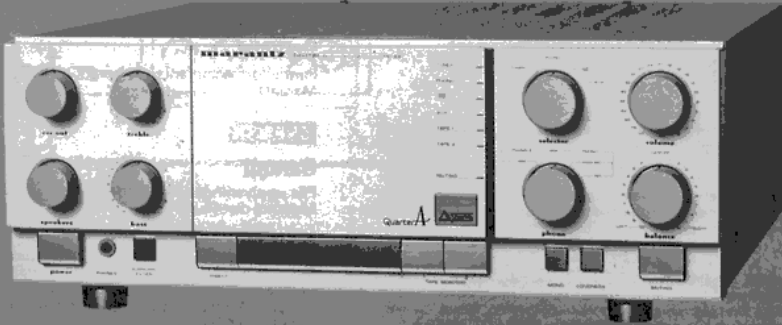


MONOMIZ[®]



**DIGITAL
MONITORING AMPLIFIER**

Handbook of Instruction

Model **PM-84**

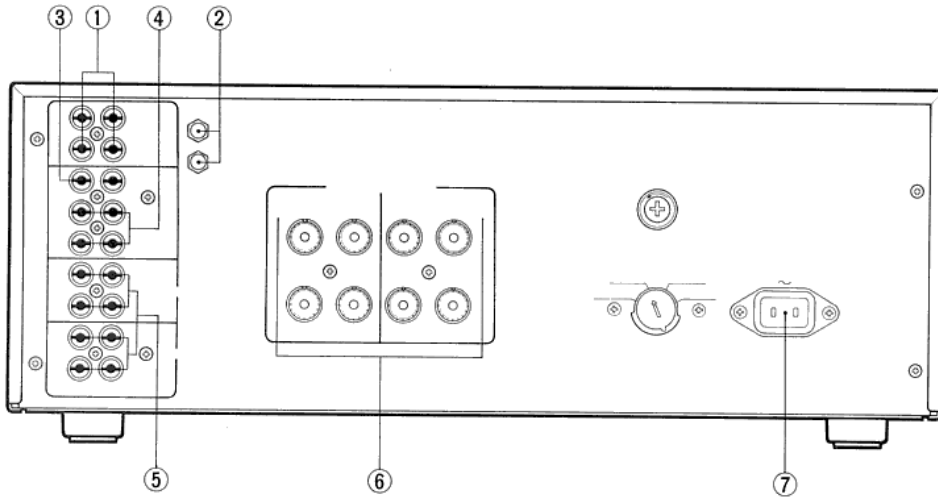


Figure 1. Rear Panel
 Figure 1. Panneau Arrière
 Abbildung 1. Geräterückseite

Afbeelding 1. Achterzijde
 Figura 1. Panel posterior
 Figura 1. Pannelo posteriore

