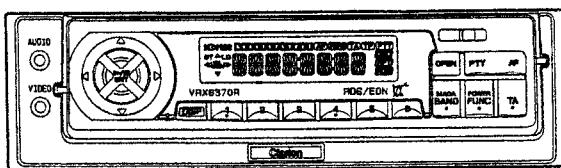


# Service Manual



TV/RDS-EON/FM-MPX/MW/LW  
RADIO WITH CD/MD CHANGER  
CONTROL

Model **VRX8370R**  
(QC-5550E-A)

## ■ SPECIFICATIONS

### FM Tuner section

Frequency range: 87.5MHz to 108.0MHz  
(0.05MHz steps)  
Usable sensitivity: 12dBf(new IHF)  
50dB quieting sensitivity:  
18dBf(new IHF)  
Signal-to-noise ratio: 70dB(IHF · A)  
Frequency response: 30 to 15kHz ±3dB  
Stereo separation: 35dB(1KHz,60dB)

### AM Tuner section

Frequency range: MW 531kHz to 1602kHz  
(9kHz steps)  
LW 153kHz to 279kHz  
(3kHz steps)  
Usable sensitivity: 28dB(μV)  
Signal-to-noise ratio: 50dB(monaural)

### TV Tuner section

Reception channels: VHF CCIR 2 to 12 ch  
UHF CCIR 21 to 69 ch  
Maximum sensitivity: VHF 35dB(μV) or less  
UHF 40dB(μV) or less

### Input/Output section

Video input: 1.0±0.2Vp-p  
(input impedance 75Ω)  
VTR video input 3.5Φmini-jack  
Audio input: 130±60mVrms  
(input impedance 10kΩ or greater)  
VTR audio input 3.5Φmini-jack

Video output:

1.0±0.2Vp-p  
(input impedance 75Ω)

RGB input:

0.7±0.2Vp-p  
(input impedance 75Ω)  
Synchronize 0.3V+0.9-0.1Vp-p  
(input impedance 75Ω)

### Audio Amplifier section

Rated power output: 14W×4(20Hz to 20kHz, 1%,4Ω)  
Maximum power output:

30W×4

Speaker impedance: 4Ω(4 to 8Ω)

### LCD monitor section

Screen size: 5-inch  
(102mm Width×74mm Height)  
Display method: Transmission type TN liquid crystal display  
Drive method: TFT(thin-film transistor) active matrix driving  
Pixels: 224,640(960×234)

### General

Power source voltage: 14.4V DC  
Ground: Negative  
Current consumption: 4.0A(1W)  
Dimensions(mm): (source unit)  
178(W)×50(H)×156(D)  
(tuner and amplifier unit)  
206(W)×50(H)×195(D)

Weight:	(source unit)
	1.5kg
	(tuner and amplifier unit)
	1.2kg

\* Specifications and design are subject to change without notice for further improvement.

## ■ COMPONENTS

### QC-5550E-A

Source unit	_____	1
Tuner amplifier unit	_____	1
Connection lead (20pin DIN lead) (for the source unit and tuner amplifier unit)	855-0500-00	1
Connection lead (13pin C-BUS lead) (for the source unit and tuner amplifier unit)	854-3327-00	1
Antenna extension lead	093-1465-02	1
Power supply lead (for the tuner amplifier unit)	854-6303-02	1
Parking sensor extension lead(orange)	854-6302-00	1
Extension lead for security camera(white/red)	854-6304-00	1
Bag for accessories of the source unit	_____	
Flat head screw(M5×8)	714-5008-41	4
Sems hexagonal bolt(M5×8)	716-0496-01	5
Bag for accessories of the source unit	_____	
Hook plate	330-8216-01	2
Cord clamp	335-0833-01	1
Spacer	345-3653-01	1
Mounting screw	716-0726-01	1
Bag for accessories of the tuner amplifier unit	_____	
Mounting bracket	300-7362-00	2
Clip	335-2515-00	4
Mounting screw(M4×8)	714-4008-80	4
Universal mounting bracket	300-9035-01	1
Remote control unit	RCB-114-300	1
Battery (for remote control unit)	_____	1
Outer escutcheon	940-7715-01	1

## ■ To engineers in charge of repair or inspection of our products.

Before repair or inspection, make sure to follow the instructions so that customers and Engineers in charge of repair or inspection can avoid suffering any risk or injury.

### 1. Use specified parts.

The system uses parts with special safety features against fire and voltage. Use only parts with equivalent characteristics when replacing them.

The use of unspecified parts shall be regarded as remodeling for which we shall not be liable. The onus of product liability (PL) shall not be our responsibility in cases where an accident or failure is as a result of unspecified parts being used.

- Place the parts and wiring back in their original positions after replacement or re-wiring.

For proper circuit construction, use of insulation tubes, bonding, gaps to PWB, etc, is involved. The wiring connection and routing to the PWB are specially planned using clamps to keep away from heated and high voltage parts. Ensure that they are placed back in their original positions after repair or inspection.

If extended damage is caused due to negligence during repair, the legal responsibility shall be with the repairing company.

- Check for safety after repair.

Check that the screws, parts and wires are put back securely in their original position after repair. Ensure for safety reasons there is no possibility of secondary problems around the repaired spots.

If extended damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.

- Caution in removal and making wiring connection to the parts for the automobile.

Disconnect the battery terminal after turning the ignition key off. If wrong wiring connections are made with the battery connected, a short circuit and/or fire may occur. If extensive damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.

- Cautions regarding chips.

Do not reuse removed chips even when no abnormality is observed in their appearance. Always replace them with new ones. (The chip parts include resistors, capacitors, diodes, transistors, etc). The negative pole of tantalum capacitors is highly susceptible to heat, so use special care when replacing them and check the operation afterwards.

- Cautions in handling flexible PWB

Before working with a soldering iron, make sure that the iron tip temperature is around 270°C. Take care not to apply the iron tip repeatedly (more than three times) to the same patterns. Also take care not to apply the tip with force.

- Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

## ■ NOTE

### 1. Connection to the DSP/equalizer

When connecting the DSP or equalizer, the switch (Normal/DSP equalizer) on the attached tuner amplifier unit should be set to "D".

### 2. Switching the VTR system between NTSC and PAL

Switch to the VTR system you use.

- Press the ADJ button to go to the CONFIGURATION mode.
- Slide the  $\alpha$ -selector to  $\blacktriangle$  (up) or  $\blacktriangledown$  (down) to move the cursor to "VTR N/P".
- Slide the  $\alpha$ -selector  $\blacktriangleright$  (right) to select "NTSC" or "PAL".
- Press the ADJ button to return to the previous mode.

### 3. Switching the TV diversity

The 4-channel TV diversity can be turned on and off if you connected an additional antenna.

When one antenna is connected, the diversity should be "OFF"(factory setting is "ON"). Wrong setting may cause noise.

1. Press the ADJ button to go to the CONFIGURATION mode.
2. Slide the  $\alpha$ -selector to  $\blacktriangle$  (up) or  $\blacktriangledown$  (down) to move the cursor to "TV DIVER".
3. Slide the  $\alpha$ -selector  $\blacktriangleright$  (right) to select "ON" or "OFF".
4. Press the ADJ button to return to the previous mode.

### 4. Setting the receiving country

This function is not available when the display is stored.

Depending on the country to be received, switch the area as follows.

1. Press the ADJ button to go to the CONFIGURATION mode.
2. Slide the  $\alpha$ -selector to  $\blacktriangle$  (up) or  $\blacktriangledown$  (down) to move the cursor to "COUNTRY".
3. The country currently set is displayed when ENT of the  $\alpha$ -selector is pressed.

4. Slide the  $\alpha$ -selector to  $\blacktriangledown$  (down) or  $\blacktriangle$  (up) to move the cursor of the to a country to be received and press ENT of the  $\alpha$ -selector.

5. Press the ADJ button to return to the previous mode.

### 5. Note on the TV display (PAL system) with the country set to Italy

If the country has been set to Italy, some operation names in the TV mode will be given in Italy, as shown below:

Preset Scan	→ SCANSIONE
Auto Store	→ MEMORIZZA
ONLY	→ SOLO

### 6. Note on the TV(PAL system) sound mute function with the country set to Italy

When you have switched to the TV mode (or turned on the power to the TV mode, performed a preset call, or switched the bands), the mute function may be automatically invoked if signals from the current station is weak. The function will be cleared once the receiving condition has been improved.

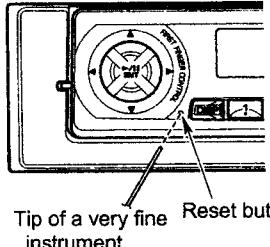
## ■ERROR DISPLAYS

\* If an error occurs, the type of error is displayed.

Take the measures described below to eliminate the problem.

Display	Name of error	Description
ERROR1	Memory error	This error occurs if the disc loading data, etc., is lost due to wear of the CD/MD changer's battery. (Remove all the discs from the magazine, insert the empty magazine and press the eject key to return to the first disc.)
ERROR2	Mechanical error	This error occurs if there is a problem with the mechanism and the eject or disc(CD/MD) selection operation is not completed in the specified amount of time.
ERROR3	Functional error	This error occurs if the pickup cannot focus after several tries due to scratches on the disc(CD/MD), signal interference, etc. (Replace the disc.)
ERROR6	Disc error	This error occurs when the disc(CD/MD) is loaded upside-down. (Reload the disc properly.)
TEMP ERROR	Temperature error	This error occurs when the CD/MD mechanism's temperature sensor detects that the temperature is too high. (When the temperature returns to normal, playback starts.)

## TROUBLESHOOTING

Symptom	Cause	Measure
Power does not switch on. (There is no sound produces.)	The fuse has blown.	Replace the fuse with one of the same rating(0.5A or 10A for this unit). If the fuse blows again, contact the store where you purchased the unit.
Nothing happens when buttons are pressed, or the display is not accurate.	Noise, etc., is causing the microprocessor to malfunction.	Press the reset button with the tip of a very fine instrument for about 2 seconds.
		 <p>Tip of a very fine instrument      Reset button</p>
DSP/EQ does not operate.	The switch of the tuner unit is set to "N".	Turn off the ignition switch once and set the switch to "D".
Picture does not appear. Picture has shadow or shadows.	Parking brake is not applied. Signal condition is poor.	Check that the parking brake is fully applied. This may be due to signals reflected off mountains or buildings. Check again in a different place and direction.
LCD panel is not drawn in when it is set to the horizontal position.	Foreign object at back of tray.	Eject the compact disc and then insert another one.
Screen is dark.	Brightness is adjusted too low.	Check that the brightness is properly adjusted in the CONFIGURATION mode and set it properly.
	Usage conditions are poor.	This may happen if the temperature in the car is below -10°C or above 60°C. Check again when the temperature is between 0 and 60°C.
Colors are pale or hue is poor.	COLOR (tone of color) and HUE are not adjusted appropriately.	Select the CONFIGURATION display and adjust the color and hue density using the COLOR and HUE controls.
Picture doubles or triples.	Signal condition is poor.	This may be due to signals reflected off mountains or buildings. Check again in a different place and direction.
Sports or stripes on picture.	Interference signals.	This may be caused by interference from other cars, trains, high voltage lines, neon lights, etc. Check again in another place.
The compact disc does not enter.	There is already a compact disc inside the disc insertion slot.	Eject the compact disc and then insert another one.
The compact disc soon comes out again.	The compact disc has been inserted upside down.	Insert the compact disc with the labeled side facing up.
Sound skipping noise and other noise are heard.	The compact disc is dirty.	Wipe the compact disc with a soft cloth.
	The compact disc is severely scratched or warped.	Replace the compact disc with one that is in good condition.
The sound is poor immediately after switching on the power.	When the car is parked in a humid place, dew might form on the internal lens.	Turn the unit on and wait for about 1 hour before operating.
When the VTR is connected, the display image is deformed.	NTSC/PAL setting is wrong.	Set NTSC or PAL in the CONFIGURATION display according to your VTR.

## ■ADJUSTMENT

### Source unit section

#### 1. DC-DC converter output voltage adjustment

1. Adjust VR602 so that the voltage of TP601 will become  $5.3 \pm 0.02V$ . Make sure that the voltage has become the following value at each test point.

TP602:  $7.5 \pm 0.5V$

TP611:  $12.7 \pm 0.5V$

TP601:  $-8.9 \pm 0.5V$

#### 2. VIDEO signal adjustment

Input the visual signal(1.0Vp-p,10step wave, APL=50%,monochrome)into the VTR1 input.

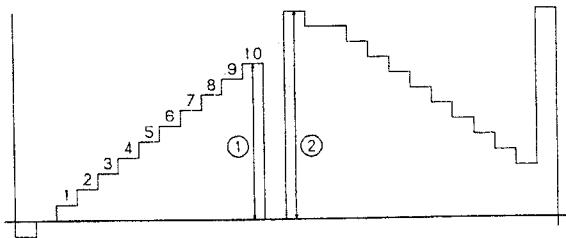


Fig.1

#### 1. BRIGHT adjustment

Adjust the brightness of the environment setting screen so that the TP607 voltage becomes  $2.07 \pm 0.02V$

#### 2. $\gamma$ 0 Adjustment

Adjust VR604 so that the voltage of TP606 will become  $2.30 \pm 0.05V$ .

#### 3. $\gamma$ 2 Adjustment

Adjust VR603 so that the voltage of TP605 will become  $2.19 \pm 0.05V$ .

#### 4. RGB-AMP adjustment

Adjust the TP613 with VR605 so that the black-black level in Fig.1-② on synchroscope screen becomes  $4.0 \pm 0.05Vp-p$ .

#### 5. CONT-G Adjustment

Adjust the TP613 with VR609 so that the CONT-G level in Fig.1-① on synchroscope screen becomes  $3.8 \pm 0.05Vp-p$ .

#### 6. CONT-R Adjustment

Adjust the TP612 with VR607 so that the CONT-R level in Fig.1-① on synchroscope screen becomes  $3.8 \pm 0.05Vp-p$ .

#### 7. CONT-B Adjustment

Adjust the TP614 with VR606 so that the CONT-B level in Fig.1-① on synchroscope screen becomes  $3.8 \pm 0.05Vp-p$ .

#### 8. VCOM-AC Amplitude Adjustment

Adjust the TP604 with VR608 so that the VCOM-AC level in Fig.2 on synchroscope screen becomes  $8.0 \pm 0.1Vp-p$ .

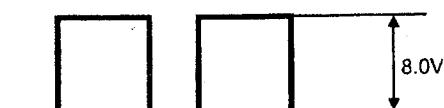


Fig.2

#### 9. VCOM-DC bias voltage adjustment

Adjust VR601 so that black bar comes to the left side of screen as shown in Fig.3.

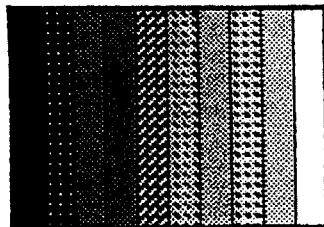


Fig.3

#### 10. Burst cleaning coil adjustment

Connect the synchroscope to TP614. Adjust L609 so that the wave form deviation of TP614 is minimized.

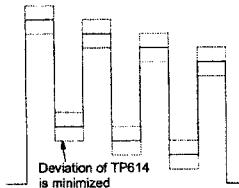


Fig.4

#### 3. Dot clock adjustment

Return the screen to the radio screen. Then, adjust with TC501 so that the amplitudes of A and B become the same as shown in Fig.5.

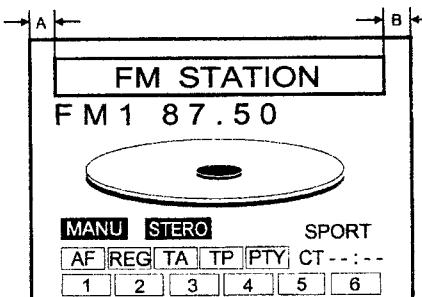


Fig.5

#### Tuner amplifier section

##### 1. Adjustment of LLD coil and measurement of image frequency specification.

1. Connect the measuring equipment as shown in Fig.6.

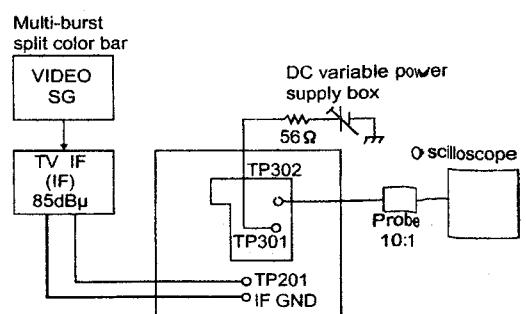


Fig.6

- Remove the solder bridge of TP201. And, input the following signal to L18.  
 Frequency : P:38.9MHz S:33.4MHz  
 (invert mode)  
 Output level : 85dB  $\mu$   
 Image signal : multi-burst signal or split color bar signal  
 Voice modulation : 1kHz 30%(15kHz · Dev)MONO
- With the multi-burst signal, observe the wave form in Fig.7 with an oscilloscope.

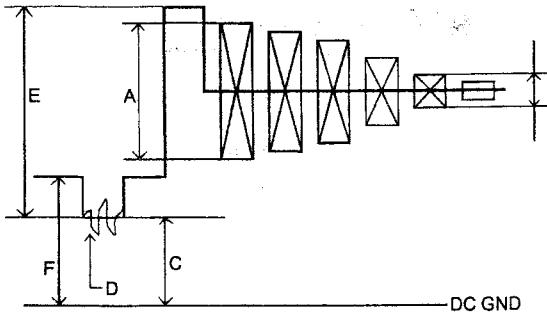


Fig.7

- Adjust the IF-AGC voltage from TP301 with DC variable power supply so that the E-voltage in Fig.7 becomes approximately 1.5V.
- Adjust the IFT302 so that the DC voltage of C or F in Fig.7 becomes the minimum. When C-voltage drops and the wave form becomes unstable, adjust the IFT302 again.
- Confirm that the H-SYNC (D) has no noise.
- Confirm that the ratio of 4.43MHz and 500KHz is within the following range.  
 $0.5/4.43\text{MHz} \cdots -10 \pm 4\text{dB}$   
 (Acceptable if A:B=5:1 more)

## 2. RF-AGC adjustment

- Connect the measuring equipment as shown in Fig.8.

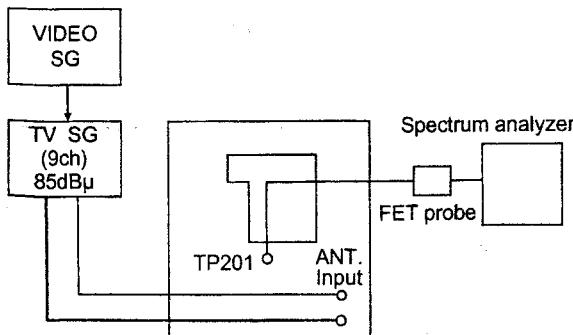


Fig.8

- Solder-bridge the TP201. And, input the following signal.  
 9ch output level : 85dB  $\mu$   
 Visual signal : multi-burst signal  
 Voice modulation : 1kHz 30%(15kHz · Dev)MONO
- Adjust the VR301 so that the display level of the spectrum analyzer becomes 87dB  $\mu$ .  
 The set value of the spectrum analyzer is as follows. (Use the FET probe for measuring.)

