BIG KNOB PASSIVE

MONITOR CONTROLLER

OWNER'S MANUAL



MACKIE.

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Only use attachments/accessories specified by the manufacturer.
10. Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



CAUTION

RISK OF ELECTRIC SHOCK! DO NOT OPEN!

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the prescence of uninsulated "dangerous voltage" within the product's enclosure, that may be of significant magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user of the prescence of important operating and maintaining (servicing) instructions in the literature accompanying the appliance.

WARNING — To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

11. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
12. Exposure to extremely high noise levels may cause permanent hearing loss. Individuals vary considerably in susceptibility to noise-induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a period of time. The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the permissible noise level exposures shown in the following chart.

According to OSHA, any exposure in excess of these permissible limits could result in some hearing loss. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels use hearing protectors while the equipment is in operation. Ear plugs or protectors in the ear canals or over the ears must be worn when operating the equipment in order to prevent permanent hearing loss if exposure is in excess of the limits set forth here:

Duration, per day in hours	Sound Level dBA, Slow Response	Typical Example
8	90	Duo in small club
6	92	
4	95	Subway Train
3	97	
2	100	Very loud classical music
1.5	102	
1	105	Jon screaming at Troy about deadlines
0.5	110	
0.25 or less	115	Loudest parts at a rock concert

Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan.

Apparatet må tilkoples jordet stikkontakt.

Apparaten skall anslutas till jordat uttag.

Correct disposal of this product: This symbol indicates that this product should not be disposed of with your household waste, according to the WEEE directive (2012/19/EU) and your national law. This product should be handed over to an authorized collection site for recycling waste electrical and electronic equipment (EEE). Improper handling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, waste authority, or your household waste disposal service.

Please write your serial number here for future reference (i.e., insurance claims, tech support, return authorization, make dad proud, etc.)

Purchased at:

Date of purchase:

Like us

Follow us

Watch our dang videos

Part No. SW1191 Rev. A 12/16
©2016 LOUD Technologies Inc. All Rights Reserved.

Contents

IMPORTANT SAFETY INSTRUCTIONS 2
TABLE OF CONTENTS 3
BIG KNOB PASSIVE FEATURES 3
INTRODUCTION 3
QUICK START 3
HOOKUP DIAGRAM 4
REAR PANEL DESCRIPTION 5
1. 1/4" SOURCE INPUTS 5
2. 1/8" STEREO LINE INPUT 5
3. MON OUTPUTS 5
FRONT PANEL DESCRIPTION 6
4. SOURCE SELECT SWITCH 6
5. MONITOR SELECT SWITCH 6
6. MONO SWITCH 6
7. MUTE SWITCH 6
8. DIM SWITCH 6
9. VOLUME KNOB [AKA BIG KNOB] 6
APPENDIX A: SERVICE INFO 7
TROUBLESHOOTING / REPAIR 7
APPENDIX B: TECHNICAL INFORMATION 8
BIG KNOB PASSIVE SPECIFICATIONS 8
BIG KNOB PASSIVE DIMENSIONS 9
BIG KNOB PASSIVE BLOCK DIAGRAM 10
BIG KNOB PASSIVE LIMITED WARRANTY 11

Big Knob Passive Features

- Excruciatingly simple 2x2 monitor controller
  - Choose between two sources and two monitor pairs.
  - Classic Big Knob volume control.
  - Professional mono, mute and dim functions.
- Pristine audio quality
  - Passive audio path with no power supply needed.
- Sturdy “Built-Like-A-Tank” design

Introduction

The Big Knob Passive benefits from a proven, bestselling design to deliver professional level control, plus source and monitor selection for studios of any size.

The passive audio path ensures pristine sonic integrity is maintained throughout your signal chain. More than just a level control solution, Big Knob Passive features the ability to choose between two sources and two monitor pairs.

