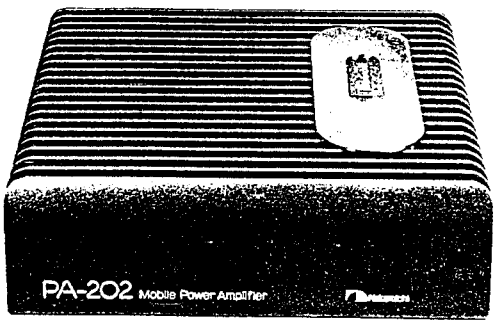
# Nakamichi

# Service Manual

# PA-202

## Mobile Power Amplifier




## Service durch Gehado

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Ersatzteil-Distributor · Reparaturcenter

CONTENTS



## 1. GENERAL

### 1.1. Notes on Order of Spare Parts

Note that the Main P.C.B. Ass'y does not include the following parts. Please order the excluded parts together with P.C.B. Ass'y to complete a set of P.C.B. Ass'y.

| P. C. B. Ass'y | Excluded Parts | |
|---|---|---|
| | Part Name | Remarks |
| Main P. C. B. Ass'y (BA07679A) | ● TR Block A Ass'y ····1pce. (BA07681A) | Ref. No. 06 in Fig. 4.1. Consists of transistors and heat sink. |
| | ● TR Block B Ass'y ····1pce. (BA07682A) | Ref. No. 07 in Fig. 4.1. Consists of diodes, transistors and heat sink. |

### 1.2. Destination

- U.S.A. and Canada
- Other
- Europe
- Japan

1.3. Package Ass'y

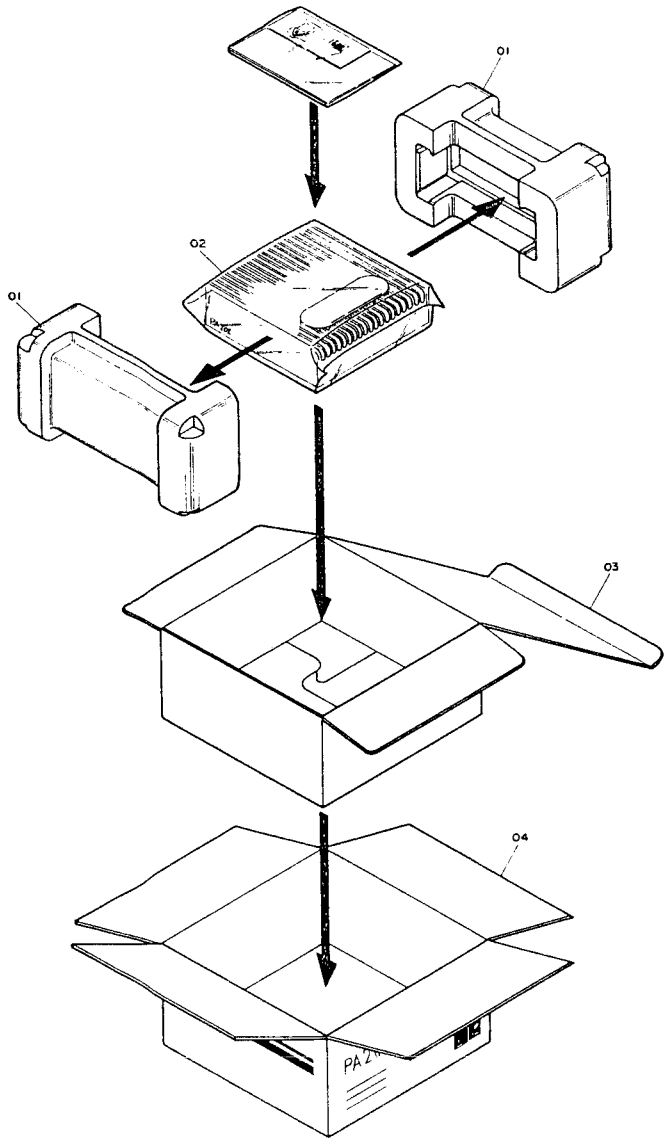



Fig. 1.1

1.4. Accessory Ass'y

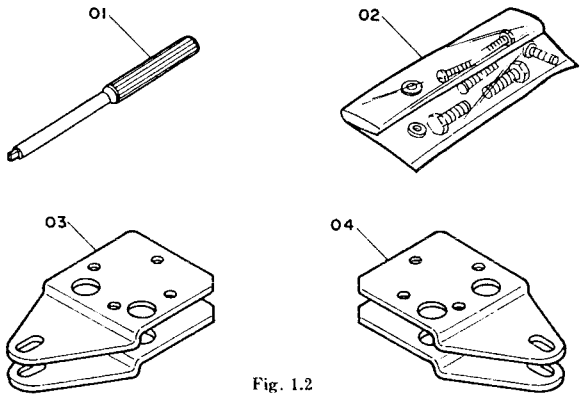



Fig. 1.2

| Schematic Ref No. | Part No. | Description | Q'ty |
|---|---|---|---|
| | | **Package Ass'y** | |
| 01 | 0F04282A | Packing (U.S.A./Other/Europe) | 2 |
| | 0F04283A | Packing (Japan) | 2 |
| 02 | 0F03702A | Poly-Bag (300x420x0.08) | 1 |
| 03 | 0F04287A | Outer Carton (U.S.A.) | 1 |
| | 0F04331A | Outer Carton (Other/Europe) | 1 |
| | 0F04288A | Outer Carton (Japan) | 1 |
| 04 | 0F04294A | Inner Carton (U.S.A.) | 1 |
| | 0F04330A | Inner Carton (Other/Europe) | 1 |
| | 0F04295A | Inner Carton (Japan) | 1 |
| | | **Accessory Ass'y** | |
| 01 | 0D03903C | Screwdriver | 1 |
| 02 | DA04253A | Screw Ass'y | 1 |
| 03 | 0H05572A | Mounting Plate A | 2 |
| 04 | 0H05589A | Mounting Plate B | 2 |
| — | 0D04347A | Poly-Bag (320x340x0.08) | 1 |
| — | 0D04593A | Poly-Bag (80x100x0.05) | 1 |
| — | 0D04999A | Owner's Manual (English/German/French) | 1 |
| — | 0D05000A | Owner's Manual (Japanese) | 1 |
| — | 0D04810A | Important Notice | 1 |

## 2. REMOVAL PROCEDURE

2.1. Fuse

Pull out F01 (Fuse 10A) toward you. (F01 is hard to remove.)

