

HITACHI

SERVICE MANUAL

NTSC

M3LXU/M3XU CHASSIS

PA

No. 0050

27CX6B/C756
27CX5B/C755
27CX25B/C750
20SA3B/C053

R/C: CLU-415UI
CLU-414UI
CLU-412U

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 1995

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 cover-shields, 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.

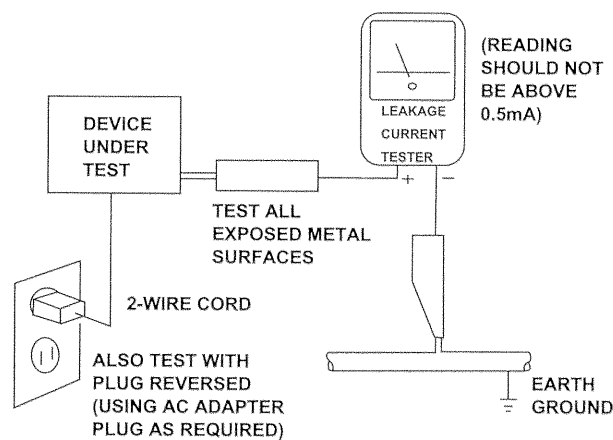
Therefore, the following checks should be performed for the continued protection of the customer and service technician.

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 $0.24M\Omega$ and a maximum resistor reading of $5.2M\Omega$. 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 34.0kV. In case any component having influence on the high voltage is replaced, confirm that high voltage with minimum BRIGHTNESS and CONTRAST is lower than 34.0kV. 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.

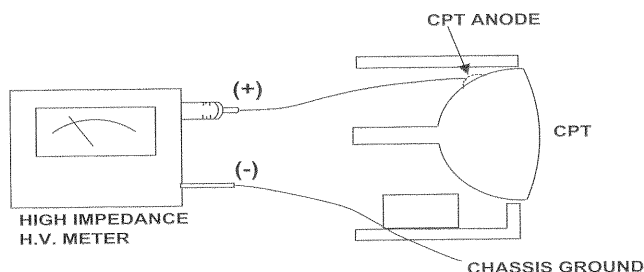
PRODUCT SAFETY NOTICE

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 $\triangle$ 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 $\triangle$ 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

POWER RATINGS

27CX6B/C756	145 watts
27CX5B/C755	145 watts
27CX25B/C750	145 watts
20SA3B/C053	108 watts

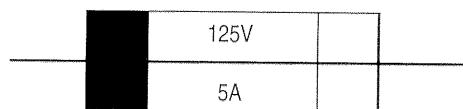
COLOR PICTURE TUBE

27CX6B/C756	A68KRQ58X(D)
27CX5B/C755	A68ADT25X02
27CX25B/C750	A68ADT25X02
20SA3B/C053	A51KQN61X

CAUTION

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

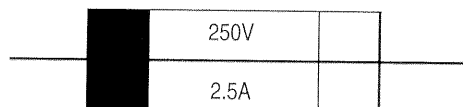
27V Model



F901

The rating of fuse F901 is 5.0A-125V.
Replace with the same type fuse for continued protection against fire.

20V Model



F901

The rating of fuse F901 is 2.5A-250V.
Replace with the same type fuse for continued protection against fire.

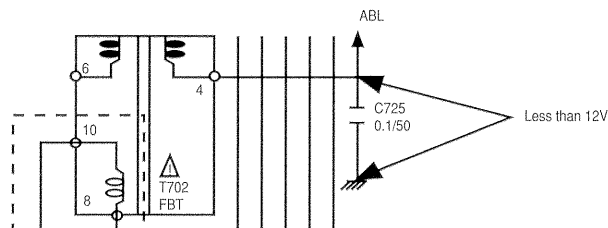
TECHNICAL CAUTIONS

27CX5B, 27CX6B, 27CX25B

High voltage limiter circuit check and overvoltage protection 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 $120 \pm 3V$.
3. Receive Circle Pattern and set "BRIGHTNESS" and "CONTRAST" to maximum. Adjust the Screen VR so that Beam Current is $1B \pm 0.1 \text{ mA}$. (The voltage of ABL terminal -C725 both ends should be 12V or less)
4. Connect R831 (Q804 collector side) to GND.



Adjustment Procedure

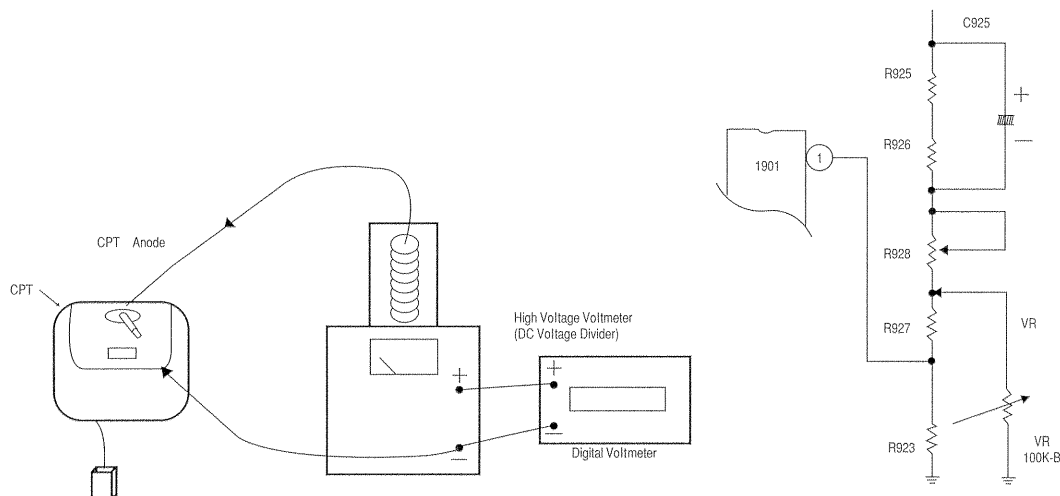
1. Check that the normal high voltage and +B voltage.

CHASSIS	E HT $\pm 1 \text{ KV}$	I B $\pm 0.1 \text{ mA}$	+B $\pm 0.3V$	E1 $\pm 1.2 \text{ KV}$
C755/C756	27.5 KV	1.5 mA	96.0 V	32.5 KV
C750	27.5 KV	1.5 mA	96.0 V	32.5 KV

Adjustment Preparation

5. Set AC input voltage to $120 \pm 3V$. Then, connect the VR (100K-B) to R925 and ground side as shown below.

Note: At that time the value of VR should be maximum.



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 CTV. Also, be sure to perform it after the chassis discharge of residual high voltage, because the high voltage of CPT anode may be left.

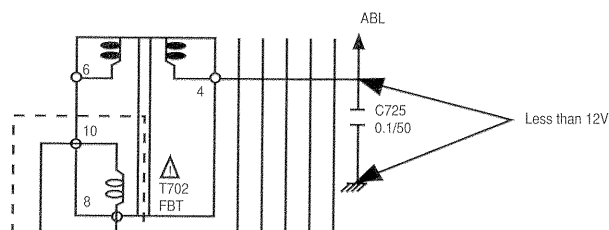
TECHNICAL CAUTIONS

20SA3B ONLY

High voltage limiter circuit operation check and overvoltage protection circuit operation check

Adjustment Preparation

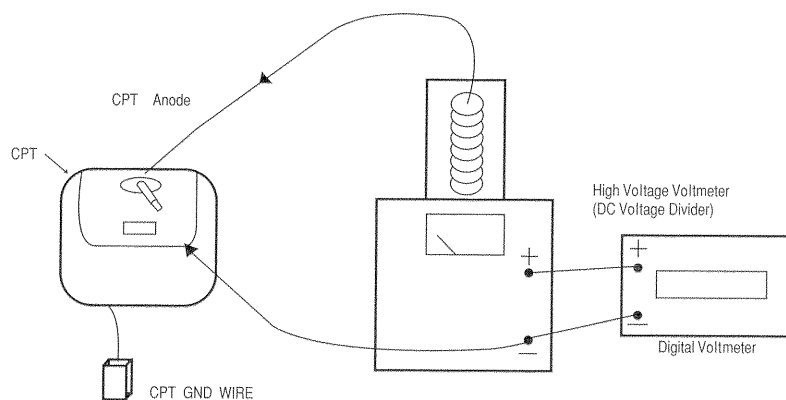
1. Connect a high voltage voltmeter between CPT anode terminal (anode capside) and the ground.
2. Set AC input voltage to $120 \pm 3V$.
3. Receive Circle Pattern and set "BRIGHTNESS" and "CONTRAST" to maximum. Adjust SCREEN VR so that Beam Current is $IB \pm 0.1 \text{ mA}$. (The voltage of ABL terminal -C725 both ends should be 12V or less)



Adjustment Procedure

1. Check that the normal high voltage EHT.

CHASSIS	EHT $\pm 1 \text{ KV}$	IB $\pm 0.1 \text{ mA}$	E1 $\pm 1.2 \text{ KV}$
C053	27.0 KV	1.1 mA	30.5 KV



Adjustment Preparation

4. Turn the power ON and receive circle pattern signal. Set CONTRAST and BRIGHTNESS to maximum and the others to the normal (RESET) condition.
5. Turn the power OFF and short circuit both ends of R906 with a jumper wire.
6. Adjust the slidac so that the input power voltage of the TV set is $100 \pm 5V$.
7. Turn the power ON and increase the input power voltage gradually while adjusting the slidac. Check the indicated value with a high voltage voltmeter and see picture condition.
8. While continuing the above operation, read the operating voltage of X-ray protection circuit E1.
9. When X-ray protection circuit operates, set the input power voltage to zero using the slidac and remove the jumper wire and the high voltage voltmeter.

ADJUSTMENT SPECIFICATIONS

M3LXU/M3XU CHASSIS

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Refer to CHASSIS SERVICE MANUAL PA NO. 0051 for additional technical information.

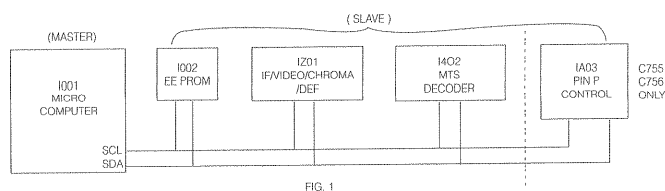
Note:

1. MAIN CHASSIS 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 ADJUSTMENT

1. I²C BUS SYSTEM

M3LXU (M3XU) Chassis uses I²C Bus Control System. Fig. 1 shows this control system.



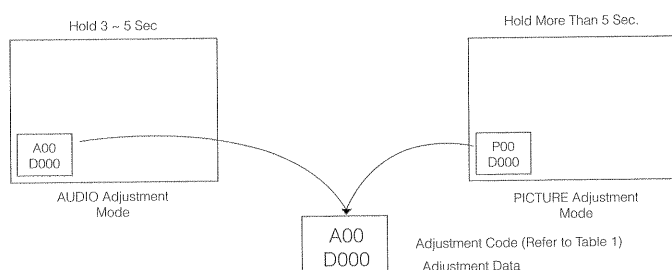
I001 (Master) controls other ICs (slave). Adjustment data is memorized in I002 (EEPROM). I001 read this data and controls other ICs.

Adjustment items applied in this chassis is shown in Table 1.

2. ADJUSTMENT PROCEDURE—START UP

2-1 How to Get to Adjustment Mode

Chassis adjustment can be done using customers remo-con with CTV set turned off, press "POWER" and "MENU" or "AVX" keys at the same time, and hold more than 3 seconds. The CTV set turns on in adjustment mode with OSD as follows.



"To Escape from Adjustment Mode"

Press "POWER" key or "POWER" button of remo-con once at any time. Then set returns to normal state.

TABLE 1 ADJUSTMENT CODE

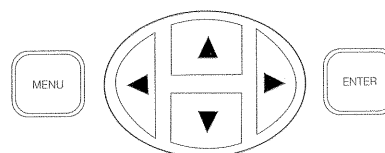
CODE NAME	ADJUSTMENT MODE	(ITEM) REMARK	SERVICE* MODE DATA
A 00	Audio Adj. Key Code	—	—
A 01	STEREO VCO Adj.	4.3	027
A 02	SAP VCO Adj.	4.6	030
A 03	Filter Adj.	4.4	026
A 04	Input Level Adj.	4.2	009
A 05	Separation (Low) Adj.	4.5	032
A 06	Separation (High) Adj.	4.5	022
P 00	Picture Adj. Key Code	—	—
P 01	PIF VCO Adj.	4.1	063
P 02	RF AGC Adj.	4.11	044
P 03	Horiz. (Phase) Position Adj.	4.8	019
P 04	Vert. (Center) Position Adj.	4.8	001
P 05	Vertical Size Adj.	4.8	030
P 06	R-BKG Cut Off Adj.	4.7-4.9	157
P 07	G-BKG Cut Off Adj.	4.7-4.9	179
P 08	B-BKG Cut Off Adj.	4.7-4.9	132
P 09	G-DRV Gain Adj.	4.9	094
P 10	B-DRV Gain Adj.	4.9	100
P 11	Sub Bright Adj.	4.10	000
P 12	Sub Color Adj.	—	000
P 13	Sub Tint Adj.	4.12	-010
P 14	Sub Sharpness Adj.	4.13	004

* This data is an approximate service mode data. Fine adjustment must be done using the specified test procedure and adjustment tools.

2-2 Changing Data and Adjustment Code

When set is in adjustment mode, the cursor "▲,▶,▲,▼" and 'ENTER' keys of the customers remo-con will be the adjustment keys.

A. By customer remote control



"▲,▼" keys are used for changing adjustment code.

"▲,▶" keys are used for changing data.

"ENTER" key is used for changing "Cut Off Mode+ Normal Mode". (Refer to cut off adjustment)

3. ADJUSTMENT MODE

If below display appears



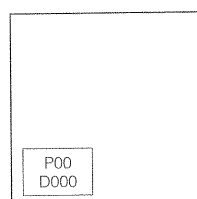
Adjustment code can not be changed by cursor "▲,▼" keys.



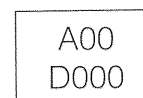
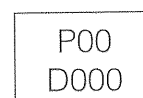
Set data "D020" at "A00" or "D030" at "P00" by "▲,▶" keys. Then adjustment code can be changed by "▲,▼" keys.

B. By Front Control Panel—Another Method

- Before turning ON the set, press AVX. Then press POWER and keep pressing AVX for about 3 seconds.
- After 3 seconds, a small square will appear on the left lower corner and there are two different displays. One shows A and D, and the other P and D for the picture adjustment.



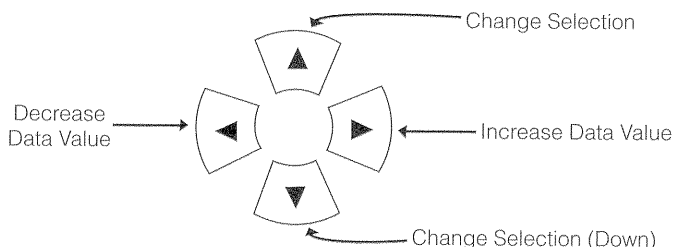
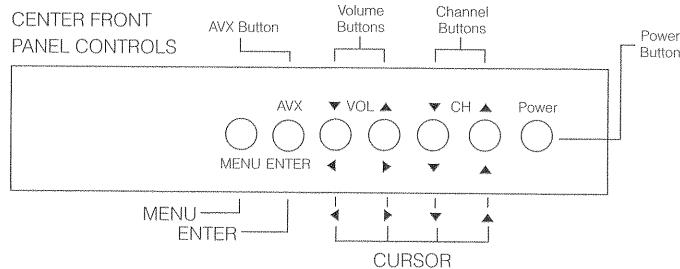
D = Data value
P = Picture
A = Audio



3. Since this adjustment is by control panel, the P and D has a value of zero. For the adjustment mode, first you have to input a data value of 30 and then you can select the other P options.

The same for the other adjustment of A and D for this adjustment you need an input value of 20 so you can select other options for A.

- To make selection you have to use the arrow keys on the front control panel.



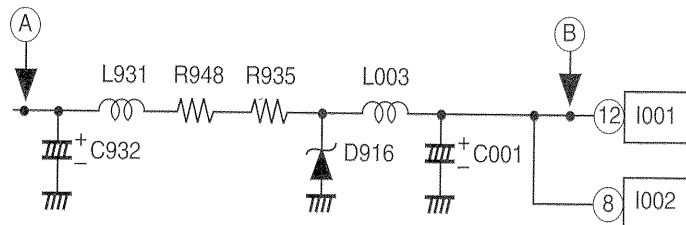
Match front panel control cursor to remote control cursor.

4. ADJUSTMENT PROCEDURE

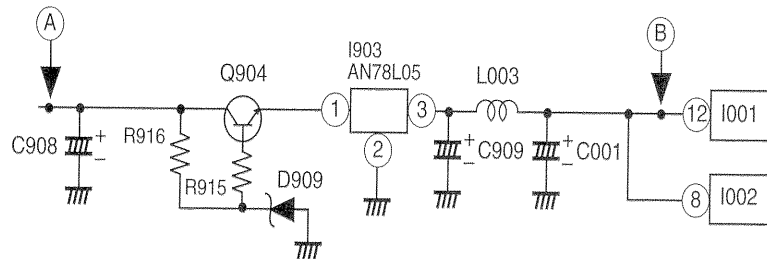
4-1 IF Adjustment

4-1-1 PIF AFC Adjustment Adjustment Preparation

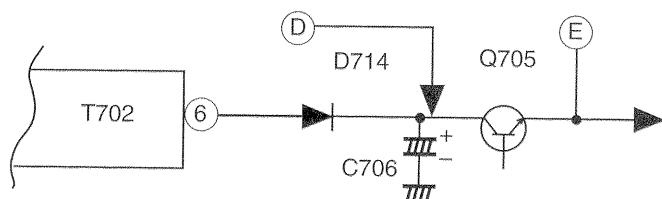
- (1) Initial setting of EEPROM (I002)
Add +15V to point A and after 5 seconds check point B if it is $5V \pm 0.3V$.
- a. M3LXU Chassis



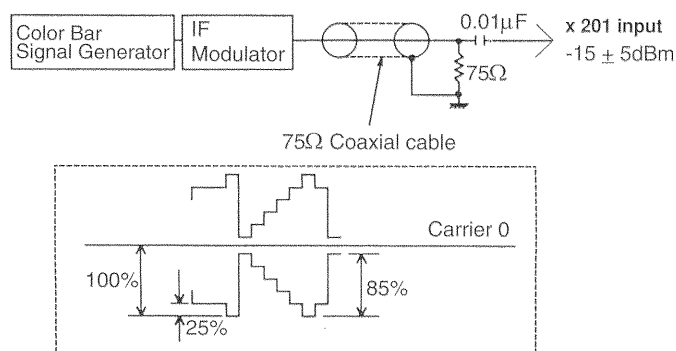
b. M3XU Chassis



- (2) Add +11V at (D) point and check (E) point is $9V \pm 0.3$.



- (3) Input signal between X201 input and earth.
(Tuner IF output)



- (4) Connect DC voltmeter (input impedance 1M ohm or more) to I201 pin (44).

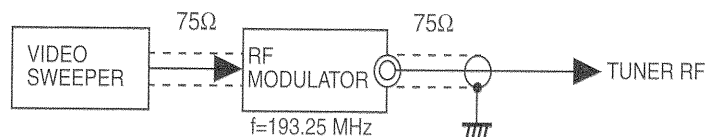
Adjustment Procedure

- (1) Set adjustment code "P01".
Change data so that the voltmeter is $2.5 \pm 0.5V$ at I201 pin (44).

4-1-2 Adjustment of IF waveform

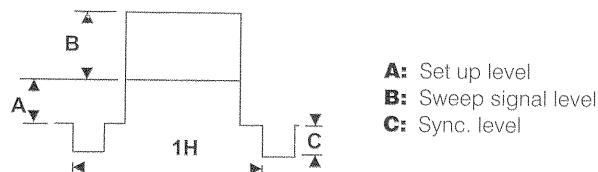
Adjustment Preparation

- (1) Connect signal as follows
- (2) Connect an oscilloscope to I201 Pin (47) (TP-12)

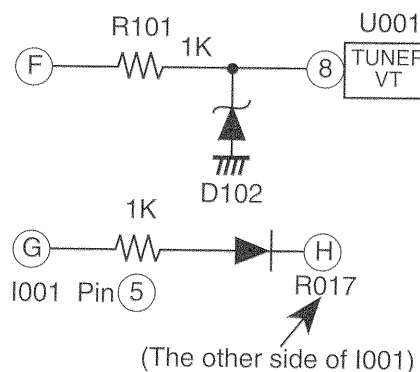


- Marks
- 0.2 MHz (10CH)
 - 1 MHz
 - 2 MHz
 - 3.6 MHz
- Output level $91 \pm 3 \text{ dB}\mu$ (50Ω load)
Modulation 90 ~ 70%

- Check the signal at TP-12 as follows
- (3) Add the following voltage.

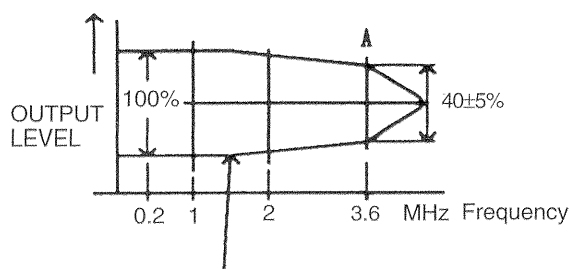


- a. Same as 4-1-1 (1).
- b. Same as 4-1-1 (2).
- c. Tuner VTi (E) POINT: 42V
- d. Connect a diode (IS2076, ISS270TA) to (G)~(H)
- e. Receive a color bar signal.



Adjustment Procedure

- Adjust tuner IFT coil so that the output level of 0.2MHz is reference level (100%) and 3.6MHz level is $40\pm 5\%$. (At that time, do not turn tuner IFT coil more than 1 turn.)

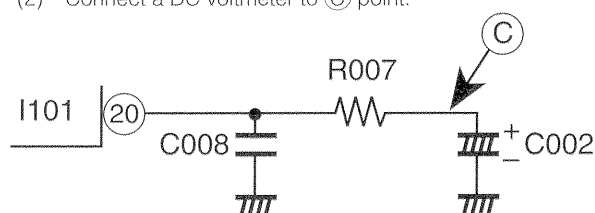


Check that 1MHz~2MHz level is 70%~100%

4-1-3 VCO for OSD adjustment

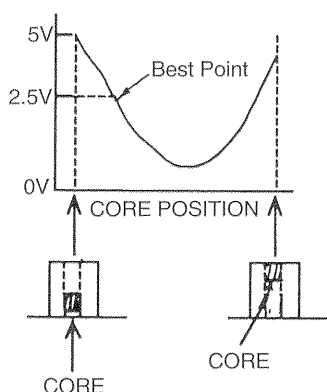
Adjustment Preparation

- Receive color bar or circle pattern signal.
- Connect a DC voltmeter to ③ point.



Adjustment Procedure

- Adjust L001 so that the voltmeter is $2.5\pm 0.2V$.

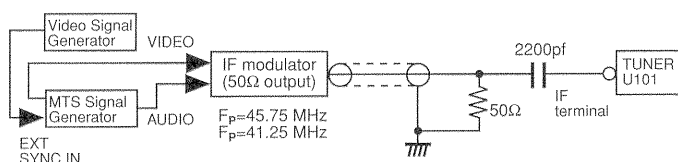


4-2 MTS Adjustment

4-2-1 Input Level Adjustment

Adjustment Preparation

- Apply a signal to tuner (U101) using the jig shown below.



Note: Video signal and audio signal should be synchronized.

IF modulator output signal wave form

(Color bar or all white)



IF modulator output level and P/S
P=106dBu (50 ohm termination)
S level: -3dB to P level
At this time, S/N ratio of F/E
video output is 45dB or less.

Sound modulation condition:

Noise reduction encoder: on

Stereo signal:

- R=0 (L only), 300 Hz, 30% modulation (see note)
- R=0 (L only), 3 KHz, 30% modulation (see note)

Monaural signal:

- Monaural, 40 Hz 100% modulation (PRE-EN OFF)

SAP signal:

- SAP, 300 Hz 30% modulation (see note)

Adjustment Preparation

- Connect AC voltmeter V to I402 pin ②⑥.
Use the AC voltmeter of mitsubishi made, model VP-950C or equivalent.
- Same as item 4-1-1 (2).
(Apply +B to I201, I402). Refer to item 4-3.
- Same as item 4-1-1 (1)
- Select adjustment code "A04"

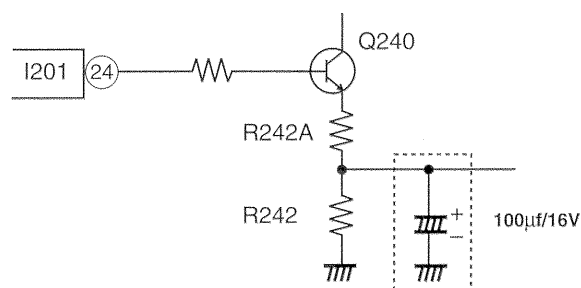
Adjustment Procedure

- Adjust the data "A04" to VO=sig 500m Vrms $\pm$ 10m Vrms at I402 pin ②⑥.

4-3 Stereo VCO Adjustment

Adjustment Preparation

- Same as items 4-1-1 (1), (2), (4).
- Connect a frequency counter to I402 pin ②⑥. Use the probe of 1:1. (Probe standard $R_i \leq 1M\Omega$, $C_i \leq 15pF$)
- Input of I402 pin ⑦ is no signal.
- Select adjustment code "A01".
- Connect a capacitor (100 μ F/16V) as follows.



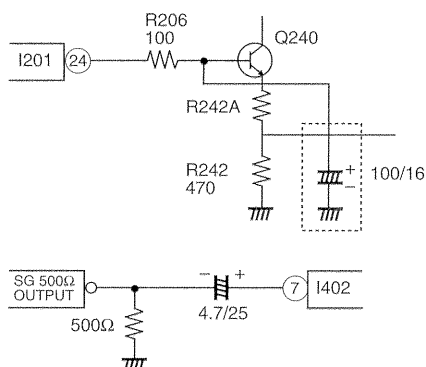
Adjustment Procedure

- Adjust the data to set to 15.73 ± 0.1 KHz by "◀▶" keys.
- Delete capacitor (100 μ F/16V).

4-4 Filter Adjustment

Adjustment Preparation

- Set capacitor 100 μ F/16V as shown as follows.
- Apply the signal to I402 pin ⑦ with the jig shown as follows.



a) SG output signal spec.

① FREQUENCY

f=15.73 KHz (sine wave)

② Signal Level

V=100mVrms

(4) Connect an AC voltmeter or oscilloscope to I402 pin ②6.

(5) Select adjustment code "A03".

Adjustment Procedure

(1) Adjust the data so that the voltage of I402 ②6 pin is minimum by "◀▶" keys.

4-5 Separation Adjustment

(The adjustment of items 4-2-1 and 4-4 must be completed first)

Adjustment Preparation

- (1) Use the same jig as input level adjustment
- (2) Connect an AC voltage meter through AUDIO AMP. to I402 pin ②6 or connect an oscilloscope.
- (3) Select adjustment code "A06" and set data "D032".

Adjustment Procedure

- (1) Select sound input signal ① and select adjustment code "A05" and adjust by "◀▶" keys so that 300Hz level in minimum (L separation adjustment)
 - (2) Select sound input signal ② and select adjustment code "A06", and adjust by "◀▶" keys so that 3KHz level is minimum.
 - (3) Repeat (1) and (2).
- Adjustment precision: within +1dB from minimum point.

4-6 SAP VCO Adjustment

Adjustment Preparation

- (1) Connect a frequency counter to I402 pin ②6.
- (2) Select adjustment Code "A02".
- (3) Connect same jig in item 4-3.

Adjustment Procedure

- (1) Adjust the data by "◀▶" keys so that frequency is 78.67 ± 0.5 KHz.

4-7 Cut-Off Adjustment (Picture Adjustment)

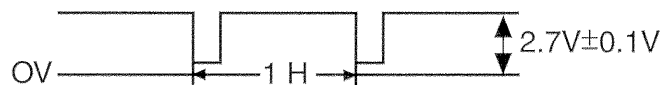
Adjustment Preparation

- (1) Connect an oscilloscope at R, G, B output.
- (2) Receive circle pattern signal.

	I201
R output	pin ①9
G output	pin ②0
B output	pin ②1

Adjustment Procedure

- (1) Select adjustment code "P06" and press "ENTER" button.
 - (2) Adjust R cut-off data as that R output waveform should be followed by "◀▶" key.
- Adjustment for G and B are the same procedure as R cut-off adjustment. The only difference is the data for G cut-off is "P07" and B cut-off is "P08".



4-8 Deflection Circuit Picture Adjustment

4-8-1 Horizontal Center Adjustment

Adjustment Preparation

- (1) Apply heat-run 5 minutes or more after the power is turned on.
- (2) Receive circle pattern signal.
- (3) Set CONTRAST maximum and others center.

Adjustment Procedure

- (1) Adjust horizontal center so that difference of right and left size marker is within 0.5 by adjustment code "P03"

4-8-2 Vertical Size Adjustment

Adjustment Preparation

- (1) Apply heat-run 5 minutes or more after the power is turned on.
- (2) Receive circle pattern signal, and set CONTRAST maximum and others center.
- (3) The set should face the north or south direction.

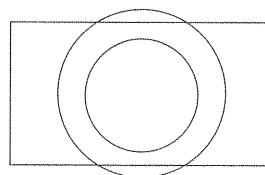
Adjustment Procedure

- (1) Adjust vertical center and size so that the outer circle of the circle pattern is like the figure below by using "◀, ▶, ▲, ▼" keys.

V Center
V Size

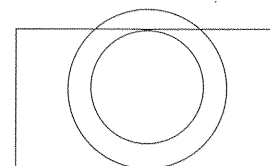
Adjustment Code
"P04"
"P05"

(i) Standard Condition



1/2 of the width of outer circle comes to the screen.

(ii) When the picture center is above CPT center at V center is minimum



When the picture center is above CPT center, adjust so that the bottom of the inner circle comes in contact with the TOP of the screen.

4-9 White Balance Adjustment

Adjustment Preparation

- (1) Apply heat-run 10 minutes 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.
- (5) Set the color temperature control (white control) to warm.
- (6) Turn the screen adjusting VR fully counterclockwise.
- (7) Set adjustment mode "P06" and press "ENTER" button to set cut-off mode again. Press "ENTER" button to return to normal mode.

Adjustment Procedure

- (1) Turn the screen adjusting VR clockwise and set it to the position where the bright colored line starts appearing on CPT screen.
- (2) Do not change the cut-off data (this data is named "CODE-A") corresponding to the color first appearing.
- (3) Turn the screen fully clockwise adjusting VR when a bright color lines does not appear.
- (4) Adjust the cut-off data except Code-A so that the red, green and blue bright colored line appear on the screen equally by using " $\blacktriangleleft$, $\blacktriangleright$, $\blacktriangleup$, $\blacktriangledown$ " key.
- (5) Set to normal mode by pressing "ENTER" key.
- (6) Adjust picture control so the indication of the brightness meter is 80% of the full scale. Then, change G and B data by using " $\blacktriangleleft$, $\blacktriangleright$ " key and adjust the high-brightness white balance.
- (7) Adjust picture control to minimum and check that the low-brightness white balance is obtained by directly observing the low-brightness without using a mirror.
- (8) When the low brightness white balance is not obtained, adjust other low-brightness white balance code except Code-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 approx. 9,300° K.

	Adjustment Code
R cut off	P06
G cut off	P07
B cut off	P08
G drive	P09
B drive	P10

4-10 Sub Black Level Adjustment

Adjustment Preparation

- (1) Apply heat-run for 10 minutes or more after the power is turned on.
- (2) Receive color bar signal.
- (3) Set the vertical incident illumination on the CPT surface to 20 lux or less.
- (4) Set BRIGHTNESS control to the center position.
- (5) Set white control to WARM.
- (6) Set adjustment code "P11" by remo-con.

Adjustment Procedure

- (1) Adjust "DATA" by using " $\blacktriangleleft$, $\blacktriangleright$ " keys. The background of A1, A2 set to black and A3 is set lighter black.

W	Y	CY	G	MG	R	BL
75%						
A7	A6	A5	A4	A3	A2	A1
B						
D						
Q	I	W100%			BLK	

The background is set to black. Perform the adjustment without observing the boundary parts.

The background is set to lighter black.

- (2) Check by directly observing the CPT surface, without using a mirror.

4-11 AGC Adjustments

Adjustment Preparation

- (1) After all the adjustments are finished, heat-run 5 minutes or more in signal receiving condition.
- (2) Receive circle pattern signal.
- (3) Set PICTURE to MAXIMUM and BLACK LEVEL to on-screen display center.
- (4) Antenna input power: -53dBm
- (5) Connect DC voltmeter of internal resistance 1M Ω or more to TP15.
- (6) Set adjustment code "P02".

Adjustment Procedure

- (1) Adjust AGC data until the indication of DC voltmeter does not change any more at the maximum point. The reading of DC voltmeter is named V1. Adjust AGC data so that the indication of DC voltmeter is $(V1 - (0.5 \pm 0.2)V)$.

4-12 Sub Tint Adjustment

Set adjustment code "P13".

Set data "-10" by " $\blacktriangleleft$, $\blacktriangleright$ " keys. (27CX5B/C755, 27CX6B/C756, 28CX25B/C750)

4-13 Sub Sharpness Adjustment

Set adjustment code "P14".

Set data "004" by " $\blacktriangleleft$, $\blacktriangleright$ " keys. (27CX5B/C755, 27CX6B/C756, 28CX25B/C750)

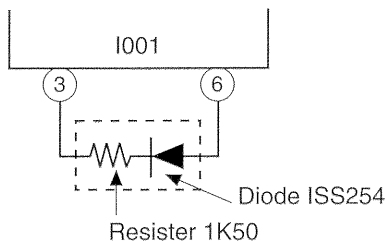
II. FUNCTION SETTING

M3LXU (M3XU) Chassis has the data for setting variety functions in EEPROM (I002).

Microcomputer (I001) set the functions needed for each model according to EEPROM data (memory switch data).

1. HOW TO SET MEMORY SWITCH SETTING MODE

Connect a diode as follows at power on. (Continue connection)



An OSD will appear on screen as follows.

MEMORY SWITCH

S - IN	0	1
SPATIALIZER	0	1
INT. SPEAKER	0	1
AUX 1	0	1
AUX 2	0	1
POWER 1	0	1
POWER 2	0	1
P IN P	0	1
MTS	0	1
SOUND	0	1
M PAL	0	1
COMB FILTER	0	1

Function name
(Yellow background shows
cursor position)

Data
(Yellow background shows
selected data)

Cursor and data are changed by "◀, ▶, ▲, ▼" button.
After setting data, press "ENTER" button. Then MEMORY INITIALIZE operation start. After complete MEMORY INITIALIZATION, TIMER SOUND is outputted from left speaker.

Note: Press "MENU" to escape from setting mode.

2. EXPLANATION OF FUNCTIONS

- (1) S-IN
Select S-Video mode or not.
Data "1" apply S-VIDEO mode.
Data "0" do not apply S-VIDEO mode.
- (2) SPATIALIZER
This function is not applied on M3LXU/M3XU chassis.
Set data "0".
- (3) INT. SPEAKER
This function selects INTERNAL SPEAKERS ON/OFF MODE.
Data "1" apply INTERNAL SPEAKERS ON/OFF MODE.
Data "0" do not apply.
- (4) AUX 1, AUX 2
This is setting of VIDEO INPUT MODE.
AUX 1 AUX 2
Data 1 1 apply VIDEO INPUT MODE
Data 0 0 apply NO VIDEO INPUT MODE
- (5) POWER 1, POWER 2
Initial settings at plug in
POWER 1 POWER 2
0 0 Power off mode (normal)
1 0 Power on at last state
0 1 Power on at video mode
1 1 Power on at TV (4CH) mode
- (6) P IN P
Select P in P function.
Data "1" apply on P in P model.
Data "0" do not apply on non P in P model.
- (7) MTS
Select MTS function.
Data "1" apply on MTS model.
Data "0" do not apply on non MTS model.
- (8) SOUND
Select SOUND "BALANCE, BASS, TREBLE" functions.
Data "1" apply on SOUND function.
Data "0" do not apply on SOUND function.
- (9) M PAL
See Table 2 for model name data.

(10) COMB FILTER

Select COMB FILTER MODEL or not.

Data "1" apply on COMB FILTER model.

Data "0" do not apply on nonCOMB FILTER model.