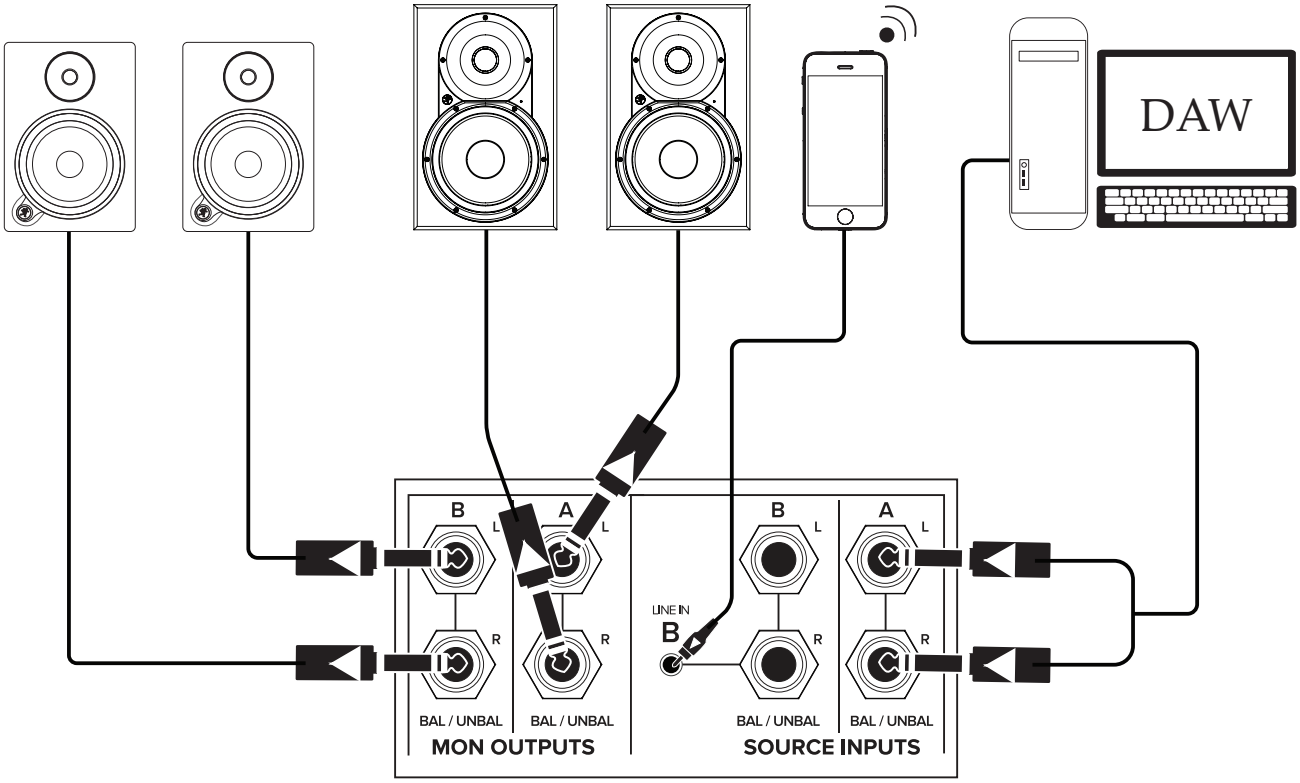
Ideal for simple level control at a home or project studio or for integration in a large studio or group of editing suites, Big Knob Passive is the “Built-Like-A-Tank,” affordable monitoring control solution.

Quick Start

We realize that you can’t wait to hook up your Big Knob Passive and try it out. Nevertheless, please take the time to read this page NOW, and the rest can wait until you’re good and ready.

1. Turn down all knobs.
2. Disengage all switches.
3. Plug signal sources into the Big Knob, such as:
   - Audio interface.
   - Line-level sources such as keyboards, drum machines, or MP3 players plugged into the line-level inputs.
   - Other stereo playback devices.
4. Connect cords from the monitor outs to powered speakers (or to an amplifier connected to passive speakers).
5. Turn the powered studio monitors (or amplifiers) on.
6. Be sure that the volume of the input is the same as it would be during normal use.
7. Engage the desired input source select and monitor select switches.
8. Slowly bring up the volume knob to a comfortable listening level.

Hookup Diagram



Big Knob Passive is the perfect monitoring tool as a level control for a home / project studio or integrated as part of a larger studio. There are many great things about the Big Knob Passive, but one of the features is no need for power...it can be placed anywhere to your heart's content! After you've decided on a spot, it's time to make connections.

In this example, a computer installed with your favorite DAW is connected to the Source Input A L/R jacks. The Source Input B jacks may accept 1/4" inputs and an 1/8" stereo input. If both inputs are connected simultaneously, the 1/8" stereo line input will take priority over the 1/4" connection. In this case, we hooked up a smartphone to the 1/8" stereo line input jack.

