)



Oscilloscope range : 10V/0.2msec
* If the sub picture sag to vertical direction, adjust the sub picture center point.



☆ Perform this adjustment after the white balance and sub-brightness adjustments of the main picture are completed.
☆ White balance 7200°K+OMPCD
(Color coordinates: x=0.301, y=0.310)
☆ Refer to the sub brightness adjustment for details of the gray scale of color bar signal.

2.4.3 Sub-picture position adjustment

Adjustment Preparation

(1) Select signal on main picture.
(2) Video settings have to be at normal condition.

Adjustment Procedure

(1) Press the Memory Initialize key on the R/C. If you do not have this key, short the pins of the 2 pin connector PI1 for one second, then remove. A beep will be heard.
(2) Press the ▲▼ buttons to select the PIP position mode.

(3) Adjust the VP (vertical) and the HP (horizontal) position using the ◀▶ buttons.
(4) Press the Memory Initialize key of the R/C to store the value in memory. If you do not have this key, short the pins of the 2 pin connector PI1 for one second, then remove.
(5) Select PIP mode and shift the sub-picture using the SHIFT button. Distance between PIP and edge of screen should be equal when shifted. If it is not, repeat (1)~(5).

2.5 Surround Operation Check

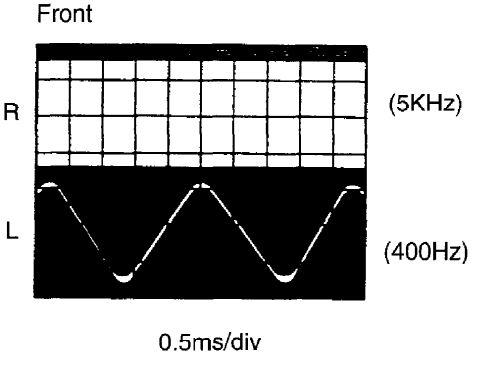
Adjustment Preparation

Input the following audio signals to the audio input of the VIDEO INPUT terminals.
When checking surround:
L CH: 400Hz sine wave 475mVrms
R CH: 5kHz sine wave 475mVrms
Set the INT. SPEAKER : ON
Set the volume controls of FRONT and REAR to center.
Set the BASS, TREBLE and BALANCE to center.

Note: Front waveform: Front speaker output of the set.
Rear waveform: Rear speaker output of the set.

2.5.1 Surround Off Check

(1) Set to SURROUND: OFF and check that the waveform shown below is obtained.

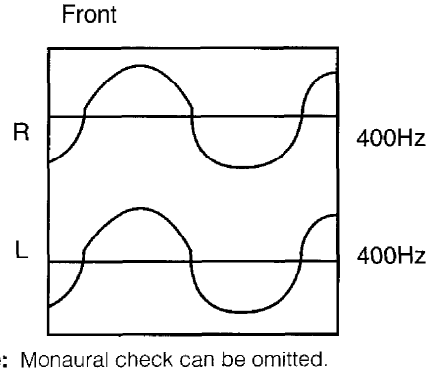


Note: REAR output is no signal.

2.5.2 Surround Off/Monaural Check

Adjustment Preparation

Check that the following waveform is obtained. The amplitudes of 2 channels are equal.

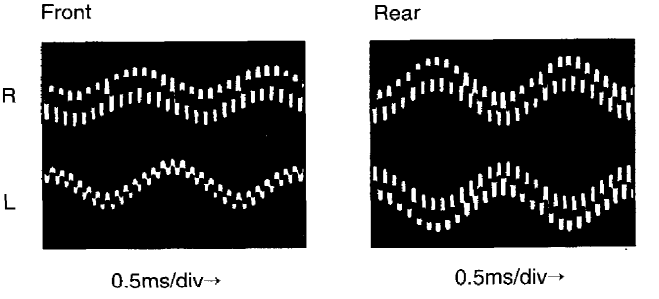


Note: Monaural check can be omitted.
REAR output is no signal.

2.5.3 Matrix Surround Check

Adjustment Preparation

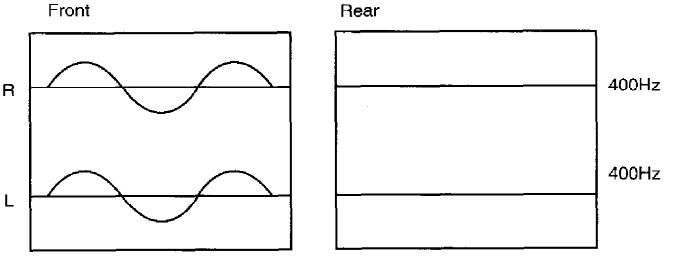
(1) Set to SURROUND : MATRIX
Check that the following waveforms are obtained.
Front : Check that the phases of R and L are different and 400Hz is superimposed on 5kHz.
The amplitudes of R and L are different.
Rear : Check that the phases of R and L are opposite and 400Hz is superimposed on 5kHz.



2.5.4 Matrix Surround/Monaural Check

Adjustment Preparation

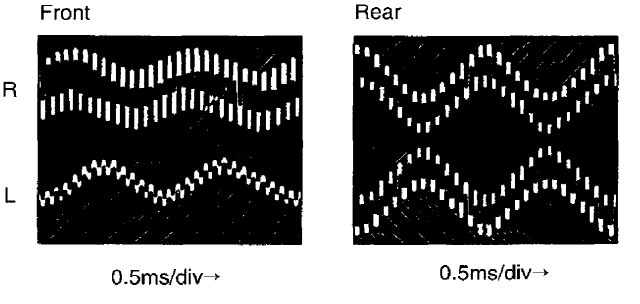
Check that the following waveforms are obtained.
Front : R and L waveforms are almost equal.
Rear : R and L waveforms are almost zero.



2.5.5 Hall Surround Check

Adjustment Preparation

(1) Set to SURROUND : HALL.
Check that the following waveforms are obtained.
Front : Check that the phases of R and L signals are different and 400Hz is superimposed 5kHz.
Rear : Check that the phases of R and L are opposite and 400Hz is superimposed on 5kHz.
The amplitudes of R and L are equal.



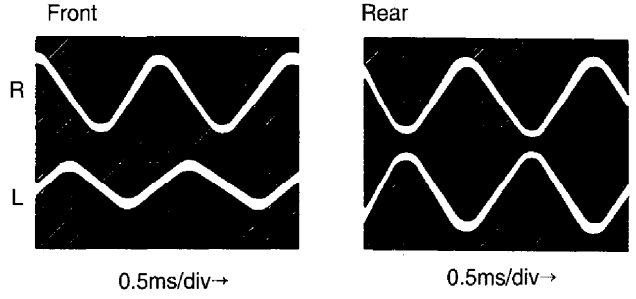
Note: Amplitude levels of front R and L are not even.

2.5.6 Hall Surround/Monaural Check

Adjustment Preparation

Check that the following waveforms are obtained.

Front : The phases of R and L are different.
The amplitudes of R and L are different.
Rear : The phases of R and L are opposite.

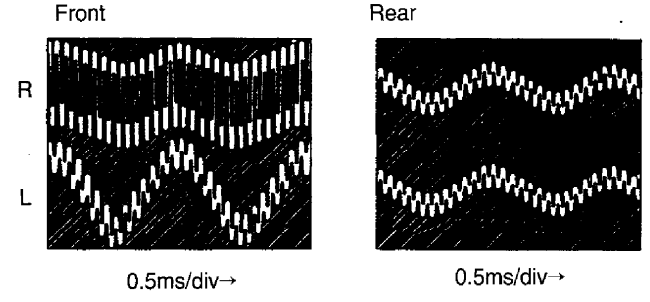


Note: The monaural check can be omitted.
Amplitude levels of front R and L are not equal.

2.5.7 Dolby Surround Check

Adjustment Preparation

(1) Set to SURROUND : DOLBY
Check that the following waveforms are obtained.
Front : R is 5kHz sine wave. L is 400Hz sine wave.
Rear : R and L are the same signal and 400Hz is superimposed on 5kHz.

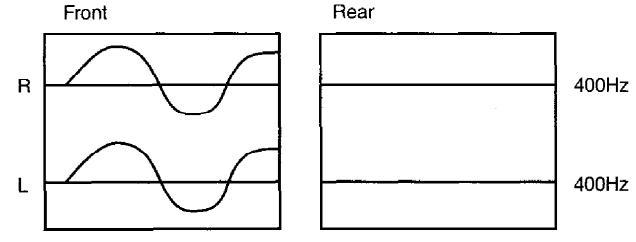


2.5.8 Dolby Surround/Monaural Check

Adjustment Preparation

Check that the following waveforms are obtained.
Front : R and L are the same signal.
Rear : Almost no output from both R and L.

Note: Front side check can be omitted.



2.6 Dynamic Bass Circuit Operation Check

Adjustment Preparation

(1) Input 90Hz audio signal with 435mVrms to L/MONO.
(2) Set the VOLUME to center.
(3) Set to SURROUND OFF.

Adjustment Procedure

(1) Switch the DYNAMIC BASS of the SOUND SETTING from OFF to ON and check that the output level of the front speaker changes by +6dB at 70Hz.

3. CHECK IN COMBINATION WITH EXTERNAL EQUIPMENT

3.1 Check in Combination with External Equipment

Preparation for Check

(1) Input video signals to "Video 1", "Video 2" and "Video 3" input terminals.
Signal condition 100% white signal
1±0.2Vp-p
75Ω termination
(2) Input audio signals to Audio 1", "Audio 2" and "Audio 3" input terminals.
Signal condition 435±20mVrms
VCR or Tuner or equivalent.
(3) Connect the monitor TV to output terminal.
(4) Input Y-C separate signals to "S-VIDEO" input terminal.
(5) Connect the "Audio Input Terminals" of the monitor TV to "Audio to Hi-Fi" output terminals, and "Transmitter Out" output terminals.

Checking Procedure

(1) Each time the input selection of the remote control transmitter is pressed, input signal should be received alternately.
(2) Check that the picture and sound are normal when the external signals are received.
(3) Check that the "Transmitter Out" signal are switched when the "WIRELESS MODE" is selected.
Remark:
(1) The 100% white of TV signal should be almost the same brightness as the 1Vp-p (75Ω termination) external video input signal.
(2) For the audio signal 100% modulation (25kHz div) of the TV signal should be almost the same level as the 435mVrms external audio signal.

Checking Procedure

(4) Check that the reception of the monitor TV connected to output terminal is also switched when Item (1) is checked.
Remark:
(1) The signals from the output terminals are the same as those of the picture and sound of the TV set.

Checking Procedure

(5) When the phono plug connected to Audio R terminal is pulled out with the external signal input, the sound from both left and right speakers should be normal (L monaural check).
When the phono plug is connected only to R terminal, check that the sound is output only from the right speaker.
(The sound should not be output from the left speaker.)
Check above in "VIDEO 2" and "VIDEO 3" modes.
Remark:
(1) The audio input terminals are switched over between stereo and monaural by switching the phono jacks.
- When the phono plugs are connected to both L and R: Stereo input mode.
- When the phono plug is connected only to L: Monaural input mode.

Checking Procedure

(6) When the Video (S-In) is selected, the picture and sound from the Y/C separated signal should be received.
However, the output signal is composite signal of S-Video input signal.

(7) The signal controlled from the TV side (Bass, Treble, Balance, Volume, Mute, Surround) should be output from Audio to Hi-Fi output terminal when Item (1) is checked.
(8) The signal controlled from the TV side (P in P VOLUME when the "WIRELESS MODE" is P in P, BASS, TREBLE, BALANCE, VOLUME, SURROUND, MUTE when the output "WIRELESS MODE" is main or rear) should be output from transmitter terminals.

4. POLARITY CHECK

This check is performed according to UL standard requirement. There should be electricity between AC power cord and chassis earth.

III. INITIAL SETTING

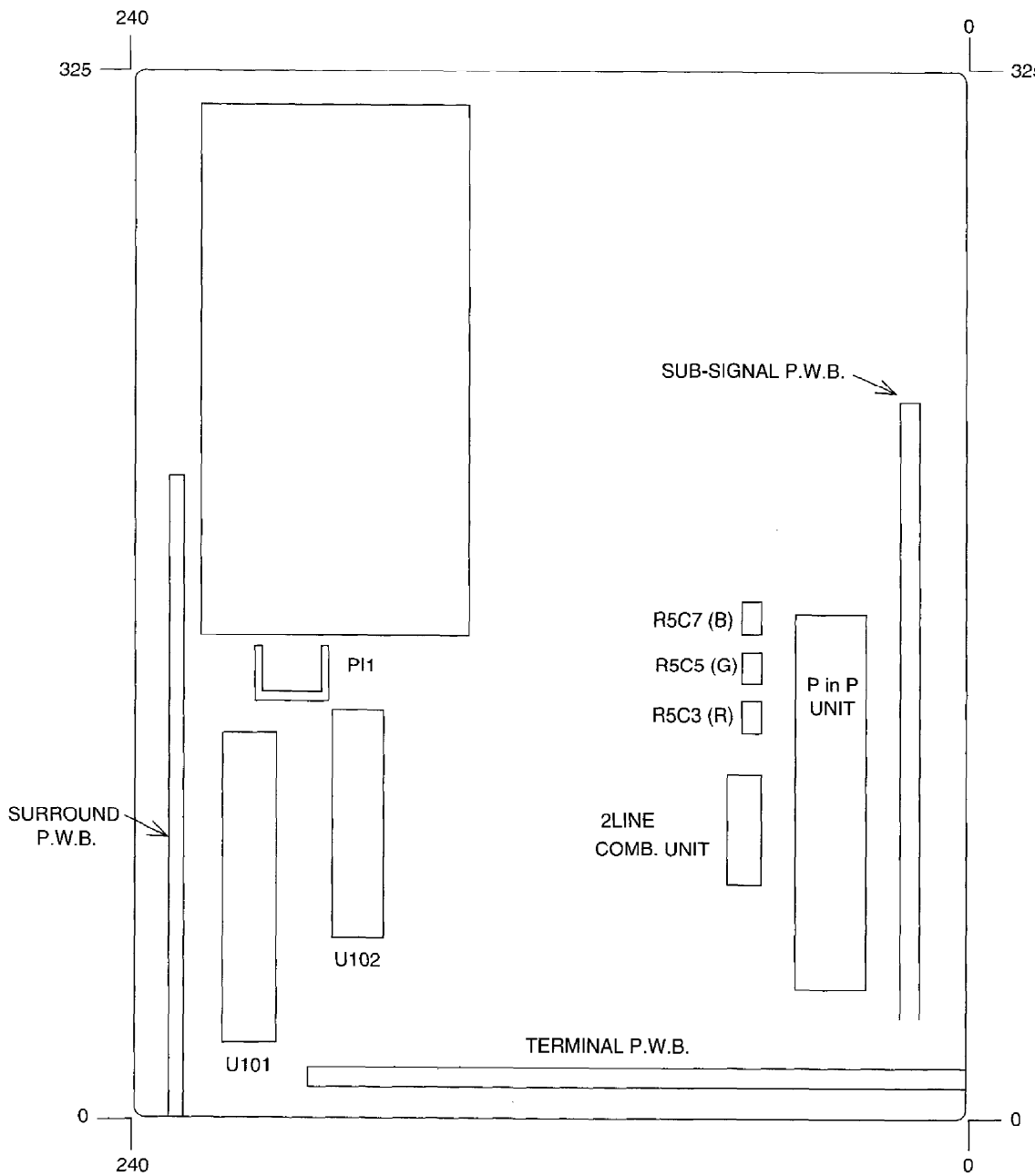
NO.	NAME	SPEC
1	Reception Channel	03 CH
2	ANTENNA	ANT A
3	INPUT	TV
4	VOLUME	20 STEP
5	P IN P	OFF
6	P in P POSITION	LOWER RIGHT (P in P ON)
7	CCD	OFF
8	AIR/CABLE	AIR
9	CHANNEL MEMORY	02~13 CH
10	CHANNEL CAPTION	No Registered for all Channels
11	CHILD LOCK	OFF for all Channels
12	VOLUME CORRECTION	OFF for all Channels
13	CLOCK SET	OFF
14	CONTRAST	MAXIMUM
15	TINT	1/2
16	COLOR	1/2
17	BRIGHTNESS	1/2
18	SHARPNESS	1/2
19	ULTRA VIEW AI	OFF
20	BALANCE	1/2
21	BASS	1/2
22	TREBLE	1/2
23	MTS MODE	STEREO
24	DYNAMIC BASS	OFF
25	INT. SPEAKERS	ON
26	REAR VOLUME	20 STEP
27	SURROUND	OFF
28	FREEZE	OFF
29	CCD MODE	CAPTION
30	CCD CHANNEL	CH1

III. INITIAL SETTING

NO.	NAME	SPEC
31	MENU LANGUAGE	ENGLISH
32	ON/OFF TIMER	No Registered
33	MESSAGE	No Registered
34	CALENDAR	'96 MAY
35	AUTOCOLOR	ON
36	NOTCH FILTER	OFF
37	NOISE REDUCTION	OFF
38	WHITE CONTROL	COOL
39	LOUDNESS	OFF
40	WIRELESS MODE	MAIN
41	SUB PICTURE VOLUME	10 STEP
42	VOLUME (FRONT)—MATRIX	20 STEP
43	VOLUME (FRONT)—HALL	20 STEP
44	VOLUME (FRONT)—DOLBY	20 STEP
45	VOLUME (REAR)—MATRIX	20 STEP
46	VOLUME (REAR)—HALL	20 STEP
47	VOLUME (REAR)—DOLBY	20 STEP
48	TEST TONE (FRONT L)	32 STEP
49	TEST TONE (FRONT R)	32 STEP
50	TEST TONE (REAR)	32 STEP
51	INPUT BALANCE	CENTER
52	FRONT VOLUME	20 STEP

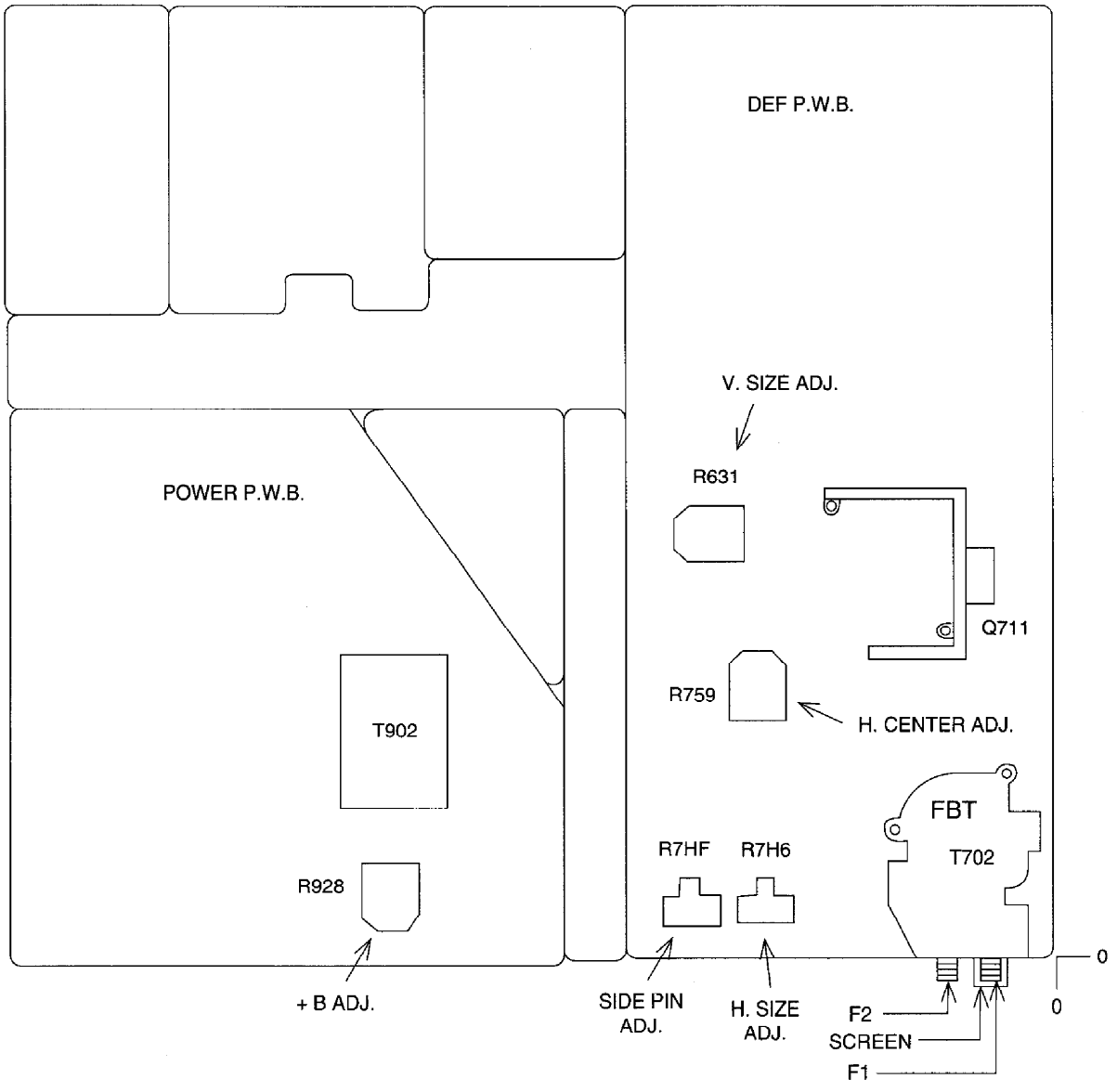
IV. ADJUSTMENT POSITION LIST

SIGNAL P.W.B.



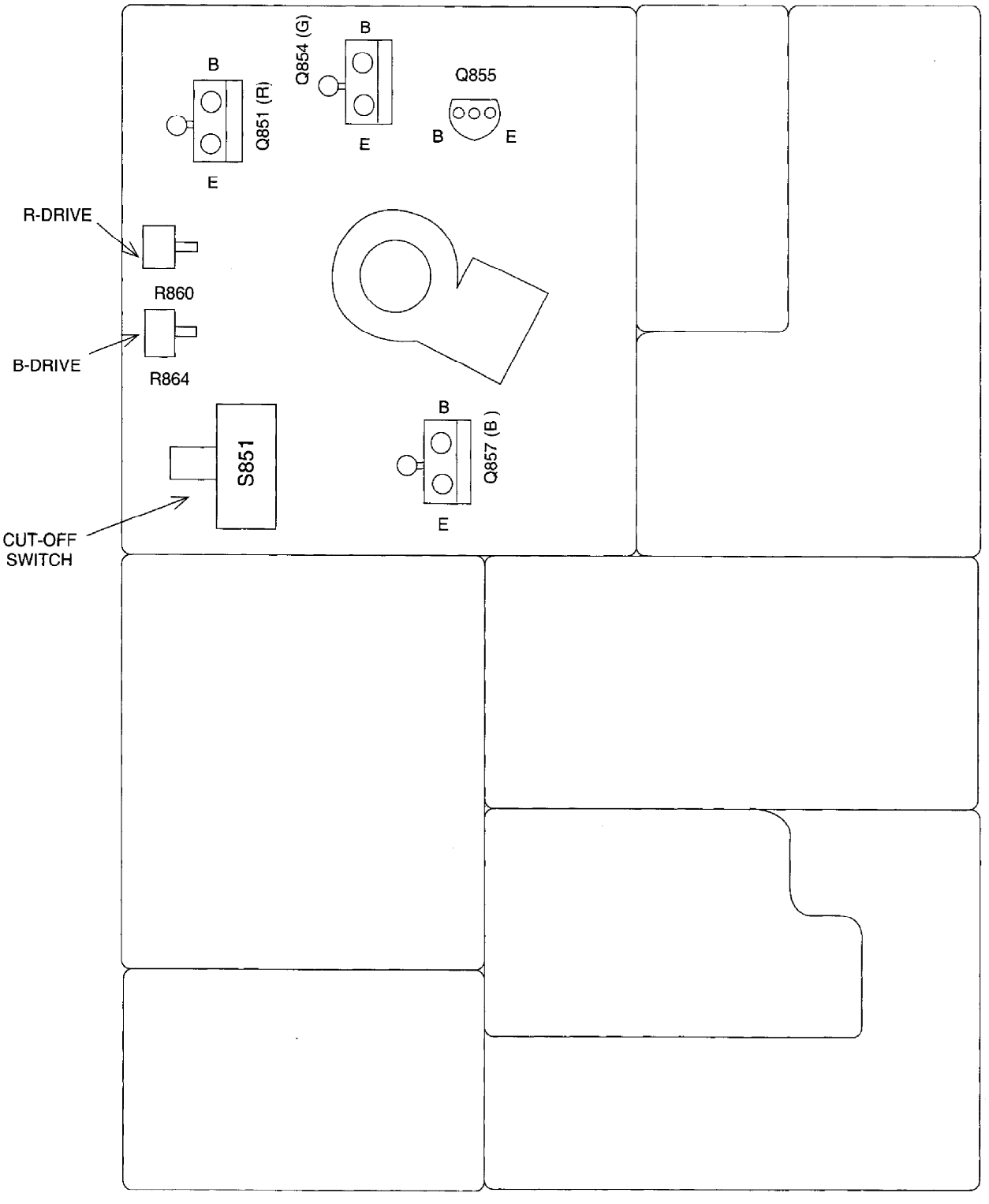
IV. ADJUSTMENT POSITION LIST

POWER P.W.B./DEF. P.W.B.



IV. ADJUSTMENT POSITION LIST

CPT P.W.B.



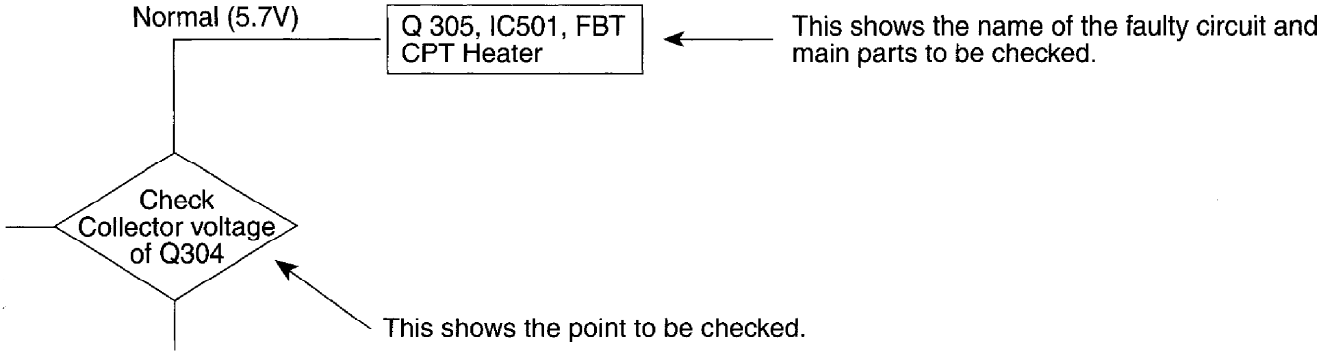
TROUBLESHOOTING

PRODUCT SAFETY NOTICE

The shaded and ⚠ marked components have special characteristics important to safety.
Read carefully the product safety notice of each Service Manual. Don't degrade the safety of the receiver through improper servicing when replacing any of these components.

HOW TO USE THE FLOW CHART

(1) The flow chart shows the following:



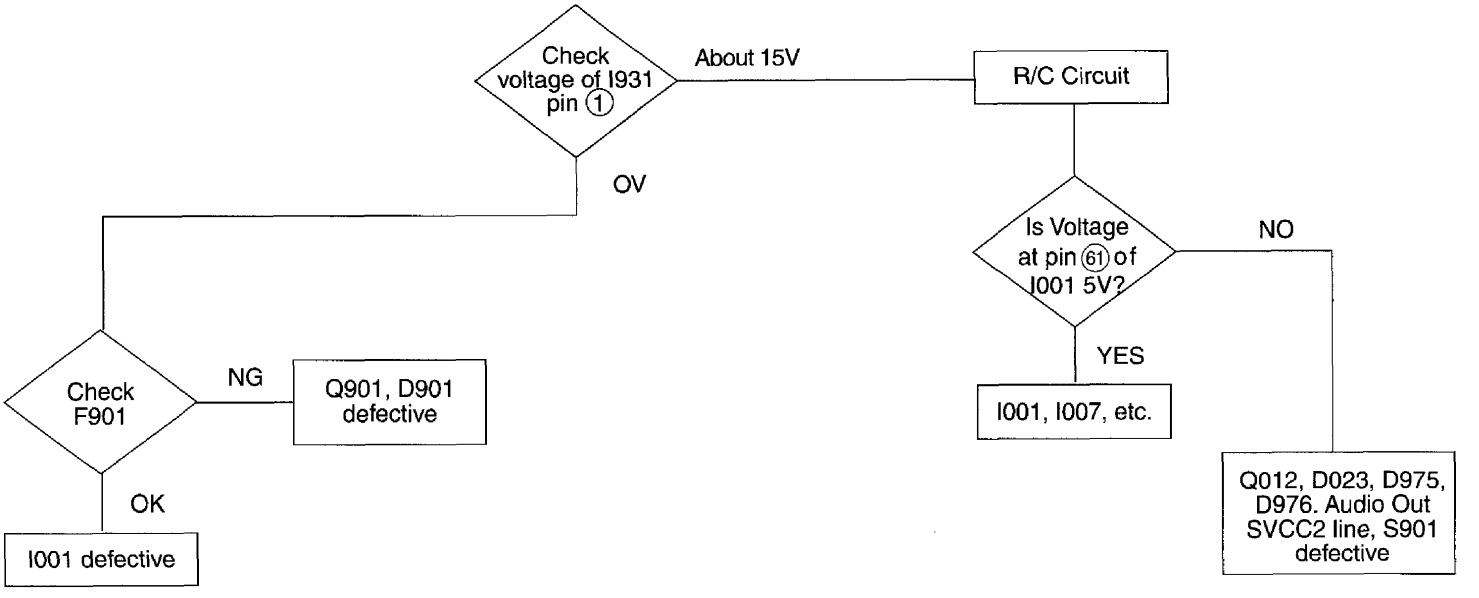
(2) The voltage shown in the chart may differ to some extent depending on the condition of the set and tester.

PRECAUTION ON MAKING MEASUREMENTS AND ON HANDLING

1. When any parts become abnormally hot or there is a smell of burning, cut off the power immediately.
2. Do not make shorts between circuits or across terminals except for those specified.
3. When applying a signal for checking purposes, make connection in the alternate current system for any not specified.
4. When measuring the voltages of ICs and TRs, be careful to see that the lead bar of the tester does not touch any other terminal.
5. Measure the voltage correctly.
6. Measure the resistance over a small range.
7. Be sure to switch off the power when replacing parts.
8. Do not apply a soldering iron for a long time when replacing parts. (Use a solder-wick.)
9. Use an isolation transformer when troubleshooting.