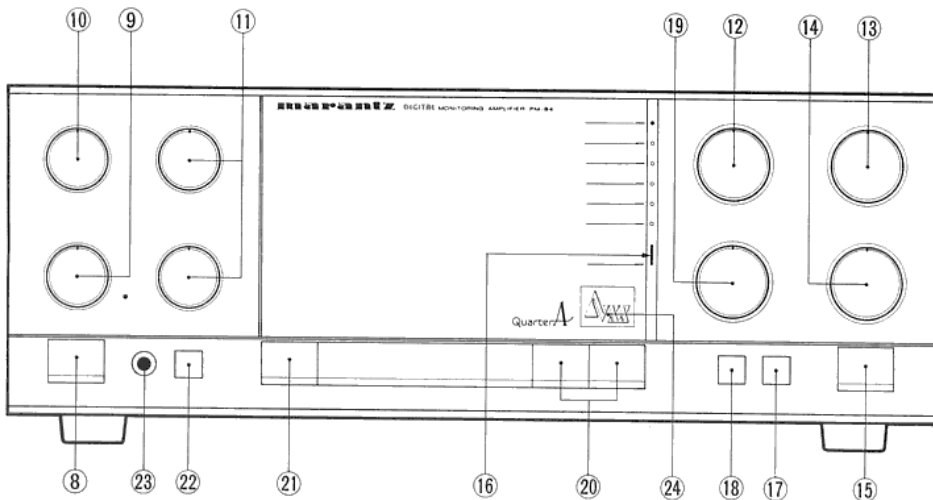


Figure 2. Front Panel
 Figure 2. Face avant
 Abbildung 2. Gerätevorderseite

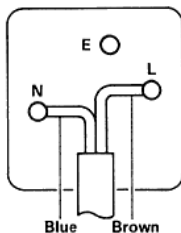
Afbeelding 2. Voorzijde
 Figura 2. Panel frontal
 Figura 2. Frontpanel

FOREWORD

Your Marantz product has been specially prepared to comply with the household power and safety requirements that exist in your region. This product has a 4-position voltage selector (110/120/220/240V) on the rear panel (A, N and T versions). Since the voltage has been adjusted as shown below upon shipment from the factory, please check the third alphabetical letter of the serial number and refer to the following table to note the characteristics of the model in your possession:

SUFFIX	VOLTAGE
A -	240V AC, 50/60 Hz
C -	120V AC, 60 Hz
U -	120V AC, 60 Hz
N -	220V AC, 50/60 Hz
T -	240V AC, 50/60 Hz

FOR UNITS SOLD IN THE UNITED KINGDOM



IMPORTANT

The wires in the mains lead are colored in accordance with the following code:

Blue	—	Neutral
Brown	—	Live

As the colors of the wires may not correspond with the terminal identification in your plug, proceed as follows:

- Connect the brown wire to the terminal marked "L" or colored brown or red.
- Connect the blue wire to the terminal marked "N" or colored blue or black.

For 13A plugs, conforming to BS1363, use a 3A fuse.

For other plugs, use a 5A or lower fuse in the plug or adaptor or at the distribution board.

NOTE FOR U.K.

Recording and playback of any material may require consent. For information, please refer to the:

Copyright Act 1956
Dramatic & Musical Performers Act 1958
Performers Protection Acts 1963 & 1972

and to any subsequent statutory enactments and orders.

ABOUT THIS MANUAL

Refer to the figures given on page 1. The callout numbers correspond to those found in this manual. All references to the connections and controls are printed in **BOLDFACE** type as they appear on the unit.

REAR PANEL CONNECTIONS

Figure 1 shows the location of the input and output jacks on the rear panel. (Front panel controls and jacks will be discussed later).

The stereo pairs of shiny round jacks such as used for the phono inputs are called "RCA phono jacks" and are designed to accommodate shielded audio cables outfitted with "RCA phono plugs". Appropriate cables of various lengths are available at your Marantz dealer. Lengths of up to 8 meters may be used. If it is necessary to purchase cable for your installation, we suggest your first arrange your components in the desired position, and then with a measuring tape determine how much cable will be needed. This will ensure that you do not underestimate the lengths required for a neat, attractive installation.

To avoid confusion, connect one cable at a time between the unit and the other components of your system. This is the safest way to avoid cross-connecting channels or confusing source outputs with inputs.

① PHONO INPUT JACKS

The **PHONO 1** jack can be used with either a Moving Magnet (MM) or a Moving Coil (MC) cartridge. The **PHONO 2** jack is dedicated to a MM type cartridge.

If a hum is heard when playing records, this is an indication that the record player of its connections are improperly grounded. Connect a separate ground wire from the turntable or record changer frame to the **GND** binding post of the unit. If this is ineffective, try reversing the polarity of the turntable's power plug. (This last solution is not applicable in the U.K.)

If hum persists, consult the instruction booklets for the turntable and/or phono cartridge.

② GND BINDING POST

The **GND** binding post permits connection of the ground wire from a turntable to reduce hum that may be produced by the turntable.

③ TUNER INPUT JACKS

The **TUNER** input jacks are used for connecting the line output of a stereo or monaural AM or FM tuner to the unit.

