

marantz®

**Model 3200
Stereo Control
Console**

MARANTZ CO., INC. 20525 NORDHOFF STREET, CHATSWORTH, CALIFORNIA 91311
A WHOLLY-OWNED SUBSIDIARY OF SUPERSCOPE INC., CHATSWORTH, CALIFORNIA 91311

AC Line Operation

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

FOREWORD

To obtain maximum performance and enjoyment from the Model 3200 Stereo Control Console, please study these instructions carefully. Installing and operating the Model 3200 is not complicated, but the flexibility provided by its numerous operating features merits your becoming familiar with its controls and connections. Our recommended procedures will assure you of securing the superb performance for which the Model 3200 was designed.

For convenience, this manual is divided into two parts. The first part covers installation and operation in a simple, nontechnical manner. The second part provides a more detailed description of the features of the Model 3200. Detailed technical specifications and functional explanations are included in this part.

For quick identification of the many controls, connection facilities, and adjustments on the Model 3200 Stereo Control Console, all references to them in this manual are printed in **BOLDFACE TYPE**.

AFTER UNPACKING

It is advisable to retain all original packing material to prevent damage should you wish to transport or ship the Model 3200 (refer to page 15 for repacking and shipping instructions). Be careful that you do not inadvertently throw away or lose the parts packed with the unit.

Please inspect your Model 3200 Stereo Control Console carefully for any signs of shipping damage. Our very strict quality control and professional pride ensure that each Model 3200 left the factory in perfect condition. If the unit is damaged or fails to operate, immediately notify your dealer. If the unit was shipped to you directly, notify the transportation company without delay. Only you, the consignee, may institute a claim against the carrier for shipping damage. Save the carton and all packing material as evidence of damage for their inspection. Should assistance be required, the Marantz Company will cooperate fully in assisting your claim.

Fill out and mail the Warranty Registration Card within ten days of purchase. The card will remain on file at the Marantz Company for the duration of the warranty period. We also strongly advise that you retain your sales receipt to provide proof of purchase in the event that Warranty service is sought.

PREPARATION FOR USE

MECHANICAL INSTALLATION

The Model 3200 Stereo Control Console can be installed in two basic ways: In a beautiful walnut cabinet for placement on a table or shelf, or mounted in your own cabinetry or custom installation.

MARANTZ WALNUT CABINET

An attractive walnut cabinet, Model WC-10, may be obtained from your Marantz dealer. The case provides for proper ventilation, and can be placed on furniture, or on a bookshelf. Complete instructions for installation are provided with the WC-10.

CUSTOM INSTALLATION

When planning a custom installation, allow adequate spacing between Model 3200, cabinet surfaces, and other components for adequate ventilation.

To install the Model 3200 Stereo Control Amplifier in a custom cabinet, cut an opening 13-3/4 inches wide by 4-5/16 inches high. Since the front panel of the Model 3200 is larger than the cutout, it will neatly hide the edges of the cut. Remove the plastic feet from the bottom of the unit and slide it through the opening. To support the weight of the Model 3200, adequate bracing across the rear of the cabinet must be located to provide contact with the rear of the unit.

TABLE OF CONTENTS

| | |
|----------------------------------|----|
| Preparation for Use | 1 |
| Mechanical Installation | 1 |
| Marantz Walnut Cabinet | 1 |
| Custom Installation | 1 |
| Connecting the Model 3200 | 3 |
| Rear Panel Signal Connections | 3 |
| Phono Input Jacks | 3 |
| Tuner Inputs | 3 |
| Aux Inputs | 3 |
| Tape 1 and Tape 2 Jacks | 3 |
| Pre Out Jacks | 3 |
| Speaker Systems | 3 |
| AC Power Source Connection | 6 |
| AC Outlets | 6 |
| Operating Instructions | 7 |
| Preliminary Procedure | 7 |
| Main Controls and Switches | 8 |
| Power Switch | 8 |
| Volume Control | 8 |
| Loudness Switch | 8 |
| Selector Switch | 8 |
| Monitor Switches | 8 |
| Main and Remote Speaker Switches | 8 |
| Mode Switch | 8 |
| Balance Control | 8 |
| Bass, Mid and Treble Controls | 8 |
| Tone Mode Switch | 9 |
| Hi Filter | 9 |
| Phones Jack | 9 |
| Technical Description | 11 |
| General | 11 |
| System Operation | 11 |
| Technical Highlights | 12 |
| Phono Amplifier | 12 |
| Tone Control/Turnover Network | 12 |
| Time Delay Relay | 12 |
| Technical Specifications | 13 |
| General Specifications | 13 |
| Maintenance | 14 |
| Cleaning | 14 |
| Fuse Replacement | 14 |
| In Case of Difficulty | 14 |
| Repairs | 14 |
| Repacking for Shipment | 15 |

LIST OF ILLUSTRATIONS

| | |
|---|----|
| 1. Rear Panel Connection Facilities | 3 |
| 2. Typical Input/Output Connections | 4 |
| 3. Loudspeaker Connection | 5 |
| 4. Operation of Speaker Switching Terminals | 5 |
| 5. Speaker Switching Inputs Connection | 6 |
| 6. Front Panel Controls and Features | 7 |
| 7. Model 3200 Functional Block Diagram | 10 |
| 8. Fletcher-Munson Loudness Curves | 11 |
| 9. Repacking Illustration | 15 |

