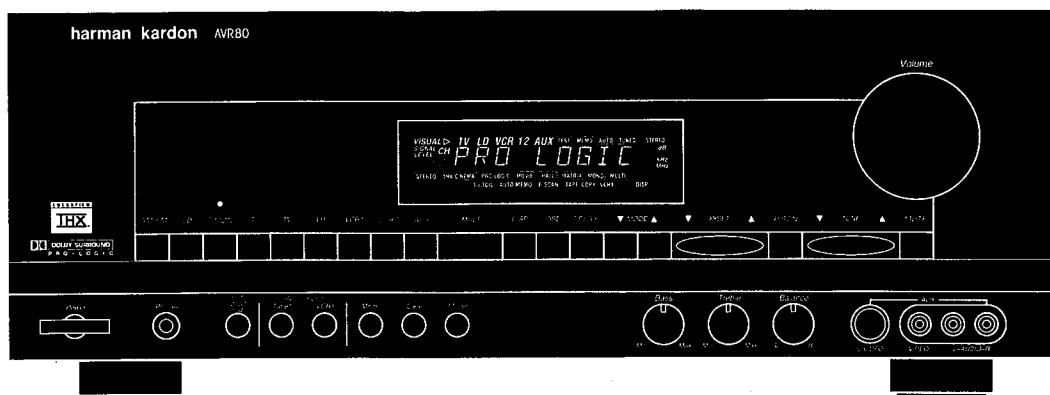


# The Harman Kardon Model AVR80/AVR80MK II AUDIO AND VIDEO RECEIVER

Manual A

AVR80

## Technical Manual



The following marks found in the parts list of this manual identify the models as follows.

- (BK)** AVR80 :North America area model Black version  
(with Tact type mains switch)
- (IB)** AVR80 :International model Black version  
(with Tact type mains switch)
- (BK)** AVR80MK II :North America area model Black version  
(with Manual Operated Mechanical type mains switch)
- (IB)** AVR80[MOMS] :International model Black version  
(with Manual Operated Mechanical type mains switch)

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**harman/kardon**

Parts and Service Office  
80 Crossways Park West, Woodbury, N.Y. 11797  
1112-AVR80 1200 Printed in Japan

**SPECIFICATIONS**

**FRONT AMP SECTION**

	Nominal	Limit
Continuous Power Output (STEREO MODE), Input: CD	≥110 W	≥100 W
THD: 0.09%, 8 ohms		
Both Channel Driven (20 Hz - 20 kHz) (SURROUND MODE)	≥85 W	≥75 W
THD: 0.3%, 8 ohms, 1 kHz		
THD at 100 W, 8 ohms, Input: CD		
20 Hz	≤0.03%	≤0.09%
1 kHz	≤0.01%	≤0.09%
20 kHz	≤0.05%	≤0.09%
IM Distortion at 100 W, 8 ohms, Vol: Max.	≤0.03%	≤0.09%
Input Sensitivity for Rated Power Output (100 W)		
CD/TAPE1/TAPE2/TV/LD	250 mV	220-290 mV
VCR1/VCR2/AUX	250 mV	220-290 mV
S/N Ratio Input Shorted at 1kHz 1W Output (WTD IHF-A)		
CD	≥82 dB	≥78 dB
Tone Control		
Bass: 100 Hz	+10 dB	+10 ±2.5 dB
	-10 dB	- 10 ±2.5 dB
Treble: 10kHz	+10 dB	+10 ±2.5 dB
	-10 dB	- 10 ±2.5 dB
Frequency Response at -3dB		
Mode: Stereo, Ref: 1 kHz, Sub Woofer: ON		
80 Hz - 70 kHz		90 Hz - 50 kHz
Mode: Stereo, Ref: 1 kHz, Sub Woofer: OFF		
10 Hz - 70kHz		15 Hz - 50 kHz
Channel Crosstalk Input Shorted by 1 kohms		
100Hz	≥55 dB	≥50 dB
1 kHz	≥45 dB	≥40 dB
10 kHz	≥35 dB	≥30 dB

**CENTER AMP SECTION**

	Nominal	Limit
RMS Output Power		
THD (0.3%, 8 ohms, 1 kHz)		
Only Center Channel Driven	≥110 W	≥100 W
S/N Ratio (Input Level : 141 mV)		
Input Shorted, IHF-A WTD	≥72 dB	≥68 dB
Frequency Response at-3 dB		
8 ohms, Dolby Pro-Logic	15 Hz - 22 kHz	30 Hz - 20 kHz

**REAR AMP SECTION**

	Nominal	Limit
RMS Output Power		
THD (0.7%, 8 ohms, 1 kHz)		
Only Rear Channel Driven	≥85 W	≥75 W
S/N Ratio (Input Shorted, IHF-A WTD)		
Delay : 20 ms, Input Level : 141 mV	≥72 dB	≥68 dB
Frequency Response at-3 dB		
8 ohms, Dolby Pro-Logic	15 Hz - 7 kHz	30 Hz - 6.5 kHz

**SUB WOOFER SECTION**

Line level at Pre out	Approx. 150 mVrms
Surround mode : Dolby Pro-Logic	
Center speaker mode : Large	
Input signal : L ch (only) 200mV	
Master volume : 0 dB	
Low pass crossover frequency	80 Hz cut off
Slope (Low Pass filter)	24 dB / octave

**VIDEO AMP SECTION**

	Nominal	Limit
Input Sensitivity/Impedance		
LD, TV, VCR1, VCR2, AUX	1 V <sub>P-P</sub> /75 Ω	±1 dB
Output Level/Impedance		
VCR1, VCR2, Monitor	1 V <sub>P-P</sub> /75 Ω	±1 dB
Frequency Response at-3 dB	DC-8 MHz	DC-6MHz

**FM SECTION**

	Nominal	Limit
Tuning Cover Range 50 kHz Step	87.50 - 108.00 MHz	
Mono Usable Sensitivity (75 ohms Input, 98 MHz)	≤13.5 dbf	≤19.2 dbf
Image Rejection (at 98 MHz)		
USA/Canada	>50 dB	≥40 dB
Europe	≥70 dB	≥60 dB
IF Rejection (at 98 MHz)	≥70 dB	≥65 dB
50 dB Quieting Sensitivity (at 98 Mhz, 100% MOD.)		
IHF Band Pass Filter		
Stereo	≤39.2 dbf	≤43.3 dbf
Distortion (1 kHz, 100% MOD. at 98 MHz, 65dbf Input)		
IHF Band Pass Filter		
Mono	≤0.2%	≤0.5%
S/N Ratio (500 μV Input, 100% MOD. at 98 MHz)		
IHF Band Pass Filter		
Stereo	≥65 dB	≥60 dB
Frequency Response (30 Hz - 15 kHz)		
USA/Canada De-Emphasis: 75μS	+0.5 dB	+1.0 dB
Europe De-Emphasis: 50μS	-2.0 dB	-4.0 dB
AM Suppression at 98 MHz		
	≥55 dB	≥45 dB
Muting Threshold (at 98 MHz)	27.2 dbf	23.3-32.0dbf
Overload Break-up at 98 MHz	71 dbf	65 dbf
Capture Ratio at 65 dbf	≤1.5 dB	≤2.5 dB
Stereo Separation (at 98 MHz, 100% MOD., 500 μV Input)		
IHF Band Pass Filter		
1 kHz	≥40 dB	≥30 dB
Tape out Level (at 98 MHz)	800 mV	600-1300 mV

**AM SECTION**

	Nominal	Limit
Tuning Cover Range (MW)		
USA/Canada : 10 kHz Step	520 - 1710 kHz	
Other : 9 kHz Step	531 - 1602 kHz	
Tuning Cover Range (LW)		
1 kHz Step	152 kHz - 282 kHz	
Usable Sensitivity		
MW at 999/1000 kHz	≤500 μV/m	≤800 μV/m
LW at 207 kHz	≤1500 μV/m	≤2500 μV/m
Image Rejection (at 999 kHz)	≥40 dB	≥35 dB
IF Rejection (at 999/1000 kHz)	≥60 dB	≥50 dB
Spurious Rejection (at 999/1000 kHz)		
	≥65 dB	≥55 dB
AGC Figure of Merit (From 100 mV/m at 999/1000 kHz)		
	≥55 dB	≥48 dB
Distortion (999/1000 Hz, 30% MOD. 50 mV/m Input)		
	≤1.0%	≤2.0%
Frequency Response (999/1000 kHz)		
at -3 dB	100 Hz - 2.2 kHz	150 Hz - 1.8 kHz
Selectivity (at 999/1000 Hz)		
9 kHz/10 kHz	≥30 dB	≥20 dB
18 kHz/20kHz	≥70 dB	≥60 dB
S/N Ratio (999/1000 kHz, With Antenna Input 50 mV/m)		
(Europe : Using 15 kHz L.P.F.)	≥50 dB	≥45 dB
Overload Break-up at 999/1000 kHz (THD 10%)		
	≥1000 mV/m	≥500 mV/m
TAPE Output Level at 999/1000 kHz (5 mV/m Input)	240 mV	150-340 mV

**GENERAL**

	Nominal	Limit
Power Consumption		
At Rated Power All Channel Driven	400 W	300 - 500W
Idling at Minimum Volume Control	55 W	45 - 65 W
Power Supplies :		
USA/Canada	AC 120 V, 60 Hz	
Europe	AC 230 V, 50 Hz	
Dimensions (W x H x D) :		
inches	17 <sup>1</sup> / <sub>16</sub> x 6 <sup>3</sup> / <sub>32</sub> x 18 <sup>1</sup> / <sub>16</sub>	
mm	444 x 160 x 459	
Weight (lbs/kgs)	32.0/14.4	

These specifications are service target specs.  
 Specifications and components are subject to change without notice.  
 Overall performance will be maintained or improved.

**ELECTROSTATICALLY SENSITIVE (ES) DEVICES**



Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charge sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material.)
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

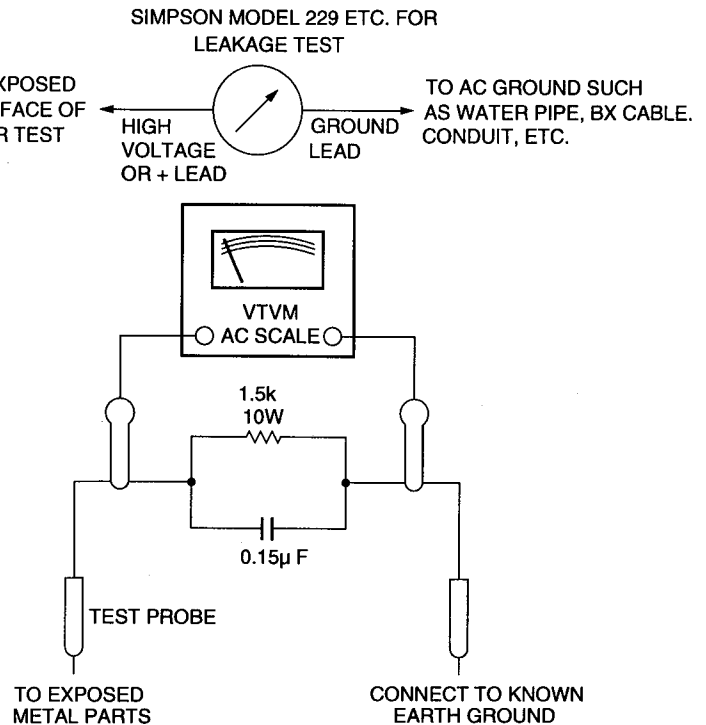
**PRODUCT SAFETY NOTICE**

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol  in the parts list are of special significance to safety. When replacing a component identified with , use only the replacement parts designated, or parts with the same ratings or resistance, wattage, or voltage that are designated in the parts list in this manual. Leakage - current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

## LEAKAGE TEST (FOR SERVICE ENGINEERS IN THE U.S.A.)

Before returning the unit to the user, perform the following safety checks:

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the unit.
2. Be sure that any protective devices such as nonmetallic control knobs, insulating fishpapers, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators, etc. Which were removed for servicing are properly reinstalled.
3. Be sure that no shock hazard exists; check for leakage current using Simpson Model 229 Leakage Tester, standard equipment item No. 21641, RCA Model WT540A or use alternate method as follows: Plug the power cord directly into a 120-volt AC receptacle (do not use an Isolation Transformer for this test). Using two clip leads, connect a 1500 Ohm, 10-watt resistor paralleled by a  $0.15\mu\text{F}$  capacitor, in series with all exposed metal cabinet parts and a known earth ground, such as a water pipe or conduit. Use a VTVM or VOM with 1000 Ohms per volt, or higher sensitivity to measure the AC voltage drop across the resistor. (See Diagram.) Move the resistor connection to each exposed metal part having a return path to the chassis (antenna, metal, cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor. (This test should be performed with the power switch in both the On and Off positions.)

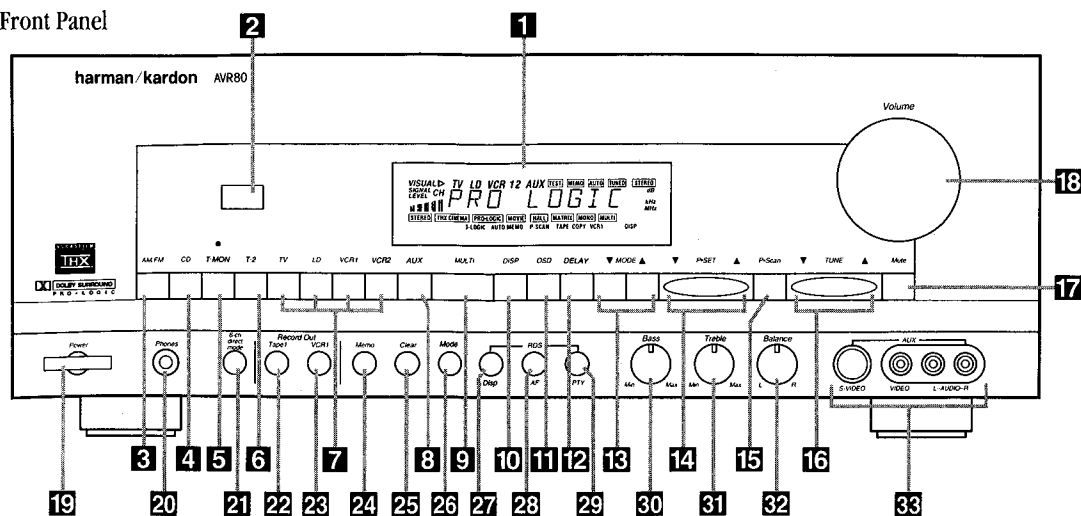


A reading of 0.35 volt RMS or more is excessive and indicates a potential shock hazard which must be corrected before returning the unit to the owner.



CONTROLS AND FUNCTIONS

Front Panel



18 ONLY

**1 Information display:** This display delivers messages and status indications to help you operate the receiver. Refer to the separate diagram for a complete explanation of the FL display.

**2 Remote Sensor Window:** The sensor behind this window receives infrared signals from the remote control. Aim the remote at this area and do not block or cover it unless an external remote sensor is installed.

**3 AM/FM Tuner Mode Selection:** Press this button once to select the tuner. Press it again to switch between FM, MW and LW.

**4 CD:** Press this button to select the CD player.

**5 Tape1/Monitor:** Press this button to select Tape One as the input source. A red LED above the button will illuminate to indicate that the Tape Monitor has been selected.

**6 Tape 2:** Press this button to select Tape 2.

**7 Video Sources:** Press any of these buttons to select a video input source.

**8 Aux:** Press this button to select the source connected to the front panel Aux jacks.

**9 Multiroom Audio Select:** Press this button to turn on the feed to the remote zone. The remote zone will stay on after the main power switch is turned off until it is switched off by the remote room control or by pressing this button again.

**10 Display:** Press this button to turn off the front panel FL display. The DISP indicator will illuminate to remind you that the unit is still turned on.

**11 OSD (On Screen Display):** Press the button briefly to display a system status report on your video screen. Press and hold the button to change the video standard.

**12 Delay:** Press this button to increase the delay to the rear (surround) channels.

**13 Mode:** Press these buttons to scroll up ▲ or down ▼ through the list of available surround modes.

**14 P-Set:** Press these buttons to manually scroll up ▲ or down ▼ through the stations programmed into the receiver's preset memory.

**15 P-Scan:** Press this button to automatically scan through the FM or AM stations preset into the receiver's memory. Press the button again to stop the scan when the tuner is at the desired station.

**16 Tune:** Press these buttons to manually scan up ▲ or down ▼ through the FM, LW or AM bands.

**17 Mute:** Press this button to cut the output to the speakers. Press it again to return to the previous volume level.

**18 Volume Control:** Turn the knob clockwise to increase volume, counterclockwise to decrease the volume. Note that approximately two revolutions of the knob are required to go from no output to maximum volume.

**19 Power:** press this button once to turn the unit on or off. In order to use the remote control to turn the unit on the power switch must be pressed once, and then the unit must be turned off via the remote. The LED indicator light surrounding the power switch will glow amber when the unit is in the Standby mode and green when the unit is on.

**20 Headphone Jack:** Plug standard stereo headphones into this jack for private listening.

**NOTE:** When the headphones are in use the output to the speakers is muted and the surround mode is automatically switched to STEREO. When the headphones are removed from the jack, sound to the speakers is restored and the unit returns to the previous sound mode.

**21 6 Channel Direct:** Press this button to select the output of an external multichannel audio adapter.

**22 Tape 1 Copy:** Press this button to select the input for the recorder connected to Tape 1. The first press will select the source currently being listened to. Press again to select the input in the following order: Tuner → CD → Tape 2 → Source.

**23 VCR1 Copy:** Press this button to select the input to the recorder connected to VCR 1. The first press selects the input currently being viewed. Press the button again to select the input in the following order: TV → LD → VCR2 → AUX → Source

**24 Memo:** The memo button is used to enter stations to the tuner's preset memory in either the manual or automatic modes. It is also used in clearing the memory and entering the sleep timer period.

**25 Clear:** The clear button is used to cancel tuning, memory input or when clearing the unit's memories.

**26 FM Mode:** Press this button to select the tuning mode for FM stations.

**27 RDS Display:** When a station transmitting RDS data is tuned, press this button to view the tuning frequency.

**28 RDS AF:** The button is used to search for stations transmitting a specific programme type that offers better reception than the currently tuned station.

**29 RDS PTY:** Press this button to view the programme type (PTY) when an RDS station is tuned. It is also used to initiate a search for RDS stations transmitting a specific programme type.

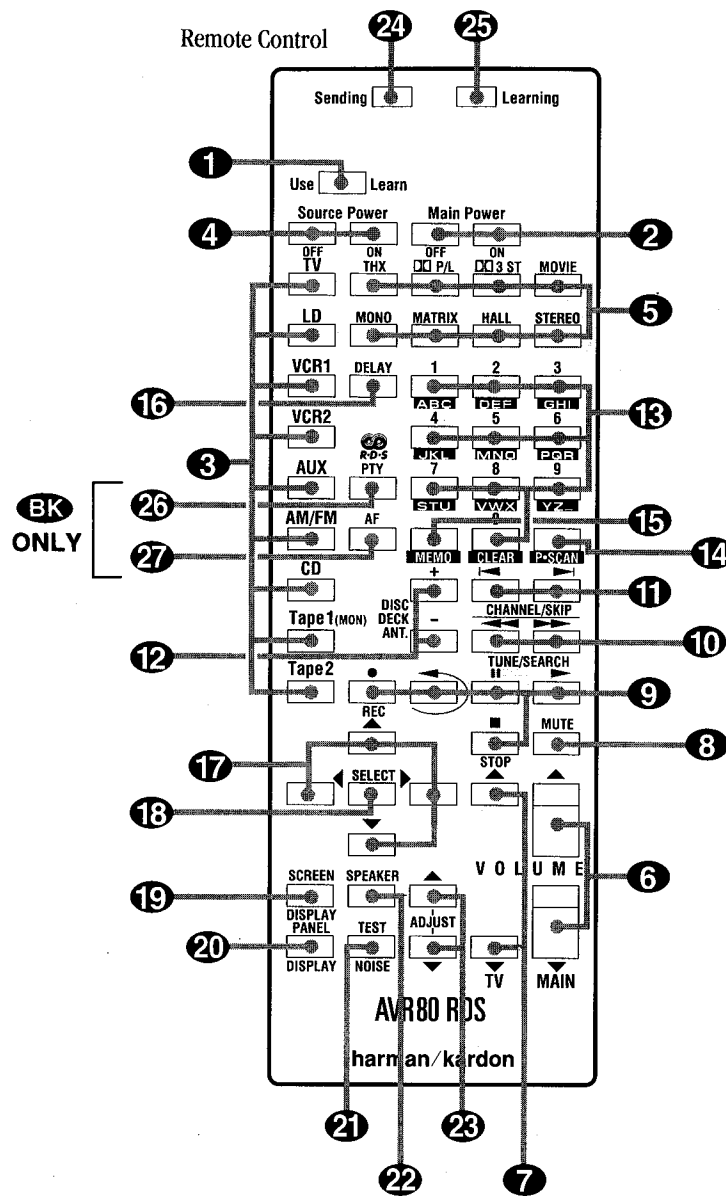
**30 Bass:** This knob adjusts the tone of low frequency sounds. Turn it to the right to boost bass frequencies or to the left to cut bass frequencies.

**31 Treble:** This knob adjusts the tone of high frequency sounds. Turn it to the right to boost high frequencies or to the left to cut high frequencies.

**32 Balance:** This knob adjusts the balance between the front left and right speakers.

**33 Front Panel Inputs:** Audio or Video sources connected to these jacks may be selected by pressing the Aux button 8.

Remote Control



BK ONLY

**1 Use/Learn:** This switch selects the operation mode of the remote control. Slide it to the left for normal operation. Slide it to the right when the remote is being programmed.

**2 Main Power:** Press these buttons to turn the unit on or off.

**3 Source Selection:** Pressing one of these buttons selects the input source that will be listened to through the receiver. When a source is selected the remote's transport and numeric number buttons will also transmit the commands needed to control that machine.

**4 Source Power:** Press these buttons to control power for the last source device selected.

**5 Surround Mode Selection:** Press one of these buttons to select a surround mode for the current listening session.

**6 Main Volume:** These buttons control the unit's volume. Note that all channels are controlled simultaneously.

**7 TV Volume:** These buttons adjust the volume for TV using the remote control codes programmed into the remote for a TV set or cable box. These buttons control the TV set only, regardless of which source is selected. This enables you to control the audio level of a TV set even when the receiver is not in use.

**8 Mute:** Press this button to temporarily cut the audio output of the receiver. Press it again to return to the previous volume level.

**9 Transport Controls:** These buttons control the tape or disc motion of the last playback source selected with the Source Selection buttons 3. Use them as you would the Play, Stop, Pause, Reverse Play and Record buttons on any VCR, CD or LD remote control.

**10 Tune/Search & Fast Forward:** (These buttons have multiple functions, which vary according to the input device selected.)

a. When the TUNER has been selected, these buttons are used to manually tune stations.

b. When CD, LD or VCR is the input source, these buttons act as the Fast Scan Forward ►►► or Fast Scan Reverse ◀◀◀ controls.

**11 Channel/Skip:** (These buttons have multiple functions, which vary according to the input device selected.)

a. When the TUNER has been selected, these buttons will scroll up ►► or down ◀◀ through the stations that have been programmed in the preset memory.

b. When TV or VCR is selected, they are the channel up ►► or channel down ◀◀ tuning buttons.

c. When CD or LD is selected these buttons act as forward and reverse "Skip" buttons to move to the next track or chapter on the disc.

d. When a compatible Harman Kardon cassette player has been selected as Tape 1 or Tape 2, these buttons move the tape forward ►► or backwards ◀◀ to the next selection using the Music Scan feature.

**12 Disc/Deck/Ant:** (These buttons have multiple functions, which vary according to the input device selected.)

a. When CD is selected and the unit is a CD changer, these buttons will change to the next disc + or previous disc -.

b. When Tape 1 or Tape 2 is the input source, and the tape machine is a compatible Harman Kardon dual cassette deck, these buttons will switch between the "A" and "B" sides.

c. When VCR 1 or VCR 2 is the input source, these buttons switch between VCR and TV as the unit's output.

d. When TV is the input source, these buttons may switch between video input sources or antenna/video input sources or the TV model.

e. When LD is the input source, these buttons will switch the side being played from "A" to "B" on compatible dual side players.

**13 Number Keys:** These buttons serve as a ten button numeric keypad to enter tuner preset positions. They are also to be used to select channel numbers when TV has been selected on the remote, or to select track numbers on a CD or LD player, depending on how the remote has been programmed. The letters below the buttons are used to enter information for tuner station names.

**NOTE:** The 0 button has a dual function. It also serves as the CLEAR button for use in programming the tuner or clearing the system memory.

**14 P-Scan:** Press this button to automatically scan through the stations preset into the tuner memory. Press the button again to end the scan when the tuner stops at the desired station.

**15 Memo:** The memo button is used to enter stations to the tuner's preset memory in either the manual or automatic modes. It is also used in the process of clearing the memory.

**16 Delay:** This button controls the amount of sound delay to the rear (surround) channels. Press it to increase the delay in the steps shown in the main Information Display or on-screen graphics.

**17 Menu Controls:** These buttons control the action of the cursor or the selection of menu items when the receiver is being configured using the setup menus.

**18 Select:** This button enters settings to the receiver's memory during system configuration.

**19 Screen Display:** Press this button to activate the on screen menu system.

**20 Panel Display:** Press this button to turn off all displays and indicators in the Information Display except for a small DISP indication in the lower right corner of the display 12. Press the button again to turn the display back on. Note that the display will briefly illuminate when a command is sent to the unit from the front panel or remote, even though the display is turned off.

**21 Test Noise:** Press this button to begin calibration of the output level for each channel. A test signal will immediately be heard from the left front speaker and the TEST indicator 2 will flash.

**22 Speaker Select:** When setting the system output levels, this button selects the speaker position being adjusted. Press it once to advance to the next speaker after each position is adjusted.

**23 Level Adjust:** When setting the system output levels, press these buttons to increase or decrease the output level.

**24 Sending LED:** This indicator should flash any time a button is pressed to confirm that a command is being sent to the receiver or another unit. If the light is dim or does not illuminate when a button is pressed the batteries in the remote should be replaced.

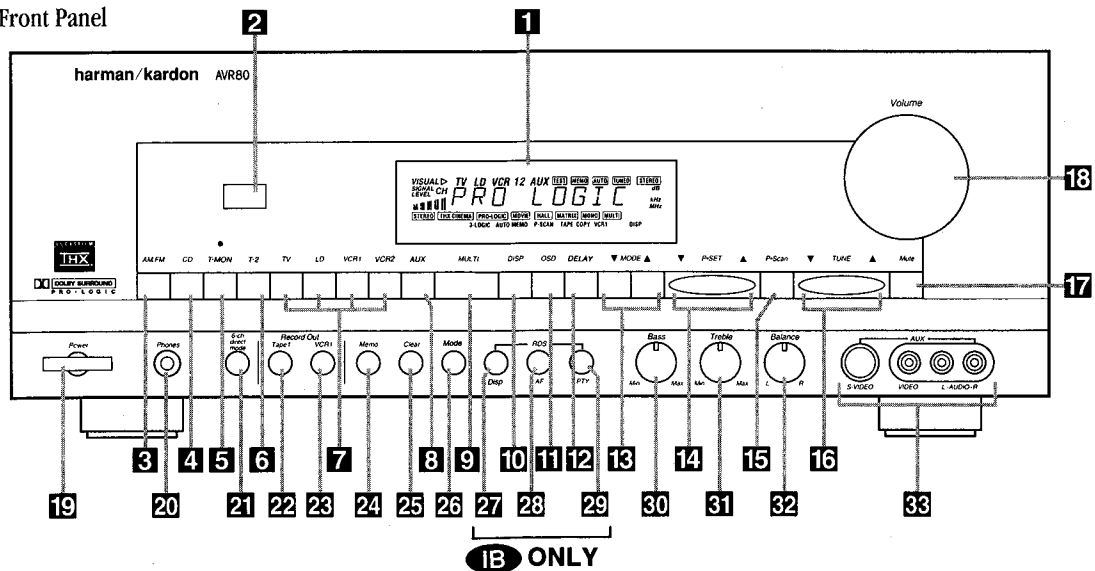
**25 Learn LED:** This indicator will illuminate when a button on the remote is being programmed with signals from another remote during the "learning" mode. The light will go out when the signal is received and memorized.

**26 RDS PTY:** Press this button to view the Programme Type information for stations transmitting RDS data. This button is also used for PTY Auto Search functions.

**27 RDS AF:** This button initiates a search of all RDS stations to find a stronger signal for the programme type currently selected.

# CONTROLS AND FUNCTIONS

Front Panel



**1 Information display:** This display delivers messages and status indications to help you operate the receiver. Refer to the separate diagram for a complete explanation of the FL display.

**2 Remote Sensor Window:** The sensor behind this window receives infrared signals from the remote control. Aim the remote at this area and do not block or cover it unless an external remote sensor is installed.

**3 AM/FM Tuner Mode Selection:** Press this button once to select the tuner. Press it again to switch between FM, MW and LW.

**4 CD:** Press this button to select the CD player.

**5 Tape1/Monitor:** Press this button to select Tape One as the input source. A red LED above the button will illuminate to indicate that the Tape Monitor has been selected.

**6 Tape 2:** Press this button to select Tape 2.

**7 Video Sources:** Press any of these buttons to select a video input source.

**8 Aux:** Press this button to select the source connected to the front panel Aux jacks.

**9 Multiroom Audio Select:** Press this button to turn on the feed to the remote zone. The remote zone will stay on after the main power switch is turned off until it is switched off by the remote room control or by pressing this button again.

**10 Display:** Press this button to turn off the front panel FL display. The DISP indicator will illuminate to remind you that the unit is still turned on.

**11 OSD (On Screen Display):** Press the button briefly to display a system status report on your video screen. Press and hold the button to change the video standard.

**12 Delay:** Press this button to increase the delay to the rear (surround) channels.

**13 Mode:** Press these buttons to scroll up ▲ or down ▼ through the list of available surround modes.

**14 P-Set:** Press these buttons to manually scroll up ▲ or down ▼ through the stations programmed into the receiver's preset memory.

**15 P-Scan:** Press this button to automatically scan through the FM or AM stations preset into the receiver's memory. Press the button again to stop the scan when the tuner is at the desired station.

**16 Tune:** Press these buttons to manually scan up ▲ or down ▼ through the FM, LW or AM bands.

**17 Mute:** Press this button to cut the output to the speakers. Press it again to return to the previous volume level.

**18 Volume Control:** Turn the knob clockwise to increase volume, counterclockwise to decrease the volume. Note that approximately two revolutions of the knob are required to go from no output to maximum volume.

**19 Power:** press this button once to turn the unit on or off. In order to use the remote control to turn the unit on the power switch must be pressed once, and then the unit must be turned off via the remote. The LED indicator light surrounding the power switch will glow amber when the unit is in the Standby mode and green when the unit is on.

**20 Headphone Jack:** Plug standard stereo headphones into this jack for private listening.

**NOTE:** When the headphones are in use the output to the speakers is muted and the surround mode is automatically switched to STEREO. When the headphones are removed from the jack, sound to the speakers is restored and the unit returns to the previous sound mode.

**21 6 Channel Direct:** Press this button to select the output of an external multichannel audio adapter.

**22 Tape 1 Copy:** Press this button to select the input for the recorder connected to Tape 1. The first press will select the source currently being listened to. Press again to select the input in the following order: Tuner → CD → Tape 2 → Source.

**23 VCR1 Copy:** Press this button to select the input to the recorder connected to VCR 1. The first press selects the input currently being viewed. Press the button again to select the input in the following order: TV → LD → VCR2 → AUX → Source

**24 Memo:** The memo button is used to enter stations to the tuner's preset memory in either the manual or automatic modes. It is also used in clearing the memory and entering the sleep timer period.

**25 Clear:** The clear button is used to cancel tuning, memory input or when clearing the unit's memories.

**26 FM Mode:** Press this button to select the tuning mode for FM stations.

**27 RDS Display:** When a station transmitting RDS data is tuned, press this button to view the tuning frequency.

**28 RDS AF:** The button is used to search for stations transmitting a specific programme type that offers better reception than the currently tuned station.

**29 RDS PTY:** Press this button to view the programme type (PTY) when an RDS station is tuned. It is also used to initiate a search for RDS stations transmitting a specific programme type.

**30 Bass:** This knob adjusts the tone of low frequency sounds. Turn it to the right to boost bass frequencies or to the left to cut bass frequencies.

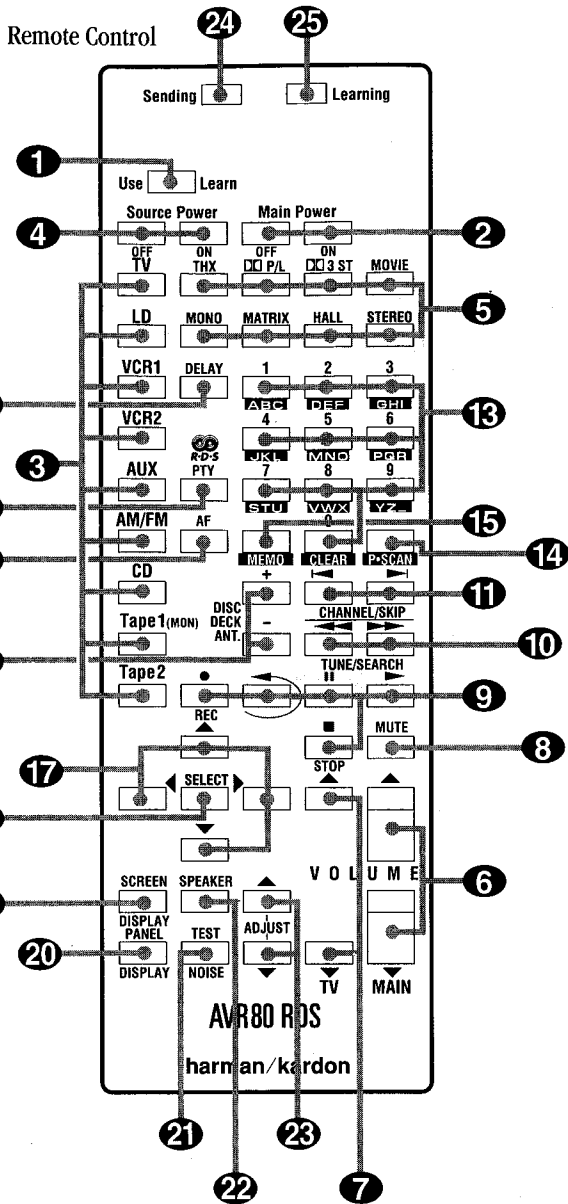
**31 Treble:** This knob adjusts the tone of high frequency sounds. Turn it to the right to boost high frequencies or to the left to cut high frequencies.

**32 Balance:** This knob adjusts the balance between the front left and right speakers.

**33 Front Panel Inputs:** Audio or Video sources connected to these jacks may be selected by pressing the Aux button **8**.

**BK ONLY**

**1 Use/L** the opera control. Sl operation the remot  
**2 Main** buttons to  
**3 Sour** of these b source th through th is selecte and nume also trans to control  
**4 Sour** tions to c source de  
**5 Surro** Press one a surroun a tuning se  
**6 Main** control th all channe neously.



b. When **CD**, **LD** or **VCR** is the input source, these buttons act as the Fast Scan Forward  $\blacktriangleright$  or Fast Scan Reverse  $\blacktriangleleft$  controls.

**11 Channel/Skip:** (These buttons have multiple functions, which vary according to the input device selected.)

a. When the **TUNER** has been selected, these buttons will scroll up  $\blacktriangleright$  or down  $\blacktriangleleft$  through the stations that have been programmed in the preset memory.

b. When **TV** or **VCR** is selected, they are the channel up  $\blacktriangleright$  or channel down  $\blacktriangleleft$  tuning buttons.

c. When **CD** or **LD** is selected these buttons act as forward and reverse "Skip" buttons to move to the next track or chapter on the disc.

d. When a compatible Harman Kardon cassette player has been selected as **Tape 1** or **Tape 2**, these buttons move the tape forward  $\blacktriangleright$  or backwards  $\blacktriangleleft$  to the next selection using the Music Scan feature.

**12 Disc/Dek/Ant:** (These buttons have multiple functions, which vary according to the input device selected.)

a. When **CD** is selected and the unit is a CD changer, these buttons will change to the next disc  $+$  or previous disc  $-$ .

b. When **Tape 1** or **Tape 2** is the input source, and the tape machine is a compatible Harman Kardon dual cassette deck, these buttons will switch between the "A" and "B" sides.

c. When **VCR 1** or **VCR 2** is the input source, these buttons switch between VCR and TV as the unit's output.

d. When **TV** is the input source, these buttons may switch between video input sources or antenna/video, depending on the TV model.

e. When **LD** is the input source, these buttons will switch the side being played from "A" to "B" on compatible dual side players.

**13 Number Keys:** These buttons serve as a ten button numeric keypad to enter tuner preset positions. They are also to be used to select channel numbers when **TV** has been selected on the remote, or to select track numbers on a CD or LD player, depending on how the remote has been programmed. The letters below the buttons are used to enter information for tuner station names.

**NOTE:** The **0** button has a dual function. It also serves as the **CLEAR** button for use in programming the tuner or clearing the system memory.

**14 P-Scan:** Press this button to automatically scan through the stations preset into the tuner memory. Press the button again to end the scan when the tuner stops at the desired station.

**15 Memo:** The memo button is used to enter stations to the tuner's preset memory in either the manual or automatic modes. It is also used in the process of clearing the memory.

**16 Delay:** This button controls the amount of sound delay to the rear (surround) channels. Press it to increase the delay in the steps shown in the main Information Display or on-screen graphics.

**17 Menu Controls:** These buttons control the action of the cursor or the selection of menu items when the receiver is being configured using the setup menus.

**18 Select:** This button enters settings to the receiver's memory during system configuration.

**19 Screen Display:** Press this button to activate the on screen menu system.

**20 Panel Display:** Press this button to turn off all displays and indicators in the Information Display except for a small **DISP** indication in the lower right corner of the display **12**. Press the button again to turn the display back on. Note that the display will briefly illuminate when a command is sent to the unit from the front panel or remote, even though the display is turned off.

**21 Test Noise:** Press this button to begin calibration of the output level for each channel. A test signal will immediately be heard from the left front speaker and the **TEST** indicator **2** will flash.

**22 Speaker Select:** When setting the system output levels, this button selects the speaker position being adjusted. Press it once to advance to the next speaker after each position is adjusted.

**23 Level Adjust:** When setting the system output levels, press these buttons to increase or decrease the output level.

**24 Sending LED:** This indicator should flash any time a button is pressed to confirm that a command is being sent to the receiver or another unit. If the light is dim or does not illuminate when a button is pressed the batteries in the remote should be replaced.

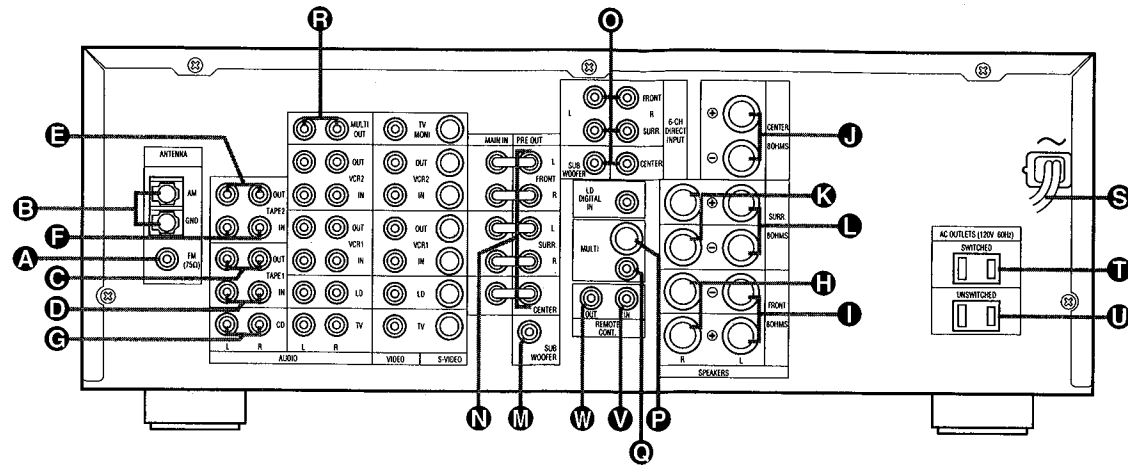
**25 Learn LED:** This indicator will illuminate when a button on the remote is being programmed with signals from another remote during the "learning" mode. The light will go out when the signal is received and memorized.

**26 RDS PTY:** Press this button to view the Programme Type information for stations transmitting RDS data. This button is also used for PTY Auto Search functions.

**27 RDS AF:** This button initiates a search of all RDS stations to find a stronger signal for the programme type currently selected.

- 1 Use/Learn:** This switch selects the operation mode of the remote control. Slide it to the left for normal operation. Slide it to the right when the remote is being programmed.
- 2 Main Power:** Press these buttons to turn the unit on or off.
- 3 Source Selection:** Pressing one of these buttons selects the input source that will be listened to through the receiver. When a source is selected the remote's transport and numeric number buttons will also transmit the commands needed to control that machine.
- 4 Source Power:** Press these buttons to control power for the last source device selected.
- 5 Surround Mode Selection:** Press one of these buttons to select a surround mode for the current listening session.
- 6 Main Volume:** These buttons control the unit's volume. Note that all channels are controlled simultaneously.
- 7 TV Volume:** These buttons adjust the volume for TV using the remote control codes programmed into the remote for a TV set or cable box. These buttons control the TV set only, regardless of which source is selected. This enables you to control the audio level of a TV set even when the receiver is not in use.
- 8 Mute:** Press this button to temporarily cut the audio output of the receiver. Press it again to return to the previous volume level.
- 9 Transport Controls:** These buttons control the tape or disc motion of the last playback source selected with the Source Selection buttons **3**. Use them as you would the Play, Stop, Pause, Reverse Play and Record buttons on any VCR, CD or LD remote control.
- 10 Tune/Search & Fast Forward:** (These buttons have multiple functions, which vary according to the input device selected.)
  - a. When the **TUNER** has been selected, these buttons are used to manually tune stations.

Rear Panel – Audio and System Connections



**A FM Antenna:** Connect an indoor or external FM antenna to these terminals. Note that the supplied 300 ohm to 75 ohm adapter is required for connections from twin lead or inside dipole antennas.

**B AM Antenna:** Connect the AM loop antenna supplied with the receiver to these terminals. If an external AM antenna is used, make connections to the **AM** and **GND** terminals in accordance with the instructions supplied with the antenna.

**C Tape 1 Out:** Connect these jacks to the RECORD/INPUT jacks of an audio recorder.

**D Tape 1 In:** Connect these jacks to the PLAY/OUT jacks of an audio recorder.

**E Tape 2 Out:** Connect these jacks to the RECORD/INPUT jacks of a second audio recorder.

**F Tape 2 In:** Connect these jacks to the PLAY/OUT jacks of a second audio recorder.

**G CD IN:** Connect these jacks to the output of a compact disc player or CD changer.

**H Front L:** Connect these terminals to the front left speaker.

**I Front R:** Connect these terminals to the front right speaker.

**J Center:** Connect these terminals to the center speaker.

**K Surround L:** Connect these terminals to the left surround speaker.

**L Surround R:** Connect these terminals to the right surround speaker.

**M Subwoofer Pre-Out:** Connect this jack to the line level input of a powered subwoofer. If an external subwoofer amplifier is used, connect this jack to the subwoofer amplifier input.

**N Pre-Outs:** If external power amplifiers are used for any channels, remove the connection pin and connect the jack to the input of the amplifier.

**O 6 Channel Direct Input:** If an external digital audio decoder is used for 5.1 (Dolby AC-3) audio, connect the outputs of that decoder to these terminals.

**P Multi Room Interface:** For multi-room installations where keypad remotes are in use, connect the keypad interface to this jack.

**Q Multi IR:** Connect the output of an IR sensor in a remote room to this jack to operate the AVR80's multi-room control system.

**R Multi-Out:** When using the AVR 80 for multi-room audio, connect this jack to the input of the audio amplifier powering the remote room speakers.

**S Power Cable:** Connect the AC plug to a non-switched AC wall output.

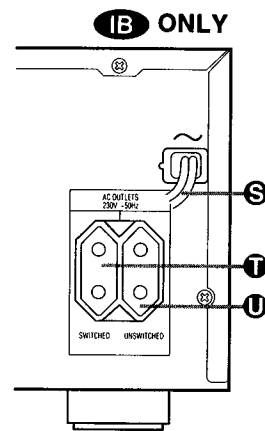
**T Switched AC Outlet:** This outlet may be used to power any device that you wish to have on when the unit is turned on.

**U Unswitched AC Outlet:** This outlet may be used to power any AC device. The power will remain on at this outlet regardless of whether the AVR80 is on or off.

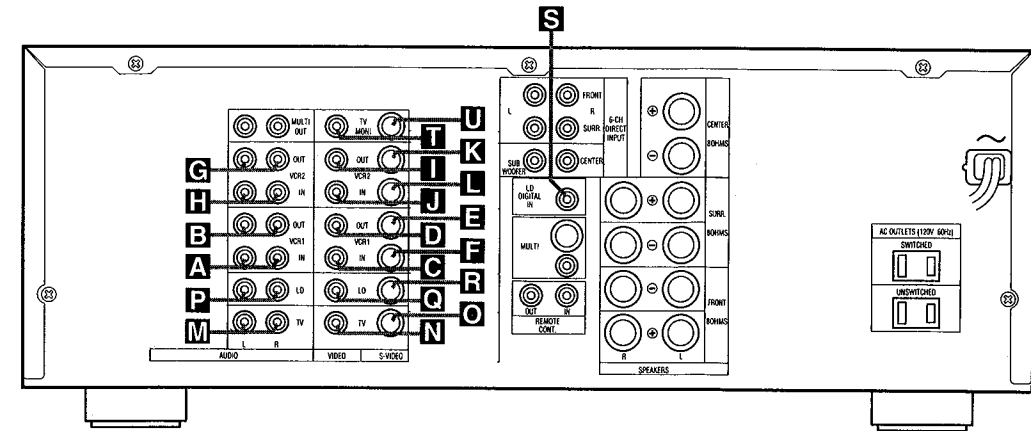
NOTE: The power consumption of the device plugged into each of these outlets should not exceed 120 watts.

**V Remote IR In:** If the AVR80's front panel IR sensor is blocked due to cabinet doors or other obstructions, an external IR sensor may be used. Connect the output of the sensor to this jack.

**W Remote IR Out:** This connection permits the IR sensor in the receiver to serve other remote controlled devices. Connect this jack to the "IR IN" jack on Harman Kardon or other compatible equipment.



Rear Panel – Video Connections



**A VCR 1 Audio In:** Connect these jacks to the audio PLAY/OUT jacks of a VCR.

**B VCR 1 Audio Out:** Connect these jacks to the RECORD/IN audio jacks of a VCR.

**C VCR 1 Video In:** Connect these jacks to the composite video PLAY/OUT jacks of a VCR.

**D VCR 1 Video Out:** Connect these jacks to the composite video RECORD/IN jacks of a VCR.

**E VCR 1 S Video Out:** Connect these jacks to the "S" video RECORD/IN jacks of a VCR.

**F VCR 1 S Video In:** Connect these jacks to the "S" video RECORD/OUT jacks of a VCR.

**G VCR 2 Audio Out:** Connect these jacks to the audio jacks RECORD/IN of a second VCR.

**H VCR 2 Audio In:** Connect these jacks to the audio PLAY/OUT jacks of a second VCR.

**I VCR 2 Video Out:** Connect these jacks to the composite video RECORD/IN jacks of a second VCR.

**J VCR 2 Video In:** Connect these jacks to the composite video PLAY/OUT jacks of a second VCR.

**K VCR 2 S Video Out:** Connect these jacks to the "S" video RECORD/IN jacks of a second VCR.

**L VCR 2 S Video In:** Connect these jacks to the "S" video RECORD/OUT jacks of a second VCR.

**M TV Audio In:** Connect the audio outputs of a TV, cable converter or satellite receiver to these jacks.

**N TV Video In:** Connect the composite video output of a TV, cable converter or satellite receiver to this jack. The signals received at this jack are also used to trigger the "TV Auto-On" feature.

**O TV S Video In:** Connect the "S" video output of a TV, cable converter or satellite receiver to this jack.

**P LD Audio In:** Connect the audio output of a laser disc player to these jacks.

**Q LD Video In:** Connect the composite video output of a laser disc player to this jack.

**R LD S Video In:** Connect the "S" video output of a laser disc player to this jack.

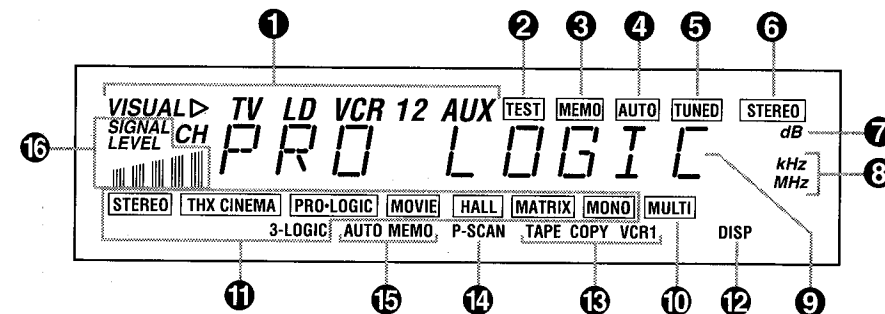
**S LD Digital In:** Connect the coax digital output of a laser disc or CD player to this jack.

NOTE: This connection is for standard, two channel PCM audio. DO NOT connect the modulated RF digital output used for multichannel (AC-3) audio to this jack.

**T TV Monitor Video Out:** Connect this jack to the composite video input of a TV monitor or video projector to view the on screen control menus and output of the receiver's video switcher.

**U TV Monitor S Video Out:** Connect this jack to the S video input of a TV monitor or video projector to view S video sources selected by the receiver's video switcher.

Information Display



**1 "Visual" Indicator:** These indicators display which input source is being fed to the video monitor output.

**2 Test:** This indicator flashes when the output levels are being set using the built in test signal generator.

**3 Memo:** This indicator flashes when the **Memo** button is pressed when entering presets and other information into the tuner's memory.

**4 Auto:** This indicator signifies that the Automatic Tuning mode is in use for FM broadcasts.

**5 Tuned:** This indicator lights when an AM or FM station is properly tuned and locked.

**6 Stereo:** This indicator lights when an FM station is broadcasting in stereo.

**7 Volume Indication:** The last two indicators on the information display indicate the volume level. Note that 0dB is the reference level, not an indication that there is no output.

**8 Tuner Frequency Indication:** When the tuner is in use, the main Information Display will show the preset channel number, if any, the frequency band and the station frequency. Indicators at the right side of the display show kHz when an LW or AM station is tuned or MHz when an FM station is tuned.

**9 Main Information Display:** This ten digit display shows messages relating to the status, input source, surround mode, tuner, volume level or other aspects of the unit's operation.

**10 Multi:** This indicator signifies that the AVR80 is sending a program source to a remote room location. Note that it may be illuminated even when the unit is "off" in the main listening room, signifying that operation continues at another location. When a remote command is being received via the **Multi** IR connection, this indicator will flash.

**11 Mode Status:** These indicators display the currently selected surround mode.

**12 DISP:** This indicator lights when the FL display has been turned off using the **Display** button **10** to remind you that the unit is still turned on.

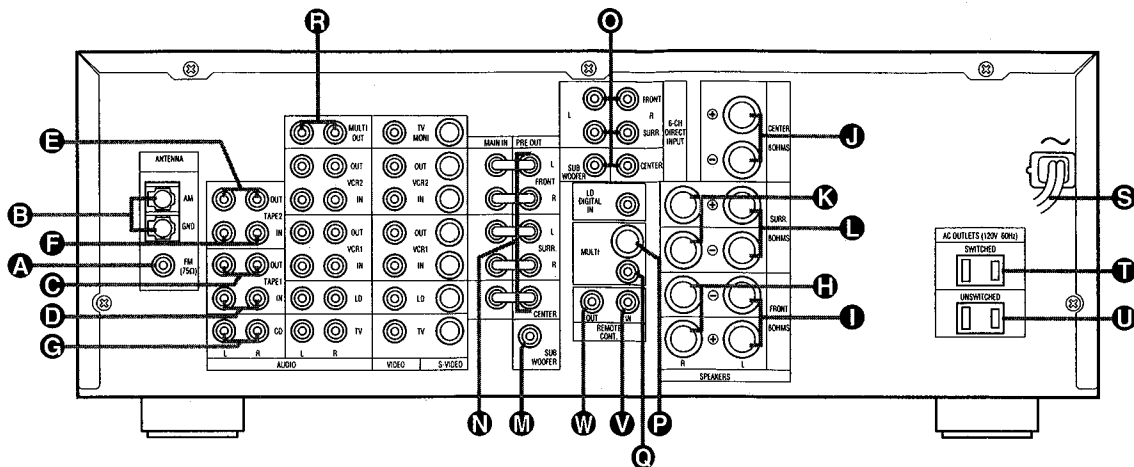
**13 Copy Indicators:** The TAPE COPY indicator lights when an input other than the current source has been selected to copy Tape 1. The VCR COPY indicator signifies that the input to VCR 1 is other than the currently selected source.

**14 P-Scan:** This indicator flashes when the stations programmed into the tuner memory are being automatically reviewed.

**15 Auto Memo:** This indicator flashes when the tuner is automatically scanning for stations and entering them into the preset memory.

**16 Signal Level Indication:** This is a visual indication of the strength of a radio station signal. The more bars visible, the stronger the station.

Rear Panel – Audio and System Connections



**A FM Antenna:** Connect an indoor or external FM antenna to these terminals. Note that the supplied 300 ohm to 75 ohm adapter is required for connections from twin lead or inside dipole antennas.

**B AM Antenna:** Connect the AM loop antenna supplied with the receiver to these terminals. If an external AM antenna is used, make connections to the **AM** and **GND** terminals in accordance with the instructions supplied with the antenna.

**C Tape 1 Out:** Connect these jacks to the RECORD/INPUT jacks of an audio recorder.

**D Tape 1 In:** Connect these jacks to the PLAY/OUT jacks of an audio recorder.

**E Tape 2 Out:** Connect these jacks to the RECORD/INPUT jacks of a second audio recorder.

**F Tape 2 In:** Connect these jacks to the PLAY/OUT jacks of a second audio recorder.

**G CD IN:** Connect these jacks to the output of a compact disc player or CD changer.

**H Front L:** Connect these terminals to the front left speaker.

**I Front R:** Connect these terminals to the front right speaker.

**J Center:** Connect these terminals to the center speaker.

**K Surround L:** Connect these terminals to the left surround speaker.

**L Surround R:** Connect these terminals to the right surround speaker.

**M Subwoofer Pre-Out:** Connect this jack to the line level input of a powered subwoofer. If an external subwoofer amplifier is used, connect this jack to the subwoofer amplifier input.

**N Pre-Outs:** If external power amplifiers are used for any channels, remove the connection pin and connect the jack to the input of the amplifier.

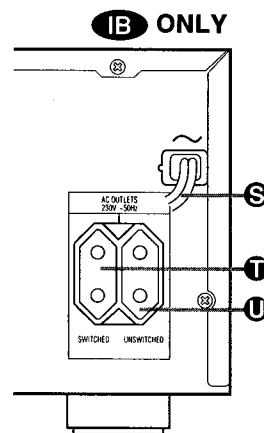
**O 6 Channel Direct Input:** If an external digital audio decoder is used for 5.1 (Dolby AC-3) audio, connect the outputs of that decoder to these terminals.

**P Multi Room Interface:** For multi-room installations where keypad remotes are in use, connect the keypad interface to this jack.

**Q Multi IR:** Connect the output of an IR sensor in a remote room to this jack to operate the AVR80's multi-room control system.

**R Multi-Out:** When using the AVR 80 for multi-room audio, connect this jack to the input of the audio amplifier powering the remote room speakers.

**S Power Cable:** Connect the AC plug to a non-switched AC wall output.



**T Switched AC Outlet:** This outlet may be used to power any device that you wish to have on when the unit is turned on.

**U Unswitched AC Outlet:** This outlet may be used to power any AC device. The power will remain on at this outlet regardless of whether the AVR80 is on or off.

**NOTE:** The power consumption of the device plugged into each of these outlets should not exceed 120 watts.

**V Remote IR In:** If the AVR80's front panel IR sensor is blocked due to cabinet doors or other obstructions, an external IR sensor may be used. Connect the output of the sensor to this jack.

**W Remote IR Out:** This connection permits the IR sensor in the receiver to serve other remote controlled devices. Connect this jack to the "IR IN" jack on Harman Kardon or other compatible equipment.

**A VCR 1 Audio In:** Connect the audio PLAY/OUT jacks to the audio RECORD/IN jacks of a VCR.

**E VCR 1 Audio Out:** Connect the audio RECORD/IN jacks of a VCR to the audio PLAY/OUT jacks of a VCR.

**C VCR 1 Video In:** Connect the video RECORD/IN jacks to the video PLAY/OUT jacks of a VCR.

**D VCR 1 Video Out:** Connect the video PLAY/OUT jacks to the video RECORD/IN jacks of a VCR.

**E VCR 1 S Video In:** Connect the video RECORD/IN jacks to the video RECORD/IN jacks of a VCR.

**F VCR 1 S Video Out:** Connect the video RECORD/OUT jacks to the video RECORD/OUT jacks of a VCR.

Information Display

**1 "Visual" Indicators:** The visual indicators display which input is being fed to the video processor.

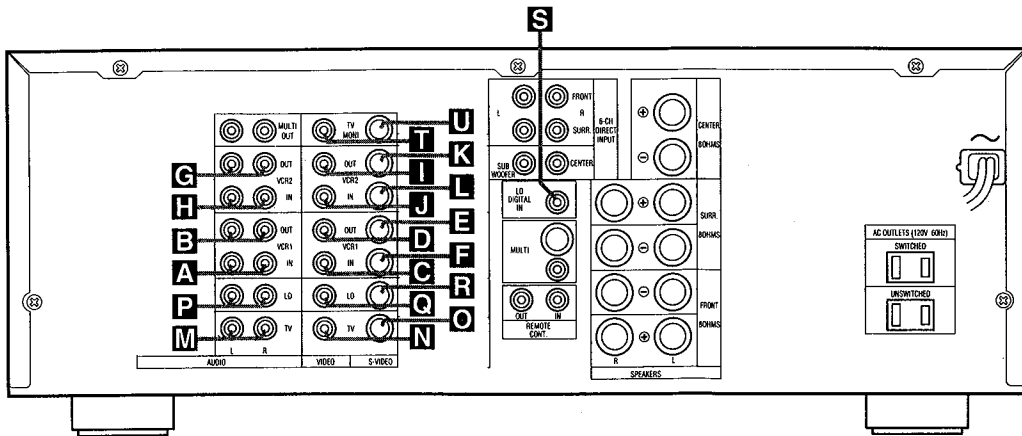
**2 Test:** This indicator shows the output levels are correct when the built in test signal is used.

**3 Memo:** This indicator shows when the Memo button is pressed when entering preset channels. Information is stored in the channel memory.

**4 Auto:** This indicator shows when the Automatic Tuning function is active for FM broadcasts.

**5 Tuned:** This indicator shows when an AM or FM station is tuned and locked.

## Rear Panel – Video Connections



**G Audio In:** Connect these jacks to the audio PLAY/OUT jacks of a VCR.

**G VCR 2 Audio Out:** Connect these jacks to the audio jacks RECORD/IN of a second VCR.

**M TV Audio In:** Connect the audio outputs of a TV, cable converter or satellite receiver to these jacks.

**R LD S Video In:** Connect the "S" video output of a laser disc player to this jack.

**H Audio Out:** Connect these jacks to the RECORD/IN audio jacks of a VCR.

**H VCR 2 Audio In:** Connect these jacks to the audio PLAY/OUT jacks of a second VCR.

**N TV Video In:** Connect the composite video output of a TV, cable converter or satellite receiver to this jack. The signals received at this jack are also used to trigger the "TV Auto-On" feature.

**S LD Digital In:** Connect the coax digital output of a laser disc or CD player to this jack.

**I Video In:** Connect these jacks to the composite video IN jacks of a VCR.

**I VCR 2 Video Out:** Connect these jacks to the composite video RECORD/IN jacks of a second VCR.

**Q TV S Video In:** Connect the "S" video output of a TV, cable converter or satellite receiver to this jack.

**NOTE:** This connection is for standard, two channel PCM audio. DO NOT connect the modulated RF digital output used for multichannel (AC-3) audio to this jack.

**J Video Out:** Connect these jacks to the composite video PLAY/IN jacks of a VCR.

**J VCR 2 Video In:** Connect these jacks to the composite video PLAY/OUT jacks of a second VCR.

**P LD Audio In:** Connect the audio output of a laser disc player to these jacks.

**T TV Monitor Video Out:** Connect this jack to the composite video input of a TV monitor or video projector to view the on screen control menus and output of the receiver's video switcher.

**K S Video Out:** Connect these jacks to the "S" video RECORD/IN jacks of a VCR.

**K VCR 2 S Video Out:** Connect these jacks to the "S" video RECORD/IN jacks of a second VCR.

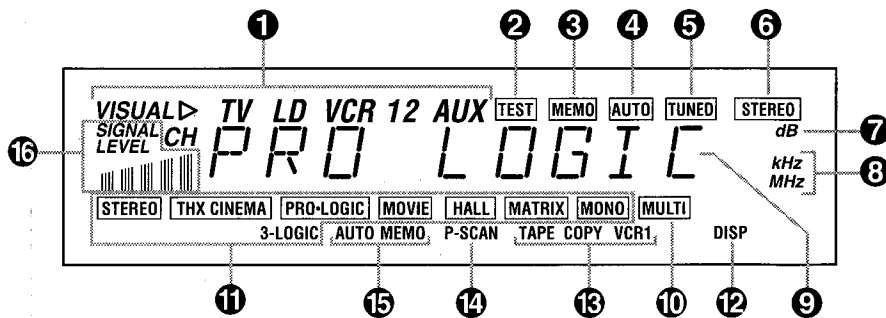
**Q LD Video In:** Connect the composite video output of a laser disc player to this jack.

**U TV Monitor S Video Out:** Connect this jack to the S video input of a TV monitor or video projector to view S video sources selected by the receiver's video switcher.

**L S Video In:** Connect these jacks to the "S" video RECORD/OUT jacks of a VCR.

**L VCR 2 S Video In:** Connect these jacks to the "S" video RECORD/OUT jacks of a second VCR.

## Information Display



**Visual Signal Level Indicator:** These indicators show the strength of the video signal being sent to the video monitor output.

**6 Stereo:** This indicator lights when an FM station is broadcasting in stereo.

**9 Main Information Display:** This ten digit display shows messages relating to the status, input source, surround mode, tuner, volume level or other aspects of the unit's operation.

**7 Volume Indication:** This indicator flashes when output levels are being set using the volume knob in test signal generator.

**7 Volume Indication:** The last two indicators on the information display indicate the volume level. Note that 0dB is the reference level, not an indication that there is no output.

**10 Multi:** This indicator signifies that the AVR80 is sending a program source to a remote room location. Note that it may be illuminated even when the unit is "off" in the main listening room, signifying that operation continues at another location. When a remote command is being received via the Multi IR connection, this indicator will flash.

**8 Memo:** This indicator flashes when the Memo button is pressed while entering presets and other information into the tuner's memory.

**8 Tuner Frequency Indication:** When the tuner is in use, the main Information Display will show the preset channel number, if any, the frequency band and the station frequency. Indicators at the right side of the display show kHz when an LW or AM station is tuned or MHz when an FM station is tuned.

**11 Mode Status:** These indicators display the currently selected surround mode.

**12 DISP:** This indicator lights when the FL display has been turned off using the Display button 10 to remind you that the unit is still turned on.

**13 Copy Indicators:** The TAPE COPY indicator lights when an input other than the current source has been selected to copy Tape 1. The VCR COPY indicator signifies that the input to VCR 1 is other than the currently selected source.

**14 P-Scan:** This indicator flashes when the stations programmed into the tuner memory are being automatically reviewed.

**15 Auto Memo:** This indicator flashes when the tuner is automatically scanning for stations and entering them into the preset memory.

**16 Signal Level Indication:** This is a visual indication of the strength of a radio station signal. The more bars visible, the stronger the station.



## SERVICE PROCEDURE

### 1. Tracking point memory

This service procedure can be used for measurement of the tuner circuit.

With the POWER ON, press the "PRESET UP" button while pressing the "MEMO" button for at least 3 seconds or more. FLD will display "TRACKING". Frequencies will be memorized as follows :

	VERSION	P1	P2	P3	P4
FM	BK IB	90.0	98.0	106.0	87.5

	SCAN STEP	P5	P6	P7	P8	P9	P10	P11	P12~P30
MW	10 KHz	600.0	1000.0	1400.0	520.0	←	←	←	←
	9 KHz	603.0	999.0	1404.0	531.0	←	←	←	←
	LW	↑	↑	↑	171.0	207.0	270.0	152.0	531.0

### 2. FLD segment illumination

This service procedure will illuminate all segments by the following steps :

With the POWER ON, press the "FM/AM(TUNER)" button while pressing the "MEMO" button for at least 3 seconds or more. This procedure takes 1 minute and 40 seconds to finish; at this point the procedure is complete.

1. All segments will be illuminated for 5 seconds.

2. At the grid "1G", segments are illuminated in the following order :

① KHz → ② MHz → ③ R → ④ PEAK → ⑤ L → ⑥ MULTI → ⑦ MONO → ⑧ MATRIX →  
⑨ HALL → ⑩ P-SCAN → ⑪ TAPE → ⑫ COPY → ⑬ VCR1 → ⑭ SLEEP → ⑮ DISP → ⑯ TX

3. At the grid "2G", to "11G", each segment is illuminated individually.

4. At the grid "12G", segments are illuminated in the following order:

① VISUAL → ② SIGNAL LEVEL → ③ CH → ④ SIGNAL BAR (LEFT SIDE) →  
⑤ SIGNAL BAR (2nd LEFT) → ⑥ SIGNAL BAR (CENTER) → ⑦ SIGNAL BAR (2nd RIGHT) →  
⑧ SIGNAL BAR (RIGHT SIDE) → ⑨ STEREO → ⑩ THX CINEMA → ⑪ PRO.LOGIC →  
⑫ MOVIE → ⑬ AUTO MEMO → ⑭ 3.LOGIC → ⑮ SIMUL'D → ⑯ SURROUND

### 3. Selector check mode

This service program automatically operates input selector and surround mode by the following procedure. This service program continually repeats until power is shut off.

When the POWER ON, press the "SURROUND MODE+" button while pressing the "MEMO" button 3 seconds or more.

STEP	INPUT SELECTOR	DSP MODE	FM MODE BAND	FREQUENCY	COPY SWITCH		NOTES
					TAPE	VCR1	
1	FM	STEREO	AUTO	98.0	SOURCE	SOURCE	
2	FM	STEREO	MONO	LAST	↑	↑	
3	CD	THX	AUTO	LAST	↑	↑	
4	TAPE1	P-LOGIC	AUTO	LAST	TUNER	SOURCE	TUNER-ON
5	TAPE2	MOVIE	AUTO	LAST	SOURCE	TV	
6	TV	3 CH	AUTO	LAST	↑	SOURCE	
7	TV	HALL	AUTO	LAST	CD	LD	
8	LD	MATRIX	AUTO	LAST	TAPE2	TV	
9	VCR1	MONO	AM/MW	1000/999	TUNER	VCR2	
10	VCR2	STEREO	AUTO	98.0	TUNER	SOURCE	TUNER-ON
11	AUX	THX	AUTO	LAST	SOURCE	AUX	

### 4. All clear

This service program can clear all memorized operations and functions.

When the POWER ON, press the "CLEAR" button while pressing the "MEMO" button 3 seconds or more. FLD shows "CLEAR MEMO" and power will be OFF.

## TEST EQUIPMENT REQUIRED

- 1) AM/FM Signal Generator
- 2) Video Signal Generator
- 3) Digital Multimeter
- 4) Distortion level meter

## ALIGNMENT PROCEDURES

### 1. FM MONO. Distortion Adjustment

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to FM antenna terminal. (75 ohm)	98 MHz	500 uV/m (54 dB/m) MONO 1 KHz / Dev.40KHz 53.3% IB MONO 1KHz / Dev. 75KHz 100% BK	98 MHz (P2)	L201	Distortion level Minimum at TAPE-OUT

### 2. FM Muting Level Adjustment

Turn variable resistor R212 and stop at position "TUNED" is not shown (not indicated), then again turn the variable resistor R212 to the opposite revolution and stop at a position "TUNED" is shown.

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to FM antenna terminal. (75 ohm)	98 MHz	10 uV/m (20 dB/m) MONO 1 KHz / Dev.40KHz 53.3% IB MONO 1KHz / Dev. 75KHz 100% BK	98 MHz (P2)	R212	"TUNED" indicate on FLD
2			Over mentioned level +3 dB	AUTO SCAN	Only Confirm	"TUNED" indicate on FLD

### 3. FM STEREO Distortion Adjustment

Adjust the L channel with the RF signal modulated only L channel first and confirm the R channel with the RF signal modulated only R channel.

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to FM antenna terminal. (75 ohm)	98 MHz	500 uV/m (54 dB/m) L+R 1KHz / Dev. 40KHz 53.3% PILOT 19KHz / Dev. 6KHz 8% IB	98 MHz (P2)	IF COIL in FRONT END	Distortion level Minimum at TAPE-OUT
2			L+R 1KHz / Dev. 67.5KHz 90% PILOT 19KHz / Dev. 6.75KHz 9% BK		R218	Distortion level Minimum at TAPE-OUT

REMARK: Adjustment with R128 is not necessary when the distortion level is less than 0.5% with adjusting IF coil.

### 4. FM STEREO Separation Adjustment

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to FM antenna terminal. (75 ohm)	98 MHz	same specification as FM STEREO distortion adjustment. Input only L channel.	98 MHz (P2)	R211	Output level Minimum at TAPE-OUT channel R
2		98 MHz	same specification as FM STEREO distortion adjustment. Input only R channel.	98 MHz (P2)	R211	Output level Similar as Rch at TAPE-OUT channel L

## SERVICE PROCEDURE

### 1. Tracking point memory

This service procedure can be used for measurement of the tuner circuit.

With the POWER ON, press the "PRESET UP" button while pressing the "MEMO" button for at least 3 seconds or more. FLD will display "TRACKING". Frequencies will be memorized as follows :

	VERSION	P1	P2	P3	P4
FM	BK IB	90.0	98.0	106.0	87.5

	SCAN STEP	P5	P6	P7	P8	P9	P10	P11	P12~ P30
MW	10 KHz	600.0	1000.0	1400.0	520.0	←	←	←	←
	9 KHz	603.0	999.0	1404.0	531.0	←	←	←	←
	LW	↑	↑	↑	171.0	207.0	270.0	152.0	531.0

### 2. FLD segment illumination

This service procedure will illuminate all segments by the following steps :

With the POWER ON, press the "FM/AM(TUNER)" button while pressing the "MEMO" button for at least 3 seconds or more. This procedure takes 1 minute and 40 seconds to finish; at this point the procedure is complete.

- All segments will be illuminated for 5 seconds.
- At the grid "1G", segments are illuminated in the following order :

① KHz → ② MHz → ③ R → ④ PEAK → ⑤ L → ⑥ MULTI → ⑦ MONO → ⑧ MATRIX →  
⑨ HALL → ⑩ P-SCAN → ⑪ TAPE → ⑫ COPY → ⑬ VCR1 → ⑭ SLEEP → ⑮ DISP → ⑯ TX

- At the grid "2G", to "11G", each segment is illuminated individually.
- At the grid "12G", segments are illuminated in the following order:

① VISUAL → ② SIGNAL LEVEL → ③ CH → ④ SIGNAL BAR (LEFT SIDE) →  
⑤ SIGNAL BAR (2nd LEFT) → ⑥ SIGNAL BAR (CENTER) → ⑦ SIGNAL BAR (2nd RIGHT) →  
⑧ SIGNAL BAR (RIGHT SIDE) → ⑨ STEREO → ⑩ THX CINEMA → ⑪ PRO.LOGIC →  
⑫ MOVIE → ⑬ AUTO MEMO → ⑭ 3.LOGIC → ⑮ SIMUL'D → ⑯ SURROUND

### 3. Selector check mode

This service program automatically operates input selector and surround mode by the following procedure. This service program continually repeats until power is shut off.

When the POWER ON, press the "SURROUND MODE+" button while pressing the "MEMO" button 3 seconds or more.

STEP	INPUT SELECTOR	DSP MODE	FM MODE BAND	FREQUENCY	COPY SWITCH		NOTES
					TAPE	VCR1	
1	FM	STEREO	AUTO	98.0	SOURCE	SOURCE	
2	FM	STEREO	MONO	LAST	↑	↑	
3	CD	THX	AUTO	LAST	↑	↑	
4	TAPE1	P-LOGIC	AUTO	LAST	TUNER	SOURCE	TUNER-ON
5	TAPE2	MOVIE	AUTO	LAST	SOURCE	TV	
6	TV	3 CH	AUTO	LAST	↑	SOURCE	
7	TV	HALL	AUTO	LAST	CD	LD	
8	LD	MATRIX	AUTO	LAST	TAPE2	TV	
9	VCR1	MONO	AM/MW	1000/999	TUNER	VCR2	
10	VCR2	STEREO	AUTO	98.0	TUNER	SOURCE	TUNER-ON
11	AUX	THX	AUTO	LAST	SOURCE	AUX	

### 4. All clear

This service program can clear all memorized operations and functions.

When the POWER ON, press the "CLEAR" button while pressing the "MEMO" button 3 seconds or more. FLD shows "CLEAR MEMO" and power will be OFF.



## TEST EQUIPMENT REQUIRED

- 1) AM/FM Signal Generator
- 2) Video Signal Generator
- 3) Digital Multimeter
- 4) Distortion level meter

## ALIGNMENT PROCEDURES

### 1. FM MONO. Distortion Adjustment

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to FM antenna terminal. (75 ohm)	98 MHz	500 uV/m (54 dB/m) MONO 1 KHz / Dev.40KHz 53.3% <b>IB</b> MONO 1KHz / Dev. 75KHz 100% <b>BK</b>	98 MHz (P2)	L201	Distortion level <b>Minimum</b> at TAPE-OUT

### 2. FM Muting Level Adjustment

Turn variable resistor **R212** and stop at position "**TUNED**" is not shown (not indicated), then again turn the variable resistor **R212** to the opposite revolution and stop at a position "**TUNED**" is shown.

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to FM antenna terminal. (75 ohm)	98 MHz	10 uV/m (20 dB/m) MONO 1 KHz / Dev.40KHz 53.3% <b>IB</b> MONO 1KHz / Dev. 75KHz 100% <b>BK</b>	98 MHz (P2)	R212	"TUNED" indicate on FLD
2			Over mentioned level <b>+3 dB</b>			AUTO SCAN

### 3. FM STEREO Distortion Adjustment

Adjust the **L channel** with the RF signal modulated only **L channel** first and confirm the **R channel** with the RF signal modulated only **R channel**.

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to FM antenna terminal. (75 ohm)	98 MHz	500 uV/m (54 dB/m) L+R 1KHz / Dev. 40KHz 53.3% PILOT 19KHz / Dev. 6KHz 8% <b>IB</b>	98 MHz (P2)	IF COIL in FRONT END	Distortion level <b>Minimum</b> at TAPE-OUT
2			L+R 1KHz / Dev. 67.5KHz 90% PILOT 19KHz / Dev. 6.75KHz 9% <b>BK</b>			R218

**REMARK:** Adjustment with **R128** is not necessary when the distortion level is less than 0.5% with adjusting IF coil.

### 4. FM STEREO Separation Adjustment

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to FM antenna terminal. (75 ohm)	98 MHz	same specification as <b>FM STEREO distortion adjustment.</b> Input only L channel.	98 MHz (P2)	R211	Output level <b>Minimum</b> at TAPE-OUT channel <b>R</b>
2		98 MHz	same specification as <b>FM STEREO distortion adjustment.</b> Input only R channel.	98 MHz (P2)	R211	Output level <b>Similar</b> as Rch at TAPE-OUT channel <b>L</b>

5. AM IF Adjustment

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to transmission *loop antenna. (*:Standard required loop)	999 KHz IB 1000 KHz BK	300 uV/m (50 dB/m)	Tuning point	LA06	Output level (L or R) <b>Maximum</b> at TAPE-OUT

This adjustment is normally not necessary, because the coil LA06 is preset by the original supplier.

