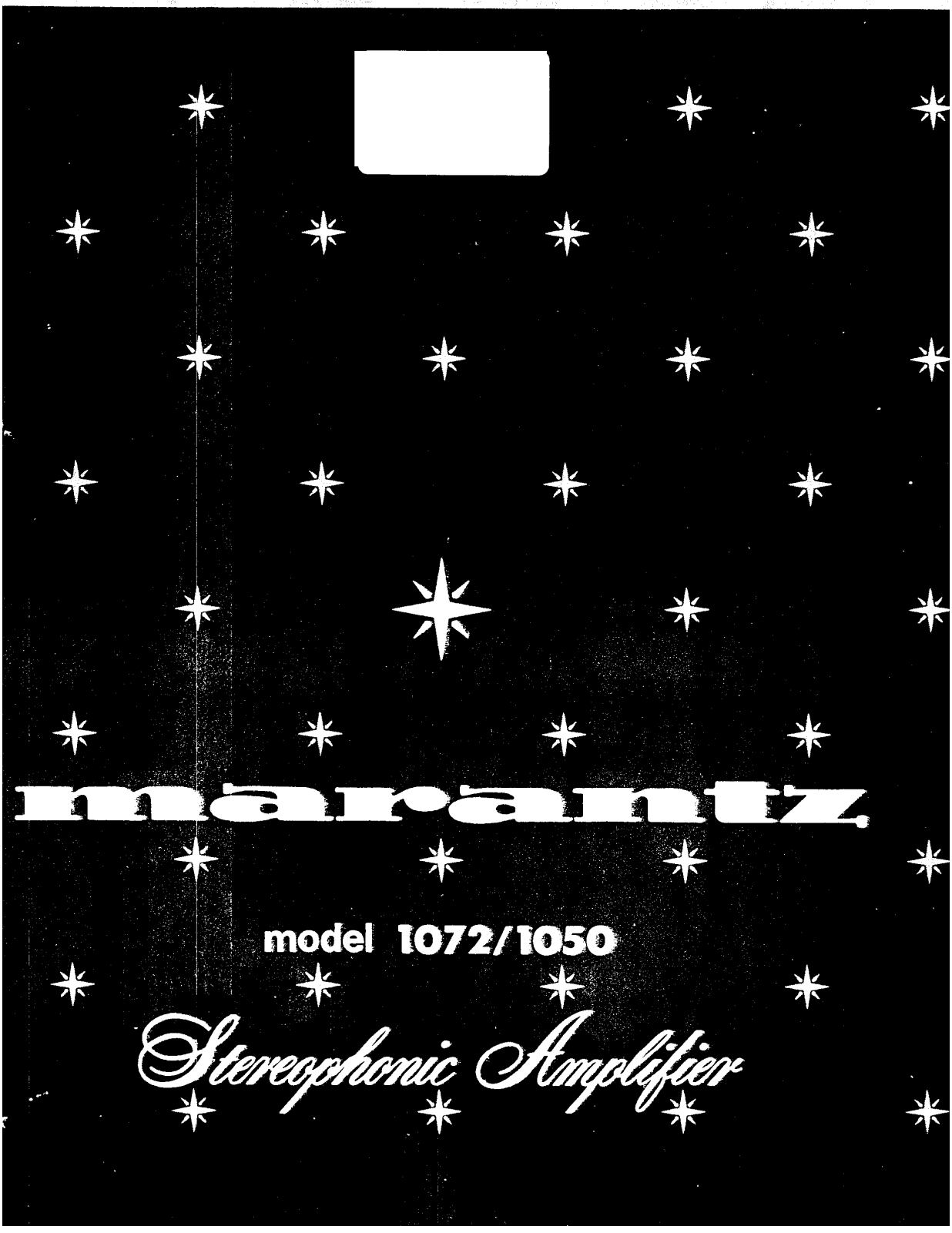
SER MANUAL

# 1072/1050



marantz

model 1072/1050

*Stereophonic Amplifier*

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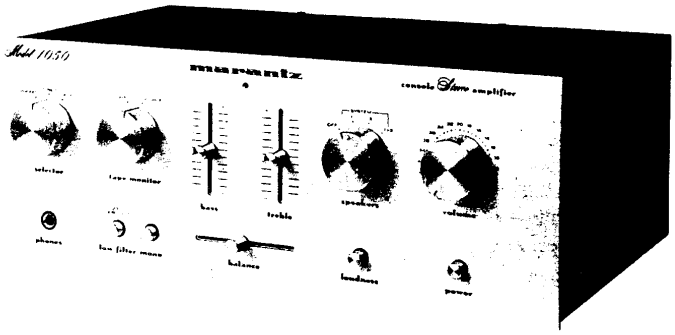


## 1. INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for the Marantz Model 1050/1072 Stereo Console Amplifier. Servicing information and voltage data included in this manual are intended for use by knowledgeable and experienced personnel only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of circuitry operation.
The parts list furnishes complete ordering information. Most replacement parts should be ordered from the Marantz Company. However, a simple description is included for parts which can be obtained locally.

## 2. PRE-AMPLIFIER

Signals from the TUNER and AUX terminals are taken to the SELECTOR SWITCH (SV01).
Signals from the PHONO terminals pass through the phono amplifier (Q401, Q403 and Q405) where they are amplified by 36dB and at the same time undergo RIAA equalization, before going to the SELECTOR SWITCH (SV01). (In the case of the Model 1072, signals coming in from the PHONO 1 and PHONO 2 terminals are selected by means of the SELECTOR SWITCH and then taken the the PHONO amplifier).
After being selected by the SELECTOR SWITCH, the incoming signals are taken to the TAPE MONITOR switch and TAPE OUT terminals.
Signals which enter from the TAPE IN terminals are taken to the TAPE MONITOR SWITCH.
Signals which are selected by the TAPE MONITOR SWITCH are taken to the MONO SWITCH BALANCE and VOLUNE potentiometers, and then enter the preamplifier (QE01 and QE03). The preamplifier has a gain of 19dB and also serves as a tone control amplifier, with the frequency response being controlled by the BASS and TREBLE controls.
After passing through the preamplifier, the signals enter the main amplifier.

## 3. MAIN AMPLIFIER

The main amplifier contains an NF type high pass filter network which can be switched in and out of circuit by means of the LOW FILTER switch.

## 4. TROUBLESHOOTING ANALYSIS

1. Excessive line consumption
   a. Check for shorted Q806 through Q809.
   b. Check for shorted transistor Q715, through Q718.
   c. Check for open Q709, Q710, R717, R718.
2. No line consumption or zero bias voltage
   a. Check line cord, fuse, check for shorted Q709, Q710, Q717, Q718.
   b. Check for open rectifiers Q806 through Q809 or open L001.
3. High hum and noise level
   a. Check filter capacitors C808, C809, C801, C803, Q801.

## 5. POWER AMPLIFIER ADJUSTMENT

### ADJUSTMENT OF IDLING CURRENT

Connect a DC voltmeter to between emitters Q715 and Q717. Adjust R717 until 11 mV is reached. Likewise, adjust Q716, Q718 and R718.

## 6. TEST EQUIPMENT REQUIRED FOR SERVICING

Table 1 lists the test equipment required for servicing the Model 1050/1072 Stereo Console Amplifier.* The wattmeter, AC voltmeter, and variable autotransformer may be assembled as a test fixture as shown schematically in Figure 1. The load resistors and AC ammeter may be assembled into a second test fixture as shown in Figure 2.

## 7. PERFORMANCE VERIFICATION

TEST PROCEDURE

A. TEST EQUIPMENT

Refer to Table 1 for required test equipment.

B. PRELIMINARY PROCEDURES

1. Make the test setup shown in Figure 1 with the instrument controls set in the following positions:

| | |
|---|---|
| Line Switch | OFF |
| Variable-line switch | Variable |
| Wattmeter Switch | ON |
| Variable Autotransformer | 0 V (fully CCW) |
| Load | 8 ohms (0.5 mfd–OFF) |
| Audio Generator | 1 kHz |
| Output | 5 V range |
| Gain | Minimum |
| AC Voltmeter | 30 V range |

2. Make sure that connections between the resistive load and the system terminals of the Model 1050/1072 have negligible resistance when compared with the resistance of the load itself. Appreciable resistance in wiring adds to the total load, resulting in inaccurate measurements of output power.

3. Connect amplifier output to load and connect AC cord to line power. Connect shorting plugs to the Phono input jacks of the Model 1050/1072.

**Table 1. Test Equipment Required for Servicing**

| Item | Manufacturer and Model No. | Use |
|---|---|---|
| Distortion Analyzer<br>Audio Oscillator<br>AC Voltmeter | Sound Technology Model 1700B | Distortion measurements<br>Sinewave and squarewave signal source voltage measurements (AC) |
| Oscilloscope | Tektronix Model T932<br>Philips Model 3232 | Waveform analysis and trouble shooting and ASO alignment |
| Circuit Tester | | Trouble shooting |
| DC Voltmeter | Fluke Model 8000 "Digital" Simpson Model 313, Triplet Model 801 | Voltage measurements (DC) |
| AC Wattmeter | Simpson Model 1379 | Monitors primary power to amplifier |
| AC Ammeter | Commercial Grade (1 ~ 10 A) | Monitors amplifier output under short circuit condition |
| Line Voltmeter | Simpson Model 1359 | Monitors potential of primary power to amplifier |
| Variable Autotransformer | Superior Electronic Co., Powerstet Model 116B-10A | Adjusts level of primary power to amplifier |
| Shorting Plug | Use phono plug with 600 ohm across center pin and shell | Shorts amplifier input to eliminate noise pickup |
| Output Load (8 ohms, ±0.5% 100 W) | Commercial Grade | Provides 8-ohm load for amplifier output termination |
| Output Load (4 ohms, ±0.5% 100 W) | Commercial Grade | Provides 4-ohm load for amplifier output termination |
| Output Load Capacitor (0.5 mfd) | Mylar | Provides capacitive load for instability checks |
| AC Power Control Box | Optional Item. Fabricate in accordance with Figure 1 | Monitors and controls primary power for amplifier |
| Amplifier Output Load Box | Optional Item. Fabricate in accordance with Figure 2 | Provides various amplifier loads and can monitor shorted output |

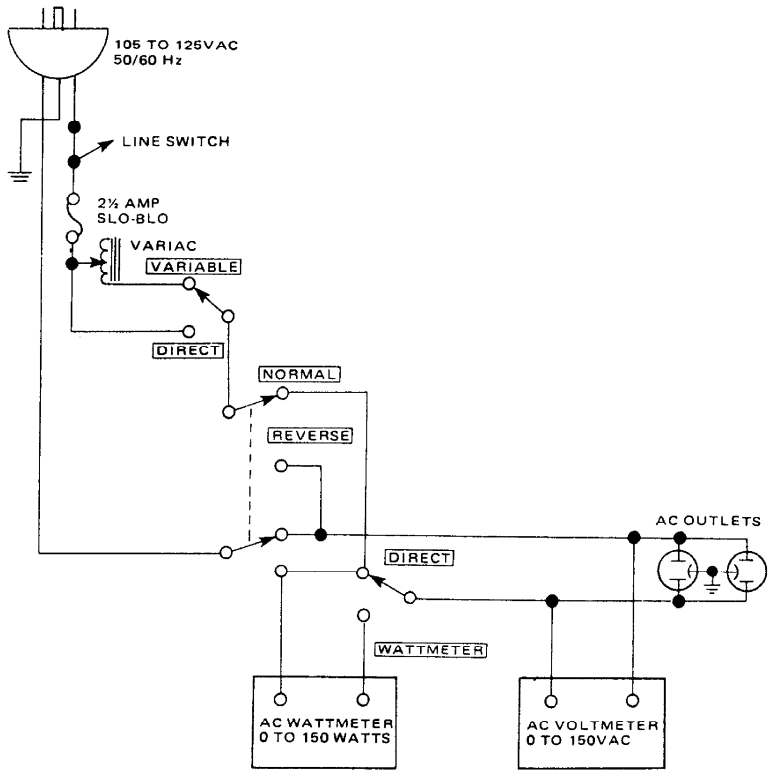


**Figure 1. AC Power Control Box Simplified Schematic**

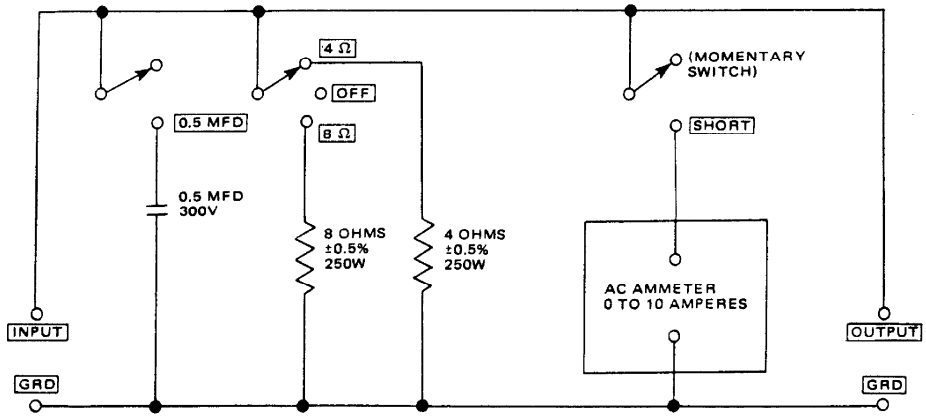


**Figure 2. Amplifier Output Load Box Simplified Schematic**



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## C. TOTAL HUM AND NOISE TEST

1. With shorting plugs connected to the Phono input jacks and an 8 ohm resistive load connected across the speaker system output terminals, connect a distortion analyzer across the load.

