



MP25 Overview

The MP25 is a compact, 4U, rack mountable, four channel mixer; featuring a twenty-two channel, high-speed USB audio interface with low-latency ASIO and Core Audio drivers. There's no "Quick Start" here, we recommend you read this relatively short manual to get all this mixer is capable of.

Key Features

- High-speed USB 2.0 interface
 - 6 stereo Record channels
 - 5 stereo Playback channels
- MIDI-enabled mixer controls
- Four full-featured program strips
 - Four stereo Phono/Line Inputs
 - Four stereo Auxiliary Inputs
 - Four stereo USB playback Inputs
 - Gain Level, 3-band EQ, and High-pass/Low-pass Filter
 - Crossfader, Cue, and FlexFx Assign
 - 60 mm long-throw channel faders
- Two fully independent Mic Inputs
 - One with front and rear panel jacks
 - One with available line-level input
 - Independent Level, Pan, EQ, Engage, and FlexFx Assign
 - Talkover mode engages the mic and automatically ducks all other program inputs.
- Advanced FlexFx architecture
 - External Analog Insert (with Send & Return level controls)
 - USB Insert
 - Meter, Cue, Engage and FlexFx Level controls
- Headphone monitor with Split Cue option

Connecting the Mixer

Leave the power unplugged until everything else is connected

Inputs

Phono/Line Inputs (P1-P4)

The MP25 has four stereo Phono/Line inputs (**P1**, **P2**, **P3**, **P4**). Any of these analog inputs may be set for Phono Input or Line Input (for CD players) using the push switches located on the rear panel. Unused inputs are best set to **Line**. Attach your turntable's ground wires to the **Phono Ground** connectors. Each of the four program strips has access to one of the Phono/Line Inputs using the program strip's **Source** selector.

Auxiliary Inputs (A1-A4)

The MP25 has four stereo Auxiliary analog inputs (**A1**, **A2**, **A3**, **A4**). Each of the four program strips has access to all of the Auxiliary Inputs using the program strip's **Source** selector.

Mic Inputs (MIC 1 and MIC 2)

The Mic Inputs accept XLR 3-pin plugs, balanced ¼" TRS (tip-ring sleeve) plugs or unbalanced TS (tip-sleeve) plugs. **Mic 1** has two input jacks, one on the front panel and one on the rear. Only use one **Mic 1** input jack at a time. **Mic 2** has a switchable line-level option.

WEAR PART

This product contains no wear parts as described in the Warranty.



Outputs

Main/Zone/Booth

All analog outputs come from the same “Main Mix” signal.

Main, **Booth** and **Zone** Outputs each have their own **Level** control.

The **Main** output is from unbalanced RCA and balanced XLR jacks with pin 2 “hot” per AES standards (XLR preferred*). If the Main output feeds a mono PA system, engage the **Mono** switch on the rear of the MP25. If the Main output is able to clip the input to the PA system when the front panel **Main Level** control is at maximum, reduce the maximum output level using the rear panel **Max Out** control.

The **Booth** and **Zone** outputs are from balanced ¼" TRS (tip-ring-sleeve) jacks. Booth and Zone outputs include *auto-mono* on both left and right connections. Plug in only one side to receive a mono signal. Plug into both jacks to receive a stereo signal.

*Rane recommends balanced wiring for the strongest signal and rejection of hum and noise. If your cable to the amp rack is less than 10 feet (3 meters), you can usually get away with an unbalanced cable with RCA or ¼" TS (tip-sleeve) plugs. See the RaneNote “Sound System Interconnection” included with this manual or at www.rane.com for details on cable wiring.

Record Outputs

Record outputs are a direct feed from the main mix. There are no level controls between the mix and these outputs. The main mix is available in three different formats for recording: unbalanced analog RCA, 24-bit 48 kHz S/PDIF, and USB (on record channel six).

FlexFX Send/Return

The MP25's FlexFX Loop includes an analog insert loop for use with outboard effects processors. The Send and Return signals are on stereo unbalanced ¼" TS jacks. The Left and Right Send jacks provide *auto-mono* operation. Simply plug in one side for mono, or both sides for stereo. The Return jack provides similar operation. Plugging into either the left or right return jack sends the signal to both the left and right FlexFX Loop return channels. Plugging into both jacks separates the left and right return channels.