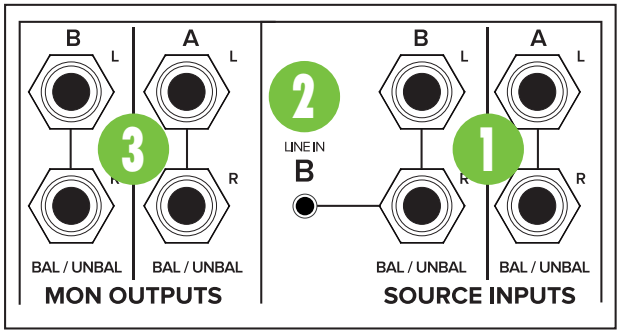
The output section is as straightforward as the input section. Here we connected a pair of XR Series studio monitors to the Mon Output A L/R jacks and a pair of MRmk3 Series studio monitors to the Mon Output B L/R jacks.

Now that connections have been made, the fun begins! The top panel has a variety of switches, buttons and something else...what was it? Oh yeah, a BIG knob, dead center! These allow you to select between the inputs, outputs, control levels and more. Descriptions of the Big Knob Passive features starts on the next page...

Typical Big Knob Passive Setup

Rear Panel Description

The rear panel is where to connect various sources feeding IN to the Big Knob Passive. These signals are then routed through the Big Knob Passive and released through the monitor OUT jacks.



1. 1/4" Source Inputs

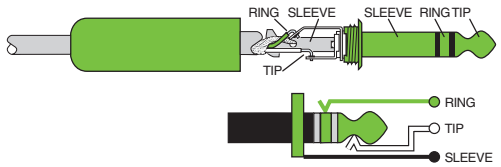
Connect the L/R line-level signals from the source(s) to the 1/4" source input jack(s).

- The source input connectors accept balanced or unbalanced signals.
- Unbalanced TS (tip-sleeve) lines can be accommodated via the TRS jack. Make sure the cable terminates with a TS plug (like a guitar plug), or if it's a TRS plug (such as a headphone plug), make sure the ring is tied to the sleeve and that the plug is fully inserted into the jack.

The connectors are wired as follows (per the AES/IEC standard):

Balanced 1/4" TRS

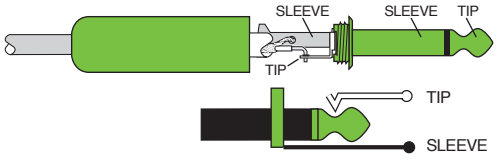
Hot (+)	Tip
Cold (–)	Ring
Shield (Ground)	Sleeve



Balanced 1/4" Connectors

Unbalanced 1/4" TS

Hot (+)	Tip
Cold (–)	Ring
Shield (Ground)	Sleeve



Unbalanced 1/4" Connectors

2. 1/8" Stereo Line Input

The stereo line input may accept an 1/8" line-level signal from a smartphone, MP3 player, or other signal source.



The Source Input B 1/4" and 1/8" line-level connections may be connected simultaneously. If both inputs are connected simultaneously, the 1/8" stereo line input will take priority over the 1/4" connection.

3. 1/4" Mon Outputs

Connect the L/R mon outputs to the inputs of powered studio monitors or to a power amplifier driving passive speakers.

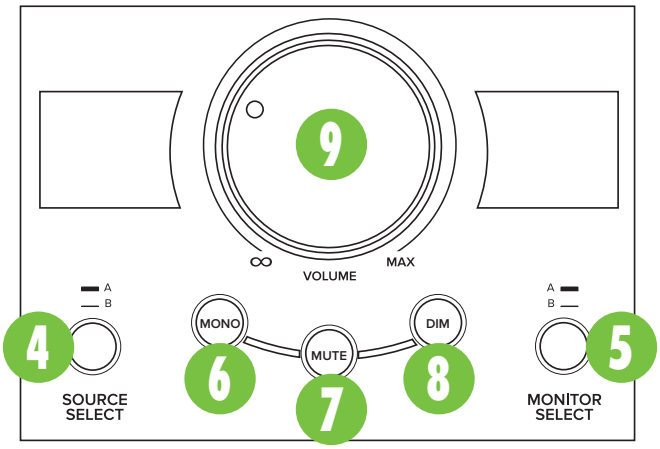
The mon outputs are fed by the "control room bus." This is the signal path fed from the source input currently selected with the source select button and routed through the volume knob.

- The mon output connectors accept balanced or unbalanced signals.
- Unbalanced TS (tip-sleeve) lines can be accommodated via the TRS jack. Make sure the cable terminates with a TS plug (like a guitar plug), or if it's a TRS plug (such as a headphone plug), make sure the ring is tied to the sleeve and that the plug is fully inserted into the jack.

The connectors are wired per the AES/IEC standard as seen in the illustrations to the left.