> **NOTE:**
>
> If the distortion analyzer does not contain a built-in voltmeter, an AC VTVM may be substituted.

2. Set the distortion analyzer controls for voltge measurements and apply power to the amplifier. Set the volume control fully CCW. Set the SELECTOR switch to PHONO.
3. If the distortion analyzer indicates more than 2.0 mV refer to the trouble analysis section of this manual.
4. Set the volume control fully CW. If the distortion analyzer indicates more than 20 mV, refer to the trouble analysis section of this manual.

## D MAXIMUM POWER OUTPUT

1. Connect the audio oscillator to the AUX input. Set audio oscillator frequency to 1 kHz. Set SELECTOR switch to AUX.
2. With the distortion analyzer connected across the output load (8-ohm), set the analyzer on the 30 VAC scale.
3. Turn the analyzer on and increase the audio oscillator output to 180 mV. The AC VTVM should read 17 VAC (14.1 VAC For Model 1050 only) or more.

## E. HARMONIC DISTORTION TEST

1. Set the frequency of the audio oscillator and the distortion analyzer to 20 kHz.
2. Set the controls of the analyzer for voltage measurement on the 30 volt scale.
3. Adjust the audio oscillator output level until the analyzer meter indicates 17 VAC. (14.1 VAC For Model 1050 only)
4. Switch the distortion analyzer to Set Level and adjust SENSITIVITY for full scale reading on 0 ~ 1% scale.
5. Measure the total harmonic distortion with the analyzer and verify it is less than 0.1%.

> **NOTE:**
>
> Any parasitic oscillation in the amplifier will be displayed on the oscilloscope when capacitance is switched into the load.

6. Switch the distortion analyzer back to SET LEVEL. (Do not readjust sensitivity of analyzer.)
7. Change the frequency of the audio oscillator and distortion analyzer to 1 kHz. Adjust audio oscillator output for a full scale reading on the 0 ~ 1% scale.
8. Measure the distortion, verifying it is no greater than 0.1%.
9. Repeat steps 7 and 8, changing frequency to 20 Hz. Distortion should be no more than 0.1%.
10. Check for parasitic oscillation; there should be none.

## 8. VOLTAGE CONVERSION

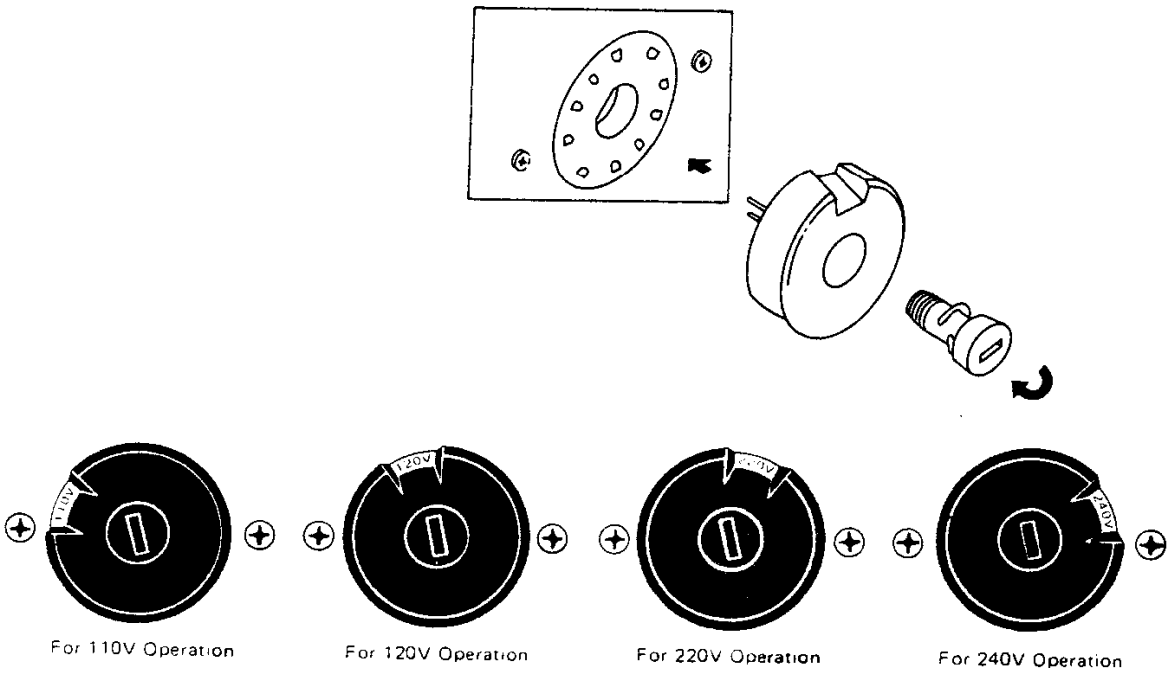
● EUROPEAN MODEL ONLY

This Model is equipped with a universal power transformer to permit operation at 110, 120, 220 and 240 V AC 50/60 Hz.
To convert the unit to the required voltage, set the plug as illustrated so that you can adjust the voltage as required.

**CAUTION**

DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE.