USB

Connect your computer to the USB port on the MP25 to send up to twenty-two channels of audio to/from your favorite multi-track mixing, beat-making, looping, sampling, and recording software applications. Install the MP25 ASIO (Windows) or Core Audio (Macintosh) drivers (instructions later in this manual), so that your computer recognizes the MP25.

Digital Inputs

The MP25's USB audio interface includes five stereo playback channels. Playback channels are audio streams from the computer to the MP25. Four of these five channels are **D1-D4**, the MP25's digital program inputs. Each of the four program strips has access to one of the four digital input channels using the **Source** selector on the program strip. The fifth stereo playback channel is the return channel of the FlexFX USB insert loop.

Digital Outputs

The MP25's USB audio interface includes six stereo record channels. Record channels are audio streams from the MP25 to the computer. Four of these five channels are post-fader record channels from the MP25's program strips. These four record streams may be used to multi-track record your set for post-production editing and mix-down. The fifth USB record channel is the send channel of the FlexFX USB insert loop. The sixth record channel may be used to record the Main Mix (default), Mic 1, or Mic 2. Select the record source for USB record channel 6 using the MP25 driver control panel on your computer.

MIDI

In addition to being an audio interface, the MP25 front panel is also a USB MIDI controller. The Zone Level, Main Balance and Main Level controls are the only front panel controls not MIDI enabled. See MIDI Implementation later in this manual.

Power Supply

The MP25 features an internal universal switching power supply that operates on any AC mains 100 to 240 VAC, 50 or 60 Hz (most places in the world). All that is required when traveling between different countries is the appropriate power cord, which is usually readily available.



Mixer Controls

Mic Inputs

Two Microphone Inputs are fully independent, each with these controls:

- **Level** control.
- **Pan** the signal from Left to Right.
- **High / Low** 2-band, full-cut tone controls. The range is Off to +6 dB, with unity gain at 12 o'clock.
- **FlexFx** Assign takes the signal out of the Main Mix and sends it to the FlexFx Loop.
- **Mic On** adds the Mic to the Main Mix as a program input. If Talkover is engaged on the other Mic, this Mic is ducked like any other program input.
- **Talkover** engages the Mic in the Main Mix and ducks all program inputs. If Talkover is engaged on the other Mic, this Mic is not ducked.
- **Peak signal / rms meter** displays the signal level with peak-hold.
- **Mic 1** front panel connector is intended for a wired dynamic mic. A gooseneck mic is not recommended as it could damage the jack and not be covered under Rane's Warranty.
- **Mic 2** allows selection of a Mic- or Line-level input via the rear panel switch. Line-level is usually for wireless mics.
- Mic 1, Mic 2, or the Main Mix may be recorded via USB Record-6. Record source selection is made in the computer's MP25 driver control panel.

Program Strips

Four program input strips include the following controls:

- **Source** selection: Each program input x may select from P_x , D_x , $A1$, $A2$, $A3$, or $A4$.
- **Level** adjustment is Off to +12 dB, with unity gain at 12 o'clock.
- **High / Mid / Low** 3-band, full-cut tone control range is Off to +6 dB, with unity gain at 12 o'clock.
- **Filter** with Low-pass and High-pass:
 - Flat response is in the center at 12 o'clock.
 - Low-pass filter cut-off moves from 20 kHz toward 20 Hz as the knob is turned counter-clockwise.
 - High-pass filter cut-off moves from 20 Hz toward 20 kHz as the knob is turned clockwise.
 - The filter resonance can be switched high or low in the computer's MP25 driver control panel.
- The **A-B-Post** switch assigns the program channel to A-side, B-side, or Post-Crossfader.
- **FlexFx** assign takes the channel out of the Main Mix and sends it to the FlexFx Bus (post-fader).
- **Cue** select assigns the channel to the headphones (pre-fader).
- **Peak signal / rms meter** displays a mono signal level with peak-hold.
- A 60 mm long-throw program fader controls the level of the program channel in the Main Mix.
- PGM 1-4 post-fader, stereo program channels are streamed to the computer via USB record channels 1-4. These channels may be recorded for post production editing and mix-down.

Phones

The Headphone Monitor provides stereo or mono Split Cue operation.