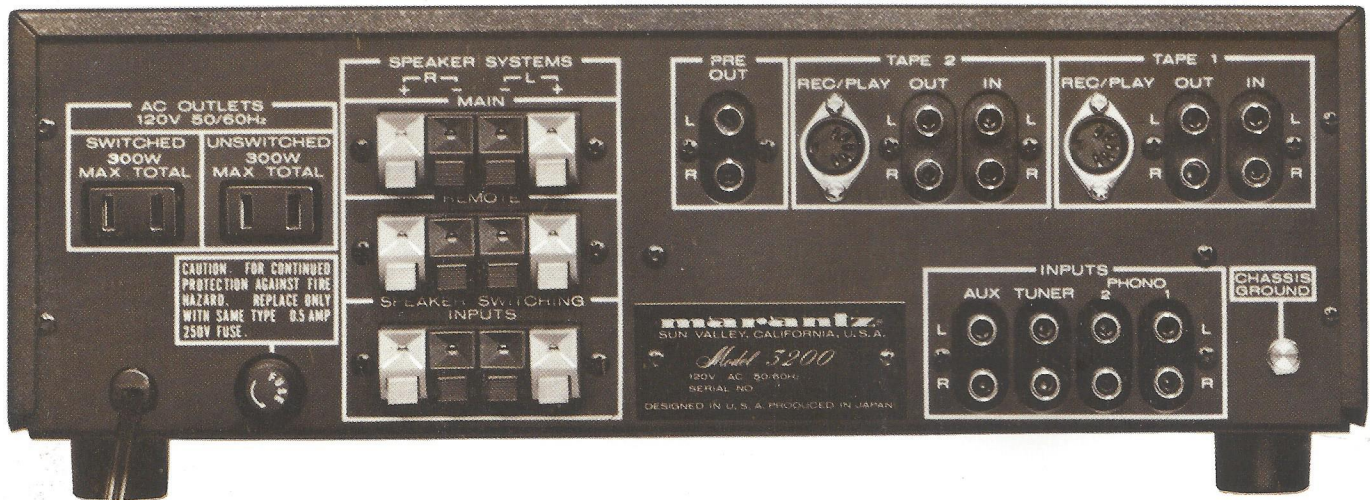


Figure 1. Rear Panel Connection Facilities

CONNECTING THE MODEL 3200

REAR PANEL SIGNAL CONNECTIONS

Figure 1 shows the location of the input and output jacks on the rear panel. These jacks are for "permanent" connections. Front panel jacks and their use will be discussed later.

All connections to the rear panel should be made with the power to the entire system turned off. The rear panel signal connections are arranged in stereo pairs. With the exception of the loudspeakers leads all signal connections to the Model 3200 should be made with shielded audio cables. To avoid confusion, connect one cable at a time between the 3200 and the other components of your system. This is the safest way to avoid cross-connecting channels or confusing signal source outputs with inputs.

PHONO INPUT JACKS

The two sets of **PHONO** jacks are intended for use with magnetic phono cartridges. Connect the turntables as shown in Figure 2.

If a hum is heard when playing records, this is an indication that the record player or its connections are inadequately grounded. Connect a separate ground wire from the turntable or record changer frame to the **CHASSIS GROUND** binding post of the Model 3200. If this is ineffective, try reversing the polarity of the turntable's power plug.

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

TUNER INPUTS

The **TUNER** input jacks are used for connecting the line output of a stereo or monaural AM or FM tuner to the Model 3200. Connect the tuner as shown in Figure 2.

AUX INPUTS

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

TAPE 1 AND TAPE 2 JACKS

The Model 3200 can accommodate two tape recorders.

The group of jacks for each tape recorder is labelled **IN**, **OUT**, and **REC/PLAY**. The terms **IN** and **OUT** refer to the input and output of the Model 3200. Therefore, the **IN** jacks on the Model 3200 accept signals from the line outputs of each tape recorder; the **OUT** jacks feed signal to the tape recorder's line inputs (see Figure 2). The **REC/PLAY** jacks are DIN-type recorder jacks and permit the use of European five wire recorder cables to connect a similarly equipped tape recorder. These jacks duplicate the function of the **TAPE 1** and **TAPE 2 IN** and **OUT** jacks, respectively.

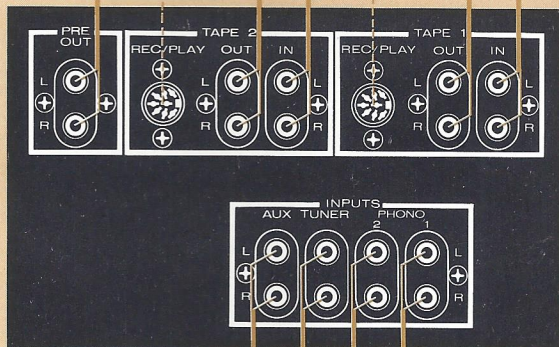
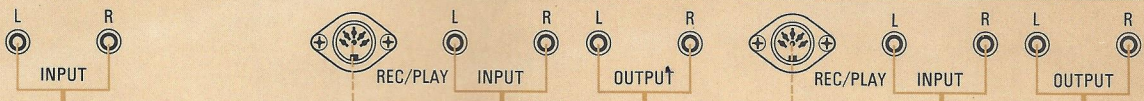
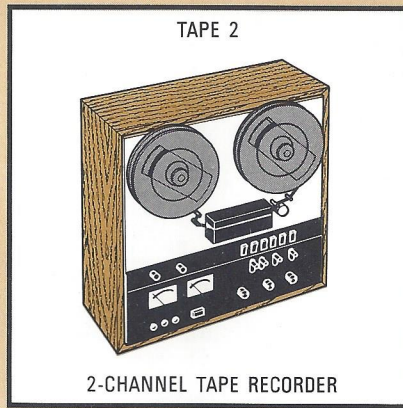
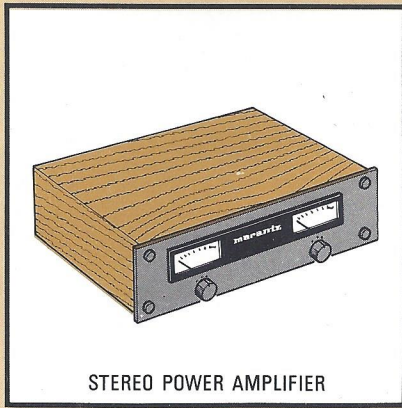
PRE OUT JACKS

These jacks are the outputs of the Model 3200 Stereo Control Console. Connect them to the inputs of your power amplifier.