TABLE 2 MODEL AND DATA TABLE

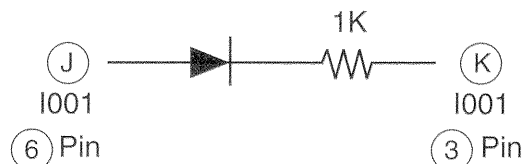
DATA NAME	MODEL NAME		
	27CX5B(C755) 27CX6B(C756)	27CX25B(C750)	20SA3B(C053)
S-IN	1	1	0
SPATIALIZER	0	0	0
INT. SPEAKER	1	1	1
AUX 1	1	1	1
AUX 2	1	1	1
POWER 1	0	0	0
POWER 2	0	0	0
P IN P	1	0	0
MTS	1	1	1
SOUND	1	1	0
M PAL	1	1	0
COMB FILTER	1	1	0

III. MEMORY INITIALIZE

1. TIMER SOUND OPERATION CHECK

Adjustment Procedure

- (1) Connect diode (ISS270TA or IS2076) to (J)~(K)



- (2) Confirm OSD-memory switch appears.
- (3) Remove diode.
After this operation, each setting should become to delivery setting automatically.
- (4) When the above operation is being performed check that a beeping sound is made from the left speaker.

IV. OPERATION CHECK

1. AFC OPERATION CHECK

Adjustment Preparation

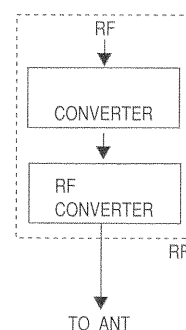
- (1) Connect the jig as shown below to the ANT terminal.

Adjustment Procedure

- (1) Receive a standard carrier (not offset) with the channel up/down or direct selection buttons.
- (2) Receive an offset signal of +1.5MHZ.
- (3) Receive an offset signal of -1.5MHZ.
Check that it is pulled into the standard tuning point.
(Perform the channel selection operation.)

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

Checking jig (All channel converter can be used)



2. CHANNEL SELECTION CIRCUIT OPERATION CHECK

2-1 Channel up/down selection

Adjustment Preparation

- (1) Set the TV set so that VHF (11, 13CH), UHF (14, 46, 63CH) and CATV (A, E, P, W, CH) can be received.
- (2) Set AIR/CABLE mode to AIR.
(Press the MENU key, and select the SETUP and AIR/CABLE mode using ENTER key.)

Adjustment Procedure

- (1) Check that VHF are received correctly by pressing CH UP (▲) or DOWN (▼) button.

Adjustment Preparation

- (3) Set AIR/CABLE mode to CATV 1.

Adjustment Procedure

- (2) Perform the same operation as in item (1), and check that VHF and CATV are received correctly.

Adjustment Preparation

- (4) Set AIR/CABLE mode to CATV 2.

Adjustment Procedure

- (3) Perform the same operation as in item (1), and check that VHF and CATV are received correctly.

Adjustment Preparation

- (1) Set the TV set so that VHF (11, 13CH), UHF (14, 46, 63CH) and CATV (A, E, P, W, A-2, GG, OO, WW, CH) can be received.

Adjustment Procedure

- (1) Set AIR/CABLE mode to AIR.
- (2) Select AUTO PROGRAM mode and press (ENTER) key.

After AUTO PROGRAM operation is completed, by pressing the channel UP (▲) or DOWN (▼) button, check that the channels having broadcast signal (s) can be received.

- (3) Set AIR/CABLE mode to CATV 1.
- (4) Perform the same operation as in item (2) check that CATV can be received correctly.

Adjustment Preparation

- (2) Set to PROGRAM LIST mode.
(Menu under PROGRAM mode)

Adjustment Procedure

- (5) Check that the above items is SCANNED and the channels is listed "ON" on the program list.

Note: CATV channels, actual input channel numbers and indicated channel numbers.

A	14
E	18
P	29
W	36
A-2	98
GG (W+7)	43
OO (W+15)	51
WW (W+23)	59

Note: Display while AUTO PROGRAM is operating.

CHANNEL	13
NOW AUTOPROGRAM IS IN PROGRESS	

Note: CATV channels, actual input channel numbers and indicated channel numbers shown in Table 3 below.

TABLE 3

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	37	31	32	33	34	35	36
MID BAND									SUPER BAND													

W+1	W+2	W+3	W+4	W+5	W+6	W+7	W+8	W+9	W+10	W+11	W+12	W+13	W+14	W+15	W+16	W+17	W+18	W+19	W+20	W+21	W+22	W+23
37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59
HYPER BAND																						

W+24	W+25	W+26	W+27	W+28	W+29	W+30	W+31	W+32	W+33	W+34	W+35	W+36	W+37	W+38	W+39	W+40	W+41	W+42	W+43	W+44	W+45	W+46
60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82
HYPER BAND					ULTRA BAND																	

W+47	W+48	W+49	W+50	W+51	W+52	W+53	W+54	W+55	W+56	W+57	W+58	A-5	A-4	A-3	A-2	A-1	W+59	W+60	W+61	W+62	W+63	W+64
83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
_____ ULTRA BAND _____												_____ MID BAND _____				_____ ULTRA BAND _____						

W+65	W+66	W+67	W+68	W+69	W+70	W+71	W+72	W+73	W+74	W+75	W+76	W+77	W+78	W+79	W+80	W+81	W+82	W+83	W+84
106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
ULTRA BAND																			

2-2 VOL UP/DOWN

Adjustment Procedure

- (1) Check that the sound volume level and volume indication is going up or down continuously by pressing sound volume UP (▲) or DOWN (▼) button.



2-3 POWER ON/OFF

Adjustment Procedure

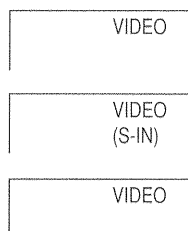
- (1) Check that the power alternates between ON and OFF by pressing the POWER button.

2-3-1 AVX

Adjustment Procedure

- (1) Check that the OSD displays by pressing the AVX button, such as below.

(C756/C755/C750)
 Receiving CH → VIDEO
 → VIDEO (S-IN)
 → Receiving CH
 (C053)
 Receiving CH → VIDEO
 → Receiving CH



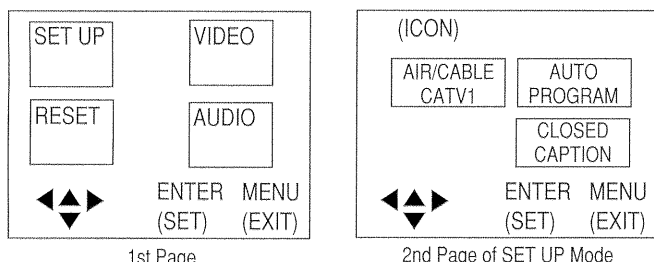
2-4 MENU (Except C053)

Adjustment Procedure

- (1) Check that the MENU OSD displays by pressing MENU button.

Note: MENU OSD is displayed as below.

- (2) After MENU OSD is displayed.



1st Page

2nd Page of SET UP Mode

Check that the keys function change as below.

MENU → MENU
 CH UP → ▲ Key
 CH DOWN → ▼ Key
 VOLUME UP → ► Key
 VOLUME DOWN ... → ◀ Key
 AVX → ENTER

2-5 MENU mode (using Remo-con)

2-5-1 SET UP mode

Adjustment Preparation

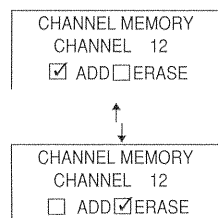
- (1) Set to CHANNEL MEMORY mode.

Adjustment Procedure

- (1) Check that ADD or ERASE is selected by pressing the ►, ◀ button.

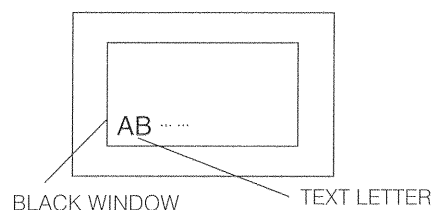
Adjustment Preparation

- (2) (a) Set the mode to CLOSED CAPTION.
- (2) (b) Receive a signal having a CLOSED CAPTION signal.



Adjustment Procedure

- (1) Set DISPLAY setting to ON with ►, ◀ button. At this time, set the other settings as follows.
 1. DISPLAY: ON
 2. MODE: C.C
 3. CHANNEL: 1
- (2) Check that the CAPTION corresponding to the above setting is displayed on the screen.
- (3) Set CHANNEL to 2.
- (4) Check that the CAPTION of CHANNEL 2 is displayed on the screen.
- (5) Set CHANNEL to 1.
- (6) Check that the CAPTION of CHANNEL 1 (FIELD 2) is displayed on the screen.
- (7) Set the mode to TEXT.
- (8) Check that a black window appears and TEXT letters are displayed at the center of the screen.
- (9) Repeat adjustment procedure from (3) to (6), and check that TEXT letters are displayed corresponding to each mode.
- (10) Set the mode to CAPTION.
- (11) The black window should disappear returning to the state of (2).
- (12) Set ON/OFF to OFF.
- (13) Check that the CAPTION letters disappears.

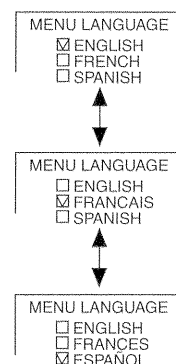


Adjustment Preparation

- (3) Set to MENU LANGUAGE mode.

Adjustment Procedure

- (14) Check that language (ENGLISH, FRENCH, SPANISH) is selected by pressing the ▲, ▼ button.



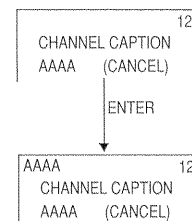
2-5-2 PROGRAM mode

Adjustment Preparation

- (2) Set to CHANNEL CAPTION mode.

Adjustment Procedure

- (1) Select the letter "A" by pressing the ►, ◀ button, and select the input position by pressing the ►, ◀ button.



- (2) After pressing the ENTER button, check that it indicates "AAAA" same as CH No. indication.
- (3) Select CHANNEL CAPTION mode again. Select the "CANCEL" by pressing the $\blacktriangleright$, $\blacktriangleleft$ button and press the ENTER button.
- (4) Check that "AAAA" is deleted when the CH No. is indicated after pressing the "MENU" button.

Adjustment Preparation

- (3) Set to CHILD LOCK MODE.

Adjustment Procedure

- (1) Select CHILD LOCK SET by $\blacktriangleright$, $\blacktriangleleft$ button.
- (2) Press "0" button 3 times. ("000" is input)
- (3) Check that the picture becomes pitch-dark, and sound does not come out.
- (4) Set to CHILD LOCK mode again, and select 'CHILD LOCK CANCEL' by $\blacktriangleright$, $\blacktriangleleft$ button.
- (5) Press "0" button 3 times. ("000" is input)
- (6) Check that the picture and sound return to the previous condition.

Adjustment Preparation

- (4) Set to VOLUME CORRECTION mode.

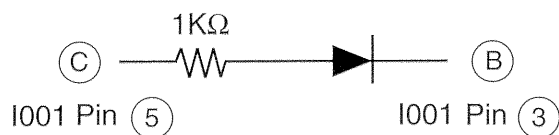
Adjustment Procedure

- (1) Select the registration point using $\blacktriangleup$, $\blacktriangledown$ button and received Channel No. is memorized by pressing the ENTER button.
Note: 4CH can be memorized.
- (2) Check that volume level changes and sets 100%–50% (5% step) using $\blacktriangleright$, $\blacktriangleleft$ button.

2-5-3 CLOCK mode (Clock operation check)

Adjustment Preparation

- (1) Connect diode (1S2076, 1SS270TA or equivalent) between (C) and (B).

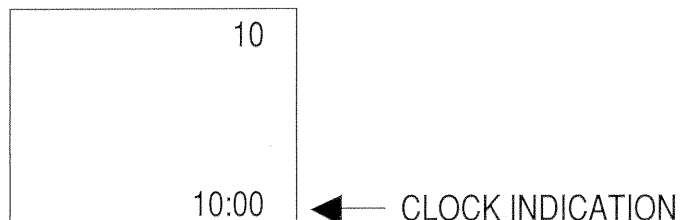


Remarks: The addition of the above diode intends to check the operation with clock counting operation as 60 times mode.

- (2) Set to CLOCK SET mode.

Adjustment Procedure

- (1) After clock setting is done and the indication disappears, perform CH indication. Check that clock indication is displayed in addition to the CH indication, and that the clock indication is going to 1 second per minute.



2-5-4 PICTURE mode

Adjustment Preparation

- (1) Receive the color bar signal. $\blacktriangleright$; BRIGHTER
- (2) Set to CONTRAST mode. $\blacktriangleleft$; DARKER

Adjustment Procedure

- (2) Check that CONTRAST is changed by pressing control $\blacktriangleleft$, $\blacktriangleright$ buttons.

Adjustment Preparation

- (3) Set to TINT mode. $\blacktriangleright$; MORE GREEN
 $\blacktriangleleft$; MORE RED

Adjustment Procedure

- (3) Check that TINT is changed by pressing control $\blacktriangleleft$, $\blacktriangleright$ buttons.

Adjustment Preparation

- (4) Set to COLOR mode. $\blacktriangleright$; DEEPER
 $\blacktriangleleft$; LIGHTER

Adjustment Procedure

- (4) Check that COLOR is changed by pressing control $\blacktriangleleft$, $\blacktriangleright$ buttons.

Adjustment Preparation

- (5) Set to BRIGHTNESS mode. $\blacktriangleright$; BRIGHTER
 $\blacktriangleleft$; DARKER

Adjustment Procedure

- (5) Check that BRIGHTNESS is changed by pressing control $\blacktriangleleft$, $\blacktriangleright$ buttons.

Adjustment Preparation

- (6) Set to SHARPNESS mode. $\blacktriangleright$; CLEARER
 $\blacktriangleleft$; SOFTER

Adjustment Procedure

- (6) Check that SHARPNESS is changed by pressing control $\blacktriangleleft$, $\blacktriangleright$ buttons.

Adjustment Preparation

- (7) Set to WHITE CONTROL mode. $\blacktriangleright$; WARM
 $\blacktriangleleft$; COOL

Adjustment Procedure

- (7) Check that WHITE CONTROL is changed by pressing control $\blacktriangleleft$, $\blacktriangleright$ buttons.

Adjustment Preparation

- (8) Set to RESET mode.

Adjustment Procedure

- (8) Check that all picture setting modes return to delivery settings by pressing ENTER button.

2-5-5 SOUND mode (Except C053)

Adjustment Preparation

- (1) Set to BALANCE mode. $\blacktriangleright$; RIGHT
 $\blacktriangleleft$; LEFT

Adjustment Procedure

- (1) Check that BALANCE is changed by pressing control $\blacktriangleleft$, $\blacktriangleright$ buttons.

Adjustment Preparation

- (2) Set to BASS mode. $\blacktriangleright$; STRONG
 $\blacktriangleleft$; WEAK

Adjustment Procedure

- (2) Check that BASS is changed by pressing control $\blacktriangleleft$, $\blacktriangleright$ buttons.

Adjustment Preparation

- (3) Set to TREBLE mode.

Adjustment Procedure

- (3) Check that TREBLE is changed by pressing control ◀/▶ buttons.

Adjustment Preparation

- (4) Set to RESET mode.

Adjustment Procedure

- (4) Check that all sound setting modes return to delivery settings by pressing ENTER button.

Adjustment Preparation

- (5) (a) Set to "VOLUME" step at *10. Set to "BASS" and "TREBLE" at center when "LOUDNESS" is turned OFF. Set to "LOUDNESS" Mode.
(b) Set "LOUDNESS" to OFF, and "BASS/TREBLE" to center.
(c) Set it to LOUDNESS Mode.

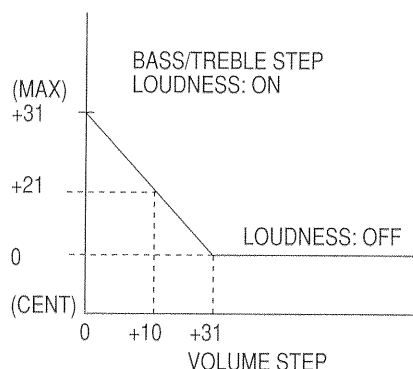
Adjustment Procedure

- (5) Check that "BASS" and "TREBLE" are changed as below table when set to 'LOUDNESS' is turned ON by pressing (◀) or (▶) control button "LOUDNESS" turn OFF after checked.

LOUDNESS	BASS	TREBLE
OFF	CENTER	
ON	+21 STEP	

(when volume is st 10)

***Note:** According to Volume Setting Level, this function works as shown in below figure.



V. + B ADJUSTMENT (THIS ADJUSTMENT MUST BE DONE AFTER 30 SECONDS OR MORE HEAT-RUN)

- (1) Receive Circle pattern signal.
- (2) Set BRIGHTNESS control and CONTRAST control to maximum.
- (3) Set the AC voltage 120V±1V (Distortion is 3% or Less)
- (4) Connect the DC voltmeter to R909.
- (5) Adjust R928 so that the indication of the DC voltmeter is 96.0±0.3V.

VI. DEFLECTION CIRCUIT PICTURE ADJUSTMENT OPERATION CHECK

1. M3LXU CHASSIS HIGH VOLTAGE LIMITER CIRCUIT OPERATION CHECK

Adjustment Preparation

- (1) Connect a high voltage voltmeter between CPT anode terminal (anode capside) and the ground as shown.

- (2) Set AC input voltage to 120±3V.
- (3) Receive Circle pattern and set "BRIGHTNESS" and "CONTRAST" to maximum. Adjust Screen VR so that beam current is $I_{B\pm 0.1\text{mA}}$. (The voltage of ABL terminal -C725 both ends should be 12V or less)
- (4) Connect R831 (Q804 collector side) to GND.

Adjustment Procedure

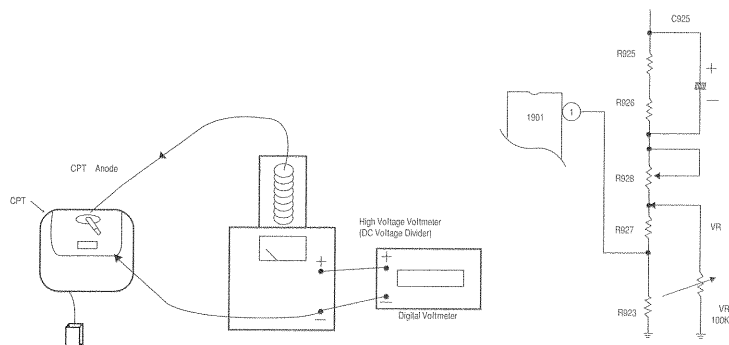
- (1) Check that the normal high voltage and +B voltage is as below.

CHASSIS	EHT ±1KV	IB±0.1mA	IB±0.3V	E1±1.2KV
C755/C756	27.5 (KV)	1.5 (mA)	96.0 (V)	32.5 (KV)
C750	27.5 (KV)	1.5 (mA)	96.0 (V)	32.5 (KV)

Adjustment Preparation

- (5) Set AC input voltage to 120±3V. Then, connect the VR (100K-B) to R925 and ground side as below.

Note: At that time the value of VR should be maximum.



Use the voltmeter in input impedance 10M ohm or more with indication to the 1st demical 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.

2. M3XU CHASSIS HIGH VOLTAGE LIMITER CIRCUIT OPERATION CHECK

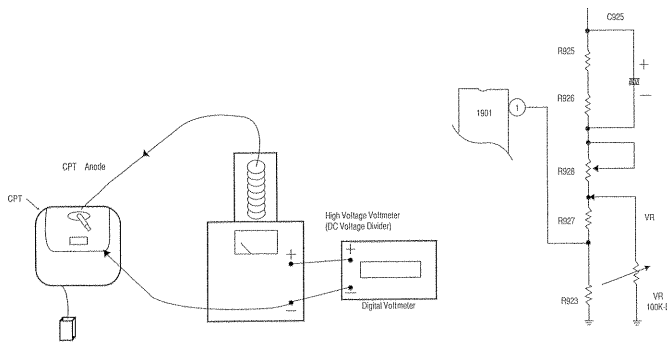
Adjustment Preparation

- (1) Connect a high voltage voltmeter between CPT anode terminal (anode capside) and the ground as shown as follows.
- (2) Set AC input voltage to 120±3V.
- (3) Receive Circle pattern and set "BRIGHTNESS" and "CONTRAST" to maximum. Adjust Screen VR so that beam current is $I_{B\pm 0.1\text{mA}}$. (The voltage of ABL terminal -C725 both ends should be 12V or less)

Adjustment Procedure

- (1) Check that the normal high voltage EHT as below.

CHASSIS	EHT ±1KV	IB±0.1mA	E1±1.2KV
C053	27.5 KV	1.1 mA	30.5 KV



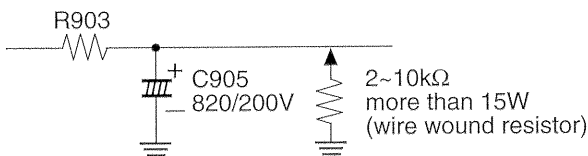
Use the voltmeter of input impedance 10M ohm or more with indication to the first decimal place.

Adjustment Preparation

- (4) Turn the power ON and receive circle pattern signal. Set PICTURE and BRIGHTNESS to maximum and the others to the normal (RESET) condition.
- (5) Turn the power OFF and short circuit both ends of R906 with jumper wire.
- (6) Adjust the slidac so that the input power voltage of TV set to $100 \pm 5V$.
- (7) Turn the power ON and increase the input power voltage gradually while adjusting the slidac. Check the indicated value by the high voltage voltmeter and picture condition.
- (8) While continuing the above operation, read the operating voltage of X-ray protection circuit E1.
- (9) When X-ray protection circuit operates, set the input power voltage to zero by the slidac and remove the jumper wire and the high voltage voltmeter.

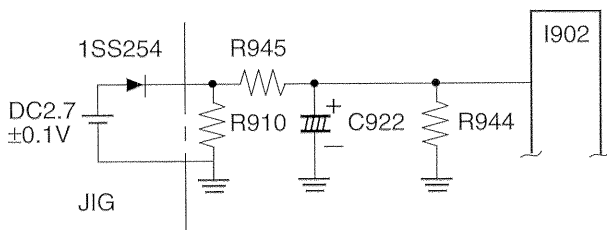
3. M3LXU CHASSIS FBT PROTECTION CIRCUIT OPERATION CHECK

- (1) Set "CONTRAST" to MAXIMUM, "BRIGHTNESS" to CENTER.
- (2) Connect an 18K Ω 1/2W resistor between +B line and D711 cathode. Check that the picture disappears.
- (3) Immediately after checking, DISCONNECT the power cord of the set.
- (4) Discharge C905 as follows.



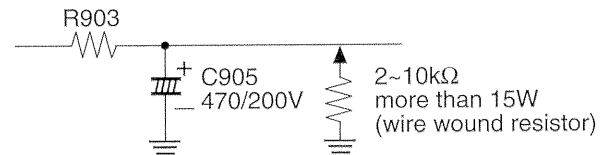
4. M3XU CHASSIS FBT PROTECTION CIRCUIT OPERATION CHECK

- (1) Set "CONTRAST" to MAXIMUM, "BRIGHTNESS" to CENTER.
- (2) Apply DC voltage to both end of R910 as below. And check that the picture disappears.



Note: To prevent excess load of R910, DC voltage should be applied to R910 less than 2 sec.

- (3) Immediately after checking, DISCONNECT the power cord of the set.
- (4) Discharge C905 as follows.



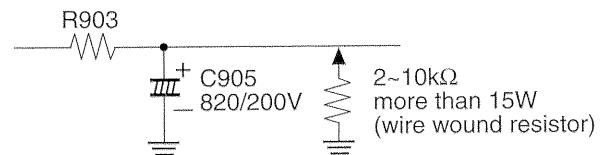
5. CHECK 16V SHORT CIRCUIT PROTECTION CIRCUIT. (M3LXU CHASSIS ONLY)

Adjustment Preparation

- (1) Set "CONTRAST" to MAXIMUM, "BRIGHTNESS" to CENTER.

Adjustment Procedure

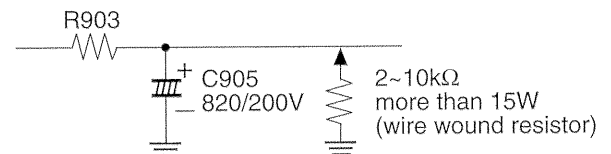
- (1) Connect 10K Ω resistor between Q945 base and GND and check that the picture disappears.
- (2) Disconnect resistor and the power cord immediately.
- (3) Discharge C905 as follows.



6. LOAD SHORT CIRCUIT PROTECTION CIRCUIT OPERATION CHECK

Adjustment Procedure

- (1) Receive circle pattern signal.
- (2) Set "CONTRAST" to MAXIMUM, "BRIGHTNESS" to CENTER.
- (3) After turning on the switch of the set, confirm that the DC voltage of D019, D020, D703 and D717 at each cathode side should be $6V \pm 1.0V$.
- (4) Short-circuit both ends of R091 and check that the picture disappears within 2-3 sec.
- (5) Disconnect short-circuit for R091 and the power cord.
- (6) Discharge C905 as follows.



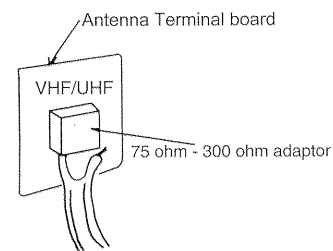
7. WEAK ELECTRIC FIELD CHECK

Adjustment Preparation

- (1) Connect one side of the 300 ohm feeder to 75 ohm-300 ohm antenna adaptor. Connect the antenna adaptor to the VHF antenna terminal board as shown below.
- (2) Turn to no signal condition.

Adjustment Procedure

- (1) Check that the phenomena such as oscillation and abnormal beat etc. do not occur in all the channel.



VII. P IN P OPERATION CHECK

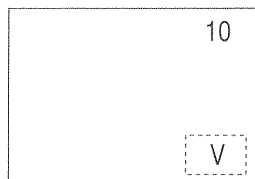
1. P IN P EXCEPT C750/C053

Adjustment Preparation

- (1) Connect a signal to ANT input and receive it.
- (2) Connect a signal to VIDEO input.

Adjustment Procedure

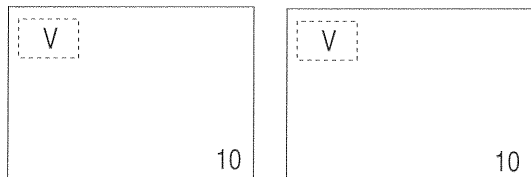
- (1) Check that by pressing "P in P" button of remo-con, sub-picture alternates between ON and OFF. When sub-picture is ON, check that the channel number and "V" are displayed.



2. SHIFT

Adjustment Preparation

- (1) Press "P in P" button to set to P in P mode.



Adjustment Procedure

- (1) Check that by pressing SHIFT button of remo-con, sub-picture moves counterclockwise. At this time, check that "V" of sub-picture also moves as well.

Note: When sub-picture is in the upper side of the screen, the channel number of main picture comes to the lower right, as shown in the figure.

3. EXCHANGE

Adjustment Preparation

- (1) Press "P in P" button to set to P in P mode.

Adjustment Procedure

- (1) Check that by pressing "EXCHANGE" button, the contents of main picture and sub-picture are exchanged.

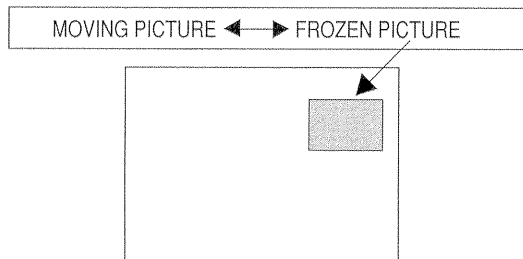
4. FREEZE

Adjustment Preparation

- (1) Connect a signal to ANTENNA input and VIDEO input. (One or both of the pictures should be moving picture).
- (2) Press "P in P" button to set to P in P mode.
- (3) Sub-picture should be moving picture by pressing "EXCHANGE" button.

Adjustment Procedure

- (1) Check that, by pressing "FREEZE" button, sub-picture alternates between moving picture and frozen picture.



- (2) Press "P in P" button to make sub-picture disappear.

5. FREEZE (AT P IN P OFF)

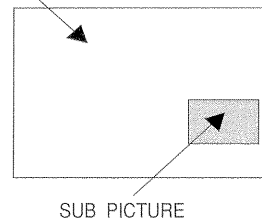
Adjustment Preparation

- (1) Connect a signal to ANTENNA input and VIDEO input. Both signals should be moving picture.
- (2) Set P in P to OFF.

Adjustment Procedure

- (1) Check that frozen picture of main screen appears by pressing FREEZE button of the remo-con.
- (2) Check it also in the TV and VIDEO modes.
- (3) Check that sub-picture disappears by pressing FREEZE button at picture frozen.
- (4) Check that it turns to normal P in P sub-picture by pressing P in P button at picture frozen.

MOVING PICTURE



VIII. FINAL ASSEMBLY ADJUSTMENT/COMMON SERVICE ADJUSTMENT

1. PURITY CONVERGENCE ADJUSTMENT

Note: For Non ITC type A51KQN61X (20V), A68KRQ58X (HITACHI 27V), apply item 1.1-1.2(8).

For ITC Type A68ADT25X01 (27V), only apply item 1.2(8) (Purity check)

1-1 Preparation of adjustment

- (1) Keep DY stuck to CPT funnel.
- (2) Turn ON the set and receive cross-hatch signal (or circle pattern signal). Adjust the static convergence coarsely according to item 1-5.
- (3) Receive circle pattern signal and adjust the white balance according to item 1-4 (4-9).
- (4) Set BRIGHTNESS control and CONTRAST control to maximum and apply heat-run to the set with circle pattern signal received for 40 min or more.

1-2 Purity adjustment

THIS ADJUSTMENT METHOD APPLIES TO THE PURITY ADJUSTMENT BY USING MICROSCOPE.

- (1) Adjust coarsely White balance, Static convergence (center) and Focus.
- (2) Receive circle pattern and heat-run more than T minutes with CONTRAST and BRIGHTNESS to maximum. Do not delete the raster nor vary the current before fixing the position of DY. Heat-run should be done with perfect raster. (DY and tilt should have been coarsely adjusted)

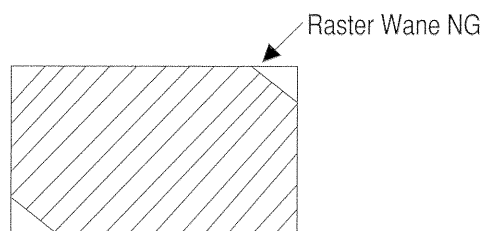


Table 1.

CPT	T
A68KRQ58X	40 Min.
A51KQN61X	20 Min.

- (3) The magnetic field in artificial magnetic field should follow the table below and the set should face as in table 2. Degauss it from outside.

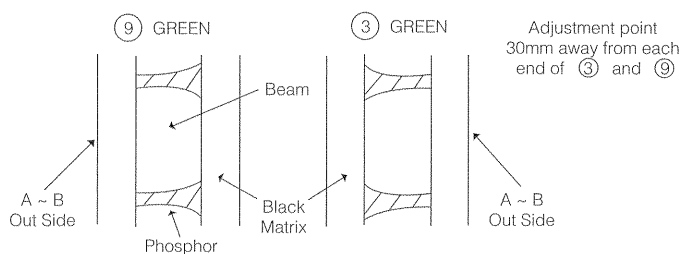
DESTINATION	VERTICAL FIELD	HORIZONTAL FIELD
USA	0.45 G	0.3 G
CANADA	0.54 G	0.15 G
UNIVERSAL	0.35 G	0.3 G
PANAMA, HAWAII	0.2 G	0.3 G
TAIWAN	0.22 G	0.37 G

Table 2.

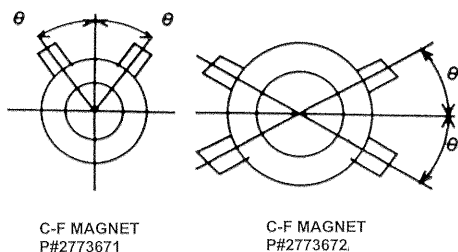
Directions for adjustment

A68KRQ58X	North
A51KQN61X	North

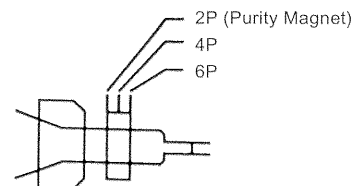
- (4) Adjust the position of purity magnet and DY. Keep the landing balance of (3) and (9), and adjust so that the landing of (3) and (9) is as follows while observing with a microscope.



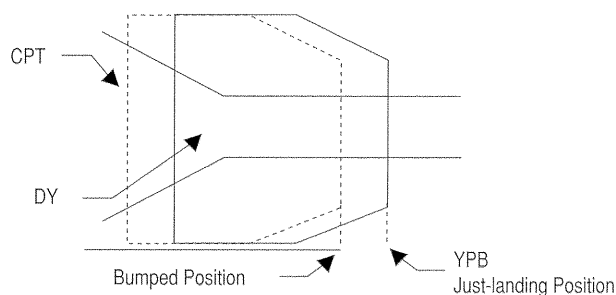
- (a) Open the purity magnet as follows in order to move the raster only in the right-left direction.



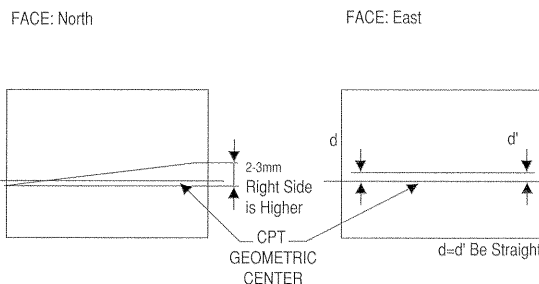
Keep the balance of (3)/(9) DY landing



- (b) YPB (Yoke pull-back) should be as follows. (Distance between the bumped position of DY toward the funnel and the just-landing position of (3) and (9))

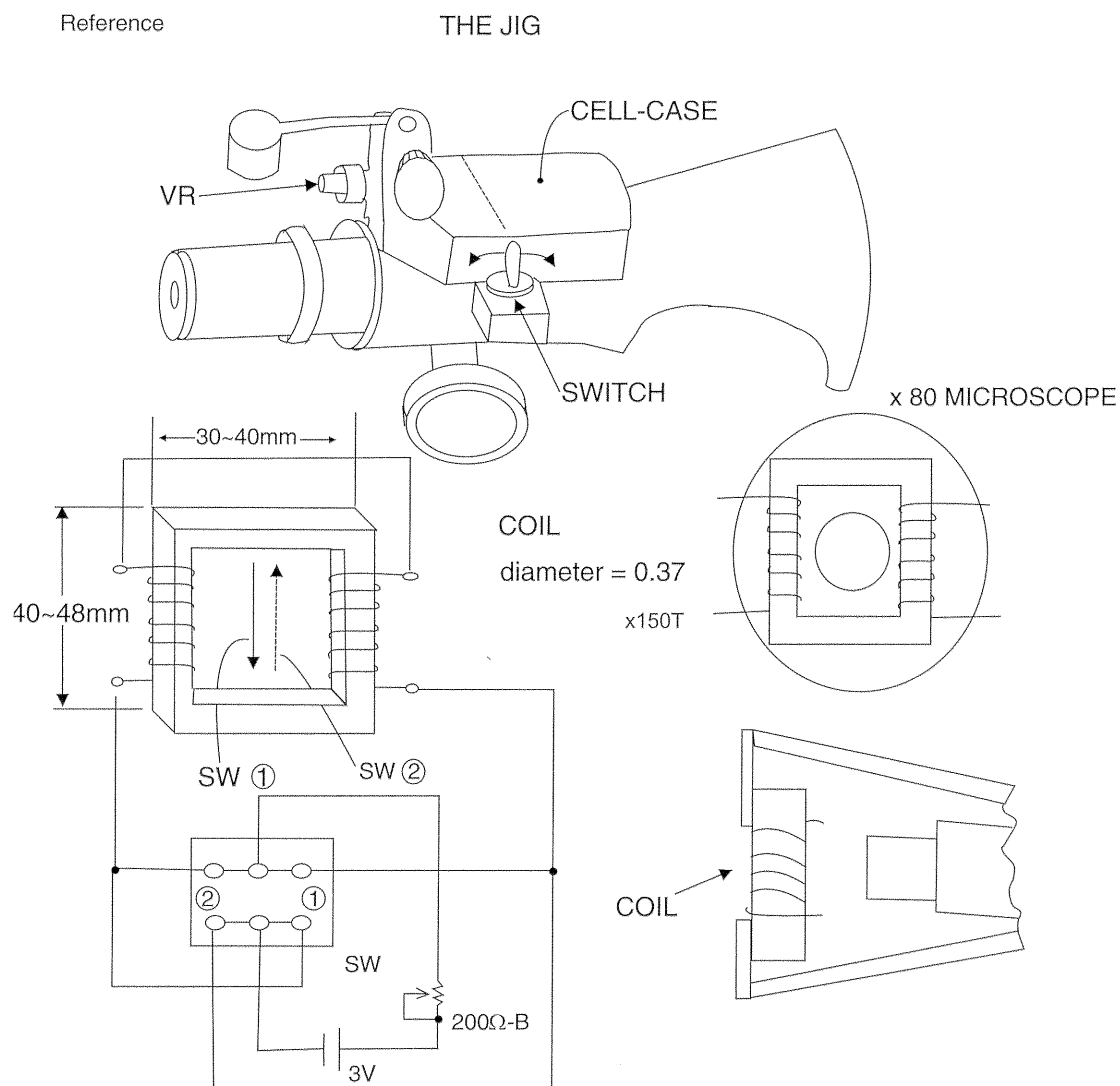


- (c) DY tilt should be as follows.