Front Panel Description

The front panel is where the magic happens! Once all of the connections on the rear panel have been made, there are several switches and a level control that you may use, manipulate and set to your heart's content. Please read on...



4. Source Select Switch

Engage / disengage the switch to select the source input. Leave this switch disengaged – up position – to select input source A. Press this switch – down position – to select input source B.

5. Monitor Select Switch

Engage / disengage the switch to select the monitor output. Leave this switch disengaged – up position – to route the currently selected input source to the monitor A output jacks. Press this switch – down position – to route the currently selected input source to the monitor B output jacks.

6. Mono Switch

Mono is short for mononucleosis. It is an infection that typically leads to a feeling of tiredness, although one could also get headaches, a sore throat, swollen glands and more. Thankfully, engaging the mono switch here does not produce the infection. Rather, the mono here is short for monophonic.

Pressing the mono switch combines the stereo signal into a monophonic signal at the monitor outputs. The left and right input signals are summed and the mono signal is output at both the left and right outputs. This allows you to check for phase problems in the stereo signal when played over a monophonic system.

7. Mute Switch

The mute switch does just what it sounds like it does. It turns off the signal by "routing" it into oblivion. Engaging the mute switch (almost) provides the same result as turning the volume knob all the way down.

8. Dim Switch

Pressing this button turns down the signal going to the monitor outputs by 20 dB. This allows you to essentially "turn down" the speakers to converse without affecting the speaker level.

9. Volume Knob [aka Big Knob]

Last, but certainly not least, the money maker! The volume knob – aka Big Knob – adjusts the volume of the selected input source's signal going to the selected monitor outputs. The volume knob ranges from OFF (∞) to unity gain (MAX).



WARNING: Always turn the volume knob all the way down before making connections or trying something new. Keep it down until all changes have been made, then turn it up slowly. This saves your speakers – and more importantly, your ears – from blowing.

Appendix A: Service Information

If you think your Big Knob Passive has a problem, please check out the following troubleshooting tips and do your best to confirm the problem. Visit the Support section of our website (www.mackie.com/support) where you will find lots of useful information such as FAQs and documentation. You may find the answer to the problem without having to send your Big Knob Passive away.

Troubleshooting

No Power

- Our favorite question: Is it plugged in? If you answered "yes" to this question, then you're reading the wrong owner's manual. The Big Knob Passive does not get "plugged in"!

No Sound

- Is the signal source turned up? Make sure the signal level from whatever device(s) immediately precedes the Big Knob Passive is high enough to produce sound.
- Is the Big Knob Passive level control turned up?
- Are the source and monitor select switches in their correct positions?
- Is the mute switch engaged?

Bad Sound

- Are the input and output connectors plugged completely into the jacks? Make sure they are plugged all the way in.
- Is it loud and distorted? Reduce the signal level at the source(s).

Noise/Hum/Buzz

- Check the signal cable between the source(s) and the Big Knob Passive. Make sure all connections are secure. These problems usually produce crackling noises, hum, or buzz.
- Make sure the signal cable is not routed near AC cables, power transformers, or other EMI sources (including wall warts and line lumps!). These sources usually produce hum.
- Excessive hiss is an indication of an incorrect gain setting somewhere before the Big Knob Passive.
- If possible, listen to the signal source with headphones plugged in. If it sounds noisy there, it's not the Big Knob Passive.

Repair

For warranty service, please refer to the warranty information on page 11.

Non-warranty service is available at a factory-authorized service center. To locate the nearest service center, visit www.mackie.com, click "Support" and select "Locate a Service Center or Distributor". Service for a Big Knob Passive living outside the United States may be obtained through local dealers or distributors.

If you do not have access to our website, please call our Tech Support department at 1-800-898-3211 (normal business hours, Pacific Time), to explain the problem. They will tell you where the nearest factory-authorized service center is located in your area.

Need help with the Big Knob Passive?