**Figure 2. Voltage Conversion Chart**




For 110V Operation

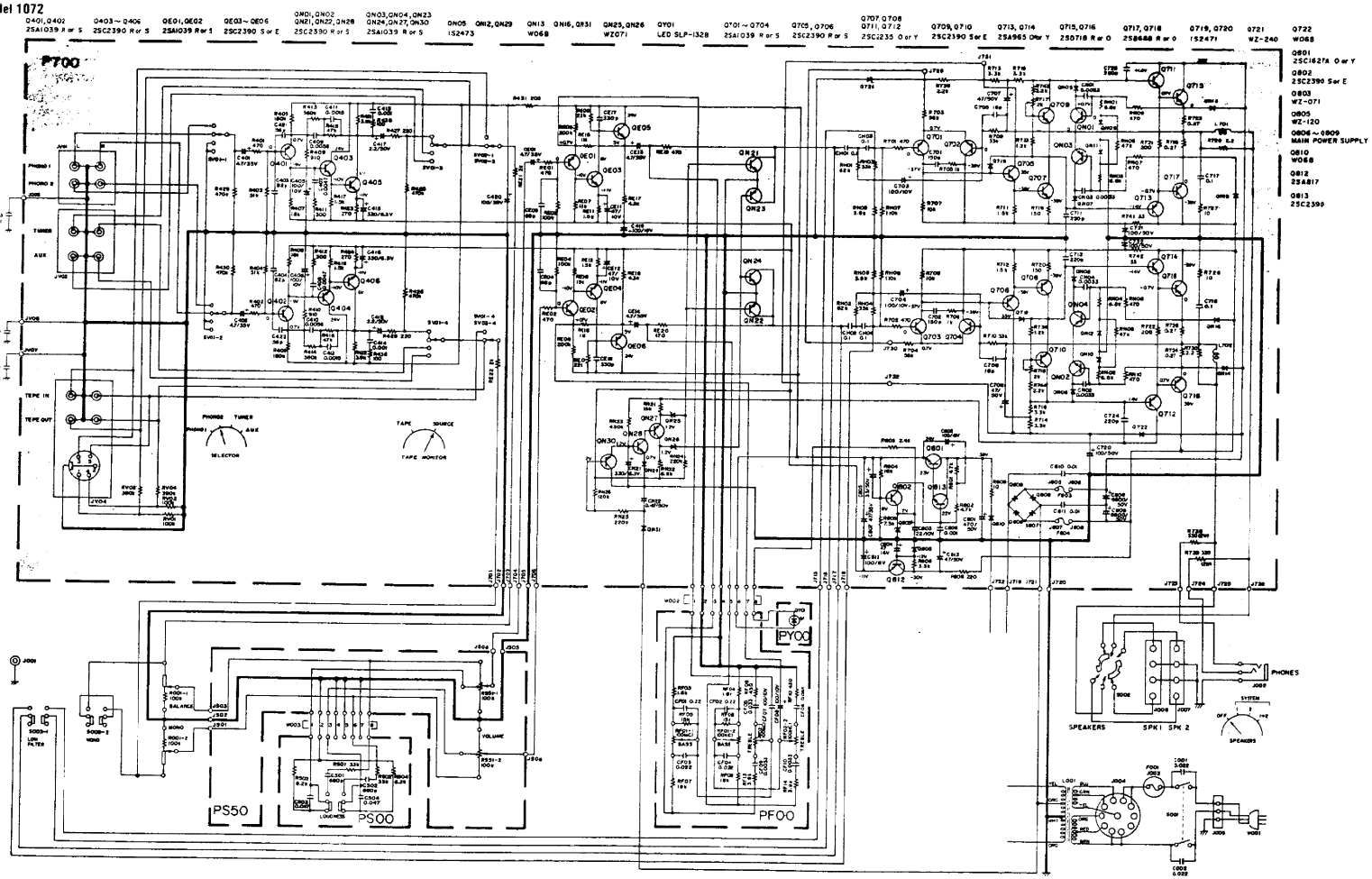
For 120V Operation

For 220V Operation

For 240V Operation

## 9. SCHEMATIC DIAGRAM

### 9.1 Model 1072



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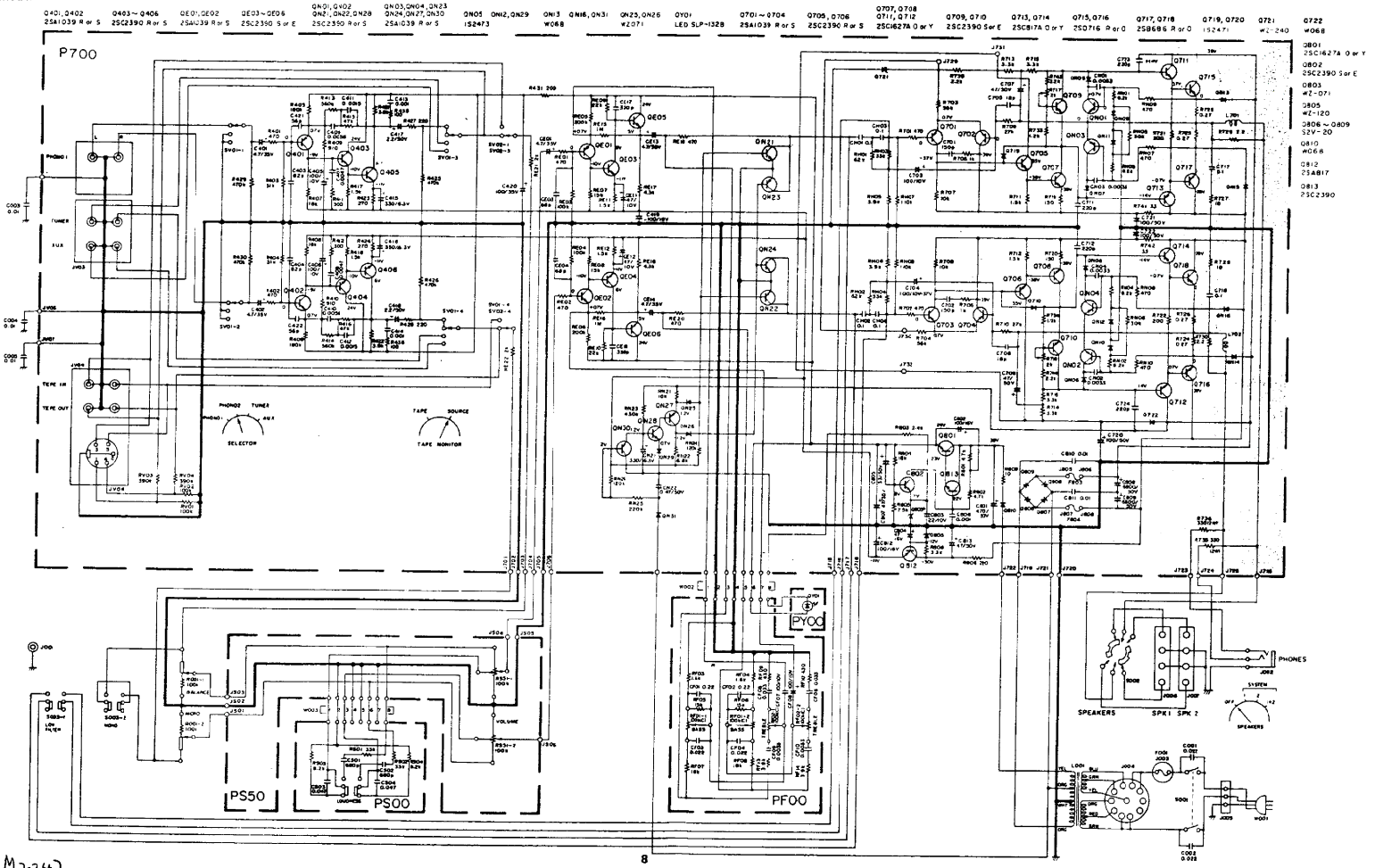
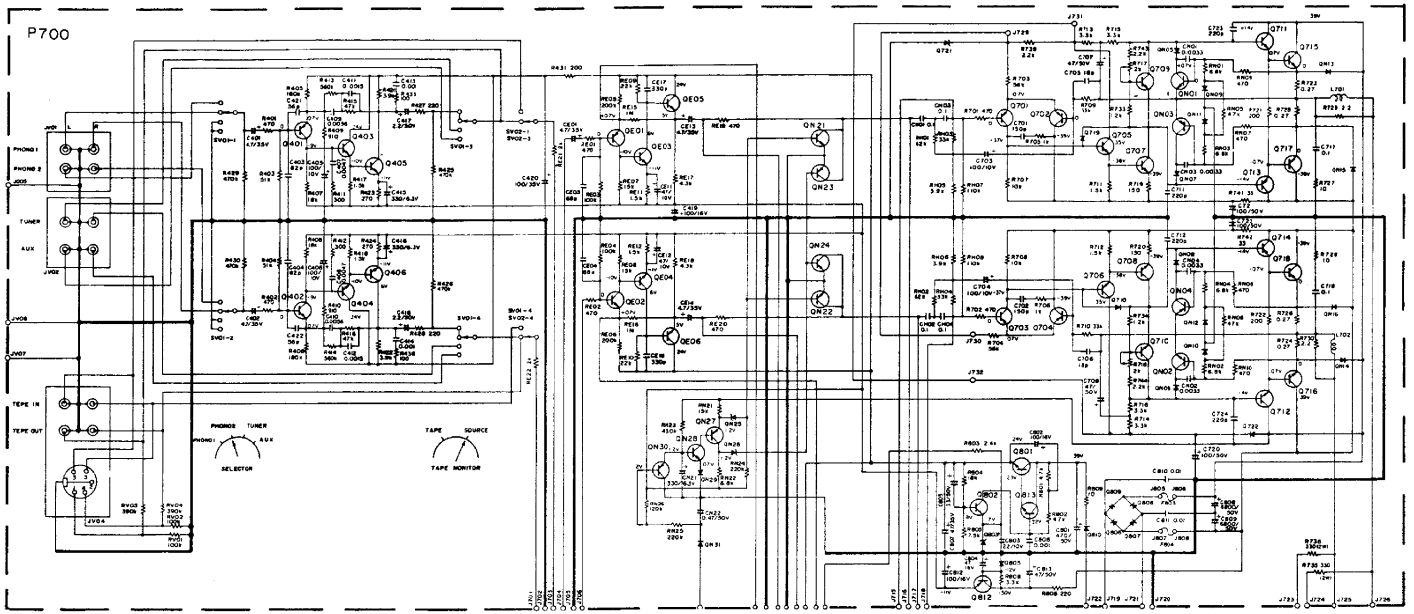
## 1.2 Model 1050



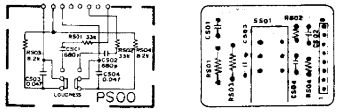
## ). DIAGRAM AND COMPONENT LOCATIONS

### ).1 Main Assembly (P700) Schematic Diagram and Component Locations

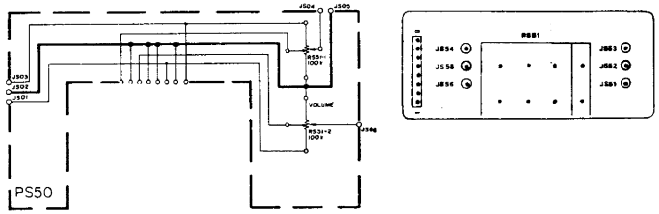



### ).2 ED Lamp Assembly (PY00) chematic Diagram and omponent Locations


### 10.3 Loudness Assembly (PS00) Schematic Diagram and Cpmponent Locations




### 10.4 Volume Assembly (PS50) Schematic Diagram and Component Locations



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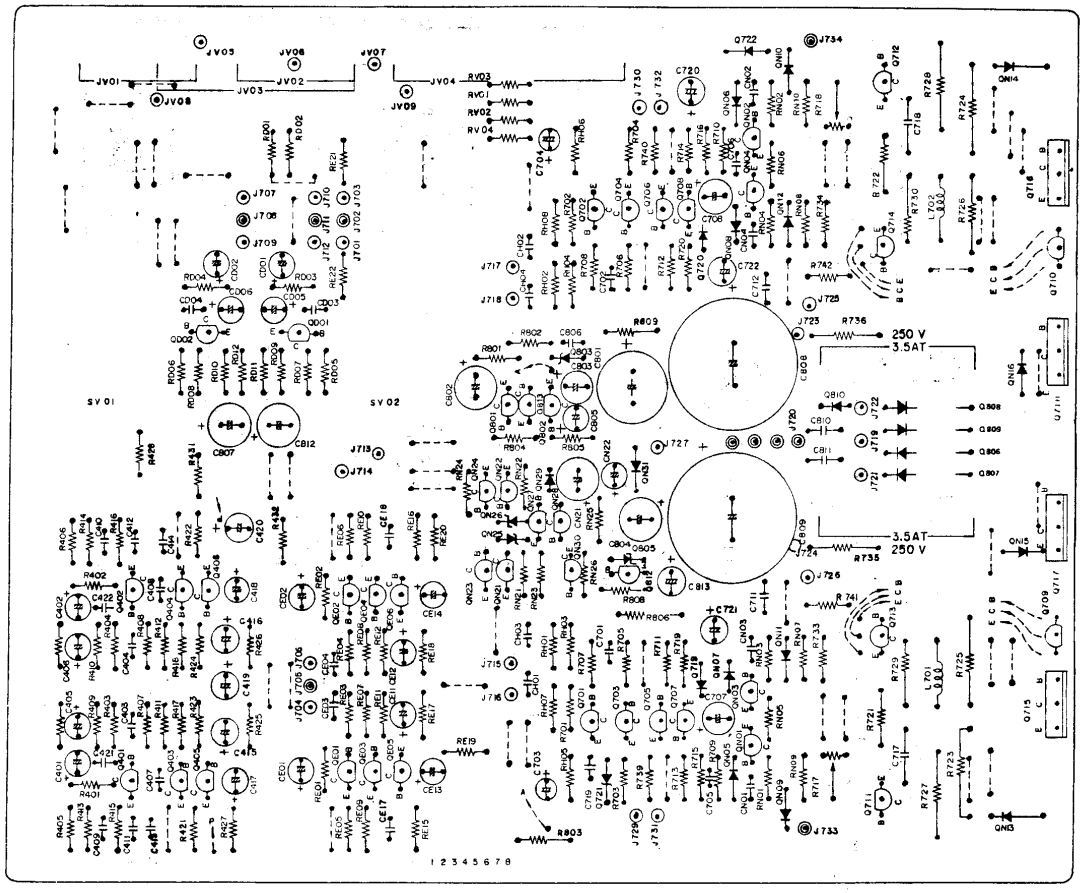
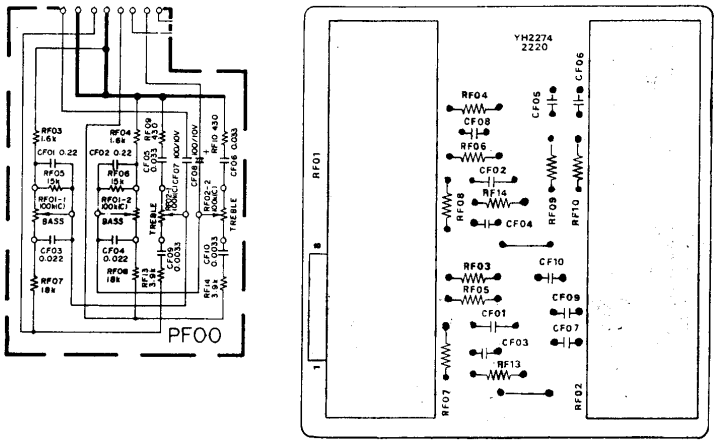