- (5) Fix DY with fixing torque of 14kg.cm. Control the torque by an electric driver.
- (6) If any miss landing occurs, correct with magnets. If any wane of 10μ or so, judge by white unevenness. At this time, if the white unevenness is all right, any magnet is not needed.
- (7) After peripheral convergence is adjusted, check the position of DY and tighten the DY again. (14kg.cm)
- (8) 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 unevenness.
- (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.

THE MICROSCOPE



Fix coil to CRT side of microscope. Set it upside down and measure it. Check that beam moves to the right and left equally in quantity. Be careful at assembly that core does not tilt because upward (downward) magnetic field by coil moves the beam to the right (left) or type MS-50X microscope of KANSAI DENKI.

1-3 PURITY ADJUSTMENT

(This adjustment method applies to purity adjustment by hand operation.)

- (1) Use an artificial magnetic field and set the field strength as follows.

*Magnetic field in CPT axis direction: 0 Gauss

*Magnetic field which is vertical to CPT axis:

U.S.A., Hawaii, Panama, Guam

Bolivia, Peru, Universal 0.3 Gauss

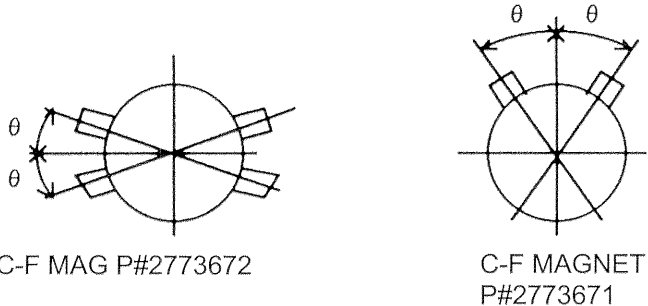
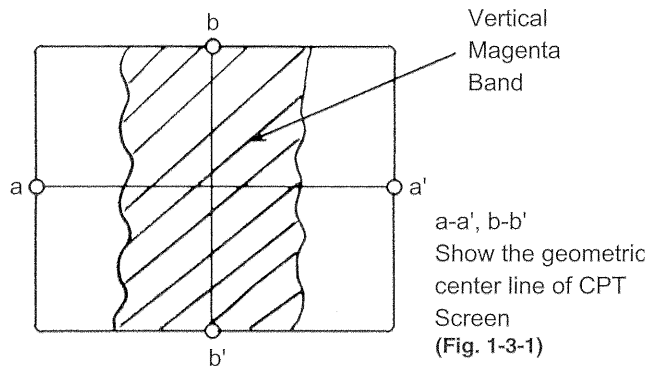
Canada 0.15 Gauss

Taiwan 0.37 Gauss

(The direction of the magnetic field should be from the left side to the right side of the CPT screen as you face it.)

- (2) Adjust Focus coarsely according to item 2.

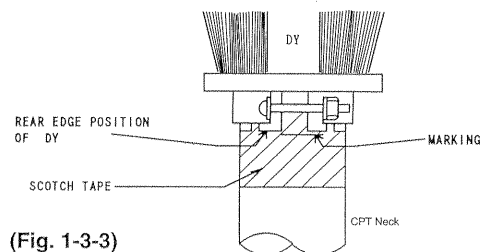
- (3) Adjust Convergence coarsely according to item 1-4 and 1-5.
- (4) Receive Circle Pattern signal and check that Contrast and Brightness are maximum.
- (5) Receive magenta signal. When the magenta signal is not available, short-circuit between the base and emitter of Q855 to set to magenta.
- (6) Press DY fully against CPT funnel and turn the purity magnet so that the vertical magenta band comes to the center of the picture (Fig. 1-3-1). Check that color unevenness of both sides are approximately equal at this time. The openings of the purity magnet should be symmetric (Fig. 1-3-2.).



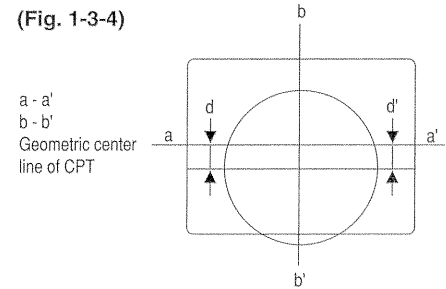
The openings of the purity magnet should be symmetric:
on the right and left sides (P#2773671)
on the upper and lower sides (P#2773672)

(Fig. 1-3-2)

- (7) Receive the single red signal.
When the single red signal is not available, short-circuit between the base and emitter of Q845, and between the base and emitter of Q857 to set to single red.
- (8) Pull back DY gradually and when the color unevenness of both sides of the picture disappear, mark the rear edge position of DY on the tape wound around CPT neck as shown in Fig. 1-3-3.
Pull back DY further and just before the color unevenness starts to appear on the both sides of the picture, mark the rear edge position of DY on the tape by the same way.
At this time, pull back DY so that the center axis of DY and CPT axis match.



- (9) Move DY so that the rear edge position of DY comes to the center of the two marked lines and fasten DY as $d=d'$. (Fig. 1-3-4.). Further insert the rubber wedge between DY and CPT funnel from the top and raise DY backwards.



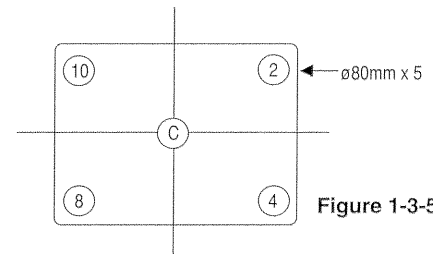
- (10) Set CPT axis direction magnetic field of the artificial magnetic field according to the artificial magnetic field setting list classified by destination.
(The direction of the magnetic field should be from the CPT screen side to the neck side.)
- (11) After degaussing it from outside, check the purity in each color of R, G and B visually.
Then, turn the screen to white and check the landing at the screen position shown in Fig. 1-3-5 with a microscope.

Criteria with microscope

There should be no miss landing at positions 2, 4, 8 and 10

Green beam should be at the center of the green phosphor at position C. (Refer to the miss landing criteria.)

- (12) Turn over the direction of CPT axis direction magnetic field of the next artificial magnetic field and check it by the same way as item (11). The positions of miss landing criteria with a microscope should be 2, 4, 8 and 10 (Fig. 1-3-5).



Miss landing criteria

The following conditions are defined as miss landing. Each color beam shines on the phosphor of the applied color and there are phosphor parts which are not luminous (shaded parts in the right figure) between the luminous parts and black matrix. Or, each color beam shines on the phosphor of not applied color.

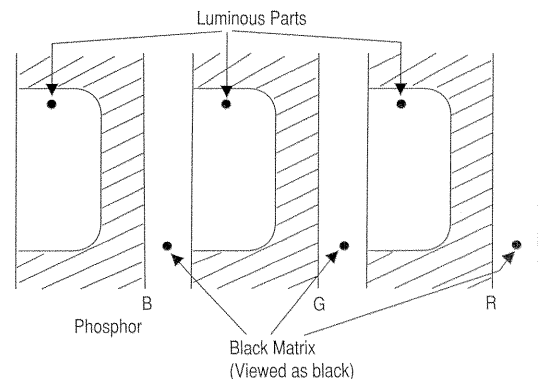
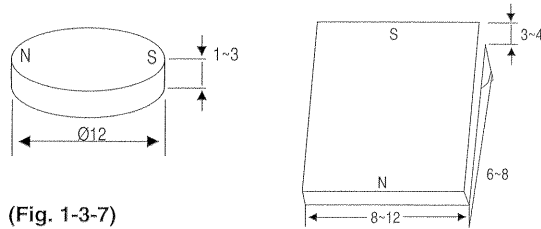


Figure 1-3-6 Enlarged view of screen with microscope

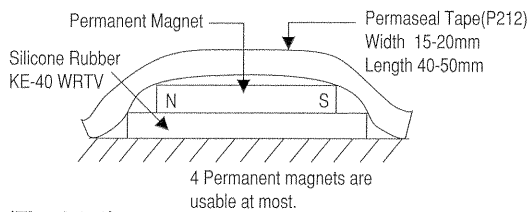
- (13) To improve the miss landing mentioned above, it's acceptable to stick the permanent magnet to CPT funnel (Fig. 1-3-7, Fig. 1-3-8).

Usage

Apply a silicone rubber KE-40 WRTV to the permanent magnet shown in the Fig., adhere it to the CPT funnel and then fix it with permaseal tape P212.



(Fig. 1-3-7)



(Fig. 1-3-8)

- (14) Final purity criteria should satisfy the miss landing criteria.
(15) When delivering the sets, set CPT axis direction magnetic field to 0 Gauss and degauss is from outside.

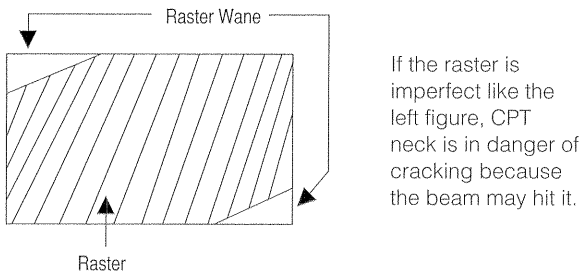
Table 3

Artificial magnetic field setting list classified by destination

DESTINATION	VERTICAL FIELD	HORIZONTAL FIELD
USA	0.45 G	0.3 G
CANADA	0.54 G	0.15 G
UNIVERSAL	0.35 G	0.3 G
PANAMA, HAWAII	0.2 G	0.3 G
TAIWAN	0.22 G	0.37 G

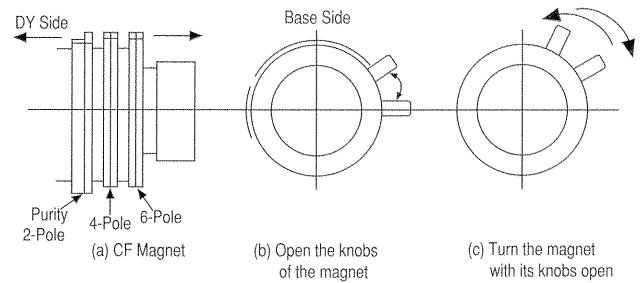
Notes for pre-heat

Before pre-heating, stick DY to CPT funnel and fix it so that the raster is perfect.



1-4 Static Convergence Adjustment (Screen center part) (Except ITC CPT)

- (1) Receive a cross-hatch signal and set Brightness to the center and Contrast to minimum.



(Fig. 1-4-1)

- (2) Open the knobs of 4-pole magnet (2 sheets) (Fig. 1-4-1 (b)) and match the blue/red vertical lines at the center of the screen as shown in Fig. 1-4-2 (a).
(3) Turn the 4-pole magnet with its knobs open (Fig. 1-4-1 (c)) and match the blue/red horizontal lines as shown in Fig. 1-4-2 (b).

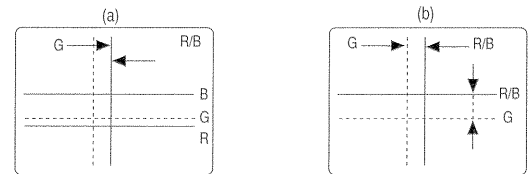
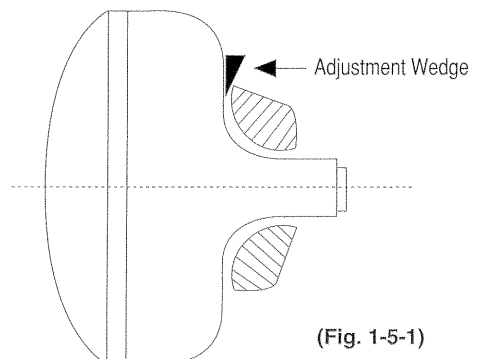


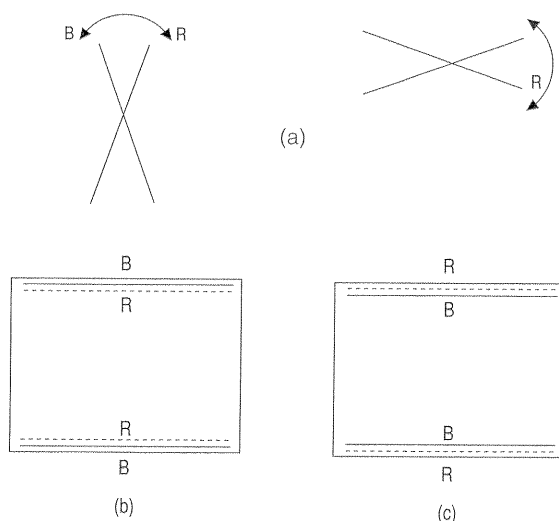
Fig. 1-4-2

1-5 Dynamic convergence adjustment (Except ITC CPT type)

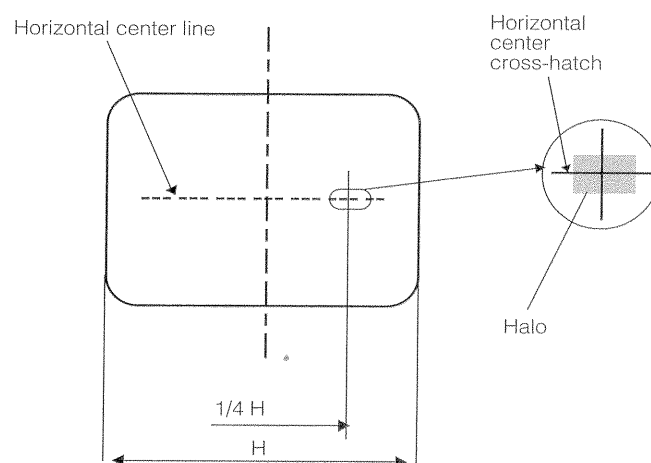
- (1) Insert an adjustment wedge (temporary) between the top of DY opening and CPT funnel as shown in Fig. 1-5-1.
By inserting the wedge gradually, match the red and blue vertical lines at the top and bottom of the screen and also match the red and blue horizontal lines of both sides of the screen as shown in Fig. 1-5-2 (a).
(2) Adjust by swinging in the right/left directions of DY while observing 6 and 12 horizontal lines of the screen and match the red and blue horizontal lines.
As shown in Fig. 1-5-2 (b), when the blue is outside from the red on CPT screen, insert the DY fixing wedge between the right-side DY viewed from the rear of CPT and CPT funnel.
(3) As shown in Fig. 1-5-2 (c), when the blue is inside from the red on CPT screen, insert the wedge between the left-side DY and CPT funnel.
(4) Insert two DY fixing wedge with approx. 120 to the fixing wedge inserted in the item (2) or (3) and remove the adjustment wedge (temporary).
Use the DY fixing wedge after peeling off the tape. After proper location, press and adhere it to the funnel.



(Fig. 1-5-1)



(Fig. 1-5-2)



Note: Adjust the point where the halo on the horizontal line disappears and the focus becomes best. For C053 only.

2. FOCUS ADJUSTMENT

NO.	MODEL	CPT	CONDITION	Focus VR setting position
1	27CX6B C756	A68KRQ58X (HED-US)	- Receive a cross-hatch signal - Contrast control: Maximum - Sharpness control: Center - Brightness control: Where the background is set	Turn the Focus VR gradually clockwise from the full counterclockwise. Then set it to the point where the focus of center vertical line from the screen center becomes best.
2	27CX5B C755 27CX25B C750	A68ADT25X01 (RCA)	Same as above	Turn the Focus VR gradually clockwise from the full counterclockwise. Then set it to the point where the focus of center vertical line from the screen center becomes best.
3	C053	A51KQN61X	- Receive a cross-hatch signal - Contrast control: Maximum - Sharpness control: Center - Brightness control: Where the background is set	While observing the cross hatch signal at 1/4H on the center horizontal line on the screen, turn the focus adjustment VR gradually clockwise from full counterclockwise. Set it to the point where the focus at 1/4H is best. (note) Adjust the point where the halo on the horizontal line disappears and the focus becomes best. For C053 only.

IX. MATCHING CHECK WITH OTHER INSTRUMENTS

1. VIDEO INPUT TERMINAL MATCHING CHECK

Adjustment Preparation

- Input the video signal to the VIDEO 1 IN terminal.
The video signal level should be within 1 ± 0.2 Vp-p (75 ohm termination) with 100% white signal at this time.
- Input the audio signal to the AUDIO 1 IN terminal.
The audio signal level should be $400\text{m Vrms} \pm 20\text{m Vrms}$.
(Connect VCR or TV tuner.)
- Connect an audio AMP to the AUDIO OUT terminals.

Adjustment Procedure

- Check that the set receives signal when selecting the AVX mode, by press the AVX (FUNCTION) button of front panel control of set.
- When external input is performed, the video and audio should not be abnormal.
The 100% white signal that RF input receives should be as bright as the video signal 1Vp-p (75 ohm termination).
As for the sound, when the 100% modulation that RF input receive is 25KHZ, the sound level should be as much as external audio signal (400Vrms) level.

2. S-IN INPUT TERMINAL MATCHING CHECK (EXCEPT C053)

Adjustment Preparation

- Connect a video/chroma signal to S-IN terminal.
- Connect a sound signal to AUDIO input terminals.

Adjustment Procedure

- Check that the set receives signal at S-IN mode.

3. AUDIO OUT LEVEL CHECK

Adjustment Preparation

- Input the same audio signal as item 1(2) to AUDIO IN terminal (L). At this time, connect nothing to R terminal.
- Input the same audio signal as item 1(2) to AUDIO IN terminal (R). At this time, connect nothing to L terminal.
- Check that the normal sound is output from both sides of the speakers when signal in item (1) is input.
- Check that the normal sound is output from only the right (R) speaker when signal in item (2) is input.

Adjustment Procedure

- Check that the audio output of AUDIO AMP connected to AUDIO HiFi OUT terminals or monitor changes according to "VOLUME" of the set.

- (2) Confirm that the output level of item (a) should be 1Vrms (2.8 Vp-p) $\pm 20\%$.
(Above level is equivalent to VOLUME MAXIMUM 100% modulated signal input.)

X. SAFETY CHECK

1. POLARITY CHECK

This check is performed according to UL standard requirement. There should be electricity between AC Power Cord and Chassis Earth.

XI. MTS OPERATION CHECK

1. STEREO/SA BROADCAST RECEIVING CHECK

Adjustment preparation

- (1) Set the TV set so that an MTS broadcast (STEREO/SAP) can be received.

STEREO	11
or SAP	ST
	or SA

- (2) Set MTS mode to STEREO or SAP mode.

Note: To select between "STEREO/SAP", display sound setting of MTS mode and select AUDIO MENU.

- (3) Set BALANCE to the center.

Adjustment Procedure

- (1) When one of the MTS broadcast stereo SAP is received, check that "ST" or "SA" is displayed on the screen.
- (2) Stereo broadcast receiving check
- Select MTS mode and press ENTER button to display "STEREO" on the screen.
 - When only Lch signal is received, Lch sound comes out from the left speaker.
 - When only Rch signal is received, Rch sound comes out from the right speaker.
 - And when monaural signal is received, monaural sound comes out from both the right and left speakers.
- (3) SAP broadcast receiving check
- Select MTS mode. Press sound button to display "SAP" on screen.
 - SAP signal comes out from both of the right and left speakers.
 - When no SAP signal, the sound on "MAIN" side (refer to (3)) comes out.

Note: When the channel selection is performed or RECALL button is operated "ST" or "SA" is shown below the channel no. (approx. for 8 sec.)

2. MTS MODE CHECK

Adjustment Preparation

- (1) Set the TV set so that an MTS broadcast (STEREO/SAP) can be received.
- (2) Set BALANCE to the center.

Adjustment Procedure

- (1) When "MTS MODE" is set to "MONO" mode, check that STEREO and MONO indication which have been ON are turned OFF and that monaural sound comes out from the right and left speakers.
- (2) When "MTS MODE" is set to "STEREO" side, check that STEREO and MONO indication which have been OFF are turned ON and that STEREO and SA sound can be received.

3. STEREO SEPARATION CHECK

Adjustment Preparation

- (1) Set the TV set so that an MTS broadcast (STEREO/SA) can be received.
- (2) Set MTS MODE to "STEREO".
- (3) Connect AUDIO OUT terminals L and R to an oscilloscope.

Adjustment Procedure

- (1) When stereo L only signal (or R only signal) is received, check that the output level ratio of L CH and R CH is 15 dB or more.

Example:

When L only is received (100% modulation)

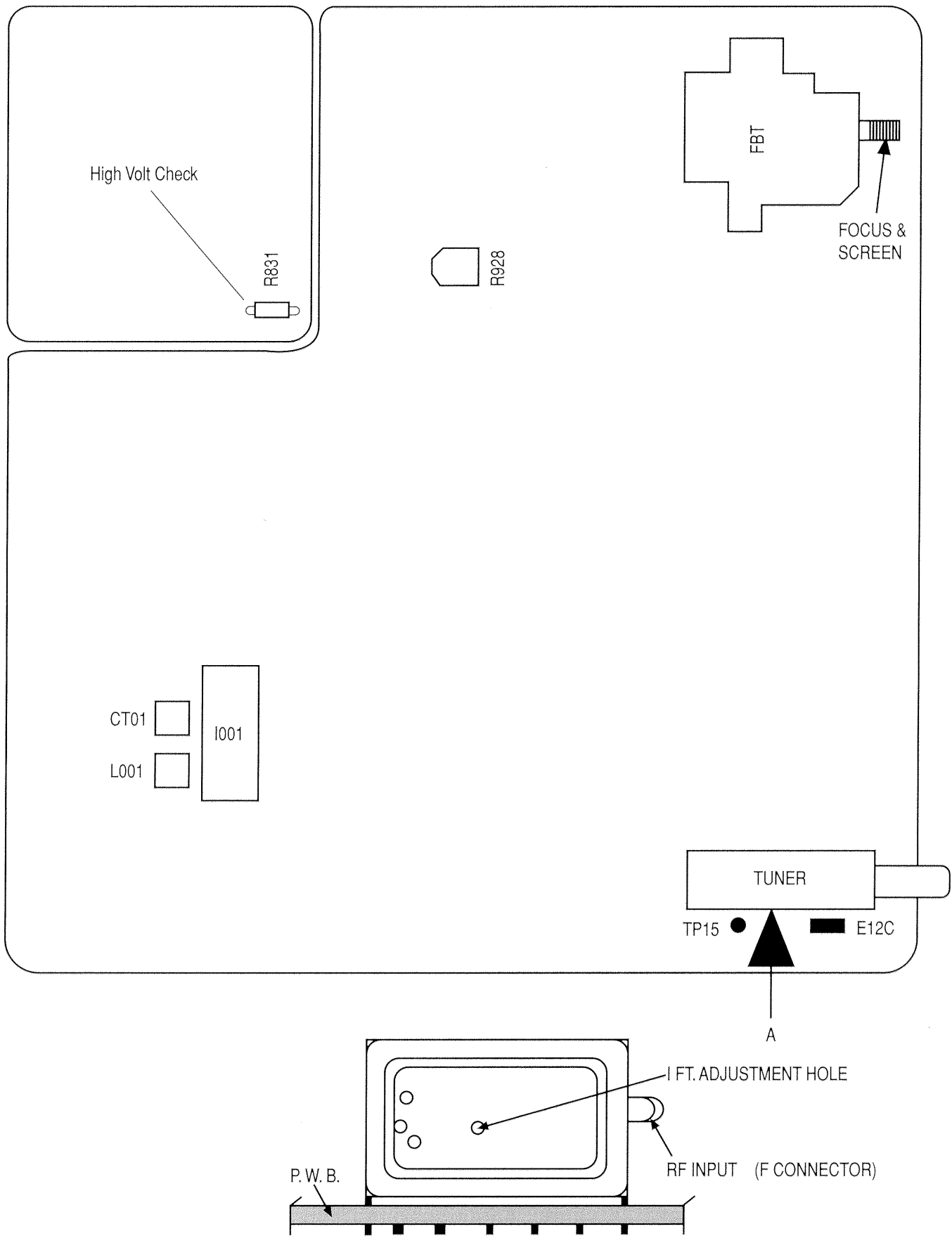
CH	Output Level
L	1.2 Vpp
R	0.21 Vpp or less

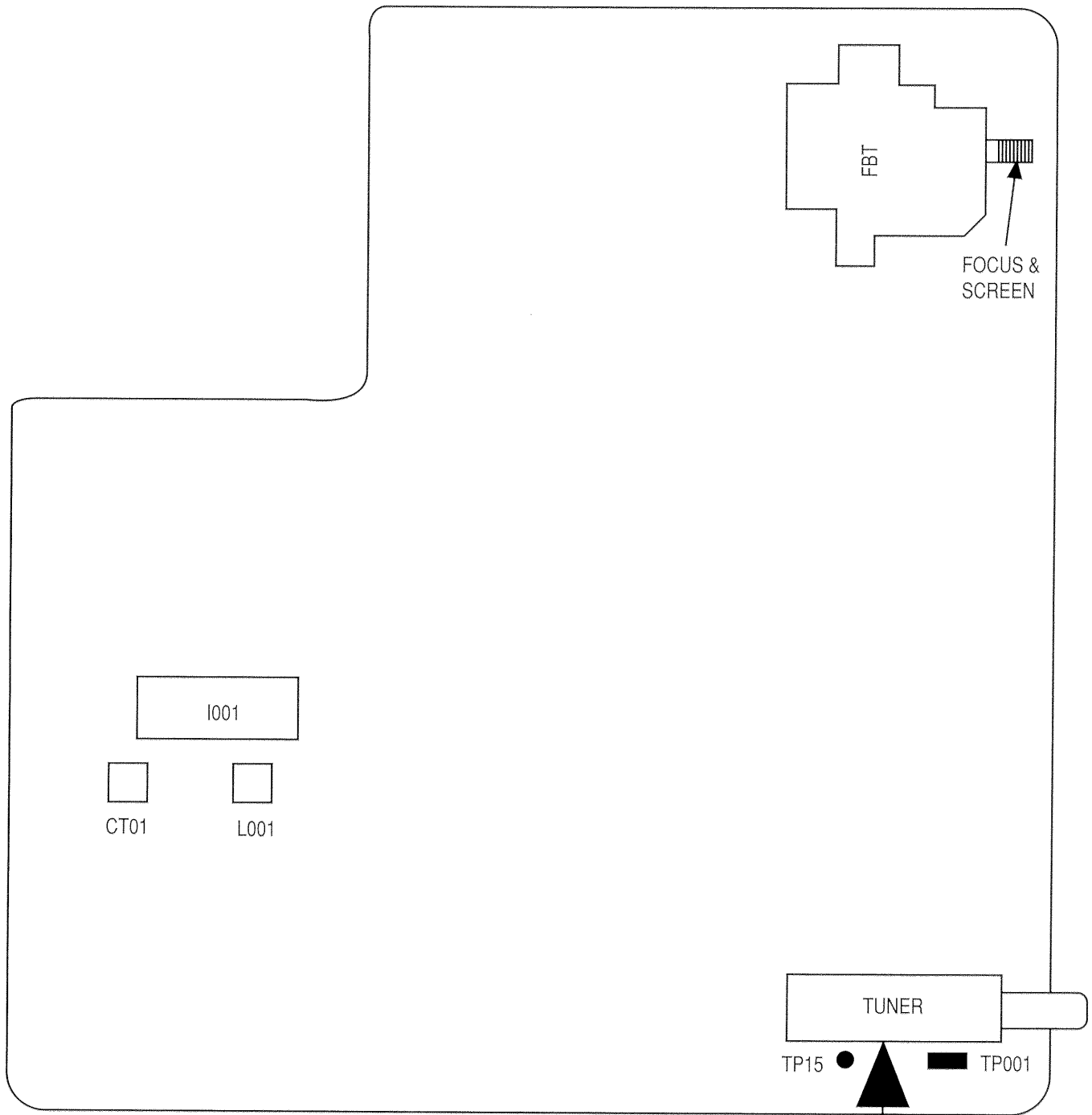
XII. SETTING FOR DELIVERY

NAME	SPECIFICATIONS BY MODELS		
	C755/C756	C750	C053
AIR/CABLE	AIR	AIR	AIR
RECEPTION CHANNEL	CH 03	CH 03	CH 03
SOUND (VOLUME)	10" ON-SCREEN DISPLAY	10" ON-SCREEN DISPLAY	10" ON-SCREEN DISPLAY
INPUT SELECT (AVX)	TV Mode	TV Mode	TV Mode
CONTRAST	Maximum	Maximum	Maximum
COLOR	Center	Center	Center
TINT	Center	Center	Center
BRIGHTNESS	Center	Center	Center
SHARPNESS	Center	Center	Center
WHITE CONTROL	COOL	COOL	COOL
BALANCE	Center	Center	————
BASS	Center	Center	————
TREBLE	Center	Center	————
MTS MODE	STEREO	STEREO	STEREO
LOUDNESS	OFF	OFF	————
INTERNAL SPEAKERS	ON	ON	ON
P IN P	OFF	————	————
CLOSED CAPTION	OFF	OFF	OFF
CLOSED CAPTION MODE	C.C.	C.C.	C.C.
CLOSED CAPTION CHANNEL	1	1	1
MENU LANGUAGE	ENGLISH	ENGLISH	ENGLISH

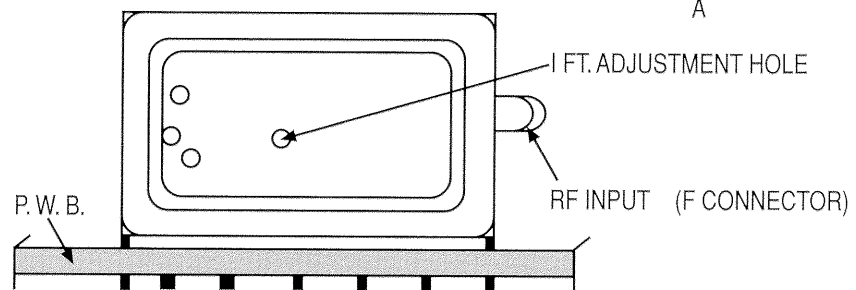
XIII. ADJUSTMENT POSITION LIST

1. M3LXU CHASSIS





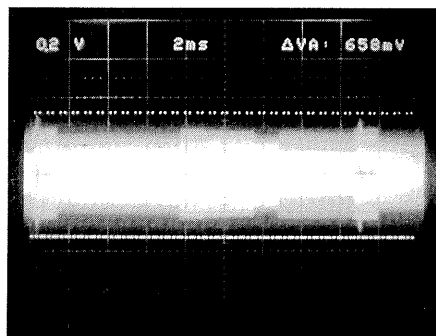
A



WAVEFORMS AT EACH SECTIONS

Numbers inside ○ correspond to locations shown in the circuit diagram

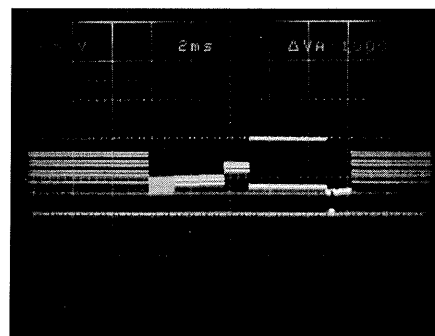
① U101 Pin 7(IF Out)



0.2V/div.

2ms/div.

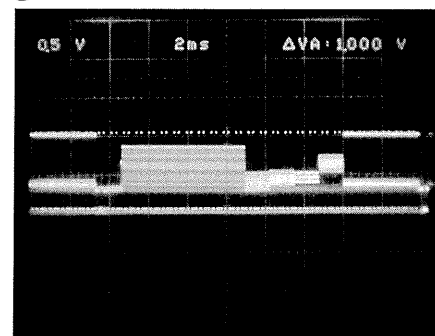
⑤ E301 Pin 8(Y - Out)/I201 Pin 37(TV - In)



0.5V/div.

2ms/div.

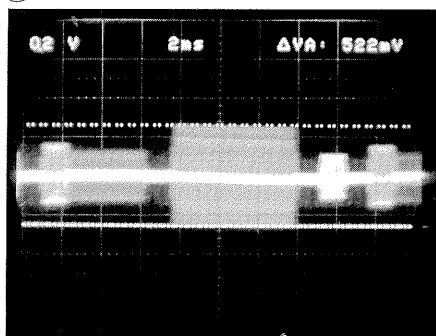
⑨ I301 Pin 3 Video Switch/Q242 Emitter



0.5V/div.

2ms/div.

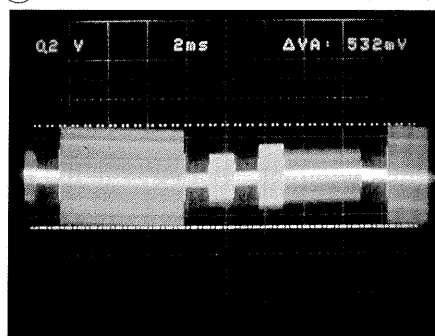
② I501 Pin 3(C - In)/201 Pin 45(C - In)



0.2V/div.

2ms/div.

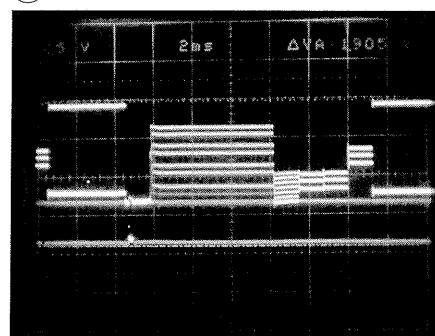
⑥ E301 Pin 6(C - Out)/I201 Pin 45(C - In)



0.2V/div.

2ms/div.

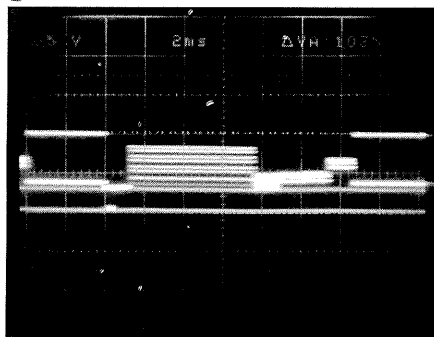
⑩ I201 Pin 41 Video Out



0.5V/div.

2ms/div.

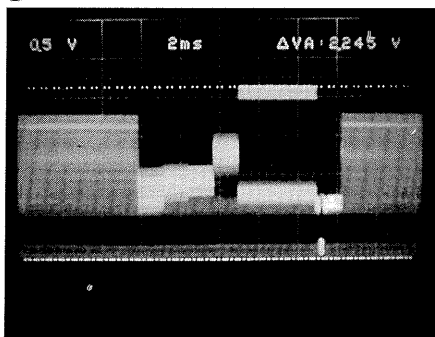
③ I301 Pin 12(C - In)/I201 Pin 43(C - In)



0.5V/div.

2ms/div.

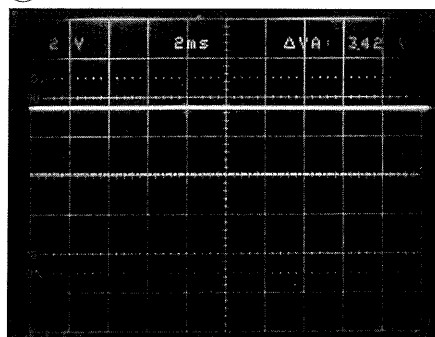
⑦ E301 Pin 4 V(TV)/Q241 Emitter



0.5V/div.

2ms/div.