SPEAKER SYSTEMS

These terminals are used for connecting two sets of speakers to a power amplifier having only one set of outputs. Using this arrangement, the speaker systems can be selected individually or simultaneously or turned off to allow private listening through headphones.

To connect the speakers to the Model 3200, use ordinary #18 gauge stranded two-conductor lamp cord. If the total desired cord length from amplifier to speaker for either channel exceeds 30 feet, use #16 gauge wire or heavier.



FOR TV SOUND ETC.

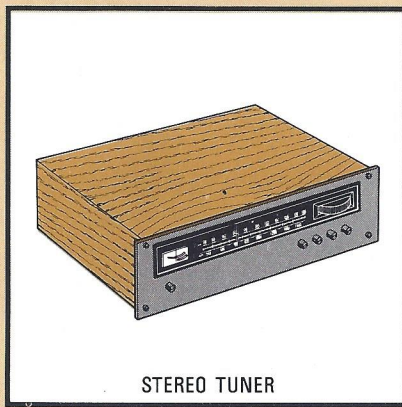


Figure 2. Typical Input/Output Connections

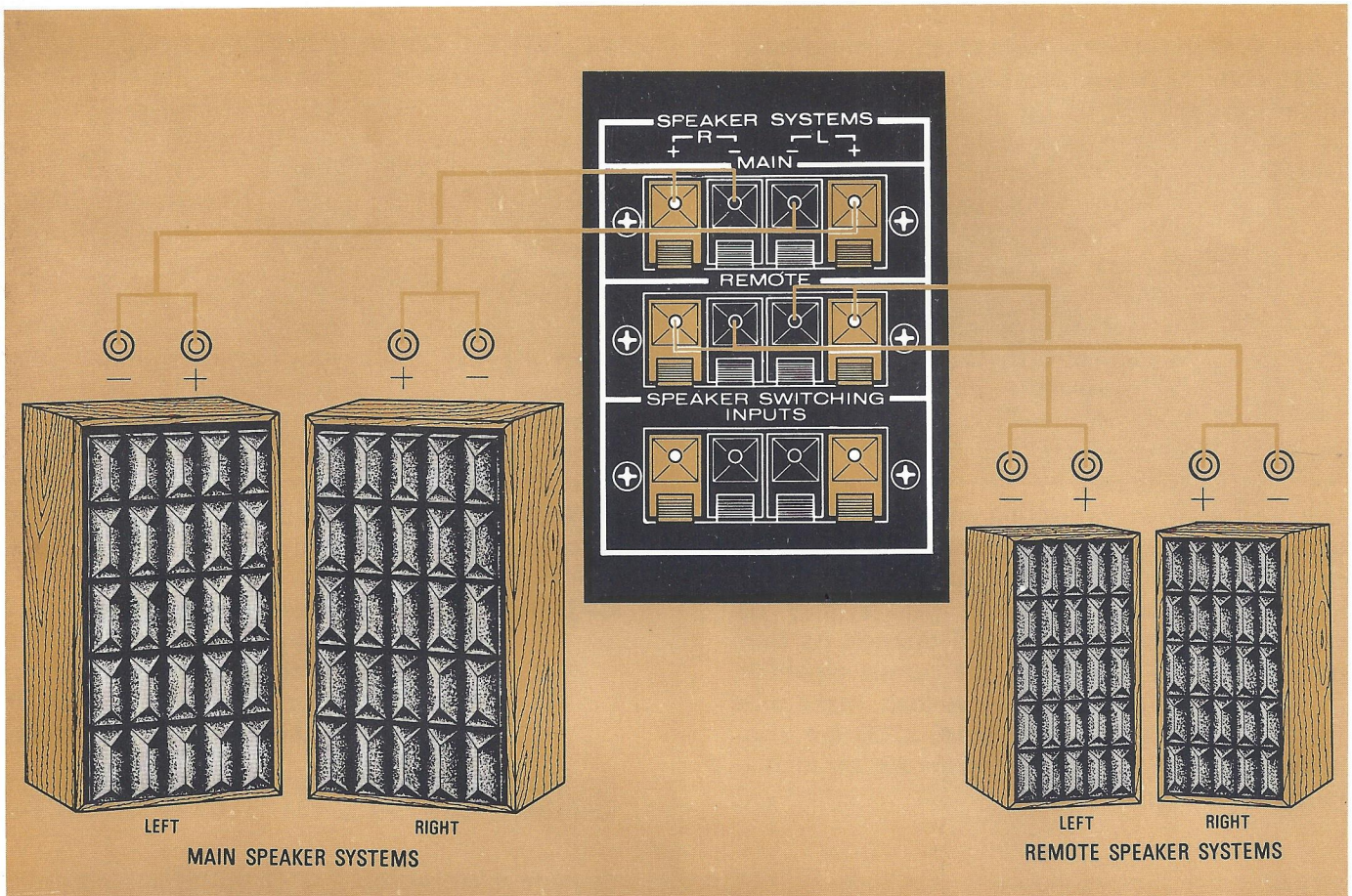


Figure 3. Loudspeaker Connection

CAUTION: Ensure that the total power output connected to the **SPEAKER SWITCHING INPUTS** does not exceed 150 watts RMS per channel, continuous power.

Strip about 1/2-inch of insulation from either end of both loudspeaker cords. Twist the strands of each conductor to prevent fraying. Examine the wires for polarity markings. One of each pair will probably be marked in any one of several ways. Check for a molded ridge on the insulation, a tracer thread, or one or more tinned strands.

To assure the best stereo separation and frequency response, the speakers must be properly phased. Normally, the positive terminal on each speaker should be connected to its respective (+) terminal on the Model 3200, and the negative or "common" terminal should be connected to its respective (-) terminal (see Figure 3). Use the polarity markings on the wires to aid in making identical connections to each speaker. If your speakers use screw terminals, it is advisable to attach crimp-on "spade lug" terminal connectors to the wires at the end that will be connected to the speakers. At the preamplifier end, connect the wires as shown in Figure 4.