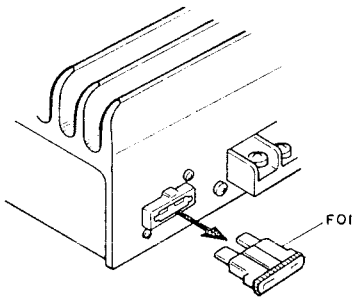



Fig. 2 Rear View

## 3. ADJUSTMENT

### 3.1. Parts Location for Adjustment

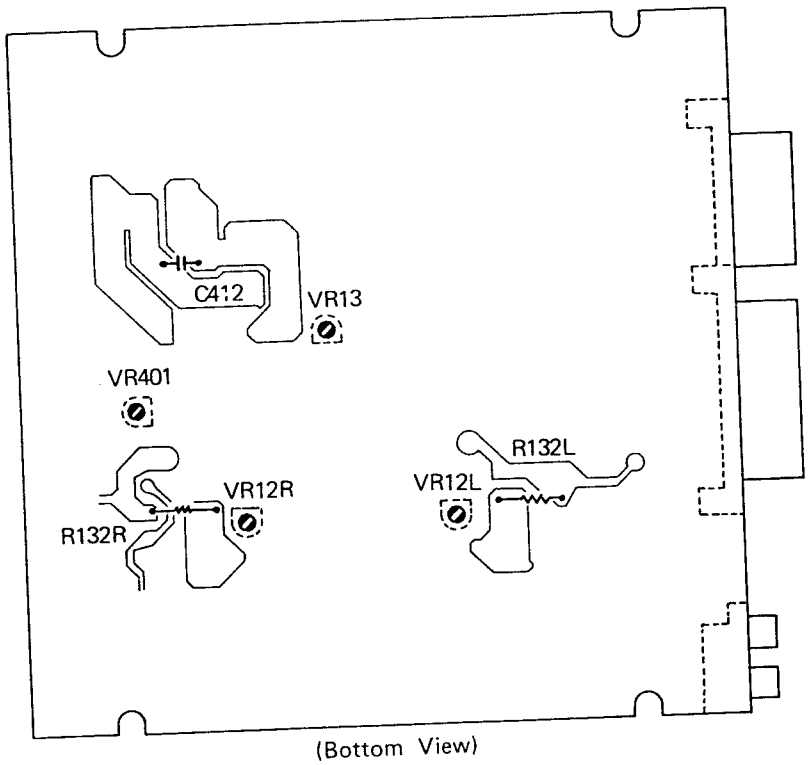



Fig. 3

### 3.2. Adjustment Procedures

Note : Perform adjustment from the bottom of the PA-202.

**3.2.1. Power Supply Output Voltage**

(1) Connect a DC voltmeter across C412.
(2) Supply 14.4V DC to +14.4V Terminal and Remote Terminal.
(3) Adjust VR401 to abtain +23.0V on the DC voltmeter.

**3.2.2 Idling Current**

(1) Insert shorting pins into Input Pin Jacks.
(2) Connect a DC millivoltmeter across R132L (R132R).
(3) Adjust VR12L (VR12R) to obtain 6mV (approx. 27mA) on the DC millivoltmeter.
(4) Remove the shorting pins.

**3.2.3 Soft Clipping Circuit**

(1) Connect 4ohm load resistors to the speaker output terminals.
(2) Turn VR13 fully clockwise viewing from the dip side of P.C.B.
(3) Feed in 1kHz sine wave to Input Pin Jacks.
(4) Adjust the Oscillator output so that the voltages at the speaker output terminals are 12.65V (40W).
(5) Measure the distortion of both channels through 30kHz L.P.F. and make sure which channel has worse distortion.
(6) Observing the distortion of worse channel, gradually return VR13 counterclockwise, and stop it when distortion gets worse.