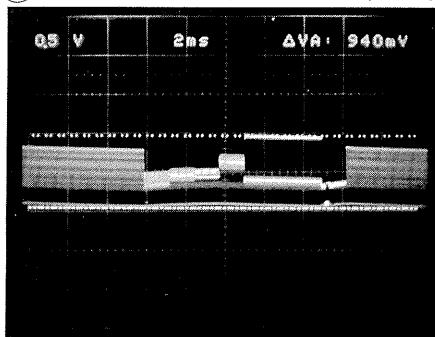
⑪ I201 Pin 44 AFC Out



0.2V/div.

2ms/div.

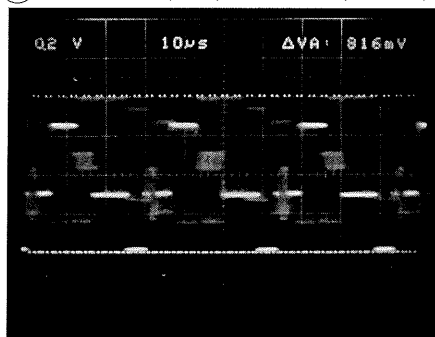
④ E301 Pin 10(C - In)/I201 Pin 45(C - In)



0.5V/div.

2ms/div.

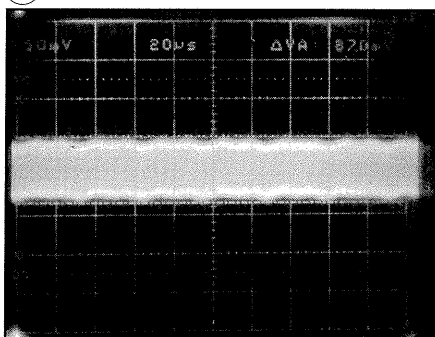
⑧ E301 Pin 2 V(AUX)/I201 Pin 39(AUX - In)



0.2V/div.

10μs/div.

⑫ I201 Pin 52 SIF In



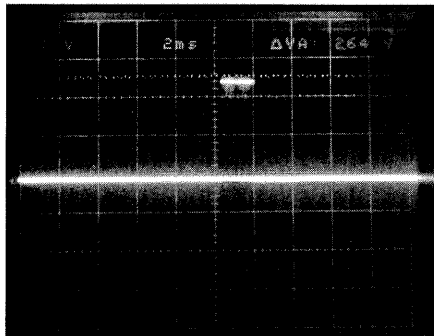
50mV/div.

20μs/div.

WAVEFORMS AT EACH SECTIONS

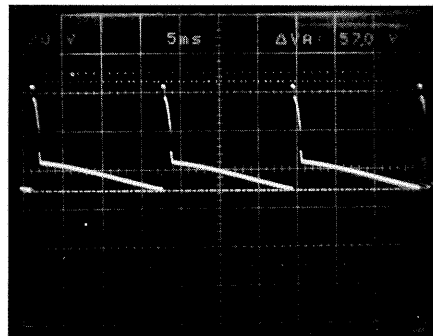
Numbers inside  correspond to locations shown in the circuit diagram

⑬ I201 Pin 14 OSD - BLK



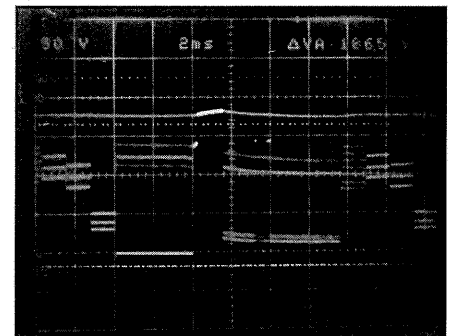
1V/div. 2ms/div.

⑰ I601 Pin 2 V - Out



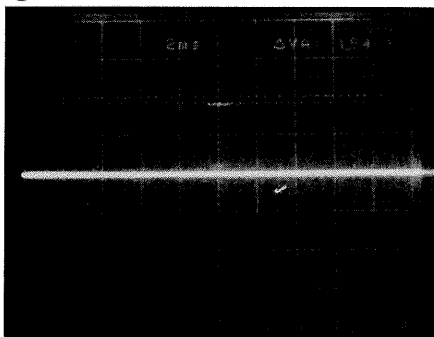
20V/div. 5ms/div.

⑳ Q802 Collector (G - Out)



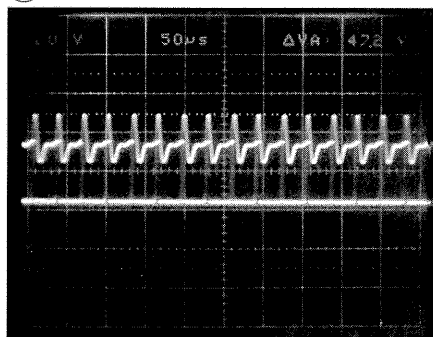
50V/div. 2ms/div.

⑭ I201 Pin 15 OSD - BLK R - In



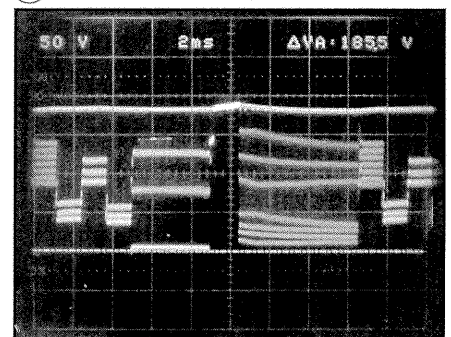
1V/div. 2ms/div.

⑱ Q701 Collector (Hor. Drive)



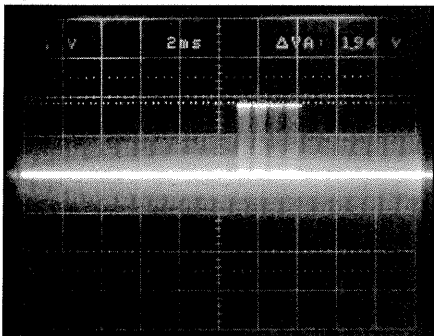
20V/div. 50μs/div.

㉑ Q803 Collector (B - Out)



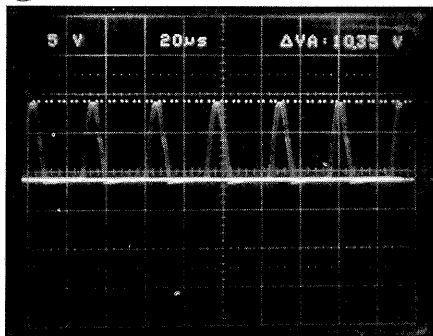
50V/div. 2ms/div.

⑮ I201 Pin 16 OSD - BLK G - In



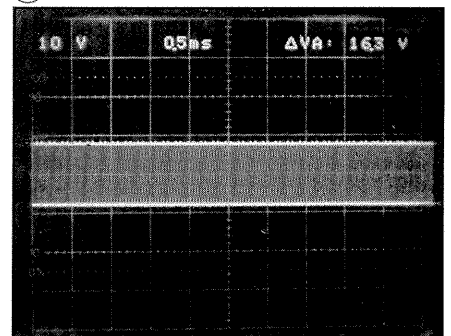
1V/div. 2ms/div.

⑲ Q702 Collector (H.O.T.)



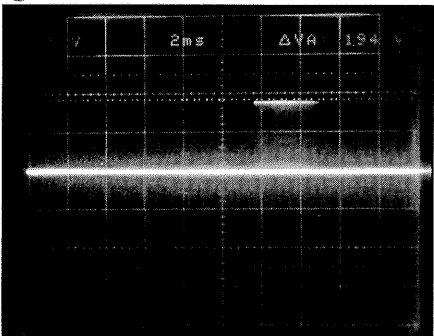
5V/div. 20μs/div.

㉒ I401 Pin 12 R Audio Out



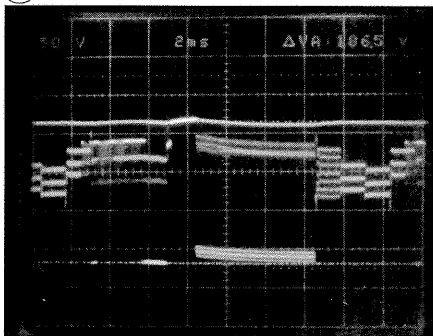
10V/div. 0.5ms/div.

⑯ I201 Pin 17 OSD - BLK B - In



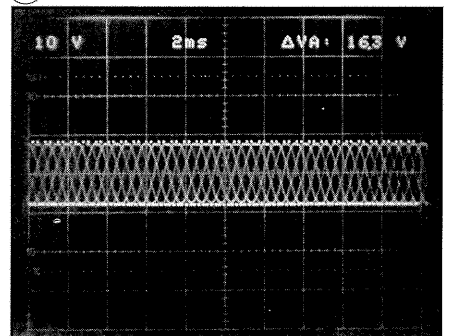
1V/div. 2ms/div.

㉓ Q801 Collector (R - Out)



50V/div. 2ms/div.

㉔ I401 Pin 12 L Audio Out



10V/div. 2ms/div.

TROUBLESHOOTING

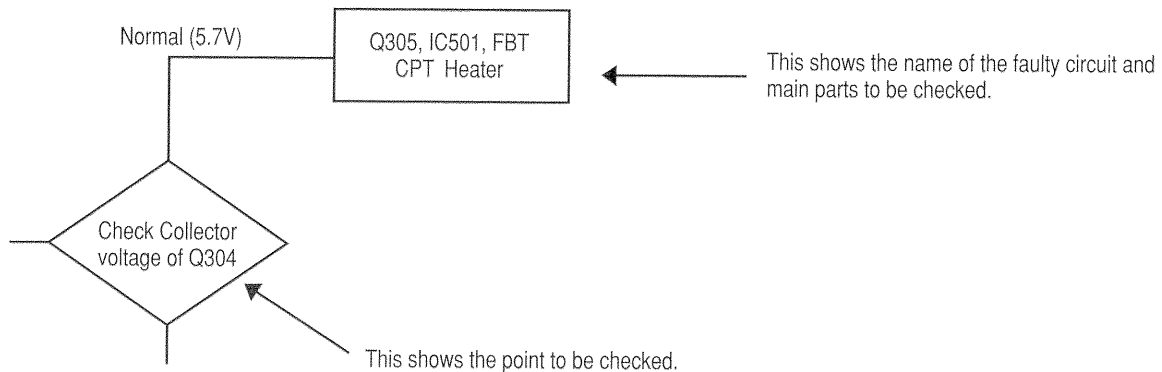
PRODUCT SAFETY NOTE

The shaded and $\triangle$ 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 this components.

HOW TO USE THE FLOW CHART

- (1) The flow chart shows the following:

This shows the name of the faulty circuit and main parts to be checked.
This shows the point to be checked.



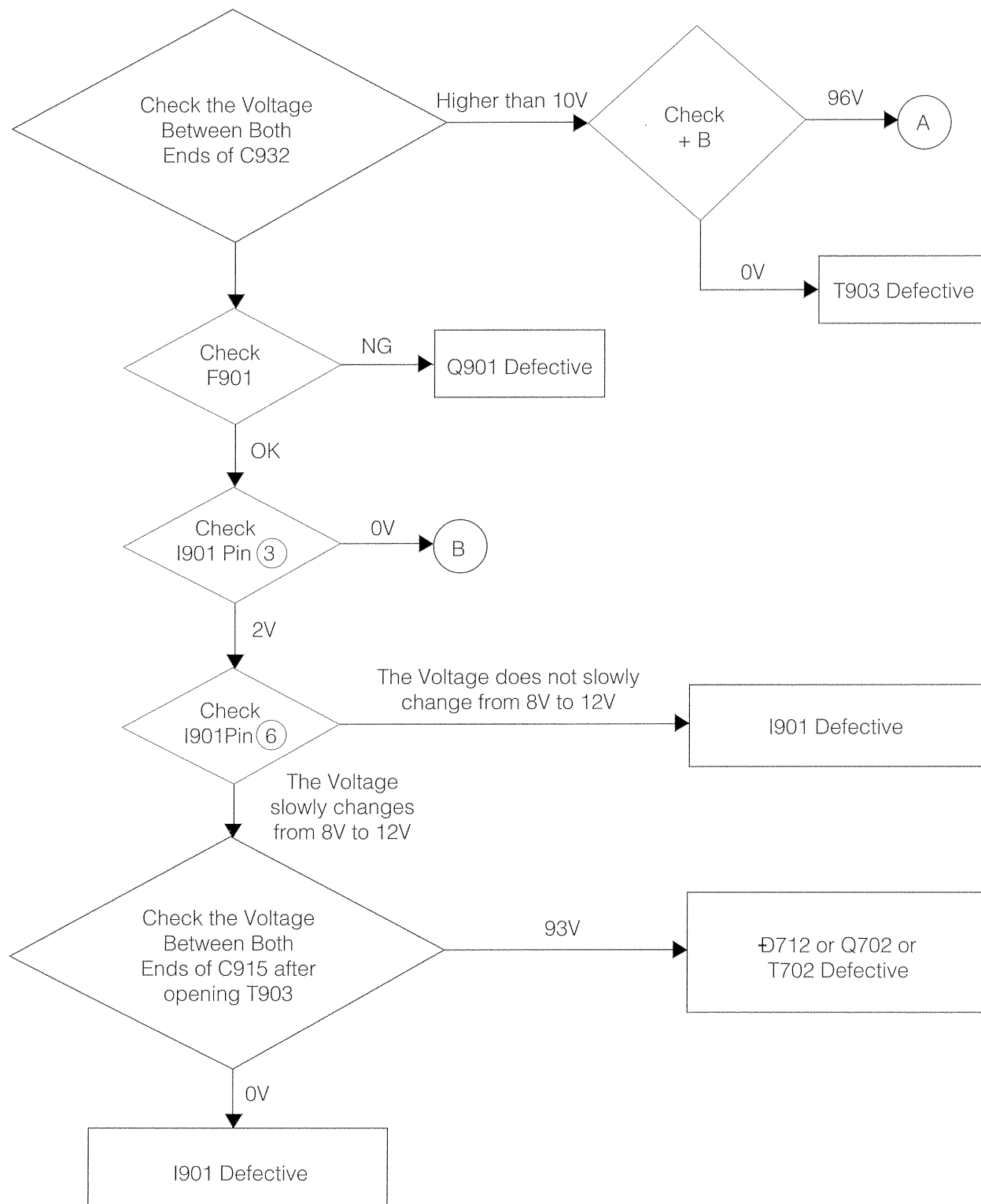
- (2) The voltage shown in the chart may differ to some extent depending on the condition of the set and tester.

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.

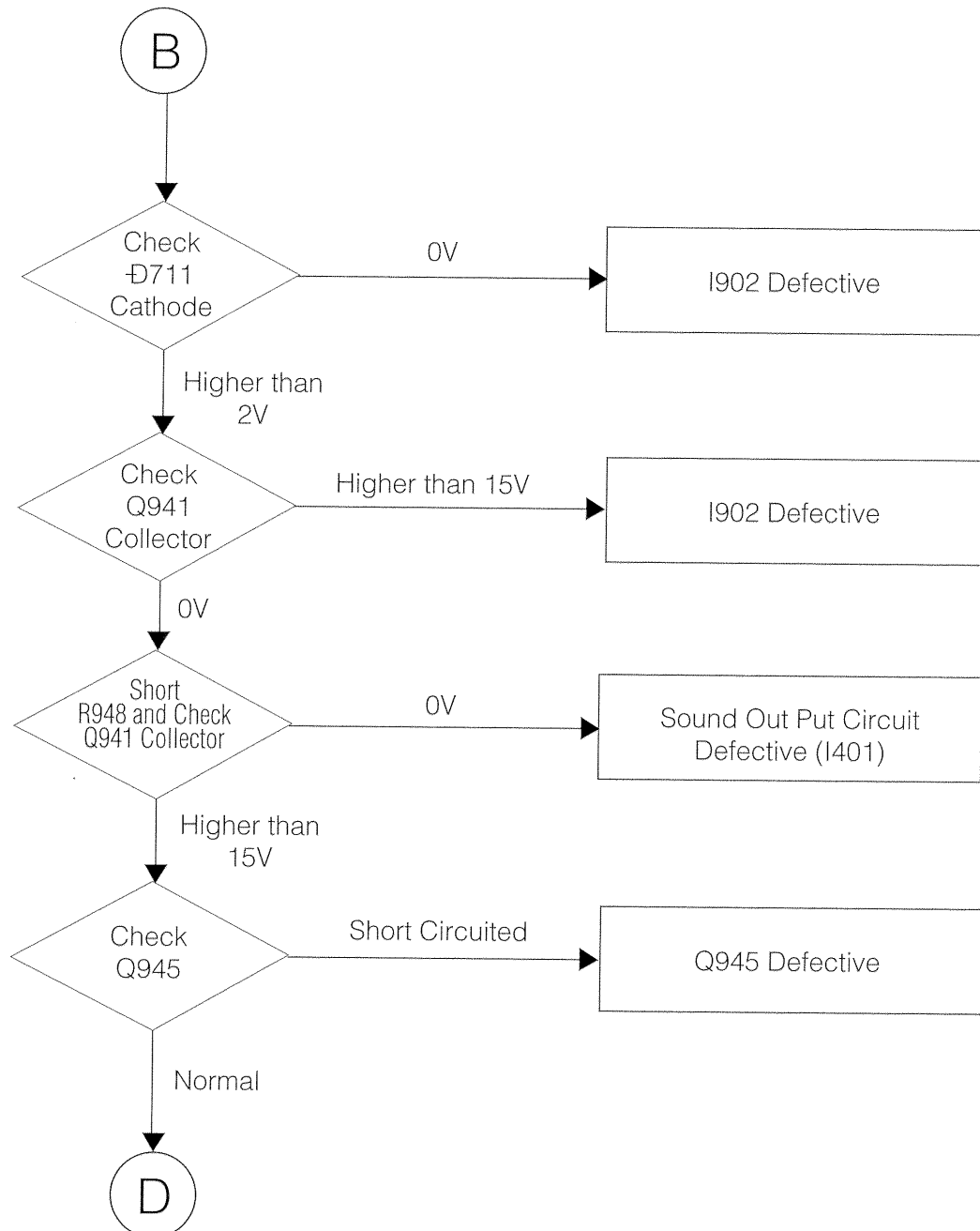
M3LXU CHASSIS TROUBLESHOOTING

1. No Raster and Sound



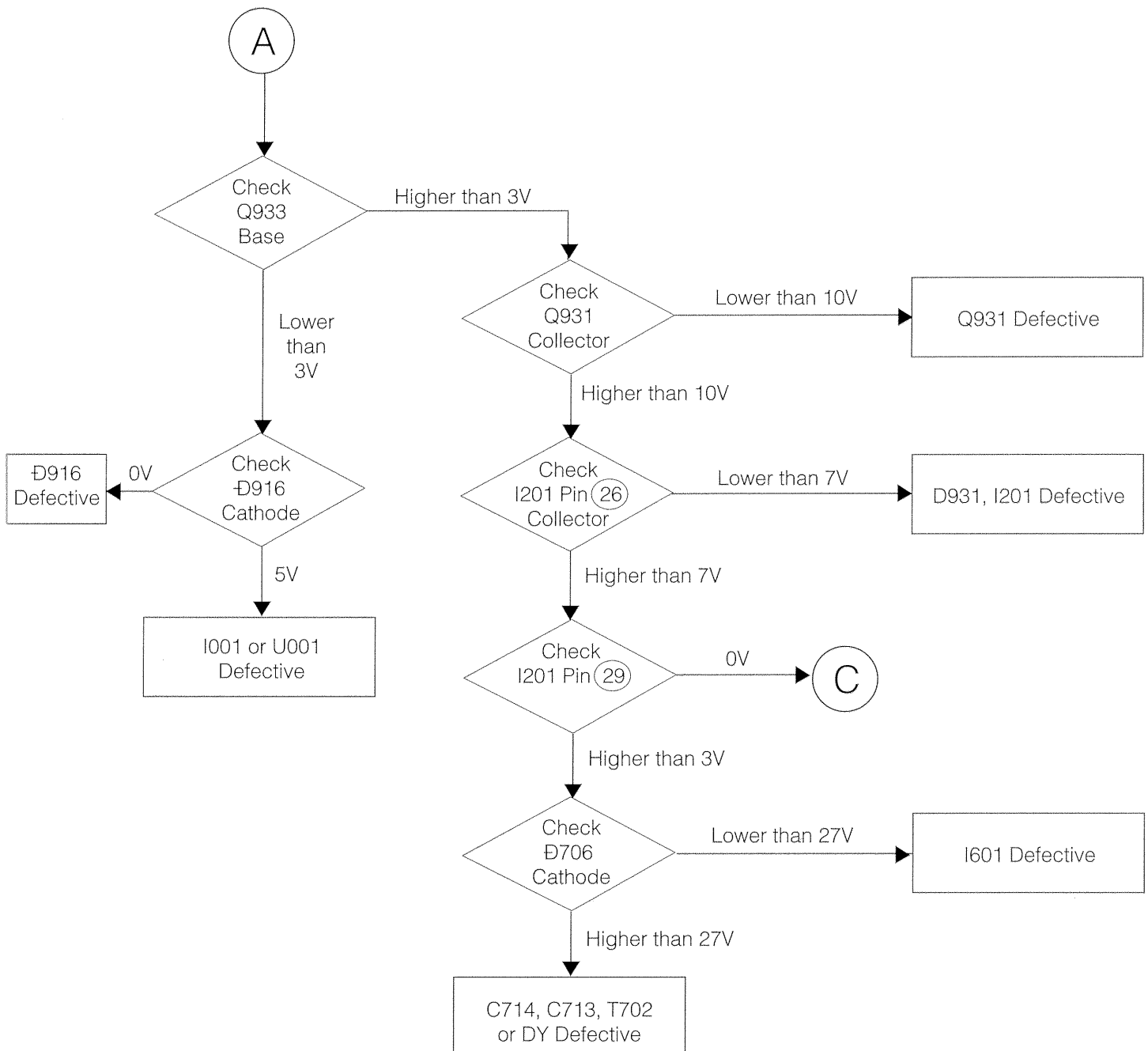
M3LXU CHASSIS TROUBLESHOOTING

1. No Raster and Sound



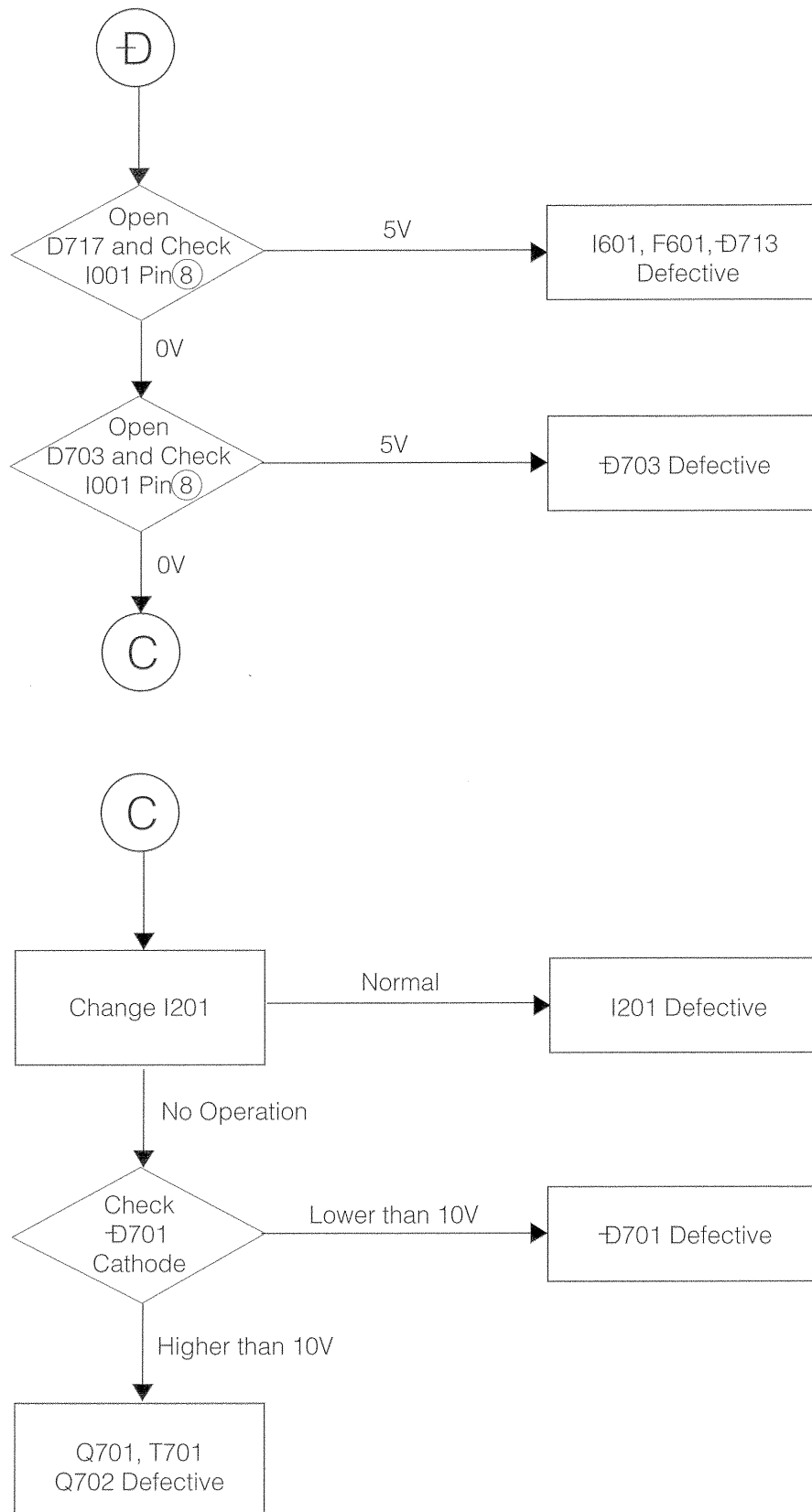
M3LXU CHASSIS TROUBLESHOOTING

1. No Raster and Sound



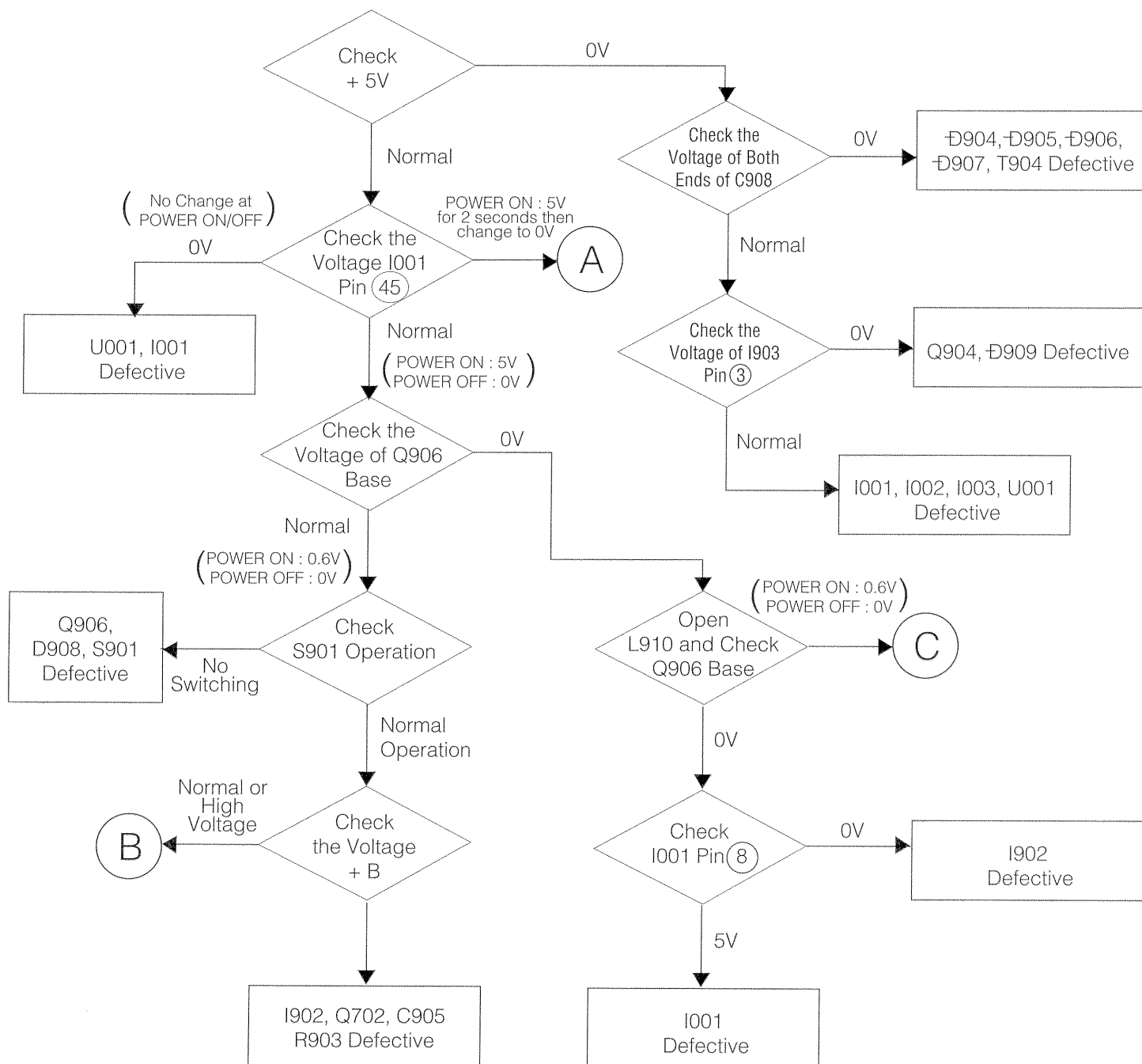
M3LXU CHASSIS TROUBLESHOOTING

1. No Raster and Sound



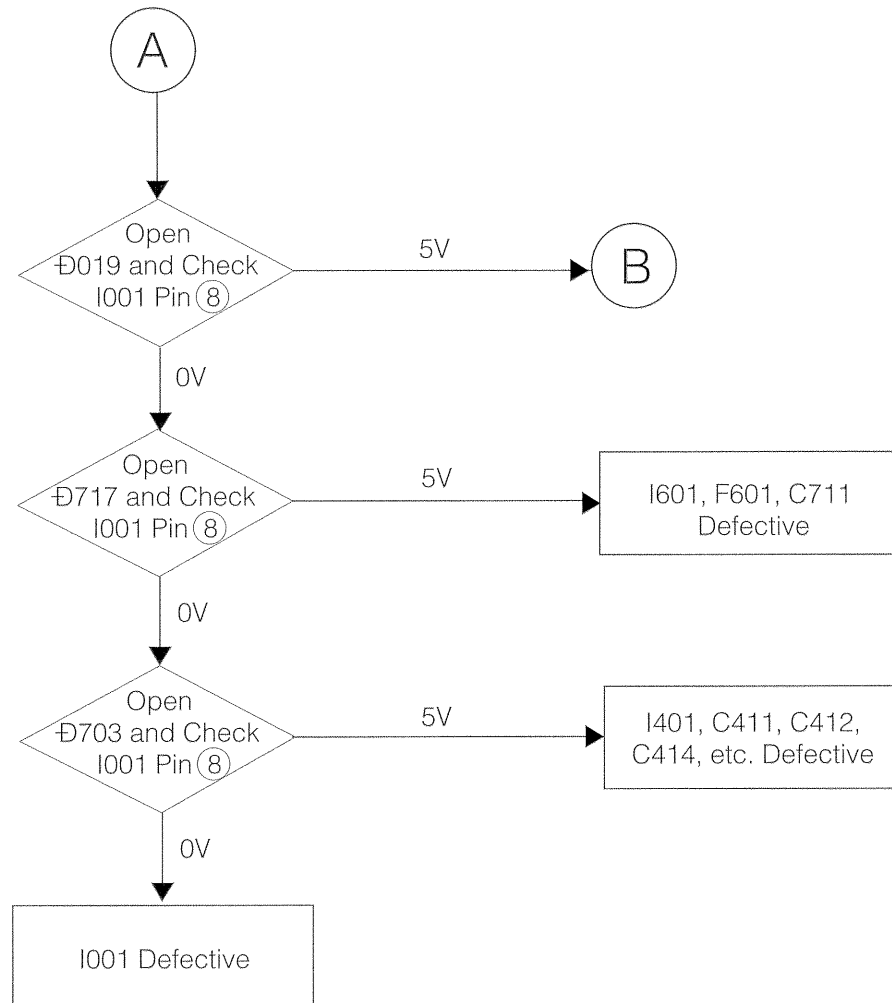
M3XU (20V) CHASSIS TROUBLESHOOTING

1. No Raster and Sound



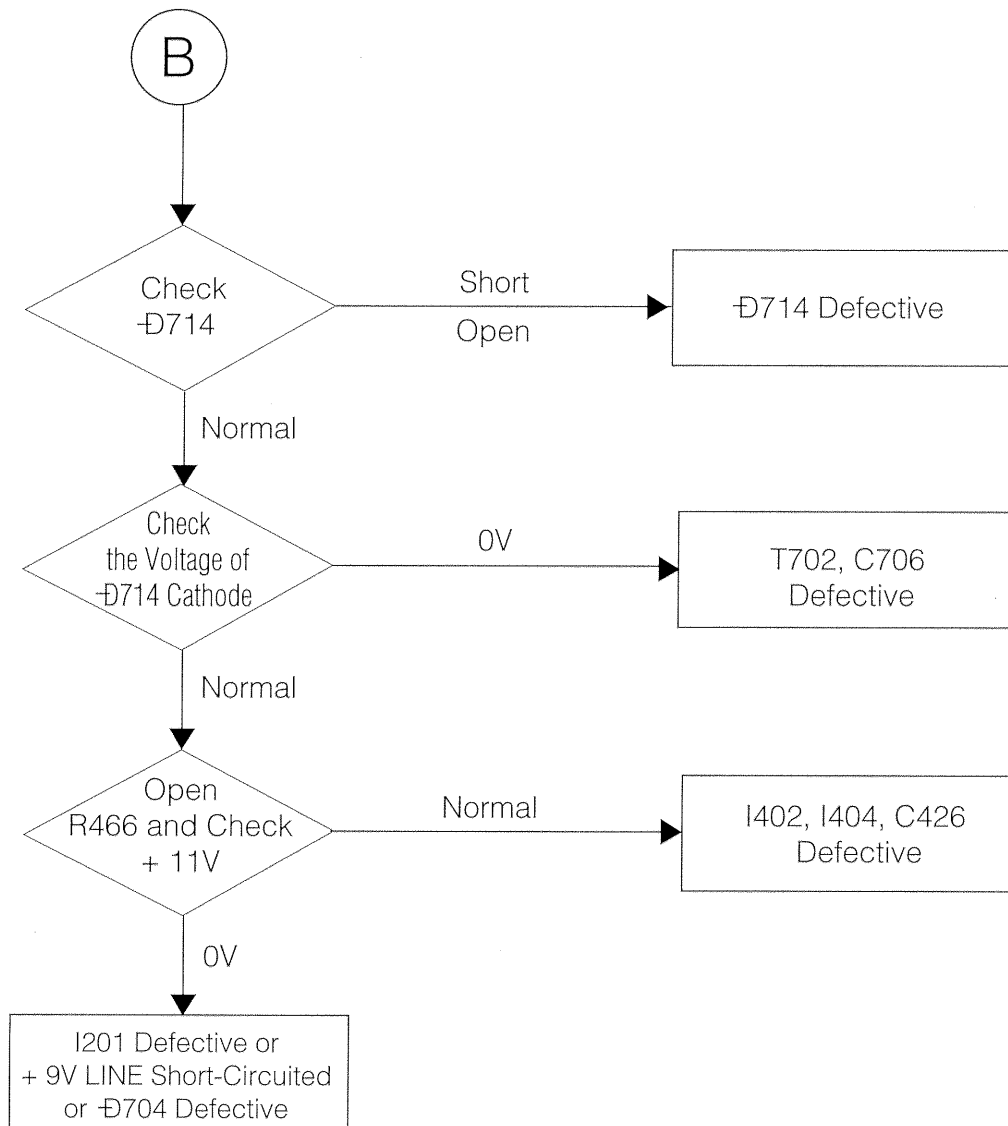
M3XU (20V CHASSIS TROUBLESHOOTING)

1. No Raster and Sound



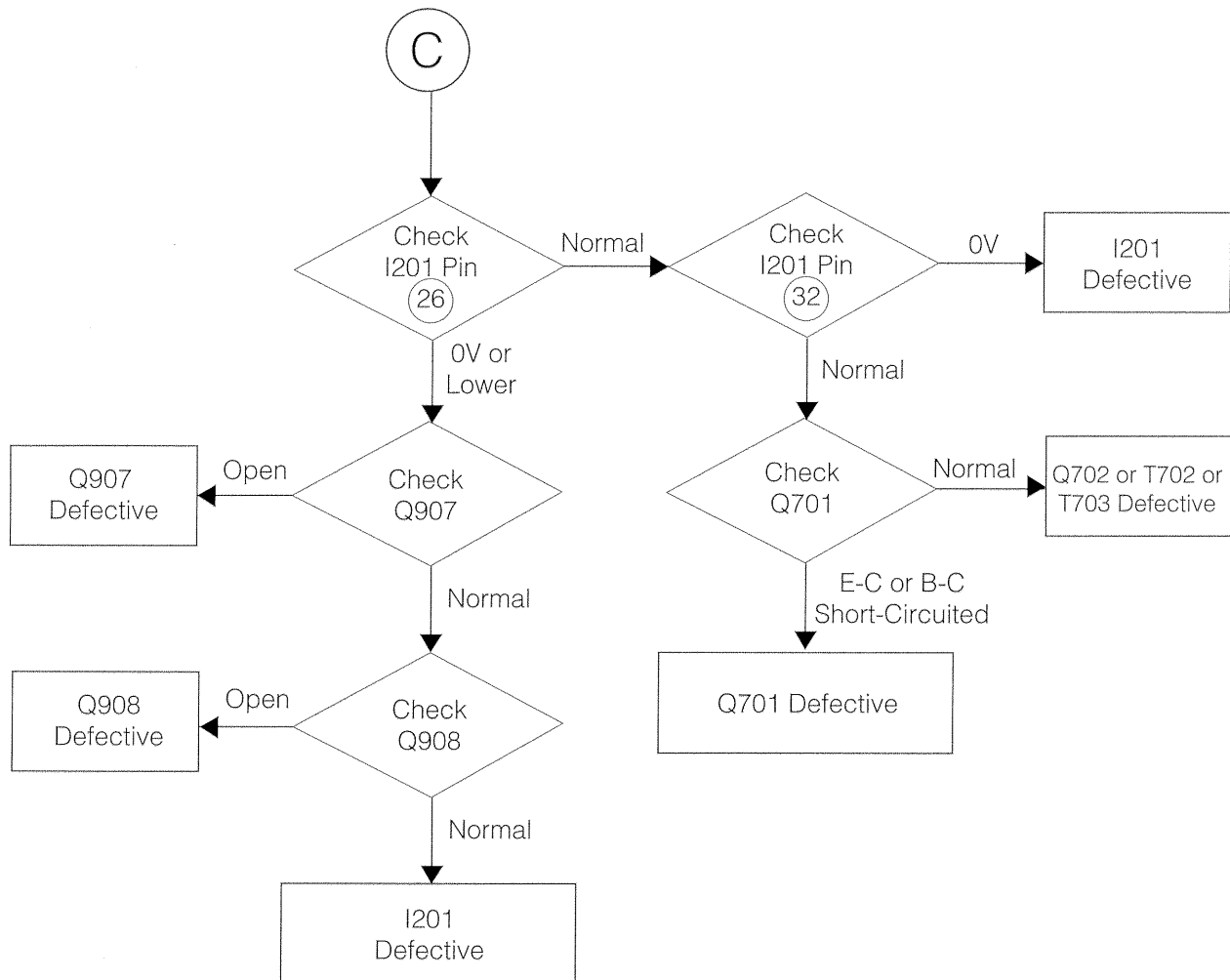
M3XU (20V) CHASSIS TROUBLESHOOTING

1. No Raster and Sound



M3XU (20V) CHASSIS TROUBLESHOOTING

1. No Raster and Sound



PRODUCT SAFETY NOTE: Components marked with a $\triangle$ 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.