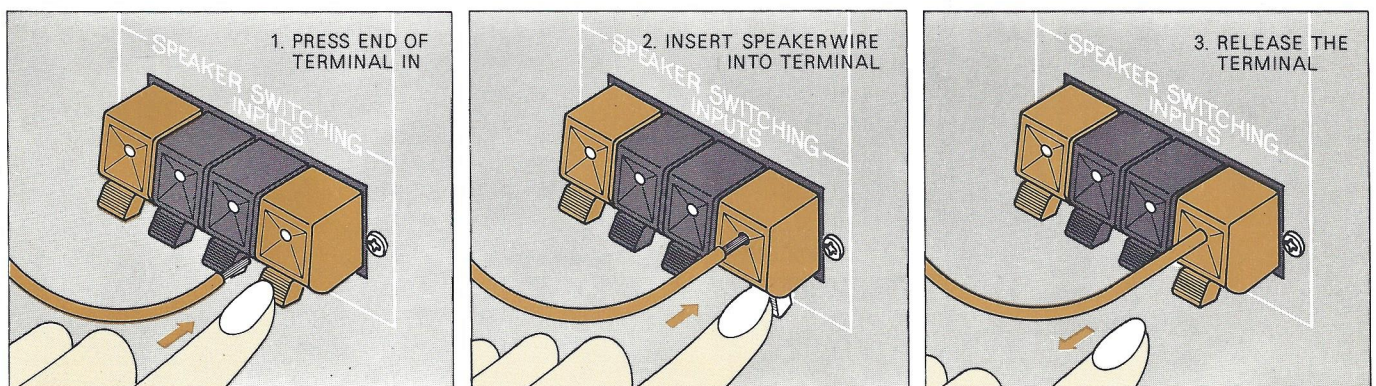


Figure 4. Operation of Speaker Switching Terminals

After the speakers are connected to the Model 3200, connect the outputs of the power amplifier directly to the **SPEAKER SWITCHING INPUTS** on the 3200 as shown in Figure 5.

CAUTION: Improper connections from power amplifier outputs to **SPEAKER SWITCHING INPUTS** may result in damage to the power amplifier. Be very careful that each positive output terminal on the power amplifier is connected to its respective positive (+) terminal on the 3200, and that each negative or "common" terminal is connected to its respective (-) terminal.

Use caution when connecting your Model 3200 to a loudspeaker with built-in power supply such as an electrostatic loudspeaker. The "common" connection terminal of such a speaker may be capacitively coupled to ground through its own power supply. To protect the power amplifier from distortion and possible overload, make sure the (-) terminals of the Model 3200 are connected to the "common" terminals of such a loudspeaker system.

AC POWER SOURCE CONNECTION

With the **POWER** switch set to the OFF (out) position, plug the AC line cord into an AC outlet providing the proper voltage.

CAUTION: DO NOT PLUG THE MODEL 3200 INTO A DC OUTLET, AS SERIOUS DAMAGE WILL OCCUR.

AC OUTLETS

Two AC outlets on the rear panel are provided for powering the associated components of your system, such as power amplifiers, tuners, tape recorders, record players, etc. The switched outlet is controlled by the front panel **POWER** switch. The **UNSWITCHED** outlet is unaffected by the **POWER** switch. This outlet is for powering a turntable or record changer that has its own on-off switch.

CAUTION: Do not exceed the maximum total power ratings of the AC outlets. The **POWER** switch and other circuitry in the 3200 would suffer damage if forced to conduct excessive current.

