

LIMITED WARRANTY

This product is warranted to the original consumer purchaser to be free from defects in materials and workmanship under normal installation, use and service for a period of one (1) year from the date of purchase as shown on the purchaser's receipt.

The obligation of Rolls Corporation under this warranty shall be limited to repair or replacement (at our option), during the warranty period of any part which proves defective in material or workmanship under normal installation, use and service, provided the product is returned to Rolls Corporation, TRANSPORTATION CHARGES PRE-PAID. Products returned to us or to an authorized Service Center must be accompanied by a copy of the purchase receipt. In the absence of such purchase receipt, the warranty period shall be one (1) year from the date of manufacture.

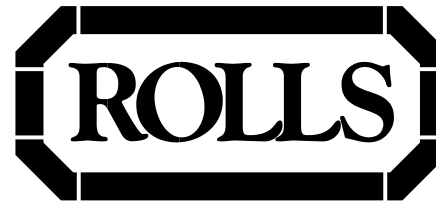
This warranty shall be invalid if the product is damaged as a result of defacement, misuse, abuse, neglect, accident, destruction or alteration of the serial number, improper electrical voltages or currents, repair, alteration or maintenance by any person or party other than our own service facility or an authorized Service Center, or any use violative of instructions furnished by us.

This one-year warranty is in lieu of all expressed warranties, obligations or liabilities. ANY IMPLIED WARRANTIES, OBLIGATIONS, OR LIABILITIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL BE LIMITED IN DURATION TO THE ONE YEAR DURATION OF THIS WRITTEN LIMITED WARRANTY. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

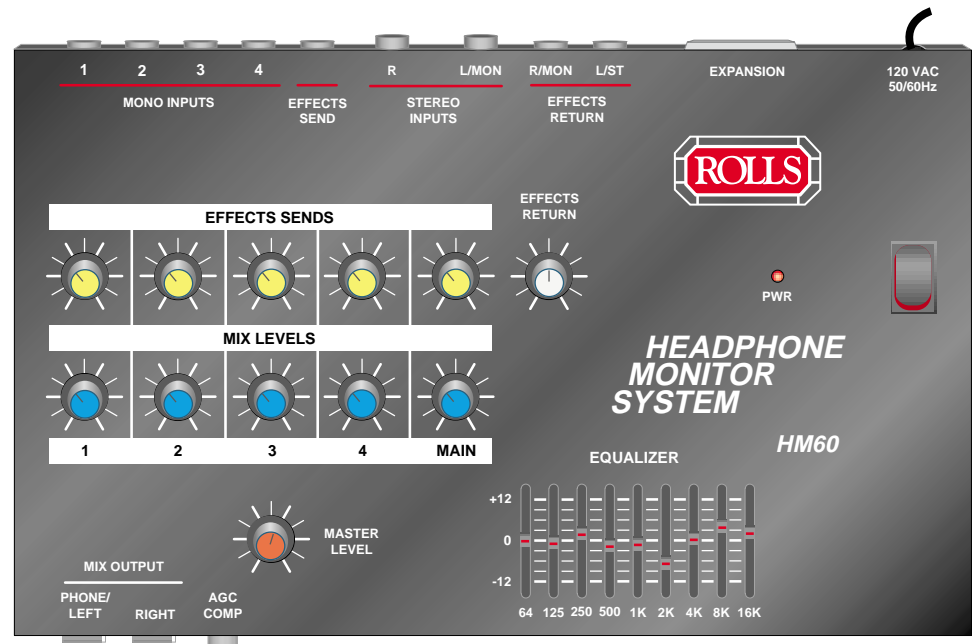
IN NO EVENT SHALL WE BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, WHATSOEVER. Some states do not allow the exclusion or limitation of special, incidental or consequential damages so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.



ROLLS CORPORATION
SALT LAKE CITY, UTAH
3/00



HM60 Headphone Monitor System



OWNERS MANUAL

Thank you for your purchase of the Rolls HM60 Headphone Monitor System. This unit allows you to mix four mono signals with two stereo signals for your own personal monitoring needs. It includes equalization and AGC compression. When coupled with an HM59 or HM58 Headphone Monitor Remote units, the custom mixing can be controlled in separate locations. Please read the following manual carefully to get the best results from your HM60.