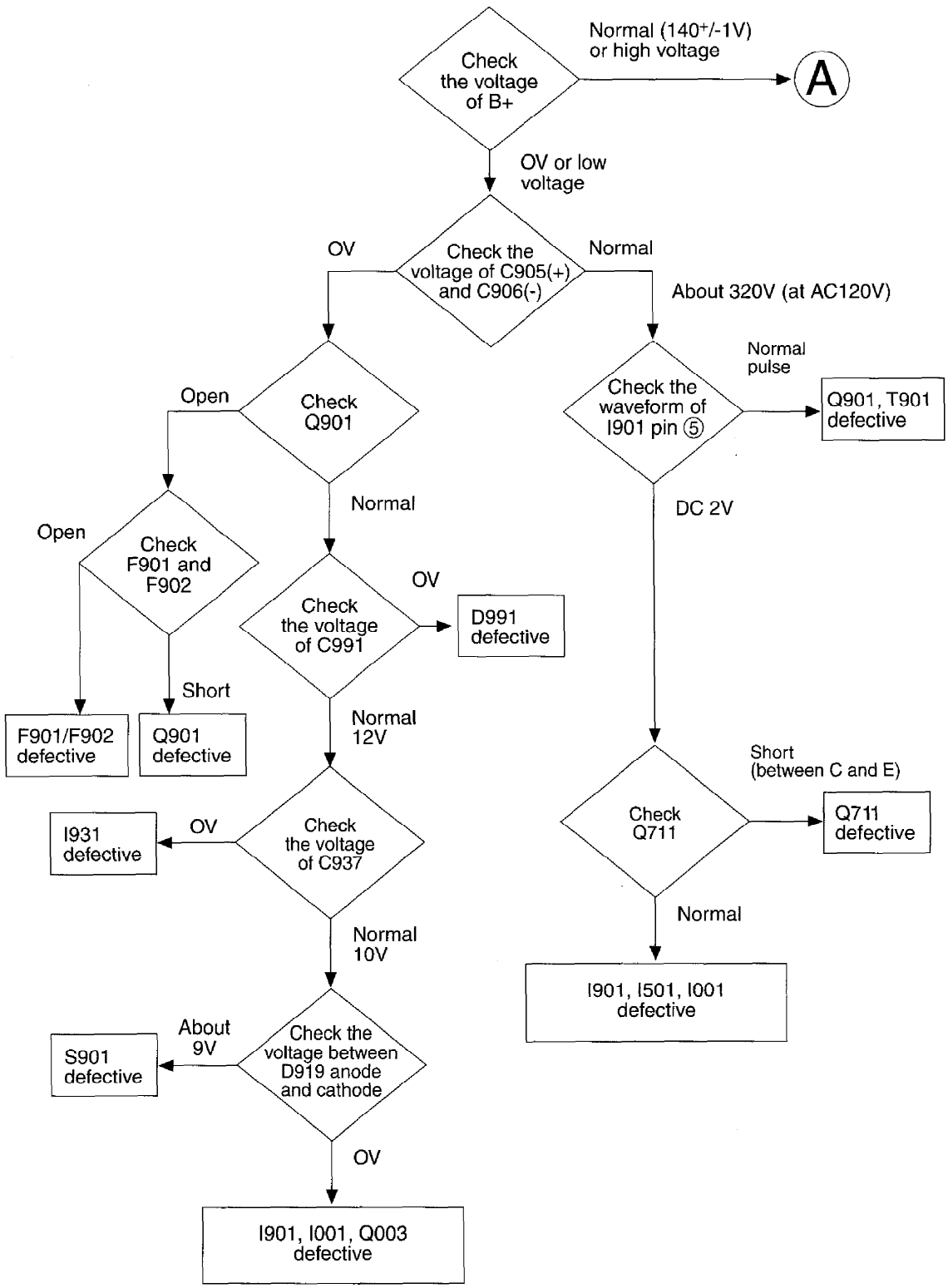
TROUBLESHOOTING

① POWER RELAY DOES NOT TURN ON

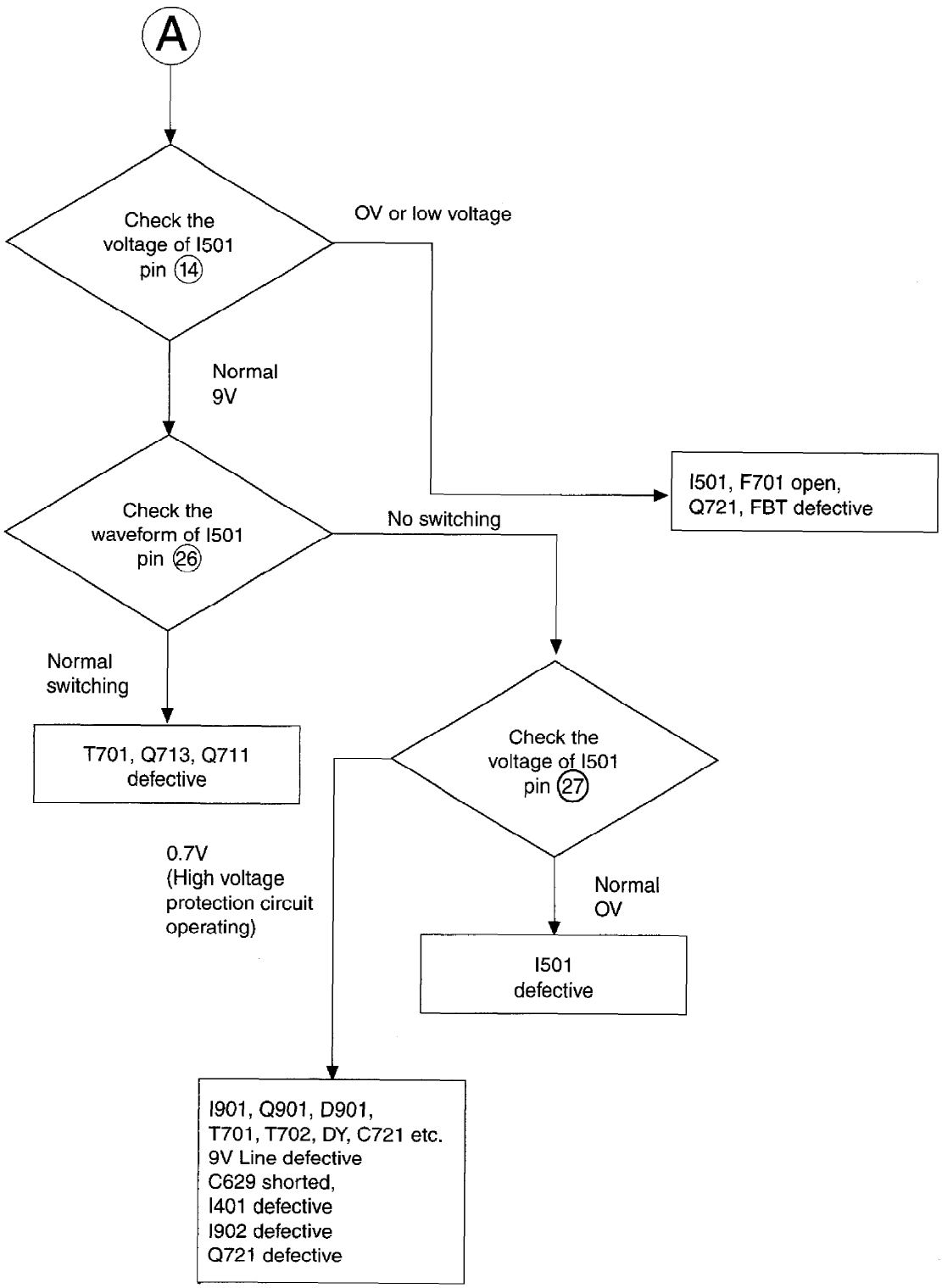


TROUBLESHOOTING

② NO RASTER AND SOUND

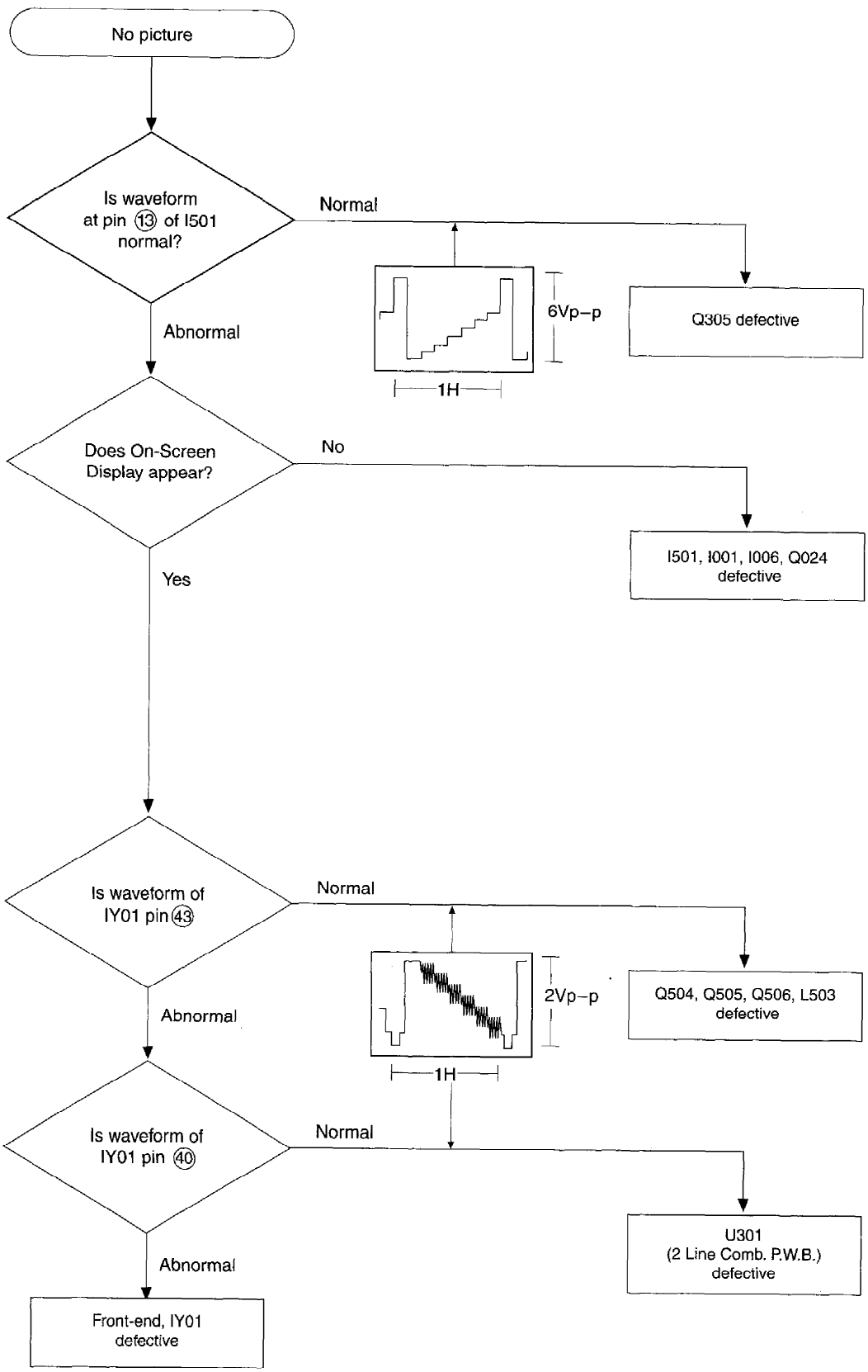


TROUBLESHOOTING



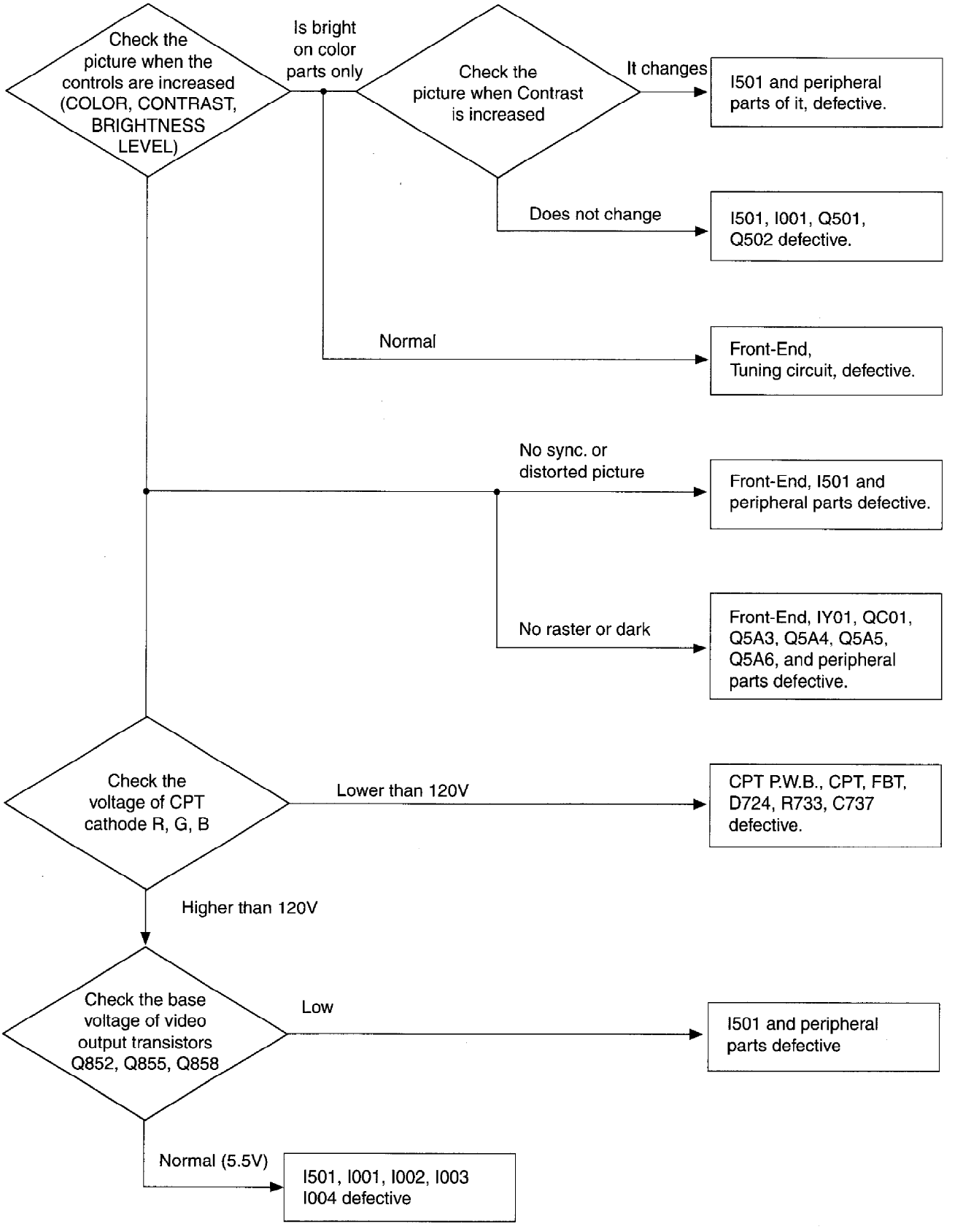
TROUBLESHOOTING

③ NO PICTURE



TROUBLESHOOTING

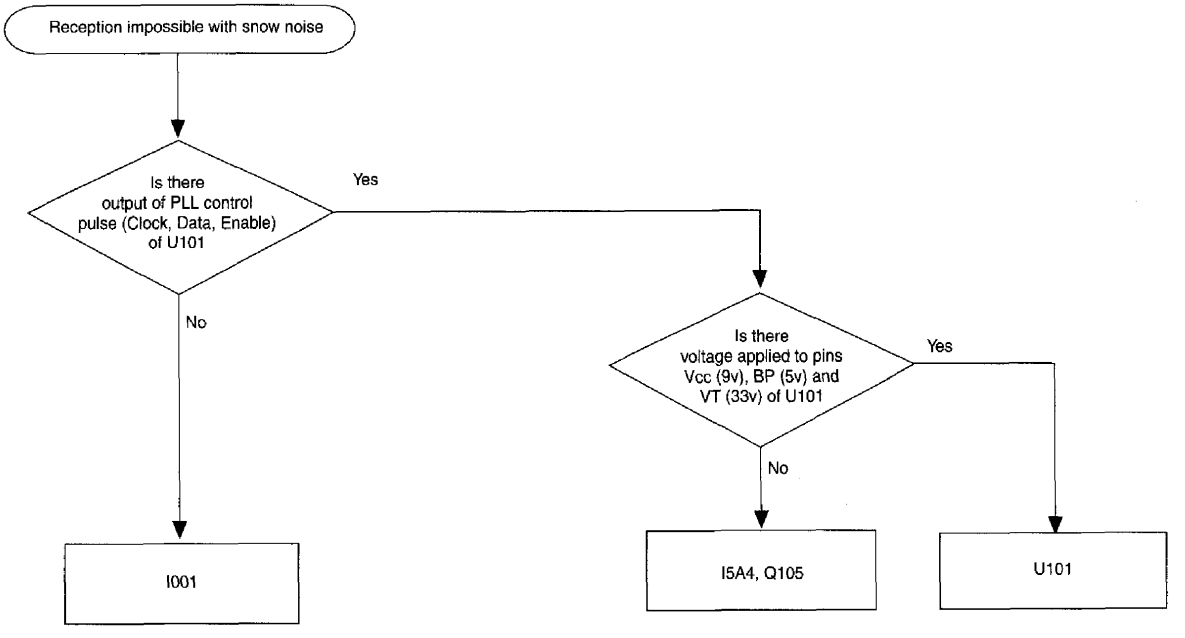
④ DARK PICTURE



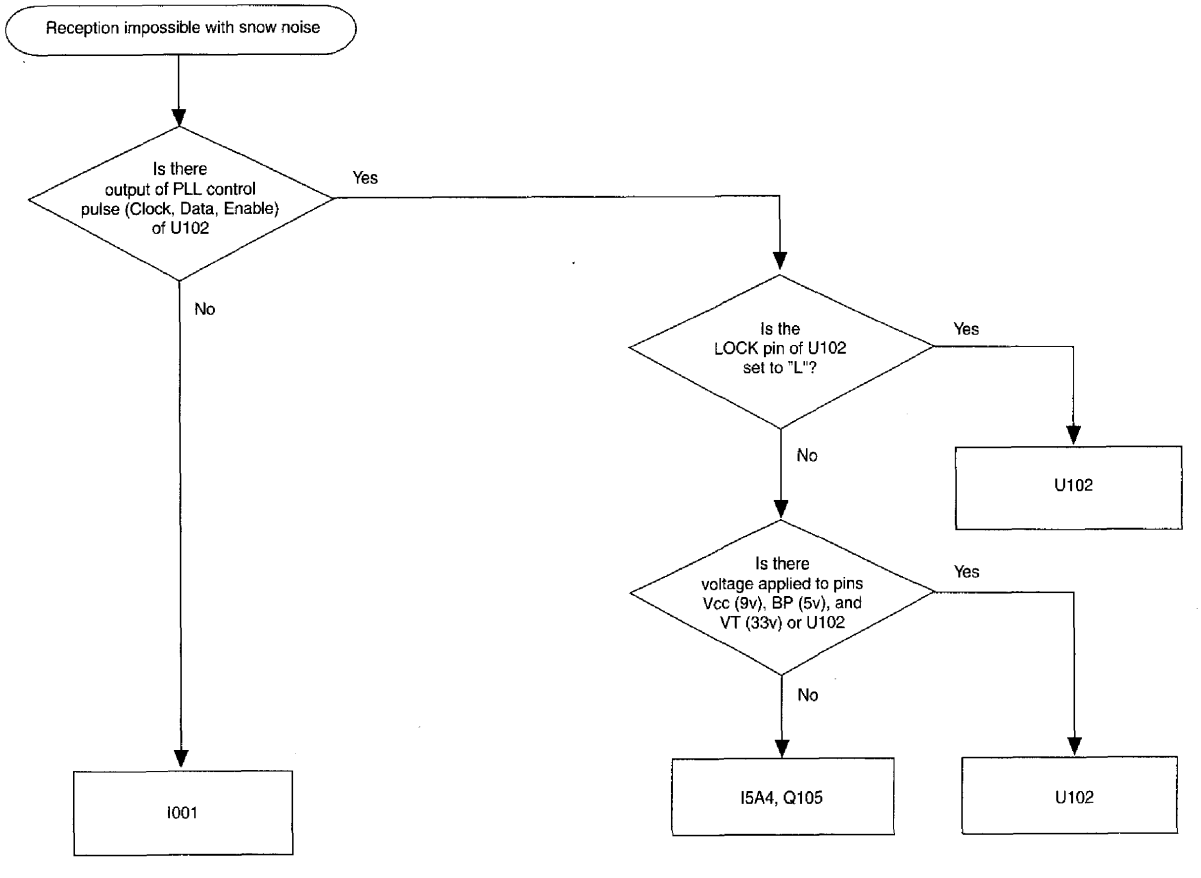
TROUBLESHOOTING

⑤ RECEPTION IMPOSSIBLE WITH SNOW NOISE

ANT A–Green Channel OSD

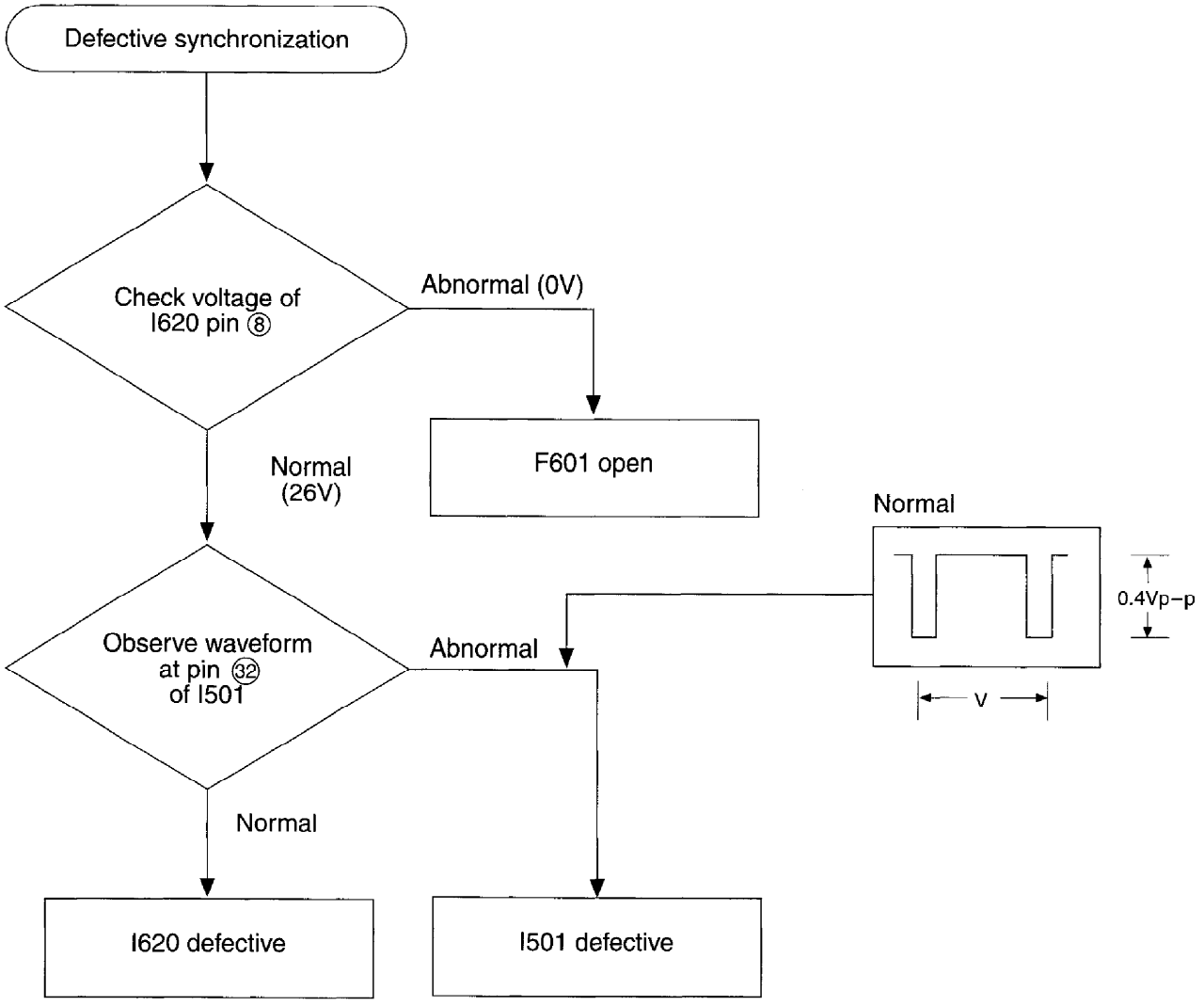


ANT B–Yellow Channel OSD



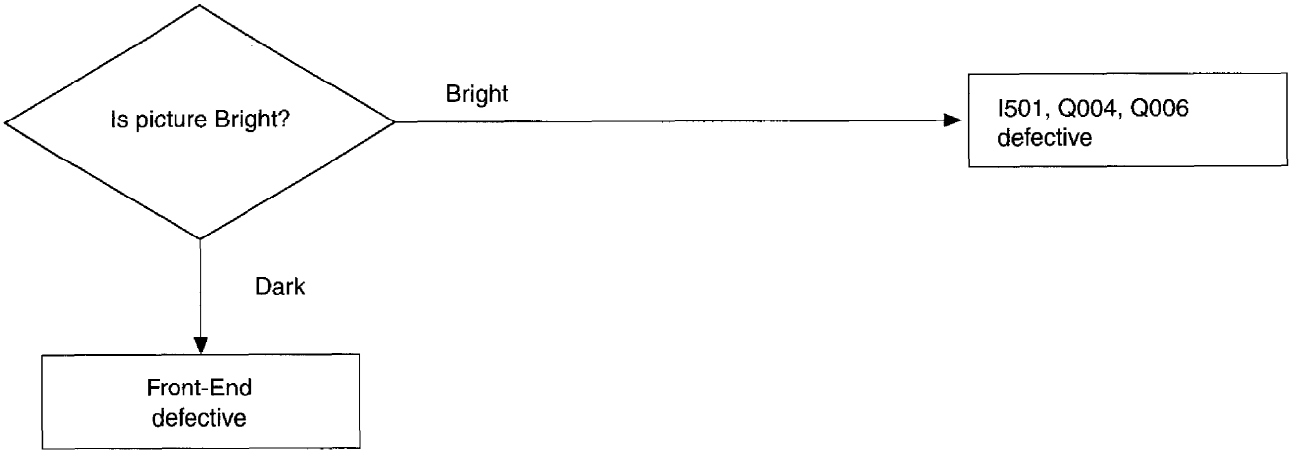
TROUBLESHOOTING

⑥ DEFECTIVE SYNCHRONIZATION

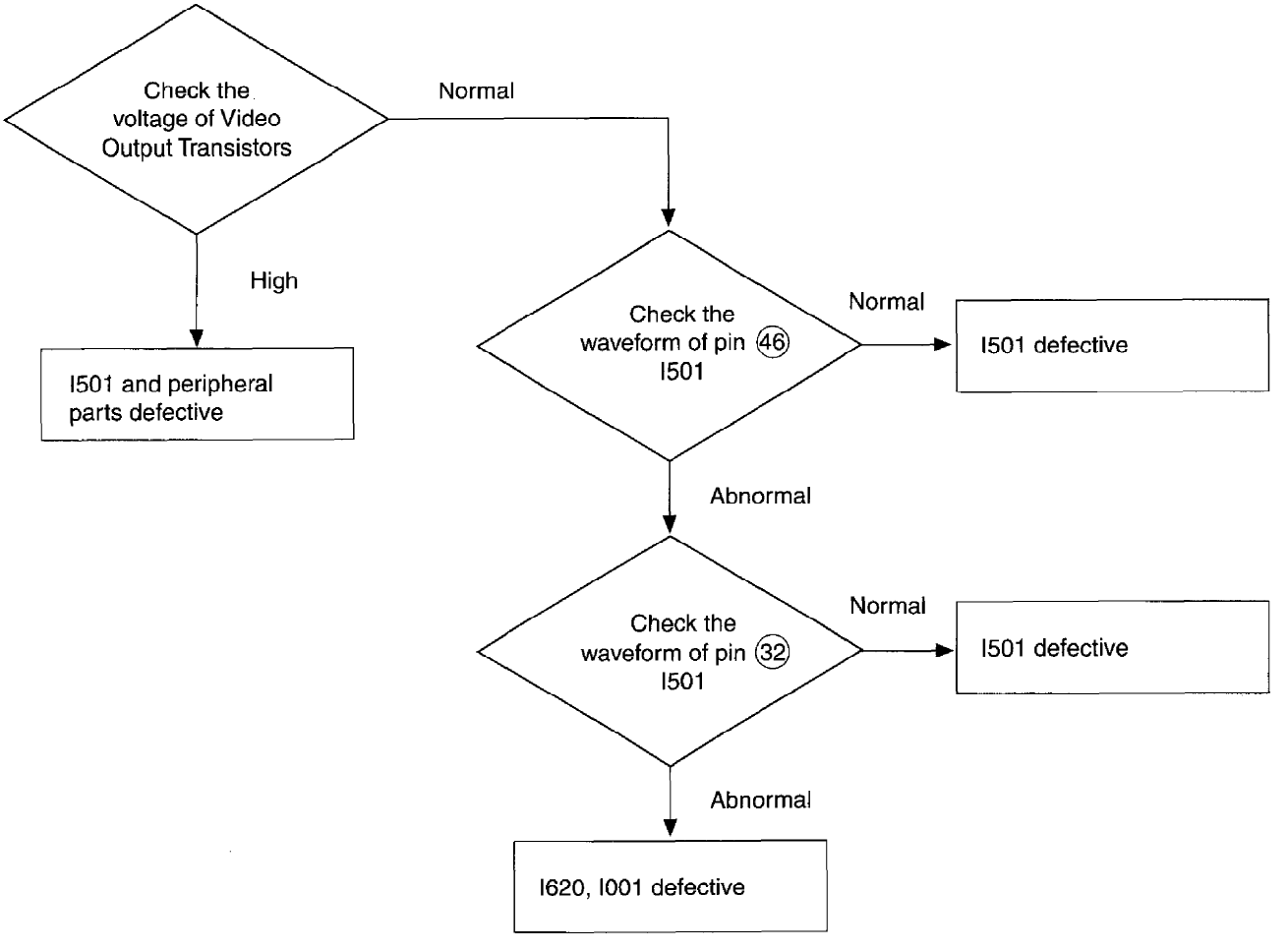


TROUBLESHOOTING

⑦ NO SYNC.

