

Yamaha MG16

Yamaha MG16 16-Input 6-Bus Mixer User Manual

Model: MG16

1. INTRODUCTION

This manual provides essential information for the safe and effective use of your Yamaha MG16 16-Input 6-Bus Mixer. Please read this manual thoroughly before using the product to ensure proper operation and to prevent damage to the unit or injury to yourself or others. Keep this manual in a safe place for future reference.

The Yamaha MG16 is a versatile 16-channel analog mixing console designed for both portable setups and permanent installations. It features high-quality D-PRE preamps, intuitive one-knob compressors, and a robust metal chassis, ensuring transparent sound reproduction and reliable performance.

2. KEY FEATURES

- **16-Channel Standalone Mixer:** Offers 16 input channels and 6 buses for flexible audio routing.
- **D-PRE Discrete Class-A Mic Preamps:** Features studio-grade preamps with an inverted Darlington circuit, delivering natural-sounding bass and smooth highs.
- **One-Knob Compressors:** Provides easy-to-use dynamics control for livelier guitars, punchier bass lines, tighter snare drums, and cleaner vocals.
- **3-Band EQ and High-Pass Filters:** Allows for precise sound-shaping and effective elimination of unwanted low-frequency noise.
- **Rugged Metal Chassis:** Constructed with an impact-resistant, powder-coated metal chassis for enhanced durability.
- **High Quality Op-Amp:** Ensures transparent sound reproduction across all channels.



Figure 2.1: D-PRE discrete Class-A mic preamp circuit diagram.



Figure 2.2: The custom-designed MG01 op-amp chip.

3. SETUP

3.1 Unpacking and Inspection

Carefully remove the mixer from its packaging. Inspect the unit for any signs of damage that may have occurred during shipping. Retain the original packaging for future transport or storage.

3.2 Power Connection

Connect the supplied AC adaptor to the AC ADAPTOR IN terminal on the rear panel of the mixer. Plug the other end of the AC adaptor into a suitable power outlet. Ensure the power switch is in the OFF position before connecting or disconnecting the power cable.



Figure 3.2.1: Rear panel of the Yamaha MG16 mixer, highlighting the AC adaptor input.

3.3 Input Connections

The MG16 features 16 input channels. Channels 1-8 are equipped with XLR/TRS combo jacks for microphones or line-level

instruments, while channels 9-16 offer TRS or RCA pin jacks for line-level sources. Connect your microphones, instruments, and other audio sources to the appropriate input jacks.

- **Microphones:** Use XLR cables for condenser or dynamic microphones. Channels 1-8 provide switchable +48V phantom power for condenser microphones.
- **Line-Level Instruments:** Use TRS or TS cables for instruments like keyboards or drum machines.
- **Stereo Sources:** Channels 9/10, 11/12, 13/14, and 15/16 are configured as stereo pairs.



Figure 3.3.1: Overview of the Yamaha MG16 mixer's input section.

3.4 Output Connections

Connect your main speakers, monitors, or recording devices to the mixer's output jacks. The MG16 offers XLR and TRS main stereo outputs, as well as Group Out, AUX Send, and Monitor Out jacks.

- **Main Stereo Out:** Connect to your main PA system or recording interface using XLR or TRS cables.
- **Group Out:** Use these outputs to send grouped channels to external processors or additional speakers.

- **AUX Send:** For connecting to monitor speakers or external effects processors.
- **Monitor Out:** For connecting to studio monitors or headphones.
- **Phones:** Connect headphones for monitoring.

4. OPERATING INSTRUCTIONS

4.1 Powering On/Off

After all connections are made, turn on the mixer by pressing the POWER switch. Always turn on the mixer before turning on any connected power amplifiers or powered speakers. When powering off, reverse the order: turn off power amplifiers/powered speakers first, then the mixer.

4.2 Channel Controls Overview

Each input channel on the MG16 features a set of controls to adjust the sound. These include Gain, PAD switch, HPF (High-Pass Filter), COMP (Compressor), 3-band EQ (HIGH, MID, LOW), AUX sends, PAN/BAL, and Channel ON switch.



Figure 4.2.1: Angled view of the Yamaha MG16 mixer, illustrating the layout of channel controls.

4.3 Gain Adjustment

Use the GAIN knob to adjust the input sensitivity for each channel. Set the GAIN so that the PEAK indicator lights only occasionally and briefly. If the input signal is too hot, engage the PAD switch to attenuate it by 26dB.

4.4 High-Pass Filter (HPF)

Engage the HPF switch (80Hz) to cut unwanted low-frequency noise, such as stage rumble or wind noise from microphones. This helps to achieve a cleaner mix.

4.5 One-Knob Compressor (COMP)

The MG16 features one-knob compressors on channels 1-8. Turn the COMP knob clockwise to increase the compression amount. This can add punch to drums, smooth out vocals, and make instruments sit better in the mix.



Figure 4.5.1: Detail of the one-knob compressor for dynamic control.

4.6 Equalization (EQ)

Each channel has a 3-band equalizer (HIGH, MID, LOW) to shape the tone of the input signal. Adjust these knobs to enhance or cut specific frequency ranges. The MID band is sweepable on channels 1-8, allowing for precise frequency selection.