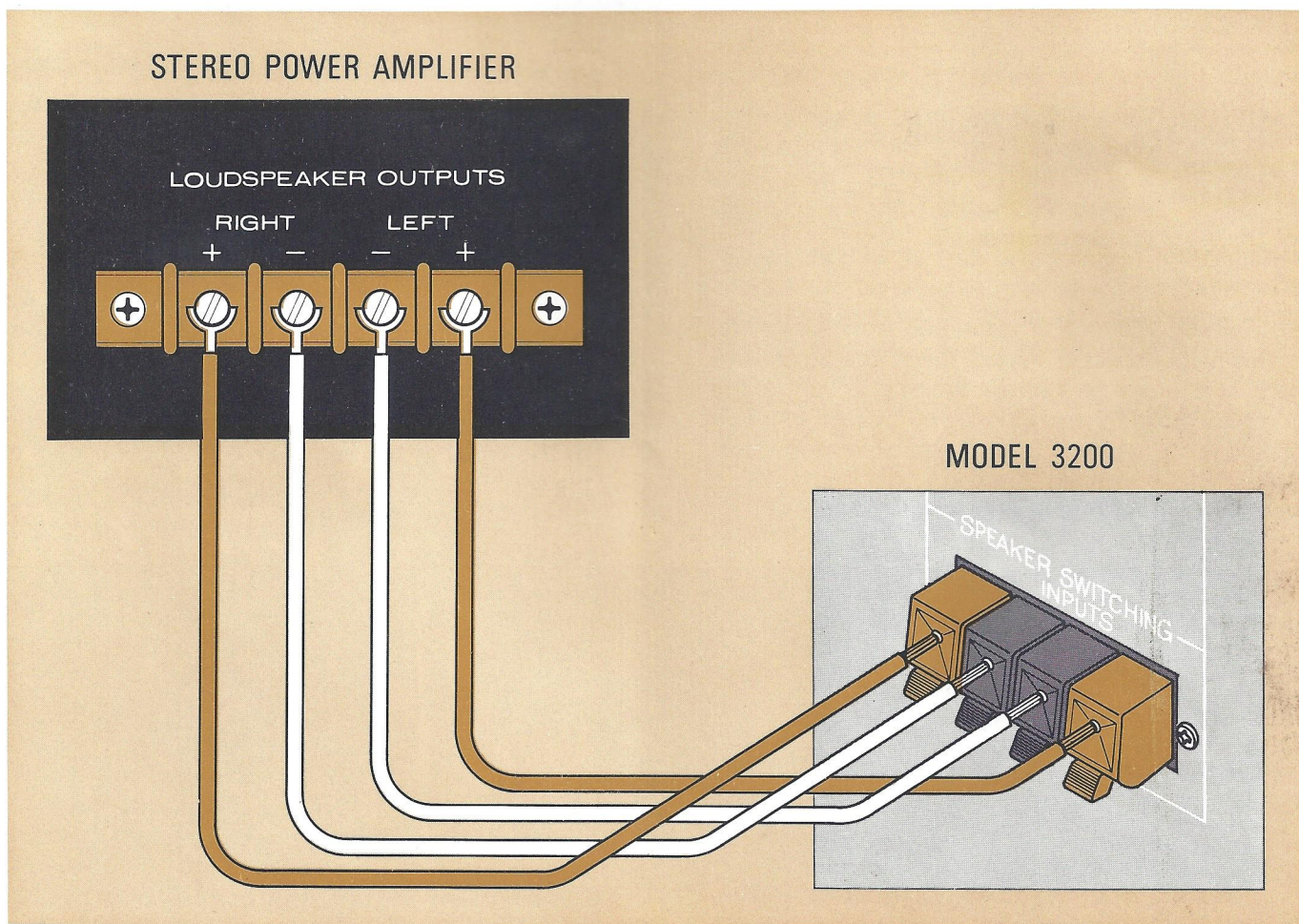


Figure 5. Speaker Switching Inputs Connection



Figure 6. Front Panel Controls and Features

OPERATING INSTRUCTIONS

When operating the Model 3200 for the first time, please follow the step-by-step instructions in the PRELIMINARY PROCEDURE that follows. After becoming familiar with the Stereo Control Console, you may take full advantage of its many features and operating versatility.

PRELIMINARY PROCEDURE

Connect the program source, power amplifier, and speakers as described in the "PREPARATION FOR USE" section. Then, set the controls and switches as follows:

| | |
|---------------------------------------|-----------------------------------|
| POWER Switch | OFF (Out) |
| VOLUME Control | Minimum (fully counter-clockwise) |
| MODE Switch | STEREO |
| BASS, MID, and TREBLE Controls | Mid Position |
| TONE MODE Switch | IN |
| SELECTOR Switch | Desired Program Source |
| HI FILTER | OUT |
| MONITOR (1, 2) | 1 (out) |
| MONITOR (SOURCE/TAPE) | SOURCE (out) |
| BALANCE Control | Mid Position |
| LOUDNESS Switch | OFF (out) |
| SPEAKERS Switches | OFF (out) |

After setting the controls and switches, proceed as follows:

1. Plug the 3200 into an AC wall outlet.
2. Depress the **POWER** switch to the ON (in) position. The pilot light will illuminate indicating that the unit's power is on.

NOTE: A time delay relay will momentarily mute the preamplifier output until all circuits have stabilized. Wait for the relay to "click in" before turning up the **VOLUME**.

3. If speakers are connected through the Model 3200, depress the **MAIN** and/or **REMOTE SPEAKERS** pushswitches.
4. Play the program source (phonograph, tuner, tape, etc.).
5. Adjust the **VOLUME** control on the 3200 to the desired listening level.

The following section will explain the remainder of the front panel controls. The controls will be discussed in order of usage with the most commonly used controls discussed first.

MAIN CONTROLS AND SWITCHES

POWER SWITCH

The **POWER** switch, when depressed, supplies AC power to the Model 3200 and to the **SWITCHED** outlet on its rear panel.

VOLUME CONTROL

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

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.

SELECTOR SWITCH

From the six available inputs, the **SELECTOR** switch determines which input becomes the Model 3200's source of audio signal. The source input may then be played or recorded onto a tape recorder.

To make a dub (tape copy) from **TAPE 1** to **TAPE 2**, place the **SELECTOR** switch in the **TAPE 1** position. The signal from **TAPE 1** is then fed to the input of **TAPE 2**. The **TAPE 1 IN** jacks are muted to prevent feedback oscillations that would occur if **TAPE 1** were inadvertently placed in the record mode.

Similarly, to make a dub from **TAPE 2** to **TAPE 1**, place the **SELECTOR** in the **TAPE 2** position. The signal is fed to **TAPE 1**, and the **TAPE 2 IN** jacks are muted. (See Figure 2.)

MONITOR SWITCHES

These pushswitches control the tape monitoring functions of the Model 3200. When the **SOURCE/TAPE** switch is in **SOURCE** position, the preamplifier inputs are determined by the **SELECTOR** switch. When the **SOURCE/TAPE** switch is in the **TAPE** position, the preamplifier derives its inputs from one of the two pairs of **TAPE IN** jacks on the rear panel. The **MONITOR 1, 2** switch determines which of these two pairs becomes the input, or in other words which tape recorder is monitored.

MAIN AND REMOTE SPEAKER SWITCHES

When the outputs of a power amplifier are connected to the rear panel **SPEAKER SWITCHING INPUTS**, these pushswitches will select the speaker terminals to which audio power is applied. The **MAIN** and **REMOTE** speakers may be

operated separately or simultaneously. With both speaker pushswitches set to their off (out) positions, all speakers are disconnected, allowing "private listening" through stereo headphones.

CAUTION: We strongly recommend that the **VOLUME** be reduced before switching speaker systems to prevent possible damage to your loudspeakers.

MODE SWITCH

The five-position **MODE** Selector switch chooses the mode or manner in which program source signals are reproduced by the stereo system.

With the switch set to **LEFT**, the left channel signal of the program source is applied to the left and right channel outputs. When set to **RIGHT**, the right channel signal of the program source is applied to the left and right channel outputs. These **MODE** switch positions are useful in evaluating stereo separation.

When set to **STEREO**, the left channel signal of the program source is applied to the left channel outputs and the right channel signal of the program source is applied to the right channel outputs.

When set to **REVERSE**, the left and right channels of the program source are transposed, reversing the apparent left-right placement of the stereo program.

Set to **MONO L + R**, the left and right channel signals of the program source are combined, and the combination (a monaural equivalent of the stereo program) is applied to the left and right preamplifier outputs.