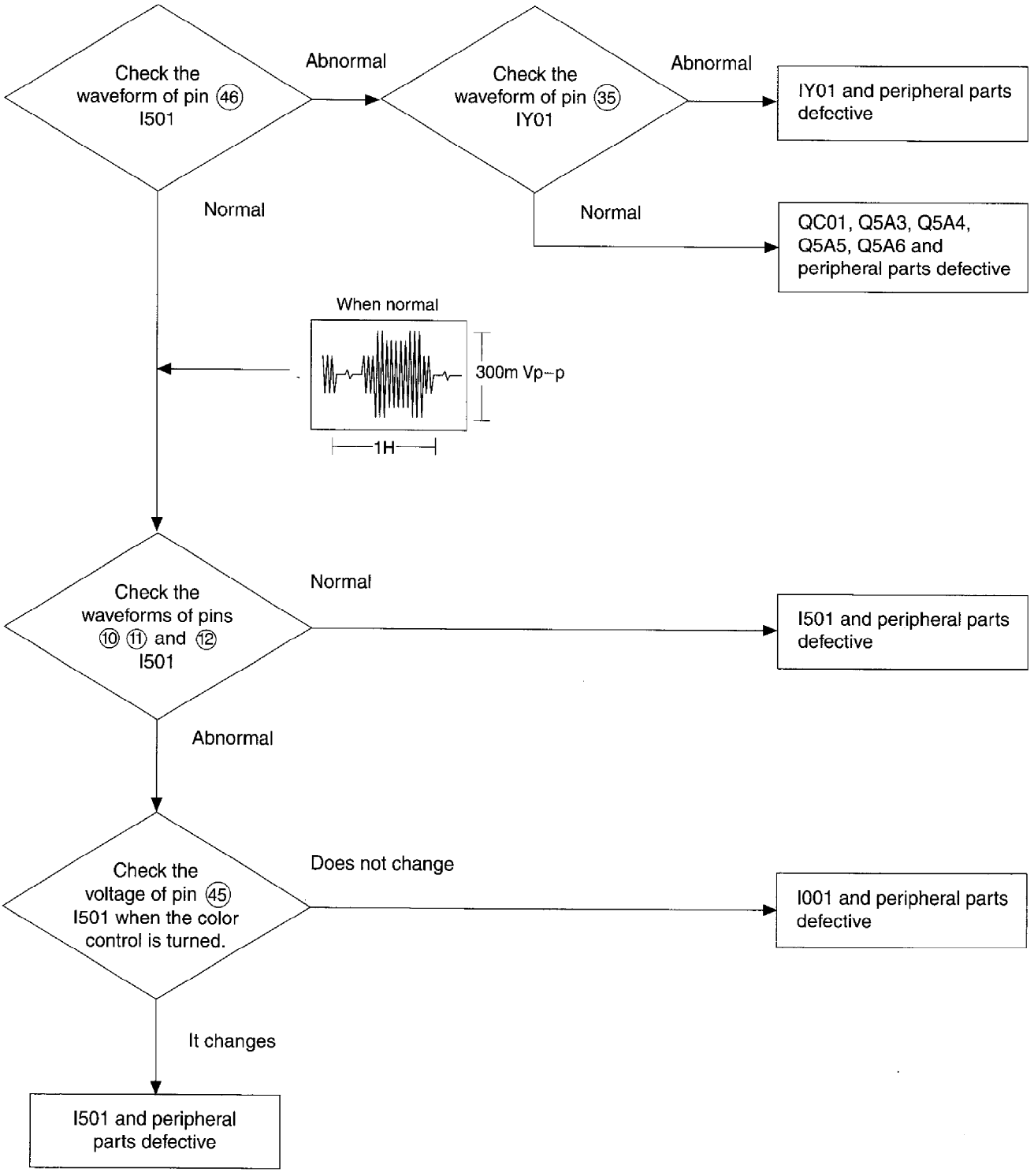


⑧ ONLY RASTER OR FLYBACK TRACE APPARENT ON PICTURE



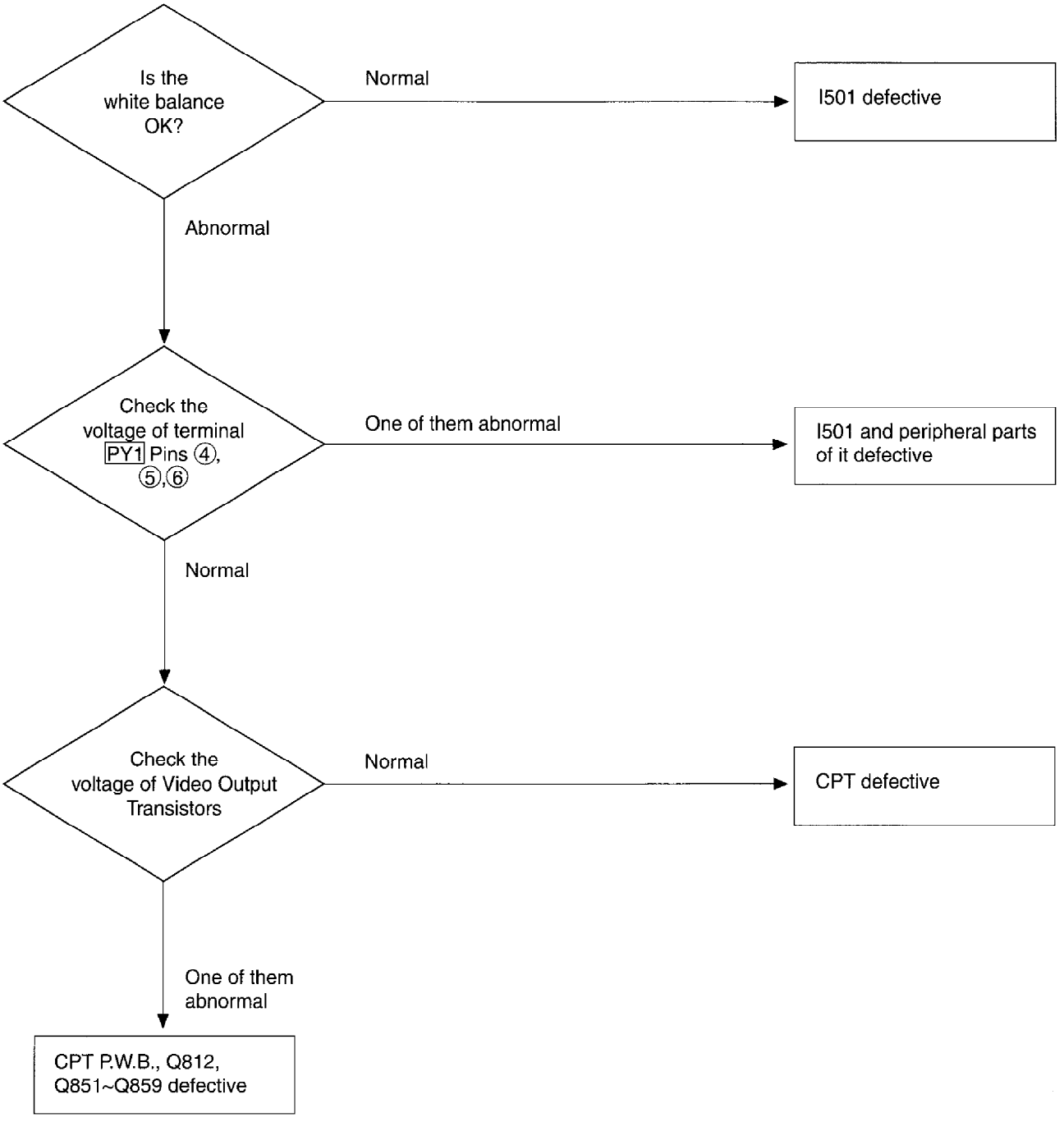
TROUBLESHOOTING

⑨ NO COLOR



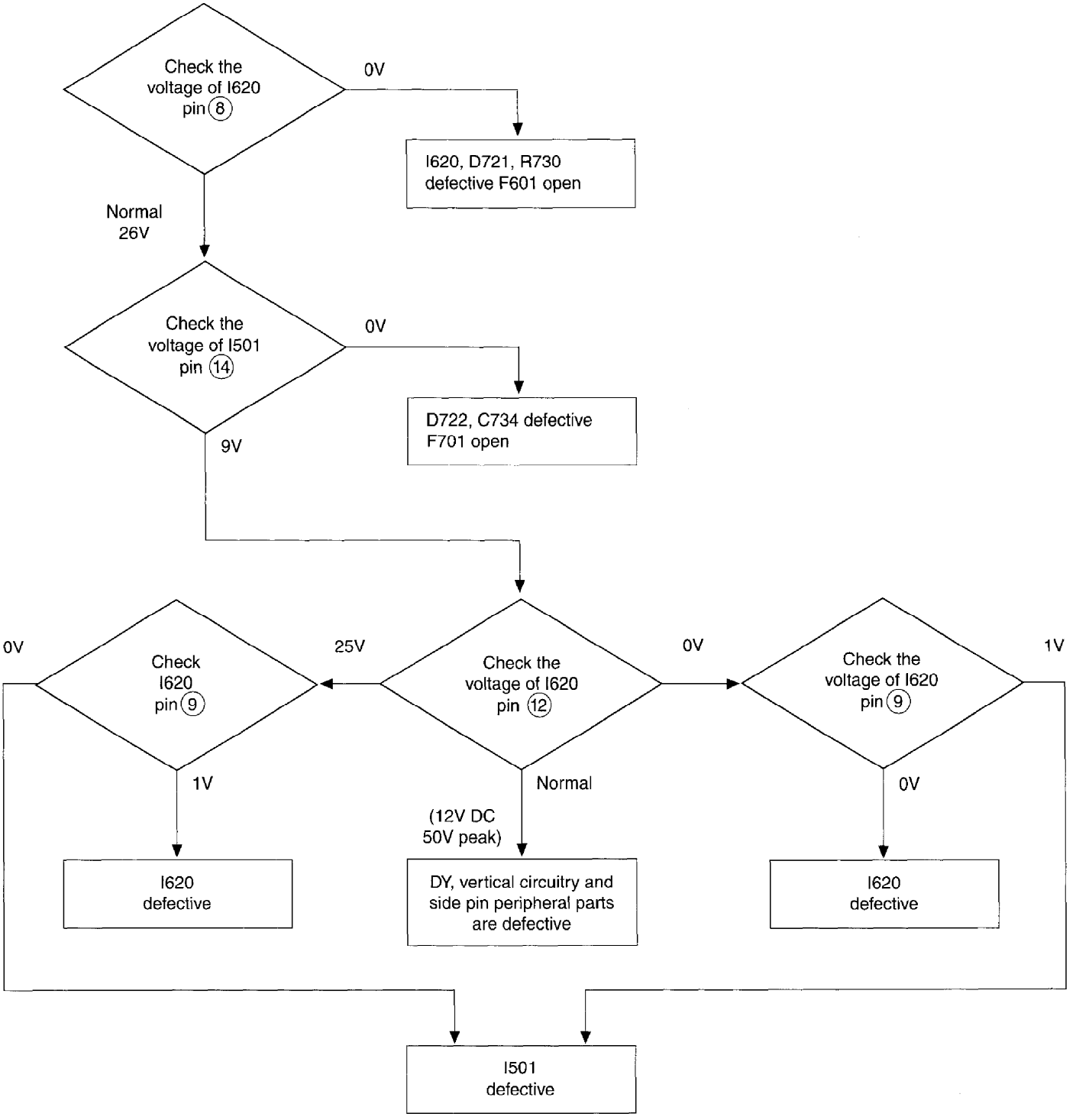
TROUBLESHOOTING

⑩ WHITE BALANCE/TINT DEFECTIVE



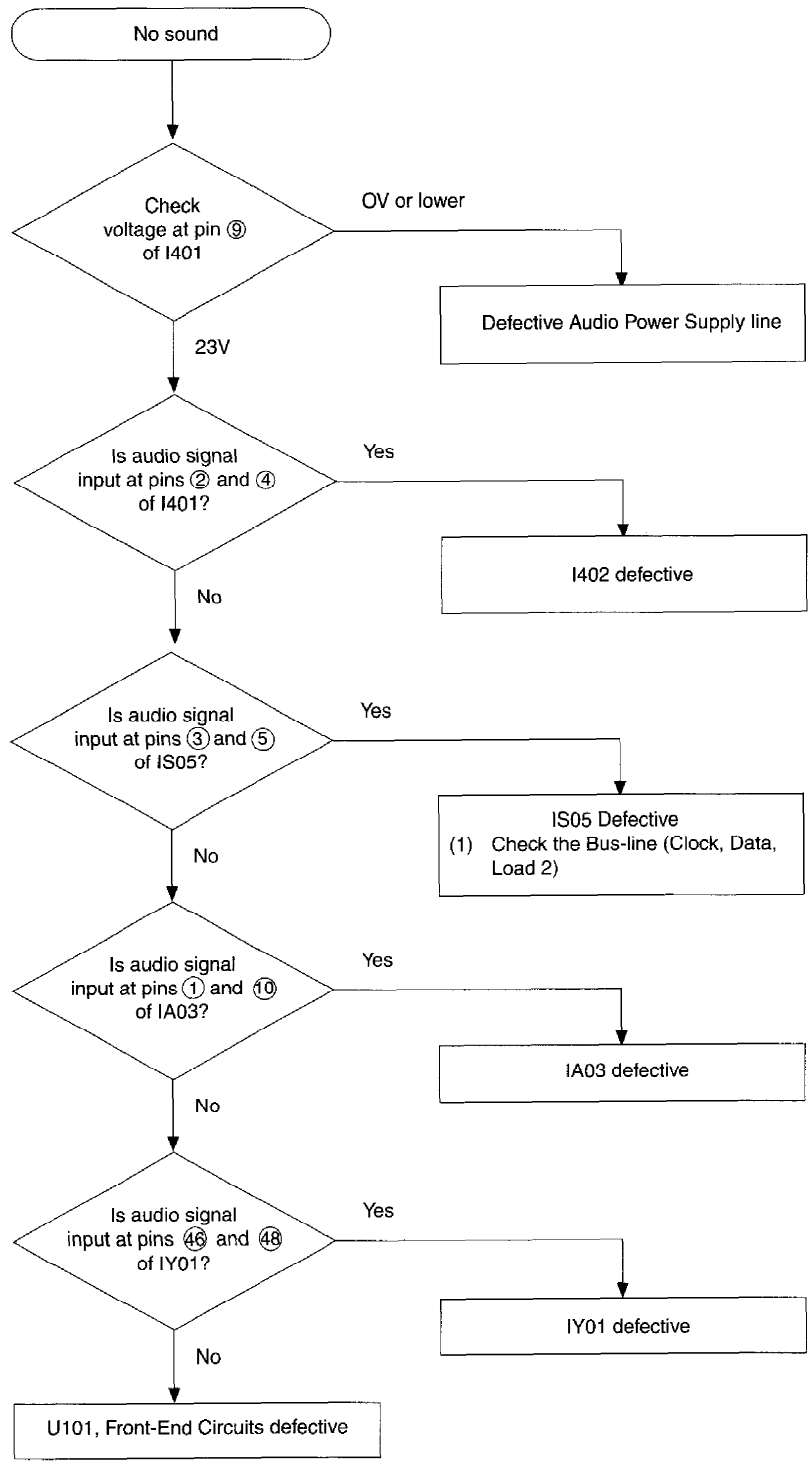
TROUBLESHOOTING

⑪ NO VERTICAL DEFLECTION OR V. SIZE IS DISTORTED



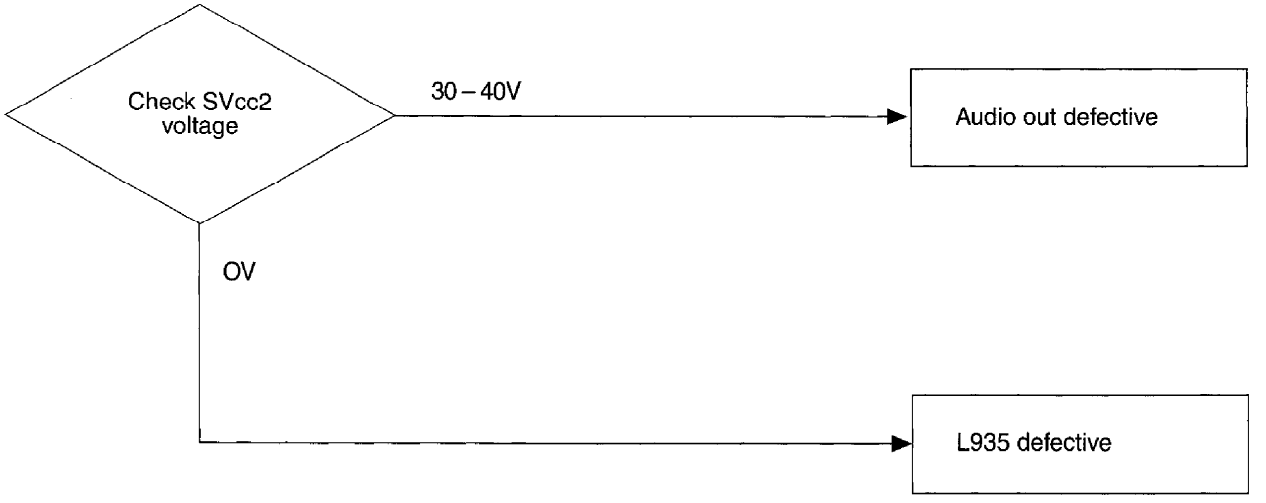
TROUBLESHOOTING

⑫ NO SOUND (WHEN SURROUND OFF)

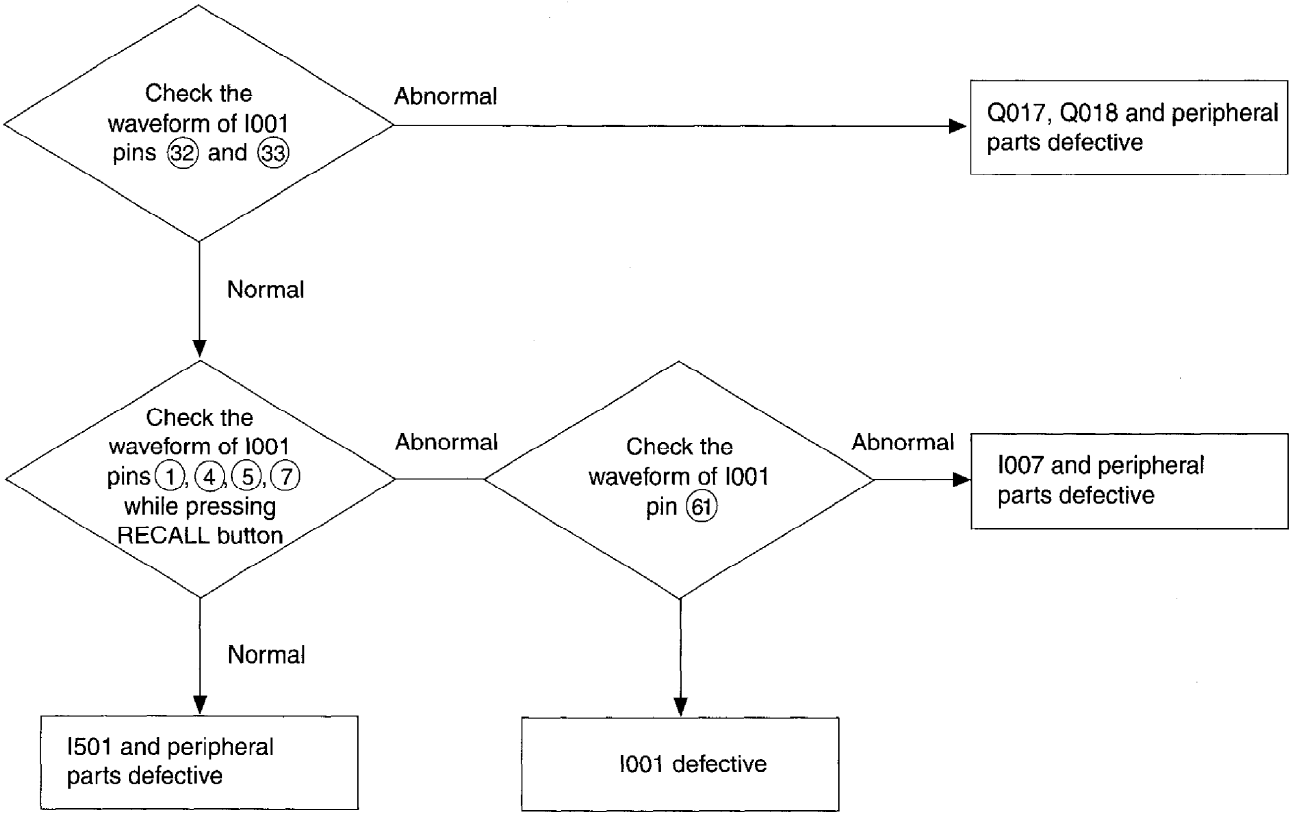


TROUBLESHOOTING

⑬ NO SOUND (NO AUDIO POWER)

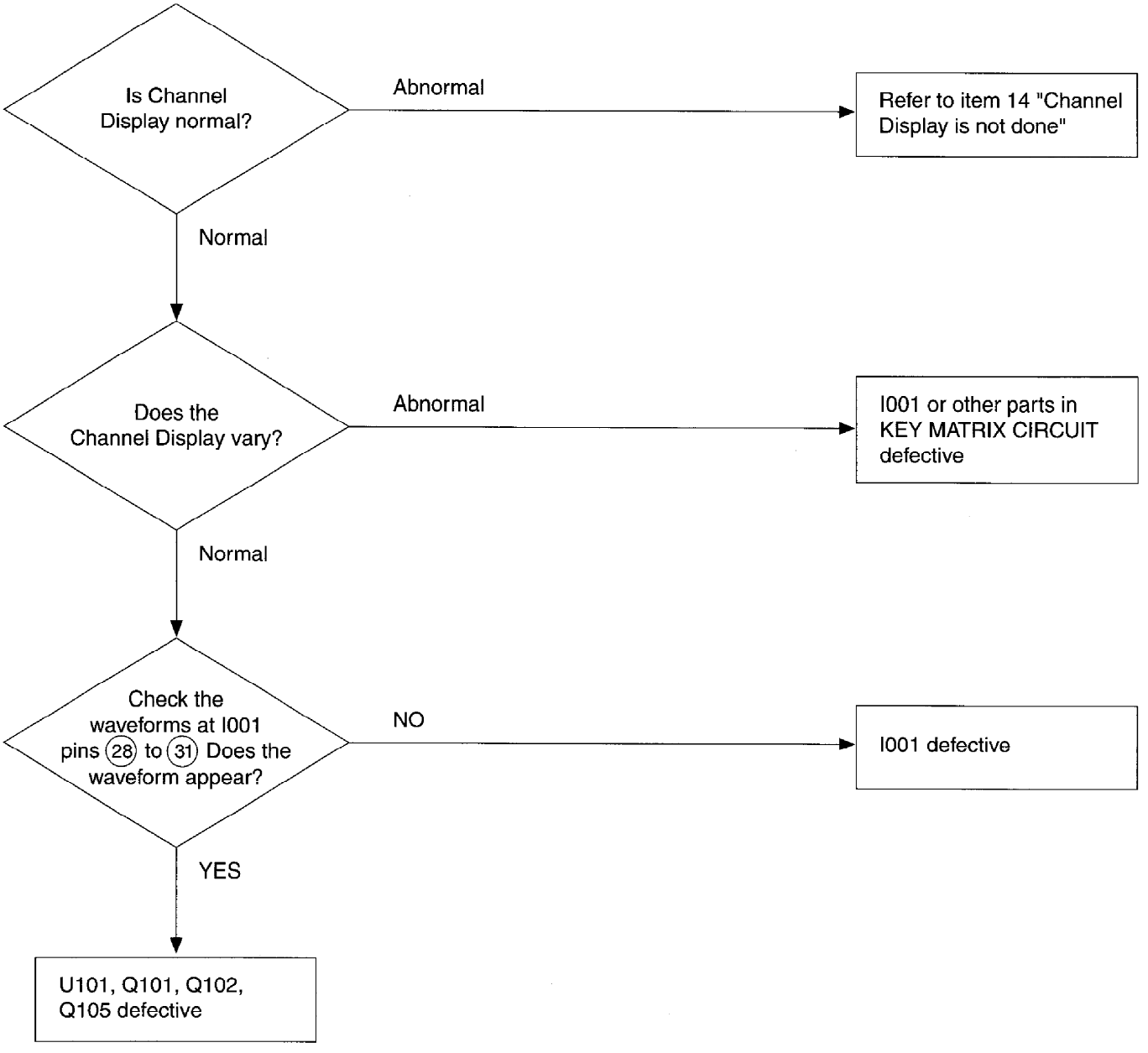


⑭ CHANNEL DISPLAY IS NOT DONE



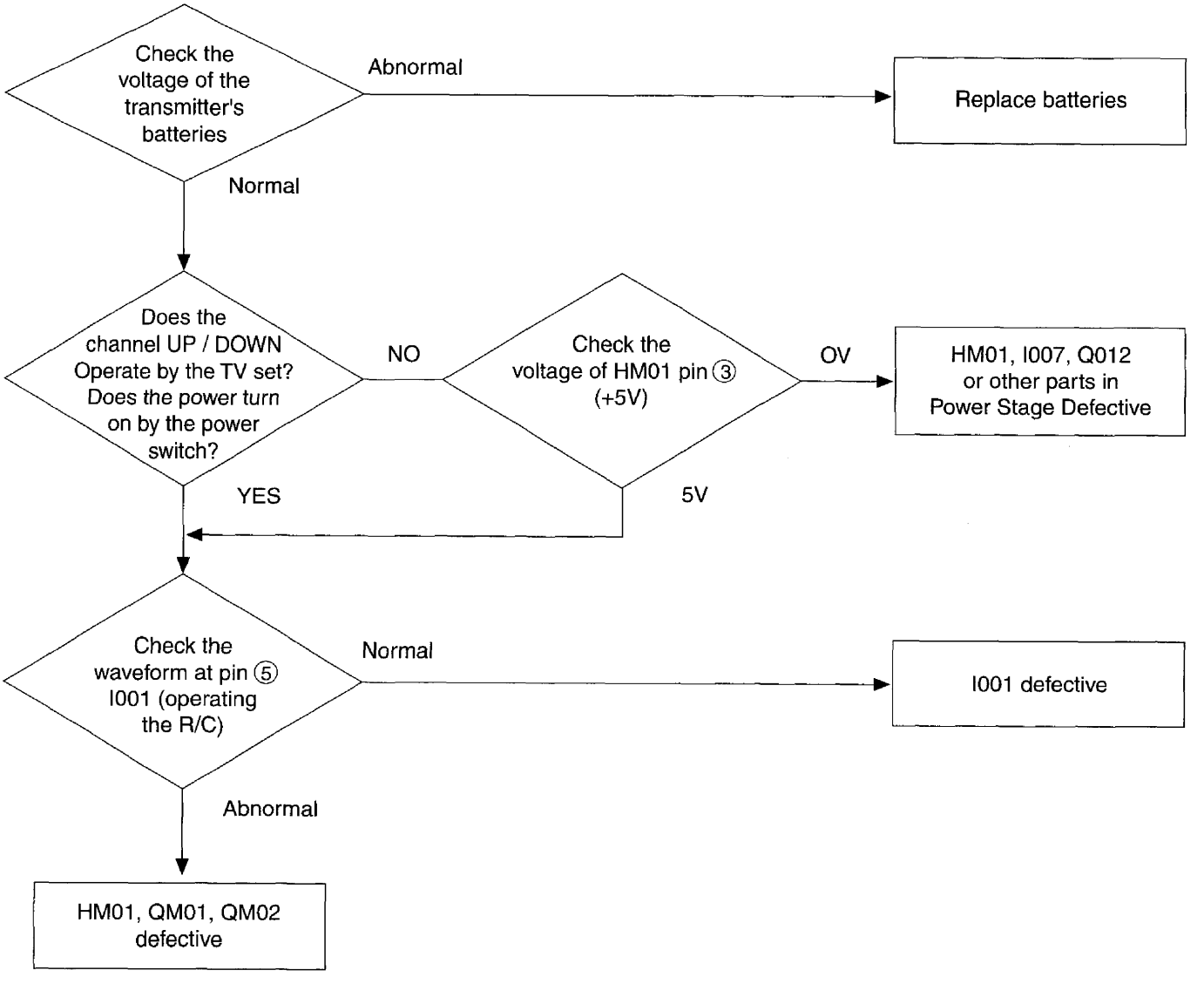
TROUBLESHOOTING

⑮ CHANNEL SELECTION IS NOT DONE



TROUBLESHOOTING

⑯ DOES NOT OPERATE BY REMOTE CONTROL



REPLACEMENT PARTS LIST

PRODUCT SAFETY NOTE: Components marked with a ⚠ have special characters important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

ABBREVIATIONS

Capaitors: CD: Ceramic Disc, PF: Polyester Film, EL: Electrolytic, PP: Polypropylene, PR: Paper, TA: Tantalum, TM: Trimmer

Resistors: CF: Carbon Film, CC: Carbon Composition, MF: Metal Oxide Film, VR: Variable Resistor, WW: Wire Wound, FR: Fuse Resistor, MG: Metal Glaze

Semiconductors: TR: Transistor, DI: Diode, ZD: Zener Diode, VA Varistor, TH: Thermistor, IC: Integrated Circuit

SYMBOL NO.	PART NO.	PART DESCRIPTION
		CAPACITORS
CA01	0800003R	EL 1.0UF-M 50V
CA02	0800003R	EL 1.0UF-M 50V
CA03	0800003R	EL 1.0UF-M 50V
CA04	0800003R	EL 1.0UF-M 50V
CA05	0800003R	EL 1.0UF-M 50V
CA06	0800003R	EL 1.0UF-M 50V
CA07	0800003R	EL 1.0UF-M 50V
CA08	0800003R	EL 1.0UF-M 50V
CA26	0800015R	EL 10UF-M 16V
CA27	0800015R	EL 10UF-M 16V
CA28	0800015R	EL 10UF-M 16V
CA29	0800015R	EL 10UF-M 16V
CA31	0800015R	EL 10UF-M 16V
CA33	0800015R	EL 10UF-M 16V
CA34	0800015R	EL 10UF-M 16V
CA35	0800015R	EL 10UF-M 16V
CA36	0800015R	EL 10UF-M 16V
CA37	0800015R	EL 10UF-M 16V
CA38	0800041R	EL 47UF-M 16V
CA39	0800041R	EL 47UF-M 16V
CA40	0800015R	EL 10UF-M 16V
CA41	0800015R	EL 10UF-M 16V
CA50	0284634R	EL 4.7UF-M 50V
CA51	0800009R	EL 4.7UF-M 25V
CA52	0284634R	EL 4.7UF-M 50V
CA53	0800015R	EL 10UF-M 16V
CA54	0800015R	EL 10UF-M 16V
CA55	0284634R	EL 4.7UF-M 50V
CA56	0800015R	EL 10UF-M 16V
CA57	0284634R	EL 4.7UF-M 50V
CA68	0800015R	EL 10UF-M 16V
CA69	0800009R	EL 4.7UF-M 25V
CA70	0800041R	EL 47UF-M 16V
CA71	0800015R	EL 10UF-M 16V
CA72	0800015R	EL 10UF-M 16V
CA73	0800015R	EL 10UF-M 16V
CA74	0800003R	EL 1.0UF-M 50V
CA75	0800003R	EL 1.0UF-M 50V
CA76	0800003R	EL 1.0UF-M 50V
CA80	0800015R	EL 10UF-M 16V
CA81	0800015R	EL 10UF-M 16V
CC02	0244171R	CD 0.01UF-Z F 50V TAPE
CC70	0880044R	PF 0.01UF-KEB 50V
CDF1	0299932F	PP 0.33UF-K 200V
CDF2	0244887	CD 1000PF-K B 2KV
CDF3	0244889	CD 2200PF-K B 2KV
CM01	0800023R	EL 22UF-M 16V
CM02	0244171R	CD 0.01UF-Z F 50V TAPE
CM03	0800003R	EL 1.0UF-M 50V
CM04	0244171R	CD 0.01UF-Z F 50V TAPE
CM05	0244171R	CD 0.01UF-Z F 50V TAPE
CSA1	0284638R	EL 10UF-SME(BP) 16V
CSA2	0890087R	CD 1000PF-K 50V
CSA3	0890087R	CD 1000PF-K 50V
CSA4	0284638R	EL 10UF-SME(BP) 16V
CSA5	0880051R	PF 0.033UF-KEB 50V
CSA6	0880041R	PF 0.0056UF-KEB 50V
CSA7	0880041R	PF 0.0056UF-KEB 50V
CSA8	0880051R	PF 0.033UF-KEB 50V
CSA9	0880057R	PF 0.1UF-KEB 50V
CSC1	0800049R	EL 100UF-M 16V
CSC2	0800049R	EL 100UF-M 16V
CSC3	0800015R	EL 10UF-M 16V
CSC4	0800015R	EL 10UF-M 16V
CSC5	0800015R	EL 10UF-M 16V
CSC7	0800015R	EL 10UF-M 16V
CSC8	0800015R	EL 10UF-M 16V
CSE1	0800003R	EL 1.0UF-M 50V
CSE2	0800003R	EL 1.0UF-M 50V
CSE3	0244105R	CD 2200PF-K 50V TAPE
CSE4	0244105R	CD 2200PF-K 50V TAPE
CSE7	0800015R	EL 10UF-M 16V
CSE8	0800003R	EL 1.0UF-M 50V
CSE9	0800042R	EL 47UF-M 25V
CSF1	0800059R	EL 220UF-M 25V
CSF6	0800042R	EL 47UF-M 25V
CSF7	0800042R	EL 47UF-M 25V
CSF8	0800051R	EL 100UF-M 25V
CSF9	0800083F	EL 1000UF-M 25V
CSG3	0880057R	PF 0.1UF-KEB 50V
CSG4	0880057R	PF 0.1UF-KEB 50V
CSG6	0800083F	EL 1000UF-M 25V
CSG7	0800083F	EL 1000UF-M 25V
CSG9	0880057R	PF 0.1UF-KEB 50V
CSH1	0880057R	PF 0.1UF-KEB 50V
CSH4	0800015R	EL 10UF-M 16V
CSH6	0800041R	EL 47UF-M 16V
CSN1	0800018R	EL 10UF-M 50V
CSN2	0800047R	EL 100UF-M 6.3V
CSN3	0800018R	EL 10UF-M 50V
CSN4	0880044R	PF 0.01UF-KEB 50V
CSN5	0800047R	EL 100UF-M 6.3V
CSN6	0800018R	EL 10UF-M 50V
CSN7	0880044R	PF 0.01UF-KEB 50V
CS01	0880057R	PF 0.1UF-KEB 50V
CS02	0800049R	EL 100UF-M 16V
CS29	0800023R	EL 22UF-M 16V
CS30	0800012R	EL 4.7UF-M 50V
CS36	0284638R	EL 10UF-SME(BP) 16V
CS37	0284638R	EL 10UF-SME(BP) 16V
CS38	0880057R	PF 0.1UF-KEB 50V
CS39	0800058R	EL 220UF-M 16V
CS40	0246451R	CD 30PF-JB CH 50V
CS41	0246451R	CD 30PF-JB CH 50V
CS42	0800058R	EL 220UF-M 16V
CS43	0880051R	PF 0.033UF-KEB 50V
CS44	0880033R	PF 0.0015UF-KEB50V
CS45	0880051R	PF 0.033UF-KEB 50V