ABBREVIATIONS

Capacitors: 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	SYMBOL NO.	PART NO.	PART DESCRIPTION
CAPACITORS			C305	0800015R	EL 10UF-M 16V(C053)
C001	0800072R	EL 470UF-M 6.3V	C306	0800015R	EL 10UF-M 16V(C756/C755/C750)
C002	0800005R	EL 2.2UF-M 50V	C330	0880057R	PF 0.1UF-KEB 50V(C756/C755/C750)
C003	0880057R	PF 0.1UF-KEB 50V	C331	0800015R	EL 10UF-M 16V(C756/C755/C750)
C004	0800047R	EL 100UF-M 6.3V	C331	0880057R	PF 0.1UF-KEB 50V(C053)
C005	0880048R	PF 0.022UF-KEB 50V	C336	0890087R	CD 1000PF-K 50V(C756/C755/C750)
C006	0880051R	PF 0.033UF-KEB 50V	C401	0880044R	PF 0.01UF-KEB 50V(C756/C755/C750)
C007	0890089R	CD 1500PF-K 50V	C402	0880044R	PF 0.01UF-KEB 50V
C008	0890089R	CD 1500PF-K 50V	C403	0800012R	EL 4.7UF-M 50V(C756/C755/C750)
C009	0880057R	PF 0.1UF-KEB 50V	C404	0800012R	EL 4.7UF-M 50V(C756/C755/C750)
C010	0800003R	EL 1.0UF-M 50V	C405	0800047R	EL 100UF-M 6.3V
C011	0890121R	CD 33PF-J CH 50V	C406	0244105R	CD 2200PF-K 50V TAPE
C012	0890121R	CD 33PF-J CH 50V	C407	0800059R	EL 220UF-M 25V
C013	0890118R	CD 22PF-J CH 50V	C408	0244105R	CD 2200PF-K 50V TAPE
C014	0890114R	CD 10PF-D CH 50 V	C409	0800059R	EL 220UF-M 25V
C015	0890087R	CD 1000PF-K 50V	C410	0800059R	EL 220UF-M 25V
C016	0248692R	CD 220PF-JB SL 50V	C411	0800075F	EL 470UF-M 25V
C017	0890074R	CD 100PF-J 50V	C412	0800075F	EL 470UF-M 25V
C018	0890074R	CD 100PF-J 50V	C413	0880057R	PF 0.1UF-KEB 50V
C019	0890074R	CD 100PF-J 50V	C414	0800075F	EL 470UF-M 25V
C020	0800009R	EL 4.7UF-M 25V	C415	0880057R	PF 0.1UF-KEB 50V
C021	0800009R	EL 4.7UF-M 25V(C756/C755/C750)	C416	0800047R	EL 100UF-M 6.3V
C022	0800009R	EL 4.7UF-M 25V(C756/C755/C750)	C417	0800016R	EL 10UF-M 25V
C023	0800009R	EL 4.7UF-M 25V(C756/C755/C750)	C418	0800041R	EL 47UF-M 16V
C025	0800015R	EL 10UF-M 16V	C419	0800074N	EL 470UF-M 16V
C026	0248700R	CD 680PF-J SL 50V	C422	0800041R	EL 47UF-M 16V
C027	0890074R	CD 100PF-J 50V(C756/C755/C750)	C423	0800015R	EL 10UF-M 16V
C028	0890074R	CD 100PF-J 50V(C756/C755/C750)	C424	0253942R	EL 0.22UF-M 50V
C030	0890074R	CD 100PF-J 50V	C425	0880048R	PF 0.022UF-KEB 50V
C031	0890074R	CD 100PF-J 50V(C756/C755/C750)	C426	0800058R	EL 220UF-M 16V
C040	0880057R	PF 0.1UF-KEB 50V(C756/C755/C750)	C428	0800003R	EL 1.0UF-M 50V
C040	0890087R	CD 1000PF-K 50V(C053)	C429	0800015R	EL 10UF-M 16V
C051	0890079R	CD 270PF-K 50V	C430	0253942R	EL 0.22UF-M 50V
C052	0890074R	CD 100PF-J 50V	C431	0880048R	PF 0.022UF-KEB 50V
C053	0890083R	CD 470PF-K 50V	C438	0800042R	EL 47UF-M 25V
C060	0880057R	PF 0.1UF-KEB 50V	C439	0800042R	EL 47UF-M 25V
C100	0800015R	EL 10UF-M 16V	C440	0800001R	EL 0.47UF-M 50V (SME)
C101	0800047R	EL 100UF-M 6.3V	C441	0800009R	EL 4.7UF-M 25V
C102	0244105R	CD 2200PF-K 50V TAPE	C442	0880057R	PF 0.1UF-KEB 50V
C103	0800082F	EL 1000UF-M 16V	C443	0880053R	PF 0.047UF-KEB 50V
C104	0244141R	CD 0.01UF-KB B 50V	C444	0800101R	EL 0.1UF-M 50V
C105	0244141R	CD 0.01UF-KB B 50V	C445	0800003R	EL 1.0UF-M 50V
C203	0880053R	PF 0.047UF-KEB 50V	C446	0800009R	EL 4.7UF-M 25V
C204	0890089R	CD 1500PF-K 50V	C447	0880057R	PF 0.1UF-KEB 50V
C205	0890089R	CD 1500PF-K 50V	C448	0800023R	EL 22UF-M 16V
C206	0890089R	CD 1500PF-K 50V	C450	0800003R	EL 1.0UF-M 50V
C207	0890069R	CD 47PF-J 50V(C756/C755/C750)	C451	0800003R	EL 1.0UF-M 50V
C240	0890067R	CD 33PF-J 50V	C452	0800003R	EL 1.0UF-M 50V
C241	0890067R	CD 33PF-J 50V	C453	0292712F	TA 3.3UF-K 16V
C245	0880044R	PF 0.01UF-KEB 50V	C454	0292714F	TA 10UF-K 16V
C248	0800001R	EL 0.47UF-M 50V (SME)	C455	0800003R	EL 1.0UF-M 50V
C251	0890083R	CD 470PF-K 50V(C053)	C456	0800003R	EL 1.0UF-M 50V
C290	0880048R	PF 0.022UF-KEB 50V(C053)	C457	0800015R	EL 10UF-M 16V
C301	0800015R	EL 10UF-M 16V(C750)	C458	0800015R	EL 10UF-M 16V
C301A	0800015R	EL 10UF-M 16V(C756/C755)	C460	0800015R	EL 10UF-M 16V
C303	0244141R	CD 0.01UF-KB B 50V(C756/C755/50)	C462	0800009R	EL 4.7UF-M 25V
C304	0800005R	EL 2.2UF-M 50V(C053)	C463	0800009R	EL 4.7UF-M 25V
C305	0800005R	EL 2.2UF-M 50V(C756/C755/C750)	C471	0800009R	EL 4.7UF-M 25V
			C472	0800009R	EL 4.7UF-M 25V

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
C473	0890089R	CD 1500PF-K 50V	C724	0880019R	PF 0.33UF-KB 50V(C756/C755/C750)
C474	0890089R	CD 1500PF-K 50V	C725	0880057R	PF 0.1UF-KEB 50V
C503	0800003R	EL 1.0UF-M 50V	C726	0890087R	CD 1000PF-K 50V(C053)
C504	0800003R	EL 1.0UF-M 50V	C728	0800064R	EL 330UF-M 6.3V(C756/C755/C750)
C505	0800015R	EL 10UF-M 16V	C729	0800075F	EL 470UF-M 25V(C756/C755/C750)
C506	0800003R	EL 1.0UF-M 50V(C053)	Δ C730	0243508R	CD 390PF-K 500V
C506	0800009R	EL 4.7UF-M 25V(C756/C755/C750)	C731	0243508R	CD 390PF-K 500V
C507	0880057R	PF 0.1UF-KEB 50V	C732	0880031R	PF 1000PF-K 50V(C756/C755/C750)
C508	0800003R	EL 1.0UF-M 50V(C053)	C732	0890084R	CD 560PF-K 50V(C053)
C508	0800009R	EL 4.7UF-M 25V(C756/C755/C750)	C732A	0890084R	CD 560PF-K 50V(C756/C755/C750)
C509	0244105R	CD 2200PF-K 50V TAPE	C733	0253952R	EL 1.0UF-M 160V(C053)
C510	0800001R	EL 0.47UF-M 50V (SME)	C745	0880044R	PF 0.01UF-KEB 50V(C756/C755/C750)
C511	0890114R	CD 10PF-D CH 50 V	C745	0890087R	CD 1000PF-K 50V(C053)
C512	0880048R	PF 0.022UF-KEB 50V	C748	0800082F	EL 1000UF-M 16V(C053)
C513	0800001R	EL 0.47UF-M 50V (SME)	C751	0880051R	PF 0.033UF-KEB 50V
C515	0880057R	PF 0.1UF-KEB 50V	C752	0800003R	EL 1.0UF-M 50V
C516	0880057R	PF 0.1UF-KEB 50V	Δ C753	0800015R	EL 10UF-M 16V
C517	0880057R	PF 0.1UF-KEB 50V	C754	0890074R	CD 100PF-J 50V(C756/C755/C750)
C518	0244105R	CD 2200PF-K 50V TAPE	C756	0800049R	EL 100UF-M 16V(C053)
C519	0800049R	EL 100UF-M 16V	C756	0800066R	EL 330UF-M 16V(C756/C755/C750)
C520	0244105R	CD 2200PF-K 50V TAPE	C757	0880044R	PF 0.01UF-KEB 50V
C521	0800074N	EL 470UF-M 16V	C760	0800009R	EL 4.7UF-M 25V
C523	0244105R	CD 2200PF-K 50V TAPE	C771	0800049R	EL 100UF-M 16V(C756/C755/C750)
C524	0800082F	EL 1000UF-M 16V	C772	0243508F	CD 390PF(B) 500WV(C756/C755/C750)
C525	0800005R	EL 2.2UF-M 50V	C781	0880044R	PF 0.01UF-KEB 50V(C756/C755/C750)
C526	0244505R	CD 0.0022UF-K 500V	C801	0244723F	CD 680P-K 2KV(C756/C755/C750)
C527	0800074N	EL 470UF-M 16V	C801	0244729F	CD 2200PF 2KV(C053)
C550	0244141R	CD 0.01UF-KB B 50V(C756/C755/C750)	C804	0890083R	CD 470PF-K 50V
C551	0800049R	EL 100UF-M 16V	C806	0890084R	CD 560PF-K 50V(C053)
C553	0244141R	CD 0.01UF-KB B 50V(C756/C755/C750)	C806	0890085R	CD 680PF-K 50V(C756/C755/C750)
C554	0244141R	CD 0.01UF-KB B 50V(C756/C755/C750)	C807	0800066R	EL 330UF-M 16V(C756/C755/C750)
C555	0244141R	CD 0.01UF-KB B 50V	C809	0890084R	CD 560PF-K 50V
C601	0880044R	PF 0.01UF-KEB 50V	C8H1	0880048R	PF 0.022UF-KEB 50V(C756/C755/C750)
C602	0800005R	EL 2.2UF-M 50V	Δ C901	AN00144S	PF (0.1UF250V)
C603	0800015R	EL 10UF-M 16V(C756/C755/C750)	Δ C902	AN00144S	PF (0.1UF250V)(C756/C755/C750)
C604	0890071R	CD 56PF-J 50V(C756/C755/C750)	C902	0249495F	CD 4700P-FZ 125V(C053)
C604	0890078R	CD 220PF-K 50V(C053)	Δ C903	0248593F	CD 4700PF-Z 250V(C756/C755/C750)
C606	0800052R	EL 100UF-M 35V	C903	0249495F	CD 4700P-FZ 125V(C053)
C609	0800082F	EL 1000UF-M 16V(C053)	Δ C904	0248593F	CD 4700PF-Z 250V(C756/C755/C750)
C609	0800087F	EL 2200UF-M 16V(C756/C755/C750)	C904	0249495F	CD 4700P-FZ 125V(C053)
C610	0880048R	PF 0.022UF-KEB 50V(C756/C755/C750)	C905	AL00151	EL 820UF 200V(USR)(C756/C755/C750)
C610	0880057R	PF 0.1UF-KEB 50V(C053)	C905	253891	EL 470UF 200V HR(C053)
C611	279859	PF FILM 0.1MF-K 200V(C756/C755/C750)	C907	0244541F	CD 0.01MF-K B 500V(C756/C755/C750)
C612	0880057R	PF 0.1UF-KEB 50V(C756/C755/C750)	C907	0253957F	EL 22UF-M 160V(C053)
C612	0880059R	PF 0.15UF-KEB 50V(C053)	Δ C908	0249392F	CD 2200PF 125V(C756/C755/C750)
C613	0800005R	EL 2.2UF-M 50V	C908	0800075F	EL 470UF-M 25V(C053)
C702	0800015R	EL 10UF-M 16V	Δ C909	0249392F	CD 2200PF 125V(C756/C755/C750)
C705	0255524F	EL 4.7MF-M 250V(KME)(C756/C755/C750)	C909	0800047R	EL 100UF-M 6.3V(C053)
C705	0255524N	EL 4.7MF-M 250V(C053)	C910	0800041R	EL 47UF-M 16V(C053)
C706	0800074N	EL 470UF-M 16V	C911	0880044R	PF 0.01UF-KEB 50V(C053)
C707	0243508F	CD 390PF(B) 500WV(C756/C755/C750)	C913	0244721F	CD 470PF 2KV(C756/C755/C750)
C707	0243508R	CD 390PF-K 500V(C053)	C913	0800003R	EL 1.0UF-M 50V(C053)
C710	0244501R	CD 1000PF-K 500V	C914	0880062R	PF 0.22UF-KEB 50V(C756/C755/C750)
C711	0800076F	EL 470UF-M 35V	C915	253862	EL 220UF-M 160V(C756/C755/C750)
Δ C713	0262424F	PP 7500PF-J 1.8 KV(C053)	C916	0880042R	PF 0.0068UF-KEB50V(C756/C755/C750)
Δ C713	0262429F	PP 12000PF-J 1800V(C756)	C917	0244230R	CD 220PF-B 50V(C756/C755/C750)
Δ C713	0262432F	PP 15000PF-J 1800V(C755/C750)	C918	0800047R	EL 100UF-M 6.3V(C756/C755/C750)
Δ C714	244716	CD 220P-K 2KV(C755/C750)	C919	0244721F	CD 470PF 2KV(C756/C755/C750)
Δ C714	244724	CD 820P-K 2KV(C053)	C920	0800049R	EL 100UF-M 16V(C756/C755/C750)
Δ C714	244727	CD 1500PF-K 2KV(C756)	C922	0244105R	CD 2200PF-K 50V TAPE(C756/C755/C750)
C715	0243512R	CD 820PF-K 500V TAPE(C756/C755/C750)	C922	0800082F	EL 1000UF-M 16V(C053)
C716	0262799F	PF 0.51UF-J 200V(C756)	C923	0800074N	EL 470UF-M 16V(C756/C755/C750)
C716	0262801F	PF 0.56UF-J 200V(C755/C750)	C924	0880039R	PF 0.0047UF-KEB50V(C756/C755/C750)
C716	0299933F	PF 0.39UF-K 200V(C053)	C925	0253952R	EL 1.0UF-M 160V(C756/C755/C750)
C718	0800064F	EL 330UF-M 6.3V(C756/C755/C750)	C926	0880062R	PF 0.22UF-KEB 50V(C756/C755/C750)
C719	0243504R	CD 180PF-K 500V TAPE	C930	0800003R	EL 1.0UF-M 50V(C756/C755/C750)
C720	0244501R	CD 1000PF-K 500V(C053)	C932	0254524F	EL 2200UF-M 25V(KME)(C756/C755/C750)
C720	0244505R	CD 0.0022UF-K 500V(C756/C755/C750)	C934	0890081R	CD 330PF 50V(C756/C755/C750)
C721	0890067R	CD 33PF-J 50V(C756/C755/C750)	C936	0800059R	EL 220UF-M 25V(C756/C755/C750)
Δ C722	0800019R	EL 10UF-M 63V(C756/C755/C750)	C937	0244141R	CD 0.01UF-KB B 50V(C756/C755/C750)
C722	0800087F	EL 2200UF-M 16V(C053)	C938	0800015R	EL 10UF-M 16V
C723	0254823G	EL100UF-M 160V	C939	0880057R	PF 0.1UF-KEB 50V(C756/C755/C750)
C724	0253952R	EL 1.0UF-M 160V(C053)	C940	0800015R	EL 10UF-M 16V(C756/C755/C750)

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
C942	0800056R	EL 220UF-M 6.3V(C756/C755/C750)	D030	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC(C053)
C944	0800047R	EL 100UF-M 6.3V(C756/C755/C750)	D101	2339837M	ZD HZS-5C1 TAPE
C950	0249394F	CD 4700PF-F 125V(C053)	D102	2339971M	ZD HZS33-1 TA
Δ C962	AN00144S	PF (0.1UF250V)(C053)	D301	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
CA01	0890086R	CD 820PF-K 50V(C756/C755)	D302	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC(C053)
CA02	0880057R	PF 0.1UF-KEB 50V(C756/C755)	D401	2398611M	DI 1SS254 TAPE (35V)SI 4NSEC(C756/C755/C750)
CA03	0880057R	PF 0.1UF-KEB 50V(C756/C755)	D404	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
CA04	0800049R	EL 100UF-M 16V(C756/C755)	D405	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
CA05	0880044R	PF 0.01UF-KEB 50V(C756/C755)	D406	2398611M	DI 1SS254 TAPE (35V)SI 4NSEC(C756/C755/C750)
CA07	0880044R	PF 0.01UF-KEB 50V(C756/C755)	D407	2339867M	ZD HZS-9-C1 TAPE (SI.200MA)
CA08	0800049R	EL 100UF-M 16V(C756/C755)	D408	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
CA09	0880044R	PF 0.01UF-KEB 50V(C756/C755)	D421	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC(C053)
CA10	0880044R	PF 0.01UF-KEB 50V(C756/C755)	D422	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC(C053)
CA11	0800041R	EL 47UF-M 16V(C756/C755)	D501	2339819M	ZD HZS3C3 TA
CA12	0800049R	EL 100UF-M 16V(C756/C755)	D502	2339867M	ZD HZS-9-C1 TAPE (SI.200MA)
CA13	0880044R	PF 0.01UF-KEB 50V(C756/C755)	D503	2339867M	ZD HZS-9-C1 TAPE (SI.200MA)
CA14	0890078R	CD 220PF-K 50V(C756/C755)	D504	2339867M	ZD HZS-9-C1 TAPE (SI.200MA)
CA15	0880044R	PF 0.01UF-KEB 50V(C756/C755)	D507	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC(C053)
CA16	0800003R	EL 1.0UF-M 50V(C756/C755)	D508	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC(C053)
CA17	0800001R	EL 0.47UF-M 50V (SME)(C756/C755)	D509	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC(C053)
CA18	0246445R	CD 16PF-J CH 50V(C756/C755)	D510	2339836M	ZD HZS-5 B3(C756/C755/C750))
CA19	0890085R	CD 680PF-K 50V(C756/C755)	D511	2398611M	DI 1SS254 TAPE (35V)SI 4NSEC(C756/C755/C750)
CA20	0800001R	EL 0.47UF-M 50V (SME)(C756/C755)	D512	2398611M	DI 1SS254 TAPE (35V)SI 4NSEC(C756/C755/C750)
CA21	0880044R	PF 0.01UF-KEB 50V(C756/C755)	D513	2398611M	DI 1SS254 TAPE (35V)SI 4NSEC(C756/C755/C750)
CA22	0890078R	CD 220PF-K 50V(C756/C755)	D515	2339851M	ZD HZS7A1 TAPE (SI.200MA)(C053)
CA25	0800003R	EL 1.0UF-M 50V(C756/C755)	D516	2339851M	ZD HZS7A1 TAPE (SI.200MA)(C053)
CA26	0880044R	PF 0.01UF-KEB 50V(C756/C755)	D604	2339491M	DI AM01Z (200 TAPE) 1A
CA27	0800005R	EL 2.2UF-M 50V(C756/C755)	D605	2339222M	ZD HZS27-2L
CA28	0880044R	PF 0.01UF-KEB 50V(C756/C755)	D606	2339222M	ZD HZS27-2L
CA29	0880044R	PF 0.01UF-KEB 50V(C756/C755)	D701	2339491M	DI AM01Z (200 TAPE)1A(C756/C755/C750)
CA30	0880044R	PF 0.01UF-KEB 50V(C756/C755)	D702	2398611M	DI 1SS254 TAPE (35V)SI 4NSEC(C756/C755/C750)
CA31	0800041R	EL 47UF-M 16V(C756/C755)	D703	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
CA32	0880057R	PF 0.1UF-KEB 50V(C756/C755)	D704	2339867M	ZD HZS-9-C1 TAPE (SI.200MA)
CA35	0800058R	EL 220UF-M 16V(C756/C755)	D705	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
CA37	0880057R	PF 0.1UF-KEB 50V(C756/C755)	Δ D706	2339222M	ZD HZS27-2L
CA38	0880044R	PF 0.01UF-KEB 50V(C756/C755)	D707	2337341M	DI 1SS270A (TP)(C053)
CA40	0800049R	EL 100UF-M 16V(C756/C755)	D709	2339868M	ZD HZS9C2 TAPE
CA41	0880044R	PF 0.01UF-KEB 50V(C756/C755)	D710	2344071	DI ERC20M-04(C756/C755/C750)
CA42	0800049R	EL 100UF-M 16V(C756/C755)	D711	2339842M	ZD HZS6A2 TA(C756/C755/C750)
CA43	0880044R	PF 0.01UF-KEB 50V(C756/C755)	Δ D712	2348511	DI RS3FS(C756/C755/C750)
CA44	0800041R	EL 47UF-M 16V(C756/C755)	D713	CH00031M	DI AU02V1(280V)
CA48	0880057R	PF 0.1UF-KEB 50V(C756/C755)	D714	CH00031M	DI AU02V1(280V)
CA49	0880057R	PF 0.1UF-KEB 50V(C756/C755)	D715	CH00031M	DI AU02V1(280V)
CA52	0880044R	PF 0.01UF-KEB 50V(C756/C755)	D716	2339491M	DI AM01Z (200 TAPE) 1A(C756/C755/C750)
CA53	0880044R	PF 0.01UF-KEB 50V(C756/C755)	D717	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
CA54	0880044R	PF 0.01UF-KEB 50V(C756/C755)	D718	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC(C053)
CA55	0800049R	EL 100UF-M 16V(C756/C755)	D719	2339481M	DI AS01Z (200 TAPE) SI 0.6A(C053)
CAZ1	0890084R	CD 560PF-K 50V(C756/C755)	Δ D725	2339481M	DI AS01Z (200 TAPE) SI 0.6A
CAZ2	0800015R	EL 10UF-M 16V(C756/C755)	D726	2398611M	DI 1SS254 TAPE (35V)SI 4NSEC(C756/C755/C750)
CE25	0244105R	CD 2200PF-K 50V TAPE(C756/C755)	D730	2398611M	DI 1SS254 TAPE (35V)SI 4NSEC(C756/C755/C750)
COM1	0248688R	CD 150PF-J SL 50V(C053)	D731	2398611M	DI 1SS254 TAPE (35V)SI 4NSEC(C756/C755/C750)
COM1	0890076R	CD 150PF-K 50V(C756/C755/C750)	D732	2339481M	DI AS01Z (200 TAPE)SI 0.6A(C756/C755/C750)
CT01	283127	TRIMMER CAPACITOR (RED)	D751	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
		DIODES	Δ D752	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D001	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC	D801	2398611M	DI 1SS254 TAPE (35V)SI 4NSEC(C756/C755/C750)
D002	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC	D802	2398611M	DI 1SS254 TAPE (35V)SI 4NSEC(C756/C755/C750)
D003	2339812M	ZD HZS3A2 TA (SI.200MA)(C756/C755/C750)	D803	2398611M	DI 1SS254 TAPE (35V)SI 4NSEC(C756/C755/C750)
D004	2339812M	ZD HZS3A2 TA (SI.200MA)(C756/C755/C750)	D804	2398611M	DI 1SS254 TAPE (35V)SI 4NSEC(C756/C755/C750)
D005	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC	D805	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D006	2398611M	DI 1SS254 TAPE (35V)SI 4NSEC(C756/C755/C750)	D806	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC
D007	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC	Δ D901	2332794	DI RB-156 (LFB) SI 1.5A 4(C053)
D008	2398611M	DI 1SS254 TAPE (35V)SI 4NSEC(C756/C755/C750)	Δ D901	2342062	DI D3SBA60-4103(C756/C755/C750))
D009	2398611M	DI 1SS254 TAPE (35V)SI 4NSEC(C756/C755/C750)	D902	2339491M	DI AM01Z (200 TAPE) 1A(C053)
D010	2398611M	DI 1SS254 TAPE (35V)SI 4NSEC(C756/C755/C750)	D904	2339491M	DI AM01Z (200 TAPE) 1A(C053)
D014	2339867M	ZD HZS-9-C1 TAPE (SI.200MA)(C756/C755)	D905	2339491M	DI AM01Z (200 TAPE) 1A(C053)
D015	2339867M	ZD HZS-9-C1 TAPE (SI.200MA)(C756/C755)	D906	2339491M	DI AM01Z (200 TAPE) 1A(C053)
D016	2339867M	ZD HZS-9-C1 TAPE (SI.200MA)(C756/C755)	D907	2339491M	DI AM01Z (200 TAPE) 1A(C053)
D018	2339867M	ZD HZS-9-C1 TAPE (SI.200MA)(C756/C755)	D908	2339491M	DI AM01Z (200 TAPE) 1A(C053)
D019	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC	D908	2349571M	DI SM-1XP2TP(C756/C755/C750))
D020	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC	D909	2339867M	ZD HZS-9-C1 TAPE (SI.200MA)(C053)
D021	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC	D909	2344071	DI ERC20M-04(C756/C755/C750))
			D910	2339551M	DI ED14(V1) SI 5MA 45(C756/C755/C750)

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
D910	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC(C053)	$\triangle$ I902	2369711	IC TLP541G
D911	2339491M	DI AM01Z (200 TAPE) 1A(C053)	I903	2020461	IC AN78L05(C053)
D913	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC(C053)	IA01	2020341	IC MM1111XS(C756/C755)
D915	2349571M	DI SM-1XP2TP(C756/C755/C750)	IA02	CP00841	ANALOG MONOLITHIC IC M52694P(C756/C755)
D916	2339837M	ZD HZS-5C1 TAPE(C756/C755/C750)	IA03	CP00831	DIGITAL MONOLITHIC IC M65607SP(C756/C755)
D918	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC(C756/C755/C750)	IA04	CP00851	DIGITAL MONOLITHIC IC (HM53461-10)(C756/C755)
D921	2339491M	DI AM01Z (200 TAPE) 1A(C053)	IA05	2366361	IC.AN7805(C756/C755)
D931	2339865M	ZD DI HZS9 (B2)(C756/C755/C750)			
D933	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC(C756/C755/C750)			INDUCTORS/COILS
DA01	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC(C756/C755)	L001	BH00101	OSC COIL
DA02	2339867M	ZD HZS-9-C1 TAPE (SI.200MA)(C756/C755)	L003	2123781	FILTER COIL EL 100UH-K
DA03	2339867M	ZD HZS-9-C1 TAPE (SI.200MA)(C756/C755)	L010	2123781R	FILTER COIL 101K(C756/C755/C750)
DA04	2339867M	ZD HZS-9-C1 TAPE (SI.200MA)(C756/C755)	L101	2123781R	FILTER COIL 101K
DA05	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC(C756/C755)	L201	BJ00131	VCO TANK COIL 52.37MHZ
DA06	2339867M	ZD HZS-9-C1 TAPE (SI.200MA)(C756/C755)	L240	2122948M	COIL-AXIAL 27UHKM BELTING(C053)
DA07	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC(C756/C755)	L240	2122949M	COIL-AXIAL 33UHKM BELTING(C756/C755/C750)
DA08	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC(C756/C755)	L242	2122944M	COIL-AXIAL 12UHKM BELTING
DA09	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC(C756/C755)	L243	2122948M	COIL-AXIAL 27UHKM BELTING
DA10	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC(C756/C755)	L301	2123781R	FILTER COIL 101K
DA11	2398611M	DI 1SS254 TAPE (35V) SI 4NSEC(C756/C755)	L502	2122253M	COIL-AXIAL 100UH-K(C053)
DA15	2339867M	ZD HZS-9-C1 TAPE (SI.200MA)(C756/C755)	L502	2123781R	FILTER COIL 101K(C756/C755/C750)
		REMOTE CONTROLS	L503	2123781R	FILTER COIL 101K
E301	HL00221	R/C UNIT CLU-412UI(C755)	L550	2123781R	FILTER COIL 101K
E301	HL00223	R/C UNIT CLU-414UI(C750)	L601	2122653M	FERRITE CORE 1.65UH TAPE
E301	HL00224	R/C UNIT CLU-415UI(C756)	L701	2125766R	HLL-470MRLT(LHLC06)
E301	HL00223	R/C UNIT CLU-414UI(C053)	L702	2124513	COIL-H.LINEARITY M1LXU1(C756/C755/C750)
		DEFLECTION YOKES	L704	2122652M	FERRITE CORE
$\triangle$ E601	BY00461	27V PIN FREE DY(C756)	L705	2122652M	FERRITE CORE
$\triangle$ E601	2445073	DY-90B 20V F/S COTY(C053)	L706	2122652M	FERRITE CORE
		FUSES	L751	2123747R	RADIAL COIL 4R7M EL0405(C756/C755/C750)
$\triangle$ F601	2722382	FUSE-DC0.75A-J/UL(L)	L804	2122094	FIXED INDUCTOR 22UF-K(C053)
$\triangle$ F901	2722212	FUSE AC2.5A(C053)	L804	2122801	FIXED COIL FL-11Z 24UH-K(C756/C755/C750)
$\triangle$ F901	2722358	FUSE AC05A(C756/C755/C750)	$\triangle$ L901	2169462	LINE FILTER COIL FX--7355-60(C756/C755/C750)
		SURGE PROTECTOR	$\triangle$ L901	2272391	LINE FILTER(C053)
$\triangle$ G901	2340741	SURGE PROTECTOR DSP-301N-S00B	$\triangle$ L902	2169462	LINE FILTER COIL FX--7355-60(C756/C755/C750)
		FILTERS	L904	2123461M	FERRITE BEADS B 0.8 MH(C756/C755/C750)
H001	2791754R	CONDENSER WITH 3 TERMINAL 100PF	L905	2123461M	FERRITE BEADS B 0.8 MH(C756/C755/C750)
H002	2791754R	CONDENSER WITH 3 TERMINAL 100PF	L906	2123461M	FERRITE BEADS B 0.8 MH(C756/C755/C750)
$\triangle$ H701	2793313	CP-EXN-G131P365L(C756/C755/C750)	L910	2125724	COIL-CHOKE 47UH-K(C053)
$\triangle$ H901	2793313	CP-EXN-G131P365L	L931	2220583	COIL-CHOKE TSL0707 270K(C756/C755/C750)
HA01	2151041	DELAY LINE AND BAND PASS FILTER(C756/C755)	L932	2123461M	FERRITE BEADS B 0.8 MH(C756/C755/C750)
HA02	2791754	FX-DSS306B101M(C756/C755)	L951	2275832	COIL-DEGAUSSING (20V)(C053)
HA03	2791754	FX-DSS306B101M(C756/C755)	L955	2165747	COIL-DEGAUSSING(C756/C755/C750)
HA07	2791759	FX-DSS306B102M(C756/C755)	LA01	2123781R	FILTER COIL 101K(C756/C755)
HA08	2791759	FX-DSS306B102M(C756/C755)	LA02	2123781R	FILTER COIL 101K(C756/C755)
HA09	2791762	FX-DSS306FZ103M(C756/C755)	LA03	2122253M	COIL-AXIAL 100UH-K(C756/C755)
HA10	2791762	FX-DSS306FZ103M(C756/C755)	LA04	2123781R	FILTER COIL 101K(C756/C755)
		INTEGRATED CIRCUITS	LA07	2122934M	COIL-AXIAL 2.2UH-M(C756/C755)
I001	CP01132	DIGITAL MONOLITHIC IC LC864156A-5838	LA09	2122934M	COIL-AXIAL 2.2UH-M(C756/C755)
I002	CP00821	DIGITAL MONOLITHIC IC M6M80022P	LAZ1	2122944M	COIL-AXIAL 12UHKM BELTING(C756/C755)
I003	2003522R	IC PST572D-2 (ANALOG IC)			INSTRUCTION MANUAL
$\triangle$ I201	CP00961	TA1201AN	N201	QR02351	INSTRUCTION MANUAL M3LXU/M3XU
I301	2020341	IC MM1111XS(C756/C755/C750)			TRANSISTORS
I401	2004022	IC AN7147N	Q001	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ
I402	CP00811	ANALOG MONOLITHIC IC UPC1852	Q002	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ
I404	2004362	IC CXA1279AS	Q003	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ
I501	2020341	IC MM1111XS(C756/C755/C750)	Q004	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ
I601	2020631	IC AN5515(C053)	Q005	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ
I601	2913981	IC AN5521(C756/C755/C750)	Q006	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ
$\triangle$ I901	2020392	IC TDA4605-3(C756/C755/C750)	Q240	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ
I901	2912175	IC STR30135(C053)	Q241	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ
			Q242	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ
			Q301	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ
			Q401	2320647M	TRS. 2SC1213 (C 21 TZ/D 21 TZ) SI 80MHZ4
			Q402	2320647M	TRS. 2SC1213 (C 21 TZ/D 21 TZ) SI 80MHZ4
			Q407	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ(C756/C755/C750)
			Q408	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ

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Q409	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ(C756/C755/C750)	R011	0700064M	CF 1/16W 56K-JB
Q410	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ	R012	0700049M	CF 1/16W 4.7K-JB
Q591	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ	R013	0700027M	CF 1/16W 100-JB
Q592	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ(C756/C755/C750)	R014	0700027M	CF 1/16W 100-JB
Q593	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ(C756/C755/C750)	R015	0700051M	CF 1/16W 5.6K-JB
Q701	2323526M	TRS. 2SD789 D/E TAPE(C756/C755/C750)	R016	0700051M	CF 1/16W 5.6K-JB
Q701	2326216	TRS. 2SC3116 (S/T)(C053)	R017	0700041M	CF 1/16W 1.0K-JB
Δ Q702	2315272	TRS. 2SC4589-03(C756/C755)	R018	0700041M	CF 1/16W 1.0K-JB
Δ Q702	2327502	TRS-2SD1877 SI 50W(C053)	R019	0700041M	CF 1/16W 1.0K-JB
Q704	2320647M	TRS. 2SC1213 (C21TZ/D21TZ) SI 80MHZ4(C756/C755/C750)	R020	0700041M	CF 1/16W 1.0K-JB
Q705	2320647M	TRS. 2SC1213 (C 21 TZ/D 21 TZ) SI 80MHZ4(C053)	R021	0700041M	CF 1/16W 1.0K-JB
Q705	2323434	TRS. 2SC1983 (O/Y)(C756/C755/C750)	R022	0700041M	CF 1/16W 1.0K-JB(C756/C755/C750)
Q706	2326862R	TRS.DTA 114ES-TAPE	R023	0700041M	CF 1/16W 1.0K-JB
Q801	2315491	TRS. 2SC4544(C756/C755/C750)	R024	0700041M	CF 1/16W 1.0K-JB
Q801	2322562	TRS. 2SC2688 (K/L) SI 80MHZ(C053)	R025	0700041M	CF 1/16W 1.0K-JB
Q802	2315491	TRS. 2SC4544(C756/C755/C750)	R026	0700054M	CF 1/16W 10K-JB
Q802	2322562	TRS. 2SC2688 (K/L) SI 80MHZ(C053)	R027	0700041M	CF 1/16W 1.0K-JB
Q803	2315491	TRS. 2SC4544(C756/C755/C750)	R028	0700041M	CF 1/16W 1.0K-JB
Q803	2322562	TRS. 2SC2688 (K/L) SI 80MHZ(C053)	R029	0700053M	CF 1/16W 8.2K-JB(C756/C755/C750)
Q804	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ(C756/C755/C750)	R030	0700041M	CF 1/16W 1.0K-JB
Q901	CF00151	TRS. 2SK2255-01M (250V)(C756/C755/C750)	R031	0700054M	CF 1/16W 10K-JB
Q904	2323526M	TRS. 2SD789 D/E TAPE(C053)	R032	0700056M	CF 1/16W 15K-JB(C756/C755/C750)
Q906	2320647M	TRS. 2SC1213 (C 21 TZ/D 21 TZ) SI 80MHZ4(C053)	R033	0700058M	CF 1/16W 22K-JB(C756/C755/C750)
Q907	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ(C053)	R034	0700045M	CF 1/16W 2.2K-JB(C756/C755/C750)
Q908	2320647M	TRS. 2SC1213 (C 21 TZ/D 21 TZ) SI 80MHZ4(C053)	R035	0700045M	CF 1/16W 2.2K-JB(C756/C755/C750)
Q931	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ(C756/C755/C750)	R036	0700056M	CF 1/16W 15K-JB(C756/C755/C750)
Q933	2326872R	TRS.-DTC114ES TAPE(C756/C755/C750)	R037	0700059M	CF 1/16W 27K-JB(C756/C755/C750)
Q941	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ(C756/C755/C750)	R038	0700056M	CF 1/16W 15K-JB(C756/C755/C750)
Q945	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ(C756/C755/C750)	R039	0700059M	CF 1/16W 27K-JB(C756/C755/C750)
QA01	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ(C756/C755)	R040	0700055M	CF 1/16W 12K-JB
QA02	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ(C756/C755)	R041	0700058M	CF 1/16W 22K-JB
QA03	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ(C756/C755)	R042	0700042M	CF 1/16W 1.2K-JB(C053)
QA04	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ(C756/C755)	R042	0700044M	CF 1/16W 1.8K-JB(C756/C755/C750)
QA05	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ(C756/C755)	R043	0700042M	CF 1/16W 1.2K-JB(C053)
QA06	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ(C756/C755)	R043	0700044M	CF 1/16W 1.8K-JB(C756/C755/C750)
QA07	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ(C756/C755)	R044	0700042M	CF 1/16W 1.2K-JB(C053)
QA08	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ(C756/C755)	R044	0700044M	CF 1/16W 1.8K-JB(C756/C755/C750)
QA09	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ(C756/C755)	R045	0700041M	CF 1/16W 1.0K-JB
QA10	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ(C756/C755)	R050	0700048M	CF 1/16W 3.9K-JB(C756/C755/C750)
QA11	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ(C756/C755)	R051	0700048M	CF 1/16W 3.9K-JB(C756/C755/C750)
QA12	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ(C756/C755)	R052	0700041M	CF 1/16W 1.0K-JB
QA13	2320637M	TRS. 2SA673 (C 26TZ/D 26TZ) SI 80MHZ(C756/C755)	R053	0700041M	CF 1/16W 1.0K-JB
QA14	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ(C756/C755)	R054	0700041M	CF 1/16W 1.0K-JB(C756/C755/C750)
QA15	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ(C756/C755)	R055	0700045M	CF 1/16W 2.2K-JB(C756/C755/C750)
QA17	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ(C756/C755)	R056	0700049M	CF 1/16W 4.7K-JB(C756/C755/C750)
QA19	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ(C756/C755)	R057	0700049M	CF 1/16W 4.7K-JB(C756/C755/C750)
QA20	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ(C756/C755)	R060	0700041M	CF 1/16W 1.0K-JB
QAZ1	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ(C756/C755)	R062	0700041M	CF 1/16W 1.0K-JB
QC01	2320596M	TRS. 2SC458 (C TZ/D TZ) SI 230MHZ(C756/C755)	R063	0700041M	CF 1/16W 1.0K-JB
RESISTORS			R064	0700041M	CF 1/16W 1.0K-JB(C756/C755/C750)
R001	0700042M	CF 1/16W 1.2K-JB	R065	0700041M	CF 1/16W 1.0K-JB
R002	0700041M	CF 1/16W 1.0K-JB	R066	0700041M	CF 1/16W 1.0K-JB
R003	0700043M	CF 1/16W 1.5K-JB	R067	0700041M	CF 1/16W 1.0K-JB
R004	0700046M	CF 1/16W 2.7K-JB	R068	0700036M	CF 1/16W 470-JB
R005	0700049M	CF 1/16W 4.7K-JB	R069	0700027M	CF 1/16W 100-JB
R006	0700054M	CF 1/16W 10K-JB(C756/C755/C750)	R070	0700041M	CF 1/16W 1.0K-JB
R007	0700058M	CF 1/16W 22K-JB	R071	0700041M	CF 1/16W 1.0K-JB
R008	0700058M	CF 1/16W 22K-JB	R072	0700041M	CF 1/16W 1.0K-JB
R009	0700061M	CF 1/16W 33K-JB	R073	0700041M	CF 1/16W 1.0K-JB
R010	0700054M	CF 1/16W 10K-JB	R074	0100065M	CF 1/8W 1K-JB(C756/C755)
			R075	0100065M	CF 1/8W 1K-JB(C756/C755)
			R076	0100065M	CF 1/8W 1K-JB(C756/C755)
			R077	0100065M	CF 1/8W 1K-JB(C756/C755)
			R080	0100065M	CF 1/8W 1K-JB(C756/C755)
			R081	0700041M	CF 1/16W 1.0K-JB
			R082	0700054M	CF 1/16W 10K-JB
			R083	0700041M	CF 1/16W 1.0K-JB
			R084	0700042M	CF 1/16W 1.2K-JB
			R085	0700063M	CF 1/16W 47K-JB
			R086	0700054M	CF 1/16W 10K-JB
			R087	0700054M	CF 1/16W 10K-JB
			R089	0700041M	CF 1/16W 1.0K-JB(C756/C755/C750)
			R090	0700054M	CF 1/16W 10K-JB

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R091	0700042M	CF 1/16W 1.2K-JB(C756/C755/C750)	R440	0700049M	CF 1/16W 4.7K-JB
R092	0700054M	CF 1/16W 10K-JB	R441	0700049M	CF 1/16W 4.7K-JB
R093	0700041M	CF 1/16W 1.0K-JB	R447	0700065M	CF 1/16W 68K-JB
R094	0700041M	CF 1/16W 1.0K-JB	R448	0700041M	CF 1/16W 1.0K-JB
R095	0700045M	CF 1/16W 2.2K-JB	R449	0187076M	CF 1/16W 3.0K-JB
R096	0700049M	CF 1/16W 4.7K-JB	R450	0187082M	CF 1/16W 5.1K-JB
R097	0700041M	CF 1/16W 1.0K-JB	R451	0119636M	MF 1/8W 16K-FB
R098	0100065M	CF 1/8W 1K-JB(C756/C755/C750)	R451A	0119601M	MF 1/8W 560-FB
R100	0700058M	CF 1/16W 22K-JB	R452	0700036M	CF 1/16W 470-JB
R101	0100065M	CF 1/8W 1K-JB	R453	0700036M	CF 1/16W 470-JB
R103	0114131M	CF 1/4W 100-JB	R454	0700058M	CF 1/16W 22K-JB
R206	0700036M	CF 1/16W 470-JB	R455	0700041M	CF 1/16W 1.0K-JB
R207	0700036M	CF 1/16W 470-JB	R456	0700041M	CF 1/16W 1.0K-JB
R208	0700027M	CF 1/16W 100-JB	R457	0700041M	CF 1/16W 1.0K-JB(C756/C755/C750)
R209	0700045M	CF 1/16W 2.2K-JB	R458	0700035M	CF 1/16W 390-JB(C053)
R210	0100121M	CF 1/8W 220K-JB	R458	0700039M	CF 1/16W 820-JB(C756/C755/C750)
R212	0100131M	CF 1/8W 560K-JB	R459	0700054M	CF 1/16W 10K-JB
R213	0700051M	CF 1/16W 5.6K-JB	R460	0700058M	CF 1/16W 22K-JB
R216	0700043M	CF 1/16W 1.5K-JB	R461	0700054M	CF 1/16W 10K-JB
R240	0700036M	CF 1/16W 470-JB	R462	0700041M	CF 1/16W 1.0K-JB
R241	0700027M	CF 1/16W 100-JB	R463	0700041M	CF 1/16W 1.0K-JB
R242	0700037M	CF 1/16W 560-JB	R464	0700041M	CF 1/16W 1.0K-JB(C756/C755/C750)
R242A	0700033M	CF 1/16W 270-JB	R465	0700035M	CF 1/16W 390-JB(C053)
R243	0700043M	CF 1/16W 1.5K-JB	R465	0700039M	CF 1/16W 820-JB(C756/C755/C750)
R246	0100057M	CF 1/8W 470-JB(C053)	Δ R466	0119505G	MF 2.2-J
R246	0700034M	CF 1/16W 330-JB(C756/C755/C750)	Δ R467	0119505G	MF 2.2-J
R247	0100057M	CF 1/8W 470-JB(C756/C755/C750)	Δ R468	0119505G	MF 2.2-J
R247	0700037M	CF 1/16W 560-JB(C053)	R469	0700041M	CF 1/16W 1.0K-JB
R248	0700041M	CF 1/16W 1.0K-JB	R472	0100113M	CF 1/8W 100K-JB
R251	0700027M	CF 1/16W 100-JB(C053)	R473	0100065M	CF 1/8W 1K-JB
R252	0700037M	CF 1/16W 560-JB(C053)	R474	0100113M	CF 1/8W 100K-JB
R253	0700031M	CF 1/16W 180-JB(C053)	R475	0100065M	CF 1/8W 1K-JB
R301	0700054M	CF 1/16W 10K-JB(C756/C755/C750)	R476	0100065M	CF 1/8W 1K-JB
R302	0700058M	CF 1/16W 22K-JB(C053)	R477	0100113M	CF 1/8W 100K-JB
R302	0700061M	CF 1/16W 33K-JB(C756/C755/C750)	R478	0100065M	CF 1/8W 1K-JB
R303	0700031M	CF 1/16W 180-JB	R479	0100113M	CF 1/8W 100K-JB
R304	0700041M	CF 1/16W 1.0K-JB(C053)	R489	0100121M	CF 1/8W 220K-JB
R305	0700041M	CF 1/16W 1.0K-JB	R490	0100133M	CF 1/8W 680K-JB
R306	0700051M	CF 1/16W 5.6K-JB	R491	0700027M	CF 1/16W 100-JB
R307	0700038M	CF 1/16W 680-JB(C053)	R492	0700027M	CF 1/16W 100-JB
R307	0700048M	CF 1/16W 3.9K-JB(C756/C755/C750)	R501	0100121M	CF 1/8W 220K-JB(C053)
R308	0700047M	CF 1/16W 3.3K-JB(C053)	R501	0100133M	CF 1/8W 680K-JB(C756/C755/C750)
R330	0100041M	CF 1/8W 100-JB(C756/C755/C750)	R502	0700035M	CF 1/16W 390-JB(C756/C755/C750)
R332	0100041M	CF 1/8W 100-JB	R502	0700037M	CF 1/16W 560-JB(C053)
R333	0100038M	CF 1/8W 75-JB	R503	0700038M	CF 1/16W 680-JB
R401	0700051M	CF 1/16W 5.6K-JB(C756/C755/C750)	R504	0700027M	CF 1/16W 100-JB
R402	0700067M	CF 1/16W 100K-JB	R505	0700047M	CF 1/16W 3.3K-JB
R403	0700045M	CF 1/16W 2.2K-JB	R506	0114141M	CF 1/4W 270-JB
R404	0700045M	CF 1/16W 2.2K-JB	R507	0100069M	CF 1/8W 1.5K-JB(C053)
R405	0700038M	CF 1/16W 680-JB(C053)	R507	0100073M	CF 1/8W 2.2K-JB(C756/C755/C750)
R405	0700041M	CF 1/16W 1.0K-JB(C756/C755/C750)	R508	0100069M	CF 1/8W 1.5K-JB(C053)
R406	0700038M	CF 1/16W 680-JB(C053)	R508	0100073M	CF 1/8W 2.2K-JB(C756/C755/C750)
R406	0700041M	CF 1/16W 1.0K-JB(C756/C755/C750)	R509	0100069M	CF 1/8W 1.5K-JB(C053)
R407	0700048M	CF 1/16W 3.9K-JB	R509	0100073M	CF 1/8W 2.2K-JB(C756/C755/C750)
R408	0700048M	CF 1/16W 3.9K-JB	R515	0700053M	CF 1/16W 8.2K-JB(C053)
R409	0700034M	CF 1/16W 330-JB	R515	0700066M	CF 1/16W 82K-JB(C756/C755/C750)
R410	0100065M	CF 1/8W 1K-JB(C053)	R516	0700066M	CF 1/16W 82K-JB
R410	0100077M	CF 1/8W 3.3K-JB(C756/C755/C750)	R550	0100038M	CF 1/8W 75-JB(C756/C755/C750)
R411	0100065M	CF 1/8W 1K-JB(C053)	R551	0100038M	CF 1/8W 75-JB(C756/C755/C750)
R411	0100077M	CF 1/8W 3.3K-JB(C756/C755/C750)	R552	0100041M	CF 1/8W 100-JB(C756/C755/C750)
R412	0700034M	CF 1/16W 330-JB	R553	0700041M	CF 1/16W 1.0K-JB(C756/C755/C750)
R413	0100113M	CF 1/8W 100K-JB	R554	0700041M	CF 1/16W 1.0K-JB(C756/C755/C750)
R414	0700063M	CF 1/16W 47K-JB	R555	0700041M	CF 1/16W 1.0K-JB
R415	0700054M	CF 1/16W 10K-JB	R556	0700036M	CF 1/16W 470-JB
R416	0700041M	CF 1/16W 1.0K-JB(C756/C755/C750)	R557	0700034M	CF 1/16W 330-JB(C756/C755/C750)
R417	0700054M	CF 1/16W 10K-JB	R558	0700034M	CF 1/16W 330-JB(C756/C755/C750)
R418	0700054M	CF 1/16W 10K-JB	R559	0700044M	CF 1/16W 1.8K-JB
R419	0100051M	CF 1/8W 270-JB	R560	0700044M	CF 1/16W 1.8K-JB
R420	0700055M	CF 1/16W 12K-JB(C053)	R561	0700044M	CF 1/16W 1.8K-JB
R421	0700049M	CF 1/16W 4.7K-JB(C053)	R562	0700027M	CF 1/16W 100-JB(C756/C755/C750)
R422	0700055M	CF 1/16W 12K-JB(C053)	R563	0700034M	CF 1/16W 330-JB(C756/C755/C750)
R423	0700049M	CF 1/16W 4.7K-JB(C053)	R591	0700032M	CF 1/16W 220-JB
R424	0700049M	CF 1/16W 4.7K-JB(C053)	R592	0700032M	CF 1/16W 220-JB

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R593	0700032M	CF 1/16W 220-JB	R766	0100105M	CF 1/8W 47K-JB(C053)
R595	0700041M	CF 1/16W 1.0K-JB(C053)	R771	0110197S	MF 2W 10-JS(C756/C755/C750)
R601	0187094M	CF 1/16W 16K-JB(C756/C755/C750)	R801	AT00387S	MF 3W 12K OHM(C756/C755/C750)
R601	0700058M	CF 1/16W 22K-JB(C053)	R801	0110271S	MF 2W 12K-JS(C053)
R602	0700027M	CF 1/16W 100-JB	R802	0113750M	CF 1/2W 1K-JB
R603	0700027M	CF 1/16W 100-JB	R803	AT00387S	MF 3W 12K OHM(C756/C755/C750)
R605	0700067M	CF 1/16W 100K-JB(C756/C755/C750)	R803	0110271S	MF 2W 12K-JS(C053)
R608	0113748M	CF 1/2 P-B 820-JB(C756/C755/C750)	R804	0700043M	CF 1/16W 1.5K-JB(C756/C755/C750)
R608	0113756M	CF SRD1/2P-B 1.8K-J(C053)	R804	0700044M	CF 1/16W 1.8K-JB(C053)
R609	119732	MF 1.2-K 1W(C756/C755/C750)	R805	0187046M	CF 1/16W 160-JB(C756/C755/C750)
R609	119733	MF 1W 1.5-K(C053)	R805	0700034M	CF 1/16W 330-JB(C053)
R611	0700056M	CF 1/16W 15K-JB(C756/C755/C750)	R806	0700027M	CF 1/16W 100-JB
R611	0700057M	CF 1/16W 18K-JB(C053)	R809	0113750M	CF 1/2W 1K-JB
R612	0700041M	CF 1/16W 1.0K-JB	R810	0700054M	CF 1/16W 10K-JB
R614	0700061M	CF 1/16W 33K-JB	R811	0100049M	CF 1/8W 220-JB
R615	0700051M	CF 1/16W 5.6K-JB	R812	0100049M	CF 1/8W 220-JB
R616	0700054M	CF 1/16W 10K-JB	R813	0700054M	CF 1/16W 10K-JB
R617	0113735M	CF 1/2W 270-JB	R814	0700043M	CF 1/16W 1.5K-JB(C756/C755/C750)
R618	0700059M	CF 1/16W 27K-JB	R814	0700044M	CF 1/16W 1.8K-JB(C053)
R701	0114212M	CF SRD 1/4 P 30K-JB(C756/C755/C750)	R815	0187046M	CF 1/16W 160-JB(C756/C755/C750)
R701	0114281M	CF SRD 1/4P 100K-J(C053)	R815	0700034M	CF 1/16W 330-JB(C053)
R701A	0114223M	CF SRD 1/4 PB 82K-J(C053)	R816	0700027M	CF 1/16W 100-JB
 R703	0119645M	MF 1/8W 39K-FB(C053)	R819	AT00387S	MF 3W 12K OHM(C756/C755/C750)
 R703	0119651M	MF 1/8W 68K-FB(C756/C755/C750)	R819	0110271S	MF 2W 12K-JS(C053)
 R704	0118970M	MF 240K-G 1/16W(C053)	R820	0113750M	CF 1/2W 1K-JB
 R704	0119648M	MF 1/8W 51K-FB(C756/C755/C750)	R823	0100073M	CF 1/8W 2.2K-JB(C756/C755/C750)
R705	0100049M	CF 1/8W 220-JB(C756/C755/C750)	R825	0700043M	CF 1/16W 1.5K-JB(C756/C755/C750)
R705	0100051M	CF 1/8W 270-JB(C053)	R825	0700044M	CF 1/16W 1.8K-JB(C053)
R706	0700042M	CF 1/16W 1.2K-JB(C756/C755/C750)	R827	0700027M	CF 1/16W 100-JB
R706	0700055M	CF 1/16W 12K-JB(C053)	R828	0187046M	CF 1/16W 160-JB(C756/C755/C750)
R707	0100089M	CF 1/8W 10K-JB	R828	0700034M	CF 1/16W 330-JB(C053)
R708	0100049M	CF 1/8W 220-JB	R829	0700054M	CF 1/16W 10K-JB
R719	0113750M	CF 1/2W 1K-JB(C756/C755/C750)	R830	0100049M	CF 1/8W 220-JB
R719	0113758M	CF 1/2W 1.2K-JB(C053)	R831	0100043M	CF 1/8W 120-JB(C756/C755/C750)
R720	0113709M	CF SRD1/2P-B 22-J(C756/C755/C750)	R841	0113733M	CF SRD1/2P-B 220-J(C053)
R721	0110215S	MF 56-JS(C756/C755/C750)	 R900	139026	CC RC1/2W 8.2M-KF HIGH VOL(C756/C755/C750)
R721	0110219S	MF 82-JS(C756/C755/C750)	 R901	2341261	THERMISTOR
R721	0140325S	WW 4.7K-J 5W(C053)	 R902	144151	WW 33-J(C756/C755/C750)
R722	147532	WW 4.7J 5W(C053)	R903	141133	WW 7W 2.7-K CEMENTED(C053)
R722	147821	WW 15W 3.9-JF(C756/C755/C750)	R903	147811	WW 15W 1.5-KM(C756/C755/C750)
R723	0700041M	CF 1/16W 1.0K-JB(C756/C755/C750)	R904	0113778M	CF 1/2W 15K-JB(C053)
R724	0113748M	CF 1/2 P-B 820-JB(C756/C755/C750)	R905	0100125M	CF 1/8W 330K-JB(C053)
R725	0700032M	CF 1/16W 220-JB(C053)	R905	0110253S	MF 2.2K-JS(C756/C755/C750)
R726	0100077M	CF 1/8W 3.3K-JB	R906	0110253S	MF 2.2K-JS(C756/C755/C750)
R727	0110271S	MF 2W 12K-JS(C053)	R906	141157	WW 15W 150-JF(C053)
R728	0110271S	MF 2W 12K-JS(C053)	R907	0110211S	MF 39-JS(C053)
R728	0113758M	CF 1/2W 2.2K-JB(C756/C755/C750)	R907	0110253S	MF 2.2K-JS(C756/C755/C750)
 R730	0119505G	MF 2.2-J	R908	0110211S	MF 39-JS(C053)
R732	0700043M	CF 1/16W 1.5K-JB(C053)	R908	0110281S	MF 33K-JS(C756/C755/C750)
R734	0100089M	CF 1/8W 10K-JB	R908A	0110211S	MF 39-JS(C053)
R735	0700047M	CF 1/16W 3.3K-JB	R909	0119508S	MF 1/4W 56-JF(C053)
R736	0700041M	CF 1/16W 1.0K-JB	R909	0140931S	WW 7W 3.3K(BSR-Z)(C756/C755/C750)
R741	0113793M	CF SRD1/2P-B 56K-J(C053)	R910	0119733M	MF 1W 1R5 -K TAPE(C053)
R745	0100037M	CF 1/8W 68-JB	 R910	0139015G	CC RC1/2W1M-KFHIGHVOLT(C756/C755/C750)
R746	0113729M	CF 1/2W 150-JB(C756/C755/C750)	R911	0100041M	CF 1/8W 100-JB(C756/C755/C750)
R746	0114177M	CF SRD 1/4 P 4.7K-J(C053)	R911	0110117S	MF 68-JS(C053)
R747	0110101S	MF 1W 15-JS(C053)	R912	0700043M	CF 1/16W 1.5K-JB(C053)
R749	0700045M	CF 1/16W 2.2K-JB(C756/C755/C750)	R912	0700044M	CF 1/16W 1.8K-JB(C756/C755/C750)
R750	0114057M	CF SRD 1/4 PF 47-J(C053)	R913	0700061M	CF 1/16W 33K-JB(C053)
R751	0700034M	CF 1/16W 330-JB	R914	0100009M	CF 1/8W 4.7-JB(C756/C755/C750)
R752	0700045M	CF 1/16W 2.2K-JB	R914	0700064M	CF 1/16W 56K-JB(C053)
R753	0700034M	CF 1/16W 330-JB	R915	0179554M	MG 1/4P330K-J(C756/C755/C750)
 R754	0700063M	CF 1/16W 47K-JB	R915	0700027M	CF 1/16W 100-JB(C053)
R756	0700034M	CF 1/16W 330-JB(C756/C755/C750)	R916	0100067M	CF 1/8W 1.2K-JB(C053)
R756	0700046M	CF 1/16W 2.7K-JB(C053)	R916	0179554M	MG 1/4P330K-J(C756/C755/C750)
R757	0100029M	CF 1/8W 33-JB	R917	0113798M	CF SRD1/2P-B 91K-J(C756/C755/C750)
R759A	0110199S	MF 2W 12-JS(C053)	R918	0700067M	CF 1/16W 100K-JB(C756/C755/C750)
R759B	0110199S	MF 2W 12-JS(C053)	R920	0179552M	MG 220K-JTAPE(C756/C755/C750)
R760	0700058M	CF 1/16W 22K-JB(C756/C755/C750)	R921	0700054M	CF 1/16W 10K-JB(C756/C755/C750)
R761	0700058M	CF 1/16W 22K-JB(C756/C755/C750)	R922	0110129S	MF 220-JS(C756/C755/C750)
R762	0100051M	CF 1/8W 270-JB(C756/C755/C750)	R923	0119591M	MF 1/8W 220-FB(C756/C755/C750)
R764	0700053M	CF 1/16W 8.2K-JB	R924	0119619M	MF 1/8W 3.3K-FB(C756/C755/C750)
R765	0100047M	CF 1/8W 180-JB	R924	0700059M	CF 1/16W 27K-JB(C053)

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R925	0100133M	CF 1/8W 680K-JB(C053)	RA61	0700036M	CF 1/16W 470-JB(C756/C755)
R925	119640	MF 1/8W 24K-F(C756/C755/C750)	RA62	0700028M	CF 1/16W 120-JB(C756/C755)
R926	119640	MF 1/8W 24K-F(C756/C755/C750)	RA63	0179536M	MG 1M J TAPE(C756/C755)
R927	0119619M	MF 1/8W 3.3K-FB(C756/C755/C750)	RA64	0700043M	CF 1/16W 1.5K-JB(C756/C755)
R927	0700041M	CF 1/16W 1.0K-JB(C053)	RA65	0187034M	CF 1/16W 51-J(C756/C755)
R928	150213	VR R-0814 2K-B(C756/C755/C750)	RA66	0700034M	CF 1/16W 330-JB(C756/C755)
R928	0700047M	CF 1/16W 3.3K-JB(C053)	RA67	0100059M	CF 1/8W 560-JB(C756/C755)
R929	0700049M	CF 1/16W 4.7K-JB(C053)	RA68	0700062M	CF 1/16W 39K-JB(C756/C755)
R932	0700053M	CF 1/16W 8.2K-JB(C756/C755/C750)	RA70	0700054M	CF 1/16W 10K-JB(C756/C755)
R933	0700053M	CF 1/16W 8.2K-JB(C756/C755/C750)	RA71	0700054M	CF 1/16W 10K-JB(C756/C755)
R935	0110225S	MF 150-JS 2W(C756/C755/C750)	RA72	0700032M	CF 1/16W 220-JB(C756/C755)
R940	0700059M	CF 1/16W 27K-JB(C756/C755/C750)	RA73	0700032M	CF 1/16W 220-JB(C756/C755)
R942	0700056M	CF 1/16W 15K-JB(C756/C755/C750)	RA74	0700032M	CF 1/16W 220-JB(C756/C755)
R943	0700045M	CF 1/16W 2.2K-JB(C756/C755/C750)	RA75	0100059M	CF 1/8W 560-JB(C756/C755)
R944	0114151M	CF SRD 1/4 P 680-J(C756/C755/C750)	RA76	0700032M	CF 1/16W 220-JB(C756/C755)
R944	0700037M	CF 1/16W 560-JB(C053)	RA77	0700054M	CF 1/16W 10K-JB(C756/C755)
R945	0114059M	CF SRD 1/4 PF 56-J(C053)	RA78	0100059M	CF 1/8W 560-JB(C756/C755)
R946	0700049M	CF 1/16W 4.7K-JB(C756/C755/C750)	RA80	0700041M	CF 1/16W 1.0K-JB(C756/C755)
R947	0700041M	CF 1/16W 1.0K-JB(C756/C755/C750)	RA81	0700052M	CF 1/16W 6.8K-JB(C756/C755)
R948	119695	MF 1W 0.47-F(C756/C755/C750)	RA82	0700041M	CF 1/16W 1.0K-JB(C756/C755)
R949	0110133S	MF 330-JS(C756/C755/C750)	RA83	0100059M	CF 1/8W 560-JB(C756/C755)
R950	0139015G	CC RC1/2W 1M-KF HIGH VOLT(C053)	RA84	0700054M	CF 1/16W 10K-JB(C756/C755)
RA02	0700027M	CF 1/16W 100-JB(C756/C755)	RA85	0700063M	CF 1/16W 47K-JB(C756/C755)
RA03	0700027M	CF 1/16W 100-JB(C756/C755)	RA86	0700054M	CF 1/16W 10K-JB(C756/C755)
RA06	0700037M	CF 1/16W 560-JB(C756/C755)	RA87	0100065M	CF 1/8W 1K-JB(C756/C755)
RA07	0700041M	CF 1/16W 1.0K-JB(C756/C755)	RA89	0700058M	CF 1/16W 22K-JB(C756/C755)
RA08	0700054M	CF 1/16W 10K-JB(C756/C755)	RA90	0700054M	CF 1/16W 10K-JB(C756/C755)
RA09	0700054M	CF 1/16W 10K-JB(C756/C755)	RA91	0700054M	CF 1/16W 10K-JB(C756/C755)
RA10	0700027M	CF 1/16W 100-JB(C756/C755)	RA92	0700054M	CF 1/16W 10K-JB(C756/C755)
RA11	0700027M	CF 1/16W 100-JB(C756/C755)	RA93	0700054M	CF 1/16W 10K-JB(C756/C755)
RA12	0700041M	CF 1/16W 1.0K-JB(C756/C755)	RA94	0700041M	CF 1/16W 1.0K-JB(C756/C755)
RA13	0700041M	CF 1/16W 1.0K-JB(C756/C755)	RA95	0700053M	CF 1/16W 8.2K-JB(C756/C755)
RA14	0700041M	CF 1/16W 1.0K-JB(C756/C755)	RA96	0700056M	CF 1/16W 15K-JB(C756/C755)
RA15	0700041M	CF 1/16W 1.0K-JB(C756/C755)	RAZ1	0700036M	CF 1/16W 470-JB(C756/C755)
RA16	0700062M	CF 1/16W 39K-JB(C756/C755)	RAZ2	0700036M	CF 1/16W 470-JB(C756/C755)
RA17	0700054M	CF 1/16W 10K-JB(C756/C755)	RAZ3	0700033M	CF 1/16W 270-JB(C756/C755)
RA18	0700027M	CF 1/16W 100-JB(C756/C755)	RAZ4	0700027M	CF 1/16W 100-JB(C756/C755)
RA19	0700036M	CF 1/16W 470-JB(C756/C755)	RC01	0700039M	CF 1/16W 820-JB(C756/C755)
RA20	0700034M	CF 1/16W 330-JB(C756/C755)	RC02	0700033M	CF 1/16W 270-JB(C756/C755)
RA21	0700036M	CF 1/16W 470-JB(C756/C755)	RC03	0700032M	CF 1/16W 220-JB(C756/C755)
RA22	0700054M	CF 1/16W 10K-JB(C756/C755)	RE04	0100041M	CF 1/8W 100-JB(C756/C755)
RA23	0700034M	CF 1/16W 330-JB(C756/C755)	RE05	0100041M	CF 1/8W 100-JB(C756/C755)
RA24	0700033M	CF 1/16W 270-JB(C756/C755)	RE06	0100041M	CF 1/8W 100-JB(C756/C755)
RA25	0700063M	CF 1/16W 47K-JB(C756/C755)	RE20	0700059M	CF 1/16W 27K-JB(C756/C755)
RA26	0700054M	CF 1/16W 10K-JB(C756/C755)	RE21	0700059M	CF 1/16W 27K-JB(C756/C755)
RA27	0700054M	CF 1/16W 10K-JB(C756/C755)	RE22	0700063M	CF 1/16W 47K-JB(C756/C755)
RA28	0700038M	CF 1/16W 680-JB(C756/C755)	RE23	0700059M	CF 1/16W 27K-JB(C756/C755)
RA29	0700035M	CF 1/16W 390-JB(C756/C755)	RE24	0700059M	CF 1/16W 27K-JB(C756/C755)
RA30	0700042M	CF 1/16W 1.2K-JB(C756/C755)	RE25	0700045M	CF 1/16W 2.2K-JB(C756/C755)
RA31	0700054M	CF 1/16W 10K-JB(C756/C755)	RE26	0700042M	CF 1/16W 1.2K-JB(C756/C755)
RA34	0700063M	CF 1/16W 47K-JB(C756/C755)	RJG1	0700027M	CF 1/16W 100-JB
RA35	0700058M	CF 1/16W 22K-JB(C756/C755)	RJG2	0700027M	CF 1/16W 100-JB
RA36	0700054M	CF 1/16W 10K-JB(C756/C755)	ROA2	0700046M	CF 1/16W 2.7K-JB
RA37	0700058M	CF 1/16W 22K-JB(C756/C755)	ROA3	0700032M	CF 1/16W 220-JB
RA38	0700054M	CF 1/16W 10K-JB(C756/C755)			SWITCHES/RELAYS
RA39	0700035M	CF 1/16W 390-JB(C756/C755)			
RA40	0700054M	CF 1/16W 10K-JB(C756/C755)	S001	2632851	5KEY TACT SWITCH
RA41	0700054M	CF 1/16W 10K-JB(C756/C755)	S002	2632901	1P TACT SWITCH(C756/C755/C750)
RA43	0700067M	CF 1/16W 100K-JB(C756/C755)	S003	2632901	1P TACT SWITCH
RA44	0700063M	CF 1/16W 47K-JB(C756/C755)	! S901	2641222	POWER RELAY
RA45	0700039M	CF 1/16W 820-JB(C756/C755)			
RA46	0110209S	MF 33-JS(C756/C755)			SPEAKERS
RA47	0110209S	MF 33-JS(C756/C755)			
RA48	0187038M	CF 1/16W 75-J(C756/C755)	SP451	GK00061	SPEAKER 5X9(C755/C750)
RA49	0187038M	CF 1/16W 75-J(C756/C755)	SP451	2412518	SPEAKER 09*05 2W(C053)
RA50	0700028M	CF 1/16W 120-JB(C756/C755)	SP451	2735335	OTHER MAGNETIC PARTS(C756)
RA51	0700032M	CF 1/16W 220-JB(C756/C755)	SP452	GK00061	SPEAKER 5X9(C755/C750)
RA53	0100041M	CF 1/8W 100-JB(C756/C755)	SP452	2412518	SPEAKER 09*05 2W(C053)
RA55	0700027M	CF 1/16W 100-JB(C756/C755)	SP452	2735335	OTHER MAGNETIC PARTS(C756)
RA56	0100041M	CF 1/8W 100-JB(C756/C755)			
RA58	0700027M	CF 1/16W 100-JB(C756/C755)			
RA59	0700037M	CF 1/16W 560-JB(C756/C755)			
RA60	0700066M	CF 1/16W 82K-JB(C756/C755)			