- In Stereo operation, the **Pan** control pans between stereo Cue and the stereo Main Mix.
- In **Split Cue** operation, the **Pan** control pans between Mono Cue in the left ear and mono Main Mix in the right ear.
- Individual **Cue** buttons are provided for PGM 1, PGM 2, PGM 3, PGM 4 and the FlexFx Loop.
- The Headphone **Level** control sets the level in the both the front panel 3.5 mm and 1/4" output jacks.
- The headphone output includes 2-band full-cut tone controls. Tone control range is Off to +6 dB. These headphone tone controls are adjusted from the computer using the MP25 driver control panel.

Main Mix and Main/Zone Outputs

The Main Mix is made from PGM 1, PGM 2, PGM 3, PGM 4 and the FlexFx Mix.

- Mono the Main Mix by pressing the front panel **Mono** button. To mono only a specific output, use the rear panel Mono switch on the Main Outs, or the *auto-mono* single plug feature of the Zone and Booth Outs.
- Apply effects to the entire Main Mix by engaging the Main Mix (blue) **FlexFX** button. This button instantly sends PGMs 1-4 and Mic 1-2 to the FlexFX Bus.
- The Main Mix is metered using a stereo rms/peak signal meter with peak-hold.

The Main Mix feeds these outputs:

- **Main Outs**
 - Front panel **Balance** and **Level** controls manage the relative (left/right) and overall levels respectively.
 - The rear panel **Mono** switch combines the left and right channels of the Main output, and an attenuator controls the **Max Out dB** from 8 Vrms (0 dB) to 0.5 Vrms (-24 dB).
 - The Main Output is available on balanced XLR and unbalanced RCA connectors.
- **Booth and Zone Outs**
 - Front panel Booth and Zone **Level** controls adjust the corresponding output level.
 - Booth and Zone Outputs are available on balanced 1/4" TRS jacks. Left and right jacks automatically provide a mono signal if the other plug is not inserted.
- **Record Outs**
 - Stereo unbalanced RCA and S/PDIF outputs.
 - The **S/PDIF** output is a 24-bit 48 kHz digital output.
 - The Main Mix, Mic 1, or Mic 2, may be recorded via USB record channel six. Record source selection is made in the computer's MP25 driver control panel.



Magnetic Crossfader

The MP25's crossfader is a field replaceable, no-noise, no-bleed magnetic fader.

- Assign each PGM channel to the A-side, B-side or Post-Cross-fader with switches in the program strips.
- Select one of three crossfader slopes with the **Contour** switch.

Crossfader Questions and Answers

Q: Can I install magnetic crossfaders in any other mixer?

A: The connectors may be similar, but the circuits are very different. Connecting the fader to anything other than the intended cable in the MP25 could permanently damage it.

Q: Can I install another crossfader in my MP25?

A: *No.* The cable connections are specially designed for Rane magnetic faders.

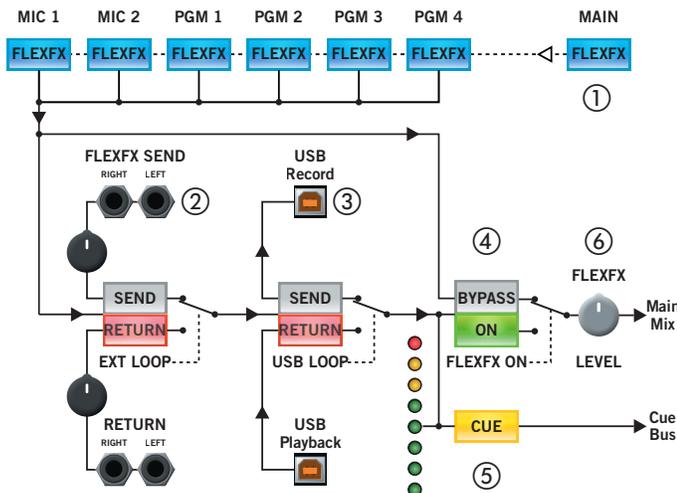
See **Magnetic Fader Maintenance** on page Manual-8.

