Owner's Manual

Model MP1
MULTICHANNEL PREAMPLIFIER

audio research
HIGH DEFINITION®

3900 ANNAPOLIS LANE NORTH / PLYMOUTH, MINNESOTA 55447-5447 / PHONE: 763-577-9700 FAX: 763-577-0323
Model MP1

- Adjusts illumination of display to seven levels including off.
- Turns power on/off.
- Select any of three six-channel inputs.
- Select any of four two-channel inputs.
- Mutes all output from the MP1.
- Adjust volume up (+) or down (−). 104 steps available including off (0).
- Selects external A-V processor (connected to multichannel input) as controller of volume level for all channels. Disables Vol (+) and Vol (−) on MP1. Volume reads "NA" on display.
- Inverts absolute phase of all outputs.
- With multichannel 1, 2, or 3 selected, STE/MULT disables center, RR and LR channels of the input.

NOTE: All MP1 control functions are available on the MP1R handheld remote controller.
Model MP1

Introduction
Thank you for choosing the MP1 Multichannel Preamplifier for your entertainment system. The MP1 breaks new ground in the high resolution playback of multichannel music recordings, having been created in response to the new generation of multichannel DVD-A and SACD players which output six analog channels. With its unprocessed, pure Class-A circuitry, the MP1 will not contaminate high resolution analog signals. Music, regardless of whether it was recorded in mono or multichannel surround-sound, will be reproduced with remarkable clarity, dynamics and naturalness.

The MP1 has been designed for flexibility, with three sets of multichannel and four sets of stereo inputs. Controls are straightforward and easy to use. Build quality is exceptional, with the finest heavily-plated circuit boards, carefully selected audiophile grade components, and unparalleled workmanship. All assembly, hand soldering and testing is done in-house by our own highly-trained, experienced craftsmen. The MP1 was created to last a lifetime, and everyone at Audio Research hopes you will enjoy it in your system for many, many years to come. Good listening.

Preface
Please take time to carefully read and understand the following instructions before you install or attempt to operate your Audio Research MP1 Multichannel preamplifier. Becoming familiar with the product and its correct operating procedures will help assure you of maximum musical enjoyment and reliable operation. The effort you invest now will be well rewarded in the years ahead.

Warnings
1. To prevent fire or shock hazard, do not expose this product to rain or moisture.
2. This unit operates on voltages which can cause serious injury or death. Do not operate with covers removed. Any necessary servicing should be carried out by your authorized Audio Research dealer or other qualified electronics technician.
3. The power cord on this unit is safety-tested and is equipped with a proper grounding plug. If used normally, it will provide a safe earth ground connection of the chassis. Defeat of the grounding plug or replacement of the plug or power cord, or any unauthorized modification of the active circuitry or controls of this unit, automatically voids warranty coverage, and could cause injury or death.
4. For safe operation and protection against fire hazard, replace fuses only with those of the same type and rating as those supplied with this unit.

Packaging
Save all packaging accompanying this product. You have purchased a precision electronic instrument, and it should be properly cartoned any time shipment becomes necessary. It is very possible that this unit could be damaged during shipment if repackaged in cartoning other than that designed for it. The original packaging materials help protect your investment from unnecessary damage, delay and added expense whenever shipment of this unit is required.

Description of Controls
Front Panel and MP1R Remote Control
POWER ON/OFF: Supplies power from A.C. wall outlet to preamp; indicated by active display window. Function also on remote control.

For approximately 30 seconds after start up, “Mute” appears in the display window and flashes until the automatic muting cycle is completed. This also occurs in the event of power interruption. No controls other than the power switch are operable during the automatic muting cycle. Upon completing the cycle, the MP1 will cease flashing and remain muted until normal operation is selected by pressing the “Mute” button.

MUTE: When activated, electrically mutes all output of the preamplifier; indicated by “Mute” in display window. This control should be activated before switching inputs, changing connections or shutting down your audio system to help protect your amplifier and speakers from unexpected signal pulses. When deactivated, “Mute” disappears from the display window allowing normal operation. Function also on remote control.

The MP1 also has automatic muting to help protect system components during A.C. power interruptions or low line voltage. When sensing these conditions, the MP1 automatically goes into “Mute” and disables all outputs. The 30-second warm-up timer will restart and “Mute” will flash in the display window when normal power conditions have been restored.

Note that automatic muting is only designed to protect against power line interruptions or severe voltage drop. It will not mute in the event of subsonic transmissions from a faulty input source, amplifier failure or speaker malfunction.
**Model MP1**

PROCESSOR (PROC): "PROC" button will convert multichannel 1, 2 or 3 into a processor pass-thru with unity gain. This allows a home theater processor to control overall system volume. The MP1 will memorize the processor setting for each multichannel input. "PROC" will not work with any of the MP1's four stereo inputs.