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
CS46	0800003R	EL 1.0UF-M 50V	CV28	0890077R	CD 180PF-K 50V
CS47	0800015R	EL 10UF-M 16V	CY01	0284647R	EL 22UF-SME(BP) 16V
CS48	0800015R	EL 10UF-M 16V	CY04	0800049R	EL 100UF-M 16V
CS49	0800058R	EL 220UF-M 16V	CY05	0800049R	EL 100UF-M 16V
CS50	0800015R	EL 10UF-M 16V	CY06	0800049R	EL 100UF-M 16V
CS51	0800015R	EL 10UF-M 16V	CY07	0800023R	EL 22UF-M 16V
CS52	0800003R	EL 1.0UF-M 50V	CY08	0800049R	EL 100UF-M 16V
CS53	0284623R	EL 1UF-SME(BP) 50V	CY09	0276717R	PP 0.1UF-J 50V (TF TYP E)
CS54	0284623R	EL 1UF-SME(BP) 50V	CY14	0800074N	EL 470UF-M 16V
CS55	0800005R	EL 2.2UF-M 50V	CY15	0276717R	PP 0.1UF-J 50V (TF TYP E)
CS56	0800041R	EL 47UF-M 16V	CY16	0800049R	EL 100UF-M 16V
CS57	0800058R	EL 220UF-M 16V	CY17	0800041R	EL 47UF-M 16V
CS58	0880057R	PF 0.1UF-KEB 50V	CY50	0800049R	EL 100UF-M 16V
CS59	0880044R	PF 0.01UF-KEB 50V	CY51	0284634R	EL 4.7UF-M 50V
CS64	0800015R	EL 10UF-M 16V	CY52	0880011R	EL 0.015UF
CS65	0890087R	CD 1000PF-K 50V	CY53	0800015R	EL 10UF-M 16V
CS66	0800015R	EL 10UF-M 16V	CY54	0880013R	EL 0.033UF
CS67	0890087R	CD 1000PF-K 50V	CY55	0880006R	EL 0.033U
CS68	0880051R	PF 0.033UF-KEB 50V	CY56	0880006R	EL 0.033U
CS69	0880041R	PF 0.0056UF-KEB50V	CY57	0880016R	PF 0.1UF 50V
CS70	0880041R	PF 0.0056UF-KEB50V	CY70	0800023R	EL 22UF-M 16V
CS71	0880051R	PF 0.033UF-KEB 50V	CY71	0800023R	EL 22UF-M 16V
CS72	0880057R	PF 0.1UF-KEB 50V	CY75	0800023R	EL 22UF-M 16V
CS73	0800049R	EL 100UF-M 16V	C002	0890077R	CD 180PF-K 50V
CS74	0800049R	EL 100UF-M 16V	C003	0246464R	CD 100PF-J CH 50V TAPE
CS75	0284638R	EL 10UF-SME(BP) 16V	C004	0800023R	EL 22UF-M 16V
CS76	0284638R	EL 10UF-SME(BP) 16V	C005	0890087R	CD 1000PF-K 50V
CS78	0800015R	EL 10UF-M 16V	C006	0284623R	EL 1UF-SME(BP) 50V
CS79	0800015R	EL 10UF-M 16V	C007	0284623R	EL 1UF-SME(BP) 50V
CS80	0800015R	EL 10UF-M 16V	C008	0284623R	EL 1UF-SME(BP) 50V
CS81	0800049R	EL 100UF-M 16V	C009	0284623R	EL 1UF-SME(BP) 50V
CS82	0800015R	EL 10UF-M 16V	C010	0284623R	EL 1UF-SME(BP) 50V
CS83	0284623R	EL 1UF-SME(BP) 50V	C011	0800003R	EL 1.0UF-M 50V
CS84	0880055R	PF 0.068UF-KEB 50V	C012	0800003R	EL 1.0UF-M 50V
CS85	0800049R	EL 100UF-M 16V	C013	0284623R	EL 1UF-SME(BP) 50V
CS86	0800041R	EL 47UF-M 16V	C014	0800003R	EL 1.0UF-M 50V
CS87	0880055R	PF 0.068UF-KEB 50V	C016	0890121R	CD 33PF-J CH 50V
CS88	0284623R	EL 1UF-SME(BP) 50V	C017	0890121R	CD 33PF-J CH 50V
CS89	0800015R	EL 10UF-M 16V	C018	0800015R	EL 10UF-M 16V
CS90	0284638R	EL 10UF-SME(BP) 16V	C019	0800005R	EL 2.2UF-M 50V
CS91	0284638R	EL 10UF-SME(BP) 16V	C023	0800047R	EL 100UF-M 6.3V
CS92	0800015R	EL 10UF-M 16V	C024	0880057R	PF 0.1UF-KEB 50V
CS98	0800049R	EL 100UF-M 16V	C025	0880044R	PF 0.01UF-KEB 50V
CS99	0800015R	EL 10UF-M 16V	C026	0880057R	PF 0.1UF-KEB 50V
CT01	0276717R	PP 0.1UF-J 50V (TF TYP E)	C027	0800012R	EL 4.7UF-M 50V
CV01	0284621R	EL 0.47UF 50V (BP)	C028	0800012R	EL 4.7UF-M 50V
CV04	0890081R	CD 330PF 50V	C029	0890074R	CD 100PF-J 50V
CV05	0800049R	EL 100UF-M 16V	C031	0800003R	EL 1.0UF-M 50V
CV06	0880044R	PF 0.01UF-KEB 50V	C032	0800047R	EL 100UF-M 6.3V
CV09	0890074R	CD 100PF-J 50V	C033	0880057R	PF 0.1UF-KEB 50V
CV10	0244541F	CD 0.01MF-K B 500V	C034	0890085R	CD 680PF-K 50V
CV11	0890074R	CD 100PF-J 50V	C035	0800015R	EL 10UF-M 16V
CV12	0244509R	CD 4700PF-KB B 500V	C036	0800047R	EL 100UF-M 6.3V
CV13	0253959F	EL 47UF-M 160V	C037	0880057R	PF 0.1UF-KEB 50V
CV14	0253959F	EL 47UF-M 160V	C038	0800048R	EL 100UF-M 10V
CV15	0253957F	EL 22UF-M 160V	C039	0800015R	EL 10UF-M 16V
CV16	0247848R	CD 56PF-J SL 500V	C040	0800074N	EL 470UF-M 16V
CV17	0800075F	EL 470UF-M 25V	C041	0880057R	PF 0.1UF-KEB 50V
CV18	0800042R	EL 47UF-M 25V	C042	0800003R	EL 1.0UF-M 50V
CV19	0253959F	EL 47UF-M 160V	C043	0800047R	EL 100UF-M 6.3V
CV20	0244541F	CD 0.01MF-K B 500V	C044	0880057R	PF 0.1UF-KEB 50V
CV21	0244171R	CD 0.01UF-Z F 50V TAPE	C045	0880057R	PF 0.1UF-KEB 50V
CV22	0880057R	PF 0.1UF-KEB 50V	C046	0880048R	PF 0.022UF-KEB 50V
CV23	0800049R	EL 100UF-M 16V	C053	0880057R	PF 0.1UF-KEB 50V
CV24	0800041R	EL 47UF-M 16V	C054	0800049R	EL 100UF-M 16V

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
C056	0800005R	EL 2.2UF-M 50V	C420	0253934F	EL 2200UF-M 35V
C057	0800003R	EL 1.0UF-M 50V	C421	0880062R	PF 0.22UF-KEB 50V
C058	0880057R	PF 0.1UF-KEB 50V	C422	0258616	EL 2.2UF-M 50V
C059	0800049R	EL 100UF-M 16V	C423	0258616	EL 2.2UF-M 50V
C060	0890081R	CD 330PF 50V	C424	0880057R	PF 0.1UF-KEB 50V
C061	0880057R	PF 0.1UF-KEB 50V	C426	0880044R	PF 0.01UF-KEB 50V
C070	0800015R	EL 10UF-M 16V	C427	0880044R	PF 0.01UF-KEB 50V
C101	0800049R	EL 100UF-M 16V	C428	0880057R	PF 0.1UF-KEB 50V
C102	0800049R	EL 100UF-M 16V	C429	0800015R	EL 10UF-M 16V
C103	0880057R	PF 0.1UF-KEB 50V	C5A7	0800049R	EL 100UF-M 16V
C104	0800079N	CEL-102M6R3WHLT-SME	C5A8	0800075F	EL 470UF-M 25V
C105	0800082N	EL 1000UF-MB16V(SME)	C5A9	0880057R	PF 0.1UF-KEB 50V
C106	0800079N	CEL-102M6R3WHLT-SME	C5C1	0880057R	PF 0.1UF-KEB 50V
C107	0880057R	PF 0.1UF-KEB 50V	C5C6	0880057R	PF 0.1UF-KEB 50V
C108	0800082N	EL 1000UF-MB16V(SME)	C5C7	0800075F	EL 470UF-M 25V
C109	0800082N	EL 1000UF-MB16V(SME)	C5C8	0880057R	PF 0.1UF-KEB 50V
C110	0800015R	EL 10UF-M 16V	C5C9	0284667R	EL 47UF-MBPR(SME)16V
C111	0800049R	EL 100UF-M 16V	C5E1	0800015R	EL 10UF-M 16V
C3A2	0880057R	PF 0.1UF-KEB 50V	C5E2	0880044R	PF 0.01UF-KEB 50V
C3A3	0880044R	PF 0.01UF-KEB 50V	C5E3	0890064R	CD 18PF-J SL 50V
C304	0800015R	EL 10UF-M 16V	C5E4	0890062R	CD 12PF-J 50V
C305	0800007R	EL 3.3UF-M 50V	C5E5	0880044R	PF 0.01UF-KEB 50V
C306	0244171R	CD 0.01UF-Z F 50V TAPE	C5E6	0880044R	PF 0.01UF-KEB 50V
C307	0244171R	CD 0.01UF-Z F 50V TAPE	C5E7	0800049R	EL 100UF-M 16V
C308	0244171R	CD 0.01UF-Z F 50V TAPE	C501	0244171R	CD 0.01UF-Z F 50V TAPE
C309	0800015R	EL 10UF-M 16V	C502	0800058R	EL 220UF-M 16V
C311	0880033R	PF 0.0015UF-KEB50V	C503	0800001R	EL 0.47UF-M 50V (SME)
C312	0880046R	PF 0.015UF-K 50V	C504	0244171R	CD 0.01UF-Z F 50V TAPE
C313	0800007R	EL 3.3UF-M 50V	C505	0890116R	CD 15PF-J CH 50V
C314	0800003R	EL 1.0UF-M 50V	C506	0880044R	PF 0.01UF-KEB 50V
C315	0800049R	EL 100UF-M 16V	C507	0244171R	CD 0.01UF-Z F 50V TAPE
C316	0244171R	CD 0.01UF-Z F 50V TAPE	C508	0244171R	CD 0.01UF-Z F 50V TAPE
C317	0800058R	EL 220UF-M 16V	C509	0244171R	CD 0.01UF-Z F 50V TAPE
C318	0800003R	EL 1.0UF-M 50V	C510	0244171R	CD 0.01UF-Z F 50V TAPE
C319	0244171R	CD 0.01UF-Z F 50V TAPE	C511	0244171R	CD 0.01UF-Z F 50V TAPE
C320	0244171R	CD 0.01UF-Z F 50V TAPE	C512	0800015R	EL 10UF-M 16V
C321	0244171R	CD 0.01UF-Z F 50V TAPE	C513	0244171R	CD 0.01UF-Z F 50V TAPE
C322	0244171R	CD 0.01UF-Z F 50V TAPE	C514	0800041R	EL 47UF-M 16V
C323	0800003R	EL 1.0UF-M 50V	C515	0244105R	CD 2200PF-K 50V TAPE
C324	0800003R	EL 1.0UF-M 50V	C516	0800041R	EL 47UF-M 16V
C325	0800005R	EL 2.2UF-M 50V	C517	0800048R	EL 100UF-M 10V
C326	0800003R	EL 1.0UF-M 50V	C518	0800015R	EL 10UF-M 16V
C327	0800003R	EL 1.0UF-M 50V	C530	0800049R	EL 100UF-M 16V
C328	0880037R	PF 0.0033UF-KEB50V	C531	0276717R	PP 0.1UF-J 50V (TF TYP E)
C329	0890079R	CD 270PF-K 50V	C534	0800009R	EL 4.7UF-M 25V
C360	0800003R	EL 1.0UF-M 50V	C6H0	0800003R	EL 1.0UF-M 50V
C401	0800015R	EL 10UF-M 16V	C6H1	0800005R	EL 2.2UF-M 50V
C402	0284623R	EL 1UF-SME(BP) 50V	C6H2	0800041R	EL 47UF-M 16V
C403	0284623R	EL 1UF-SME(BP) 50V	C6H3	0800018R	EL 10UF-M 50V
C404	0800003R	EL 1.0UF-M 50V	C6H4	0276717R	PP 0.1UF-J 50V (TF TYP E)
C405	0800003R	EL 1.0UF-M 50V	C6H5	0880037R	PF 0.0033UF-KEB50V
C406	0890087R	CD 1000PF-K 50V	C6H6	0800005R	EL 2.2UF-M 50V
C407	0890087R	CD 1000PF-K 50V	C620	0800057R	EL 220UF-M 10V
C408	0800042R	EL 47UF-M 25V	C621	0880042R	PF 0.0068UF-KEB50V
C409	0800042R	EL 47UF-M 25V	C622	0292716R	TA 1.0UF-K 20V
C410	0800051R	EL 100UF-M 25V	C623	0248696R	CD 330PF-J SL 50V TAPE
C411	0800003R	EL 1.0UF-M 50V	C624	0800061N	EL 220UF-M 35V
C412	0800003R	EL 1.0UF-M 50V	C625	0800007R	EL 3.3UF-M 50V
C413	0800051R	EL 100UF-M 25V	C626	0276717R	PP 0.1UF-J 50V (TF TYP E)
C414	0800041R	EL 47UF-M 16V	C627	0800007R	EL 3.3UF-M 50V
C415	0880057R	PF 0.1UF-KEB 50V	C628	0800003R	EL 1.0UF-M 50V
C416	0253934F	EL 2200UF-M 35V	C629	0800084F	EL 1000UF-M 35V
C417	0880057R	PF 0.1UF-KEB 50V	C630	0276717R	PP 0.1UF-J 50V (TF TYP E)
C418	0880057R	PF 0.1UF-KEB 50V	C631	0890087R	CD 1000PF-K 50V
C419	0253934F	EL 2200UF-M 35V	C632	0800056R	EL 220UF-M 6.3V

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION
C633	0800015R	EL 10UF-M 16V
C7H0	0800007R	EL 3.3UF-M 50V
C7H1	0800044R	EL 47UF-M 50V
C7H2	0284623R	EL 1UF-SME(BP) 50V
C7H3	0800005R	EL 2.2UF-M 50V
C710	0247842R	CD 33PF-SL 500V
C711	0880044R	PF 0.01UF-KEB 50V
C712	0244105R	CD 2200PF-K 50V TAPE
C713	0880019R	PF 0.33UF-KB 50V
⚠C714	0244889	CD 2200PF-K B 2KV
⚠C715	0244889	CD 2200PF-K B 2KV
⚠C716	0244885	CD 470PF-K B 2KV
⚠C717	0244884	CD 330PF-K B 2KV
⚠C718	0262432F	PP 15000PF-J 1800V
⚠C719	0299932F	PP 0.33UF-K 200V
⚠C720	0299931F	PP 0.27UF-K 200V
⚠C721	0299707F	PF 0.015UF-K 630V
⚠C723	0263001G	EL3.3UF-M 100V
C724	0244501R	CD 1000PF-K 500V
C725	0800047R	EL 100UF-M 6.3V
⚠C726	0249391F	CD 1000PF 125V
C727	0880035R	PP 2200PF-50V
C728	0254823G	EL 100UF-M 160V
C730	0800074N	EL 470UF-M 16V
C732	0243506R	CD 270PF-K 500V
C733	0800084F	EL 1000UF-M 35V
C734	0244501R	CD 1000PF-K 500V
C735	0800082F	EL 1000UF-M 16V
⚠C736	0800019R	EL 10UF-M 63V
C737	0244501R	CD 1000PF-K 500V
C738	0253974F	EL 33UF 250V CE04W2E33
C739	0255507F	EL 22UF-MB 160V(KME)
C740	0255524N	EL 4.7MF-M 250V
C741	0276717R	PP. 0.1UF-J 50V (TF TYP E)
⚠C754	0800003R	EL 1.0UF-M 50V
C755	0890086R	CD 820PF-K 50V
C757	0800005R	EL 2.2UF-M 50V
C758	0800015R	EL 10UF-M 16V
C760	0276717R	PP. 0.1UF-J 50V (TF TYP E)
C851	0800049R	EL 100UF-M 16V
C854	0890078R	CD 220PF-K 50V
C856	0890079R	CD 270PF-K 50V
C857	0890082R	CD 390PF-K 50V
C859	0255524F	EL 4.7MF-M 250V(KME)
C860	0244889	CD 2200PF-K B 2KV
C866	0244171R	CD 0.01UF-Z F 50V TAPE
C874	0880057R	PF 0.1UF-KEB 50V
C875	0880057R	PF 0.1UF-KEB 50V
C876	0880057R	PF 0.1UF-KEB 50V
C877	0890074R	CD 100PF-J 50V
C878	0890074R	CD 100PF-J 50V
C879	0890074R	CD 100PF-J 50V
C880	0890086R	CD 820PF-K 50V
C881	0890087R	CD 1000PF-K 50V
C882	0890086R	CD 820PF-K 50V
⚠C901	AN00144	PF 0.1UF 250V
⚠C902	AN00144	PF 0.1UF 250V
⚠C903	0248593F	CD 4700PF-Z 250V
⚠C904	0248593F	CD 4700PF-Z 250V
C905	AL00343	EL 680UF 200V
C906	AL00343	EL 680UF 200V
C908	0249392F	CD 2200PF 125V
C909	0249392F	CD 2200PF 125V
C913	0244171F	CD 0.01UF-Z 50V
C914	0880062R	PF 0.22UF-KEB 50V
C915	0254823G	EL100UF-M 160V
C916	0880039R	PF 0.0047UF-KEB50V
⚠C918	0800047R	EL 100UF-M 6.3V
C919	0244717F	CD 270PF 2KV
C920	0800049R	EL 100UF-M 16V
C922	0800066R	EL 330UF-M 16V
C923	0800074N	EL 470UF-M 16V
C924	0880035R	PP 2200PF-50V
C925	0253951R	EL 0.47UF-M 160V
C926	0880056R	PF 0.082UF-KEB 50V
C930	0800059R	EL 220UF-M 25V
C932	0254525F	EL 3300UF-M 25V(KME)
C937	0800049R	EL 100UF-M 16V
C938	0800003R	EL 1.0UF-M 50V
C940	0800015R	EL 10UF-M 16V
⚠C942	0800041R	EL 47UF-M 16V
C944	0800047R	EL 100UF-M 6.3V
C952	0800015R	EL 10UF-M 16V
C991	0800084F	EL 1000UF-M 35V
		DIODES
DA01	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
DA02	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
DA03	2348031M	DI MTZ-J2.7ATA
DA04	2348031M	DI MTZ-J2.7ATA
DA05	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
DA06	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
DA07	2348031M	DI MTZ-J2.7ATA
DA08	2348031M	DI MTZ-J2.7ATA
DA09	2348212M	DI MTZ-J15BTA
DA10	2348212M	DI MTZ-J15BTA
DA11	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
DA12	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
DA70	2339889M	ZD HZS12 (C3) 0.005A
DA71	2339889M	ZD HZS12 (C3) 0.005A
DC03	2348212M	DI MTZ-J15BTA
DM01	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
DM02	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
DS01	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
DS02	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
DS03	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
DS04	2348103M	ZD MTZJ-5.1C TA
DS05	CH00151M	DI DSM1SD2(200V)TAPE
DS06	CH00151M	DI DSM1SD2(200V)TAPE
DS08	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
DS12	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
DS14	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
DS15	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
DS68	2339839M	ZD HZS5C3 TAPE
DT01	2339491M	DI AM01Z (200 TAPE) 1A
DV01	2339491M	DI AM01Z (200 TAPE) 1A
DV02	2339491M	DI AM01Z (200 TAPE) 1A
DV03	2339491M	DI AM01Z (200 TAPE) 1A
DV04	2339491M	DI AM01Z (200 TAPE) 1A
DV05	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
DV06	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
DV07	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
DY02	2348212M	DI MTZ-J15BTA
DY03	2348212M	DI MTZ-J15BTA
DY04	2348212M	DI MTZ-J15BTA
DY50	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D012	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D013	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D015	2331827M	ZD DI HZ-9 TAPE (C1) SI 500MW

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION
D020	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D022	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D023	2348103M	ZD MTZJ-5.1C TA
D024	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D025	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D026	2348212M	DI MTZ-J15BTA
D027	2348212M	DI MTZ-J15BTA
D028	2348212M	DI MTZ-J15BTA
D029	2348212M	DI MTZ-J15BTA
D030	2348212M	DI MTZ-J15BTA
D031	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D033	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D034	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D040	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D041	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D042	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D043	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D044	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D101	2348212M	DIO-MTZ-J15BTA
D103	2335991M	ZD HZ-T33 (02 TP)
D104	2348123M	ZD MTZJ-6.2C TA
D105	2335991M	ZD HZ-T33 (02 TP)
D106	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D107	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D3A1	2334324M	ZD RD36E TAPE (B3) SI 500MW
D301	2339867M	ZD HZS-9-C1 TAPE (SI.200MA)
D302	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D303	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D304	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D305	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D306	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D307	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D308	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D310	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D311	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D313	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D314	2348103M	ZD MTZJ-5.1C TA
D401	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D402	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D404	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D405	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D406	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D407	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D408	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D412	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D5A1	2348162M	DI MTZ -J 9.1B TA
D5A2	2348162M	DI MTZ -J 9.1B TA
D5A5	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D5A6	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D501	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D502	2331827M	ZD HZ-9 TAPE (C1) SI 500MW
D503	2331827M	ZD HZ-9 TAPE (C1) SI 500MW
D504	2331827M	ZD HZ-9 TAPE (C1) SI 500MW
D505	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D506	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D507	2348103M	ZD MTZJ-5.1C TA
D508	2331827M	ZD HZ-9 TAPE (C1) SI 500MW
D509	2348103M	ZD MTZJ-5.1C TA
D520	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D6H0	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D6H1	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D620	2339862M	ZD HZS-9A2 TA
D621	2339491M	DI AM01Z (200 TAPE) 1A
D622	2339491M	DI AM01Z (200 TAPE) 1A
D623	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D624	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D7H0	2339981M	ZD HZS36-1 TA
D7H1	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D7H2	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D7H3	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
⚠D710	2348511	DI RS3FS
⚠D711	2348511	DI RS3FS
⚠D712	2336612M	DI RU3AM TA
D720	2339481M	DI AS01Z (200 TAPE) SI 0.6A
D721	CH00031M	DI AU02V1(280V)
D722	2338944	DI FML-G12S (F) (200V) SI 0.04US
⚠D723	2339481M	DI AS01Z (200 TAPE) SI 0.6A
D724	CH00031M	DI AU02V1(280V)
D725	CH00031M	DI AU02V1(280V)
D726	CH00031M	DI AU02V1(280V)
D731	2339491M	DI AM01Z (200 TAPE) 1A
D732	2339491M	DI AM01Z (200 TAPE) 1A
⚠D734	2339242M	ZD HZS33L2 TAPE
⚠D735	2339223M	ZD HZS27 (3L)
D738	2339251M	ZD HZS36-1L TAPE
D739	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D740	2339851M	ZD HZS7A1 TAPE (SI.200MA)
D742	2339491M	DI AM01Z (200 TAPE) 1A
D743	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D744	2339889M	ZD HZS12 (C3) 0.005A
D751	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D801	2339821M	ZD HZS4A1 TA
D804	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D805	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D806	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D820	2339601M	ZD HZS-2 TAPE (ALL) SI 400MW
D821	2339601M	ZD HZS-2 TAPE (ALL) SI 400MW
D822	2339601M	ZD HZS-2 TAPE (ALL) SI 400MW
D823	2339868M	ZD HZS9C2 TAPE
D825	2339868M	ZD HZS9C2 TAPE
D826	2339868M	ZD HZS9C2 TAPE
D855	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D856	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D857	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D858	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
⚠D901	2342062	DI D3SBA60-4103
D908	2349571M	DI SM-1XP2TP
D909	2336612	DI RU3AM SI 1.5A
D910	2338944	DI FML-G12S (F) (200V) SI 0.04US
D915	2349571M	DI SM-1XP2TP
D919	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D935	2339491M	DI AM01Z (200 TAPE) 1A
D951	2339052M	ZD HZS7 (B2 L TP)
D991	2348393	DI S1NB20(200V)
		FUSES
⚠F601	2722382	FUS-DC0.75A-J/UL(L)
⚠F701	2722385	FUSE DC2A
⚠F901	2722359	FUSE AC06A
⚠F902	2722355	FUS-AC2.5A-JP
		COMPOUND COMPONENTS
HM01	2574762	R/C MODULE SPS-409-1K
H001	2791754R	CONDENSER WITH 3 TERMINAL 100PF
H002	2791754R	CONDENSER WITH 3 TERMINAL 100PF
H003	2791754R	CONDENSER WITH 3 TERMINAL 100PF