When playing a single channel source such as TV or AM radio, set the switch to either **LEFT** or **RIGHT** position or to **MONO L + R** so that the single channel source can be heard through both speakers.

BALANCE CONTROL

This control alters the level of either output channel in situations where it is necessary to correct unbalanced programs sometimes encountered in older stereo recordings or in stereo broadcasts. As it is moved from its center position, it decreases the level in one output channel while maintaining the level in the other channel.

BASS, MID AND TREBLE CONTROLS

These controls alter the tonal balance of program signals to suit individual listening preference.

TONE MODE SWITCH

The **TONE MODE** switch determines the operating characteristics of the **BASS**, **MID** and **TREBLE** controls, and allows additional flexibility in compensating for room, speaker, and program characteristics. The switch affects the tone controls as follows:

OUT: The tone controls are switched out of circuit and frequency response is made flat regardless of their positions.

IN: The tone controls operate normally.

250Hz: The turnover frequency of the **BASS** tone control is shifted from 500 Hz to 250 Hz, while the **MID** and **TREBLE** operate normally.

4KHz: The turnover frequency of the **TREBLE** tone control is shifted from 2 kHz to 4 kHz, while the **BASS** and **MID** operate normally.

250Hz, 4KHz: Both **BASS** and **TREBLE** are affected as above, while **MID** operates normally.

HI FILTER SWITCH

This switch can be used to reduce high frequency noise such as that associated with the playing of poorly recorded tapes or worn disc recordings. If an AM tuner is being used with the Model 3200, this switch will help to suppress considerably the high pitched "whistle" caused by adjacent AM channel interference. This filter will also, along with high frequency noise, slightly attenuate high frequency program material, and should therefore be used judiciously.

PHONES JACK

This jack accepts headphones utilizing a standard three conductor phone plug. It is internally connected to the speaker switching inputs through isolation resistors to provide adequate sound level with popular low impedance headphones as well as with high impedance units. Two or more sets of headphones may be used with the aid of "Y" connectors. However, output level will drop as additional headphones are added. The headphone jack output is not affected by the **MAIN-SPEAKERS-REMOTE** switches.

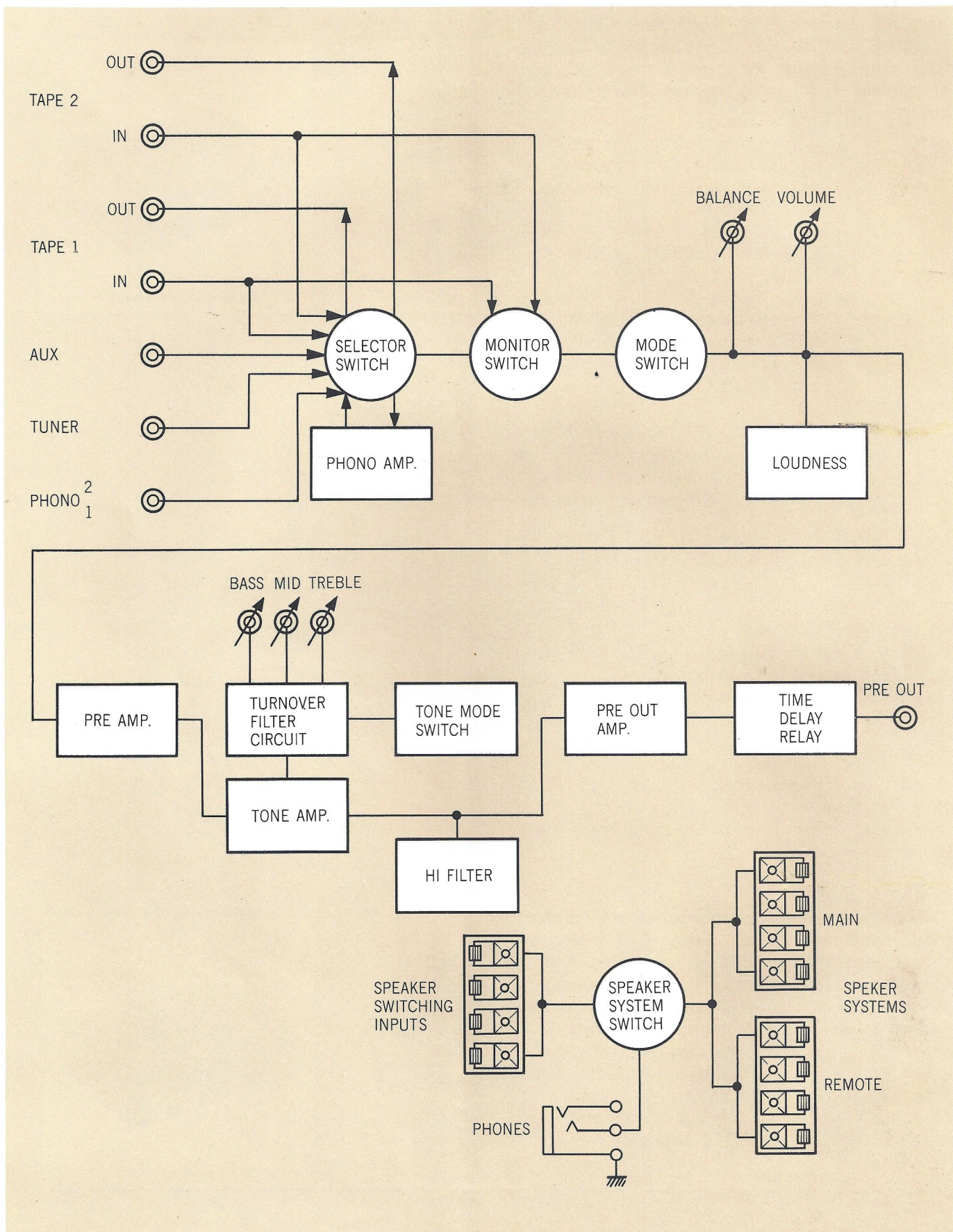


Figure 7. Model 3200 Functional Block Diagram

TECHNICAL DESCRIPTION

GENERAL

Figure 7 is a functional block diagram of the Model 3200 left audio channel, showing the principle circuit elements and signal routing paths. Since the left and right channels are identical, and process audio signals simultaneously, only the left channel will be discussed in the following paragraphs.