④ CD, AUX INPUT JACKS

The **CD** (Compact Disc), **AUX** (auxiliary) input jacks permit connecting miscellaneous high-level program sources such as TV sound, tape players with built-in preamplifiers, record players with RIAA equalized line outputs, or additional tuners or receivers.

⑤ TAPE 1 AND TAPE 2 JACKS

Your stereo console amplifier can accommodate two tape recorders. The terms **IN** and **OUT** refer to the input and output of the unit. Therefore, the **IN** jacks on the unit accept signals from the line outputs of each tape recorder; the **OUT** jacks feed signal to the tape recorder's line inputs.

⑥ SPEAKER SYSTEMS

The **SPEAKER SYSTEMS** terminals on the rear panel can accommodate two stereo pairs of loudspeakers. Connect the main pair to the **SYSTEM 1** terminals. The **SYSTEM 2** terminals are for a second stereo pair of loudspeakers. Selection of loudspeaker systems is made with the **SPEAKERS** switch on the front panel.

To connect the speakers to your amplifier, use a minimum of 3A capacity cable (heavy duty two conductor lamp cord). If the desired cord length for either speaker exceeds 5 meters, use a minimum of 6A capacity cable.

7 AC POWER CONNECTION

The correct voltage for operating your system is written on the rear panel. Be sure the **POWER** pushswitch is out before plugging the AC line cord into an electrical outlet.

FRONT PANEL FEATURES

8 POWER SWITCH

Pressing this switch turns the power on. Pressing it again turns the power off.

The power indicator (AVSS mark)  lights when this switch is on.

9 SPEAKERS SYSTEM SWITCHES

These switches select the speaker terminals to which audio power is fed. Either the **SYSTEM 1** or **SYSTEM 2** pair of stereo speakers may be operated individually or simultaneously if **1+2** position.

The signal at the headphones jack is not affected by the **SPEAKER SYSTEM** switches. The "OFF" position allows "private listening" when stereo headphones are used.

10 REC OUT SWITCH

This switch makes recording or dubbing possible. For details in use of this switch, refer to the section "Using tape deck".

11 TONE CONTROLS

Two **TONE** controls for each output channel, **BASS** and **TREBLE**, adjust the normally "0" frequency response of the unit to suit individual listening preference.

The **BASS** control adjusts the low frequency tones, and the **TREBLE** control adjusts the high frequency tones.

12 SELECTOR SWITCH

The **SELECTOR** switch selects any one of four program sources for listening or recording:

TUNER, PHONO, CD or AUX

The corresponding indicator lights when a program source is chosen.

13 VOLUME CONTROL

The **VOLUME** control adjusts the level of both output channels simultaneously. It does not affect the signal present at the **TAPE 1 OUT** and **TAPE 2 OUT** jacks.

14 BALANCE CONTROL

The **BALANCE** control may be positioned to the left or right of center for the desired speaker balance. Normally this control should remain in the center position.

15 MUTING SWITCH

Pressing this switch decreases the volume level by 20 dB (one eleventh). This switch is useful when temporarily reducing the volume to change record discs.

Note:

If you want to increase the volume, be sure to reset this switch before turning the volume control; otherwise, the speaker may be damaged.

The LED lights when this switch is pressed.

16 MUTING INDICATOR

This indicator lights when the **MUTING** switch is pressed.

17 LOUDNESS SWITCH

The **LOUDNESS** switch compensates for human hearing characteristics by boosting the bass and treble response at low volume levels to achieve a more pleasing tonal balance.

18 MONO SWITCH

The **LEFT** and **RIGHT** channel signals are mixed and routed to drive both right and left audio channel speakers. When playing a single channel source such as TV or AM radio, press the **MONO** switch so that the single channel source can be heard through both speakers.

19 PHONO SWITCH

This switch selects **PHONO 1** or **PHONO 2** when the **SELECTOR** switch is in **PHONO** position. Either **MM** or **MC** cartridges can be connected to the **PHONO 1** terminal.

