

# SERVICE MANUAL

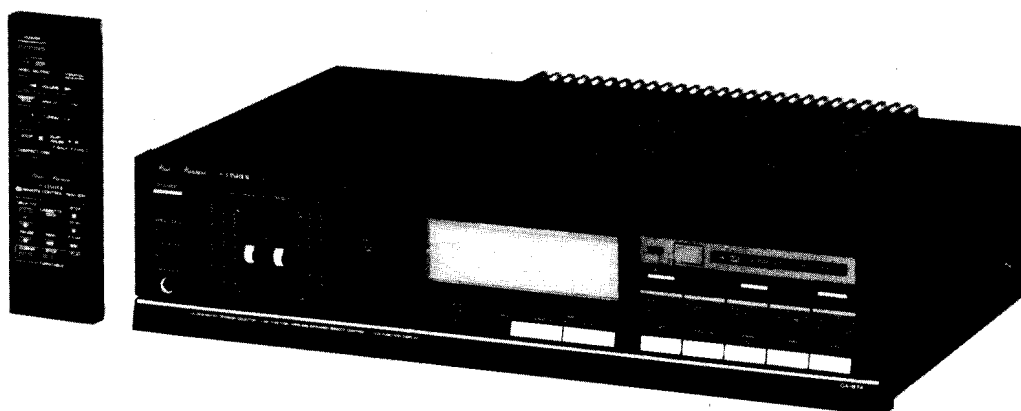


# FISHER

## INTEGRATED STEREO AMPLIFIER

# CA-874

(EUROPE)



132 299 44

## SPECIFICATIONS

Remote Control (REM-874) 25-function,  
wireless remote control

### POWER AMPLIFIER SECTION

Minimum RMS sine wave power per channel  
within stated bandwidth at no more than stated  
distortion and with 8-ohm load 120 Watts  
Power Bandwidth 20 Hz – 20 kHz  
Total Harmonic Distortion 0.05 %  
I.M. Distortion 0.05 %  
Speaker Damping > 20

### PREAMPLIFIER SECTION

Frequency Response  
Phono (RIAA)  $\pm 1$  dB  
Aux (20 Hz – 20 kHz)  $\pm 1$  dB  
Input Sensitivity and Impedance  
Phono 2.5 mV/50 k $\Omega$   
Tape Monitor 1,2 150 mV/50 k $\Omega$

Tuner/Video/CD 150 mV/50 k $\Omega$   
Phono Max. Input Capability 150 mV  
Tone Controls  
Bass(100Hz)  $\pm 10$  dB  
Treble(10KHz)  $\pm 10$  dB  
Loudness Contour (100 Hz/10 kHz) +8 dB/+4 dB  
Hum & Noise (IHF Short Circuit, A Network)  
Phono 70 dB  
Tape Monitor 1,2 90 dB  
Tuner/Video/CD 90 dB

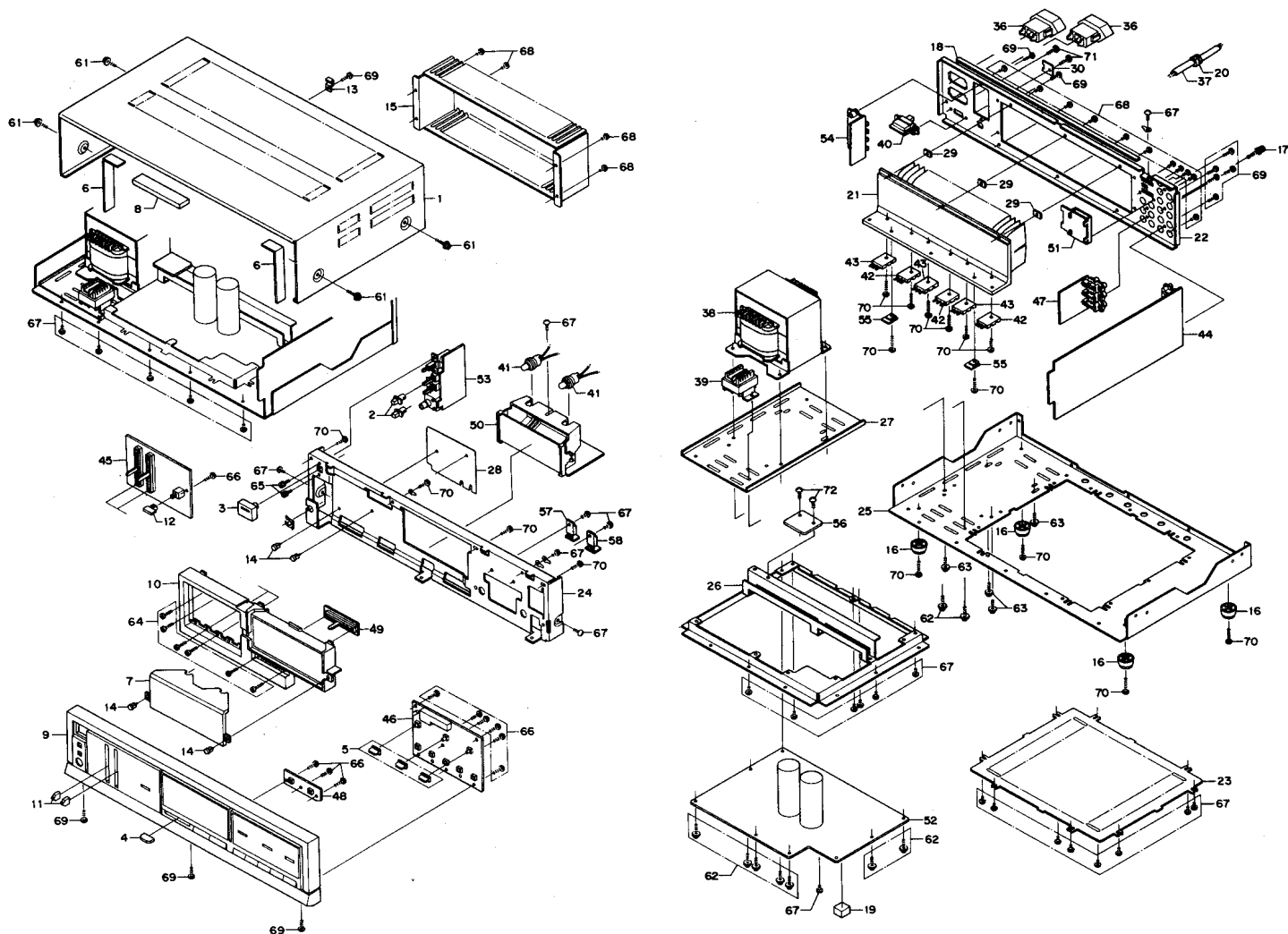
### GENERAL

Power Requirements (50 Hz) AC 110/220 V  
Power Consumption 550 Watts  
AC Outlets 2  
Dimensions (W x H x D) 440 x 108 x 315 mm  
Weight (approx.) 9.2 kg

— Specifications and design are subject to change without notice.—

REFERENCE No. WM-19679

## CABINET & CHASSIS EXPLODED VIEW



## POWER AMPLIFIER ADJUSTMENT

### BEFORE ADJUSTMENT

Unplug the AC power cord and set the front panel controls as follows:

- Power switch to OFF position.
- Set the SPEAKERS switch to the OFF position.
- Set the volume level to minimum level by Pressing the VOLUME DOWN button.
- IDLING CURRENT ADJUSTMENT VR501/VR502 (on the Main Amplifier P.C.Board) setting to mechanical center position.
- Connect the AC power cord and Power Switch to the ON position.

### IDLING CURRENT ADJUSTMENT

This adjustment is very sensitive to changes in ambient temperature. Allow set to operate for 2 minutes before attempting this alignment.

#### LEFT AMPLIFIER

- 1) Connect the DC Voltmeter between Pins 19 and 21 on the Main Amplifier P.C.Board.
- 2) Adjust the VR501 for an indication of 9mV (7mV ~ 15mV) on the DC Voltmeter.

#### RIGHT AMPLIFIER

- 1) Connect the DC Voltmeter between Pins 20 and 22 on the Main Amplifier P.C.Board.
- 2) Adjust the VR502 for an indication of 9mV (7mV ~ 15mV) on the DC Voltmeter.

# CABINET & CHASSIS PARTS LIST

## PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol  $\triangle$  in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with  $\triangle$ , use only the replacement parts designated, or parts with the same ratings of 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.

| Ref. No.                     | Part No.         | Description                | Q'ty | Ref. No.                                                                 | Part No.                 | Description                             | Q'ty |
|------------------------------|------------------|----------------------------|------|--------------------------------------------------------------------------|--------------------------|-----------------------------------------|------|
| <b>PACKAGE</b>               |                  |                            |      | 22                                                                       | 141-2-1219-40909         | Panel Rear                              | 1    |
|                              | 3-9415-10300     | Bag Polyethylene           | 1    | 23                                                                       | 141-2-1259-11200         | Bottom Cover                            | 1    |
|                              | 131-6-3009-36090 | Pad                        | 1    | 24                                                                       | 141-2-2149-31200         | Panel Front                             | 1    |
|                              | 131-6-3009-36700 | Pad                        | 2    | 25                                                                       | 141-2-3119-31600         | Chassis                                 | 1    |
|                              | 131-6-3069-16350 | Patching Sheet             | 1    | 26                                                                       | 141-2-3129-06600         | Sub Chassis                             | 1    |
|                              | 131-6-4559-11200 | Serial No. Sheet           | 2    | 27                                                                       | 141-2-3159-05800         | Metal Reinforce                         | 1    |
|                              | 141-6-1189-28500 | Box Corrugate-Exp.         | 1    | 28                                                                       | 141-2-3229-62900         | Plate Shield                            | 1    |
|                              | 141-6-1469-11700 | Pad (Front)                | 1    | 29                                                                       | 141-2-4359-41200         | Plate Sever                             | 3    |
|                              | 141-6-1469-11800 | Pad (Rear)                 | 1    | 30                                                                       | 131-2-7104-00500         | Plate Pad Switch                        | 1    |
|                              | 141-6-2519-22290 | Sheet Polyethylene         | 1    |                                                                          |                          |                                         |      |
| <b>ACCESSORIES</b>           |                  |                            |      | 36                                                                       | $\triangle$ 4-2352-00450 | AC Socket (AC OUTLET)                   | 2    |
|                              | 4-1929-70266     | REM-874 (Remote Control)   | 1    | 37                                                                       | $\triangle$ 4-2432-00400 | Power Cord                              | 1    |
|                              | 131-6-2719-10401 | Bag Fan                    | 1    | 38                                                                       | $\triangle$ 4-2512-25020 | Power Trans (Main)                      | 1    |
|                              | 142-6-4119-33421 | Explanatory Booklet        | 1    | 39                                                                       | $\triangle$ 4-2512-23760 | Power Trans (Sub)                       | 1    |
|                              |                  |                            |      | 40                                                                       | $\triangle$ 4-2312-01020 | Switch Slide (AC SELECTOR) [S901]       | 1    |
| <b>CABINET &amp; CHASSIS</b> |                  |                            |      | 41                                                                       | 4-6129-70724             | Lamp                                    | 2    |
|                              | 4-2379-21520     | Terminal Lug               | 2    | 42                                                                       | 405 017 7804             | TR 2SC3281-O [Q515, Q516, Q546]         | 3    |
|                              | 141-2-4729-07100 | Wire Band                  | 20   | or                                                                       | 405 060 2504             | TR 2SD1975-P [Q515, Q516]               | 2    |
|                              | 131-6-4559-11200 | Serial No. Sheet           | 1    | 43                                                                       | 405 003 4008             | TR 2SA1302-O [Q517, Q518, Q545]         | 3    |
| 1                            | 131-2-1410-35400 | Cover                      | 1    | or                                                                       | 405 031 9006             | TR 2SB1163-P [Q517, Q518]               | 2    |
| 2                            | 131-2-1601-69601 | Knob (Speaker Selector)    | 2    | 44                                                                       | 141-0-1939-23330         | Input P.C.B. Assy                       | 1    |
| 3                            | 131-2-1601-93303 | Knob (Power Switch)        | 1    | 45                                                                       | 141-0-1939-23340         | Tone P.C.B. Assy                        | 1    |
| 4                            | 131-2-1601-93400 | Knob (Balance)             | 1    | 46                                                                       | 141-0-1939-23350         | Control P.C.B. Assy                     | 1    |
| 5                            | 131-2-1601-99800 | Knob Tact                  | 3    | 47                                                                       | 141-0-1939-23360         | Pin Jack P.C.B. Assy                    | 1    |
| 6                            | 131-2-3202-13400 | Metal Reinforce            | 2    | 48                                                                       | 141-0-1939-23370         | Volume SW. P.C.B. Assy                  | 1    |
| 7                            | 131-2-3608-16413 | Filter                     | 1    | 49                                                                       | 141-0-1939-23380         | Balance Volume P.C.B. Assy              | 1    |
| 8                            | 131-2-5205-33300 | Cushion                    | 1    | 50                                                                       | 141-0-1939-23390         | LCD P.C.B. Assy                         | 1    |
| 9                            | 141-0-1129-29307 | Cabinet Front Assy         | 1    | 51                                                                       | 141-0-1939-23400         | Remote Control Input P.C.B. Assy        | 1    |
|                              | 141-2-1129-56903 | Cabinet Front              | 1    | 52                                                                       | 141-0-1939-23410         | Main AMP P.C.B. Assy                    | 1    |
|                              | 141-2-1449-79902 | Plate Front                | 1    | 53                                                                       | 141-0-1939-23420         | Power SW. P.C.B. Assy                   | 1    |
|                              | 141-2-1319-52300 | Window                     | 1    | 54                                                                       | 141-0-1939-23430         | Speaker Terminal P.C.B. Assy            | 1    |
|                              | 131-2-3608-16600 | Filter                     | 1    | 55                                                                       | 141-0-1939-20450         | Bias P.C.B. Assy                        | 2    |
|                              | 141-2-1449-65014 | Plate Decorate             | 1    | 56                                                                       | 141-0-1939-23290         | Lamp P.C.B. Assy                        | 1    |
|                              | 131-2-1601-99700 | Knob (Volume)              | 1    | 57                                                                       | 141-0-1939-23520         | Transistor (SUB) P.C.B. Assy            | 1    |
|                              | 131-2-1601-91800 | Knob (Function)            | 1    | 58                                                                       | 141-0-1939-23560         | Transistor (+B) P.C.B. Assy             | 1    |
|                              | 4-2359-78079     | Connector 1P Assy          | 1    | 61                                                                       | 141-2-4219-38400         | Screw, Bind Hd. Tapping-B, +M4.0X8 Sems | 4    |
|                              | 411 020 5508     | SCR S-TPG BRZ 2.6X6        | 1    | 62                                                                       | 131-2-4201-25201         | Screw, Brazier Hd. Tapping-B, +M3.0X8   | 9    |
|                              | 131-2-6113-52400 | Shelter                    | 1    | 63                                                                       | 141-2-4219-43300         | Screw, Bind Hd. Tapping-C, +M4.0X10     | 4    |
|                              | 4-2352-02721     | Connector 1P Assy          | 1    | 64                                                                       | 411 002 4901             | SCR PAN 2X4                             | 6    |
| 10                           | 141-0-3519-26700 | Mount P.C.B. Assy          | 1    | 65                                                                       | 411 003 8908             | SCR PAN+SW 3X6                          | 2    |
|                              | 141-2-3519-84700 | Mount P.C.B.               | 1    | 66                                                                       | 411 020 5706             | SCR S-TPG BRZ 2.6X8                     | 10   |
|                              | 141-2-1449-65110 | Screen LCD                 | 1    | 67                                                                       | 411 020 7700             | SCR S-TPG BRZ 3X6                       | 27   |
|                              | 141-2-3229-62500 | Plate Shield               | 1    | 68                                                                       | 411 099 9704             | SCR S-TPG BRZ 3X6                       | 15   |
|                              | 4-2359-79034     | Connector 1P Assy          | 1    | 69                                                                       | 411 099 9803             | SCR S-TPG BRZ 3X8                       | 11   |
| 11                           | 141-2-1659-35900 | Knob Slide (Tone)          | 2    | 70                                                                       | 411 020 5904             | SCR S-TPG BRZ 3X10                      | 16   |
| 12                           | 141-2-1659-77800 | Knob Push (Tape-2 Monitor) | 1    | 71                                                                       | 411 002 9005             | SCR PAN 3X8                             | 2    |
| 13                           | 141-2-3159-03300 | Bracket Cover              | 1    | 72                                                                       | 411 020 8004             | SCR S-TPG BRZ 3X8                       | 2    |
| 14                           | 131-2-4221-00600 | Rivet                      | 4    | C901                                                                     | 403 074 2701             | CERAMIC 0.047U Z 50V                    | 1    |
| 15                           | 131-2-1410-34840 | Cover Heat Sink            | 1    | C902                                                                     | 403 074 2701             | CERAMIC 0.047U Z 50V                    | 1    |
| 16                           | 131-2-1801-14100 | Leg                        | 4    | <b>NOTES:</b>                                                            |                          |                                         |      |
| 17                           | 131-2-4201-17800 | Screw Ground               | 1    | 1. Parts order must contain Model Number, Part Number and Description.   |                          |                                         |      |
| 18                           | 131-2-5205-15800 | Cushion                    | 1    | 2. Ordering quantity of screws and resistors must be multiple of 10 pcs. |                          |                                         |      |
| 19                           | 131-2-5205-35900 | Cushion                    | 1    |                                                                          |                          |                                         |      |
| 20                           | 131-2-6111-14200 | Bushing (4N-4)             | 1    |                                                                          |                          |                                         |      |
| 21                           | 131-2-6201-36101 | Heat Sink                  | 1    |                                                                          |                          |                                         |      |

