

Behringer MDX1400

Behringer MDX1400 Autocom Pro Compressor/Limiter User Manual

Audio Interactive Dynamics Processor

1. INTRODUCTION

The Behringer MDX1400 Autocom Pro is an interactive stereo dynamics processor designed for professional audio applications. It features a comprehensive set of tools including an expander/gate, compressor/limiter, and dynamic enhancer, allowing for precise control over audio signals. This unit is suitable for various studio and live sound environments, providing both automatic and manual control options for dynamic processing.

This manual provides detailed instructions for the setup, operation, and maintenance of your MDX1400 Autocom Pro to ensure optimal performance and longevity.

2. KEY FEATURES

- Interactive Reference-Class 2-Channel Expander / Gate / Compressor / Enhancer.
- IKA (Interactive Knee Adaptation) compressor concept combines the advantages of "hard knee" and "soft knee" characteristics.
- Switchable high-pass filter in control signal path avoids low-frequency signals from dominating compressor.
- IRC circuit in expander/gate enables "inaudible" elimination of disturbing noise signals.
- Dynamic Enhancer for compression dependent equalization.
- Auto and manual mode compression.
- Separate IRC expander/gate circuits.
- Fully automatic or manually controllable attack and release times.
- Dual-mono or stereo ("true stereo") operation.
- Precise 12-segment LED displays for input/output levels and gain reduction.
- Switchable, external side chain input with side chain monitor function.
- Operating level switchable from +4 dBu to -10 dBV.
- Servo-balanced inputs and outputs.
- XLR and jack connectors.

3. SETUP

Before connecting your MDX1400, ensure all audio equipment is powered off to prevent damage. The unit is designed for standard 19-inch rack mounting.

3.1 Power Connection

Connect the supplied power cord to the AC inlet on the rear panel of the MDX1400 and then to a suitable power outlet. Ensure the voltage matches the unit's requirements.

3.2 Audio Connections

The MDX1400 features balanced XLR and 1/4" TRS jack connectors for both inputs and outputs. It operates as a two-channel unit, allowing for independent processing of two mono signals or linked stereo operation.

- **Inputs:** Connect your audio source (e.g., mixer output, microphone preamplifier) to the INPUT connectors.
- **Outputs:** Connect the OUTPUT connectors to the next stage in your audio chain (e.g., power amplifier, recording interface).
- **Sidechain:** The sidechain inputs and outputs allow for external control of the compressor/gate. For example, a kick drum signal can be used to "duck" a bass guitar track.



Figure 3.2.1: Rear panel connections of the MDX1400. This image displays the XLR and 1/4" TRS jack inputs, outputs, and sidechain connections for both channels, along with the power inlet.

3.3 Operating Level Switch

On the rear panel, locate the operating level switch. Set it to **+4 dBu** for professional studio equipment or **-10 dBV** for consumer-level equipment. Incorrect setting can lead to signal distortion or low signal-to-noise ratio.

4. OPERATING INSTRUCTIONS

The MDX1400 offers intuitive controls for dynamic processing. Each channel has identical controls for independent or stereo-linked operation.



Figure 4.0.1: Front panel overview of the MDX1400. This image shows the layout of all controls, switches, and LED meters for both channels.

4.1 Expander/Gate Section

The expander/gate section is used to reduce unwanted noise and improve signal clarity by attenuating signals below a set threshold.

- **THRESHOLD:** Sets the level below which the gate/expander will activate. Turn clockwise to increase the threshold (more aggressive gating).
- **RELEASE:** Controls how quickly the gate closes after the signal drops below the threshold. "FAST" for quick cuts, "SLOW" for smoother transitions.
- **SC MON (Sidechain Monitor):** Activates monitoring of the sidechain signal.
- **SC EXT (Sidechain External):** Engages the external sidechain input for the gate.