FlexFX

The FlexFx architecture in the MP25 is more powerful than typical effect insert solutions. The architecture includes the FlexFx Bus, an auxiliary bus routed to the FlexFX Loop which includes two independent effects inserts. Any combination of PGM 1-4 and Mic 1-2 may be routed to the FlexFX Bus. Any combination of external analog and USB effects may be applied within the FlexFX Loop. It is possible to cue and meter the FlexFX Loop return. You can bypass the entire FlexFX Loop using a single button to instantly punch in and out a combination of effects. The final FlexFX Output Level controls the level of the FlexFX audio in the Main Mix. The flexibility of the FlexFX architecture makes it a very powerful tool. So, it is important to take some time to understand FlexFX signal routing and controls.

The order of processing in the MP25's FlexFx architecture is:

- ① Independent FlexFx assign for PGM 1-4 and Mic 1-2, or assign all sources simultaneously with the Main FlexFx button.
- ② Ext. Analog Insert, with Send and Return Levels.
- ③ USB Insert.
- ④ FlexFX Loop return Cue and Meter.
- ⑤ FlexFx On (FlexFX Loop Bypass).
- ⑥ FlexFx Mix Level control.



- ① The **FlexFx** buttons in the PGM and MIC strips assign the post-fader audio to the FlexFx Bus when on, and to the Main Mix when off. This allows multiple inputs to the FlexFx Bus, and allows drumming different signals into and out of an applied effect. The **FlexFX** button in the Main Mix section assigns all PGM and Mic channels to the FlexFX Loop, *applying effects to the entire mix*.
- ② The **Ext Loop** button engages or bypasses the analog effects insert. Use the **Send** level to avoid clipping the input of your effects processor. The **Return** level allows you to bring the signal of the affected output back up to your normal mix level. The FlexFX Bus is always output on the analog loop send, even if **Ext Loop** is bypassed. This means you may always use the analog Send to record the dry FlexFX mix.
- ③ The **USB Loop** button engages or bypasses the USB effects insert. The USB insert uses USB record-5 and playback-5 to form an effects loop. Even when the USB insert is bypassed, the audio from the external analog loop is sent to the USB Send. Therefore, when the analog loop is bypassed, USB record-5 can serve as an audio output for recording the FlexFX mix on your computer.
- ④ The **FlexFX Cue** and Meter are located at the return of the FlexFX Loop, after the analog and USB inserts and before the FlexFx ON switch. This allows cueing the FlexFX mix and any applied effects before they are heard in the Main Mix.
- ⑤ The **FlexFx On** button toggles between wet and dry versions of the FlexFX mix. When this switch is off, the FlexFX Loop is bypassed and the dry FlexFX mix is routed to the Main Mix. This allows applying and cueing any combination of effects in the FlexFX Loop before hearing those effects in the Main Mix. When you're ready to listen to the affected audio, engage the **FlexFX On** button (green) and the wet signal is applied to the Main Mix (as long as the **FlexFX Level** is up).
- ⑥ The **FlexFx Level** controls the level of the FlexFX audio in the Main Mix. Turn down the **FlexFX Level** to keep the FlexFx audio out of the Main Mix. Then, you can **Cue** the FlexFX mix and effects. When the mix is correct and the effects are set up, turn up the **FlexFX Level** to bring the FlexFX mix into the Main Mix.

USB Drivers

The MP25 includes high-performance, high-stability ASIO and Core Audio device drivers. The driver allows audio applications to play and record audio via the MP25's five stereo playback and six stereo record USB channels. The drivers are designed for incredibly low audio latency, eliminating perceptible delay between control input to audio applications and the resulting audible effect.

Applications may also connect to the MP25 MIDI Out and MIDI In ports. Control changes on the mixer's front panel are sent out the MIDI Out port. Some mixer features may be controlled by sending MIDI messages to the mixer's MIDI In port. Change the MIDI channel number for MIDI In and MIDI Out messages using the driver's control panel.

The driver is available on the MP25 installation CD that is shipped with the mixer. Of course, the latest driver can always be found at www.rane.com/mp25.html.

ASIO (Windows)

The MP25 uses a low-latency, multi-client, ASIO device driver to interface with applications on Windows operating systems.

Multi-client ASIO allows different audio software applications to simultaneously stream audio to and from the MP25. If the same playback channel is selected in more than one application, the driver mixes the audio from the different applications before streaming it to the mixer.