# P.C.BOARD PARTS LIST

| Ref. No.                 | Part No.         | Description                | Q'ty | Ref. No. | Part No.     | Description         | Q'ty |
|--------------------------|------------------|----------------------------|------|----------|--------------|---------------------|------|
| <b>INPUT P.C.B. ASSY</b> |                  |                            |      | R105     | 401 024 7707 | CARBON 100K JA 1/6W | 1    |
| 44                       | 141-0-1939-23330 | Input P.C.B. Assy          | 1    | R106     | 401 024 7707 | CARBON 100K JA 1/6W | 1    |
|                          | 4-2352-01700     | Pin Jack 4P (PHONO, TUNER) | 1    | R107     | 401 026 2700 | CARBON 300 JA 1/6W  | 1    |
|                          | 4-2352-01700     | Pin Jack 4P (CD, VIDEO)    | 1    | R108     | 401 026 2700 | CARBON 300 JA 1/6W  | 1    |
|                          | 4-2352-01700     | Pin Jack 4P (TAPE-1)       | 1    | R109     | 401 025 8703 | CARBON 220K JA 1/6W | 1    |
|                          | 4-2259-71080     | Crystal 4.194304MHz        | 1    | R110     | 401 025 8703 | CARBON 220K JA 1/6W | 1    |
|                          | 4-2359-79429     | Connector 1P Assy          | 1    | R111     | 401 025 1902 | CARBON 15K JA 1/6W  | 1    |
| CN101                    | 4-2362-00900     | Plug 8P                    | 1    | R112     | 401 025 1902 | CARBON 15K JA 1/6W  | 1    |
| CN102                    | 4-2352-02650     | Socket Jumper 4P           | 1    | R113     | 401 024 7707 | CARBON 100K JA 1/6W | 1    |
| CN103                    | 4-2369-73140     | Plug 4P                    | 1    | R114     | 401 024 7707 | CARBON 100K JA 1/6W | 1    |
| CN104                    | 4-2369-73980     | Plug 4P                    | 1    | R115     | 401 024 7004 | CARBON 1K JA 1/6W   | 1    |
| CN105                    | 4-2369-76410     | Plug 4P                    | 1    | R116     | 401 024 7004 | CARBON 1K JA 1/6W   | 1    |
| CN106                    | 4-2369-73160     | Plug 6P                    | 1    | R117     | 401 024 7004 | CARBON 1K JA 1/6W   | 1    |
| CN502                    | 4-2359-79240     | Connector 8P Assy          | 1    | R118     | 401 024 7004 | CARBON 1K JA 1/6W   | 1    |
| D101                     | 407 005 3805     | DIODE DS442-BT             | 1    | R119     | 401 027 6103 | CARBON 680K JA 1/6W | 1    |
| D102                     | 407 004 9105     | DIODE DSF10C-BT            | 1    | R120     | 401 027 6103 | CARBON 680K JA 1/6W | 1    |
| or                       | 407 060 9606     | DIODE 11E2                 | 1    | R121     | 401 024 7004 | CARBON 1K JA 1/6W   | 1    |
| D103                     | 407 008 7206     | DIODE MA700                | 1    | R122     | 401 024 7004 | CARBON 1K JA 1/6W   | 1    |
| D104                     | 407 005 3805     | DIODE DS442-BT             | 1    | R123     | 401 027 6103 | CARBON 680K JA 1/6W | 1    |
| D106                     | 407 008 7206     | DIODE MA700                | 1    | R124     | 401 027 6103 | CARBON 680K JA 1/6W | 1    |
| IC101                    | 409 070 4800     | IC NJM2068DD               | 1    | R125     | 401 024 7004 | CARBON 1K JA 1/6W   | 1    |
| IC102                    | 409 072 0909     | IC TC9163N                 | 1    | R126     | 401 024 7004 | CARBON 1K JA 1/6W   | 1    |
| IC103                    | 410 014 9904     | IC TMP47C460AN-2           | 1    | R127     | 401 026 4902 | CARBON 330K JA 1/6W | 1    |
| Q101                     | 405 004 4502     | TR 2SA608-F-NP             | 1    | R128     | 401 026 4902 | CARBON 330K JA 1/6W | 1    |
| Q102                     | 405 019 2708     | TR 2SC536-F-NP             | 1    | R129     | 401 024 7004 | CARBON 1K JA 1/6W   | 1    |
| Q103                     | 405 004 4502     | TR 2SA608-F-NP             | 1    | R130     | 401 024 7004 | CARBON 1K JA 1/6W   | 1    |
| Q104                     | 405 019 2708     | TR 2SC536-F-NP             | 1    | R131     | 401 025 8703 | CARBON 220K JA 1/6W | 1    |
| C101                     | 403 023 5807     | CERAMIC 330P K 50V         | 1    | R132     | 401 025 8703 | CARBON 220K JA 1/6W | 1    |
| C102                     | 403 023 5807     | CERAMIC 330P K 50V         | 1    | R133     | 401 024 7004 | CARBON 1K JA 1/6W   | 1    |
| C103                     | 403 023 5807     | CERAMIC 330P K 50V         | 1    | R134     | 401 024 7004 | CARBON 1K JA 1/6W   | 1    |
| C104                     | 403 023 5807     | CERAMIC 330P K 50V         | 1    | R135     | 401 027 9005 | CARBON 82K JA 1/6W  | 1    |
| C105                     | 403 047 1502     | ELECT 4.7U M 25V           | 1    | R136     | 401 027 9005 | CARBON 82K JA 1/6W  | 1    |
| C106                     | 403 047 1502     | ELECT 4.7U M 25V           | 1    | R137     | 401 016 2604 | CARBON 220 JA 1/4W  | 1    |
| C107                     | 403 018 8509     | CERAMIC 220P K 50V         | 1    | R138     | 401 016 2604 | CARBON 220 JA 1/4W  | 1    |
| C108                     | 403 018 8509     | CERAMIC 220P K 50V         | 1    | R141     | 401 020 0801 | CARBON 470 JA 1/4W  | 1    |
| C109                     | 403 039 2906     | ELECT 47U M 6.3V           | 1    | R142     | 401 026 4308 | CARBON 3.3K JA 1/6W | 1    |
| C110                     | 403 039 2906     | ELECT 47U M 6.3V           | 1    | R143     | 401 025 7805 | CARBON 2.2K JA 1/6W | 1    |
| C111                     | 403 059 0401     | POLYESTER 0.018U K 50V     | 1    | R144     | 401 025 0608 | CARBON 1.3K JA 1/6W | 1    |
| C112                     | 403 059 0401     | POLYESTER 0.018U K 50V     | 1    | R145     | 401 024 7400 | CARBON 10K JA 1/6W  | 1    |
| C113                     | 403 061 8709     | POLYESTER 4700P K 50V      | 1    | R146     | 401 024 6700 | CARBON 100 JA 1/6W  | 1    |
| C114                     | 403 061 8709     | POLYESTER 4700P K 50V      | 1    | R147     | 401 024 7707 | CARBON 100K JA 1/6W | 1    |
| C115                     | 403 047 1502     | ELECT 4.7U M 25V           | 1    | R148     | 401 024 7400 | CARBON 10K JA 1/6W  | 1    |
| C116                     | 403 047 1502     | ELECT 4.7U M 25V           | 1    | R149     | 401 024 7400 | CARBON 10K JA 1/6W  | 1    |
| C119                     | 403 045 0507     | ELECT 100U M 25V           | 1    | R150     | 401 024 7400 | CARBON 10K JA 1/6W  | 1    |
| C120                     | 403 045 0507     | ELECT 100U M 25V           | 1    | R151     | 401 024 7400 | CARBON 10K JA 1/6W  | 1    |
| C141                     | 403 074 2701     | CERAMIC 0.047U Z 50V       | 1    | R152     | 401 024 7400 | CARBON 10K JA 1/6W  | 1    |
| C143                     | 403 042 0302     | ELECT 10U M 16V            | 1    | R153     | 401 024 7400 | CARBON 10K JA 1/6W  | 1    |
| C144                     | 403 069 8404     | CERAMIC 0.01U Z 50V        | 1    | R154     | 401 024 7400 | CARBON 10K JA 1/6W  | 1    |
| C145                     | 403 043 3104     | ELECT 2200U M 16V          | 1    | R155     | 401 024 7400 | CARBON 10K JA 1/6W  | 1    |
| C146                     | 403 048 7602     | ELECT 0.47U M 50V          | 1    | R156     | 401 024 7400 | CARBON 10K JA 1/6W  | 1    |
| C147                     | 403 049 1609     | ELECT 1U M 50V             | 1    | R157     | 401 024 7400 | CARBON 10K JA 1/6W  | 1    |
| C148                     | 403 018 4204     | CERAMIC 22P K 50V          | 1    | R158     | 401 024 7400 | CARBON 10K JA 1/6W  | 1    |
| C149                     | 403 018 4204     | CERAMIC 22P K 50V          | 1    | R159     | 401 024 7400 | CARBON 10K JA 1/6W  | 1    |
| C150                     | 403 057 0908     | POLYESTER 0.01U K 50V      | 1    | R160     | 401 024 7400 | CARBON 10K JA 1/6W  | 1    |
| C151                     | 403 073 6502     | CERAMIC 470P K 50V         | 1    | R161     | 401 024 7400 | CARBON 10K JA 1/6W  | 1    |
| C152                     | 403 073 6502     | CERAMIC 470P K 50V         | 1    | R162     | 401 024 7400 | CARBON 10K JA 1/6W  | 1    |
| C153                     | 403 073 6502     | CERAMIC 470P K 50V         | 1    | R163     | 401 024 7400 | CARBON 10K JA 1/6W  | 1    |
| C154                     | 403 073 6502     | CERAMIC 470P K 50V         | 1    | R164     | 401 014 4105 | CARBON 1.5K JA 1/4W | 1    |
| C160                     | 403 074 2701     | CERAMIC 0.047U Z 50V       | 1    | R165     | 401 024 7400 | CARBON 10K JA 1/6W  | 1    |
| C161                     | 403 074 2701     | CERAMIC 0.047U Z 50V       | 1    | R166     | 401 024 7400 | CARBON 10K JA 1/6W  | 1    |
| C162                     | 403 074 2701     | CERAMIC 0.047U Z 50V       | 1    | R167     | 401 024 7400 | CARBON 10K JA 1/6W  | 1    |
| C163                     | 403 018 8509     | CERAMIC 220P K 50V         | 1    | R168     | 401 024 7400 | CARBON 10K JA 1/6W  | 1    |
| R101                     | 401 024 7004     | CARBON 1K JA 1/6W          | 1    | R169     | 401 024 7400 | CARBON 10K JA 1/6W  | 1    |
| R102                     | 401 024 7004     | CARBON 1K JA 1/6W          | 1    | R172     | 401 012 7009 | CARBON 10K JA 1/4W  | 1    |
| R103                     | 401 024 7707     | CARBON 100K JA 1/6W        | 1    | R173     | 401 024 7400 | CARBON 10K JA 1/6W  | 1    |
| R104                     | 401 024 7707     | CARBON 100K JA 1/6W        | 1    | R174     | 401 024 7400 | CARBON 10K JA 1/6W  | 1    |