TABLE OF CONTENTS

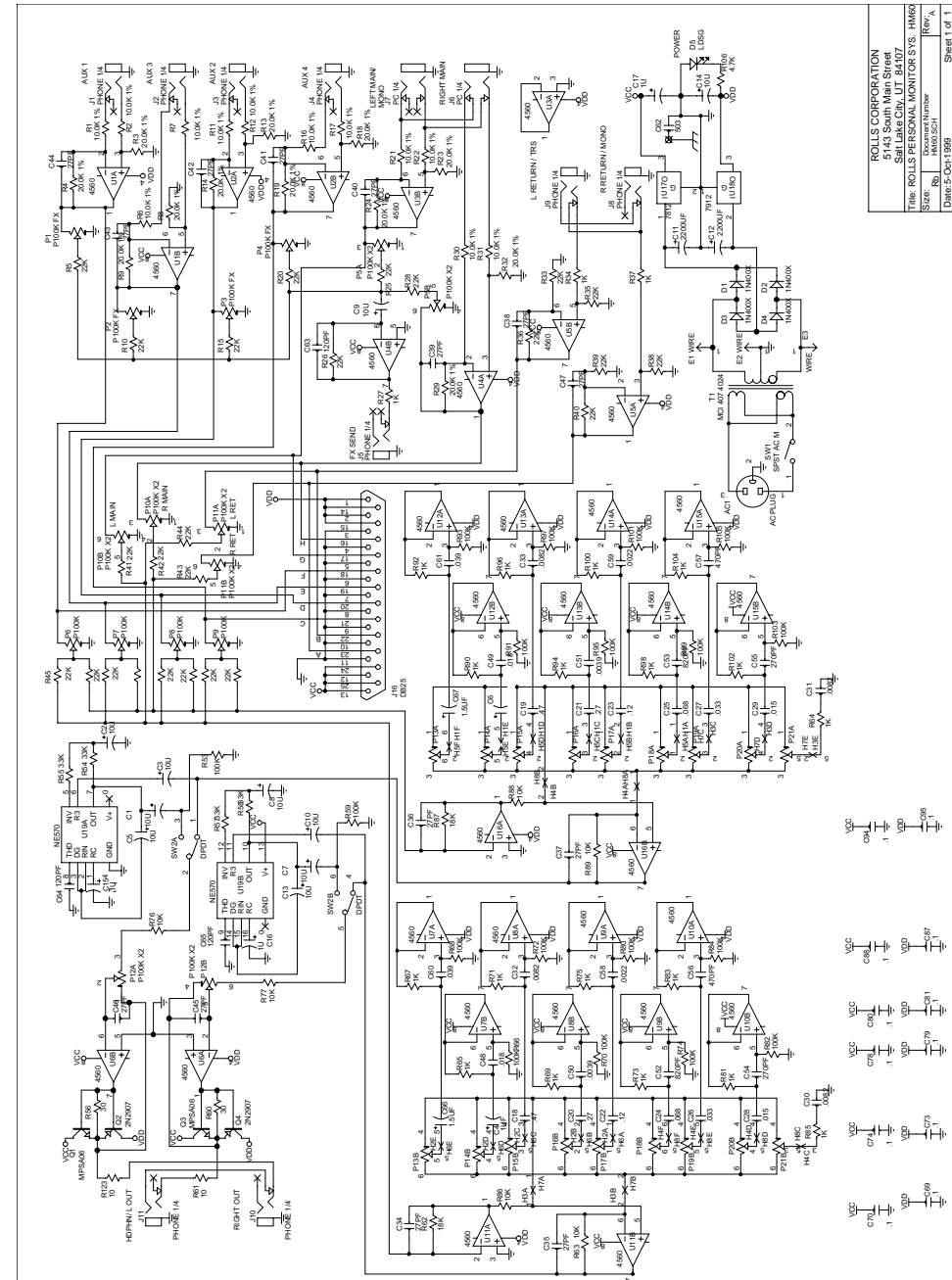
Introduction	1
Table of Contents	1
Inspection	1
Specifications	1
Description	
Top Panel	2
Front Panel	2
Bottom Panel	2
Connection	3
Operation	4
Block Diagram	5
Schematic	6
Warranty	
	Rear Cover

