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Lab Gruppen CM41

Lab Gruppen CM41 Commercial Mixer User Manual

Model: CM41

1. INTRODUCTION

The Lab Gruppen CM41 Commercial Mixer is designed to provide a robust and versatile audio mixing solution for various commercial and industrial environments. This 4-input, 1-output mixer is engineered for ease of installation and operation, making it suitable for non-technical personnel. It is an ideal choice for applications such as bars, restaurants, retail spaces, hotels, corporate offices, educational institutions, and other venues requiring background music or public address systems.

This manual provides essential information for the proper setup, operation, maintenance, and troubleshooting of your CM41 mixer. Please read it thoroughly before using the device.

2. SAFETY INSTRUCTIONS

To ensure safe operation and prevent damage, observe the following safety precautions:

- **Power Source:** Connect the unit only to the specified voltage and frequency as indicated on the device. Ensure the power cord is not damaged or pinched.
- **Ventilation:** Do not block ventilation openings. Ensure adequate airflow around the unit to prevent overheating.
- **Moisture:** Do not expose the unit to rain, moisture, or excessive humidity. Avoid placing liquid-filled objects on or near the device.
- **Cleaning:** Disconnect the power before cleaning. Use a dry, soft cloth. Do not use liquid cleaners or aerosols.
- **Servicing:** Do not attempt to service this unit yourself. Refer all servicing to qualified service personnel.
- **Placement:** Place the unit on a stable surface. Avoid placing it near heat sources or in direct sunlight.

3. PRODUCT OVERVIEW

3.1 Key Features

- 4 input / 1 output mixer for commercial and industrial applications.

- 4 mic/line inputs with individual volume controls.
- Individual front panel master volume and bass/treble controls.
- Configurable priority muting function for background music override.
- GPI remote volume control using standard RJ-45 connector and Ethernet cable.
- Front panel power control button for direct access.
- Aux output for expansion to connect with amplifiers.
- Rack-mountable 1U, half-rack width enclosure with joining brackets for rack, table and wall mounting.
- Euroblock-type mic/line input and output connectors.

3.2 Front Panel Controls

The front panel provides intuitive controls for managing audio inputs and overall output.



Figure 1: Front view of the CM41 mixer, showing input volume knobs, master volume, bass/treble controls, and power button.

1. **Input Volume Controls (A, B, C, D):** Individual rotary knobs to adjust the volume level for each of the four input channels.
2. **Master Volume Control:** A large rotary knob to adjust the overall output volume of the mixer.
3. **Bass Control:** Adjusts the low-frequency response of the master output.
4. **Treble Control:** Adjusts the high-frequency response of the master output.
5. **Power Button:** Toggles the unit's power on and off.
6. **LED Indicators:** Indicate signal presence and power status for each channel and the master output.

3.3 Rear Panel Connections

The rear panel houses all input, output, and control connections.

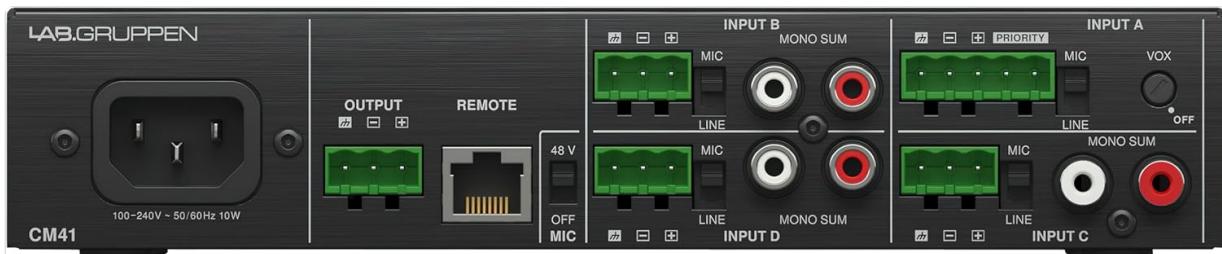


Figure 2: Rear view of the CM41 mixer, displaying power input, output, remote control port, and various mic/line inputs.

1. **AC Power Input:** Standard IEC power connector for connecting the mixer to mains electricity.
2. **Output (Euroblock):** Main audio output connector for connecting to an amplifier or other audio equipment.
3. **Remote (RJ-45):** GPI port for remote volume control using an Ethernet cable.
4. **Mic/Line Inputs (Euroblock & RCA):** Four individual input channels (A, B, C, D) supporting both

- microphone and line-level signals via Euroblock connectors and RCA (mono sum) for line inputs.
- 5. **48V Phantom Power Switch:** Enables or disables 48V phantom power for condenser microphones on specific input channels.
- 6. **Priority Muting Switches:** Configuration switches for the priority muting function.
- 7. **Aux Output:** Additional output for connecting to expansion amplifiers or other devices.

4. SETUP

4.1 Unpacking and Inspection

Carefully unpack the CM41 mixer and inspect it for any signs of damage during transit. Retain the packaging materials for future transport or storage.

4.2 Mounting

The CM41 is designed for flexible installation:

- **Rack Mounting:** The unit is 1U high and half-rack width. Use the provided joining brackets to mount it in a standard 19-inch equipment rack.
- **Tabletop/Wall Mounting:** The compact design also allows for placement on a tabletop or mounting to a wall using appropriate brackets (not always included, check packaging).

4.3 Connections

Ensure the mixer is powered off before making any connections.