# P.C.BOARD PARTS LIST (Continued)

| Ref. No.                | Part No.         | Description                               | Q'ty | Ref. No.                   | Part No.         | Description                           | Q'ty |
|-------------------------|------------------|-------------------------------------------|------|----------------------------|------------------|---------------------------------------|------|
| R175                    | 401 024 7400     | CARBON 10K JA 1/6W                        | 1    | R303                       | 401 026 9907     | CARBON 4.7K JA 1/6W                   | 1    |
| R176                    | 401 024 7400     | CARBON 10K JA 1/6W                        | 1    | R304                       | 401 026 9907     | CARBON 4.7K JA 1/6W                   | 1    |
| R177                    | 401 024 7400     | CARBON 10K JA 1/6W                        | 1    | R305                       | 401 024 7707     | CARBON 100K JA 1/6W                   | 1    |
| R178                    | 401 027 0507     | CARBON 470K JA 1/6W                       | 1    | R306                       | 401 024 7707     | CARBON 100K JA 1/6W                   | 1    |
| R179                    | 401 024 7400     | CARBON 10K JA 1/6W                        | 1    | R307                       | 401 024 7004     | CARBON 1K JA 1/6W                     | 1    |
| R180                    | 401 024 7400     | CARBON 10K JA 1/6W                        | 1    | R308                       | 401 024 7004     | CARBON 1K JA 1/6W                     | 1    |
| R181                    | 401 024 7400     | CARBON 10K JA 1/6W                        | 1    | R309                       | 401 027 3003     | CARBON 56K JA 1/6W                    | 1    |
| R182                    | 401 024 7400     | CARBON 10K JA 1/6W                        | 1    | R310                       | 401 027 3003     | CARBON 56K JA 1/6W                    | 1    |
| R183                    | 401 024 7400     | CARBON 10K JA 1/6W                        | 1    | R311                       | 401 025 8703     | CARBON 220K JA 1/6W                   | 1    |
| R184                    | 401 024 7400     | CARBON 10K JA 1/6W                        | 1    | R312                       | 401 025 8703     | CARBON 220K JA 1/6W                   | 1    |
| R185                    | 401 024 7707     | CARBON 100K JA 1/6W                       | 1    | R313                       | 401 025 8703     | CARBON 220K JA 1/6W                   | 1    |
| R186                    | 401 024 7707     | CARBON 100K JA 1/6W                       | 1    | R314                       | 401 025 8703     | CARBON 220K JA 1/6W                   | 1    |
| R187                    | 401 024 7707     | CARBON 100K JA 1/6W                       | 1    | R315                       | 401 025 4903     | CARBON 180K JA 1/6W                   | 1    |
|                         |                  |                                           |      | R316                       | 401 025 4903     | CARBON 180K JA 1/6W                   | 1    |
|                         |                  |                                           |      | R317                       | 401 025 1902     | CARBON 15K JA 1/6W                    | 1    |
|                         |                  |                                           |      | R318                       | 401 014 5201     | CARBON 15K JA 1/4W                    | 1    |
|                         |                  |                                           |      | R319                       | 401 025 7805     | CARBON 2.2K JA 1/6W                   | 1    |
|                         |                  |                                           |      | R320                       | 401 025 7805     | CARBON 2.2K JA 1/6W                   | 1    |
|                         |                  |                                           |      | R321                       | 401 025 1902     | CARBON 15K JA 1/6W                    | 1    |
|                         |                  |                                           |      | R322                       | 401 025 1902     | CARBON 15K JA 1/6W                    | 1    |
|                         |                  |                                           |      | R323                       | 401 026 9600     | CARBON 470 JA 1/6W                    | 1    |
|                         |                  |                                           |      | R324                       | 401 026 9600     | CARBON 470 JA 1/6W                    | 1    |
|                         |                  |                                           |      | R325                       | 401 018 2800     | CARBON 330 JA 1/4W                    | 1    |
|                         |                  |                                           |      | R326                       | 401 018 2800     | CARBON 330 JA 1/4W                    | 1    |
|                         |                  |                                           |      | R331                       | 401 024 7004     | CARBON 1K JA 1/6W                     | 1    |
|                         |                  |                                           |      | R332                       | 401 024 7004     | CARBON 1K JA 1/6W                     | 1    |
| <b>TONE P.C.B. ASSY</b> |                  |                                           |      | <b>CONTROL P.C.B. ASSY</b> |                  |                                       |      |
| 45                      | 141-0-1939-23340 | Tone P.C.B. Assy                          | 1    | 46                         | 141-0-1939-23350 | Control P.C.B. Assy                   | 1    |
| PC303                   | 4-2352-02363     | Connector 8P Assy                         | 1    |                            | 4-2359-79637     | Connector 1P Assy                     | 1    |
| PC305                   | 131-0-4006-31407 | Cord Assy                                 | 1    |                            | 4-2369-70740     | Pin RT                                | 3    |
| S301                    | 4-2319-77780     | Switch Push 1 key (TAPE-2 Monitor)        | 1    |                            | 131-2-4208-28000 | Spacer                                | 1    |
| VR301                   | 4-2229-77200     | Slide Volume (C-100k $\Omega$ x2, BASS)   | 1    |                            | 131-2-4208-49500 | Spacer                                | 1    |
| VR302                   | 4-2229-77200     | Slide Volume (C-100k $\Omega$ x2, TREBLE) | 1    |                            | 141-2-3229-62000 | Cover Shield                          | 1    |
| IC301                   | 409 070 4800     | IC NJM2068DD                              | 1    | CN203                      | 131-0-4006-31405 | Cord Assy                             | 1    |
| or                      | 409 018 4503     | IC LA6458DS                               | 1    | CN204                      | 4-2352-02958     | Connector 4P Assy                     | 1    |
| or                      | 409 057 4601     | IC UPC4570HA                              | 1    | CN205                      | 4-2352-02959     | Connector 4P Assy                     | 1    |
| IC302                   | 409 053 1901     | IC TC9177P                                | 1    | S201                       | 4-2319-78471     | Tact Switch (POWER STANDBY)           | 1    |
| Q301                    | 405 010 9706     | TR 2SC1571-G-NP                           | 1    | S202                       | 4-2319-78471     | Tact Switch (MUTING)                  | 1    |
| Q302                    | 405 010 9706     | TR 2SC1571-G-NP                           | 1    | S203                       | 4-2319-78471     | Tact Switch (LOUDNESS)                | 1    |
| C301                    | 403 047 1809     | ELECT 4.7U M 25V                          | 1    | S204                       | 4-2312-05300     | Keyboard Switch 6mm (PHONO)           | 1    |
| C302                    | 403 047 1809     | ELECT 4.7U M 25V                          | 1    | S205                       | 4-2312-05300     | Keyboard Switch 6mm (TUNER)           | 1    |
| C303                    | 403 038 5908     | ELECT 22U M 6.3V                          | 1    | S206                       | 4-2312-05300     | Keyboard Switch 6mm (COMPACT DISC)    | 1    |
| C304                    | 403 038 5908     | ELECT 22U M 6.3V                          | 1    | S207                       | 4-2312-05300     | Keyboard Switch 6mm (VIDEO/AUX)       | 1    |
| C305                    | 403 047 1809     | ELECT 4.7U M 25V                          | 1    | S208                       | 4-2312-05300     | Keyboard Switch 6mm (TAPE-1, Monitor) | 1    |
| C306                    | 403 047 1809     | ELECT 4.7U M 25V                          | 1    | D201                       | 407 005 3805     | DIODE DS442-BT                        | 1    |
| C307                    | 403 047 1809     | ELECT 4.7U M 25V                          | 1    | D205                       | 407 065 0905     | PHOTO DIODE SPS-501C-1                | 1    |
| C308                    | 403 047 1809     | ELECT 4.7U M 25V                          | 1    | D206                       | 407 063 2109     | LED SLR-54VT3 (POWER STANDBY)         | 1    |
| C309                    | 403 047 1809     | ELECT 4.7U M 25V                          | 1    | IC201                      | 409 056 9409     | IC UPC1490HA                          | 1    |
| C310                    | 403 047 1809     | ELECT 4.7U M 25V                          | 1    | Q201                       | 405 019 2708     | TR 2SC536-F-NP                        | 1    |
| C311                    | 403 067 7201     | MT-COMPO 0.033U J 50V                     | 1    | Q202                       | 405 019 2708     | TR 2SC536-F-NP                        | 1    |
| C312                    | 403 067 7201     | MT-COMPO 0.033U J 50V                     | 1    | C201                       | 403 038 2709     | ELECT 100U M 6.3V                     | 1    |
| C313                    | 403 071 1806     | CERAMIC 180P K 50V                        | 1    | C202                       | 403 072 8200     | CERAMIC 330P K 50V                    | 1    |
| C314                    | 403 071 1806     | CERAMIC 180P K 50V                        | 1    | C203                       | 403 046 3101     | ELECT 3.3U M 25V                      | 1    |
| C315                    | 403 068 9105     | CERAMIC 100P K 50V                        | 1    | C204                       | 403 048 3406     | ELECT 0.22U M 50V                     | 1    |
| C316                    | 403 068 9105     | CERAMIC 100P K 50V                        | 1    | C205                       | 403 038 2709     | ELECT 100U M 6.3V                     | 1    |
| C317                    | 403 068 9105     | CERAMIC 100P K 50V                        | 1    | R201                       | 401 012 4503     | CARBON 100 JA 1/4W                    | 1    |
| C318                    | 403 068 9105     | CERAMIC 100P K 50V                        | 1    | R202                       | 401 024 7400     | CARBON 10K JA 1/6W                    | 1    |
| C319                    | 403 071 5903     | CERAMIC 220P K 50V                        | 1    | R203                       | 401 025 3500     | CARBON 160K JA 1/6W                   | 1    |
| C320                    | 403 071 5903     | CERAMIC 220P K 50V                        | 1    | R204                       | 401 026 8108     | CARBON 4.7 JA 1/6W                    | 1    |
| C321                    | 403 047 1809     | ELECT 4.7U M 25V                          | 1    | R205                       | 401 020 0801     | CARBON 470 JA 1/4W                    | 1    |
| C322                    | 403 047 1809     | ELECT 4.7U M 25V                          | 1    | R206                       | 401 013 7305     | CARBON 120K JA 1/4W                   | 1    |
| C323                    | 403 042 0807     | ELECT 10U M 16V                           | 1    | R207                       | 401 027 0309     | CARBON 47K JA 1/6W                    | 1    |
| C324                    | 403 042 0807     | ELECT 10U M 16V                           | 1    | R208                       | 401 024 7707     | CARBON 100K JA 1/6W                   | 1    |
| C325                    | 403 059 5802     | POLYESTER 0.022U J 50V                    | 1    | R209                       | 401 024 7707     | CARBON 100K JA 1/6W                   | 1    |
| C326                    | 403 059 5802     | POLYESTER 0.022U J 50V                    | 1    |                            |                  |                                       |      |
| C327                    | 403 067 6204     | MT-COMPO 0.15U J 50V                      | 1    |                            |                  |                                       |      |
| C328                    | 403 067 6204     | MT-COMPO 0.15U J 50V                      | 1    |                            |                  |                                       |      |
| C329                    | 403 061 2103     | POLYESTER 3900P J 50V                     | 1    |                            |                  |                                       |      |
| C330                    | 403 061 2103     | POLYESTER 3900P J 50V                     | 1    |                            |                  |                                       |      |
| C331                    | 403 060 2203     | POLYESTER 0.027U J 50V                    | 1    |                            |                  |                                       |      |
| C332                    | 403 060 2203     | POLYESTER 0.027U J 50V                    | 1    |                            |                  |                                       |      |
| C333                    | 403 044 0706     | ELECT 47U M 16V                           | 1    |                            |                  |                                       |      |
| C334                    | 403 044 0706     | ELECT 47U M 16V                           | 1    |                            |                  |                                       |      |
| C340                    | 403 024 8203     | CERAMIC 390P K 50V                        | 1    |                            |                  |                                       |      |
| C341                    | 403 018 8509     | CERAMIC 220P K 50V                        | 1    |                            |                  |                                       |      |
| R301                    | 401 025 2305     | CARBON 150K JA 1/6W                       | 1    |                            |                  |                                       |      |
| R302                    | 401 025 2305     | CARBON 150K JA 1/6W                       | 1    |                            |                  |                                       |      |