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SYMBOL NO.	PART NO.	PART DESCRIPTION
H004	2791754R	CONDENSER WITH 3 TERMINAL 100PF
H006	2791754R	CONDENSER WITH 3 TERMINAL 100PF
⚠H901	2793313	CP-EXN-G131P365L
U002	HP00092	PINP UNIT KC-011S
U101	HC00221	BTF-WB451
U102	2429691	FE TUNER V8-A68FT
U301	CW00021	HYBRID IC (331KNT)
		INTEGRATED CIRCUITS
IA02	2366301	IC UPD4052BC
IA03	CP02601	AN5285K
IS03	CP00791U	LV1010N
IS04	2362602	IC UPC4558
IS05	2020001	IC TDA9860
IS06	2362602	IC UPC4558
IS07	2362602	IC UPC4558
IS10	2020001	IC TDA9860
IS12	2004751	IC TA8200AH
IS13	2000361	IC M51132L
⚠IT01	2000465	IC PS2501-1 (KC/LC)
IY01	2020452	ANALOG MONOLITHIC IC (CXA1545AS)
I001	CP02793	MN1876476-HHT
I002	CP00822	DIGITAL MONOLITHIC IC M6M80042P
I003	2366301	IC UPD4052BC
I004	CP00822	DIGITAL MONOLITHIC IC M6M80042P
I006	CP00761	ANALOG MONOLITHIC IC (MM1231XD)
I007	2000541	IC M51951BSL
I401	2004751	IC TA8200AH
I5A2	2003421	IC UPC7805AHF
I5A4	2004665	IC PQ09RF21
I501	2020324	ANALOG MONOLITHIC IC (YAT016H)
I502	CP02781	M62399P
I6H0	2362601	IC HA17458PS
⚠I620	2003541	IC LA7838
⚠I7H0	2000521	IC PC713F6
I702	2020507	IC AN7812F
⚠I901	2020392	IC TDA4605-3
⚠I902	2369711	IC TLP541G
I931	2020506	IC AN7810F
		COILS
LA02	2123763R	RADIAL COIL 101K(TYPE EL0405)
LA03	2123763R	RADIAL COIL 101K(TYPE EL0405)
LS01	2123781R	FILTER COIL 101K
LS02	2123781R	FILTER COIL 101K
LS03	2123781R	FILTER COIL 101K
LS04	2123781R	FILTER COIL 101K
LS05	2123781R	FILTER COIL 101K
LS10	2122956M	COIL-AXIAL 100UHKM BELTING
LV01	2122943M	COIL-AXIAL 10UHKM BELTING
LV02	2123468M	FERRITE BEADS CORE LEAD 0.8MH
LV03	2123468M	FERRITE BEADS CORE LEAD 0.8MH
LV04	2123468M	FERRITE BEADS CORE LEAD 0.8MH
LY01	2123781R	FILTER COIL 101K
LY03	2123763R	RADIAL COIL 101K(TYPE EL0405)
LY04	2123763R	RADIAL COIL 101K(TYPE EL0405)
LY50	2123116M	COIL-AXIAL 100UH-K
L002	2123781R	FILTER COIL 101K
L003	2123781R	FILTER COIL 101K
L004	2146093	COIL (LC FILTER) FL-160V5R8SS
L101	2123763R	RADIAL COIL 101K(TYPE EL0405)
L102	2123763R	RADIAL COIL 101K(TYPE EL0405)
L103	2123781R	FILTER COIL 101K
L104	2123763R	RADIAL COIL 101K(TYPE EL0405)
L105	2123781R	FILTER COIL 101K
L106	2123781R	FILTER COIL 101K
L107	2123781R	FILTER COIL 101K
L401	2122652M	FERRITE CORE
L5A4	2123781R	FILTER COIL 101K
L5A5	2122248M	COIL-AXIAL 47UH-K
L5A7	2123763R	RADIAL COIL 101K(TYPE EL0405)
L5A8	2122253M	COIL-AXIAL 100UH-K
L501	2122948M	COIL-AXIAL 27UHKM BELTING
L502	2122948M	COIL-AXIAL 27UHKM BELTING
L503	2146092	COIL-TRAP (3.58MHZ) VL-5R8C0L
L504	2123763R	RADIAL COIL 101K(TYPE EL0405)
L610	BH00204R	FILTER COIL 18UH
L710	2122652M	FERRITE CORE
L711	2122652M	FERRITE CORE
L712	2122652M	FERRITE CORE
⚠L713	2275381	COIL-CHOKING 1000UH
L714	2124513	COIL-H.LINEARITY M1LXU1
L720	BH00206R	FILTER COIL 27UH
⚠L721	2122244M	COIL-AXIAL 22UH-K
L722	2122248M	COIL-AXIAL 47UH-K
L851	2122239M	COIL-AXIAL 10UH-K
L852	2122239M	COIL-AXIAL 10UH-K
L853	2122239M	COIL-AXIAL 10UH-K
L854	2122253M	COIL-AXIAL 100UH-K
L855	2122253M	COIL-AXIAL 100UH-K
L856	2122253M	COIL-AXIAL 100UH-K
L857	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L858	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L859	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L860	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L861	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L862	2123468M	FERRITE BEADS CORE LEAD 0.8MH
L863	2123468M	FERRITE BEADS CORE LEAD 0.8MH
⚠L901	2169462	LINE FILTER COIL FX-7355-60
L904	2123461M	FERRITE BEADS B 0.8 MH
L905	2123461M	FERRITE BEADS B 0.8 MH
L906	2123461M	FERRITE BEADS B 0.8 MH
L908	2123461M	FERRITE BEADS B 0.8 MH
L909	2123461M	FERRITE BEADS B 0.8 MH
L931	2122253M	COIL-AXIAL 100UH-K
L935	2220577	COIL HLL-10UH KRL TSL0707
		TRANSISTORS
QA01	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ
QA02	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ
QA03	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ
QA04	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ
QA05	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ
QA06	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ
QA07	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ
QA09	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ
QA11	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ
QA12	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ
QA70	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ
QA71	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ
QA72	2326876R	TRS. DTC124ES TAPE
QA73	2326876R	TRS. DTC124ES TAPE
QA74	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ
QA75	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ
QA78	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ
QA79	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ
QC01	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
QM01	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	Q403	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ
QM02	2312992	PHOTO TRS. RPT-38PT3F (M)	Q404	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ
QSN2	2320664	TRS. 2SC1213A (B/C) SI 80MHZ4	Q5A3	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ
QSN3	2315933	TRS. 2SB1548A P/Q	Q5A4	2326876R	TRS. DTC124ES TAPE
QSN6	2320664	TRS. 2SC1213A (B/C) SI 80MHZ4	Q5A5	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ
QSN7	2315933	TRS. 2SB1548A P/Q	Q5A6	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ
QSN8	2321321M	TRS. 2SA844 (D TZ/E TZ) SI 200MHZ	Q501	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ
QS05	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	Q502	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ
QS06	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	Q503	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ
QS17	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	Q504	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ
QS18	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	Q505	2326876R	TRS. DTC124ES TAPE
QS20	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	Q506	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ
QS21	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	Q6H0	2320598M	TRS. 2SC458 (B TZ/C TZ/D TZ)
QV01	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ	Q610	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ
QV02	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ	Q7H0	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ
QV03	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ	Q7H1	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ
QV04	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ	Q710	2323523M	TRS. 2SD789 D TAPE
QV05	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ	⚠Q711	2315275F	TRS. 2SC4589-06 (1500V)
QV06	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ	Q713	2321112M	TRS.2SA778AK(02 TAPE)
QV07	2320647M	TRS. 2SC1213 (C 21 TZ/D 21 TZ) SI 80MHZ4	Q714	2323434	TRS. 2SC1983 (O/Y)
QV08	2321351M	TRS. 2SA836/844D/E 100MA 200MW 200MHZSI	Q721	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ
QV09	2315381	TRS. 2SA1837	Q811	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ
QV10	2315391	TRS. 2SC4793	Q812	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ
QV11	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ	Q851	2315491	TRS. 2SC4544
QV12	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ	Q852	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ
QY07	2326021M	TRS. 2SC1741S P/R/Q (TP) SI250MHZ 30	Q853	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ
QY08	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	Q854	2315491	TRS. 2SC4544
QY50	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ	Q855	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ
QY51	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	Q856	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ
QY52	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ	Q857	2315491	TRS. 2SC4544
QY53	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	Q858	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ
Q001	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	Q859	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ
Q002	2327772M	TRS.2SC3413 TAPE (B/C) SI 200MHZ	Q901	CF00211	TRS. 2SK1101-01M (450V)
Q003	2320647M	TRS. 2SC1213 (C 21 TZ/D 21 TZ) SI 80MHZ4	⚠Q941	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ
Q004	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	Q945	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ
Q005	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	Q951	2326631	THYRISTOR CR5AS-8(B-A1)
Q006	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ			
Q008	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ			**RESISTORS**
Q011	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ			
Q012	2320647M	TRS. 2SC1213 (C 21 TZ/D 21 TZ) SI 80MHZ4	RAC9	0700057M	CF 1/16W 18K-JB
Q013	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	RAD1	0700041M	CF 1/16W 1.0K-JB
Q014	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ	RAD2	0700055M	CF 1/16W 12K-JB
Q015	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	RAD3	0700041M	CF 1/16W 1.0K-JB
Q016	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	RAD4	0700057M	CF 1/16W 18K-JB
Q017	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	RAD5	0700041M	CF 1/16W 1.0K-JB
Q018	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	RAD6	0700055M	CF 1/16W 12K-JB
Q019	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	RAD7	0700041M	CF 1/16W 1.0K-JB
Q021	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	RA01	0700051M	CF 1/16W 5.6K-JB
Q022E	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ	RA02	0700051M	CF 1/16W 5.6K-JB
Q023E	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ	RA03	0700051M	CF 1/16W 5.6K-JB
Q024	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	RA04	0700051M	CF 1/16W 5.6K-JB
Q101	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	RA05	0700051M	CF 1/16W 5.6K-JB
Q102	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	RA06	0700051M	CF 1/16W 5.6K-JB
Q103	2320647M	TRS. 2SC1213 (C 21 TZ/D 21 TZ) SI 80MHZ4	RA07	0700051M	CF 1/16W 5.6K-JB
Q105	2323524M	TRS. 2SD789 TAPE(C)	RA08	0700051M	CF 1/16W 5.6K-JB
Q302	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	RA09	0700041M	CF 1/16W 1.0K-JB
Q303	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	RA10	0700041M	CF 1/16W 1.0K-JB
Q304	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	RA11	0700027M	CF 1/16W 100-JB
Q305	2326021M	TRS. 2SC1741S P/R/Q (TP) SI250MHZ 30	RA12	0700027M	CF 1/16W 100-JB
Q310	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	RA18	0700057M	CF 1/16W 18K-JB
Q311	2326876R	TRS. DTC124ES TAPE	RA19	0700055M	CF 1/16W 12K-JB
Q312	2326876R	TRS. DTC124ES TAPE	RA20	0700041M	CF 1/16W 1.0K-JB
Q313	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	RA21	0700041M	CF 1/16W 1.0K-JB
Q401	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	RA22	0700041M	CF 1/16W 1.0K-JB
Q402	2320591M	TRS. 2SC458 (B TZ/C TZ) SI 230MHZ	RA23	0700032M	CF 1/16W 220-JB

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RA24	0700057M	CF 1/16W 18K-JB	RC06	0700041M	CF 1/16W 1.0K-JB
RA25	0700055M	CF 1/16W 12K-JB	RC16	0100038M	CF 1/8W 75-JB
RA26	0700041M	CF 1/16W 1.0K-JB	RC17	0700027M	CF 1/16W 100-JB
RA27	0700041M	CF 1/16W 1.0K-JB	RC71	0100038M	CF 1/8W 75-JB
RA28	0700041M	CF 1/16W 1.0K-JB	RDF1	0110163S	MF 5.6K-JS
RA29	0700032M	CF 1/16W 220-JB	RDF2	0114219M	CF 1/4W 56K-JB
RA30	0700041M	CF 1/16W 1.0K-JB	RG05	0147060	WW 2W 33-K
RA31	0700067M	CF 1/16W 100K-JB	RM01	0700041M	CF 1/16W 1.0K-JB
RA32	0700041M	CF 1/16W 1.0K-JB	RM02	0700058M	CF 1/16W 22K-JB
RA33	0700067M	CF 1/16W 100K-JB	RM03	0700045M	CF 1/16W 2.2K-JB
RA38	0700041M	CF 1/16W 1.0K-JB	RM04	0100065M	CF 1/8W 1K-JB
RA39	0700032M	CF 1/16W 220-JB	RM05	0100065M	CF 1/8W 1K-JB
RA44	0700041M	CF 1/16W 1.0K-JB	RM06	0700041M	CF 1/16W 1.0K-JB
RA45	0700032M	CF 1/16W 220-JB	RM07	0700043M	CF 1/16W 1.5K-JB
RA46	0700041M	CF 1/16W 1.0K-JB	RM08	0700046M	CF 1/16W 2.7K-JB
RA47	0700067M	CF 1/16W 100K-JB	RM09	0700049M	CF 1/16W 4.7K-JB
RA48	0700041M	CF 1/16W 1.0K-JB	RM10	0100129M	CF 1/8W 470K-JB
RA49	0700067M	CF 1/16W 100K-JB	RM11	0700041M	CF 1/16W 1.0K-JB
RA50	0700041M	CF 1/16W 1.0K-JB	RM12	0100125M	CF 1/8W 330K-JB
RA51	0700067M	CF 1/16W 100K-JB	RM14	0100125M	CF 1/8W 330K-JB
RA52	0700041M	CF 1/16W 1.0K-JB	RM15	0700054M	CF 1/16W 10K-JB
RA53	0700067M	CF 1/16W 100K-JB	RSA1	0700041M	CF 1/16W 1.0K-JB
RA54	0700041M	CF 1/16W 1.0K-JB	RSA2	0700041M	CF 1/16W 1.0K-JB
RA55	0700067M	CF 1/16W 100K-JB	RSA3	0700027M	CF 1/16W 100-JB
RA56	0700041M	CF 1/16W 1.0K-JB	RSA8	0700063M	CF 1/16W 47K-JB
RA57	0700067M	CF 1/16W 100K-JB	RSA9	0700067M	CF 1/16W 100K-JB
RA58	0700041M	CF 1/16W 1.0K-JB	RSC3	0700063M	CF 1/16W 47K-JB
RA59	0700067M	CF 1/16W 100K-JB	RSC5	0700051M	CF 1/16W 5.6K-JB
RA60	0700041M	CF 1/16W 1.0K-JB	RSC6	0700051M	CF 1/16W 5.6K-JB
RA61	0700067M	CF 1/16W 100K-JB	RSC8	0700045M	CF 1/16W 2.2K-JB
RA62	0700041M	CF 1/16W 1.0K-JB	RSC9	0700045M	CF 1/16W 2.2K-JB
RA63	0700041M	CF 1/16W 1.0K-JB	RSE2	0700054M	CF 1/16W 10K-JB
RA64	0100123M	CF 1/8W 270K-JB	RSE3	0700054M	CF 1/16W 10K-JB
RA65	0100123M	CF 1/8W 270K-JB	RSE4	0700036M	CF 1/16W 470-JB
RA66	0100123M	CF 1/8W 270K-JB	RSE5	0700041M	CF 1/16W 1.0K-JB
RA67	0100123M	CF 1/8W 270K-JB	RSE6	0700058M	CF 1/16W 22K-JB
RA68	0179561M	MG 2.2M-J TAPE	RSE8	0119505G	MF 2.2-J
RA69	0700049M	CF 1/16W 4.7K-JB	RSE9	0119505G	MF 2.2-J
RA70	0700056M	CF 1/16W 15K-JB	RSF1	0114161M	CF 1/4W 1K-JB
RA71	0100041M	CF 1/8W 100-JB	RSF2	0114161M	CF 1/4W 1K-JB
RA72	0700041M	CF 1/16W 1.0K-JB	RSF5	0700065M	CF 1/16W 68K-JB
RA73	0700041M	CF 1/16W 1.0K-JB	RSF6	0700065M	CF 1/16W 68K-JB
RA74	0700064M	CF 1/16W 56K-JB	RSG2	0700027M	CF 1/16W 100-JB
RA75	0700045M	CF 1/16W 2.2K-JB	RSG3	0700027M	CF 1/16W 100-JB
RA76	0100123M	CF 1/8W 270K-JB	RSG4	0700027M	CF 1/16W 100-JB
RA77	0700047M	CF 1/16W 3.3K-JB	RSG5	0700027M	CF 1/16W 100-JB
RA78	0700064M	CF 1/16W 56K-JB	RSG6	0700041M	CF 1/16W 1.0K-JB
RA79	0100123M	CF 1/8W 270K-JB	RSG7	0700041M	CF 1/16W 1.0K-JB
RA80	0700041M	CF 1/16W 1.0K-JB	RSG8	0700027M	CF 1/16W 100-JB
RA81	0700041M	CF 1/16W 1.0K-JB	RSG9	0700027M	CF 1/16W 100-JB
RA82	0100041M	CF 1/8W 100-JB	RSH4	0700054M	CF 1/16W 10K-JB
RA83	0700041M	CF 1/16W 1.0K-JB	RSH6	0700027M	CF 1/16W 100-JB
RA84	0700067M	CF 1/16W 100K-JB	RSH7	0700027M	CF 1/16W 100-JB
RA85	0700054M	CF 1/16W 10K-JB	RSH8	0700027M	CF 1/16W 100-JB
RA86	0700041M	CF 1/16W 1.0K-JB	RSH9	0700027M	CF 1/16W 100-JB
RA89	0700054M	CF 1/16W 10K-JB	RSJ1	0700041M	CF 1/16W 1.0K-JB
RA90	0700054M	CF 1/16W 10K-JB	RSJ2	0700027M	CF 1/16W 100-JB
RA91	0700041M	CF 1/16W 1.0K-JB	RSJ3	0700027M	CF 1/16W 100-JB
RA92	0700067M	CF 1/16W 100K-JB	RSJ9	0700041M	CF 1/16W 1.0K-JB
RA93	0700054M	CF 1/16W 10K-JB	RSK2	0700027M	CF 1/16W 100-JB
RA94	0700041M	CF 1/16W 1.0K-JB	RSK3	0700027M	CF 1/16W 100-JB
RC01	0700027M	CF 1/16W 100-JB	RSK4	0700047M	CF 1/16W 3.3K-JB
RC02	0700027M	CF 1/16W 100-JB	RSK5	0700054M	CF 1/16W 10K-JB
RC04	0700027M	CF 1/16W 100-JB	RSK6	0700054M	CF 1/16W 10K-JB
RC05	0700032M	CF 1/16W 220-JB	RSK7	0700054M	CF 1/16W 10K-JB

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SYMBOL NO.	PART NO.	PART DESCRIPTION
RSK8	0700067M	CF 1/16W 100K-JB
RSK9	0700067M	CF 1/16W 100K-JB
RSN1	0700063M	CF 1/16W 47K-JB
RSN2	0700063M	CF 1/16W 47K-JB
RSN3	0700058M	CF 1/16W 22K-JB
RSN4	0700058M	CF 1/16W 22K-JB
RSP2	0700058M	CF 1/16W 22K-JB
RSP3	0700054M	CF 1/16W 10K-JB
RSP4	0700045M	CF 1/16W 2.2K-JB
RSP6	0110245S	MF 1.0K-JS
RSQ2	0700058M	CF 1/16W 22K-JB
RSQ3	0700054M	CF 1/16W 10K-JB
RSQ4	0700045M	CF 1/16W 2.2K-JB
RSQ6	0110245S	MF 1.0K-JS
RS14	0700041M	CF 1/16W 1.0K-JB
RS15	0700041M	CF 1/16W 1.0K-JB
RS16	0179536M	MG 1M J TAPE
RS17	0700063M	CF 1/16W 47K-JB
RS18	0700051M	CF 1/16W 5.6K-JB
RS19	0700064M	CF 1/16W 56K-JB
RS21	0700062M	CF 1/16W 39K-JB
RS22	0700041M	CF 1/16W 1.0K-JB
RS23	0700041M	CF 1/16W 1.0K-JB
RS24	0700041M	CF 1/16W 1.0K-JB
RS25	0700058M	CF 1/16W 22K-JB
RS26	0700058M	CF 1/16W 22K-JB
RS27	0700058M	CF 1/16W 22K-JB
RS28	0100059M	CF 1/8W 560-JB
RS29	0700067M	CF 1/16W 100K-JB
RS30	0700067M	CF 1/16W 100K-JB
RS39	0700054M	CF 1/16W 10K-JB
RS42	0700041M	CF 1/16W 1.0K-JB
RS43	0700027M	CF 1/16W 100-JB
RS46	0700027M	CF 1/16W 100-JB
RS47	0700041M	CF 1/16W 1.0K-JB
RS48	0700054M	CF 1/16W 10K-JB
RS49	0700041M	CF 1/16W 1.0K-JB
RS50	0700054M	CF 1/16W 10K-JB
RS51	0700041M	CF 1/16W 1.0K-JB
RS52	0700063M	CF 1/16W 47K-JB
RS53	0700051M	CF 1/16W 5.6K-JB
RS54	0700043M	CF 1/16W 1.5K-JB
RS55	0700051M	CF 1/16W 5.6K-JB
RS56	0700043M	CF 1/16W 1.5K-JB
RS57	0700051M	CF 1/16W 5.6K-JB
RS58	0700051M	CF 1/16W 5.6K-JB
RS59	0700045M	CF 1/16W 2.2K-JB
RS60	0700054M	CF 1/16W 10K-JB
RS61	0700034M	CF 1/16W 330-JB
RS62	0700067M	CF 1/16W 100K-JB
RS63	0700054M	CF 1/16W 10K-JB
RS64	0700054M	CF 1/16W 10K-JB
RS65	0700067M	CF 1/16W 100K-JB
RS66	0700034M	CF 1/16W 330-JB
RS67	0700054M	CF 1/16W 10K-JB
RS68	0700045M	CF 1/16W 2.2K-JB
RS69	0700063M	CF 1/16W 47K-JB
RS70	0700027M	CF 1/16W 100-JB
RS71	0700027M	CF 1/16W 100-JB
RS72	0700027M	CF 1/16W 100-JB
RS73	0700027M	CF 1/16W 100-JB
RS83	0100065M	CF 1/8W 1K-JB
RS99	0700027M	CF 1/16W 100-JB
RT01	0110281S	MF 33K-JS
RT02	0700051M	CF 1/16W 5.6K-JB
RT03	0700054M	CF 1/16W 10K-JB
RV01	0700067M	CF 1/16W 100K-JB
RV02	0700059M	CF 1/16W 27K-JB
RV04	0700035M	CF 1/16W 390-JB
RV06	0700034M	CF 1/16W 330-JB
RV07	0700057M	CF 1/16W 18K-JB
RV08	0700067M	CF 1/16W 100K-JB
RV09	0700033M	CF 1/16W 270-JB
RV10	0700033M	CF 1/16W 270-JB
RV11	0700042M	CF 1/16W 1.2K-JB
RV12	0700045M	CF 1/16W 2.2K-JB
RV13	0700058M	CF 1/16W 22K-JB
RV16	0113742M	CF 1/2W 470-JB
RV17	0700046M	CF 1/16W 2.7K-JB
RV19	0700028M	CF 1/16W 120-JB
RV20	0700041M	CF 1/16W 1.0K-JB
RV21	0113701M	CF 1/2P-B 10-J
RV22	0100039M	CF 1/8W 82-JB
RV23	0100039M	CF 1/8W 82-JB
RV24	0114165M	CF 1/4 PF 1.5K-J
RV25	0100069M	CF 1/8W 1.5K-JB
RV26	0114143M	CF 1/4W 330-JB
RV27	0114221M	CF 1/4 PB 68K-J
RV28	0114221M	CF 1/4 PB 68K-J
RV29	0100053M	CF 1/8W 330-JB
RV30	0113776M	CF 1/2P-B 12K-J
RV31	0113716M	CF 1/2P-B 43-J
RV32	0113716M	CF 1/2P-B 43-J
RV33	0113686M	CF 1/2W 2.7-J
RV34	0113686M	CF 1/2W 2.7-J
RV35	0110229S	MF 220-JS
RV36	0110135S	MF 390-JS
RV37	0110132S	MF 300-JS
RV38	0700047M	CF 1/16W 3.3K-JB
RV39	0700051M	CF 1/16W 5.6K-JB
RV40	0700061M	CF 1/16W 33K-JB
RV41	0700036M	CF 1/16W 470-JB
RV42	0700043M	CF 1/16W 1.5K-JB
RV43	0700035M	CF 1/16W 390-JB
RV44	0700043M	CF 1/16W 1.5K-JB
RV45	0700067M	CF 1/16W 100K-JB
RV46	0700067M	CF 1/16W 100K-JB
RV47	0700046M	CF 1/16W 2.7K-JB
RV48	0700041M	CF 1/16W 1.0K-JB
RV49	0700037M	CF 1/16W 560-JB
RV50	0700035M	CF 1/16W 390-JB
RV51	0700056M	CF 1/16W 15K-JB
RY01	0700027M	CF 1/16W 100-JB
RY02	0700027M	CF 1/16W 100-JB
RY03	0700027M	CF 1/16W 100-JB
RY04	0700041M	CF 1/16W 1.0K-JB
RY05	0700027M	CF 1/16W 100-JB
RY06	0700027M	CF 1/16W 100-JB
RY07	0700027M	CF 1/16W 100-JB
RY08	0700041M	CF 1/16W 1.0K-JB
RY09	0700041M	CF 1/16W 1.0K-JB
RY10	0700041M	CF 1/16W 1.0K-JB
RY11	0700041M	CF 1/16W 1.0K-JB
RY12	0700027M	CF 1/16W 100-JB
RY14	0700027M	CF 1/16W 100-JB
RY15	0700027M	CF 1/16W 100-JB
RY31	0100038M	CF 1/8W 75-JB
RY32	0100038M	CF 1/8W 75-JB
RY33	0700063M	CF 1/16W 47K-JB
RY34	0700058M	CF 1/16W 22K-JB

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
RY35	0100038M	CF 1/8W 75-JB	R0G9	0100065M	CF 1/8W 1K-JB
RY36	0700027M	CF 1/16W 100-JB	R0H1	0100065M	CF 1/8W 1K-JB
RY37	0700027M	CF 1/16W 100-JB	R0H2	0700049M	CF 1/16W 4.7K-JB
RY38	0700041M	CF 1/16W 1.0K-JB	R0H3	0700058M	CF 1/16W 22K-JB
RY39	0700034M	CF 1/16W 330-JB	R0H4	0700067M	CF 1/16W 100K-JB
RY40	0114137M	CF 1/4W 180-JB	R0H5	0700049M	CF 1/16W 4.7K-JB
RY41	0100037M	CF 1/8W 68-JB	R0H6	0700031M	CF 1/16W 180-JB
RY42	0700067M	CF 1/16W 100K-JB	R0H7	0700066M	CF 1/16W 82K-JB
RY43	0700041M	CF 1/16W 1.0K-JB	R0H8	0100107M	CF 1/8W 56K-JB
RY44	0700054M	CF 1/16W 10K-JB	R0H9	0700056M	CF 1/16W 15K-JB
RY45	0700039M	CF 1/16W 820-JB	R0L1	0700041M	CF 1/16W 1.0K-JB
RY47	0700054M	CF 1/16W 10K-JB	R0L3E	0700058M	CF 1/16W 22K-JB
RY50	0700027M	CF 1/16W 100-JB	R0L4E	0700058M	CF 1/16W 22K-JB
RY51	0700038M	CF 1/16W 680-JB	R0L5	0700058M	CF 1/16W 22K-JB
RY52	0700043M	CF 1/16W 1.5K-JB	R0L6	0700041M	CF 1/16W 1.0K-JB
RY53	0700039M	CF 1/16W 820-JB	R0L7	0700063M	CF 1/16W 47K-JB
RY54	0700063M	CF 1/16W 47K-JB	R0L8	0700042M	CF 1/16W 1.2K-JB
RY56	0700027M	CF 1/16W 100-JB	R0L9	0700054M	CF 1/16W 10K-JB
RY57	0100055M	CF 1/8W 390-JB	R0M1	0700054M	CF 1/16W 10K-JB
RY58	0700041M	CF 1/16W 1.0K-JB	R0M2	0700049M	CF 1/16W 4.7K-JB
RY59	0700046M	CF 1/16W 2.7K-JB	R0M3	0700054M	CF 1/16W 10K-JB
RY60	0700043M	CF 1/16W 1.5K-JB	R0M5	0700067M	CF 1/16W 100K-JB
RY61	0100115M	CF 1/8W 120K-JB	R0Y1	0187074M	CF 1/16W 2.4K-JB
RY62	0700052M	CF 1/16W 6.8K-JB	R001	0700054M	CF 1/16W 10K-JB
RY63	0700057M	CF 1/16W 18K-JB	R002	0700066M	CF 1/16W 82K-JB
RY64	0100121M	CF 1/8W 220K-JB	R003	0700051M	CF 1/16W 5.6K-JB
RY65	0700061M	CF 1/16W 33K-JB	R004	0700054M	CF 1/16W 10K-JB
RY70	0100038M	CF 1/8W 75-JB	R005	0700063M	CF 1/16W 47K-JB
RY71	0100038M	CF 1/8W 75-JB	R006	0700063M	CF 1/16W 47K-JB
RY74	0100101M	CF 1/8W 33K-JB	R008	0700063M	CF 1/16W 47K-JB
RY77	0100123M	CF 1/8W 270K-JB	R009	0700054M	CF 1/16W 10K-JB
RY78	0100123M	CF 1/8W 270K-JB	R010	0700054M	CF 1/16W 10K-JB
R0A3	0700058M	CF 1/16W 22K-JB	R011	0700041M	CF 1/16W 1.0K-JB
R0A5	0700027M	CF 1/16W 100-JB	R012	0700064M	CF 1/16W 56K-JB
R0A6	0700037M	CF 1/16W 560-JB	R014	0700054M	CF 1/16W 10K-JB
R0A7	0700027M	CF 1/16W 100-JB	R015	0700056M	CF 1/16W 15K-JB
R0A8	0700041M	CF 1/16W 1.0K-JB	R016	0700051M	CF 1/16W 5.6K-JB
R0A9	0700041M	CF 1/16W 1.0K-JB	R017	0700041M	CF 1/16W 1.0K-JB
R0C1	0700041M	CF 1/16W 1.0K-JB	R018	0700032M	CF 1/16W 220-JB
R0C3	0700058M	CF 1/16W 22K-JB	R019	0100041M	CF 1/8W 100-JB
R0C4	0700027M	CF 1/16W 100-JB	R020	0700032M	CF 1/16W 220-JB
R0C5	0700027M	CF 1/16W 100-JB	R031	0700032M	CF 1/16W 220-JB
R0C7	0700056M	CF 1/16W 15K-JB	R032	0700027M	CF 1/16W 100-JB
R0E2	0700054M	CF 1/16W 10K-JB	R033	0700027M	CF 1/16W 100-JB
R0E3	0114149M	CF 1/4 PF 560-J	R034	0700054M	CF 1/16W 10K-JB
R0E4	0700058M	CF 1/16W 22K-JB	R035	0700054M	CF 1/16W 10K-JB
R0E5	0700041M	CF 1/16W 1.0K-JB	R036	0700027M	CF 1/16W 100-JB
R0E6	0700063M	CF 1/16W 47K-JB	R037	0700054M	CF 1/16W 10K-JB
R0E7	0700055M	CF 1/16W 12K-JB	R038	0700027M	CF 1/16W 100-JB
R0E8	0700054M	CF 1/16W 10K-JB	R039	0700041M	CF 1/16W 1.0K-JB
R0E9	0700041M	CF 1/16W 1.0K-JB	R040	0700041M	CF 1/16W 1.0K-JB
R0F3	0700041M	CF 1/16W 1.0K-JB	R041	0700041M	CF 1/16W 1.0K-JB
R0F5	0700041M	CF 1/16W 1.0K-JB	R042	0700051M	CF 1/16W 5.6K-JB
R0F6	0700041M	CF 1/16W 1.0K-JB	R043	0700027M	CF 1/16W 100-JB
R0F7	0700067M	CF 1/16W 100K-JB	R044	0700058M	CF 1/16W 22K-JB
R0F8	0700041M	CF 1/16W 1.0K-JB	R045	0700041M	CF 1/16W 1.0K-JB
R0F9	0700051M	CF 1/16W 5.6K-JB	R046	0700058M	CF 1/16W 22K-JB
R0G1	0100123M	CF 1/8W 270K-JB	R047	0700041M	CF 1/16W 1.0K-JB
R0G2	0700041M	CF 1/16W 1.0K-JB	R048	0700058M	CF 1/16W 22K-JB
R0G3	0700041M	CF 1/16W 1.0K-JB	R049	0700041M	CF 1/16W 1.0K-JB
R0G4	0700041M	CF 1/16W 1.0K-JB	R050	0700057M	CF 1/16W 18K-JB
R0G5	0700027M	CF 1/16W 100-JB	R051	0700049M	CF 1/16W 4.7K-JB
R0G6	0700027M	CF 1/16W 100-JB	R052	0700058M	CF 1/16W 22K-JB
R0G7	0100065M	CF 1/8W 1K-JB	R053	0700054M	CF 1/16W 10K-JB
R0G8	0100089M	CF 1/8W 10K-JB	R054	0700058M	CF 1/16W 22K-JB