Installation

1. Locate the setup executable, either on the installation CD or where you downloaded the driver from www.rane.com.
 - a. 32-bit Windows: RaneAsioMp25x86Setup.exe
 - b. 64-bit Windows: RaneAsioMp25x64Setup.exe
2. Connect the MP25 to your computer, and power on the MP25.
3. Double click the setup file.
4. Follow the prompts on the screen.
5. Reboot your PC, and you are ready to go!

Uninstall

The MP25 ASIO drivers may be uninstalled from the Windows control panel. Open the list of installed programs then locate and double-click "Rane MP25."

Windows XP: Start -> Control Panel -> Add or Remove Programs -> Rane MP25.

Windows Vista: Start -> Control Panel -> Programs and Features -> Rane MP25

Windows 7: Start -> Control Panel -> Programs -> Programs and Features -> Rane MP25

Launching the Control Panel

The driver control panel may be launched from the Windows Control Panel. Select Start -> Control Panel -> Rane MP25.

Core Audio (Macintosh)

The MP25 uses a low-latency, Core Audio device driver to interface with applications on Macintosh operating systems.

Installation

1. Locate the MP25.pkg file, either on the installation CD or where you downloaded the driver from www.rane.com.
2. Double click the package file.
3. Follow the prompts on the screen.
4. Reboot your Mac, and you are ready to go!

Launching the Control Panel

Open the System Preferences window. Locate the MP25 in the "Other" section, and click the MP25 icon to launch the panel.

Control Panel

The MP25 driver control panel allows you to set some preferences for your MP25 Mixer. There are three pages in the control panel: Preferences, PGM Inputs 1-4, and MIDI Channel Selection. You can switch between these pages by pressing the button in the upper left-hand corner. The button displays the name of the next page.

Preferences

The Preferences page allows you to control these features:

- 2-Band Headphone Tone Controls adjust the level of headphone output high and low frequencies from +6 dB to Off.
- USB-6 Record source selection routes the specified signal within the MP25 to the USB-6 Record channel. The available options are Main Mix, Mic 1, and Mic 2. Main Mix is the default setting.
- Button backlighting is on by default, but may be turned off using the Button Backlight control. When the backlight is on, buttons toggle between dimly lit and fully lit. When the backlight is off, buttons toggle between dark and fully lit.
- The USB driver buffer size may be increased to achieve higher stability at the cost of higher latency. The MP25's drivers are designed to run very reliably at latencies below 10 milliseconds. However, computer performance and available resources (number of applications running) may adversely affect the computer's ability to stream audio reliably. If pops and clicks are heard in the USB audio, try increasing the buffer size to eliminate them.
- If the MP25 firmware installed on your computer is newer than the firmware in your MP25, the Update Device Firmware panel is enabled. Pressing the Update Firmware button will update the MP25 firmware to the newer version installed with your driver.

PGM1-4 Inputs

- The **Filter** controls on the program strips each have two Filter Resonance values. The Filter resonance may be set High or Low using the control panel.

MIDI Channel Selection

The MP25's front panel controls are MIDI enabled. Changes to front panel controls may be sent via MIDI to audio applications on the computer. By default, the MP25 uses MIDI channel 1 to send MIDI messages. However, you can change the output channel number using the MIDI Out control. Some MP25 features may be controlled via MIDI. By default, the MP25 does not accept MIDI input. However, you can enable MIDI input to the MP25 by setting the MIDI In channel number.

MIDI Out Controls

All MP25 front panel controls with the exception of the Main Balance, Main Level, and Zone Level send MIDI output messages when changed.