## P.C. BOARD PARTS LIST (Continued)

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# P.C.BOARD PARTS LIST(Continued)

| Ref. No. | Part No.     | Description         | Q'ty | Ref. No. | Part No.     | Description            | Q'ty |
|----------|--------------|---------------------|------|----------|--------------|------------------------|------|
| D527     | 407 004 9105 | DIODE DSF10C-BT     | 1    | C530     | 4-2239-72120 | Ceram 220PF 500V K     | 1    |
| or       | 407 060 9606 | DIODE 11E2          | 1    | C531     | 403 061 4404 | POLYESTER 0.039U K 50V | 1    |
| D529     | 407 005 4703 | DIODE DS446         | 1    | C532     | 403 061 4404 | POLYESTER 0.039U K 50V | 1    |
| D530     | 407 005 4703 | DIODE DS446         | 1    | C533     | 403 085 3407 | NP-ELECT 47U M 10V     | 1    |
| D531     | 407 005 4703 | DIODE DS446         | 1    | C534     | 403 044 8207 | ELECT 10U M 25V        | 1    |
| D532     | 407 005 4703 | DIODE DS446         | 1    | C537     | 403 041 3304 | ELECT 47U M 10V        | 1    |
| D533     | 407 061 3207 | DIODE 30D2          | 1    | C538     | 403 039 4504 | ELECT 470U M 6.3V      | 1    |
| D534     | 407 061 3207 | DIODE 30D2          | 1    | C539     | 403 044 8207 | ELECT 10U M 25V        | 1    |
| D535     | 407 003 5504 | DIODE DBA10C        | 1    | C541     | 403 044 8207 | ELECT 10U M 25V        | 1    |
| D536     | 407 049 6503 | ZENER DIODE GZA13X  | 1    | C542     | 403 044 8207 | ELECT 10U M 25V        | 1    |
| Q501     | 405 011 0306 | TR 2SC1583-F        | 1    | C543     | 403 044 8207 | ELECT 10U M 25V        | 1    |
| Q502     | 405 011 0306 | TR 2SC1583-F        | 1    | C544     | 403 044 8207 | ELECT 10U M 25V        | 1    |
| Q503     | 405 004 4502 | TR 2SA608-F-NP      | 1    | C545     | 403 045 0507 | ELECT 100U M 25V       | 1    |
| Q504     | 405 004 4502 | TR 2SA608-F-NP      | 1    | C546     | 403 045 0507 | ELECT 100U M 25V       | 1    |
| Q505     | 405 013 7600 | TR 2SC2291-F        | 1    | C547     | 404 012 5709 | ELECT 4700U M 40V      | 1    |
| Q506     | 405 013 7600 | TR 2SC2291-F        | 1    | C548     | 404 012 5709 | ELECT 4700U M 40V      | 1    |
| Q507     | 405 002 9103 | TR 2SA1209-S        | 1    | C549     | 404 012 6904 | CERAMIC 0.047U Z 150V  | 1    |
| Q508     | 405 002 9103 | TR 2SA1209-S        | 1    | C550     | 404 012 6904 | CERAMIC 0.047U Z 150V  | 1    |
| Q509     | 405 016 3906 | TR 2SC2911-S        | 1    | C551     | 404 012 6904 | CERAMIC 0.047U Z 150V  | 1    |
| Q510     | 405 016 3906 | TR 2SC2911-S        | 1    | C552     | 404 012 6904 | CERAMIC 0.047U Z 150V  | 1    |
| Q511     | 405 017 2502 | TR 2SC3117-R        | 1    | C553     | 404 012 6904 | CERAMIC 0.047U Z 150V  | 1    |
| Q512     | 405 017 2502 | TR 2SC3117-R        | 1    | C554     | 404 012 6904 | CERAMIC 0.047U Z 150V  | 1    |
| Q513     | 405 003 1502 | TR 2SA1249-R        | 1    | C555     | 404 012 6904 | CERAMIC 0.047U Z 150V  | 1    |
| Q514     | 405 003 1502 | TR 2SA1249-R        | 1    | C556     | 404 012 6904 | CERAMIC 0.047U Z 150V  | 1    |
| Q519     | 405 019 2708 | TR 2SC536-F-NP      | 1    | C557     | 4-2239-70970 | Capacitor 0.01MF400V   | 1    |
| Q520     | 405 019 2708 | TR 2SC536-F-NP      | 1    | C558     | 403 043 4903 | ELECT 33U M 16V        | 1    |
| Q521     | 405 003 7900 | TR 2SA1348          | 1    | C559     | 404 031 7302 | ELECT 8200U M 85V      | 1    |
| or       | 405 034 6804 | TR DTA114-ES        | 1    | C560     | 404 031 7302 | ELECT 8200U M 85V      | 1    |
| Q522     | 405 004 4502 | TR 2SA608-F-NP      | 1    | C562     | 403 049 1609 | ELECT 1U M 50V         | 1    |
| Q523     | 405 019 2708 | TR 2SC536-F-NP      | 1    | C563     | 4-2239-72120 | Ceram 220PF 500V K     | 1    |
| Q526     | 405 007 5100 | TR 2SB560-E-MP      | 1    | C564     | 4-2239-72120 | Ceram 220PF 500V K     | 1    |
| Q527     | 405 019 2708 | TR 2SC536-F-NP      | 1    | C565     | 403 075 8504 | CERAMIC 120P K 500V    | 1    |
| Q529     | 405 016 2206 | TR 2SC2878-A        | 1    | C566     | 403 075 8504 | CERAMIC 120P K 500V    | 1    |
| Q530     | 405 016 2206 | TR 2SC2878-A        | 1    | C567     | 403 067 5603 | MT-COMPO 0.1U J 50V    | 1    |
| Q531     | 405 019 2708 | TR 2SC536-F-NP      | 1    | C568     | 403 067 5603 | MT-COMPO 0.1U J 50V    | 1    |
| Q541     | 405 013 6801 | TR 2SC2274-E        | 1    | C570     | 403 049 5409 | ELECT 10U M 50V        | 1    |
| Q542     | 405 006 6504 | TR 2SA984-E         | 1    | C571     | 403 074 2701 | CERAMIC 0.047U Z 50V   | 1    |
| Q543     | 405 007 7906 | TR 2SB631-E         | 1    | C572     | 403 074 2701 | CERAMIC 0.047U Z 50V   | 1    |
| Q544     | 405 024 2809 | TR 2SD600-E         | 1    | C573     | 403 074 2701 | CERAMIC 0.047U Z 50V   | 1    |
| C501     | 403 071 5903 | CERAMIC 220P K 50V  | 1    | C574     | 403 074 2701 | CERAMIC 0.047U Z 50V   | 1    |
| C502     | 403 071 5903 | CERAMIC 220P K 50V  | 1    | C575     | 403 050 9908 | ELECT 330U M 50V       | 1    |
| C503     | 403 047 1502 | ELECT 4.7U M 25V    | 1    | R501     | 401 024 7004 | CARBON 1K JA 1/6W      | 1    |
| C504     | 403 047 1502 | ELECT 4.7U M 25V    | 1    | R502     | 401 024 7004 | CARBON 1K JA 1/6W      | 1    |
| C505     | 403 023 5807 | CERAMIC 330P K 50V  | 1    | R503     | 401 024 7707 | CARBON 100K JA 1/6W    | 1    |
| C506     | 403 023 5807 | CERAMIC 330P K 50V  | 1    | R504     | 401 024 7707 | CARBON 100K JA 1/6W    | 1    |
| C507     | 403 023 5807 | CERAMIC 330P K 50V  | 1    | R505     | 401 027 2600 | CARBON 5.6K JA 1/6W    | 1    |
| C508     | 403 023 5807 | CERAMIC 330P K 50V  | 1    | R506     | 401 027 2600 | CARBON 5.6K JA 1/6W    | 1    |
| C509     | 403 039 2906 | ELECT 47U M 6.3V    | 1    | R507     | 401 027 5908 | CARBON 68K JA 1/6W     | 1    |
| C510     | 403 039 2906 | ELECT 47U M 6.3V    | 1    | R508     | 401 027 5908 | CARBON 68K JA 1/6W     | 1    |
| C511     | 4-2239-71190 | Capacitor 27PF 500V | 1    | R509     | 401 025 6204 | CARBON 2K JA 1/6W      | 1    |
| C512     | 4-2239-71190 | Capacitor 27PF 500V | 1    | R510     | 401 025 6204 | CARBON 2K JA 1/6W      | 1    |
| C513     | 4-2239-72020 | Ceram 3 PF 500V     | 1    | R511     | 401 027 8602 | CARBON 8.2K JA 1/6W    | 1    |
| C514     | 4-2239-72020 | Ceram 3 PF 500V     | 1    | R512     | 401 027 8602 | CARBON 8.2K JA 1/6W    | 1    |
| C515     | 403 067 5603 | MT-COMPO 0.1U J 50V | 1    | R513     | 401 027 2105 | CARBON 56 JA 1/6W      | 1    |
| C516     | 403 067 5603 | MT-COMPO 0.1U J 50V | 1    | R514     | 401 027 2105 | CARBON 56 JA 1/6W      | 1    |
| C517     | 4-2239-71120 | Capacitor 18PF 500V | 1    | R515     | 401 026 7408 | CARBON 39K JA 1/6W     | 1    |
| C518     | 4-2239-71120 | Capacitor 18PF 500V | 1    | R516     | 401 026 7408 | CARBON 39K JA 1/6W     | 1    |
| C519     | 403 054 9706 | ELECT 47U M 100V    | 1    | R517     | 401 027 8602 | CARBON 8.2K JA 1/6W    | 1    |
| C520     | 403 054 9706 | ELECT 47U M 100V    | 1    | R518     | 401 027 8602 | CARBON 8.2K JA 1/6W    | 1    |
| C521     | 403 054 9706 | ELECT 47U M 100V    | 1    | R519     | 401 027 2105 | CARBON 56 JA 1/6W      | 1    |
| C522     | 403 054 9706 | ELECT 47U M 100V    | 1    | R520     | 401 027 2105 | CARBON 56 JA 1/6W      | 1    |
| C523     | 403 049 1609 | ELECT 1U M 50V      | 1    | R521     | 401 026 4605 | CARBON 33K JA 1/6W     | 1    |
| C524     | 403 049 1609 | ELECT 1U M 50V      | 1    | R522     | 401 026 4605 | CARBON 33K JA 1/6W     | 1    |
| C527     | 4-2239-72120 | Ceram 220PF 500V K  | 1    | R523     | 402 015 5603 | FUSIBLE RES 82 J- 1/4W | 1    |
| C528     | 4-2239-72120 | Ceram 220PF 500V K  | 1    | R524     | 402 015 5603 | FUSIBLE RES 82 J- 1/4W | 1    |
| C529     | 4-2239-72120 | Ceram 220PF 500V K  | 1    | R525     | 402 015 9700 | FUSIBLE RES 82 J- 1/4W | 1    |

# P.C.BOARD PARTS LIST (Continued)

| Ref. No. | Part No.     | Description             | Q'ty | Ref. No. | Part No.     | Description        | Q'ty |
|----------|--------------|-------------------------|------|----------|--------------|--------------------|------|
| R526     | 402 015 5603 | FUSIBLE RES 82 J- 1/4W  | 1    | R702     | 401 069 3009 | OXIDE-MT 680 JA 2W | 1    |
| R527     | 402 015 3005 | FUSIBLE RES 10 J- 1/4W  | 1    | R703     | 401 017 0807 | CARBON 270 JA 1/4W | 1    |
| R528     | 402 015 3005 | FUSIBLE RES 10 J- 1/4W  | 1    | R704     | 401 017 0807 | CARBON 270 JA 1/4W | 1    |
| R529     | 402 015 3005 | FUSIBLE RES 10 J- 1/4W  | 1    | R705     | 401 017 0807 | CARBON 270 JA 1/4W | 1    |
| R530     | 402 015 3005 | FUSIBLE RES 10 J- 1/4W  | 1    | R706     | 401 017 0807 | CARBON 270 JA 1/4W | 1    |
| R531     | 402 015 9205 | FUSIBLE RES 47 J- 1/4W  | 1    |          |              |                    |      |
| R532     | 402 015 9205 | FUSIBLE RES 47 J- 1/4W  | 1    |          |              |                    |      |
| R533     | 402 015 4705 | FUSIBLE RES 47 J- 1/4W  | 1    |          |              |                    |      |
| R534     | 402 015 9205 | FUSIBLE RES 47 J- 1/4W  | 1    |          |              |                    |      |
| R535     | 402 015 8406 | FUSIBLE RES 2.2 J- 1/4W | 1    |          |              |                    |      |
| R536     | 402 015 3708 | FUSIBLE RES 2.2 J- 1/4W | 1    |          |              |                    |      |
| R537     | 402 015 8406 | FUSIBLE RES 2.2 J- 1/4W | 1    |          |              |                    |      |
| R538     | 402 015 8406 | FUSIBLE RES 2.2 J- 1/4W | 1    |          |              |                    |      |
| R539     | 401 027 5908 | CARBON 68K JA 1/6W      | 1    |          |              |                    |      |
| R540     | 401 027 5908 | CARBON 68K JA 1/6W      | 1    |          |              |                    |      |
| R541     | 402 016 5107 | FUSIBLE RES 330 J- 1/2W | 1    |          |              |                    |      |
| R542     | 402 016 5107 | FUSIBLE RES 330 J- 1/2W | 1    |          |              |                    |      |
| R543     | 4-2219-70370 | Cement 0.22X2 5W        | 1    |          |              |                    |      |
| R544     | 4-2219-70370 | Cement 0.22X2 5W        | 1    |          |              |                    |      |
| R545     | 401 019 6203 | CARBON 4.7 JA 1/4W      | 1    |          |              |                    |      |
| R546     | 401 019 6203 | CARBON 4.7 JA 1/4W      | 1    |          |              |                    |      |
| R547     | 401 058 1207 | OXIDE-MT 10 JB 1W       | 1    |          |              |                    |      |
| R548     | 401 058 1207 | OXIDE-MT 10 JB 1W       | 1    |          |              |                    |      |
| R549     | 401 027 3003 | CARBON 56K JA 1/6W      | 1    |          |              |                    |      |
| R550     | 401 027 3003 | CARBON 56K JA 1/6W      | 1    |          |              |                    |      |
| R551     | 401 025 4606 | CARBON 18K JA 1/6W      | 1    |          |              |                    |      |
| R553     | 401 024 7400 | CARBON 10K JA 1/6W      | 1    |          |              |                    |      |
| R554     | 401 020 2904 | CARBON 47K JA 1/4W      | 1    |          |              |                    |      |
| R557     | 401 012 5708 | CARBON 1K JA 1/4W       | 1    |          |              |                    |      |
| R558     | 401 055 1804 | OXIDE-MT 150 JB 1/2W    | 1    |          |              |                    |      |
| R559     | 401 018 2800 | CARBON 330 JA 1/4W      | 1    |          |              |                    |      |
| R560     | 401 018 2800 | CARBON 330 JA 1/4W      | 1    |          |              |                    |      |
| R561     | 401 012 5708 | CARBON 1K JA 1/4W       | 1    |          |              |                    |      |
| R562     | 401 012 5708 | CARBON 1K JA 1/4W       | 1    |          |              |                    |      |
| R563     | 402 016 5305 | FUSIBLE RES 390 J- 1/2W | 1    |          |              |                    |      |
| R566     | 401 024 7400 | CARBON 10K JA 1/6W      | 1    |          |              |                    |      |
| R567     | 401 062 2405 | OXIDE-MT 4.7K JB 1W     | 1    |          |              |                    |      |
| R569     | 401 024 7400 | CARBON 10K JA 1/6W      | 1    |          |              |                    |      |
| R570     | 401 024 7400 | CARBON 10K JA 1/6W      | 1    |          |              |                    |      |
| R571     | 401 027 0507 | CARBON 470K JA 1/6W     | 1    |          |              |                    |      |
| R572     | 401 027 0507 | CARBON 470K JA 1/6W     | 1    |          |              |                    |      |
| R573     | 401 021 3009 | CARBON 5.6K JA 1/4W     | 1    |          |              |                    |      |
| R574     | 401 021 3009 | CARBON 5.6K JA 1/4W     | 1    |          |              |                    |      |
| R575     | 401 022 1905 | CARBON 680 JA 1/4W      | 1    |          |              |                    |      |
| R576     | 401 022 1905 | CARBON 680 JA 1/4W      | 1    |          |              |                    |      |
| R577     | 401 013 5301 | CARBON 1.2K JA 1/4W     | 1    |          |              |                    |      |
| R578     | 401 013 5301 | CARBON 1.2K JA 1/4W     | 1    |          |              |                    |      |
| R579     | 401 015 2704 | CARBON 1.8K JA 1/4W     | 1    |          |              |                    |      |
| R580     | 401 015 2704 | CARBON 1.8K JA 1/4W     | 1    |          |              |                    |      |
| R582     | 401 013 5301 | CARBON 1.2K JA 1/4W     | 1    |          |              |                    |      |
| R587     | 401 099 2706 | OXIDE-MT 1.8K JB 1W     | 1    |          |              |                    |      |
| R588     | 401 099 2706 | OXIDE-MT 1.8K JB 1W     | 1    |          |              |                    |      |