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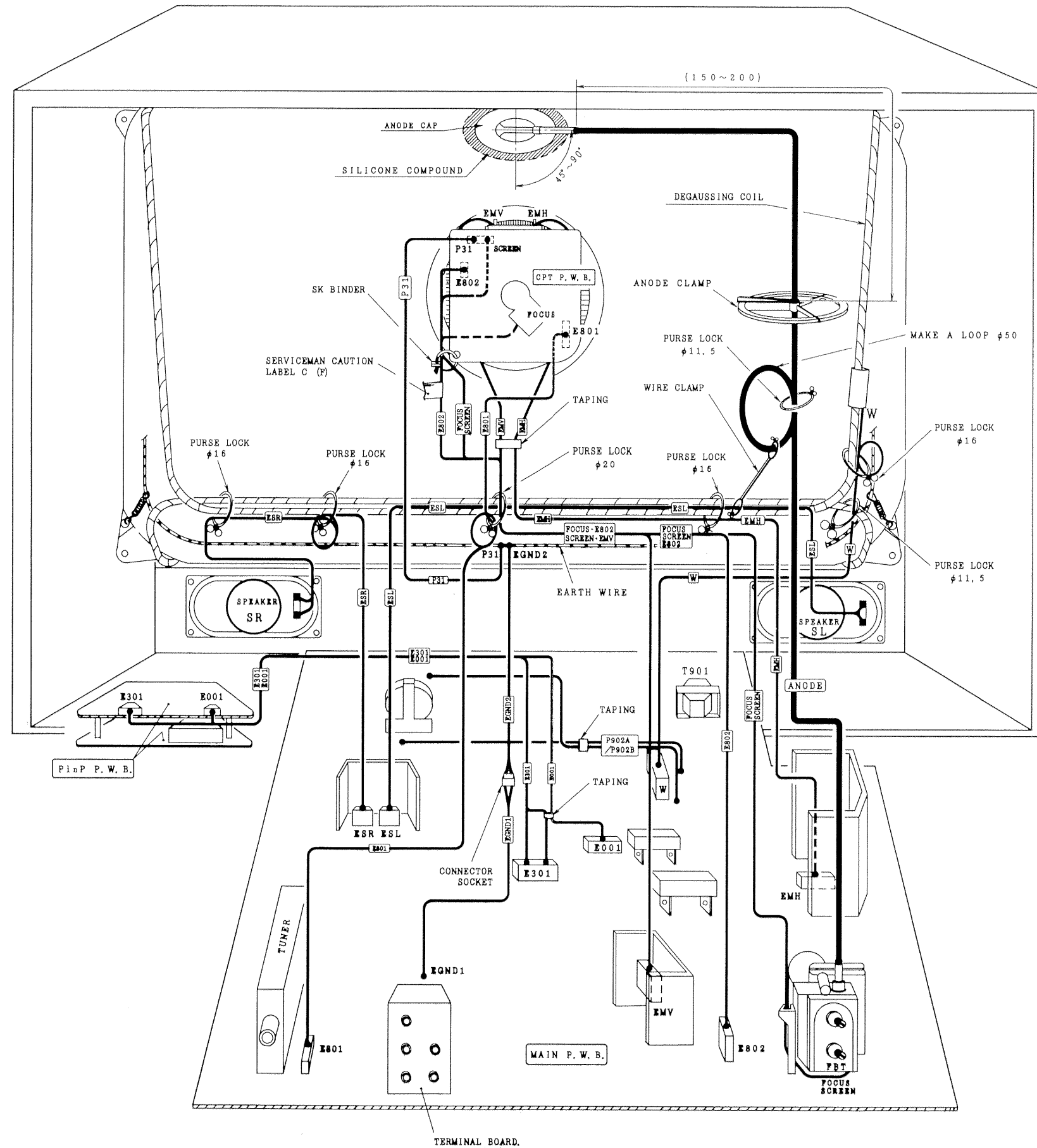
SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
TRANSFORMERS					
T201	2143672	IF COIL WITH 7 CASE 1:3 INCORE	#304	3727972	POWER CORD HANGER(C053)
Δ T701	2260021	HORIZONTAL DRIVING COIL(C053)	#310	H311071	POWER CORD COVER 20V(C053)
Δ T701	2274353	TRANS.-H.DRIVE(C756/C755/C750)	#311	NX00561	P IN P FIXED PIECE 27V(C756/C755)
Δ T702	2436777	HFL1532G ASS(C756/C755/C750)	#350	QX00101	POWER CORD COVER 27V(C756/C755/C750)
Δ T702	2436778	HFL1532G ASS(C053)	#601	3727972	POWER CORD HANGER(C756/C755/C750)
T703	2276081	H. DRIVE TRANS(C053)	#650	3876121	FBT SUPPORT CMT2195 PA(C756/C755/C750)
T901	2124361	DC NOISE FILTER(C756/C755/C750)	#686	H461171	PATENT AND TELESONICS LABEL(27V)
Δ T902	BT00292	COIL(C756/C755/C750)	#686	H461171	PATENT AND TELESONICS LABEL(C053)
T903	2124362	DC.NOISE FILTER(C756/C755/C750)	#802	4693491	CANADA COVER LABEL CCT(C750)
T904	2215912	POWER TRANSFORMER (83MA,14.5V)(C053)	#888	H390032	CUSHION-NEOPLANE(C756)
COLOR PICTURE TUBE			#889	8441611	HIMERON SHEET 240*18(C756)
Δ V1	DE00831	CPT A68ADT25X02 (DARK TINT)(C755/C750)	#900	3810102	PCB SUPPORT(C756/C755/C750)
Δ V1	DE00841	CPT A68KRQ58X(D) (HEDUS)(DARK TINT)(C756)	E001	2909238	CONN.W/WIRE 08C-B2R0 L470(C756/C755)
Δ V1	2471531	CPT A51KQN61X (DARK TINT)(C053)	E203	2784243	DRY BATTERY SUM-3 (G)
CRYSTALS			E301	2976661	CONN. W/WIRE SEH 12J (L300)(C756/C755)
X001	2168931	CRYSTAL HC-49/U-120MHZ	E602	2908401	CRT EARTH WIRE(C756)
X201	2300477	SAW FILTER HW2267	E602	2908403	CPT GND WIRE(RCA1R)(C755/C750)
X241	2167311	FILTER CERAMIC (4.5MHZ)	E603	2788084	CRT EARTH WIRE 20INCH SF(C053)
X242	2167201	TRAP CERAMIC (4.5MHZ)	E604	2773672	CF-MAGNET(C756)
X243	BN00031	CERAMIC DISCRIMINATOR	E801	EF02501	CONNECTOR 06B-B2R5-431#5NC(C053)
X301	HP00151	COMB FILTER UNIT(C756/C755/C750)	E801	EF02502	CONNECTOR 06B-B2R5-561#5NC(C756/C755/C750)
X501	2791505	CRYSTAL HC-491U 3.58MHZ	E802	EF02511	CONNECTOR 04B-B2R5-431#2NC(C053)
X751	2168771	X'TAL CSB503F30	E802	EF02512	CONNECTOR 04B-B2R5-471#2NC(C756/C755/C750)
XA01	BP00171	X'TAL 14R3X16THC-49/U(C756/C755)	E851	2953344	CPT SOCKET
XAZ1	2167201	TRAP CERAMIC (4.5MHZ)(C756/C755)	Δ E901	2745411	<u>AC POWER CORD</u>
MISCELLANEOUS PARTS			E902A	EF02491	CONNECTOR 01A-A0R0-181BROWN
#003	3739671	BS CORD HOLDER NYLON 6	E902B	EF02492	CONNECTOR 01A-A0R0-181RED
#040	QD01801	FRAME SASS'Y 27CX5B(C755/C750)	EA01	2974231S	CONN. W/WIRE SEH 9J L60 (C-B)(C756/C755)
#041	QD01802	FRAME SASS'Y 27CX6B(C756)	EA02	2974201S	CONN. W/WIRE SEH 8J L60 (C-B)(C756/C755)
#051	QD01781	FRAME 27CX5B(C755/C750) <i>Sub QD01791</i>	EF901	2720641	FUSE HOLDER
#052	QD01791	FRAME 27CX6B(C756) <i>Sub to QD01802</i>	EGND1	2957792	CONNECTOR(C756/C755/C750)
#081	QD01771	BACK COVER (C756/C755/C750)	EGND2	2957802	CONNECTOR(C756/C755/C750)
#100	8781646	SCREW 4 X 16 TAPPING(C053)	EMH	2992233	CONNECTOR 04C-N5R0-431-1,3(C755/C750)
#101	8781646	SCREW 4 X 16 TAPPING(C053)	EMV	2967059	W/WIRE 3J MINI CONN(C755/C750)
#102	4519503	3X12 B TAPPING SCREW SWCH15A (C053)	ETP	2122652M	FERRITE CORE(C756/C755/C750)
#103A	4159423	SCR NO 3X12 FL/FLT(C053)	J301	2693841	TERMINAL BOARD M3XU
#104	4159425	3X16 TAPPING WITH WASHER SWRM (C053)	JSIN	2983122	S-SOCKET(C756/C755/C750)
#105	4518376	SCREW 6X25 TAPPING WITH WSR SAE(C053)	JSL	2976644	CONNECTOR 02C-N2R5-821(C755/C750)
#110	4286581	PVC WASHER 2.0T(C053)	JSL	2976643	CONNECTOR 02C-N2R5-621(C053)
#111	8781646	SCREW 4 X 16 TAPPING(C756/C755/C750)	JSL	2976753	CONN. W/WIRE EH 3J (L620)(C756)
#112	8781646	SCREW 4 X 16 TAPPING(C756)	JSR	2976654	CONNECTOR 03C-N2R5-471-1,3(C755/C750)
#115	4159427	3X10 SCREW WITH WASHER STEEL(C755/C750)	JSR	2976653	CONNECTOR 03C-N2R5-221-1,3(C053)
#152A	4528355	6*30 TAPPING SCREW(C756)	JSR	2976763	CONN. W/WIRE EH 4J (L680)(C756)
#152B	4528351	M6X30 TAP SCREW WITH WASHER SAE1(27V)	N101	3701202	PWB HOLDER G7-A PA
#180	PC01182	BUTTON 27CX6B(C756)	N101	3785511	V LOCK 16(C756/C755/C750)
#181	PC01181	BUTTON 27CX5B(C755/C750)	N101	3785502	V LOCK 11.5(C053)
#182	8781646	SCREW 4 X 16 TAPPING(C756/C755/C750)	N101	544510	TERMINAL PIECE(C755/C750)
#201	8781646	SCREW 4 X 16 TAPPING(C756/C755/C750)	N102	QN00931	CHASSIS MODEL LABEL (C756/C755/C750)
#201	3106729	FRAME SUBASSEMBLY(C053)	N102	QN00932	CHASSIS LABEL M3XU(C053)
#203	8781646	SCREW 4 X 16 TAPPING(C756/C755/C750)	N102	3785522	V LOCK 20(C756/C755/C750)
#204	4519508	SCREW 3X20 TAPPING SCREW(C756/C755/C750)	N103	3705232	ANODE CLAMPER 94V0 (101)(C053)
#205	4519503	3X12 B TAPPING SCREW SWCH15A(27V)	N104	3785511	V LOCK 16(C756/C755/C750)
#207	3106231	FRAME 20SA3B PS (C053)	N105	3705232	ANODE CLAMPER 94V0 (101)(C756/C755/C750)
#210	3850663	CHASSIS RAIL 20SA3B PS (C053)	N106	3785511	V LOCK 16(C756/C755/C750)
#211	8781646	SCREW 4 X 16 TAPPING(C756/C755/C750)	N108	3785511	V LOCK 16(C756/C755/C750)
#212	4286585H	PVC WASHER(C756/C755)	N108	3785502	V LOCK 11.5(C053)
#215	3874331	FBT MTG HOLDER PS (C053)	N110	3785502	V LOCK 11.5(C756/C755/C750)
#220	3828091	R/C LENS 20SA3B (C053)	N111	3785502	V LOCK 11.5(C756/C755/C750)
#222	H311081	SP SHEET 27CX6B(C756)	N112	9374506	WIRE UL1007 CSATR64 AWG22 1/0.64 FR-1 GR
#222	3273681	CONTROL BUTTON 20SA3B (C053)	N113	3763751	SK BINDER(C756/C755/C750)
#250	3487425	HITACHI BADGE (C756)	N113	3763751	SK BINDER(C053)
#252	KQ00212	R/C LENS 27CX6B(C756)	N130	3700342	WIRE CLAMP V0(C756/C755/C750)
#253	KQ00211	R/C LENS 27CX5B(C755/C750)	N150	3728273	PURSE LOCK (8)(C756/C755/C750)
#254	8781646	SCREW 4 X 16 TAPPING(C756/C755/C750)	N401	3446863	S HEAT SINK (M1-K) AL(C756/C755/C750)
#302	3164683	BACKCOVER 20SA3B(C053)	N401	QN00328	SERVICEMAN WARNING LABEL A(27CX6B)
			N401	4778553	SERVICEMAN WARNING LABEL(C053)
			N401A	4520881	M3*8 SCREW WITH WASHER(C756/C755/C750)
			N401B	8821234	NUT-3(C756/C755/C750)
			N403	QN00329	SERVICEMAN WARNING LABEL A (27CX5B)
			N601	3442421	HEAT SINK TC-30(C053)
			N601	3446864	V.HEAT SINK M3LXU(C756/C755/C750)
			N601	4615641	WEDGE(C756)
			N601	4615642	WEDGE(C053)

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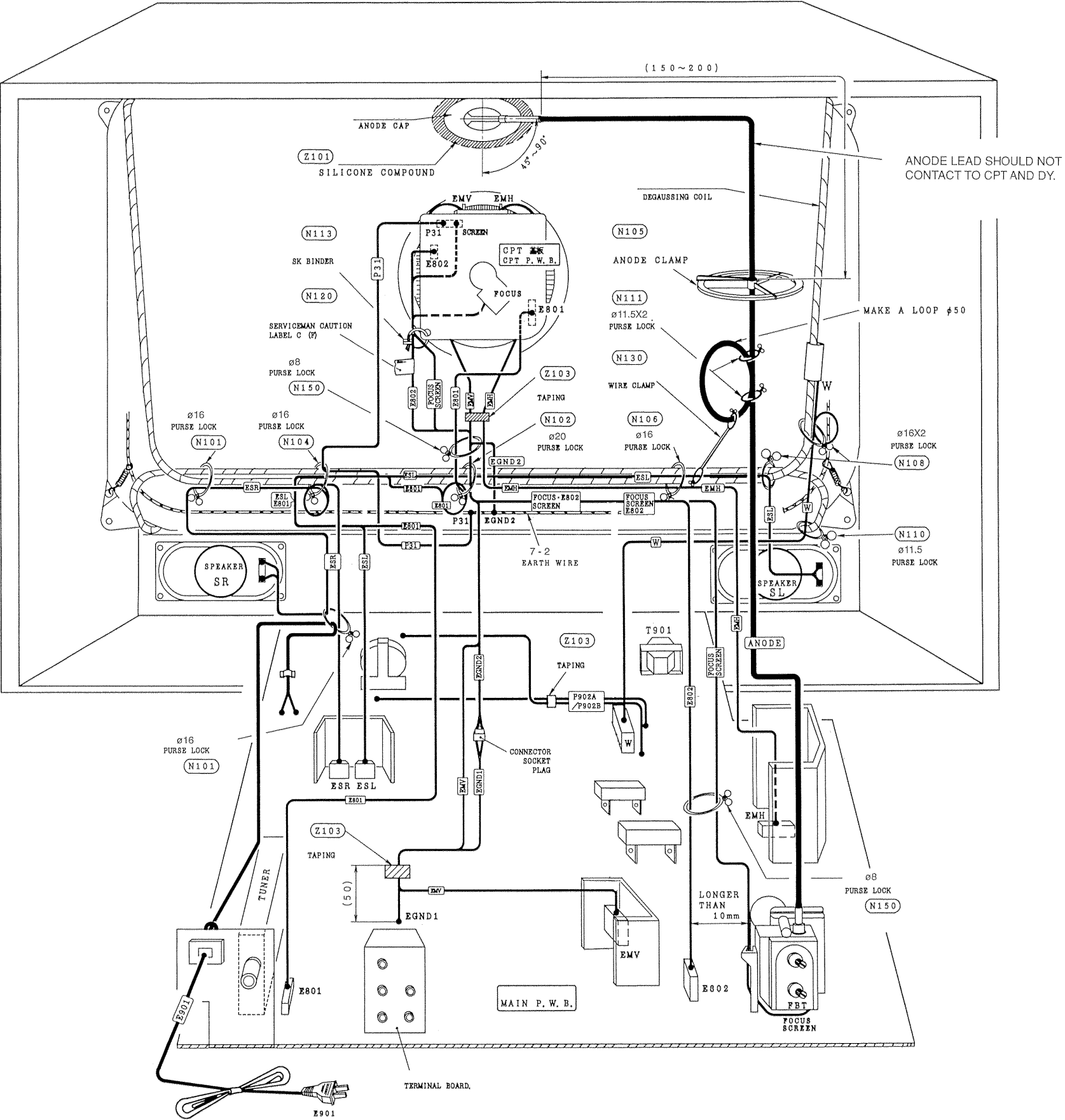
SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
N601A	4519501	SCREW 3X10 B TAPPING(C053)	Z925	9451104	VARNISH CLOTH TUBE 0.8X1.8 YEL.(C756/C755/C750)
N601A	4520881	M3*8 SCREW WITH WASHER(C756/C755/C750)	Z933	9413926	SILICON RUBBER(C756/C755/C750)
N601B	8821234	NUT-3(C756/C755/C750)	ZA01	3787482	PCB HOLDER (16L)(C756/C755)
N602	3333921	EARTH SPRING(C053)	ZA02	9451104	VARNISH CLOTH TUBE 0.8X1.8 YELLOW(C756/C755)
N604	649009	HOOK-30(C053)	ZA03	9451104	VARNISH CLOTH TUBE 0.8X1.8 YELLOW(C756/C755)
N605	649009	HOOK-30(C756/C755/C750)	ZC301	9374575	UL CSA1007-24HP CODE GREEN(C756/C755)
N605	3763751	SK BINDER(C053)	ZC301B	9485158	HOT MELT (AX-1503C)(C756/C755/C750)
N606	3330941	EARTH SPRING(C756/C755/C750)	ZC310A	9451104	VARNISH CLOTH TUBE 0.8X1.8 YELLOW (C756/C755/C750)
N606	3763751	SK BINDER(C053)	ZE9	9449603	NITTOH TAPE #747(C756/C755/C750)
N609	3763751	SK BINDER(C756/C755/C750)	ZE9B	9563445	EXCEED GLASS TUBE HG-2E 3.5(C756/C755/C750)
N611	2772981	FERRITE SHEET ASS'Y(C756/C755/C750)	ZK16	9413926	SILICON RUBBER(C756/C755/C750)
N611	2772981	FERRITE SHEET ASS'Y(C053)	ZK17	9413926	SILICON RUBBER(C756/C755/C750)
N613	2772211	MAG. PIECE(C756)	ZK51	9413926	SILICON RUBBER(C756/C755/C750)
N702	3442421	HEAT SINK TC-30(C053)	ZKAZ1	9374575	UL CSA1007-24HP CODE GREEN(C756/C755)
N702	3445542	H.HEAT SINK HY09 A11DOP-H2(C756/C755/C750)	ZKAZ2	9374575	UL CSA1007-24HP CODE GREEN(C756/C755)
N702A	4514061	SCREW FLANGED 3*12(C756/C755/C750)	ZQ91	9414017	SILICONE COMPOUND(G-746)(C756/C755/C750)
N702A	4518771	SCREW 3X10 TAPPING WITH WSR STEEL(C053)	ZR030	9485158	HOT MELT (AX-1503C)(C756/C755/C750)
N702B	8821234	NUT-3(C756/C755/C750)	ZR057	9451104	VARNISH CLOTH TUBE 0.8X1.8 YEL.(C756/C755/C750)
N702C	8813124	SPRING WASHER-3(C756/C755/C750)	ZRA	9449506	SCOTCH TAPE NO.29 19MM(C756/C755)
N702D	4284311	2000 EARTH PIN(C756/C755/C750)	ZRA73	9451104	VARNISH CLOTH TUBE 0.8X1.8 YELLOW(C756/C755)
N702E	4159411	SCREW 3*8 KNURLED TAPPINGSWRM (C756/C755/C750)	ZRAZ3	9451104	VARNISH CLOTH TUBE 0.8X1.8 YELLOW(C756/C755)
N901	4289238	HEAT SINK M3LXU(C053)	ZRAZ4	9451104	VARNISH CLOTH TUBE 0.8X1.8 YELLOW(C756/C755)
N901A	4520883	3*12 SCREW WITH WASHER(C053)	ZRC03	9451104	VARNISH CLOTH TUBE 0.8X1.8 YELLOW(C756/C755)
N901B	8821114	NUT,3(C053)	ZS1	EU00301	TERMINAL PIN(C053)
N901D	2787531	MICA SHETT(C053)	ZS2	EY00341	PLUG(C053)
NA01	MD01161	M3 PIP SHIELD CASE A(C756/C755)	ZS3	EU00291	TERMINAL PIN(C053)
NA02	MD01171	M3 PIP SHIELD CASE B(C756/C755)	ZS4	EU00311	TERMINAL PIN(C053)
NE901	3772201	AC CORD HOLDER NYLON			
NQ91	4276993	VERTICAL HEAT SINK(C756/C755/C750)			
NQ91A	4520881	M3*8 SCREW WITH WASHER(C756/C755/C750)			
NT1	4518742	M2.3X12 SCREW WITH WASHER STEEL			
NT2	4243445	G51 INSULATION WASHER PL-11T			
NT3	4518753	M2.3 NUT SWRM3			
P001	2675287	PLUG PIN (PH 8P)(C756/C755)			
P12C	2902264	PLUG PIN SUB MINI 5P(C756/C755/C750)			
P301	2902252	12P PLUG PIN(C756/C755)			
P31	2663131	2P PLUG PIN WITH BASE			
P901	2782611	CENTER PIN(C756/C755/C750)			
P902	2782611	CENTER PIN(C756/C755/C750)			
PA01	2902248	PLUG PIN SUB MINI9P(C756/C755)			
PA02	2902247	PLUG PIN SUB MINI 8P(C756/C755)			
$\triangle$ PMH	2665279	4P PLUG PIN			
$\triangle$ PMV	2663132	3P PLUG PIN WITH BASE			
PSL	2902261	PLUGPIN SUB MINI 2P			
PSR	2902262	PLUG PIN SUB MINI 3P			
$\triangle$ PW	2661751	2P PLUG PIN WITH BASE(C053)			
$\triangle$ PW	2661753	4P PLUG PIN WITH BASE(C756/C755/C750)			
TP001	EU00281	TERMINAL PIN(C053)			
U001	2574881	REMOCON RECEIVER UNIT(GP1U781Q)			
$\triangle$ U101	HJ00081	ET452A - <i>Tuner</i>			
W91	9374575	UL CSA1007-24HP CODE GREEN(C756/C755/C750)			
Z057	9451164	UL TUBE #10(C756/C755/C750)			
Z0A2	9451104	VARNISH CLOTH TUBE 0.8X1.8 YELLOW (C756/C755/C750)			
Z127	9449603	NITTOH TAPE #747			
Z401	9414017	SILICONE COMPOUND(G-746)(C756/C755/C750)			
Z513	9485158	HOT MELT (AX-1503C)(C756/C755/C750)			
Z559	9451104	VARNISH CLOTH TUBE 0.8X1.8 YEL.(C756/C755/C750)			
Z560	9451104	VARNISH CLOTH TUBE 0.8X1.8 YEL.(C756/C755/C750)			
Z561	9451104	VARNISH CLOTH TUBE 0.8X1.8 YEL.(C756/C755/C750)			
Z601	9414017	SILICONE COMPOUND(G-746)			
Z618	9451136	UL CSA TUBE NO.8(C756/C755/C750)			
Z701	9371901	SCA COPPER WIRE 0.65(C756/C755/C750)			
Z702	9414017	SILICONE COMPOUND(G-746)			
Z703	9485158	HOT MELT (AX-1503C)(C053)			
Z760	9451104	VARNISH CLOTH TUBE 0.8X1.8 YEL.(C756/C755/C750)			
Z764	9451136	UL CSA TUBE NO.8(C756/C755/C750)			
Z765	9451136	UL CSA TUBE NO.8(C756/C755/C750)			
Z781	9451104	VARNISH CLOTH TUBE 0.8X1.8 YEL.(C756/C755/C750)			
Z9	9413926	SILICON RUBBER(C756/C755/C750)			
Z901	9414017	SILICONE COMPOUND(G-746)(C053)			
Z901A	9413926	SILICON RUBBER(C756/C755/C750)			

[illegible]