6. AM Tracking Adjustment (MW)

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to transmission *loop antenna. (*:Standard required loop)	603 KHz IB 600 KHz BK	Level 300 - 400 uV/m Mod. 400 Hz 30%	603 KHz IB 600 KHz BK	LA01	Output level (L or R) <b>Maximum</b> at TAPE-OUT
2		1404 KHz IB 1400 KHz BK	Level 300 - 400 uV/m Mod. 400 Hz 30%	1404 KHz IB 1400 KHz BK	CA01	Output level (L or R) <b>Maximum</b> at TAPE-OUT
3	Repeat step 1 and 2 until level is at maximum reading.					

7. AM Tracking Adjustment (LW)

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to transmission *loop antenna. (*:Standard required loop)	171 KHz	Level 300 - 400 uV/m Mod. 400 Hz 30%	171 KHz	LA03	Output level (L or R) <b>Maximum</b> at TAPE-OUT
2		270 KHz	Level 300 - 400 uV/m Mod. 400 Hz 30%	270 KHz	CA08	Output level (L or R) <b>Maximum</b> at TAPE-OUT
3	Repeat step 1 and 2 until level is at maximum reading.					

8. AM auto stop Adjustment

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to transmission *loop antenna. (*:Standard required loop)	999 KHz IB 1000 KHz BK	500 uV/m (54 dB/m)	999 KHz IB 1000 KHz BK	RA11	"TUNED" indicate on FLD
2			1000 uV/m (60 dB/m)	AUTO SCAN	Only Confirm	"TUNED" indicate on FLD

REMARK: This adjustment is related to the FM muting Level Adjustment. The FM muting Level re-adjustment is necessary after this adjustment.

9. On Screen Display VCO Adjustment

Step	Input Signal Source and Connection	Measuring position	Measuring equipment	Input selector	Adjustment Point	Adjustment Value
1	Color bar or other standard video signal. Video signal generator output to LD video input.	IC QX60 26pin and GND.	DC voltmeter (Impedance > 10K ohm/V)	LD	CX67	2.5V +0.1V

REMARK: Connect the TV monitor to the monitor output terminal of the product.

10. Main amp idling current adjustment

- 1) With the power OFF, set semi – fixed resistor R743 (Lch), R744 (Rch), R786 (Center ch) on the PC board (PV04) to the center position.
- 2) Connect a digital voltmeter, set for the DC range, on the emitter resistor [R759 (Lch), R760 (Rch), R794 (Center ch)] on the PC board (PV04).
- 3) After the above, adjust the idling current as follows: Turn the power ON and adjust semi – fixed resistor R743 (Lch), R744 (Rch), R786 (Center ch) while observing the digital multimeter indication. The target value is 7.2 mV (20 mA).

All values are with no load on speaker terminals, volume set to minimum and no input with the unit switched to the CD position. Always allow the amplifier to stabilize for 10 minutes or longer prior to adjusting idle current.

11. Main amp DC offset adjustment

- 1) With the power OFF, connect a digital voltmeter, set for the DC range, to the speaker terminal.
- 2) After the above, adjust the DC offset as follows: Turn the power ON and adjust RN63 (Lch), RN64 (Rch), RN70 (Center ch) so that the output is ±20 mV.

5. AM IF Adjustment

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to transmission *loop antenna. (*:Standard required loop)	999 KHz IB 1000 KHz BK	300 uV/m (50 dB/m)	Tuning point	LA06	Output level (L or R) Maximum at TAPE-OUT

This adjustment is normally not necessary, because the coil LA06 is preset by the original supplier.

6. AM Tracking Adjustment (MW)

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to transmission *loop antenna. (*:Standard required loop)	603 KHz IB 600 KHz BK	Level 300 - 400 uV/m Mod. 400 Hz 30%	603 KHz IB 600 KHz BK	LA01	Output level (L or R) Maximum at TAPE-OUT
2		1404 KHz IB 1400 KHz BK	Level 300 - 400 uV/m Mod. 400 Hz 30%	1404 KHz IB 1400 KHz BK	CA01	Output level (L or R) Maximum at TAPE-OUT
3	Repeat step 1 and 2 until level is at maximum reading.					

7. AM Tracking Adjustment (LW)

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to transmission *loop antenna. (*:Standard required loop)	171 KHz	Level 300 - 400 uV/m Mod. 400 Hz 30%	171 KHz	LA03	Output level (L or R) Maximum at TAPE-OUT
2		270 KHz	Level 300 - 400 uV/m Mod. 400 Hz 30%	270 KHz	CA08	Output level (L or R) Maximum at TAPE-OUT
3	Repeat step 1 and 2 until level is at maximum reading.					

8. AM auto stop Adjustment

Step	Input Signal Source Connection	Signal Frequency	Source Signal Output Level and Modulation	Reception Frequency	Adjustment Point	Adjustment Value
1	Signal generator output to transmission *loop antenna. (*:Standard required loop)	999 KHz IB 1000 KHz BK	500 uV/m (54 dB/m)	999 KHz IB 1000 KHz BK	RA11	"TUNED" indicate on FLD
2			1000 uV/m (60 dB/m)	AUTO SCAN	Only Confirm	"TUNED" indicate on FLD

REMARK: This adjustment is related to the FM muting Level Adjustment. The FM muting Level re-adjustment is necessary after this adjustment.

9. On Screen Display VCO Adjustment

Step	Input Signal Source and Connection	Measuring position	Measuring equipment	Input selector	Adjustment Point	Adjustment Value
1	Color bar or other standard video signal. Video signal generator output to LD video input.	IC QX60 26pin and GND.	DC voltmeter (Impedance > 10K ohm/V)	LD	CX67	2.5V +0.1V

REMARK: Connect the TV monitor to the monitor output terminal of the product.

#### 10. Main amp idling current adjustment

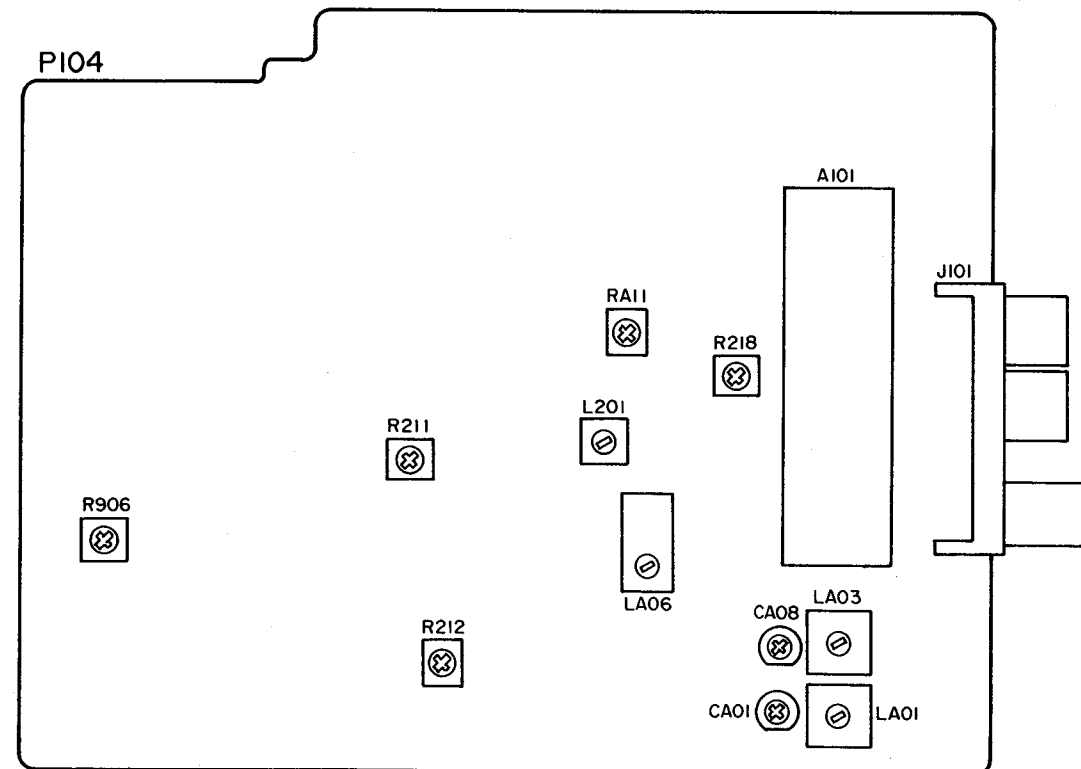
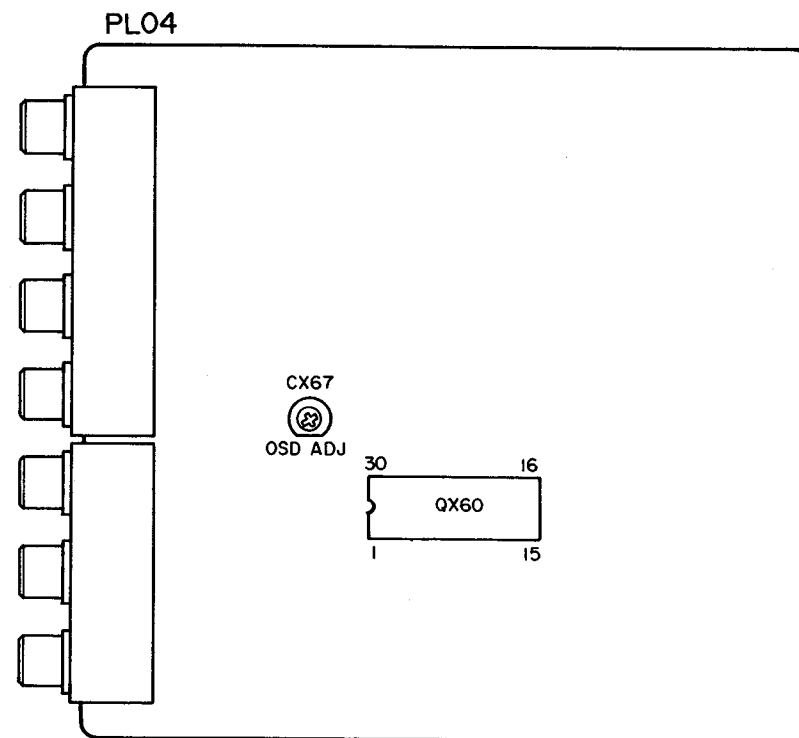
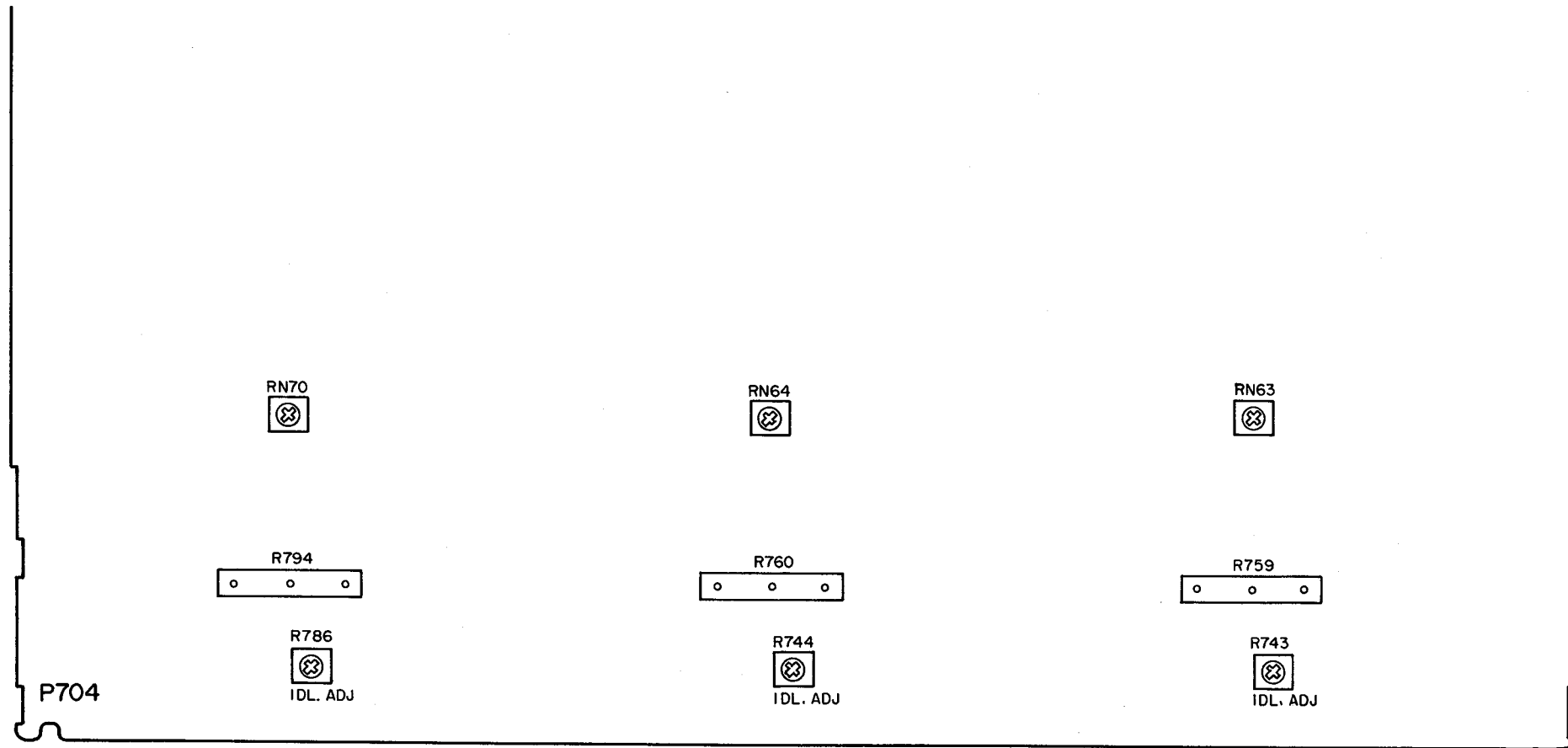
- 1) With the power OFF, set semi – fixed resistor R743 (Lch), R744 (Rch), R786 (Center ch) on the PC board (PV04) to the center position.
- 2) Connect a digital voltmeter, set for the DC range, on the emitter resistor [R759 (Lch), R760 (Rch), R794 (Center ch)] on the PC board (PV04).
- 3) After the above, adjust the idling current as follows:  
Turn the power ON and adjust semi – fixed resistor R743 (Lch), R744 (Rch), R786 (Center ch) while observing the digital multimeter indication.  
The target value is 7.2 mV (20 mA).

All values are with no load on speaker terminals, volume set to minimum and no input with the unit switched to the CD position. Always allow the amplifier to stabilize for 10 minutes or longer prior to adjusting idle current.

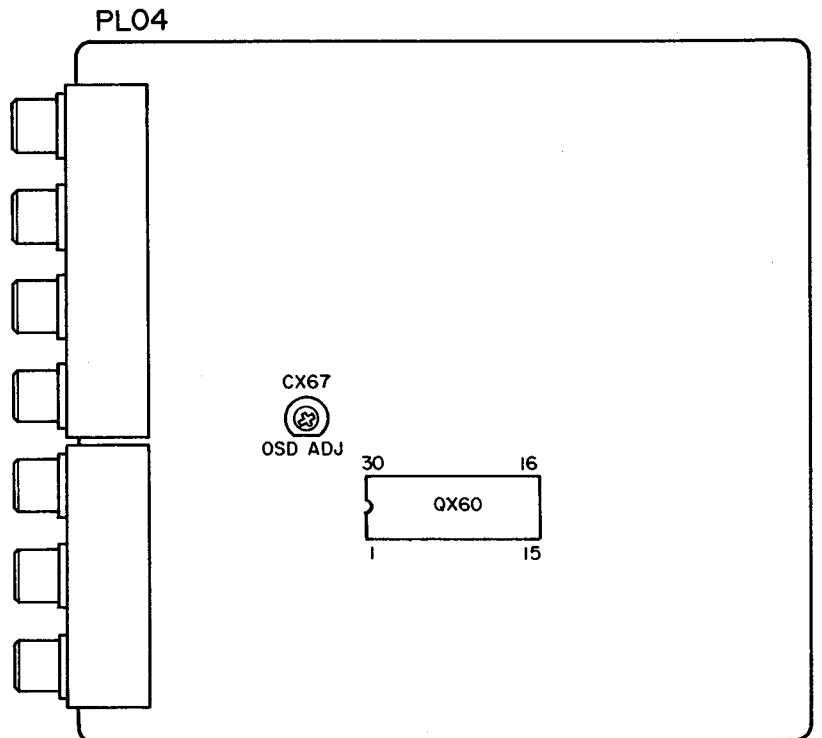
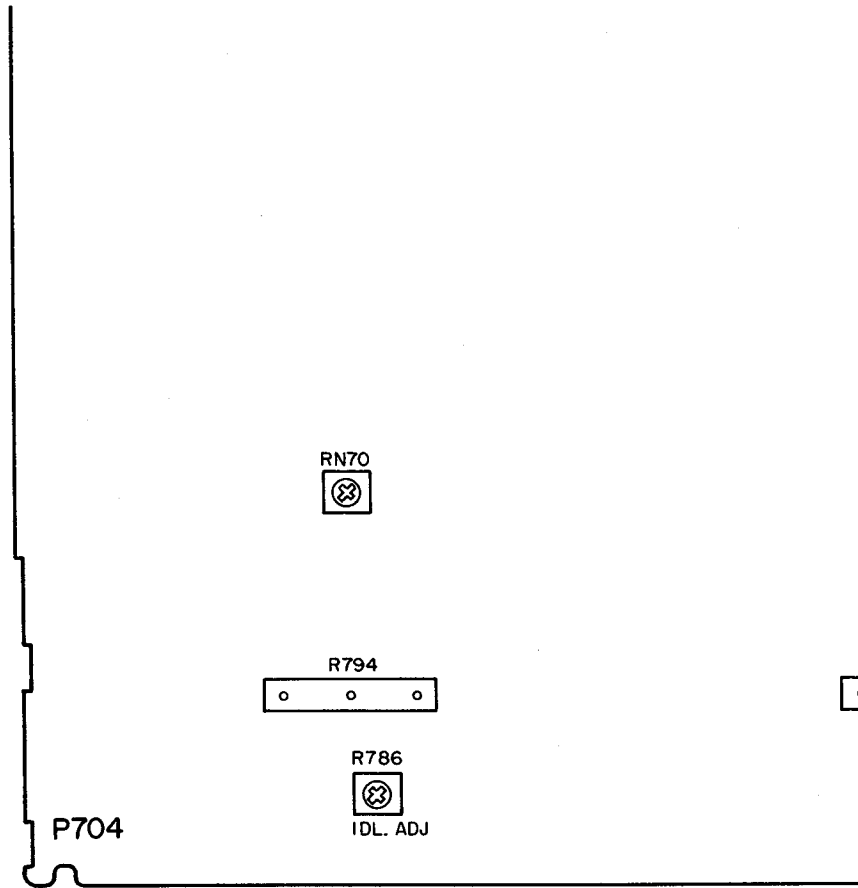
#### 11. Main amp DC offset adjustment

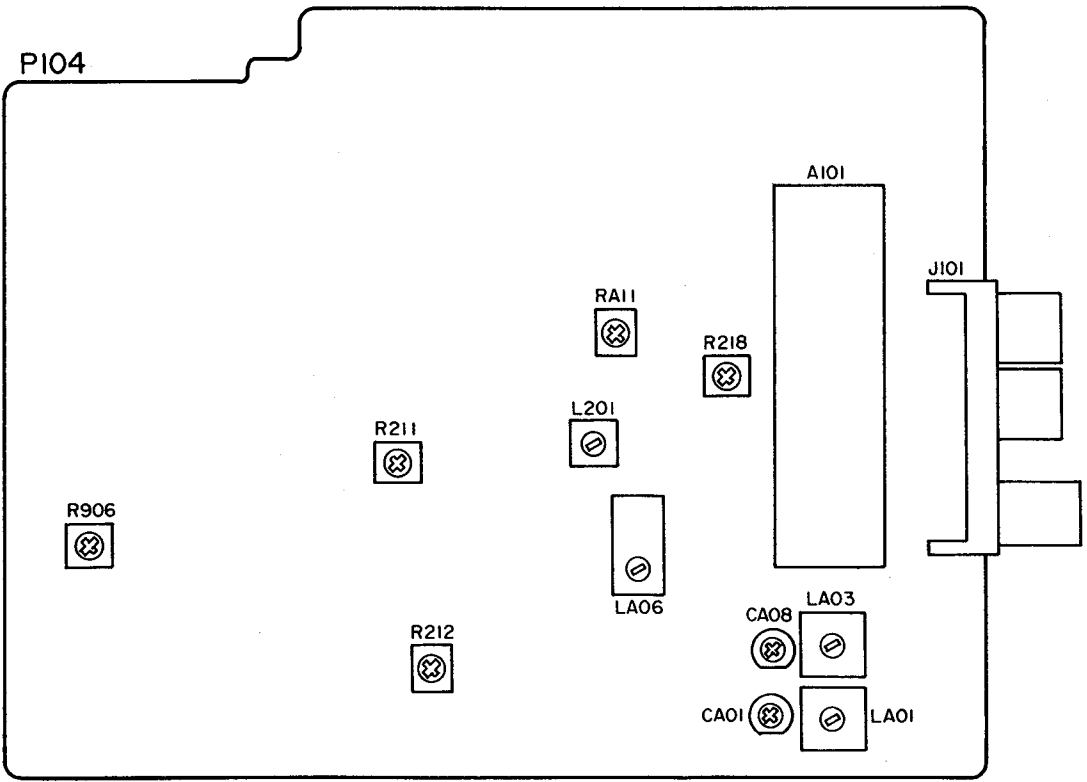
- 1) With the power OFF, connect a digital voltmeter, set for the DC range, to the speaker terminal.
- 2) After the above, adjust the DC offset as follows:  
Turn the power ON and adjust RN63 (Lch), RN64 (Rch), RN70 (Center ch) so that the output is  $\pm 20$  mV.

ALIGNMENT AND TEST POINTS



# ALIGNMENT AND TEST POINTS



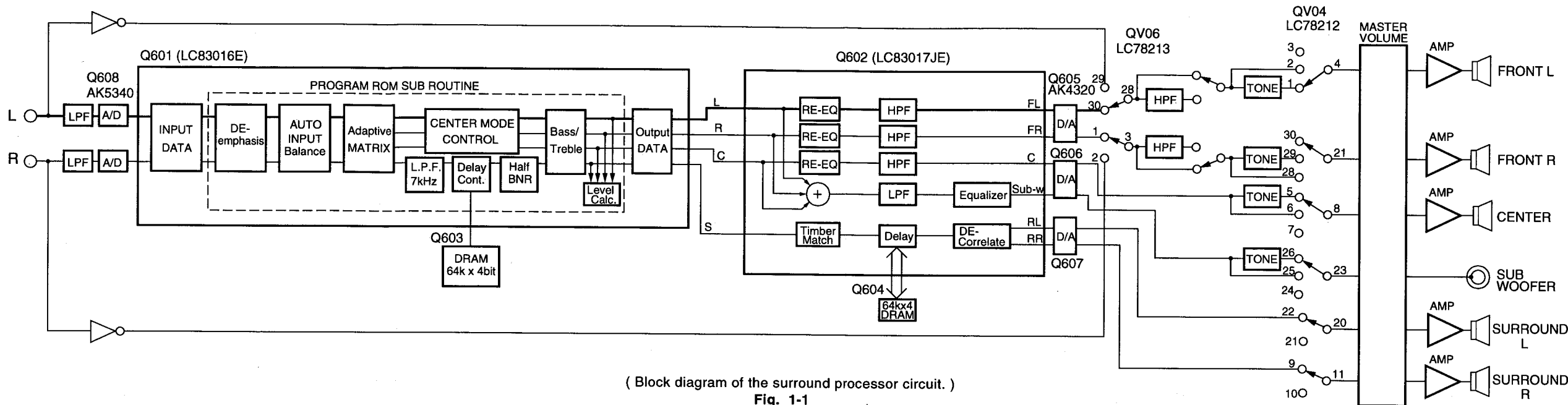


**CIRCUIT DESCRIPTION**

**1. SURROUND CIRCUIT**

This model incorporates a surround processor circuit that provides 6 types of the surround sound. Fig. 1-1 is a block diagram of the surround processor circuit.

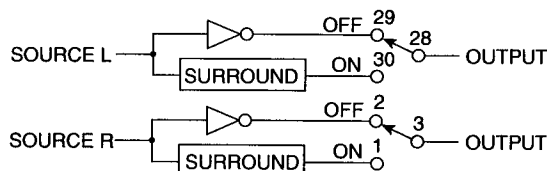
The microprocessor transfers the data to the parameter control ( Serial data, Serial clock, Request Ready ) to operate the circuits in each mode.



**(1) Stereo**

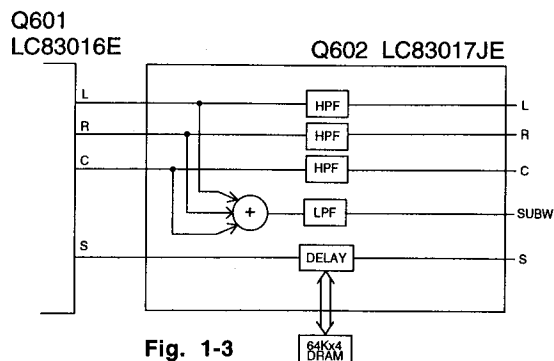
Set to this mode to listen to ordinary stereo sound. The rear L/R and center outputs will be muted.

Q706 LC78213



**(2) THX Cinema**

The IC Q602 (LC83017E) is a THX Cinema decoder IC. IC Q602 (LC83017E) divides the 4 channel signals (Left, Right, Center and Surround) sourcing from IC Q601 (LC83016E) into 6 channel signals (Left, Right, Center, Surround Left, Surround Right and Sub Woofer).



**(3) Dolby pro logic**

Q601 ( LC8316E ) is a Dolby pro logic decoder IC. When an audio signal recorded using the Dolby pro logic system is sent to this IC, the left, right, center and surround components are separated. The surround signal component is delayed by the digital delay circuit by 15-30 mS and is sent to the modified B-type decoder Q601 where noise reduction processing is performed.

**(4) Movie, 3CH Logic Hall, Matrix**

The Movie mode provides the feeling of presence you get from a 35-mm movie in a movie theater. 3CH Logic mode is used to improve the sound field center by applying directivity enhancement provided by the Dolby Pro Logic Surround decoder. Hall mode provides a sound-field effect of medium-sized circular hall with rich reverberations. Matrix mode is effective for playing sports broadcasts or outdoor live concerts. It provides a surround mode with a wide surround effect. All the connections of the circuits are the same in these modes. Q601, controlled by the microprocessor, processes the audio signals to produce various sound effects and creates surround components to use them as signals to drive the surround channel.

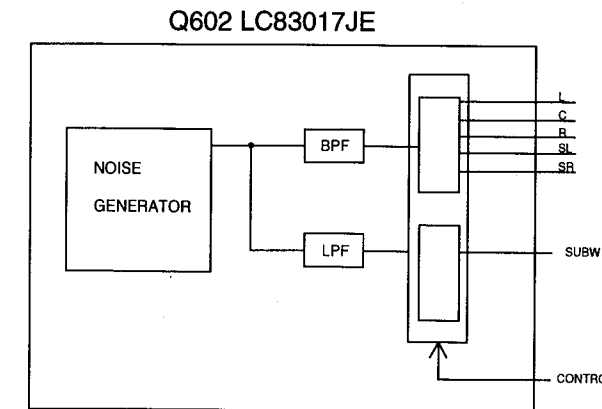
**2. CENTER MODE**

With Dolby pro logic, three center modes depend on the use of a center speaker as follows :

<b>NORMAL</b>	: Bass frequencies are sent only to the Left and Right Front channels. Select this mode when the Center Speaker is smaller than the Left and Right speakers.
<b>WIDE</b>	: Bass frequencies are sent to the Left, Center and Right speakers. Select this mode when the Center speaker is approximately the same size as the Left and Right speakers.
<b>PHANTOM</b>	: Center channel information is sent to the Left and Right speakers. Select this mode when you do not have a center channel speaker.

**3. TEST TONE GENERATOR**

The test tone generator generates a test tone ( noise ) to check the balance of sound output from each speaker in the THX CINEMA MODE, ( This circuit is produced under license of Lucasfilm Ltd. ) and the Dolby pro logic mode. ( This circuit is produced under license of the Dolby Laboratories Licensing Corp. )



( Flow of noise signals within the system. )

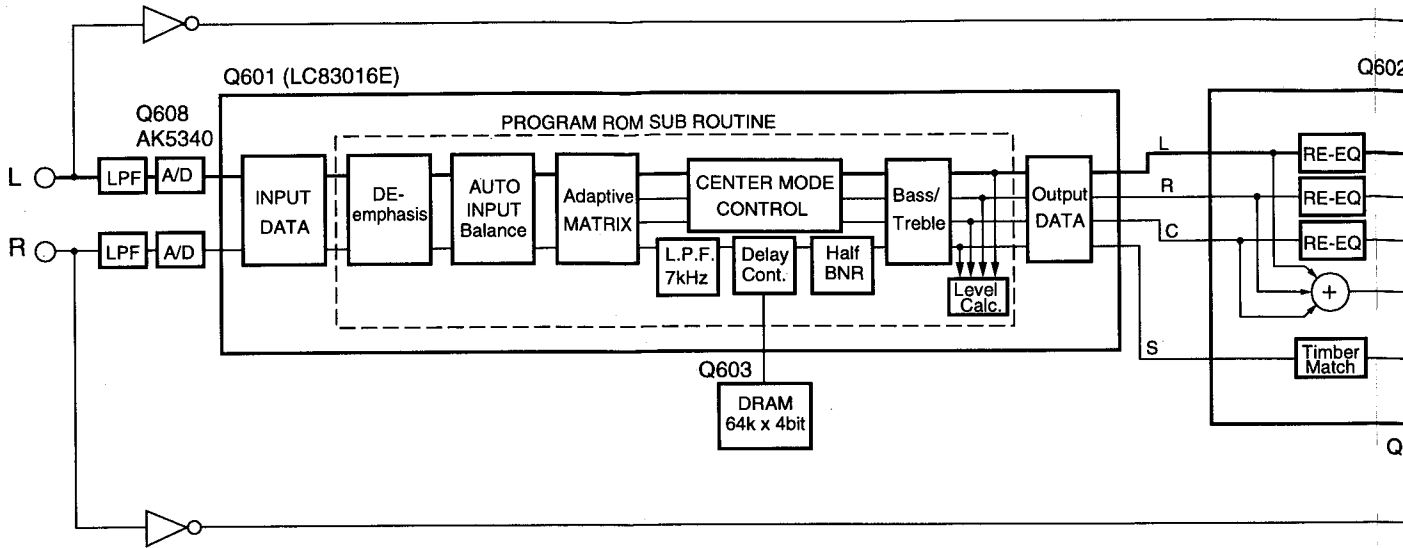


**CIRCUIT DESCRIPTION**

**1. SURROUND CIRCUIT**

This model incorporates a surround processor circuit that provides 6 types of the surround sound. Fig. 1-1 is a block diagram of the surround processor circuit.

The microprocessor transfers the data to the parameter control ( Serial data, Serial clock, Request Ready ) to operate the circuits in each mode.



( Block diagram of the surround processor circuit )  
Fig. 1-1

**(1) Stereo**

Set to this mode to listen to ordinary stereo sound. The rear L/R and center outputs will be muted.

Q706 LC78213

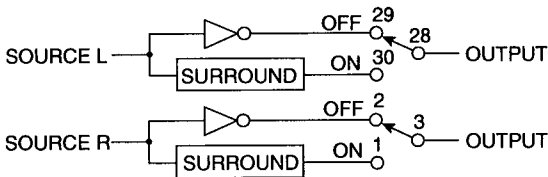


Fig. 1-2

**(2) THX Cinema**

The IC Q602 (LC83017E) is a THX Cinema decoder IC. IC Q602 (LC83017E) divides the 4 channel signals (Left, Right, Center and Surround) sourcing from IC Q601 (LC83016E) into 6 channel signals (Left, Right, Center, Surround Left, Surround Right and Sub Woofer).

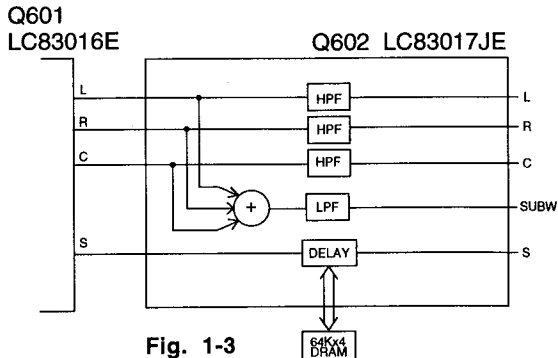


Fig. 1-3

**(3) Dolby pro logic**

Q601 ( LC8316E ) is a Dolby pro logic decoder IC. When an audio signal recorded using the Dolby pro logic system is sent to this IC, the left, right, center and surround components are separated. The surround signal component is delayed by the digital delay circuit by 15-30 mS and is sent to the modified B-type decoder Q601 where noise reduction processing is performed.

**(4) Movie, 3CH Logic Hall, Matrix**

The Movie mode provides the feeling of presence you get from a 35-mm movie in a movie theater. 3CH Logic mode is used to improve the sound field center by applying directivity enhancement provided by the Dolby Pro Logic Surround decoder. Hall mode provides a sound-field effect of medium-sized circular hall with rich reverberations. Matrix mode is effective for playing sports broadcasts or outdoor live concerts. It provides a surround effect with a wide surround effect. All the connections of the circuits are the same in these modes. Q601, controlled by the microprocessor, processes the audio signals to produce various sound effects and creates surround components to use them as signals to drive the surround channel.

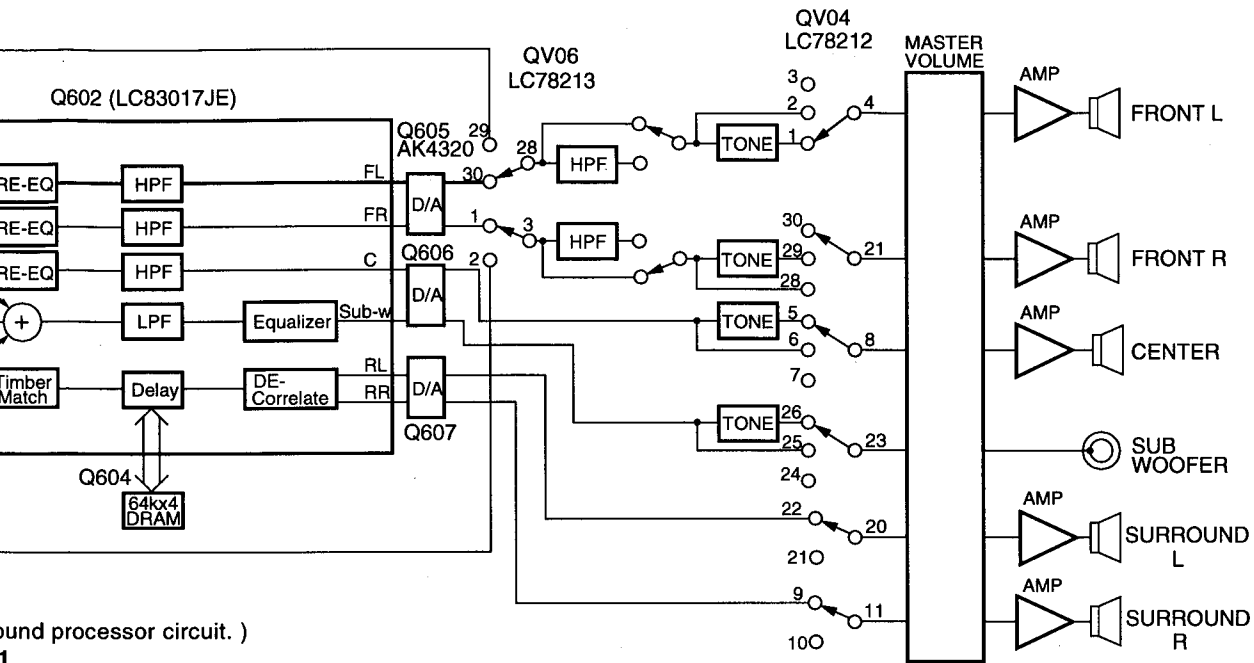
**2. CENTER**

With Do  
use of a

NORM

WIDE

PHAN



ound processor circuit. )

1

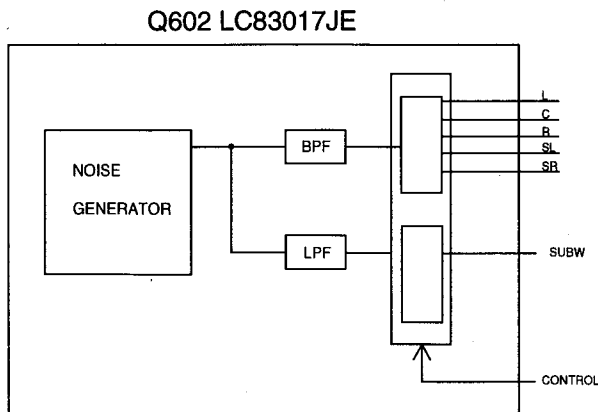
### 2. CENTER MODE

With Dolby pro logic, three center modes depend on the use of a center speaker as follows :

<b>NORMAL</b>	: Bass frequencies are sent only to the Left and Right Front channels. Select this mode when the Center Speaker is smaller than the Left and Right speakers.
<b>WIDE</b>	: Bass frequencies are sent to the Left, Center and Right speakers. Select this mode when the Center speaker is approximately the same size as the Left and Right speakers.
<b>PHANTOM</b>	: Center channel information is sent to the Left and Right speakers. Select this mode when you do not have a center channel speaker.

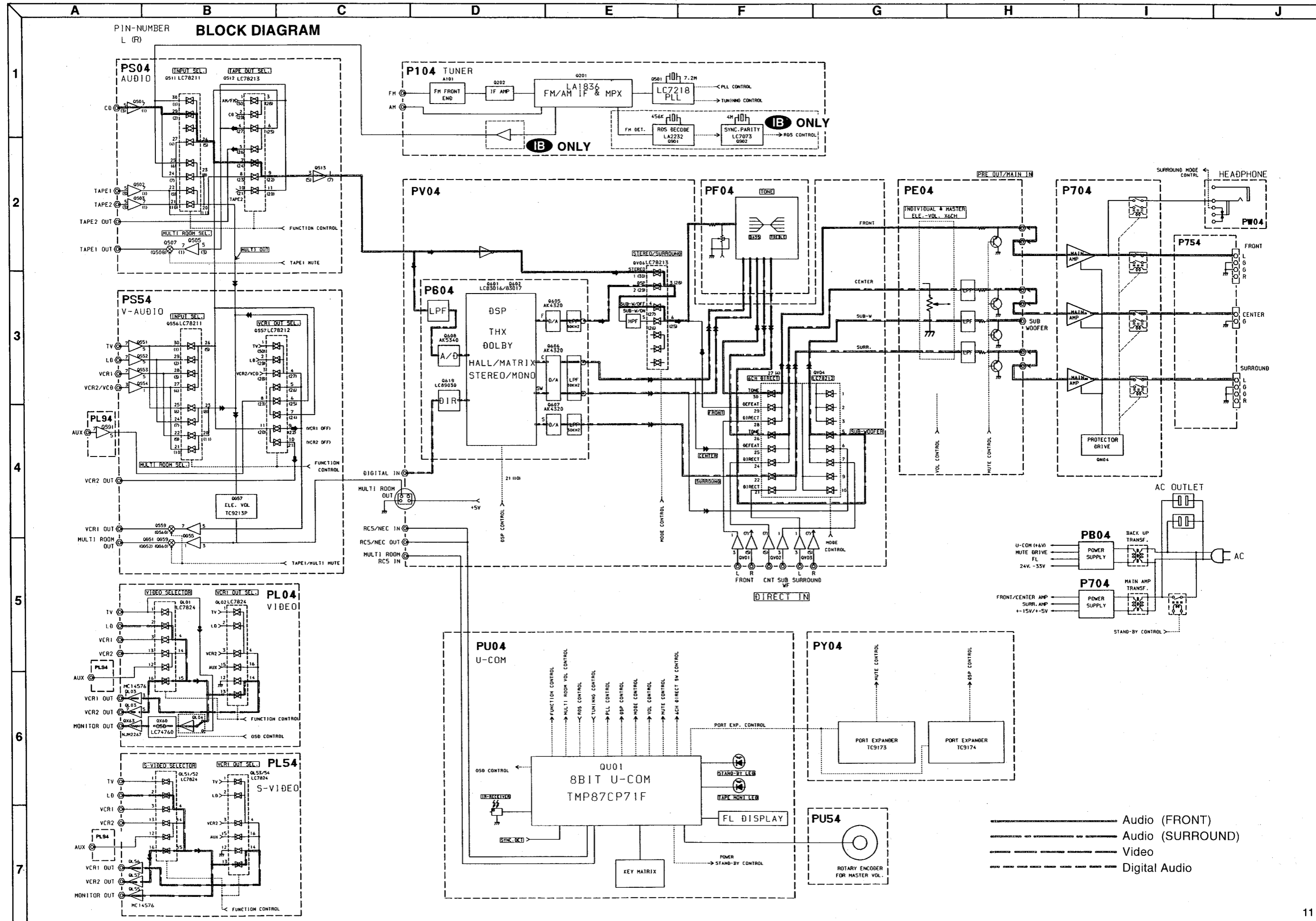
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The test tone generator generates a test tone ( noise ) to check the balance of sound output from each speaker in the THX CINEMA MODE, ( This circuit is produced under license of Lucasfilm Ltd. ) and the Dolby pro logic mode. ( This circuit is produced under license of the Dolby Laboratories Licensing Corp. )



( Flow of noise signals within the system. )

Fig. 3

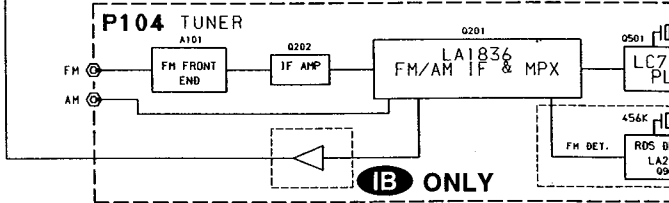
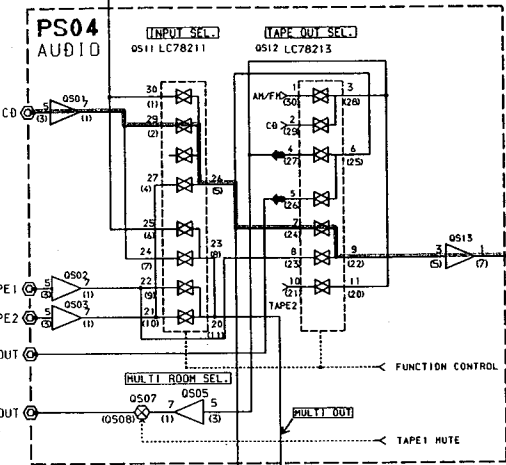


——— Audio (FRONT)  
 - - - - - Audio (SURROUND)  
 . . . . . Video  
 - - - - - Digital Audio

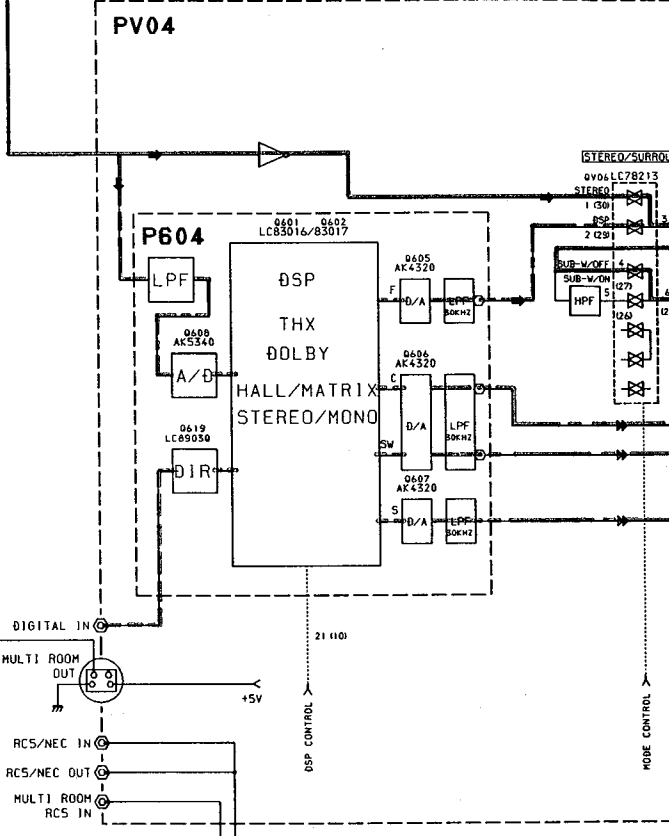
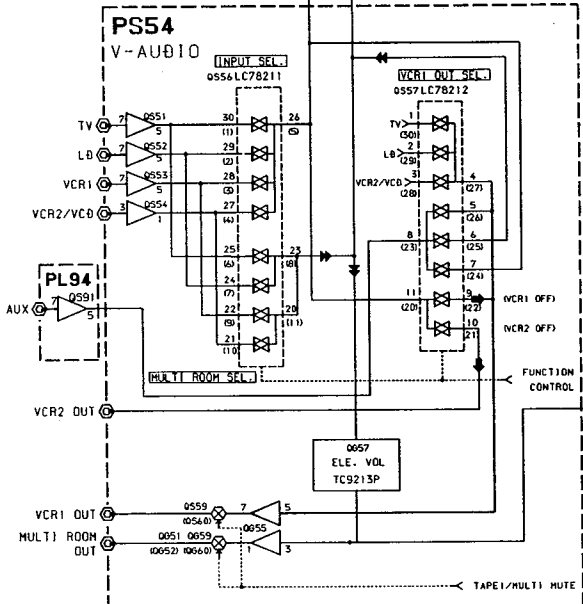
PIN-NUMBER  
L (R)

**BLOCK DIAGRAM**

1



2

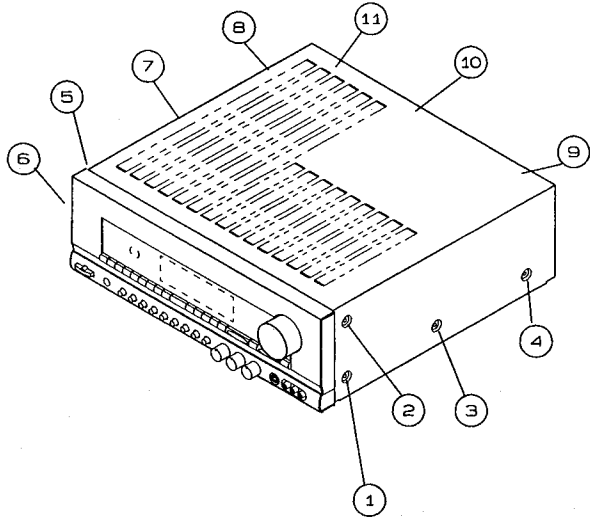




**DISASSEMBLY PROCEDURES**

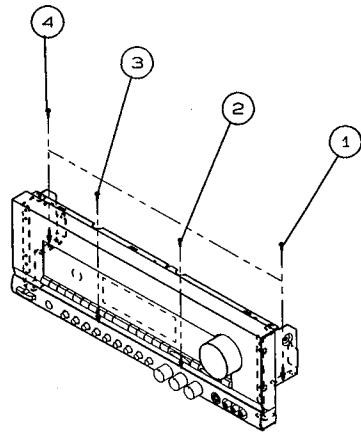
**1. Removing the top Cover**

Remove the screws ① ~ ⑪



**2. Removing the front panel**

Remove the screws ① ~ ④



**MAIN PCB BLOCK (P704)**

1. Remove all of the screws on REAR PANEL. (900G)
2. Remove the REAR PANEL.
3. Remove the SPEAKER TERMINAL PCB. (P754)
4. Remove the screw x4 for MAIN PCB mounting.
5. Remove the screw x2 for both sides GIRD PCB of main heatsink.
6. Remove the both sides GIRD PCB.
7. Remove the screw x4 for MAIN PCB BLOCK mounting.
8. Remove the MAIN PCB BLOCK.

**POWER SUPPLY PCB (PB04)**

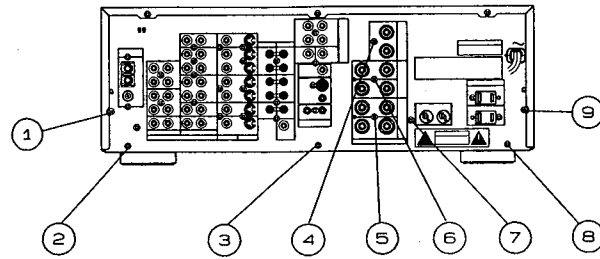
1. Remove the screw x2 for TRANSF mounting.
2. Remove the screw x2 for POWER SUPPLY PCB mounting.
3. Remove the POWER SUPPLY PCB.

**MAIN VOL PCB (PU54)**

1. Remove the MAIN VOL KNOB. (035B)
2. Remove the MAIN VOL NUT.
3. Pull out the MAIN VOL PCB.

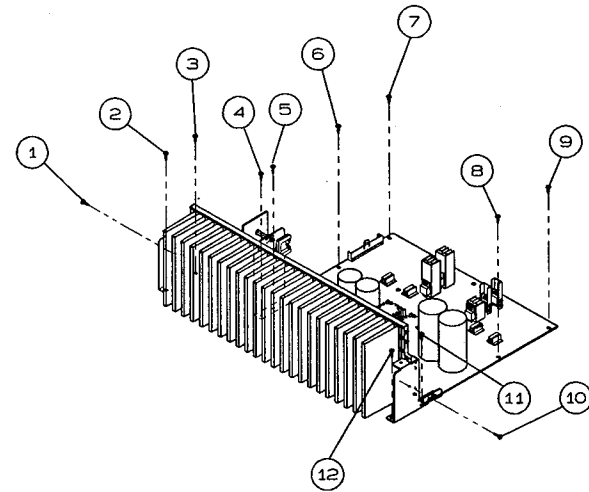
**3. Removing the rear panel**

Remove the screws ① ~ ⑨



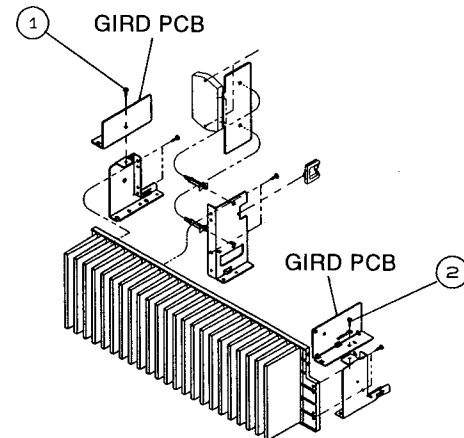
**4. Removing the main PCB Block**

Remove the screws ① ~ ⑫



**5. Removing the shield plate**

Remove the screws ① ②



**TONE VOL PCB (PF04)**

1. Remove the three TONE VOL KNOBS. (036B)
2. Remove the three TONE VOL NUTS.
3. Pull out the TONE VOL PCB.

**FRONT FUNCTION PCB (PU04)**

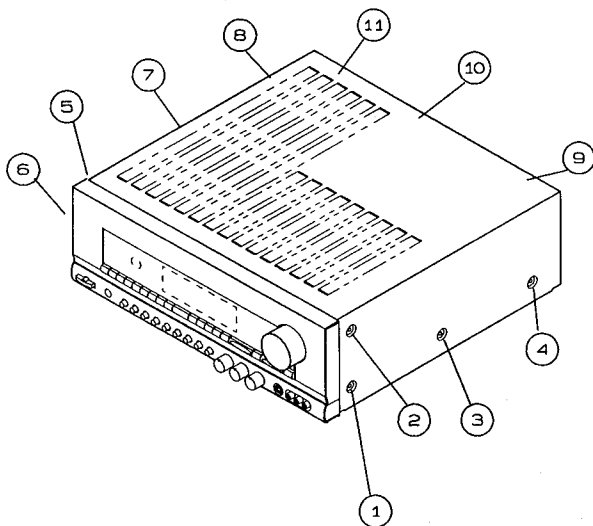
1. Remove the screw x4 for FRONT PANEL ASSY mounting.
2. Lay down the FRONT PANEL ASSY.
3. Remove the screw x16 for FRONT FUNCTION PCB.
4. Remove the FRONT FUNCTION PCB.

**GENERAL UNIT PARTS LIST**

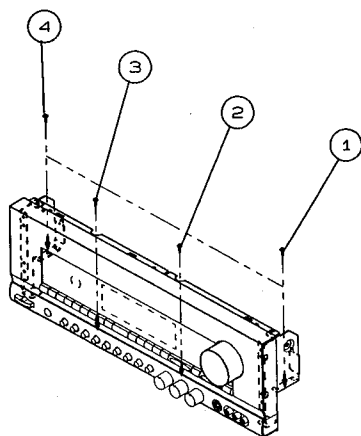
Ref. No.	Part. No.	Description	Q'TY	Ref. No.	Part. No.	Description	Q'TY
001B	260J248020	FRONT PANEL (IB)	1	▲L001	TS60513020	POWER TRANSF. 230V (IB)	1
001B	260J248010	FRONT PANEL (BK)	1	▲L001	TS60513010	POWER TRANSF. 120V (BK)	1
005B	260J105010	CHASSIS, FRONT	1	L002	FC50380010	FERRITE CORE (IB)	1
008B	260J158010	WINDOW	1	Y001	YQ01000080	SHORTING PLUG	1
010B	260J270010	BUTTON, FUNCTION	1	Y002	YQ01000080	SHORTING PLUG	1
013B	260J270510	BUTTON KIT, POWER	1	Y003	YQ01000080	SHORTING PLUG	1
014B	260J270040	BUTTON, POWER	1	Y004	YQ01000080	SHORTING PLUG	1
015B	260J355020	LENS, POWER	1	Y005	YQ01000080	SHORTING PLUG	1
017B	260J270020	BUTTON, MODE (IB)	1	▲W001	YC01800790	A.C POWER CORD (IB)	1
017B	260J270120	BUTTON, MODE (BK)	1	▲W001	YC01800780	A.C POWER CORD (BK)	1
019B	183J271020	HOLDER, FL	1				
020B	056J122010	STICKER, FL	1	5110	51100306M0	B. H. M SCREW 5110 ø3x6 (M)	5
021B	4220005040	CLAMPER	1	5110	51100308A0	B. H. M SCREW 5110 ø3x8 (A)	4
023B	183J010010	SCREW, PHONE PCB	1	5126	51260308M0	B.T.SCREW(W/W) 5126 ø3x8 (M)	8
025B	264J160040	BRACKET, LEFT	1	5126	51260308U0	B.T.SCREW(W/W) 5126 ø3x8 (U)	11
027B	264J160050	BRACKET, RIGHT	1	5128	51280308M0	B. H. TAP. SCREW 5128 ø3x8 (M)	99
035B	063J154180	KNOB, MAIN VOL	1	5128	51280308U0	B. H. TAP. SCREW 5128 ø3x8 (U)	3
036B	042J154020	KNOB, TONE VOL	3	5128	51280325B0	B. H. TAP. SCREW 5128 ø3x25 (B)	2
001D	264J257110	LID, TOP COVER	1	5128	51280410U0	B. H. TAP. SCREW 5128 ø4x10 (U)	1
001G	264J105500	CHASSIS ASSEMBLY, MAIN	1	5128	51480310A0	F. WASHER SCREW 5148 ø3x10(A)	9
002G	264J105010	CHASSIS, MAIN	1	5128	51480315M0	F. WASHER SCREW 5148 ø3x15(M)	2
003G	030J114010	STOPPER	1	5128	52040408M0	H. HEAD BOLT 5204 ø4x8 (M)	4
006G	227J056010	BUFFER	4				
007G	183J057010	LEG, FRONT	2				
008G	183J057110	LEG, REAR	2				
010G	264J160010	BRACKET, TRANSF.	1				
013G	260J271010	HOLDER, SUB TRANSF.	1				
016G	2218271020	HOLDER, PCB	7				
017G	054J101020	SUPPORT, MAIN PCB	3				
020G	137J861050	LABEL, FUSE (BK)	1				
022G	093J861010	LABEL, FUSE (BK)	1				
030G	136J101020	SUPPORT	1				
900G	260J250020	REAR PANEL (IB)	1				
900G	260J250010	REAR PANEL (BK)	1				
910G	450H259010	BUSHING, AC CODE	1				
915G	260J861010	LABEL (IB)	1				
920G	95109111D0	LABEL (BK)	1				
001L	264J267010	HEATSINK, MAIN	1				
005L	264J160020	BRACKET, HEAT SINK (L)	1				
009L	264J160030	BRACKET, HEAT SINK (R)	1				
013L	261J104010	RETAINER, MAIN PCB	2				
015L	264J160060	BRACKET, HEATSINK CENTER	1				
017L	090J101010	SUPPORT	2				
020L	287S005010	CLAMPER	1				
001K	009D267010	HEATSINK	1				
002K	009D267010	HEATSINK	1				
003K	001J267030	HEATSINK	1				
004K	001J267030	HEATSINK	1				
005K	309V267010	HEATSINK	1				
007K	309V267010	HEATSINK	1				
011K	260J123010	CONTACTOR	1				
012K	152J118030	SPACER	1				
014K	306V259030	BUSHING (IB)	1				
061K	415T101010	SUPPORT	1				

**DISASSEMBLY PROCEDURES**

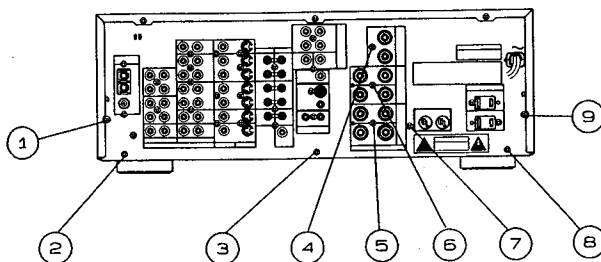
1. Removing the top Cover  
Remove the screws ① ~ ⑪



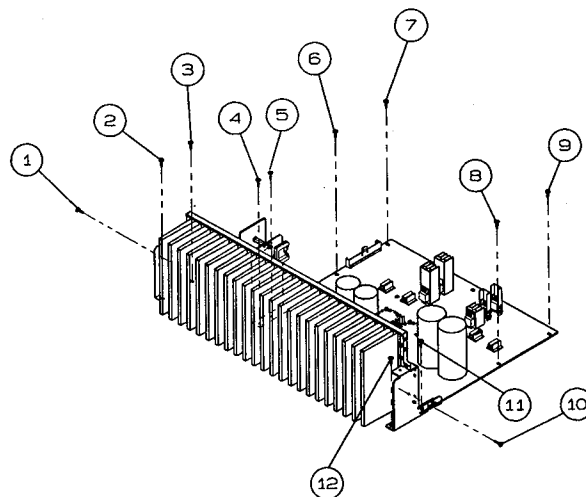
2. Removing the front panel  
Remove the screws ① ~ ④



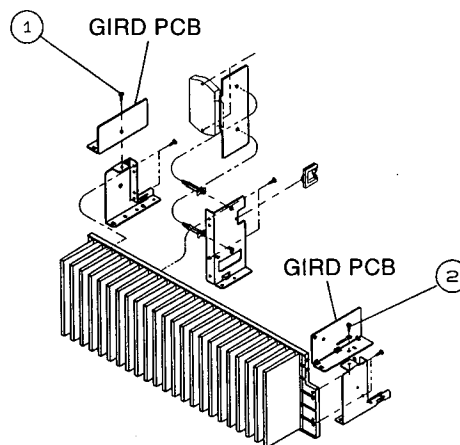
3. Removing the rear panel  
Remove the screws ① ~ ⑨



4. Removing the main PCB Block  
Remove the screws ① ~ ⑫



5. Removing the shield plate  
Remove the screws ① ②



**MAIN PCB BLOCK (P704)**

1. Remove all of the screws on REAR PANEL. (900G)
2. Remove the REAR PANEL.
3. Remove the SPEAKER TERMINAL PCB. (P754)
4. Remove the screw x4 for MAIN PCB mounting.
5. Remove the screw x2 for both sides GIRD PCB of main heatsink.
6. Remove the both sides GIRD PCB.
7. Remove the screw x4 for MAIN PCB BLOCK mounting.
8. Remove the MAIN PCB BLOCK.

**POWER SUPPLY PCB (PB04)**

1. Remove the screw x2 for TRANSF mounting.
2. Remove the screw x2 for POWER SUPPLY PCB mounting.
3. Remove the POWER SUPPLY PCB.

**MAIN VOL PCB (PU54)**

1. Remove the MAIN VOL KNOB. (035B)
2. Remove the MAIN VOL NUT.
3. Pull out the MAIN VOL PCB.

**TONE VOL PCB (PF04)**

1. Remove the three TONE VOL KNOBS. (036B)
2. Remove the three TONE VOL NUTS.
3. Pull out the TONE VOL PCB.

**FRONT FUNCTION PCB (PU04)**

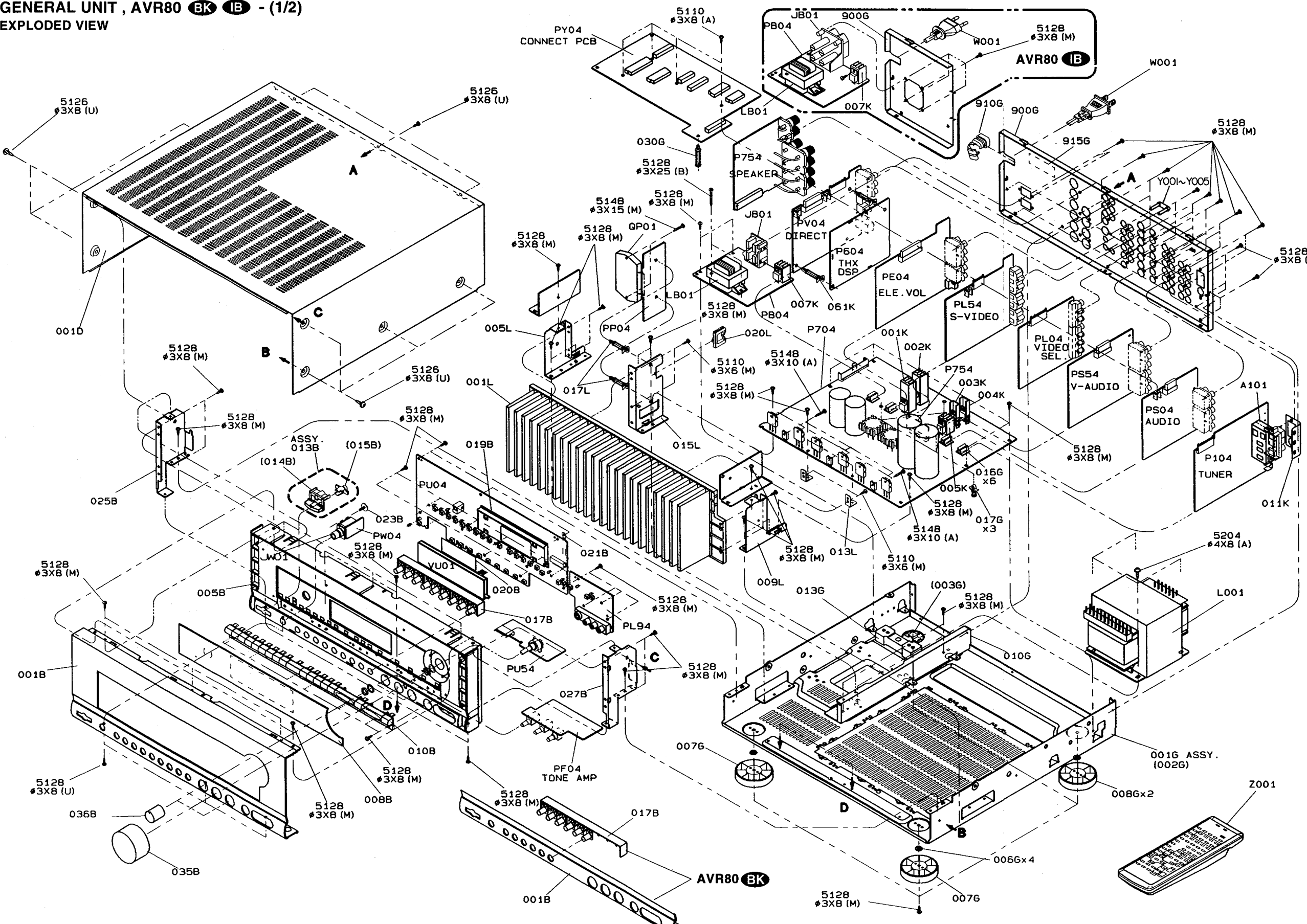
1. Remove the screw x4 for FRONT PANEL ASSY mounting.
2. Lay down the FRONT PANEL ASSY.
3. Remove the screw x16 for FRONT FUNCTION PCB.
4. Remove the FRONT FUNCTION PCB.