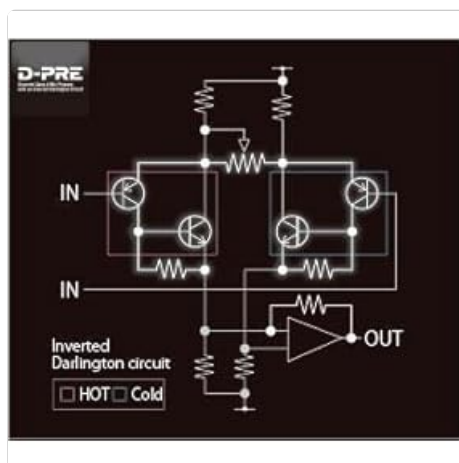


Figure 4.6.1: Close-up of the 3-band EQ controls.

4.7 AUX Sends

The AUX SEND knobs control the level of the signal sent from each channel to the AUX output jacks. These are commonly used for monitor mixes or external effects processing.

4.8 Pan/Balance

The PAN (Panoram) knob adjusts the stereo position of mono signals. For stereo channels, the BAL (Balance) knob adjusts the balance between the left and right signals.

4.9 Channel Faders and Master Controls

Use the channel faders to adjust the individual volume of each input. The main STEREO fader controls the overall output level of the mix. Group faders (GROUP 1-2, GROUP 3-4) control the output level of grouped channels.

5. MAINTENANCE

5.1 Cleaning

Regularly clean the mixer's surface with a soft, dry cloth. Avoid using abrasive cleaners, solvents, or waxes, as these can damage the finish. For stubborn dirt, a slightly damp cloth with mild soap can be used, followed by a dry cloth.

5.2 Storage

When not in use, store the mixer in a cool, dry place away from direct sunlight, extreme temperatures, and high humidity. If storing for an extended period, it is recommended to cover the unit to protect it from dust.

5.3 Cable Management

Ensure all cables are neatly organized and not under tension. Avoid bending cables sharply or placing heavy objects on them, as this can lead to damage and signal loss.

6. TROUBLESHOOTING

- **No Sound:**
 - Check all power connections and ensure the mixer and connected devices are powered on.
 - Verify that input and output cables are correctly connected.
 - Ensure channel GAIN, faders, and master faders are not set to minimum.
 - Check that the Channel ON switch is engaged for active channels.
 - If using condenser microphones, ensure +48V phantom power is activated.
- **Distorted Sound:**
 - Reduce the GAIN for the affected channel.
 - Engage the PAD switch if the input signal is too strong.
 - Check the PEAK indicators; if they are constantly lit, the signal is too high.
 - Ensure connected devices are not sending an overly hot signal.
- **Hum or Noise:**
 - Check all cable connections for proper seating and damage.
 - Ensure balanced cables (XLR, TRS) are used where appropriate.
 - Try engaging the HPF (High-Pass Filter) on microphone channels.
 - Ensure power cables are not running parallel to audio cables.

7. SPECIFICATIONS

Feature	Specification
Item Weight	14.55 pounds (6600 Grams)
Product Dimensions	20.59 x 8.39 x 22.01 inches
Item Model Number	MG16
Power Source	Corded Electric
Voltage	48 Volts
Wattage	30 watts
Brand	Yamaha
Number of Channels	16

First Available Date

May 15, 2014

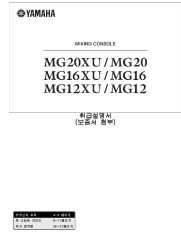
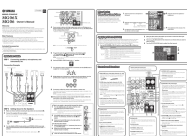
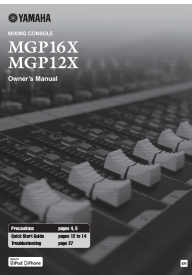

8. WARRANTY AND SUPPORT


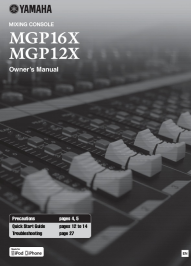
For information regarding the product warranty, please refer to the warranty card included with your purchase or visit the official Yamaha website. For technical support, service, or additional inquiries, please contact Yamaha customer service or your authorized dealer.

You can find more information and support resources on the [Yamaha Store on Amazon](#).

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Related Documents - MG16

	<p>Yamaha MG Series Mixing Consoles: User Manual</p> <p>Comprehensive user manual for Yamaha MG20XU, MG20, MG16XU, MG16, MG12XU, and MG12 mixing consoles. Covers safety, setup, features, operation, troubleshooting, and specifications.</p>
	<p>Yamaha MG06X/MG06 Compact Mixing Console Owner's Manual</p> <p>Comprehensive owner's manual for the Yamaha MG06X and MG06 compact mixing consoles, detailing features, connections, controls, functions, effects, troubleshooting, specifications, and safety precautions.</p>
	<p>Yamaha MGP16X/MGP12X Mixing Console Owner's Manual</p> <p>Comprehensive owner's manual for the Yamaha MGP16X and MGP12X mixing consoles, detailing features, setup, operation, controls, troubleshooting, specifications, and more. Learn about D-PRE mic preamps, Xpressive EQ, digital effects (REV-X, SPX), Ducker, Leveler, Stereo Image functions, and connectivity options.</p>
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	<p>Yamaha MGP32X/MGP24X Mixing Console Owner's Manual</p> <p>Comprehensive owner's manual for the Yamaha MGP32X and MGP24X mixing consoles, detailing features, setup, operation, and troubleshooting for professional audio applications.</p>
	<p>Yamaha MGP16X/MGP12X Mixing Console Owner's Manual</p> <p>Comprehensive owner's manual for the Yamaha MGP16X and MGP12X analog mixing consoles, covering features, setup, operation, controls, troubleshooting, and specifications.</p>