## 10.5 Tone Assembly (PF00) Schematic Diagram and Component Locations



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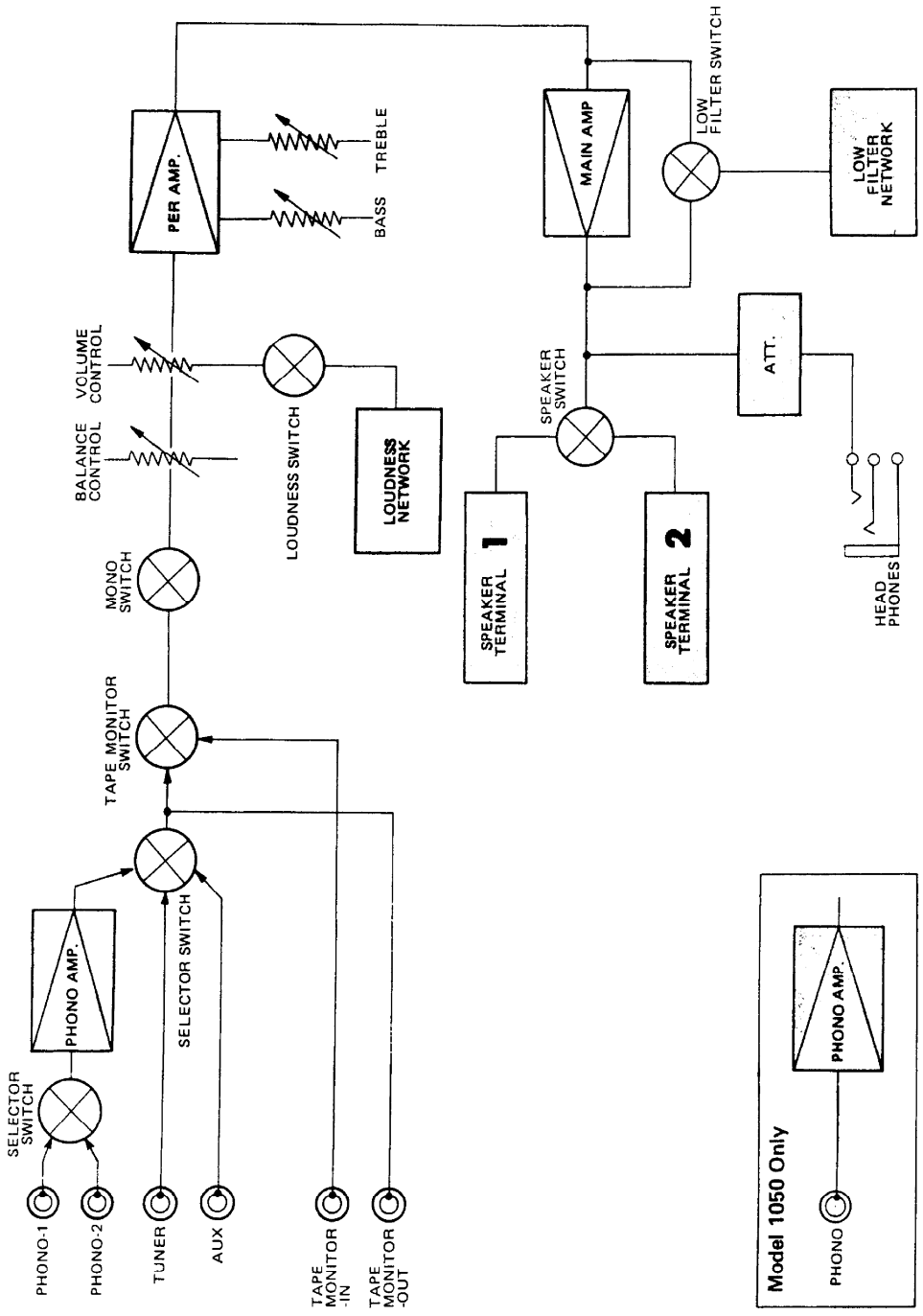
## 11. BLOCK DIAGRAM



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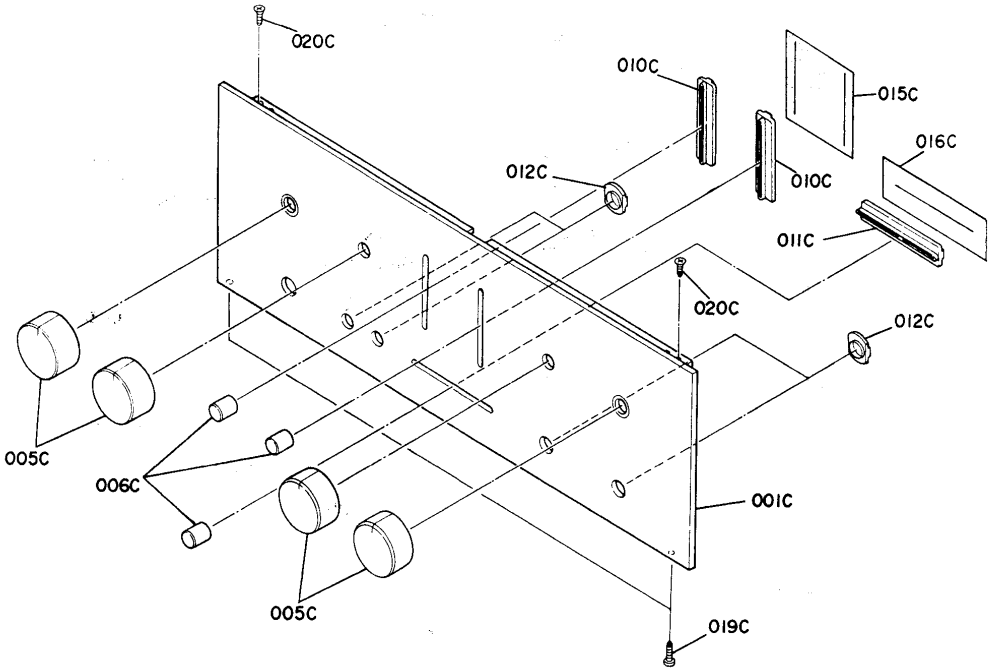
## 12. EXPLODED MECHANICAL DIAGRAM

- [C01-99] Front Panel




| REF. DESIG. | Q'TY N | PART NO. | DESCRIPTION |
|---|---|---|---|
| | | | **M1050, ONLY** |
| A | 1 | 2230063400 | Front Panel Assembly |
| 001C | 1 | 2230063012 | Escutcheon |
| 010C | 2 | 2970259010 | Bushing |
| 011C | 1 | 2926259042 | Bushing |
| 012C | 4 | 2978259012 | Bushing |
| 015C | 1 | 2970303012 | Mask |
| 016C | 1 | 2926303020 | Mask |
| | | | **M1072, ONLY** |
| A | 1 | 2274063400 | Front Panel Assembly (Gold) |
| A1 | 1 | 2274063410 | Front Panel Assembly (Black) |
| 001C | 1 | 2274063012 | Escutcheon (Gold) |
| 001C | 1 | 2274063112 | Escutcheon (Black) |
| 010C | 2 | 2970259010 | Bushing |
| 011C | 1 | 2926259042 | Bushing |
| 012C | 4 | 2978259012 | Bushing |
| 015C | 1 | 2970303012 | Mask |
| 016C | 1 | 2926303020 | Mask |

| REF. DESIG. | Q'TY N | PART NO. | DESCRIPTION |
|---|---|---|---|
| 005C | 4 | 2258154010 | Knob |
| 006C | 3 | 2970154012 | Knob |
| 019C | 3 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 020C | 2 | 51340306B0 | F.H. Tapped Screw F3 x 6 |

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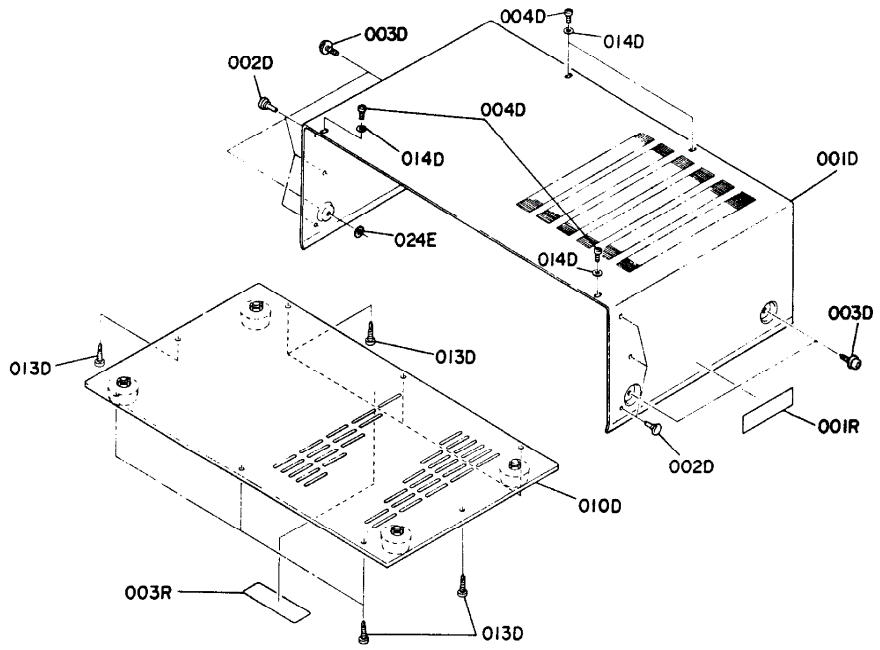
● [C02-99] Lid. (Top cover)




| REF. DESIG. | Q'TY N | PART NO. | DESCRIPTION |
|---|---|---|---|
| 001D | 1 | 2258257010 | Lid, Top Cover |
| 002D | 6 | 2991259010 | Bushing |
| 003D | 4 | 51260408U0 | F. Washer Screw F4 x 8 |
| 004D | 4 | 51280308U0 | B.H. Tapped Screw B3 x 8 |
| 010D | 1 | 2258257502 | Lid Assembly Bottom Cover |
| 013D | 8 | 51280410U0 | B.H. Tapped Screw B4 x 10 |
| 014D | 4 | 59030805P1 | Washer |

| REF. DESIG. | Q'TY N | PART NO. | DESCRIPTION |
|---|---|---|---|
| 024E | 1 | 54050400R0 | T.L. Washer, OR |
| 001R | 1 | 2932861012 | Label |
| 003R | 1 | 2578861010 | Label |



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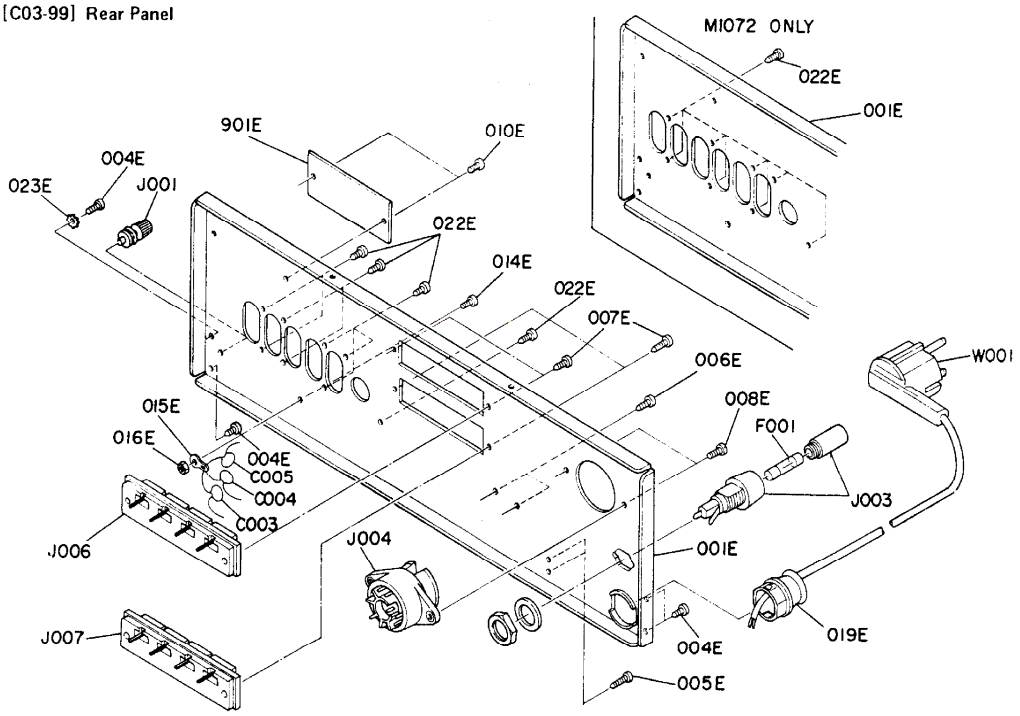
• [C03-99] Rear Panel




| REF. DESIG. | Q'TY N | PART NO. | DESCRIPTION |
|---|---|---|---|
| | | | (M1050, ONLY) |
| 001E | 1 | 2230160223 | Bracket, Rear Panel |
| | | | (M1072, ONLY) |
| 001E | 1 | 2274160223 | Bracket, Rear Panel |
| 004E | 4 | 51280308U0 | B.H. Tapped Screw B3 x 8 |
| 005E | 2 | 51280308U0 | B.H. Tapped Screw B3 x 8 |
| 006E | 2 | 51280308U0 | B.H. Tapped Screw B3 x 8 |
| 007E | 4 | 51280308U0 | B.H. Tapped Screw B3 x 8 |
| 008E | 2 | 51100308S9 | B.H.M. Screw B3 x 8 |
| 010E | 2 | 51760306B0 | OS Tapped Screw B3 x 6 |
| 014E | 1 | 51100306S9 | B.H.M. Screw B3 x 6 |
| 015E | 1 | 62030049W0 | Lug |
| 016E | 1 | 53110303A9 | Hexagon Nut |
| 019E | 1 | 2286259110 | Bushing |
| 022E | 8 | 51280308U0 | B.H. Tapped Screw B3 x 8 |
| 023E | 1 | 54050300R0 | T.L. Washer OR |

| REF. DESIG. | Q'TY N | PART NO. | DESCRIPTION |
|---|---|---|---|
| 901E | 1 | 2230265010 | Indicator (M1050, ONLY) |
| 901E | 1 | 2274265010 | Indicator (M1072, ONLY) |
| C003 | 1 | DK18103310 | Ceramic Cap. 0.01μF +100% −0 |
| C004 | 1 | DK18103310 | Ceramic Cap. 0.01μF +100% −0 |
| C005 | 1 | DK18103310 | Ceramic Cap. 0.01μF +100% −0 |
| F001 | 1 | FS10063800 | Fuse 630mAT (M1050, ONLY) |
| F001 | 1 | FS10080800 | Fuse 800mAT (M1072, ONLY) |
| J001 | 1 | YL03010240 | Terminal |
| J003 | 1 | YJ08000220 | Jack, Huse Holder |
| J004 | 1 | BY03110010 | Plug, Voltage Selector |
| J006 | 1 | YT03040160 | Terminal |
| J007 | 1 | YT03040160 | Terminal |
| W001 | 1 | YC01900030 | A.C. Power Cord |