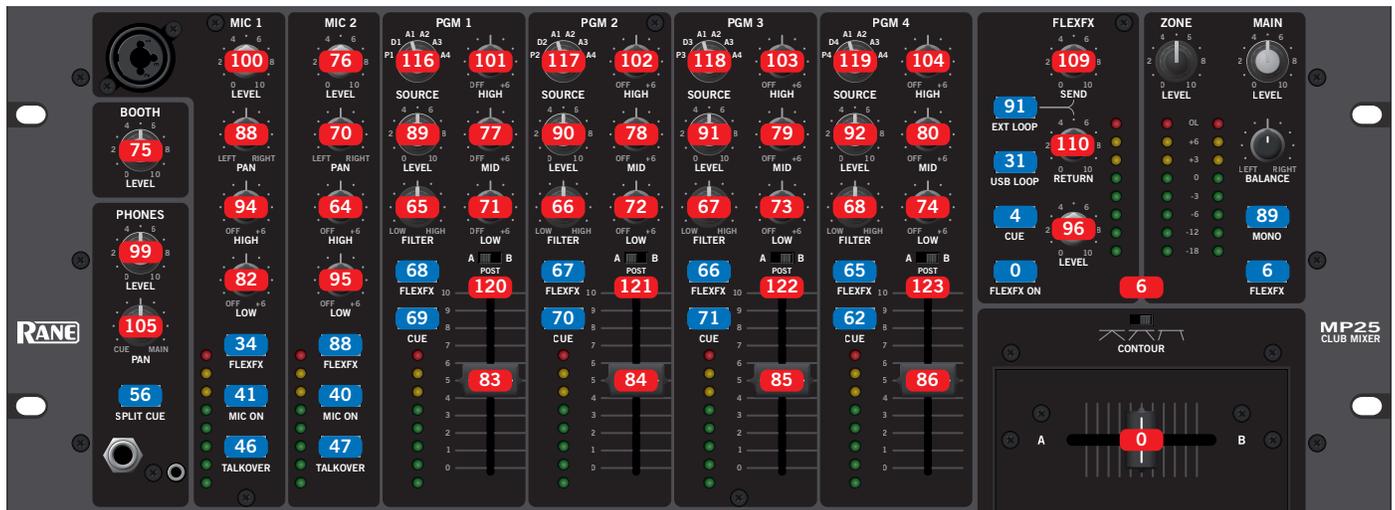
- Buttons output a MIDI Note On message when pressed and a MIDI Note Off message when released.
- Pots and faders output a MIDI control change message whenever they change value. The value is a number in the range 0 to 127 (counter-clockwise to clockwise, down to up, or left to right).
- Switches produce control change messages when they change value. The following table lists MP25 switches and their control values.

Switch	Control Change Values
PGM Source Selector	1=Px, 2=Dx, 3=A1, 4=A2, 5=A3, 6=A4
Crossfader Assign	1=A, 2=B, 3=Post
Crossfader Contour	1=Slow, 2=Medium, 3=Fast

MIDI In Controls

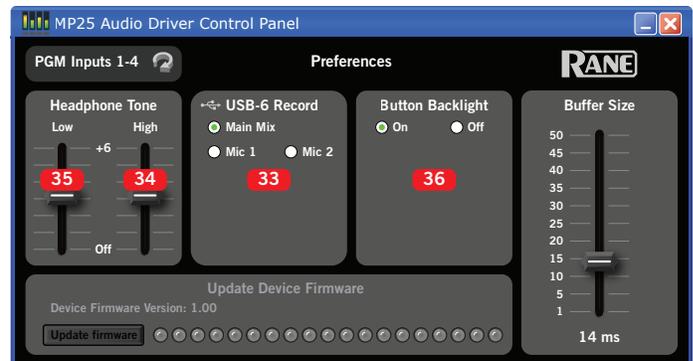
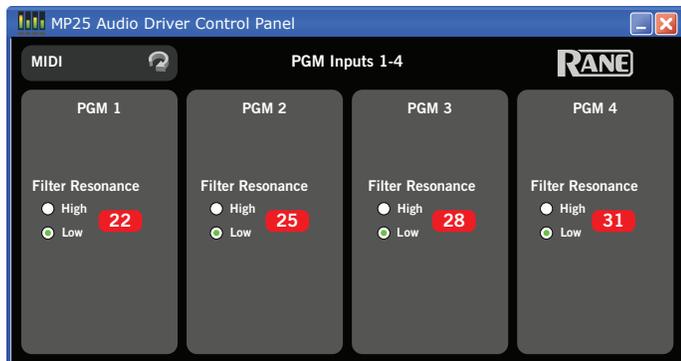
The mixer parameters controlled via the MP25 driver control panel are also available for control via MIDI Input. All MIDI Inputs are control change messages. The following table lists the MP25 MIDI Input parameters and their control values.