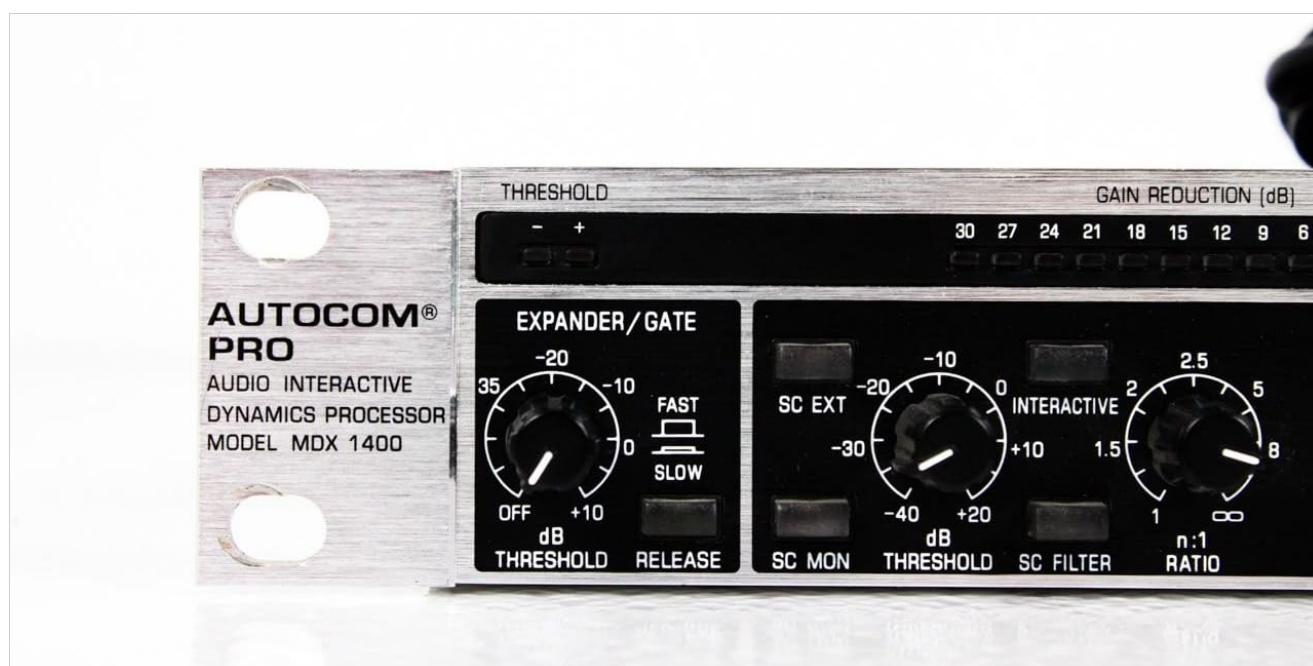


Figure 4.1.1: Detailed view of channel 1 controls. This image highlights the Expander/Gate, Compressor/Limiter, and Enhancer sections, showing their respective knobs and switches.

4.2 Compressor/Limiter Section

This section controls the dynamic range of your audio, making loud signals quieter and quiet signals louder, resulting in a more consistent and impactful sound.

- **THRESHOLD:** Sets the level at which compression begins. Signals above this threshold will be compressed.
- **RATIO:** Determines the amount of compression applied. A ratio of 4:1 means that for every 4dB increase in input level above the threshold, the output level will only increase by 1dB.
- **ATTACK:** Controls how quickly the compressor reacts to signals exceeding the threshold. "AUTO" provides automatic adjustment.
- **RELEASE:** Controls how quickly the compressor returns to its uncompressed state after the signal drops below the threshold. "AUTO" provides automatic adjustment.
- **OUTPUT:** Adjusts the overall output level of the compressed signal.
- **INTERACTIVE:** Engages the IKA (Interactive Knee Adaptation) feature for a more natural compression characteristic.
- **SC FILTER:** Activates a high-pass filter in the sidechain path to prevent low frequencies from triggering compression.
- **LIMITER:** Engages the peak limiter function, preventing the signal from exceeding a set maximum level.

4.3 Enhancer Section

The dynamic enhancer adds clarity and presence to the compressed signal by subtly boosting high and low frequencies.

- **PROCESS:** Activates the enhancer.
- **OUTPUT:** Adjusts the amount of enhancement applied.

4.4 Stereo Link Operation

Press the **STEREO LINK** button to link both channels for true stereo operation. In this mode, the controls of channel 1 will affect both channels equally, ensuring consistent dynamic processing for stereo sources.

4.5 LED Meters

The 12-segment LED meters provide visual feedback on input/output levels and gain reduction, allowing for precise monitoring of the dynamic processing.

5. MAINTENANCE

To ensure the longevity and optimal performance of your Behringer MDX1400, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the unit. Avoid abrasive cleaners or solvents, which can damage the finish.
- **Ventilation:** Ensure adequate ventilation around the unit to prevent overheating. Do not block ventilation openings.
- **Environment:** Operate the unit in a dry environment, away from direct sunlight, heat sources, and excessive dust or moisture.
- **Power:** Disconnect the power cord before cleaning or when the unit will be unused for extended periods.
- **Servicing:** Refer all servicing to qualified service personnel. Do not attempt to service the unit yourself.

6. TROUBLESHOOTING

If you encounter issues with your MDX1400, consult the following troubleshooting guide:

Problem	Possible Cause	Solution
No power	Power cord not connected; power outlet faulty; unit fuse blown.	Check power cord connection; try a different outlet; contact service for fuse replacement.
No audio output	Incorrect cabling; input/output levels too low; gate threshold too high; compressor gain reduction too high.	Verify all audio connections; adjust input/output levels; lower gate threshold; reduce gain reduction or increase output gain.
Distorted audio	Input signal too hot; output level too high; incorrect operating level setting.	Reduce input signal level; lower output level; ensure operating level switch (+4 dBu / -10 dBV) matches connected equipment.
Excessive noise/hum	Ground loop; faulty cables; improper gain staging.	Check for ground loops (use a ground lift if necessary, but with caution); replace faulty cables; adjust gain staging throughout your system.

7. SPECIFICATIONS

Item Weight	5 pounds (2.27 kg)
Package Dimensions	23 x 10 x 5 inches (58.4 x 25.4 x 12.7 cm)
Model Number	MDX1400
Connector Type	XLR, 1/4" Jack
Signal Format	Analog
Power Source	Corded Electric
Audio Output Effects	Compression, Limiting, Gating, Expansion, Enhancement
Controls Type	Knob, Switch
Operating Level	Switchable +4 dBu / -10 dBV
Inputs/Outputs	Servo-balanced XLR and 1/4" TRS

8. WHAT'S IN THE BOX

- Behringer MDX1400 Autocom Pro Compressor/Limiter Unit
- Power Cord

9. WARRANTY AND SUPPORT

For detailed warranty information and technical support, please refer to the official Behringer website or contact your local Behringer distributor. Keep your purchase receipt as proof of purchase for any warranty claims. You can find more information and support resources by visiting the [Behringer Store on Amazon](#).