## SPEAKER TERMINAL P.C.B. ASSY

|      |                  |                              |   |
|------|------------------|------------------------------|---|
| 54   | 141-0-1939-23430 | Speaker Terminal P.C.B. Assy | 1 |
|      | 4-2372-01160     | SP 8P Terminal (SPEAKERS)    | 1 |
| W702 | 4-2439-73065     | Wire 2 Parallel              | 1 |
| C703 | 403 069 1504     | CERAMIC 1000P K 50V          | 1 |
| C704 | 403 069 1504     | CERAMIC 1000P K 50V          | 1 |
| C705 | 403 069 1504     | CERAMIC 1000P K 50V          | 1 |
| C706 | 403 069 1504     | CERAMIC 1000P K 50V          | 1 |

## BIAS P.C.B. ASSY

|      |                  |                  |   |
|------|------------------|------------------|---|
| 55   | 141-0-1939-20450 | Bias P.C.B. Assy | 2 |
| D601 | 407 008 0405     | DIODE GMB01-BT   | 1 |
| Q601 | 405 026 0803     | TR 2SD947        | 1 |

## LAMP P.C.B. ASSY

|    |                  |                    |   |
|----|------------------|--------------------|---|
| 56 | 141-0-1939-23290 | Lamp P.C.B. Assy   | 1 |
|    | 111-2-6220-11100 | Wire Wrap Terminal | 4 |

## TRANSISTOR (SUB) P.C.B. ASSY

|      |                  |                              |   |
|------|------------------|------------------------------|---|
| 57   | 141-0-1939-23520 | Transistor (SUB) P.C.B. Assy | 1 |
| Q537 | 405 022 1101     | TR 2SD1266-P                 | 1 |

## TRANSISTOR (+) P.C.B. ASSY

|      |                  |                             |   |
|------|------------------|-----------------------------|---|
| 58   | 141-0-1939-23560 | Transistor (+B) P.C.B. Assy | 1 |
| Q525 | 405 022 1101     | TR 2SD1266-P                | 1 |

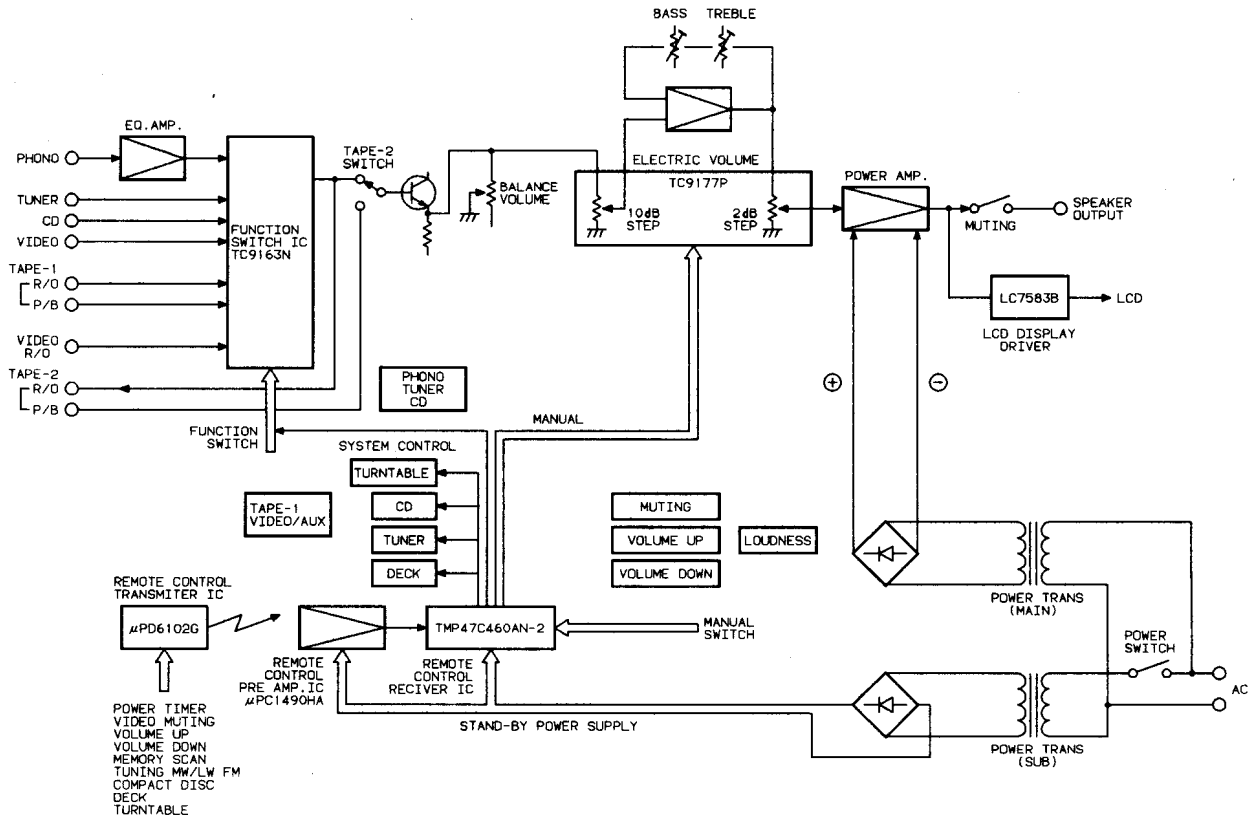
## NOTES:

- Parts order must contain Model Number, Part Number and Description.
- Ordering quantity of screws and resistors must be multiple of 10 pcs.

## POWER SW. P.C.B. ASSY

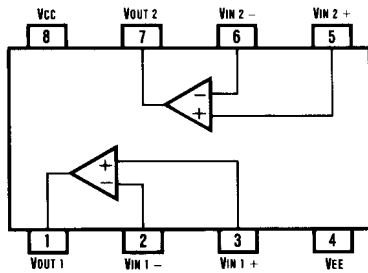
|      |                  |                                |   |
|------|------------------|--------------------------------|---|
| 53   | 141-0-1939-23420 | Power SW. P.C.B. Assy          | 1 |
|      | 4-2352-00970     | Headphone Jack 3P (HEADPHONES) | 1 |
|      | 4-2372-00830     | EC Terminal 1P                 | 2 |
|      | 111-2-6220-11100 | Wire Wrap Terminal             | 3 |
|      | 131-2-6114-00200 | Cover Safety                   | 1 |
| W701 | 4-2439-73063     | Wire 6 Parallel                | 1 |
| S701 | △ 4-2312-05710   | SW Push Power (POWER)          | 1 |
| S702 | 4-2319-77341     | SW Push 1 key (SPEAKER A)      | 1 |
| S703 | 4-2319-77341     | SW Push 1 key (SPEAKER B)      | 1 |
| C701 | △ 4-2239-71040   | Capacitor 1000P 400V           | 1 |
| R701 | 401 069 3009     | OXIDE-MT 680 JA 2W             | 1 |

# FUNCTIONAL BLOCK DIAGRAM

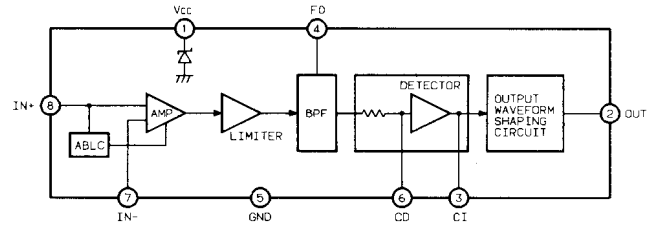


# INTEGRATED CIRCUIT BLOCK DIAGRAM

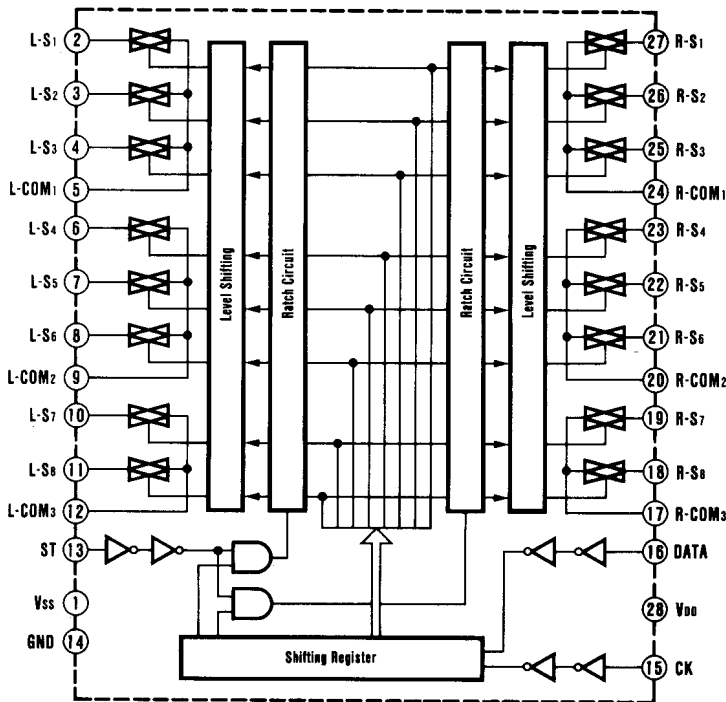
PHONO EQ. / TONE CONTROL AMP IC NJM 2068 DD



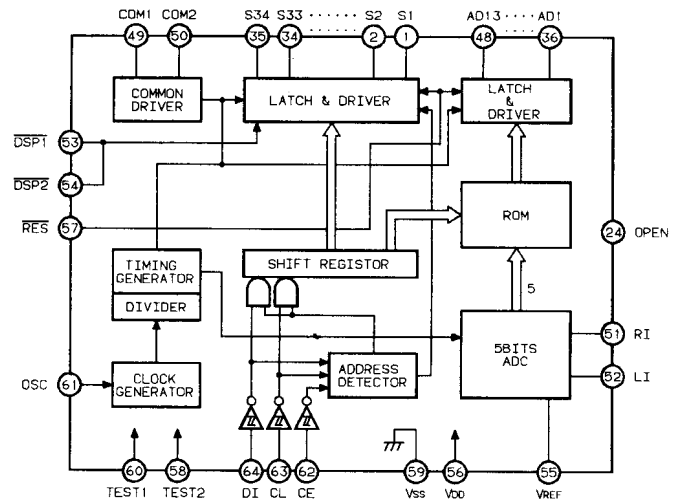
REMOTE CONTROL PRE AMP IC  $\mu$ PC 1490 HA