# GENERAL UNIT PARTS LIST

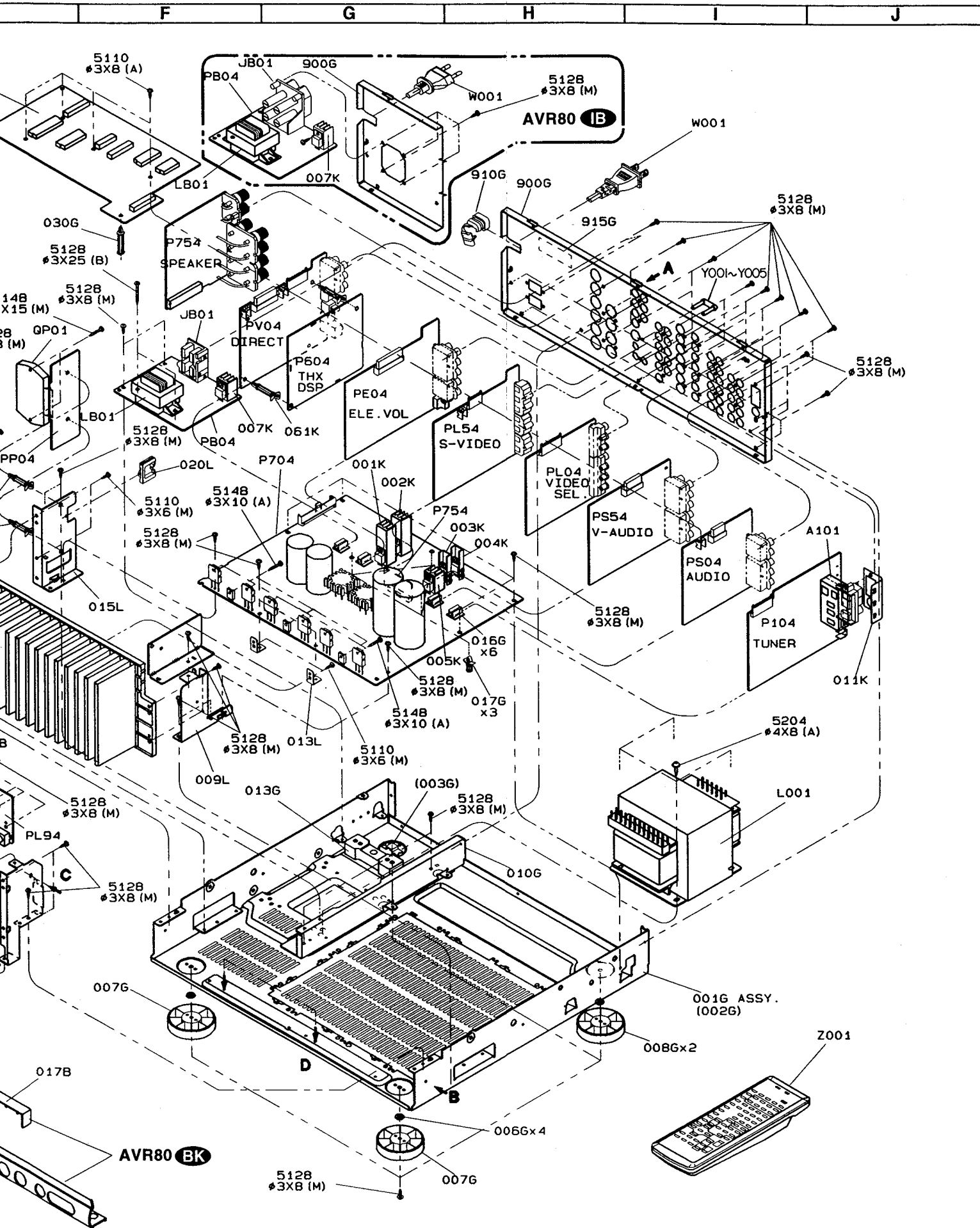
Ref. No.	Part. No.	Description	Q'TY	Ref. No.	Part. No.	Description	Q'TY
001B	260J248020	FRONT PANEL <b>IB</b>	1	▲ L001	TS60513020	POWER TRANSF. 230V <b>IB</b>	1
001B	260J248010	FRONT PANEL <b>BK</b>	1	▲ L001	TS60513010	POWER TRANSF. 120V <b>BK</b>	1
005B	260J105010	CHASSIS, FRONT	1	L002	FC50380010	FERRITE CORE <b>IB</b>	1
008B	260J158010	WINDOW	1	Y001	YQ01000080	SHORTING PLUG	1
010B	260J270010	BUTTON, FUNCTION	1	Y002	YQ01000080	SHORTING PLUG	1
013B	260J270510	BUTTON KIT, POWER	1	Y003	YQ01000080	SHORTING PLUG	1
014B	260J270040	BUTTON, POWER	1	Y004	YQ01000080	SHORTING PLUG	1
015B	260J355020	LENS, POWER	1	Y005	YQ01000080	SHORTING PLUG	1
017B	260J270020	BUTTON, MODE <b>IB</b>	1	▲ W001	YC01800790	A.C POWER CORD <b>IB</b>	1
017B	260J270120	BUTTON, MODE <b>BK</b>	1	▲ W001	YC01800780	A.C POWER CORD <b>BK</b>	1
019B	183J271020	HOLDER, FL	1				
020B	056J122010	STICKER, FL	1	5110	51100306M0	B. H. M SCREW 5110 ø3x6 (M)	5
021B	4220005040	CLAMPER	1	5110	51100308A0	B. H. M SCREW 5110 ø3x8 (A)	4
023B	183J010010	SCREW, PHONE PCB	1	5126	51260308M0	B.T.SCREW(W/W) 5126 ø3x8 (M)	8
025B	264J160040	BRACKET, LEFT	1	5126	51260308U0	B.T.SCREW(W/W) 5126 ø3x8 (U)	11
027B	264J160050	BRACKET, RIGHT	1	5128	51280308M0	B. H. TAP. SCREW 5128 ø3x8 (M)	99
035B	063J154180	KNOB, MAIN VOL	1	5128	51280308U0	B. H. TAP. SCREW 5128 ø3x8 (U)	3
036B	042J154020	KNOB, TONE VOL	3	5128	51280325B0	B. H. TAP. SCREW 5128 ø3x25 (B)	2
001D	264J257110	LID, TOP COVER	1	5128	51280410U0	B. H. TAP. SCREW 5128 ø4x10 (U)	1
001G	264J105500	CHASSIS ASSEMBLY, MAIN	1	5128	51480310A0	F. WASHER SCREW 5148 ø3x10(A)	9
002G	264J105010	CHASSIS, MAIN	1	5128	51480315M0	F. WASHER SCREW 5148 ø3x15(M)	2
003G	030J114010	STOPPER	1	5128	52040408M0	H. HEAD BOLT 5204 ø4x8 (M)	4
006G	227J056010	BUFFER	4				
007G	183J057010	LEG, FRONT	2				
008G	183J057110	LEG, REAR	2				
010G	264J160010	BRACKET, TRANSF.	1				
013G	260J271010	HOLDER, SUB TRANSF.	1				
016G	2218271020	HOLDER, PCB	7				
017G	054J101020	SUPPORT, MAIN PCB	3				
020G	137J861050	LABEL, FUSE <b>BK</b>	1				
022G	093J861010	LABEL, FUSE <b>BK</b>	1				
030G	136J101020	SUPPORT	1				
900G	260J250020	REAR PANEL <b>IB</b>	1				
900G	260J250010	REAR PANEL <b>BK</b>	1				
910G	450H259010	BUSHING, AC CODE	1				
915G	260J861010	LABEL <b>IB</b>	1				
920G	95109111D0	LABEL <b>BK</b>	1				
001L	264J267010	HEATSINK, MAIN	1				
005L	264J160020	BRACKET, HEAT SINK (L)	1				
009L	264J160030	BRACKET, HEAT SINK (R)	1				
013L	261J104010	RETAINER, MAIN PCB	2				
015L	264J160060	BRACKET, HEATSINK CENTER	1				
017L	090J101010	SUPPORT	2				
020L	287S005010	CLAMPER	1				
001K	009D267010	HEATSINK	1				
002K	009D267010	HEATSINK	1				
003K	001J267030	HEATSINK	1				
004K	001J267030	HEATSINK	1				
005K	309V267010	HEATSINK	1				
007K	309V267010	HEATSINK	1				
011K	260J123010	CONTACTOR	1				
012K	152J118030	SPACER	1				
014K	306V259030	BUSHING <b>IB</b>	1				
061K	415T101010	SUPPORT	1				



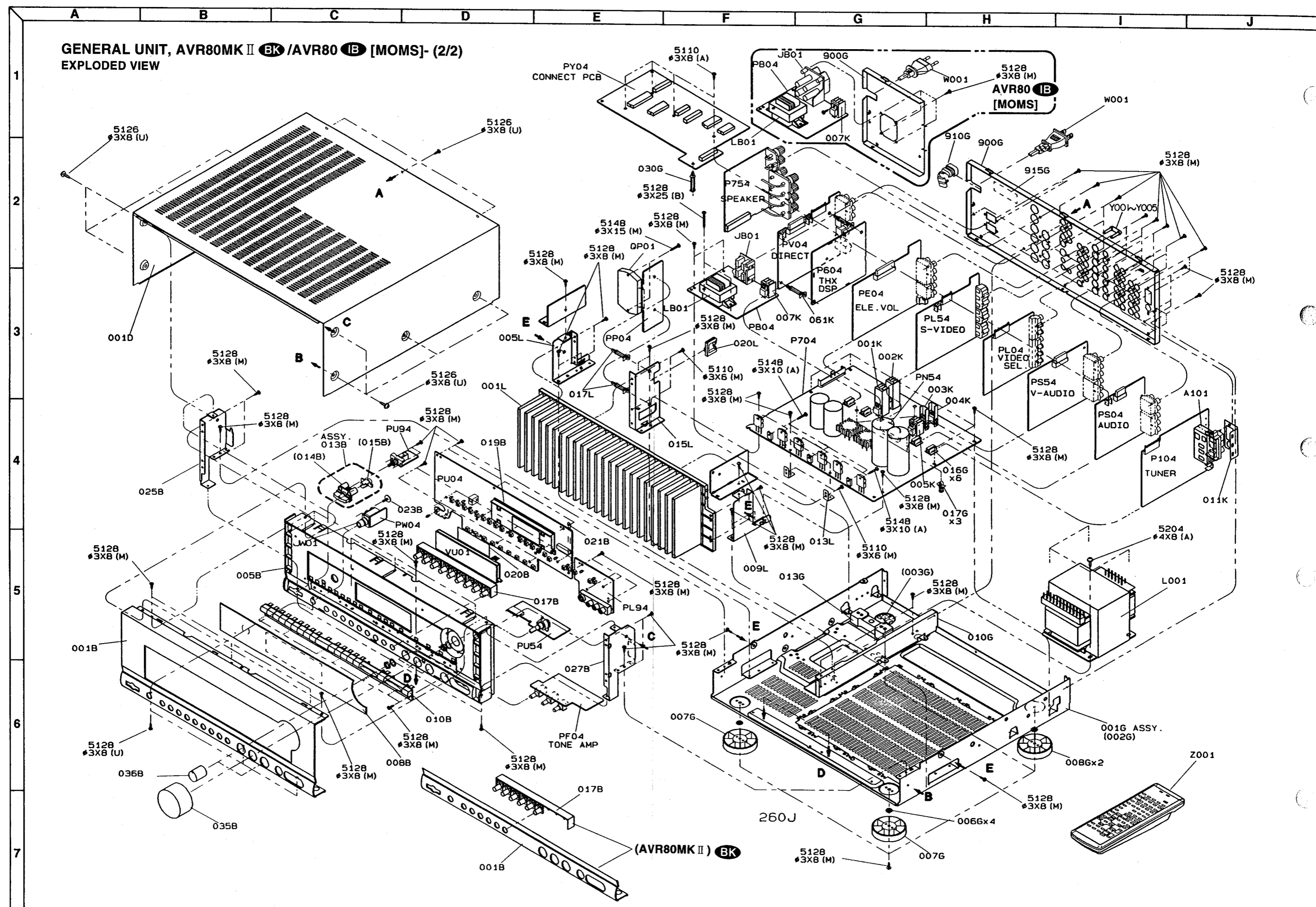
GENERAL UNIT, AVR80 BK IB - (1/2)  
EXPLODED VIEW







GENERAL UNIT, AVR80MK II BK /AVR80 IB [MOMS]- (2/2)  
EXPLODED VIEW



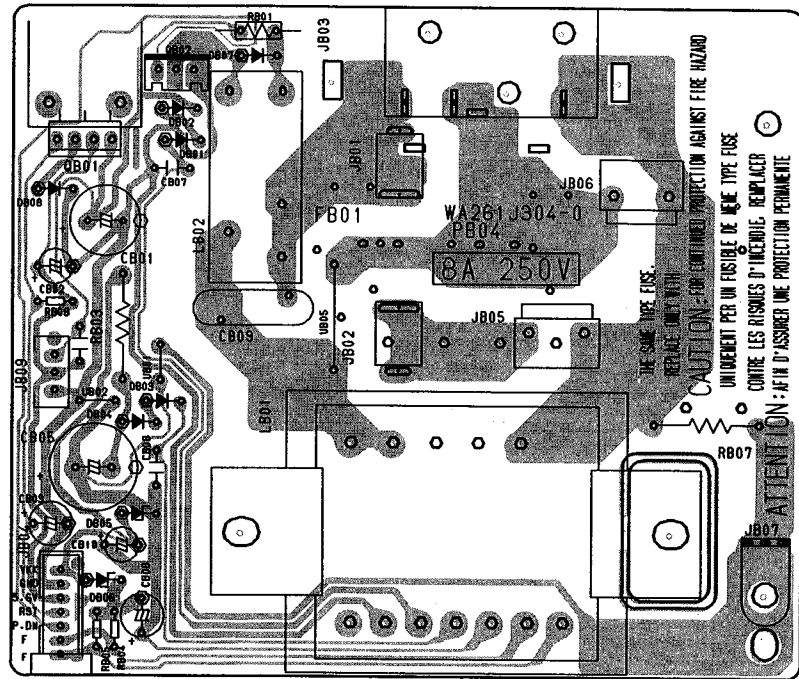




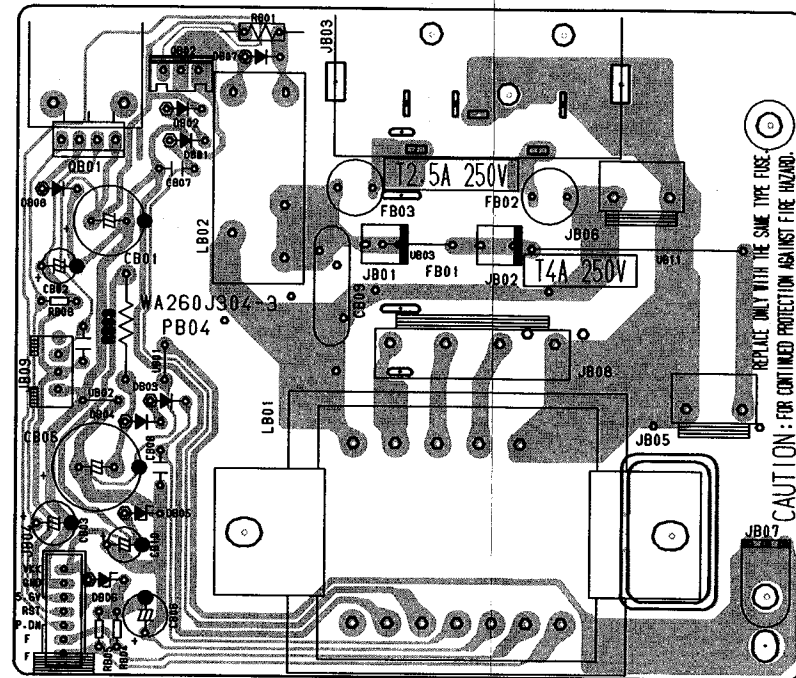


P.C. BOARDS ( 1 )

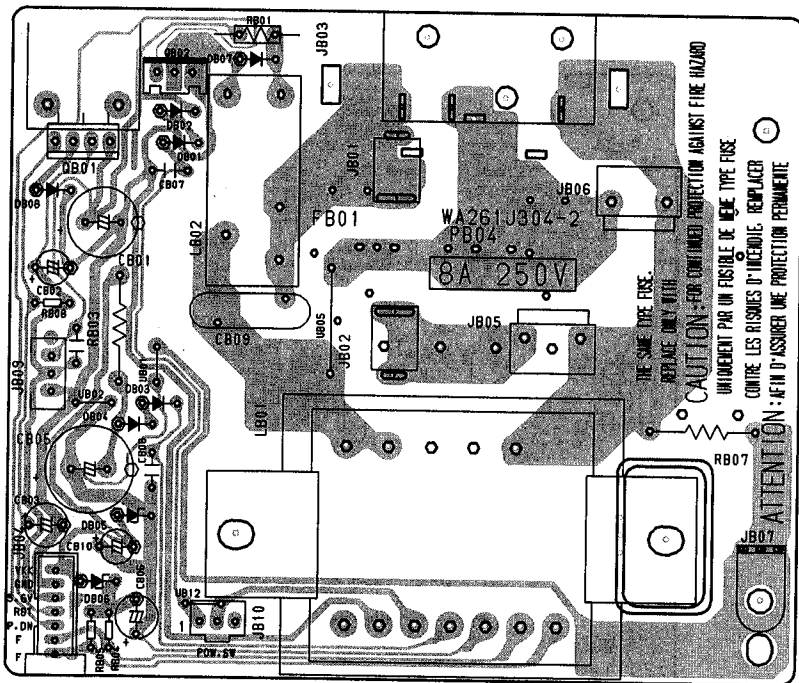
PB04-Back-up P.C. Board , AVR80 **BK** Version



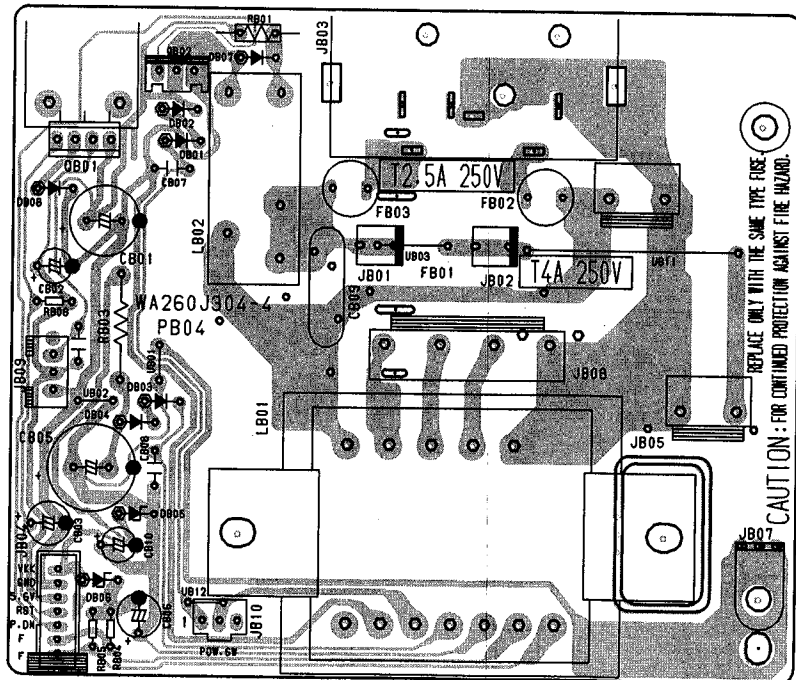
PB04-Back-up P.C. Board , AVR80 **IB** Version



PB04-Back-up P.C. Board , AVR80MK II **BK** Version

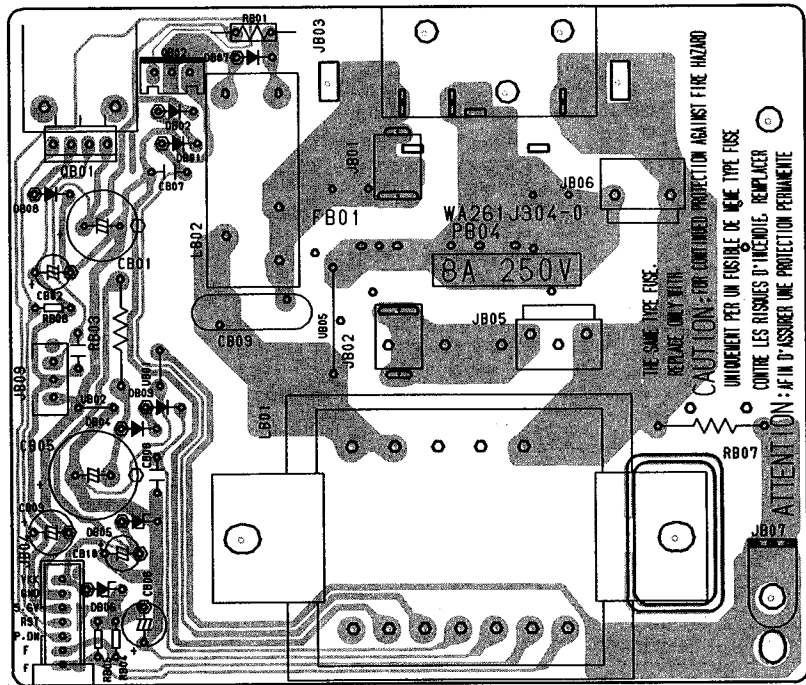


PB04-Back-up P.C. Board , AVR80 **IB** [MOMS] Version

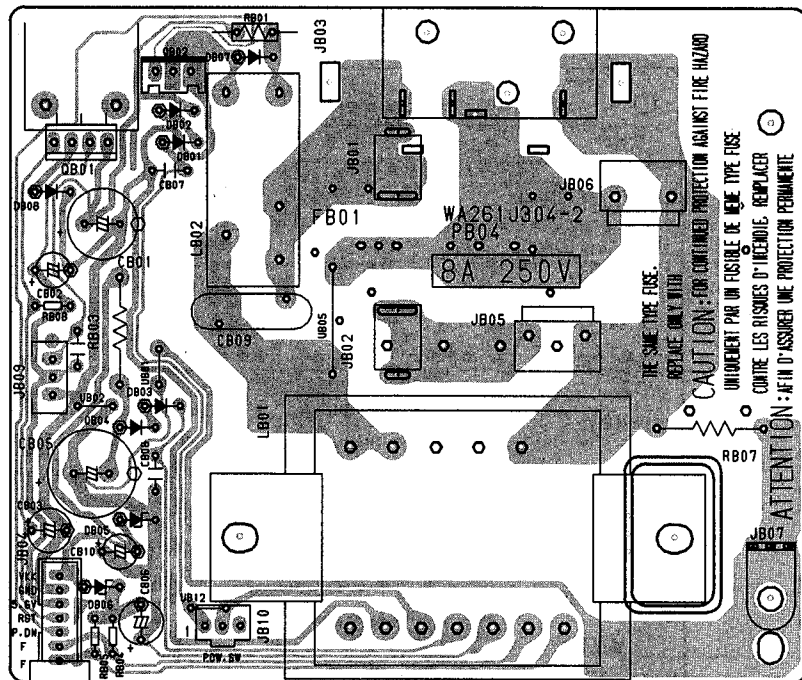


**P.C. BOARDS ( 1 )**

**PB04-Back-up P.C. Board , AVR80 BK Version**



**PB04-Back-up P.C. Board , AVR80MK II BK Version**





F

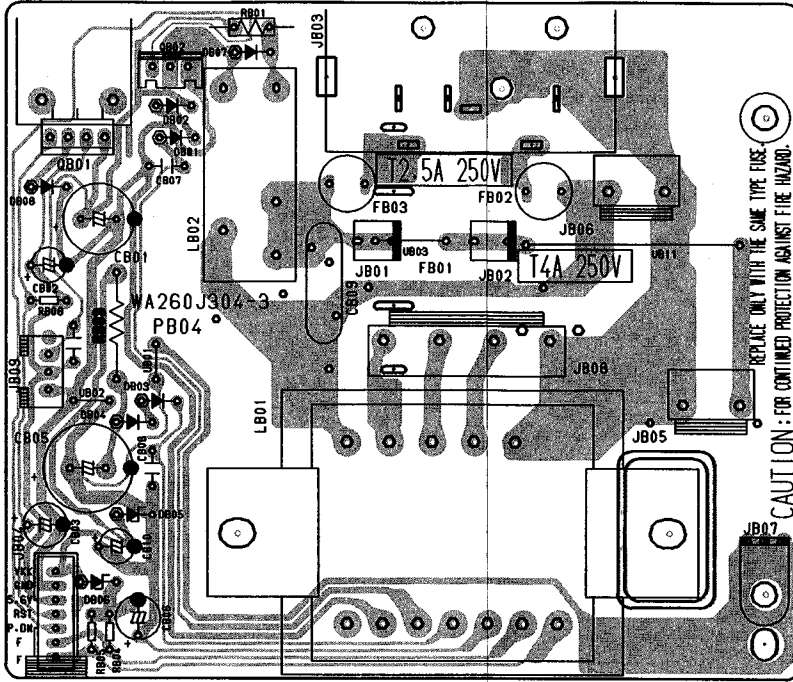
G

H

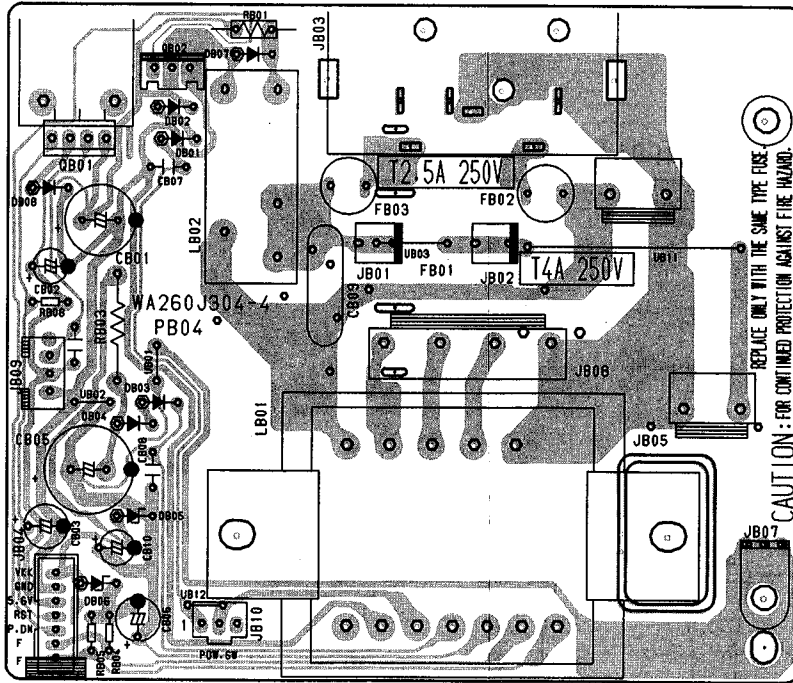
I

J

PB04-Back-up P.C. Board , AVR80 **IB** Version

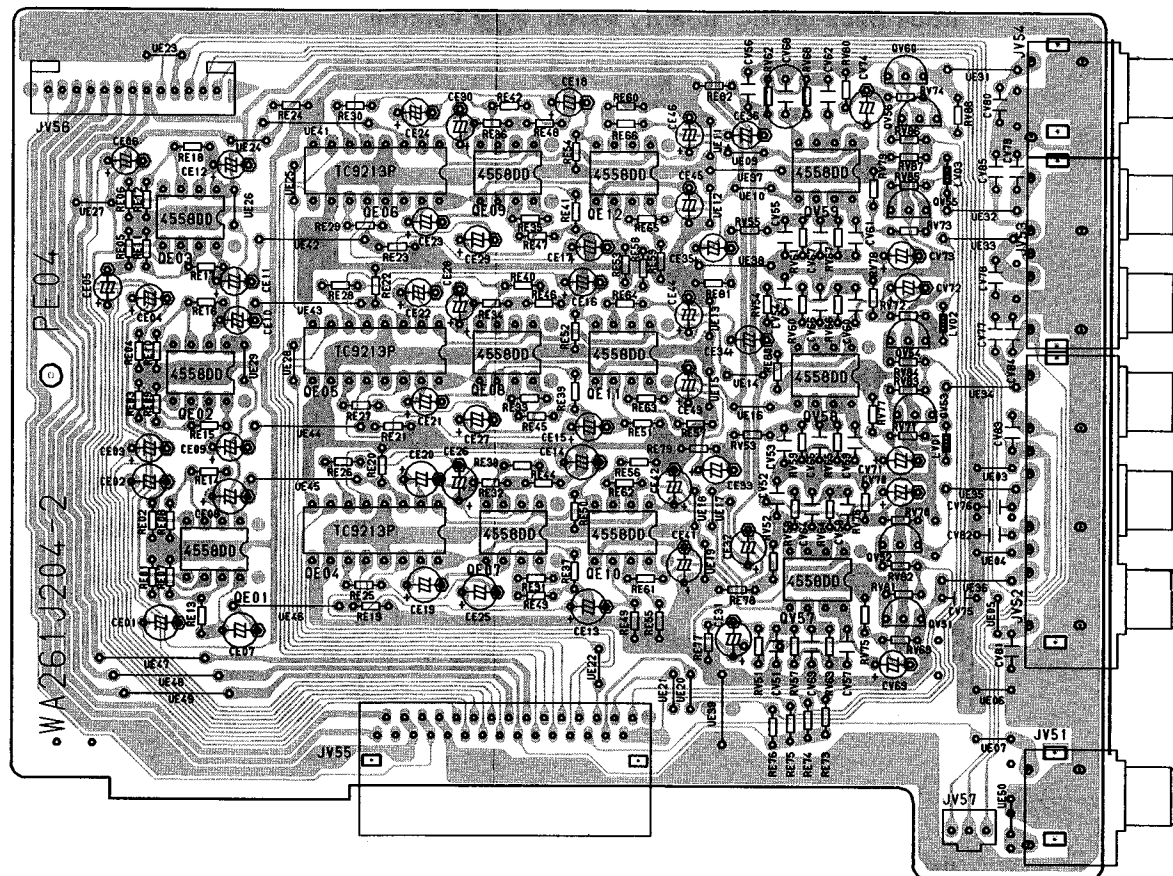


PB04-Back-up P.C. Board , AVR80 **IB** [MOMS] Version

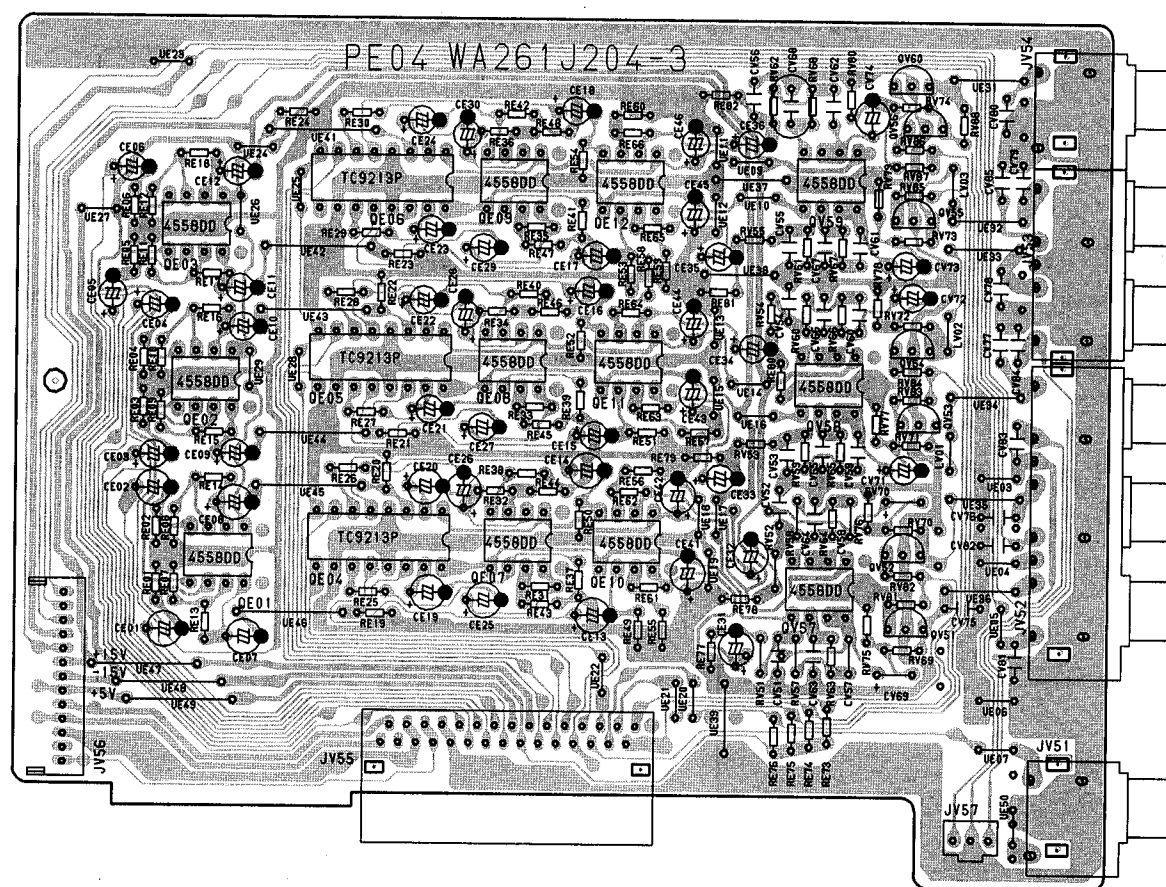


A B C D E F G H I J

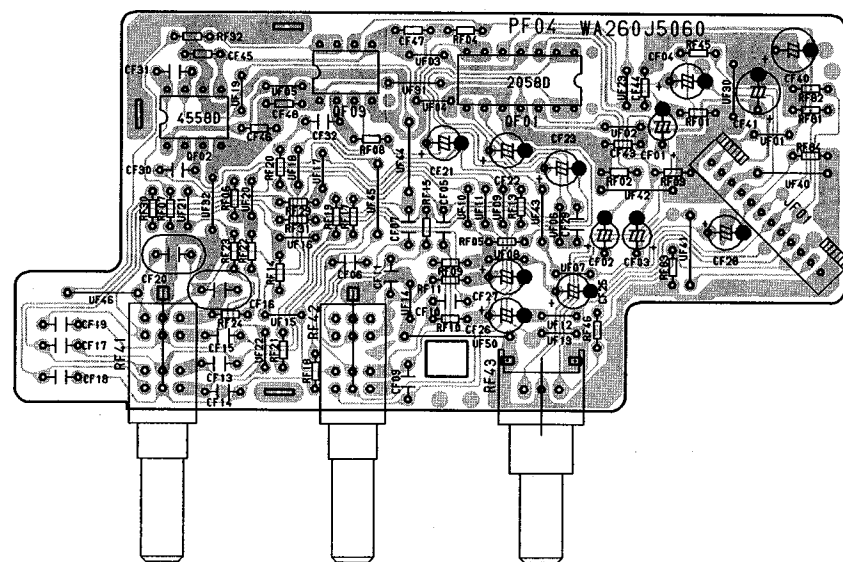
PE04-Ele. Vol P.C. Board , AVR80 **BK** **IB** Only



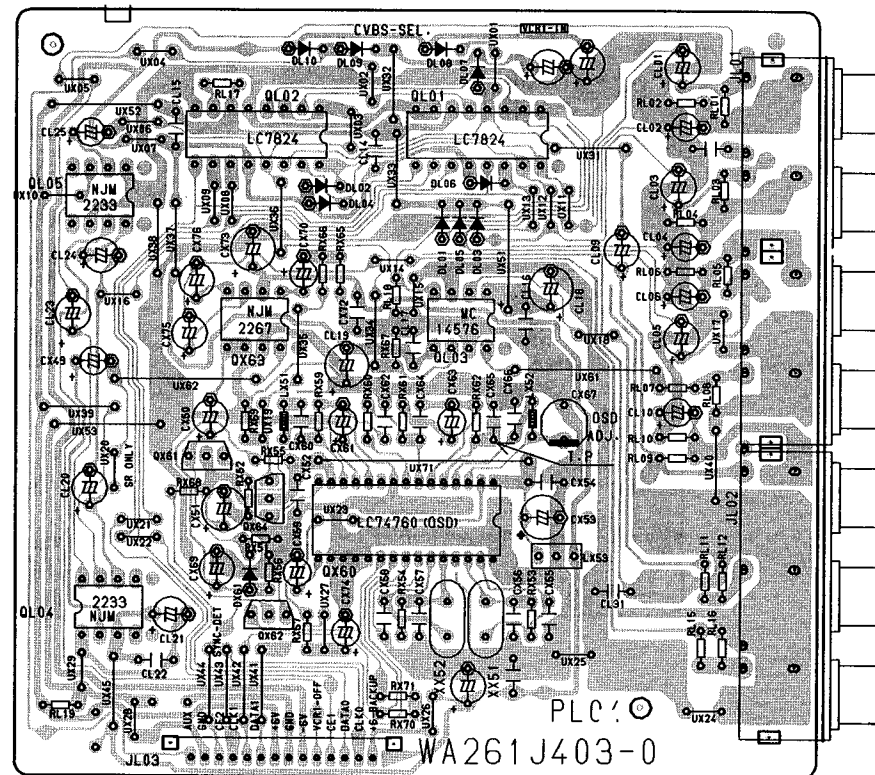
PE04-Ele. Vol P.C. Board , AVR80MK II **BK** /AVR80 **IB** [MOMS]



PF04-Tone P.C. Board



PL04-Video Selector P.C. Board



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A B C D E

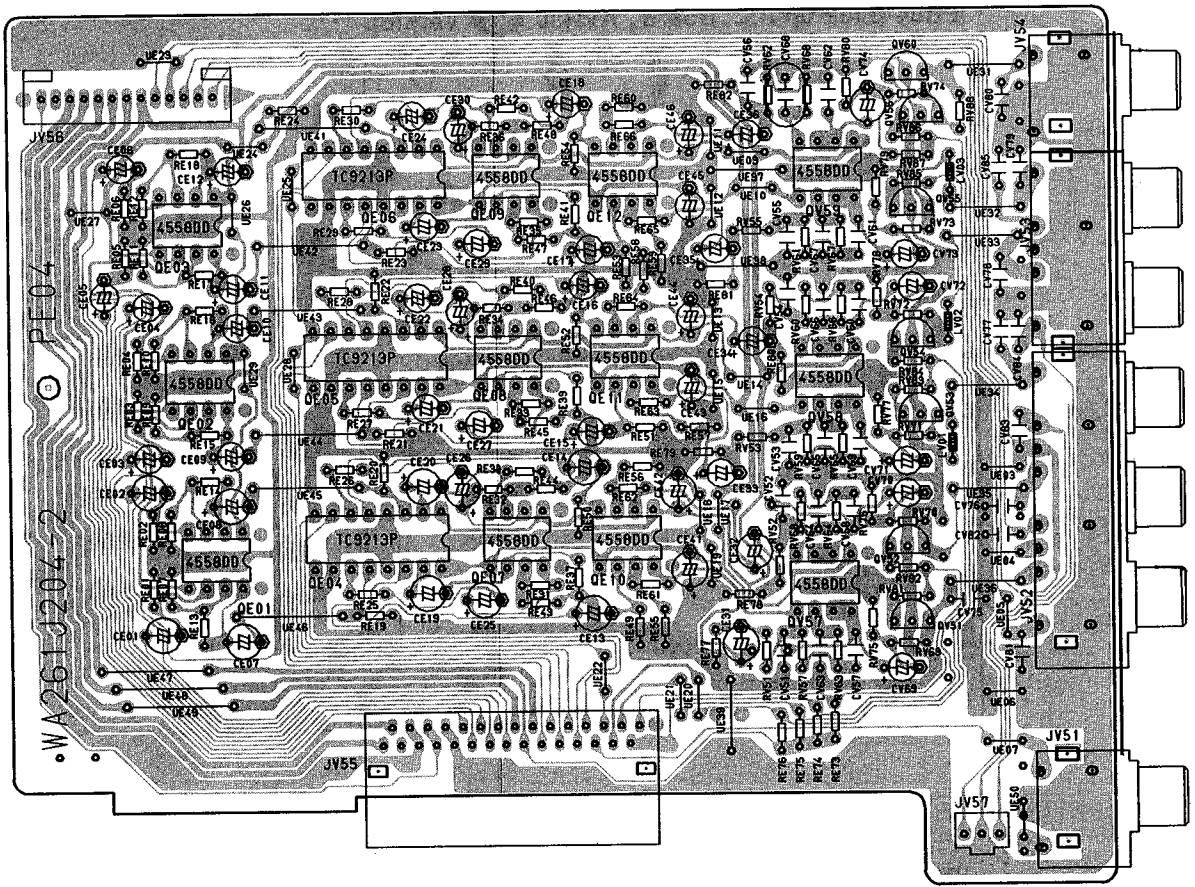
PE04-Ele. Vol P.C. Board , AVR80 **BK** **IB** Only

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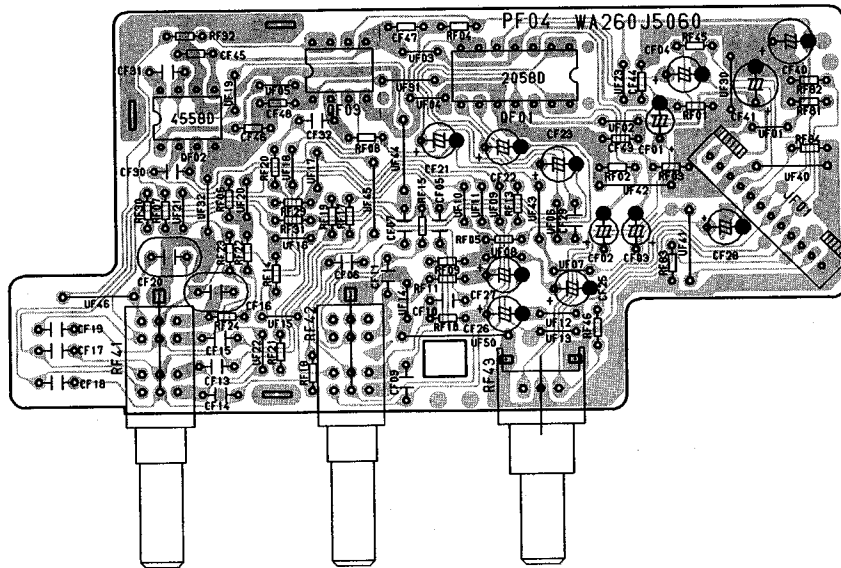
4



5

PF04-Tone P.C. Board

6



7



F

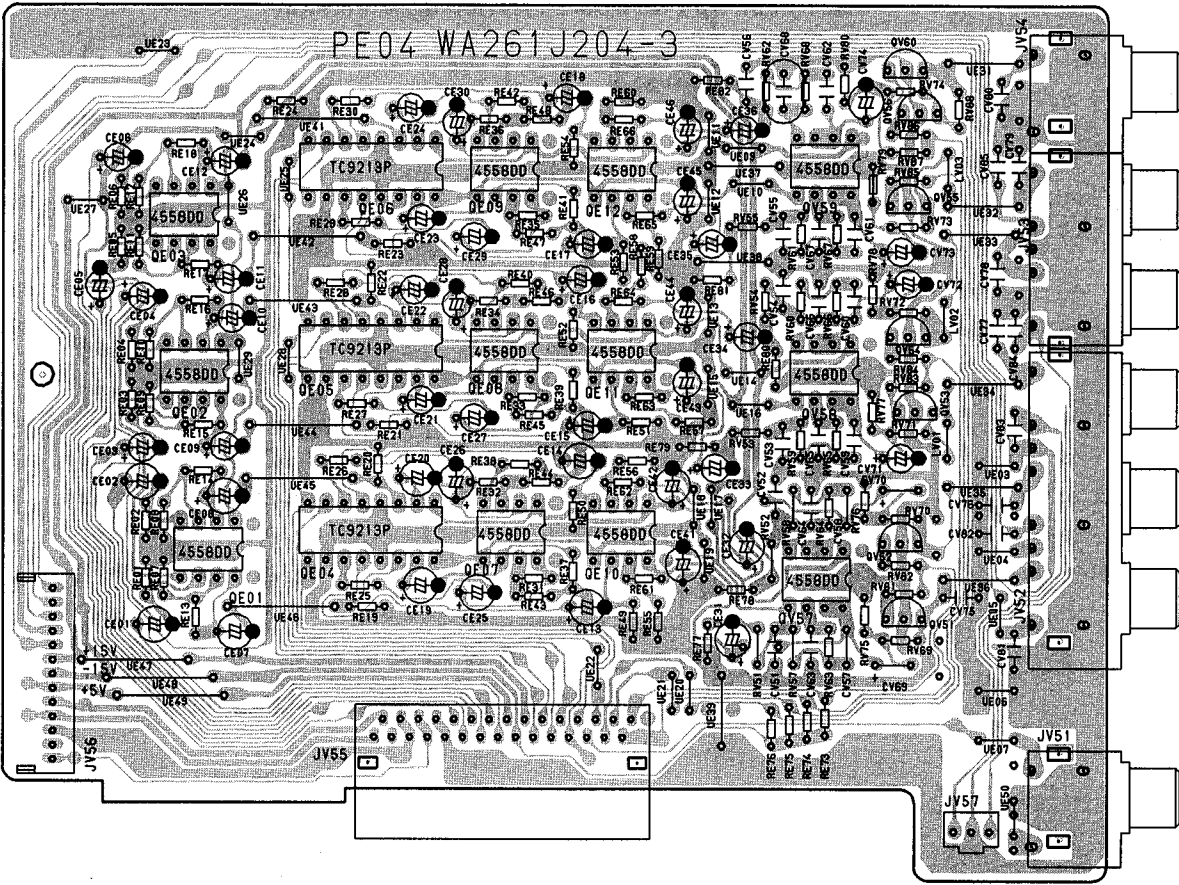
G

H

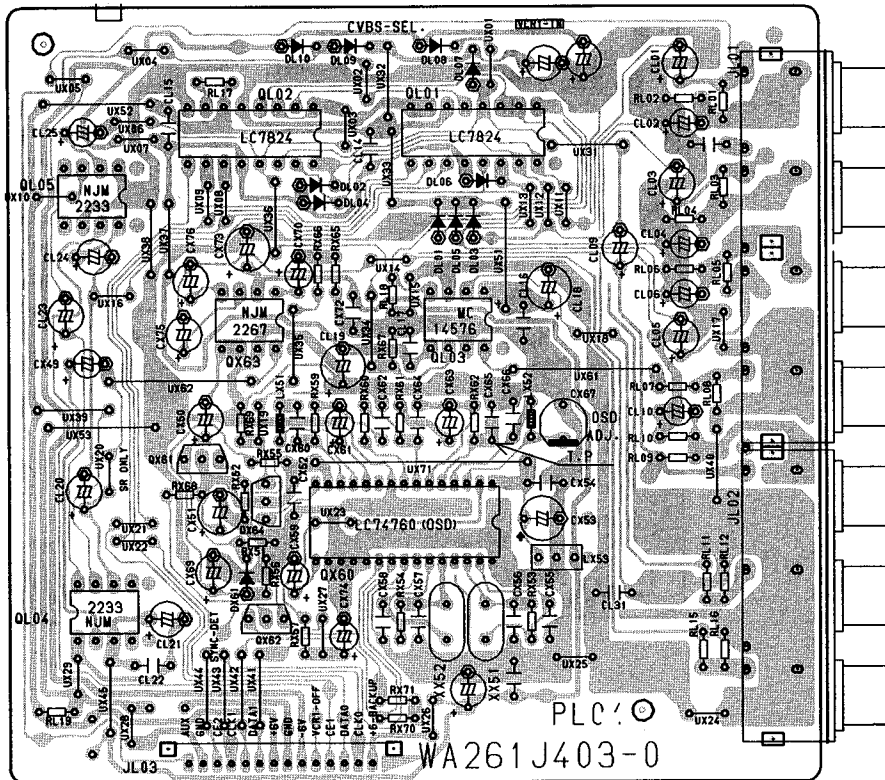
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PE04-Ele. Vol P.C. Board , AVR80MK II BK /AVR80 IB [MOMS]

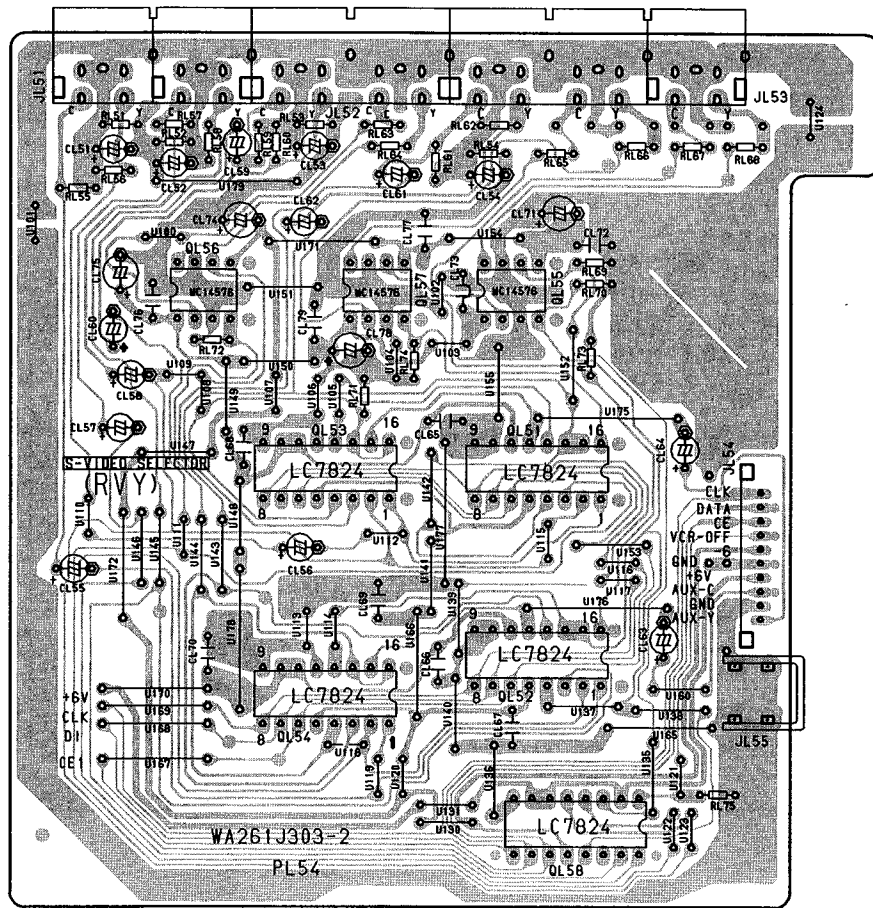


PL04-Video Selector P.C. Board

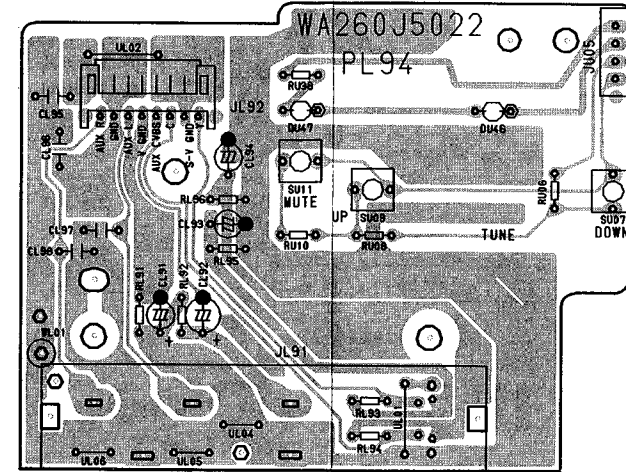


P.C. BOARD (3)

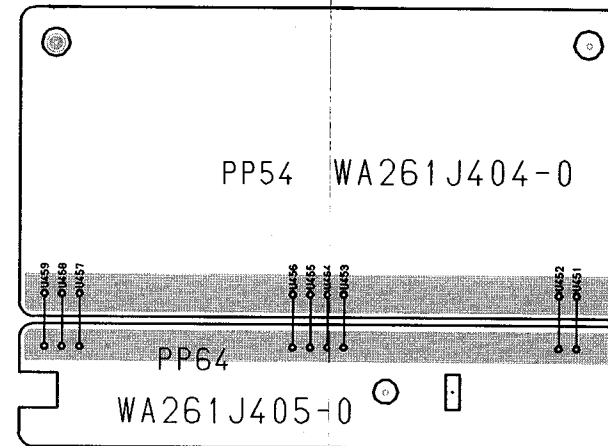
PL54-S-Video P.C. Board



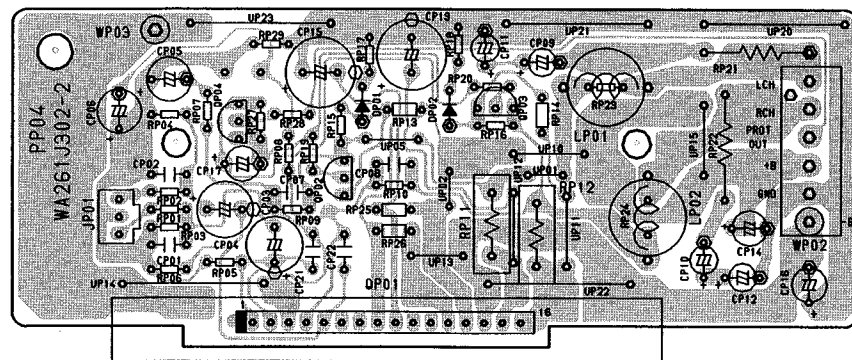
PL94-AUX In P.C. Board



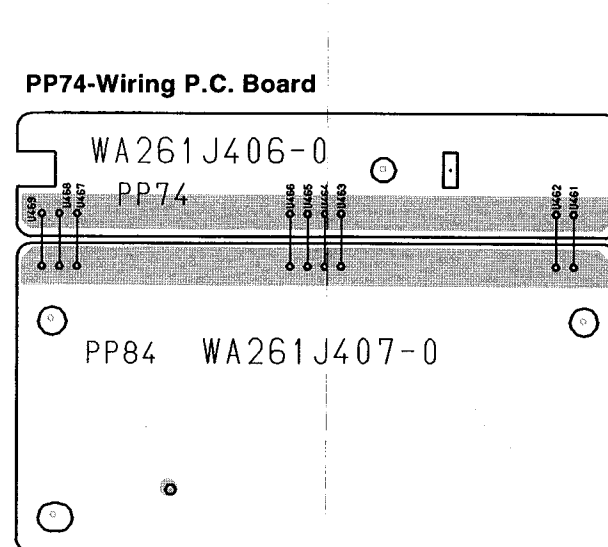
PP54-Wiring P.C. Board



PP04-Surround Amp P.C. Board

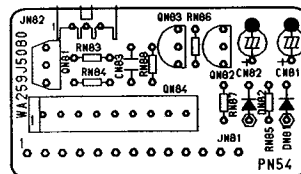


PP64-Wiring P.C. Board



PP74-Wiring P.C. Board

PN54-SPK Protect P.C. Board , AVR80MK II BK /AVR80 IB [MOMS]

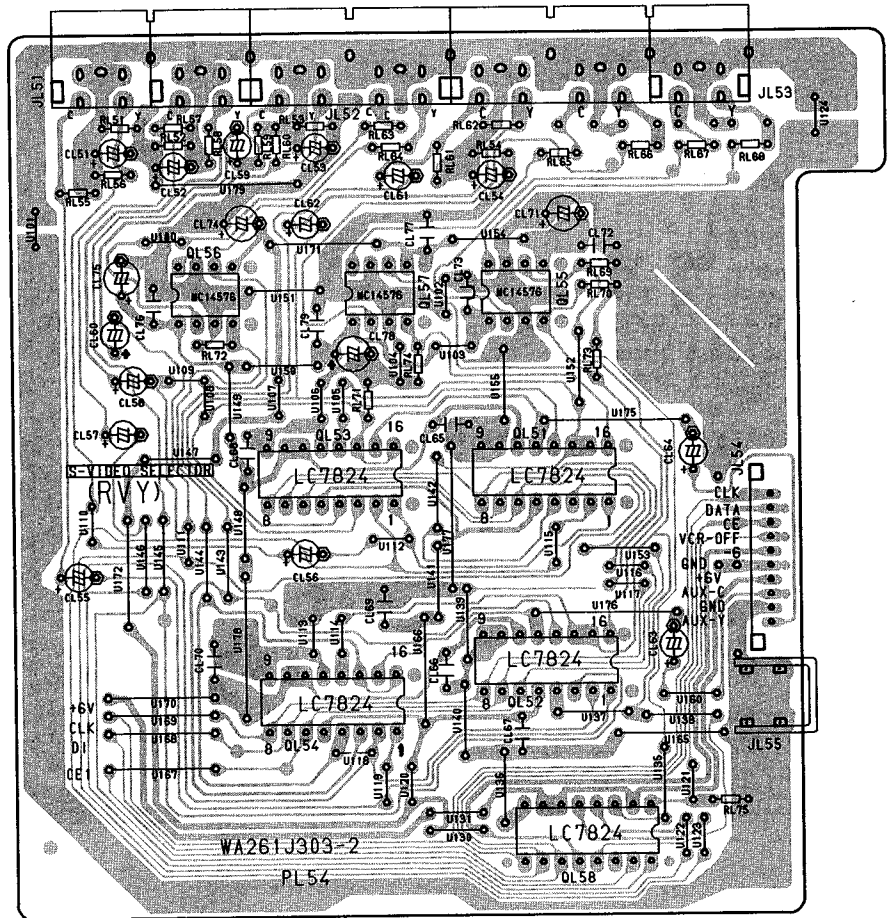


PP84-Wiring P.C. Board

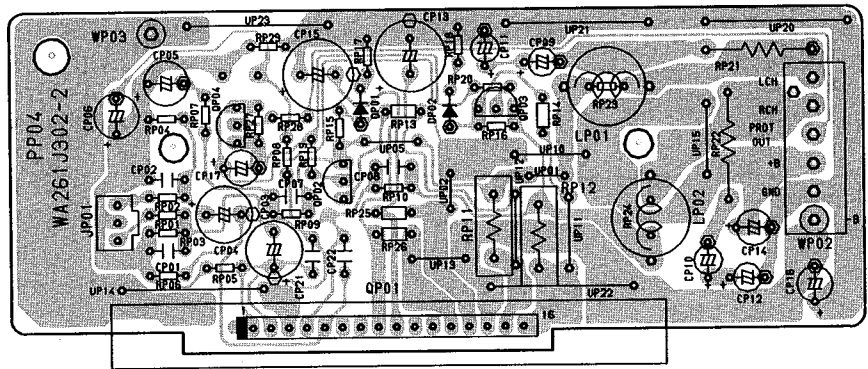


**P.C. BOARD (3)**

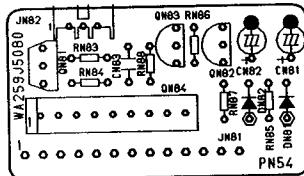
**PL54-S-Video P.C. Board**



**PP04-Surround Amp P.C. Board**



**PN54-SPK Protect P.C. Board , AVR80MK II BK /AVR80 B [MOMS]**

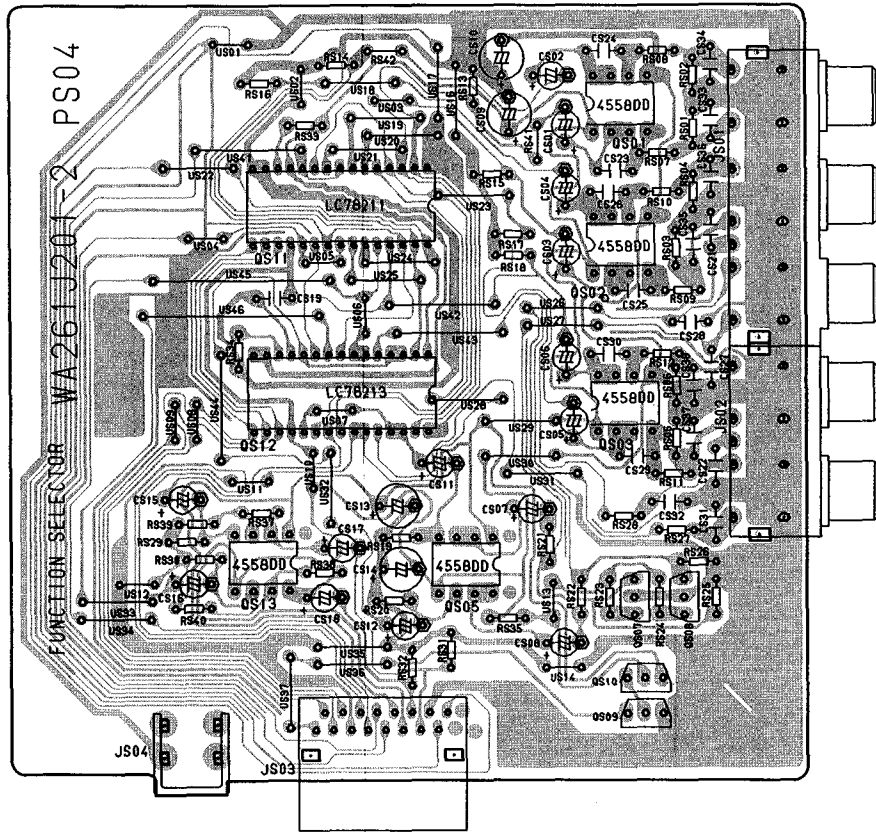




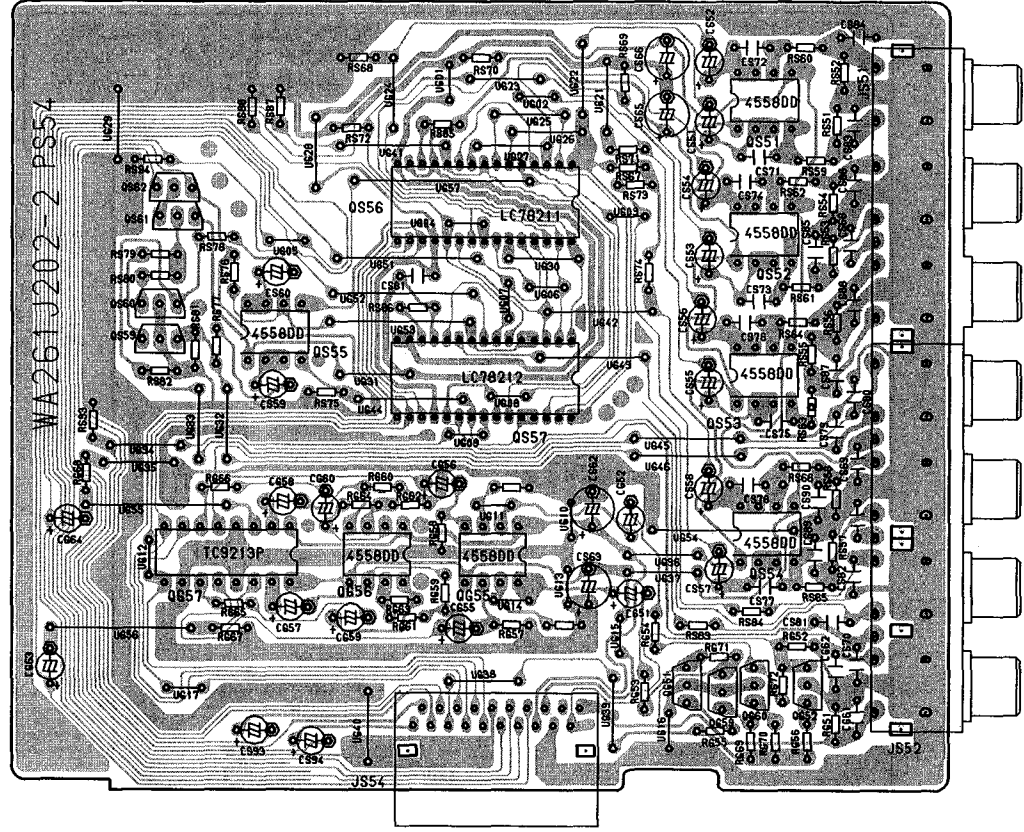


P.C. BOARD ( 4 )

PS04-Audio Function P.C. Board



PS54-V-Audio Function P.C. Board



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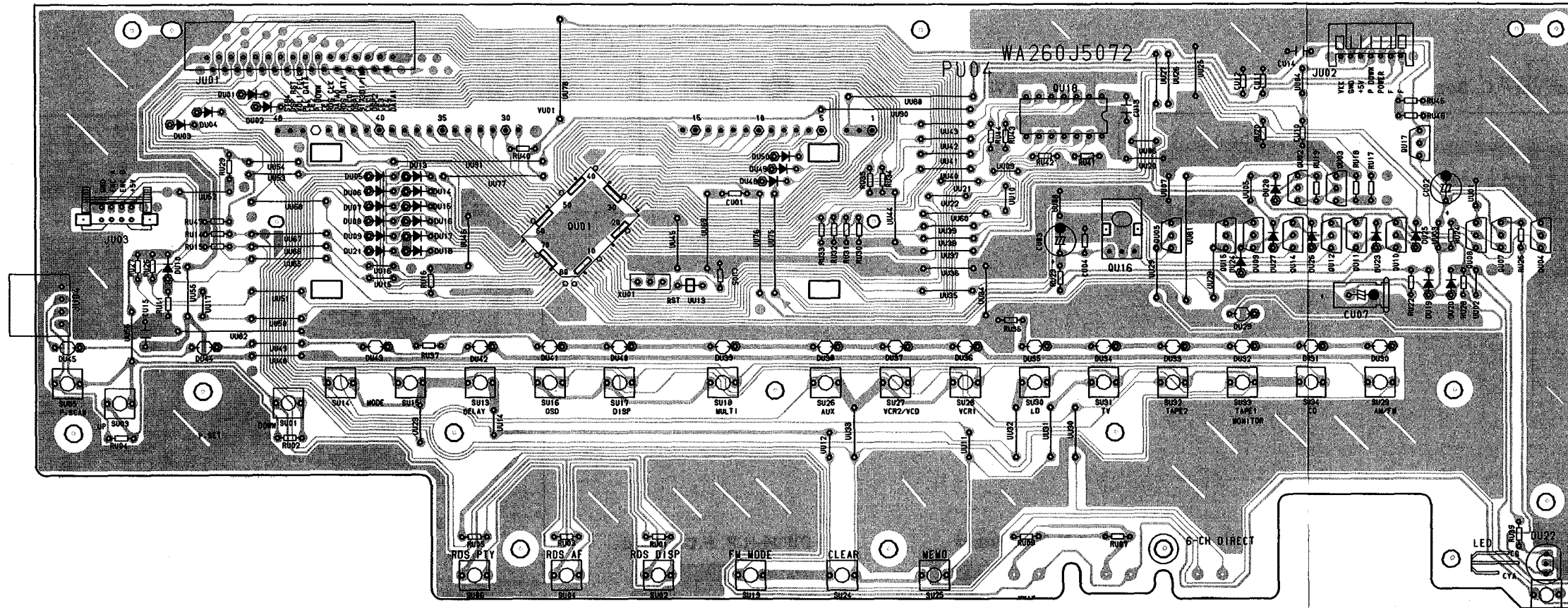






P.C. BOARD ( 5 )

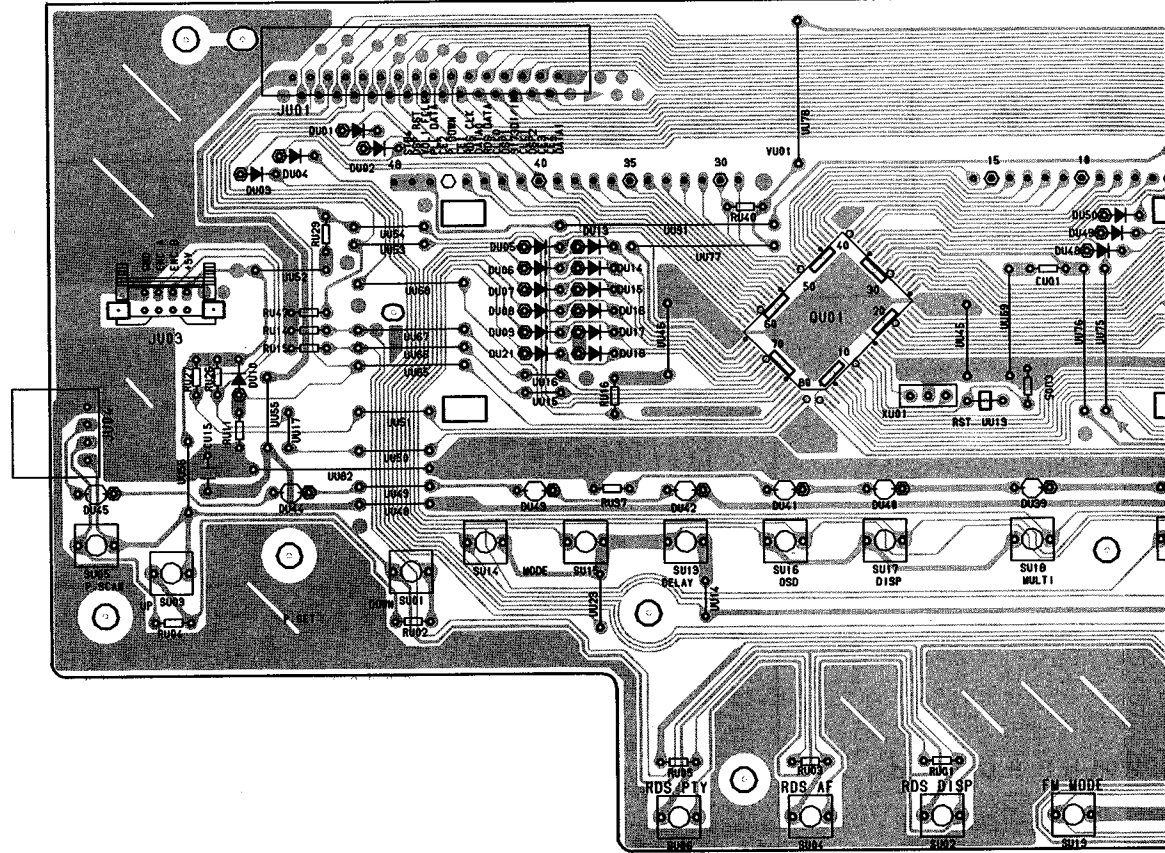
PU04-Front P.C. Board , AVR80 BK IB Only



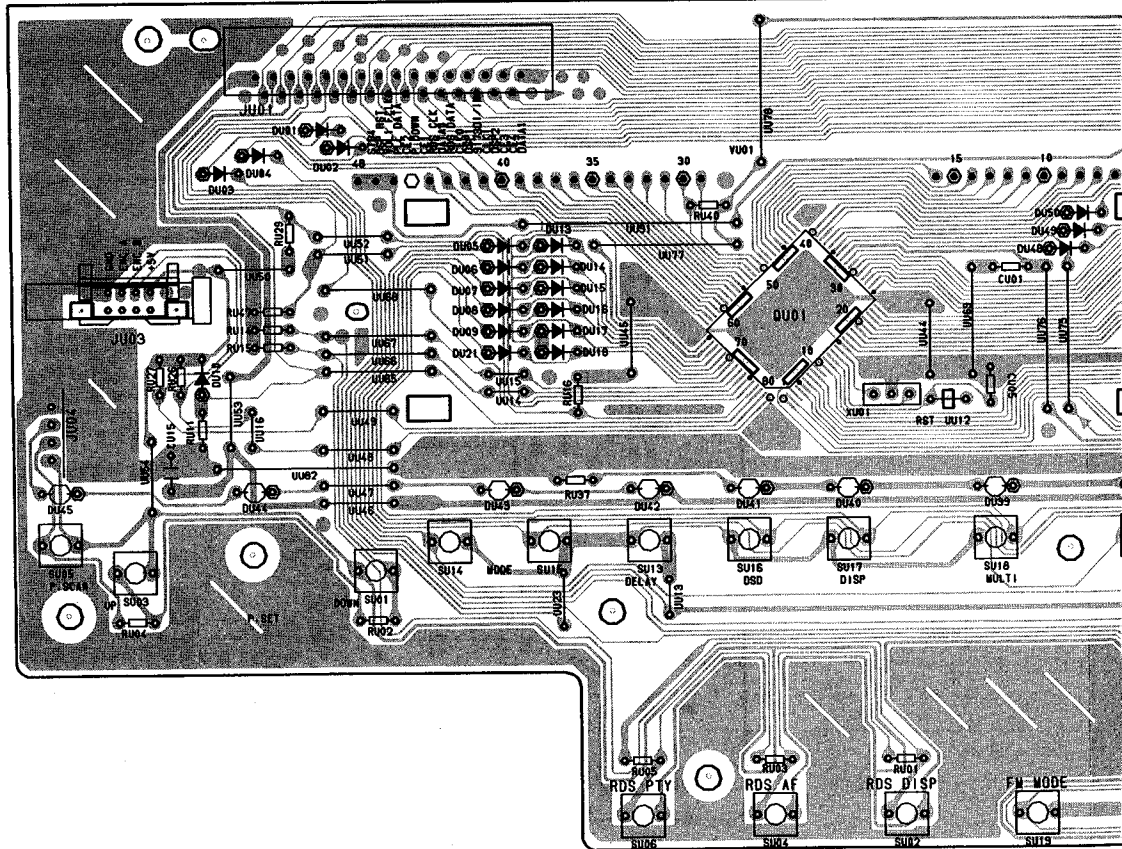


**P.C. BOARD ( 5 )**

**PU04-Front P.C. Board , AVR80 BK IB Only**



**PU04-Front P.C. Board , AVR80MK II BK/AVR80 IB [MOMS]**

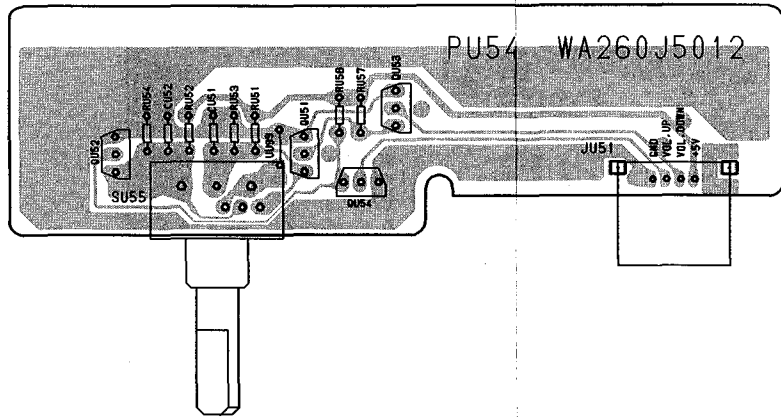




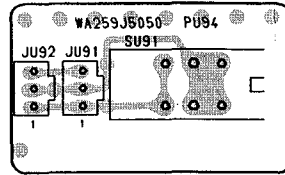


P.C. BOARD (6)

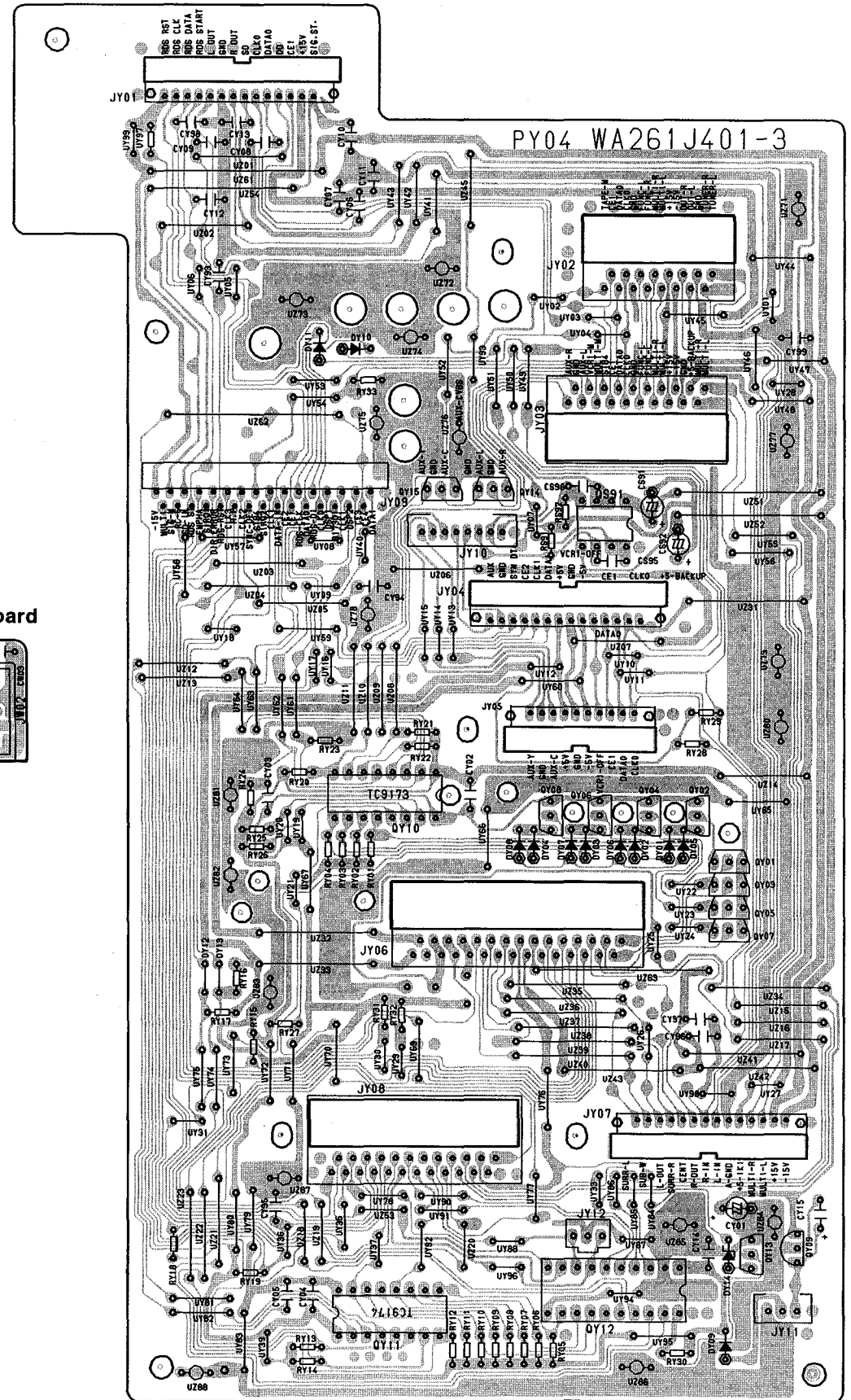
PU54-Master Vol P.C. Board



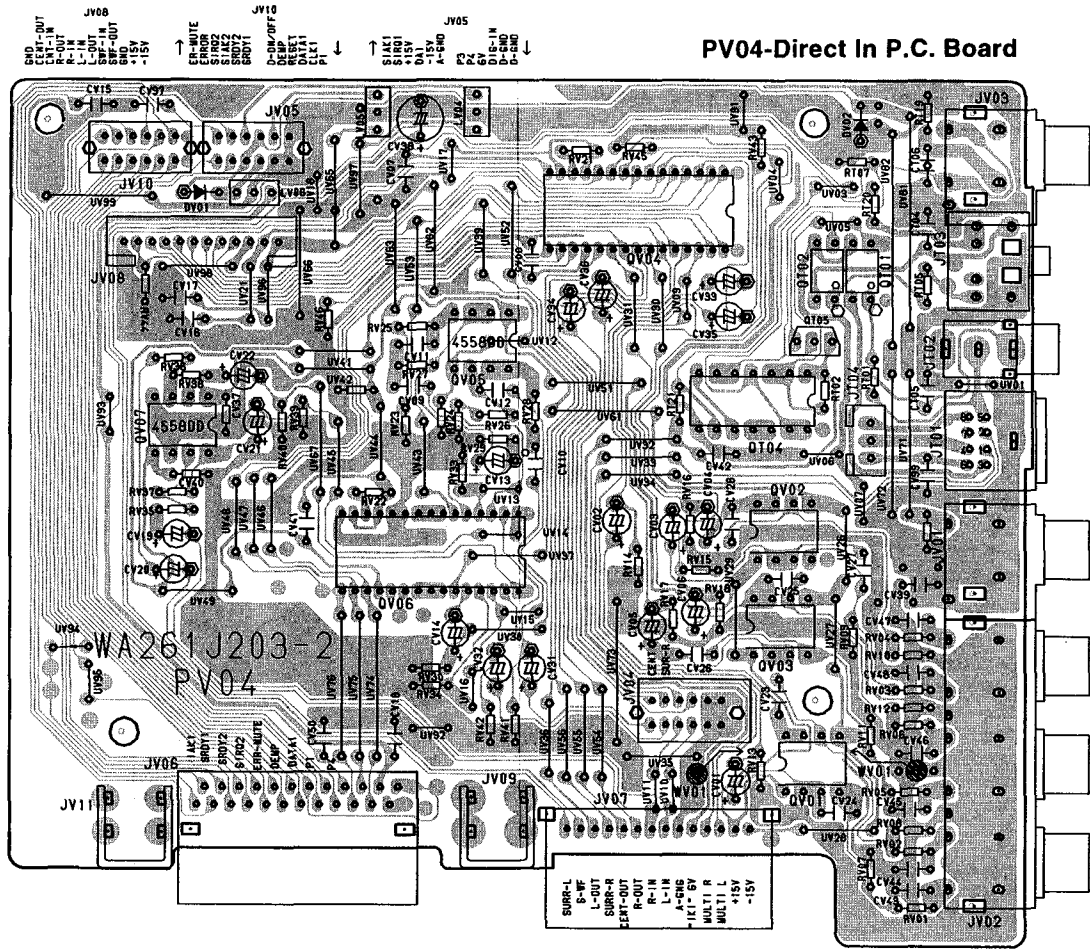
PU94-Power SW P.C. Board  
AVR80MK II **BK**/AVR80 **IB** [MOMS]



PY04-Connect P.C. Board



PV04-Direct In P.C. Board





F

G

H

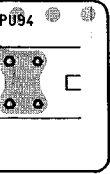
I

J

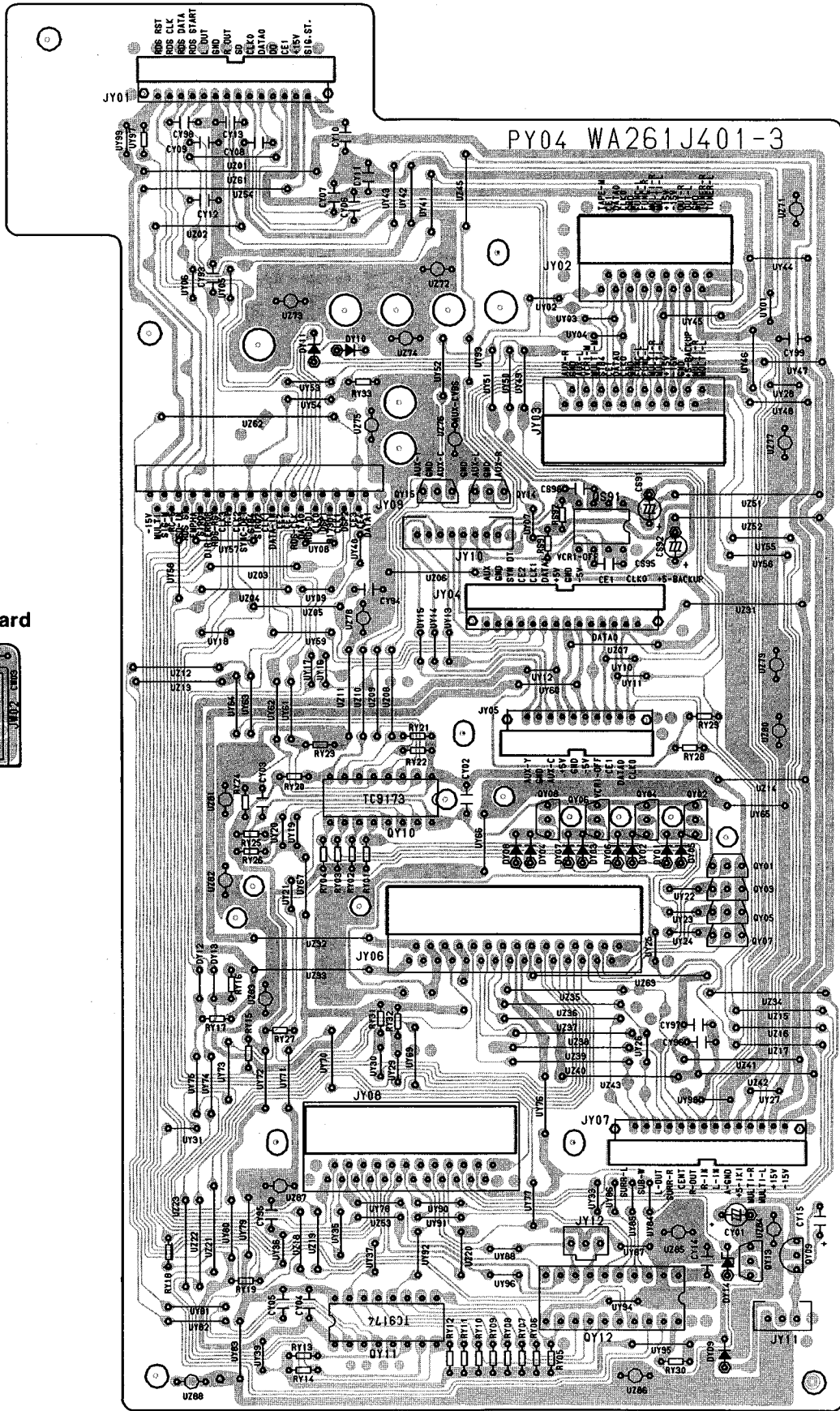
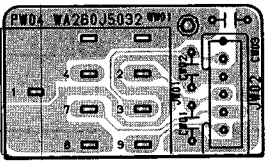
### PY04-Connect P.C. Board

C. Board

VR80 (B) [MOMS]



PW04-H.P. P.C. Board









F

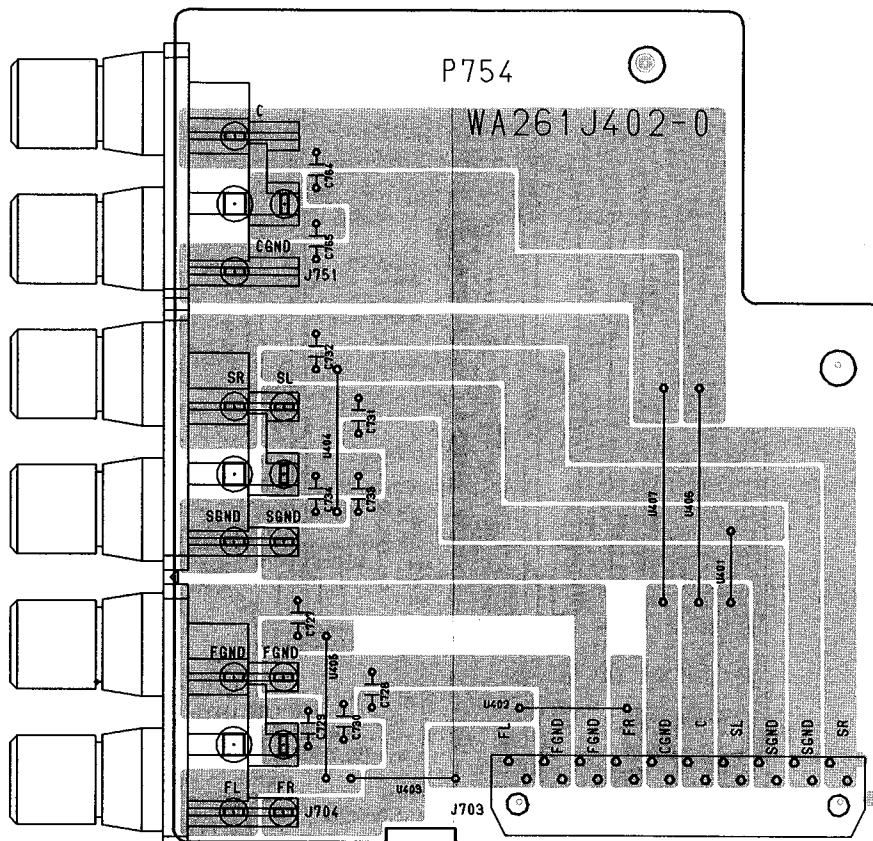
G

H

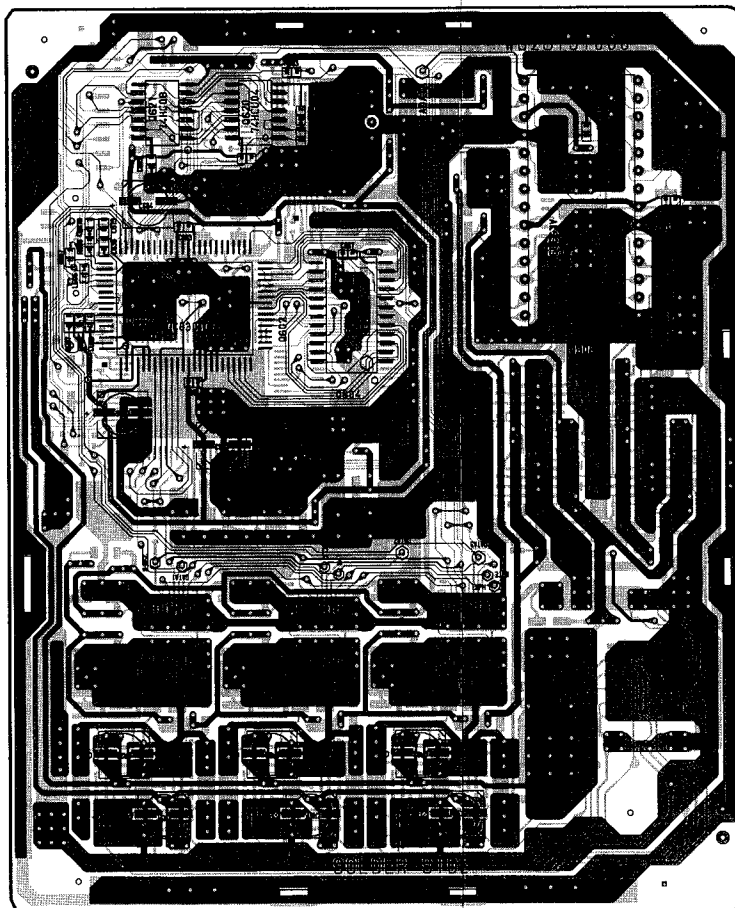
I

J

### P754-SPK Terminal P.C. Board



### P604-THX Pro-Logic DSP P.C. Board



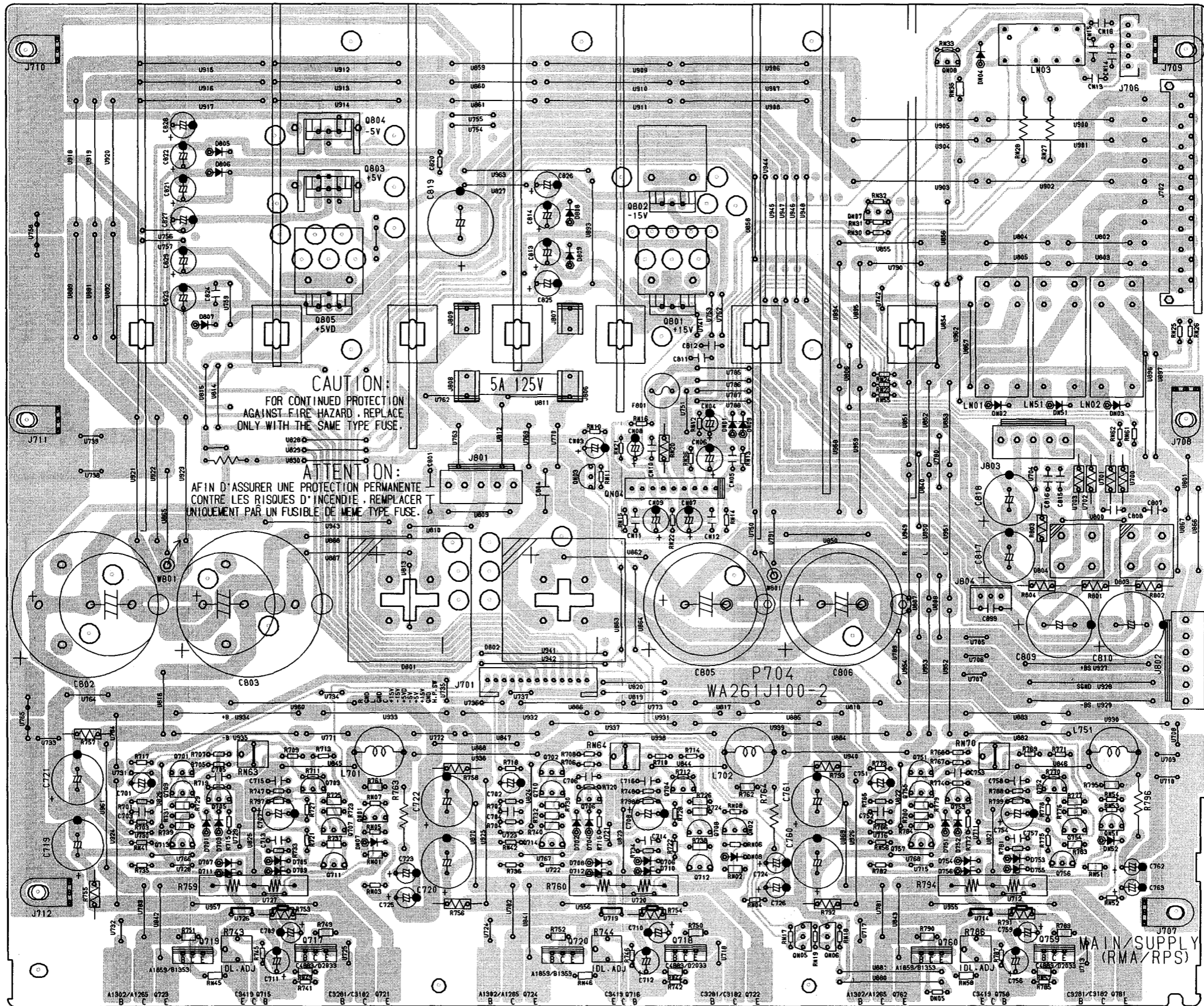


P.C. BOARD ( 8 )

P704-Main Amp P.C. Board

1  
2  
3  
4  
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7

A B C D E F G H I J

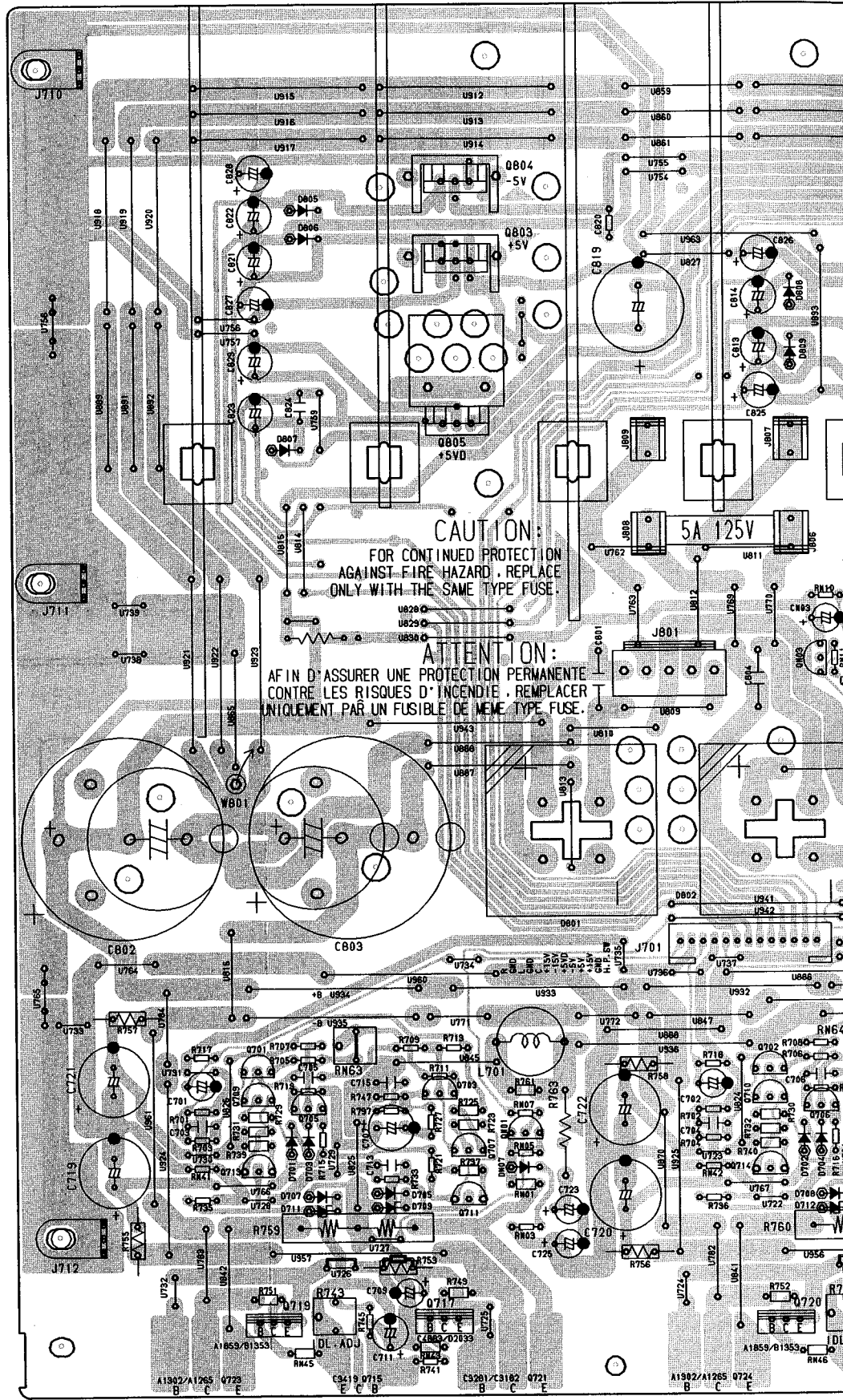


P.C. BOARD ( 8 )

P704-Main Amp P.C. Board

1  
2  
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A B C D E



**CAUTION:**  
FOR CONTINUED PROTECTION  
AGAINST FIRE HAZARD, REPLACE  
ONLY WITH THE SAME TYPE FUSE.

**ATTENTION:**  
AFIN D'ASSURER UNE PROTECTION PERMANENTE  
CONTRE LES RISQUES D'INCENDIE, REMPLACER  
UNIQUEMENT PAR UN FUSIBLE DE MEME TYPE FUSE.