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R055	0700027M	CF 1/16W 100-JB	R125	0700041M	CF 1/16W 1.0K-JB
R056	0700027M	CF 1/16W 100-JB	R126	0700059M	CF 1/16W 27K-JB
R057	0700041M	CF 1/16W 1.0K-JB	R127	0700041M	CF 1/16W 1.0K-JB
R058	0700041M	CF 1/16W 1.0K-JB	R128	0700041M	CF 1/16W 1.0K-JB
R059	0700058M	CF 1/16W 22K-JB	R129	0700041M	CF 1/16W 1.0K-JB
R060	0700041M	CF 1/16W 1.0K-JB	R130	0700022M	CF 1/16W 39-J
R061	0700042M	CF 1/16W 1.2K-JB	R131	0700041M	CF 1/16W 1.0K-JB
R062	0700042M	CF 1/16W 1.2K-JB	R132	0700058M	CF 1/16W 22K-JB
R063	0700042M	CF 1/16W 1.2K-JB	R133	0700058M	CF 1/16W 22K-JB
R064	0700043M	CF 1/16W 1.5K-JB	R134	0700041M	CF 1/16W 1.0K-JB
R066	0700027M	CF 1/16W 100-JB	R135	0700041M	CF 1/16W 1.0K-JB
R067	0700051M	CF 1/16W 5.6K-JB	R136	0700062M	CF 1/16W 39K-JB
R068	0700027M	CF 1/16W 100-JB	R3C3	0700041M	CF 1/16W 1.0K-JB
R069	0700049M	CF 1/16W 4.7K-JB	R3C4	0700056M	CF 1/16W 15K-JB
R070	0700051M	CF 1/16W 5.6K-JB	R306	0700058M	CF 1/16W 22K-JB
R071	0700041M	CF 1/16W 1.0K-JB	R307	0700058M	CF 1/16W 22K-JB
R072	0700052M	CF 1/16W 6.8K-JB	R308	0700047M	CF 1/16W 3.3K-JB
R073	0700027M	CF 1/16W 100-JB	R309	0700067M	CF 1/16W 100K-JB
R074	0700058M	CF 1/16W 22K-JB	R310	0700049M	CF 1/16W 4.7K-JB
R075	0700058M	CF 1/16W 22K-JB	R311	0700061M	CF 1/16W 33K-JB
R076	0700041M	CF 1/16W 1.0K-JB	R312	0700029M	CF 1/16W 150-JB
R077	0700054M	CF 1/16W 10K-JB	R313	0700043M	CF 1/16W 1.5K-JB
R078	0700027M	CF 1/16W 100-JB	R314	0700054M	CF 1/16W 10K-JB
R079	0700054M	CF 1/16W 10K-JB	R315	0700065M	CF 1/16W 68K-JB
R080	0700027M	CF 1/16W 100-JB	R316	0700067M	CF 1/16W 100K-JB
R081	0700049M	CF 1/16W 4.7K-JB	R317	0700064M	CF 1/16W 56K-JB
R082	0700032M	CF 1/16W 220-JB	R318	0700058M	CF 1/16W 22K-JB
R083	0700041M	CF 1/16W 1.0K-JB	R322	0700063M	CF 1/16W 47K-JB
R084	0700041M	CF 1/16W 1.0K-JB	R323	0700054M	CF 1/16W 10K-JB
R085	0700041M	CF 1/16W 1.0K-JB	R324	0700041M	CF 1/16W 1.0K-JB
R086	0700041M	CF 1/16W 1.0K-JB	R325	0700048M	CF 1/16W 3.9K-JB
R087	0700041M	CF 1/16W 1.0K-JB	R326	0700054M	CF 1/16W 10K-JB
R088	0700041M	CF 1/16W 1.0K-JB	R327	0700054M	CF 1/16W 10K-JB
R089	0700027M	CF 1/16W 100-JB	R328	0700065M	CF 1/16W 68K-JB
R090	0700041M	CF 1/16W 1.0K-JB	R329	0700067M	CF 1/16W 100K-JB
R092	0700055M	CF 1/16W 12K-JB	R330	0700058M	CF 1/16W 22K-JB
R093	0700054M	CF 1/16W 10K-JB	R332	0700048M	CF 1/16W 3.9K-JB
R094	0700045M	CF 1/16W 2.2K-JB	R333	0700034M	CF 1/16W 330-JB
R095	0700054M	CF 1/16W 10K-JB	R334	0700054M	CF 1/16W 10K-JB
R096	0187094M	CF 1/16W 16K-JB	R338	0700051M	CF 1/16W 5.6K-JB
R097	0700054M	CF 1/16W 10K-JB	R340	0700046M	CF 1/16W 2.7K-JB
R098	0700054M	CF 1/16W 10K-JB	R342	0700033M	CF 1/16W 270-JB
R099	0700041M	CF 1/16W 1.0K-JB	R343	0700045M	CF 1/16W 2.2K-JB
R101	0700039M	CF 1/16W 820-JB	R344	0700041M	CF 1/16W 1.0K-JB
R102	0700041M	CF 1/16W 1.0K-JB	R345	0100125M	CF 1/8W 330K-JB
R103	0700038M	CF 1/16W 680-JB	R346	0700041M	CF 1/16W 1.0K-JB
R104	0700041M	CF 1/16W 1.0K-JB	R347	0700062M	CF 1/16W 39K-JB
R105	0700041M	CF 1/16W 1.0K-JB	R348	0100051M	CF 1/8W 270-JB
R106	0700038M	CF 1/16W 680-JB	R349	0700037M	CF 1/16W 560-JB
R107	0700054M	CF 1/16W 10K-JB	R350	0114135M	CF 1/4W 150-JB
R108	0100065M	CF 1/8W 1K-JB	R360	0700033M	CF 1/16W 270-JB
R109	0700054M	CF 1/16W 10K-JB	R361	0700061M	CF 1/16W 33K-JB
R111	0700027M	CF 1/16W 100-JB	R362	0700029M	CF 1/16W 150-JB
R112	0700054M	CF 1/16W 10K-JB	R363	0700049M	CF 1/16W 4.7K-JB
R113	0700051M	CF 1/16W 5.6K-JB	R364	0700051M	CF 1/16W 5.6K-JB
R114	0700041M	CF 1/16W 1.0K-JB	R365	0700066M	CF 1/16W 82K-JB
R115	0700041M	CF 1/16W 1.0K-JB	R366	0100133M	CF 1/8W 680K-JB
R116	0700041M	CF 1/16W 1.0K-JB	R368	0700034M	CF 1/16W 330-JB
R117	0700041M	CF 1/16W 1.0K-JB	R370	0700052M	CF 1/16W 6.8K-JB
R118	0100059M	CF 1/8W 560-JB	R371	0700038M	CF 1/16W 680-JB
R119	0100059M	CF 1/8W 560-JB	R372	0700046M	CF 1/16W 2.7K-JB
R121	0700041M	CF 1/16W 1.0K-JB	R373	0700049M	CF 1/16W 4.7K-JB
R122	0700041M	CF 1/16W 1.0K-JB	R374	0700048M	CF 1/16W 3.9K-JB
R123	0700041M	CF 1/16W 1.0K-JB	R375	0700048M	CF 1/16W 3.9K-JB
R124	0700041M	CF 1/16W 1.0K-JB	R376	0700041M	CF 1/16W 1.0K-JB

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R377	0179536M	MG 1M J TAPE	R515	0700054M	CF 1/16W 10K-JB
R378	0700055M	CF 1/16W 12K-JB	R516	0700054M	CF 1/16W 10K-JB
R379	0700052M	CF 1/16W 6.8K-JB	R517	0700054M	CF 1/16W 10K-JB
R380	0700067M	CF 1/16W 100K-JB	R518	0700067M	CF 1/16W 100K-JB
R381	0100119M	CF 1/8W 180K-JB	R519	0700065M	CF 1/16W 68K-JB
R382	0700042M	CF 1/16W 1.2K-JB	R520	0700067M	CF 1/16W 100K-JB
R401	0700054M	CF 1/16W 10K-JB	R521	0700059M	CF 1/16W 27K-JB
R402	0700041M	CF 1/16W 1.0K-JB	R522	0700054M	CF 1/16W 10K-JB
R404	0700041M	CF 1/16W 1.0K-JB	R523	0700054M	CF 1/16W 10K-JB
R405	0700051M	CF 1/16W 5.6K-JB	R524	0700047M	CF 1/16W 3.3K-JB
R406	0700051M	CF 1/16W 5.6K-JB	R525	0700061M	CF 1/16W 33K-JB
R407	0700046M	CF 1/16W 2.7K-JB	R526	0700046M	CF 1/16W 2.7K-JB
R408	0700046M	CF 1/16W 2.7K-JB	R527	0700049M	CF 1/16W 4.7K-JB
R411	0700063M	CF 1/16W 47K-JB	R528	0700054M	CF 1/16W 10K-JB
R412	0700063M	CF 1/16W 47K-JB	R529	0700054M	CF 1/16W 10K-JB
R413	0700067M	CF 1/16W 100K-JB	R530	0700029M	CF 1/16W 150-JB
R414	0700036M	CF 1/16W 470-JB	R531	0700054M	CF 1/16W 10K-JB
R415	0700041M	CF 1/16W 1.0K-JB	R532	0700027M	CF 1/16W 100-JB
R416	0700058M	CF 1/16W 22K-JB	R533	0700036M	CF 1/16W 470-JB
R417	0119505G	MF 2.2-J	R534	0700054M	CF 1/16W 10K-JB
R418	0119505G	MF 2.2-J	R535	0700034M	CF 1/16W 330-JB
R419	0700065M	CF 1/16W 68K-JB	R536	0700044M	CF 1/16W 1.8K-JB
R420	0700065M	CF 1/16W 68K-JB	R537	0700029M	CF 1/16W 150-JB
R421	0114161M	CF 1/4W 1K-JB	R538	0700045M	CF 1/16W 2.2K-JB
R422	0114161M	CF 1/4W 1K-JB	R539	0700041M	CF 1/16W 1.0K-JB
R423	0700051M	CF 1/16W 5.6K-JB	R540	0700041M	CF 1/16W 1.0K-JB
R425	0700054M	CF 1/16W 10K-JB	R541	0700041M	CF 1/16W 1.0K-JB
R5C3	0150133	VR RV06 500-B	R542	0700041M	CF 1/16W 1.0K-JB
R5C4	0700035M	CF 1/16W 390-JB	R543	0100125M	CF 1/8W 330K-JB
R5C5	0150133	VR RV06 500-B	R544	0700041M	CF 1/16W 1.0K-JB
R5C6	0700035M	CF 1/16W 390-JB	R545	0700041M	CF 1/16W 1.0K-JB
R5C7	0150133	VR RV06 500-B	R546	0100047M	CF 1/8W 180-JB
R5C8	0700035M	CF 1/16W 390-JB	R547	0700041M	CF 1/16W 1.0K-JB
R5C9	0100041M	CF 1/8W 100-JB	R548	0700041M	CF 1/16W 1.0K-JB
R5E1	0100041M	CF 1/8W 100-JB	R549	0700041M	CF 1/16W 1.0K-JB
R5E2	0700056M	CF 1/16W 15K-JB	R550	0700027M	CF 1/16W 100-JB
R5E4	0700054M	CF 1/16W 10K-JB	R551	0700032M	CF 1/16W 220-JB
R5E5	0700027M	CF 1/16W 100-JB	R555	0700032M	CF 1/16W 220-JB
R5E6	0700038M	CF 1/16W 680-JB	R556	0700032M	CF 1/16W 220-JB
R5E7	0700032M	CF 1/16W 220-JB	R557	0700041M	CF 1/16W 1.0K-JB
R5E8	0700041M	CF 1/16W 1.0K-JB	R558	0100063M	CF 1/8W 820-JB
R5E9	0700056M	CF 1/16W 15K-JB	R559	0700041M	CF 1/16W 1.0K-JB
R5F1	0700055M	CF 1/16W 12K-JB	R561	0700054M	CF 1/16W 10K-JB
R5F2	0700027M	CF 1/16W 100-JB	R562	0700058M	CF 1/16W 22K-JB
R5F3	0700027M	CF 1/16W 100-JB	R563	0700058M	CF 1/16W 22K-JB
R5F4	0700053M	CF 1/16W 8.2K-JB	R6HA	0114141M	CF 1/4W 270-JB
R5F5	0700057M	CF 1/16W 18K-JB	R6HE	0100057M	CF 1/8W 470-JB
R5F6	0700041M	CF 1/16W 1.0K-JB	R6HF	0700054M	CF 1/16W 10K-JB
R5F7	0119691M	MF 1W 0.33JB	R6HG	0700057M	CF 1/16W 18K-JB
R5F8	0119691M	MF 1W 0.33JB	R6HJ	0700058M	CF 1/16W 22K-JB
R5F9	0119691M	MF 1W 0.33JB	R6HK	0100119M	CF 1/8W 180K-JB
R501	0700042M	CF 1/16W 1.2K-JB	R6HL	0700061M	CF 1/16W 33K-JB
R502	0100037M	CF 1/8W 68-JB	R6HM	0100117M	CF 1/8W 150K-JB
R503	0100049M	CF 1/8W 220-JB	R6HN	0700067M	CF 1/16W 100K-JB
R504	0100049M	CF 1/8W 220-JB	R6HS	2340371	TH 112301-9
R505	0100049M	CF 1/8W 220-JB	R6H0	0700066M	CF 1/16W 82K-JB
R506	0100041M	CF 1/8W 100-JB	R6H1	0700066M	CF 1/16W 82K-JB
R507	0187086M	CF 1/16W 7.5K-JB	R6H2	0700059M	CF 1/16W 27K-JB
R508	0700054M	CF 1/16W 10K-JB	R6H3	0700045M	CF 1/16W 2.2K-JB
R509	0700032M	CF 1/16W 220-JB	R6H4	0700044M	CF 1/16W 1.8K-JB
R510	0700041M	CF 1/16W 1.0K-JB	R6H5	0100133M	CF 1/8W 680K-JB
R511	0100129M	CF 1/8W 470K-JB	R6H6	0700064M	CF 1/16W 56K-JB
R512	0700067M	CF 1/16W 100K-JB	R6H7	0700061M	CF 1/16W 33K-JB
R513	0700061M	CF 1/16W 33K-JB	R6H9	0700061M	CF 1/16W 33K-JB
R514	0700067M	CF 1/16W 100K-JB	R620	0700035M	CF 1/16W 390-JB

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R621	0700065M	CF 1/16W 68K-JB	R759	0150137	VR RV06 10K-B
R622	0700058M	CF 1/16W 22K-JB	⚠R761	0700032M	CF 1/16W 220-JB
R623	0100131M	CF 1/8W 560K-JB	R767	0100025M	CF 1/8W 22-JB
R624	0114135M	CF 1/4W 150-JB	R801	0100053M	CF 1/8W 330-JB
R625	0700059M	CF 1/16W 27K-JB	R802	0110257S	MF 3.3K-JS
R626	0100129M	CF 1/8W 470K-JB	R803	0110257S	MF 3.3K-JS
R627	0187106M	CF 1/16W 51K-JB	R804	0110257S	MF 3.3K-JS
R628	0187104M	CF 1/16W 43K-JB	R811	0100033M	CF 1/8W 47-JB
R629	0700047M	CF 1/16W 3.3K-JB	R812	0100033M	CF 1/8W 47-JB
R630	0700067M	CF 1/16W 100K-JB	R813	0100033M	CF 1/8W 47-JB
R631	0160503U	VR RTD06 100K-B 0.1W	R814	0700038M	CF 1/16W 680-JB
R632	0119731M	MF 1W R68-K TAPE	R816	0700049M	CF 1/16W 4.7K-JB
R633	0113733M	CF 1/2P-B 220-J	R817	0700045M	CF 1/16W 2.2K-JB
R634	0700049M	CF 1/16W 4.7K-JB	R818	0700049M	CF 1/16W 4.7K-JB
R635	0700041M	CF 1/16W 1.0K-JB	R851	0110257S	MF 3.3K-JS
R636	0700041M	CF 1/16W 1.0K-JB	R852	0110257S	MF 3.3K-JS
R637	0700037M	CF 1/16W 560-JB	R853	0110257S	MF 3.3K-JS
R639	0113746M	CF 1/2W 680-JB	R854	0113750M	CF 1/2W 1K-JB
R640	0700032M	CF 1/16W 220-JB	R855	0113750M	CF 1/2W 1K-JB
R641	0110115S	MF 56-JS	R856	0113750M	CF 1/2W 1K-JB
R7HA	0700056M	CF 1/16W 15K-JB	R857	0100053M	CF 1/8W 330-JB
R7HE	0700044M	CF 1/16W 1.8K-JB	R858	0100053M	CF 1/8W 330-JB
R7HF	0150117U	VR RV6 100K-B-U	R860	0150108	VR RV6 100-B
R7HG	0700065M	CF 1/16W 68K-JB	R861	0700024M	CF 1/16W 56-J
R7HH	0700054M	CF 1/16W 10K-JB	R863	0700024M	CF 1/16W 56-J
R7HJ	0700054M	CF 1/16W 10K-JB	R864	0150108	VR RV6 100-B
R7HK	0100073M	CF 1/8W 2.2K-JB	R865	0700024M	CF 1/16W 56-J
R7H0	0100075M	CF 1/8W 2.7K-JB	R866	0150302	VR RV6 2K-B (V)
R7H1	0700058M	CF 1/16W 22K-JB	R867	0700038M	CF 1/16W 680-JB
R7H2	0700064M	CF 1/16W 56K-JB	R868	0150302	VR RV6 2K-B (V)
R7H3	0700066M	CF 1/16W 82K-JB	R869	0700038M	CF 1/16W 680-JB
R7H4	0700064M	CF 1/16W 56K-JB	R870	0150302	VR RV6 2K-B (V)
R7H5	0700057M	CF 1/16W 18K-JB	R871	0700038M	CF 1/16W 680-JB
R7H6	0150115U	VR RV6 20K-B-U	R874	0700054M	CF 1/16W 10K-JB
R7H7	0700061M	CF 1/16W 33K-JB	R875	0100049M	CF 1/8W 220-JB
R7H8	0700027M	CF 1/16W 100-JB	R876	0100049M	CF 1/8W 220-JB
R7H9	0700038M	CF 1/16W 680-JB	R877	0100049M	CF 1/8W 220-JB
R710	0113729M	CF 1/2W 150-JB	R878	0100055M	CF 1/8W 390-JB
⚠R711	0100037M	CF 1/8W 68-JB	R879	0100055M	CF 1/8W 390-JB
R712	0114141M	CF 1/4W 270-JB	R880	0100055M	CF 1/8W 390-JB
R713	0119691M	MF 1W 0.33JB	R886	0700038M	CF 1/16W 680-JB
R714	0100087M	CF 1/8W 8.2K-JB	R889	0114131M	CF 1/4W 100-JB
R716	0100109M	CF 1/8W 68K-JB	R890	0114131M	CF 1/4W 100-JB
R718	0113760M	CF 1/2W 2.7K-JB	R891	0114131M	CF 1/4W 100-JB
R719	0110259S	MF 3.9K-JS	R892	0700023M	CF 1/16W 47-J
R720	0110259S	MF 3.9K-JS	⚠R900	0139026	CC RC1/2W 8.2M-KF HIGH VOL
R721	0100071M	CF 1/8W 1.8K-JB	⚠R901	2341281	TH 3R0Q
⚠R730	0119838S	MF 1/4-S 0.5-J	R902	0144151	WW 33-J
⚠R732	0119505G	MF 2.2-J	R903	0147811	WW 15W 1.5-KM
⚠R733	0119505G	MF 2.2-J	R905	0110267S	MF 8.2K-JS
⚠R734	0100073M	CF 1/8W 2.2K-JB	R906	0110267S	MF 8.2K-JS
R735	0100077M	CF 1/8W 3.3K-JB	R907	0110267S	MF 8.2K-JS
R736	0100107M	CF 1/8W 56K-JB	R908	0110281S	MF 33K-JS
R737	0100107M	CF 1/8W 56K-JB	R911	0100037M	CF 1/8W 68-JB
R742	0110225S	MF 150-JS 2W	R912	0700052M	CF 1/16W 6.8K-JB
R746	0700049M	CF 1/16W 4.7K-JB	R914	0100009M	CF 1/8W 4.7-JB
R749	0700067M	CF 1/16W 100K-JB	R915	0179554M	MG RK1/4P 330K-J
R750	0113750M	CF 1/2W 1K-JB	R916	0179554M	MG RK1/4P 330K-J
⚠R751	0700053M	CF 1/16W 8.2K-JB	⚠R917	0113798M	CF SRD1/2P-B 91K-J
R753	0110241S	MF 680-JS	⚠R919	0700034M	CF 1/16W 330-JB
⚠R754	0700048M	CF 1/16W 3.9K-JB	⚠R920	0179551M	MG 1/4W 18-KJ
R755	0100061M	CF 1/8W 680-JB	R921	0700054M	CF 1/16W 10K-JB
R756	0700054M	CF 1/16W 10K-JB	R922	0110129S	MF 220-JS
R757	0114141M	CF 1/4W 270-JB	R923	0119591M	MF 1/8W 220-FB
R758	0700041M	CF 1/16W 1.0K-JB	⚠R924	0119619M	MF 1/8W 3.3K-FB

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION
R925	0119641M	MF 1/8W 27K-FB
R926	0119641M	MF 1/8W 27K-FB
R927	0119638M	MF 1/8W 20K-FB
R928	0150136	VR RV06 5K-B
R940	0700059M	CF 1/16W 27K-JB
R942	0100051M	CF 1/8W 270-JB
⚠R943	0700045M	CF 1/16W 2.2K-JB
R944	0114151M	CF 1/4 P 680-J
⚠R945	0100065M	CF 1/8W 1K-JB
R946	0700049M	CF 1/16W 4.7K-JB
R947	0700041M	CF 1/16W 1.0K-JB
R948	0119688	CF 0.22-J
R951	0194068F	WW 2W 1.0-KF
R952	0700041M	CF 1/16W 1.0K-JB
R954	0110281S	MF 33K-JS
R955	0110281S	MF 33K-JS
R956	0100061M	CF 1/8W 680-JB
		SWITCHES
SM01	2632901	1P TACT SWITCH
SM02	2632851	5KEY TACT SWITCH
SM03	2632901	1P TACT SWITCH
S851	2622571	SWITCH ESD1522205
⚠S901	2641222	POWER RELAY
		TRANSFORMERS
TDF1	BZ01391	DF TRANS.
⚠T701	2274353	TRANS.-H.DRIVE
⚠T702	BW00571	HFL1735LD
T901	2124361	DC NOISE FILTER
⚠T902	BT00462	COIL PT-EE35F11U
T903	2124362	DC NOISE FILTER
⚠T991	2215911	POWER TRANSFORMER
		MISCELLANEOUS
#01	NT00511	A4LXU POWER PWB HOLDER
#003	NT00671	JOINT HOLDER A6LXU
#005	NT00681	SURROUND HOLDER A6LXU
#010	4159423	SCR NO 3 X 12 FL/FLT
#050	NA08891	SUB PWB SUPPORT BRACKET
#060	4159423	SCR NO 3 X 12 FL/FLT
#061	QD01567	FRAME 35UX85B
#066	3875771	LATCH 4T02 NYLON
#068	PH02511	DOOR 35UX85B
#069	3760031	SMALL PIECE (S-2) FOR CABINET PS
#075	MN00561	AR HORN SPACER (A)
#076	MN00562	AR HORN SPACER (B)
#077	PH02521	SP SHEET 35UX85B
#078	PH02522	SP SHEET (R) 35UX85B
#080	PC01191	BUTTON 35UX85B
#084	PH02541	LENS 35UX85B
#086	PH02531	INDOOR PLATE 35UX85B
#090	3487425	HITACHI BADGE 35UX85B
#100	4159423	SCR NO 3 X 12 FL/FLT
#111	4519503	3 X 12 B TAPPING SCREW
#112	4159423	SCR NO 3 X 12 FL/FLT
#120	8781646	SCREW 4 X 16 TAPPING
#150	4329271	WASHER (F) C2720R
#151	4522901	6 NUT (F) BSBM
#160	3739671	BS CORD HOLDER NYLON6
#200	QD01572	BACK COVER 35UX85B
#202	3727972	POWER CORD HANGER
#250	8781646	SCREW 4 X 16 TAPPING
#251	8781646	SCREW 4 X 16 TAPPING
#255	8781646	SCREW 4 X 16 TAPPING
#256	8781646	SCREW 4 X 16 TAPPING
#257	8781646	SCREW 4 X 16 TAPPING
#258	8781646	SCREW 4 X 16 TAPPING
#260	8781642	SCREW 4 X 12 TAPPING
#261	8781642	SCREW 4 X 12 TAPPING
#263	4515482	SCREW-4 X 16 TAPPING WITH WASHER STEEL
#264	4515482	SCREW-4 X 16 TAPPING WITH WASHER STEEL
#280	4518378	6 X 35 TAPPING SCREW WITH WASHER STEEL
#281	4286588	PVC WASHER 20 T2.0 PVC
#300	4778206	LABEL BASE US
#850	8441615	HIMERON SHEET
#881	4621186	CUSHION 2908 CR
#882	H390041	HIMERON SHEET 85 X 10
#888	H390032	CUSHION-NEOPLENE
#889	8441615	HIMERON SHEET
EAC	2976986	CONN. 02C-C7R5-561
EAN	2974056S	3J CONN. SEH UL1007 L=160
⚠EANT	HP00341	ANT SW
EDF	2955567	CONN.04C-C5R0-391#2,3N 0
EDF2	2973636	CONN.CO-03C-C5R0-331#2NC
EFV	2973954S	CONN.SEH11C-C1007A L=750
EF1	2973739S	CONN.W/WIRE SEH 4J L510(C-C)
EF2	2973757S	CONN.W/WIRE SEH 5J L180(C-C)
EF901	2720641	FUSE HOLDER
EF902	2720641	FUSE HOLDER
EG	2663328	2J MINI-CONN.W/WIRE
EMUT	2974027S	CONN.(SEH02C-B1007A181)
ENH2	EF04011	CONN. 05C-C5R0-461#2,4N
ENH3	EF02921	CO-06C-C2R5-430
ENS1	EF03012	CO-5C-C2R5-470 RED
EP37	2973976S	CONN. SSEH12C-C1007A L=390
EP46	EF04021	CONN. 14C-C2R5-361
ETU1	2979174	PLUG WITH COAXIAL CABLE
ETU2	2979172	MINI PLUG WITH COAXIAL CABLE
EVM1	EF02922	CO-06C-C2R5-560
EVM2	2956485	CONN. CO-01C-A—471
EVM3	EF03701	CONN. 2J CONN-CONN L=300 SVM
EY1	EF03022	CO-7C-C2R5-390
EY2	EF02941	CO-05C-C2R5-560
E203	2784243	DRY BATTERY SUM-3 (G)
E301	HL00227	RML-CLU-417UI
E602	2908402	CRT EARTH WIRE (35V)
E603	GX00131	MAGNET-CHEVRON FUNNEL
E851	EY00411	W-FOCUS CPT SOCKET
⚠E901	2972841	AC POWER CORD (FILTER IN)
⚠G801	2340037	SPARK GAP
⚠G802	2340037	SPARK GAP
⚠G803	2340037	SPARK GAP
⚠G804	2340037	SPARK GAP
⚠G901	2340741	SURGE PROTECTOR DSP-301N-S00B
JM	2665293	6P MINI CONN LEAD
JSL	2958713	CONN. W/WIRE MINI 5J W/FASTEN
JSR	2958387	CONN. W/WIRE MINI 4J W/FASTEN
JS01	ER00121	2L4P LEVER TERMINAL
JY01	ES00001	JACK
JY02	ES00022	3P(SW) PIN JACK WITH S
L970	2229023	DEGAUSSING COIL (35V)
NB	4348491	G8 HEAT SINK
NDF	3875341	LEAD CLAMPER
ND91	3446731	HEAT SINK T0220
NE901	3772201	AC CORD HOLDER NYLON
NI93	3446473	HEATSINK H30 P10

REPLACEMENT PARTS LIST

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
NI93A	4520881	M3 X 8 SCREW WITH WASHER	PNH2	2661754	5P PLUG PIN WITH BASE
NMZ1	3816161	G9 EE HOLDER (S)	PNH3	2902265	PLUG PIN SUB MINI 6P
NQV09	3446473	HEATSINK H30 P10	PNS1	2902264	PLUG PIN SUB MINI 5P
NQV09A	4520883	3 X 12 SCREW WITH WASHER	PP3	2902272	PLUG PIN SUB MINI 12P
NQV10	3446473	HEATSINK H30 P10	PP4	2902274	14P PLUG (2.5MM PITCH)
NQV10A	4520883	3 X 12 SCREW WITH WASHER	PP6	2902274	14P PLUG (2.5MM PITCH)
NQ91	3446135	POWER HEAT SINK A6LXU	PP7	2902272	PLUG PIN SUB MINI 12P
NQ91A	4520881	M3 X 8 SCREW WITH WASHER	PR	2661753	4P PLUG PIN WITH BASE
NS01	MC00132	SURROUND HEAT SINK 45 A6063S-T5	PSD3	2674635	10P PLUG PIN
NS01A2	4520883	3 X 12 SCREW WITH WASHER	PSD4	2674635	10P PLUG PIN
NT72B	4531761	SCREEN 3 X 16 TAPPING W/S-WASHER	PSD5	2674636	12P FJ CONNECTOR (TYPE 12PL-FJ)
STEEL			PSD6	2674631	5P PLUG PIN
N101	3705232	ANODE CLAMPER 94V0 (101)	PSI1	ED00575	CP-TAC-L18X-A1
N102	3763751	SK BINDER	PSI2	ED00575	CP-TAC-L18X-A1
N103	3763751	SK BINDER	PSU1	ED00576	CP-TAC-L20X-A1
N104	3785511	V LOCK 16	PSU2	ED00575	CP-TAC-L18X-A1
N105	3785511	V LOCK 16	⚠PVMC	2902261	PLUGPIN SUB MINI 2P
N106	3785511	V LOCK 16	PVM1	2902265	PLUG PIN SUB MINI 6P
N108	3785502	V LOCK 11.5	PVM2	2661756	1P PLUG PIN WITH BASE
N109	3785502	V LOCK 11.5	PW	2661753	4P PLUG PIN WITH BASE
N110	3785502	V LOCK 11.5	PY1	2902266	PLUG PIN SUB MINI 7P
N111	3785502	V LOCK 11.5	PY2	2902264	PLUG PIN SUB MINI 5P
N112	3785502	V LOCK 11.5	P31	2661751	2P PLUG PIN WITH BASE
N201	QR06081	35UX85B-511 INSTRUCTION BOOK	P901	2782611	CENTER PIN
N202	H461705	WARRANTY CARD (E) 20-35V	P902	2782611	CENTER PIN
N209	H461901	HITACHI EXT. SVC CARD	⚠SP451	2735335	MGZ-SDX-SP AS'Y(A3)
N301	4712247	CUSTOMER REGISTRATION CARD	⚠SP452	2735335	MGZ-SDX-SP AS'Y(A3)
N401	QN01009	SERVICEMAN WARNING	⚠V1	DE00881	35V CPT (RCA) A89AGF11X10
N402	4520883	3*12 SCREW WITH WASHER	XS01	2786585	CRYSTAL RESONATOR 8.000MHZ
N501	3446477	HEAT SINK H60P10	X001	2168831	CRYSTAL CSA12.0MTZ
N502	4520883	3*12 SCREW WITH WASHER	X301	2167241	CERAMIC OSC CSB503F
N606	3333922	EARTH SPRING SUS.	X501	2791505	CRYSTAL HC-491U 3.58MHZ
N607	3763751	SK BINDER	ZB1	9414017	SILICONE COMPOUND(G-746)
N608	3763752	SK BINDER 200 NYLON 66	ZCSC3	9451104	VARNISH CLOTH TUBE 0.8X1.8 YELLOW
N610	2772981	FERRITE SHEET ASS'Y	ZC1	9485184	CLEAN COAT
N612	H420831	HOOK	Z5C7	9553958	ADHESIVE TAPE (PERMACEL P212 19W)
N613	4621186	CUSHION 2908 CR			
N620	3446862	VERTICAL HEAT SINK M1LXU			
N620A	4520881	M3 X 8 SCREW WITH WASHER			
N620B	8821234	NUT-3			
N711	4327812	F55 H.HEAT SINK			
N711A	4514061	SCREW FLANGED 3 X 12			
N711B	8821234	NUT-3			
N711C	8813124	SPRING WASHER-3			
N711D	4518771	SCREW 3 X 10 TAPPING WITH WSR STEEL			
N714	3445563	HEAT SINK A3LXU			
N714A	4520881	M3 X 8 SCREW WITH WASHER			
PAC	2723091	PLG-02P5R0VPWB ZIF			
PCB	ED00572	CP-TAC-L15X-A1			
PCC	ED00576	CP-TAC-L20X-A1			
PCD	ED00576	CP-TAC-L20X-A1			
PDF	2661753	4P PLUG PIN WITH BASE			
PDF2	2661752	3P PLUG PIN WITH BASE			
PDF2A	2661754	5P PLUG PIN WITH BASE			
PFJ1	2902264	PLUG PIN SUB MINI 5P			
PFJ2	2902263	PLUG PIN SUB MINI 4P			
PFVB	2902271	PLUG PIN SUB MINI11P			
PFVE	2902251	11P PLUG PIN			
PF1B	2902263	PLUG PIN SUB MINI 4P			
PF2B	2902264	PLUG PIN SUB MINI 5P			
PG	2661751	2P PLUG PIN WITH BASE			
PI1	2663821	2P SUB MINI PLUG PIN			
PL	2661754	5P PLUG PIN WITH BASE			
PM	2665272	4P PLUG PIN WITH BASE			
PMUT	2902261	PLUGPIN SUB MINI 2P			