RES · BW	300kHz
V · BW	300kHz
f0	= 38.9MHz
fspan	= 10MHz

## 3. Soft mute adjustment.

- Connect the measuring equipment as shown in Fig.9.

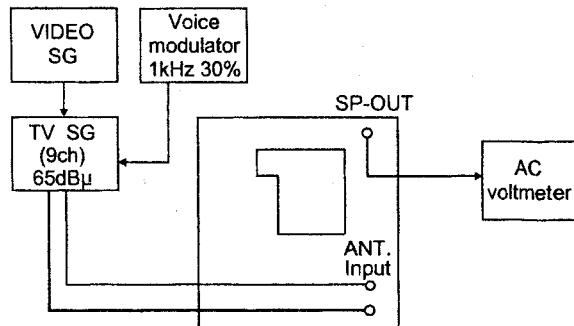


Fig.9

- Input the following signal.

9ch output level : 65dB  $\mu$

Visual signal : multi-burst signal

Voice modulation : 1kHz 30%(15kHz · Dev)MONO

- The point on which SP output does not clip is defined 0dB.
- Adjust the VR302 so that the voice output level drops by 10dB when the RF input is set to 0dB.

## 4. FM-SD adjustment

- Connect the measuring equipment as shown in Fig.10.

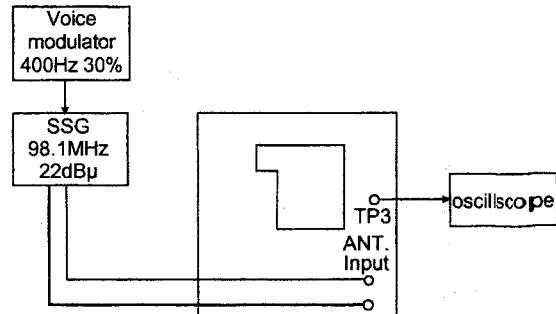


Fig.10

- Input the following signal.

Input signal : 98.1MHz/22dB  $\mu$  ( $75\Omega$ )

Voice modulation : 400Hz 30% MONO

- Adjust VR3 so that the voltage of TP3 is high (0V → 5.0V).

## 5. S-meter adjustment

- Input the following signal.

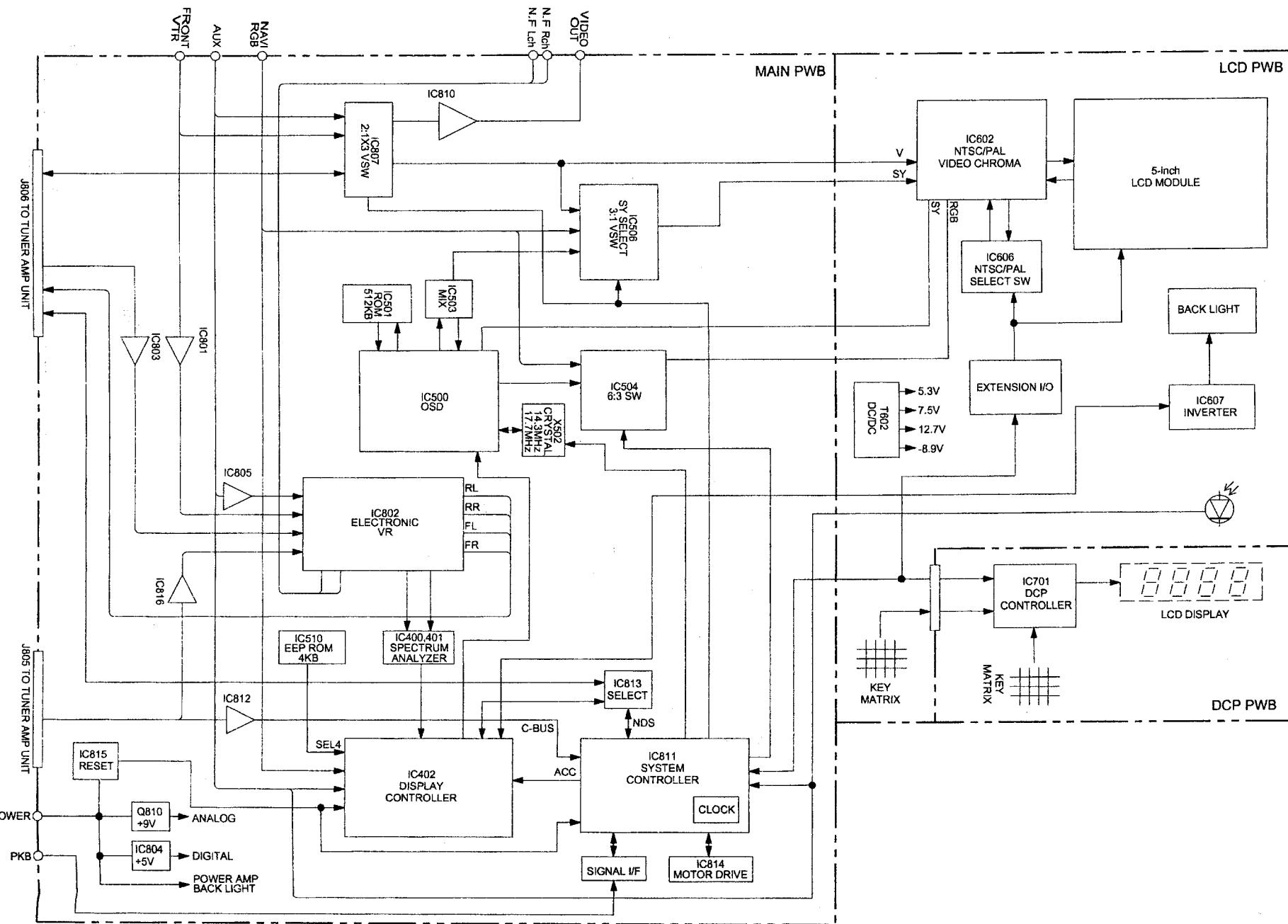
Input signal : 98.1MHz/30dB  $\mu$  ( $75\Omega$ )

Voice modulation : 400Hz 30% MONO

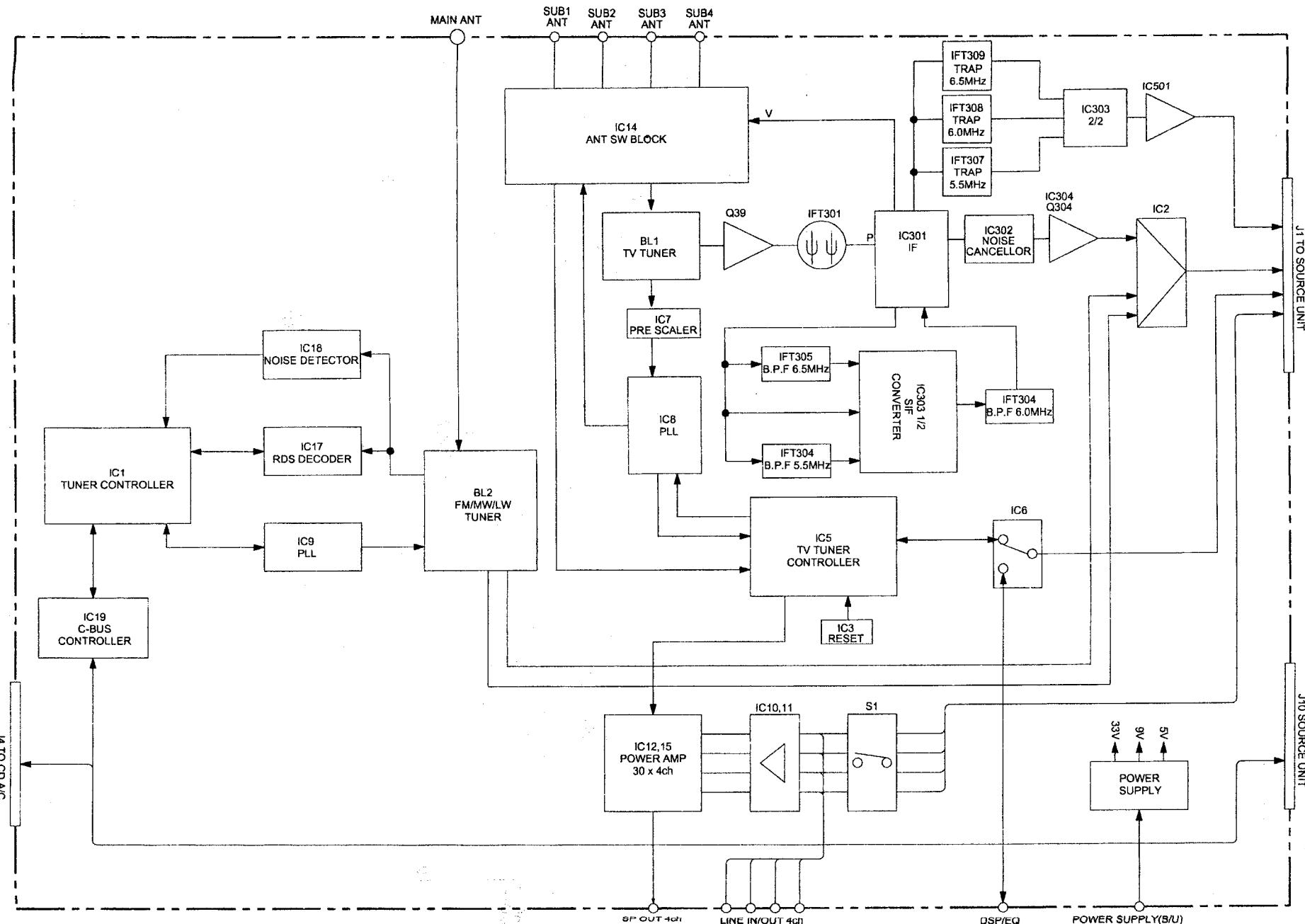
- Turn on the power switch and Press the AF button and CH6 button at the same time (TEST MODE).
- Adjust the reading of LCD indicator to [24 00] (2.4V) by VR1.

## BLOCK DIAGRAM

### Source unit section



## Tuner amp unit section



## ■EXPLANATION OF IC

■ μPD78052GC-10B-3B9	052-1307-01	Tuner Controller
■ μPD78052GC-133-3B9	052-1307-10	

Outward Form  
80 pins, plastic QFP

### Terminal Description

No.	Symbol	I/O	Function															
1 3	NC	I	Connected to GND.															
4	AVSS	—	Connected to GND.															
5	TUN-REQ	O	NDS REQ to master microcomputer															
6	NC	I	Connected to GND.															
7	AV REF1	—	Connected to VDD.															
8	RXD	I	Receiving terminal of start-stop synchronizing communication with Master microcomputer															
9	TXD	O	Transmission terminal of start-stop synchronizing communication with Master microcomputer															
10	NC	I	Connected to GND.															
11	PLL-DATA	I	Data input from PLL IC															
12	PLL-DATA	O	Data output to PLL IC															
13	PLL-CLK	O	Clock output to PLL IC															
14	PLL-CE	O	CE output to PLL IC															
15 18	NC	I	Connected to GND.															
19	TV-ON	O	TV power supply output terminal															
20	AM-ON	O	AM power supply output terminal															
21	FM-ON	O	FM power supply output terminal															
22	NC	O	Not in use.															
23	MONO/ST	O	Output terminal for TV MONO/ST selection															
24 25	NC	O	Not in use.															
26	TUN-MUTE	O	Tuner mute signal terminal															
27	NC	I	Connected to GND.															
28	ANT-SEL1	O	Output terminals for TV diversity ANT selection <table border="1" style="margin-left: 20px;"> <tr> <td></td><td>S1</td><td>S2</td><td>S3</td><td>S4</td></tr> <tr> <td>ANT-SEL1</td><td>H</td><td>L</td><td>H</td><td>L</td></tr> <tr> <td>ANT-SEL2</td><td>H</td><td>H</td><td>L</td><td>L</td></tr> </table>		S1	S2	S3	S4	ANT-SEL1	H	L	H	L	ANT-SEL2	H	H	L	L
	S1	S2	S3	S4														
ANT-SEL1	H	L	H	L														
ANT-SEL2	H	H	L	L														
29	ANT-SEL2	O																
30	AV ON	O	AMP STBY control terminal (PWR ON: ON)															
31 32	NC	I	Connected to GND.															
33	VSS	—	Connected to GND.															
34	AM SD	I	AM SD input terminal (Presence of AM station is judged in SEEK mode.)															
35	FM SD	I	FM SD input terminal (Presence of FM station is judged in SEEK mode.)															
36	TV-M/SUB	O	TV MAIN/SUB select output terminal															
37	SIF BAND1	O	Sound frequency select output terminals (Control of TV band for Asia specification) <table border="1" style="margin-left: 20px;"> <tr> <td>Channel</td><td>SIF BAND1</td><td>SIF BAND2</td><td>SIF BAND3</td><td>Sound frequency</td></tr> <tr> <td>CCIR IT. NZ. AUSTRALIA</td><td>L</td><td>H</td><td>L</td><td>5.5MHz</td></tr> </table>	Channel	SIF BAND1	SIF BAND2	SIF BAND3	Sound frequency	CCIR IT. NZ. AUSTRALIA	L	H	L	5.5MHz					
Channel	SIF BAND1	SIF BAND2	SIF BAND3	Sound frequency														
CCIR IT. NZ. AUSTRALIA	L	H	L	5.5MHz														
38	SIF BAND2	O	<table border="1" style="margin-left: 20px;"> <tr> <td>HONGKONG SOUTHAFRICA</td><td>H</td><td>L</td><td>L</td><td>6.0MHz</td></tr> <tr> <td>IRELAND Angola channel</td><td></td><td></td><td></td><td></td></tr> <tr> <td>CHINA OIRT channel</td><td>H</td><td>H</td><td>L</td><td>6.5MHz</td></tr> </table>	HONGKONG SOUTHAFRICA	H	L	L	6.0MHz	IRELAND Angola channel					CHINA OIRT channel	H	H	L	6.5MHz
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CHINA OIRT channel	H	H	L	6.5MHz														
39	SIF BAND3	O																
40	NC	I	Connected to GND.															

No.	Symbol	I/O	Function																			
41 44	NC	I	Connected to GND.																			
45	AV5V-ON	O	5V power supply control terminal (PWR ON: ON)																			
46	NC	I	Connected to GND.																			
47	PA-MUTE	O	Amplifier mute output terminal																			
48 59	NC	I	Connected to GND.																			
60	RESET	I	Reset signal input terminal																			
61	TV SYNC	I	Pulse input terminal for judging of TV station presence Synchronization for AV ON. (OFF: Sleep mode)																			
62	AV+B ON	I	Connected to GND.																			
63 65	NC	I	Terminals for selection of destination.																			
66	SIMUKE1	I	Power supply voltage terminal <table border="1" style="margin-left: 20px;"> <tr> <td></td><td>JPN</td><td>ASIA</td><td>EUR</td><td>USA</td></tr> <tr> <td>SIMUKE1</td><td>L</td><td>L</td><td>H</td><td>H</td></tr> <tr> <td>SIMUKE2</td><td>L</td><td>H</td><td>L</td><td>H</td></tr> </table>						JPN	ASIA	EUR	USA	SIMUKE1	L	L	H	H	SIMUKE2	L	H	L	H
	JPN	ASIA	EUR	USA																		
SIMUKE1	L	L	H	H																		
SIMUKE2	L	H	L	H																		
67	SIMUKE2	I																				
68	VDD	—	System clock terminals																			
69 70	X1 X2	—	4.9152 MHz																			
71	IC	—	Connected to VSS.																			
72	XT2	—	Not in use.																			
73	XT1	I	Connected to GND.																			
74	AVDD	—	Analog power supply terminal for AD converter																			
75	AVREFO	—	Standard voltage input terminal for AD converter																			
76 80	NC	I	Connected to GND.																			