INSPECTION

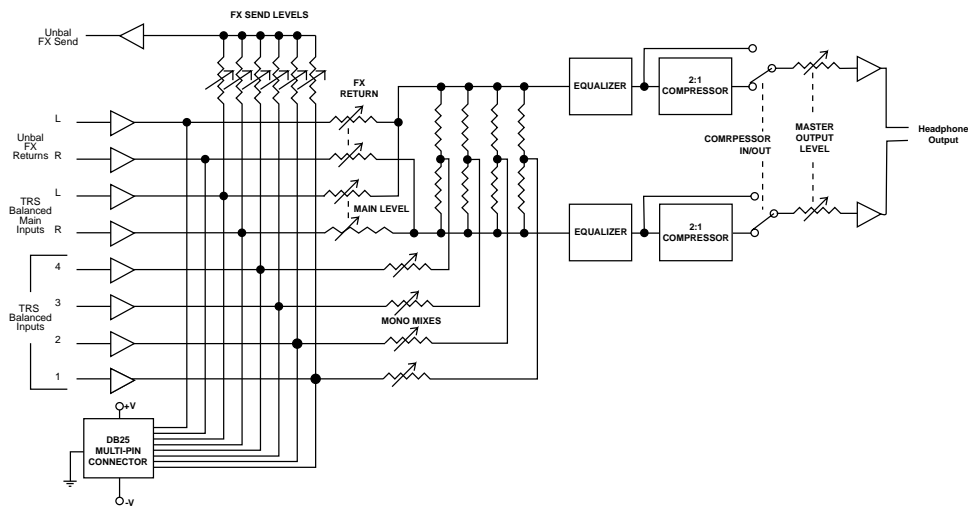
1. Unpack and inspect the HM60 box and package. If obvious physical damage is noticed, contact the carrier immediately to make a damage claim. We suggest saving the shipping carton and packing materials for safely transporting the unit in the future.
2. Please complete the Warranty Registration Card and return it to the factory.

SPECIFICATIONS

Output Impedance:	10 Ω
Sensitivity:	Variable, -10 to +4 dB for rated output
Power Output:	>500 mW at 32 Ω (>150 mW at 600 ohms) 20 Hz to 20 KHz.
Connectors:	Inputs: Outputs: 1/4" TRS stereo headphone jack, DB25 jack
Distortion:	0.008% THD full power @ 1 KHz; 0.05% THD 20Hz to 20 KHz
Dynamic Range:	Greater than 96 dB
Freq. Response:	20 Hz to 20 KHz, +0, -1 dB 400 mW output
Power Requirement:	Rolls PS12 12VAC power supply
Dimensions (HxWxD):	6.3" x 10.25" x 1.625"
Weight:	3 lbs.



ROLLS CORPORATION
5143 South Main Street
Salt Lake City, UT 84107
THE ROLLS PERSONAL MONITOR SYSTEM
Rev. A
Made in China
DMR-5-C01-1999
Sheet 1 of 1



TOP PANEL

- MONO INPUTS:** Four 1/4" TS unbalanced jacks labeled 1 - 4, for connection to line-level sources such as a mixer's auxiliary sends or monitor sends.
- EFFECTS SEND:** 1/4" TS unbalanced jack for connection to the input of a signal processor such as a reverb or multi-effects processor.
- STEREO INPUTS:** Two 1/4" TRS balanced jacks for connection to a line level source such as a mixer's cue send or headphone output. The Left input is the MONO input and will feed both the right and left channels.
- EFFECTS RETURN:** Two 1/4" TS unbalanced jacks for connection to the output of a signal processor such as a reverb or multi-effects processor. The Right input is the MONO input and will feed both the right and left return channels. The Left input is STEREO and requires a Tip-Ring-Sleeve plug if it is to be used alone.
- EXPANSION:** 25-pin connector - contains all the input signals; the four mono inputs, the main stereo inputs, the effects returns and the power. It connects to the Rolls HM58 or HM59 Headphone Monitor Remote units. Consult their respective owners manuals for more information on connecting and operating them properly.
- 120VAC:** Power cord - connect to a properly grounded ac outlet.