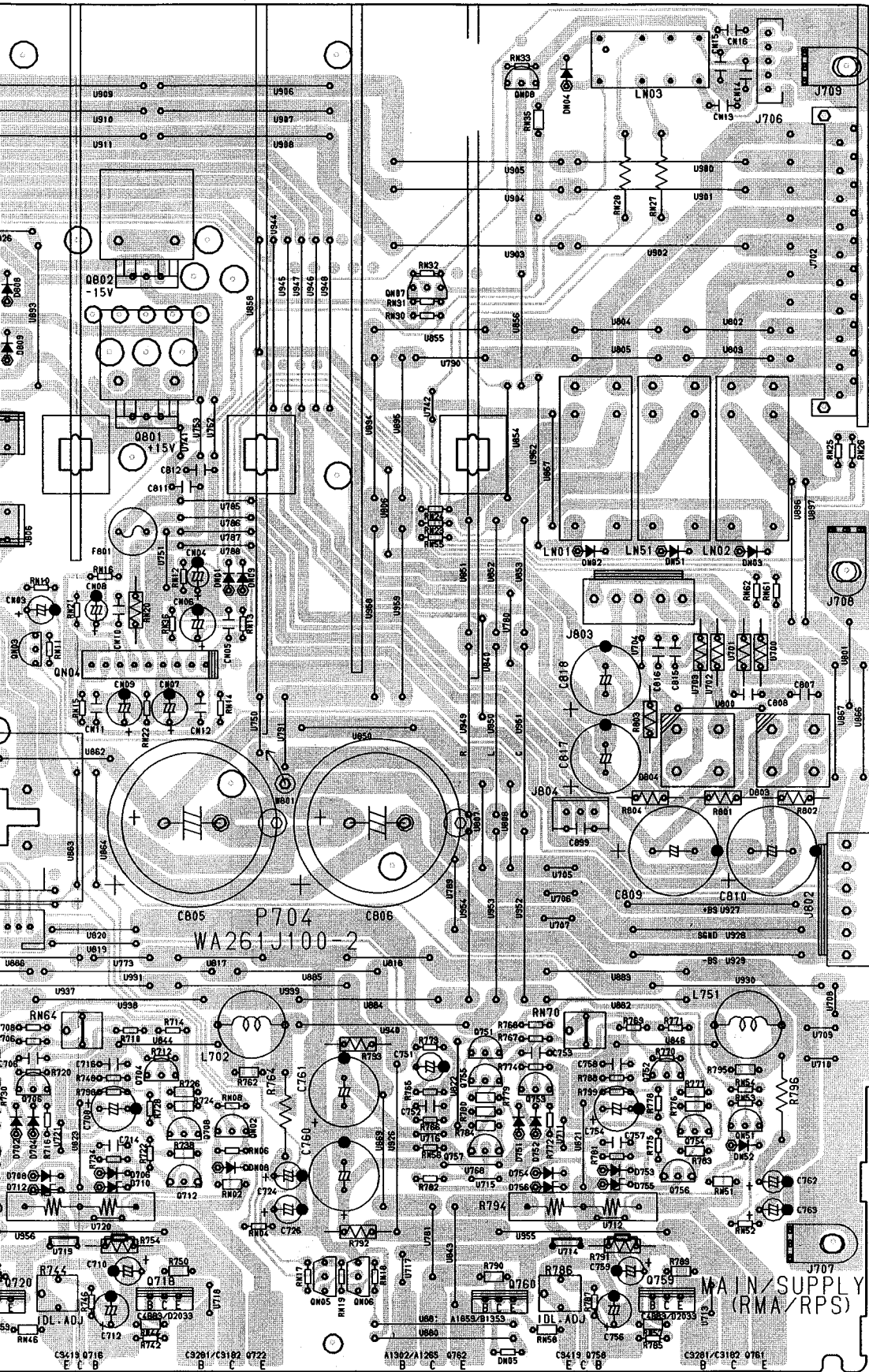
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P704  
WA261J100-2

MAIN/SUPPLY  
(RMA/RPS)

DL ADJ  
C3201/C3182 0722  
A1382/A1285 0782  
C3419 0758  
C3781/C3182 0781



Ref. No.	Part. No.	Description	Ref. No.	Part. No.	Description
CV84	DK16221300	CERAMIC 220PF ±10%	RE73	GD05105160	1/6W 1M Ω ±5%
CV85	DK16471300	CERAMIC 470PF ±10%	RE74	GD05105160	1/6W 1M Ω ±5%
<b>RESISTORS</b>			RE75	GD05105160	1/6W 1M Ω ±5%
RE01	GD05104160	1/6W 100K Ω ±5%	RE76	GD05105160	1/6W 1M Ω ±5%
RE02	GD05104160	1/6W 100K Ω ±5%	RE79	GD05104160	1/6W 100K Ω ±5%
RE03	GD05104160	1/6W 100K Ω ±5%	RE80	GD05104160	1/6W 100K Ω ±5%
RE04	GD05104160	1/6W 100K Ω ±5%	RE81	GD05104160	1/6W 100K Ω ±5%
RE05	GD05104160	1/6W 100K Ω ±5%	RE82	GD05104160	1/6W 100K Ω ±5%
RE06	GD05104160	1/6W 100K Ω ±5%	RV53	GD05392160	1/6W 3.9K Ω ±5%
RE07	GD05332160	1/6W 3.3K Ω ±5%	RV54	GD05392160	1/6W 3.9K Ω ±5%
RE08	GD05332160	1/6W 3.3K Ω ±5%	RV55	GD05392160	1/6W 3.9K Ω ±5%
RE09	GD05332160	1/6W 3.3K Ω ±5%	RV59	GD05392160	1/6W 3.9K Ω ±5%
RE10	GD05332160	1/6W 3.3K Ω ±5%	RV60	GD05392160	1/6W 3.9K Ω ±5%
RE11	GD05332160	1/6W 3.3K Ω ±5%	RV61	GD05392160	1/6W 3.9K Ω ±5%
RE12	GD05332160	1/6W 3.3K Ω ±5%	RV62	GD05273160	1/6W 27K Ω ±5%
RE13	GD05222160	1/6W 2.2K Ω ±5%	RV65	GD05392160	1/6W 3.9K Ω ±5%
RE14	GD05222160	1/6W 2.2K Ω ±5%	RV66	GD05392160	1/6W 3.9K Ω ±5%
RE15	GD05222160	1/6W 2.2K Ω ±5%	RV67	GD05392160	1/6W 3.9K Ω ±5%
RE16	GD05222160	1/6W 2.2K Ω ±5%	RV68	GD05273160	1/6W 27K Ω ±5%
RE17	GD05222160	1/6W 2.2K Ω ±5%	RV69	GD05471160	1/6W 470 Ω ±5%
RE18	GD05222160	1/6W 2.2K Ω ±5%	RV70	GD05471160	1/6W 470 Ω ±5%
RE19	GD05104160	1/6W 100K Ω ±5%	RV71	GD05471160	1/6W 470 Ω ±5%
RE20	GD05104160	1/6W 100K Ω ±5%	RV72	GD05471160	1/6W 470 Ω ±5%
RE21	GD05104160	1/6W 100K Ω ±5%	RV73	GD05471160	1/6W 470 Ω ±5%
RE22	GD05104160	1/6W 100K Ω ±5%	RV74	GD05221160	1/6W 220 Ω ±5%
RE23	GD05104160	1/6W 100K Ω ±5%	RV75	GD05473160	1/6W 47K Ω ±5%
RE24	GD05104160	1/6W 100K Ω ±5%	RV76	GD05473160	1/6W 47K Ω ±5%
RE25	GD05331160	1/6W 330 Ω ±5%	RV77	GD05473160	1/6W 47K Ω ±5%
RE26	GD05331160	1/6W 330 Ω ±5%	RV78	GD05473160	1/6W 47K Ω ±5%
RE27	GD05331160	1/6W 330 Ω ±5%	RV79	GD05473160	1/6W 47K Ω ±5%
RE28	GD05331160	1/6W 330 Ω ±5%	RV80	GD05473160	1/6W 47K Ω ±5%
RE29	GD05331160	1/6W 330 Ω ±5%	RV81	GD05103160	1/6W 10K Ω ±5%
RE30	GD05331160	1/6W 330 Ω ±5%	RV82	GD05103160	1/6W 10K Ω ±5%
RE31	GD05152160	1/6W 1.5K Ω ±5%	RV83	GD05103160	1/6W 10K Ω ±5%
RE32	GD05152160	1/6W 1.5K Ω ±5%	RV84	GD05103160	1/6W 10K Ω ±5%
RE33	GD05152160	1/6W 1.5K Ω ±5%	RV85	GD05103160	1/6W 10K Ω ±5%
RE34	GD05152160	1/6W 1.5K Ω ±5%	RV86	GD05103160	1/6W 10K Ω ±5%
RE35	GD05152160	1/6W 1.5K Ω ±5%	RV87	GD05103160	1/6W 10K Ω ±5%
RE36	GD05152160	1/6W 1.5K Ω ±5%	RV88	GD05271160	1/6W 270 Ω ±5%
RE37	GD05334160	1/6W 330K Ω ±5%	<b>INTEGRATED CIRCUITS</b>		
RE38	GD05334160	1/6W 330K Ω ±5%	QE01	HC10008090	IC NJM4558DD Dual OP AMP
RE39	GD05334160	1/6W 330K Ω ±5%	QE02	HC10008090	IC NJM4558DD Dual OP AMP
RE40	GD05334160	1/6W 330K Ω ±5%	QE03	HC10008090	IC NJM4558DD Dual OP AMP
RE41	GD05334160	1/6W 330K Ω ±5%	QE04	HC10304050	IC TC9213P Electric Volume (2ch)
RE42	GD05334160	1/6W 330K Ω ±5%	QE05	HC10304050	IC TC9213P Electric Volume (2ch)
RE43	GD05152160	1/6W 1.5K Ω ±5%	QE06	HC10304050	IC TC9213P Electric Volume (2ch)
RE44	GD05152160	1/6W 1.5K Ω ±5%	QE07	HC10008090	IC NJM4558DD Dual OP AMP
RE45	GD05152160	1/6W 1.5K Ω ±5%	QE08	HC10008090	IC NJM4558DD Dual OP AMP
RE46	GD05152160	1/6W 1.5K Ω ±5%	QE09	HC10008090	IC NJM4558DD Dual OP AMP
RE47	GD05152160	1/6W 1.5K Ω ±5%	QE10	HC10008090	IC NJM4558DD Dual OP AMP
RE48	GD05152160	1/6W 1.5K Ω ±5%	QE11	HC10008090	IC NJM4558DD Dual OP AMP
RE49	GD05104160	1/6W 100K Ω ±5%	QE12	HC10008090	IC NJM4558DD Dual OP AMP
RE50	GD05104160	1/6W 100K Ω ±5%	QV58	HC10008090	IC NJM4558DD Dual OP AMP
RE51	GD05104160	1/6W 100K Ω ±5%	QV59	HC10008090	IC NJM4558DD Dual OP AMP
RE52	GD05104160	1/6W 100K Ω ±5%	<b>TRANSISTORS</b>		
RE53	GD05104160	1/6W 100K Ω ±5%	QV51	HT328782A0	2SC2878 (A, B)
RE54	GD05104160	1/6W 100K Ω ±5%	QV52	HT328782A0	2SC2878 (A, B)
RE55	GD05152160	1/6W 1.5K Ω ±5%	QV53	HT328782A0	2SC2878 (A, B)
RE56	GD05152160	1/6W 1.5K Ω ±5%	QV54	HT328782A0	2SC2878 (A, B)
RE57	GD05152160	1/6W 1.5K Ω ±5%	QV55	HT328782A0	2SC2878 (A, B)
RE58	GD05152160	1/6W 1.5K Ω ±5%	QV56	HT328782A0	2SC2878 (A, B)
RE59	GD05152160	1/6W 1.5K Ω ±5%	QV60	HT328782A0	2SC2878 (A, B)
RE60	GD05152160	1/6W 1.5K Ω ±5%			
RE61	GD05152160	1/6W 1.5K Ω ±5%			
RE62	GD05152160	1/6W 1.5K Ω ±5%			
RE63	GD05152160	1/6W 1.5K Ω ±5%			
RE64	GD05152160	1/6W 1.5K Ω ±5%			
RE65	GD05152160	1/6W 1.5K Ω ±5%			
RE66	GD05152160	1/6W 1.5K Ω ±5%			



Ref. No.	Part. No.	Description
<b>COILS</b>		
LV01	LC14733800	CHOKE 47 $\mu$ H <b>IB</b>
LV02	LC14733800	CHOKE 47 $\mu$ H <b>IB</b>
LV03	LC14733800	CHOKE 47 $\mu$ H <b>IB</b>
<b>MISCELLANEOUS</b>		
JV52	YT02060540	TERMINAL, 6P RCA PIN JACK <b>IB</b>
JV52	YT02060500	TERMINAL, 6P RCA PIN JACK <b>BK</b>
JV53	YT02041160	TERMINAL, 4P RCA PIN JACK <b>IB</b>
JV53	YT02041110	TERMINAL, 4P RCA PIN JACK <b>BK</b>
JV54	YT02011020	TERMINAL, 1P RCA PIN JACK <b>IB</b>
JV54	YT02010780	TERMINAL, 1P RCA PIN JACK <b>BK</b>
JV55	YJ06030600	JACK, 30P
JV56	YP06004570	PLUG, 13P
JV57	YP06006930	PLUG, 3P

Ref. No.	Part. No.	Description
RF13	GD05103160	1/6W 10K $\Omega$ $\pm$ 5%
RF14	GD05103160	1/6W 10K $\Omega$ $\pm$ 5%
RF15	GD05103160	1/6W 10K $\Omega$ $\pm$ 5%
RF17	GD05103160	1/6W 10K $\Omega$ $\pm$ 5%
RF18	GD05103160	1/6W 10K $\Omega$ $\pm$ 5%
RF19	GD05103160	1/6W 10K $\Omega$ $\pm$ 5%
RF20	GD05103160	1/6W 10K $\Omega$ $\pm$ 5%
RF21	GD05223160	1/6W 22K $\Omega$ $\pm$ 5%
RF22	GD05223160	1/6W 22K $\Omega$ $\pm$ 5%
RF23	GD05223160	1/6W 22K $\Omega$ $\pm$ 5%
RF24	GD05223160	1/6W 22K $\Omega$ $\pm$ 5%
RF29	GD05223160	1/6W 22K $\Omega$ $\pm$ 5%
RF30	GD05223160	1/6W 22K $\Omega$ $\pm$ 5%
RF31	GD05223160	1/6W 22K $\Omega$ $\pm$ 5%
RF32	GD05223160	1/6W 22K $\Omega$ $\pm$ 5%
RF45	GD05102160	1/6W 1K $\Omega$ $\pm$ 5%
RF46	GD05102160	1/6W 1K $\Omega$ $\pm$ 5%
RF81	GD05473160	1/6W 47K $\Omega$ $\pm$ 5%
RF82	GD05473160	1/6W 47K $\Omega$ $\pm$ 5%
RF83	GD05473160	1/6W 47K $\Omega$ $\pm$ 5%
RF84	GD05473160	1/6W 47K $\Omega$ $\pm$ 5%

**PF04-TONE P.C. BOARD**

<b>CAPACITORS</b>		
CF01	EJ10601610	ELECT 10 $\mu$ F 16V
CF02	EJ10601610	ELECT 10 $\mu$ F 16V
CF03	EJ10601610	ELECT 10 $\mu$ F 16V
CF04	OA47601620	ELECT 47 $\mu$ F 16V
CF05	DK16222300	CERAMIC 2200PF $\pm$ 10%
CF06	DK16222300	CERAMIC 2200PF $\pm$ 10%
CF07	DK16222300	CERAMIC 2200PF $\pm$ 10%
CF09	DD15101300	CERAMIC 100PF $\pm$ 5%
CF10	DD15101300	CERAMIC 100PF $\pm$ 5%
CF11	DD15101300	CERAMIC 100PF $\pm$ 5%
CF13	DF15153350	FILM 0.015 $\mu$ F $\pm$ 5%
CF14	DF15153350	FILM 0.015 $\mu$ F $\pm$ 5%
CF15	DF15153350	FILM 0.015 $\mu$ F $\pm$ 5%
CF16	DF15473310	FILM 0.047 $\mu$ F $\pm$ 5%
CF17	DF15153350	FILM 0.015 $\mu$ F $\pm$ 5%
CF18	DF15153350	FILM 0.015 $\mu$ F $\pm$ 5%
CF19	DF15153350	FILM 0.015 $\mu$ F $\pm$ 5%
CF20	DF15473310	FILM 0.047 $\mu$ F $\pm$ 5%
CF21	OA47601620	ELECT 47 $\mu$ F 16V
CF22	OA47601620	ELECT 47 $\mu$ F 16V
CF23	OA47601620	ELECT 47 $\mu$ F 16V
CF25	OA22601620	ELECT 22 $\mu$ F 16V
CF26	OA22601620	ELECT 22 $\mu$ F 16V
CF27	OA22601620	ELECT 22 $\mu$ F 16V
CF28	OA22601620	ELECT 22 $\mu$ F 16V
CF29	DD15470300	CERAMIC 47PF $\pm$ 5%
CF30	DD15470300	CERAMIC 47PF $\pm$ 5%
CF31	DD15470300	CERAMIC 47PF $\pm$ 5%
CF32	DD15470300	CERAMIC 47PF $\pm$ 5%
CF40	OA10701620	ELECT 100 $\mu$ F 16V
CF41	OA10701620	ELECT 100 $\mu$ F 16V
CF43	DA17223110	CERAMIC 0.022 $\mu$ F $\pm$ 20%
CF44	DA17223110	CERAMIC 0.022 $\mu$ F $\pm$ 20%
CF45	DA17223110	CERAMIC 0.022 $\mu$ F $\pm$ 20%
CF46	DA17223110	CERAMIC 0.022 $\mu$ F $\pm$ 20%
CF47	DA17223110	CERAMIC 0.022 $\mu$ F $\pm$ 20%
CF48	DA17223110	CERAMIC 0.022 $\mu$ F $\pm$ 20%

<b>RESISTORS</b>		
RF01	GD05473160	1/6W 47K $\Omega$ $\pm$ 5%
RF02	GD05473160	1/6W 47K $\Omega$ $\pm$ 5%
RF03	GD05473160	1/6W 47K $\Omega$ $\pm$ 5%
RF04	GD05473160	1/6W 47K $\Omega$ $\pm$ 5%
RF05	GD05470160	1/6W 47 $\Omega$ $\pm$ 5%
RF06	GD05470160	1/6W 47 $\Omega$ $\pm$ 5%
RF07	GD05470160	1/6W 47 $\Omega$ $\pm$ 5%
RF08	GD05470160	1/6W 47 $\Omega$ $\pm$ 5%
RF09	GD05103160	1/6W 10K $\Omega$ $\pm$ 5%
RF10	GD05103160	1/6W 10K $\Omega$ $\pm$ 5%
RF11	GD05103160	1/6W 10K $\Omega$ $\pm$ 5%

<b>CONTROLS</b>		
RF41	RG01040140	VARIABLE, 100K $\Omega$ (B) x 4
RF42	RG01040140	VARIABLE, 100K $\Omega$ (B) x 4
RF43	RK01040620	VARIABLE, 100K $\Omega$ (W)

<b>INTEGRATED CIRCUITS</b>		
QF01	HC10031090	IC NJM2058D Quad OP AMP
QF02	HC10008090	IC NJM4558DD Dual OP AMP
QF03	HC10008090	IC NJM4558DD Dual OP AMP

<b>MISCELLANEOUS</b>		
JF01	YP06006720	PLUG, 11P

**PL04-VIDEO SELECTOR P.C. BOARD**

<b>CAPACITORS</b>		
CL01	EJ22601010	ELECT 22 $\mu$ F 10V
CL02	EJ10601610	ELECT 10 $\mu$ F 16V
CL03	EJ22601010	ELECT 22 $\mu$ F 10V
CL04	EJ10601610	ELECT 10 $\mu$ F 16V
CL05	EJ22601010	ELECT 22 $\mu$ F 10V
CL06	EJ10601610	ELECT 10 $\mu$ F 16V
CL09	EJ22601010	ELECT 22 $\mu$ F 10V
CL10	EJ10601610	ELECT 10 $\mu$ F 16V
CL14	DD38104010	CERAMIC 0.1 $\mu$ F +80% -20%
CL15	DD38104010	CERAMIC 0.1 $\mu$ F +80% -20%
CL16	DK18103310	CERAMIC 0.01 $\mu$ F +80% -20%
CL17	DK18103310	CERAMIC 0.01 $\mu$ F +80% -20%
CL18	EA22700610	ELECT 220 $\mu$ F 6.3V
CL19	EA22700610	ELECT 220 $\mu$ F 6.3V
CL20	EJ22601010	ELECT 22 $\mu$ F 10V
CL21	EA10701010	ELECT 100 $\mu$ F 10V
CL22	DK18103310	CERAMIC 0.01 $\mu$ F +80% -20%
CL23	EJ22601010	ELECT 22 $\mu$ F 10V
CL31	DD38104010	CERAMIC 0.1 $\mu$ F +80% -20%
CX49	EJ47502510	ELECT 4.7 $\mu$ F 25V
CX50	EA47601010	ELECT 47 $\mu$ F 10V
CX51	EA22700610	ELECT 220 $\mu$ F 6.3V
CX52	DK18103310	CERAMIC 0.01 $\mu$ F +80% -20%
CX53	EA22700610	ELECT 220 $\mu$ F 6.3V
CX54	DK18103310	CERAMIC 0.01 $\mu$ F +80% -20%
CX55	DD15220300	CERAMIC 22PF $\pm$ 5%
CX56	DD15220300	CERAMIC 22PF $\pm$ 5%
CX57	DD15220300	CERAMIC 22PF $\pm$ 5% <b>IB</b>
CX58	DD15220300	CERAMIC 22PF $\pm$ 5% <b>IB</b>
CX59	EJ47405010	ELECT 0.47 $\mu$ F 50V

Ref. No.	Part. No.	Description
CX60	DD15560300	CERAMIC 56PF ±5%
CX61	EJ10505010	ELECT 1μF 50V
CX62	DK16122300	CERAMIC 1200PF ±10%
CX63	EJ10505010	ELECT 1μF 50V
CX64	DF15682350	FILM 0.0068μF ±5%
CX65	DF15223350	FILM 0.022μF ±5%
CX66	DD15470300	CERAMIC 47PF ±5%
CX67	CT12000200	TRIMMING 20PF
CX69	EA47601010	ELECT 47μF 10V
CX70	EJ47502510	ELECT 4.7μF 25V
CX72	DK18103310	CERAMIC 0.01μF +80% -20%
CX73	EA22700610	ELECT 220μF 6.3V
CX74	EJ10505010	ELECT 1μF 50V
CX75	EJ22601010	ELECT 22μF 10V
CX76	EA10701010	ELECT 100μF 10V

**RESISTORS**

RL01	GD05820160	1/6W 82 Ω ±5%
RL02	GD05100160	1/6W 10 Ω ±5%
RL03	GD05820160	1/6W 82 Ω ±5%
RL04	GD05100160	1/6W 10 Ω ±5%
RL05	GD05820160	1/6W 82 Ω ±5%
RL06	GD05100160	1/6W 10 Ω ±5%
RL07	GD05750160	1/6W 75 Ω ±5%
RL09	GD05820160	1/6W 82 Ω ±5%
RL10	GD05100160	1/6W 10 Ω ±5%
RL11	GD05750160	1/6W 75 Ω ±5%
RL15	GD05750160	1/6W 75 Ω ±5%
RL17	GD05104160	1/6W 100K Ω ±5%
RL18	GD05104160	1/6W 100K Ω ±5%
RL19	GD05472160	1/6W 4.7K Ω ±5%
RX51	GD05333160	1/6W 33K Ω ±5%
RX52	GD05221160	1/6W 220 Ω ±5%
RX53	GD05105160	1/6W 1M Ω ±5%
RX54	GD05105160	1/6W 1M Ω ±5%
RX55	GD05103160	1/6W 10K Ω ±5%
RX56	GD05103160	1/6W 10K Ω ±5%
RX57	GD05103160	1/6W 10K Ω ±5%
RX59	GD05221160	1/6W 220 Ω ±5%
RX60	GD05152160	1/6W 1.5K Ω ±5%
RX61	GD05682160	1/6W 6.8K Ω ±5%
RX62	GD05102160	1/6W 1K Ω ±5%
RX65	GD05102160	1/6W 1K Ω ±5%
RX66	GD05102160	1/6W 1K Ω ±5%
RX67	GD05104160	1/6W 100K Ω ±5%
RX68	GD05223160	1/6W 22K Ω ±5%
RX69	GD05471160	1/6W 470 Ω ±5%

**INTEGRATED CIRCUITS**

QL01	HC10275030	IC LC7824 Analogue Switch
QL02	HC10275030	IC LC7824 Analogue Switch
QL03	HC10046170	IC MC14576 Dual Video AMP
QL04	HC12233090	IC NJM2233BD Single Video AMP
QX60	HC10328030	IC LC74760-9004 OSD LSI
QX63	HC10141090	IC NJM2267D Dual Video AMP

**TRANSISTORS**

QX61	HT30001000	2SC536SP
QX62	BA20002000	DIGITAL DTC144ES/UN4213
QX64	HT30001000	2SC536SP

**DIODES**

DL01	HD20002000	1SS176
DL02	HD20002000	1SS176
DL03	HD20002000	1SS176
DL04	HD20002000	1SS176
DL05	HD20002000	1SS176
DL06	HD20002000	1SS176

Ref. No.	Part. No.	Description
DL07	HD20002000	1SS176
DL08	HD20002000	1SS176
DL09	HD20002000	1SS176
DL10	HD20002000	1SS176
DX61	HD20002000	1SS176

**COILS**

LX51	LC12233800	CHOKE, 22μH
LX52	LC15623800	CHOKE, 5.6μH

**MISCELLANEOUS**

JL01	YT02041130	TERMINAL, 4P RCA PIN JACK
JL02	YT02030370	TERMINAL, 3P RCA PIN JACK
JL03	YP06020640	PLUG, 14P
LX53	FM12223010	EMI FILTER
XX51	JX14001260	CRYSTAL, 14.31818MHz
XX52	JX17001260	CRYSTAL, 17.7MHz (IB)

**PL54-S-VIDEO P.C. BOARD**

**CAPACITORS**

CL51	EJ10601610	ELECT 10μF 16V
CL52	EJ10601610	ELECT 10μF 16V
CL53	EJ10601610	ELECT 10μF 16V
CL54	EJ10601610	ELECT 10μF 16V
CL55	EJ10601610	ELECT 10μF 16V
CL56	EJ10601610	ELECT 10μF 16V
CL57	EJ10601610	ELECT 10μF 16V
CL58	EJ10601610	ELECT 10μF 16V
CL59	EJ10601610	ELECT 10μF 16V
CL60	EJ10601610	ELECT 10μF 16V
CL61	EJ10601610	ELECT 10μF 16V
CL62	EJ10601610	ELECT 10μF 16V
CL63	EJ10601610	ELECT 10μF 16V
CL64	EJ10601610	ELECT 10μF 16V
CL65	DD38104010	CERAMIC 0.1μF +80% -20%
CL66	DD38104010	CERAMIC 0.1μF +80% -20%
CL67	DD38104010	CERAMIC 0.1μF +80% -20%
CL68	DD38104010	CERAMIC 0.1μF +80% -20%
CL69	DD38104010	CERAMIC 0.1μF +80% -20%
CL70	DD38104010	CERAMIC 0.1μF +80% -20%
CL71	EA10700610	ELECT 100μF 6.3V
CL72	DK18103310	CERAMIC 0.01μF +80% -20%
CL73	DK18103310	CERAMIC 0.01μF +80% -20%
CL74	EA10700610	ELECT 100μF 6.3V
CL75	EA10700610	ELECT 100μF 6.3V
CL76	DK18103310	CERAMIC 0.01μF +80% -20%
CL77	DK18103310	CERAMIC 0.01μF +80% -20%
CL78	EA10700610	ELECT 100μF 6.3V
CL79	DK18103310	CERAMIC 0.01μF +80% -20%

**RESISTORS**

RL51	GD05100160	1/6W 10 Ω ±5%
RL52	GD05100160	1/6W 10 Ω ±5%
RL53	GD05100160	1/6W 10 Ω ±5%
RL54	GD05100160	1/6W 10 Ω ±5%
RL55	GD05820160	1/6W 82 Ω ±5%
RL56	GD05820160	1/6W 82 Ω ±5%
RL57	GD05820160	1/6W 82 Ω ±5%
RL58	GD05820160	1/6W 82 Ω ±5%
RL59	GD05820160	1/6W 82 Ω ±5%
RL60	GD05820160	1/6W 82 Ω ±5%
RL61	GD05820160	1/6W 82 Ω ±5%
RL62	GD05820160	1/6W 82 Ω ±5%
RL63	GD05750160	1/6W 75 Ω ±5%
RL64	GD05750160	1/6W 75 Ω ±5%

Ref. No.	Part. No.	Description	Ref. No.	Part. No.	Description
RL65	GD05750160	1/6W 75 Ω ±5%	WL01	YB00152110	CONNECTIVE CORD, 1P
RL66	GD05750160	1/6W 75 Ω ±5%	<b>PN54-SPK PROTECT P.C. BOARD (AVR80MK II)</b>		
RL67	GD05750160	1/6W 75 Ω ±5%			
RL68	GD05750160	1/6W 75 Ω ±5%			
RL69	GD05104160	1/6W 100K Ω ±5%			
RL70	GD05104160	1/6W 100K Ω ±5%			
RL71	GD05104160	1/6W 100K Ω ±5%			
RL72	GD05104160	1/6W 100K Ω ±5%			
RL73	GD05104160	1/6W 100K Ω ±5%			
RL74	GD05104160	1/6W 100K Ω ±5%			
<b>INTEGRATED CIRCUITS</b>					
QL51	HC10275030	IC LC7824 Analogue Switch	CN81	EJ10505010	ELECT 1μF 50V
QL52	HC10275030	IC LC7824 Analogue Switch	CN82	EJ10505010	ELECT 1μF 50V
QL53	HC10275030	IC LC7824 Analogue Switch	CN83	DD38104010	CERAMIC 0.1μF +80% -20%
QL54	HC10275030	IC LC7824 Analogue Switch	<b>RESISTORS</b>		
QL55	HC10046170	IC MC14576 Dual Video AMP	RN83	GD05473160	1/6W 47K Ω ±5%
QL56	HC10046170	IC MC14576 Dual Video AMP	RN84	GD05473160	1/6W 47K Ω ±5%
QL57	HC10046170	IC MC14576 Dual Video AMP	RN85	GD05104160	1/6W 100K Ω ±5%
<b>MISCELLANEOUS</b>			RN86	GD05103160	1/6W 10K Ω ±5%
JL51	YT02021320	TERMINAL, 2P	RN87	GD05473160	1/6W 47K Ω ±5%
JL52	YT02021320	TERMINAL, 2P	RN88	GD05473160	1/6W 47K Ω ±5%
JL53	YT02030350	TERMINAL, 3P	<b>INTEGRATED CIRCUITS</b>		
JL54	YP06020600	PLUG, 10P	QN84	HC10042050	IC TA7317P Over Load Protector
JL55	YL01010140	TERMINAL GND	<b>TRANSISTORS</b>		
<b>PL94-AUX IN P.C. BOARD</b>			QN81	BA10007210	DIGITAL DTA114ES
<b>CAPACITORS</b>			QN82	HT322402A0	2SC2240 (GR, BL)
CL91	EJ10601610	ELECT 10μF 16V	QN83	HT322402A0	2SC2240 (GR, BL)
CL92	EJ22601610	ELECT 22μF 16V	<b>DIODES</b>		
CL93	EJ10601610	ELECT 10μF 16V	DN81	HD20002000	1SS176
CL94	EJ10601610	ELECT 10μF 16V	DN82	HD20002000	1SS176
CL95	DD38104010	CERAMIC 0.1μF +80% -20%	<b>MISCELLANEOUS</b>		
CL96	DD38104010	CERAMIC 0.1μF +80% -20%	JN81	YJ06019130	JACK, 13P
CL97	DK16221300	CERAMIC 220PF ±10% (IB) (MOMS)	JN82	YP06007130	PLUG, 3P
CL97	DK16102300	CERAMIC 1000PF ±10% (IB) (AVR80)	<b>PP04-SURROUND AMP P.C. BOARD</b>		
CL98	DK16221300	CERAMIC 220PF ±10% (IB) (MOMS)	<b>CAPACITORS</b>		
CL98	DK16102300	CERAMIC 1000PF ±10% (IB) (AVR80)	CP01	DK16102300	CERAMIC 1000PF ±10%
<b>RESISTORS</b>			CP02	DK16102300	CERAMIC 1000PF ±10%
RL91	GD05100160	1/6W 10 Ω ±5%	CP03	EQ10606390	ELECT 10μF 63V
RL92	GD05750160	1/6W 75 Ω ±5%	CP04	EQ10606390	ELECT 10μF 63V
RL93	GD05750160	1/6W 75 Ω ±5%	CP05	EA10701610	ELECT 100μF 16V
RL94	GD05750160	1/6W 75 Ω ±5%	CP06	EA10701610	ELECT 100μF 16V
RL95	GD05100160	1/6W 10 Ω ±5%	CP07	DD11100300	CERAMIC 10PF ±0.5PF (IB)
RL96	GD05100160	1/6W 10 Ω ±5%	CP07	DD10030300	CERAMIC 3PF ±0.25PF (BK)
RL97	GD05102160	1/6W 1K Ω ±5% (IB) (MOMS)	CP08	DD11100300	CERAMIC 10PF ±0.5PF (IB)
RL98	GD05102160	1/6W 1K Ω ±5% (IB) (MOMS)	CP08	DD10030300	CERAMIC 3PF ±0.25PF (BK)
RU06	GD05332160	1/6W 3.3K Ω ±5%	CP09	EJ22405010	ELECT 0.22μF 50V
RU08	GD05682160	1/6W 6.8K Ω ±5%	CP10	EJ22405010	ELECT 0.22μF 50V
RU10	GD05103160	1/6W 10K Ω ±5%	CP11	EJ22405010	ELECT 0.22μF 50V
RU38	GD05151160	1/6W 150 Ω ±5%	CP12	EJ22405010	ELECT 0.22μF 50V
<b>DIODES</b>			CP13	EA10706310	ELECT 100μF 63V
DU46	HI10095320	L.E.D. LT3K44B (GRN)	CP14	EA10606310	ELECT 10μF 63V
DU47	HI10095320	L.E.D. LT3K44B (GRN)	CP15	EA10706310	ELECT 100μF 63V
<b>MISCELLANEOUS</b>			CP16	EA10606310	ELECT 10μF 63V
JL91	BY04040020	TERMINAL, AUX / S-VIDEO IN	CP17	EJ22601010	ELECT 22μF 10V
JL92	YP06007260	PLUG, 8P	CP21	DD15470300	CERAMIC 47PF ±5% (IB)
JU05	YJ06018040	JACK, 4P	CP22	DD15470300	CERAMIC 47PF ±5% (IB)
SU07	SP01011280	PUSH SWITCH, TACT	<b>RESISTORS</b>		
SU09	SP01011280	PUSH SWITCH, TACT	RP01	GD05102160	1/6W 1K Ω ±5% (IB)
SU11	SP01011280	PUSH SWITCH, TACT	RP01	GD05471160	1/6W 470 Ω ±5% (BK)
			RP02	GD05102160	1/6W 1K Ω ±5% (IB)
			RP02	GD05471160	1/6W 470 Ω ±5% (BK)
			RP03	GD05473160	1/6W 47K Ω ±5%
			RP04	GD05473160	1/6W 47K Ω ±5%
			RP05	GD05563160	1/6W 56K Ω ±5%
			RP06	GD05563160	1/6W 56K Ω ±5%

Ref. No.	Part. No.	Description
RP07	GD05182160	1/6W 1.8K Ω ±5%
RP08	GD05182160	1/6W 1.8K Ω ±5%
RP09	GD05513160	1/6W 51K Ω ±5%
RP10	GD05513160	1/6W 51K Ω ±5%
▲RP11	GO10222030	3W 0.22 Ω ±10%
▲RP12	GO10222030	3W 0.22 Ω ±10%
▲RP13	GG05102160	1/6W 1K Ω ±5%
▲RP14	GG05102160	1/6W 1K Ω ±5%
RP15	GD05102160	1/6W 1K Ω ±5%
RP16	GD05102160	1/6W 1K Ω ±5%
RP17	GD05273160	1/6W 27K Ω ±5%
RP18	GD05273160	1/6W 27K Ω ±5%
RP19	GD05223160	1/6W 22K Ω ±5%
RP20	GD05223160	1/6W 22K Ω ±5%
▲RP21	GA05100010	1W 10 Ω ±5%
▲RP22	GA05100010	1W 10 Ω ±5%
RP23	GD05221160	1/6W 220 Ω ±5%
RP23	GD05181160	1/6W 180 Ω ±5%
RP24	GD05221160	1/6W 220 Ω ±5%
RP24	GD05181160	1/6W 180 Ω ±5%
▲RP25	GG05101160	1/6W 100 Ω ±5%
▲RP26	GG05101160	1/6W 100 Ω ±5%
RP27	GD05682160	1/6W 6.8K Ω ±5%
RP28	GD05333160	1/6W 33K Ω ±5%
RP29	GD05100160	1/6W 100 Ω ±5%
RP99	GG05100140	1/4W 10 Ω ±5%

INTEGRATED CIRCUITS		
▲QP01	HC10357030	IC STK401-140 AF Power AMP (2ch)

TRANSISTORS		
QP02	HT322402A0	2SC2240 (GR, BL)
QP03	HT322402A0	2SC2240 (GR, BL)
QP04	HT109702A0	2SA970 (GR, BL)

DIODES		
DP01	HD20027010	HSS81TD
DP02	HD20027010	HSS81TD

COILS		
LP01	ML08010030	AIR, SPK CHOCK
LP02	ML08010030	AIR, SPK CHOCK

MISCELLANEOUS		
JP01	YP06006930	PLUG, 3P

WP03	YB00170870	CONNECTIVE CORD, 1P <b>IB</b>
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**PS04-AUDIO FUNCTION P.C. BOARD**

CAPACITORS		
CS01	EJ10601610	ELECT 10μF 16V
CS02	EJ10601610	ELECT 10μF 16V
CS03	EJ10601610	ELECT 10μF 16V
CS04	EJ10601610	ELECT 10μF 16V
CS05	EJ10601610	ELECT 10μF 16V
CS06	EJ10601610	ELECT 10μF 16V
CS07	EJ47502510	ELECT 4.7μF 25V
CS08	EJ47502510	ELECT 4.7μF 25V
CS09	EA10701610	ELECT 100μF 16V
CS10	EA10701610	ELECT 100μF 16V
CS11	EJ47502510	ELECT 4.7μF 25V
CS12	EJ47502510	ELECT 4.7μF 25V
CS13	EA10701610	ELECT 100μF 16V
CS14	EA10701610	ELECT 100μF 16V
CS15	EJ47502510	ELECT 4.7μF 25V
CS16	EJ47502510	ELECT 4.7μF 25V
CS17	EJ10601610	ELECT 10μF 16V
CS18	EJ10601610	ELECT 10μF 16V

Ref. No.	Part. No.	Description
CS19	DD38104010	CERAMIC 0.1μF +80% -20%
CS21	DD38104010	CERAMIC 0.1μF +80% -20%
CS22	DD38104010	CERAMIC 0.1μF +80% -20%
CS23	DK16151300	CERAMIC 150PF ±10% <b>IB</b>
CS24	DK16151300	CERAMIC 150PF ±10% <b>IB</b>
CS25	DK16151300	CERAMIC 150PF ±10% <b>IB</b>
CS26	DK16151300	CERAMIC 150PF ±10% <b>IB</b>
CS27	DK16221300	CERAMIC 220PF ±10% <b>IB</b>
CS28	DK16221300	CERAMIC 220PF ±10% <b>IB</b>
CS29	DK16151300	CERAMIC 150PF ±10% <b>IB</b>
CS30	DK16151300	CERAMIC 150PF ±10% <b>IB</b>
CS31	DK16221300	CERAMIC 220PF ±10% <b>IB</b>
CS32	DK16221300	CERAMIC 220PF ±10% <b>IB</b>
CS33	DK16221300	CERAMIC 220PF ±10% <b>IB</b>
CS34	DK16221300	CERAMIC 220PF ±10% <b>IB</b>
CS35	DK16221300	CERAMIC 220PF ±10% <b>IB</b>
CS36	DK16221300	CERAMIC 220PF ±10% <b>IB</b>
CS37	DK16221300	CERAMIC 220PF ±10% <b>IB</b>
CS38	DK16221300	CERAMIC 220PF ±10% <b>IB</b>

**RESISTORS**

RS01	GD05473160	1/6W 47K Ω ±5%
RS02	GD05473160	1/6W 47K Ω ±5%
RS03	GD05473160	1/6W 47K Ω ±5%
RS04	GD05473160	1/6W 47K Ω ±5%
RS05	GD05473160	1/6W 47K Ω ±5%
RS06	GD05473160	1/6W 47K Ω ±5%
RS07	GD05102160	1/6W 1K Ω ±5%
RS08	GD05102160	1/6W 1K Ω ±5%
RS09	GD05102160	1/6W 1K Ω ±5%
RS10	GD05102160	1/6W 1K Ω ±5%
RS11	GD05102160	1/6W 1K Ω ±5%
RS12	GD05102160	1/6W 1K Ω ±5%
RS13	GD05473160	1/6W 47K Ω ±5%
RS14	GD05473160	1/6W 47K Ω ±5%
RS15	GD05473160	1/6W 47K Ω ±5%
RS16	GD05473160	1/6W 47K Ω ±5%
RS17	GD05473160	1/6W 47K Ω ±5%
RS18	GD05473160	1/6W 47K Ω ±5%
RS19	GD05473160	1/6W 47K Ω ±5%
RS20	GD05473160	1/6W 47K Ω ±5%
RS21	GD05102160	1/6W 1K Ω ±5%
RS22	GD05102160	1/6W 1K Ω ±5%
RS23	GD05473160	1/6W 47K Ω ±5%
RS24	GD05473160	1/6W 47K Ω ±5%
RS25	GD05473160	1/6W 47K Ω ±5%
RS26	GD05473160	1/6W 47K Ω ±5%
RS27	GD05102160	1/6W 1K Ω ±5%
RS28	GD05102160	1/6W 1K Ω ±5%
RS29	GD05104160	1/6W 100K Ω ±5%
RS30	GD05104160	1/6W 100K Ω ±5%
RS31	GD05104160	1/6W 100K Ω ±5%
RS32	GD05104160	1/6W 100K Ω ±5%
RS33	GD05104160	1/6W 100K Ω ±5%
RS34	GD05104160	1/6W 100K Ω ±5%
RS37	GD05182160	1/6W 1.8K Ω ±5%
RS38	GD05182160	1/6W 1.8K Ω ±5%
RS39	GD05103160	1/6W 10K Ω ±5%
RS40	GD05103160	1/6W 10K Ω ±5%

**INTEGRATED CIRCUITS**

QS01	HC10008090	IC NJM4558DD Dual OP AMP
QS02	HC10008090	IC NJM4558DD Dual OP AMP
QS03	HC10008090	IC NJM4558DD Dual OP AMP
QS05	HC10008090	IC NJM4558DD Dual OP AMP
QS11	HC10308030	IC LC78211 Analogue Switch
QS12	HC10310030	IC LC78213 Analogue Switch
QS13	HC10008090	IC NJM4558DD Dual OP AMP

Ref. No.	Part. No.	Description	Ref. No.	Part. No.	Description
		<b>TRANSISTORS</b>			
QS07	HT421442A0	2SD2144S (U, V)	CS95	DK16151300	CERAMIC 150PF ±10% <b>IB</b>
QS08	HT421442A0	2SD2144S (U, V)	CS96	DK16151300	CERAMIC 150PF ±10% <b>IB</b>
QS09	BA20001000	DIGITAL DTC114ES			
QS10	BA10001000	DIGITAL DTA114ES			
		<b>MISCELLANEOUS</b>			
JS01	YT02060460	TERMINAL, 6P RCA PIN JACK			
JS02	YT02040940	TERMINAL, 4P RCA PIN JACK			
JS03	YJ06030570	JACK, 16P			
JS04	YL01010140	TERMINAL, GND			

### PS54-V-AUDIO FUNCTION P.C. BOARD

Ref. No.	Part. No.	Description	Ref. No.	Part. No.	Description
		<b>CAPACITORS</b>			
CG51	EJ47502510	ELECT 4.7μF 25V			
CG52	EJ47502510	ELECT 4.7μF 25V			
CG55	EJ47502510	ELECT 4.7μF 25V			
CG56	EJ47502510	ELECT 4.7μF 25V			
CG57	EJ47502510	ELECT 4.7μF 25V			
CG58	EJ47502510	ELECT 4.7μF 25V			
CG59	EJ47502510	ELECT 4.7μF 25V			
CG60	EJ47502510	ELECT 4.7μF 25V			
CG61	DK16101300	CERAMIC 100PF ±10% <b>IB</b>			
CG62	DK16101300	CERAMIC 100PF ±10% <b>IB</b>			
CG63	EJ47502510	ELECT 4.7μF 25V			
CG64	EJ47502510	ELECT 4.7μF 25V			
CS51	EJ10601610	ELECT 10μF 16V			
CS52	EJ10601610	ELECT 10μF 16V			
CS53	EJ10601610	ELECT 10μF 16V			
CS54	EJ10601610	ELECT 10μF 16V			
CS55	EJ10601610	ELECT 10μF 16V			
CS56	EJ10601610	ELECT 10μF 16V			
CS57	EJ10601610	ELECT 10μF 16V			
CS58	EJ10601610	ELECT 10μF 16V			
CS59	EJ47502510	ELECT 4.7μF 25V			
CS60	EJ47502510	ELECT 4.7μF 25V			
CS61	DD38104010	CERAMIC 0.1μF +80% -20%			
CS62	EA10701610	ELECT 100μF 16V			
CS63	EA10701610	ELECT 100μF 16V			
CS65	EA10701610	ELECT 100μF 16V			
CS66	EA10701610	ELECT 100μF 16V			
CS68	DD38104010	CERAMIC 0.1μF +80% -20%			
CS69	DD38104010	CERAMIC 0.1μF +80% -20%			
CS70	DD38104010	CERAMIC 0.1μF +80% -20%			
CS71	DK16151300	CERAMIC 150PF ±10% <b>IB</b>			
CS72	DK16151300	CERAMIC 150PF ±10% <b>IB</b>			
CS73	DK16151300	CERAMIC 150PF ±10% <b>IB</b>			
CS74	DK16151300	CERAMIC 150PF ±10% <b>IB</b>			
CS75	DK16151300	CERAMIC 150PF ±10% <b>IB</b>			
CS76	DK16151300	CERAMIC 150PF ±10% <b>IB</b>			
CS77	DK16151300	CERAMIC 150PF ±10% <b>IB</b>			
CS78	DK16151300	CERAMIC 150PF ±10% <b>IB</b>			
CS79	DK16221300	CERAMIC 220PF ±10% <b>IB</b>			
CS80	DK16221300	CERAMIC 220PF ±10% <b>IB</b>			
CS81	DK16221300	CERAMIC 220PF ±10% <b>IB</b>			
CS82	DK16221300	CERAMIC 220PF ±10% <b>IB</b>			
CS83	DK16221300	CERAMIC 220PF ±10% <b>IB</b>			
CS84	DK16221300	CERAMIC 220PF ±10% <b>IB</b>			
CS85	DK16221300	CERAMIC 220PF ±10% <b>IB</b>			
CS86	DK16221300	CERAMIC 220PF ±10% <b>IB</b>			
CS87	DK16221300	CERAMIC 220PF ±10% <b>IB</b>			
CS88	DK16221300	CERAMIC 220PF ±10% <b>IB</b>			
CS89	DK16221300	CERAMIC 220PF ±10% <b>IB</b>			
CS90	DK16221300	CERAMIC 220PF ±10% <b>IB</b>			
CS93	EJ10601610	ELECT 10μF 16V			
CS94	EJ10601610	ELECT 10μF 16V			
					<b>RESISTORS</b>
			RG51	GD05473160	1/6W 47K Ω ±5%
			RG52	GD05473160	1/6W 47K Ω ±5%
			RG53	GD05471160	1/6W 470 Ω ±5%
			RG54	GD05471160	1/6W 470 Ω ±5%
			RG55	GD05473160	1/6W 47K Ω ±5%
			RG56	GD05473160	1/6W 47K Ω ±5%
			RG57	GD05104160	1/6W 100K Ω ±5%
			RG58	GD05104160	1/6W 100K Ω ±5%
			RG59	GD05334160	1/6W 330K Ω ±5%
			RG60	GD05334160	1/6W 330K Ω ±5%
			RG61	GD05152160	1/6W 1.5K Ω ±5%
			RG62	GD05152160	1/6W 1.5K Ω ±5%
			RG63	GD05472160	1/6W 4.7K Ω ±5%
			RG64	GD05472160	1/6W 4.7K Ω ±5%
			RG65	GD05331160	1/6W 330 Ω ±5%
			RG66	GD05331160	1/6W 330 Ω ±5%
			RG67	GD05473160	1/6W 47K Ω ±5%
			RG68	GD05473160	1/6W 47K Ω ±5%
			RG69	GD05103160	1/6W 10K Ω ±5%
			RG70	GD05103160	1/6W 10K Ω ±5%
			RG71	GD05471160	1/6W 470 Ω ±5%
			RG72	GD05471160	1/6W 470 Ω ±5%
			RS51	GD05473160	1/6W 47K Ω ±5%
			RS52	GD05473160	1/6W 47K Ω ±5%
			RS53	GD05473160	1/6W 47K Ω ±5%
			RS54	GD05473160	1/6W 47K Ω ±5%
			RS55	GD05473160	1/6W 47K Ω ±5%
			RS56	GD05473160	1/6W 47K Ω ±5%
			RS57	GD05473160	1/6W 47K Ω ±5%
			RS58	GD05473160	1/6W 47K Ω ±5%
			RS59	GD05102160	1/6W 1K Ω ±5%
			RS60	GD05102160	1/6W 1K Ω ±5%
			RS61	GD05102160	1/6W 1K Ω ±5%
			RS62	GD05102160	1/6W 1K Ω ±5%
			RS63	GD05102160	1/6W 1K Ω ±5%
			RS64	GD05102160	1/6W 1K Ω ±5%
			RS65	GD05102160	1/6W 1K Ω ±5%
			RS66	GD05102160	1/6W 1K Ω ±5%
			RS67	GD05473160	1/6W 47K Ω ±5%
			RS68	GD05473160	1/6W 47K Ω ±5%
			RS69	GD05473160	1/6W 47K Ω ±5%
			RS70	GD05473160	1/6W 47K Ω ±5%
			RS71	GD05473160	1/6W 47K Ω ±5%
			RS72	GD05473160	1/6W 47K Ω ±5%
			RS73	GD05473160	1/6W 47K Ω ±5%
			RS74	GD05473160	1/6W 47K Ω ±5%
			RS75	GD05104160	1/6W 100K Ω ±5%
			RS76	GD05104160	1/6W 100K Ω ±5%
			RS77	GD05102160	1/6W 1K Ω ±5%
			RS78	GD05102160	1/6W 1K Ω ±5%
			RS79	GD05473160	1/6W 47K Ω ±5%
			RS80	GD05473160	1/6W 47K Ω ±5%
			RS81	GD05473160	1/6W 47K Ω ±5%
			RS82	GD05473160	1/6W 47K Ω ±5%
			RS83	GD05102160	1/6W 1K Ω ±5%
			RS84	GD05102160	1/6W 1K Ω ±5%
			RS85	GD05104160	1/6W 100K Ω ±5%
			RS86	GD05104160	1/6W 100K Ω ±5%
			RS93	GD05473160	1/6W 47K Ω ±5%
			RS94	GD05473160	1/6W 47K Ω ±5%
					<b>INTEGRATED CIRCUITS</b>
			QG55	HC10008090	IC NJM4558DD Dual OP AMP
			QG56	HC10008090	IC NJM4558DD Dual OP AMP
			QG57	HC10304050	IC TC9213P Electric Volume (2ch)

Ref. No.	Part. No.	Description
QS51	HC10008090	IC NJM4558DD Dual OP AMP
QS52	HC10008090	IC NJM4558DD Dual OP AMP
QS53	HC10008090	IC NJM4558DD Dual OP AMP
QS54	HC10008090	IC NJM4558DD Dual OP AMP
QS55	HC10008090	IC NJM4558DD Dual OP AMP
QS56	HC10308030	IC LC78211 Analogue Switch
QS57	HC10309030	IC LC78212 Analogue Switch
QS91	HC10008090	IC NJM4558DD Dual OP AMP
<b>TRANSISTORS</b>		
QG51	HT421442A0	2SD2144S, U, V
QG52	HT421442A0	2SD2144S, U, V
QG59	HT421442A0	2SD2144S, U, V
QG60	HT421442A0	2SD2144S, U, V
QS59	HT421442A0	2SD2144S, U, V
QS60	HT421442A0	2SD2144S, U, V
QS61	BA10001000	DIGITAL DTA114ES
QS62	BA20001000	DIGITAL DTC114ES
<b>MISCELLANEOUS</b>		
JS51	YT02060460	TERMINAL, 6P RCA PIN JACK
JS52	YT02080110	TERMINAL, 8P RCA PIN JACK
JS54	YJ06030580	JACK, 20P

Ref. No.	Part. No.	Description
RU34	GD05103160	1/6W 10K Ω ±5% (AVR80MK II)
RU36	GD05151160	1/6W 150 Ω ±5%
RU37	GD05151160	1/6W 150 Ω ±5%
RU39	GD05471160	1/6W 470 Ω ±5%
RU40	GD05473160	1/6W 47K Ω ±5%
RU41	GD05472160	1/6W 4.7K Ω ±5%
RU42	GD05472160	1/6W 4.7K Ω ±5%
RU43	GD05182160	1/6W 1.8K Ω ±5%
RU44	GD05182160	1/6W 1.8K Ω ±5%
RU45	GD05473160	1/6W 47K Ω ±5%
RU46	GD05103160	1/6W 10K Ω ±5%

Ref. No.	Part. No.	Description
QU01	HU260JT120	<b>INTEGRATED CIRCUITS</b> MICROPROCESSOR TMP87CP71F
QU18	HC712500B0	IC 74HC125 Quad Bus Buffer Gates

Ref. No.	Part. No.	Description
QU02	BA10007210	DIGITAL DTA114ES
QU03	HT30001000	2SC536SP
QU04	BA20012210	DIGITAL DTC144ES
QU05	BA20010210	DIGITAL DTC114ES
QU07	HT30001000	2SC536SP
QU08	BA20012210	DIGITAL DTC144ES
QU09	BA20012210	DIGITAL DTC144ES
QU10	BA10010210	DIGITAL DTA144ES
QU11	BA10003210	DIGITAL DTA114TS
QU12	BA10007210	DIGITAL DTA114ES
QU14	BA10010210	DIGITAL DTA144ES
QU15	BA20012210	DIGITAL DTC144ES
QU16	HW10001210	PHOTO UNIT, IR RECIVER
QU17	BA10007210	DIGITAL DTA114ES
QU19	HT30001000	2SC536SP (AVR80MK II)
QU20	HT30001000	2SC536SP (AVR80MK II)
QU21	HT10001000	2SA608SP (AVR80MK II)

Ref. No.	Part. No.	Description
<b>DIODES</b>		
DU01	HD20029210	1SS132 (AVR80MK II)
DU01	HD20002000	1SS176 (AVR80)
DU02	HD20029210	1SS132 (AVR80MK II)
DU02	HD20002000	1SS176 (AVR80)
DU03	HD20029210	1SS132 (AVR80MK II)
DU03	HD20002000	1SS176 (AVR80)
DU04	HD20029210	1SS132 (AVR80MK II)
DU04	HD20002000	1SS176 (AVR80)
DU05	HD20002000	1SS176
DU06	HD20002000	1SS176
DU07	HD20002000	1SS176
DU08	HD20002000	1SS176
DU09	HD20002000	1SS176
DU10	HD20002000	1SS176
DU14	HD20029210	1SS132
DU17	HD20029210	1SS132 <b>IB</b>
DU19	HD20002000	1SS176
DU20	HD20002000	1SS176
DU21	HD20002000	1SS176
DU22	HI10099320	L.E.D. GL3ED8
DU23	HD20002000	1SS176
DU24	HD20002000	1SS176
DU25	HD20002000	1SS176
DU26	HD20002000	1SS176
DU27	HD20002000	1SS176
DU28	HD20002000	1SS176
DU29	HI10062320	L.E.D. LT3D8B (RED)
DU30	HI10095320	L.E.D. LT3K44B (GRN)
DU31	HI10095320	L.E.D. LT3K44B (GRN)
DU32	HI10095320	L.E.D. LT3K44B (GRN)
DU33	HI10095320	L.E.D. LT3K44B (GRN)
DU34	HI10095320	L.E.D. LT3K44B (GRN)
DU35	HI10095320	L.E.D. LT3K44B (GRN)

**PU04-FRONT P.C. BOARD**

Ref. No.	Part. No.	Description
<b>CAPACITORS</b>		
CU01	DA17223110	CERAMIC 0.022μF ±20%
CU02	EJ47601010	ELECT 47μF 10V
CU03	EJ22700610	ELECT 220μF 6.3V
CU04	DA17223110	CERAMIC 0.022μF ±20%
CU05	DA17104110	CERAMIC 0.1μF ±20%
CU07	EX22300530	BIG ELECT 0.22F 5.5V
CU10	DA17223110	CERAMIC 0.022μF ±20%
CU11	DA17223110	CERAMIC 0.022μF ±20%
CU12	DA17223110	CERAMIC 0.022μF ±20%
CU13	DD38104010	CERAMIC 0.1μF +80% -20%
CU14	DK18103310	CERAMIC 0.01μF +80% -20% <b>IB</b>
CU15	DK18103310	CERAMIC 0.01μF +80% -20% <b>IB</b>

Ref. No.	Part. No.	Description
<b>RESISTORS</b>		
RU01	GD05152160	1/6W 1.5K Ω ±5%
RU02	GD05152160	1/6W 1.5K Ω ±5%
RU03	GD05222160	1/6W 2.2K Ω ±5%
RU04	GD05222160	1/6W 2.2K Ω ±5%
RU05	GD05332160	1/6W 3.3K Ω ±5%
RU07	GD05682160	1/6W 6.8K Ω ±5%
RU09	GD05103160	1/6W 10K Ω ±5%
RU11	GD05473160	1/6W 47K Ω ±5%
RU14	GD05103160	1/6W 10K Ω ±5%
RU15	GD05103160	1/6W 10K Ω ±5%
RU16	GD05103160	1/6W 10K Ω ±5%
RU17	GD05473160	1/6W 47K Ω ±5%
RU18	GD05183160	1/6W 18K Ω ±5%
RU19	GD05103160	1/6W 10K Ω ±5%
RU20	GD05473160	1/6W 47K Ω ±5%
RU22	GD05100160	1/6W 10 Ω ±5%
RU23	GD05101160	1/6W 100 Ω ±5%
RU24	GD05103160	1/6W 10K Ω ±5%
RU25	GD05221160	1/6W 220 Ω ±5%
RU26	GD05103160	1/6W 10K Ω ±5%
RU27	GD05103160	1/6W 10K Ω ±5%
RU28	GD05331160	1/6W 330 Ω ±5%
RU29	GD05103160	1/6W 10K Ω ±5%
RU30	GD05103160	1/6W 10K Ω ±5%
RU31	GD05473160	1/6W 47K Ω ±5% (AVR80MK II)
RU32	GD05103160	1/6W 10K Ω ±5% (AVR80MK II)
RU33	GD05473160	1/6W 47K Ω ±5% (AVR80MK II)



Ref. No.	Part. No.	Description
DU36	HI10095320	L.E.D. LT3K44B (GRN)
DU37	HI10095320	L.E.D. LT3K44B (GRN)
DU38	HI10095320	L.E.D. LT3K44B (GRN)
DU39	HI10095320	L.E.D. LT3K44B (GRN)
DU40	HI10095320	L.E.D. LT3K44B (GRN)
DU41	HI10095320	L.E.D. LT3K44B (GRN)
DU42	HI10095320	L.E.D. LT3K44B (GRN)
DU43	HI10095320	L.E.D. LT3K44B (GRN)
DU44	HI10095320	L.E.D. LT3K44B (GRN)
DU45	HI10095320	L.E.D. LT3K44B (GRN)
DU48	HD20002000	1SS176
DU49	HD20002000	1SS176
DU50	HD20002000	1SS176
DU51	HD20002000	1SS176 (AVR80MKII)
DU52	HD20002000	1SS176 (AVR80MKII)

**MISCELLANEOUS**

JU01	YJ07011240	JACK, 31P
JU02	YP06007170	PLUG, 7P
JU03	YJ06030640	JACK, 4P
JU04	YP06020550	PLUG, 4P
JU06	YP06006930	PLUG, 3P (AVR80MKII)
SU01	SP01011280	PUSH SWITCH, TACT
SU02	SP01011280	PUSH SWITCH, TACT <b>IB</b>
SU03	SP01011280	PUSH SWITCH, TACT
SU04	SP01011280	PUSH SWITCH, TACT <b>IB</b>
SU05	SP01011280	PUSH SWITCH, TACT
SU06	SP01011280	PUSH SWITCH, TACT <b>IB</b>
SU08	SP01011280	PUSH SWITCH, TACT
SU10	SP01011280	PUSH SWITCH, TACT
SU12	SP01011280	PUSH SWITCH, TACT (AVR80)
SU13	SP01011280	PUSH SWITCH, TACT
SU14	SP01011280	PUSH SWITCH, TACT
SU15	SP01011280	PUSH SWITCH, TACT
SU16	SP01011280	PUSH SWITCH, TACT
SU17	SP01011280	PUSH SWITCH, TACT
SU18	SP01011280	PUSH SWITCH, TACT
SU19	SP01011280	PUSH SWITCH, TACT
SU21	SP01011280	PUSH SWITCH, TACT
SU24	SP01011280	PUSH SWITCH, TACT
SU25	SP01011280	PUSH SWITCH, TACT
SU26	SP01011280	PUSH SWITCH, TACT
SU27	SP01011280	PUSH SWITCH, TACT
SU28	SP01011280	PUSH SWITCH, TACT
SU29	SP01011280	PUSH SWITCH, TACT
SU31	SP01011280	PUSH SWITCH, TACT
SU32	SP01011280	PUSH SWITCH, TACT
SU33	SP01011280	PUSH SWITCH, TACT
SU34	SP01011280	PUSH SWITCH, TACT
VU01	HQ31206060	DISPLAY UNIT, FIP12DM8P
XU01	FQ08004010	CERAMIC RESONATOR CST8,0MHz

**PU54-MASTER VOL P.C. BOARD**

CAPACITORS		
CU51	DA16101110	CERAMIC 100PF ±10%
CU52	DA16101110	CERAMIC 100PF ±10%
RESISTORS		
RU51	GD05104160	1/6W 100K Ω ±5%
RU52	GD05104160	1/6W 100K Ω ±5%
RU53	GD05224160	1/6W 220K Ω ±5%
RU54	GD05224160	1/6W 220K Ω ±5%
RU55	GG05010140	1/6W 1 Ω ±5%
RU57	GD05103160	1/6W 10K Ω ±5% (AVR80)
RU58	GD05103160	1/6W 10K Ω ±5% (AVR80)

Ref. No.	Part. No.	Description
<b>TRANSISTORS</b>		
QU51	HT30001000	2SC536SP
QU52	HT30001000	2SC536SP
QU53	HT30001000	2SC536SP (AVR80)
QU54	HT30001000	2SC536SP (AVR80)
<b>MISCELLANEOUS</b>		
JU51	YP06020740	PLUG, 4P
SU55	SR02010040	ROTARY SWITCH, MASTER VOL.