There are two positions for **MC** cartridges. Use **MC** position for general listening, and select **HIGH MC** position featured on model PM-84 to enjoy high-output sound with **MC** cartridges. Select either position that suits your taste and the music you are going to listen. The **PHONO 2** terminal is provided for **MM** cartridges only.

20 TAPE MONITOR SWITCHES

1. This switch is used to play or monitor the tape deck connected to the **TAPE 1 MONITOR** terminal.
2. This switch is used to play or monitor the tape deck connected to the **TAPE 2 MONITOR** terminal.
The LED lights when either switch is pressed.
When both switches are pressed, **TAPE MONITOR 1** is selected.

21 DIRECT SWITCH

The audio signal passes through the tone control circuit when this switch is in the **OUT** position.

The audio signal bypasses the tone control circuit when this switch is in the **IN** position.

The signal from the phono amplifier can be directly applied to the main amplifier.

22 SUBSONIC FILTER SWITCH

Turn this switch on when rumble or low frequency due to warped record is significant.

This switch is not effective when the **DIRECT** switch is on.

23 PHONES JACK

A stereo headphone utilizing a standard 6 mm phone plug can be connected to this jack for private listening. The headphone jack output is not affected by the **SPEAKERS** switches.

USING TAPE DECKS WITH YOUR AMPLIFIER

PLAYBACK

1. When a tape deck is connected to the **TAPE 1** jacks, set the **TAPE MONITOR** switch to "1", when the deck is connected to the **TAPE 2** jacks, set the **TAPE MONITOR** switch to "2".
2. Play back the recorded tape.
3. Adjust the **VOLUME** control for desired volume and **BASS** and **TREBLE TONE** controls for desired tone.

Notes:

1. Set the **TAPE MONITOR** switch to the **OFF** position unless a tape is being played back.
2. Tape playback can be performed regardless of the position of the **SELECTOR** switch.

RECORDING

When recording a program source such as a turntable, tuner and compact-disk player, follow instructions below.

1. Set the record-out (**REC OUT**) switch to the position of the desired program source.
2. Play the program source.
3. Operate the tape deck for recording.

TAPE MONITORING

When using a tape deck with a monitor system (three-head type), monitoring the signal immediately after it is recorded is possible by setting the **TAPE MONITOR** switch to "1" (or "2"). In this case, be sure the recording and playback connections are correct.

Note:

When using a 2-head type tape deck, record monitoring is not possible by operating the **TAPE MONITOR** switch. However, the program source can be heard directly.

DUBBING OPERATION

If you have two tape decks, a new tape with the desired tunes in the desired order can be made from previously recorded tapes by means of the dubbing feature. If you have a cassette tape deck and an open reel tape deck, you can copy the open reel to a cassette tape.

1. Connect two tape decks.
2. When dubbing from tape deck 1 to tape deck 2, set the **REC OUT** switch to the **COPY 1 → 2** position.

Note:

To check the connects being recorded, set the **TAPE MONITOR** switch to the tape deck playing back.

MAINTENANCE

CLEANING

The satin gold anodized finish of the knobs and heavy aluminum front panel will last indefinitely with proper care and cleaning. **NEVER** use scouring pads, steel wool, scouring powders, or harsh chemical agents, such as lye solution. These will mar the finish. Clean with a soft, lint-free cloth or cotton swab slightly dampened with a mild solution of detergent and water.

FUSE REPLACEMENT

In the event the fuse blows out, replace it **ONLY** with a fuse of the same type and rating. Replacement with a fuse of a higher rating or slower action will not protect the unit and will void the warranty.

The unit power should be switched **OFF** before replacing the fuse. Should the replacement fuse blow out within a short period of time after the unit is turned on, the unit should be taken to an authorized service facility.

REPAIRS

Only the most competent and qualified service technicians should be allowed to service the unit. The Marantz Company and its factory-trained warranty station personnel have the knowledge and special equipment needed for repair and calibration of this precision instrument.

In the event of difficulty refer to your dealer or write directly to the one of the location listed on page for the name and address of the Marantz Authorized Service Station nearest you. Please include the model and serial number of your unit together with a full description of what you feel is abnormal in its behavior.