**μPD178016GC-516-3B9** 052-1316-00 **TV Controller**

**Outward Form**  
80 pins, plastic QFP

**Terminal Description**

No.	Symbol	I/O	Function
1 2	N.C.	I	Not in use
3	RDS S-METER	I	RDS S-METER voltage detection
4	RDS NOISE	I	RDS noise detection
5	N.C.	I	Not in use
6	E/U	I	Low for Europe, Hi for USA
7	RDS DISCHGE	O	Hi for DISCHGE
8 11	N.C.	I	Not in use
12 13 14	C-BUS SI C-BUS SO C-BUS SCK	I O I	C-BUS communication line
15	RDS +B REM	O	Switches RDS power supply: Low except for AM
16	SD OPEN	O	Makes port Hi when FM SD Hi is input
17	FM LOCAL	O	Switches FM DX / LO: Low when local
18	SD UP	O	Low when following-up RDS
19	AM LOCAL	O	Switches AM DX/LO: Low when local
20	N.C.	O	Not in use
21	PORT GND	-	I/O port GND terminal
22	PORT VDD	-	I/O port power supply
23	RDS MUTE	O	Hi when RDS IF MUTE is output
24 26	N.C.	O	Not in use
27	IF REQ	O	Lo when RADIO IF signal requested
28	AM IFC	I	AM IF signal input terminal
29	FM IFC	I	FM IF signal input terminal
30	PLL VDD	-	PLL circuit power supply terminal
31	FM IN	I	FM OSC signal input terminal
32	AM IN	I	AM OSC signal input terminal
33	PLL GND	-	PLL circuit GND terminal
34	EO 0	O	AM error out signal output terminal
35	EO 1	O	FM error out signal output terminal
36	IC-TEST	--	Connect to GND
37	AM SD	I	AM SD detection: Hi for SD ON
38	FM SD	I	FM SD detection: Hi for SD ON
39	FM ST	I	FM ST detection: Low for ST
40 44	N.C.	I	Not in use
45	RADIO MUTE	O	Outputs MUTE for RADIO micro computer
46	FM ON	O	Switches FM power supply
47	AM ON	O	Switches AM power supply
48	C-BUS SRQ	O	Outputs C-BUS SRQ signal
49 52	N.C.	I	Not in use
53 54 55 56	PLL DI PLL SCK PLL DO PLL CE	I O O O	PLL IC control line

No.	Symbol	I/O	Function
57 65	N.C.	I	Not in use
66	RDS DATA	I	Inputs data from decoder
67	RDS CLK	I	Inputs CLK signal from decoder
68	ACC CONT	I	Detects ACC CONT
69 73	N.C.	I	Not in use
74	REG CPU	-	CPU power supply terminal: Connected with condenser.
75	GND	-	Micro computer GND terminal
76 77	X 2 X 1	- I	Connecting crystal terminal (4.5 MHz)
78	REG OSC	-	Power supply terminal for oscillation circuits: Connected with condenser.
79	VDD	-	CPU power supply terminal
80	RESET	I	RESET signal input terminal

■μPD78058FGC-059-3B9 052-6021-10 System controller

**Outward Form**

80 pins, plastic QFP

**Terminal Description**

No.	Symbol	I/O	Function
1 3	NC	—	Connected to GND.
4	AVSS	—	Connected to GND.
5	C-BUS SRQ	I	Input terminal of C-BUS service request
6	NDS SEL0	O	NDS communication select output terminal
7	AV REF1	—	Connected to VDD.
8	RXD	I	Receiving terminal of start-stop synchronizing communication with slave microcomputer
9	TXD	O	Transmission terminal of start-stop synchronizing communication with slave microcomputer
10	NDS SELL1	O	NDS communication select output terminal
11	DCP DATA	I	μPD16431 Serial data input terminal
12	DCP DATA	O	Serial data output terminal with μPD16431/TCT74HC595
13	DCP CLK	O	Serial clock output terminal with μPD16431/TCT74HC595
14 15	NC	—	Connected to GND.
16	C-BUS IN	I	C-BUS data input terminal
17	C-BUS OUT	O	C-BUS data output terminal
18	C-BUS CLK	O	C-BUS clock output terminal
19 22	NC	—	Connected to GND.
23	ILL	I	Lighting SW input terminal (L: ILL ON)
24	O/C SW	I	OPEN/CLOSE SW input terminal
25	DCP REQ	I	DCP request signal input terminal
26	NC	—	Connected to GND.
27 28	SEL2 SEL3	I I	AUX input terminals SEL2   H   TV   L   VTR   H   TV   L   AUX SEL3   H   TV   H   VTR   L   AUX   L   AUX (Upper: Sound Lower: Image)
29	EXIO-STB	O	TC74HC595 latch (rise) output terminal
30	DCP-CE	O	DCP IC chip enable output terminal
31	AV 5V ON	O	5V power supply control
32	MUTE	O	Audio mute signal (L: MUTE ON)
33	VSS	—	GND terminal
34	ACC CONT2	O	ACC control signal 2 (C-BUS) output terminal
35	NTSC/PAL	O	NTSC (RGB) /PAL control output terminal
36	VOL IC CLK	O	VOL IC (M62419FP) serial clock output terminal
37	VOL IC DAT	O	VOL IC (M62419FP) serial data output terminal
38	PANEL ON	O	ON/OFF of same timing with AV ON (Not turned on in screen storage status.)
39	RESET OUT	O	Reset control output terminal to TUNER microcomputer
40	VSEL1	O	VIDEO signal select 1 output terminal
41	VSEL2	O	VIDEO signal select 2 output terminal
42	VSEL3	O	VIDEO signal select 3 output terminal
43 44	NC	—	Connected to GND.
45	BUZ	O	Buzzer output terminal (4 kHz)
46 48	NC	—	Connected to GND.

No.	Symbol	I/O	Function
49	CLK	O	Clock output terminal
50	M-F	O	Motor control output terminal (Draw out)
51	M-R	O	Motor control output terminal (Storage)
52	NO-ACC	I	Destination input terminal of ACC presence H: Not presence L: Presence
53	OPEN	I	Input terminal of all screen extract detection
54	CLOSE	I	Input terminal of all screen storage detection
55	OVER LOAD	—	Connected to GND.
56	VID/RGB	O	VIDEO/RGB screen select output terminal
57	ACC+B ON	O	Power supply control output terminal of motor, back light, LED.
58	ACC CONT	O	ACC control signal (display microcomputer) output terminal
59	AV ON	O	Power supply control output terminal
60	RESET	I	Reset input terminal
61	IR	I	IR remote control input terminal
62	O/C SW	I	OPEN/CLOSE switch input.
63	DISP REQ	I	Request input (rise) terminal from display microcomputer
64	TUNER REQ	I	Request input (rise) terminal from TUNER microcomputer
65	PWR SW	I	PWR/FUNC SW input terminal
66	TIILT	I	Tilt SW input terminal H: Horizontal L: Incline
67	DSP REQ	I	Request input (rise) terminal from DSP.
68	VDD	—	Power supply voltage terminal
69 70	X2 X1	—	Connection terminals for system clock oscillating crystal 4.091 MHz
71	IC	—	Connected to GND.
72 73	XT2 XT1	—	Connection terminal for clock crystal (32.768 kHz)
74	AVDD	—	Connected to VDD.
75	AVREF0	—	Connected to VDD.
76 80	NC	—	Connected to GND.

<b>■μPD78058FGC-037-3B9</b>	052-7021-01	Display controller
<b>■μPD78058FGC-060-3B9</b>	052-7021-10	

**Outward Form**  
80 pins, plastic QFP

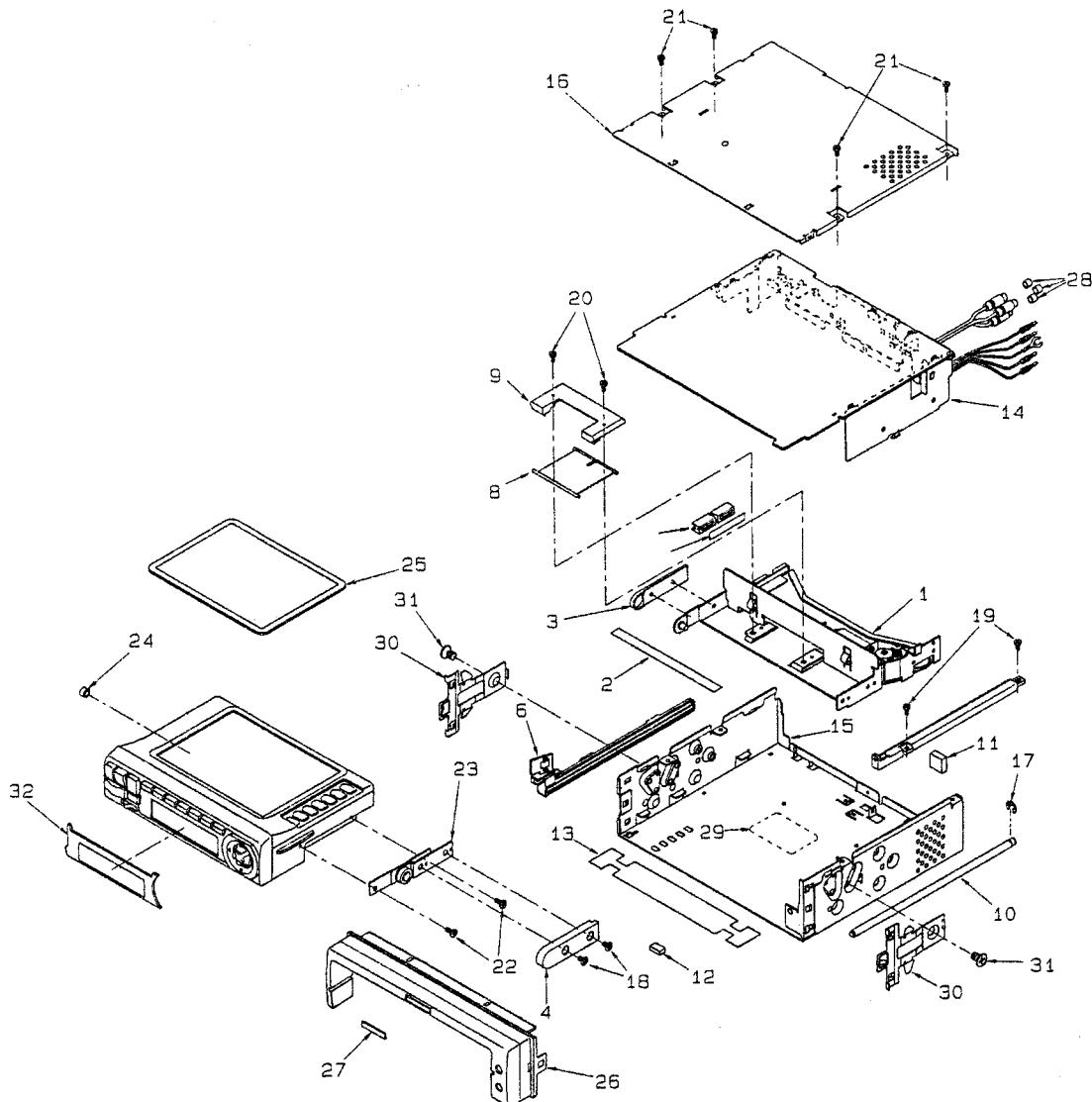
**Terminal Description**

No.	Symbol	I/O	Function
1	SP 3K	I	Spectrum analyzer input terminal (3 kHz)
2	SP 10K	I	Spectrum analyzer input terminal (10 kHz)
3	NC	-	Connected to GND.
4	AVSS	-	GND terminal
5	HUE	O	HUE control output terminal (D/A output)
6	COLOR	O	COLOR control output terminal (D/A output)
7	AVREF1	-	Connected to AVDD.
8	RXD	I	Data receiving terminal of start-stop synchronizing communication with head microcomputer
9	TXD	O	Data transmission terminal of start-stop synchronizing communication with head microcomputer
10	DISP REQ	O	Request output terminal to head microcomputer
11	OSD RES	O	Reset control output terminal to OSD IC
12	OSD DATA	O	Serial data output terminal to OSD IC
13	OSD CLK	O	Serial clock output terminal to OSD IC
14	OSD CS	O	CS control output terminal to OSD IC
15	E²P CS	O	E²PROM CS output terminal
16	E²P IN	I	E²PROM serial data input terminal
17	E²P OUT	O	E²PROM serial data output terminal
18	E²P CLK	O	E²PROM serial clock output terminal
19 32 34 43	NC	-	Connected to GND.
33	VSS	-	GND terminal
44	BRT	O	BRT control output terminal (PWM)
45 49	NC	-	Connected to GND.
50	NAVI SYNC ON	O	NAVI SYNC select output terminal
51	NAVION	O	NAVI display (RGB) select output terminal
52	SEL4	I	NAVI RGB connection judgement input terminal (Synchronizing with SEL3.)
53	NC	-	Connected to GND.
54	PKB	I	Parking brake input terminal (H: Brake)
55	CCD ON	O	Control signal output terminal for CCD connection box
56	A-ANT	O	Auto antenna control output terminal (H: Up)
57 59	NC	-	Connected to GND.
60	RESET	I	Reset input terminal
61	NC	-	Connected to GND.
62	ACC IN	I	ACC CONT input terminal from head microcomputer
63	SPEED	I	Speed pulse input terminal
64 66	NC	-	Connected to GND.
67	LCD VSYNC	I	V SYNC input terminal (for ending judgement of external synchronizing VRAM fill)
68	VDD	-	Power supply voltage terminal
69 70	X2 X1		Connection terminal for system clock oscillating crystal 4.9152 MHz

No.	Symbol	I/O	Function
71	IC	-	Connected to GND.
72	XT2	-	Not in use.
73	XT1	-	Connected to GND.
74	AVDD	-	Connected to VDD.
75	AVREF0	-	Connected to VDD.
76	SP 60	I	Spectrum analyzer input terminal (60Hz)
77	SP 125	I	Spectrum analyzer input terminal (125Hz)
78	SP 250	I	Spectrum analyzer input terminal (250Hz)
79	SP 500	I	Spectrum analyzer input terminal (500Hz)
80	SP 1K	I	Spectrum analyzer input terminal (1 kHz)

## ■ EXPLODED VIEW • PARTS LIST

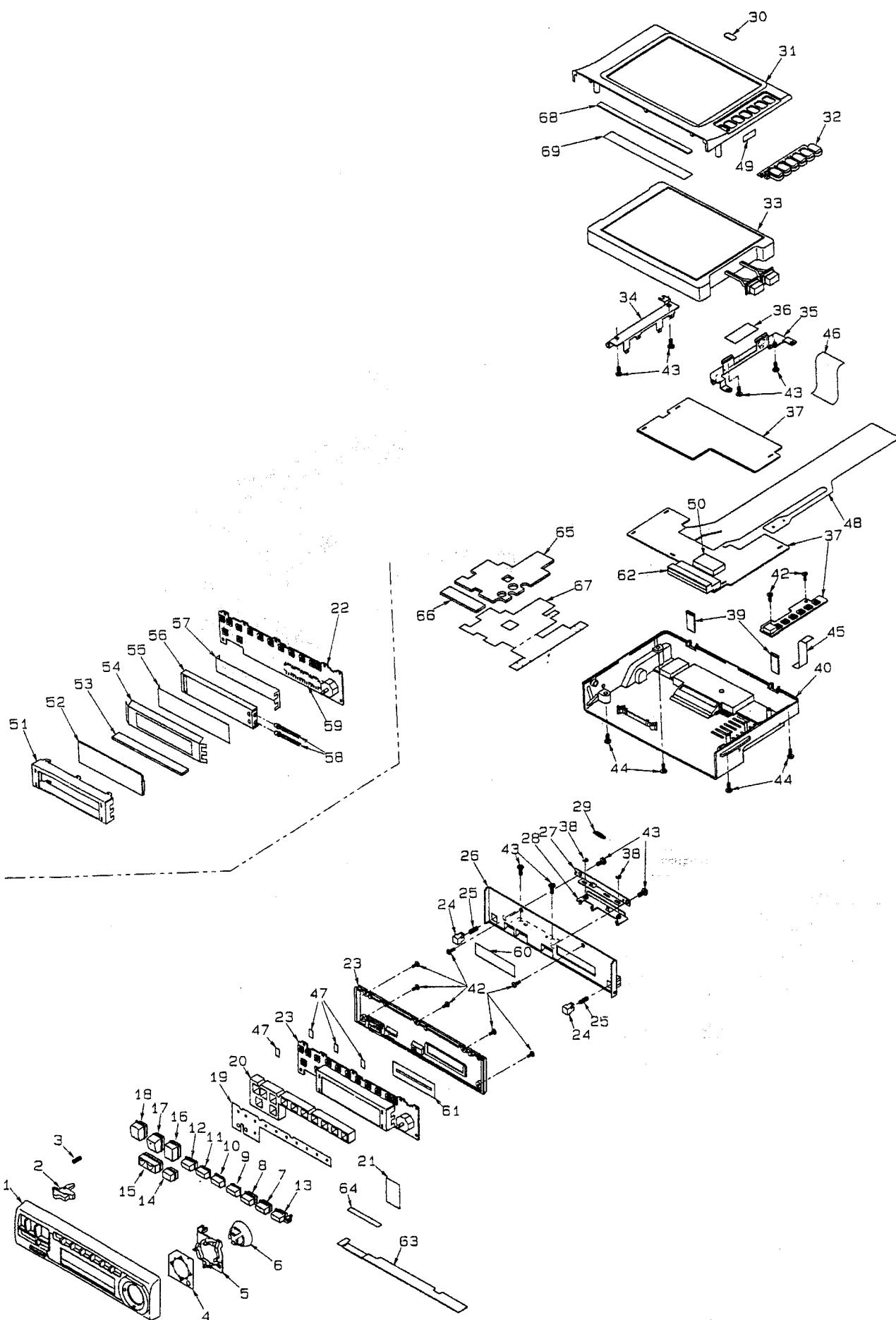
## MAIN section



NO.	PART NO.	DESCRIPTION	Q'TY
1	948-0412-00	HOLD PLATE ASSY	1
2	353-0450-00	SHADE C	1
3	335-4927-00	SIDE COVER(R)	1
4	335-4929-00	SIDE COVER(L)	1
5	335-4724-02	SLIDER	1
6	335-4383-02	SLIDE HOLDER	1
7	335-3854-02	RACK	1
8	335-4609-00	FPC CVR	1
9	335-4926-00	FPC CVR	1
10	612-0183-01	SHAFT	1
11	345-7536-00	RUBBER CUSHION	1
12	345-7684-00	RUBBER CUSHION	1
13	353-0427-00	SHADE B	1
14	039-0752-03	MAIN PWB	1
15	311-1657-06	LOWER CASE	1
16	310-1515-05	UPPER CASE	1
17	743-4000-10	E-RING	1

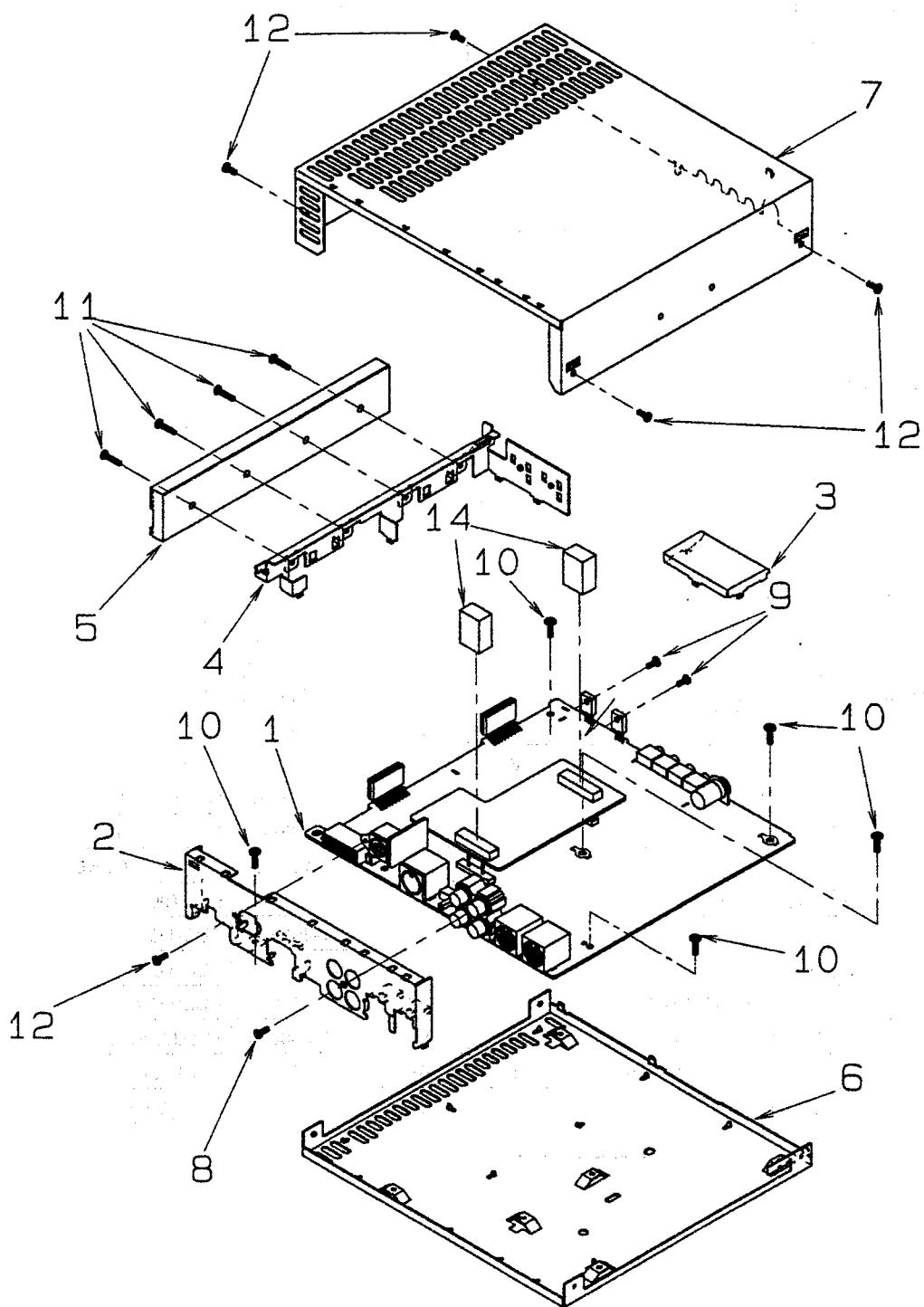
NO.	PART NO.	DESCRIPTION	Q'TY
18	716-1598-00	SCREW(M2.6X5)	2
19	714-2605-81	MACHINE SCREW(M2.6X5)	2
20	714-2605-89	MACHINE SCREW(M2.6X5)	2
21	716-1494-00	SCREW(M2.6X5)	4
22	716-1730-01	P-TIGHT SCREW	2
23	947-0411-00	TRQU BUSH	1
24	335-4938-00	SPACER	1
25	373-0848-00	LCD CVR	1
26	370-5602-03	ESCUOTCHEON	1
27	378-0134-00	BADGE	1
28	345-3799-00	RUBBER PART	3
29	286-8819-00	SETPLATE	1
30	750-2796-02	SPRING	2
31	714-5008-41	MACHINE SCREW(M5X8)	2
32	373-0816-00	LCD CVR	1
33	347^1949-00	DUBLE FACE	1