# 4. MECHANISM ASS'Y AND PARTS LIST

## 4.1. Synthesis

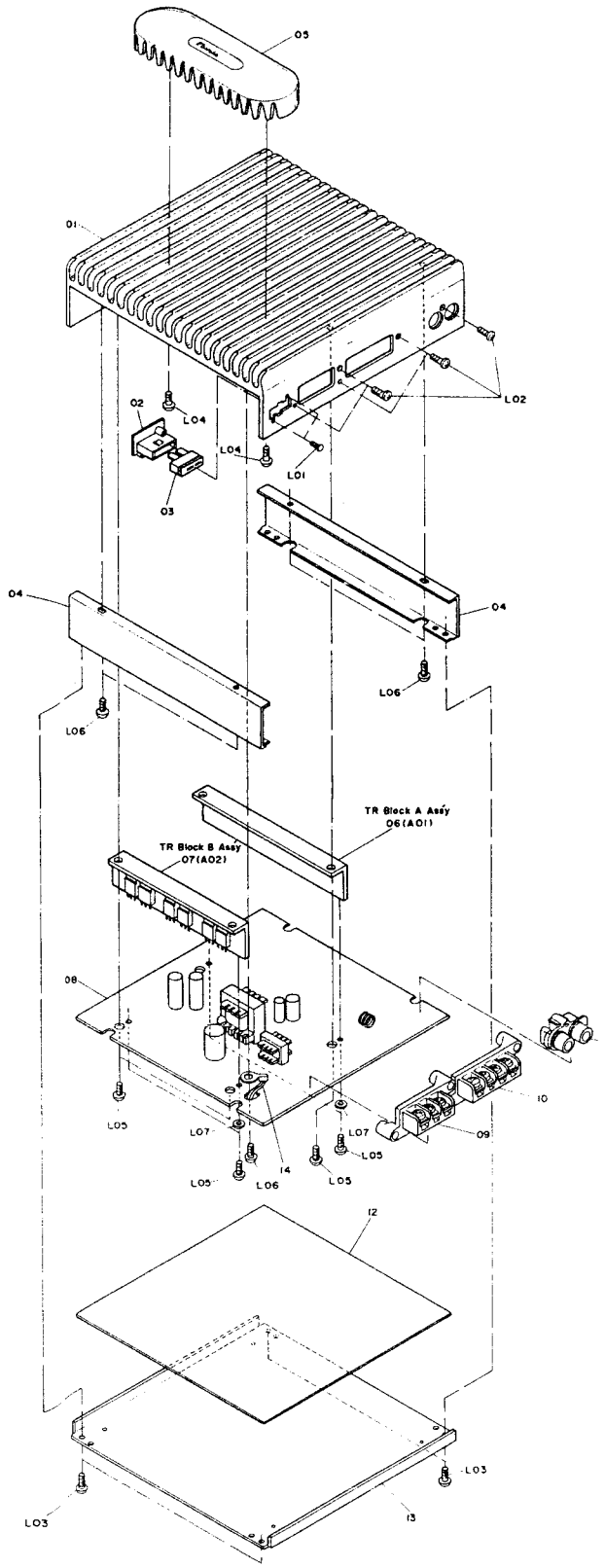



Fig. 4.1

| Schematic Ref. No. | Part No. | Description | Q'ty |
|---|---|---|---|
| 4.1. Synthesis | | | |
| | | Synthesis | |
| 01 | 0H05617A | Heat Sink | 1 |
| 02 | BA07680A | Fuse P.C.B. Ass'y | 1 |
| 03 | 0B90423A | Fuse 10A | |
| 04 | 0H05573A | Side Chassis | 2 |
| 05 | HA05753A | Transformer Cover Ass'y | 1 |
| 06 | BA07681A | TR Block A Ass'y | 1 |
| 07 | BA07682A | TR Block B Ass'y | 1 |
| 08 | BA07679A* | Main P.C.B. Ass'y | 1 |
| 09 | 0B84106A | Terminal 3P (U.S.A.) (TM-401) | 1 |
| | 0B84152A | Terminal 3P Gold (Other/Europe/ Japan) (TM-401) | 1 |
| 10 | 0B84107A | Terminal 4P (U.S.A.) (TM-101) | 1 |
| | 0B84153A | Terminal 4P Gold (Other/Europe/ Japan) (TM-101) | 1 |
| 11 | 0B81630A | Pin Jack 2P (PJ101) | 1 |
| 12 | 0J05924A | Bottom Sheet | 1 |
| 13 | 0H05620A | Bottom Cover | 1 |
| 14 | 0B19013A | Thermistor (TH401) | 1 |
| L01 | 0E00974A | BT 2x8 ⊕ Binding (Black Chromate) | |
| L02 | 0E00948A | BT 3x8 ⊕ Binding (Black Chromate) | |
| L03 | 0E00860A | BT 3x6 ⊕ Binding (Black Chromate) | |
| L04 | 0E00865A | BT 3x10 ⊕ Binding | |
| L05 | 0E00868A | BT 3x8 ⊕ Binding | |
| L06 | 0E03013A | BT 3x5 ⊕ Binding | |
| L07 | 0E00172A | Washer 3mm Toothed Lock | |

* : See item 1.1.

4.2. TR Block A Ass'y (A01)

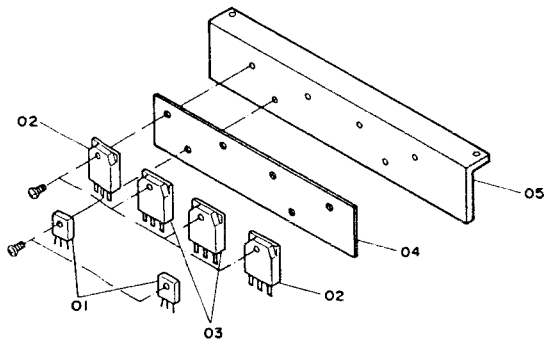



Fig. 4.2

4.3. TR Block B Ass'y (A02)

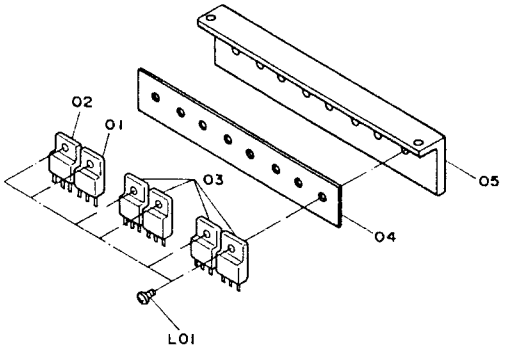



Fig. 4.3

| Schematic Ref. No. | Part No. | Description | Q'ty |
|---|---|---|---|
| **4.2. TR Block A Ass'y (A01)** | | | |
| **A01** | **BA07681A** | **TR BLock A Ass'y** | |
| 01 | 0B10199A | TR 2SC3421 (Q106L,R) | 2 |
| 02 | 0B10339A | TR 2SC44666 (Q111L,R) | 2 |
| 03 | 0B10340A | TR 2SA1693 (Q112L,R) | 2 |
| 04 | 0J05945A | Transistor Sheet A | 1 |
| 05 | 0J05920B | Heat Sink A | 1 |
| L01 | 0E03319A | M 3x8 ⊕ Binding (Nickel) | 6 |