REPACKING FOR SHIPMENT

Should it become necessary to repack your unit for shipment to the factory, to an authorized service station, or elsewhere, please observe the following precautions:

- a. Pack the unit carefully, using the original material as shown in Figure 3.
- b. Ship via a reputable carrier (do not use Parcel Post) and obtain a shipping receipt from the carrier.
- c. Be sure to include your return address on the shipping label.

FUNCTIONAL BLOCK DIAGRAM

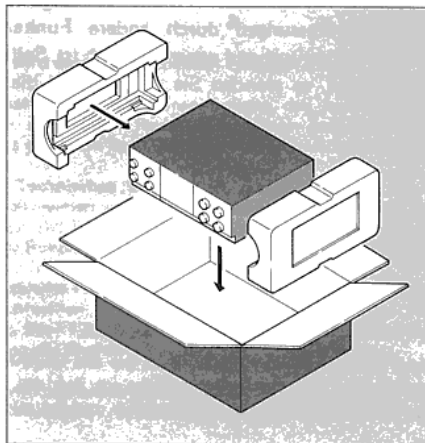
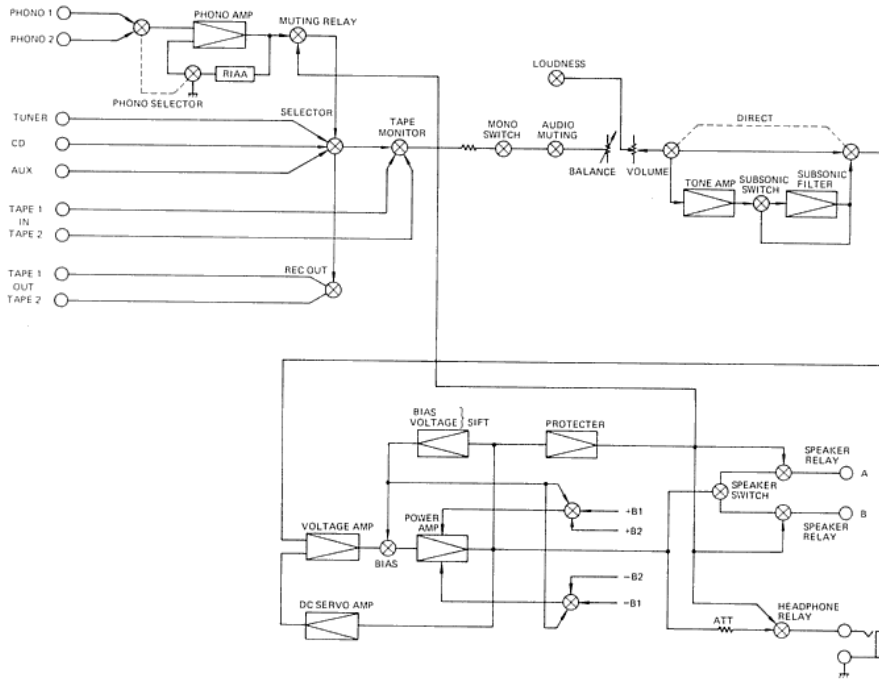


Figure 3.

MODEL PM-84 TECHNICAL SPECIFICATIONS (DIN)

AUDIO SECTION

POWER OUTPUT PER CHANNEL

DIN 4 OHMS	180 W
RMS 4 OHMS (20 Hz — 20 kHz)	140 W
DIN 8 OHMS	130 W
RMS 8 OHMS (20 Hz — 20 kHz)	120 W
TOTAL HARMONIC DISTORTION AT RMS 8 OHMS	0.015%
I.M. DISTORTION	0.015%
DAMPING FACTOR 8 OHMS (1 kHz)	90

MM CARTRIDGE INPUT

Frequency Response (RIAA)	±0.2 dB
Signal-to-Noise Ratio (A weighted)	92 dB
Input Impedance	47 k ohms
Input Sensitivity	2.5 mV
Equivalent Input Noise	0.07 µV