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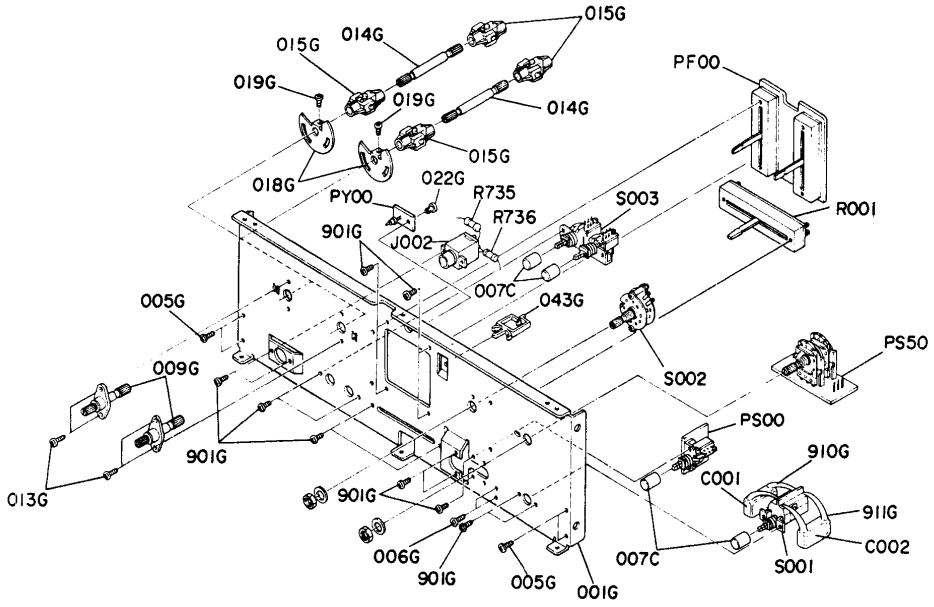
• [P01-99] Front Chassis and General Parts




| REF. DESIG. | Q'TY N | PART NO. | DESCRIPTION |
|---|---|---|---|
| 007C | 4 | 2259154030 | Knob |
| 001G | 1 | 2258160013 | Bracket, Front Chassis |
| 005G | 4 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 006G | 2 | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 009G | 2 | 2258112500 | Shaft, K |
| 013G | 4 | 51280305B0 | B.H. Tapped Screw B3 x 5 |
| 014G | 2 | 2258112020 | Shaft |
| 015G | 4 | 2258125510 | Joint, K |
| 018G | 2 | 2258062012 | Click |
| 019G | 2 | 51650304D9 | Set Screw H.P. 3 x 4 |
| 022G | 1 | 2276005050 | Clamper |
| 043G | 1 | 2886005030 | Clamper |
| 901G | 14 | 51100306A9 | B.H.M. Screw B3 x 6 |
| 910G | 1 | 3926120010 | Insulator |
| 911G | 1 | 3926120010 | Insulator |
| C001 | 1 | DF17223800 | Film Cap. 0.022μF ±20% 1000V |
| C002 | 1 | DF17223800 | Film Cap. 0.022μF ±20% 1000V |
| J002 | 1 | YJ01001200 | Jack, Head Phone |
| R001 | 1 | RS01040090 | Variable Resistor 100KΩ x 2 |
| S001 | 1 | SP02010370 | Push Switch, Power |
| S002 | 1 | SR02040110 | Rotaly Switch |
| S003 | 1 | SP02020310 | Push Switch |
| R735 | 1 | GA05331020 | Resistor 330Ω ±5% 2W |
| R736 | 1 | GA05331020 | Resistor 330Ω ±5% 2W |

| REF. DESIG. | Q'TY N | PART NO. | DESCRIPTION |
|---|---|---|---|
| PF00 | 1 | YH22742210 | P.W. Board, Tone |
| | 1 | ZZ39602210 | P.W. Board Assembly |
| PS00 | 1 | YH22741210 | P.W. Board, Loudness |
| | 1 | ZZ22741210 | P.W. Board Assembly |
| PS50 | 1 | YH22741220 | P.W. Board, Volume |
| | 1 | ZZ22741220 | P.W. Board Assembly |
| PY00 | 1 | YH22742220 | P.W. Board, LED |
| | 1 | ZZ22742220 | P.W. Board Assembly |



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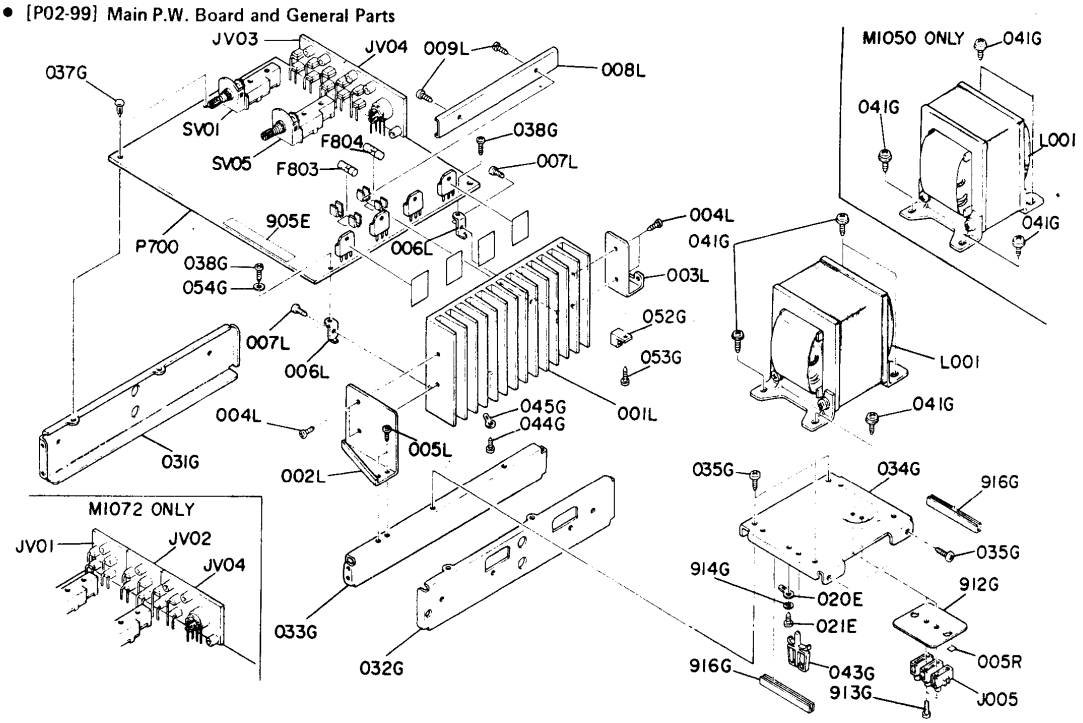
• [P02-99] Main P.W. Board and General Parts




| REF. DESIG. | Q'TY N | PART NO. | DESCRIPTION |
|---|---|---|---|
| 020E | 1 | 62030049W0 | Lug |
| 021E | 1 | 5128030680 | B.H. Tapped Screw B3 x 6 |
| 905E | 1 | 2205861010 | Label |
| 031G | 1 | 2258126010 | Stay, Left |
| 032G | 1 | 2258126020 | Stay, Riget |
| 033G | 1 | 2258126030 | Stay, Center |
| 034G | 1 | 2258160022 | Bracket (M1050, ONLY) |
| 034G | 1 | 2274160020 | Bracket (M1072, ONLY) |
| 035G | 4 | 5128040880 | B.H. Tapped Screw B4 x 8 |
| 037G | 2 | 2276005050 | Clamper |
| 038G | 2 | 5128030880 | B.H. Tapped Screw B3 x 8 |
| 041G | 4 | 51490512A9 | L. Washer Screw L5 x 12 |
| 043G | 1 | 2886005030 | Clamper |
| 044G | 1 | 5128030680 | B.H. Tapped Screw B3 x 6 |
| 045G | 1 | 52040029W0 | Lug |
| 052G | 1 | 2887005012 | Clamper |
| 053G | 1 | 5128030880 | B.H. Tapped Screw B3 x 8 |
| 054G | 1 | 2258118010 | Spacer |
| 912G | 1 | 2970120040 | Insulator |
| 913G | 2 | 5128031480 | B.H. Tapped Screw B3 x 14 |
| 914G | 1 | 54040302A0 | Spring Washer |
| 916G | 2 | 2218259020 | Bushing |
| 001L | 1 | 2274267012 | Heatsink |
| 002L | 1 | 2258160040 | Bracket |
| 003L | 1 | 2258160050 | Bracket |
| 004L | 4 | 5128030880 | B.H. Tapped Screw B3 x 8 |
| 005L | 2 | 5128030880 | B.H. Tapped Screw B3 x 8 |

| REF. DESIG. | Q'TY N | PART NO. | DESCRIPTION |
|---|---|---|---|
| 006L | 2 | 2231160040 | Bracket |
| 007L | 2 | 5128030880 | B.H. Tapped Screw B3 x 8 |
| 008L | 1 | 2258005010 | Clamper |
| 009L | 2 | 5128031480 | B.H. Tapped Screw B3 x 14 |
| 005R | 1 | 2882861020 | Label |
| J005 | 1 | YL09030010 | Terminal |
| L001 | 1 | TS18304010 | Power Transformer (M1050, ONLY) |
| L001 | 1 | TS18303010 | Power Transformer (M1072, ONLY) |
| P700 | 1 | YG22740010 | P.W. Board, Main (M1050, ONLY) |
| | 1 | ZZ22300010 | P.W. Board Assembly |
| P700 | 1 | YG22740010 | P.W. Board, Main (M1072, ONLY) |
| | 1 | ZZ22748010 | P.W. Board Assembly |
| F803 | 1 | FS10350800 | Fuse 3.5AT |
| F804 | 1 | FS10350800 | Fuse 3.5AT |
| JV01 | 1 | YT02040280 | Terminal (M1072, ONLY) |
| JV02 | 1 | YT02040280 | Terminal (M1072, ONLY) |
| JV03 | 1 | YT02060140 | Terminal (M1050, ONLY) |
| JV04 | 1 | YT02050010 | Terminal |
| SV01 | 1 | SR04030220 | Rotary Switch (M1050, ONLY) |
| SV01 | 1 | SR04040130 | Rotary Switch (M1072, ONLY) |
| SV05 | 1 | SR04020150 | Rotary Switch |