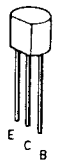
| Schematic Ref. No. | Part No. | Description | Q'ty |
|---|---|---|---|
| **4.3. TR Block B Ass'y (A02)** | | | |
| **A02** | **BA07682A** | **TR Block B Ass'y** | |
| 01 | 0B12646A | SiD FMU22S (D403) | 1 |
| 02 | 0B12647A | SiD FMU22R (D404) | 1 |
| 03 | 0B10341A | TR 2SC4064 (0, Y) (Q401, 402, 403, 404) | 2 |
| 04 | 0J05946A | Transistor Sheet B | 1 |
| 05 | 0J05921A | Heat Sink B | 1 |
| L01 | 0E03319A | M 3x8 ⊕ Binding | 6 |

## 5. MOUNTING DIAGRAMS

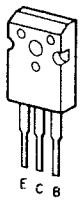
Notes : 1. Mounting diagram shows a dip side view of the printed circuit board.
2. Diode is 1SS176 unless otherwise specified.
3. Following transistors are interchangeable with each other.
a. 2SA733, 2SA608SP, 2SA1048, 2SA1175
b. 2SC945, 2SC536SP, 2SC2458, 2SC2785
4. Abbreviation for part name:
TR—Transistor, SiD—Silicon Diode, ZD—Zener Diode
RK—Carbon Resistor, RM—Metal Film Resistor
RC—Cement Resistor, RF—Fail Safe Type Resistor
C—Mica Capacitor, CE—Electrolytic Capacitor
CC—Ceramic Capacitor, CPP—PP Capacitor
CML—Mylar Capacitor