## LCD Panel section



NO.	PART NO.	DESCRIPTION	Q'TY	NO.	PART NO.	DESCRIPTION	Q'TY
1	370-5601-03	ESCUTCHEON(DCP)	1	36	347-5339-00	SHADE(LCD-H)	1
2	382-4201-01	BUTTON	1	37	039-0785-00	LCD PWB	1
3	750-3208-00	SPRING	1	38	743-1500-20	E-RING	2
4	347-5338-00	SHADE	1	39	335-4384-00	ROCK	2
5	335-5139-00	ILLUMI PART	1	40	377-0205-02	DIAL SUPPORT	1
6	382-7720-03	BUTTON(LOCK RELEASE)	1	41	738-2030-11	PRECISION SCREW	2
7	382-4203-00	BUTTON(1)	1	42	716-0872-11	PAD SCREW	9
8	382-4204-00	BUTTON(2)	1	43	716-0645-00	SCREW	8
9	382-4205-00	BUTTON(3)	1	44	716-1730-01	P TIGHT SCREW	4
10	382-4206-00	BUTTON(4)	1	45	816-2411-00	FLAT CABLE	1
11	382-4207-00	BUTTON(5)	1	46	816-2410-00	FLAT CABLE	1
12	382-4208-00	BUTTON(6)	1	47	347-1561-00	DOUBLE FACE	4
13	382-4209-00	BUTTON(DISP)	1	48	039-0740-00	FPC	1
14	382-4210-01	BUTTON(OPEN)	1	49	347-5355-00	PAPER PART	1
15	382-7721-00	BUTTON(PTY/AF)	1	50	331-1969-00	SHIELD CASE	1
16	382-4212-00	BUTTON(BAND)	1	51	331-1930-00	LCD CVR	1
17	382-4213-00	BUTTON(FUNC)	1	52	379-1092-41	INDICATOR(FRONT)	1
18	382-4214-01	BUTTON(TA)	1	53	345-7801-00	RUBBER CONNECTOR	1
19	347-5340-00	BUTTON HLDR	1	54	347-5336-00	FILM	1
20	345-7768-00	BUTTON HLDR	1	55	347-5337-00	CCS FILM	1
21	347-2061-00	PAPER PART	1	56	335-5138-00	ILLUMI PLATE	1
22	039-0986-00	DCP PWB	1	57	347-5335-00	REFLECTOR	1
23	335-5149-00	BACK PLATE	1	58	001-7027-00	DIODE	2
24	335-5147-00	EJECTOR	2	59	076-0531-00	PLUG	1
25	750-3218-00	EJ SPRING	2	60	347-5187-01	GUIDE LABEL	1
26	335-5196-00	DCP CVR	1	61	347-5358-00	SHADE(CON)	1
27	331-1931-00	HOOK HKDR	1	62	074-1136-00	OUTLET SOCKET	1
28	331-1932-00	HOOK PLATE	1	63	331-2043-00	ES BRKT	1
29	750-2506-00	SPRING	1	64	347-4063-00	CUSHION TAPE	1
30	335-5214-00	IR FILTER	1	65	345-7944-00	CUSHION	1
31	373-0815-03	DIAL CVR(MONITOR)	1	66	345-7953-00	CUSHION	1
32	382-4202-01	BUTTON(CONT.)	1	67	347-5486-00	SHIELD SHEET	1
33	379-1053-00	INDICATOR(MONITOR)	1	68	345-7945-00	CUSHION	1
34	331-1934-00	LCD HOLDER(L)	1	69	347-5487-00	DOUBLE FACE	1
35	331-1933-00	LCD HOLDER(R)	1				

## Tuner amp section



NO.	PART NO.	DESCRIPTION	Q'TY
1	039-0955-00	TUNER PWB	1
2	331-2120-00	FRONT PLATE	1
3	331-1920-00	SHIELD CASE	1
4	331-1918-00	IC HOLDER	1
5	313-1668-00	HEAT SINK	1
6	331-1705-00	LOWER CASE	1
7	310-1625-00	UPPER CASE	1

NO.	PART NO.	DESCRIPTION	QTY
8	702-3008-81	TAP SCREW	1
9	714-3006-81	MACHINE SCREW(M3×5)	2
10	716-0878-00	IT SCREW(M2.6×5)	5
11	714-2612-81	MACHINE SCREW(M2.6×12)	4
12	714-2605-81	MACHINE SCREW(M2.6×5)	5
13	345-4263-00	RUBBER PART	1
14	345-7946-00	CUSION	2

# ELECTRICAL PARTS LIST

LCD PWB

Note) Several different parts of the same reference number are alternative parts.  
One of those parts is used in the set.

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
C 666	042-0522-07	16V3.3 μF	C 608	042-0452-01	10V220 μF	R 611	117-1531-10	1/10W 15kΩ
C 667	163-1073-31	16V100 μF	C 609	163-1073-10	6.3V100 μF	R 612	117-1031-10	1/10W 10kΩ
C 668	178-1522-78	1500pF	C 610	042-0528-00	35V15 μF	R 613	117-4721-10	1/10W 4.7kΩ
C 669	178-2245-79	0.22 μF	C 611	163-4763-30	16V47 μF	R 614	117-5611-10	1/10W 560Ω
C 670	178-2212-78	220pF	C 612	042-0528-00	35V15 μF	R 615	117-2221-10	1/10W 2.2kΩ
C 671	178-2222-78	2200pF	C 613	178-1055-79	1 μF	R 616	117-4731-10	1/10W 47kΩ
C 672	043-0499-51	0.1 μF	C 614	178-1032-78	0.01 μF	R 617	117-4731-10	1/10W 47kΩ
C 673	043-0500-51	22pF	C 615	178-1032-78	0.01 μF	R 618	117-4731-10	1/10W 47kΩ
C 674	043-0500-51	22pF	C 616	178-1032-78	0.01 μF	R 619	117-4731-10	1/10W 47kΩ
C 675	042-0397-00	16V1 μF TAN	C 617	178-1055-79	1 μF	R 620	117-4731-10	1/10W 47kΩ
C 676	178-1055-79	1 μF	C 618	178-1032-78	0.01 μF	R 621	117-4731-10	1/10W 47kΩ
C 677	178-1022-78	1000pF	C 619	178-1032-78	0.01 μF	R 622	117-5631-10	1/10W 56kΩ
C 678	176-1011-00	100pF CH	C 620	178-3322-78	3300pF	R 623	117-2231-10	1/10W 22kΩ
C 679	176-1011-00	100pF CH	C 621	178-1032-78	0.01 μF	R 624	117-2731-10	1/10W 27kΩ
D 601	001-0516-00	MA111	C 622	178-1032-78	0.01 μF	R 625	117-2731-10	1/10W 27kΩ
D 602	001-0608-00	D1FS4	C 623	163-1053-60	50V1 μF	R 626	117-2231-10	1/10W 22kΩ
D 603	001-0608-00	D1FS4	C 624	178-4745-79	0.47 μF	R 627	117-2231-10	1/10W 22kΩ
D 604	001-0516-00	MA111	C 625	178-4745-79	0.47 μF	R 628	117-2231-10	1/10W 22kΩ
D 605	001-0516-00	MA111	C 626	178-4745-79	0.47 μF	R 629	117-3931-10	1/10W 39kΩ
D 606	001-0608-00	D1FS4	C 627	042-0452-01	10V220 μF	R 630	117-2231-10	1/10W 22kΩ
D 607	001-0528-48	MA8091-H	C 628	178-1055-79	1 μF	R 631	117-1011-10	1/10W 100Ω
D 608	001-0516-00	MA111	C 629	163-3353-61	50V3.3 μF	R 632	117-1011-10	1/10W 100Ω
D 609	001-0506-00	DAN202K	C 630	178-1032-78	0.01 μF	R 633	117-1011-10	1/10W 100Ω
D 610	001-0518-04	AA1101W	C 631	176-5601-00	56pF CH	R 634	117-1021-10	1/10W 1kΩ
F 601	051-1570-10	ICP-F15	C 632	178-2222-78	2200pF	R 635	117-1011-10	1/10W 100Ω
IC 601	051-1619-00	FA7610N	C 633	178-2235-79	0.022 μF	R 636	117-2231-10	1/10W 22kΩ
IC 602	051-5307-00	IR3Y24	C 634	163-1063-30	16V10 μF	R 637	117-4711-10	1/10W 470Ω
IC 603	051-1292-00	NJM4565M-D	C 635	176-2201-00	22pF CH	R 638	117-4711-10	1/10W 470Ω
IC 604	051-1250-00	TC4S66F	C 636	176-3301-00	33pF CH	R 639	117-4711-10	1/10W 470Ω
IC 605	051-1250-00	TC4S66F	C 637	178-1045-79	0.1 μF	R 640	117-4711-10	1/10W 470Ω
IC 606	051-7214-38	MC74HC595AF	C 639	178-6812-78	680pF	R 641	032-0098-03	1/10W 18kΩ
IC 607	051-3601-91	TL494CNS	C 640	176-5601-00	56pF CH	R 642	117-2221-10	1/10W 2.2kΩ
IR 601	060-4007-00	GP1U101X	C 641	178-1032-78	0.01 μF	R 643	117-3341-10	1/10W 330kΩ
J 601	074-1048-70		C 642	178-4732-78	0.047 μF	R 645	117-3341-10	1/10W 330kΩ
J 602	074-1049-63		C 643	178-1032-78	0.01 μF	R 646	117-2731-10	1/10W 27kΩ
J 603	074-1048-65		C 644	176-8201-00	82pF CH	R 647	117-2431-10	1/10W 24kΩ
J 607	076-0478-53		C 645	178-1032-78	0.01 μF	R 648	117-5621-10	1/10W 5.6kΩ
L 601	010-2271-00	100 μH	C 646	178-1055-79	1 μF	R 649	117-1021-10	1/10W 1kΩ
L 602	010-2174-24	100 μH	C 647	178-1045-79	0.1 μF	R 650	117-1021-10	1/10W 1kΩ
L 603	010-2271-00	100 μH	C 648	176-8097-00	8pF CH	R 651	117-5621-10	1/10W 5.6kΩ
L 604	010-2174-24	100 μH	C 649	176-8097-00	8pF CH	R 652	117-5621-10	1/10W 5.6kΩ
L 605	010-2199-30	33 μH J	C 650	178-1032-78	0.01 μF	R 653	117-6821-10	1/10W 6.8kΩ
L 607	010-2199-33	56 μH J	C 651	163-4743-60	50V0.47 μF	R 654	117-4721-10	1/10W 4.7kΩ
L 608	010-2199-33	56 μH J	C 652	178-1055-79	1 μF	R 655	117-3021-10	1/10W 3kΩ
L 609	010-4013-00	806PN-504	C 653	178-1055-79	1 μF	R 656	117-2021-10	1/10W 2kΩ
L 610	010-2165-00	100 μH	C 654	178-1055-79	1 μF	R 657	117-3351-15	1/10W 3.3MΩ
L 611	010-2165-00	100 μH	C 655	163-4763-30	16V47 μF	R 658	117-6821-10	1/10W 6.8kΩ
P 604	076-0529-02		C 656	178-1045-79	0.1 μF	R 659	117-1051-10	1/10W 1MΩ
P 605	076-0529-02		C 657	178-1045-79	0.1 μF	R 660	117-5621-10	1/10W 5.6kΩ
Q 601	102-2873-00	2SC2873	C 658	163-1063-30	16V10 μF	R 661	117-1521-10	1/10W 1.5kΩ
Q 602	102-2712-00	2SC2712	C 659	163-1063-30	16V10 μF	R 662	117-3311-10	1/10W 330Ω
Q 603	125-2004-02	RN1402	C 660	163-1063-50	35V10 μF	R 663	117-2221-10	1/10W 2.2kΩ
Q 604	125-2004-02	RN1402	C 662	178-1045-79	0.1 μF	R 664	117-6811-10	1/10W 680Ω
Q 605	125-2004-02	RN1402	C 663	178-1045-79	0.1 μF	R 665	117-8221-10	1/10W 8.2kΩ
Q 606	125-2004-02	RN1402	C 664	042-0522-08	16V10 μF	R 666	117-1521-10	1/10W 1.5kΩ
Q 607	102-3326-00	2SC3326	C 665	178-1055-79	1 μF	R 667	117-1011-10	1/10W 100Ω
Q 608	100-1738-00	2SA1738	C 667	125-2036-00	FB1J3P	R 668	117-1011-10	1/10W 100Ω
Q 609	125-2004-02	RN1402	C 668	125-2036-00	FB1J3P	R 669	117-5621-10	1/10W 5.6kΩ
Q 610	125-2004-02	RN1402	C 669	125-2004-03	RN1403	R 670	117-1011-10	1/10W 100Ω
Q 611	125-2004-02	RN1402	C 670	101-1204-61	2SB1204R.S.T	R 671	117-1031-10	1/10W 10kΩ
Q 612	100-1738-00	2SA1738	C 671	102-2873-00	2SC2873	R 672	117-4731-10	1/10W 47kΩ
Q 613	125-0002-03	RN2403	C 672	102-2873-00	2SC2873	R 673	117-2231-10	1/10W 22kΩ
Q 614	100-1213-00	2SA1213	R 601	117-6841-10	1/10W 680kΩ	R 674	117-1031-10	1/10W 10kΩ