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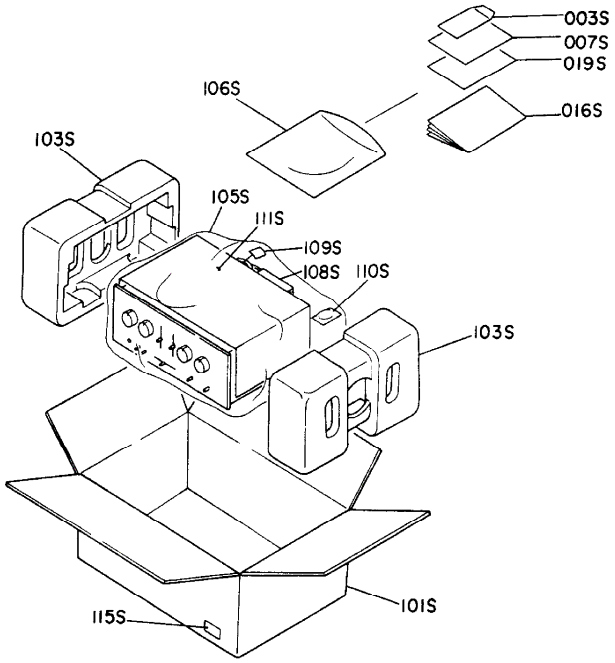
- [H01-99] Packing Materials




| REF. DESIG. | Q'TY N | PART NO. | DESCRIPTION |
|---|---|---|---|
| 003S | 1 | 2818813010 | Envelope |
| 007S | 1 | 9630000180 | Guarantee Card |
| 016S | 1 | 2230851310 | Instructions |
| 019S | 1 | 2230851030 | Instructions (M1050, ONLY) |
| 019S | 1 | 2274851030 | Instructions (M1072, ONLY) |
| 101S | 1 | 2230801012 | Packing Case (M1050, ONLY) |
| 101S | 1 | 2274801012 | Packing Case (M1072, ONLY) |
| 103S | 2 | 4214809013 | Cushion |
| 105S | 1 | 9014335330 | Polyethy Bag |
| 106S | 1 | 9013025010 | Polyethy Bag |

| REF. DESIG. | Q'TY N | PART NO. | DESCRIPTION |
|---|---|---|---|
| 108S | 1 | 2864804010 | Sleeve |
| 109S | 1 | 9560000043 | Hang Tag |
| 110S | 1 | 2731821010 | Silicagel |
| 111S | 1 | 2918107160 | Sheet |
| 115S | 3 | 9526019060 | Serial No. Card |



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## 13. ELECTRICAL PARTS LIST

| REF. DESIG. | Q'TY N | PART NO. | DESCRIPTION |
|---|---|---|---|
| | | | **P700-MAIN CIRCUIT BOARD (M1050, ONLY)** |
| P700 | 1 | YG22740010 | P.W. Board, Main |
| | 1 | ZZ22300010 | P.W. Board Assembly |
| | | | **(M1072, ONLY)** |
| P700 | 1 | YG22740010 | P.W. Board, Main |
| | 1 | ZZ22748010 | P.W. Board Assembly |
| | | | **P700-CAPACITORS** |
| C401 | 1 | EA47503590 | Elect 4.7μF 35V |
| C402 | 1 | EA47503590 | Elect 4.7μF 35V |
| C403 | 1 | DD16820010 | Ceramic 82pF ±10% |
| C404 | 1 | DD16820010 | Ceramic 82pF ±10% |
| C405 | 1 | EA10701090 | Elect 100μF 10V |
| C406 | 1 | EA10701090 | Elect 100μF 10V |
| C407 | 1 | DF15472300 | Film 0.0047μF ±5% |
| C408 | 1 | DF15472300 | Film 0.0047μF ±5% |
| C409 | 1 | DF15562300 | Film 0.0056μF ±5% |
| C410 | 1 | DF15562300 | Film 0.0056μF ±5% |
| C411 | 1 | DF15152300 | Film 0.0015μF ±5% |
| C412 | 1 | DF15152300 | Film 0.0015μF ±5% |
| C413 | 1 | DF15102300 | Film 0.001μF ±5% |
| C414 | 1 | DF15102300 | Film 0.001μF ±5% |
| C415 | 1 | EA33700690 | Elect 330μF 6.3V |
| C416 | 1 | EA33700690 | Elect 330μF 6.3V |
| C417 | 1 | EA22505090 | Elect 2.2μF 50V |
| C418 | 1 | EA22505090 | Elect 2.2μF 50V |
| C419 | 1 | EA10701690 | Elect 100μF 16V |
| C420 | 1 | EA10703590 | Elect 100μF 35V |
| C421 | 1 | DD15560370 | Ceramic 56pF ±5% |
| C422 | 1 | DD15560370 | Ceramic 56pF ±5% |
| C701 | 1 | DD15151370 | Ceramic 150pF ±5% |
| C702 | 1 | DD15151370 | Ceramic 150pF ±5% |
| C703 | 1 | EA10701090 | Elect 100μF 10V |
| C704 | 1 | EA10701090 | Elect 100μF 10V |
| C705 | 1 | DD15180370 | Ceramic 18pF ±5% |
| C706 | 1 | DD15180370 | Ceramic 18pF ±5% |
| C707 | 1 | EA47605090 | Elect 47μF 50V |
| C708 | 1 | EA47605090 | Elect 47μF 50V |
| C711 | 1 | DK16221510 | Ceramic 220pF ±10% 500V |
| C712 | 1 | DK16221510 | Ceramic 220pF ±10% 500V |
| C717 | 1 | DF17104540 | Film 0.1μF ±20% 100V |
| C718 | 1 | DF17104540 | Film 0.1μF ±20% 100V |
| C720 | 1 | EA10705090 | Elect 100μF 50V |
| C721 | 1 | EA10705090 | Elect 100μF 50V |
| C722 | 1 | EA10705090 | Elect 100μF 50V |
| C723 | 1 | DK16221510 | Ceramic 220pF ±10% 500V |
| C724 | 1 | DK16221510 | Ceramic 220pF ±10% 500V |
| C801 | 1 | EA47705090 | Elect 470μF 50V |
| C802 | 1 | EA10701690 | Elect 100μF 16V |
| C803 | 1 | EA22601090 | Elect 22μF 10V |
| C804 | 1 | EA47601690 | Elect 47μF 16V |
| C805 | 1 | EA33505090 | Elect 3.3μF 50V |
| C806 | 1 | DF17102010 | Film 0.001μF ±20% |
| C807 | 1 | EA47603590 | Elect 47μF 35V |
| C808 | 1 | EB68805020 | Elect 6800μF 50V |
| C809 | 1 | EB68805020 | Elect 6800μF 50V |
| C810 | 1 | DK18103510 | Ceramic 0.01μF 500V |
| C811 | 1 | DK18103510 | Ceramic 0.01μF 500V |
| C812 | 1 | EA10701690 | Elect 100μF 16V |
| C813 | 1 | EA47605090 | Elect 47μF 50V |

| REF. DESIG. | Q'TY N | PART NO. | DESCRIPTION |
|---|---|---|---|
| CE01 | 1 | EA47503590 | Elect 4.7μF 35V |
| CE02 | 1 | EA47503590 | Elect 4.7μF 35V |
| CE03 | 1 | DD15680370 | Ceramic 68pF ±5% |
| CE04 | 1 | DD15680370 | Ceramic 68pF ±5% |
| CE11 | 1 | EA47601090 | Elect 47μF 10V |
| CE12 | 1 | EA47601090 | Elect 47μF 10V |
| CE13 | 1 | EA47503590 | Elect 4.7μF 35V |
| CE14 | 1 | EA47503590 | Elect 4.7μF 35V |
| CE17 | 1 | DD15331370 | Ceramic 330pF ±5% |
| CE18 | 1 | DD15331370 | Ceramic 330pF ±5% |
| CH01 | 1 | DF16104300 | Film 0.1μF ±10% |
| CH02 | 1 | DF16104300 | Film 0.1μF ±10% |
| CH03 | 1 | DF16104300 | Film 0.1μF ±10% |
| CH04 | 1 | DF16104300 | Film 0.1μF ±10% |
| CN01 | 1 | DF16332300 | Film 0.0033μF ±10% |
| CN02 | 1 | DF16332300 | Film 0.0033μF ±10% |
| CN03 | 1 | DF16332300 | Film 0.0033μF ±10% |
| CN04 | 1 | DF16332300 | Film 0.0033μF ±10% |
| CN21 | 1 | EA33700690 | Elect 330μF 6.3V |
| CN22 | 1 | EA47405090 | Elect 0.47μF 50V |
| | | | **P700-RESISTORS (All Resistors are ±5% and ¼W)** |
| R401 | 1 | GD05471140 | 470Ω |
| R402 | 1 | GD05471140 | 470Ω |
| R403 | 1 | GD05513140 | 51KΩ |
| R404 | 1 | GD05513140 | 51KΩ |
| R405 | 1 | GD05184140 | 180KΩ |
| R406 | 1 | GD05184140 | 180KΩ |
| R407 | 1 | GD05183140 | 18KΩ |
| R408 | 1 | GD05183140 | 18KΩ |
| R409 | 1 | GD05911140 | 910Ω |
| R410 | 1 | GD05911140 | 910Ω |
| R411 | 1 | GD05301140 | 300Ω |
| R412 | 1 | GD05301140 | 300Ω |
| R413 | 1 | GD05564140 | 560KΩ |
| R414 | 1 | GD05564140 | 560KΩ |
| R415 | 1 | GD05473140 | 47KΩ |
| R416 | 1 | GD05473140 | 47KΩ |
| R417 | 1 | GD05152140 | 1.5KΩ |
| R418 | 1 | GD05152140 | 1.5KΩ |
| R421 | 1 | GD05392140 | 3.9KΩ |
| R422 | 1 | GD05392140 | 3.9KΩ |
| R423 | 1 | GD05271140 | 270Ω |
| R424 | 1 | GD05271140 | 270Ω |
| R425 | 1 | GD05224140 | 220KΩ |
| R426 | 1 | GD05224140 | 220KΩ |
| R427 | 1 | GD05221140 | 220Ω |

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| REF. DESIG. | Q'TY N | PART NO. | DESCRIPTION |
|---|---|---|---|
| R428 | 1 | GD05221140 | 220Ω |
| R429 | 1 | GD05474140 | 470KΩ |
| R430 | 1 | GD05474140 | 470KΩ |
| R431 | 1 | GG05201140 | 200Ω |
| R435 | 1 | GD05101140 | 100Ω |
| R436 | 1 | GD05101140 | 100Ω |
| R701 | 1 | GD05471140 | 470Ω |
| R702 | 1 | GD05471140 | 470Ω |
| R703 | 1 | GD05563140 | 56KΩ |
| R704 | 1 | GD05563140 | 56KΩ |
| R705 | 1 | GD05102140 | 1KΩ |
| R706 | 1 | GD05102140 | 1KΩ |
| R707 | 1 | GD05103140 | 10KΩ |
| R708 | 1 | GD05103140 | 10KΩ |
| R711 | 1 | GD05152140 | 1.5KΩ |
| R712 | 1 | GD05152140 | 1.5KΩ |
| R713 | 1 | GD05332140 | 3.3KΩ |
| R714 | 1 | GD05332140 | 3.3KΩ |
| R715 | 1 | GD05332140 | 3.3KΩ |
| R716 | 1 | GD05332140 | 3.3KΩ |
| R717 | 1 | RA02020180 | Trimming, 2KΩ |
| R718 | 1 | RA02020180 | Trimming, 2KΩ |
| R719 | 1 | GG05151140 | 150Ω |
| R720 | 1 | GG05151140 | 150Ω |
| R721 | 1 | GG05201120 | 200Ω ½W |
| R722 | 1 | GG05201120 | 200Ω ½W |
| R723 | 1 | GB05272020 | 0.27Ω 2W |
| R724 | 1 | GB05272020 | 0.27Ω 2W |
| R725 | 1 | GB05272020 | 0.27Ω 2W |
| R726 | 1 | GB05272020 | 0.27Ω 2W |
| R727 | 1 | GA05100020 | 10Ω 2W |
| R728 | 1 | GA05100020 | 10Ω 2W |
| R729 | 1 | RC10022120 | 2.2Ω ±10% ½W |
| R730 | 1 | RC10022120 | 2.2Ω ±10% ½W |
| R733 | 1 | GD05122140 | 1.2KΩ |
| R734 | 1 | GD05122140 | 1.2KΩ |
| R739 | 1 | GG05222140 | 2.2KΩ |
| R741 | 1 | GG05330140 | 33Ω |
| R742 | 1 | GG05330140 | 33Ω |
| R743 | 1 | GD05222140 | 2.2KΩ |
| R744 | 1 | GD05222140 | 2.2KΩ |
| R801 | 1 | GG05472140 | 4.7KΩ |
| R802 | 1 | GG05472140 | 4.7KΩ |
| R803 | 1 | GG05242120 | 2.4KΩ ½W |
| R804 | 1 | GD05183140 | 18KΩ |
| R805 | 1 | GD05572140 | 7.5KΩ |
| R806 | 1 | RF05221140 | 220Ω |
| R808 | 1 | GG05332120 | 3.3KΩ ½W |
| R809 | 1 | RF05100140 | 10Ω |
| | | | **(M1050, ONLY)** |
| R709 | 1 | GD05273140 | 27KΩ |
| R710 | 1 | GD05273140 | 27KΩ |
| | | | **(M1072, ONLY)** |
| R709 | 1 | GD05333140 | 33KΩ |
| R710 | 1 | GD05333140 | 33KΩ |