MC CARTRIDGE INPUT

Input Sensitivity	250 µV
Input Impedance MC	(High MC) 1 k ohms (MC) 100 ohms
Signal-to-Noise Ratio (A weighted)	80 dB

AUX. INPUT

Input Impedance	25 k ohms
Input Sensitivity	150 mV
Frequency Response (±1 dB)	(Direct Position) 5 Hz — 45 kHz
Signal-to-Noise Ratio (A weighted)	98 dB

OUTPUT VOLTAGE

Tape Out [PHONO (MM) 7.75 mV 1 kHz Input]	520 mV
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OUTPUT IMPEDANCE

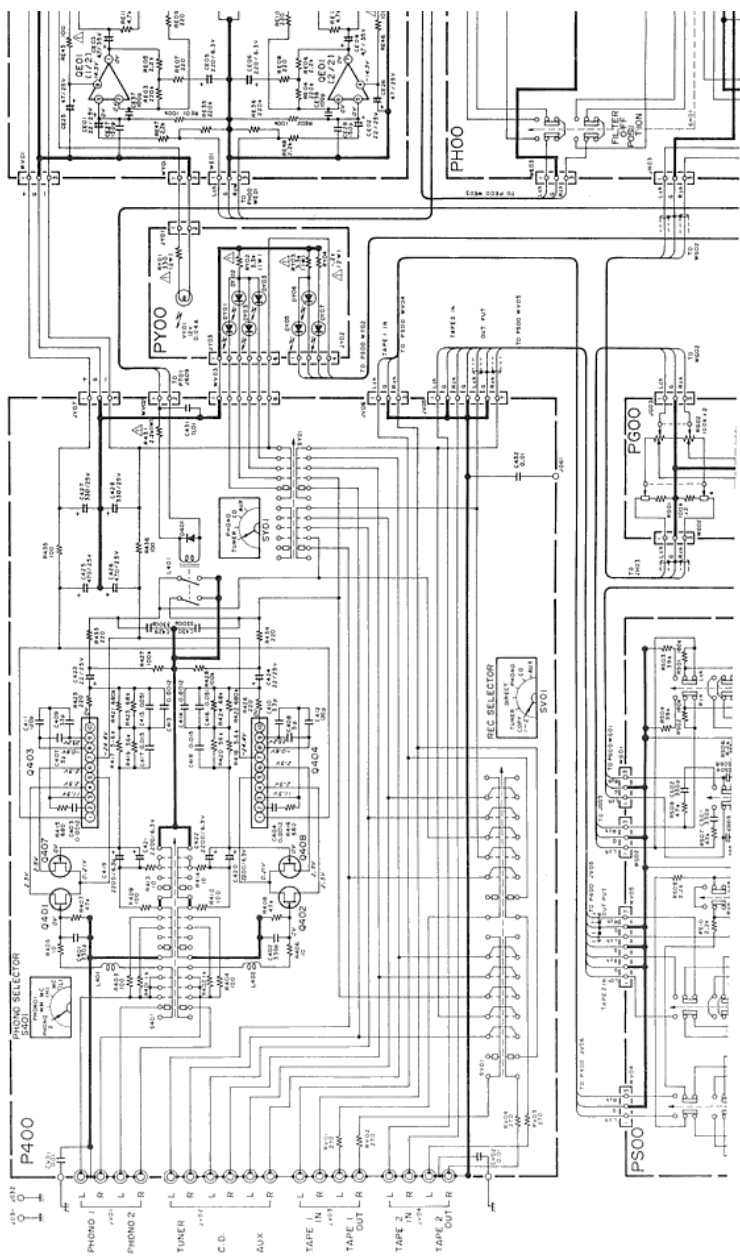
Tape Out (PHONO)	490 ohms
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GENERAL