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
D 809	001-0541-00	MA157	Q 801	102-2712-00	2SC2712	Q 840	103-1306-00	2SD1306	R 805	117-5631-10	1/10W 56kΩ	R 872	117-1031-10	1/10W 10kΩ
D 810	001-0516-00	MA111	Q 801	103-0601-00	2SD601A	R 440	117-1511-10	1/10W 150Ω	R 806	117-5631-10	1/10W 56kΩ	R 877	117-2231-10	1/10W 22kΩ
D 810	001-0541-00	MA157	Q 802	100-1037-00	2SA1037	R 441	117-1021-10	1/10W 1kΩ	R 807	117-3321-10	1/10W 3.3kΩ	R 878	117-5631-10	1/10W 56kΩ
D 811	001-0528-27	MA8047H	Q 802	100-1162-00	2SA1162	R 442	117-1021-10	1/10W 1kΩ	R 808	117-4721-10	1/10W 4.7kΩ	R 879	117-3311-10	1/10W 330Ω
D 812	001-0516-00	MA111	Q 803	101-1143-00	2SB1143	R 443	117-4711-10	1/10W 470Ω	R 809	117-5631-10	1/10W 56kΩ	R 880	117-2231-10	1/10W 22kΩ
D 812	001-0626-00	1A2	Q 806	100-1431-00	2SA1431	R 444	117-4711-10	1/10W 470Ω	R 810	117-6831-10	1/10W 68kΩ	R 881	117-5631-10	1/10W 56kΩ
IC 402	052-7021-10	μPD78P058FGC-060-3B9	Q 807	125-2004-07	RN1407	R 445	117-4711-10	1/10W 470Ω	R 811	117-6831-10	1/10W 68kΩ	R 882	117-1021-10	1/10W 1kΩ
IC 500	051-1965-00	MB90076BPF-G-BND	Q 808	100-1431-00	2SA1431	R 447	117-1031-10	1/10W 10kΩ	R 812	117-1021-10	1/10W 1kΩ	R 883	117-1021-10	1/10W 1kΩ
IC 501	052-6019-10	NSM534001C-72GS-KRI	Q 809	125-2004-03	RN1403	R 448	117-1031-10	1/10W 10kΩ	R 813	111-2231-91	1/4WS 22kΩ	R 884	117-5631-10	1/10W 56kΩ
IC 502	051-0921-05	TC74HC32AF	Q 810	102-3668-00	2SC3668	R 449	117-4731-10	1/10W 47kΩ	R 814	117-5631-10	1/10W 56kΩ	R 885	117-5631-10	1/10W 56kΩ
IC 502	051-7219-08	SN74HC32NSLE	Q 811	100-1431-00	2SA1431	R 450	117-4731-10	1/10W 47kΩ	R 815	117-5631-10	1/10W 56kΩ	R 886	117-1031-10	1/10W 10kΩ
IC 503	051-1738-05	TC7S08F	Q 812	125-2004-03	RN1403	R 451	117-1021-10	1/10W 1kΩ	R 816	117-5631-10	1/10W 56kΩ	R 887	117-2231-10	1/10W 22kΩ
IC 503	051-1738-35	SC7S08F	Q 813	100-1213-00	2SA1213	R 452	117-1021-10	1/10W 1kΩ	R 817	117-4721-10	1/10W 4.7kΩ	R 888	117-2231-10	1/10W 22kΩ
IC 504	051-1478-05	TC74HC4053AF	Q 813	100-1797-00	2SA1797	R 453	117-4721-10	1/10W 4.7kΩ	R 818	117-2231-10	1/10W 22kΩ	R 889	117-1021-10	1/10W 1kΩ
IC 505	051-0682-05	TC74HC74AF	Q 813	101-1123-00	2SB1123	R 454	117-1031-10	1/10W 10kΩ	R 820	117-2231-10	1/10W 22kΩ	R 890	117-1021-10	1/10W 1kΩ
IC 506	051-5306-90	MM1117XF	Q 814	125-2004-03	RN1403	R 455	117-4721-10	1/10W 4.7kΩ	R 821	117-1531-10	1/10W 15kΩ	R 891	117-1021-10	1/10W 1kΩ
IC 507	051-1855-05	TC7W14F	Q 814	125-2005-02	UN2212	R 456	117-1031-10	1/10W 10kΩ	R 822	117-1531-10	1/10W 15kΩ	R 892	117-1021-10	1/10W 1kΩ
IC 508	051-1250-00	TC4S66F	Q 818	102-2412-00	2SC2412	R 460	117-4721-10	1/10W 4.7kΩ	R 823	117-8221-10	1/10W 8.2kΩ	R 893	117-1021-10	1/10W 1kΩ
IC 508	051-1250-30	SC14S66F	Q 818	102-2712-00	2SC2712	R 461	117-4721-10	1/10W 4.7kΩ	R 824	117-8221-10	1/10W 8.2kΩ	R 895	117-1021-10	1/10W 1kΩ
IC 509	051-1250-00	TC4S66F	Q 819	102-2412-00	2SC2412	R 462	117-4721-10	1/10W 4.7kΩ	R 825	117-1801-10	1/10W 18Ω	R 896	117-1021-10	1/10W 1kΩ
IC 509	051-1250-30	SC14S66F	Q 819	102-2712-00	2SC2712	R 463	117-4721-10	1/10W 4.7kΩ	R 826	117-8221-10	1/10W 8.2kΩ	R 897	117-1021-10	1/10W 1kΩ
IC 510	051-9405-08	X25160SI-L	Q 819	103-0601-00	2SD601A	R 464	117-4741-10	1/10W 470kΩ	R 827	117-8221-10	1/10W 8.2kΩ	R 898	117-1021-10	1/10W 1kΩ
IC 510	051-9405-38	NM25C160EM8X	Q 819	103-0601-00	2SD601A	R 465	117-4741-10	1/10W 470kΩ	R 829	117-8221-10	1/10W 8.2kΩ	R 899	117-1021-10	1/10W 1kΩ
IC 801	051-1292-00	NJM4565M-D	Q 820	125-0001-93	UN2113	R 466	117-4731-10	1/10W 47kΩ	R 830	117-8221-10	1/10W 8.2kΩ	R 900	117-7501-10	1/10W 75Ω
IC 802	051-5008-00	M62419FP	Q 820	125-0002-04	RN2404	R 467	117-1021-10	1/10W 1kΩ	R 831	117-1531-10	1/10W 15kΩ	R 901	117-1021-10	1/10W 1kΩ
IC 803	051-1292-00	NJM4565M-D	Q 820	125-0014-94	DTA144EK	R 468	117-1021-10	1/10W 1kΩ	R 832	117-1531-10	1/10W 15kΩ	R 902	117-5621-10	1/10W 5.6kΩ
IC 804	051-0792-00	TA78DS05BP	Q 821	102-2412-00	2SC2412	R 469	117-1511-10	1/10W 150Ω	R 833	117-1531-10	1/10W 15kΩ	R 903	111-5611-91	1/4WS 560Ω
IC 805	051-1292-00	NJM4565M-D	Q 821	102-2712-00	2SC2712	R 470	117-1511-10	1/10W 150Ω	R 834	117-1531-10	1/10W 150Ω	R 904	117-7501-10	1/10W 75Ω
IC 806	051-1292-00	NJM4565M-D	Q 821	103-0601-00	2SD601A	R 471	117-5611-10	1/10W 560Ω	R 835	117-1531-10	1/10W 150Ω	R 906	117-7501-10	1/10W 75Ω
IC 807	051-1917-00	BA7603F	Q 822	100-1037-00	2SA1037	R 472	117-5611-10	1/10W 560Ω	R 836	117-1531-10	1/10W 15kΩ	R 907	117-2231-10	1/10W 22kΩ
IC 808	051-1743-00	GP1S51	Q 822	100-1162-00	2SA1162	R 473	117-5611-10	1/10W 560Ω	R 837	117-1531-10	1/10W 15kΩ	R 908	117-2231-10	1/10W 22kΩ
IC 809	051-1743-00	GP1S51	Q 823	102-2412-00	2SC2412	R 474	117-4711-10	1/10W 470Ω	R 838	117-1531-10	1/10W 15kΩ	R 909	111-5611-91	1/4WS 560Ω
IC 810	051-1621-00	MM1031XM	Q 823	102-2712-00	2SC2712	R 475	117-4711-10	1/10W 470Ω	R 839	111-6811-81	1/2WS 680Ω	R 910	117-1031-10	1/10W 10kΩ
IC 811	052-6021-10	μPD78P058FGC-059-3B9	Q 823	103-0601-00	2SD601A	R 476	117-3921-10	1/10W 3.9kΩ	R 840	117-1031-10	1/10W 10kΩ	R 911	117-1041-10	1/10W 100kΩ
IC 812	051-0160-06	SN74LS07NS-L	Q 824	102-2712-00	2SC2712	R 477	117-5611-10	1/10W 560Ω	R 841	111-6811-81	1/2WS 680Ω	R 912	117-7501-10	1/10W 75Ω
IC 812	051-7400-06	HD74LS07FP	Q 824	103-0601-00	2SD601A	R 478	117-5611-10	1/10W 560Ω	R 842	117-5631-10	1/10W 56kΩ	R 913	117-1021-10	1/10W 1kΩ
IC 813	051-0410-05	TC4052BF	Q 825	125-2004-03	RN1403	R 479	117-4711-10	1/10W 470Ω	R 843	117-5631-10	1/10W 56kΩ	R 914	111-1031-91	1/4WS 10kΩ
IC														

REF No.	PART No.	DESCRIPTION
Q 706	125-0002-02	RN2402
R 701	117-1031-10	1/10W 10kΩ
R 702	117-1041-10	1/10W 100kΩ
R 703	117-1041-10	1/10W 100kΩ
R 705	118-5611-10	1/2W 560Ω
R 706	118-5611-10	1/2W 560Ω
R 707	118-5611-10	1/2W 560Ω
R 708	118-6811-10	1/2W 680Ω
R 709	118-6811-10	1/2W 680Ω
R 711	117-1021-10	1/10W 1kΩ
R 712	117-1021-10	1/10W 1kΩ
R 713	117-1021-10	1/10W 1kΩ
S 701	013-6501-01	
S 702	013-6501-01	
S 703	013-6501-01	
S 704	013-6501-01	
S 705	013-6501-01	
S 706	013-6501-01	
S 707	013-6501-01	
S 708	013-6501-01	
S 709	013-6501-01	
S 710	013-6501-01	
S 711	013-6501-01	
S 712	013-6501-01	
S 713	013-6501-02	
S 714	013-9900-00	
S 715	013-6501-01	

### Tuner PWB

REF No.	PART No.	DESCRIPTION
ANT1	092-0612-03	ANTENNA RECEPT
BL 1	941-0203-00	TV TUNER
BL 2	880-2081A	AM/FM TUNER
C 1	178-1022-78	1000pF
C 2	178-1022-78	1000pF
C 3	178-1042-78	0.1 μF
C 4	178-1042-78	0.1 μF
C 5	183-1073-22	10V100 μF
C 6	178-1022-78	1000pF
C 7	178-1042-78	0.1 μF
C 8	183-4753-52	35V4.7 μF
C 9	183-4753-52	35V4.7 μF
C 10	178-1032-78	0.01 μF
C 11	176-8201-00	82pF CH
C 12	183-4753-52	35V4.7 μF
C 13	176-4701-00	47pF CH
C 14	178-1042-78	0.1 μF
C 15	176-1011-00	100pF CH
C 16	183-2253-62	50V2.2 μF
C 17	178-3312-78	330pF
C 18	184-4773-22	10V470 μF
C 19	176-1011-00	100pF CH
C 20	178-1022-78	1000pF
C 21	183-4763-12	6.3V47 μF
C 22	183-4763-32	16V47 μF
C 23	178-5612-78	560pF
C 24	183-4763-32	16V47 μF
C 25	178-5612-78	560pF
C 26	178-1022-78	1000pF
C 27	178-2232-78	0.022 μF
C 28	178-2232-78	0.022 μF
C 29	183-4753-52	35V4.7 μF
C 30	183-4753-52	35V4.7 μF
C 31	178-2242-78	0.22 μF
C 32	176-2201-00	22pF CH
C 33	172-6831-11	0.068 μF
C 34	172-6831-11	0.068 μF
C 35	176-2201-00	22pF CH
C 36	178-1032-78	0.01 μF
C 37	184-4773-22	10V470 μF
C 38	178-1032-78	0.01 μF
C 39	178-1042-78	0.1 μF
C 40	183-1073-22	10V100 μF
C 41	178-1022-78	1000pF
C 42	178-1032-78	0.01 μF
C 43	178-1032-78	0.01 μF
C 44	183-1063-32	16V10 μF
C 45	178-1022-78	1000pF
C 46	178-1022-78	1000pF
C 47	176-1801-00	18pF CH
C 48	176-1501-00	15pF CH
C 49	178-1022-78	1000pF
C 51	178-1042-78	0.1 μF
C 52	178-1022-78	1000pF
C 54	176-1011-00	100pF CH
C 55	178-1022-78	1000pF
C 56	178-1022-78	1000pF
C 57	178-1022-78	1000pF
C 58	178-1032-78	0.01 μF
C 59	178-1032-78	0.01 μF
C 60	178-1032-78	0.01 μF
C 61	178-1032-78	0.01 μF
C 62	178-1032-78	0.01 μF
C 63	042-0527-00	16V47 μF
C 64	178-1032-78	0.01 μF
C 65	178-1032-78	0.01 μF
C 66	178-4732-78	0.047 μF
C 67	178-1032-78	0.01 μF
C 68	178-1042-78	0.1 μF
C 69	176-1011-00	100pF CH
C 70	176-1011-00	100pF CH
C 71	176-1011-00	100pF CH
C 72	176-1011-00	100pF CH
C 73	183-4753-52	35V4.7 μF
C 74	178-1032-78	0.01 μF
C 75	183-1053-62	50V1 μF
C 76	183-4763-12	6.3V47 μF
C 77	183-1053-62	50V1 μF
C 78	178-1222-78	1200pF
C 79	178-1222-78	1200pF
C 80	183-1053-62	50V1 μF
C 81	178-1532-78	0.015 μF
C 82	178-1532-78	0.015 μF
C 83	183-1053-62	50V1 μF
C 84	183-4753-52	35V4.7 μF
C 85	178-2232-78	0.022 μF
C 86	183-1063-32	16V10 μF
C 87	178-2232-78	0.022 μF
C 88	178-2232-78	0.022 μF
C 89	178-1032-78	0.01 μF
C 90	178-2232-78	0.022 μF
C 91	178-2232-78	0.022 μF
C 92	183-4753-52	35V4.7 μF
C 93	172-3341-11	0.33 μF
C 94	178-1032-78	0.01 μF
C 95	183-1053-62	50V1 μF
C 96	183-4763-12	6.3V47 μF
C 97	178-2232-78	0.022 μF
C 98	178-1022-78	1000pF
C 99	042-0176-00	16V10 μF
C 100	173-5621-18	5600pF
C 101	183-1053-62	50V1 μF
C 102	183-1053-62	50V1 μF
C 103	178-5612-78	560pF
C 104	178-3312-78	330pF
C 105	183-1053-62	50V1 μF
C 106	183-4753-52	35V4.7 μF
C 107	184-2263-61	50V22 μF
C 108	183-1063-32	16V10 μF
C 109	183-4753-52	35V4.7 μF
C 110	183-4753-62	50V4.7 μF
C 111	178-1032-78	0.01 μF
C 112	183-4753-62	50V4.7 μF
C 113	178-6812-78	680pF
C 114	184-2283-32	16V2200 μF
C 115	172-1041-11	0.1 μF
C 116	182-1073-32	16V100 μF
C 117	178-1032-78	0.01 μF
C 118	183-1063-32	16V10 μF
C 119	183-1043-62	50V0.1 μF
C 120	178-1032-78	0.01 μF

REF No.	PART No.	DESCRIPTION
C 186	178-4712-78	470pF
C 187	178-4712-78	470pF
C 188	178-4712-78	470pF
C 189	184-4773-22	10V470 μF
C 190	176-1011-00	100pF CH
C 191	178-4712-78	470pF
C 192	178-4712-78	470pF
C 193	042-0527-00	16V47 μF
C 194	178-4712-78	470pF
C 195	176-1011-00	100pF CH
C 196	178-1032-78	0.01 μF
C 197	176-1011-00	100pF CH
C 198	176-1011-00	100pF CH
C 199	178-2232-78	0.022 μF
C 301	183-4753-51	35V4.7 μF
C 302	183-1063-31	16V10 μF
C 303	183-4743-61	50V0.47 μF
C 304	178-1032-78	0.01 μF
C 305	178-1032-78	0.01 μF
C 306	178-1032-78	0.01 μF
C 307	178-1032-78	0.01 μF
C 308	178-1032-78	0.01 μF
C 309	178-1032-78	0.01 μF
C 310	183-4753-51</	

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
Q 6	102-2712-00	2SC2712	Q 50	125-2005-02	UN2212	R 61	117-4711-10	1/10W 470Ω	R 145	117-1031-10	1/10W 10kΩ	R 307	117-3331-10	1/10W 33kΩ
Q 7	102-2412-00	2SC2412	Q 50	125-2020-03	DTC124EK	R 62	117-4711-10	1/10W 470Ω	R 146	117-5611-10	1/10W 560Ω	R 308	117-1521-10	1/10W 1kΩ
Q 7	102-2712-00	2SC2712	Q 51	125-2004-03	RN1403	R 63	117-1021-10	1/10W 1kΩ	R 147	117-1011-10	1/10W 100Ω	R 309	117-1811-10	1/10W 180Ω
Q 8	102-2412-00	2SC2412	Q 51	125-2005-02	UN2212	R 64	117-1021-10	1/10W 1kΩ	R 148	117-5611-10	1/10W 560Ω	R 310	117-4721-10	1/10W 4.7kΩ
Q 8	102-2712-00	2SC2712	Q 51	125-2020-03	DTC124EK	R 65	117-1021-10	1/10W 1kΩ	R 149	117-5611-10	1/10W 560Ω	R 311	117-3321-10	1/10W 3.3kΩ
Q 9	125-0001-02	UN2112	Q 52	100-1162-00	2SA1162	R 66	117-1021-10	1/10W 1kΩ	R 150	117-5611-10	1/10W 560Ω	R 312	117-5621-10	1/10W 5.6kΩ
Q 9	125-0002-03	RN2403	Q 52	101-0709-00	2SB709A-Q.R.S	R 67	117-1021-10	1/10W 1kΩ	R 151	117-1011-10	1/10W 100Ω	R 313	117-8241-10	1/10W 820kΩ
Q 9	125-0014-03	DTA124EK	Q 53	100-1428-00	2SA1428	R 69	117-4711-10	1/10W 470Ω	R 152	117-1521-10	1/10W 1.5kΩ	R 314	117-5611-10	1/10W 560Ω
Q 10	125-2004-02	RN1402	Q 54	102-2412-00	2SC2412	R 70	117-1021-10	1/10W 1kΩ	R 153	117-1011-10	1/10W 100Ω	R 315	117-3311-10	1/10W 330Ω
Q 10	125-2005-01	UN2211	Q 54	102-2712-00	2SC2712	R 71	117-4711-10	1/10W 470Ω	R 154	117-1011-10	1/10W 100Ω	R 316	117-5601-10	1/10W 56Ω
Q 10	125-2020-02	DTC114EK	Q 301	102-2412-00	2SC2412	R 72	117-4711-10	1/10W 470Ω	R 155	117-4711-10	1/10W 470Ω	R 317	117-1021-10	1/10W 1kΩ
Q 11	125-0001-02	UN2112	Q 301	102-2712-00	2SC2712	R 73	117-4711-10	1/10W 470Ω	R 156	117-1031-10	1/10W 10kΩ	R 318	117-2231-10	1/10W 22kΩ
Q 11	125-0002-03	RN2403	Q 302	102-2412-00	2SC2412	R 74	117-1021-10	1/10W 1kΩ	R 157	117-1521-10	1/10W 1.5kΩ	R 319	117-4721-10	1/10W 4.7kΩ
Q 11	125-0014-03	DTA124EK	Q 302	102-2712-00	2SC2712	R 76	117-1021-10	1/10W 1kΩ	R 158	117-1521-10	1/10W 1.5kΩ	R 320	117-4711-10	1/10W 470Ω
Q 12	125-0001-02	UN2112	Q 303	100-1048-00	2SA1048	R 77	117-1021-10	1/10W 1kΩ	R 159	117-1031-10	1/10W 10kΩ	R 321	117-4711-10	1/10W 470Ω
Q 12	125-0002-03	RN2403	Q 304	102-2412-00	2SC2412	R 78	117-1021-10	1/10W 1kΩ	R 160	117-1031-10	1/10W 10kΩ	R 323	117-5611-10	1/10W 560Ω
Q 12	125-0014-03	DTA124EK	Q 304	102-2712-00	2SC2712	R 79	117-1021-10	1/10W 1kΩ	R 161	117-5621-10	1/10W 5.6kΩ	R 326	117-1021-10	1/10W 1kΩ
Q 14	125-2004-02	RN1402	Q 305	102-3326-00	2SC3326	R 80	117-4721-10	1/10W 4.7kΩ	R 162	117-1041-10	1/10W 100kΩ	R 327	117-4711-10	1/10W 4.7kΩ
Q 14	125-2005-01	UN2211	Q 305	103-1306-00	2SD1306	R 81	117-1021-10	1/10W 1kΩ	R 163	117-1031-10	1/10W 10kΩ	R 328	117-1021-10	1/10W 1kΩ
Q 14	125-2020-02	DTC114EK	R 1	117-1031-10	1/10W 10kΩ	R 82	117-1031-10	1/10W 10kΩ	R 164	117-8221-10	1/10W 8.2kΩ	R 329	117-2211-10	1/10W 220Ω
Q 15	100-1428-00	2SA1428	R 2	111-1031-91	1/4WS 10kΩ	R 83	117-1031-10	1/10W 10kΩ	R 165	117-1521-10	1/10W 1.5kΩ	R 330	117-2211-10	1/10W 220Ω
Q 17	125-0001-02	UN2112	R 3	111-2221-91	1/4WS 2.2kΩ	R 84	117-4721-10	1/10W 4.7kΩ	R 166	117-2201-10	1/10W 22Ω	R 331	117-2211-10	1/10W 220Ω
Q 17	125-0002-03	RN2403	R 4	117-1021-10	1/10W 1kΩ	R 85	117-4721-10	1/10W 4.7kΩ	R 168	117-1031-10	1/10W 10kΩ	R 332	117-1021-10	1/10W 1kΩ
Q 17	125-0014-03	DTA124EK	R 5	117-1021-10	1/10W 1kΩ	R 87	117-4721-10	1/10W 4.7kΩ	R 169	117-5621-10	1/10W 5.6kΩ	R 333	117-1031-10	1/10W 10kΩ
Q 18	108-0208-00	2SK208	R 6	117-1021-10	1/10W 1kΩ	R 88	117-1031-10	1/10W 10kΩ	R 170	111-1221-91	1/4WS 1.2kΩ	R 334	117-1031-10	1/10W 10kΩ
Q 19	102-2412-00	2SC2412	R 7	117-1031-10	1/10W 10kΩ	R 89	117-1021-10	1/10W 1kΩ	R 171	111-3311-91	1/4WS 330Ω	R 335	117-1031-10	1/10W 10kΩ
Q 19	102-2712-00	2SC2712	R 8	117-1021-10	1/10W 1kΩ	R 90	117-1011-10	1/10W 100Ω	R 172	111-1011-91	1/4WS 100Ω	R 336	117-1531-10	1/10W 15kΩ
Q 20	108-0669-00	2SK669	R 9	117-3311-10	1/10W 330Ω	R 91	117-4711-10	1/10W 470Ω	R 173	111-1031-91	1/4WS 10kΩ	R 337	117-1821-10	1/10W 1.8kΩ
Q 21	102-2412-00	2SC2412	R 10	117-3311-10	1/10W 330Ω	R 92	117-4711-10	1/10W 470Ω	R 175	117-2221-10	1/10W 2.2kΩ	R 340	117-4741-10	1/10W 470kΩ
Q 21	102-2712-00	2SC2712	R 11	117-2231-10	1/10W 22kΩ	R 93	117-1021-10	1/10W 1kΩ	R 176	117-1831-10	1/10W 18kΩ	R 341	117-1031-10	1/10W 10kΩ
Q 23	100-1428-00	2SA1428	R 12	117-2231-10	1/10W 22kΩ	R 94	117-4711-10	1/10W 470Ω	R 177	117-1031-10	1/10W 10kΩ	R 342	117-4731-10	1/10W 47kΩ
Q 24	125-2004-03	RN1403	R 13	117-1011-10	1/10W 100Ω	R 95	117-4711-10	1/10W 470Ω	R 178	117-1031-10	1/10W 10kΩ	R 343	117-4731-10	1/10W 47kΩ
Q 24	125-2005-02	UN2212	R 14	117-1031-10	1/10W 10kΩ	R 96	117-4711-10	1/10W 470Ω	R 179	117-1021-10	1/10W 1kΩ	R 344	117-4731-10	1/10W 47kΩ
Q 24	125-2020-03	DTC124EK	R 15	117-1031-10	1/10W 10kΩ	R 98	117-1231-10	1/10W 12kΩ	R 180	117-1521-10	1/10W 1.5kΩ	R 345	117-2221-10	1/10W 2.2kΩ
Q 25	125-2004-03	RN1403	R 16	111-2221-91	1/4WS 2.2kΩ	R 99	117-3321-10	1/10W 3.3kΩ	R 181	117-7521-10	1/10W 7.5kΩ	R 346	117-1021-10	1/10W 1kΩ
Q 25	125-2005-02	UN2212	R 17	117-4711-10	1/10W 470Ω	R 100	117-2221-10	1/10W 2.2kΩ	R 182	117-3301-10	1/10W 33Ω	R 347	117-2221-10	1/10W 2.2kΩ
Q 25	125-2020-03	DTC124EK	R 18	117-1031-10	1/10W 10kΩ	R 101	117-2231-10	1/10W 22kΩ	R 183	117-3311-10	1/10W 330Ω	R 348	117-2221-10	1/10W 2.2kΩ
Q 26	125-2004-03	RN1403	R 19	117-3931-10	1/10W 39kΩ	R 102	117-1031-10	1/10W 10kΩ</						