| REF. DESIG. | Q'TY N | PART NO. | DESCRIPTION |
|---|---|---|---|
| RE01 | 1 | GD05471140 | 470Ω |
| RE02 | 1 | GD05471140 | 470Ω |
| RE03 | 1 | GD05104140 | 100KΩ |
| RE04 | 1 | GD05103140 | 100KΩ |
| RE05 | 1 | GD05204140 | 200KΩ |
| RE06 | 1 | GD05204140 | 200KΩ |
| RE07 | 1 | GD05153140 | 15KΩ |
| RE08 | 1 | GD05153140 | 15KΩ |
| RE09 | 1 | GD05223140 | 22KΩ |
| RE10 | 1 | GD05223140 | 22KΩ |
| RE11 | 1 | GD05152140 | 1.5KΩ |
| RE12 | 1 | GD05152140 | 1.5KΩ |
| RE15 | 1 | GD05105140 | 1MΩ |
| RE16 | 1 | GD05105140 | 1MΩ |
| RE17 | 1 | GD05432140 | 4.3KΩ |
| RE18 | 1 | GD05432140 | 4.3KΩ |
| RE19 | 1 | GD05471140 | 470Ω |
| RE20 | 1 | GD05471140 | 470Ω |
| RE21 | 1 | GD05202140 | 2KΩ |
| RE22 | 1 | GD05202140 | 2KΩ |
| RH01 | 1 | GD05623140 | 62KΩ |
| RH02 | 1 | GD05623140 | 62KΩ |
| RH03 | 1 | GD05333140 | 33KΩ |
| RH04 | 1 | GD05333140 | 33KΩ |
| RH05 | 1 | GD05392140 | 3.9KΩ |
| RH06 | 1 | GD05392140 | 3.9KΩ |
| RH07 | 1 | GD05114140 | 110KΩ |
| RH08 | 1 | GD05114140 | 110KΩ |
| | | | **(M1050, ONLY)** |
| RN01 | 1 | GD05822140 | 8.2KΩ |
| RN02 | 1 | GD05822140 | 8.2KΩ |
| RN03 | 1 | GD05822140 | 8.2KΩ |
| RN04 | 1 | GD05822140 | 8.2KΩ |
| RN05 | 1 | GD05303140 | 30KΩ |
| RN06 | 1 | GD05303140 | 30KΩ |
| | | | **(M1072, ONLY)** |
| RN01 | 1 | GD05682140 | 6.8KΩ |
| RN02 | 1 | GD05682140 | 6.8KΩ |
| RN03 | 1 | GD05682140 | 6.8KΩ |
| RN04 | 1 | GD05682140 | 6.8KΩ |
| RN05 | 1 | GD05473140 | 47KΩ |
| RN06 | 1 | GD05473140 | 47KΩ |
| RN07 | 1 | GG05471140 | 470Ω |
| RN08 | 1 | GG05471140 | 470Ω |
| RN09 | 1 | GG05471140 | 470Ω |
| RN10 | 1 | GG05471140 | 470Ω |
| RN22 | 1 | GD05682140 | 6.8KΩ |
| RN23 | 1 | GD05434140 | 430KΩ |
| RN25 | 1 | GD05224140 | 220KΩ |
| RN26 | 1 | GD05124140 | 120KΩ |



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| REF. DESIG. | Q'TY N | PART NO. | DESCRIPTION |
|---|---|---|---|
| | | | (M1050, ONLY) |
| RN21 | 1 | GD05103140 | 10KΩ |
| RN24 | 1 | GD05124140 | 120KΩ |
| | | | (M1072, ONLY) |
| RN21 | 1 | GD05153140 | 15KΩ |
| RN24 | 1 | GD05224140 | 220KΩ |
| RV01 | 1 | GD05104140 | 100KΩ |
| RV02 | 1 | GD05104140 | 100KΩ |
| RV03 | 1 | GD05394140 | 390KΩ |
| RV04 | 1 | GD05394140 | 390KΩ |
| | | | P700-SEMICONDUCTORS |
| Q401 | 1 | HT110392A0 | Transistor 2SA1039 (R or S) |
| Q402 | 1 | HT110392A0 | Transistor 2SA1039 (R or S) |
| Q403 | 1 | HT323902A0 | Transistor 2SC2390 (R or S) |
| Q404 | 1 | HT323902A0 | Transistor 2SC2390 (R or S) |
| Q405 | 1 | HT323902A0 | Transistor 2SC2390 (R or S) |
| Q406 | 1 | HT323902A0 | Transistor 2SC2390 (R or S) |
| Q701 | 1 | HT110392A0 | Transistor 2SA1039 (R or S) |
| Q702 | 1 | HT110392A0 | Transistor 2SA1039 (R or S) |
| Q703 | 1 | HT110392A0 | Transistor 2SA1039 (R or S) |
| Q704 | 1 | HT110392A0 | Transistor 2SA1039 (R or S) |
| Q705 | 1 | HT323902A0 | Transistor 2SC2390 (R or S) |
| Q706 | 1 | HT323902A0 | Transistor 2SC2390 (R or S) |
| Q707 | 1 | HT322352A0 | Transistor 2SC2235 (O or Y) |
| Q708 | 1 | HT322352A0 | Transistor 2SC2235 (O or Y) |
| Q709 | 1 | HT323902B0 | Transistor 2SC2390 (S or E) |
| Q710 | 1 | HT323902B0 | Transistor 2SC2390 (S or E) |
| Q719 | 1 | HD20003210 | Diode 1S2471 |
| Q720 | 1 | HD20003210 | Diode 1S2471 |
| Q721 | 1 | HD30039090 | Zener WZ-240 |
| Q722 | 1 | HD20005010 | Diode W06B |
| | | | (M1050, ONLY) |
| Q711 | 1 | HT316272A0 | Transistor 2SC1627A (O or Y) |
| Q712 | 1 | HT316272A0 | Transistor 2SC1627A (O or Y) |
| Q713 | 1 | HT108172A0 | Transistor 2SC817A (O or Y) |
| Q714 | 1 | HT108172A0 | Transistor 2SC817A (O or Y) |
| Q715 | 1 | HT407162A0 | Transistor 2SD716 (R or O) |
| Q716 | 1 | HT407162A0 | Transistor 2SD716 (R or O) |
| Q717 | 1 | HT206862A0 | Transistor 2SB686 (R or O) |
| Q718 | 1 | HT206862A0 | Transistor 2SB686 (R or O) |
| | | | (M1072, ONLY) |
| Q711 | 1 | HT322352A0 | Transistor 2SC2235 (O or Y) |
| Q712 | 1 | HT322352A0 | Transistor 2SC2235 (O or Y) |
| Q713 | 1 | HT109652A0 | Transistor 2SA965 (O or Y) |
| Q714 | 1 | HT109652A0 | Transistor 2SA965 (O or Y) |
| Q715 | 1 | HT407182B0 | Transistor 2SD718 (R or O) |
| Q716 | 1 | HT407182B0 | Transistor 2SD718 (R or O) |
| Q717 | 1 | HT206882B0 | Transistor 2SB688 (R or O) |
| Q718 | 1 | HT206882B0 | Transistor 2SB688 (R or O) |

| REF. DESIG. | Q'TY N | PART NO. | DESCRIPTION |
|---|---|---|---|
| Q801 | 1 | HT316272A0 | Transistor 2SC1627A (O or Y) |
| Q802 | 1 | HT323902B0 | Transistor 2SC2390 (S or E) |
| Q803 | 1 | HD30023090 | Zener WZ-071 |
| Q805 | 1 | HD30024090 | Zener WZ-120 |
| Q810 | 1 | HD20005010 | Diode W06B |
| Q812 | 1 | HT108172A0 | Transistor 2SA817 |
| Q813 | 1 | HT323902B0 | Transistor 2SC2390 |
| | | | (M1050, ONLY) |
| Q806 | 1 | HD20009290 | Diode S2V-20 |
| Q807 | 1 | HD20009290 | Diode S2V-20 |
| Q808 | 1 | HD20009290 | Diode S2V-20 |
| Q809 | 1 | HD20009290 | Diode S2V-20 |
| | | | (M1072, ONLY) |
| Q806 | 1 | HD20011290 | Diode |
| Q807 | 1 | HD20911290 | Diode |
| Q808 | 1 | HD20911290 | Diode |
| Q809 | 1 | HD20911290 | Diode |
| QE01 | 1 | HT110392A0 | Transistor 2SA1039 (R or S) |
| QE02 | 1 | HT110392A0 | Transistor 2SA1039 (R or S) |
| QE03 | 1 | HT323902B0 | Transistor 2SC2390 (S or E) |
| QE04 | 1 | HT323902B0 | Transistor 2SC2390 (S or E) |
| QE05 | 1 | HT323902B0 | Transistor 2SC2390 (S or E) |
| QE06 | 1 | HT323902B0 | Transistor 2SC2390 (S or E) |
| QN01 | 1 | HT323902A0 | Transistor 2SC2390 (R or S) |
| QN02 | 1 | HT323902A0 | Transistor 2SC2390 (R or S) |
| QN03 | 1 | HT110392A0 | Transistor 2SA1039 (R or S) |
| QN04 | 1 | HT110392A0 | Transistor 2SA1039 (R or S) |
| QN05 | 1 | HD20001210 | Diode 1S2473 |
| QN06 | 1 | HD20001210 | Diode 1S2473 |
| QN07 | 1 | HD20001210 | Diode 1S2473 |
| QN08 | 1 | HD20001210 | Diode 1S2473 |
| QN09 | 1 | HD20001210 | Diode 1S2473 |
| QN10 | 1 | HD20001210 | Diode 1S2473 |
| QN11 | 1 | HD20001210 | Diode 1S2473 |
| QN12 | 1 | HD20001210 | Diode 1S2473 |
| QN13 | 1 | HD20005010 | Diode W06B |
| QN14 | 1 | HD20005010 | Diode W06B |
| QN15 | 1 | HD20005010 | Diode W06B |
| QN16 | 1 | HD20005010 | Diode W06B |
| QN21 | 1 | HT323902A0 | Transistor 2SC2390 (R or S) |
| QN22 | 1 | HT323902A0 | Transistor 2SC2390 (R or S) |
| QN23 | 1 | HT110392A0 | Transistor 2SA1039 (R or S) |
| QN24 | 1 | HT110392A0 | Transistor 2SA1039 (R or S) |
| QN25 | 1 | HD30023090 | Zener WZ071 |
| QN26 | 1 | HD30023090 | Zener WZ071 |
| QN27 | 1 | HT110392A0 | Transistor 2SA1039 (R or S) |
| QN28 | 1 | HT323902A0 | Transistor 2SC2390 (R or S) |
| QN29 | 1 | HD20001210 | Diode 1S2473 (M1072, ONLY) |
| QN30 | 1 | HT110392A0 | Transistor 2SA1039 (R or S) |
| QN31 | 1 | HD20005010 | Diode W06B |