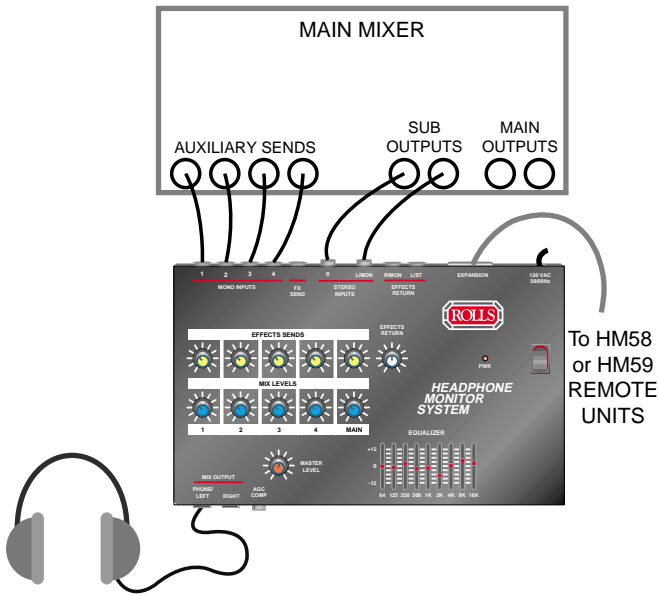
FRONT PANEL

- EFFECTS SENDS:** These controls adjust the level of signal sent from the corresponding input to the EFFECTS SEND jack.
- EFFECTS RETURN:** Adjusts the level of stereo signal returning from a signal processor (or whatever is connected to the Effects Return jack(s)). These inputs may also be used as an additional set of stereo inputs.
- MIX LEVELS:** Controls 1 - 4 and Main; adjust the level of input signal from the corresponding input.
- MASTER LEVEL:** Adjusts the amount of mixed signal sent to the Mix Output jacks.
- EQUALIZER:** These slider controls adjust the level of the indicated frequency. For example, the 64 slider boosts or cuts the 64 Hertz component of the output signal by + or - 12 dB.
- PWR:** Indicates that the HM60 is connected to a power source and is on.

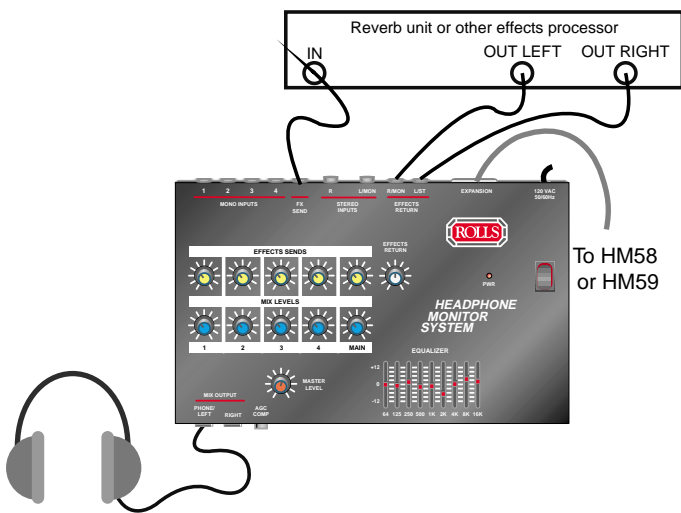
BOTTOM PANEL

- MIX OUTPUT:**
 - Phone/Left: For connection to a set of stereo headphones. If a mono Tip-Sleeve plug is connected, this jack becomes the Left Output.
 - Right: Contains the Right portion of the Output signal.
- AGC COMP:** This switch engages the Automatic Gain Control compressor.

Make sure the HM60 is connected to a properly grounded AC outlet. Before turning on the HM60 power switch, make all audio connections. Shown below is an example for connecting your HM60 to a mixer.



Shown below is an example for proper connection to a signal processor.



OPERATING THE HM60

The HM60 can be operated as a stand-alone monitor mixer and headphone amplifier, or as a distribution system.

After proper connections are made, begin sending signals to the HM60.

- Set the Master Level control at approximately 12 O'clock. Carefully bring up the 1-4 and Main Mix Levels until a desired mix is achieved.
- Adjust the Equalizer as needed. The 64, 125, and 250 Hz sliders control the lower or bass frequencies, the 500, 1K, and 2K sliders adjust the middle frequencies, the the 4K, 8K, and 16K sliders vary the high or treble frequencies.
- The AGC compressor keeps transient signals like pops or feedback under control, so they won't damage your hearing. It also slightly brings up low-level signals. *NOTE: Much of the signal content may not be compressed, you may not notice any effect. Only very high level or low level signals are effected.*
- To use external effects processors, connect the FX Send jack to the Input of your effects unit, connect the output(s) of the processor to the Effects Return jacks (See the connection example on Page 3). If you are using a mono signal out of the processor, use the Right/Mono jack.

The Effects Send controls 1 - 4 and Main adjust the amount of signal from the indicated input out the Effects Send jack and to your effects processor. Adjust the Output Level of your processor along with the HM60 Effects Return control to set a desired amount of effect you want.

OPERATING THE HM60 WITH THE HM59 OR HM58 HEADPHONE MONITOR REMOTES.

Combining the HM60 with the HM59 or HM58 Headphone Monitor Remote units allows users to make and control their own monitor mix.

After proper connection of the HM60 to the audio sources, connect the DB25 cable to the HM59 or HM58. From those units, more HM59 and HM58 units may be connected.

NOTE: The Effects Sends, Mix Levels, Effects Return, Master Level, AGC Compressor, and Equalizer on the HM60 will have no effect on the signals sent out the DB25 cable to the HM59 or HM58. Refer to the HM58 or HM59 Owners Manual for their proper operation.