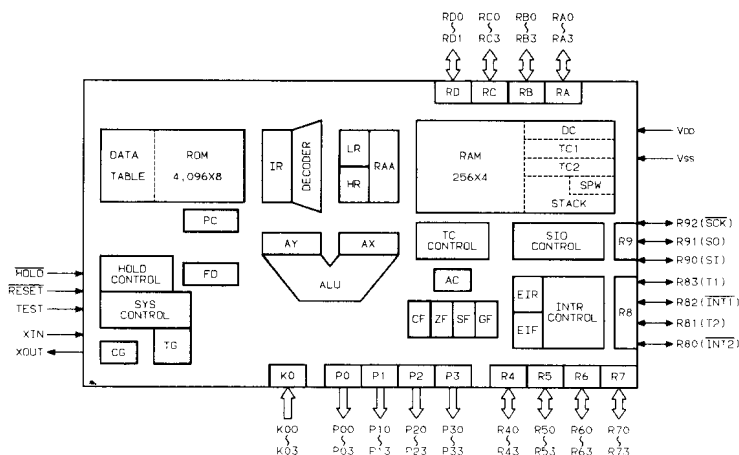
FUNCTION ANALOG SWITCH IC TC 9163 N



LCD DISPLAY DRIVER AMP IC LC 7583 B

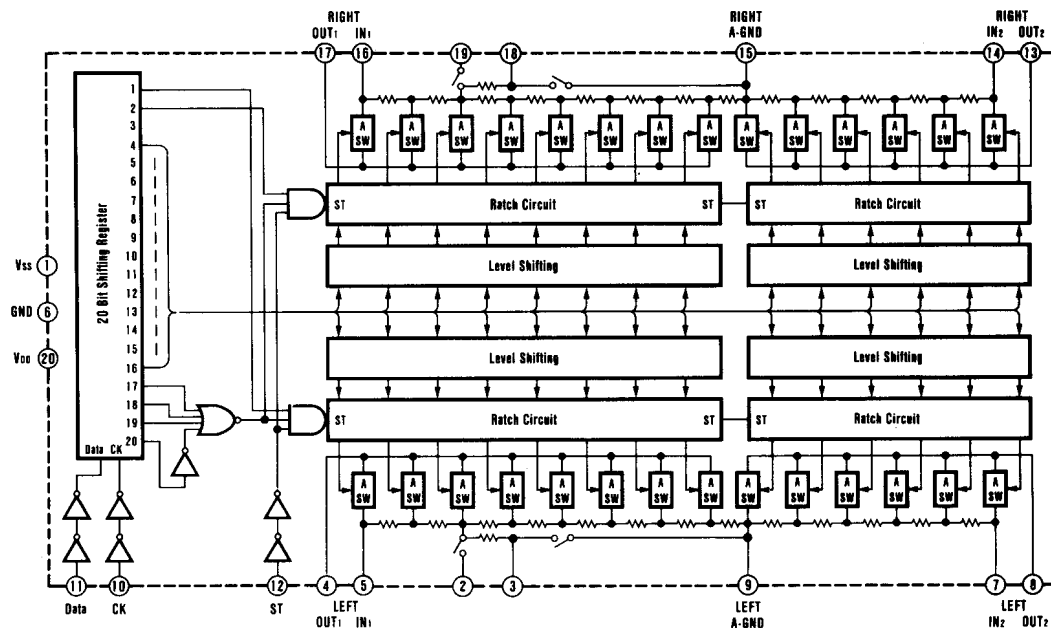


REMOTE CONTROL RECEIVER IC TMP 47C460AN-2

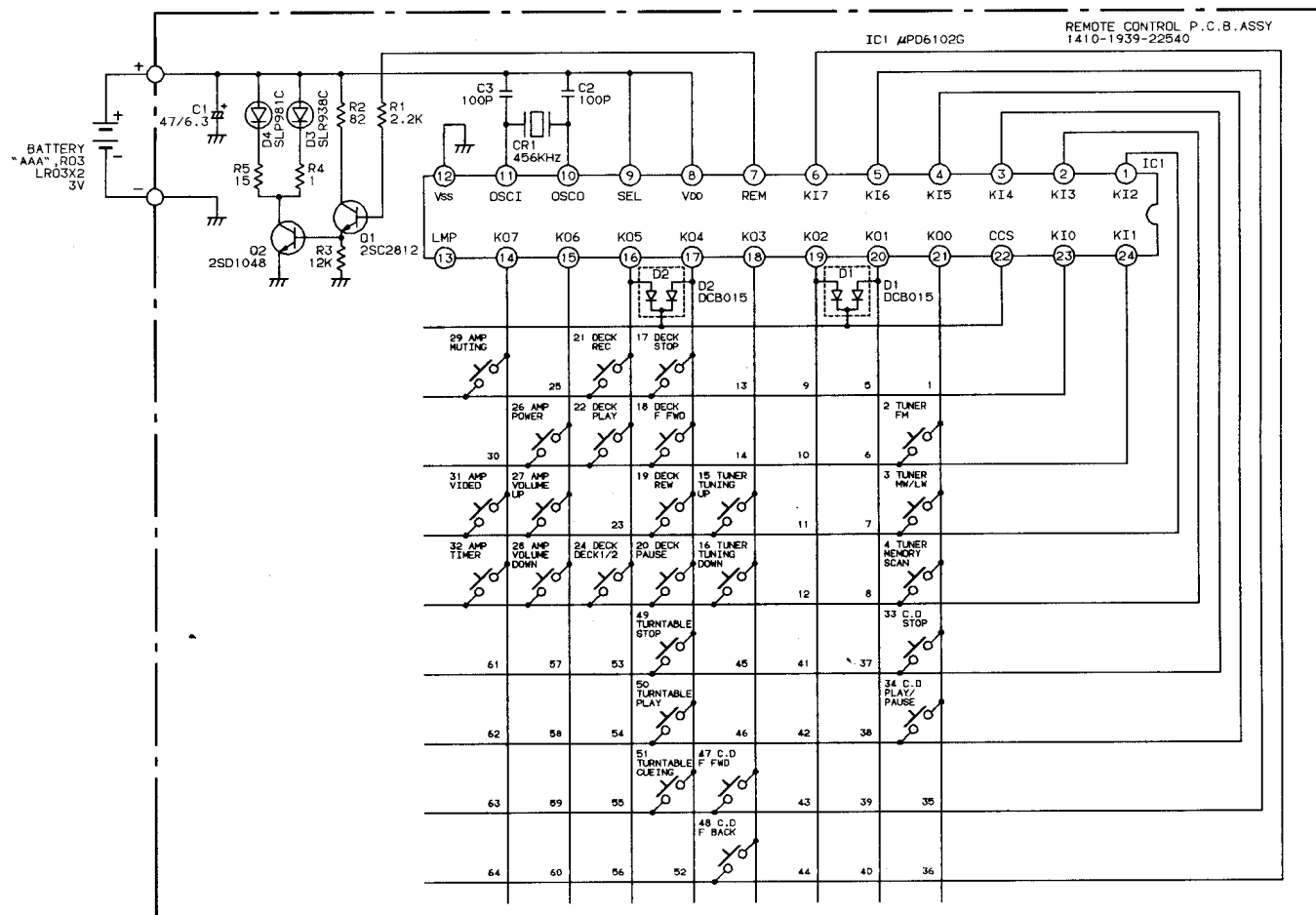


## INTEGRATED CIRCUIT BLOCK DIAGRAM(Continued)

## ELECTRONIC VOLUME (with Loudness) IC TC 9177P

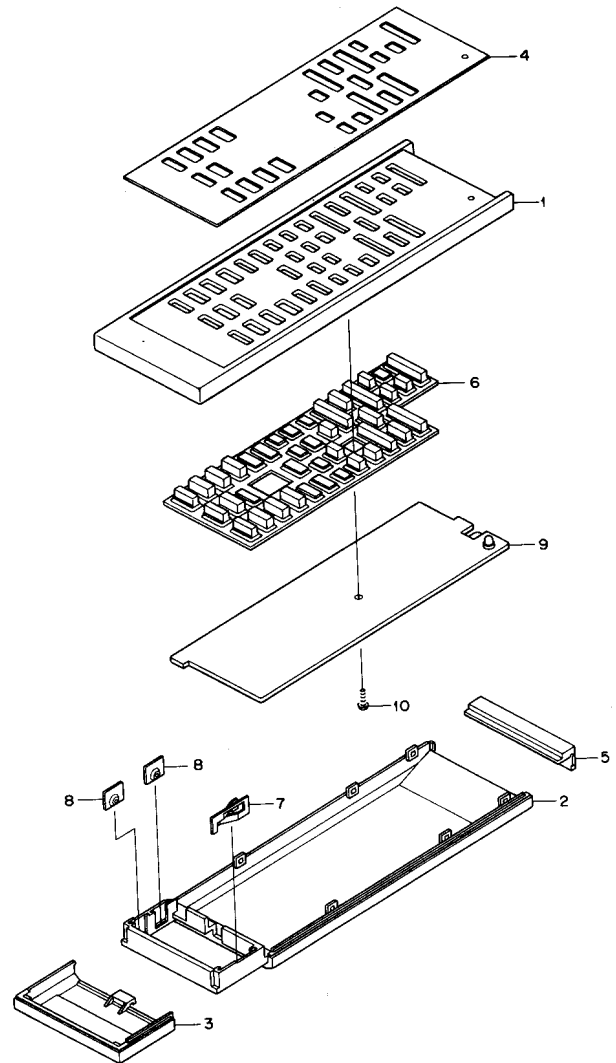


### SCHEMATIC DIAGRAM (REMOTE CONTROL)



# PARTS LIST & EXPLODED VIEW (REMOTE CONTROL)

| Ref. No.                          | Part No.         | Description                | Q'ty |
|-----------------------------------|------------------|----------------------------|------|
| <b>REMOTE CONTROL CABINET</b>     |                  |                            |      |
|                                   | 4-1929-70266     | REM-874 (Remote Control)   | 1    |
| 1                                 | 131-2-1101-53300 | Cabinet Top                | 1    |
| 2                                 | 131-2-1101-53400 | Cabinet Bottom             | 1    |
| 3                                 | 131-2-1107-27800 | Lid Battery                | 1    |
| 4                                 | 131-2-1110-43006 | Plate Decorate             | 1    |
| 5                                 | 131-2-6308-26700 | Filter                     | 1    |
| 6                                 | 141-2-1669-02601 | Knob Rubber (25Key)        | 1    |
| 7                                 | 141-2-3829-49700 | Spring Battery             | 1    |
| 8                                 | 141-2-3829-49800 | Terminal Anode             | 2    |
| 9                                 | 141-0-1939-22540 | Remote Control P.C.B. Assy | 1    |
| <b>REMOTE CONTROL P.C.B. ASSY</b> |                  |                            |      |
| 9                                 | 141-0-1939-22540 | Remote Control P.C.B. Assy | 1    |
| CR1                               | 4-2279-70101     | Ceramic OSC 456KHz         | 1    |
| D1                                | 407 004 0706     | DIODE DCB015-TA            | 1    |
| D2                                | 407 004 0706     | DIODE DCB015-TA            | 1    |
| D3                                | 407 040 4003     | LED SLR-938C               | 1    |
| D4                                | 407 036 6301     | LED SLP-981C-50            | 1    |
| IC1                               | 409 060 1604     | IC UPD6102G                | 1    |
| Q1                                | 405 015 8704     | TR 2SC2812-L6-TA           | 1    |
| Q2                                | 405 021 2505     | TR 2SD1048-X8-TA           | 1    |
| C1                                | 403 039 2906     | ELECT 47U M 6.3V           | 1    |
| C2                                | 403 068 9709     | CERAMIC 100P K 50V         | 1    |
| C3                                | 403 068 9709     | CERAMIC 100P K 50V         | 1    |
| R1                                | 402 024 1207     | MT-GLAZE 2.2K JA 1/8W      | 1    |
| R2                                | 402 033 8402     | MT-GLAZE 82 JA 1/8W        | 1    |
| R3                                | 402 033 8501     | MT-GLAZE 12K JA 1/8W       | 1    |
| R4                                | 402 033 8303     | MT-GLAZE 1 JA 1/8W         | 1    |
| R5                                | 402 022 9106     | MT-GLAZE 15 JA 1/8W        | 1    |

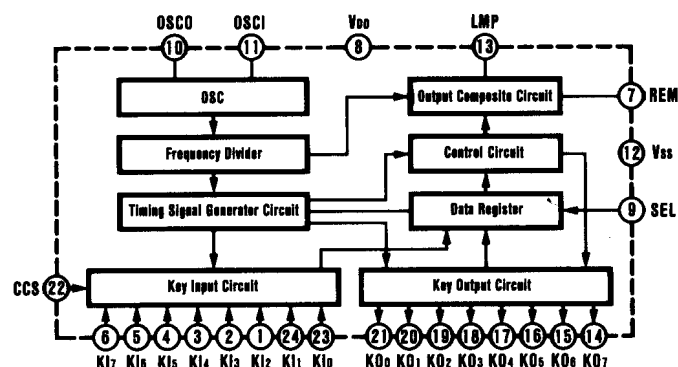


## NOTES:

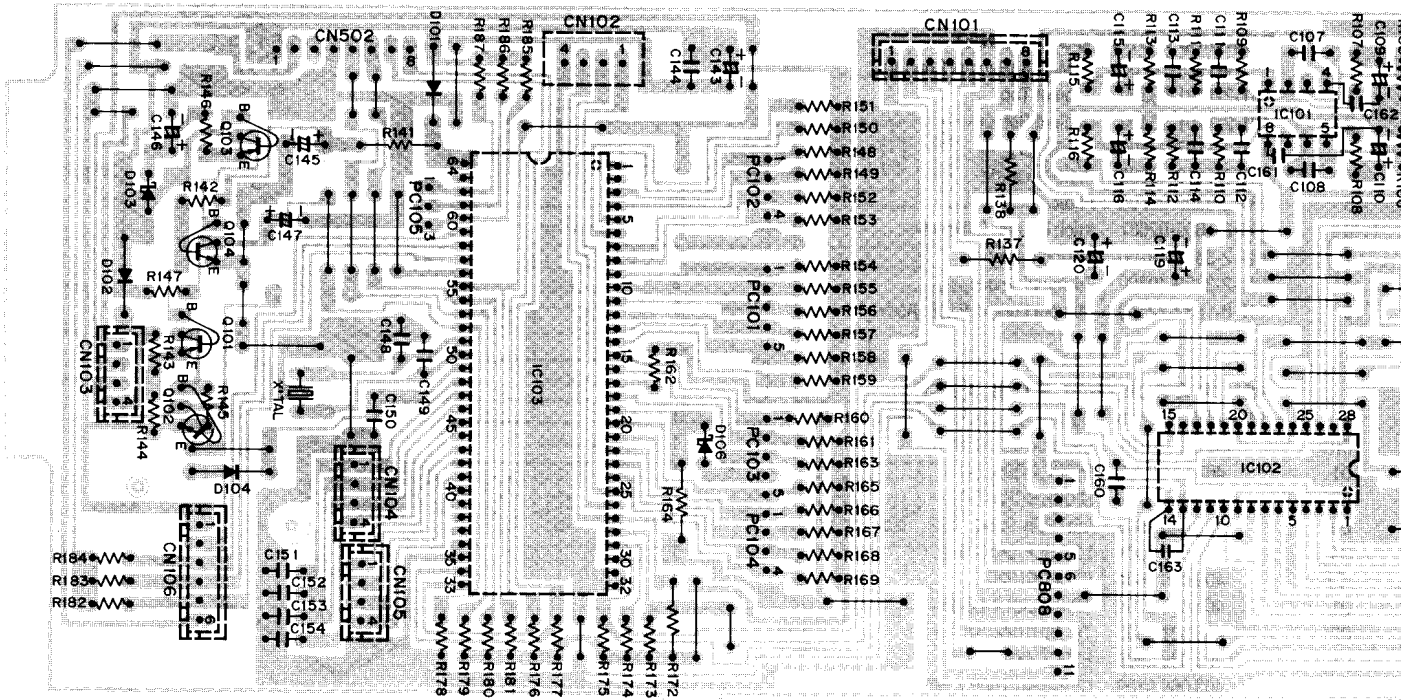
- Parts order must contain Model Number, Part Number and Description.
- Ordering quantity of screws and resistors must be multiple of 10 pcs.