- **Visit www.mackie.com and click Support to find: FAQs, manuals, and addendums.**
- **Telephone 1-800-898-3211 to speak with one of our splendid technical support chaps (Monday through Friday, normal business hours, Pacific Time).**

Appendix B: Technical Information

Big Knob Passive Specifications

Frequency Response

0 dBu Input:	±1 dB, 10 Hz – 30 kHz

Distortion (THD+N)

0 dBu Input @1 kHz:	<0.005 %

Crosstalk (20 Hz – 20 kHz)

0 dBu Input @1 kHz:	<–85 dB

Attenuation

Muted:	–100 dB

Signal-To-Noise Ratio

A–weighted:	<–100 dB

Maximum Levels

All inputs:	+22 dBu
1/4" outputs:	+15 dBu

Input Type

Input Type:	Female 1/4" balanced / unbalanced Female 1/8" unbalanced

Output Type

Output Type:	Female 1/4" balanced / unbalanced

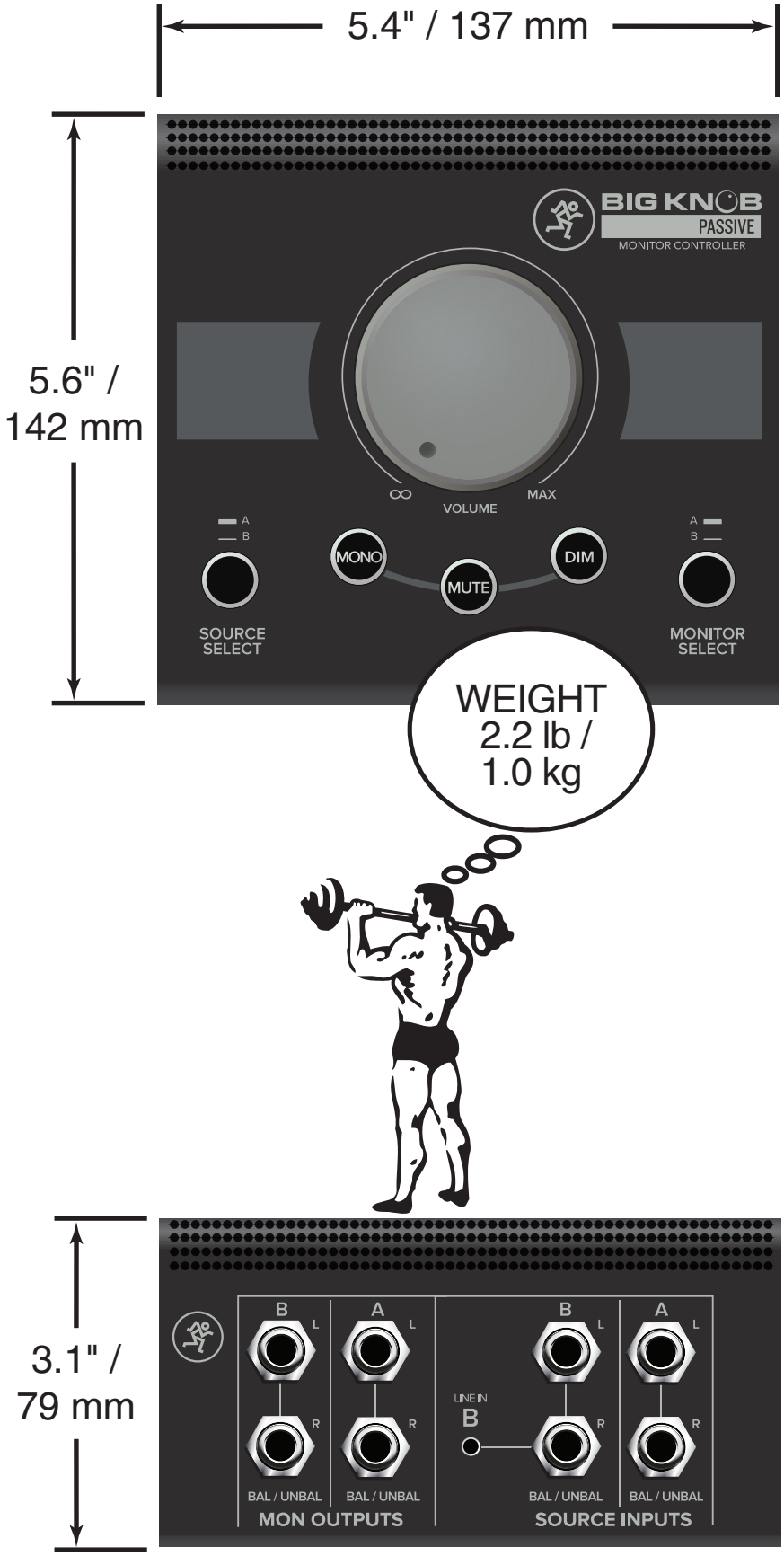
Physical Dimensions and Weight

Height:	3.1 in / 79 mm
Width:	5.4 in / 137 mm
Depth:	5.6 in / 142 mm
Weight:	2.2 lb / 1.0 kg