1. **Power Connection:** Connect the supplied AC power cord to the IEC inlet on the rear panel and then to a suitable mains power outlet.
2. **Input Connections:**
 - **Microphones:** Connect microphones to the Euroblock inputs. If using condenser microphones, ensure the 48V phantom power switch for the respective channel is engaged.
 - **Line-Level Devices:** Connect line-level sources (e.g., CD players, media players) to the Euroblock or RCA (mono sum) inputs.
3. **Output Connections:** Connect the main Euroblock output to your power amplifier or active speakers. The Aux output can be used for additional amplification or monitoring.
4. **GPI Remote Control:** For remote volume control, connect a standard Ethernet cable from a compatible GPI controller to the RJ-45 'Remote' port on the rear panel.

5. OPERATION

5.1 Powering On/Off

Press the 'Power' button on the front panel to turn the mixer on or off. The power LED will illuminate when the unit is active.

5.2 Adjusting Input Levels

Use the individual 'Volume' knobs (A, B, C, D) on the front panel to set the desired level for each connected input source. Monitor the signal presence LEDs to ensure a healthy signal without clipping.

5.3 Master Volume and Tone Control

The 'Master' volume knob controls the overall output level of the mixer. Use the 'Bass' and 'Treble' knobs to adjust the low and high-frequency response of the master output to suit your environment and audio content.

5.4 Priority Muting Function

The CM41 features a configurable priority muting function. This allows certain inputs (e.g., a microphone for announcements) to automatically lower the volume of other inputs (e.g., background music). Refer to the detailed wiring diagram and switch settings in the full technical manual for specific configuration instructions.

5.5 GPI Remote Volume Control

If a GPI remote control system is connected, the master volume can be adjusted remotely. Consult the documentation for your GPI controller for specific operation details.

6. MAINTENANCE

The Lab Gruppen CM41 mixer requires minimal maintenance to ensure long-term performance.

- Cleaning:** Regularly wipe the exterior with a soft, dry cloth. Avoid using abrasive cleaners, solvents, or waxes.
- Ventilation:** Ensure that the ventilation slots remain clear of dust and debris.
- Cable Management:** Periodically check all cables for wear and tear. Replace any damaged cables immediately.

7. TROUBLESHOOTING

If you encounter issues with your CM41 mixer, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No power	Power cord disconnected; power outlet faulty; unit power switch off.	Check power cord connection; test power outlet; ensure front panel power button is pressed.
No sound output	Master volume too low; input volume too low; incorrect input/output connections; amplifier off/faulty.	Increase master and input volumes; verify all audio connections; check connected amplifier.
Distorted sound	Input level too high (clipping); master volume too high; faulty cable.	Reduce input and master volumes; check signal LEDs for clipping; replace suspect cables.
Microphone not working	Phantom power off (for condenser mics); mic cable faulty; mic input volume low.	Enable 48V phantom power if needed; test with another mic/cable; increase mic input volume.

If the problem persists after attempting these solutions, contact qualified service personnel.

8. SPECIFICATIONS

The following are the technical specifications for the Lab Gruppen CM41 Commercial Mixer:

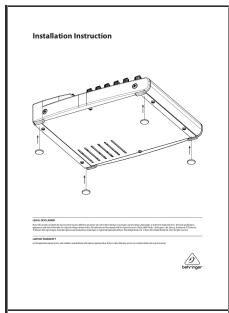
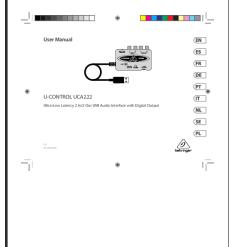
Feature	Specification
Item Model Number	CM41
Inputs	4 (Mic/Line, Euroblock & RCA)
Outputs	1 Main (Euroblock), 1 Aux
Number of Channels	4
Power Source	Corded Electric
Voltage	240 Volts (check local power requirements)
Product Dimensions	8.6 x 11.8 x 1.8 inches (21.8 x 30 x 4.6 cm)
Item Weight	4.6 pounds (2.09 kg)
Connectivity Technology	Auxiliary
Mounting	Rack-mountable 1U, half-rack width

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your purchase or visit the official Lab Gruppen website. Keep your proof of purchase for any warranty claims.

Related Documents - CM41

	<p>Science Shepherd Life Science Lab Supply List</p> <p>A comprehensive list of supplies required for various life science laboratory activities from Science Shepherd, covering materials for experiments from Lab 3 to Lab 25.</p>
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	<p><u>Behringer Xenyx Mixer Installation Instructions</u></p> <p>Official installation guide for Behringer Xenyx mixers, detailing the attachment of accessories. Includes legal disclaimers and warranty information.</p>
	<p><u>Behringer U-CONTROL UCA222 User Manual</u></p> <p>User manual for the Behringer U-CONTROL UCA222 Ultra-Low Latency 2 In/2 Out USB Audio Interface with Digital Output, covering setup, operation, safety, and specifications.</p>
	<p><u>Verkada: Soluciones de Videoseguridad Híbrida en la Nube y Cámaras IP</u></p> <p>Descubra las cámaras de seguridad Verkada, incluyendo modelos Dome, Bullet, Mini y Multisensor, con análisis avanzados de personas y vehículos, gestión en la nube y reconocimiento de matrículas. Consulte especificaciones y precios.</p>
	<p><u>Verkada CM41 Camera Setup Guide</u></p> <p>Comprehensive setup guide for the Verkada CM41 camera, covering unboxing, connection, mounting, and status indicators. Learn how to install and configure your CM41 camera.</p>