## INTEGRATED CIRCUIT BLOCK DIAGRAM

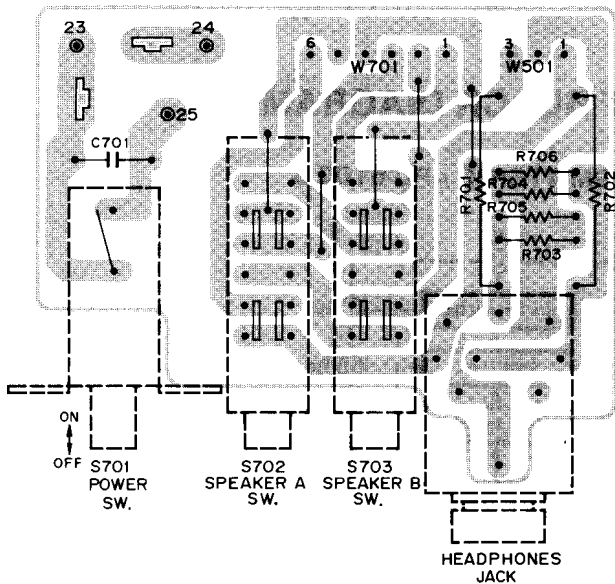
### REMOTE CONTROL TRANSMITTER IC $\mu$ PD 6102 G



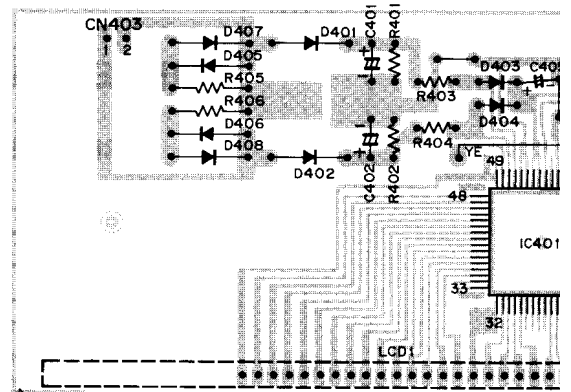
## INPUT PRINTED CIRCUIT BOARD (BOTTOM VIEW)



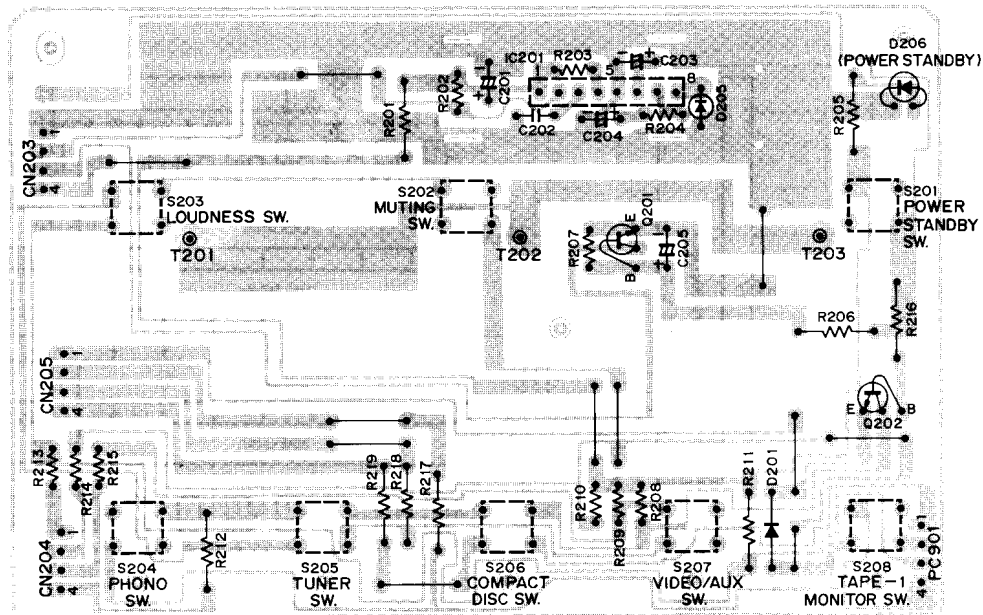
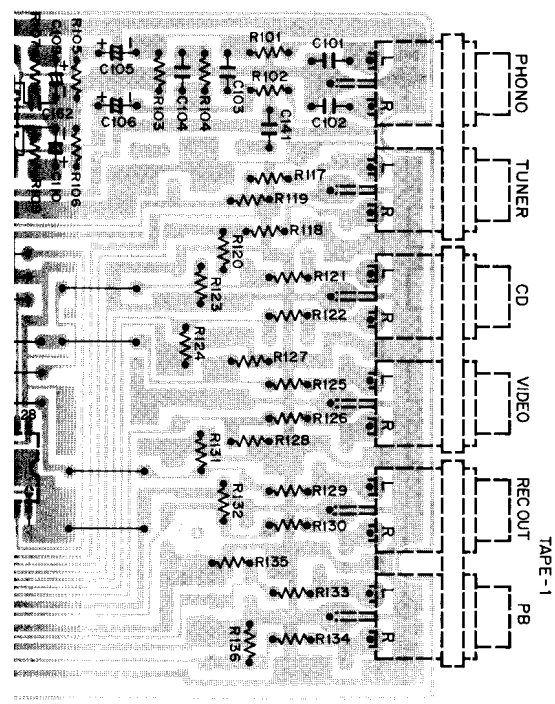
## POWER SWITCH P.C.BOARD (BOTTOM VIEW)



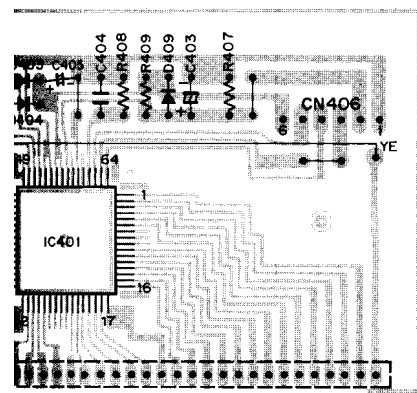
**LCD P.C.B.OA**  
**(BOTTOM VIEW**



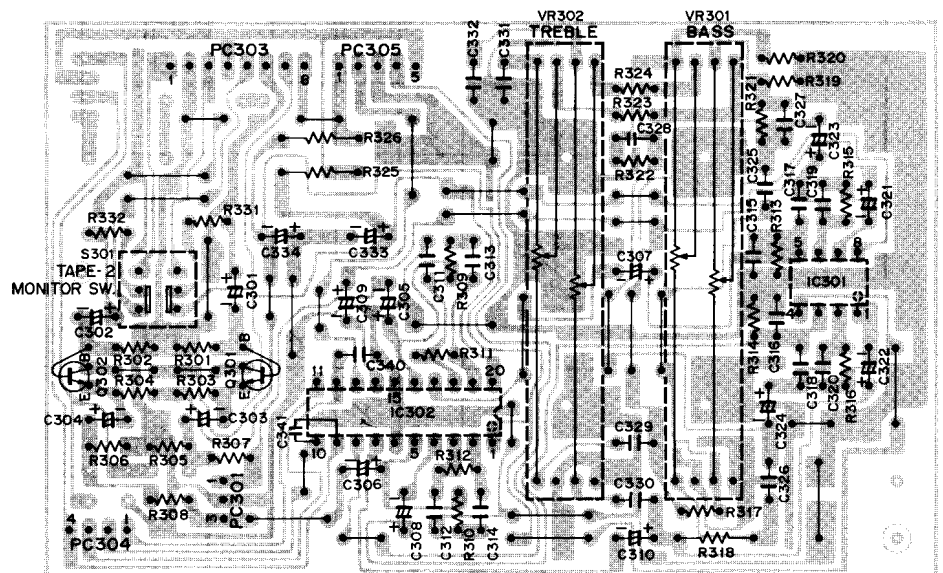
## CONTROL P.C.BOARD (BOTTOM VIEW)



## BOARD (VIEW)



## TONE P.C.BOARD (BOTTOM VIEW)



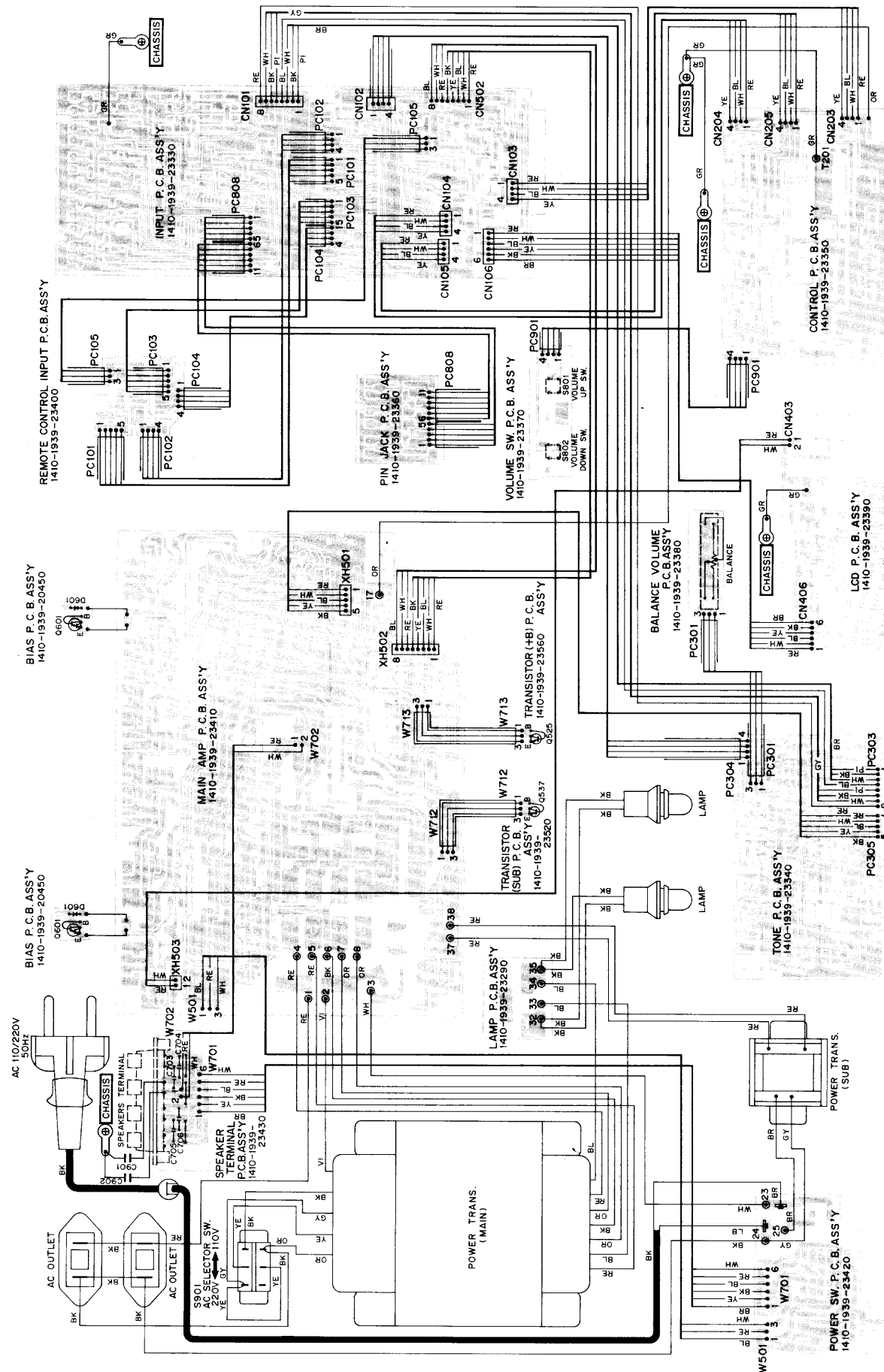
This is a detailed electronic circuit board layout for a radio receiver. The board is populated with numerous components, including resistors (R), capacitors (C), diodes (D), and transistors (Q). The layout is organized into several functional sections:

- Input/Output Section (Top Left):** Features a 19-pin connector (Q515) and a 21-pin connector (Q517). It includes a variable resistor (VR50) and a 500k resistor (R541).
- Power Section (Top Right):** Includes a 30-pin connector (Q523), a 36-pin connector (Q527), and a 37-pin connector (Q529). It features a 500k resistor (R541), a 500k resistor (R542), and a 500k resistor (R543).
- Amplifier Section (Center):** Contains a 500k resistor (R541), a 500k resistor (R542), and a 500k resistor (R543). It also includes a 500k resistor (R541), a 500k resistor (R542), and a 500k resistor (R543).
- Control Section (Bottom):** Includes a 500k resistor (R541), a 500k resistor (R542), and a 500k resistor (R543). It also includes a 500k resistor (R541), a 500k resistor (R542), and a 500k resistor (R543).