## ■ PRINTED WIRING BOARD

Tuner amp P.W.B section

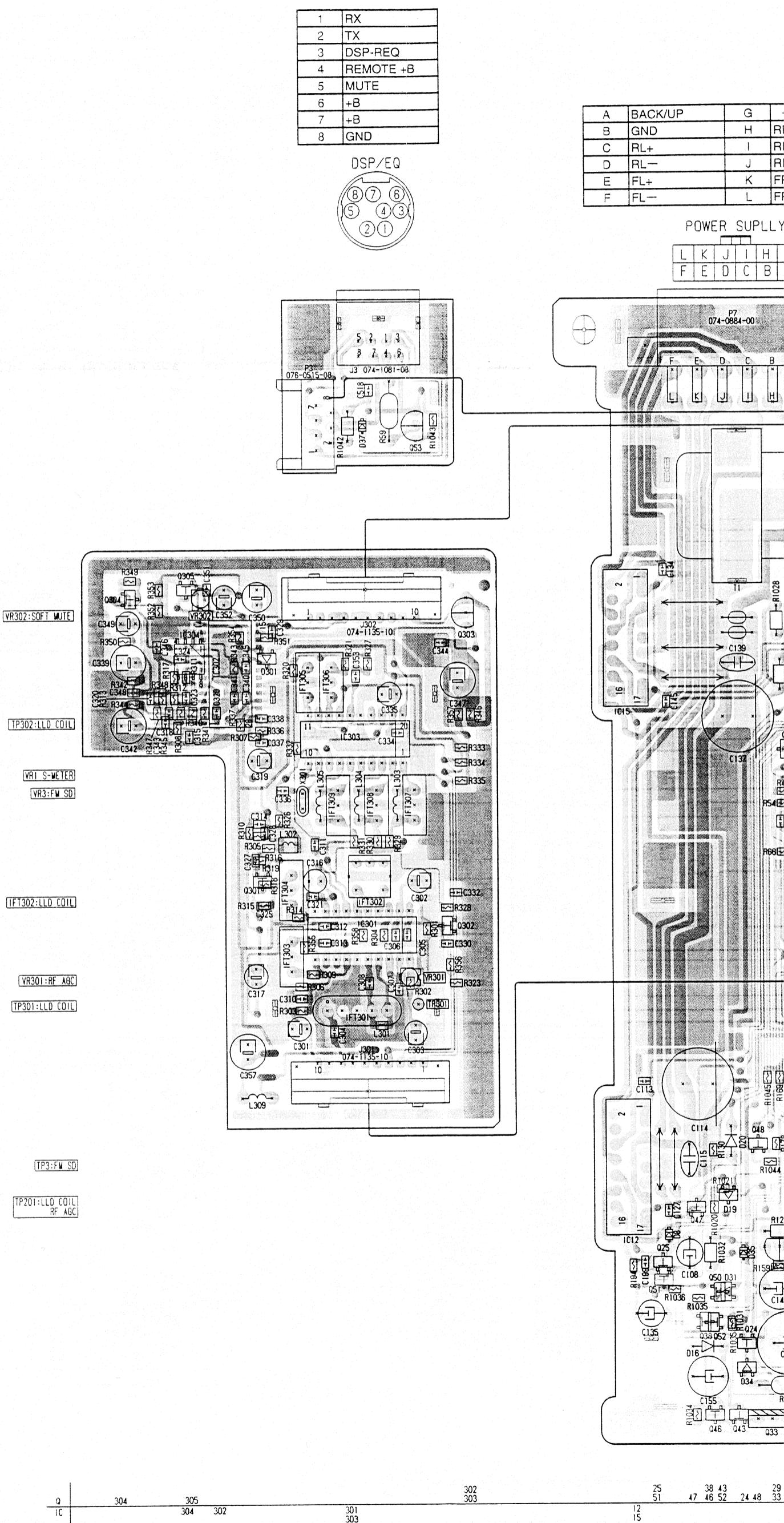
1	RX
2	TX
3	DSP-REQ
4	REMOTE +B
5	MUTE
6	+B
7	+B
8	GND



A	BACK/UP	G	-
B	GND	H	RF
C	RL+	I	RF
D	RL-	J	RF
E	FL+	K	FF
F	FL-	L	FF

POWER SUPPLY

L	K	J	I	H
F	E	D	C	B



EMOTE  
R+  
R-  
R+  
R-  
  
G  
A

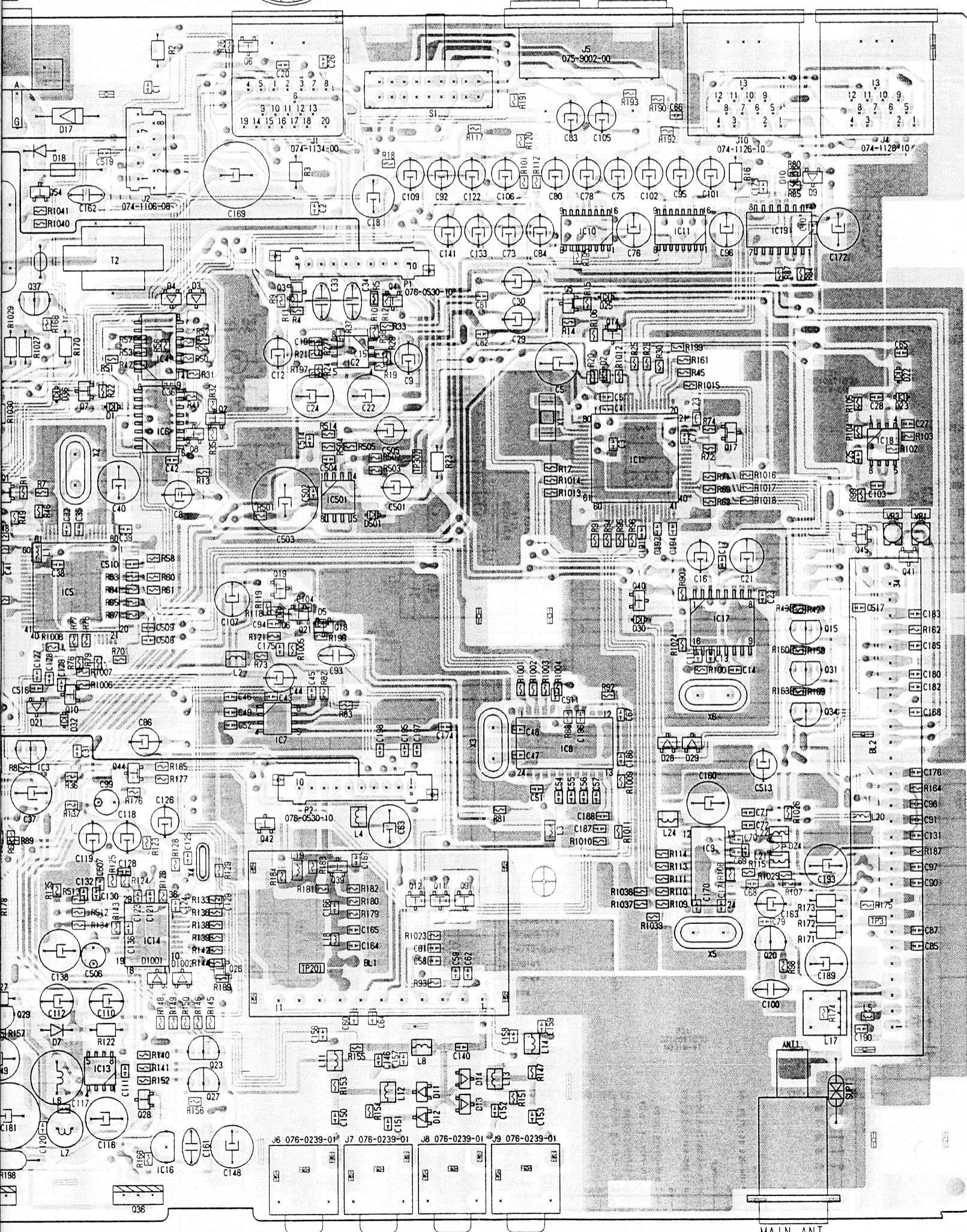
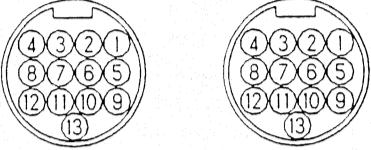
1	BACK/UP	11	MUTE
2		12	VIDEO
3	RESET	13	VIDEO GND
4	RX	14	REAR Lch
5	TX	15	REAR Rch
6	TU-RQ	16	AV-ON
7	DSP-REQ	17	TUNER-Lch
8	TUN/DSP	18	TUNER-Rch
9	FRONT Lch	19	FR GND
10	FRONT Rch	20	S GND