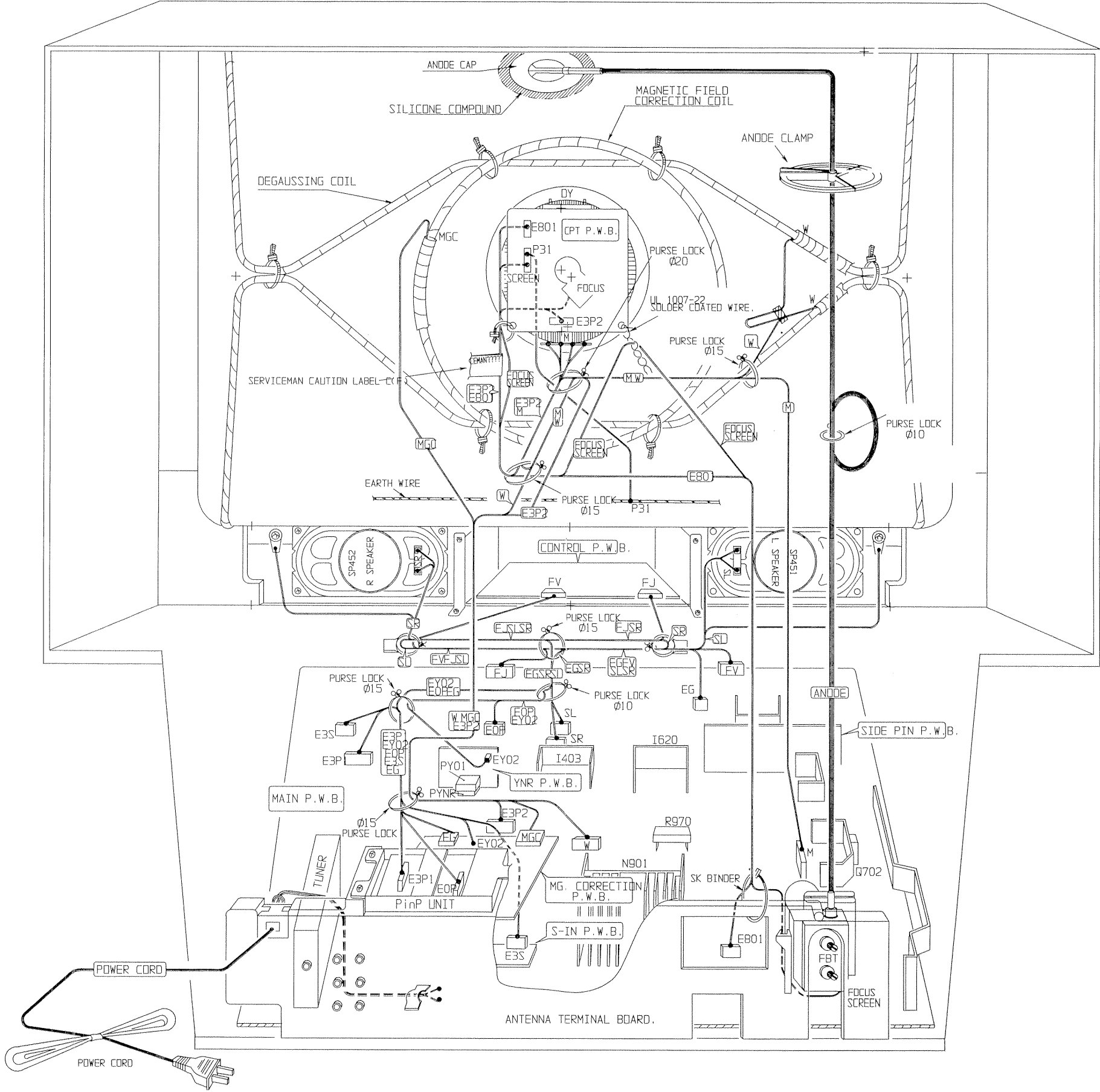
WIRING DRAWING OF 27CX5B/C755 FINAL ASSEMBLY



WIRING DRAWING OF 27CX25B/C750 FINAL ASSEMBLY



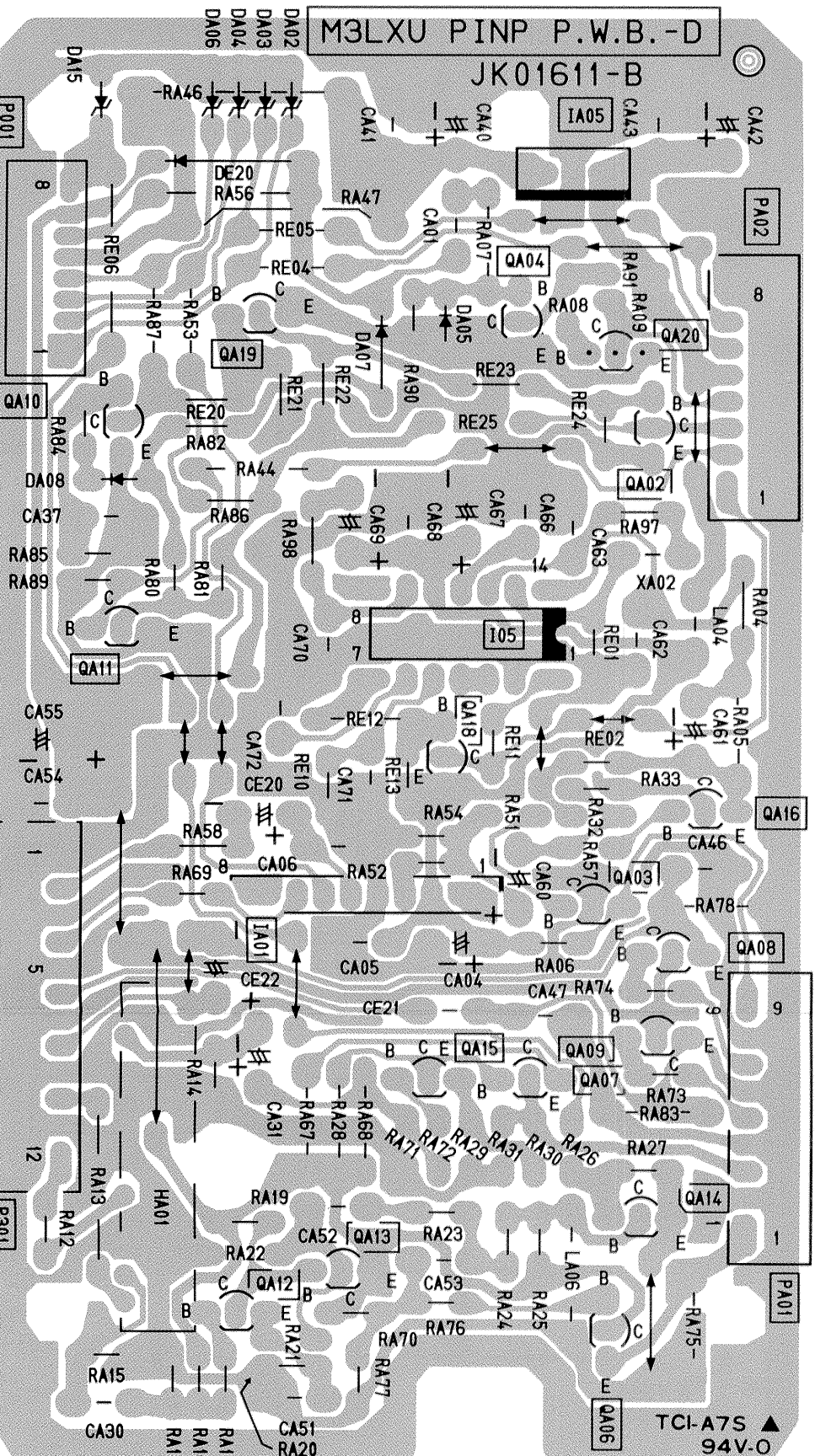
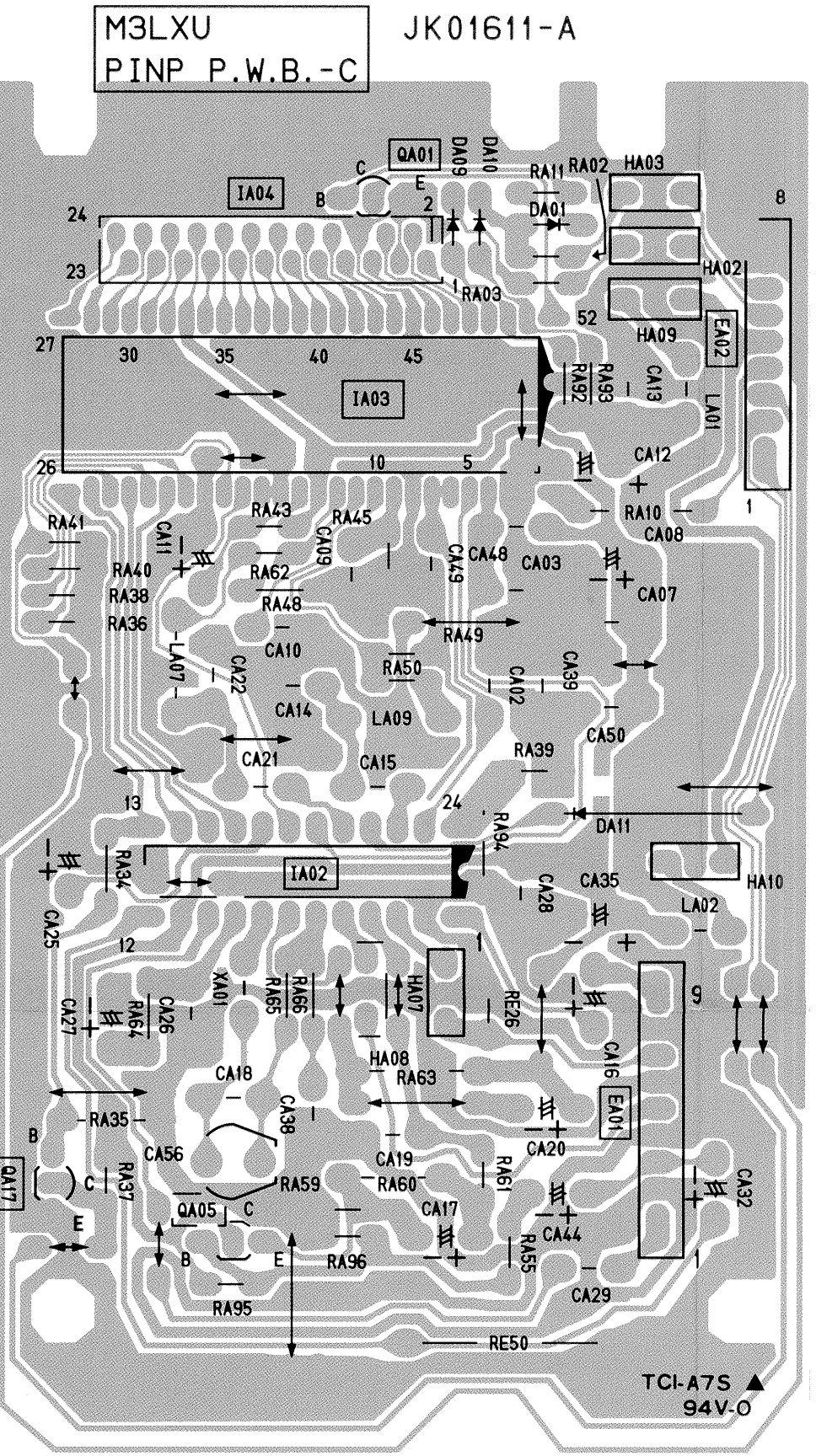
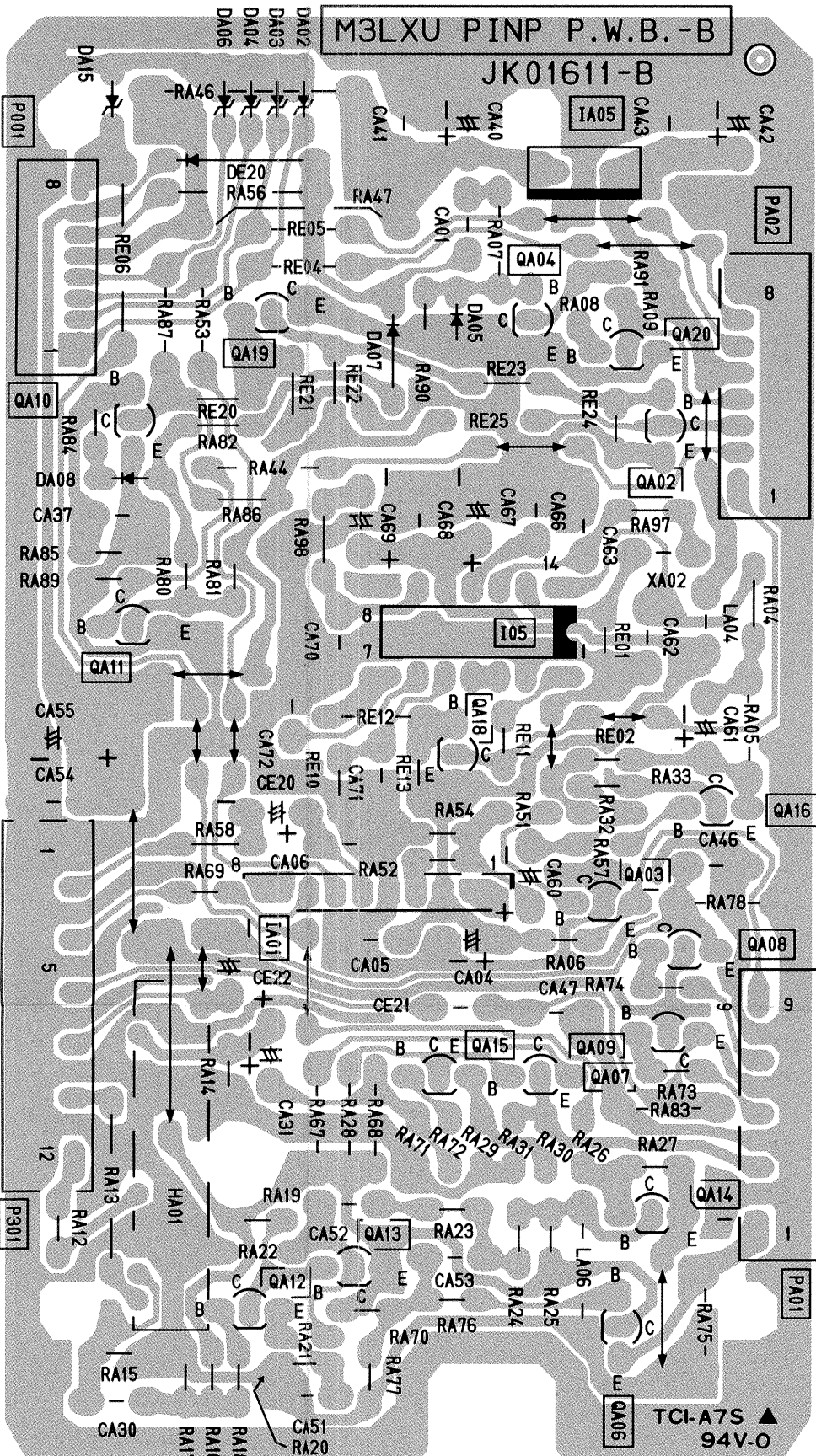
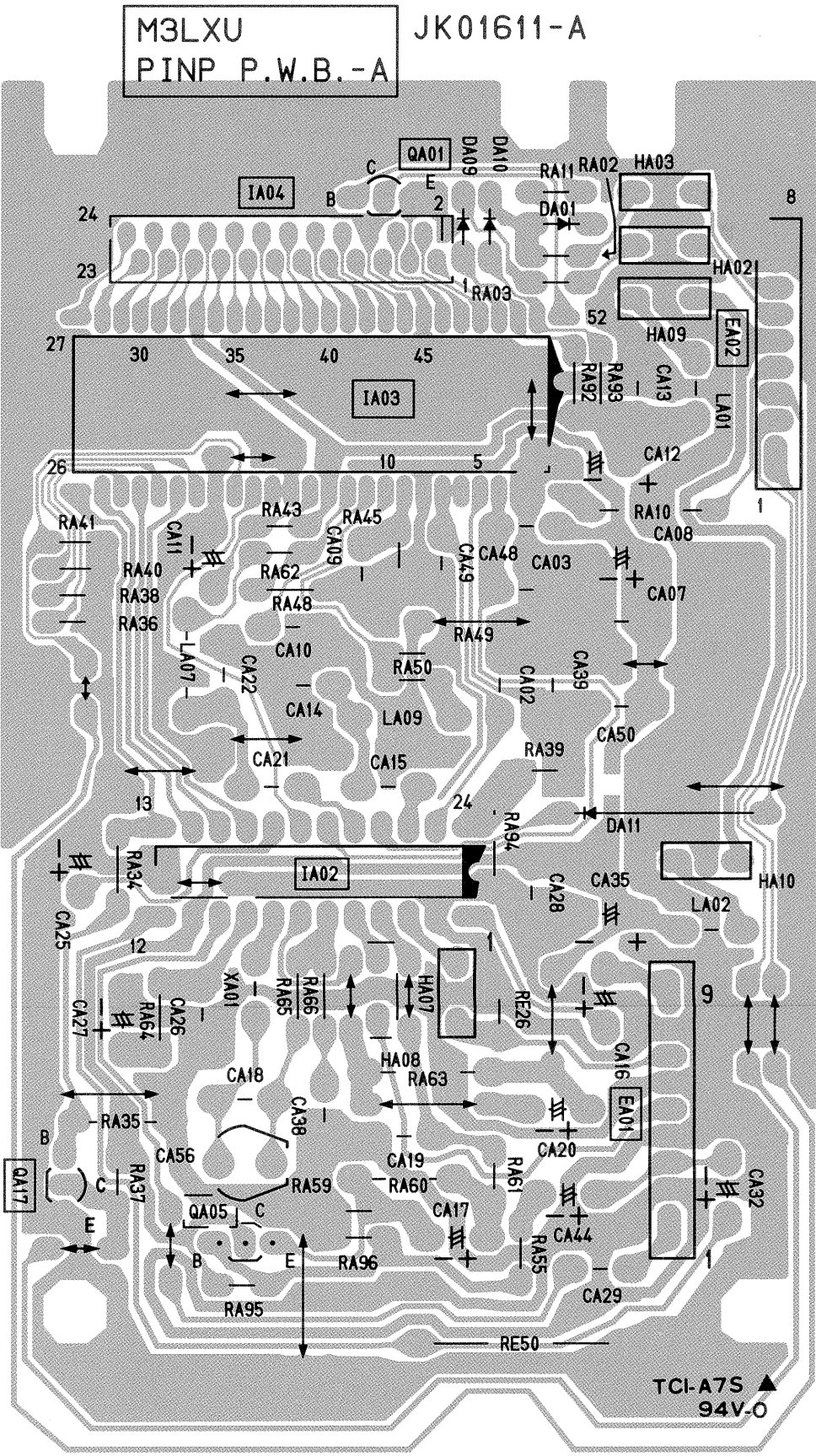
WIRING DRAWING OF 20SA3B/C053 FINAL ASSEMBLY



M3LXU MAIN P.W.B.

PRINTED WIRING BOARD FOIL PATTERN

M3LXU P in P.W.B

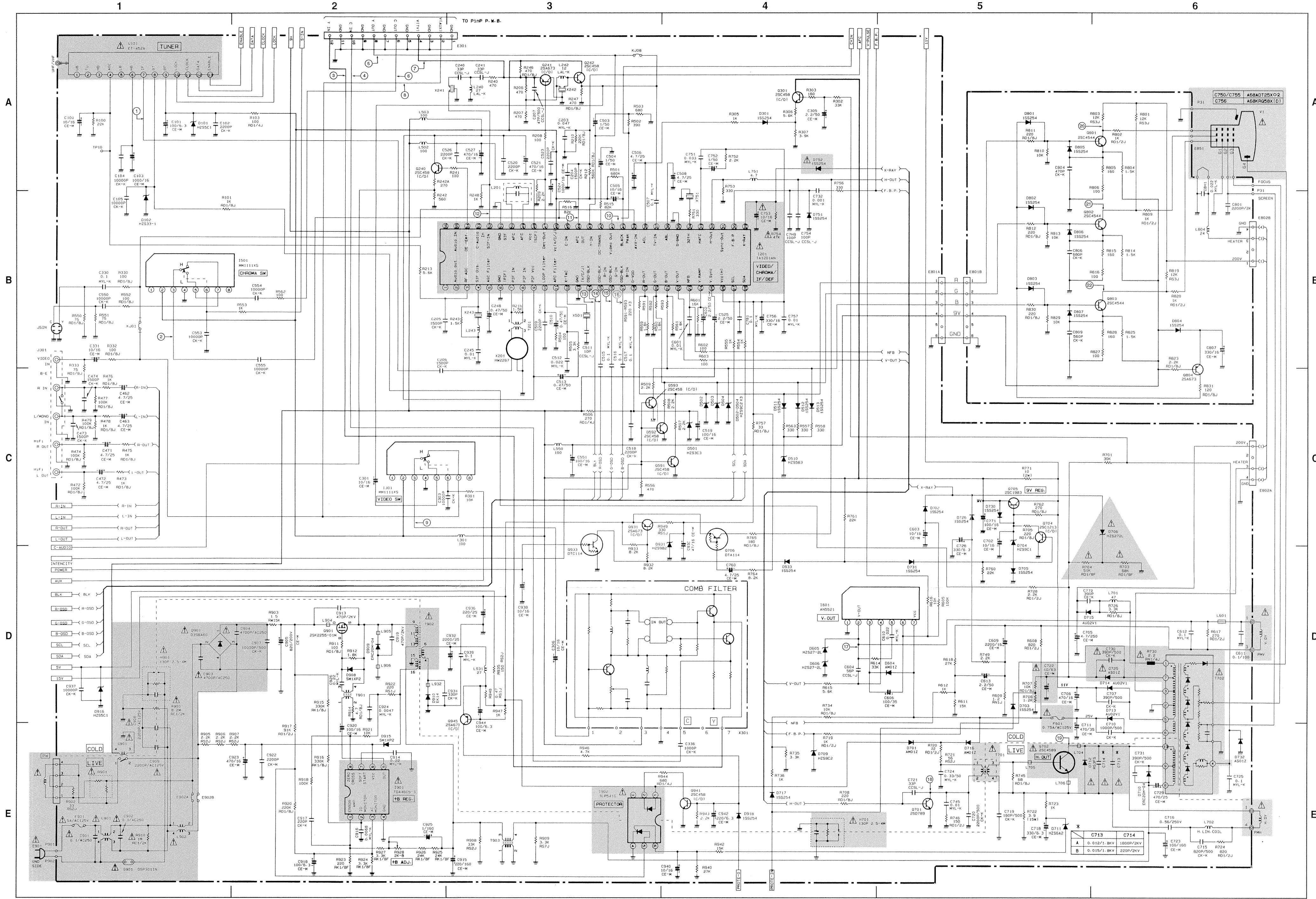


M3XU MAIN P.W.B.

This is a detailed black and white photograph of a complex electronic circuit board, likely a television set. The board is densely packed with components, including resistors (labeled R001 through R900), capacitors (C001 through C900), and integrated circuits (ICs). Key components include a TCI-A7S 94V.0 JK01751-B M3XU CPT P.W.B. (top left), a TCI-A7S 94V.0 JK01751-A M3XU MAIN P.W.B. (bottom center), and a 250V 2.5A power transformer (top right). The board is divided into several functional areas, with labels such as "LIVE", "COLD", "POWER", "DEF.", "VIDEO/CHROMA/DEF.", "TUNER/IF", "AGC", "D501", "D502", "D503", "D504", "D505", "D506", "D507", "D508", "D509", "D510", "D511", "D512", "D513", "D514", "D515", "D516", "D517", "D518", "D519", "D520", "D521", "D522", "D523", "D524", "D525", "D526", "D527", "D528", "D529", "D530", "D531", "D532", "D533", "D534", "D535", "D536", "D537", "D538", "D539", "D540", "D541", "D542", "D543", "D544", "D545", "D546", "D547", "D548", "D549", "D550", "D551", "D552", "D553", "D554", "D555", "D556", "D557", "D558", "D559", "D560", "D561", "D562", "D563", "D564", "D565", "D566", "D567", "D568", "D569", "D570", "D571", "D572", "D573", "D574", "D575", "D576", "D577", "D578", "D579", "D580", "D581", "D582", "D583", "D584", "D585", "D586", "D587", "D588", "D589", "D590", "D591", "D592", "D593", "D594", "D595", "D596", "D597", "D598", "D599", "D600". The board is also labeled with "AVX", "VOL-DN", "VOL-UP", "CH-DN", "CH-UP", "SELECTOR", "POWER", "C015", "U001", "C060", "S003", "E902A", "L901", "C901", "P901", "GND SIDE", "P902", "R950", "H901", "E902B", "C401", "C402", "C403", "C404", "C405", "C406", "C407", "C408", "C409", "C410", "C411", "C412", "C413", "C414", "C415", "C416", "C417", "C418", "C419", "C420", "C421", "C422", "C423", "C424", "C425", "C426", "C427", "C428", "C429", "C430", "C431", "C432", "C433", "C434", "C435", "C436", "C437", "C438", "C439", "C440", "C441", "C442", "C443", "C444", "C445", "C446", "C447", "C448", "C449", "C450", "C451", "C452", "C453", "C454", "C455", "C456", "C457", "C458", "C459", "C460", "C461", "C462", "C463", "C464", "C465", "C466", "C467", "C468", "C469", "C470", "C471", "C472", "C473", "C474", "C475", "C476", "C477", "C478", "C479", "C480", "C481", "C482", "C483", "C484", "C485", "C486", "C487", "C488", "C489", "C490", "C491", "C492", "C493", "C494", "C495", "C496", "C497", "C498", "C499", "C500". The board is also labeled with "T701", "T702", "T703", "T704", "T705", "T706", "T707", "T708", "T709", "T710", "T711", "T712", "T713", "T714", "T715", "T716", "T717", "T718", "T719", "T720", "T721", "T722", "T723", "T724", "T725", "T726", "T727", "T728", "T729", "T730", "T731", "T732", "T733", "T734", "T735", "T736", "T737", "T738", "T739", "T740", "T741", "T742", "T743", "T744", "T745", "T746", "T747", "T748", "T749", "T750", "T751", "T752", "T753", "T754", "T755", "T756", "T757", "T758", "T759", "T760", "T761", "T762", "T763", "T764", "T765", "T766", "T767", "T768", "T769", "T770", "T771", "T772", "T773", "T774", "T775", "T776", "T777", "T778", "T779", "T780", "T781", "T782", "T783", "T784", "T785", "T786", "T787", "T788", "T789", "T790", "T791", "T792", "T793", "T794", "T795", "T796", "T797", "T798", "T799", "T800". The board is also labeled with "Q001", "Q002", "Q003", "Q004", "Q005", "Q006", "Q007", "Q008", "Q009", "Q010", "Q011", "Q012", "Q013", "Q014", "Q015", "Q016", "Q017", "Q018", "Q019", "Q020", "Q021", "Q022", "Q023", "Q024", "Q025", "Q026", "Q027", "Q028", "Q029", "Q030", "Q031", "Q032", "Q033", "Q034", "Q035", "Q036", "Q037", "Q038", "Q039", "Q040", "Q041", "Q042", "Q043", "Q044", "Q045", "Q046", "Q047", "Q048", "Q049", "Q050", "Q051", "Q052", "Q053", "Q054", "Q055", "Q056", "Q057", "Q058", "Q059", "Q060", "Q061", "Q062", "Q063", "Q064", "Q065", "Q066", "Q067", "Q068", "Q069", "Q070", "Q071", "Q072", "Q073", "Q074", "Q075", "Q076", "Q077", "Q078", "Q079", "Q080", "Q081", "Q082", "Q083", "Q084", "Q085", "Q086", "Q087", "Q088", "Q089", "Q090", "Q091", "Q092", "Q093", "Q094", "Q095", "Q096", "Q097", "Q098", "Q099", "Q100". The board is also labeled with "E801", "E802", "E803", "E804", "E805", "E806", "E807", "E808", "E809", "E810", "E811", "E812", "E813", "E814", "E815", "E816", "E817", "E818", "E819", "E820", "E821", "E822", "E823", "E824", "E825", "E826", "E827", "E828", "E829", "E830", "E831", "E832", "E833", "E834", "E835", "E836", "E837", "E838", "E839", "E840", "E841", "E842", "E843", "E844", "E845", "E846", "E847", "E848", "E849", "E850", "E851", "E852", "E853", "E854", "E855", "E856", "E857", "E858", "E859", "E860", "E861", "E862", "E863", "E864", "E865", "E866", "E867", "E868", "E869", "E870", "E871", "E872", "E873", "E874", "E875", "E876", "E877", "E878", "E879", "E880", "E881", "E882", "E883", "E884", "E885", "E886", "E887", "E888", "E889", "E890", "E891", "E892", "E893", "E894", "E895", "E896", "E897", "E898", "E899", "E900". The board is also labeled with "S001", "S002", "S003", "S004", "S005", "S006", "S007", "S008", "S009", "S010", "S011", "S012", "S013", "S014", "S015", "S016", "S017", "S018", "S019", "S020", "S021", "S022", "S023", "S024", "S025", "S026", "S027", "S028", "S029", "S030", "S031", "S032", "S033", "S034", "S035", "S036", "S037", "S038", "S039", "S040", "S041", "S042", "S043", "S044", "S045", "S046", "S047", "S048", "S049", "S050", "S051", "S052", "S053", "S054", "S055", "S056", "S057", "S058", "S059", "S060", "S061", "S062", "S063", "S064", "S065", "S066", "S067", "S068", "S069", "S070", "S071", "S072", "S073", "S074", "S075", "S076", "S077", "S078", "S079", "S080", "S081", "S082", "S083", "S084", "S085", "S086", "S087", "S088", "S089", "S090", "S091", "S092", "S093", "S094", "S095", "S096", "S097", "S098", "S099", "S100". The board is also labeled with "U001", "U002", "U003", "U004", "U005", "U006", "U007", "U008", "U009", "U010", "U011", "U012", "U013", "U014", "U015", "U016", "U017", "U018", "U019", "U020", "U

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.

CIRCUIT SCHEMATIC DIAGRAM OF 27CX25B/C750, 27CX5B/C755, 27CX6B/C756



• 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). Voltage taken on a complex color bar signal including a standard color bar signal.

Circuit No.	Pin No.	DC Voltage Vdc
1001	1	4.9
	2	4.9
	3	5.1
	4	0.9
	5	0.9
	6	0.9
	7	5.2
	8	5.1
	9	0
	10	2.5
	11	2.7
	12	5.3
	13	3.2
	14	5.3
	15	0.4
	16	0.2
	17	5.3
	18	2.5
	19	2.5
	20	2.6
	21	5.3
	22	0
	23	2.9
	24	5
	25	4.3
	26	0
	27	0.1
	28	0.1

Circuit No.	Pin No.	DC Voltage Vdc
1001	1	4.9
	2	0.3
	3	0.1
	4	1.6
	5	5.4
	6	5.5
	35	0.2
	36	0
	37	0.1
	38	0.1
	39	0.1
	40	0.1
	41	0
	42	5.3
	43	5.2
	44	5.2
	45	5.2
	46	5.2
	47	0.1
	48	0.1
	49	0
	50	0.3
	51	5.1
	52	5.1

Circuit No.	Pin No.	DC Voltage Vdc
1002	1	0
	2	0
	3	0
	4	0
	5	5
	6	5
	7	0
	8	5.3
1003	1	5.3
	2	0
	3	5.3
1201	1	4.1
	2	4.1
	3	3.3
	4	3.3
	5	4.5
	6	0
1201	7	2.1
	8	2.1
	9	9.3
	10	4.6
	11	6

Circuit No.	Pin No.	DC Voltage Vdc
1201	12	5
	13	0
	14	0.9
	15	4.9
	16	4.8
	17	4.8
	18	3.8
	19	2.4
	20	2.5
	21	2.7
	22	0.8
	23	4.6
	24	4.6
	25	5.7
	26	3.2
	27	5
	28	5
	29	0.7
	30	1.6
	31	0.1
	32	1
	33	6.8
	34	5.3
	35	0
	36	3.2
	37	3.3
	38	4.1
	39	1.6

Circuit No.	Pin No.	DC Voltage Vdc
1201	40	5.3
	41	2.9
	42	4.8
	43	4.7
	44	3.3
	45	2.7
	46	9.2
	47	4
	48	9.3
	49	8.2
	50	8.2
	51	0
1201	52	0
	53	2.9
	54	4
	55	2.9
	56	2.9

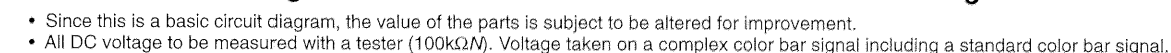
Circuit No.	Pin No.	DC Voltage Vdc
1301	1	0
	2	9.1
	3	4.4
	4	0
	5	5.1
	6	0.1
	7	4
	8	0
1401	1	1.3
	2	0
	3	16.9
	4	0
	5	0
	6	1.3
	7	8.9
	8	16
	9	0
	10	17.2
	11	0
	12	8.9

Circuit No.	Pin No.	DC Voltage Vdc
1402	1	9.1
	2	4.6
	3	4.6
	4	0.1
	5	4.6
	6	4.7
	7	4.6
	8	4.4
	9	5.7
	10	0.1
	11	3.3
	12	4.6
	13	4.6
	14	0
	15	2.5
	16	5
	17	0
	18	4.6
	19	4.6
	20	4.7
	21	1.3
	22	5.2
	23	5.2
	24	4.6
	25	4.6
	26	4.6
	27	4.6
	28	4.9

Circuit No.	Pin No.	DC Voltage Vdc
1404	1	0
	2	0
	3	4.6
	4	0.1
	5	4.7
	6	4.7
	7	0.1
	8	0.1
	9	4.6
	10	0.1
	11	2.6
	12	2.6
	13	0.1
	14	4.1
	15	2.5
	16	0.1
	17	4.7
	18	4.7
	19	0.1
	20	4.6
	21	9.1
	22	5.2
	23	5.2
	24	4.6
	25	4.6
	26	4.6
	27	4.6
	28	4.9

Circuit No.	Pin No.	DC Voltage Vdc
1501	1	0
	2	9.3
	3	0
	4	0
	5	5.2
	6	0
	7	0
	8	0
1601	1	0
	2	12.5
	3	26.8
	4	0.8
	5	0
	6	2.1
	7	25.9

Circuit No.	Pin No.	DC Voltage Vdc
1901	1	0.4
	2	1.2
	3	1.8
	4	0
	5	6.1
	6	13.1
	7	1.8
	8	0.3
1902	1	17.3
	2	16.7
	3	0
	4	-14.7
	5	82
	6	-14.7



Circuit No.	Pin No.	DC Voltage Vdc
Q804	B	9.2
	C	-0.4
	E	9.2
Q901	G	102
	D	168
	S	96.8
Q931	B	16.5
	C	17.2
	E	17.3
Q933	B	4.7
	C	0.1
	E	0
Q941	B	0
	C	17.1
	E	0
Q945	B	17.3
	C	0
	E	17.3

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.

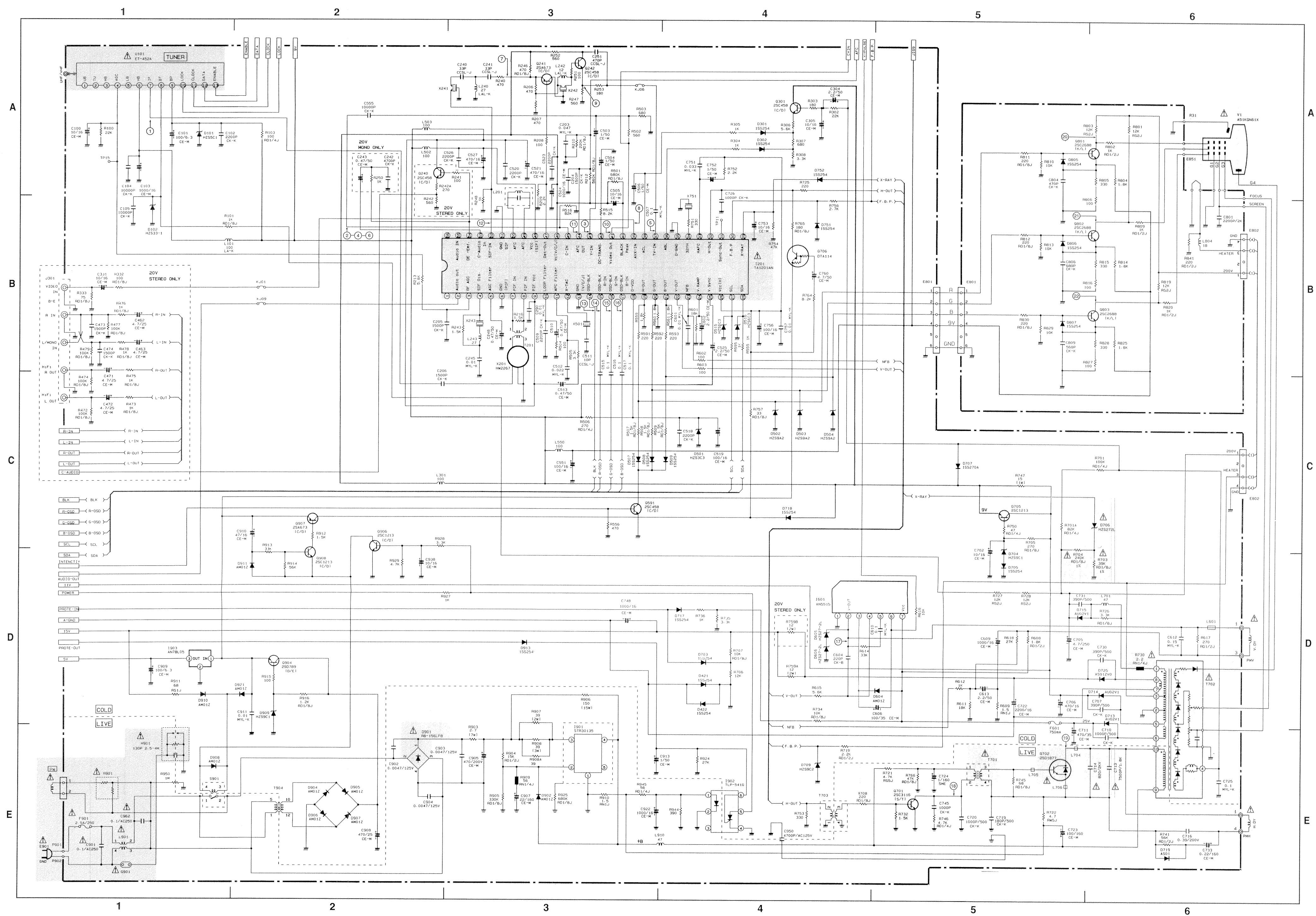


- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.
- All DC voltage to be measured with a tester (100k Ω /V). Voltage taken on a complex color bar signal including a standard color bar signal.

[illegible]

CIRCUIT SCHEMATIC DIAGRAM OF 20SA3B/C053

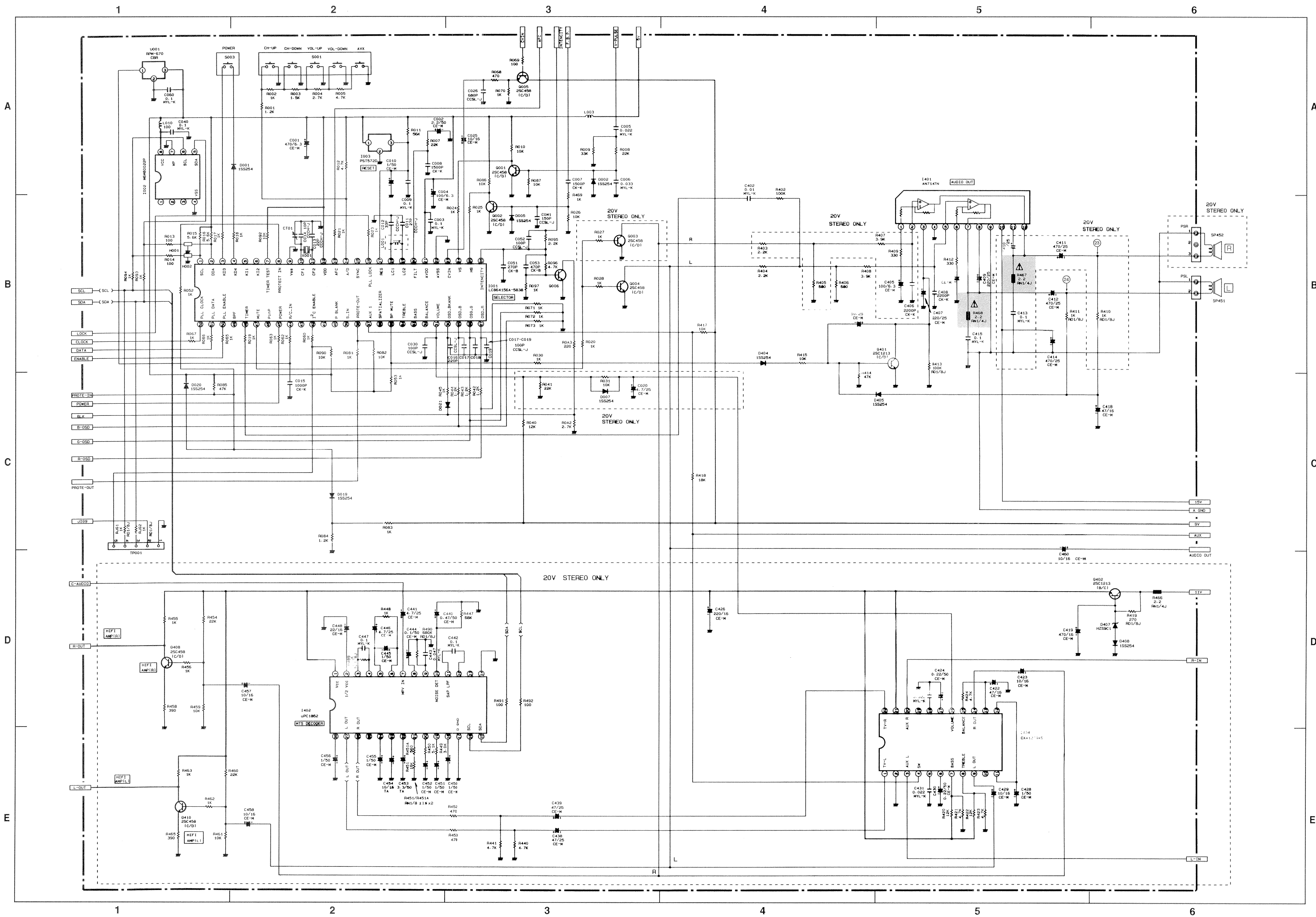
PRODUCT SAFETY NOTE: Components marked with a  and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.



Circuit No.	Pin No.	DC Voltage Vdc
1001	1	4.9
	2	4.9
	3	5.1
	4	0.9
	5	0.9
	6	5.2
	7	5.1
	8	0
	9	2.5
	10	2.7
1002	11	5.3
	12	3.2
	13	5.3
	14	5.3
	15	0.4
	16	0.2
	17	5.3
	18	2.5
	19	2.5
	20	2.6
1003	21	5.3
	22	0
	23	2.9
	24	5
	25	4.3
	26	0
	27	0.1
	28	0.1
	29	0.1
	30	0.3
1004	31	0.1
	32	1.6
	33	5.4
	34	5.5
	35	0.2
	36	0
	37	0.1
	38	0.1
	39	0.1
	40	0
1005	41	0
	42	5.3
	43	5.2
	44	5.2
	45	5.2
	46	5.2
	47	0.1
	48	0.1
	49	0
	50	0.3
1006	51	5.1
	52	5.1
	53	0
	54	0
	55	0
	56	0
	57	0
	58	0
	59	0
	60	0
1007	61	0
	62	0
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	255	0
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	257	0
	258	0
	259	0
	260	0
1027	261	0
	262	0
	263	0
	264	0
	265	0
	266	0
	267	0
	268	0
	269	0
	270	0
1028	271	0
	272	0
	273	0
	274	0
	275	0
	276	0
	277	0
	278	0
	279	0
	280	0
1029	281	0
	282	0
	283	0
	284	0
	285	0
	286	0
	287	0
	288	0
	289	0
	290	0
1030	291	0
	292	0
	293	0
	294	0
	295	0
	296	0
	297	0
	298	0
	299	0
	300	0
1031	301	0
	302	0
	303	0
	304	0
	305	0
	306	0
	307	0
	308	0
	309	0
	310	0
1032	311	0
	312	0
	313	0
	314	0
	315	0
	316	0
	317	0
	318	0
	319	0
	320	0
1033	321	0
	322	0
	323	0
	324	0
	325	0
	326	0
	327	0
	328	0
	329	0
	330	0
1034	331	0
	332	0
	333	0
	334	0
	335	0
	336	0
	337	0
	338	0
	339	0
	340	0
1035	341	0
	342	0
	343	0
	344	0
	345	0
	346	0
	347	0
	348	0
	349	0
	350	0
1036	351	0
	352	0
	353	0
	354	0
	355	0
	356	0
	357	0
	358	0
	359	0
	360	0
1037	361	0
	362	0
	363	0
	364	0
	365	0
	366	0
	367	0
	368	0
	369	0
	370	0
1038	371	0
	372	0
	373	0
	374	0
	375	0
	376	0
	377	0
	378	0
	379	0
	380	0
1039	381	0
	382	0
	383	0
	384	0
	385	0
	386	0
	387	0
	388	0
	389	0
	390	0
1040	391	0
	392	0
	393	0
	394	0
	395	0
	396	0
	397	0
	398	0
	399	0
	400	0
1041	401	0
	402	0
	403	0
	404	0
	405	0
	406	0
	407	0
	408	0
	409	0
	410	0
1042	411	0
	412	0
	413	0
	414	0
	415	0
	416	0
	417	0
	418	0
	419	0
	420	0
1043	421	0
	422	0
	423	0
	424	0
	425	0
	426	0
	427	0
	428	0
	429	0
	430	0
1044	431	0
	432	0
	433	0
	434	0
	435	0
	436	0</

CIRCUIT SCHEMATIC DIAGRAM OF 20SA3B/C053

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.



• 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). Voltage taken on a complex color bar signal including a standard color bar signal.

Circuit No.	Pin No.	DC Voltage Vdc
Q001	B	0
	C	5
	E	0
Q002	B	0
	C	4.4
	E	0
Q003	B	0
	C	0
	E	0
Q004	B	0
	C	0
	E	0
Q005	B	2.9
	C	9.2
	E	2.2
Q006	B	0
	C	0.9
	E	0
Q240	B	3.9
	C	9.2
	E	3.2
Q241	B	4
	C	0
	E	4.6
Q242	B	2.4
	C	9.2
	E	1.7

Circuit No.	Pin No.	DC Voltage Vdc
Q301	B	9.8
	C	9.2
	E	9.2
Q401	B	0
	C	16.9
	E	0
Q402	B	9.8
	C	11.1
	E	9.1
Q408	B	2.8
	C	8.4
	E	2.2
Q410	B	2.8
	C	8.4
	E	2.2
Q591	B	0
	C	2.9
	E	0
Q701	B	0.4
	C	15.9
	E	0
Q702	B	2
	C	134.1
	E	2.1
Q705	B	9.9
	C	11.3
	E	0

Circuit No.	Pin No.	DC Voltage Vdc
Q706	B	17.2
	C	1
	E	17.2
Q801	B	0
	C	154.5
	E	2.6
Q802	B	3.2
	C	148.6
	E	2.7
Q803	B	3.2
	C	144.3
	E	2.8
Q904	B	9.3
	C	18.4
	E	8.7
Q906	B	0
	C	0.2
	E	0
Q907	B	8.2
	C	8.6
	E	8.7
Q908	B	0.2
	C	8.2
	E	0.2

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