When engaged, "PROC" will appear in the display, and the numerical volume setting will read "NA" (for "Not Applicable") because gain is fixed and not adjustable. The MP1 will also mute the input after "PROC" is initially engaged.

**WARNING:** Before unmuting a multichannel input with "PROC" engaged, be sure to turn the volume down on the home-theater processor. Never connect a source with a fixed level output (DVD player, tuner, CD, etc.) to a multichannel input with "PROC" engaged or the amplifier(s) and speaker system could be damaged when the MP1 is unmuted.

MULT 1, MULT 2, MULT 3: Selects one of three 6-channel inputs. MULT1 and MULT2 are SE only; MULT3 offers BAL and SE connections. Also selectable via remote control.

CD, ST1, ST2, ST3: Stereo input pairs offering both BAL and SE connectors for stereo source components such as CD player, AM/FM tuner, phono preamp, and more. Also selectable via remote control.

VOLUME UP/DOWN: Increases/decreases overall volume level of all channels equally for whichever inputs have been selected. Caution: do not turn up volume beyond normal listening levels when "Mute" is engaged to avoid unexpected or possibly damaging sound levels. It is a good idea to reduce volume whenever changing program sources, even when muted. Function also on remote control.

**MP1 Remote Control Only**

DISPLAY: Selects one of seven display illumination levels, including off. When off, the display can be reactivated for 10 seconds at its lowest level by pressing any button (except Power) on remote or front panel.

BAL/SE: Should be selected as appropriate for the input chosen for best sonic performance. For source components having balanced (XLR) connections to the MP1, select BAL. For single-ended (RCA) sources, select SE. Once selected for an input source, this setting is memorized by the MP1 until manually changed.

INVERT: Inverts absolute phase of the output signal of all channels in use on the MP1.

ADJUST: Allows volume level of each channel to be attenuated to achieve proper balance as necessary. Each time "Adjust" button is pressed a different channel is selected (Right Front→Left Front→Center→Right Rear→Left Rear→Subwoofer). After a channel is selected the level can be adjusted via the Volume Up/Down buttons.

The selected levels are memorized for each channel of that input only, not for other inputs. Each input's levels must be set separately.

To get out of the "Adjust" mode press "Adjust" button repeatedly until display returns to normal. **Level settings will remain in the memory after the MP1 is turned off and unplugged.**

STE/MULT: When engaged, switches between six channels of operation (RF, LF, Center, RR, LR and Subwoofer) and three primary channels (RF, LF and Subwoofer). Works only with Multichannel inputs 1, 2 or 3. In "STEREO" mode, RR, LR and Center are muted, and "STEREO" appears in display.

**Connections**

INPUT CONNECTORS: The MP1 provides three sets of six-channel inputs: MC1 (SE), MC2 (SE) and MC3 (BAL/SE). They are located just above the output connectors and are labeled Right Front, Left Front, Center, Right Rear, Left Rear and Subwoofer.

The MP1 also includes four sets of stereo inputs for two-channel sources: CD (BAL/SE), Stereo 1 (BAL/SE), Stereo 2 (BAL/SE) and Stereo 3 (BAL/SE).

OUTPUT CONNECTORS: Six channels of BAL/SE are provided—RF, LF, Center, RR, LR and Subwoofer.

RECORD OUTPUT: The SE stereo tape outputs should be connected to your recorder's "Record" or "Line" inputs. These outputs provide a fixed-level two-channel signal (RF, LF) to your recorder from whichever input is selected. The non-variable output level will be the same as the output of the selected source.

It is possible to dub or copy from one recorder to another by connecting the output of the source recorder to an unused set of stereo inputs on the MP1. The signal will then be routed to the Record Out connectors when that input source is selected.

**12V IN/OUT REMOTE START JACKS:** The +12V DC input/output jacks provide the ability to remotely turn on and off the MP1 and other linked components such as power amplifiers having similar capabilities.

**Installation Instructions**

While the MP1 does not dissipate an unusual amount of heat, it is important that it be provided with reasonable airflow to assure long, trouble-free operation. In addition,
the following installation guidelines will help insure maximum sonic performance as well as reliable service.  
1. Operate unit in upright and horizontal position, preferably on solid, non-metal shelving.
2. Do not stack the MP1 on top of a power amplifier: not only could this cause overheating, but hum may be introduced into the MP1 from the proximity of the amplifier's power transformer. Do not stack components or other objects directly on top of the MP1. 
3. Do not place or operate your MP1 on a soft or irregular surface such as a rug. This will prevent proper ventilation.
4. Do not operate your MP1 without the top and bottom covers installed. These are required both for safety as well as shielding from interference (except in service operations by qualified personnel).

Operating Procedure

Start-Up:
1. Secure all rear-panel connections between MP1, power amplifier(s) and input sources.
2. Plug three-prong power cord from rear of MP1 into grounded AC wall outlet. The Power switch defaults to "off" when the unit is plugged into a power receptacle.
3. Press power switch (either remote or front panel). "Mute" will flash in the display window for approximately 30 seconds, then cease flashing and remain in the display. Press "Mute" to initiate operation.
4. Select input source, then BAL or SE as necessary.