NOTES

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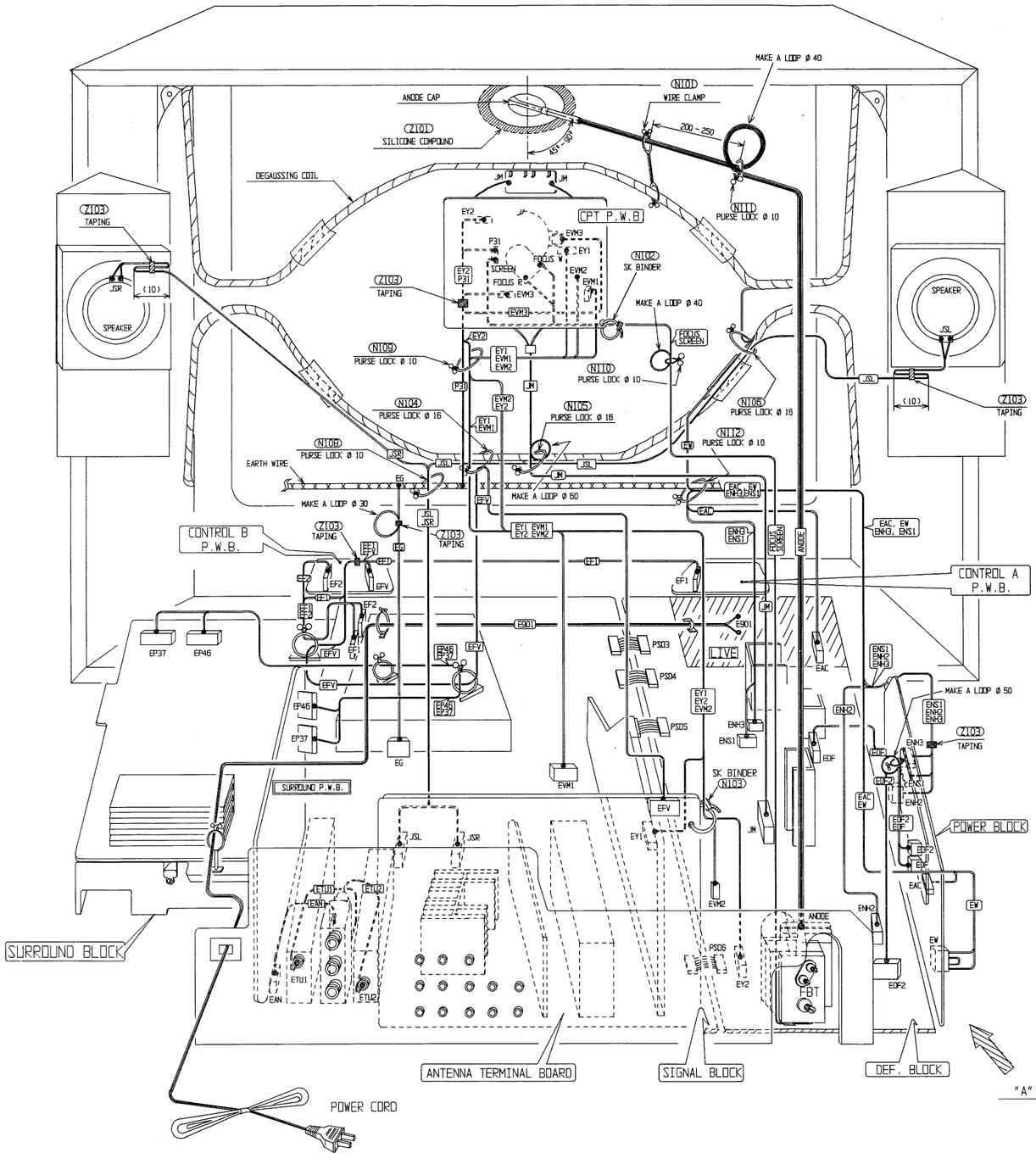
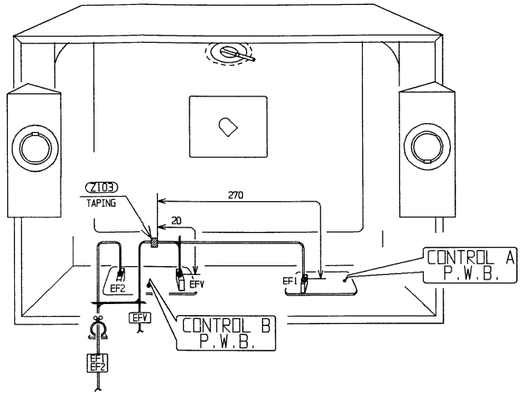
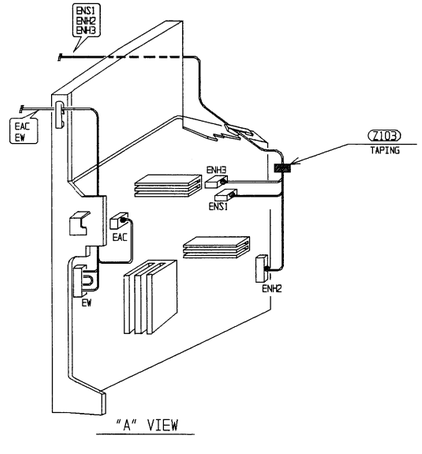
NOTES

WIRING DRAWING OF 35UX85B/CZ68 FINAL ASSEMBLY



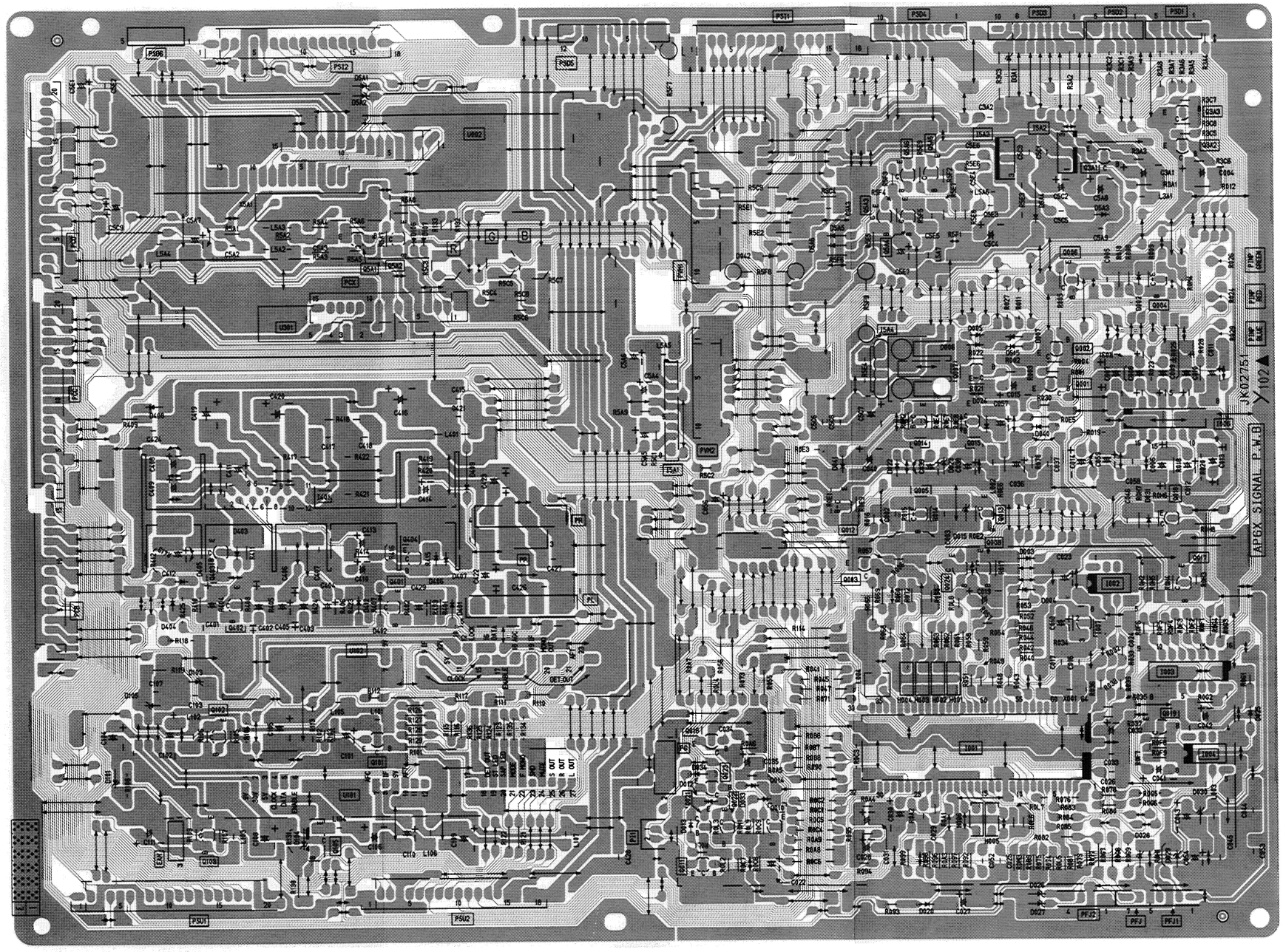




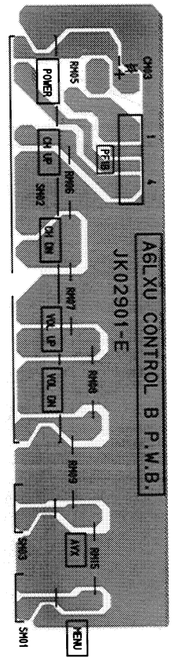
"A" VIEW

PRINTED WIRING BOARD FOIL PATTERN

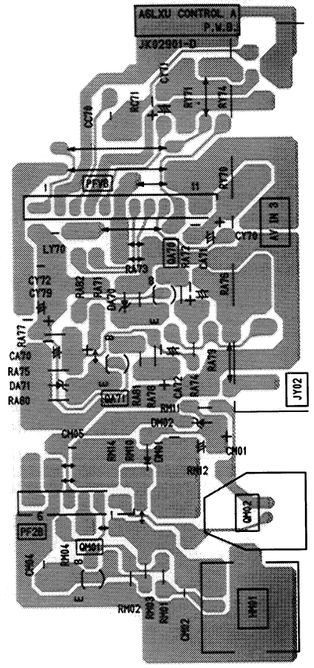
SIGNAL P.C.B.



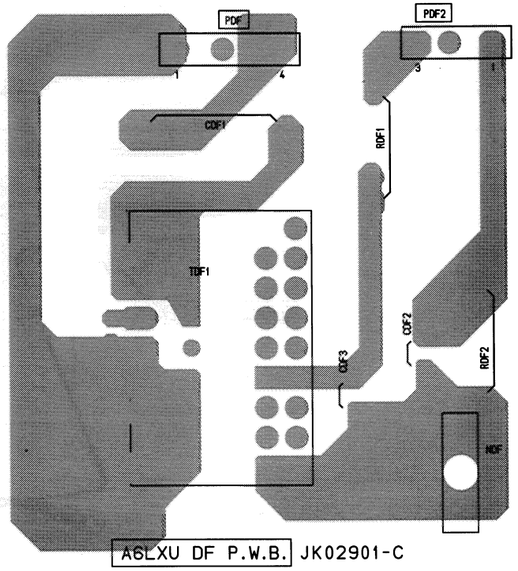
CONTROL B P.C.B.



CONTROL A P.C.B.



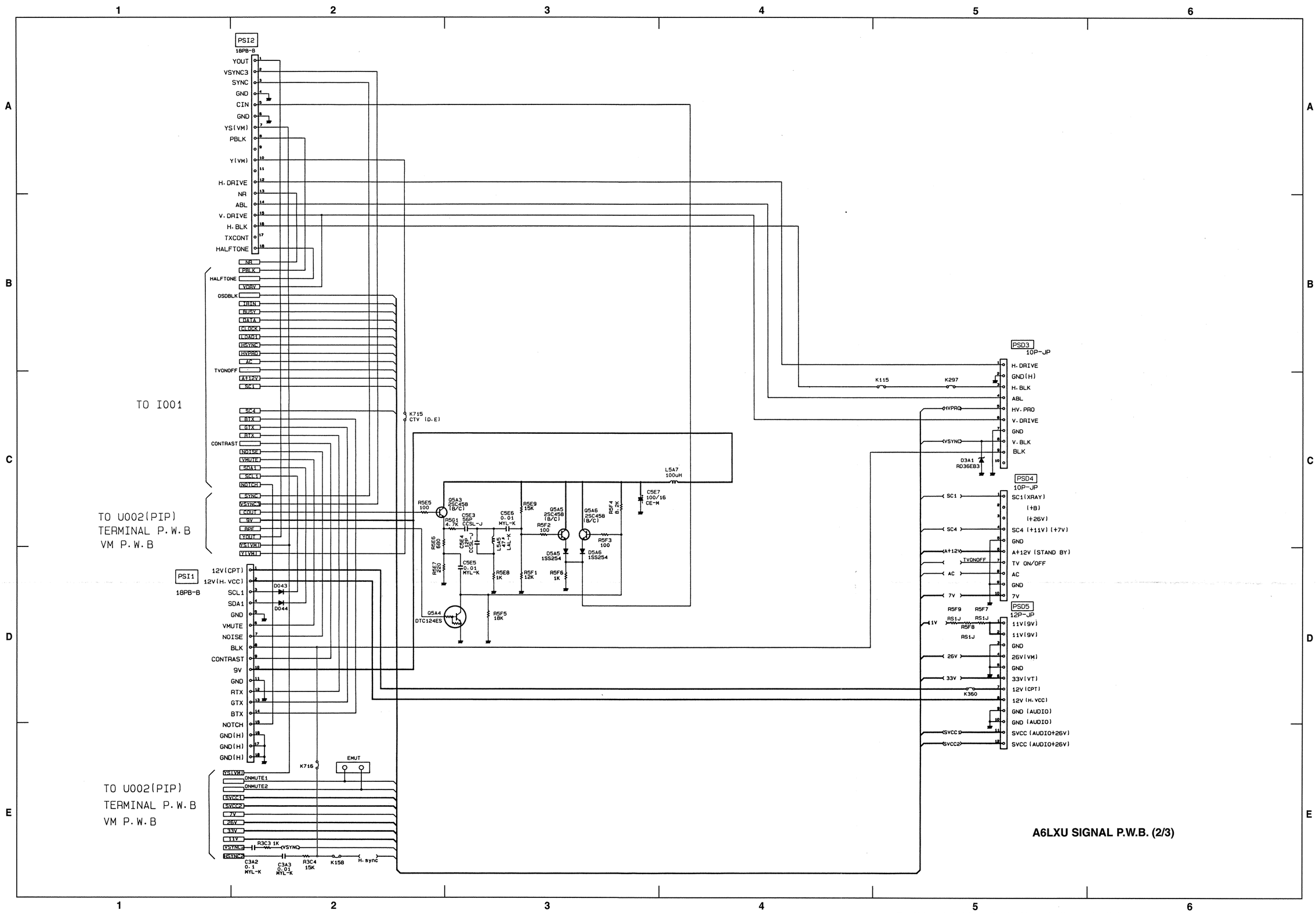
DF P.C.B.



HITACHI

BASIC CIRCUIT DIAGRAM

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.



A6LXU SIGNAL P.W.B. (2/3)

- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.
- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

Circuit No.	Pin No.	Voltage Vdc
Q5A3	B	3.8
	C	9.0
	E	3.1
Q5A4	B	4.9
	C	0
	E	0
Q5A5	B	3.9
	C	9.0
	E	3.2
Q5A6	B	0
	C	9.0
	E	0.3

BASIC CIRCUIT DIAGRAM

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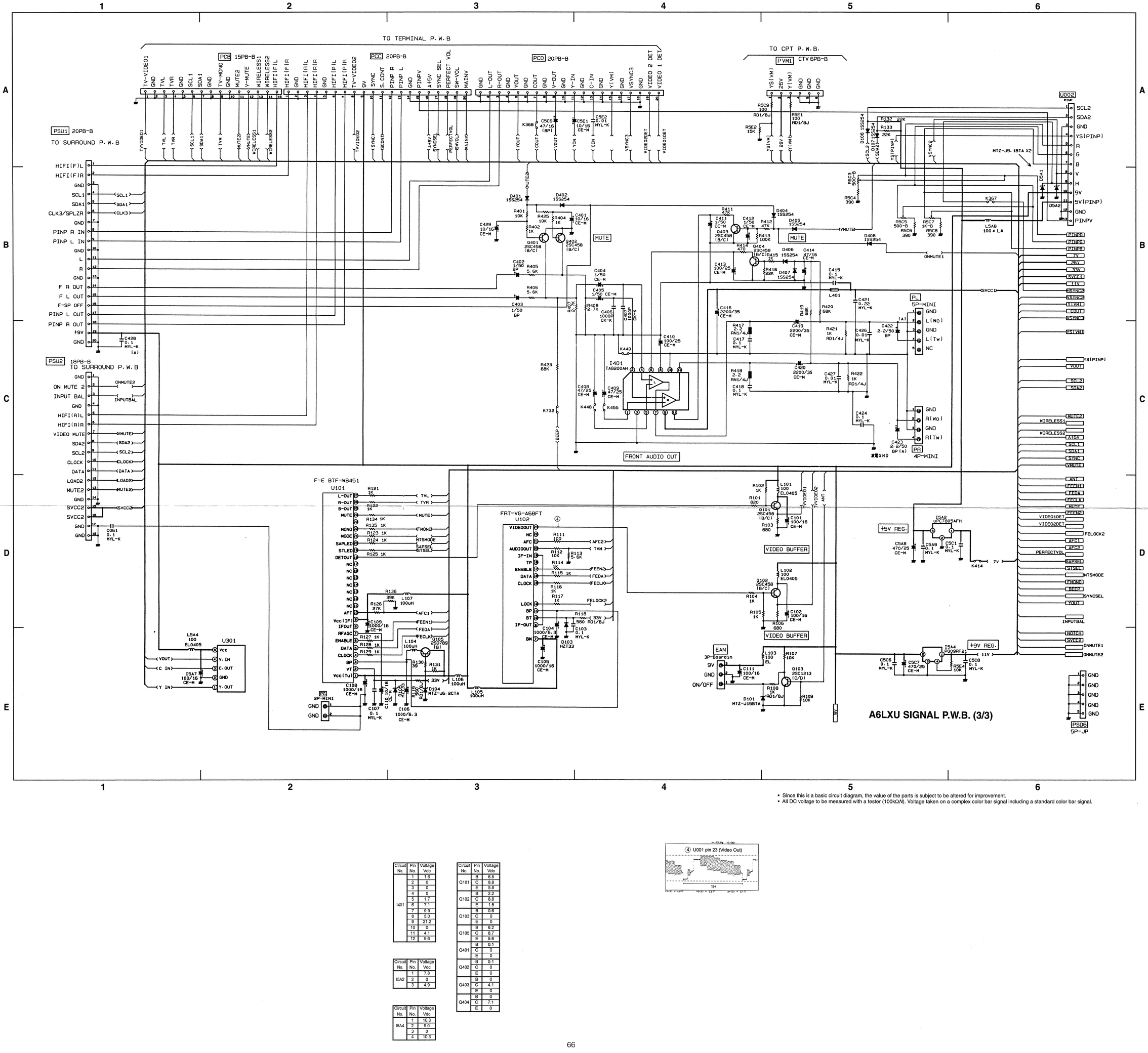

- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.
- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

④ U001 pin 23 (Video Out)

Circuit No.	Pin No.	Voltage Vdc
I401	1	1.6
	2	0
	3	0
	4	0
	5	1.7
	6	7.1
	7	9.9
	8	5.0
	9	21.2
	10	0
	11	4.1
	12	9.6

Circuit No.	Pin No.	Voltage Vdc
I5A2	1	7.8
	2	0
	3	4.9

Circuit No.	Pin No.	Voltage Vdc
I5A4	1	10.3
	2	9.0
	3	0
	4	10.3

Circuit No.	Pin No.	Voltage Vdc
Q101	B	6.5
	C	8.8
	E	5.8
Q102	B	2.2
	C	8.8
	E	1.5
Q103	B	0.6
	C	0
	E	0
Q105	B	6.2
	C	8.7
	E	5.6
Q401	B	0.1
	C	0
	E	0
Q402	B	0.1
	C	0
	E	0
Q403	B	0
	C	4.1
	E	0
Q404	B	0
	C	7.1
	E	0

BASIC CIRCUIT DIAGRAM

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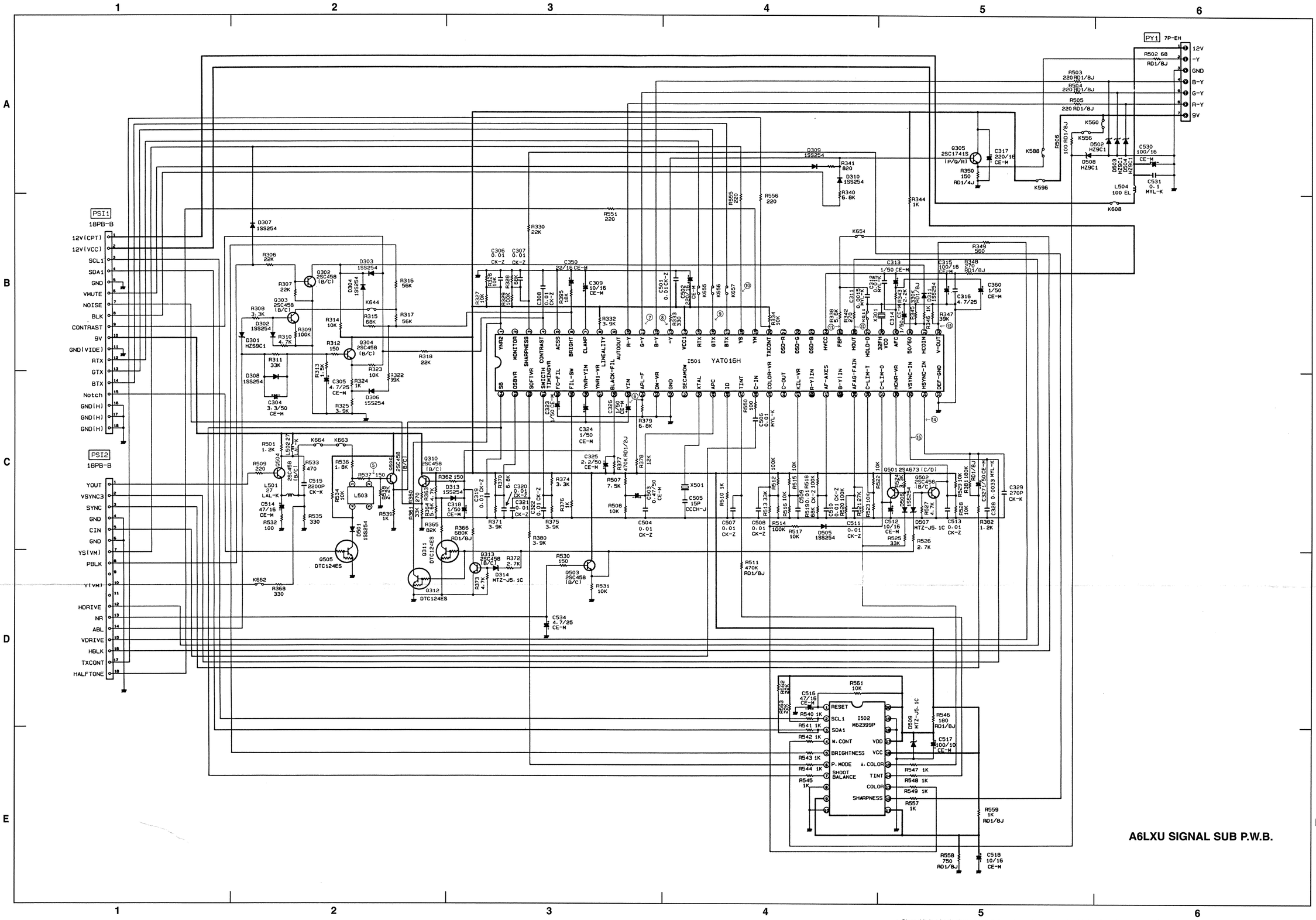


Circuit No.	Pin No.	Voltage Vdc
I501	1	0
	2	0.1
	3	4.3
	4	6.7
	5	0
	6	4.6
	7	6.8
	8	8.8
	9	0.1
	10	5.2
	11	5.3
	12	5.4
	13	4.7
	14	8.9
	15	3.1
	16	3.1
	17	3.1
	18	0
	19	0
	20	8.2
	21	0
	22	0
	23	0
	24	8.9
	25	0.2
	26	0.5
	27	0
	28	6.1
	29	6.7
	30	8.6
	31	7.3
	32	4.4

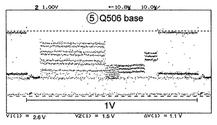
Circuit No.	Pin No.	Voltage Vdc
I501	33	0
	34	6.9
	35	6.3
	36	0
	37	6.8
	38	3.9
	39	6.9
	40	1.2
	41	3.5
	42	1.2
	43	4.1
	44	6.4
	45	4.5
	46	3.1
	47	4.5
	48	0.6
	49	5.7
	50	5.3
	51	1.4
	52	0
	53	0
	54	3.2
	55	3.7
	56	6.0
	57	4.3
	58	3.7
	59	0
	60	4.2
	61	4.5
	62	6.0
	63	0.8
	64	4.8

Circuit No.	Pin No.	Voltage Vdc
I502	1	5.3
	2	5.2
	3	5.2
	4	8.8
	5	5.0
	6	8.9
	7	4.8
	8	0
	9	3.9
	10	0
	11	3.9
	12	4.7
	13	4.7
	14	4.7
	15	8.9
	16	8.9
	17	5.3
	18	0
	19	0
	20	5.3

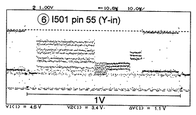
Circuit No.	Pin No.	Voltage Vdc
Q302	B	0
	C	8.9
	E	0
Q303	B	0
	C	4.7
	E	0
Q304	B	7.5
	C	8.9
	E	6.8
Q305	B	4.8
	C	8.9
	E	4.1
Q310	B	4.3
	C	8.9
	E	3.7
Q311	B	7.9
	C	0
	E	0
Q312	B	7.9
	C	0
	E	0
Q313	B	0.7
	C	0
	E	0

Circuit No.	Pin No.	Voltage Vdc
Q501	B	8.9
	C	6.3
	E	8.9
Q502	B	0.7
	C	0
	E	0
Q503	B	8.6
	C	8.9
	E	7.9
Q504	B	5.1
	C	8.8
	E	4.4
Q505	B	0
	C	8.7
	E	0
Q506	B	2.3
	C	8.9
	E	1.6

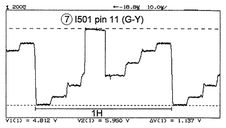
⑤ Q506 base



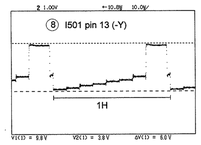
⑥ I501 pin 55 (Y-in)



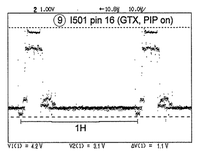
⑦ I501 pin 11 (G-Y)



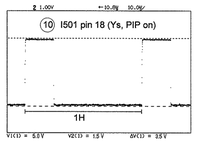
⑧ I501 pin 13 (-Y)



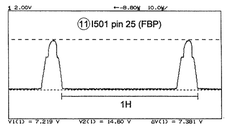
⑨ I501 pin 16 (GTX, PIP on)



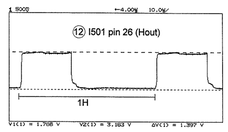
⑩ I501 pin 18 (Ys, PIP on)



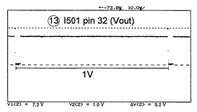
⑪ I501 pin 25 (FBP)



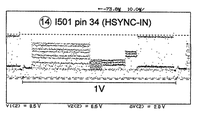
⑫ I501 pin 26 (Hout)



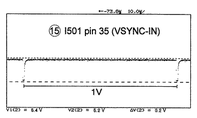
⑬ I501 pin 32 (Vout)



⑭ I501 pin 34 (HSYNC-IN)



⑮ I501 pin 35 (VSYNC-IN)



- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.
- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

BASIC CIRCUIT DIAGRAM

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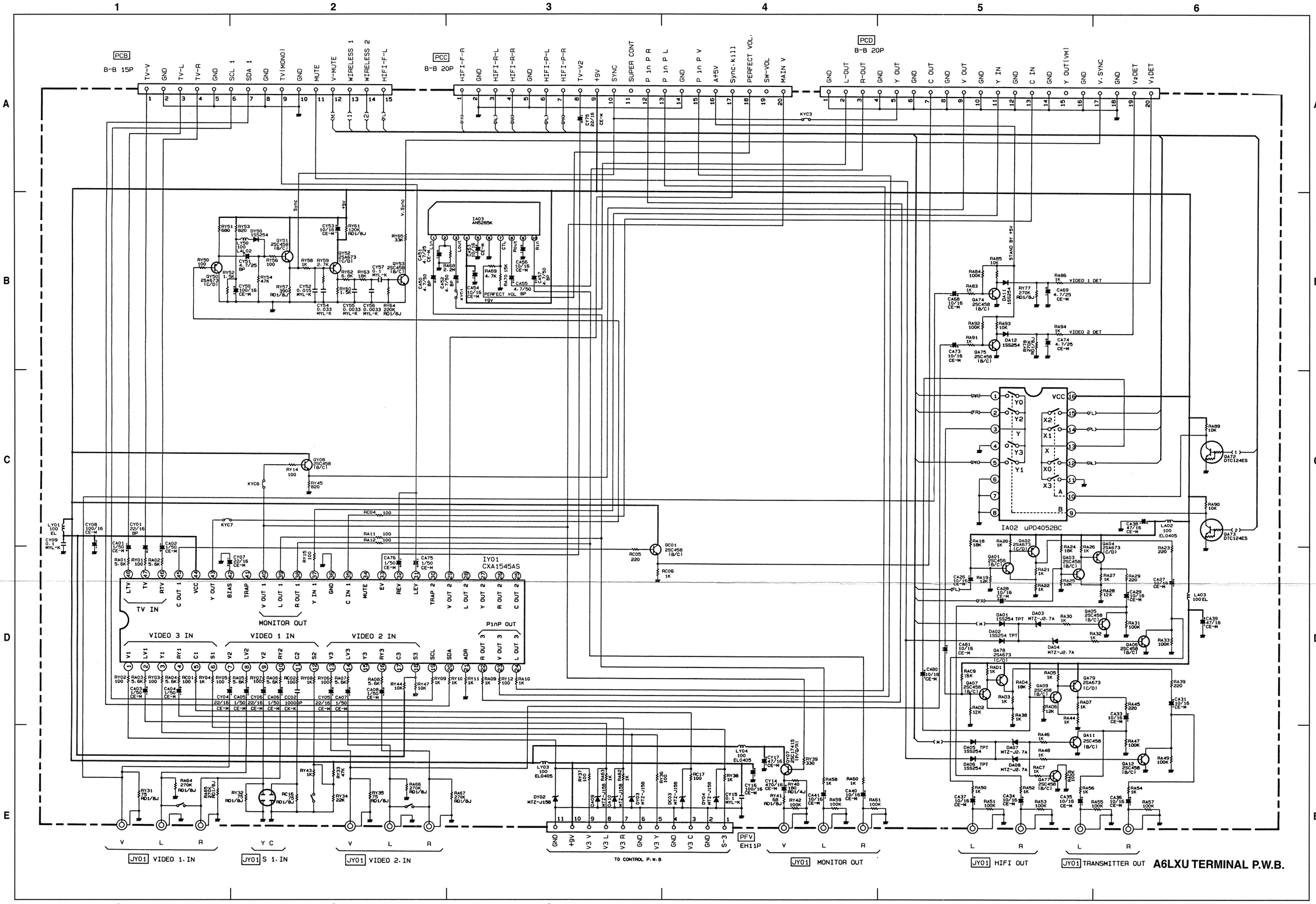

- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.
- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

Circuit No.	Pin No.	Voltage Vdc
IY01	1	4.6
	2	4.6
	3	4.6
	4	4.6
	5	4.6
	6	6.7
	7	4.6
	8	4.6
	9	4.6
	10	4.6
	11	4.5
	12	2.5
	13	4.6
	14	4.6
	15	4.5
	16	4.6
	17	4.5
	18	4.2
	19	5.1
	20	5.1
	21	0
	22	4.6
	23	4.5
	24	4.7

Circuit No.	Pin No.	Voltage Vdc
IY01	25	4.5
	26	4.6
	27	4.6
	28	4.7
	29	4.4
	30	4.5
	31	4.6
	32	4.6
	33	4.6
	34	0
	35	4.6
	36	0
	37	4.6
	38	4.6
	39	4.7
	40	4.5
	41	4.5
	42	4.6
	43	4.5
	44	8.9
	45	4.5
	46	4.6
	47	4.6
	48	4.6