MP25 Parameter	Control Change Values
Low/High Headphone Tone Controls	0-127, 0 = Off, 127 = +6 dB
USB-6 Record Source	1 = Main Mix, 2 = Mic 1, 3 = Mic 2
Button Backlight	0 = Off, 1 = Dim
PGM 1-4 High-pass/Low-pass Filter Resonance	0-64 = Low, 65-127 = High



Control Number Note Number

MP25 MIDI Controls



Maintaining the Magnetic Crossfader

There are no electrical contacts to clean!

The crossfader in the MP25 is designed with materials highly resistant to corrosion and most chemicals. While the crossfader will handle millions of operations, it may become dirty over time. Bad things may be spilled or sprayed into the crossfader. In either case, the crossfader is not damaged and the sound quality is unaffected. *Cleaning is only required to maintain the feel of the crossfader.*

The crossfader is self-lubricating and with normal use, should not require additional lubrication. If you wish, you can use a light silicone lubricant rated for use with electrical parts. This will help maintain the feel. We recommend Caig DeoxIT FaderLube F100 spray lubricant.

Order DeoxIT® F100 from CAIG Laboratories, Inc.

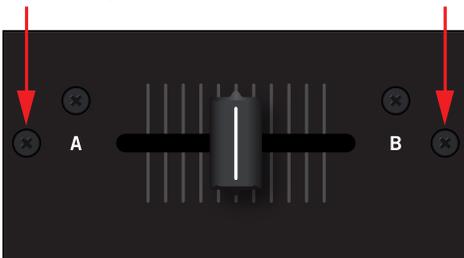
12200 Thatcher Ct.
Poway, CA 92064
Phone 858-486-8388
Fax 858-486-8398
Web www.caig.com

Never use a heavy lubricant or grease. Doing so will not damage the faders, but can undo the feel. If grease was used, it may be removed by following the cleaning instructions.

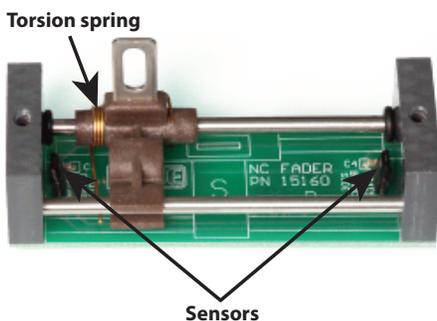
Crossfader Removal and Replacement

For cleaning and lubrication, follow these directions:

1. Required tools: #1 Philips screwdriver and a pair of clean hands.
2. Disconnect the power.
3. Remove only the two 4-40 screws attaching the crossover faceplate as pointed out below.



4. Remove the crossfader from the mixer, and carefully remove the ribbon cable from the back of the circuit board.



5. Move the carrier all the way to one side.
6. Use a soft lint-free cloth to wipe off the rails.
7. Add a drop of silicone lubricant (or quick spray from aerosol) to the center of each rail.
8. Move the carrier back and forth to distribute lubricant.
9. Do not bend the torsion spring. Do not disturb the position of the small sensors at each end of the Fader. If you accidentally do, make sure the parts are standing straight before reinstalling.
10. CAUTION: Sugary liquids may damage the crossfader beyond repair. You might be able to save it by removing the crossfader and thoroughly rinsing it in hot water. Make sure the part is clean and dry before lubricating or reinstalling.
11. Removal of grease or other stubborn debris may require alcohol or contact cleaner. Make sure the part is clean and dry before lubricating or reinstalling.
12. Problems? Contact Rane Corporation customer service at 425-355-6000 or email us at info@rane.com.

Channel Fader Cleaning

With heavy use in harsh environments, the channel faders may need lubrication. This treatment extends longevity and can make used faders as good as new. We recommend any of the following cleaning solutions:

- Caig DeoxIT FaderLube F100 spray lubricant
- Caig DeoxIT FaderLube F5 spray cleaner
- CRC 2-26 (www.crcindustries.com)

Order CaiLube MCL® from CAIG Laboratories at the same address previously listed.

1. Position the fader at mid-travel.
2. Spray cleaner/lubricant into both ends of the fader.
3. Move the fader over its full travel back and forth a few times.
4. Wipe off excess fluid.

If cleaning does not fix any fader, please contact Rane Corporation customer service at 425-355-6000 or email us at info@rane.com if you are in the U.S.A. Outside the U.S.A, please contact your distributor for service.