**PU94-POWER SW P.C. BOARD ( AVR80MK II )**

MISCELLANEOUS		
JU91	YP06006930	PLUG, 3P
JU92	YP06006930	PLUG, 3P
SU91	SP02011570	PUSH SWITCH, POWER

**PV04-DIRECT IN P.C. BOARD**

CAPACITORS		
CT04	DK18103310	CERAMIC 0.01μF +80% -20% <b>IB</b>
CT05	DK18103310	CERAMIC 0.01μF +80% -20% <b>IB</b>
CV01	EJ10601610	ELECT 10μF 16V
CV02	EJ10601610	ELECT 10μF 16V
CV03	EJ10601610	ELECT 10μF 16V
CV04	EJ10601610	ELECT 10μF 16V
CV05	EJ10601610	ELECT 10μF 16V
CV06	EJ10601610	ELECT 10μF 16V
CV07	DD38104010	CERAMIC 0.1μF +80% -20%
CV08	DD38104010	CERAMIC 0.1μF +80% -20%
CV09	DF15104350	FILM 0.1μF ±5%
CV10	DF15104350	FILM 0.1μF ±5%
CV11	DF15104350	FILM 0.1μF ±5%
CV12	DF15104350	FILM 0.1μF ±5%
CV13	EJ10601610	ELECT 10μF 16V
CV14	EJ10601610	ELECT 10μF 16V
CV15	DK16101300	CERAMIC 100PF ±10% <b>IB</b>
CV16	DK18103310	CERAMIC 0.01μF +80% -20% <b>IB</b>
CV17	DK18103310	CERAMIC 0.01μF +80% -20% <b>IB</b>
CV18	DK18103310	CERAMIC 0.01μF +80% -20% <b>IB</b>
CV19	EJ10601610	ELECT 10μF 16V
CV20	EJ10601610	ELECT 10μF 16V
CV21	EJ10601610	ELECT 10μF 16V
CV22	EJ10601610	ELECT 10μF 16V
CV23	DK16151300	CERAMIC 150PF ±10% <b>IB</b>
CV24	DK16151300	CERAMIC 150PF ±10% <b>IB</b>
CV25	DK16151300	CERAMIC 150PF ±10% <b>IB</b>
CV26	DK16151300	CERAMIC 150PF ±10% <b>IB</b>
CV27	DK16151300	CERAMIC 150PF ±10% <b>IB</b>
CV28	DK16151300	CERAMIC 150PF ±10% <b>IB</b>
CV31	EJ10601610	ELECT 10μF 16V
CV32	EJ10601610	ELECT 10μF 16V
CV33	EJ10601610	ELECT 10μF 16V
CV34	EJ10601610	ELECT 10μF 16V
CV35	EJ10601610	ELECT 10μF 16V
CV36	EJ10601610	ELECT 10μF 16V
CV37	DA17223110	CERAMIC 0.022μF ±20%
CV38	EJ10700610	ELECT 100μF 6.3V
CV39	DD38104010	CERAMIC 0.1μF +80% -20%
CV40	DA17223110	CERAMIC 0.022μF ±20%
CV41	DD38104010	CERAMIC 0.1μF +80% -20%
CV42	DD38104010	CERAMIC 0.1μF +80% -20%
CV43	DK16221300	CERAMIC 220PF ±10% <b>IB</b>
CV44	DK16221300	CERAMIC 220PF ±10% <b>IB</b>
CV45	DK16221300	CERAMIC 220PF ±10% <b>IB</b>
CV46	DK16221300	CERAMIC 220PF ±10% <b>IB</b>

Ref. No.	Part. No.	Description
CV47	DK16221300	CERAMIC 220PF ±10% <b>IB</b>
CV48	DK16221300	CERAMIC 220PF ±10% <b>IB</b>
CV50	DK16101300	CERAMIC 100PF ±10% <b>IB</b>
CV97	DK16101300	CERAMIC 100PF ±10% <b>IB</b>
CV99	DK18103310	CERAMIC 0.01µF +80% -20%

Ref. No.	Part. No.	Description
QT05	BA10007210	DIGITAL DTA114ES
DV01	HD20002000	DIODES 1SS176
DV02	HD20002000	DIODES 1SS176

**RESISTORS**

RT01	GD05271160	1/6W 270 Ω ±5%
RT02	GD05102160	1/6W 1K Ω ±5%
RT05	GD05271160	1/6W 270 Ω ±5%
RT07	GD05222160	1/6W 2.2K Ω ±5%
RT20	GD05220160	1/6W 22 Ω ±5%
RV01	GD05102160	1/6W 1K Ω ±5%
RV02	GD05102160	1/6W 1K Ω ±5%
RV03	GD05102160	1/6W 1K Ω ±5%
RV04	GD05102160	1/6W 1K Ω ±5%
RV05	GD05102160	1/6W 1K Ω ±5%
RV06	GD05102160	1/6W 1K Ω ±5%
RV07	GD05104160	1/6W 100K Ω ±5%
RV08	GD05104160	1/6W 100K Ω ±5%
RV09	GD05104160	1/6W 100K Ω ±5%
RV10	GD05104160	1/6W 100K Ω ±5%
RV11	GD05104160	1/6W 100K Ω ±5%
RV12	GD05104160	1/6W 100K Ω ±5%
RV13	GD05104160	1/6W 100K Ω ±5%
RV14	GD05104160	1/6W 100K Ω ±5%
RV15	GD05104160	1/6W 100K Ω ±5%
RV16	GD05104160	1/6W 100K Ω ±5%
RV17	GD05104160	1/6W 100K Ω ±5%
RV18	GD05104160	1/6W 100K Ω ±5%
RV21	GD05104160	1/6W 100K Ω ±5%
RV22	GD05104160	1/6W 100K Ω ±5%
RV23	GD05153160	1/6W 15K Ω ±5%
RV24	GD05153160	1/6W 15K Ω ±5%
RV25	GD05153160	1/6W 15K Ω ±5%
RV26	GD05153160	1/6W 15K Ω ±5%
RV27	GD05223160	1/6W 22K Ω ±5%
RV28	GD05223160	1/6W 22K Ω ±5%
RV29	GD05473160	1/6W 47K Ω ±5%
RV30	GD05473160	1/6W 47K Ω ±5%
RV33	GD05103160	1/6W 10K Ω ±5%
RV34	GD05103160	1/6W 10K Ω ±5%
RV35	GD05103160	1/6W 10K Ω ±5%
RV36	GD05103160	1/6W 10K Ω ±5%
RV37	GD05562160	1/6W 5.6K Ω ±5%
RV38	GD05562160	1/6W 5.6K Ω ±5%
RV39	GD05104160	1/6W 100K Ω ±5%
RV40	GD05104160	1/6W 100K Ω ±5%
RV41	GD05473160	1/6W 47K Ω ±5%
RV42	GD05473160	1/6W 47K Ω ±5%
RV43	GD05473160	1/6W 47K Ω ±5%
RV44	GD05473160	1/6W 47K Ω ±5%
RV45	GD05473160	1/6W 47K Ω ±5%
RV46	GD05473160	1/6W 47K Ω ±5%

**INTEGRATED CIRCUITS**

QT04	HC713200A0	IC 74LS132 Quad 2input NAND Schmitt
QV01	HC10008090	IC NJM4558DD Dual OP AMP
QV02	HC10008090	IC NJM4558DD Dual OP AMP
QV03	HC10008090	IC NJM4558DD Dual OP AMP
QV04	HC10309030	IC LC78212 Analogue Switch
QV05	HC10008090	IC NJM4558DD Dual OP AMP
QV06	HC10310030	IC LC78213 Analogue Switch
QV07	HC10008090	IC NJM4558DD Dual OP AMP

**TRANSISTORS**

QT01	HW10006320	PHOTO UNIT PC-817
QT02	HW10006320	PHOTO UNIT PC-817

Ref. No.	Part. No.	Description
JT01	YJ11000500	JACK, 8P DIN
JT02	YJ01004220	JACK, MINI
JT03	YJ01004230	JACK, MINI
JT04	YP06003830	PLUG, 3P
JV01	YT02011020	TERMINAL, 1P RCA PIN JACK <b>IB</b>
JV01	YT02010780	TERMINAL, 1P RCA PIN JACK <b>BK</b>
JV02	YT02060540	TERMINAL, 6P RCA PIN JACK <b>IB</b>
JV02	YT02060500	TERMINAL, 6P RCA PIN JACK <b>BK</b>
JV04	YP06020940	PLUG, 12P
JV05	YP06020940	PLUG, 12P
JV06	YJ06030590	JACK, 24P
JV07	YP06020640	PLUG, 14P
JV08	YP06006720	PLUG, 12P
JV09	YL01010140	TERMINAL, GND
JV10	YP06020940	PLUG, 12P
JV11	YL01010140	TERMINAL, GND
LV04	FM12223010	EMI FILTER
LV05	FM12223010	EMI FILTER
LV06	FM12223010	EMI FILTER
WV01	YB00040430	CONNECTIVE CORD, 1P

**PW04-H.P.P.C. BOARD**

CAPACITORS		
CW01	DK18103310	CERAMIC 0.01µF +80% -20% <b>IB</b>
CW02	DK18103310	CERAMIC 0.01µF +80% -20% <b>IB</b>
CW03	DK18103310	CERAMIC 0.01µF +80% -20% <b>IB</b>
MISCELLANEOUS		
JW01	YJ01004240	JACK, PHONE
JW02	YP06010450	PLUG, 5P
WW01	YB00152110	CONNECTIVE CORD, 1P

**PY04-CONNECT P.C. BOARD**

CAPACITORS		
CS91	EJ10601610	ELECT 10µF 16V
CS92	EJ10601610	ELECT 10µF 16V
CY01	EJ47502510	ELECT 4.7µF 25V
CY02	DD38104010	CERAMIC 0.1µF +80% -20%
CY04	DD38104010	CERAMIC 0.1µF +80% -20%
CY06	DD15470300	CERAMIC 47PF ±5% <b>IB</b>
CY07	DD15470300	CERAMIC 47PF ±5%
CY08	DD15470300	CERAMIC 47PF ±5% <b>BK</b>
CY09	DD15470300	CERAMIC 47PF ±5%
CY10	DK18103310	CERAMIC 0.01µF +80% -20% <b>BK</b>
CY12	DD15470300	CERAMIC 47PF ±5%
CY14	DD38104010	CERAMIC 0.1µF +80% -20%
CY15	DK18103310	CERAMIC 0.01µF +80% -20%

**RESISTORS**

RS91	GD05473160	1/6W 47K Ω ±5%
RS92	GD05473160	1/6W 47K Ω ±5%
RY01	GD05103160	1/6W 10K Ω ±5%



Ref. No.	Part. No.	Description	Ref. No.	Part. No.	Description
C313	EJ10601610	ELECT 10μF 16V <b>IB</b>	R306	GD05153160	1/6W 15K Ω ±5% <b>IB</b>
C314	EA47603510	ELECT 47μF 35V <b>IB</b>	R307	GD05221160	1/6W 220 Ω ±5%
C315	DK16151300	CERAMIC 150PF ±10% <b>IB</b>	R308	GD05221160	1/6W 220 Ω ±5%
C316	DK16151300	CERAMIC 150PF ±10% <b>IB</b>	R309	GD05473160	1/6W 47K Ω ±5%
C317	DK16101300	CERAMIC 100PF ±10% <b>IB</b>	R310	GD05473160	1/6W 47K Ω ±5%
C318	DK16101300	CERAMIC 100PF ±10% <b>IB</b>	R311	GD05473160	1/6W 47K Ω ±5% <b>IB</b>
C501	DD15470300	CERAMIC 47PF ±5%	R312	GD05473160	1/6W 47K Ω ±5% <b>IB</b>
C502	DD15470300	CERAMIC 47PF ±5%	R313	GG05221140	1/4W 220 Ω ±5% <b>IB</b>
C503	EA10700610	ELECT 100μF 6.3V	R501	GD05102160	1/6W 1K Ω ±5%
C504	DK18103310	CERAMIC 0.01μF +80% -20%	R502	GD05332160	1/6W 3.3K Ω ±5%
C505	EJ10505010	ELECT 1μF 50V	R503	GD05102160	1/6W 1K Ω ±5%
C506	EJ10405010	ELECT 0.1μF 50V	R504	GD05103160	1/6W 10K Ω ±5%
C507	DK18103310	CERAMIC 0.01μF +80% -20%	R506	GD05102160	1/6W 1K Ω ±5%
C508	EA10701610	ELECT 100μF 16V	R507	GD05332160	1/6W 3.3K Ω ±5%
C509	DK16101300	CERAMIC 100PF ±10%	R508	GD05473160	1/6W 47K Ω ±5%
C510	DK16101300	CERAMIC 100PF ±10%	R510	GD05102160	1/6W 1K Ω ±5%
C511	DK18103310	CERAMIC 0.01μF +80% -20%	R511	GD05102160	1/6W 1K Ω ±5%
C901	EA10700610	ELECT 100μF 6.3V <b>IB</b>	R512	GA05271010	1W 270 Ω ±5%
C902	EJ10601610	ELECT 10μF 16V <b>IB</b>	R513	GD05103160	1/6W 10K Ω ±5%
C903	DK16332300	CERAMIC 3300PF ±10% <b>IB</b>	R514	GG05470160	1/6W 47 Ω ±5%
C904	DK16332300	CERAMIC 3300PF ±10% <b>IB</b>	R515	GD05683160	1/6W 68K Ω ±5%
C905	DK18103310	CERAMIC 0.01μF +80% -20% <b>IB</b>	R516	GD05473160	1/6W 47K Ω ±5%
C906	DK18103310	CERAMIC 0.01μF +80% -20% <b>IB</b>	R517	GD05473160	1/6W 47K Ω ±5%
C907	EJ10601610	ELECT 10μF 16V <b>IB</b>	R901	GD05333160	1/6W 33K Ω ±5% <b>IB</b>
C908	EJ10601610	ELECT 10μF 16V <b>IB</b>	R902	GD05103160	1/6W 10K Ω ±5% <b>IB</b>
C909	EJ47502510	ELECT 4.7μF 25V <b>IB</b>	R903	GD05223160	1/6W 22K Ω ±5% <b>IB</b>
C910	EJ10601610	ELECT 10μF 16V <b>IB</b>	R904	GD05102160	1/6W 1K Ω ±5% <b>IB</b>
C911	DK18223310	CERAMIC 0.022μF +80% -20% <b>IB</b>	R905	GD05682160	1/6W 6.8K Ω ±5% <b>IB</b>
C912	DF15333310	FILM 0.033μF ±5% <b>IB</b>	R907	GD05102160	1/6W 1K Ω ±5% <b>IB</b>
C913	DF15333310	FILM 0.033μF ±5% <b>IB</b>	R908	GD05332160	1/6W 3.3K Ω ±5% <b>IB</b>
C914	DF15682350	FILM 0.0068μF ±5% <b>IB</b>	R909	GD05103160	1/6W 10K Ω ±5% <b>IB</b>
C915	DK18103310	CERAMIC 0.01μF +80% -20% <b>IB</b>	R910	GA05221010	1W 220 Ω ±5% <b>IB</b>
C916	DD15470300	CERAMIC 47PF ±5% <b>IB</b>	R911	GD05103160	1/6W 10K Ω ±5% <b>IB</b>

**RESISTORS**

RA01	GD05103160	1/6W 10K Ω ±5%
RA02	GD05104160	1/6W 100K Ω ±5%
RA03	GD05103160	1/6W 10K Ω ±5% <b>IB</b>
RA04	GD05154160	1/6W 150K Ω ±5% <b>IB</b>
RA06	GD05104160	1/6W 100K Ω ±5% <b>IB</b>
RA07	GD05103160	1/6W 10K Ω ±5% <b>IB</b>
RA08	GD05154160	1/6W 150K Ω ±5% <b>IB</b>
RA09	GD05222160	1/6W 2.2K Ω ±5% <b>IB</b>
R102	GD05103160	1/6W 10K Ω ±5% <b>IB</b>
R103	GD05103160	1/6W 10K Ω ±5% <b>IB</b>
R201	GD05101160	1/6W 100 Ω ±5% <b>BK</b>
R202	GD05471160	1/6W 470 Ω ±5% <b>IB</b>
R202	GD05391160	1/6W 390 Ω ±5% <b>BK</b>
R203	GD05222160	1/6W 2.2K Ω ±5%
R204	GD05471160	1/6W 470 Ω ±5%
R205	GD05331160	1/6W 330 Ω ±5%
R206	GD05153160	1/6W 15 Ω ±5%
R207	GG05181140	1/4W 180 Ω ±5%
R208	GD05392160	1/6W 3.9K Ω ±5%
R209	GD05104160	1/6W 100K Ω ±5%
R210	GD05332160	1/6W 3.3K Ω ±5%
R213	GD05220160	1/6W 22 Ω ±5%
R214	GD05473160	1/6W 47K Ω ±5%
R215	GD05154160	1/6W 150K Ω ±5% <b>IB</b>
R215	GD05333160	1/6W 33K Ω ±5% <b>BK</b>
R216	GD05103160	1/6W 10K Ω ±5%
R217	GG05181140	1/4W 180 Ω ±5% <b>IB</b>
R217	GG05221140	1/4W 220 Ω ±5% <b>BK</b>
R219	GD05334160	1/6W 330K Ω ±5%
R301	GD05104160	1/6W 100K Ω ±5% <b>IB</b>
R302	GD05104160	1/6W 100K Ω ±5% <b>IB</b>
R303	GD05103160	1/6W 10K Ω ±5% <b>IB</b>
R304	GD05103160	1/6W 10K Ω ±5% <b>IB</b>
R305	GD05153160	1/6W 15K Ω ±5% <b>IB</b>

**CONTROLS**

RA11	RA02230780	TRIM-POTS 22K Ω
R211	RA02230780	TRIM-POTS 22K Ω (B)
R212	RA04720780	TRIM-POTS 4.7K Ω (B)
R218	RA04720780	TRIM-POTS 4.7K Ω (B) <b>IB</b>
R906	RA04720780	TRIM-POTS 4.7K Ω (B) <b>IB</b>

**INTEGRATED CIRCUITS**

Q201	HC10342030	IC LA1836 FM/AM IF, MPX IC
Q301	HC10008090	IC NJM4558DD <b>IB</b> Dual OP AMP
Q501	HC10221030	IC LC7218 PLL Frequency Synthesizer
Q901	HC10315030	IC LA2232 <b>IB</b> RDS Demodulator
Q902	HC10333030	IC LC7073 <b>IB</b> RDS Error Corrector

**TRANSISTORS**

QA01	HT30001000	2SC536SP <b>IB</b>
QA02	HT30001000	2SC536SP <b>IB</b>
QA03	HT421442A0	2SD2144S (U, V) <b>IB</b>
QA04	BA10002000	DIGITAL DTA144ES <b>IB</b>
QA05	BA10002000	DIGITAL DTA144ES <b>IB</b>
Q202	HT318091P0	2SC1809SP
Q203	BA10007210	DIGITAL DTA114ES
Q204	BA20002000	DIGITAL DTC144ES
Q503	HT30001000	2SC536SP
Q903	HT30001000	2SC536SP <b>IB</b>

**F.E.T.**

Q502	HF200300B0	2SK30ATM
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**DIODES**

DA01	HD40009030	VARIACAP SVC342-L
DA02	HD20017210	1SS135 <b>IB</b>
DA03	HD40009030	VARIACAP SVC342-L <b>IB</b>
DA04	HD20017210	1SS135 <b>IB</b>

Ref. No.	Part. No.	Description	Ref. No.	Part. No.	Description
DA05	HD20002000	1SS176	CR34	DK98104200	CERAMIC 0.1μF +80% -20%
DA06	HD20002000	1SS176	CR35	DK98104200	CERAMIC 0.1μF +80% -20%
D201	HD20002000	1SS176	CR36	DK98104200	CERAMIC 0.1μF +80% -20%
D202	HD30681000	ZENER 6.8V	CR37	EY10700620	ELECT 100μF 6.3V
D501	HD30511000	ZENER 5.1V	CR38	DK96103200	CERAMIC 0.01μF ±10%
D901	HD30511000	ZENER 5.1V <b>IB</b>	CR39	EY10601620	ELECT 10μF 16V
			CR40	EY10601620	ELECT 10μF 16V
		<b>COILS</b>	CR41	DD95101300	CERAMIC 100PF ±5%
LA01	LA10295170	ANT, MW 280μH	CR42	DD95101300	CERAMIC 100PF ±5%
LA02	LO70013010	OSC, MW	CR43	DK98104200	CERAMIC 0.1μF +80% -20%
LA03	LA10295160	ANT, LW <b>IB</b>	CR44	DK98104200	CERAMIC 0.1μF +80% -20%
LA04	LO70013020	OSC, LW <b>IB</b>	CR45	DD95331300	CERAMIC 330PF ±5%
LA05	LC23960710	CHOKER, 39mH	CR46	DK96104200	CERAMIC 0.1μF ±10%
L201	LI70376010	I.F.T., FM DET	CR47	DD95151300	CERAMIC 150PF ±5%
L301	LS10293020	M.P.X., 19.38KHz	CR48	DK96473200	CERAMIC 0.047μF ±10%
L302	LS10293020	M.P.X., 19.38KHz	CR49	DK98104200	CERAMIC 0.1μF +80% -20%
L501	LC14733800	CHOKER, 47μH	CR50	DK98104200	CERAMIC 0.1μF +80% -20%
L502	LC14733800	CHOKER, 47μH	CR61	DK98104200	CERAMIC 0.1μF +80% -20%
L503	LC14733800	CHOKER, 47μH	CR62	EY10700620	ELECT 100μF 6.3V
L504	LC14733800	CHOKER, 47μH	CR63	EY10700620	ELECT 100μF 6.3V
		<b>MISCELLANEOUS</b>	CR64	DK98104200	CERAMIC 0.1μF +80% -20%
A101	AV01203020	VHF TUNER, FE415-G11 <b>IB</b>	CR65	DK98104200	CERAMIC 0.1μF +80% -20%
A101	AV01202220	VHF TUNER, FE337-A05 <b>BK</b>	CR66	DK98104200	CERAMIC 0.1μF +80% -20%
F201	FF11070620	CERAMIC FILTER <b>IB</b>	CR67	EY10700620	ELECT 100μF 6.3V
F201	FF11070610	CERAMIC FILTER <b>BK</b>	CR68	DK96103200	CERAMIC 0.01μF ±10%
F202	FF11070620	CERAMIC FILTER	CR69	EY10601620	ELECT 10μF 16V
J101	YT03030020	TERMINAL, ANT <b>IB</b>	CR70	EY10601620	ELECT 10μF 16V
J101	YT03030080	TERMINAL, ANT <b>BK</b>	CR71	DD95101300	CERAMIC 100PF ±5%
J102	YL01010140	TERMINAL, GND	CR72	DD95101300	CERAMIC 100PF ±5%
J301	YP06020640	PLUG, 14P	CR73	DK98104200	CERAMIC 0.1μF +80% -20%
LA06	FF10045330	CERAMIC FILTER	CR74	DK98104200	CERAMIC 0.1μF +80% -20%
X201	FQ04563040	CERAMIC VIB.	CR75	DD95331300	CERAMIC 330PF ±5%
X501	JX07001260	CRYSTAL, 7.2MHz	CR76	DD95331300	CERAMIC 330PF ±5%
X901	FQ04563040	CERAMIC VIB. CSB456F33 <b>IB</b>	CR77	DD95151300	CERAMIC 150PF ±5%
X902	FQ04004030	CERAMIC VIB. 4.00MHz <b>IB</b>	CR78	DD95151300	CERAMIC 150PF ±5%
			CR79	DK98104200	CERAMIC 0.1μF +80% -20%
			CR80	DK98104200	CERAMIC 0.1μF +80% -20%
			C601	EY10601620	ELECT 10μF 16V
			C602	EY10601620	ELECT 10μF 16V
			C603	DD95151300	CERAMIC 150PF ±5%
			C604	DD95151300	CERAMIC 150PF ±5%
			C605	DD95151300	CERAMIC 150PF ±5%
			C606	DD95151300	CERAMIC 150PF ±5%
			C607	DK98104200	CERAMIC 0.1μF +80% -20%
			C608	DK98104200	CERAMIC 0.1μF +80% -20%
			C609	DK98104200	CERAMIC 0.1μF +80% -20%
			C610	DK98104200	CERAMIC 0.1μF +80% -20%
			C611	DK98104200	CERAMIC 0.1μF +80% -20%
			C612	DK98104200	CERAMIC 0.1μF +80% -20%
			C617	DK98104200	CERAMIC 0.1μF +80% -20%
			C618	DK98104200	CERAMIC 0.1μF +80% -20%
			C619	DD95471370	CERAMIC 470PF ±5%
			C620	DD95471370	CERAMIC 470PF ±5%
			C621	EY10601620	ELECT 10μF 16V
			C622	EY10601620	ELECT 10μF 16V
			C623	DK98104200	CERAMIC 0.1μF +80% -20%
			C624	EY10700620	ELECT 100μF 6.3V
			C625	EY10700620	ELECT 100μF 6.3V
			C626	DK98104200	CERAMIC 0.1μF +80% -20%
			C627	DK98104200	CERAMIC 0.1μF +80% -20%
			C628	EY10700620	ELECT 100μF 6.3V
			C629	DK98104200	CERAMIC 0.1μF +80% -20%
			C630	EY10700620	ELECT 100μF 6.3V
			C631	DK98104200	CERAMIC 0.1μF +80% -20%
			C635	DK96103200	CERAMIC 0.01μF ±10%
			C636	DK96103200	CERAMIC 0.01μF ±10%
			C637	DK96103200	CERAMIC 0.01μF ±10%
			C638	DK96103200	CERAMIC 0.01μF ±10%
			C651	DK98104200	CERAMIC 0.1μF +80% -20%

### P604-THX PRO-LOGIC DSP P.C. BOARD

#### CAPACITORS, CHIP

CR01	DK98104200	CERAMIC 0.1μF +80% -20%
CR02	EY10700620	ELECT 100μF 6.3V
CR03	EY10700620	ELECT 100μF 6.3V
CR04	DK98104200	CERAMIC 0.1μF +80% -20%
CR05	DK98104200	CERAMIC 0.1μF +80% -20%
CR06	DK98104200	CERAMIC 0.1μF +80% -20%
CR07	EY10700620	ELECT 100μF 6.3V
CR08	DK96103200	CERAMIC 0.01μF ±10%
CR09	EY10601620	ELECT 10μF 16V
CR10	EY10601620	ELECT 10μF 16V
CR11	DD95101300	CERAMIC 100PF ±5%
CR12	DD95101300	CERAMIC 100PF ±5%
CR13	DK98104200	CERAMIC 0.1μF +80% -20%
CR14	DK98104200	CERAMIC 0.1μF +80% -20%
CR15	DD95331300	CERAMIC 330PF ±5%
CR16	DD95331300	CERAMIC 330PF ±5%
CR17	DD95151300	CERAMIC 150PF ±5%
CR18	DD95151300	CERAMIC 150PF ±5%
CR19	DK98104200	CERAMIC 0.1μF +80% -20%
CR20	DK98104200	CERAMIC 0.1μF +80% -20%
CR31	DK98104200	CERAMIC 0.1μF +80% -20%
CR32	EY10700620	ELECT 100μF 6.3V
CR33	EY10700620	ELECT 100μF 6.3V





Ref. No.	Part. No.	Description	Ref. No.	Part. No.	Description
Q616	HC10011090	IC NJM4558M (Y) Dual OP AMP	C752	DK16681300	CERAMIC 680PF ±10% <b>IB</b>
Q617	HC10011090	IC NJM4558M (Y) Dual OP AMP	C752	DD15680300	CERAMIC 68PF ±5% <b>BK</b>
Q618	HC10011090	IC NJM4558M (Y) Dual OP AMP	C753	DK16331300	CERAMIC 330PF ±10%
Q619	HC10339030	IC LC8903Q Digital Audio Interface	C754	EA47700610	ELECT 470μF 6.3V
Q620	HC700400Z0	IC 74HCU04 Hex Inverters	C756	OA10610020	ELECT 10μF 100V
Q621	HC700800Z0	IC 74HC08 Quad 2input AND gate	C757	DK16221300	CERAMIC 220PF ±10%
Q622	HC99005090	IC NJM79L05UA Voltage Regulator	C758	DD15470300	CERAMIC 47PF ±5%
			C759	EA10510010	ELECT 1μF 100V
			C760	OA47706320	ELECT 470μF 63V
			C761	OA47706320	ELECT 470μF 63V
			C762	EJ10405010	ELECT 0.1μF 50V
			C763	EJ10405010	ELECT 0.1μF 50V
Q623	BA20004210	<b>TRANSISTOR</b> DIGITAL DTC144EK	▲C801	DK18103560	CERAMIC 0.01μF +80% -20%
			▲C802	OB27906310	ELECT 27000μF 63V
			▲C803	OB27906310	ELECT 27000μF 63V
			▲C804	DK18103560	CERAMIC 0.01μF +80% -20%
			▲C805	EB10906380	ELECT 10000μF 63V
			▲C806	EB10906380	ELECT 10000μF 63V
J601	YJ06031000	<b>MISCELLANEOUS</b> JACK, 12P	C807	DK18103310	CERAMIC 0.01μF +80% -20%
J602	YJ06031000	JACK, 12P	C808	DK18103310	CERAMIC 0.01μF +80% -20%
J603	YJ06031000	JACK, 12P	C809	EA33802510	ELECT 3300μF 25V
L601	FM32102010	EMI FILTER	C810	EA33802510	ELECT 3300μF 25V
L602	FN31000010	FEI FILTER	C811	DK18103310	CERAMIC 0.01μF +80% -20%
L603	FN31000010	FEI FILTER	C812	DK18103310	CERAMIC 0.01μF +80% -20%
L604	FN31000010	EMI FILTER	C813	EA10701610	ELECT 100μF 16V
L605	FN31000010	EMI FILTER	C814	EA10701610	ELECT 100μF 16V
X681	FZ02255030	CERAMIC RESONATOR 22.5792MHz	C815	DK18103310	CERAMIC 0.01μF +80% -20%
			C816	DK18103310	CERAMIC 0.01μF +80% -20%
			C817	EA22801610	ELECT 2200μF 16V
			C818	EA22801610	ELECT 2200μF 16V
			C820	DA17103110	CERAMIC 0.01μF ±20%
			C821	EA10701610	ELECT 100μF 16V
			C822	EA10701610	ELECT 100μF 16V
			C823	EA10701610	ELECT 100μF 16V
			C824	DK18103310	CERAMIC 0.01μF +80% -20%
			C825	EA10701610	ELECT 100μF 16V
			C826	EA10701610	ELECT 100μF 16V
			C827	EA10701610	ELECT 100μF 16V
			C828	EA10701610	ELECT 100μF 16V
			C829	EA10701610	ELECT 100μF 16V

**P704-MAIN AMP P.C. BOARD**

		<b>CAPACITORS</b>				<b>RESISTORS</b>	
CN03	EA22601610	ELECT	22μF 16V	▲RN01	GG05122160	1/6W	1.2K Ω ±5%
CN04	EJ33505010	ELECT	3.3μF 50V <b>IB</b>	▲RN02	GG05122160	1/6W	1.2K Ω ±5%
CN04	EJ22505010	ELECT	2.2μF 50V <b>BK</b>	RN03	GD05103160	1/6W	10K Ω ±5%
CN05	DD38104010	CERAMIC	0.1μF +80% -20%	RN04	GD05103160	1/6W	10K Ω ±5%
CN06	EJ47601610	ELECT	47μF 16V	RN05	GD05102160	1/6W	1K Ω ±5%
CN07	EJ47601610	ELECT	47μF 16V	RN06	GD05102160	1/6W	1K Ω ±5%
CN08	EJ10505010	ELECT	1μF 50V	RN07	GD05223160	1/6W	22K Ω ±5%
CN09	EJ10701010	ELECT	100μF 10V	RN08	GD05223160	1/6W	22K Ω ±5%
CN10	DD38104010	CERAMIC	0.1μF +80% -20%	RN10	GD05682160	1/6W	6.8K Ω ±5%
CN12	DD38104010	CERAMIC	0.1μF +80% -20%	RN11	GD05473160	1/6W	47K Ω ±5%
CN13	DK16101300	CERAMIC	100PF ±10% <b>IB</b>	RN12	GD05472160	1/6W	4.7K Ω ±5%
CN14	DK16101300	CERAMIC	100PF ±10% <b>IB</b>	RN13	GD05473160	1/6W	47K Ω ±5%
CN15	DK18103310	CERAMIC	0.01μF +80% -20% <b>IB</b>	RN14	GD05473160	1/6W	47K Ω ±5%
CN16	DK18103310	CERAMIC	0.01μF +80% -20% <b>IB</b>	RN15	GD05104160	1/6W	100K Ω ±5%
C701	OA47601020	ELECT	47μF 10V	RN16	GD05822160	1/6W	8.2K Ω ±5%
C702	OA47601020	ELECT	47μF 10V	RN20	GG05222140	1/6W	2.2K Ω ±5%
C703	DK16681300	CERAMIC	680PF ±10% <b>IB</b>	RN21	GD05473160	1/6W	47K Ω ±5%
C703	DD15680300	CERAMIC	68PF ±5% <b>BK</b>	RN22	GD05333160	1/6W	33K Ω ±5%
C704	DK16681300	CERAMIC	680PF ±10% <b>IB</b>	RN23	GD05683160	1/6W	68K Ω ±5%
C704	DD15680300	CERAMIC	68PF ±5% <b>BK</b>	RN24	GD05683160	1/6W	68K Ω ±5%
C705	DK16331300	CERAMIC	330PF ±10%	RN25	GD05683160	1/6W	68K Ω ±5%
C706	DK16331300	CERAMIC	330PF ±10%	RN26	GD05683160	1/6W	68K Ω ±5%
C707	EA47700610	ELECT	470μF 6.3V	▲RN27	GA05561010	1W	560 Ω ±5%
C708	EA47700610	ELECT	470μF 6.3V	▲RN28	GA05561010	1W	560 Ω ±5%
C709	EA10510010	ELECT	1μF 100V	RN30	GD05103160	1/6W	10K Ω ±5%
C710	EA10510010	ELECT	1μF 100V	RN31	GD05103160	1/6W	10K Ω ±5%
C711	OA10610020	ELECT	10μF 100V	RN32	GD05223160	1/6W	22K Ω ±5%
C712	OA10610020	ELECT	10μF 100V	RN33	GD05103160	1/6W	10K Ω ±5%
C713	DK16221300	CERAMIC	220PF ±10%				
C714	DK16221300	CERAMIC	220PF ±10%				
C715	DD15470300	CERAMIC	47PF ±5%				
C716	DD15470300	CERAMIC	47PF ±5%				
C719	OA47706320	ELECT	470μF 63V				
C720	OA47706320	ELECT	470μF 63V				
C721	OA47706320	ELECT	470μF 63V				
C722	OA47706320	ELECT	470μF 63V				
C723	OA10405020	ELECT	0.1μF 50V				
C724	OA10405020	ELECT	0.1μF 50V				
C725	OA10405020	ELECT	0.1μF 50V				
C726	OA10405020	ELECT	0.1μF 50V				
C751	OA47601020	ELECT	47μF 10V				

Ref. No.	Part. No.	Description	Ref. No.	Part. No.	Description
RN35	GD05100160	1/6W 10 Ω ±5%	▲R754	GG05181140	1/4W 180 Ω ±5%
RN36	GG05222160	1/6W 2.2K Ω ±5%	▲R755	GG05100140	1/4W 10 Ω ±5%
RN41	GD05100160	1/6W 10 Ω ±5%	▲R756	GG05100140	1/4W 10 Ω ±5%
RN42	GD05100160	1/6W 10 Ω ±5%	▲R757	GG05100140	1/4W 10 Ω ±5%
▲RN43	GG05101160	1/6W 100 Ω ±5%	▲R758	GG05100140	1/4W 10 Ω ±5%
▲RN44	GG05101160	1/6W 100 Ω ±5%	▲R759	BZ10182020	0.18 Ω 5W x 2 ARRAY
▲RN45	GG05101160	1/6W 100 Ω ±5%	▲R760	BZ10182020	0.18 Ω 5W x 2 ARRAY
▲RN46	GG05101160	1/6W 100 Ω ±5%	▲R761	GG05100160	1/6W 10 Ω ±5%
▲RN51	GG05122160	1/6W 1.2K Ω ±5%	▲R762	GG05100160	1/6W 10 Ω ±5%
RN52	GD05103160	1/6W 10K Ω ±5%	▲R763	GA05100010	1W 10 Ω ±5%
RN53	GD05102160	1/6W 1K Ω ±5%	▲R764	GA05100010	1W 10 Ω ±5%
RN54	GD05223160	1/6W 22K Ω ±5%	R765	GD05333160	1/6W 33K Ω ±5%
RN55	GD05683160	1/6W 68K Ω ±5%	R766	GD05102160	1/6W 1K Ω ±5%
RN56	GD05100160	1/6W 10 Ω ±5%	R766	GD05331160	1/6W 330 Ω ±5%
▲RN57	GG05101160	1/6W 100 Ω ±5%	R767	GD05221160	1/6W 220 Ω ±5%
▲RN58	GG05101160	1/6W 100 Ω ±5%	R768	GD05152160	1/6W 1.5K Ω ±5%
RN61	GD05472160	1/6W 4.7K Ω ±5%	R769	GD05561160	1/6W 560 Ω ±5%
RN62	GD05472160	1/6W 4.7K Ω ±5%	R770	GD05151160	1/6W 150 Ω ±5%
R701	GD05333160	1/6W 33K Ω ±5%	R771	GD05152160	1/6W 1.5K Ω ±5%
R702	GD05333160	1/6W 33K Ω ±5%	R772	GD05271160	1/6W 270 Ω ±5%
R703	GD05102160	1/6W 1K Ω ±5%	R773	GD05224160	1/6W 220K Ω ±5%
R703	GD05331160	1/6W 330 Ω ±5%	R774	GD05473160	1/6W 47K Ω ±5%
R704	GD05102160	1/6W 1K Ω ±5%	R775	GD05561160	1/6W 560 Ω ±5%
R704	GD05331160	1/6W 330 Ω ±5%	▲R776	GG05561160	1/6W 560 Ω ±5%
R705	GD05221160	1/6W 220 Ω ±5%	▲R777	GG05561160	1/6W 560 Ω ±5%
R706	GD05221160	1/6W 220 Ω ±5%	R778	GD05122160	1/6W 1.2K Ω ±5%
R707	GD05152160	1/6W 1.5K Ω ±5%	▲R779	GG05561160	1/6W 560 Ω ±5%
R708	GD05152160	1/6W 1.5K Ω ±5%	▲R780	GG05561160	1/6W 560 Ω ±5%
R709	GD05561160	1/6W 560 Ω ±5%	R781	GD05104160	1/6W 100K Ω ±5%
R710	GD05561160	1/6W 560 Ω ±5%	▲R783	GG05560160	1/6W 56 Ω ±5%
R711	GD05151160	1/6W 150 Ω ±5%	▲R784	GG05560160	1/6W 56 Ω ±5%
R712	GD05151160	1/6W 150 Ω ±5%	R785	GD05682160	1/6W 6.8K Ω ±5%
R713	GD05152160	1/6W 1.5K Ω ±5%	R787	GD05272160	1/6W 2.7K Ω ±5%
R714	GD05152160	1/6W 1.5K Ω ±5%	R788	GD05333160	1/6W 33K Ω ±5%
R715	GD05271160	1/6W 270 Ω ±5%	▲R789	GG05022160	1/6W 2.2 Ω ±5%
R716	GD05271160	1/6W 270 Ω ±5%	▲R790	GG05022160	1/6W 2.2 Ω ±5%
R717	GD05224160	1/6W 220K Ω ±5%	▲R791	GG05181140	1/6W 180 Ω ±5%
R718	GD05224160	1/6W 220K Ω ±5%	▲R792	GG05100140	1/4W 10 Ω ±5%
R719	GD05473160	1/6W 47K Ω ±5%	▲R793	GG05100140	1/4W 10 Ω ±5%
R720	GD05473160	1/6W 47K Ω ±5%	▲R794	BZ10182020	0.18 Ω 5W x 2 ARRAY
R721	GD05561160	1/6W 560 Ω ±5%	▲R795	GG05100160	1/6W 10 Ω ±5%
R722	GD05561160	1/6W 560 Ω ±5%	▲R796	GA05100010	1W 10 Ω ±5%
▲R723	GG05561160	1/6W 560 Ω ±5%	R797	GD05102160	1/6W 1K Ω ±5%
▲R724	GG05561160	1/6W 560 Ω ±5%	R797	GD05222160	1/6W 2.2K Ω ±5%
▲R725	GG05561160	1/6W 560 Ω ±5%	R798	GD05102160	1/6W 1K Ω ±5%
▲R726	GG05561160	1/6W 560 Ω ±5%	R798	GD05222160	1/6W 2.2K Ω ±5%
R727	GD05122160	1/6W 1.2K Ω ±5%	R799	GD05102160	1/6W 1K Ω ±5%
R728	GD05122160	1/6W 1.2K Ω ±5%	R799	GD05222160	1/6W 2.2K Ω ±5%
▲R729	GG05561160	1/6W 560 Ω ±5%	▲R801	GG05010140	1/4W 1 Ω ±5%
▲R730	GG05561160	1/6W 560 Ω ±5%	▲R802	GG05010140	1/4W 1 Ω ±5%
▲R731	GG05561160	1/6W 560 Ω ±5%	▲R803	GG05010140	1/4W 1 Ω ±5%
▲R732	GG05561160	1/6W 560 Ω ±5%	▲R804	GG05010140	1/4W 1 Ω ±5%
R733	GD05104160	1/6W 100K Ω ±5%	▲U700	GG05010140	1/4W 1 Ω ±5%
R734	GD05104160	1/6W 100K Ω ±5%	▲U701	GG05010140	1/4W 1 Ω ±5%
▲R737	GG05560160	1/6W 56 Ω ±5%	▲U702	GG05010140	1/4W 1 Ω ±5%
▲R738	GG05560160	1/6W 56 Ω ±5%	▲U703	GG05010140	1/4W 1 Ω ±5%
▲R739	GG05560160	1/6W 56 Ω ±5%			
▲R740	GG05560160	1/6W 56 Ω ±5%			
R741	GD05682160	1/6W 6.8K Ω ±5%			
R742	GD05682160	1/6W 6.8K Ω ±5%			
R745	GD05272160	1/6W 2.7K Ω ±5%			
R746	GD05272160	1/6W 2.7K Ω ±5%			
R747	GD05333160	1/6W 33K Ω ±5%	RN63	RA01010780	TRIM-POTS 100 Ω
R748	GD05333160	1/6W 33K Ω ±5%	RN64	RA01010780	TRIM-POTS 100 Ω
▲R749	GG05022160	1/6W 2.2 Ω ±5%	RN70	RA01010780	TRIM-POTS 100 Ω
▲R750	GG05022160	1/6W 2.2 Ω ±5%	R743	RA02220780	TRIM-POTS 2.2K Ω
▲R751	GG05022160	1/6W 2.2 Ω ±5%	R744	RA02220780	TRIM-POTS 2.2K Ω
▲R752	GG05022160	1/6W 2.2 Ω ±5%	R786	RA02220780	TRIM-POTS 2.2K Ω
▲R753	GG05181140	1/4W 180 Ω ±5%			

**CONTROLS**

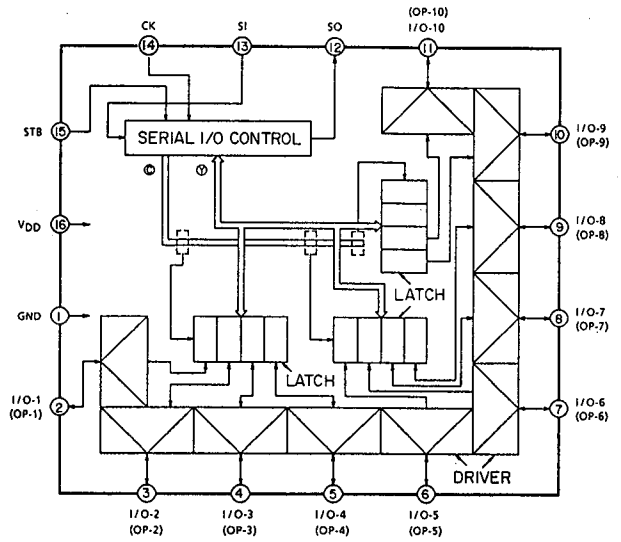
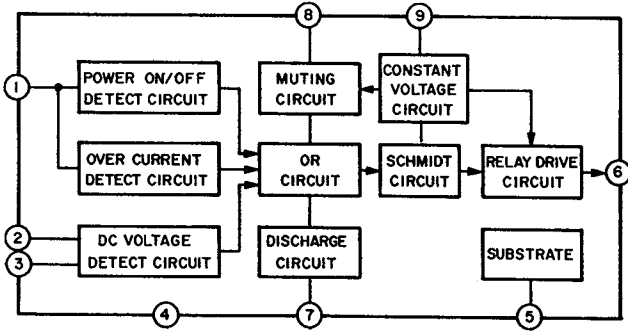
TRIM-POTS 100 Ω  
 TRIM-POTS 100 Ω  
 TRIM-POTS 100 Ω  
 TRIM-POTS 2.2K Ω  
 TRIM-POTS 2.2K Ω  
 TRIM-POTS 2.2K Ω



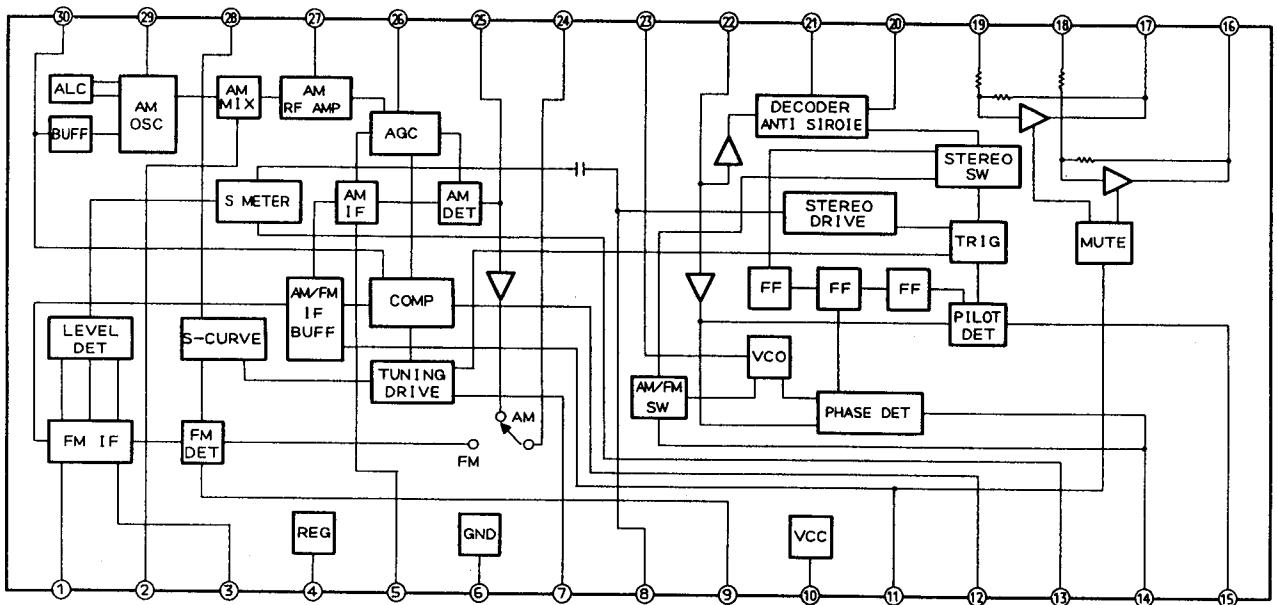
IC BLOCK DIAGRAMS

QY10 : TC9173 QY11 : TC9174  
PORT EXPANDER

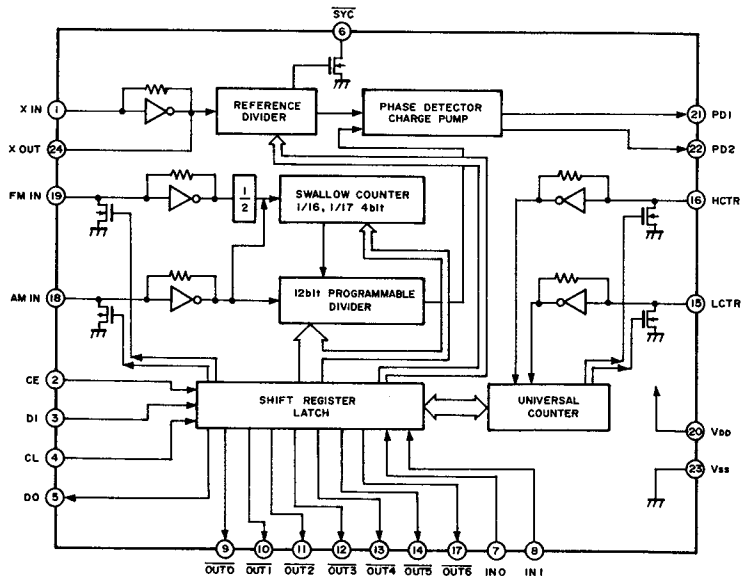
QN04 : TA7317P OVER LOAD PROTECTOR



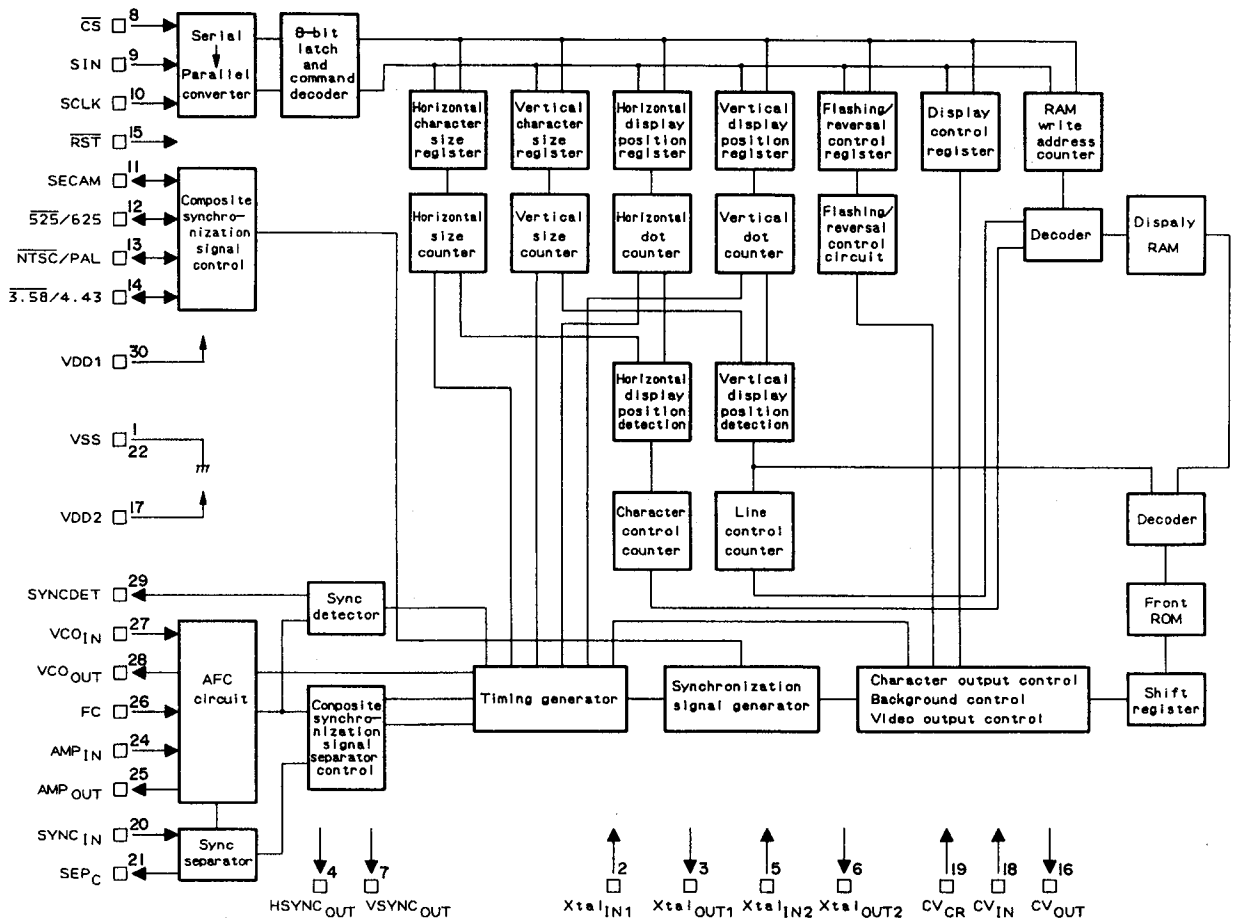
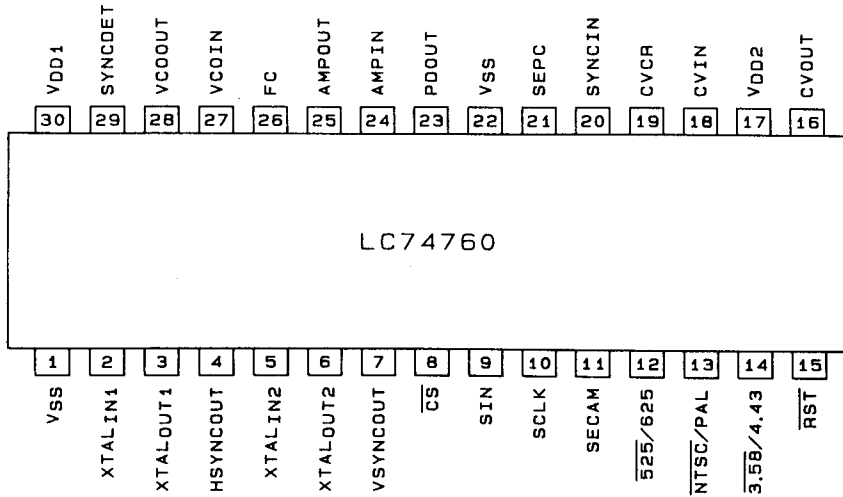
Q201 : LA1836 FM / AM IF, MPX IC



Q501 : LC7218 PLL FREQUENCY SYNTHESIZER



**QX60 : LC74760-9004**  
**OSD LSI**

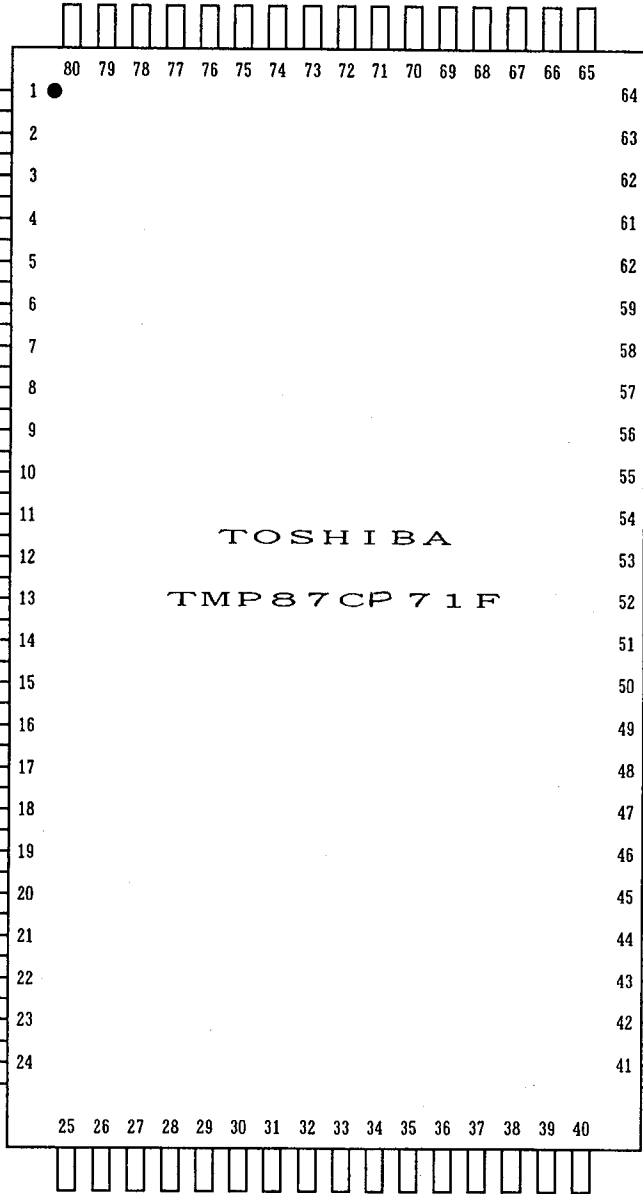


QU01 : TMP87CP71F MICROPROCESSOR

KEY IN CIN1  
 KEY IN CIN0  
 SD IN  
 EMPHASIS IN  
 DIG. IR ERROR IN  
 SIG. STR. IN  
 PLS. ENC (A) IN  
 PUS. ENC (B) IN

K5 KEY IN (K5)  
 K4 KEY IN (K4)  
 K3 KEY IN (K3)  
 K2 KEY IN (K2)  
 K1 KEY IN (K1)  
 K0 KEY IN (K0)  
 Vkk -30V  
 Sa SEGMENT a/A1

RC-5 OUT P10/INT0  
 RDS START BIT IN P11/INT1  
 MULTI ROOM IN P12/INT2  
 DSP1 SIRQ OUT P13  
 RDS RESET OUT P14  
 AUTO MODE IN P15  
 OSD SYNC. DET. IN P16  
 HOLOGRAM/A. I. B TAPE MONI. LED P17  
 N. C TEST  
 DSP2 SIRQ OUT P21  
 PLL DATA-IN P22  
 RESET RESET  
 8MHz XIN  
 8MHz XOUT  
 GND VSS  
 POWER DOWN IN P20  
 RC-5/MULTI RC IN P30/INT3  
 POWER ON/OFF P31  
 RDS CLOCK IN P32  
 RDS DATA IN P33  
 DSP1 SIAK IN P34  
 CLK-1 OUT (DSP/OSD) P35  
 CE3 (P-EXP. 1) P36  
 DATA-1 OUT (DSP/OSD) P37



64 Sb SEG. b/A2  
 63 Sc SEG. c/A3  
 62 Sd SEG. d/A4  
 61 Se SEG. e/A5  
 60 Sf SEG. f  
 59 Sg SEG. g  
 58 Sh SEG. h  
 57 Si SEG. i  
 56 Sj SEG. j  
 55 Sk SEG. k  
 54 Sl SEG. l  
 53 Sm SEG. m  
 52 Sn SEG. n  
 51 So SEG. o  
 50 Sp SEG. p  
 49 G1 DIGIT D1  
 48 G2 DIGIT D2  
 47 G3 DIGIT D3  
 46 G4 DIGIT D4  
 45 G5 DIGIT D5  
 44 G6 DIGIT D6  
 43 G7 DIGIT D7  
 42 G8 DIGIT D8  
 41 G9 DIGIT D9

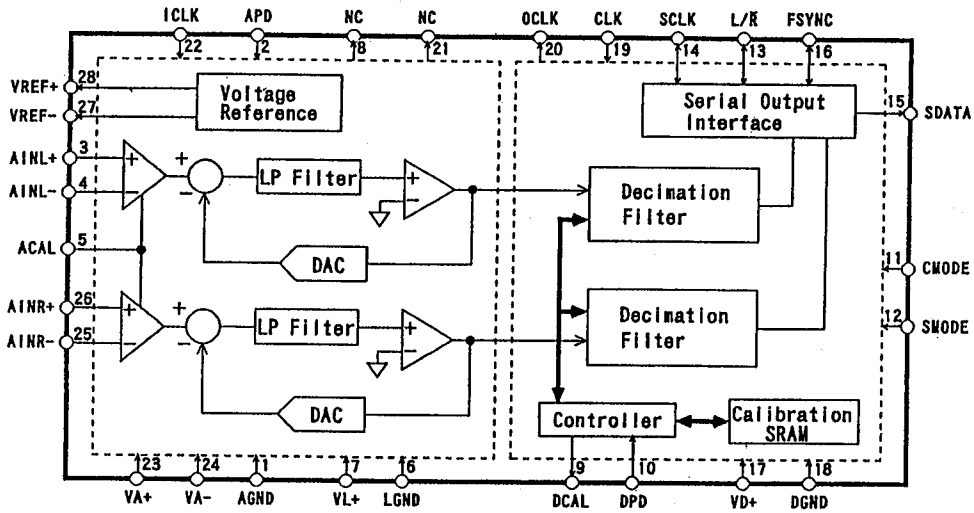
CE4 (PORT EXP. 2) P00  
 DSP2 SIAK IN P01  
 PORT EXP1 DATA IN P02  
 CLK-0 OUT (PLL/VOL) P03  
 DATA-0 OUT P04  
 CE1 (PLL, LC7821ETC) P05  
 CE2 (OSD) P06  
 VOL. 1-CLK (FRONT) P07

G10 DIG. D10  
 G11 DIG. D11  
 G12 DIG. D12  
 P63 VOL. 3-CLK (CNT/SUB-WF)  
 P62 VOL. 2-CLK (SURRE.)  
 P61 IR SWITCH OUT  
 P60 STB4 (VOL/MULTI)  
 VDD +5.5V

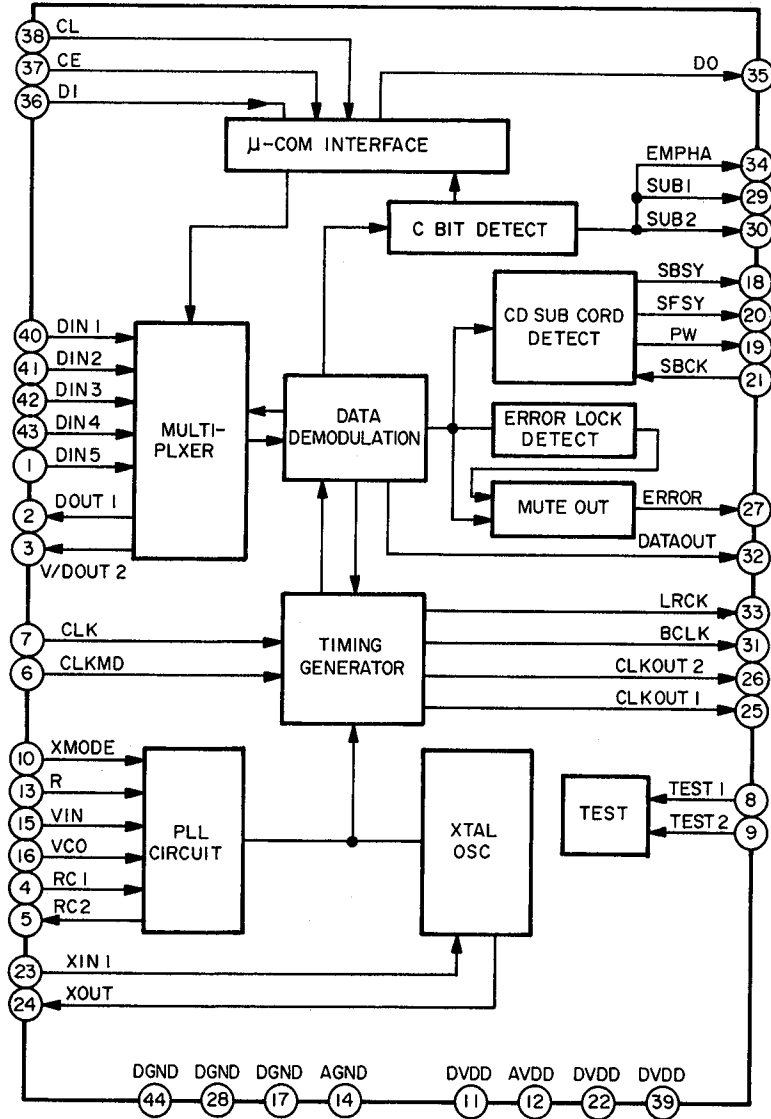




**Q608 : AK5389**  
**ANALOGUE DIGITAL CONVERTER**



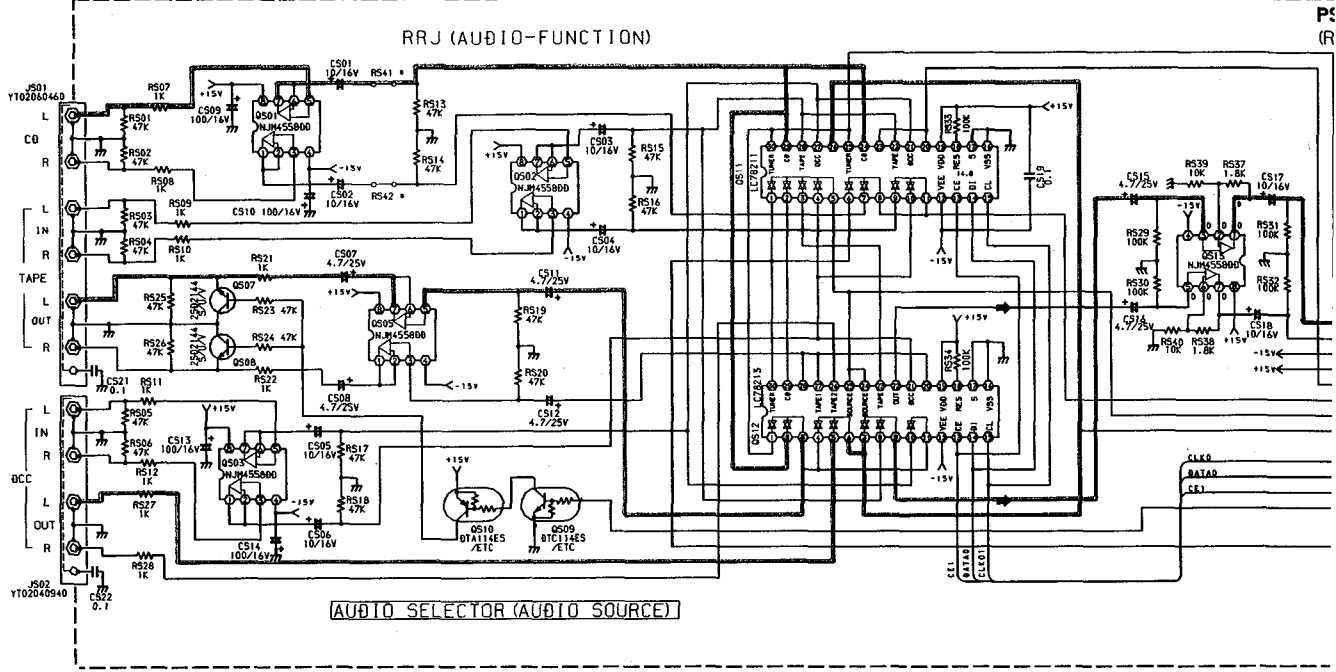
**Q619 : LC8903Q**  
**DIGITAL AUDIO INTERFACE**



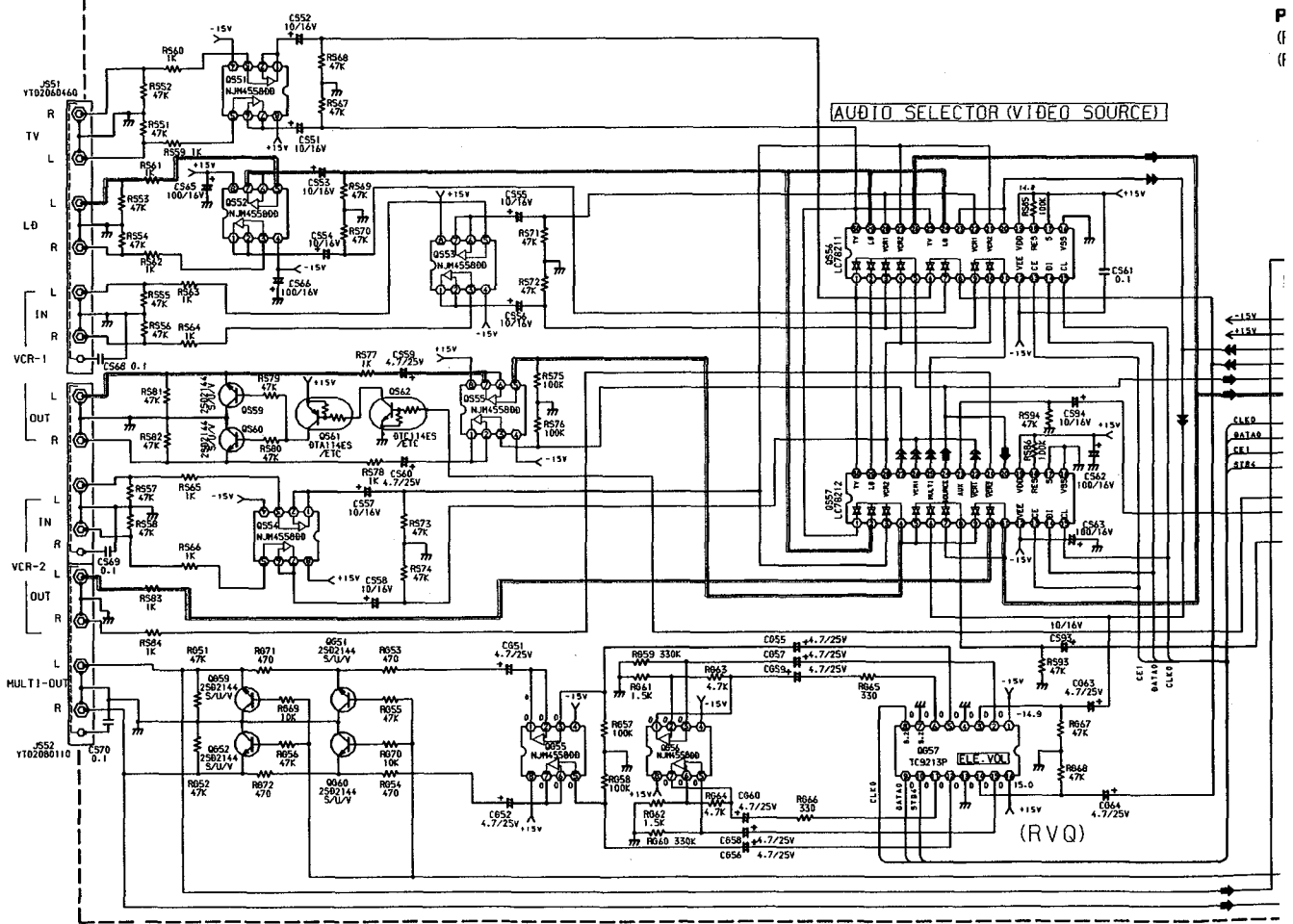


**SCHEMATIC DIAGRAM ( 1 ) BK VERSION**

**PS04-AUDIO FUNCT**

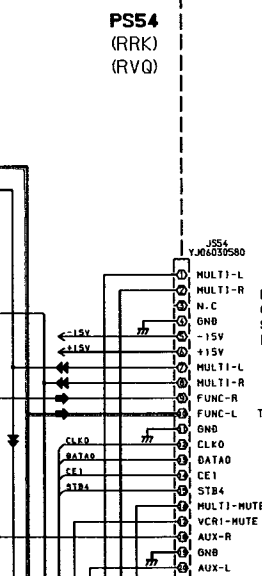
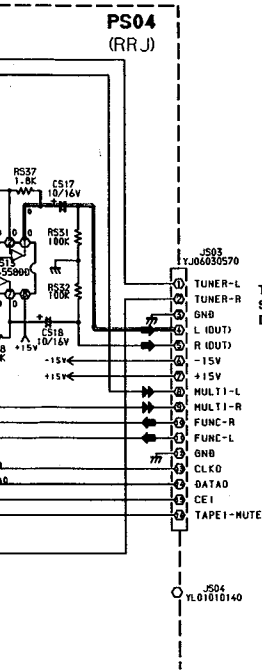