SOURCE UNIT



1	SI/SO
2	SCK
3	
4	SRQ
5	REMOTE POWER
6	S-GND
7	Lch
8	Rch
9	
10	BACK UP
11	ACC CONT
12	GND
13	

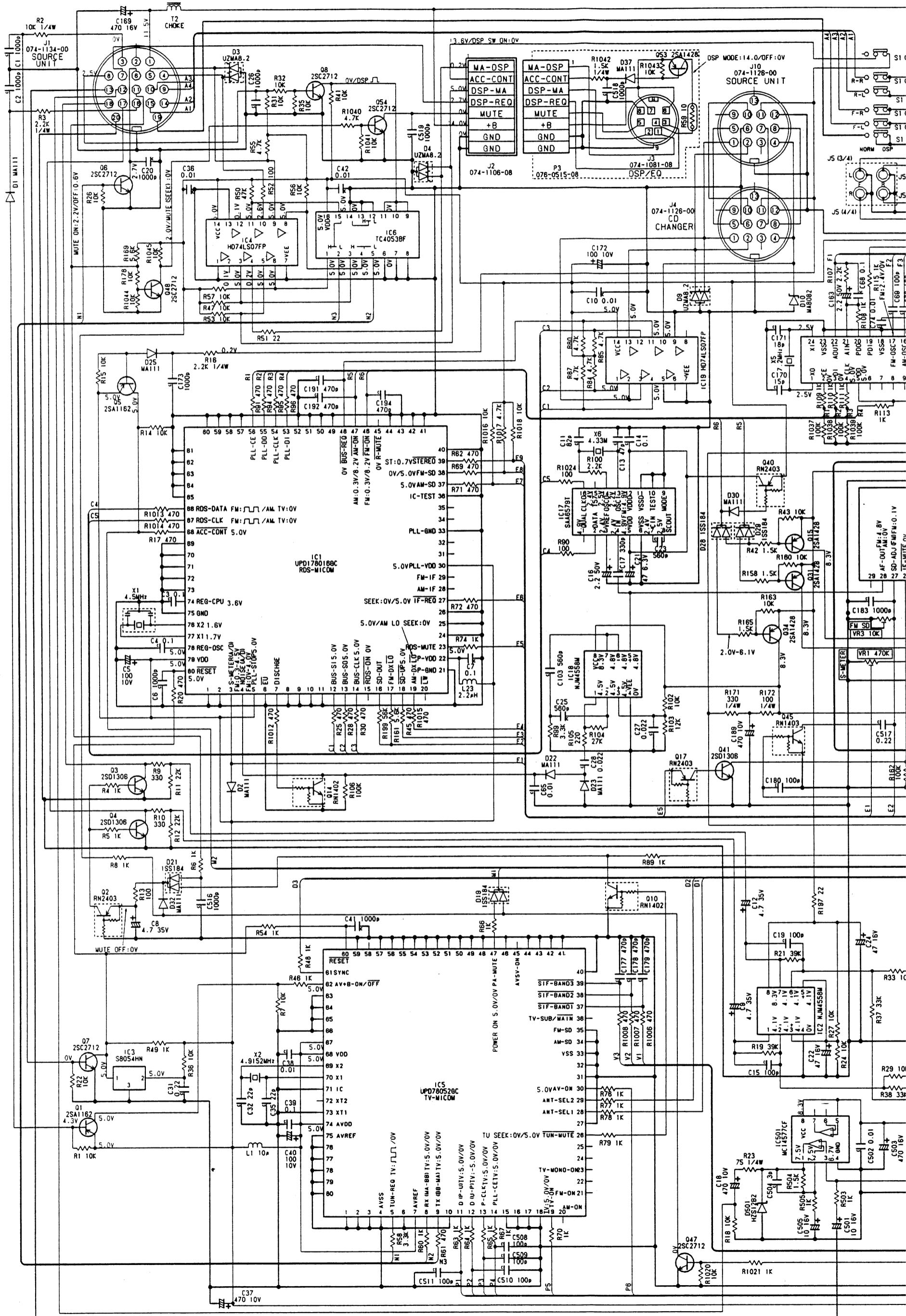
SOURCE UNIT CD CHANGER

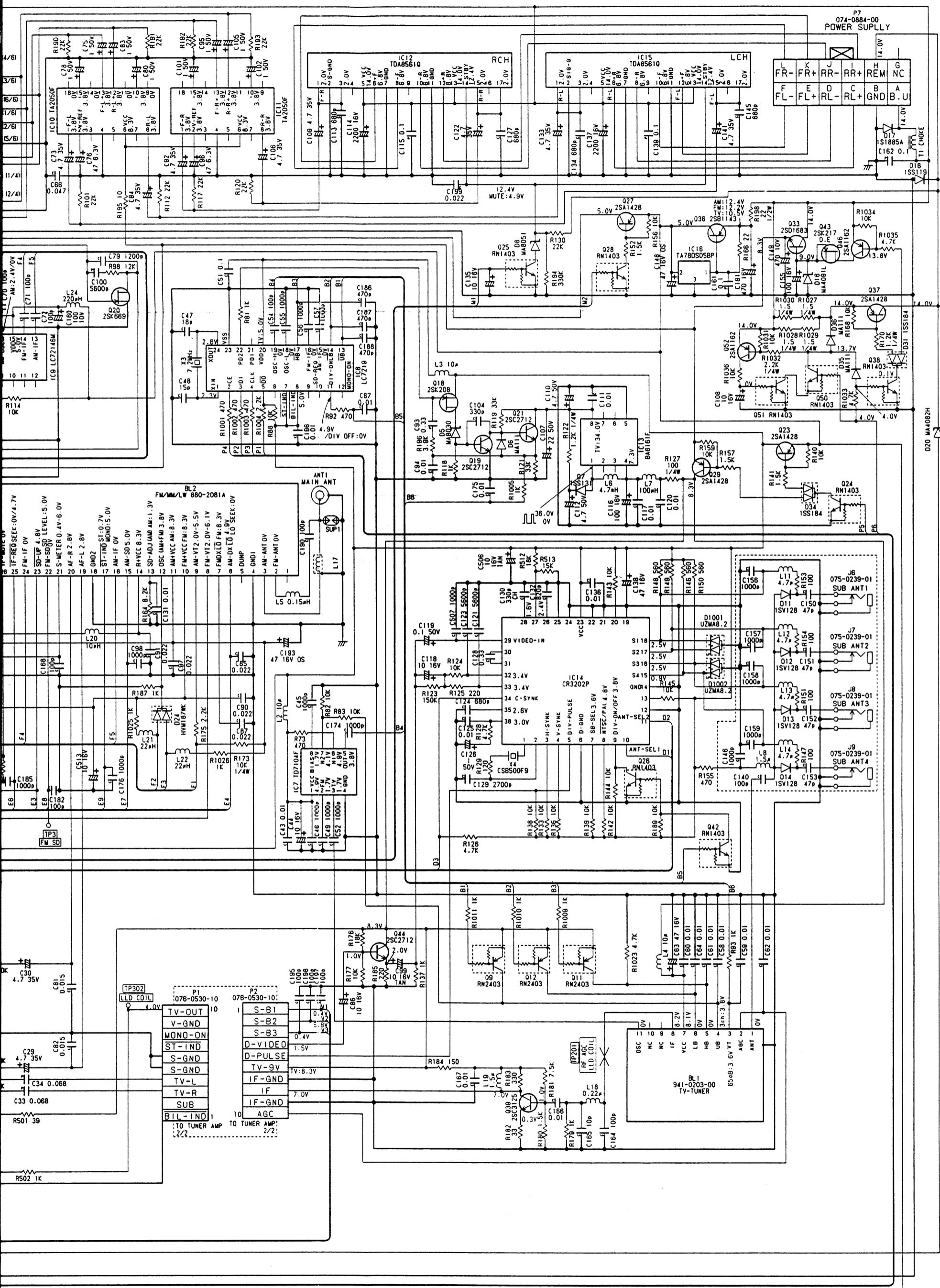


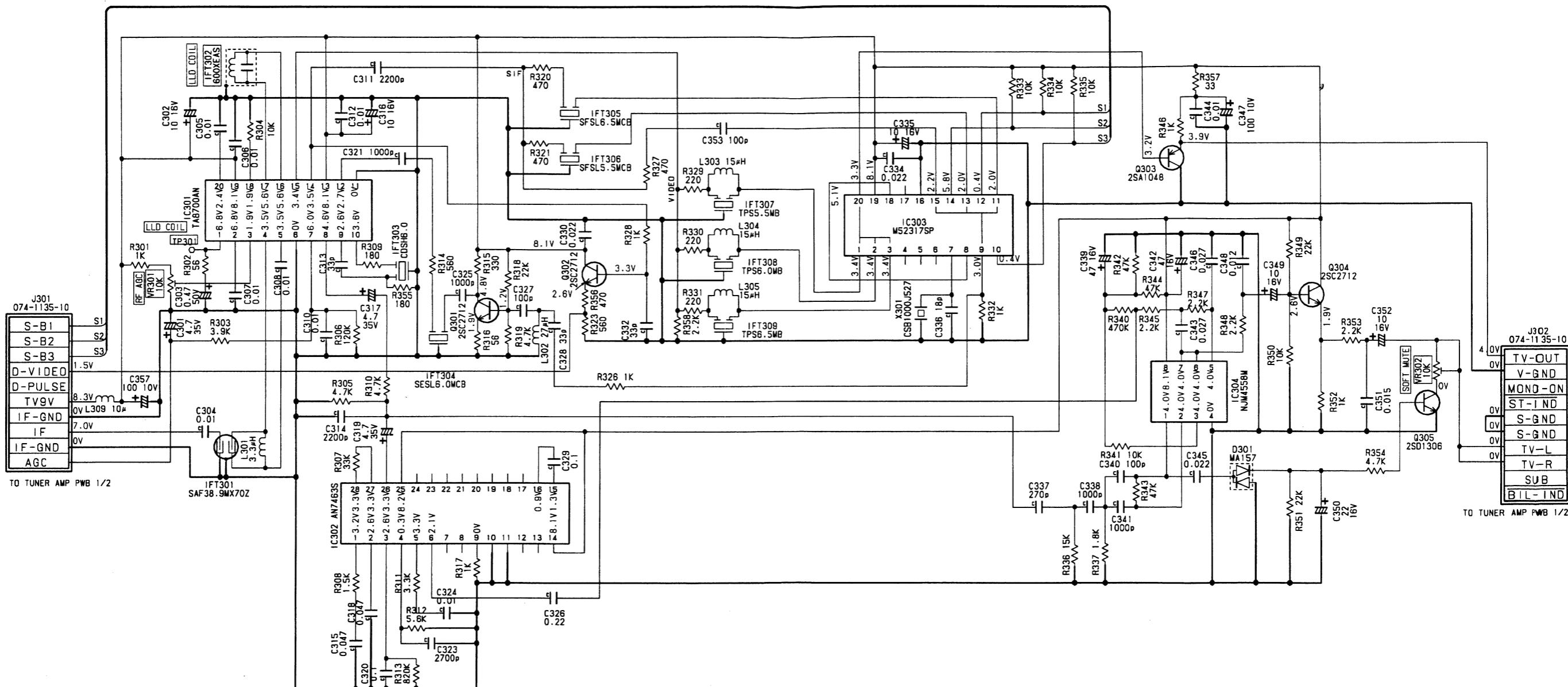
1	37	54	7	28	36	2	23	27	6	42	19	18	39	2	4	12	11	9	5	10	14	1	11	9	20	19	15	31	34	41
3	5	10	13	44	44	4	14	16	7	7	21	39	501	2	12	11	9	10	11	14	10	11	9	17	19	18	45	18	41	