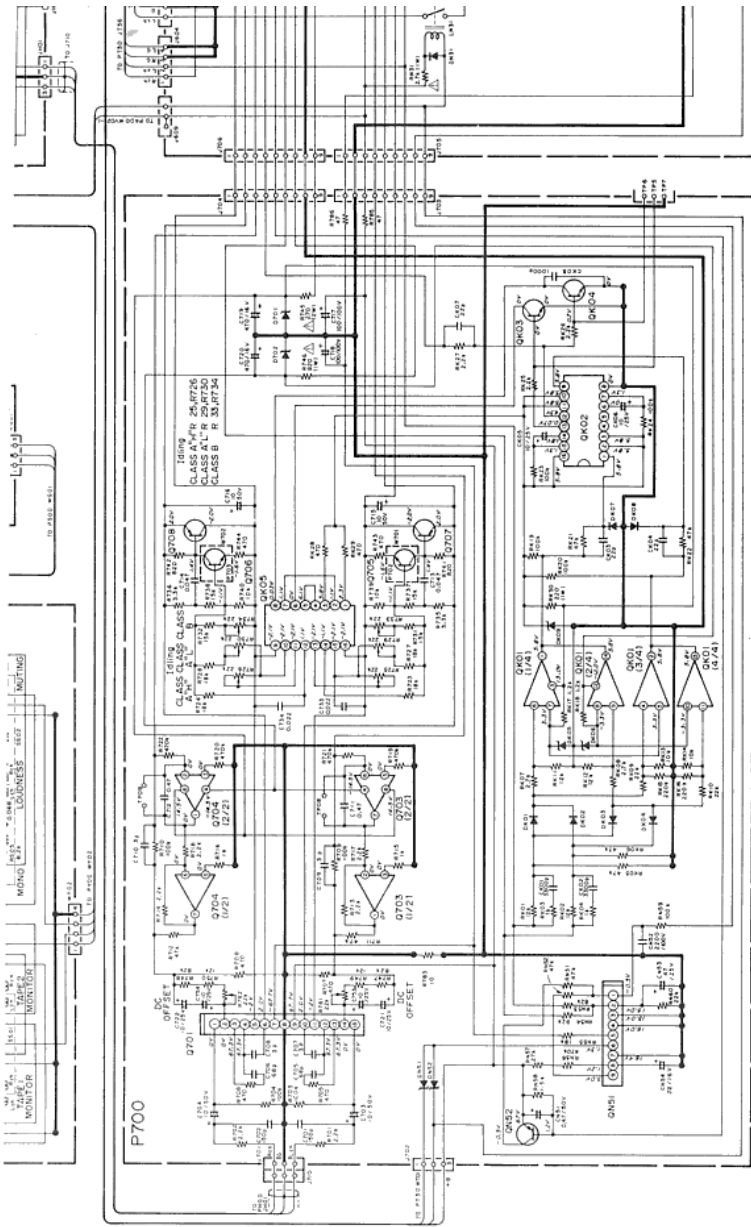
Power Requirements	110/120/220/240 V AC, 50/60 Hz
Power Consumption at Rated Output, both Channels Operating	500 W
Dimensions (W x H x D)	416 x 146 x 410 mm
Weight	18 kg