**PS54-V-AUDIO FUNCTION**

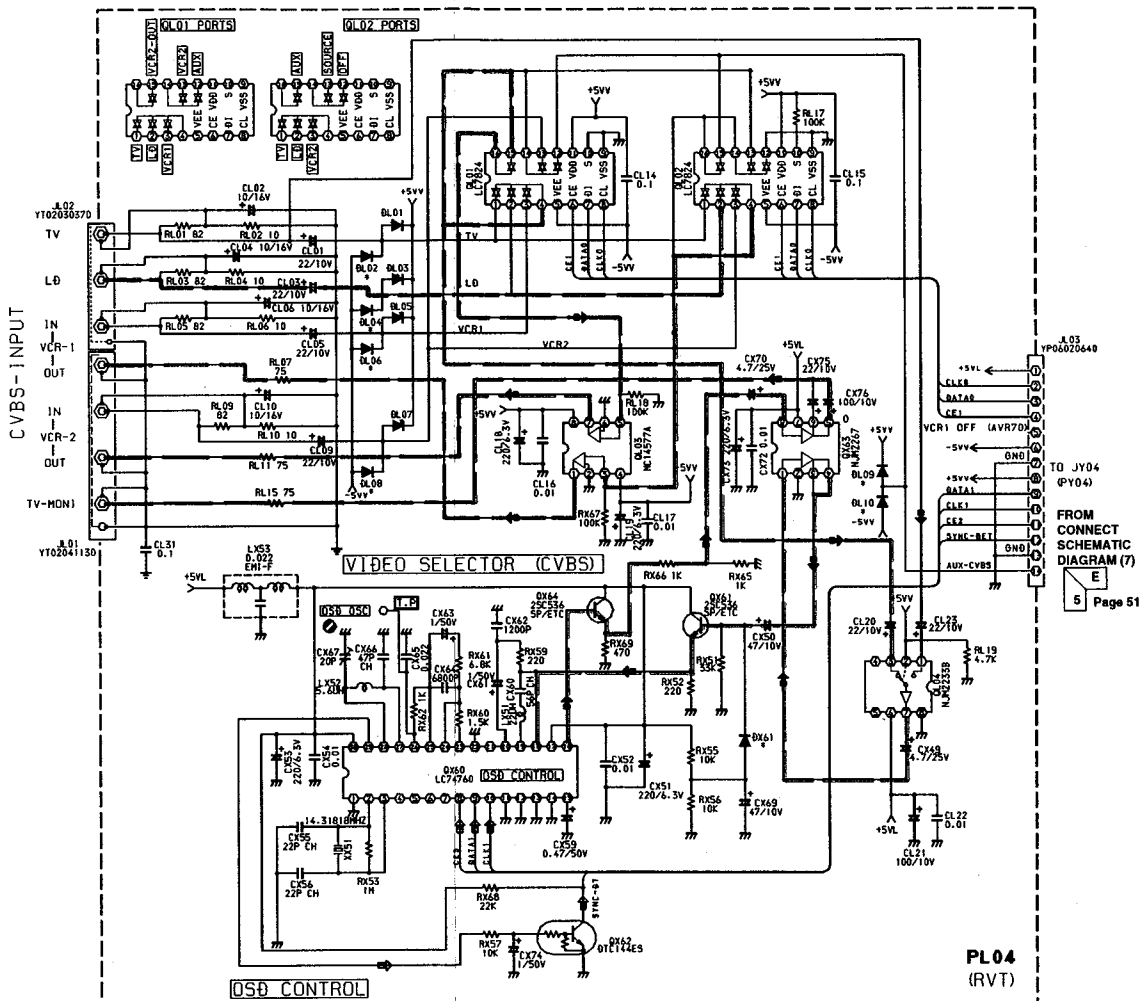


F G H I J

RADIO FUNCTION



PL04-VIDEO SELECTOR



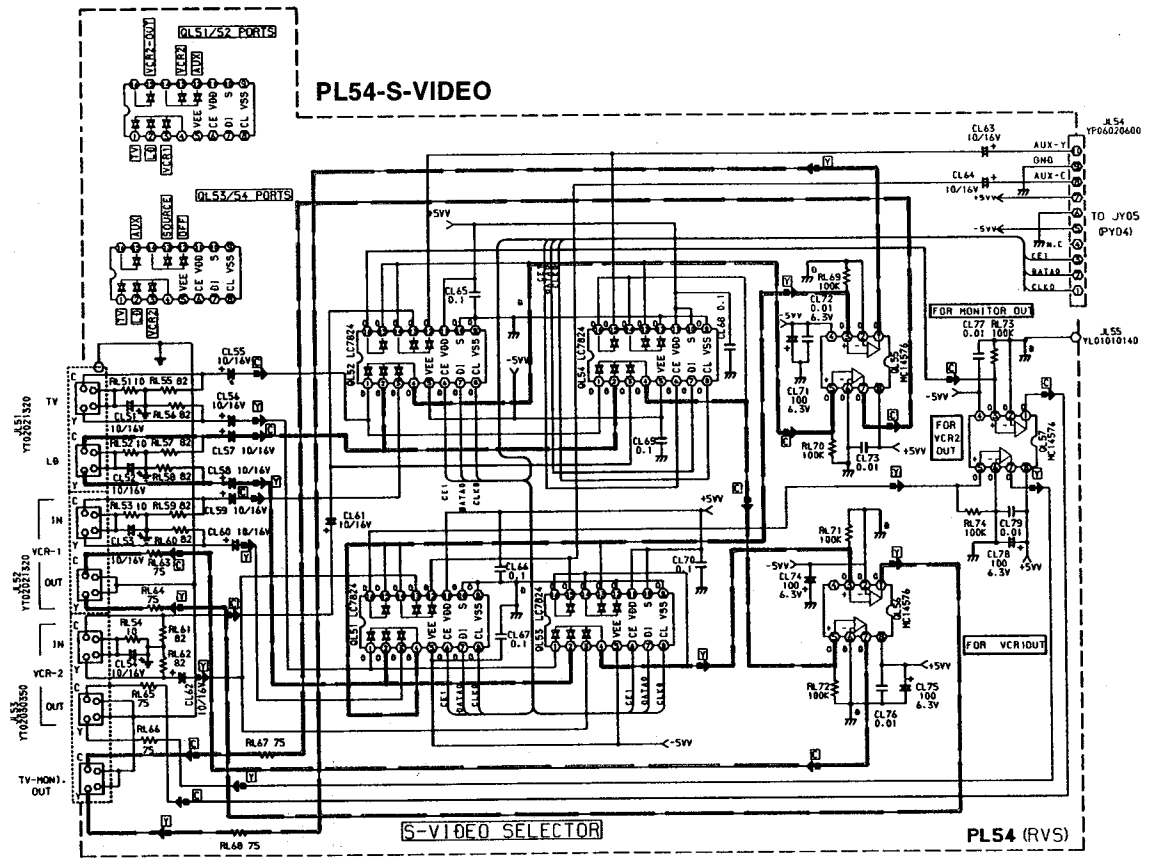
FRONT →  
 MULTI ROOM →



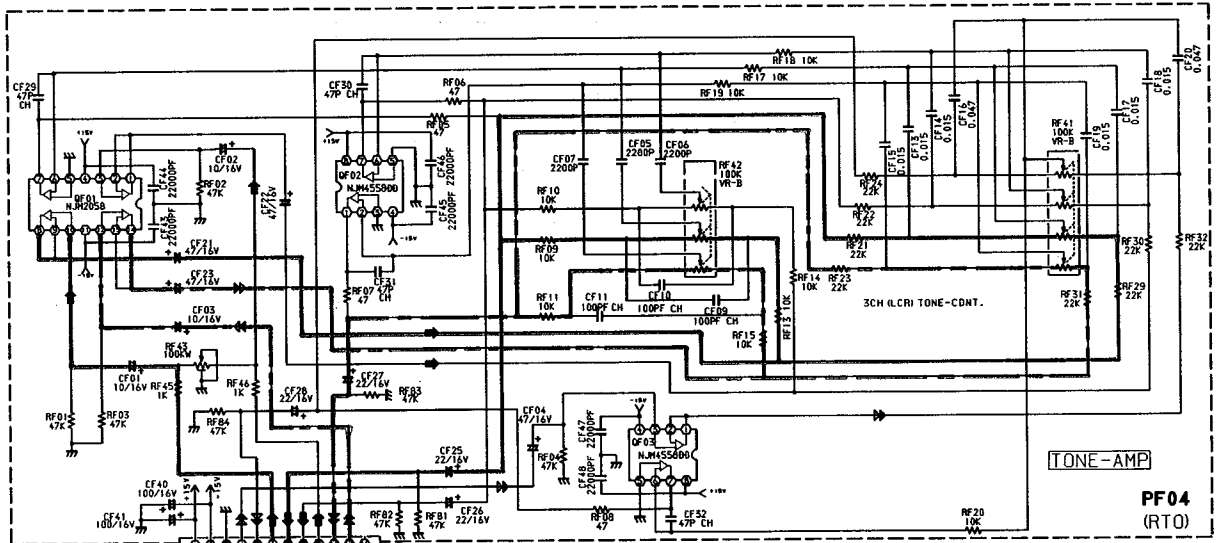


SCHEMATIC DIAGRAM ( 2 ) BK VERSION

1  
2  
3  
4  
5  
6  
7



PF04-TONE



PV04-DIRECT IN

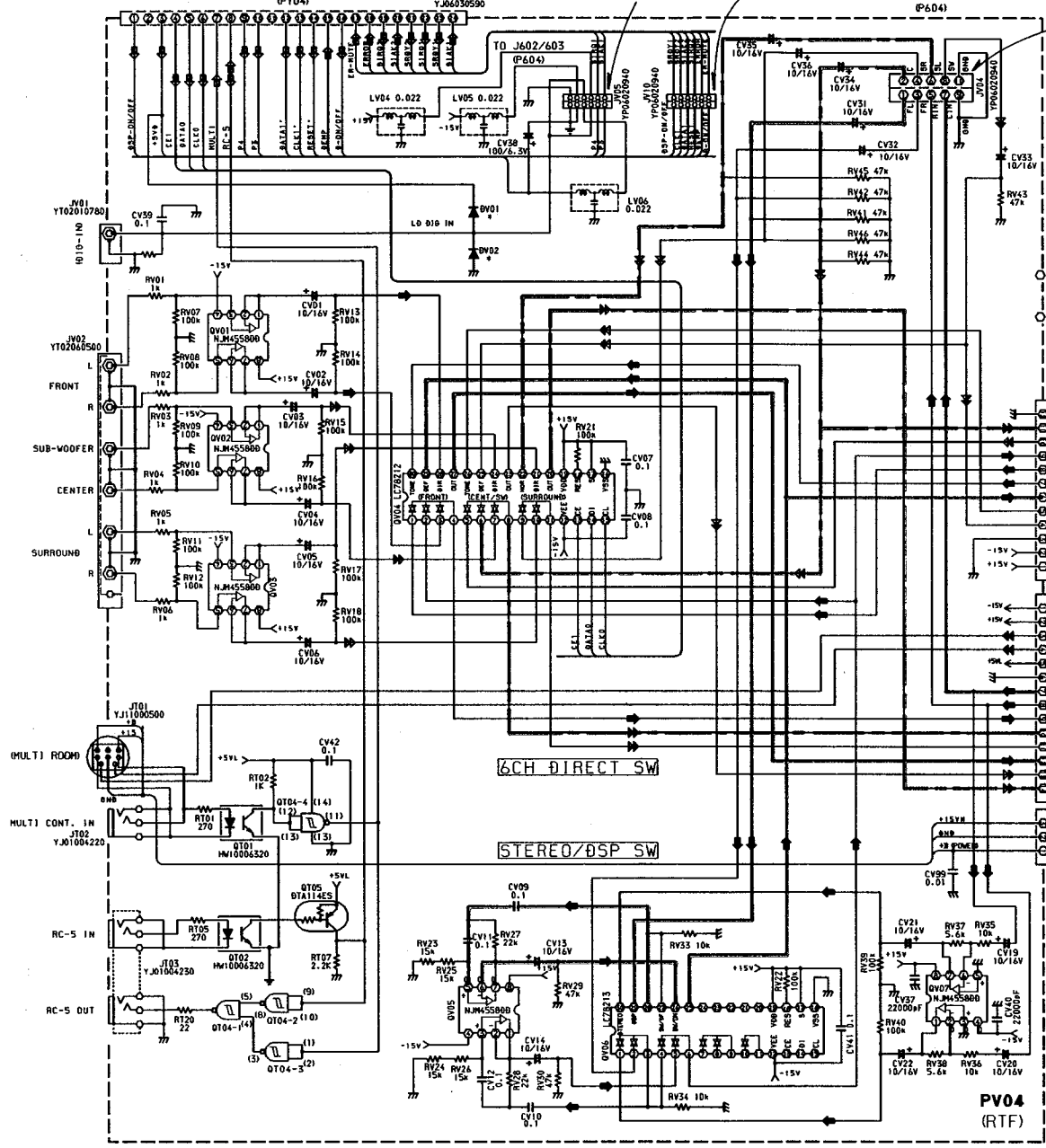
FROM CONNECT SCHEMATIC DIAGRAM (7)

TO THX PRO LOGIC DSP SCHEMATIC DIAGRAM (10)

TO THX PRO LOGIC DSP SCHEMATIC DIAGRAM (10)

FROM THX PRO LOGIC SCHEMATIC DIAGRAM (10)

M CONNECT SCHEMATIC DIAGRAM (7) Page 51



TO TONE SCHEMATIC DIAGRAM (2)

TO CONNECT SCHEMATIC DIAGRAM (7)

FROM MAIN AMP SCHEMATIC DIAGRAM (8)

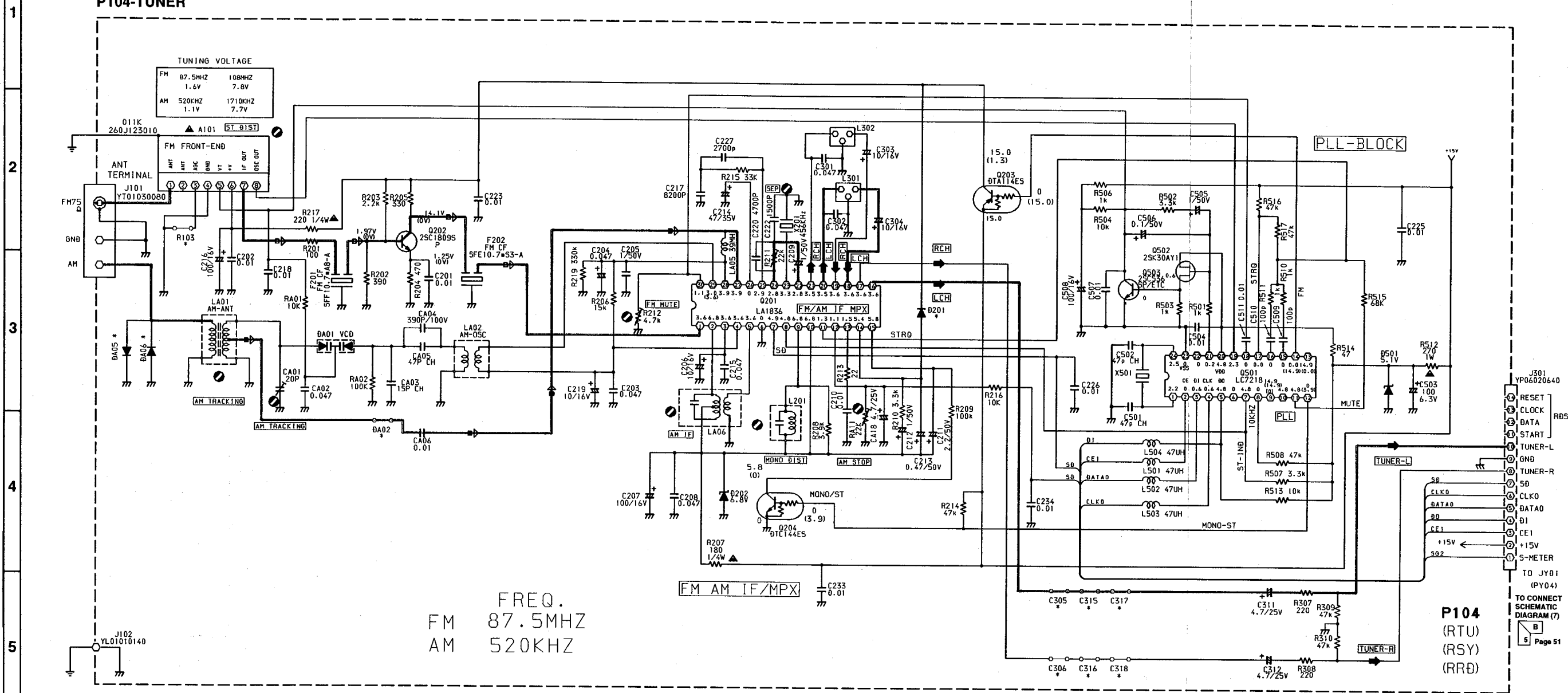
TO TONE SCHEMATIC DIAGRAM (2) Page 46

- FRONT
- CENTER
- SUB-WOOFER
- SURROUND
- MULTI ROOM

PV04 (RTF)

# SCHEMATIC DIAGRAM ( 3 ) BK VERSION

## P104-TUNER



TO JY01 (PY04)  
TO CONNECT SCHEMATIC DIAGRAM (7)



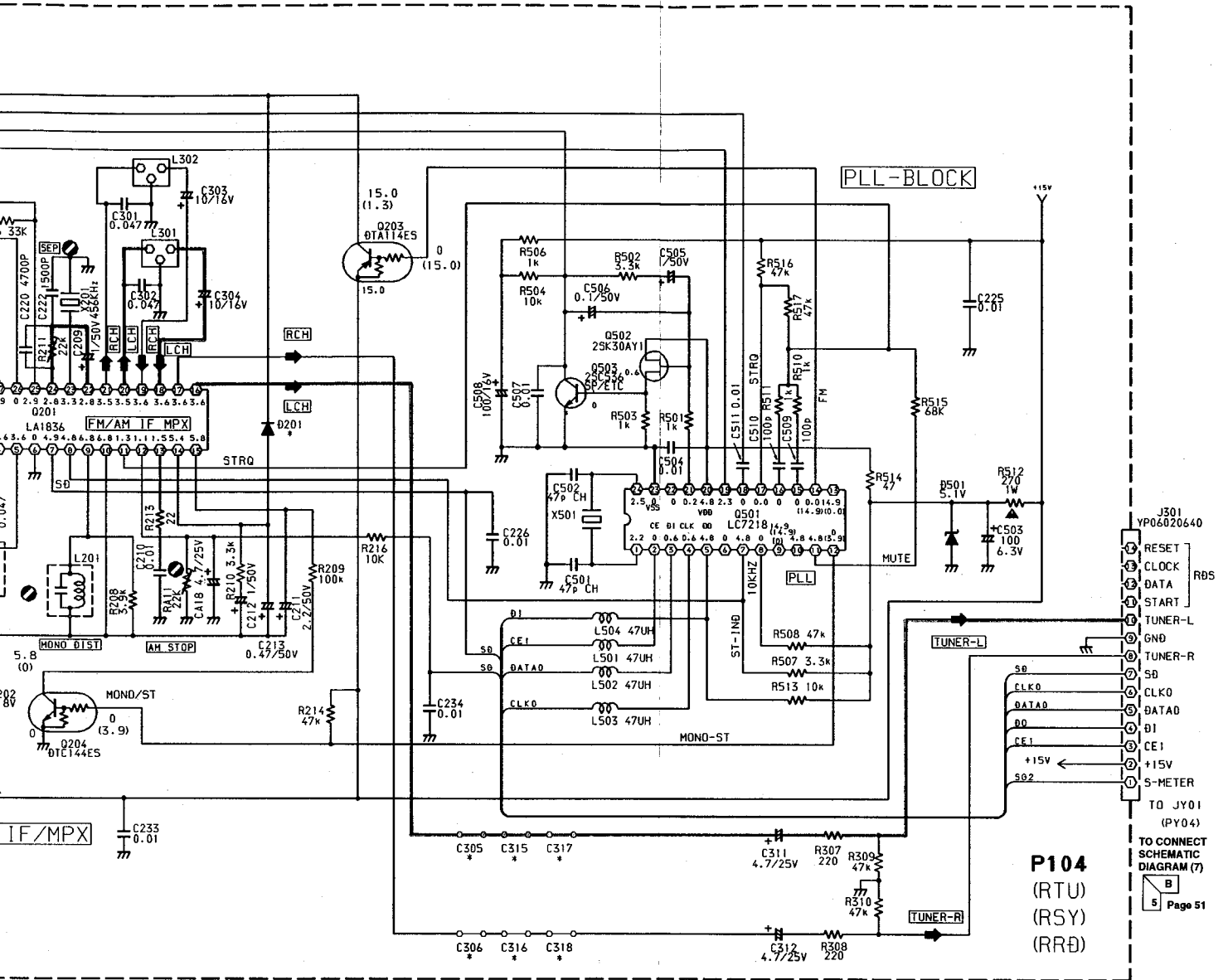
F

G

H

I

J



**P104**  
(RTU)  
(RSY)  
(RRB)

- J301  
YP06020640
- 1 RESET
  - 2 CLOCK
  - 3 DATA
  - 4 START
  - 5 TUNER-L
  - 6 GND
  - 7 TUNER-R
  - 8 SB
  - 9 CLK0
  - 10 DATA0
  - 11 B1
  - 12 CE1
  - 13 +15V
  - 14 S-METER
- TO JY01 (PY04)  
TO CONNECT SCHEMATIC DIAGRAM (7)  
B  
5 Page 51

SCHEMATIC DIAGRAM ( 4 ) BK VERSION

PE04-ELE. VOL

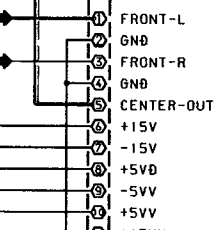
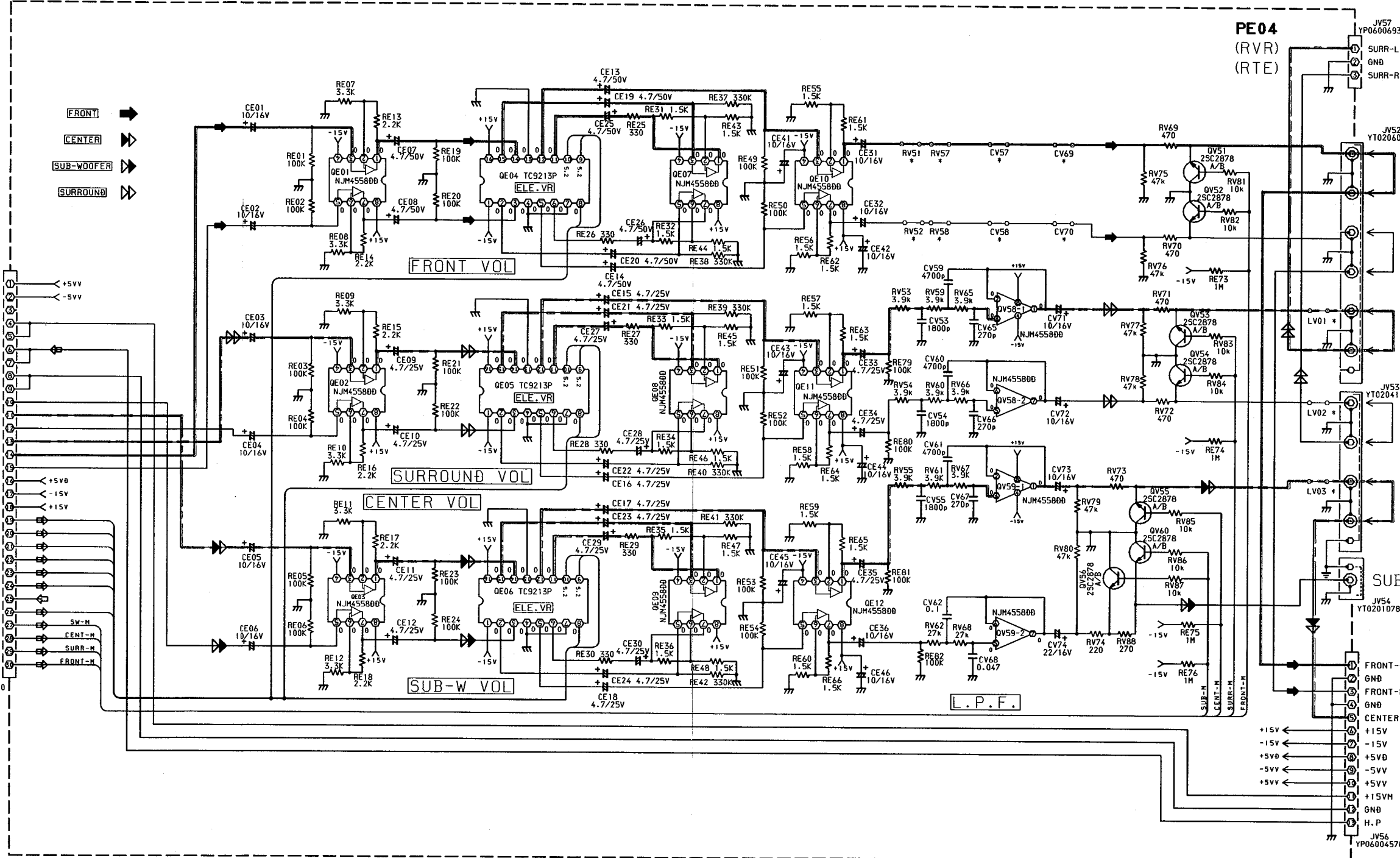
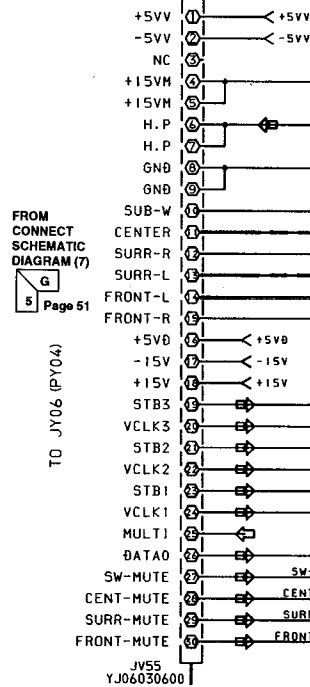
PE04 (RVR) (RTE)

TO SURROUND AMP SCHEMATIC DIAGRAM (8) or (9) Page 52 or 53

TO MAIN AMP SCHEMATIC DIAGRAM (8) or (9) Page 52 or 53

1  
2  
3  
4  
5  
6  
7

FRONT  
CENTER  
SUB-WOOFER  
SURROUND





SCHMATIC DIAGRAM ( 4 ) BK VERSION

PE04-ELE. VOL

1

2

3

4

5

6

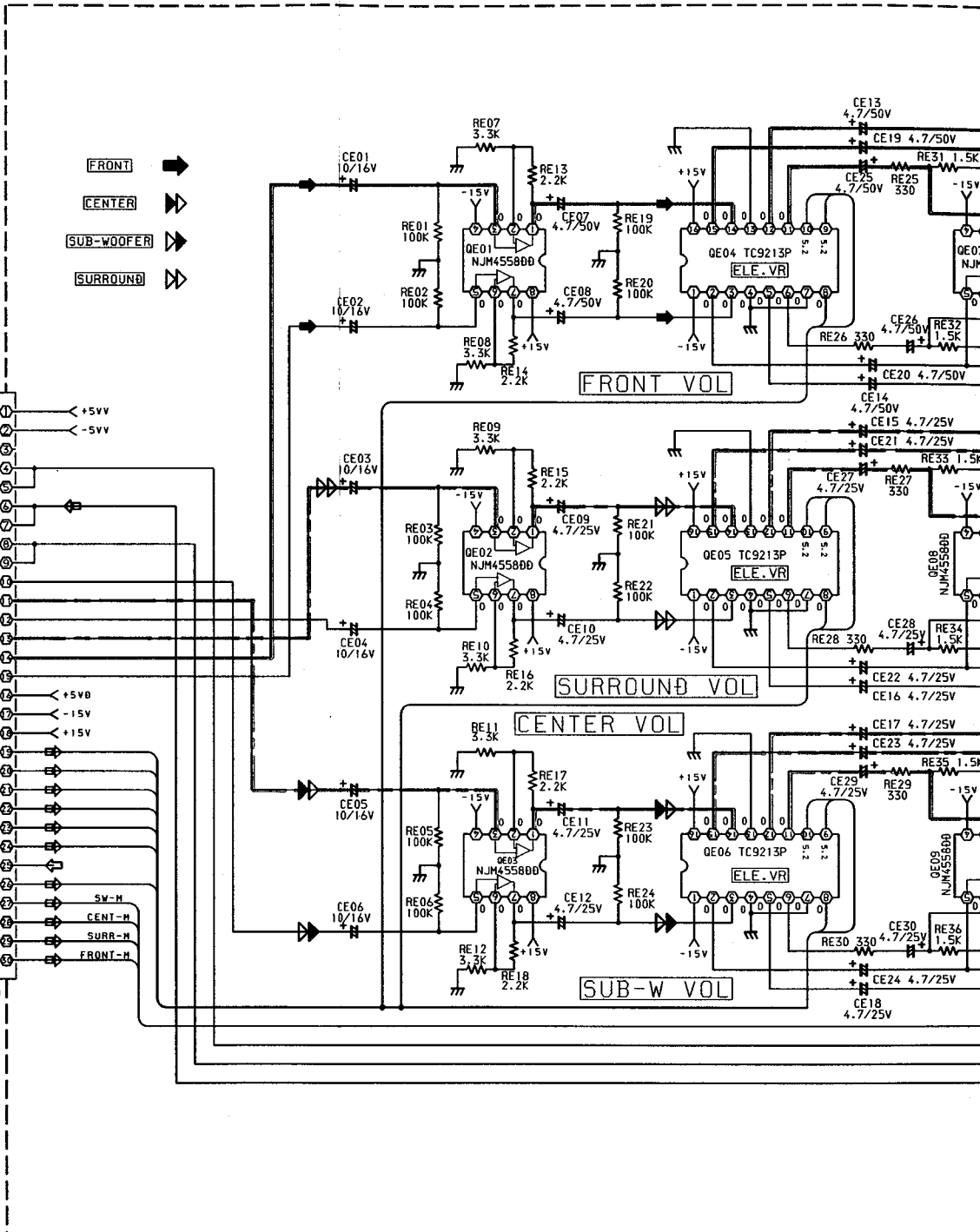
7

- FRONT →
- CENTER →
- SUB-WOOFER →
- SURROUND →

FROM CONNECT SCHEMATIC DIAGRAM (7)  
 G Page 51

TO JY06 (PY04)

- +5VV ① ← +5VV
- 5VV ② ← -5VV
- NC ③
- +15VM ④
- +15VM ⑤
- H.P ⑥
- H.P ⑦
- GND ⑧
- GND ⑨
- SUB-W ⑩
- CENTER ⑪
- SURR-R ⑫
- SURR-L ⑬
- FRONT-L ⑭
- FRONT-R ⑮
- +5V0 ⑯ ← +5V0
- 15V ⑰ ← -15V
- +15V ⑱ ← +15V
- STB3 ⑲
- VCLK3 ⑳
- STB2 ㉑
- VCLK2 ㉒
- STB1 ㉓
- VCLK1 ㉔
- MULT1 ㉕
- DATA0 ㉖
- SW-MUTE ㉗ ← SW-M
- CENT-MUTE ㉘ ← CENT-M
- SURR-MUTE ㉙ ← SURR-M
- FRONT-MUTE ㉚ ← FRONT-M
- JV55 YJ06030600





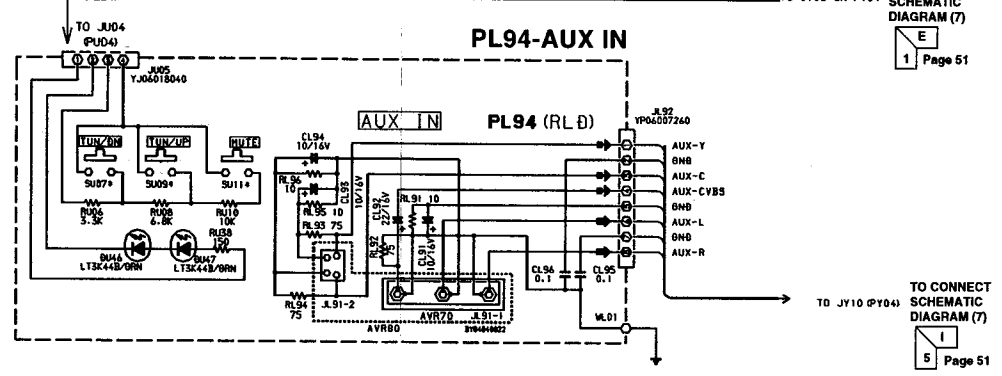
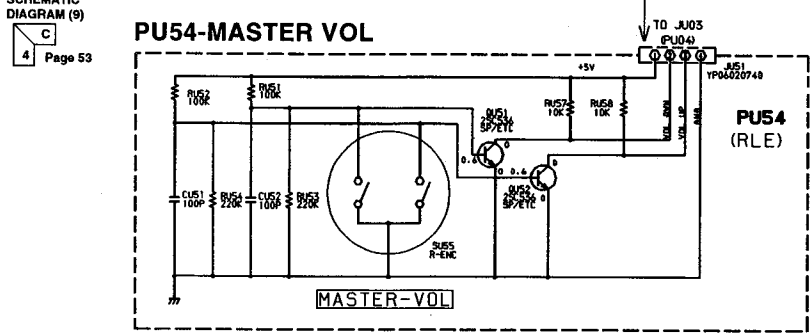
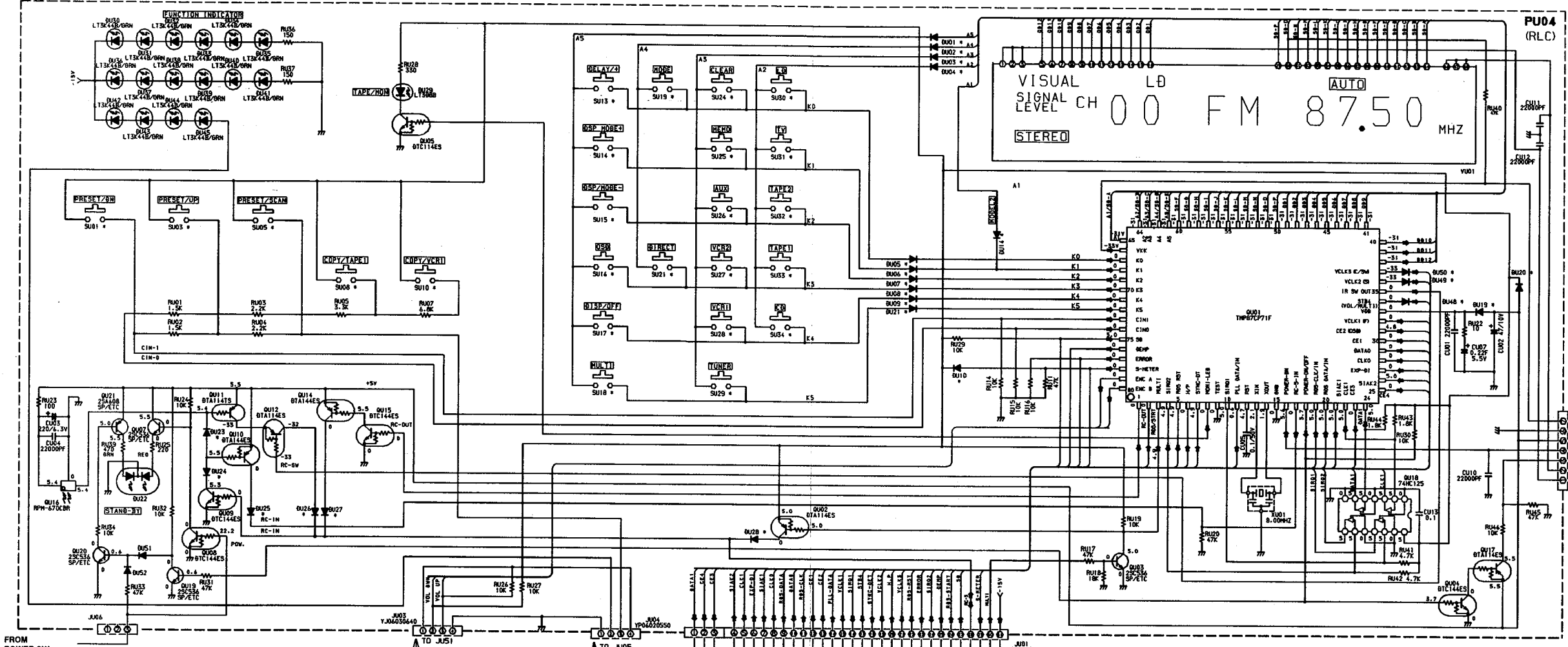






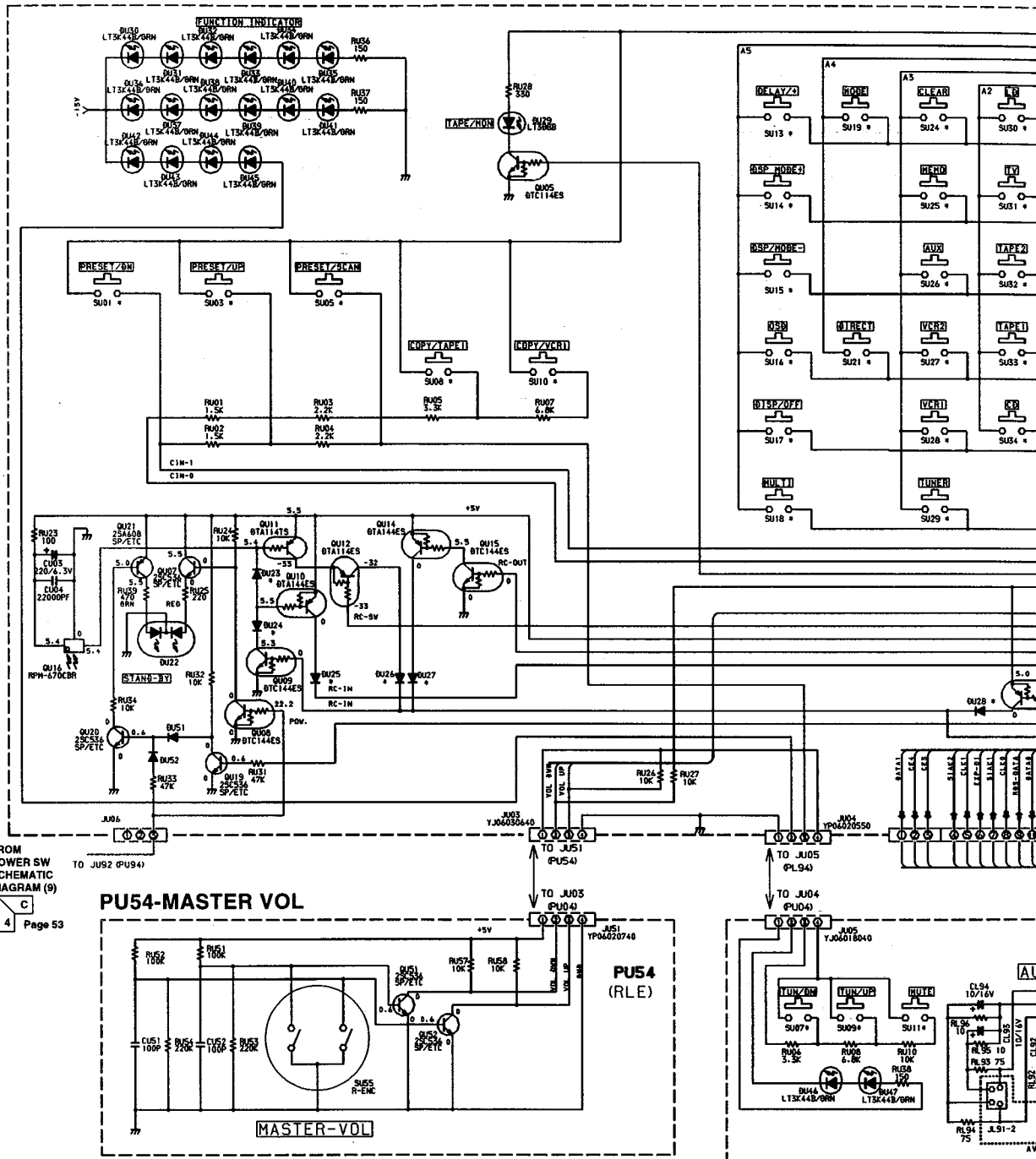
**SCHEMATIC DIAGRAM ( 6 ) BK VERSION**  
**PU04-FRONT ( AVR80MK II ) ONLY**

1  
2  
3  
4  
5  
6  
7





SCHEMATIC DIAGRAM ( 6 ) BK VERSION  
PU04-FRONT ( AVR80MK II ) ONLY



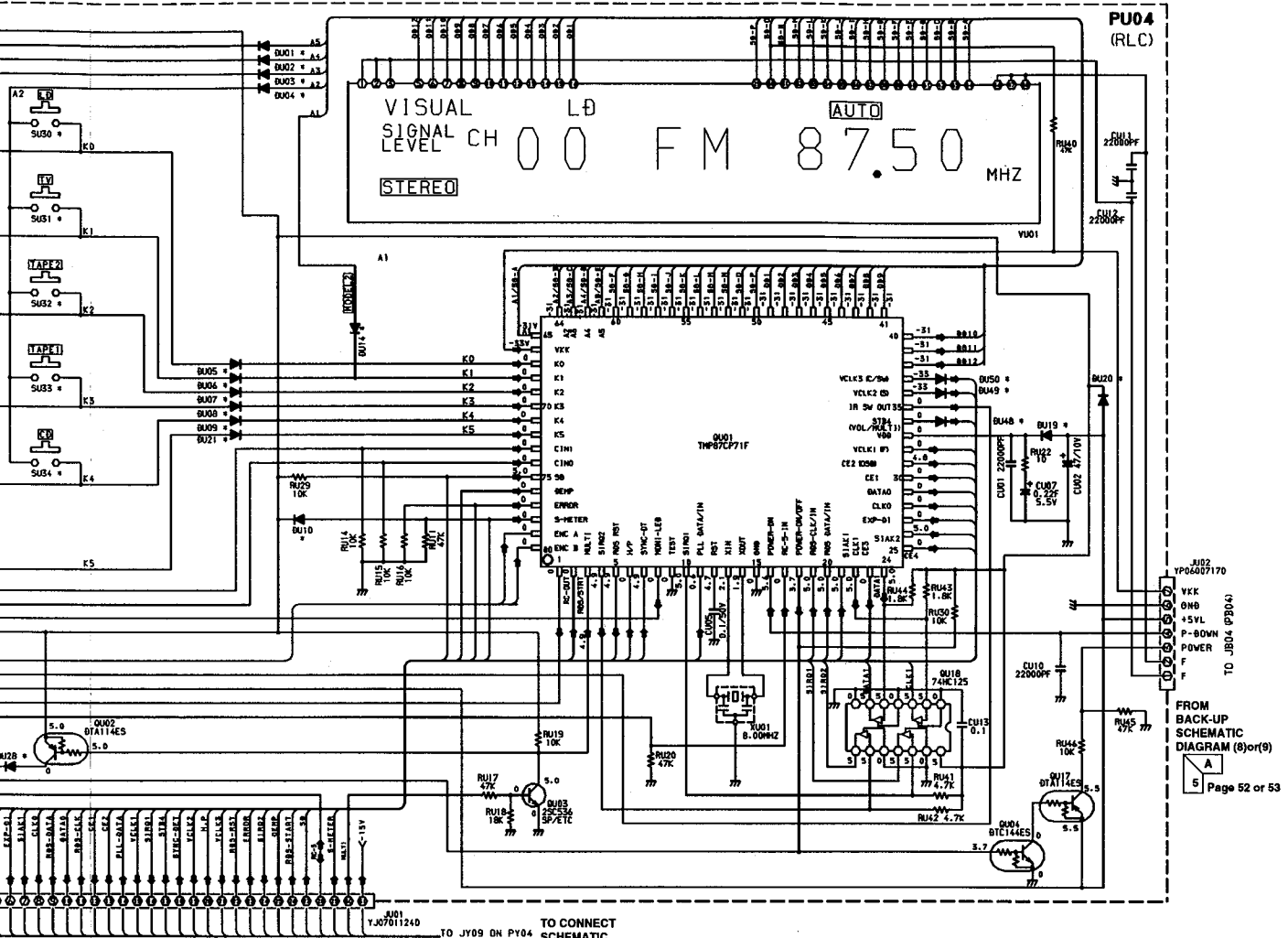
F

G

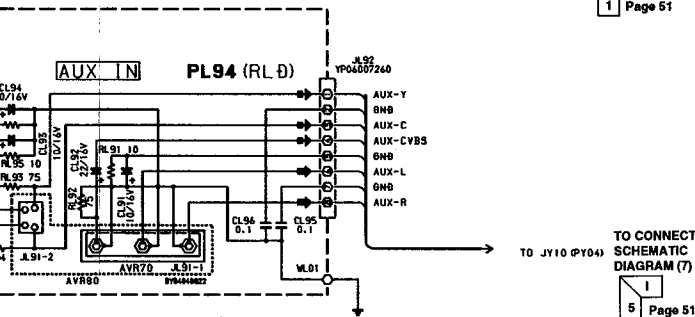
H

I

J



**PL94-AUX IN**





# SCHEMATIC DIAGRAM ( 7 ) BK VERSION

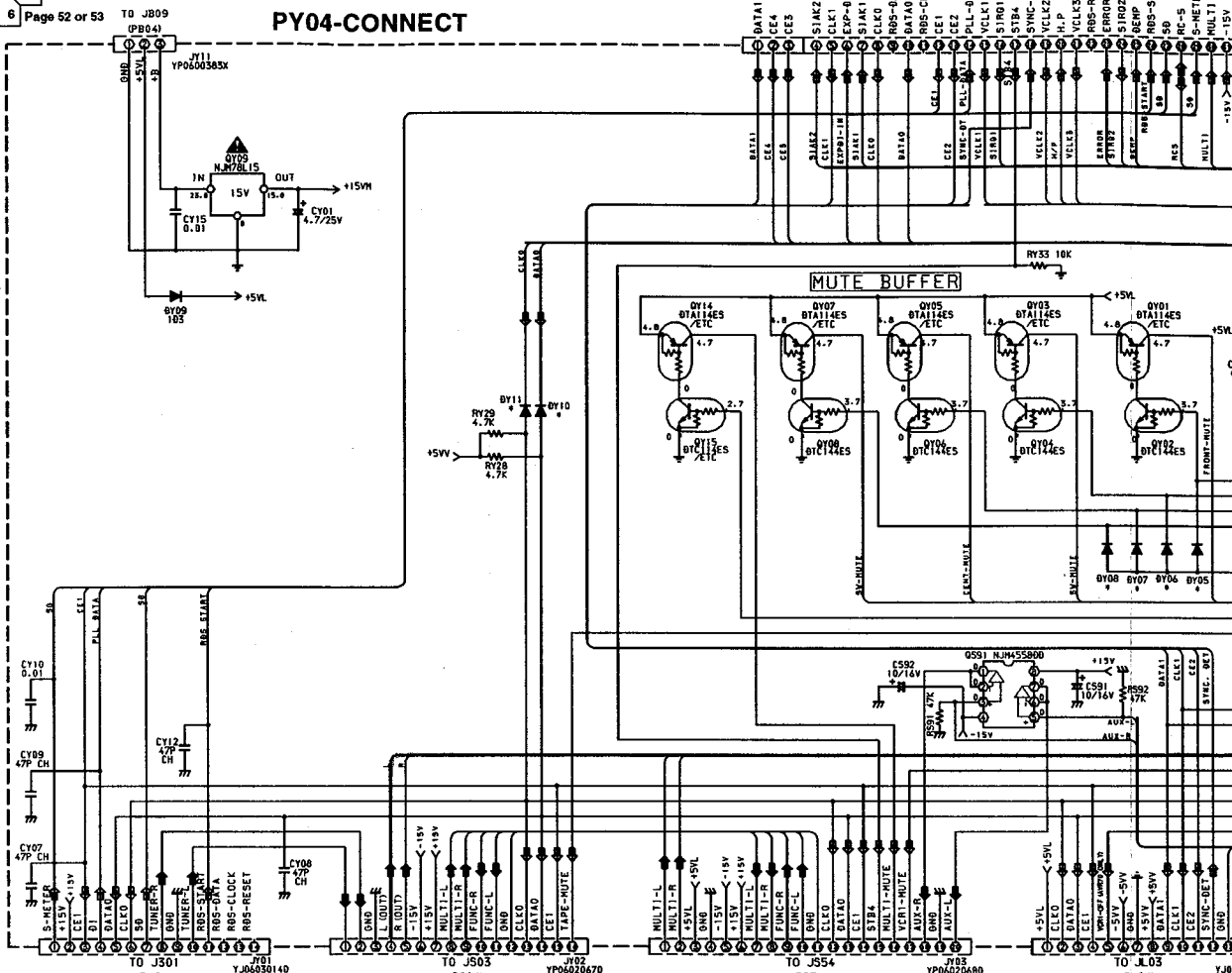
FROM BACK-UP SCHEMATIC DIAGRAM (8) or (9)

6 Page 52 or 53

## PY04-CONNECT

FROM FRONT SCHEMATIC DIAGRAM (5) or (6)

5 Page 49 or 50 TO JU01 (PU04)



FROM TUNER SCHEMATIC DIAGRAM (3)

4 Page 47

FROM AUDIO FUNCTION SCHEMATIC DIAGRAM (1)

2 Page 45

TO V-AUDIO FUNCTION SCHEMATIC DIAGRAM (1)

5 Page 45

TO VIDEO SELECTOR SCHEMATIC DIAGRAM (1)

4 Page 45

1  
2  
3  
4  
5  
6  
7

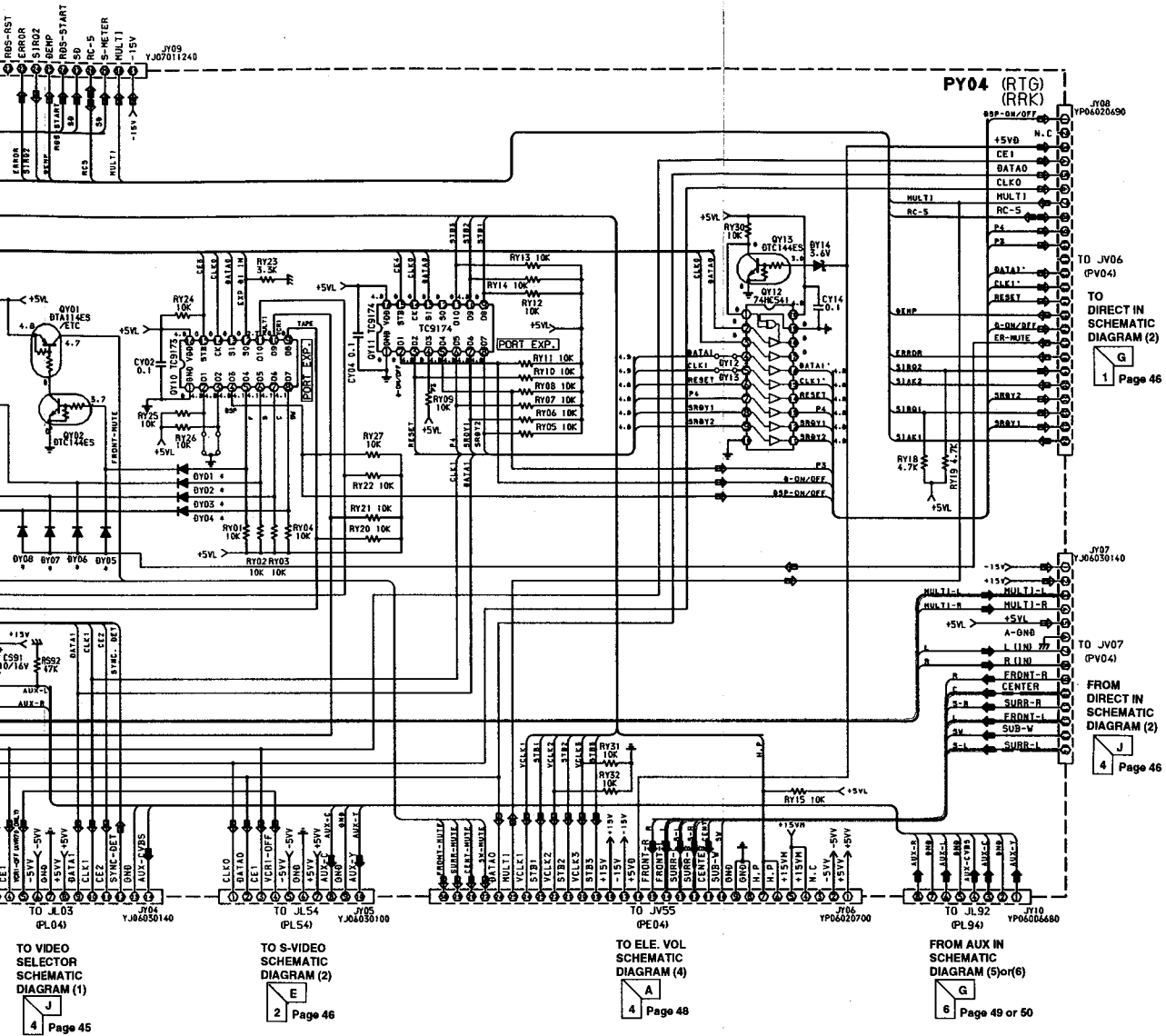
F

G

H

I

J



TO VIDEO SELECTOR SCHEMATIC DIAGRAM (1)  
 J Page 45

TO S-VIDEO SCHEMATIC DIAGRAM (2)  
 E Page 46

TO ELE. VOL SCHEMATIC DIAGRAM (4)  
 A Page 48

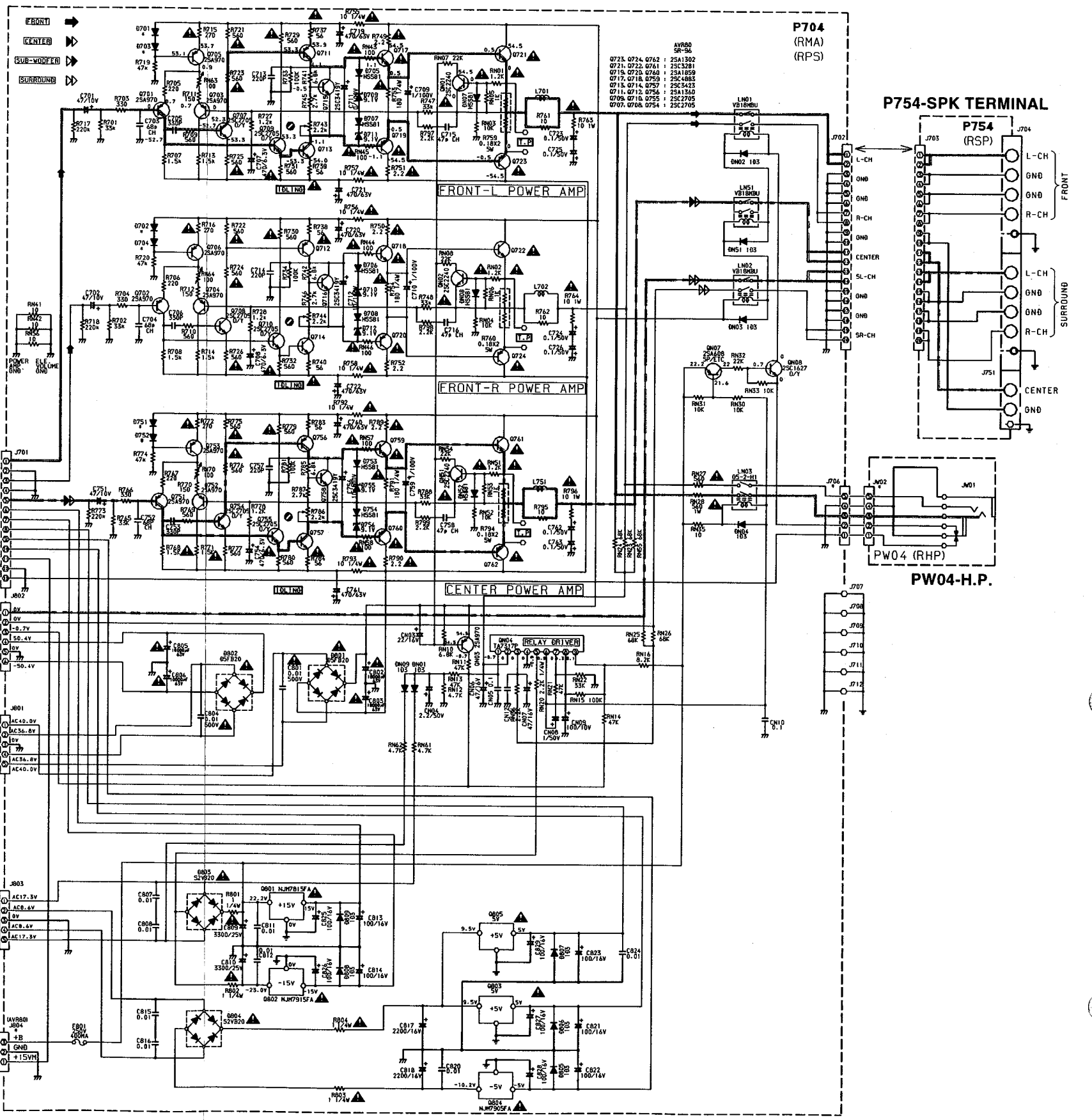
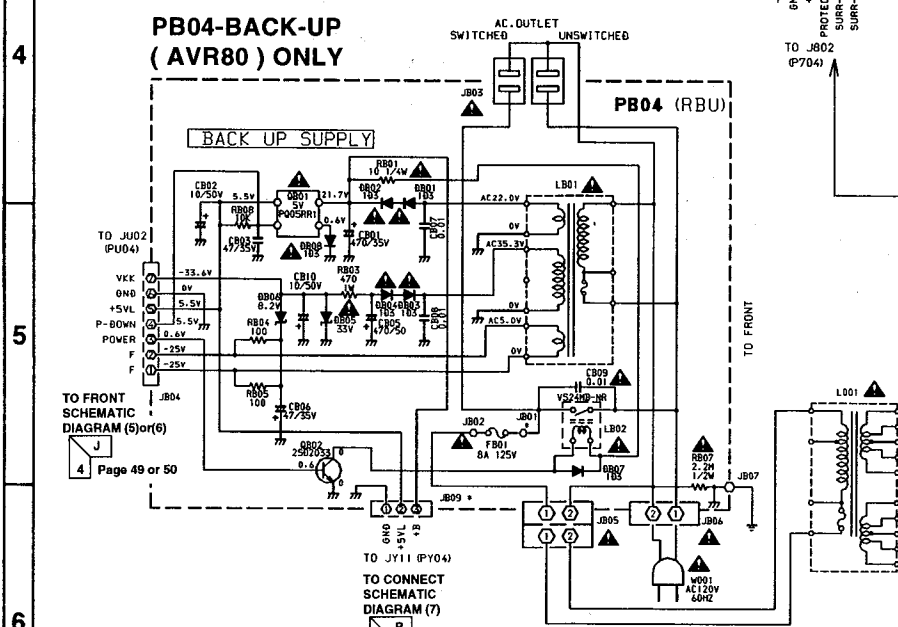
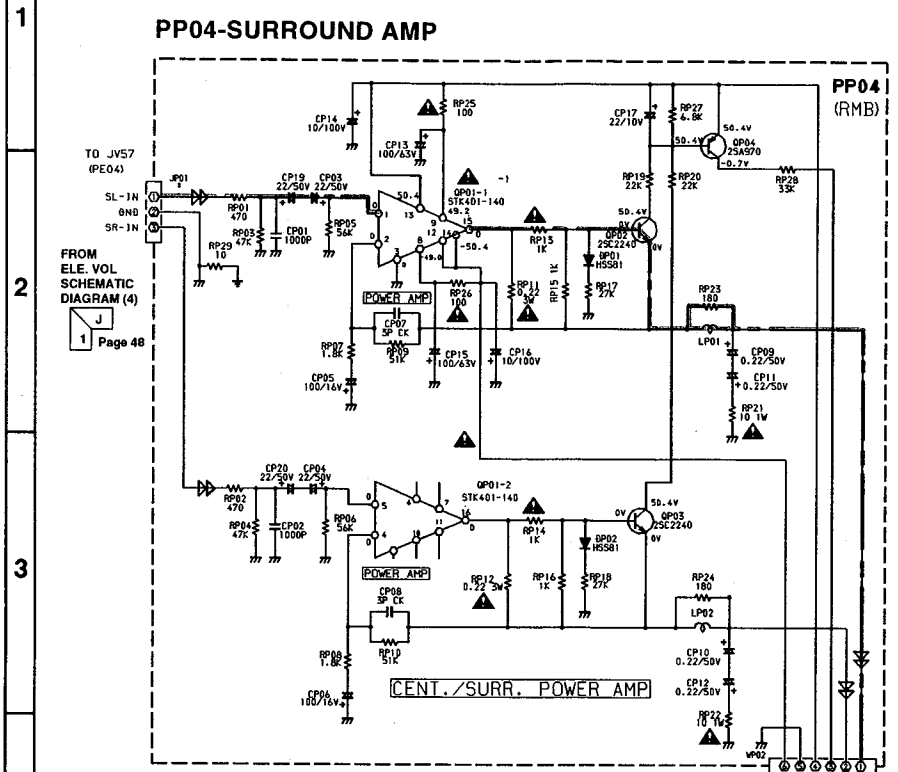
FROM AUX IN SCHEMATIC DIAGRAM (5) or (6)  
 G Page 49 or 50

TO DIRECT IN SCHEMATIC DIAGRAM (2)  
 G Page 46

TO J07 (PV04) FROM DIRECT IN SCHEMATIC DIAGRAM (2)  
 J Page 46

SCHEMATIC DIAGRAM ( 8 ) BK VERSION

P704-MAIN AMP ( AVR80 ) ONLY



AVR80  
 SR-56

0723, 0724, 0762	: 2SA1302
0721, 0722, 0761	: 2SC3281
0719, 0720, 0760	: 2SA1859
0717, 0718, 0759	: 2SC4983
0713, 0714, 0757	: 2SC5423
0711, 0712, 0755	: 2SA1340
0709, 0710, 0753	: 2SC2705
0707, 0708, 0751	: 2SC2705

1  
2  
3  
4  
5  
6  
7





(R80) ONLY

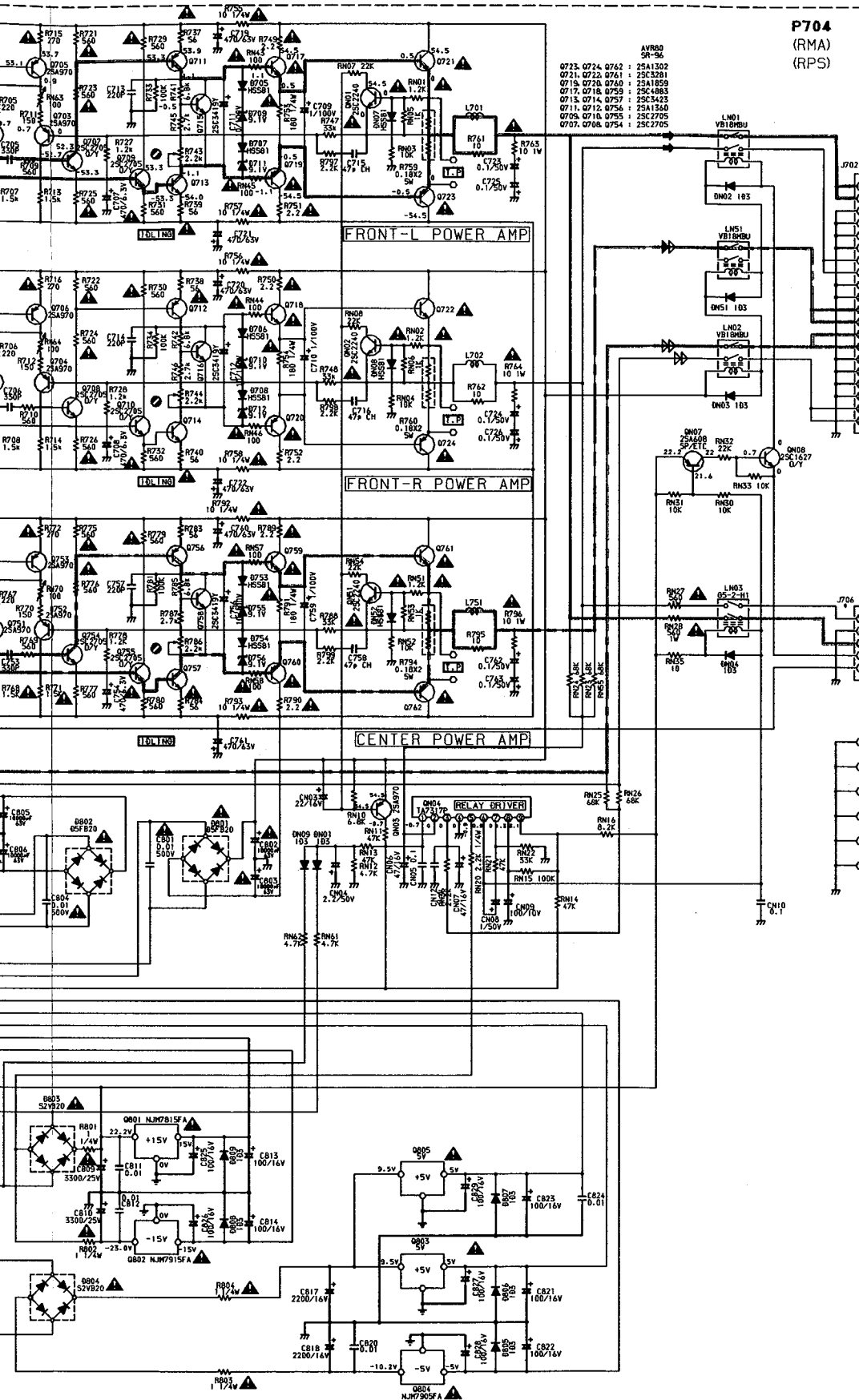
F

G

H

I

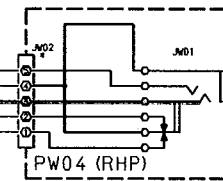
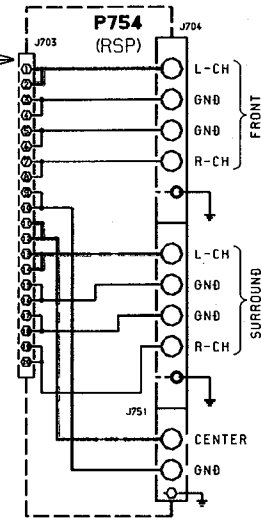
J



- 0721, 0724, 0762 : 2SA1302
- 0721, 0722, 0761 : 2SC3281
- 0715, 0720, 0760 : 2SA1859
- 0717, 0718, 0759 : 2SC4863
- 0713, 0714, 0757 : 2SC3423
- 0711, 0712, 0756 : 2SA1360
- 0706, 0718, 0785 : 2SC2795
- 0707, 0708, 0754 : 2SC2705

P704 (RMA) (RPS)

P754-SPK TERMINAL

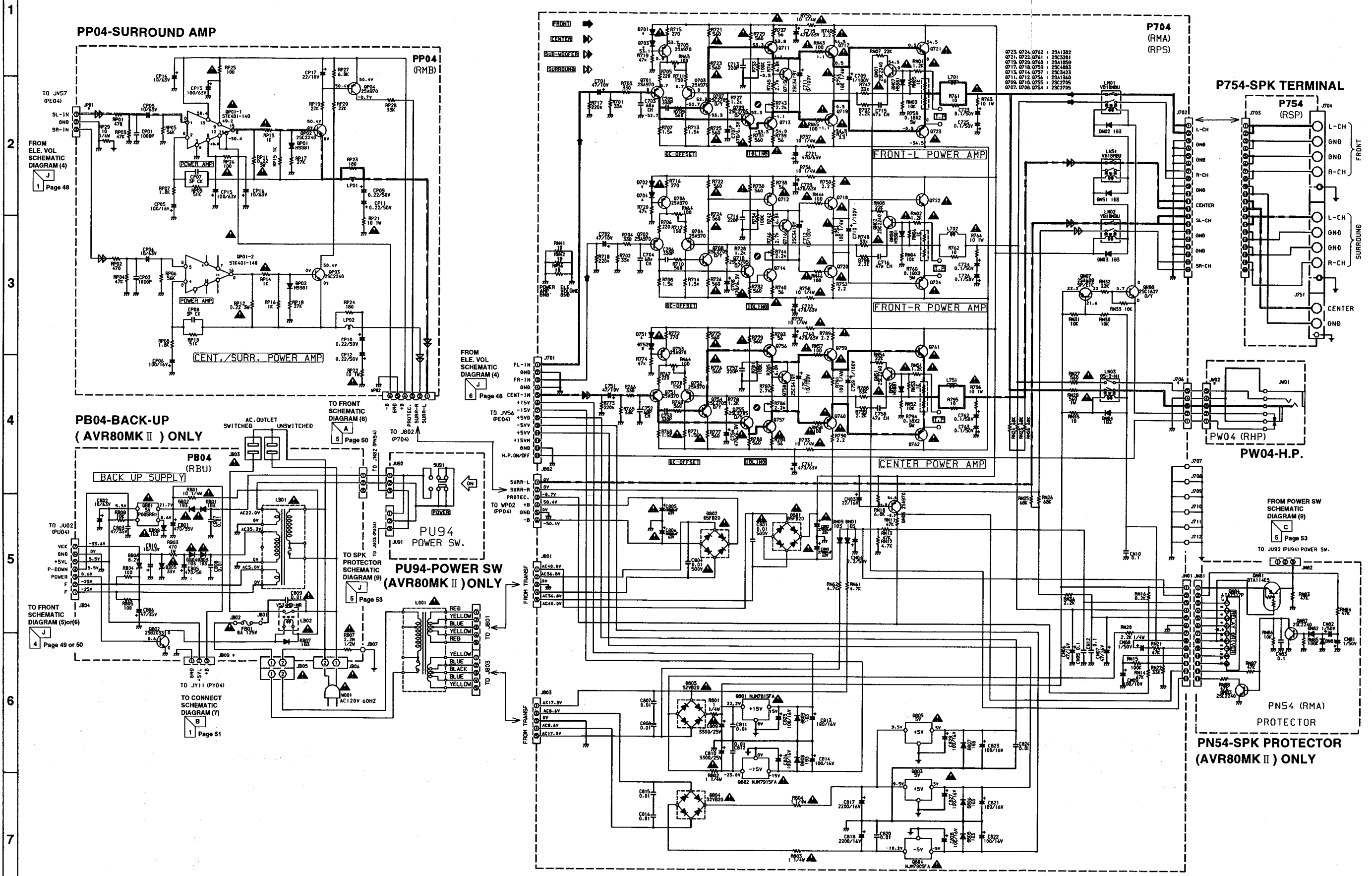


PW04 (RHP)

PW04-H.P.

SCHEMATIC DIAGRAM ( 9 ) BK VERSION

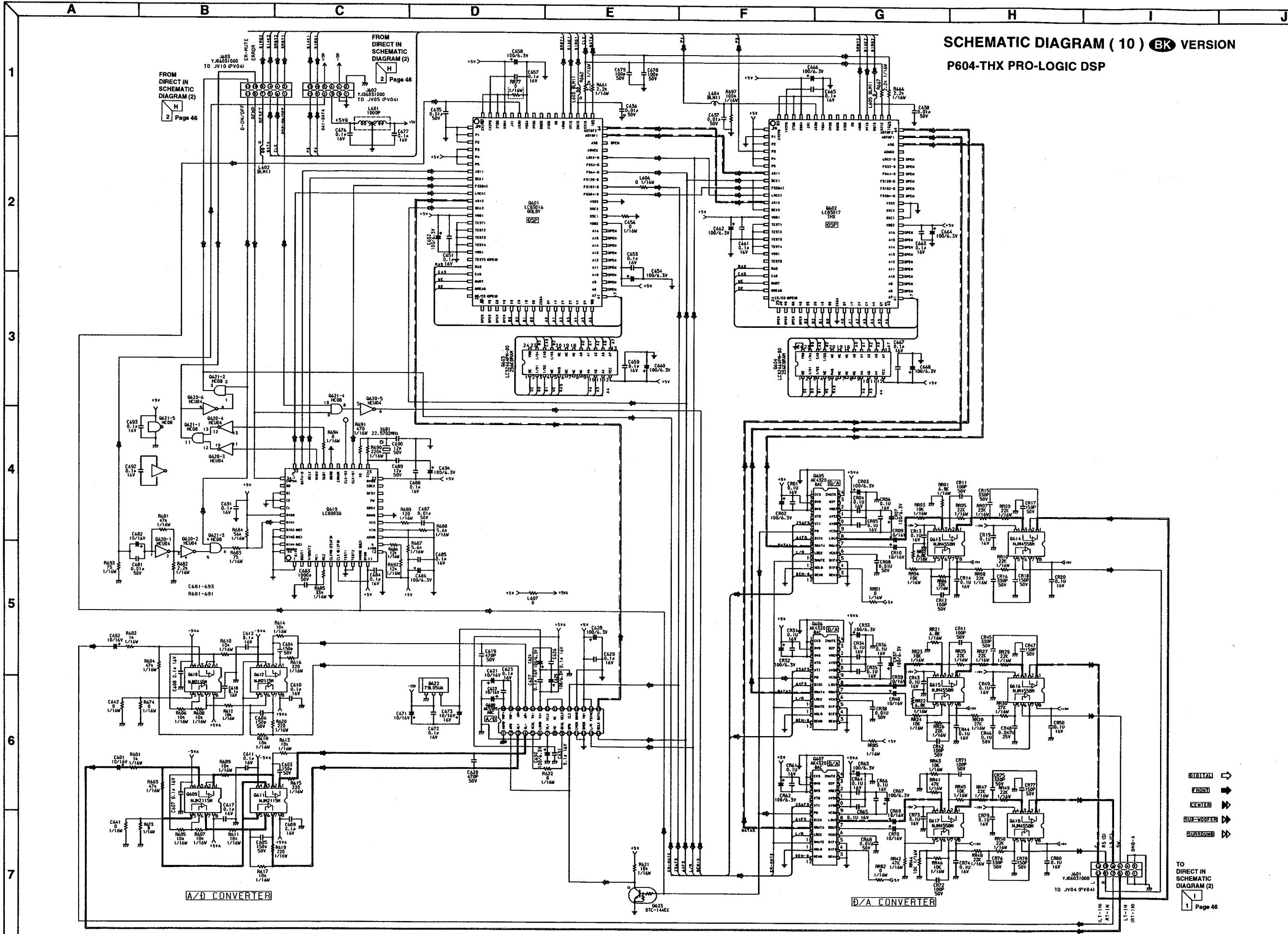
P704-MAIN AMP ( AVR80MK II ) ONLY







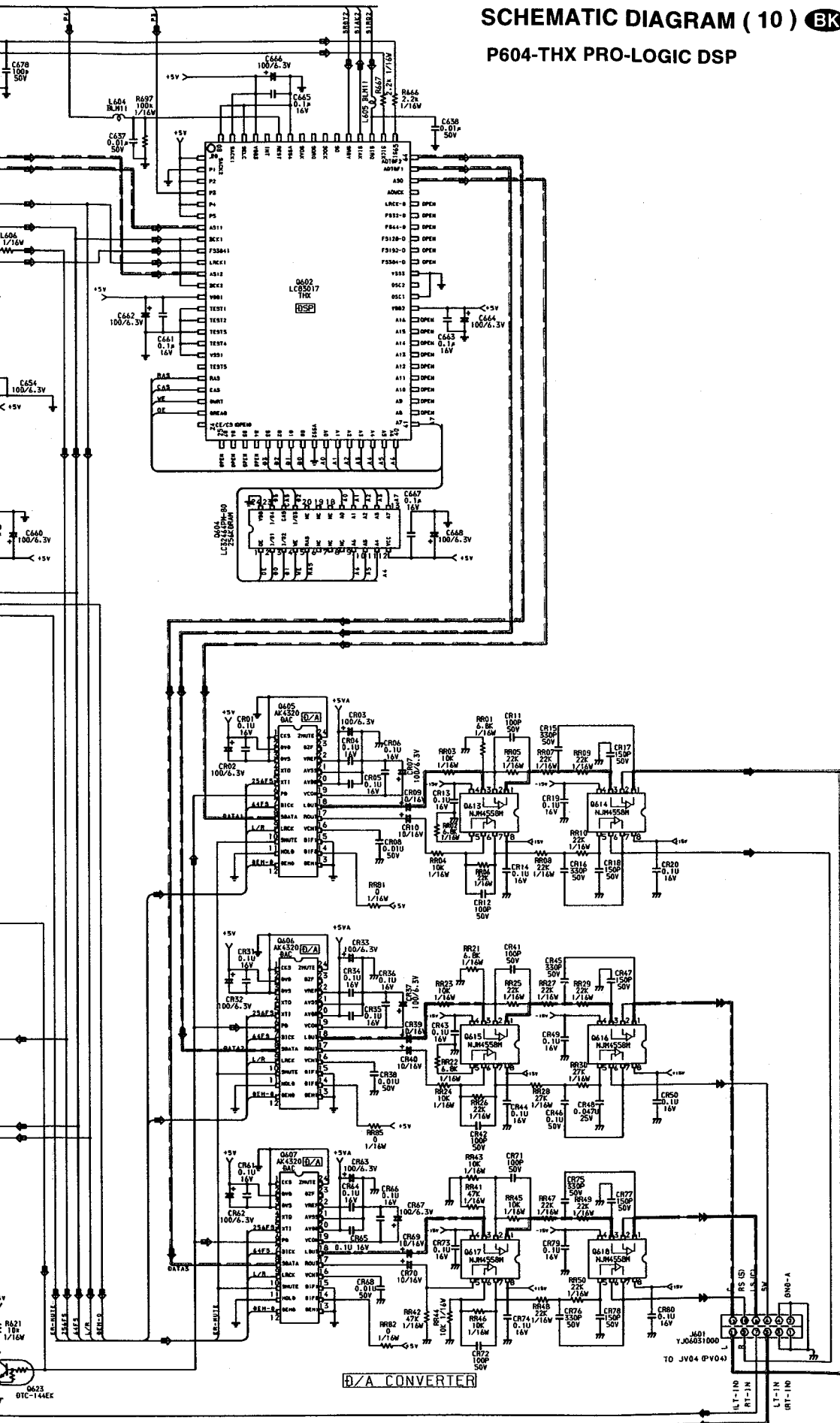
SCHMATIC DIAGRAM ( 10 ) EK VERSION  
P604-THX PRO-LOGIC DSP





# SCHEMATIC DIAGRAM ( 10 ) BK VERSION

## P604-THX PRO-LOGIC DSP



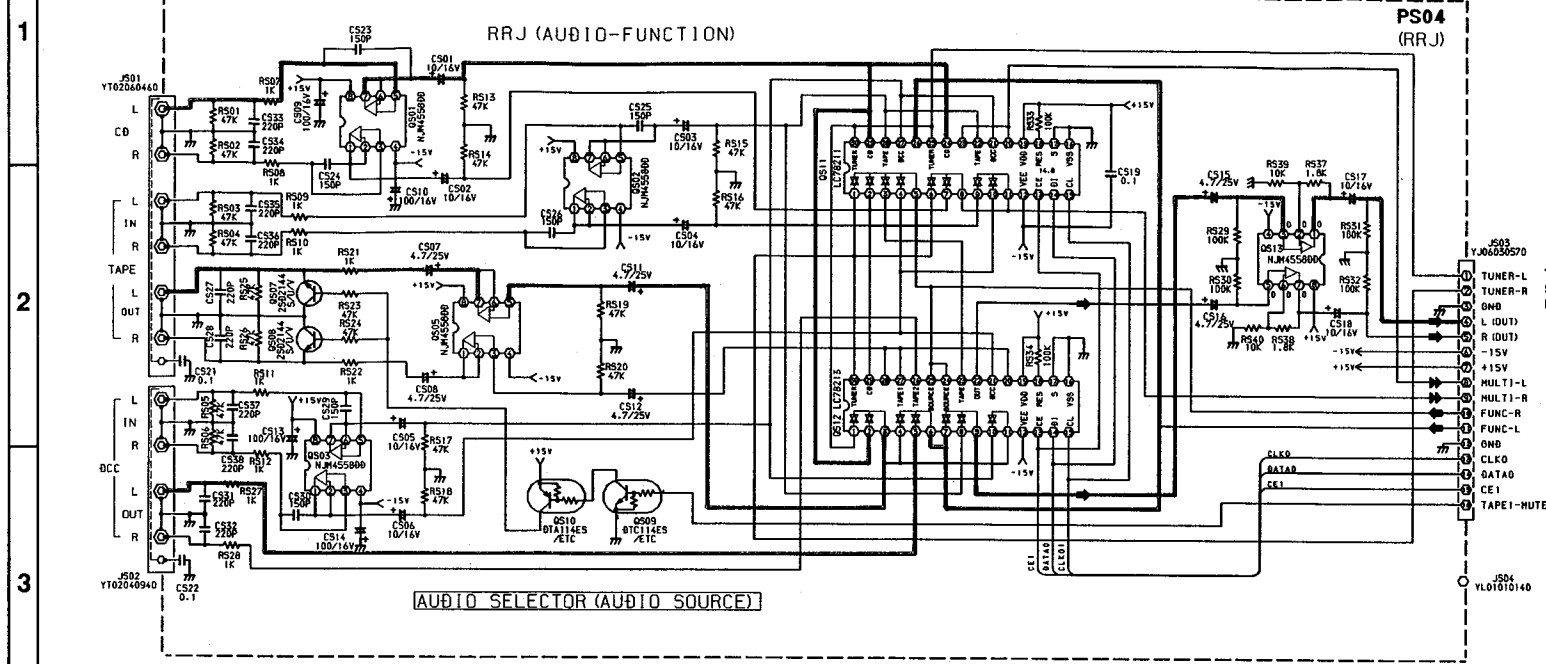
- BITAL  $\rightarrow$
- FRONT  $\rightarrow$
- CENTER  $\rightarrow$
- SUB-WOOFER  $\rightarrow$
- SURROUND  $\rightarrow$

TO DIRECT IN SCHEMATIC DIAGRAM (2)