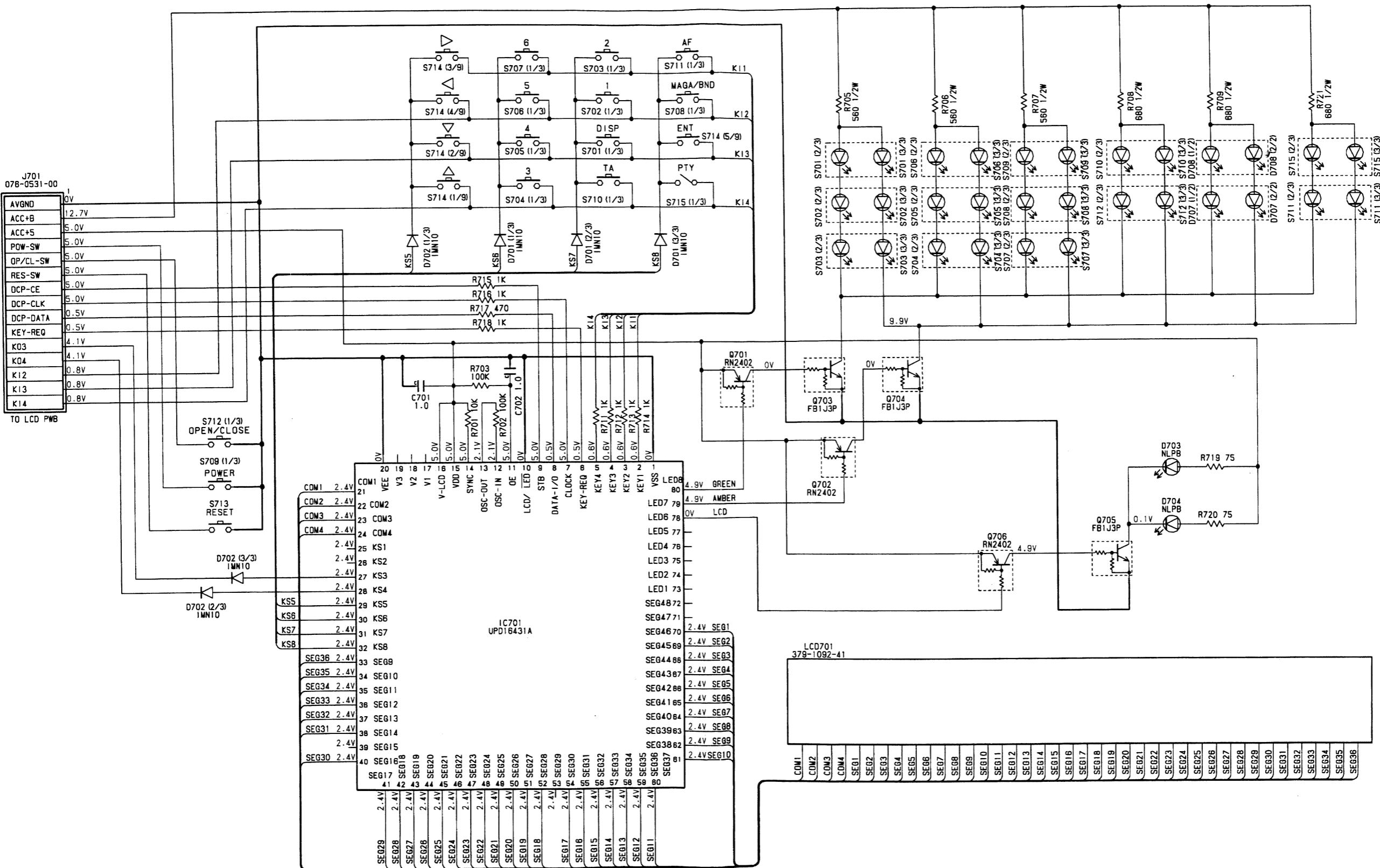
## ■CIRCUIT DIAGRAM

Tuner amp P.W.B section 1 / 2

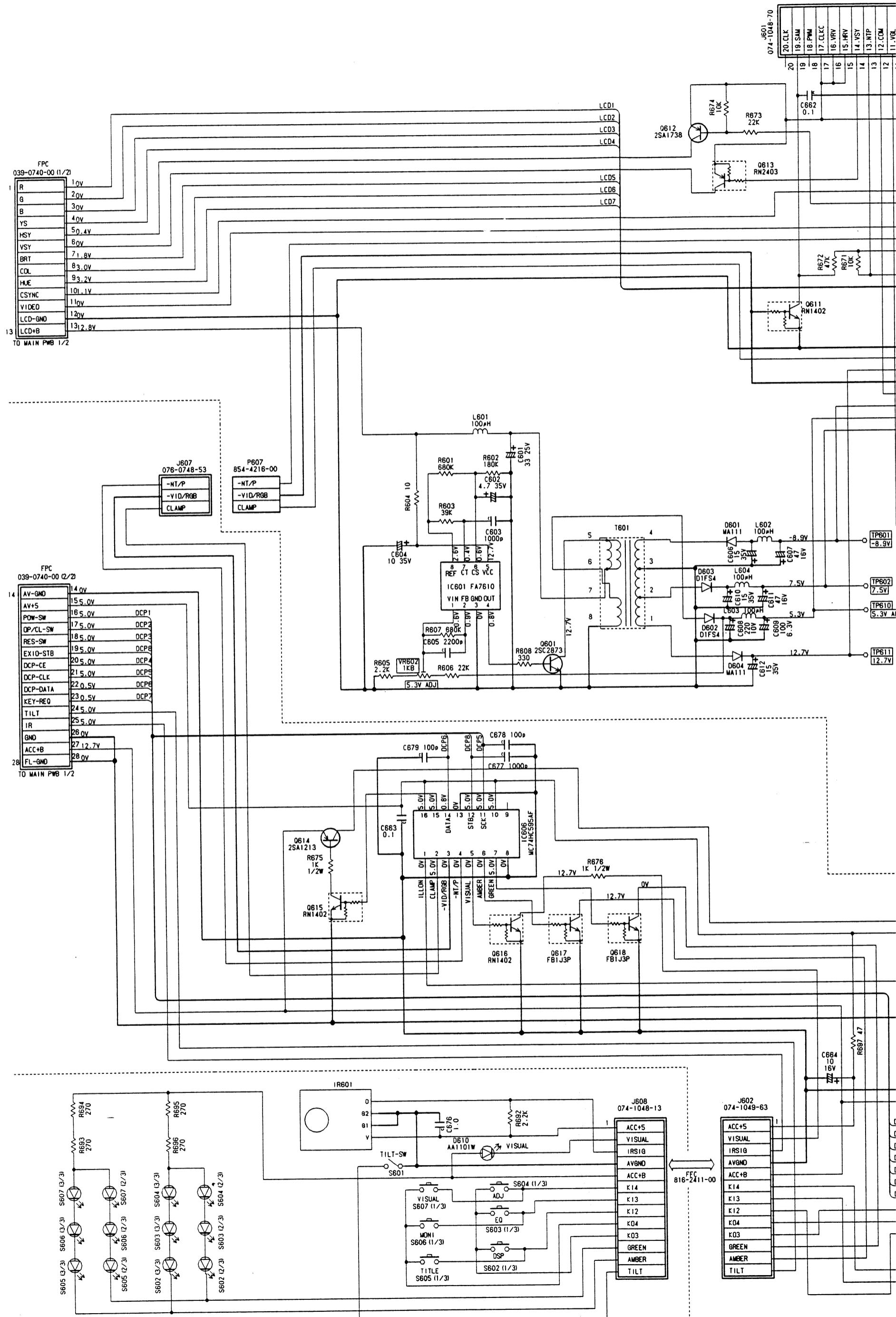


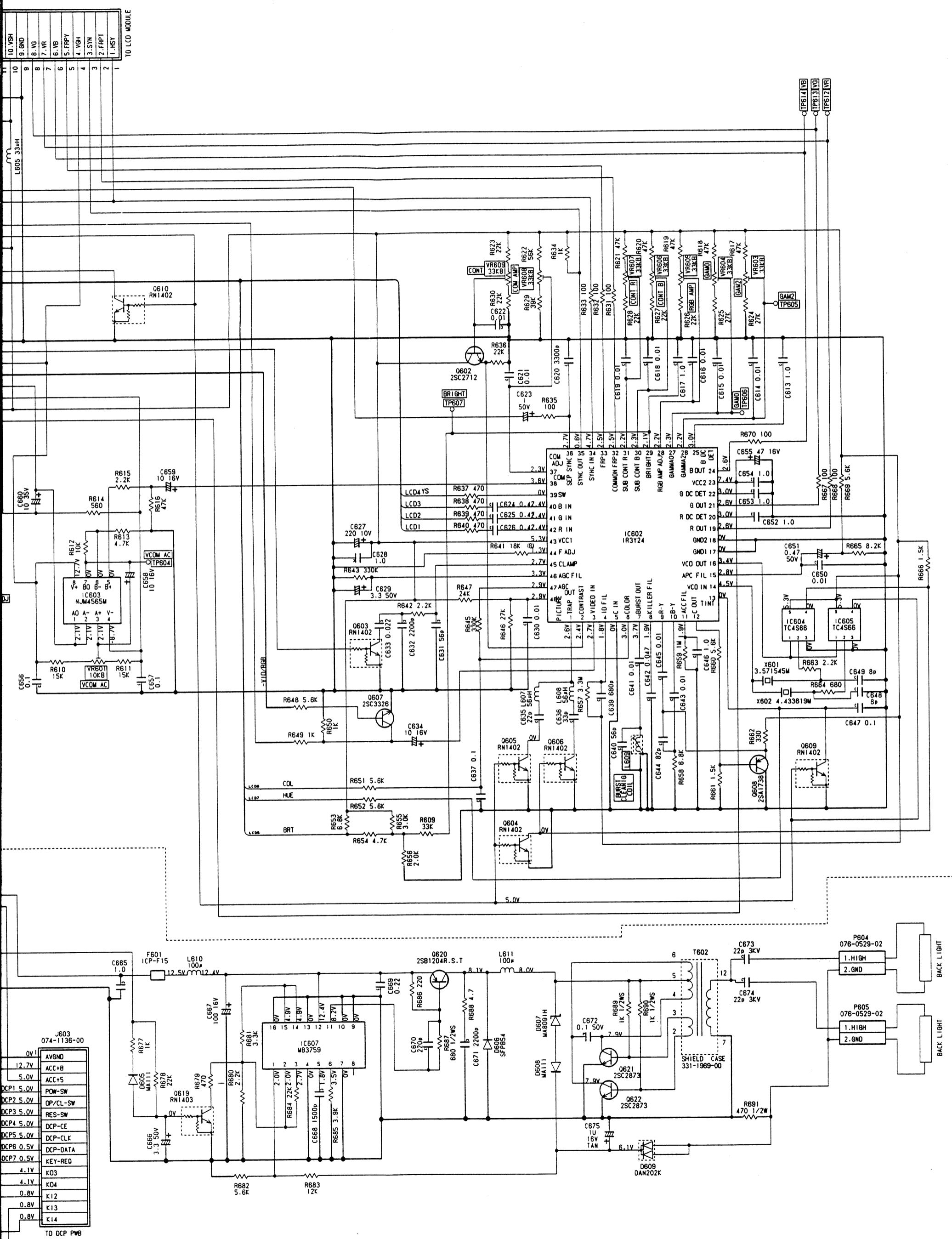




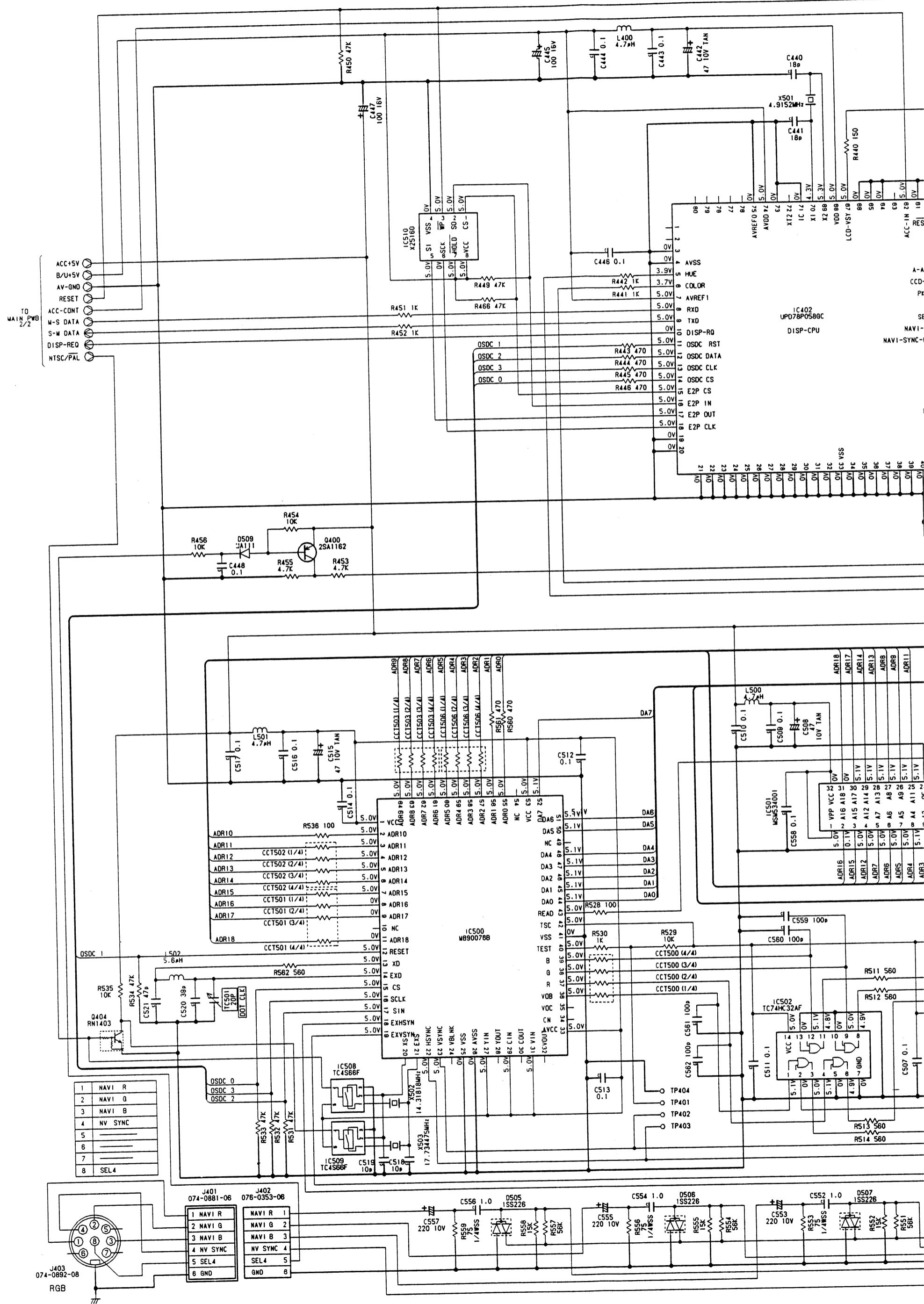


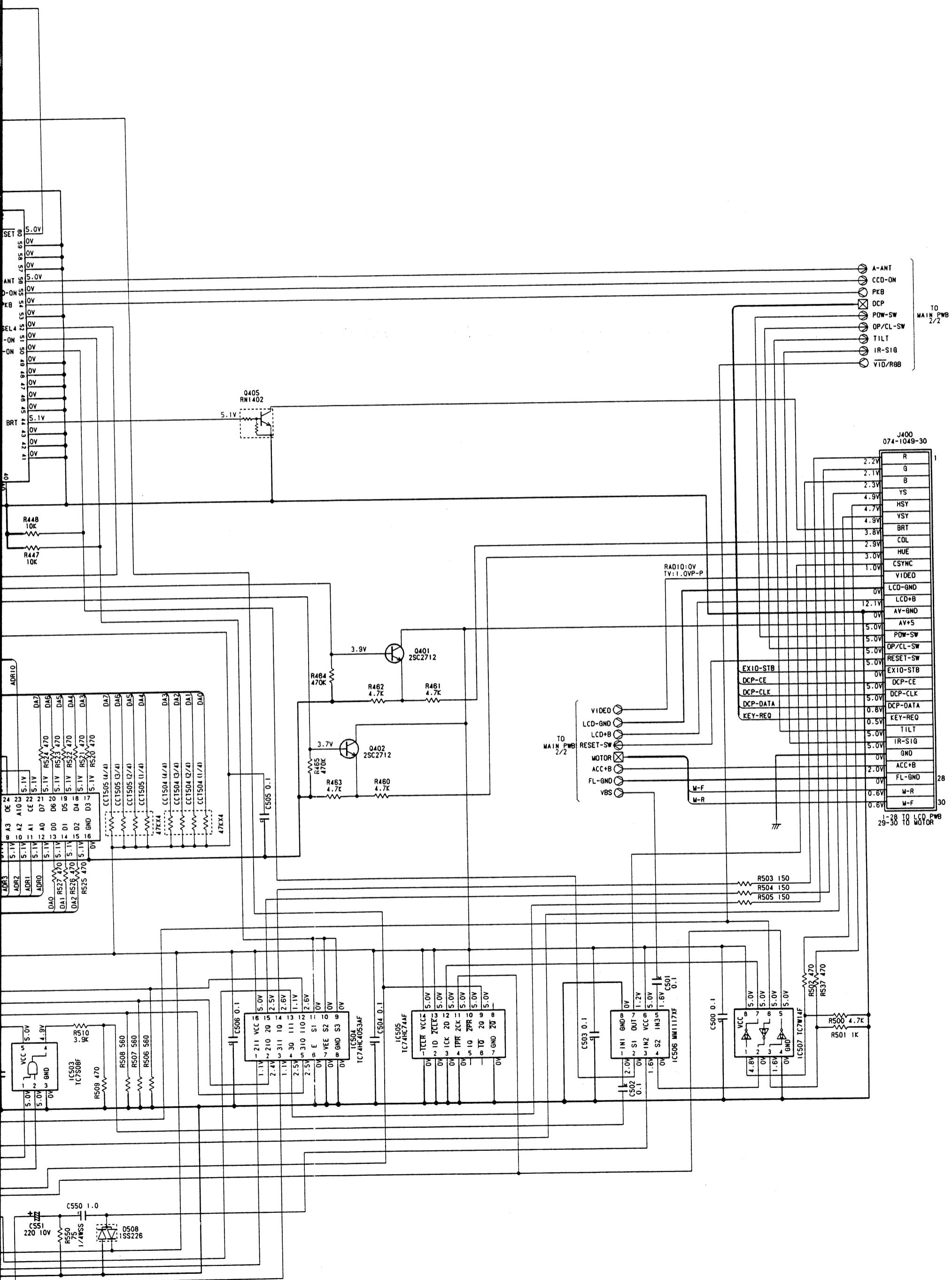
LCD P.W.B section



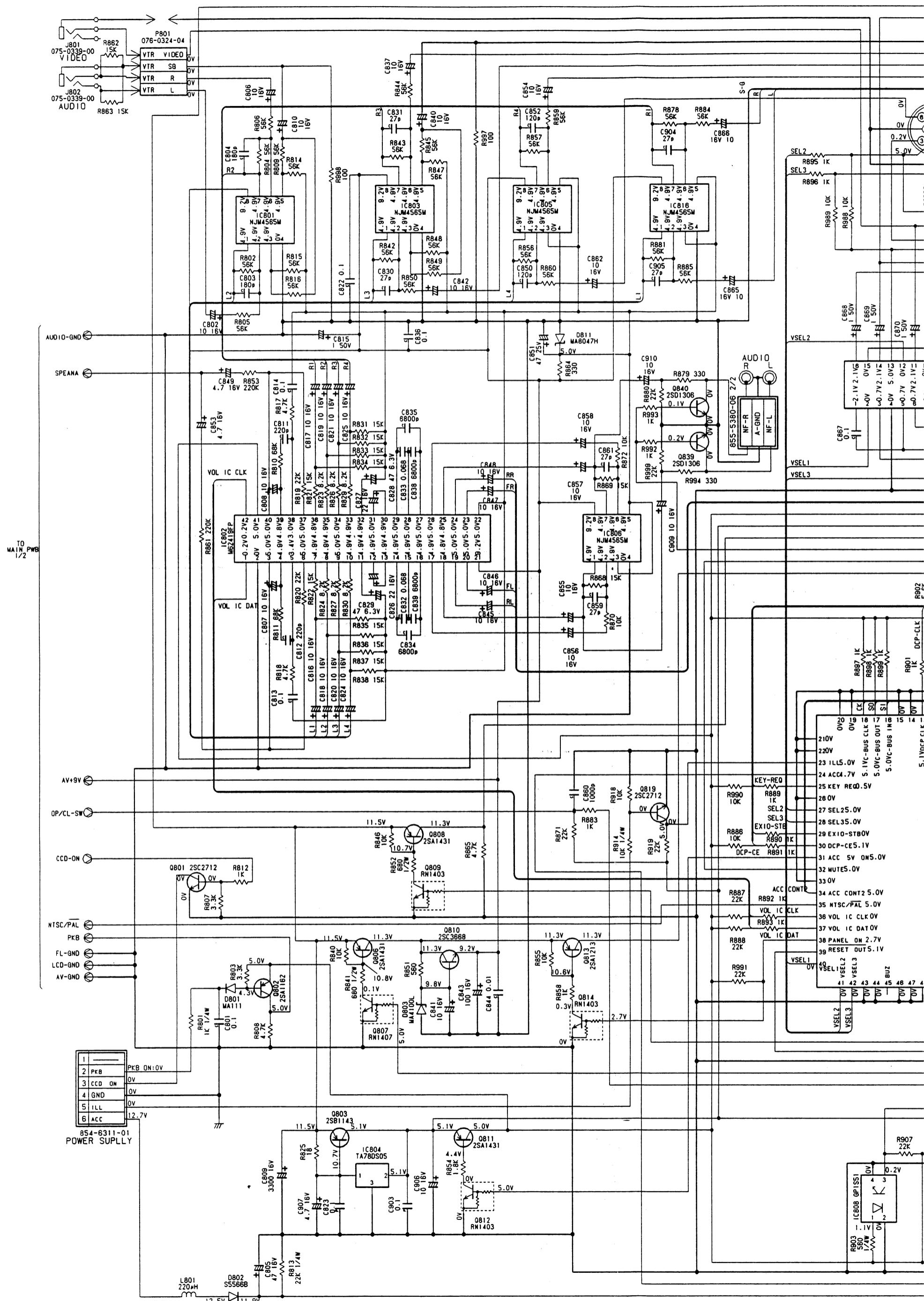


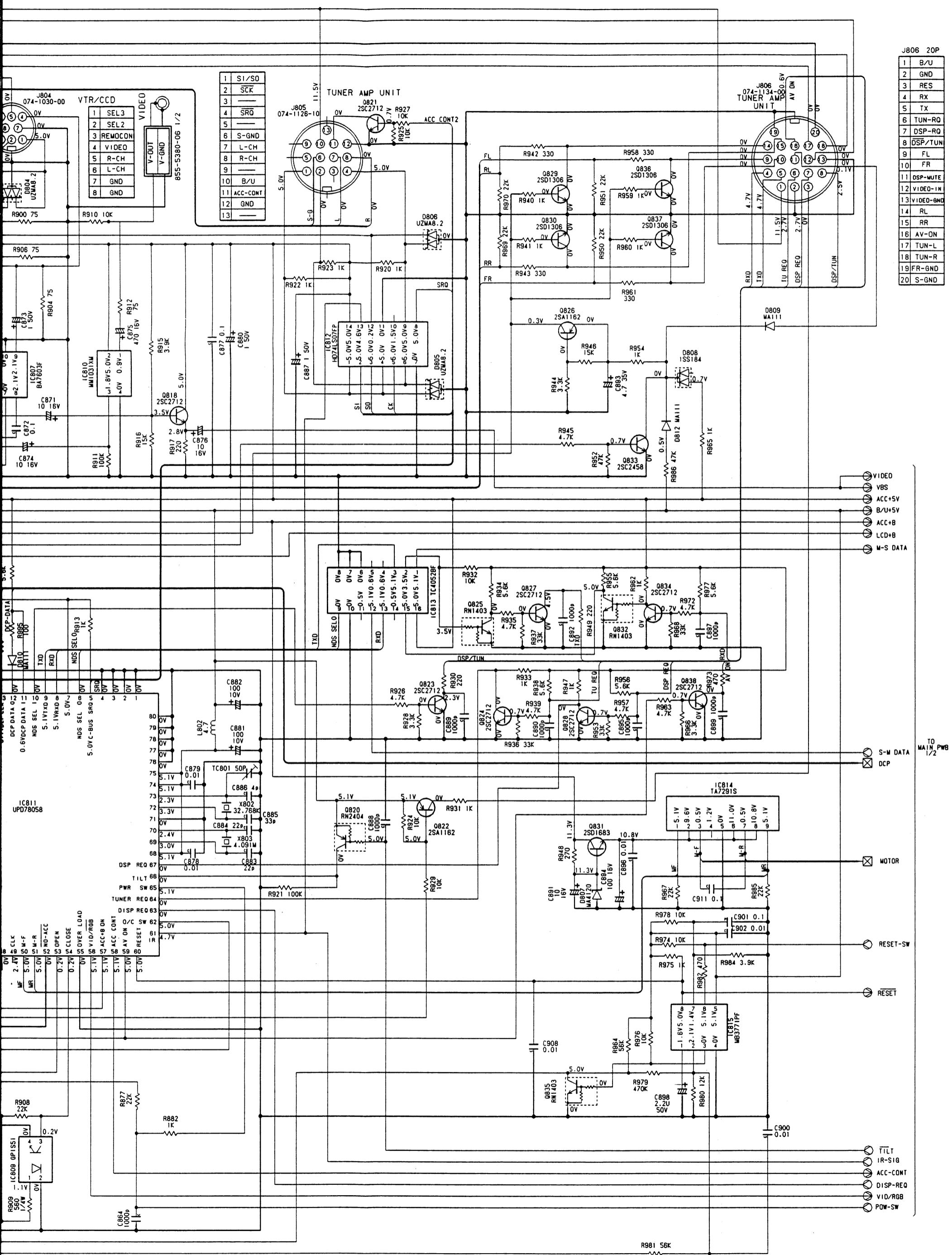
Main P.W.B section 1 / 2





Main P.W.B section 2 / 2

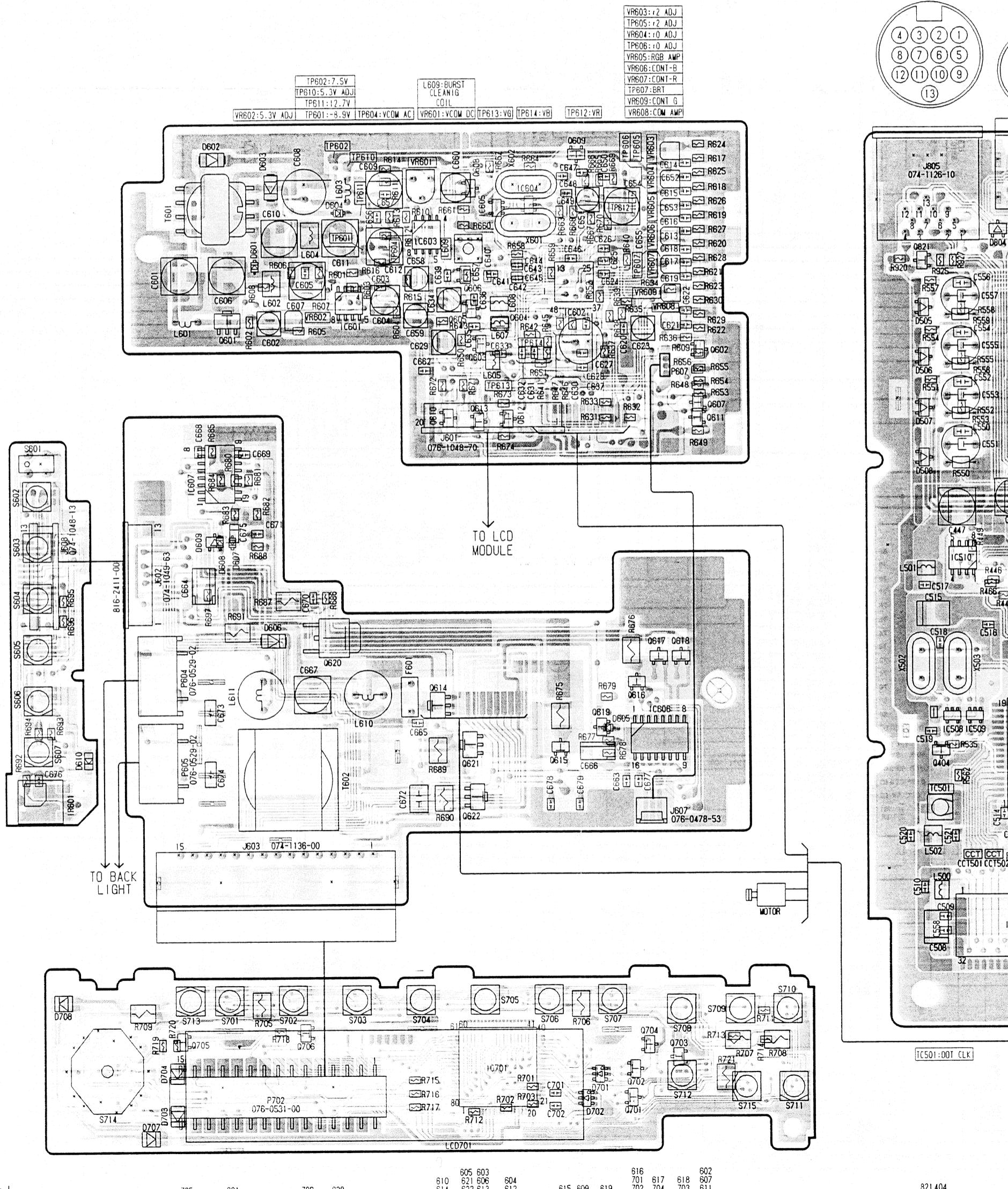
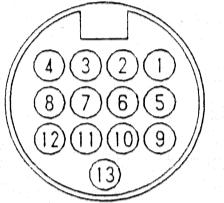




## Main P.W.B / LCD P.W.B / DCP P.W.B section

1	SI/SO
2	SCK
3	_____
4	SRQ
5	REMOTE POWER
6	S-GND
7	Lch
8	Rch
9	_____
10	BACK UP
11	ACC CONT
12	GND
13	_____

## TUNER AMP UNIT



1	SEL3
2	SEL2
3	REMOTE
4	VIDEO IN
5	Rch-IN
6	Lch-IN
7	GND
8	A-GND
CASE	GND

1	—	—
2	PKB	ORG
3	CCD ON	WHT/RED
4	GND	BLK
5	ILLUMI	ORG/WHT
6	ACC	RED

1	BACK/UP	11	MUTE
2	—	12	VIDEO
3	RESET	13	VIDEO GND
4	RX	14	REAR Lch
5	TX	15	REAR Rch
6	TU-RQ	16	AV-ON
7	DSP-REQ	17	TUNER-Lch
8	TUN/DSP	18	TUNER-Rch
9	FRONT Lch	19	FR GND
10	FRONT Rch	20	S GND

1	NAVI R
2	NAVI G
3	NAVI B
4	NAVI-SYNC
5	—
6	—
7	—
8	SEL 4
CASE	GND