| Schematic Ref. No. | Part No. | Description |
|---|---|---|
| **5.1. Main P.C.B. Ass'y** | | |
| | **BA07697A (Note)** | **Main PCB Ass'y** |
| | 0B60742A | Main PCB |
| U101 | 0B11713A | IC μPC4570C |
| U401 | 0B06427A | IC μPC494C |
| Q101L,R | 0B06299A | TR 2SC2878 |
| Q102L,R | 0B10125A | TR 2SC2259 (F,G,H) |
| Q103L,R | 0B06142A | TR 2SC2240 (BL) |
| Q104L,R | 0B10050A | TR 2SA970 (BL) |
| Q105L,R | 0B06142A | TR 2SC2240 (BL) |
| Q107L,R | 0B06142A | TR 2SC2240 (BL) |
| Q108L,R | 0B10050A | TR 2SA970 (BL) |
| Q109L,R | 0B10199A | TR 2SC3421 |
| Q110L,R | 0B10198A | TR 2SA1358 |
| Q113L,R | 0B06142A | TR 2SC2240 (BL) |
| Q114 | 0B10050A | TR 2SA970 (BL) |
| Q115 | 0B06142A | TR 2SC2240 (BL) |
| Q116 | 0B06013A | TR 2SA733 (P,Q) |
| Q117 | 0B06100A | TR 2SC945 (K,P,Q) |
| Q118 | 0B06013A | TR 2SA733 (P,Q) |
| Q119 | 0B06160A | TR 2SC945 (K,P,Q) |
| Q120 | 0B06013A | TR 2SA733 (P, Q) |
| Q121 | 0B06100A | TR 2SC945 (K,P,Q) |
| Q405,406 | 0B10046A | TR 2SD1347 (T,U) |
| Q407 | 0B06322A | TR 2SC2002 (K,L) |
| Q408 | 0B06372A | TR 2SA953 (K,L) |
| Q409,410 | 0B06100A | TR 2SC945 (K,P,Q) |
| Q411 | 0B06013A | TR 2SA733 (P,Q) |
| Q412,413 | 0B06100A | TR 2SC945 (K,P,Q) |
| Q414 | 0B10058A | TR DTA114ES |
| Q415,416 | 0B06100A | TR 2SC945 (K,P,Q) |
| Q417,418 | 0B06013A | TR 2SA733 (P,Q) |
| Q419 | 0B10068A | TR DTC114ES |
| Q420 | 0B06100A | TR 2SC945 (K,P,Q) |
| ZD11L,R | 0B12360A | ZD 2.7V RD2.7ESB2 |
| ZD12,13 | 0B12186A | ZD 18V RD18JSB2 |
| ZD401,402 | 0B12198A | ZD 27V RD27JSB2 |
| ZD403 | 0B12186A | ZD 18V RD18JSB2 |
| ZD404 | 0B12144A | ZD 4.7V RD4.7 SB2 |
| ZD405,406 | 0B12623A | ZD 11V RD11ESB2 |
| D101L,R | 0B06398A | SiD 1SS176 |
| D102L,R | 0B12624A | SiD 1SS177 |
| D103L,R | 0B12624A | SiD 1SS177 |
| D104L,R | 0B06398A | SiD 1SS176 |
| D105,106 | 0B06398A | SiD 1SS176 |
| D107,108 | 0B06398A | SiD 1SS176 |
| D109,110 | 0B06398A | SiD 1SS176 |
| D401 | 0B06458A | SiD 30D-2 |
| D402 | 0B12418A | SiD UB-151 |
| D405,406 | 0B06398A | SiD 1SS176 |
| L101L,R | 0B51315A | Output Coil 0.8 |
| L401 | 0B51227A | Chork Coil |
| L402,403 | 0B51339A | Chork Coil OWD18 |
| VR11L,R | 0B32164A | Semi-VR 10K |
| VR12L,R | 0B32072A | Semi-VR 470 (B) |
| VR13 | 0B32074A | Semi-VR 1.0K (B) |
| VR401 | 0B32080A | Semi-VR 10K (B) |
| R101L,R | 0B09694A | RK 5.1K 1/6W J |
| R102L,R | 0B09713A | RK 33K 1/6W J |
| R103L,R | 0B09677A | RK 1.0K 1/6W J |
| R104L,R | 0B22197A | RM 523 1/4W F |
| R105L,R | 0B22338A | RM 9.09K 1/4W F |
| R106L,R | 0B22283A | RM 3.09K 1/4W F |
| R107L,R | 0B22327A | RM 7.15K 1/4W F |
| R108L,R | 0B09697A | RK 6.8K 1/6W J |
| R109L,R | 0B09697A | RK 6.8K 1/6W J |
| R110L,R | 0B09665A | RK 330 1/6W J |
| R111L,R | 0B09695A | RK 5.6K 1/6W J |
| R112L,R | 0B09665A | RK 330 1/6W J |
| R113L,R | 0B24227A | RF 12K 1/2W J |
| R114L,R | 0B09657A | RK 150 1/6W J |
| R115L,R | 0B09647A | RK 56 1/6W J |
| R116L,R | 0B09669A | RK 470 1/6W J |
| R117L,R | 0B22283A | RM 3.09K 1/4W F |
| R118L,R | 0B09646A | RK 51 1/6W J |
| R119L,R | 0B09709A | RK 22K 1/6W J |
| R120L,R | 0B09701A | RK 10K 1/6W J |
| R121L,R | 0B22327A | RM 7.15K 1/4W F |
| R122L,R | 0B09686A | RK 2.4K 1/6W J |
| R123L,R | 0B09669A | RK 470 1/6W J |
| R124L,R | 0B01846A | RK 4.7K 1/4W J |
| R125L,R | 0B01846A | RK 4.7K 1/4W J |
| R126L,R | 0B09629A | RK 10 1/6W J |
| R127L,R | 0B09629A | RK 10 1/6W J |
| R128L,R | 0B01933A | RK 220 1/4W J |
| R129L,R | 0B01933A | RK 220 1/4W J |
| R130L,R | 0B05695A | RK 1.0 1/4W J |
| R131L,R | 0B05695A | RK 1.0 1/4W J |
| R132L,R | 0B24226A | RC 0.22 5W |
| R133L,R | 0B24226A | RC 0.22 5W |
| R134L,R | 0B09709A | RK 22K 1/6W J |
| R135L,R | 0B09709A | RK 22K 1/6W J |
| R136L,R | 0B20093A | RK 1.5M 1/6W J |
| R137L,R | 0B09743A | RK 560K 1/6W J |
| R138L,R | 0B09701A | RK 10K 1/6W J |
| R139L,R | 0B24229A | RF 3.3 1W J |
| R140L,R | 0B24095A | RF 4.7 1W J |
| R141L,R | 0B09737A | RK 330K 1/6W J |
| R142 | 0B22338A | RM 9.09K 1/4W F |
| R143 | 0B09749A | RK 1.0M 1/6W J |
| R144,145 | 0B05794A | RK 680 1/4W J |