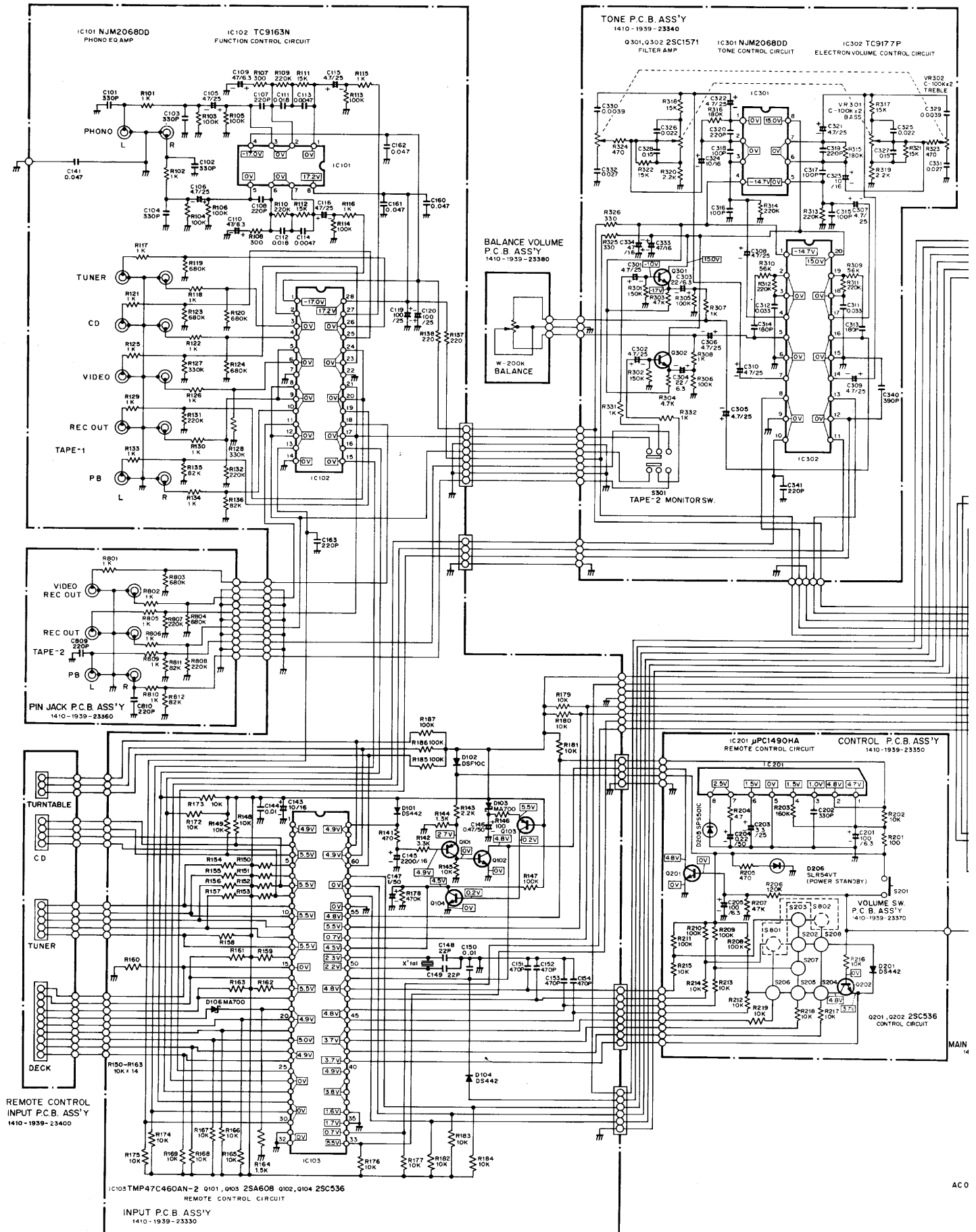
The board is populated with numerous components, including resistors (R), capacitors (C), diodes (D), and transistors (Q). The layout is organized into several functional sections:

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- Amplifier Section (Center):** Contains a 500k resistor (R541), a 500k resistor (R542), and a 500k resistor (R543). It also includes a 500k resistor (R541), a 500k resistor (R542), and a 500k resistor (R543).
- Control Section (Bottom):** Includes a 500k resistor (R541), a 500k resistor (R542), and a 500k resistor (R543). It also includes a 500k resistor (R541), a 500k resistor (R542), and a 500k resistor (R543).

## POINT TO POINT WIRING DIAGRAM

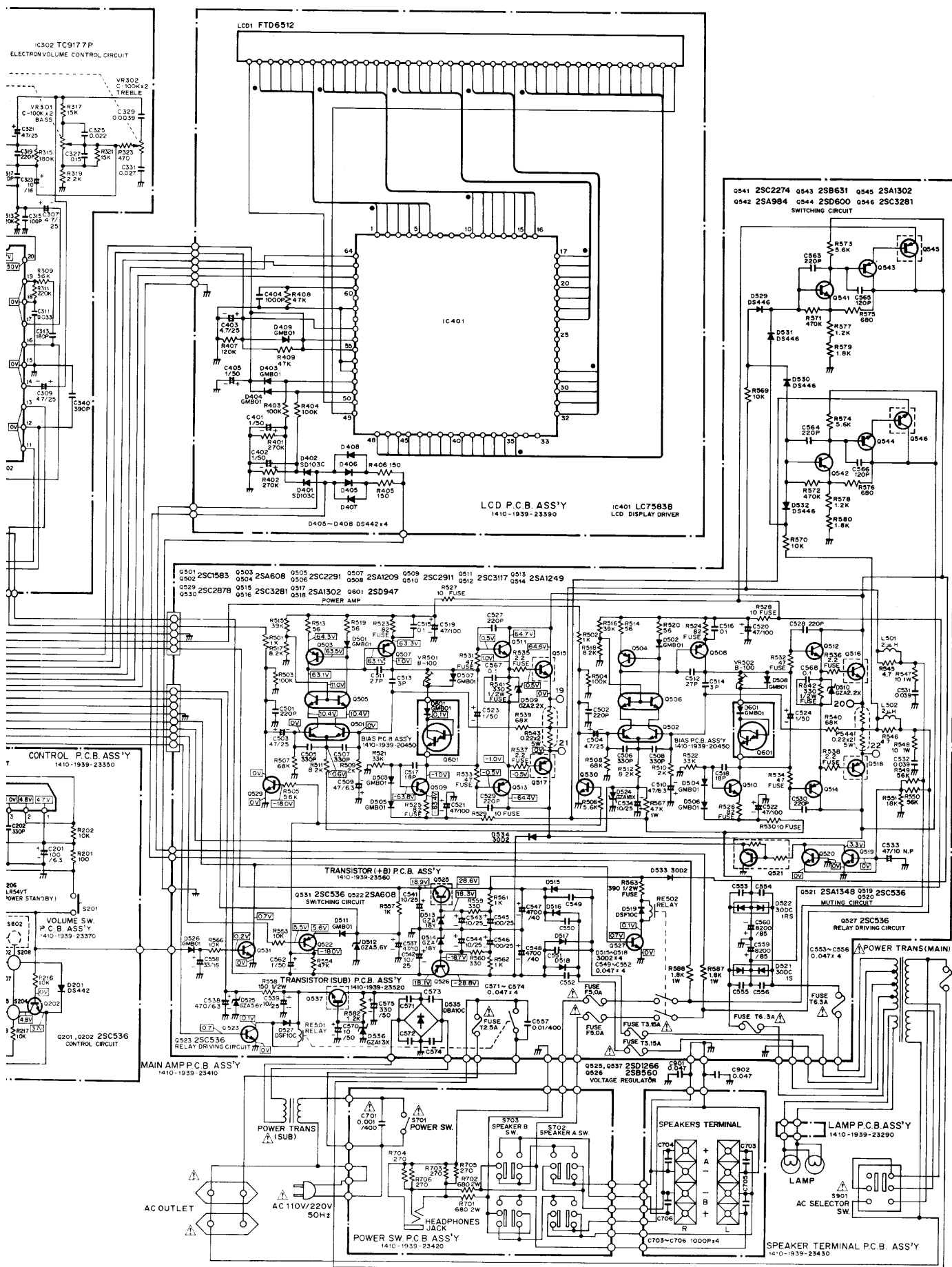


# SCHEMATIC DIAGRAM



AC 0

## DIAGRAM



## SEMICONDUCTOR LEAD IDENTIFICATION

| TRANSISTOR                                                                    | FRONT VIEW | BOTTOM VIEW | TRANSISTOR                                                           | FRONT VIEW | BOTTOM VIEW |
|-------------------------------------------------------------------------------|------------|-------------|----------------------------------------------------------------------|------------|-------------|
| 2SA 608<br>2SA 984<br>2SB 560<br>2SC 536<br>2SC 1571<br>2SC 2274<br>2SC 2878  |            |             | 2SA 1302<br>2SC 3281                                                 |            |             |
| 2SD 1266                                                                      |            |             | 2SC 2291                                                             |            |             |
| 2SA 1209<br>2SA 1249<br>2SB 631<br>2SC 2911<br>2SC 3117<br>2SD 600<br>2SD 947 |            |             | 2SA 1348                                                             |            |             |
| 2SC 1583                                                                      |            |             | <b>TERMINAL NAME</b><br><br>B → BASE<br>C → COLLECTOR<br>E → EMITTER |            |             |

## SWITCH POSITION TABLE

| No.  | Name                  | Position | No.  | Name                  | Position |
|------|-----------------------|----------|------|-----------------------|----------|
| S201 | POWER STANDBY Switch  | OFF      | S301 | TAPE-2 MONITOR Switch | OFF      |
| S202 | MUTING Switch         | OFF      | S701 | POWER Switch          | OFF      |
| S203 | LOUDNESS Switch       | OFF      | S702 | SPEAKER A Switch      | OFF      |
| S204 | PHONO Switch          | OFF      | S703 | SPEAKER B Switch      | OFF      |
| S205 | TUNER Switch          | OFF      | S801 | VOLUME UP Switch      | OFF      |
| S206 | COMPACT DISC Switch   | OFF      | S802 | VOLUME DOWN Switch    | OFF      |
| S207 | VIDEO/AUX Switch      | OFF      | S901 | AC SELECTOR Switch    | 220V     |
| S208 | TAPE-1 MONITOR Switch | OFF      |      |                       |          |

### NOTES:

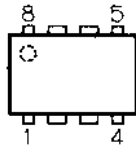
1. All resistors values are indicated in "ohm" (K=10<sup>3</sup>, M=10<sup>6</sup>).
2. All capacitors values are indicated in "μF" (P=10<sup>-12</sup>).
3. All voltages indicated on the schematics are measured under the following conditions.
  - a. Use a V.T.V.M.

Because Fisher products are subject to continuous improvement, Fisher Corporation reserves the right to make any changes or modifications without notice.

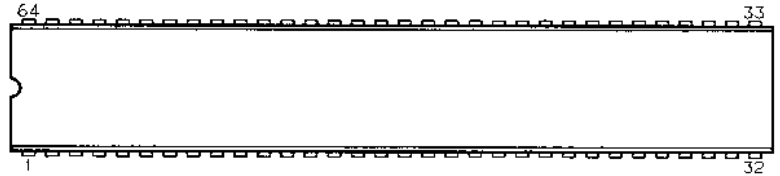
- b. All voltages ±10 % with respect to chassis ground
- c. No signals at input terminals
- d. AC input at 220 volts 50 Hz
4. This is a basic schematic diagram.

## SEMICONDUCTOR LEAD IDENTIFICATION(Continued)

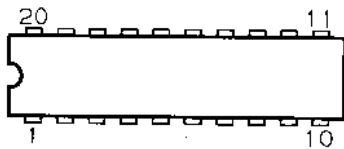
**NJM 2068 DD TOP VIEW**



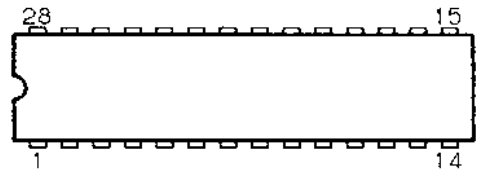
**TMP 47C460AN-2 TOP VIEW**



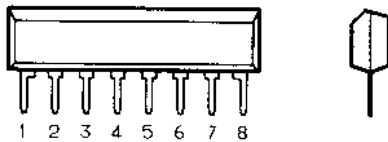
**TC 9177 P TOP VIEW**



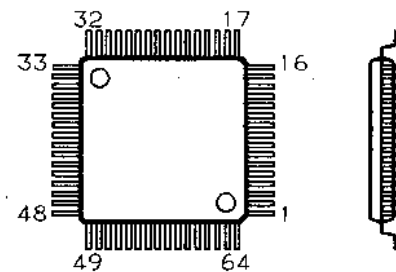
**TC 9163 N TOP VIEW**



**$\mu$ PC 1490 HA TOP/SIDE VIEWS**



**LC 7583 B TOP/SIDE VIEWS**



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