SYSTEM OPERATION

High- and low-level inputs (program sources) are selected by the Selector Rotary switches and routed in accordance with signal level. When low level sources are selected (PHONO), the rotary selector switch selects either phono 1 or 2 and applies the input signal to the Phono Amplifier which provides the proper gain and equalization. The output of the Phono Amplifier is then fed to the Selector rotary switch where it is handled as another high level input.

High level input signals (TUNER, AUX, TAPE 1, TAPE 2, or the output of the Phono Amplifier) are applied to the TAPE OUT jacks, and to the MONITOR switch. The MONITOR switch selects between the Selector Switch output and the signal input at either the TAPE 1 IN or TAPE 2 IN jack. The signal selected by the MONITOR switch is routed to the MODE switch.

The MODE switch determines the manner in which the left- and right-channel signals of the program source are presented to the Model 3200: LEFT channel only, RIGHT channel only, two-channel STEREO, STEREO REVERSE, or MONO L + R (left and right channels combined). The signal selected by the MODE switch is then routed to the BALANCE control. BALANCE is achieved of the left and right channels by attenuating the level of one channel while maintaining the level of the other. From the BALANCE control the signal is routed to the VOLUME control, which controls the level of the output signal available at the PRE OUT jacks. The signal is also routed to a Loudness Contour Circuit that, when activated, boosts low and high frequencies at low listening levels so that all frequencies appear to have equal loudness. The Loudness Contour Circuit that, when activated, boosts low and high frequencies at low listening levels so that all frequencies appear to have equal loudness. The Loudness Contour Circuit adjusts the frequency response of the Model 3200 to approximate the Fletcher-Munson loudness curves (Figure 8). The signal from the VOLUME control is then routed to the input of the preamplifier gain stage.

The output of the gain stage is routed to the Tone Control/Turnover Network comprised of the BASS, MID, and TREBLE Tone Controls, the 250 Hz, the 4 kHz and 250 Hz/4 kHz TURN-OVER circuitry and the feedback Tone Amplifier stage.

The tone control portion of the network boosts or attenuates low, middle, and high frequencies; the turnover portion of the network, when activated, decreases the point at which low frequencies are affected by the BASS control (250 Hz) and increases the point at which high frequencies are affected by the TREBLE control (4 kHz). The TONE MODE switch selects either the flat output of the TONE amplifier (bypassing the tone controls) or the tone control altered output of the Tone Amplifier. The output of the Tone Amplifier is routed to the HI FILTER circuit, then to the output buffer amplifiers, and finally to the Time Delay Relay.

From the relay contacts, the signal is routed to the PRE OUT jacks to drive an external power amplifier. The power amplifier outputs are connected to the SPEAKER SWITCHING INPUTS and the signal is routed to the stereo PHONES jacks. The power amplifier signal is also routed to the MAIN and/or REMOTE speaker terminals via the corresponding SPEAKERS switch.

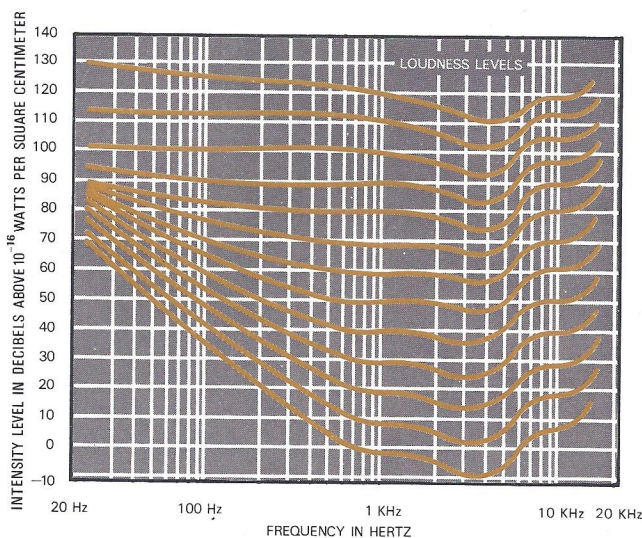


Figure 8. Fletcher-Munson Loudness Curves

TECHNICAL HIGHLIGHTS

PHONO AMPLIFIER

The low level PHONO amplifier features the ability to accommodate a wide range of phono cartridges without overloading. Moreover, it achieves its overload capability without sacrificing the high sensitivity required for low output cartridges.

The amplifier consists primarily of a two transistor direct coupled high gain stage, an emitter follower output stage and a special 78 volt regulated power supply. This results in a very high input overload capability of 200 mV. Since the maximum output of most phono cartridges would not exceed 40 mV, the PHONO amplifier has more than adequate head room (over 14 dB). A large amount of DC feedback makes this amplifier very stable.

Carefully selected components in the negative feedback network set the closed loop gain at 40 dB and establishes precise Phono (RIAA) equalization.

tone control/turnover network

The band of audio frequencies to which the human ear is most sensitive is the midrange. Conveniently enough, most speaker systems and most listening environments faithfully reproduce midrange frequencies.

On the other hand, the reproduction of the low bass and high treble regions are considerably influenced by room acoustics and speaker design. To provide flexibility in coping with these conditions, the **TURNOVER** switches shift the frequency locus (turnover points) for the **BASS** and **TREBLE** controls. This allows the bass and treble response to be adjusted with minimum influence on the critical midrange frequencies.

The turnover frequency designations (250 Hz and 4 kHz) refer to the lower and upper limits of the band of midrange frequencies which would not be effected by the **BASS** or **TREBLE** controls.

time delay relay

When the **POWER** switch is OFF, the relay contacts maintain a short across the output terminals of the preamp. The time delay circuit opens the relay contacts approximately four seconds after the **POWER** switch is turned on. This time period allows the power supply to stabilize, thus preventing transients from reaching the speaker system. Audible "pops" are thereby eliminated.