| R146,147 | 0B09685A | RK 2.2K 1/6W J |
| R148,149 | 0B22266A | RM 2.21K 1/4W F |
| R150 | 0B09677A | RK 1.0K 1/6W J |
| R151,152 | 0B09701A | RK 10K 1/6W J |
| R153 | 0B09677A | RK 1.0K 1/6W J |
| R154 | 0B09717A | RK 47K 1/6W J |
| R155 | 0B09727A | RK 120K 1/6W J |
| R156 | 0B09749A | RK 1.0M 1/6W J |
| R157 | 0B09701A | RK 10K 1/6W J |
| R158 | 0B09729A | RK 150K 1/6W J |
| R159 | 0B09709A | RK 22K 1/6W J |
| R160 | 0B09725A | RK 100K 1/6W J |
| R401,402 | 0B24170A | RF 0.47 1W J |
| R403,404 | 0B24170A | RF 0.47 1W J |
| R405,406 | 0B24229A | RF 3.3 1W J |
| R407,408 | 0B24243A | RF 4.7 2W J |
| R409,410 | 0B24042A | RF 220 1W J |
| R411,412 | 0B09797A | RK 120 1/4W J |
| R413 | 0B24122A | RF 10 2W J |
| R414 | 0B24231A | RF 100 1W J |
| R415,416 | 0B09677A | RK 1.0K 1/6W J |
| R417,418 | 0B09665A | RK 330 1/6W J |
| R419,420 | 0B24232A | RF 820 1W J |
| R422,423 | 0B09669A | RK 470 1/6W J |
| R424 | 0B09701A | RK 10K 1/6W J |
| R425 | 0B09697A | RK 6.8K 1/6W J |
| R426 | 0B09685A | RK 2.2K 1/6W J |
| R427 | 0B09721A | RK 68K 1/6W J |
| R428,429 | 0B09677A | RK 1.0K 1/6W J |
| R430 | 0B09689A | RK 3.3K 1/6W J |
| R431,432 | 0B09693A | RK 4.7K 1/6W J |
| R433 | 0B09701A | RK 10K 1/6W J |
| R434 | 0B09669A | RK 470 1/6W J |
| R435 | 0B09701A | RK 10K 1/6W J |
| R436 | 0B09700A | RK 9.1K 1/6W J |
| R437 | 0B09741A | RK 470K 1/6W J |
| R438 | 0B09693A | RK 4.7K 1/6W J |
| R439 | 0B09701A | RK 10K 1/6W J |
| R440 | 0B09685A | RK 2.2K 1/6W J |
| R441 | 0B09733A | RK 220K 1/6W J |
| R442 | 0B09677A | RK 1.0K 1/6W J |
| R443,444 | 0B09701A | RK 10K 1/6W J |
| R445 | 0B09694A | RK 5.1K 1/6W J |
| R446 | 0B09709A | RK 22K 1/6W J |
| R447,448 | 0B09725A | RK 100K 1/6W J |
| R449 | 0B09677A | RK 1.0K 1/6W J |
| R450,451 | 0B09709A | RK 22K 1/6W J |
| R452 | 0B09707A | RK 18K 1/6W J |
| R453 | 0B09689A | RK 3.3K 1/6W J |
| R454 | 0B09677A | RK 1.0K 1/6W J |
| R456,457 | 0B09709A | RK 22K 1/6W J |
| R458 | 0B09677A | RK 1.0K 1/6W J |
| R459 | 0B09699A | RK 8.2K 1/6W J |
| C101L,R | 0B09249A | C 33p 50V J |
| C102L,R | 0B09322A | CPP 330p 100V J |
| C103L,R | 0B09933A | CE 2.2μ 50V (LN) |
| C104L,R | 0B41119A | CPP 560p 100V G |
| C105L,R | 0B05653A | CML 1500p 50V J |
| C106L,R | 0B09249A | C 33p 50V J |
| C107L,R | 0B41292A | CML 0.033μ 50V J |
| C108L,R | 0B09242A | C 47p 50V J |
| C109L,R | 0B40113A | CE 2.2μ 50V |
| C110L,R | 0B41302A | CML 0.022μ 50V J |
| C111L,R | 0B41294A | CML 0.047μ 50V J |
| C112,113 | 0B40466A | CE 47μ 25V (LN) |
| C114,115 | 0B40075A | CE 22μ 16V |
| C116 | 0B40250A | CE 100μ 16V (BP) |
| C117,118 | 0B41298A | CML 0.1μ 50V J |
| C119 | 0B40075A | CE 22μ 16V |
| C120 | 0B40113A | CE 2.2μ 50V |
| C121L,R | 0B41291A | CML 0.027μ 50V J |
| C401 | 0B41917A | CC 0.1μ 25V Z |
| C402 | 0B41822A | CML 0.47μ 50V J |
| C403 | 0B40079A | CE 220μ 16V |
| C404 | 0B41917A | CC 0.1μ 25V Z |
| C405 | 0B40661A | CE 3300μ 16V |
| C406 | 0B09860A | CML 0.022μ 50V J |
| C407 | 0B40643A | CE 330μ 35V |
| C408 | 0B40642A | CE 180μ 35V |
| C409 | 0B41084A | CML 0.0015μ 50V J |
| C410,411 | 0B41082A | CML 0.001μ 50V J |
| C412,413 | 0B40641A | CE 1200μ 25V |
| C414,415 | 0B40077A | CE 47μ 16V |
| C416 | 0B40113A | CE 2.2μ 50V |
| C417 | 0B40077A | CE 47μ 16V |
| C418 | 0B41917A | CC 0.1μ 25V Z |
| C419 | 0B40052A | CE 470μ 6.3V |
| C420 | 0B41082A | CML 0.001μ 50V J |
| C421 | 0B41298A | CML 0.1μ 50V J |
| C422 | 0B41082A | CML 0.001μ 50V J |
| C423 | 0B41008A | CML 0.0033μ 50V J |
| C424 | 0B40079A | CE 220μ 16V |
| C425 | 0B40206A | CE 100μ 16V |
| C426 | 0B40637A | CE 220μ 35V (LN) |
| C427 | 0B41298A | CML 0.1μ 50V J |
| FC101 | 0B83747A | Ribbon Cable 4P |
| FC102 | 0B83773A | Ribbon Cable 3P |
| S101 | 0B70154A | Slide Switch 4-2 |
| T401 | 0B50162A | Converter Transformer |
| **5.2. Fuse P.C.B. Ass'y** | | |
| | **BA07680A** | **Fuse P.C.B. Ass'y** |
| | 0B60743A | Fuse P.C.B. |
| | 0B80248A | Wire AWG16 RED 100mm |
| | 0B80249A | Wire AWG16 RED 80mm |
| | 0B84108A | Auto Fuse Holder |