marantz

- 0401-0402 0403-0404 0701 0702-0706 0707-0708 0709-0710 0711-0712 0713-0714 0715-0716 0717-0718 0719-0720 0721-0722 0723-0724 0725-0726 0727-0728 0729-0730 0731-0732 0733-0734 0735-0736 0737-0738 0739-0740 0741-0742 0743-0744 0745-0746 0747-0748 0749-0750 0751-0752 0753-0754 0755-0756 0757-0758 0759-0760 0761-0762 0763-0764 0765-0766 0767-0768 0769-0770 0771-0772 0773-0774 0775-0776 0777-0778 0779-0780 0781-0782 0783-0784 0785-0786 0787-0788 0789-0790 0791-0792 0793-0794 0795-0796 0797-0798 0799-0800 0801-0802 0803-0804 0805-0806 0807-0808 0809-0810 0811-0812 0813-0814 0815-0816 0817-0818 0819-0820 0821-0822 0823-0824 0825-0826 0827-0828 0829-0830 0831-0832 0833-0834 0835-0836 0837-0838 0839-0840 0841-0842 0843-0844 0845-0846 0847-0848 0849-0850 0851-0852 0853-0854 0855-0856 0857-0858 0859-0860 0861-0862 0863-0864 0865-0866 0867-0868 0869-0870 0871-0872 0873-0874 0875-0876 0877-0878 0879-0880 0881-0882 0883-0884 0885-0886 0887-0888 0889-0890 0891-0892 0893-0894 0895-0896 0897-0898 0899-0900 0901-0902 0903-0904 0905-0906 0907-0908 0909-0910 0911-0912 0913-0914 0915-0916 0917-0918 0919-0920 0921-0922 0923-0924 0925-0926 0927-0928 0929-0930 0931-0932 0933-0934 0935-0936 0937-0938 0939-0940 0941-0942 0943-0944 0945-0946 0947-0948 0949-0950 0951-0952 0953-0954 0955-0956 0957-0958 0959-0960 0961-0962 0963-0964 0965-0966 0967-0968 0969-0970 0971-0972 0973-0974 0975-0976 0977-0978 0979-0980 0981-0982 0983-0984 0985-0986 0987-0988 0989-0990 0991-0992 0993-0994 0995-0996 0997-0998 0999-1000



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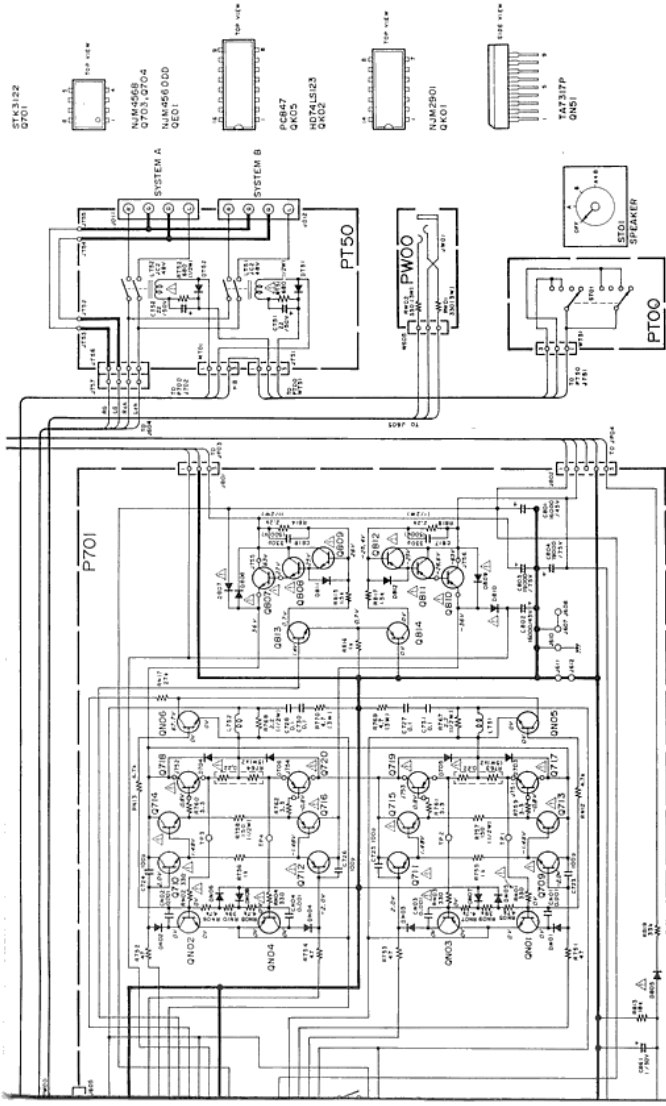


NOTE ON SAFETY:

Symbol Δ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol Δ . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

Components and wiring are subject to

STK3122
G701



change for modification without notice.

242H856010 1984/2

- Q815 1S104040
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ALPINE