TECHNICAL SPECIFICATIONS

| | |
|--|---------------------|
| Total Harmonic Distortion (at 3 Volts, 1 kHz) | 0.05% |
| Maximum Output Voltage | 7 Volts at 1.0% THD |
| Sensitivity | |
| (Reference Output, 1.5 Volt) | |
| PHONO | 1.8 mV |
| AUX | 180 mV |
| TAPE | 180 mV |
| Tape Output Level with 7.75 mV at Phono Input | 775 mV |
| Frequency Response | |
| PHONO | 25–20 kHz ± 1.0 dB |
| AUX | 20–20 kHz ± 0.5 dB |
| Phono Input Overload | 200 mV |
| Phono Dynamic Range | 106 dB |
| Signal/Noise, Phono Inputs (Ref. 3 Volts Out) | 75 dB |
| Signal/Noise, High Level Inputs (Ref. 3 Volts Out) | 86 dB |
| Phono Input Impedance at 1 kHz | 47 kΩ |
| Aux Input Impedance at 1 kHz | 47 kΩ |
| Output Impedance at 1 kHz (Pre-Out Jacks) | Less Than 600 Ω |

GENERAL SPECIFICATIONS

| | |
|---------------------|--------------------|
| Power Requirements | 120 V AC, 50/60 Hz |
| Power Consumption | 11 Watts |
| Dimensions: | |
| Width | 14-1/8 inches |
| Height | 4-3/4 inches |
| Depth | 9-1/16 inches |
| Weight: | |
| Model 3200 Only | 11.6 pounds |
| Packed for Shipment | 16 pounds |

repair and calibration of this precision instrument.

In the event of difficulty, refer to the list of Authorized Marantz Service Stations packed with the Model 3200 or write directly to the location listed below for the name and address of the Marantz authorized service station nearest your home or business. Please include the model and serial number of your unit together with a full description of what you feel is abnormal in its behavior.

Marantz Company, Inc.
Technical Services Dept.
P.O. Box 99
Sun Valley, CA 91352
U.S.A.

REPACKING FOR SHIPMENT

Should it become necessary to repack your Model 3200 for shipment to the factory, to an authorized service station, or elsewhere, please observe the following precautions:

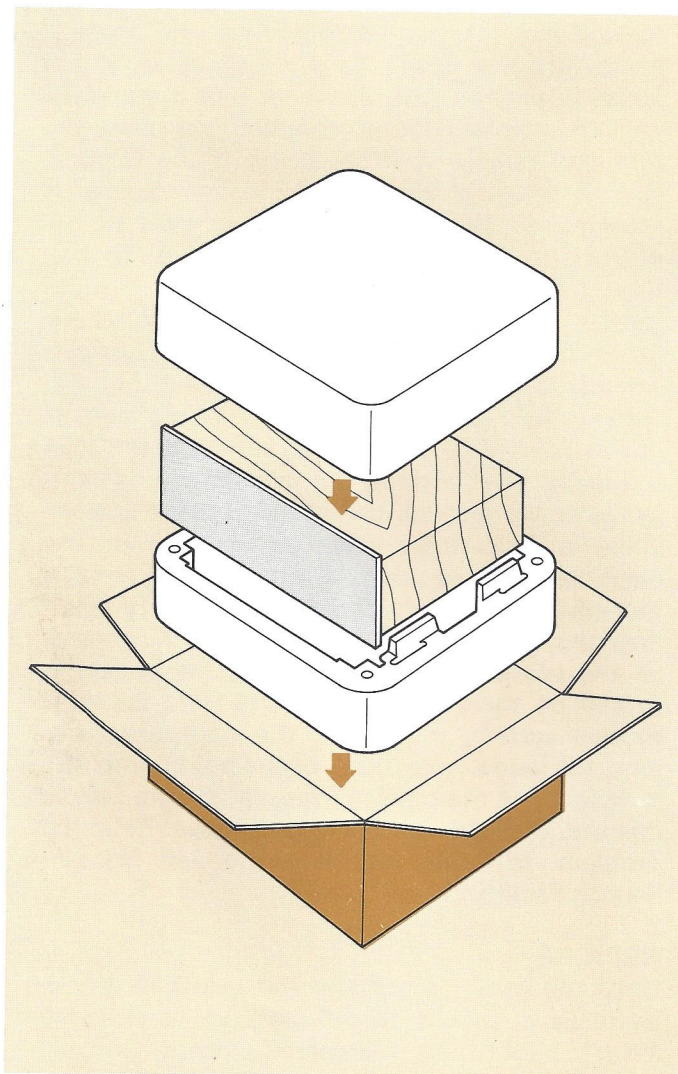


Figure 9. Repacking Illustration

- a. Do not ship your unit to the factory without an Authorized Return Label, which the Marantz Company will supply if the description of difficulties appears to warrant factory service.
- b. Do not ship the unit installed in its accessory walnut cabinet; remove the unit from the cabinet before packing.
- c. Pack the unit carefully, using the original material as shown in Figure 9. PLEASE NOTE that if you have discarded, lost, or damaged the packing material, new packing material may be obtained by writing to the **Marantz Technical Services Department**. The carton, its fillers, and packing instructions will be returned to you at a nominal charge.
- d. Ship via a reputable carrier (do not use Parcel Post) and obtain a shipping receipt from the carrier.
- e. Insure the unit for its full value.
- f. Be sure to include your return address on the shipping label.

The Sound of Marantz
is the compelling warmth of a Stradivarius.
It is a dancing flute, a haughty bassoon
and the plaintive call of a lone French horn.
The Sound of Marantz is the sound of beauty,
and Marantz equipment is designed to bring you
the subtle joy of its delight.
Wonderful adventures in sound await you
when you discover that the Sound of Marantz
is the sound of music at its very best.



marantz