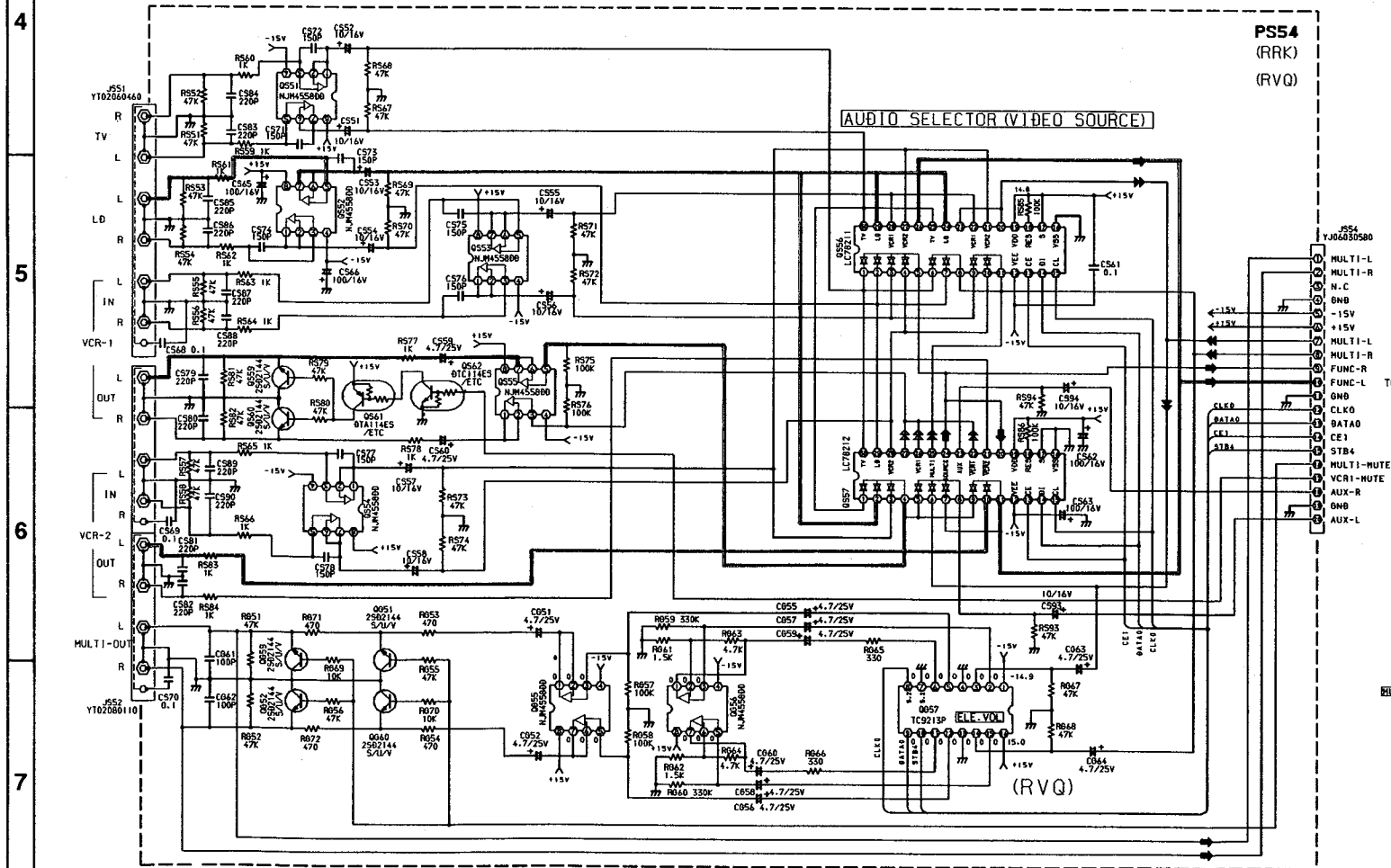


SCHEMATIC DIAGRAM (11) (B) VERSION

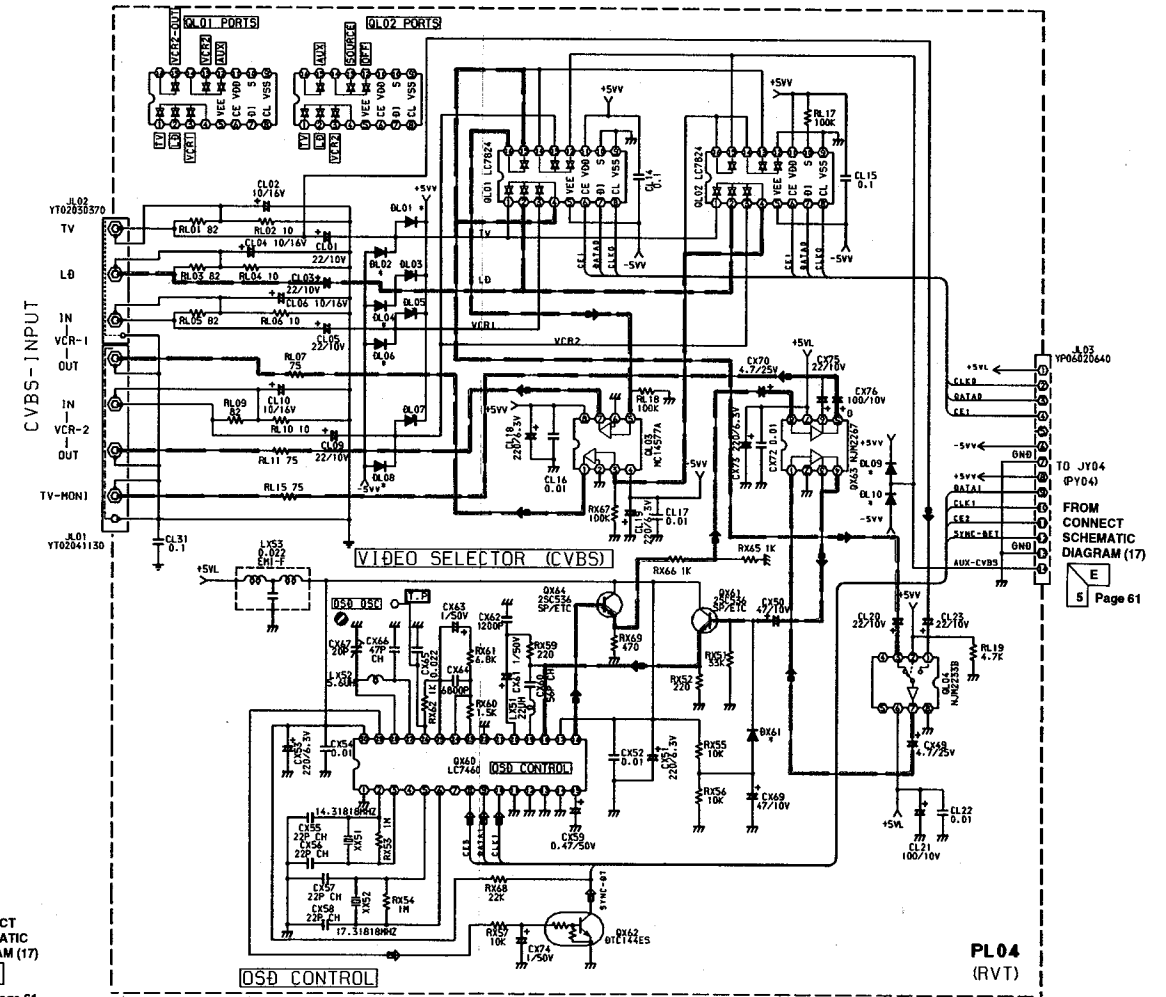
PS04-AUDIO FUNCTION



PS54-V-AUDIO FUNCTION



PL04-VIDEO SELECTOR



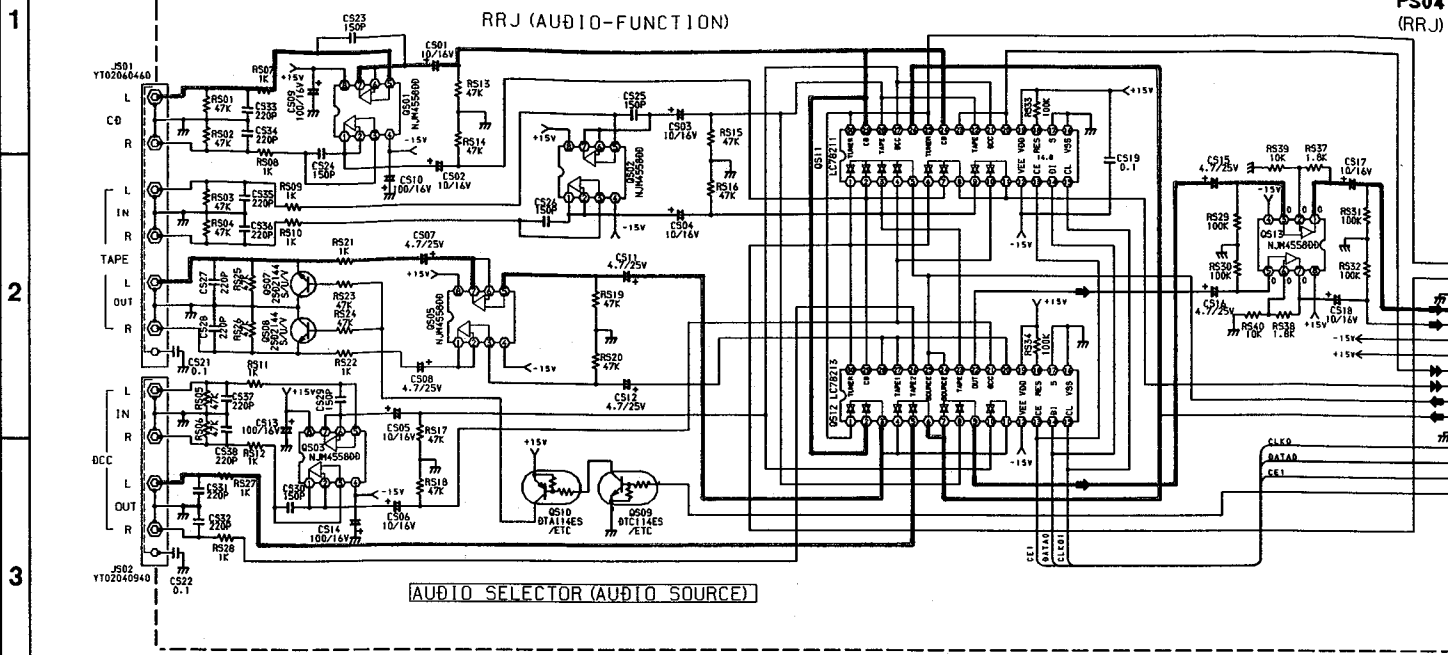
FRONT →

MULTI ROOM →

# SCHEMATIC DIAGRAM ( 11 ) ( B ) VERSION

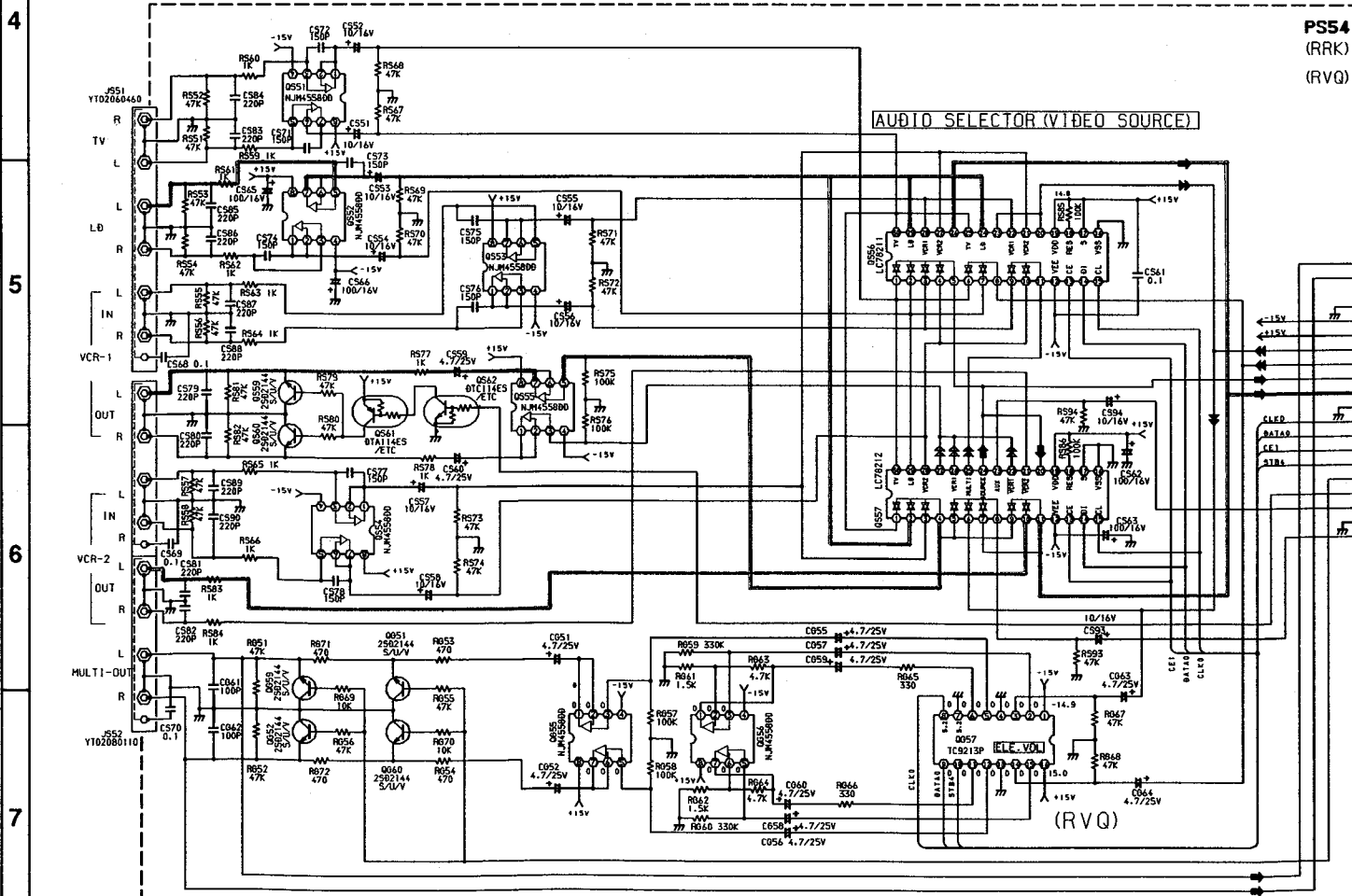
# PS04-AUDIO FUNCTIO

PS04  
(RRJ)



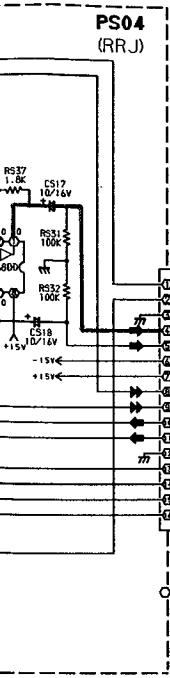
# PS54-V-AUDIO FUNCTION

PS54  
(RRK)  
(RVQ)



F G H I J

IO FUNCTION

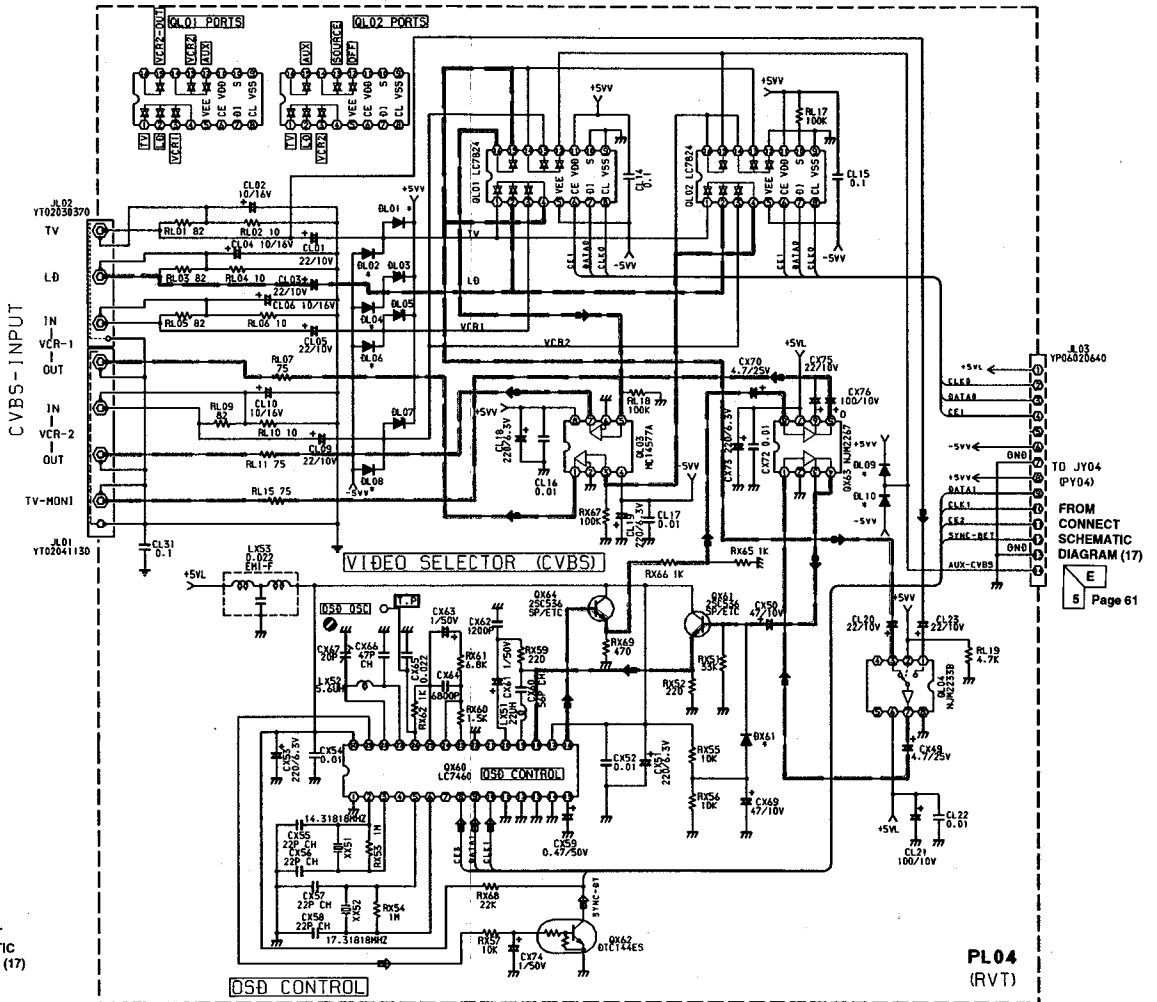


TO CONNECT SCHEMATIC DIAGRAM (17)

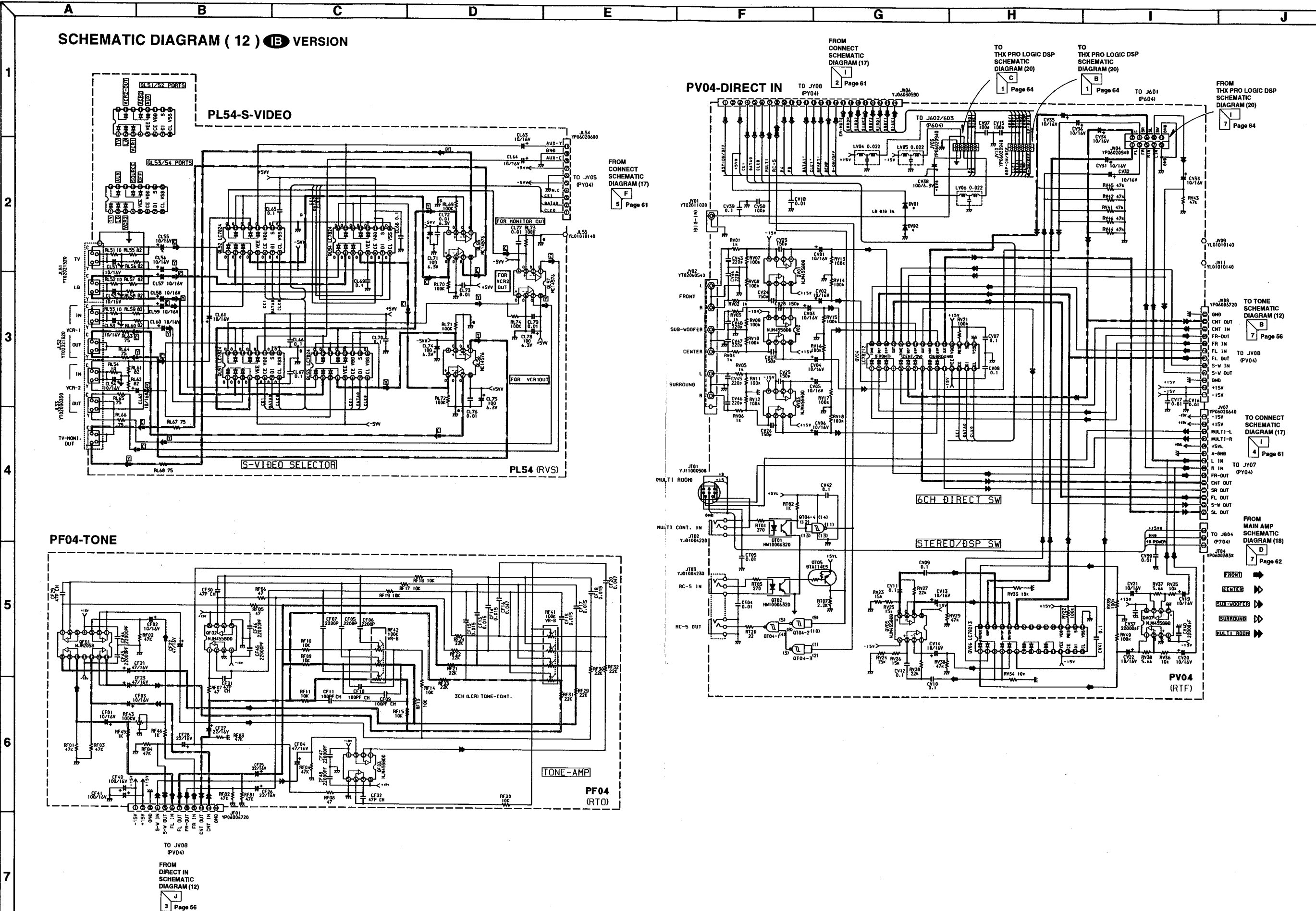


TO JY02 (PY04)

PL04-VIDEO SELECTOR



SCHEMATIC DIAGRAM ( 12 ) B VERSION



PL54-S-VIDEO

S-VIDEO SELECTOR

PL54 (RVS)

PF04-TONE

TONE-AMP

PF04 (RTO)

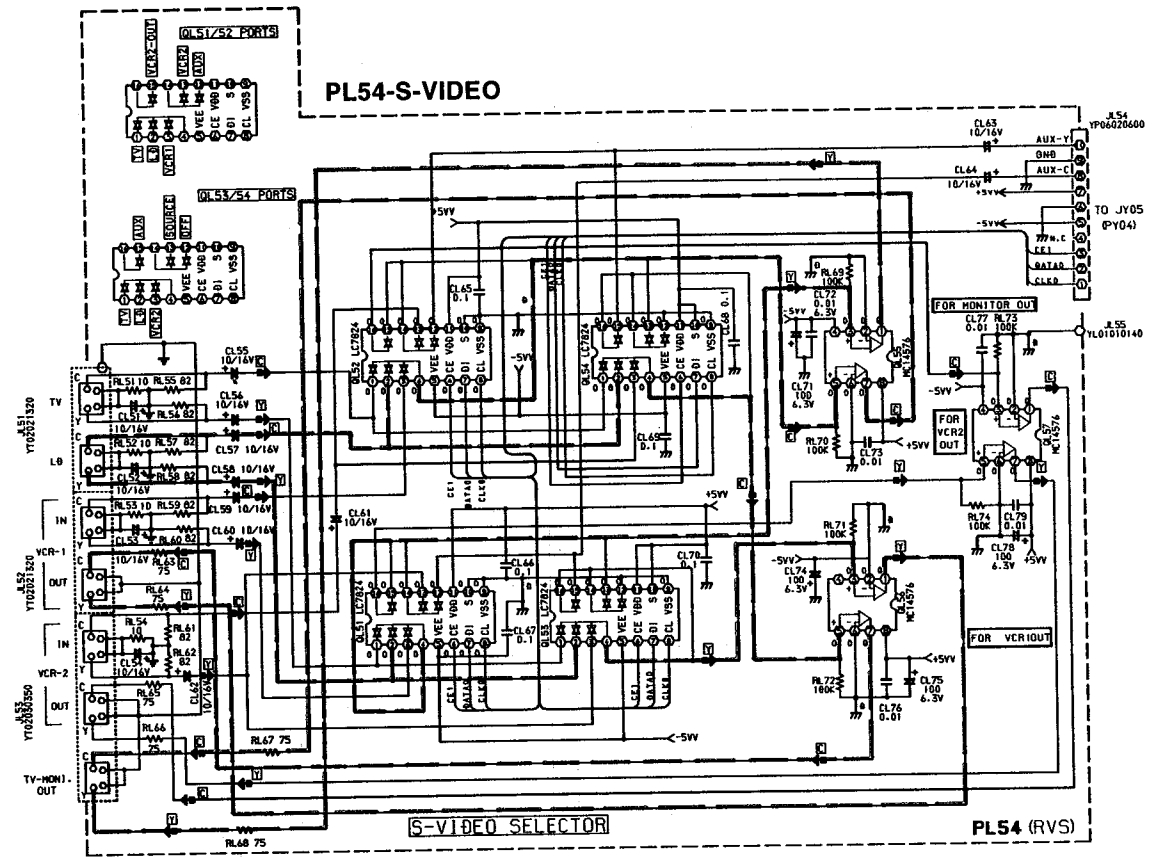
PV04-DIRECT IN

6CH DIRECT SW

STEREO/DSP SW

PV04 (RTF)

SCHEMATIC DIAGRAM ( 12 ) (B) VERSION



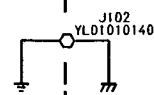
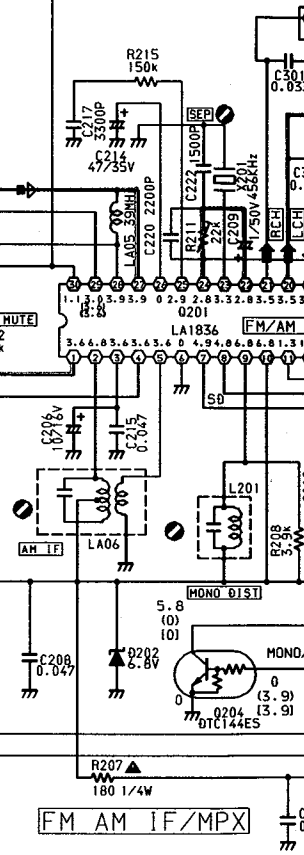
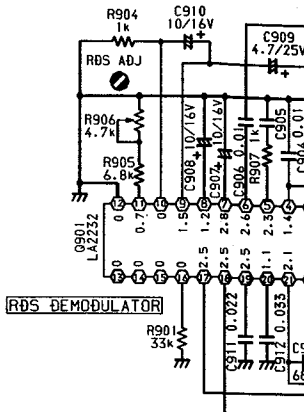
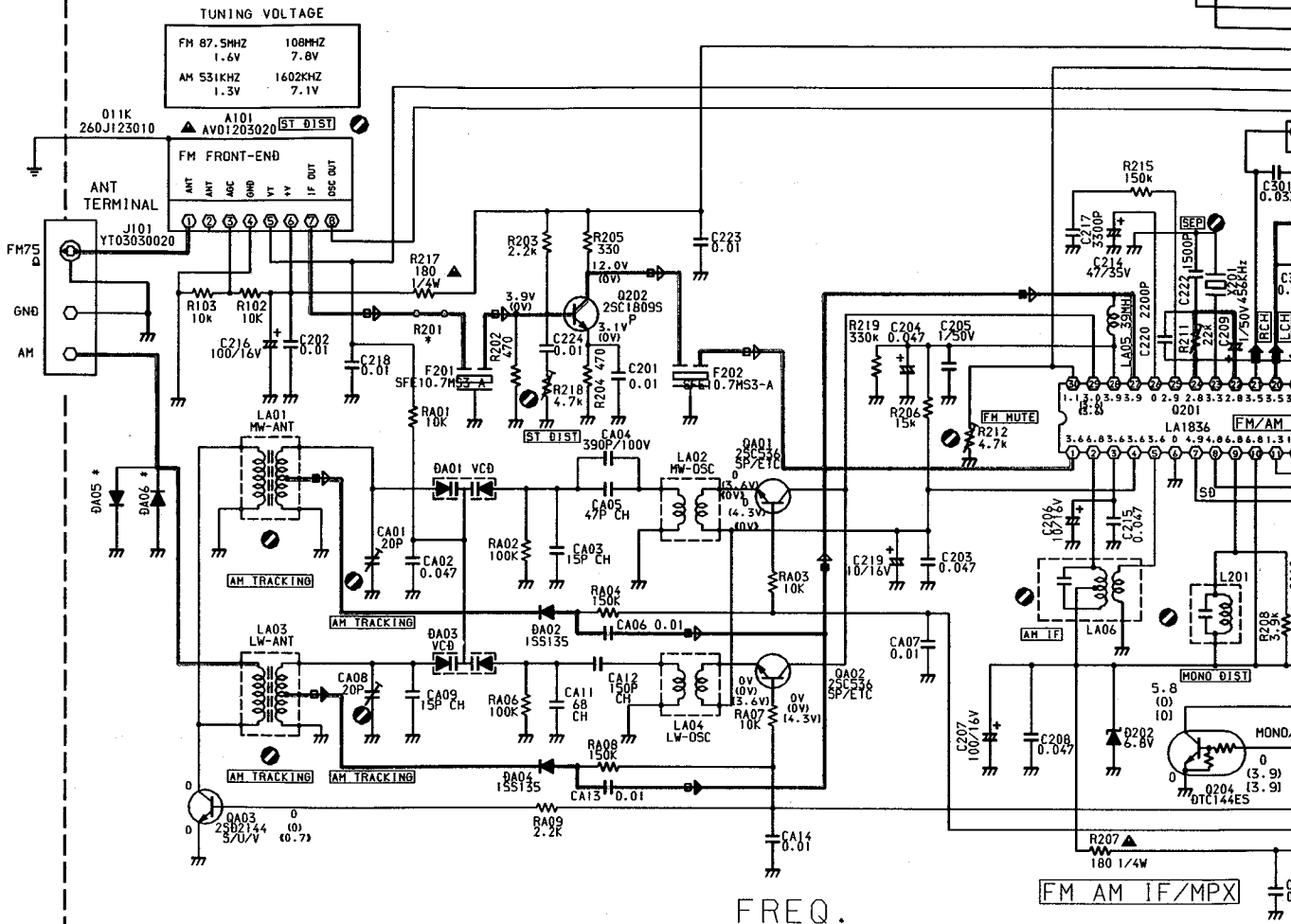






# SCHEMATIC DIAGRAM ( 13 ) **IB** VERSION

## P104-TUNER



F

G

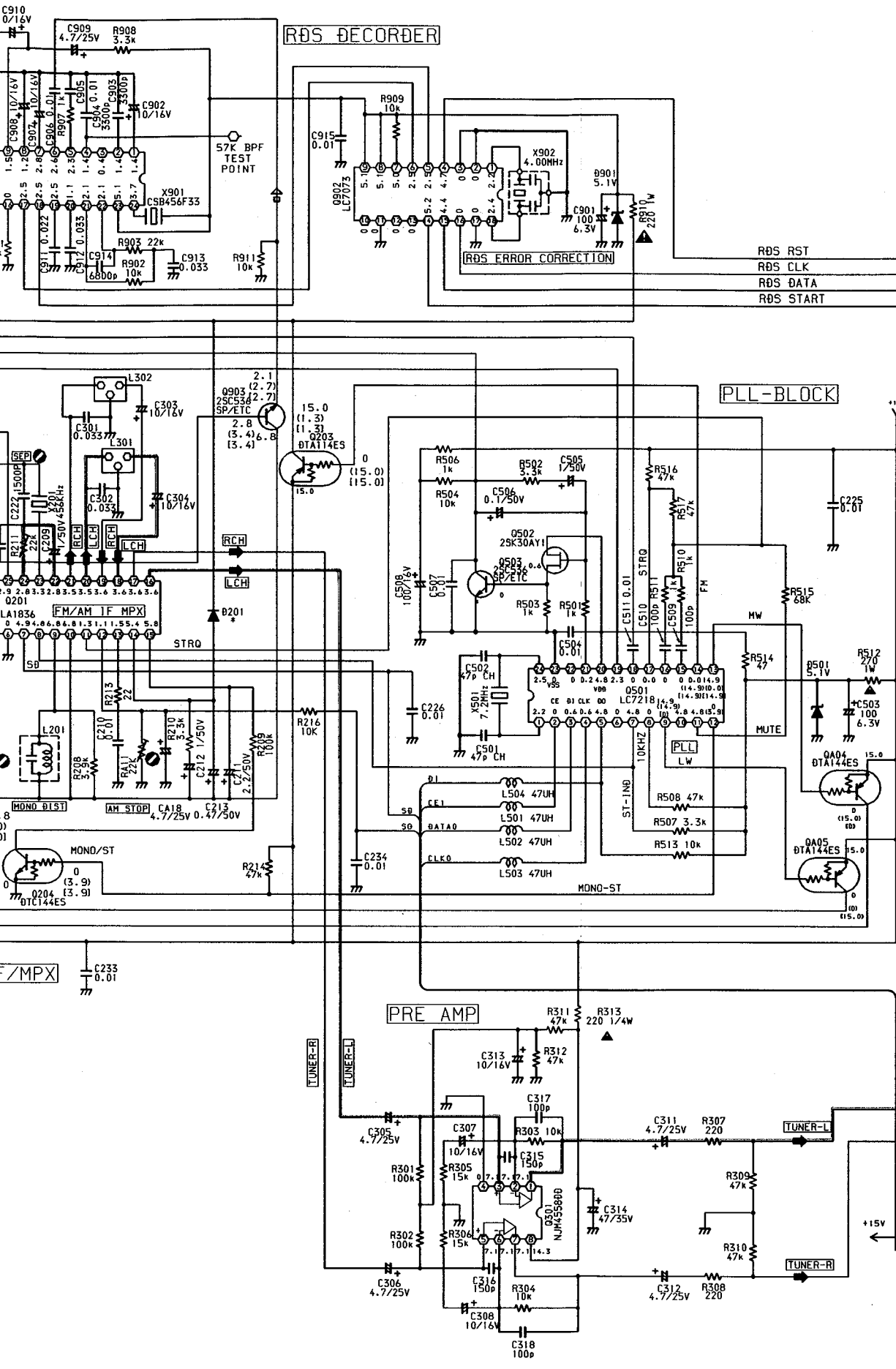
H

I

J

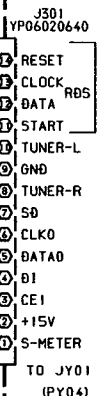
P104

(RTU)  
(RSY)  
(RRD)



TO CONNECT SCHEMATIC DIAGRAM (17)

5	Page 61
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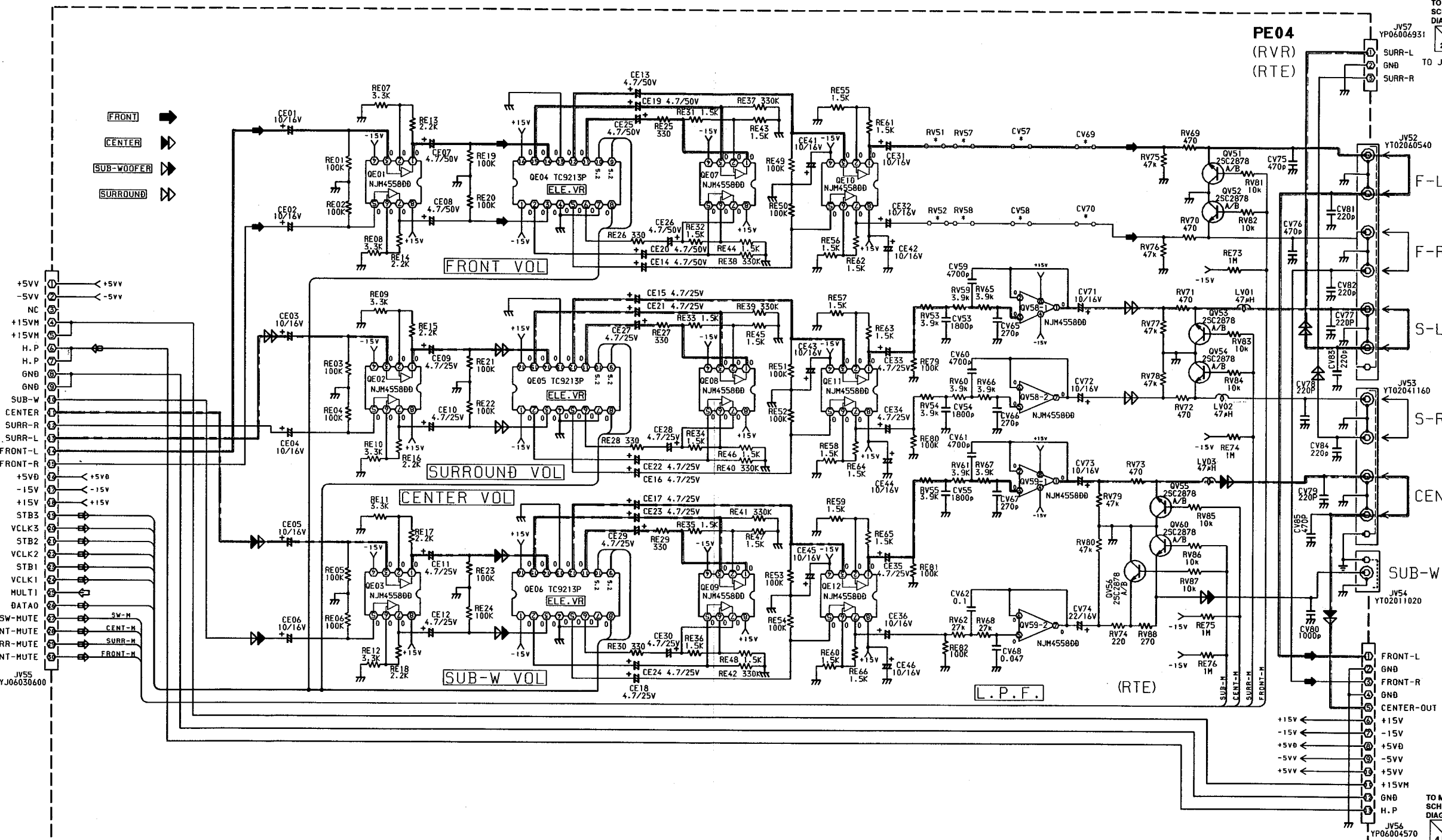


SCHEMATIC DIAGRAM ( 14 ) **B** VERSION

PE04-ELE. VOL

1  
2  
3  
4  
5  
6  
7

FRONT  
CENTER  
SUB-WOOFER  
SURROUND



TO JY06 (PY04)

FROM CONNECT SCHEMATIC DIAGRAM (17)

Page 61

JV55 YJ06030600

SW-MUTE  
CENT-MUTE  
SURR-MUTE  
FRONT-MUTE

SW-M  
CENT-M  
SURR-M  
FRONT-M

TO SURROUND AMP SCHEMATIC DIAGRAM (18) or (19)

Page 62 or 63

JV57 YP06006931

SURR-L  
GND  
SURR-R

TO JP01 (PP04)

TO MAIN AMP SCHEMATIC DIAGRAM (18) or (19)

Page 62 or 63

JV56 YP06004570

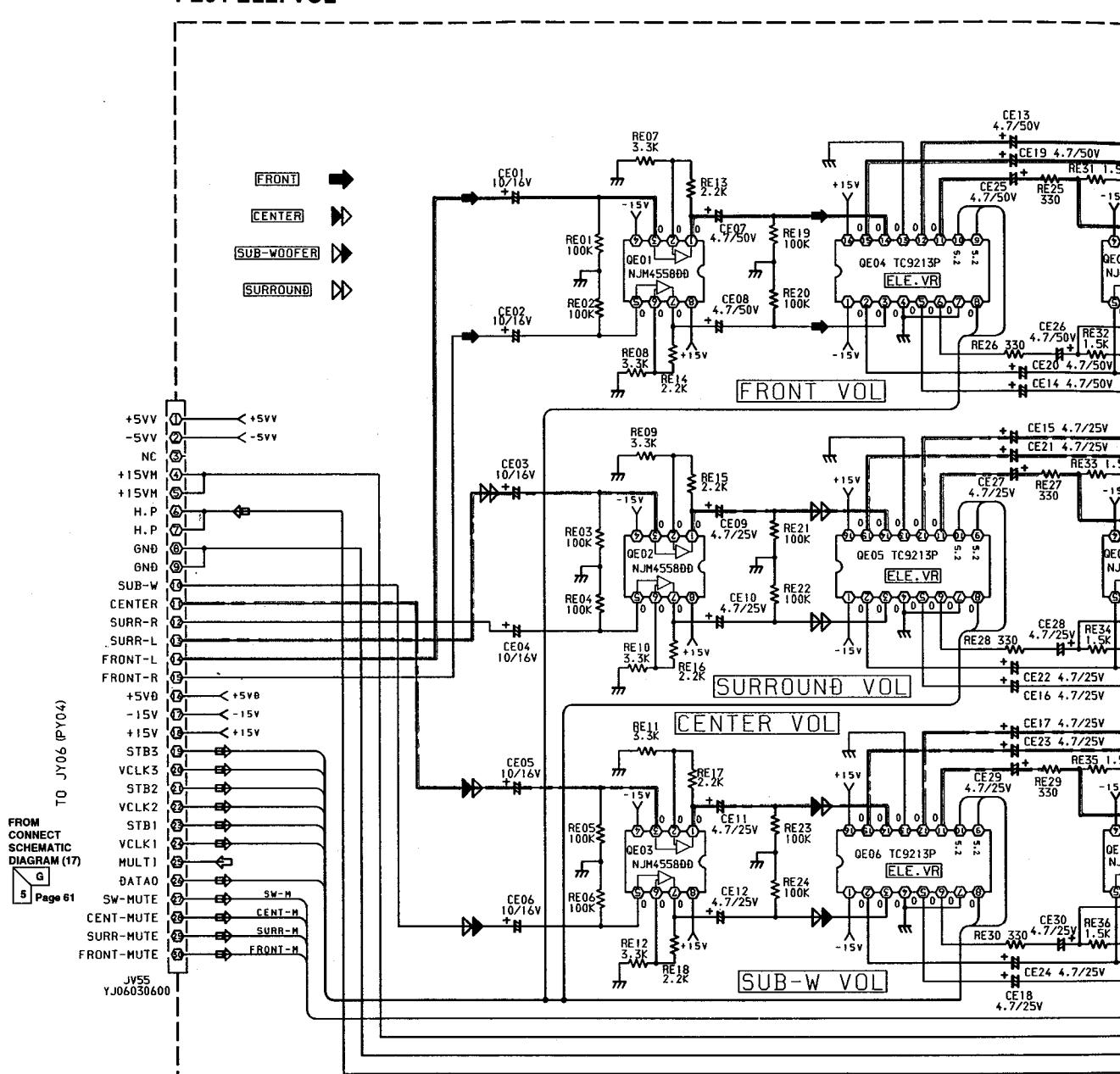
FRONT-L  
GND  
FRONT-R  
GND  
CENTER-OUT  
GND

TO J701 (P704)

+15V  
-15V  
+5V  
-5V  
+5V  
+15V  
GND  
H.P.

SCHEMATIC DIAGRAM ( 14 ) **B** VERSION

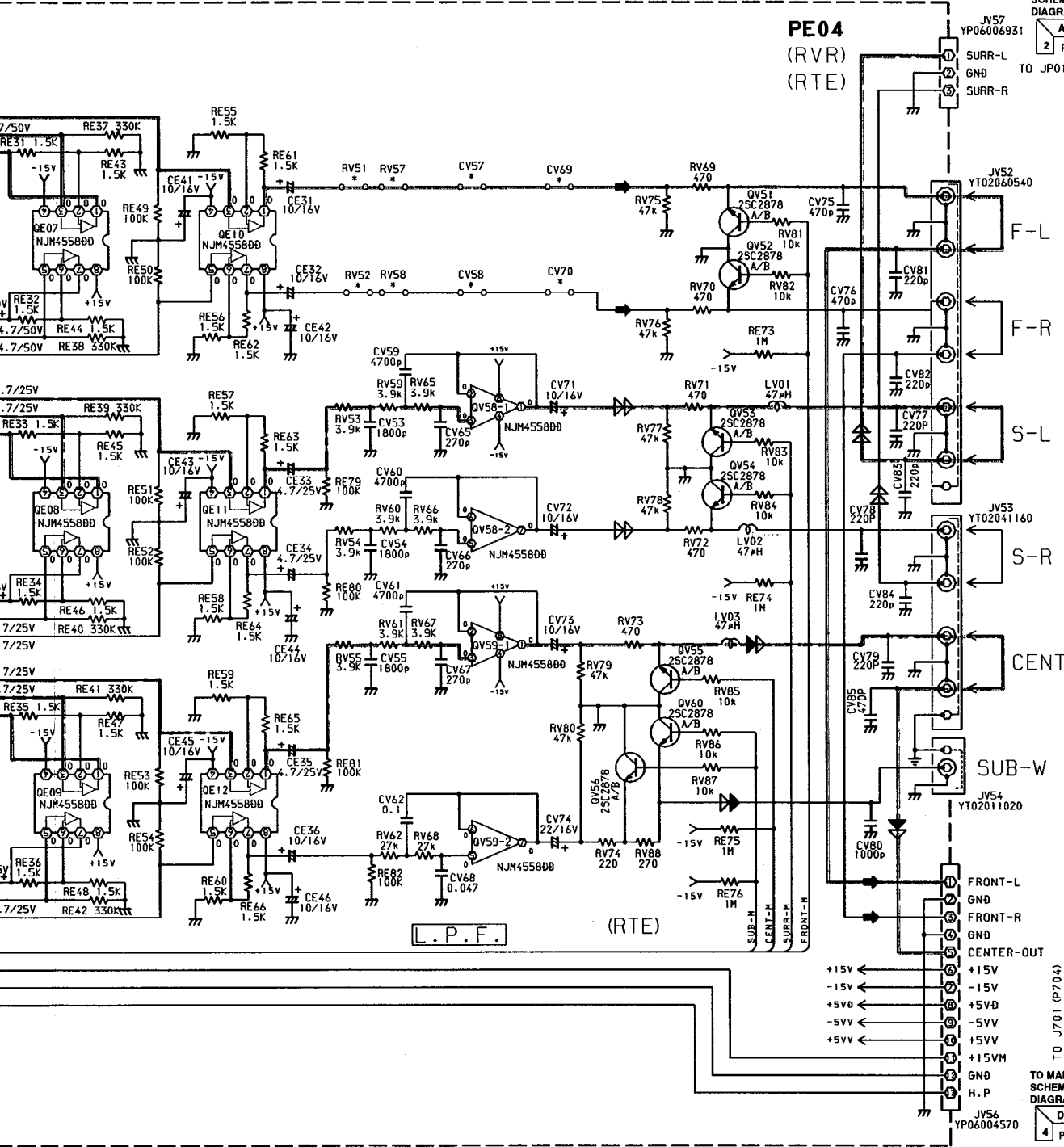
PE04-ELE. VOL



TO SURROUND AMP  
SCHEMATIC  
DIAGRAM (18)or(19)

Page 62 or 63  
TO JP01 (PP04)

PE04  
(RVR)  
(RTE)



L.P.F.

(RTE)

TO MAIN AMP  
SCHEMATIC  
DIAGRAM (18)or(19)

Page 62 or 63

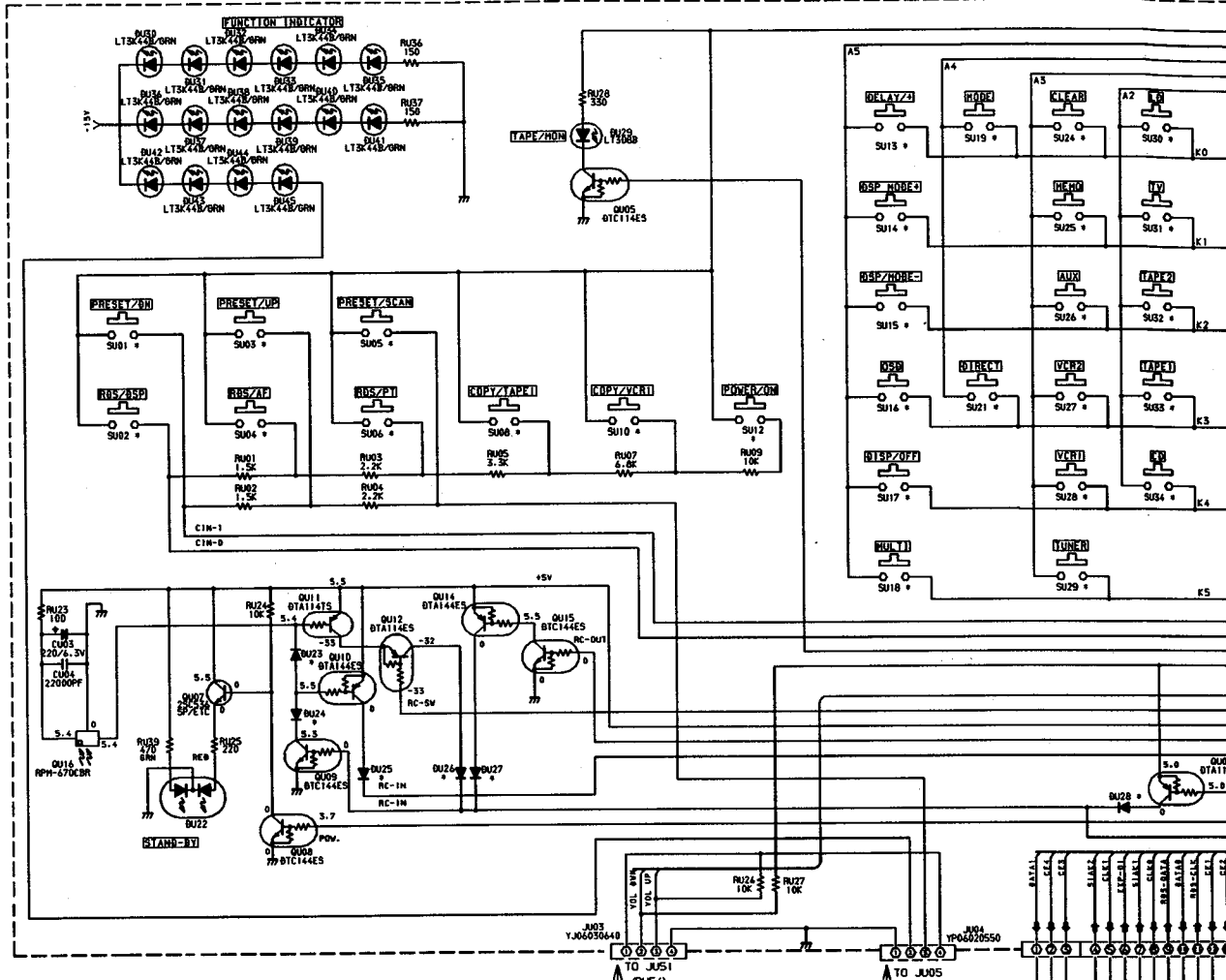
TO JP01 (P704)

Page 62 or 63

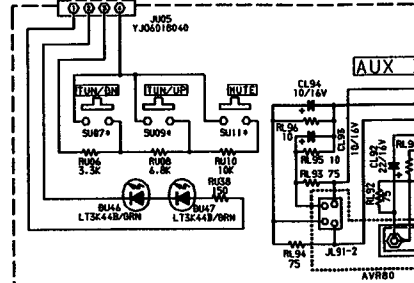
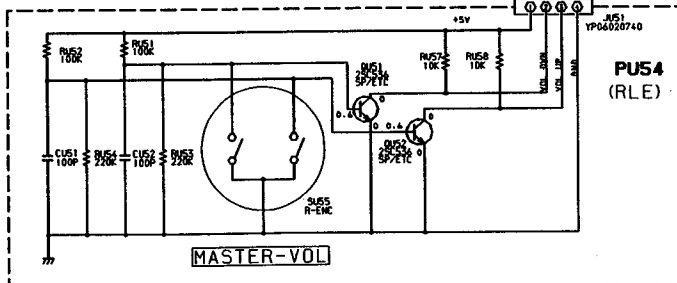


# SCHEMATIC DIAGRAM ( 15 ) IB VERSION

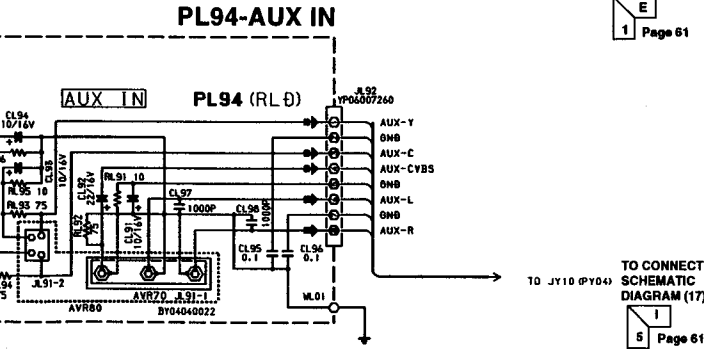
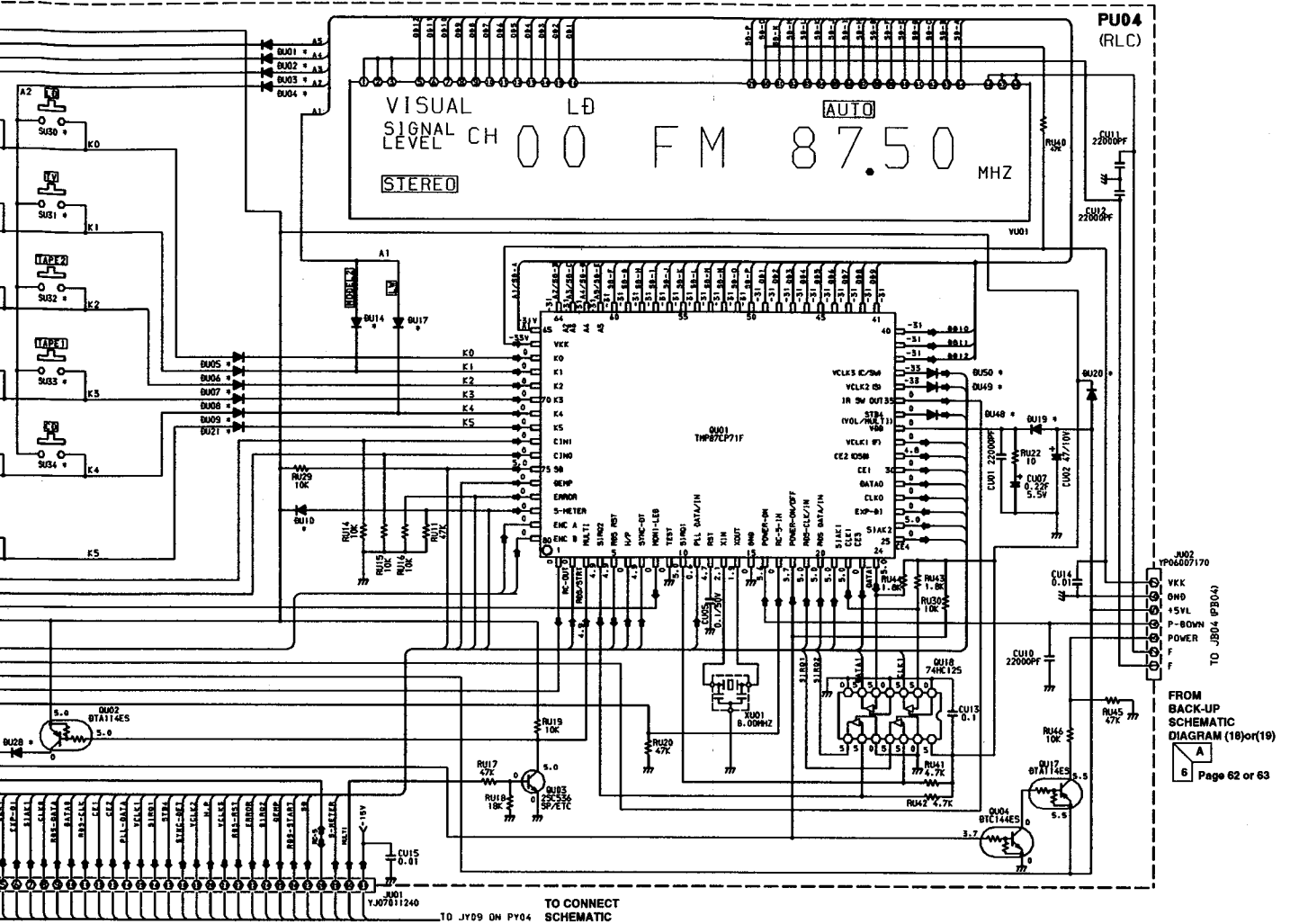
## PU04-FRONT (AVR80) ONLY



### PU54-MASTER VOL

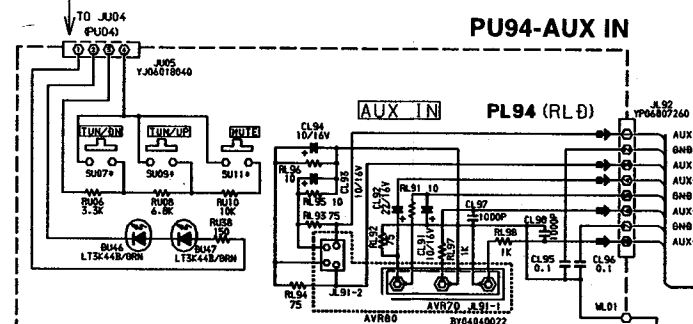
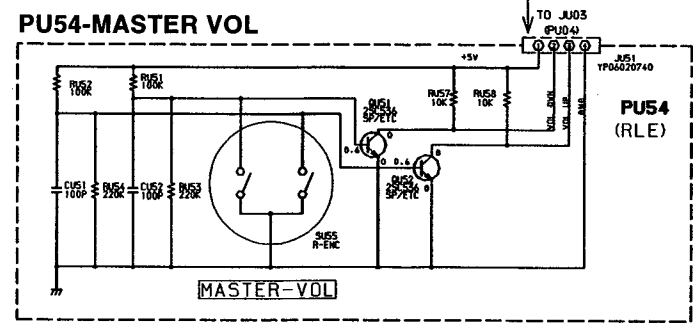
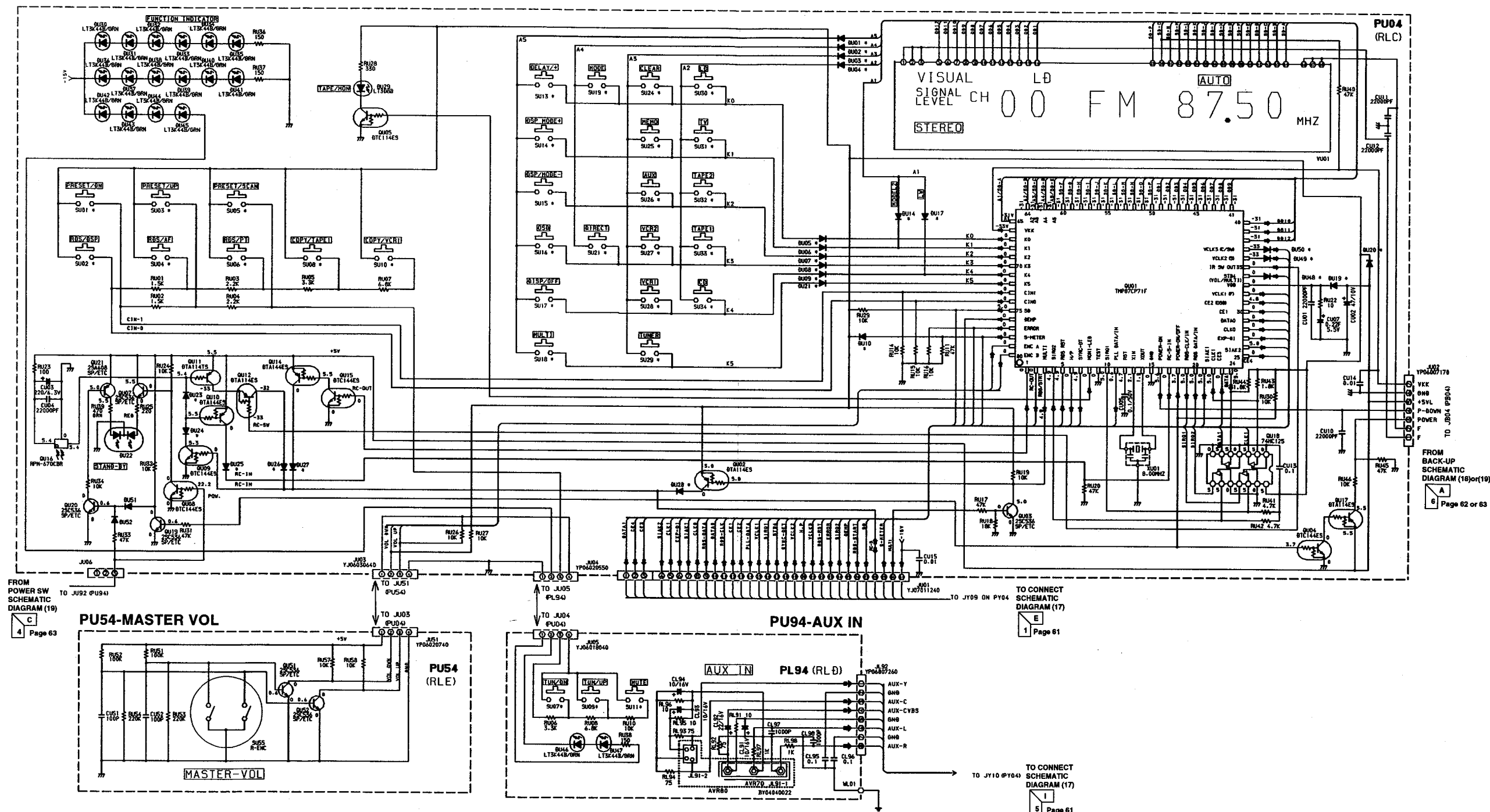






SCHEMATIC DIAGRAM ( 16 ) (B) VERSION

PU04-FRONT (AVR80) [MOMS] ONLY



FROM BACK-UP SCHEMATIC DIAGRAM (18) or (19)  
 TO J804 (P904)  
 TO J805 (P904)  
 TO J806 (P904)  
 TO J807 (P904)  
 TO J808 (P904)  
 TO J809 (P904)  
 TO J810 (P904)  
 TO J811 (P904)  
 TO J812 (P904)  
 TO J813 (P904)  
 TO J814 (P904)  
 TO J815 (P904)  
 TO J816 (P904)  
 TO J817 (P904)  
 TO J818 (P904)  
 TO J819 (P904)  
 TO J820 (P904)  
 TO J821 (P904)  
 TO J822 (P904)  
 TO J823 (P904)  
 TO J824 (P904)  
 TO J825 (P904)  
 TO J826 (P904)  
 TO J827 (P904)  
 TO J828 (P904)  
 TO J829 (P904)  
 TO J830 (P904)  
 TO J831 (P904)  
 TO J832 (P904)  
 TO J833 (P904)  
 TO J834 (P904)  
 TO J835 (P904)  
 TO J836 (P904)  
 TO J837 (P904)  
 TO J838 (P904)  
 TO J839 (P904)  
 TO J840 (P904)



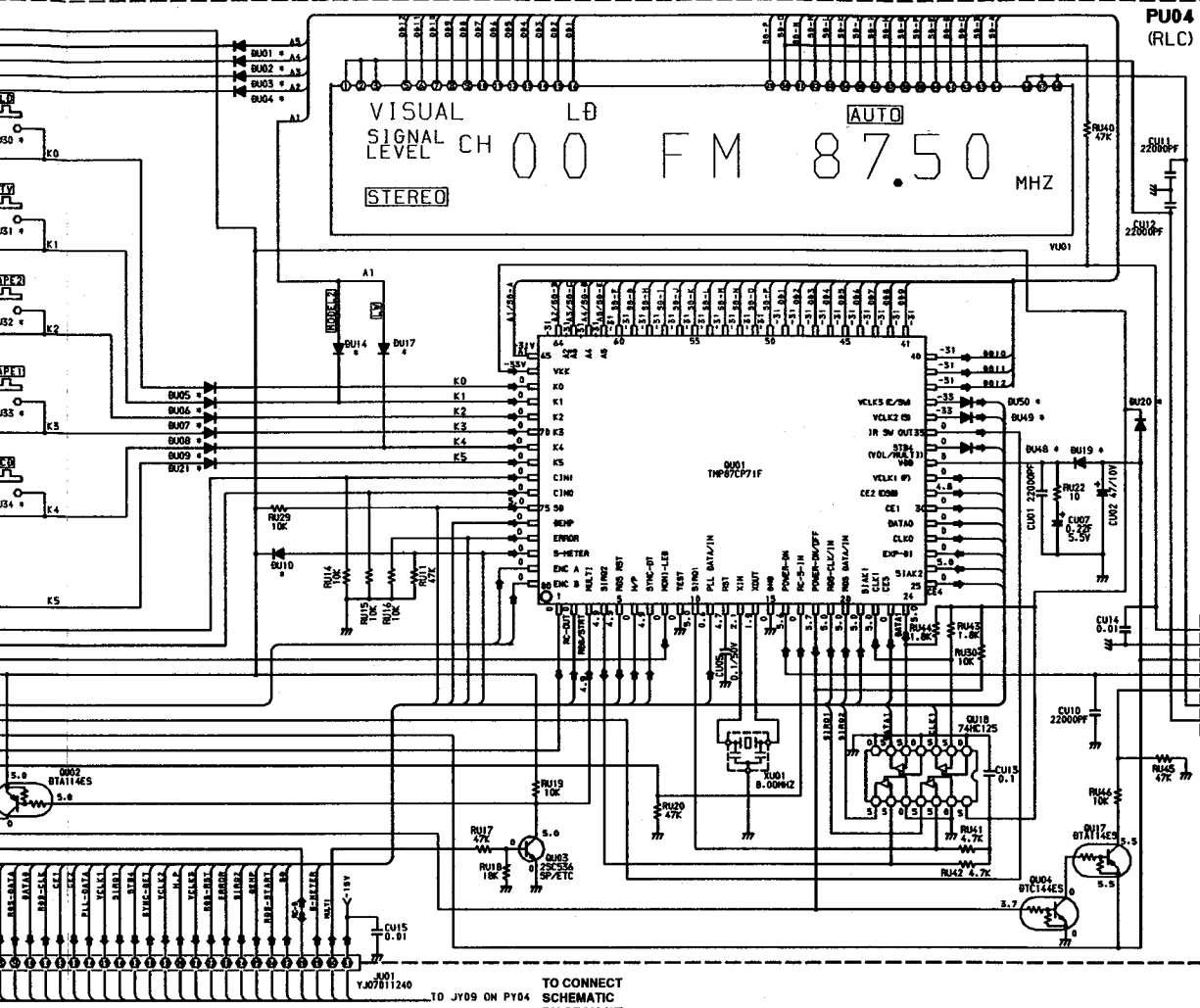
F

G

H

I

J



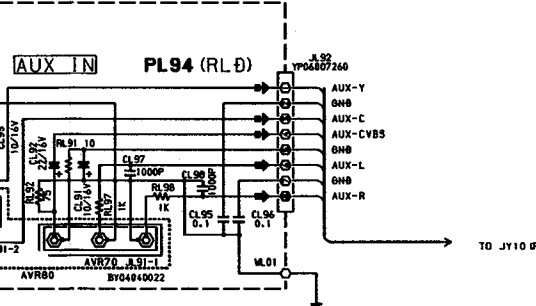
PU04 (RLC)

VISUAL L0  
 SIGNAL LEVEL CH 00 FM 87.50 MHz  
 STEREO

FROM BACK-UP SCHEMATIC DIAGRAM (18) or (19)  
 TO J804 (P30A)  
 YP06A07178  
 VCK  
 0NB  
 +5VL  
 P-DOWN  
 POWER  
 F  
 F  
 A  
 B  
 Page 62 or 63

TO CONNECT SCHEMATIC DIAGRAM (17)  
 E  
 1  
 Page 61

PU94-AUX IN

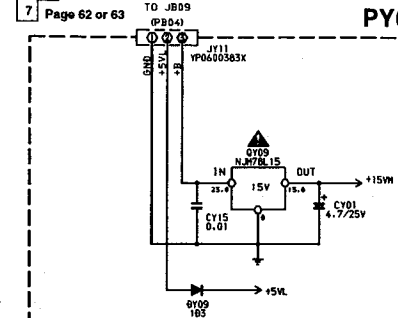


TO CONNECT SCHEMATIC DIAGRAM (17)  
 5  
 Page 61

SCHEMATIC DIAGRAM ( 17 ) B VERSION

FROM BACK-UP SCHEMATIC DIAGRAM (18) or (19)

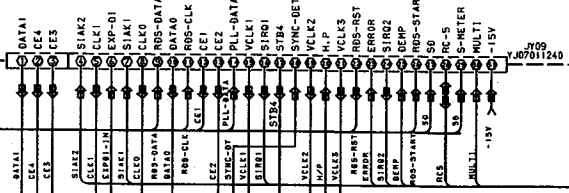
Page 62 or 63



PY04-CONNECT

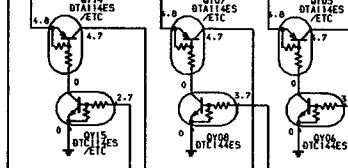
FROM FRONT SCHEMATIC DIAGRAM (15) or (16)

Page 59 or 60



PY04 (RTG) (RRK)

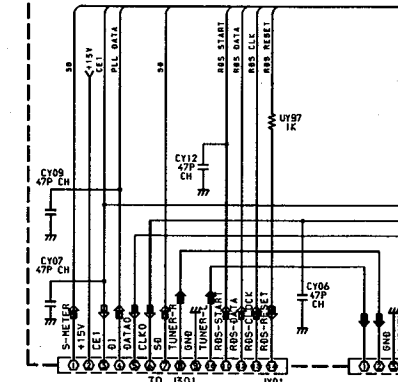
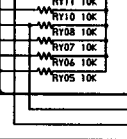
MUTE BUFFER



STATUS-NUTER (F-INNO SIGNAL)



PORT EXP.