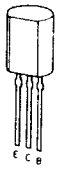
Note : TR Block A Ass'y and TR Block B Ass'y are not included in the Main P. C. B. Ass'y. (See item 1. 1)



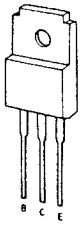

2SA733
2SA953
2SA970
2SC945
2SC2002
2SC2240
2SC2878



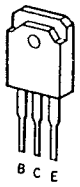

2SA1358
2SC3421




2SD1347

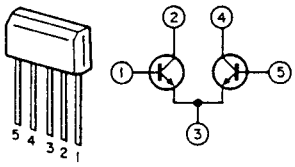



2SC4064

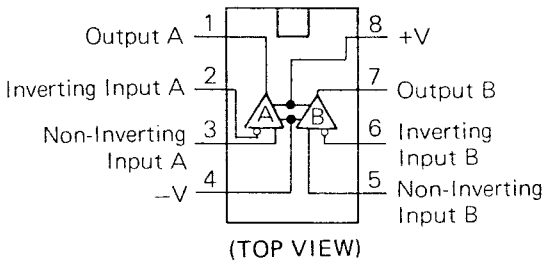



2SA1693
2SC4466


DTA114ES
DTC114ES




2SC2259




(TOP VIEW)

Operational Amp. IC μPC4570C

Notes : 1. Diode is 1SS176 unless otherwise specified.
2. Following transistors are interchangeable with each other.
a. 2SA733, 2SA608SP, 2SA1048, 2SA2785
b. 2SC945, 2SC536SP, 2SC2458, 2SC2785
3. Voltage measuring conditions :
- With no input signal applied to the input jacks.
- With no load connected to the speaker terminals.