Shut-Down:
1. Activate "Mute" function.
2. Set Volume level to "0".
3. Turn off power amplifier(s).
4. Press MP1 Power switch to "off".
5. Turn off input sources.

Troubleshooting:
It is possible for a static discharge to temporarily disable the microprocessor that allows the controls to function. If this should occur, depress the "Mute" button, then turn off the MP1 as well as other components and unplug the MP1 from the A.C. receptacle for about 30 seconds. Reconnect the A.C. plug and turn the MP1 back on, along with other components. The controls should resume normal operation. If the problem persists, contact your dealer or Audio Research Customer Service at 763-577-9700.

Servicing
Because of its careful design and exacting standards of manufacture, your MP1 should require no routine maintenance. The MP1R remote control's batteries (AAA) should be replaced once a year.

Should service be necessary, please contact your Audio Research dealer, or Audio Research Customer Service at (763) 577-9700.

CAUTION: Your MP1 contains sufficient levels of voltage and current to be lethal. Do not tamper with a component or part inside the unit. Refer any needed service to your authorized Audio Research dealer or other qualified technician.

Cleaning
To maintain the new appearance of this unit, occasionally wipe the front panel and top cover with a soft, damp (not wet) cloth to remove dust. A mild, non-alkaline soap solution or dilute isopropyl alcohol may be used to remove fingerprints or similar smudges. Cleaners containing abrasives should not be used as they will damage the anodized finish of the front panel. A small, soft paint brush is effective in removing dust from bevels, the recessed nameplate and other features of the front panel.

Limited Warranty
Audio Research Corporation products are covered by a 3-Year Limited Warranty, or a 90-Day Limited Warranty (vacuum tubes). This Limited Warranty initiates from the date of purchase, and is limited to the original purchaser, or in the case of demonstration equipment, limited to the balance of warranty remaining after original shipment to the retailer or importer.

In the United States, the specific terms, conditions and remedies for fulfillment of this Limited Warranty are listed on the warranty card accompanying the product in its shipping carton, or may be obtained from the authorized retailer or from the Audio Research Customer Service Department. Outside the United States, the authorized importing retailer or distributor has accepted the responsibility for warranty of Audio Research products sold by them. The specific terms and remedies for fulfillment of the Limited Warranty may vary from country to country. Warranty service should normally be obtained from the importing retailer or distributor from whom the product was purchased.

In the unlikely event that technical service beyond the ability of the importer is required, Audio Research will fulfill the terms and conditions of the Limited Warranty. Such product must be returned at the purchaser's expense to the Audio Research factory, along with a photocopy of the dated purchase receipt for the product, a written description of the problem(s) encountered, and any information necessary for return shipment. The cost of return shipment is the responsibility of the purchaser.
Model MP1

Specifications

FREQUENCY RESPONSE: ±1dB, 0.1Hz to 40kHz at rated output. -3dB points below 0.06Hz and above 70kHz.

DISTORTION: .01% at 2V RMS Balanced output.

GAIN: Main Output: 15dB Balanced, 9dB SE.
Tape output: 0dB. Processor Output: 0dB Balanced.

INPUT IMPEDANCE: 150K ohms Balanced, 75K ohms SE.
Inputs (7): MC1 (SE), MC2 (SE), MC3, CD, STEREO 1, 2, 3 (BAL, SE).

OUTPUT IMPEDANCE: 400 ohms Balanced, 200 ohms SE
Main. 10K ohms minimum load and 5000pF maximum capacitance. Outputs (3): 6 Main Bal, 6 Main SE, 1 Record SE.

OUTPUT POLARITY: Non Inverting

MAXIMUM INPUT: 14V RMS maximum Balanced, (7V RMS SE).

RATED OUTPUTS: 2V RMS (1V RMS SE) into 200K ohm Balanced load (maximum Balanced output capability is 12V RMS at 1% THD at 1kHz).

CONTROLS: Volume (104 steps), Power, Mute, Proc, Mult 1, Mult 2, Mult 3, CD, Stereo 1, stereo 2, Stereo 3. All functions on Remote Control.


NOISE: 35uV RMS residual IHF-A weighted Balanced noise output with gain control at minimum, (95dB below 2V RMS output).

POWER REQUIREMENTS: 100-135VAC 60Hz (200-270VAC 50/60Hz) 90 watts maximum.

DIMENSIONS: 19" (48 cm) W x 6.97" (7.6 cm) H (standard rack panel) x 15" (37.9 cm) D. Handles extend 1.50" (3.8 cm) forward of the front panel.

WEIGHT: 20.4 lbs. (9.2 kg) Net; 33.6 lbs. (15.2 kg) Shipping.

Specifications subject to change without notice.

©2004 Audio Research Corporation.