FROM TUNER SCHEMATIC DIAGRAM (13)

Page 57

FROM AUDIO FUNCTION SCHEMATIC DIAGRAM (11)

Page 55

TO V-AUDIO FUNCTION SCHEMATIC DIAGRAM (11)

Page 55

TO VIDEO SELECTOR SCHEMATIC DIAGRAM (11)

Page 55

TO S-VIDEO SCHEMATIC DIAGRAM (12)

Page 56

TO ELE, VOL SCHEMATIC DIAGRAM (14)

Page 58

FROM AUX IN SCHEMATIC DIAGRAM (15) or (16)

Page 59 or 60

TO DIRECT IN SCHEMATIC DIAGRAM (12)

Page 56

TO JOV7 (PV04) FROM DIRECT IN SCHEMATIC DIAGRAM (12)

Page 56

1  
2  
3  
4  
5  
6  
7

# SCHEMATIC DIAGRAM ( 17 ) IB VERSION

FROM BACK-UP  
SCHEMATIC  
DIAGRAM (18)or(19)

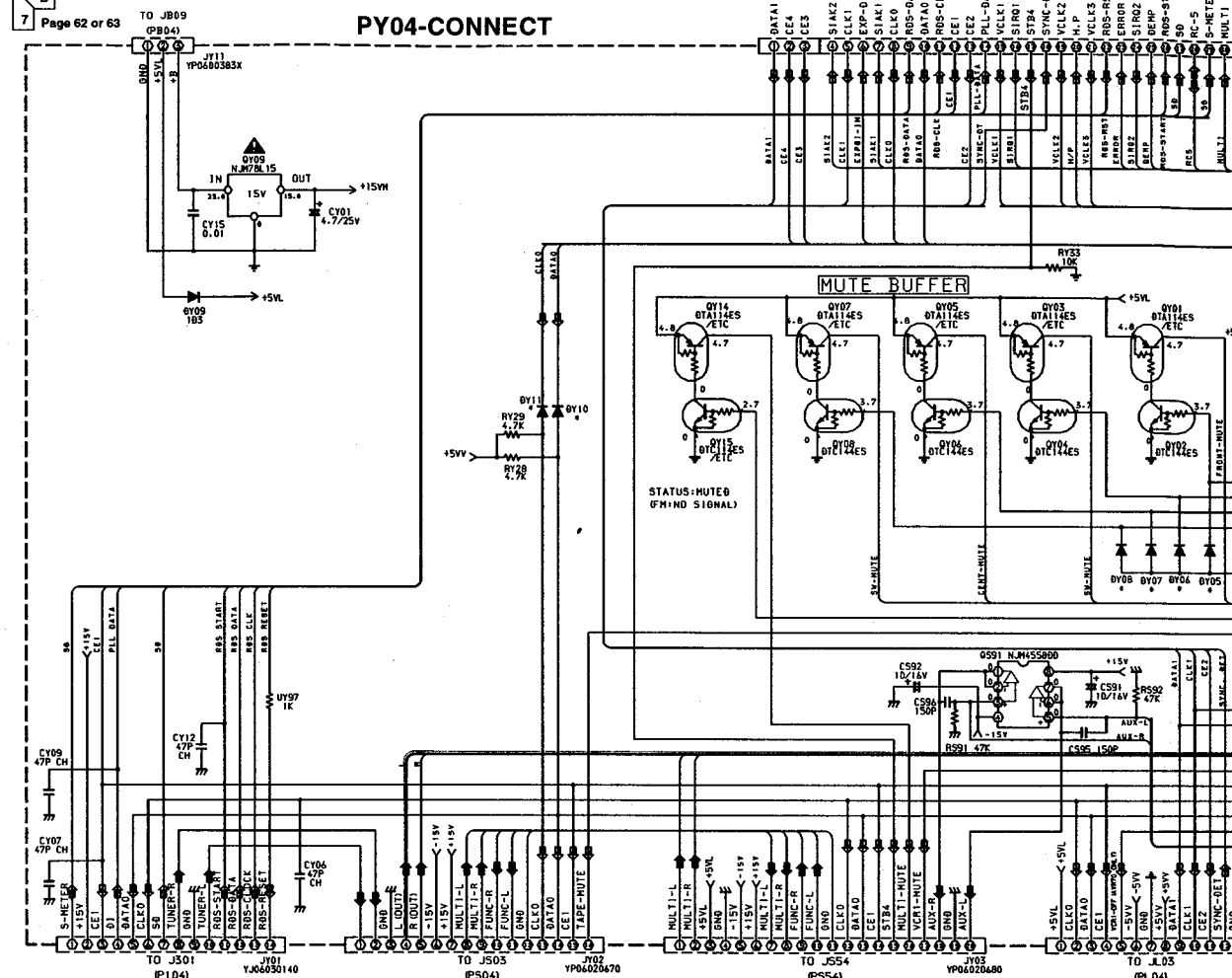
7 Page 62 or 63

FROM FRONT  
SCHEMATIC  
DIAGRAM (15)or(16)

5 Page 59 or 60

TO JU01  
(PU04)

## PY04-CONNECT



FROM TUNER  
SCHEMATIC  
DIAGRAM (13)

6 Page 57

FROM AUDIO  
FUNCTION  
SCHEMATIC  
DIAGRAM (11)

2 Page 55

TO V-AUDIO  
FUNCTION  
SCHEMATIC  
DIAGRAM (11)

5 Page 55

TO VIDEO  
SELECTOR  
SCHEMATIC  
DIAGRAM (11)

4 Page 55

1

2

3

4

5

6

7

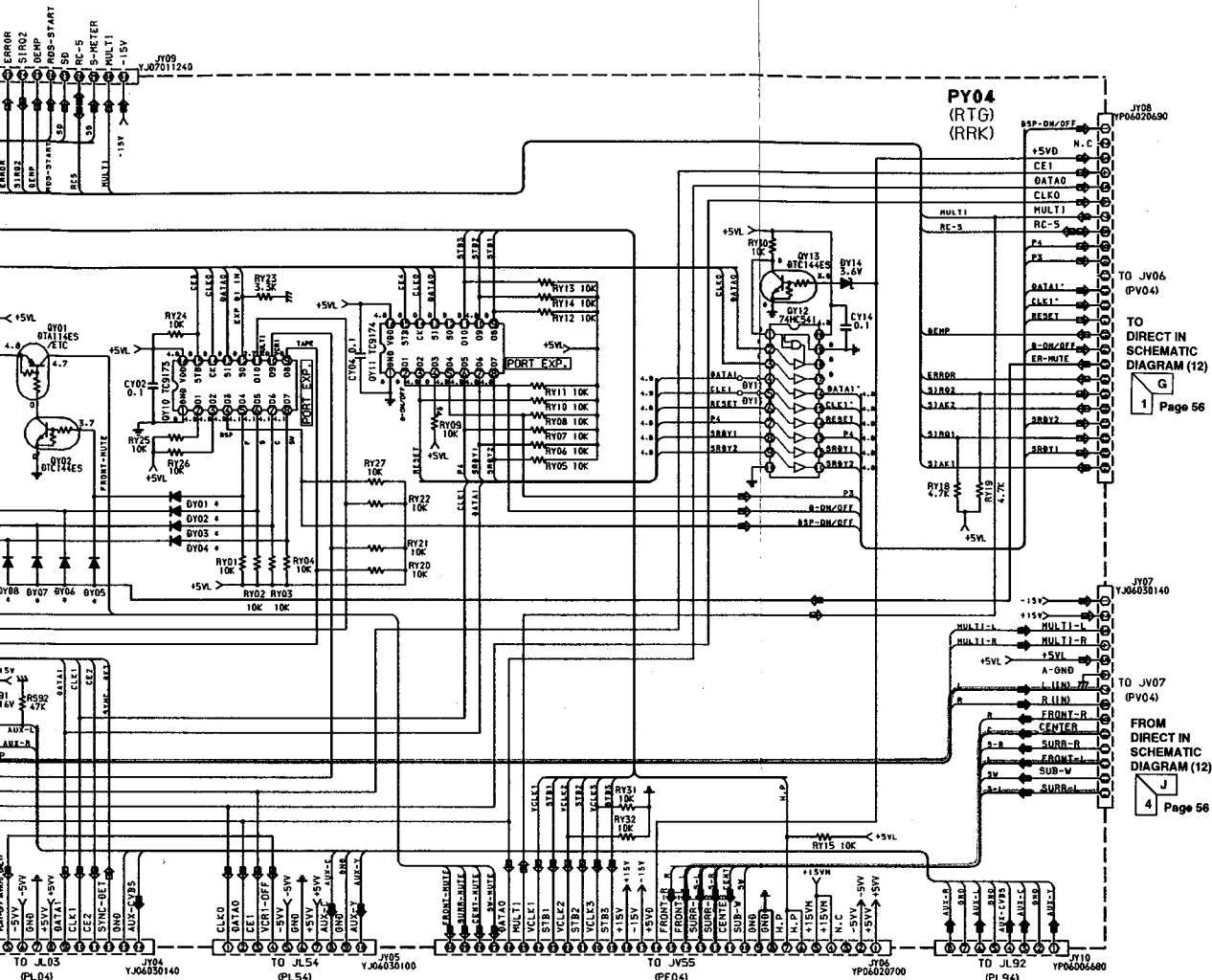
F

G

H

I

J



TO VIDEO  
SELECTOR  
SCHEMATIC  
DIAGRAM (11)

J  
4 Page 55

TO S-VIDEO  
SCHEMATIC  
DIAGRAM (12)

F  
2 Page 56

TO ELE, VOL  
SCHEMATIC  
DIAGRAM (14)

A  
4 Page 58

FROM AUX IN  
SCHEMATIC  
DIAGRAM (15) or (16)

G  
6 Page 59 or 60

TO DIRECT IN  
SCHEMATIC  
DIAGRAM (12)

G  
1 Page 56

TO JY07  
(PV04)

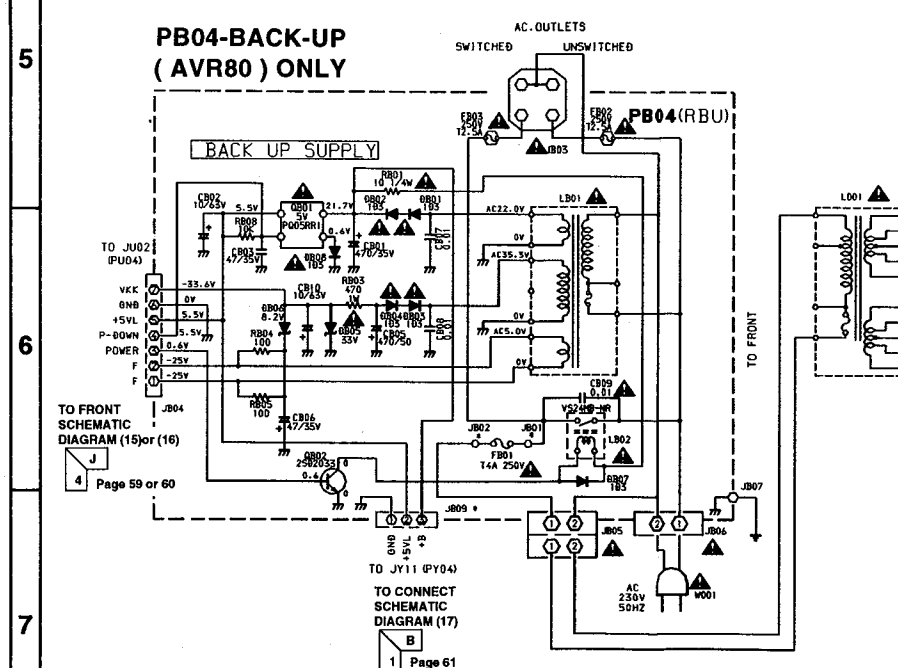
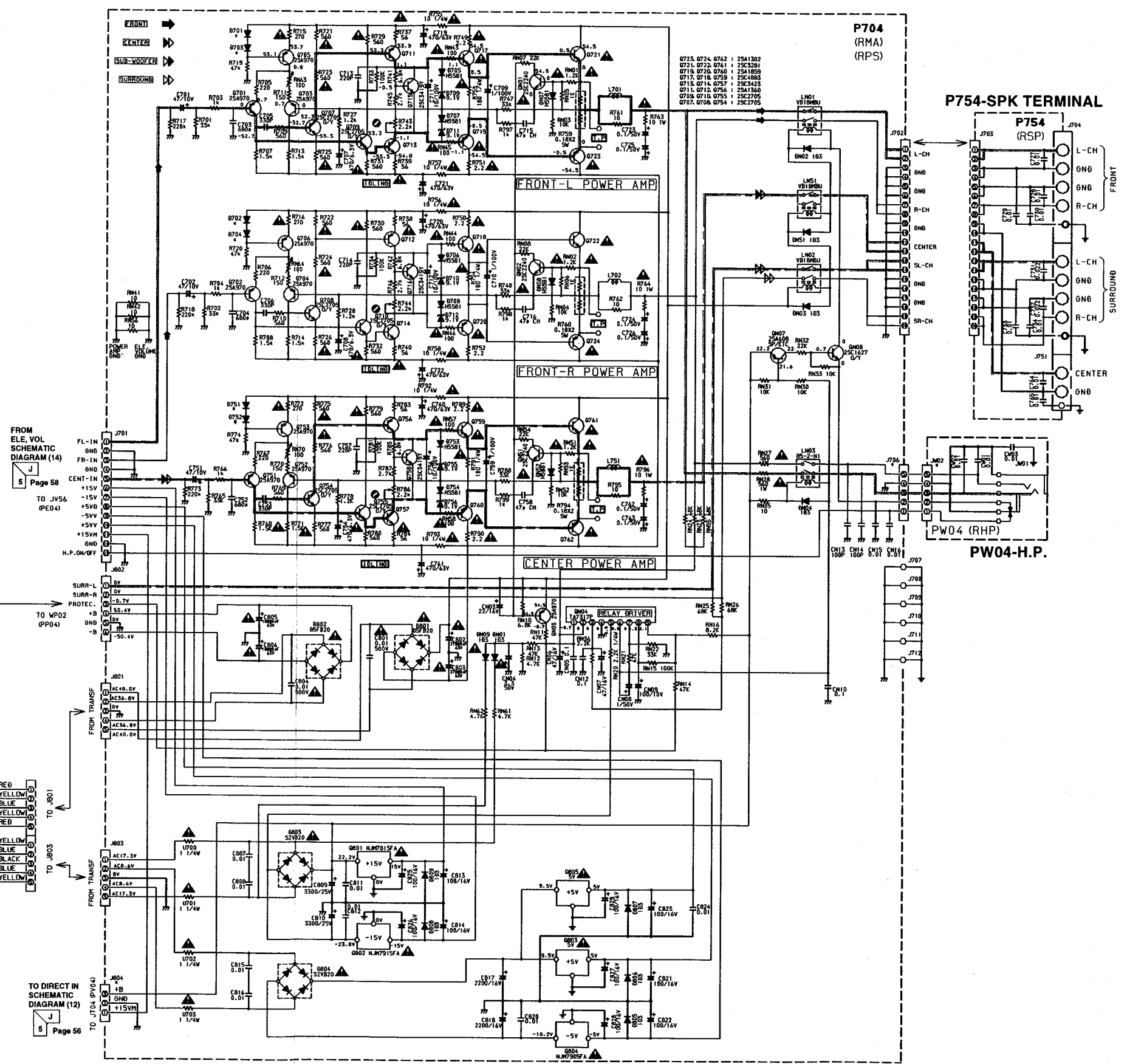
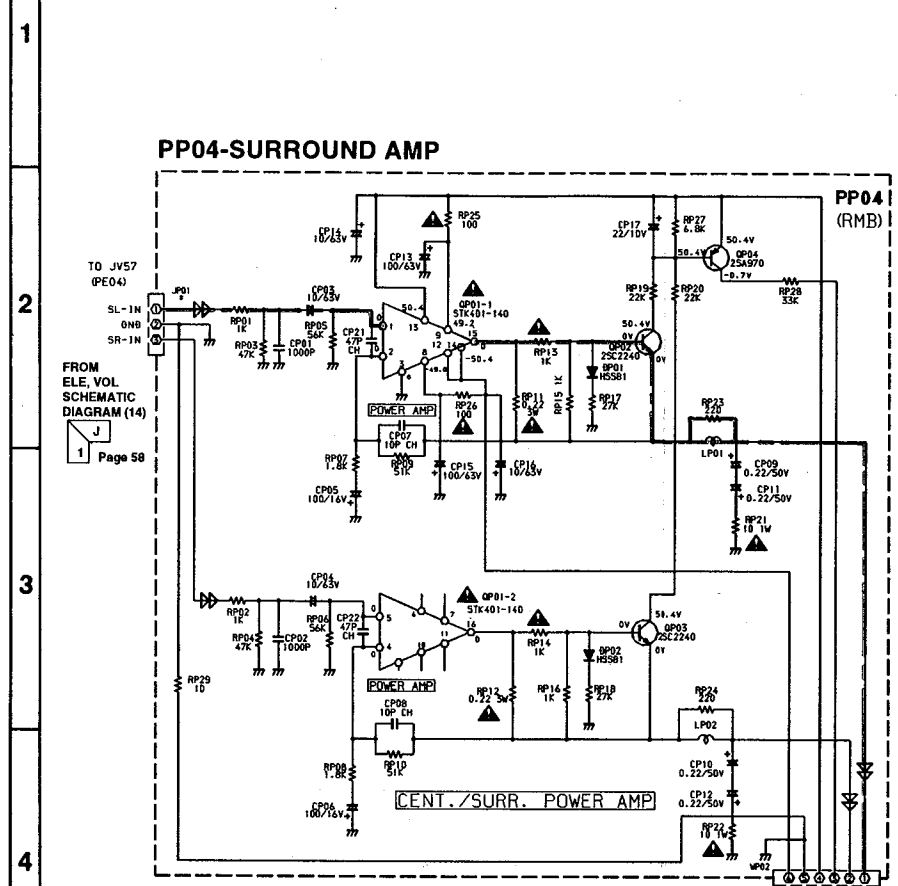
FROM DIRECT IN  
SCHEMATIC  
DIAGRAM (12)

J  
4 Page 56



SCHEMATIC DIAGRAM ( 18 ) (B) VERSION

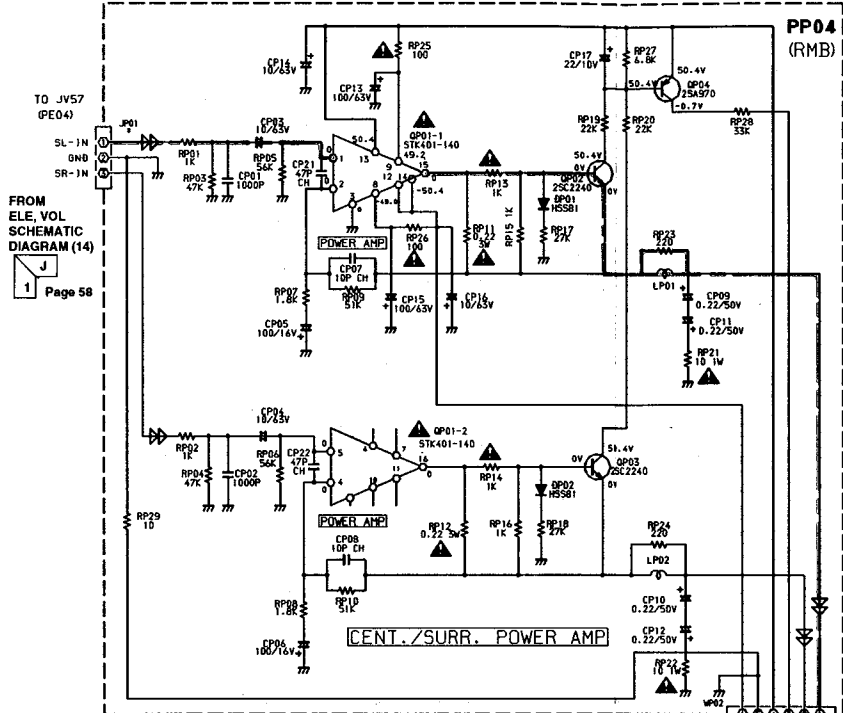
P704-MAIN AMP ( AVR80 ) ONLY



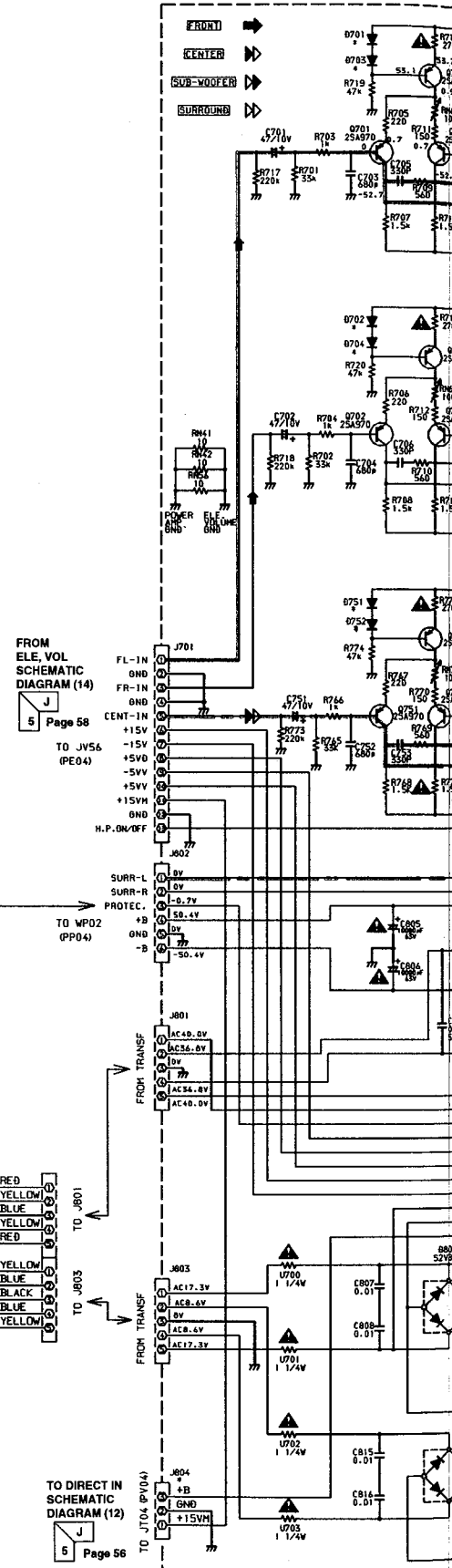
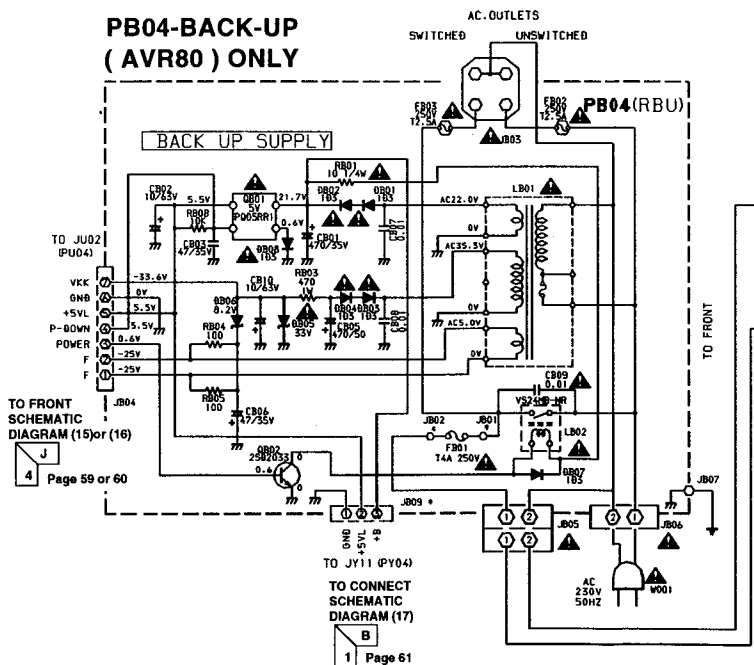
SCHMATIC DIAGRAM ( 18 ) (B) VERSION

P704-MAIN AMP ( AVR80 )

PP04-SURROUND AMP



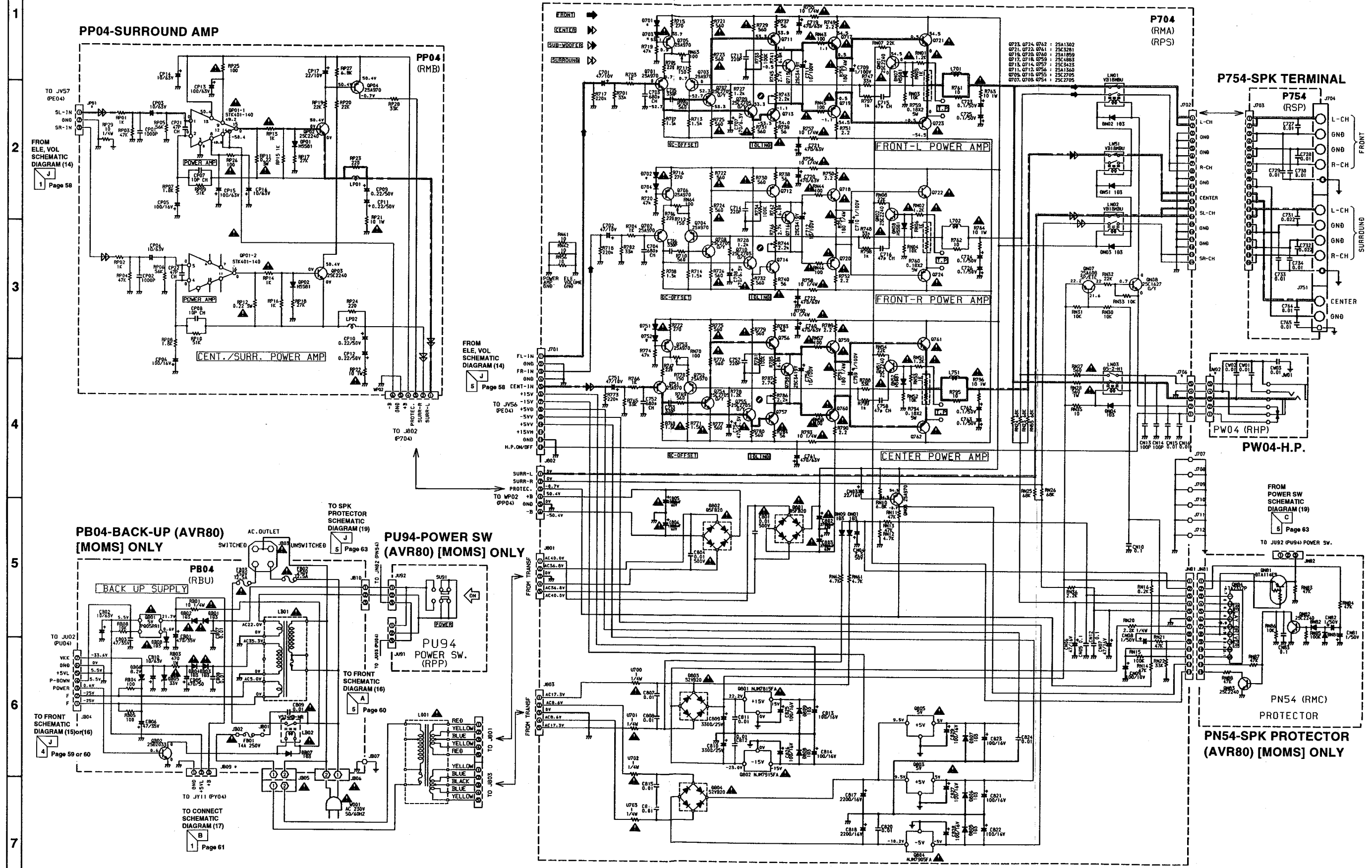
PB04-BACK-UP ( AVR80 ) ONLY





SCHEMATIC DIAGRAM ( 19 ) (B) VERSION

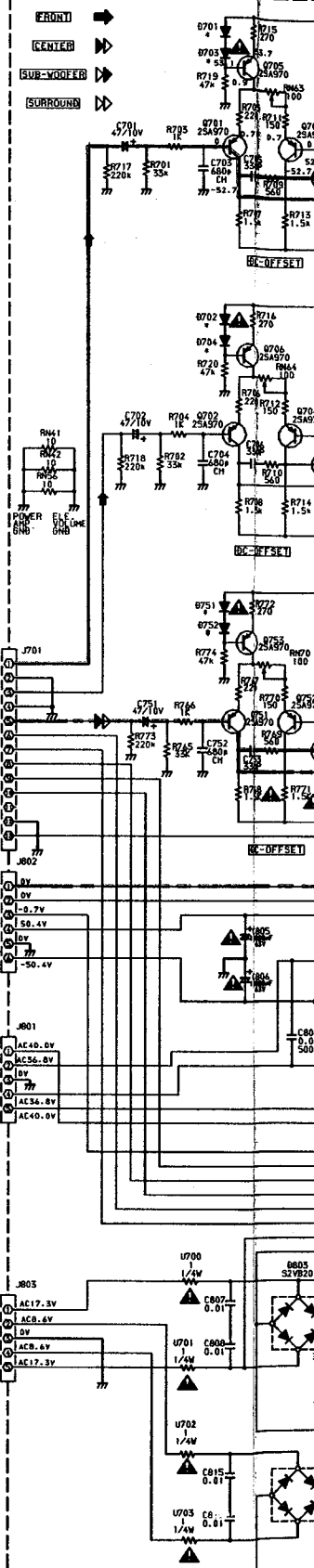
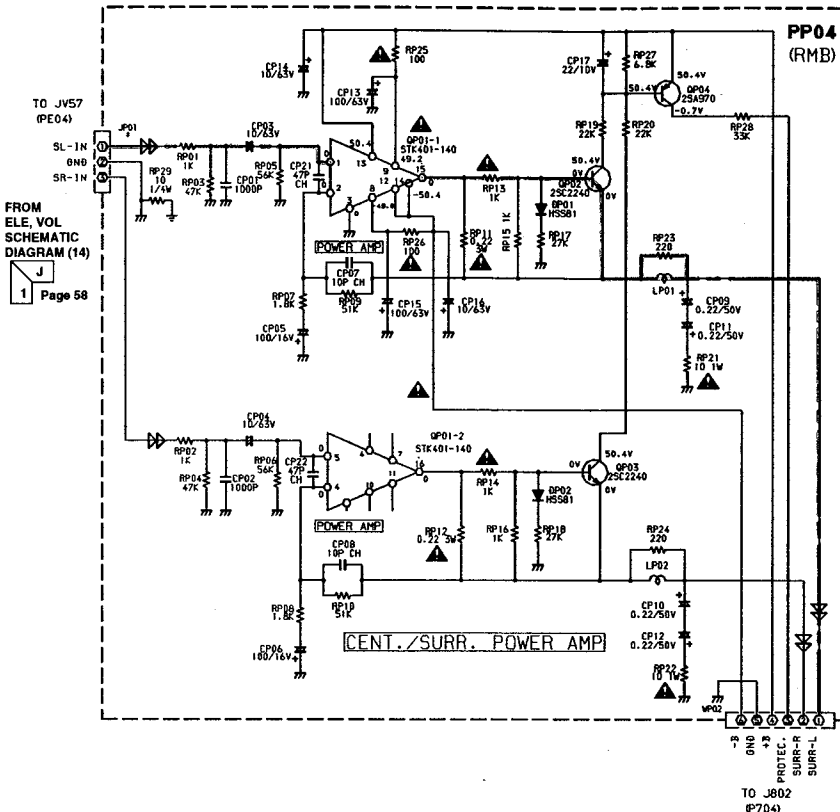
P704-MAIN AMP (AVR80) [MOMS] ONLY



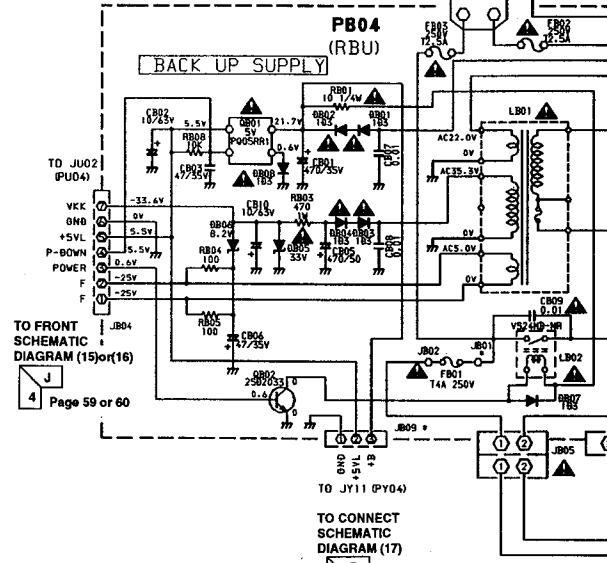
**SCHEMATIC DIAGRAM ( 19 ) IB VERSION**

**P704-MAIN AMP (AVR80) [MOMS]**

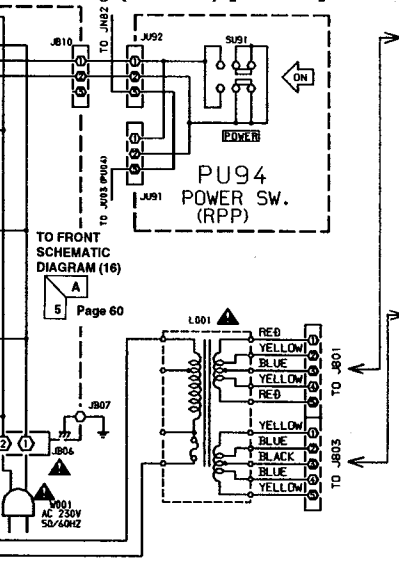
**PP04-SURROUND AMP**



**PB04-BACK-UP (AVR80) [MOMS] ONLY**



**PU94-POWER SW (AVR80) [MOMS] ONLY**



FROM ELE. VOL SCHEMATIC DIAGRAM (14) 1 Page 58

FROM ELE. VOL SCHEMATIC DIAGRAM (14) 5 Page 58

TO SPK PROTECTOR SCHEMATIC DIAGRAM (19) 5 Page 63

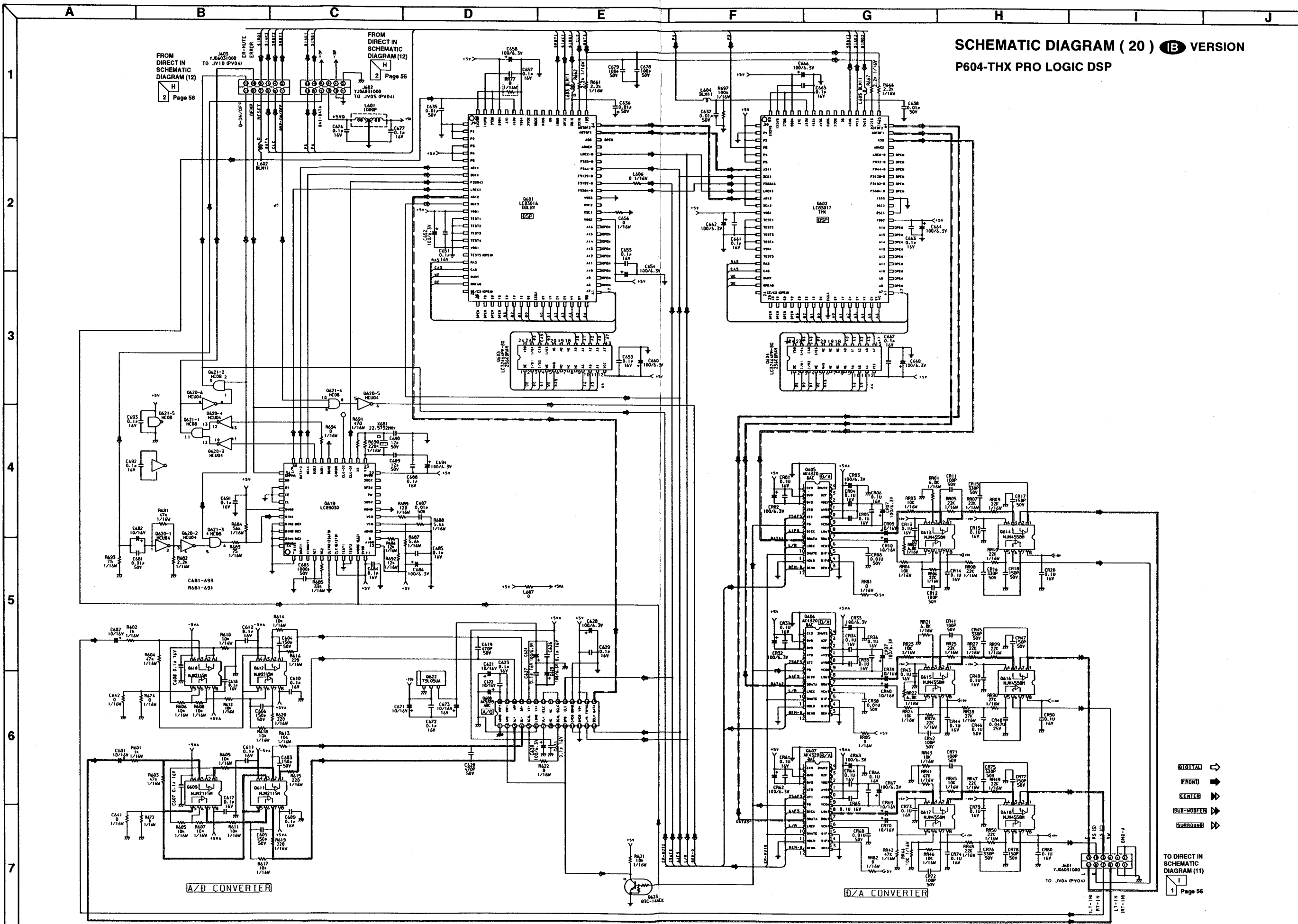
TO FRONT SCHEMATIC DIAGRAM (16) 5 Page 60

TO FRONT SCHEMATIC DIAGRAM (15) or (16) 4 Page 59 or 60

TO CONNECT SCHEMATIC DIAGRAM (17) 1 Page 61



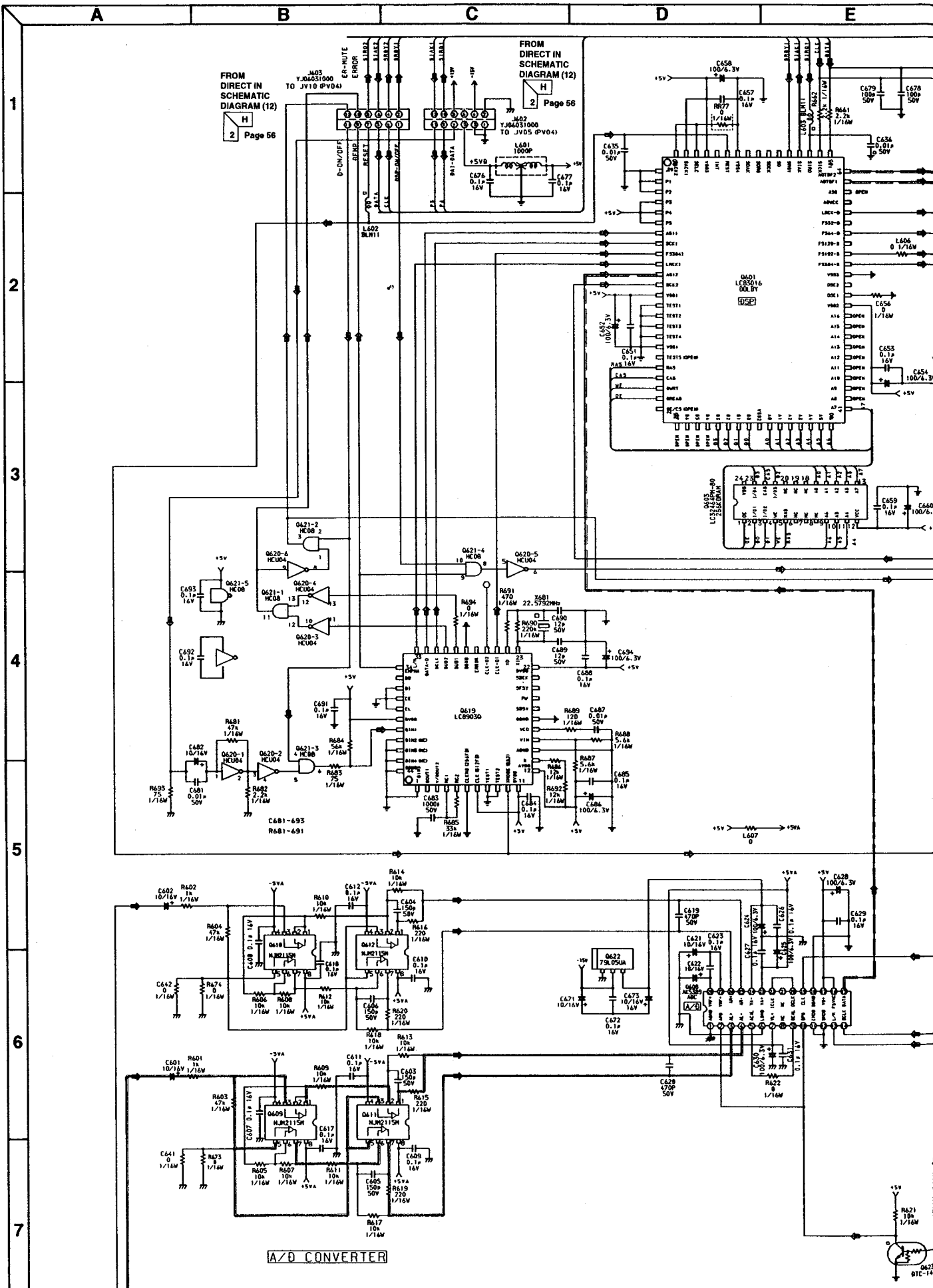
SCHEMATIC DIAGRAM ( 20 ) **IB** VERSION  
P604-THX PRO LOGIC DSP



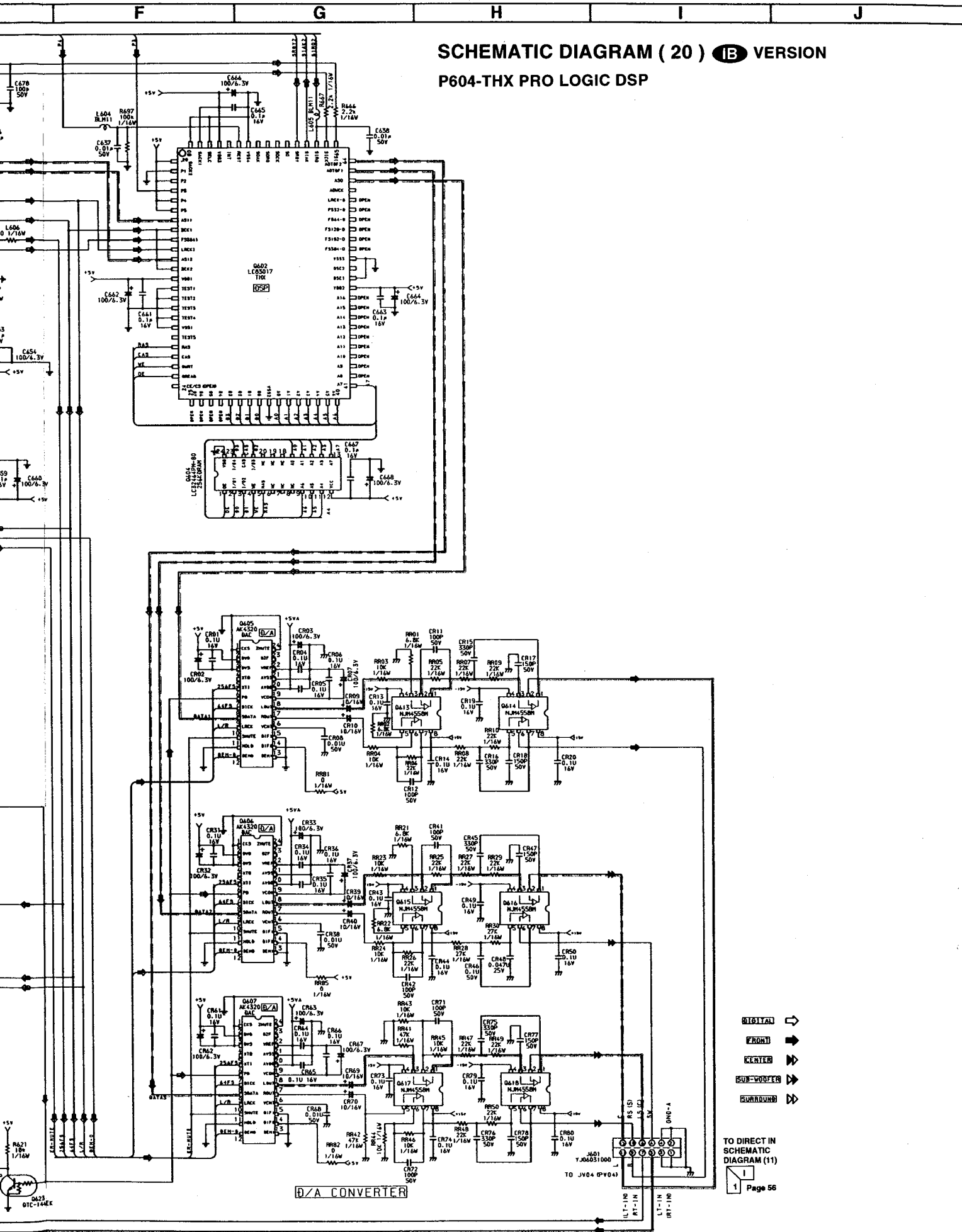
- DIGITAL ⇨
- FRONT ⇨
- CENTER ⇨
- SUB-CENTERS ⇨
- SURROUND ⇨

TO DIRECT IN SCHEMATIC DIAGRAM (11)  
1 Page 56





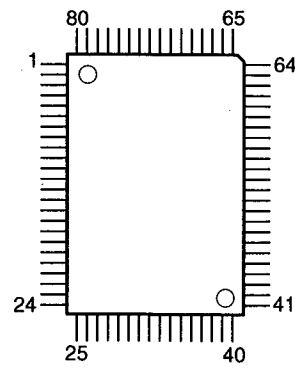
# SCHEMATIC DIAGRAM ( 20 ) **B** VERSION P604-THX PRO LOGIC DSP



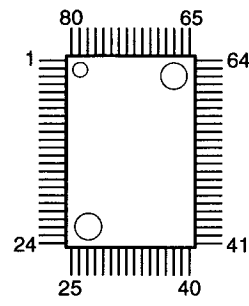
- SIGNAL ⇨
- FRONT ⇨
- CENTER ⇨
- SUB-WOOFER ⇨
- SURROUND ⇨

TO DIRECT IN  
SCHEMATIC  
DIAGRAM (11)

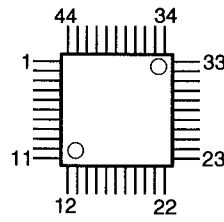
PIN CONNECTION DIAGRAM



Q601: LC83016JE  
Q602: LC83017JE



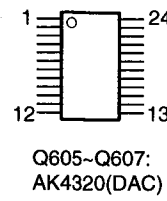
QU01: TMP87CP71F



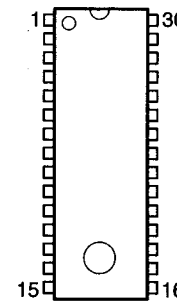
Q619: LC8903Q



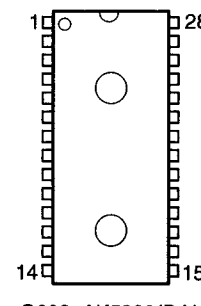
Q603, Q604:  
LC32464PM-80



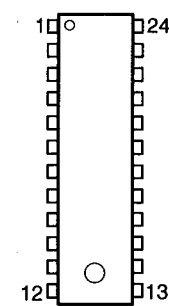
Q605-Q607:  
AK4320(DAC)



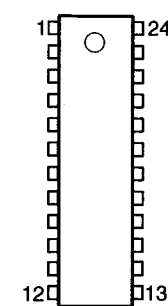
Q201: LA1836  
QS11, QS12, QS56: LC78211  
QS57, QV04: LC78212  
QV06: LC78213  
QX60: LC4760-9004



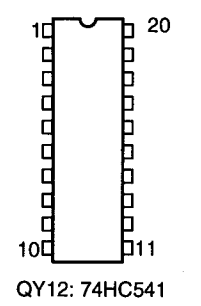
Q608: AK5389(DAK)



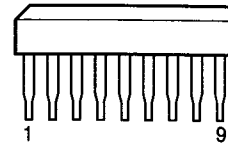
Q901: LA2232



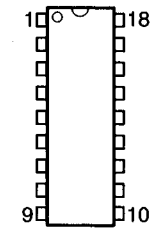
Q501: LC7218



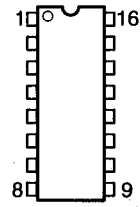
QY12: 74HC541



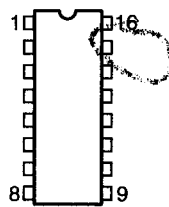
QN04, QN84: TA7317P



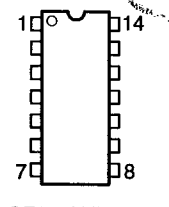
Q902: LC7073



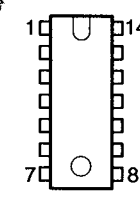
QL01, QL02,  
QL51-QL54: LC7824



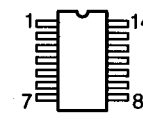
QE04-QE06, QG57: TC9213P  
QY10: TC9173P  
QY11: TC9174P



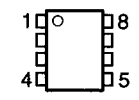
QF01: NJM2058D  
QU18: 74HC125



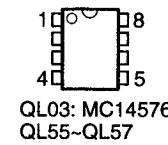
QT04: 74LS132



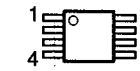
Q620: 74HCU04  
Q621: 74HC08



QL04: NJM2233BD  
QX63: NJM2267D



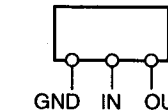
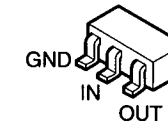
QL03: MC14576  
QL55-QL57



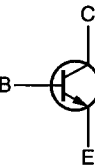
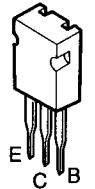
Q609-Q612: NJM2115M  
Q613-Q618: NJM4558M



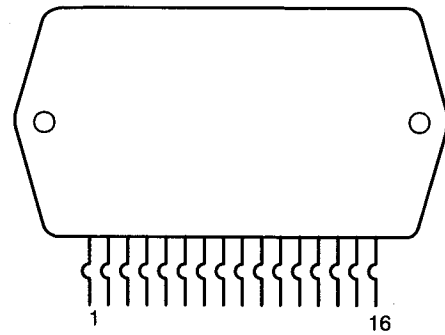
QT01,  
QT02: PC-817



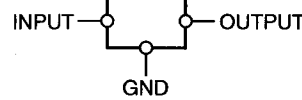
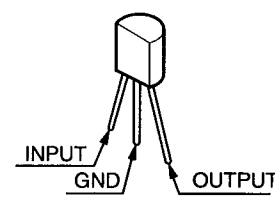
Q622: NJM79L05UA



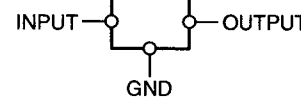
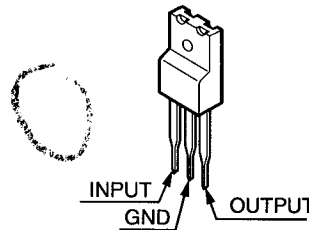
QB02:  
2SD2033(E)



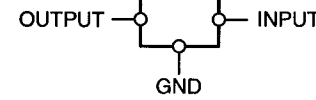
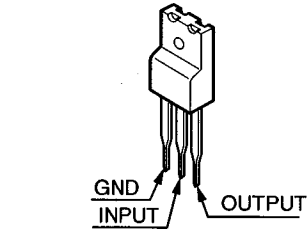
QP01: STK401-140



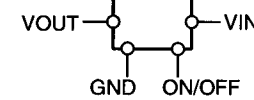
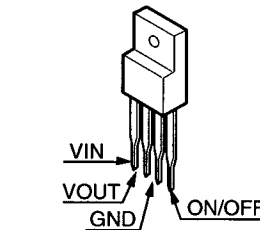
QY09: NJM78L15A



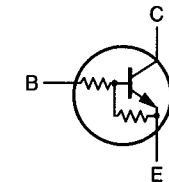
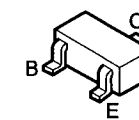
Q801: NJM7815FA  
Q803, Q805: NJM7805FA



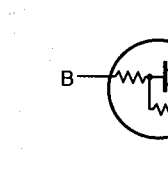
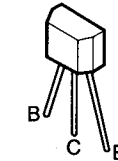
Q802: NJM7915FA  
Q804: NJM7905FA



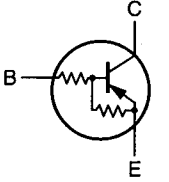
QB01: PQ05RR1



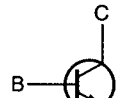
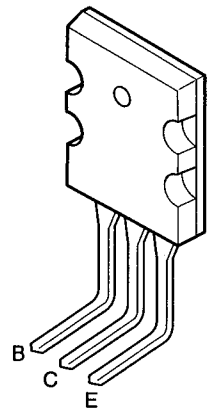
Q623: DTC144EK



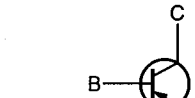
QS09, QS62: DTC114ES  
QU04, QU05, QU08, QU09,  
QU15, QX62, QY02, QY04,  
QY06, QY08, QY13, QY15,  
Q204: DTC144ES



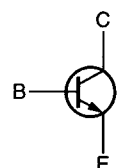
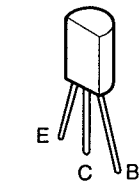
QN81, QS10, QS61, QT05,  
QU02, QU12, QU17, QY01,  
QY03, QY05, QY07, QY14,  
Q203: DTA114ES  
QA04, QA05, QU10, QU14:  
DTA144ES



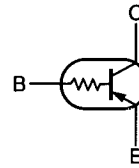
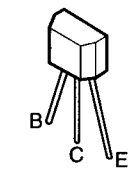
Q721, Q722,  
Q761: 2SC3281(R,O)



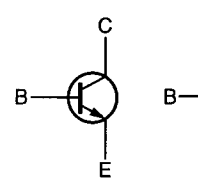
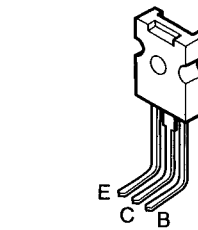
Q723, Q724,  
Q762: 2SA1302(R,O)



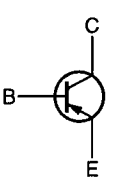
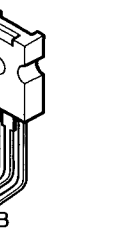
Q707-Q710,  
Q754, Q755:  
2SC2705(Q,Y)



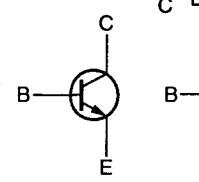
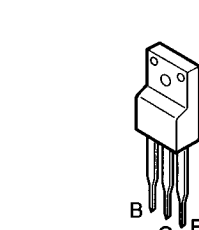
QU11: DTA114TS



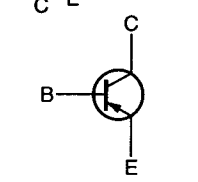
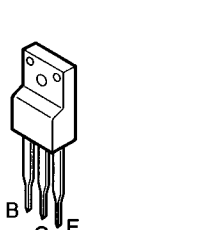
Q715, Q716,  
Q758:  
2SC3419Y  
Q713, Q714,  
Q757:  
2SC3423(O,Y)



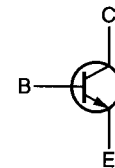
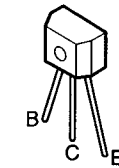
Q711, Q712,  
Q756:  
2SA1360(O,Y)



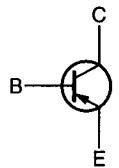
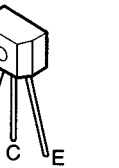
Q717, Q718,  
Q759:  
2SC4883(O,Y)



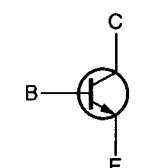
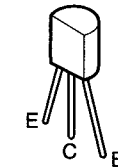
Q719, Q720,  
Q760:  
2SA1859(O,Y)



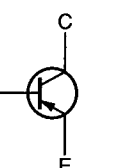
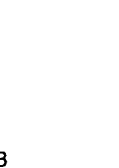
Q202: 2SC1809SP  
QA01, QA02, QU03,  
QU07, QU19-QU21,  
QU51-QU54, QX61,  
QX64, Q503, Q903:  
2SC536SP  
QA03, QG51-QG52,  
QG59, QG60, QS07,  
QS08, QS59, QS60  
: 2SD2144S



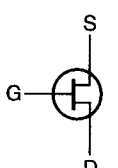
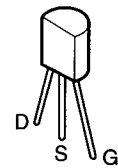
QN07: 2SA608SP



QN08: 2SC1627(Q,Y)  
QN01, QN02, QN51,  
QN82, QN83, QP02,  
QP03: 2SC2240(GR, BL)  
QV51-QV56, QV60:  
2SC2878(A,B)

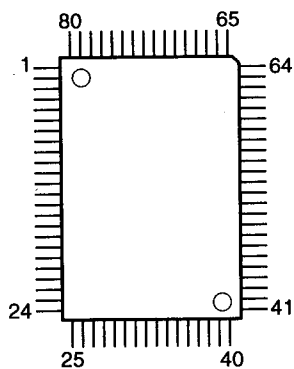


QN03, QP04,  
Q751-Q753,  
Q701-Q706:  
2SA970(GR, BL)

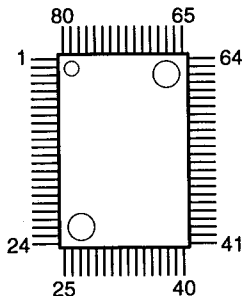


Q502: 2SK30ATM

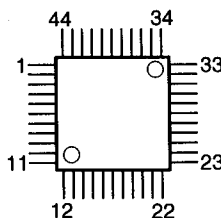
# PIN CONNECTION DIAGRAM



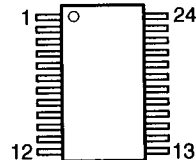
Q601: LC83016JE  
Q602: LC83017JE



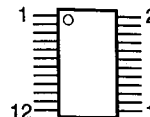
QU01: TMP87CP71F



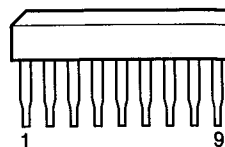
Q619: LC8903Q



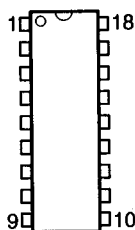
Q603, Q604:  
LC32464PM-80



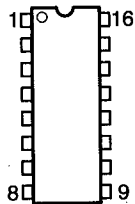
Q605-Q607:  
AK4320(DAC)



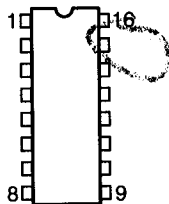
QN04, QN84: TA7317P



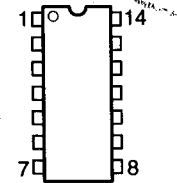
Q902: LC7073



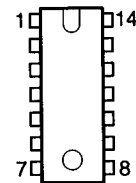
QL01, QL02,  
QL51-Q154: LC7824



QE04-QE06, QG57: TC9213P  
QY10: TC9173P  
QY11: TC9174P



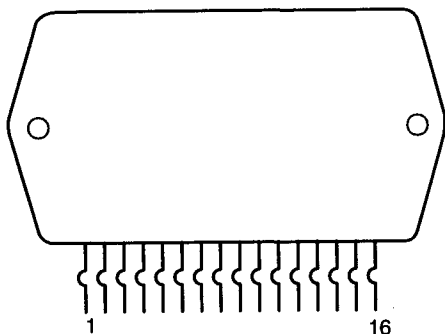
QF01: NJM2058D  
QU18: 74HC125



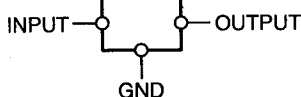
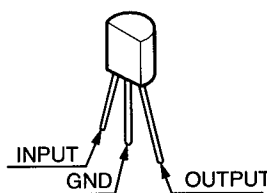
QT04: 74LS132



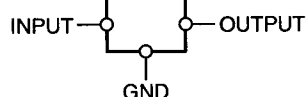
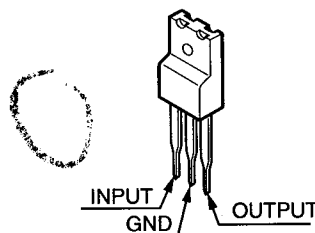
Q620: 74H  
Q621: 74H



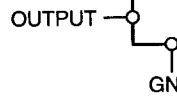
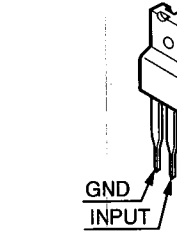
QP01: STK401-140



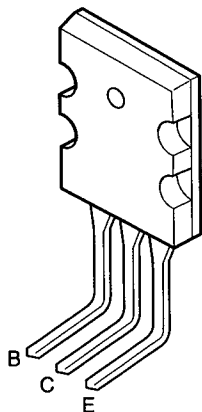
QY09: NJM78L15A



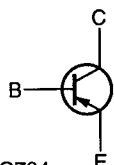
Q801: NJM7815FA  
Q803, Q805: NJM7805FA



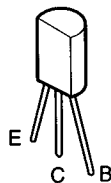
Q802: NJM  
Q804: NJM



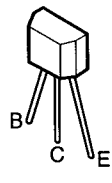
Q721, Q722,  
Q761: 2SC3281(R,O)



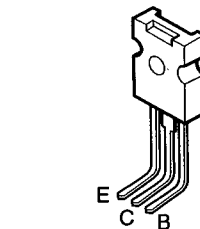
Q723, Q724,  
Q762: 2SA1302(R,O)



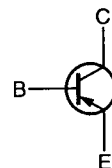
Q707-Q710,  
Q754, Q755:  
2SC2705(Q,Y)



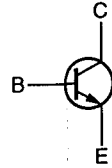
QU11: DTA114TS



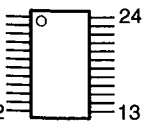
Q715, Q716,  
Q758:  
2SC3419Y  
Q713, Q714,  
Q757:  
2SC3423(O,Y)



Q711, Q712,  
Q756:  
2SA1360(O,Y)



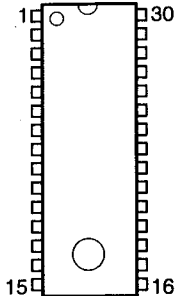
Q717, Q718,  
Q759:  
2SC4883(O,Y)



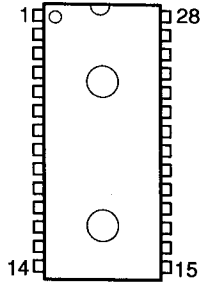
Q605~Q607:  
AK4320(DAC)



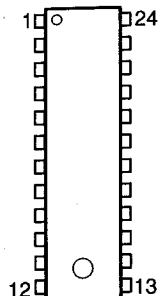
7317P



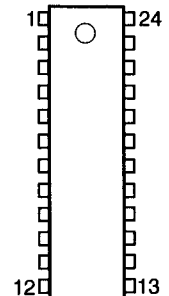
Q201: LA1836  
QS11, QS12, QS56: LC78211  
QS57, QV04: LC78212  
QV06: LC78213  
QX60: LC4760-9004



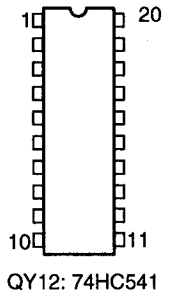
Q608: AK5389(DAK)



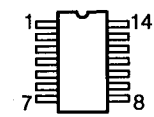
Q901: LA2232



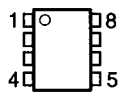
Q501: LC7218



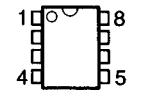
QY12: 74HC541



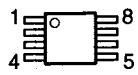
Q620: 74HCU04  
Q621: 74HC08



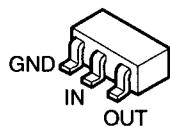
QL04: NJM2233BD  
QX63: NJM2267D



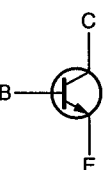
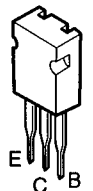
QL03: MC14576  
QL55~QL57



Q609~Q612: NJM2115M  
Q613~Q618: NJM4558M

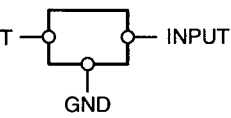
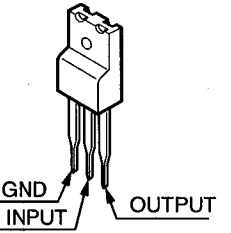


Q622: NJM79L05UA

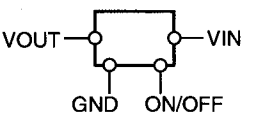
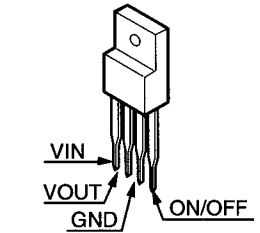


QB02: 2SD2033(E)

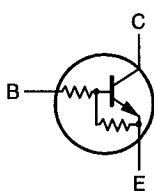
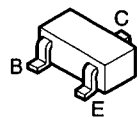
QE01~QE03, QE07~QE12,  
QF02, QF03, QG55, QG56,  
QS01~QS03, QS05, QS13,  
QS51~QS55, QS91,  
QV01~QV03, QV05, QV07,  
QV57, QV58, Q301: NJM4558DD



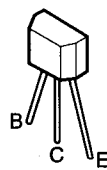
Q802: NJM7915FA  
Q804: NJM7905FA



QB01: PQ05RR1

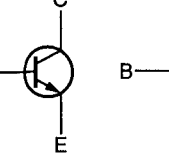
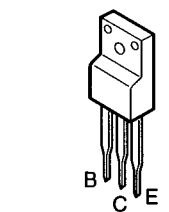


Q623: DTC144EK

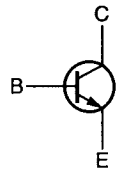


QS09, QS62: DTC114ES  
QU04, QU05, QU08, QU09,  
QU15, QX62, QY02, QY04,  
QY06, QY08, QY13, QY15,  
Q204: DTC144ES

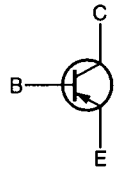
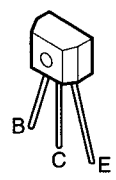
QN81, QS10, QS61, QT05,  
QU02, QU12, QU17, QY01,  
QY03, QY05, QY07, QY14,  
Q203: DTA114ES  
QA04, QA05, QU10, QU14:  
DTA144ES



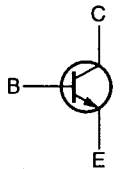
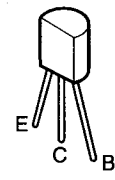
Q717, Q718,  
Q759: SC4883(O, Y)



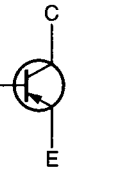
Q202: 2SC1809SP  
QA01, QA02, QU03,  
QU07, QU19~QU21,  
QU51~QU54, QX61,  
QX64, Q503, Q903:  
2SC536SP  
QA03, QG51~QG52,  
QG59, QG60, QS07,  
QS08, QS59, QS60  
: 2SD2144S



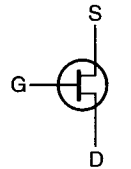
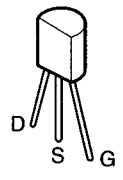
QN07: 2SA608SP



QN08: 2SC1627(Q, Y)  
QN01, QN02, QN51,  
QN82, QN83, QP02,  
QP03: 2SC2240(GR, BL)  
QV51~QV56, QV60:  
2SC2878(A, B)



QN03, QP04,  
Q751~Q753,  
Q701~Q706:  
2SA970(GR, BL)



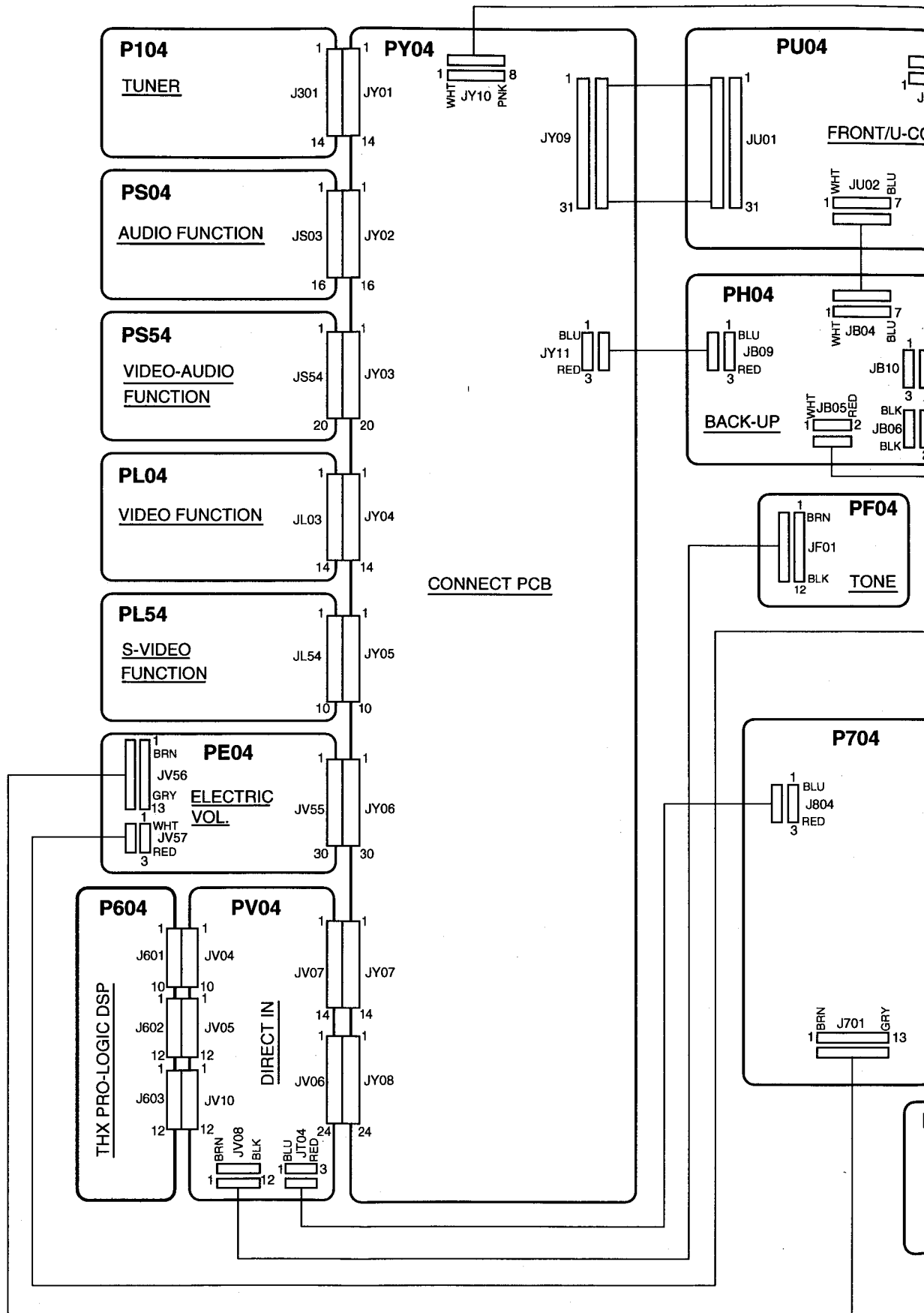
Q502: 2SK30ATM

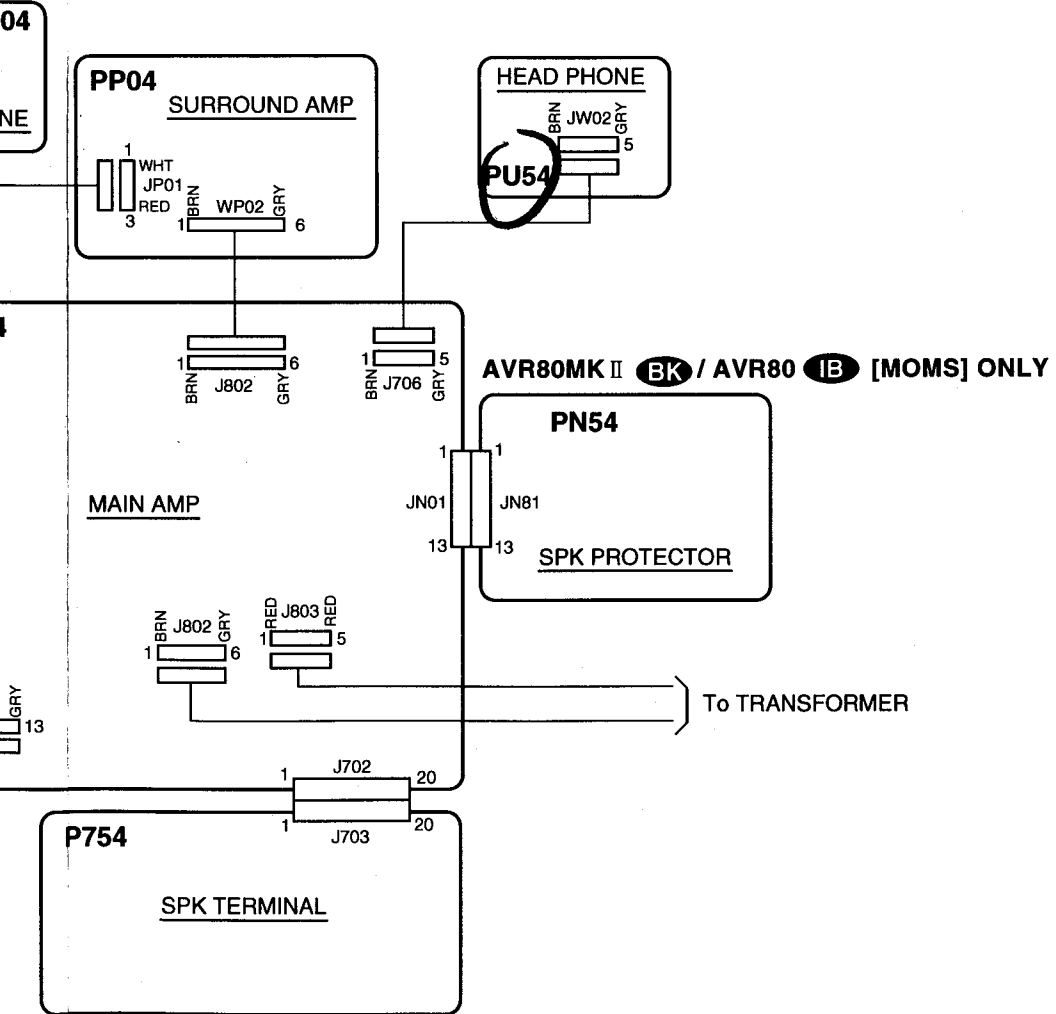
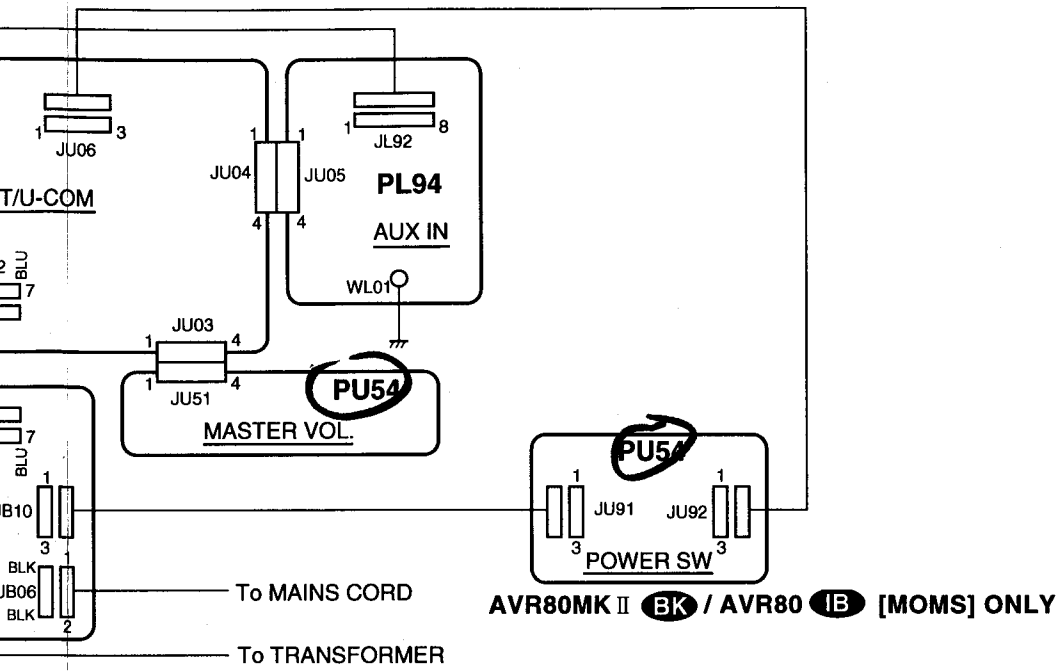


WIRING DIAGRAM

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A B C D E

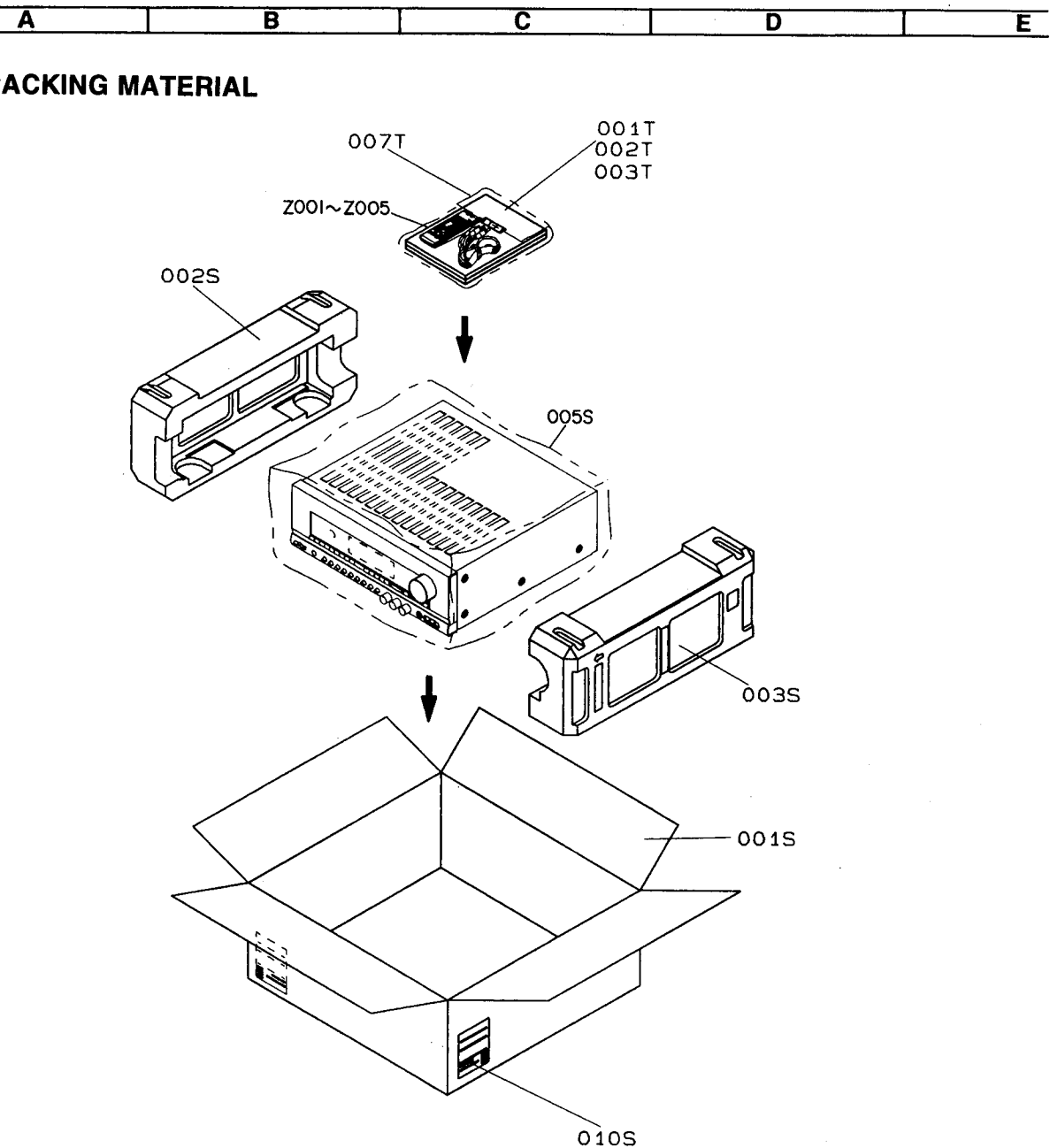






**PACKING MATERIAL**

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Ref. No.	Part. No.	Description	Q'TY
001S	260J801010	PACKING CASE (IB)	1
001S	260J801020	PACKING CASE (BK)	1
002S	260J809010	CUSHION, (L)	1
003S	260J809020	CUSHION, (R)	1
005S	9091111030	POLYETHY SHEET	1
010S	9510901260	LABEL	2
001T	260J851310	USER MANUAL (IB) (AVR80)	1
001T	260J851360	USER MANUAL (IB) [MOMS]	1
001T	260J851250	USER MANUAL (BK) (AVR80)	1
001T	260J851260	USER MANUAL (BK) (AVR80MKII)	1
002T	260J854010	WARRANTY CARD (BK)	1
003T	260J865010	CARD (BK)	1
007T	9012540010	POLYETHY BAG	1
Z001	ZK260J0010	UNIT KIT, REMOTE (IB)	1
Z001	ZK260J0020	UNIT KIT, REMOTE (BK)	1
Z002	ZF24302000	BATTERY, UM-4NEPH x 2	1
Z003	ZA02800020	EXT. ANTENNA FM (IB)	1
Z003	ZA02800070	EXT. ANTENNA FM (BK)	1
Z004	LA00065020	ANT COIL	1
Z005	YP90000310	PLUG (BK)	1