Circuit No.	Pin No.	Voltage Vdc
IA02	1	4.1
	2	4.1
	3	4.1
	4	0
	5	4.1
	6	0
	7	0
	8	0
	9	8.9
	10	0
	11	0
	12	4.1
	13	4.1
	14	4.1
	15	4.1
	16	8.9

Circuit No.	Pin No.	Voltage Vdc
IA03	1	4.5
	2	1.3
	3	4.5
	4	8.9
	5	4.5
	6	0
	7	0
	8	4.5
	9	2.0
	10	4.5

Circuit No.	Pin No.	Voltage Vdc
QA01	B	3.5
	C	8.3
	E	2.9
QA02	B	8.3
	C	5.2
	E	8.9
QA03	B	3.6
	C	8.3
	E	2.9
QA04	B	8.3
	C	5.2
	E	8.9
QA05	B	0
	C	0
	E	0
QA06	B	0
	C	0
	E	0
QA07	B	3.6
	C	8.3
	E	2.9
QA09	B	3.5
	C	8.3
	E	2.9

Circuit No.	Pin No.	Voltage Vdc
QA11	B	0
	C	0
	E	0
QA12	B	0
	C	0
	E	0
QA72	B	5.0
	C	0
	E	0
QA73	B	0
	C	8.9
	E	0
QA74	B	0.7
	C	0
	E	0
QA75	B	0.7
	C	0
	E	0
QA78	B	8.3
	C	5.2
	E	8.9
QA79	B	8.3
	C	5.1
	E	8.9

Circuit No.	Pin No.	Voltage Vdc
QC01	B	4.5
	C	8.9
	E	3.8
QY07	B	4.5
	C	8.8
	E	3.8
QY08	B	4.5
	C	8.9
	E	3.8
QY50	B	4.5
	C	0
	E	5.1
QY51	B	5.9
	C	8.9
	E	5.2
QY52	B	5.2
	C	0
	E	5.1
QY53	B	0
	C	6.3
	E	0

BASIC CIRCUIT DIAGRAM

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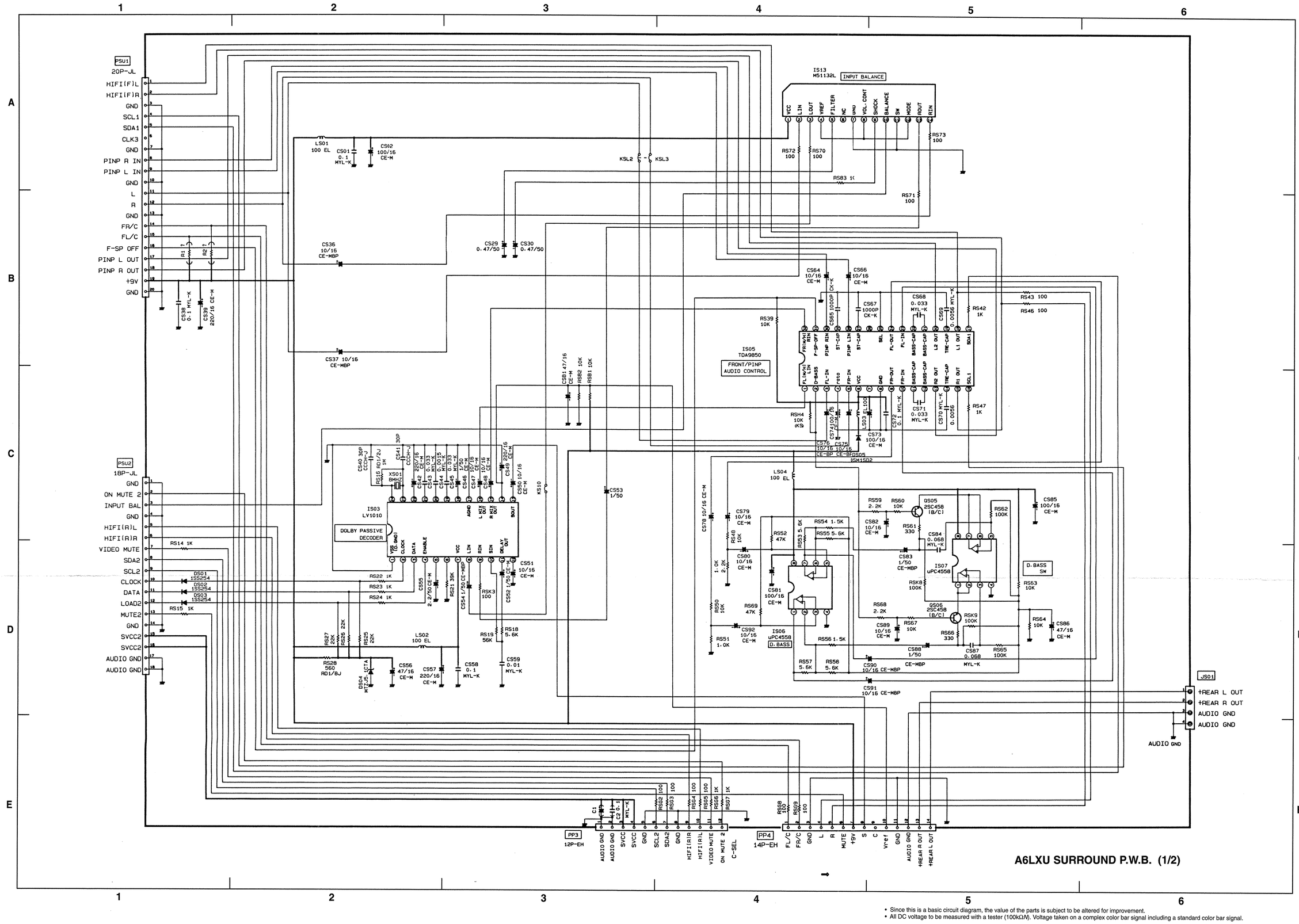

A6LXU SURROUND P.W.B. (1/2)

- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.
- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

Circuit No.	Pin No.	Voltage Vdc
IS03	1	0
	2	5.2
	3	5.1
	4	5.2
	5	2.2
	6	0.7
	7	8.9
	8	4.5
	9	4.5
	10	4.5
	11	4.5
	12	4.5
	13	4.5
	14	4.5
	15	4.5
	16	4.5
	17	0
	18	4.5
	19	4.5
	20	4.5
	21	4.5
	22	4.7
	23	2.3
	24	2.3

Circuit No.	Pin No.	Voltage Vdc
IS05	1	4.1
	2	0.2
	3	4.1
	4	8.1
	5	4.1
	6	8.2
	7	4.1
	8	0
	9	4.1
	10	4.1
	11	4.1
	12	4.1
	13	4.1
	14	4.1
	15	4.1
	16	5.1
	17	5.1
	18	4.1
	19	4.1
	20	4.1
	21	4.1
	22	4.1
	23	4.1
	24	4.1
	25	0
	26	4.1
	27	4.1
	28	4.1
	29	4.1
	30	4.1
	31	0.2
	32	4.1

Circuit No.	Pin No.	Voltage Vdc
IS06	1	4.5
	2	4.5
	3	4.4
	4	0
	5	4.4
	6	4.5
	7	4.5
	8	8.9

Circuit No.	Pin No.	Voltage Vdc
IS07	1	4.5
	2	4.5
	3	4.4
	4	0
	5	4.4
	6	4.5
	7	4.5
	8	8.9

Circuit No.	Pin No.	Voltage Vdc
IS13	1	8.9
	2	3.8
	3	3.4
	4	5.5
	5	8.8
	6	0
	7	0
	8	5.5
	9	0
	10	2.7
	11	0
	12	5.5
	13	3.4
	14	3.8

Circuit No.	Pin No.	Voltage Vdc
QS05	B	0.2
	C	4.4
	E	4.5
QS06	B	0.2
	C	4.4
	E	4.5

BASIC CIRCUIT DIAGRAM

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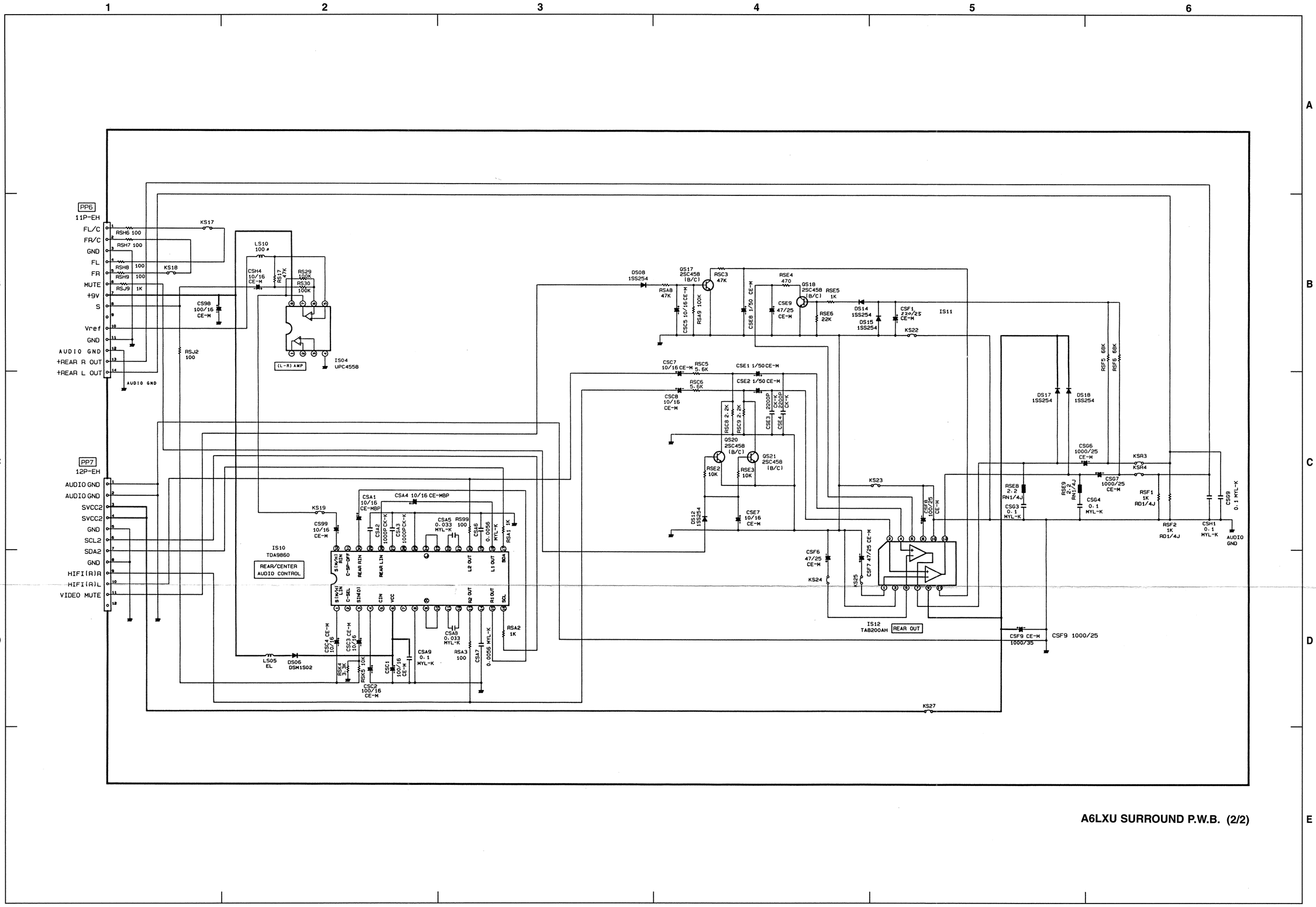

A6LXU SURROUND P.W.B. (2/2)

- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.
- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

Circuit No.	Pin No.	Voltage Vdc
IS10	1	4.1
	2	0
	3	4.1
	4	8.1
	5	4.1
	6	8.2
	7	4.1
	8	0
	9	4.1
	10	4.1
	11	4.1
	12	4.1
	13	4.1
	14	4.1
	15	4.1
	16	5.1
	17	5.1
	18	4.1
	19	4.1
	20	4.1
	21	4.1
	22	4.1
	23	4.1
	24	4.1
	25	0
	26	4.1
	27	4.1
	28	4.1
	29	4.1
	30	4.1
	31	1.1
	32	4.1

Circuit No.	Pin No.	Voltage Vdc
IS04	1	8.3
	2	1.2
	3	1.8
	4	0
	5	4.5
	6	4.5
	7	4.5
	8	8.9

Circuit No.	Pin No.	Voltage Vdc
IS12	1	1.7
	2	0
	3	0
	4	0
	5	1.7
	6	7.2
	7	10.0
	8	5.0
	9	21.2
	10	0
	11	4.2
	12	9.7

Circuit No.	Pin No.	Voltage Vdc
QS17	B	0
	C	4.1
	E	0
QS18	B	0
	C	7.2
	E	0
QS20	B	0
	C	0
	E	0
QS21	B	0
	C	0
	E	0

BASIC CIRCUIT DIAGRAM

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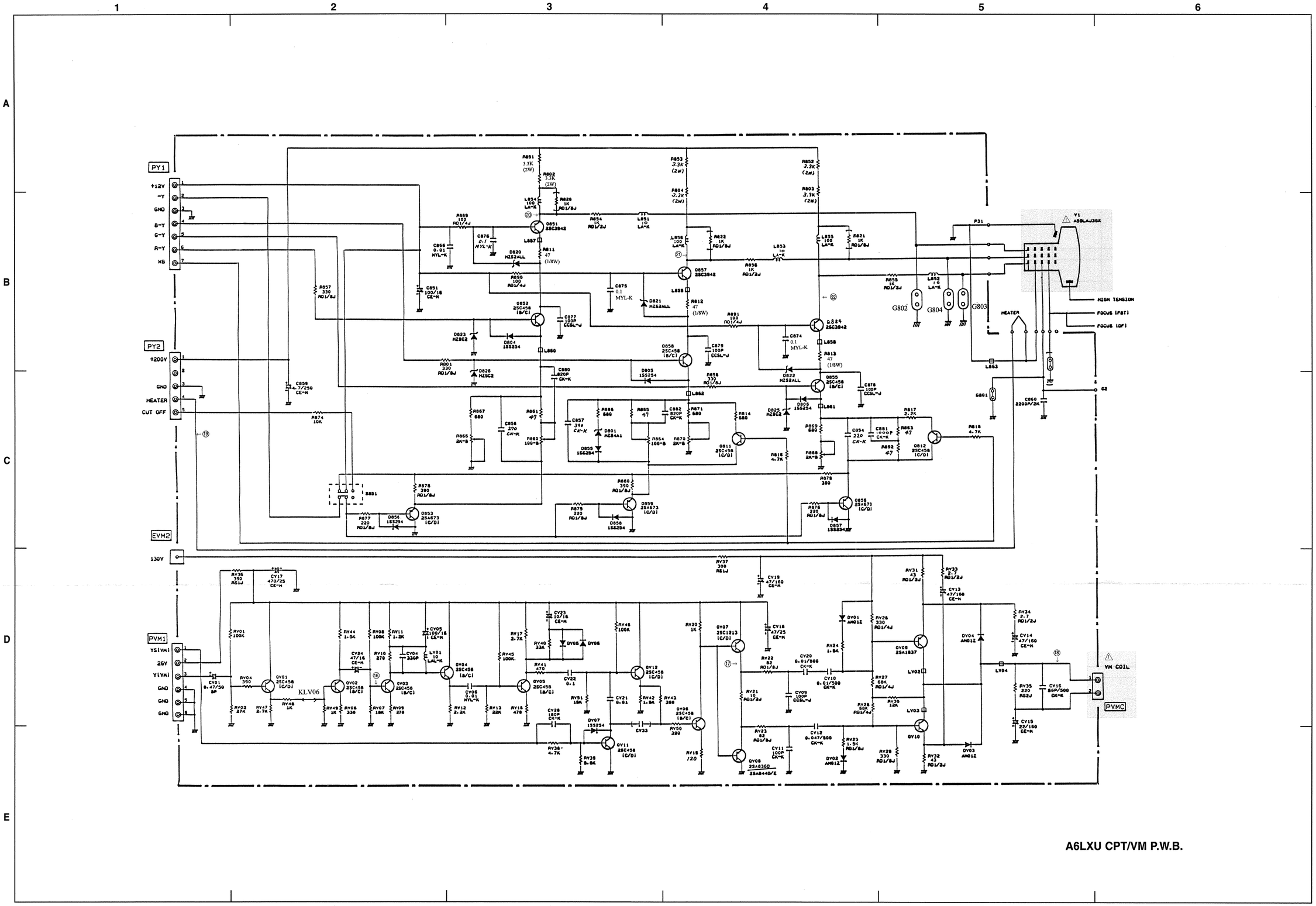


A6LXU CPT/VM P.W.B.

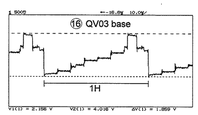
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.
- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

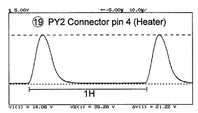
Circuit No.	Pin No.	Voltage Vdc
QV01	B	3.3
	C	16.5
	E	2.6
QV02	B	0.9
	C	15.2
	E	0.3
QV03	B	2.2
	C	9.8
	E	1.5
QV04	B	9.8
	C	16.5
	E	9.1
QV05	B	2.7
	C	5.3
	E	2.0
QV06	B	1.5
	C	10.2
	E	0.8

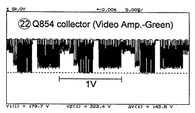
Circuit No.	Pin No.	Voltage Vdc
QV07	B	10.2
	C	16.4
	E	10.2
QV08	B	10.2
	C	0
	E	10.2
QV09	B	130.5
	C	70.5
	E	131.0
QV10	B	0.3
	C	69.6
	E	0.1
QV11	B	0
	C	0
	E	0
QV12	B	2.1
	C	16.4
	E	1.5

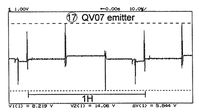
Circuit No.	Pin No.	Voltage Vdc
Q811	B	5.4
	C	4.8
	E	4.9
Q812	B	5.4
	C	4.7
	E	4.8
Q851	B	11.7
	C	164.8
	E	11.2
Q852	B	5.5
	C	10.8
	E	5.2
Q853	B	4.3
	C	0
	E	4.8
Q854	B	11.7
	C	165.8
	E	11.2

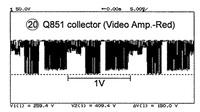
Circuit No.	Pin No.	Voltage Vdc
Q855	B	5.7
	C	10.8
	E	5.3
Q856	B	4.3
	C	0
	E	4.8
Q857	B	11.7
	C	167.1
	E	11.2
Q858	B	5.8
	C	10.8
	E	5.4
Q859	B	4.3
	C	0
	E	4.9

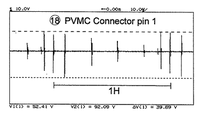


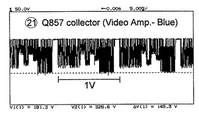












BASIC CIRCUIT DIAGRAM

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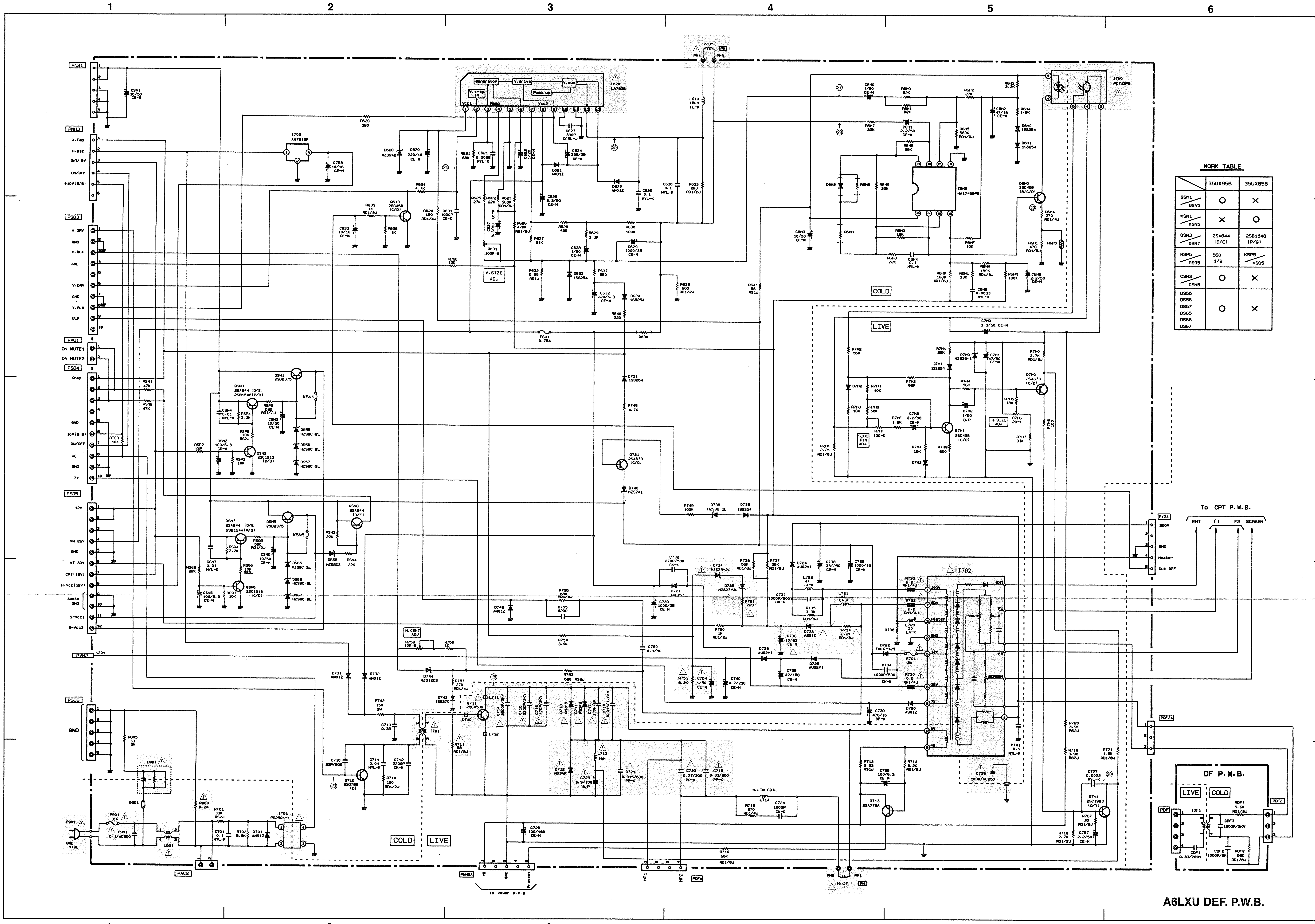

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Circuit No.	Pin No.	Voltage Vdc
IT01	1	13.5
	2	14.0
	3	0
	4	4.6

Circuit No.	Pin No.	Voltage Vdc
I6H0	1	5.3
	2	5.3
	3	5.3
	4	0
	5	5.8
	6	5.8
	7	6
	8	10.8

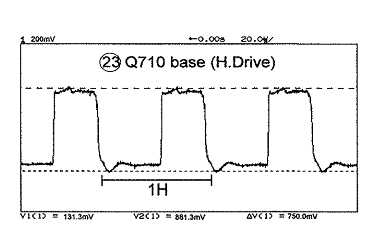
Circuit No.	Pin No.	Voltage Vdc
I620	1	8.2
	2	4.4
	3	4.1
	4	4.1
	5	0
	6	4
	7	3.8
	8	26.3
	9	2.7
	10	1.4
	11	0
	12	15.0
	13	27.1

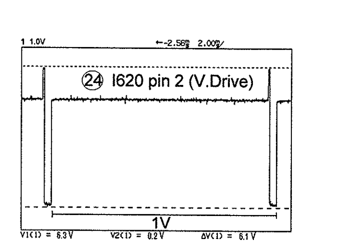
Circuit No.	Pin No.	Voltage Vdc
I7H0	1	10.7
	2	9.6
	3	0
	4	4.4
	5	36.4
	6	4.7

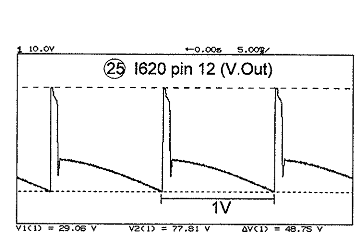
Circuit No.	Pin No.	Voltage Vdc
I702	1	21.2
	2	0
	3	11.9

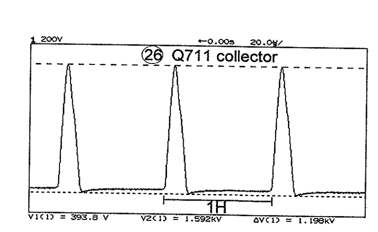
Circuit No.	Pin No.	Voltage Vdc
QSN2	B	0.6
	C	0
	E	0
QSN3	B	20.5
	C	21.2
	E	21.2
QSN6	B	0.6
	C	0
	E	0
QSN7	B	20.1
	C	21.2
	E	21.2
QSN8	B	21.2
	C	-0.6
	E	21.2

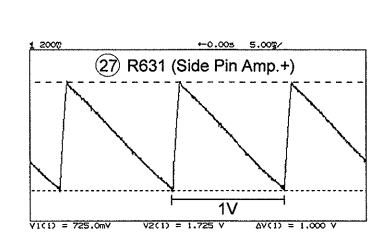
Circuit No.	Pin No.	Voltage Vdc
Q6H0	B	6.0
	C	9.5
	E	5.3
Q7H0	B	24.9
	C	0.5
	E	25.3
Q7H1	B	5.6
	C	11.2
	E	0.8
Q610	B	0
	C	4.4
	E	0
Q710	B	0.3
	C	14.4
	E	0
Q711	B	0
	C	137.3
	E	0
Q713	B	139.6
	C	0
	E	140.0
Q714	B	0.5
	C	18.2
	E	0
Q721	B	5.3
	C	-0.4
	E	7.6

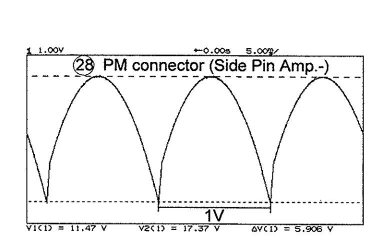


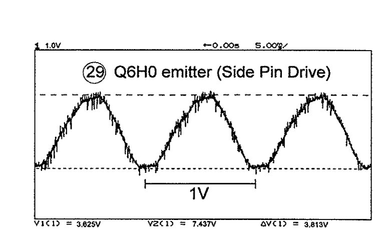


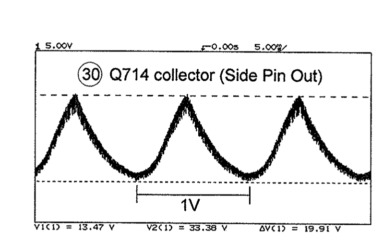












A6LXU	POWER CONTROL

BASIC CIRCUIT DIAGRAM

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

A6LXU POWER P.W.B.

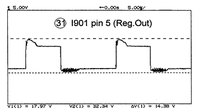
- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.
- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

Circuit No.	Pin No.	Voltage Vdc
I901	1	0.4
	2	1.2
	3	2.0
	4	0
	5	4.0
	6	11.9
	7	1.7
	8	0.3

Circuit No.	Pin No.	Voltage Vdc
I902	1	21.3
	2	21.9
	3	0
	4	0
	5	113.0
	6	0

Circuit No.	Pin No.	Voltage Vdc
I931	1	16.8
	2	0
	3	9.8

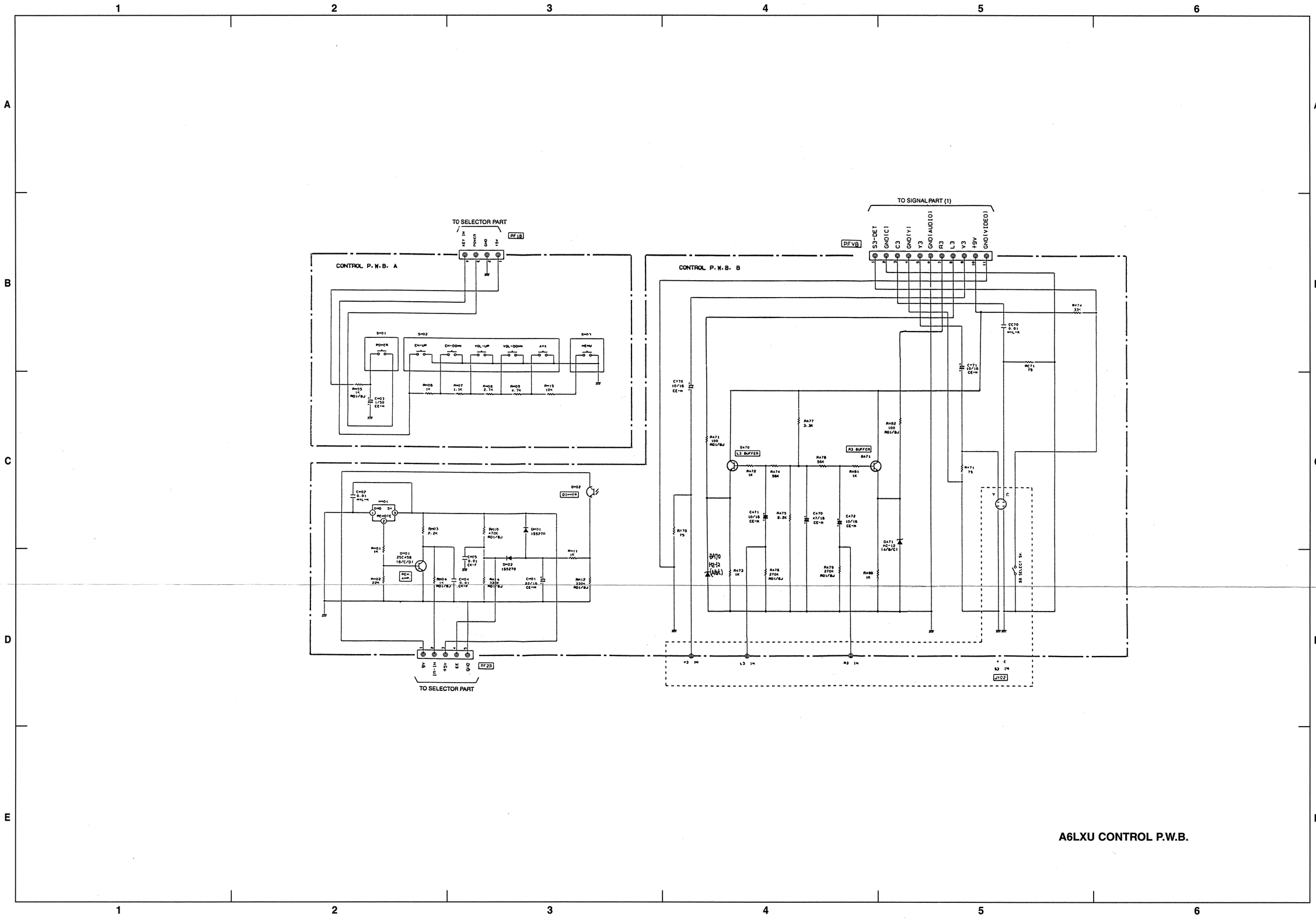
Circuit No.	Pin No.	Voltage Vdc
Q901	G	30.2
	D	336.2
	S	30.0
Q941	B	0
	C	20.7
	E	0
Q945	B	21.3
	C	0
	E	21.3
Q951	G	0
	A	140.2
	K	0



A6LXU	POWER CONTROL

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

BASIC CIRCUIT DIAGRAM



A6LXU CONTROL P.W.B.

- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.
- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

Circuit No.	Pin No.	Voltage Vdc
QA70	B	2.9
	C	8.9
	E	2.3
QA71	B	2.9
	C	8.9
	E	2.3
QM01	B	0.7
	C	0
	E	0
QM02	B	-
	C	5.6 ~0.5
	E	9.1