Disclaimer

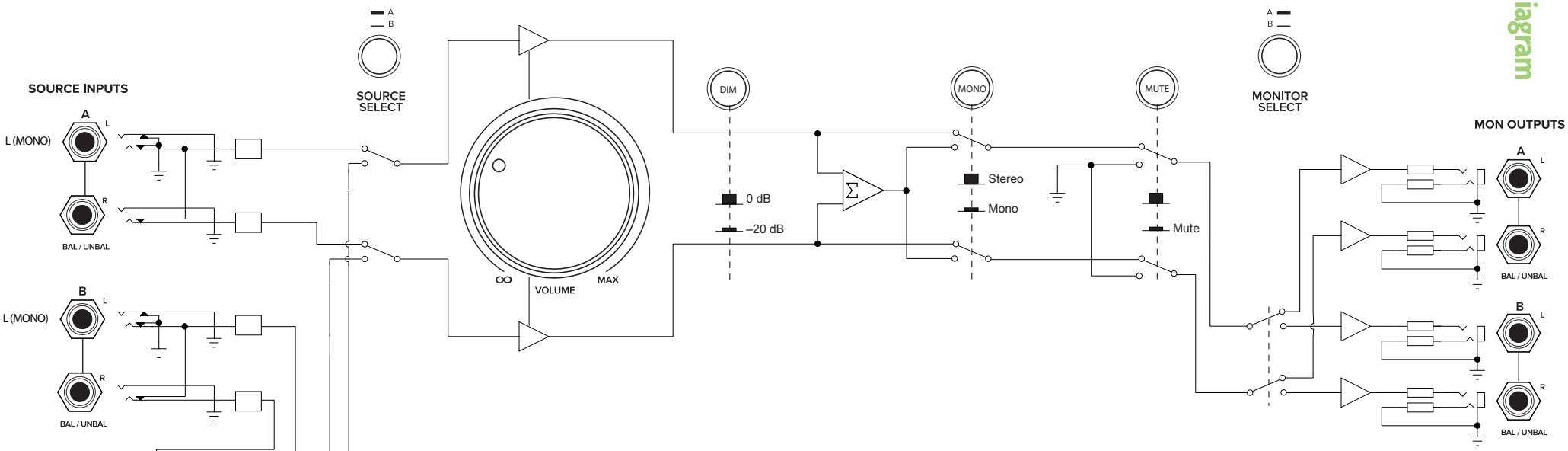
LOUD Technologies is always striving to improve our products by incorporating new and improved materials, components and manufacturing methods. Therefore, we reserve the right to change these specifications at any time without notice.

Big Knob Passive Dimensions



Big Knob Passive Monitor Controller

Big Knob Passive Block Diagram



Source B Inputs
1/8” • 3,5 mm stereo input
defeats the 1/4” • 6,35 inputs

Limited Warranty

Please keep your sales receipt in a safe place.

This Limited Product Warranty ("Product Warranty") is provided by LOUD Technologies Inc. ("LOUD") and is applicable to products purchased in the United States or Canada through a LOUD-authorized reseller or dealer. The Product Warranty will not extend to anyone other than the original purchaser of the product (hereinafter, "Customer," "you" or "your").

For products purchased outside the U.S. or Canada, please visit www.mackie.com to find contact information for your local distributor, and information on any warranty coverage provided by the distributor in your local market.

LOUD warrants to Customer that the product will be free from defects in materials and workmanship under normal use during the Warranty Period. If the product fails to conform to the warranty then LOUD or its authorized service representative will at its option, either repair or replace any such nonconforming product, provided that Customer gives notice of the noncompliance within the Warranty Period to the Company at: www.mackie.com or by calling LOUD technical support at 1.800.898.3211 (toll-free in the U.S. and Canada) during normal business hours Pacific Time, excluding weekends or LOUD holidays. Please retain the original dated sales receipt as evidence of the date of purchase. You will need it to obtain any warranty service.

For full terms and conditions, as well as the specific duration of the Warranty for this product, please visit www.mackie.com.

The Product Warranty, together with your invoice or receipt, and the terms and conditions located at www.mackie.com constitutes the entire agreement, and supersedes any and all prior agreements between LOUD and Customer related to the subject matter hereof. No amendment, modification or waiver of any of the provisions of this Product Warranty will be valid unless set forth in a written instrument signed by the party to be bound thereby.



16220 Wood-Red Road NE
Woodinville, WA 98072 • USA
Phone: 425.487.4333
Toll-free: 800.898.3211
Fax: 425.487.4337
www.mackie.com