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| REF. DESIG. | Q'TY N | PART NO. | DESCRIPTION |
|---|---|---|---|
| | | | **P700-MISCELLANEOUS** |
| L701 | 1 | LL23915120 | Choke Coil |
| L702 | 1 | LL23915120 | Choke Coil |
| JV01 | 1 | YT02040280 | Terminal (M1072, ONLY) |
| JV02 | 1 | YT02040280 | Terminal (M1072, ONLY) |
| JV03 | 1 | YT02060140 | Terminal (M1050, ONLY) |
| JV04 | 1 | YT02050010 | Terminal |
| SV01 | 1 | SR04030220 | Rotary Switch, Selector |
| SV05 | 1 | SR04020150 | Rotary Switch, Monitor |
| J805 ~ J808 | 4 | YJ08000270 | Jack, Fuse Holder |
| P811 | 1 | 3444118050 | Spacer |
| | | | **PF00-TONE CIRCUIT BOARD** |
| PF00 | 1 | YH22742210 | P.W. Board, Tone |
| | 1 | ZZ22742210 | P.W. Board Assembly |
| | | | **PF00-CAPACITORS** |
| CF01 | 1 | DF15224300 | Film 0.22μF ±5% |
| CF02 | 1 | DF15224300 | Film 0.22μF ±5% |
| CF03 | 1 | DF15223300 | Film 0.022μF ±5% |
| CF04 | 1 | DF15223300 | Film 0.022μF ±5% |
| CF05 | 1 | DF15333300 | Film 0.033μF ±5% |
| CF06 | 1 | DF15333300 | Film 0.033μF ±5% |
| CF07 | 1 | EA10701090 | Elect 100μF 10V |
| CF08 | 1 | EA10701090 | Elect 100μF 10V |
| CF09 | 1 | DF15332300 | Film 0.0033μF ±5% |
| CF10 | 1 | DF15332300 | Film 0.0033μF ±5% |
| | | | **PF00-RESISTORS** (All Resistors are ±5% and ¼W) |
| RF01 | 1 | RS01040080 | Variable Resistor (Bass) |
| RF02 | 1 | RS01040080 | Variable Resistor (Treble) |
| RF03 | 1 | GD05162140 | 1.6KΩ |
| RF04 | 1 | GD05162140 | 1.6KΩ |
| RF05 | 1 | GD05153140 | 15KΩ |
| RF06 | 1 | GD05153140 | 15KΩ |
| RF07 | 1 | GD05183140 | 18KΩ |
| RF08 | 1 | GD05183140 | 18KΩ |
| RF09 | 1 | GD05431140 | 430Ω |
| RF10 | 1 | GD05431140 | 430Ω |
| RF13 | 1 | GD05392140 | 3.9KΩ |
| RF14 | 1 | GD05392140 | 3.9KΩ |

| REF. DESIG. | Q'TY N | PART NO. | DESCRIPTION |
|---|---|---|---|
| | | | **PS00-LOUDNESS CIRCUIT BOARD** |
| PS00 | 1 | YH22741210 | P.W. Board, Loudness |
| | 1 | ZZ22741210 | P.W. Board Assembly |
| | | | **PS00-CAPACITORS** |
| CS01 | 1 | DK16681300 | Ceramic 680pF ±10% |
| CS02 | 1 | DK16681300 | Ceramic 680pF ±10% |
| CS03 | 1 | DF15473300 | Film 0.047μF ±5% |
| CS04 | 1 | DF15473300 | Film 0.047μF ±5% |
| | | | **PS00-RESISTORS** (All Resistors are ±5% and ¼W) |
| RS01 | 1 | GD05333140 | 33KΩ |
| RS02 | 1 | GD05333140 | 33KΩ |
| RS03 | 1 | GD05822140 | 8.2KΩ |
| RS04 | 1 | GD05822140 | 8.2KΩ |
| | | | **PS00-SWITCH** |
| SS01 | 1 | SP02010260 | Push Switch, Loudness |
| | | | **PS50-VOLUME CIRCUIT BOARD** |
| PS50 | 1 | YH22741220 | P.W. Board, Volume |
| | 1 | ZZ22741220 | P.W. Board Assembly |
| RS51 | 1 | RM01040230 | Variable Resistor 100KΩ x 2 |
| | | | **PY00-L.E.D CIRCUIT BOARD** |
| PY00 | 1 | YH22742220 | P.W. Board, L.E.D |
| | 1 | ZZ22742220 | P.W. Board Assembly |
| QY01 | 1 | HI10004030 | L.E.D SLP-132B |

| | |
|---|---|
| (W01-99) | Assembly and Wiring |
| (T01-99) | Adjustment |
| (X01-00) | Correction |



Mzobc

## 14. TECHNICAL SPECIFICATIONS

### 14.1 Model 1072

AUDIO SECTION

| | |
|---|---|
| POWER OUTPUT, DIN, 4 OHM, PER CHANNEL | 77W |
| POWER OUTPUT, FTC AMERICAN STANDARDS, 4 OHM, PER CHANNEL | 46W |
| TOTAL HARMONIC DISTORTION AT RATED POWER OUTPUT | 0.08% |
| I.M. DISTORTION AT RATED POWER OUTPUT (250 Hz AND 8 kHz MIXED, AMPLITUDE RATIO 4:1) | 0.08% |
| POWER OUTPUT, DIN, 8 OHM, PER CHANNEL | 50W |
| POWER OUTPUT, FTC AMERICAN STANDARDS, 8 OHM, PER CHANNEL | 36W |
| TOTAL HARMONIC DISTORTION AT RATED POWER OUTPUT | 0.05% |
| I.M. DISTORTION AT RATED POWER OUTPUT (250 Hz AND 8 kHz MIXED, AMPLITUDE RATIO 4:1) | 0.05% |
| POWER BANDWIDTH | 15 Hz ~ 60 kHz |
| DAMPING FACTOR 8 OHM | 45 |

| | | |
|---|---|---|
| Frequency Tesponse | | |
| Phono | (RIAA) | ±0.5 dB |
| Aux | (±1 dB) | 15 Hz ~ 60 kHz |
| Input Terminals | | |
| Phono: | Input Impedance | 47k ohms |
| | Input Capacitance | 100 pF |
| | Input Sensitivity | 2.0 mV |
| | Overload Margin | 35 dB |
| Aux: | Input Impedance | 25k ohms |
| | Input Sensitivity | 180 mV |
| Phono Equivalent Input Noise | | 0.5 μV |
| Phono Dynamic Tange (Ratio of input overload to equivalent input noise) | | 100 dB |
| Channel Balance (0 to −40 dB/40 Hz ~ 16 kHz) | | |
| Phono | | 3.0 dB |
| Aux | | 3.0 dB |
| Interchannel Crosstalk | | |
| Phono, 1 kHz | | 47 dB |
| Aux, 1 kHz | | 62 dB |
| Tape, 1 kHz | | 62 dB |
| Intersource Crosstalk (Worst Point), 1 kHz | | 55 dB |
| Output Voltage, 1 kHz | | |
| Tape Out | | 775 mV |
| Output Impedance, 1 kHz | | |
| Tape Out | | 220 ohms |
| Headphone Jack Load Impedance | | 4 ohms |

GENERAL

| | |
|---|---|
| Power Requirements | 220V AC, 50 Hz (E and N versions are featuring an external voltage selector for use on 110/120/240V. Other versions can be converted by a qualified technician to operate on 110/120/240V.) |
| Power Consumption at Rated Output, both Channels Driven | 160W ± 20W |
| Idling Power | 14W ± 5W |
| Semiconductor Complement | |
| Transistors | 45 |
| Diodes | 26 |
| Dimensions | |
| Panel Width | 416 mm (16-3/8 inches) |
| Panel Height | 146 mm (5-3/4 inches) |
| Depth | 240 mm (9-7/16 inches) |
| Weight | |
| Unit Alone | 8.0 kg (17.6 lbs) |
| Packed for Shipment | 8.5 kg (18.7 lbs) |

M 30 61

## 14.2 Model 1050

AUDIO SECTION

POWER OUTPUT, DIN, 4 OHM, PER CHANNEL ..... 51W
POWER OUTPUT, FTC AMERICAN STANDARDS, 4 OHM, PER CHANNEL ..... 30W
TOTAL HARMONIC DISTORTION AT RATED POWER OUTPUT ..... 0.1%
I M. DISTORTION AT RATED POWER OUTPUT
(250 Hz AND 8 kHz MIXED, AMPLITUDE RATIO 4:1) ..... 0.1%

POWER OUTPUT, DIN, 8 OHM, PER CHANNEL ..... 40W
POWER OUTPUT, FTC AMERICAN STANDARDS, 8 OHM, PER CHANNEL ..... 25W
TOTAL HARMONIC DISTORTION AT RATED POWER OUTPUT ..... 0.1%
I.M. DISTORTION AT RATED POWER OUTPUT
(250 Hz AND 8 kHz MIXED, AMPLITUDE RATIO 4:1) ..... 0.1%
POWER BANDWIDTH ..... 20 Hz ~ 50 kHz
DAMPING FACTOR 8 OHM ..... 45

Frequency Tesponse
Phono (RIAA) ..... ±0.5 dB
Aux (±1 dB) ..... 20 Hz ~ 50 kHz
Input Terminals
Phono: Input Impedance ..... 47k ohms
Input Capacitance ..... 100 pF
Input Sensitivity ..... 2.1 mV
Overload Margin ..... 35 dB
Aux: Input Impedance ..... 25k ohms
Input Sensitivity ..... 180 mV
Phono Equivalent Input Noise ..... 0.5 μV
Phono Dynamic Tange (Ratio of input overload to equivalent input noise) ..... 100 dB
Channel Balance (0 to −40 dB/40 Hz ~ 16 kHz)
Phono ..... 3.0 dB
Aux ..... 3.0 dB
Interchannel Crosstalk
Phono, 1 kHz ..... 47 dB
Aux, 1 kHz ..... 62 dB
Tape, 1 kHz ..... 62 dB
Intersource Crosstalk (Worst Point), 1 kHz ..... 55 dB
Output Voltage, 1 kHz
Tape Out ..... 775 mV
Output Impedance, 1 kHz
Tape Out ..... 220 ohms
Headphone Jack Load Impedance ..... 4 ohms

**GENERAL**

Power Requirements ..... 220V AC, 50 Hz
(E and N versions are featuring an external voltage selector for use on 110/120/240V. Other versions can be converted by a qualified technician to operate on 110/120/240V.)
Power Consumption at Rated Output, both Channels Driven ..... 110W ± 20W
Idling Power ..... 11W ± 5W
Semiconductor Complement
Transistors ..... 45
Diodes ..... 26
Dimensions
Panel Width ..... 416 mm (16-3/8 inches)
Panel Height ..... 146 mm ( 5-3/4 inches)
Depth ..... 240 mm (9-7/16 inches)
Weight
Unit Alone ..... 7.0 kg (15.4 lbs)
Packed for Shipment ..... 7.5 kg (16.5 lbs)

NOTICE : We hereunder show the substitute transistors stated in the parts list. In your ordering the parts from now on, please place your order of the parts in the column (B).

| | (A) | (B) |
|---|---|---|
| (1) | HT323902A0 (2SC2390) | HT314001E0 (2SC1400) |
| | REF. DESIG. NO, (QN01, QN02, QN21, QN22, QN28, Q403 ~ Q406, Q705, Q706, Q709, Q710) | |
| (2) | HT323902B0 (2SC2390) | HT314001E0 (2SC1400) |
| | REF. DESIG. NO, (Q802, Q813, QE03, QE04, QE05, QE06) | |
| (3) | HT110392A0 (2SA1039) | HT107502C0 (2SA750) |
| | REF. DESIG. NO, (QE01, QE02, QN03, QN04, QN23, QN24, QN27, QN30, Q401, Q402, Q701, Q702, Q703, Q704) | |