5.1. Main P.C.B. Ass'y

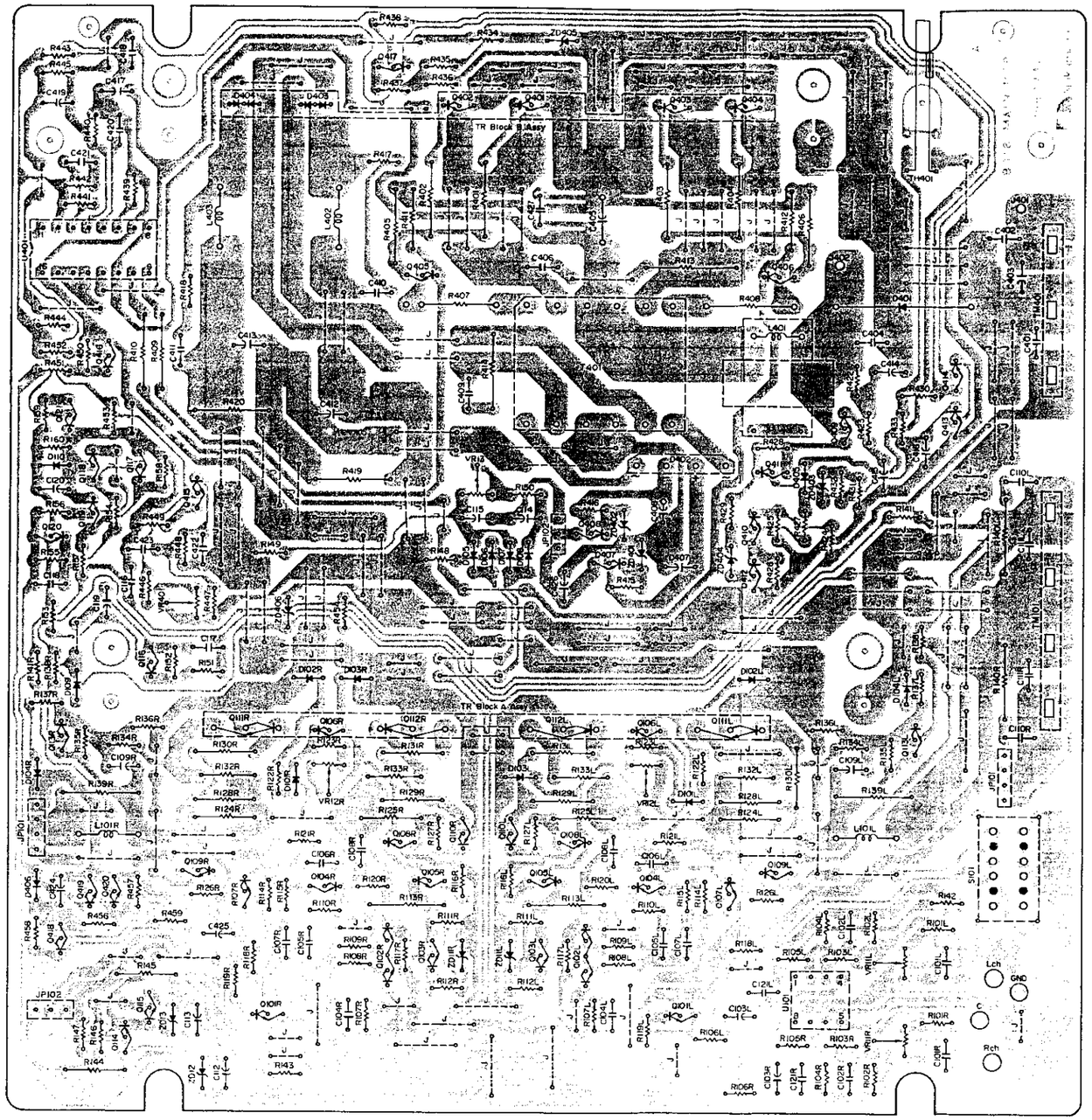



Fig. 5.1

5.2. Fuse P.C.B. Ass'y

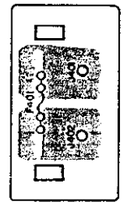


Fig. 5.2

## 6. SCHEMATIC DIAGRAM

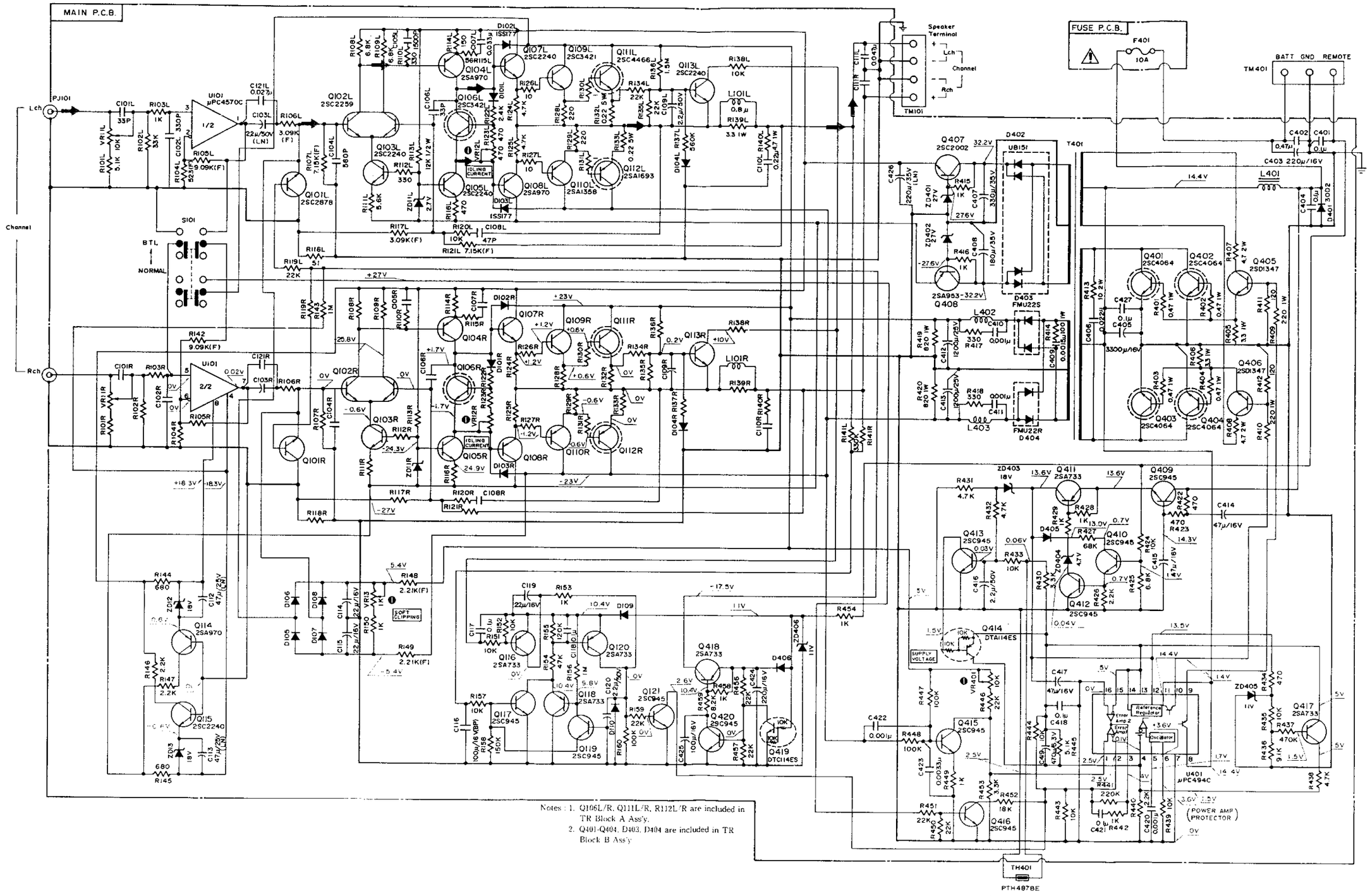



Fig. 6

## 7. BLOCK DIAGRAM

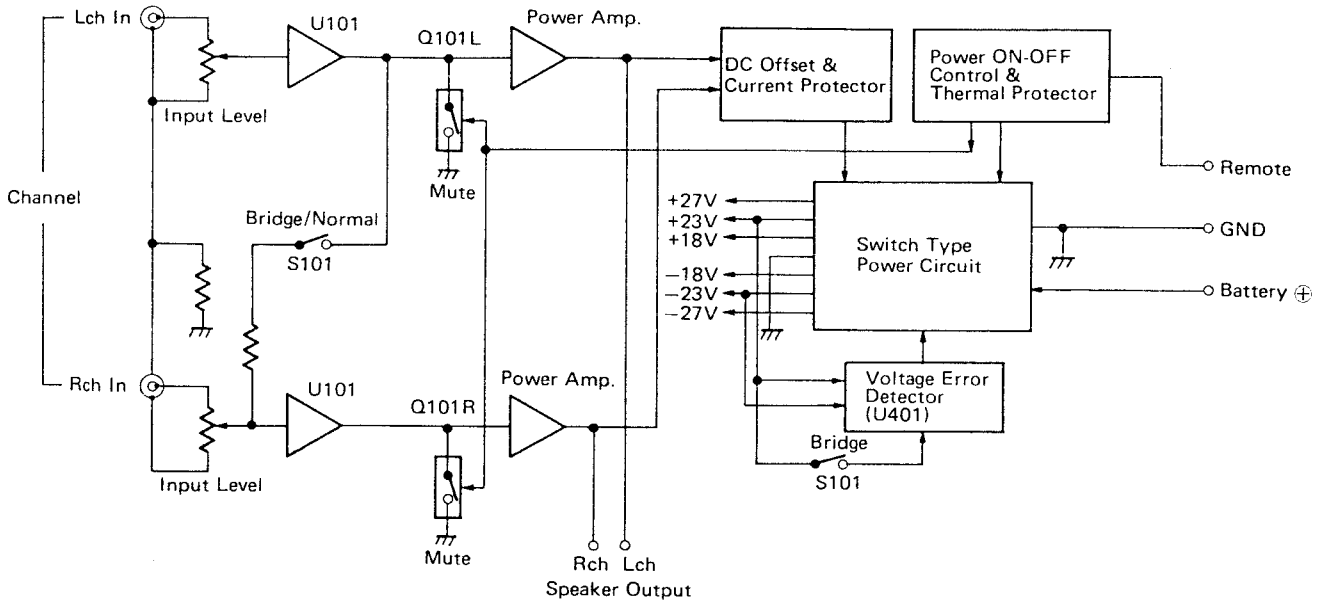



Fig. 7

## 8. SPECIFICATIONS

| | |
|---|---|
| Continuous Power Output | 40 W × 2 RMS (two channels driven, 4ohms, 1kHz, 0.005% THD) |
| | 80 W × 1 RMS (monaural, 4ohms, 1kHz, 0.01% tHD) |
| Power Bandwidth | 10—50,000 Hz (4ohms, 0.1% THD) |
| Total Harmonic Ditortion | 0.005% (4ohms, 1kHz, 40w ×2) |
| Frequency Response | 10—50,000Hz +1, −3dB (with input sensitivity control at max.) |
| | 20- 20,000Hz ±1dB (with input sensitivity control at max.) |
| Signal to Noise Ratio | Better than 110dB (IHF A-WTD, at rated power, with input sensitivity control at max.) |
| Damping Factor | Greater than 1,000 (4ohms, 1kHz) |
| Input Sensitivity/Impedance | 0.3—0.8V variable/10kohms ("Normal" position) |
| | 0.2—0.55V variable/10kohms ("Bridge" position) |
| Stereo Speparation | Better than 80dB (4ohms, 1kHz) |
| Power Source | 14.4V DC negative ground (10.8—15.6V allowable) |
| Current Consumption | |
| Max. | 12A (two channels driven, 4ohms, 40W × 2) |
| | 16A (monaural, 4ohms, 80W ×1) |
| Music | Approx. 5A (4ohms) |
| Min. | Approx. 1.2A (Idling) |
| Load Impedance | Above 4ohms |
| Dimensions* | 190 (W) ×56 (H) × 190 (D) mm |
| | 7-1 2 (W) × 2-3 16 (H) × 7-1 2 (D) inches |
| Approximate Weight | 2.0kg 4lbs. 7oz. |

* : Dimensions do not include protruding parts. Height is the panel height.

- Unless otherwise noted, all measurements are with two channels driven ("Normal" position)
- Specifications and design are subject to change for future improvement without notice.