M-16DX 16-Channel Digital Mixer

Creating Submixes Using the Mute/Alt Bus

M16DXWS17

About the Workshop Booklets

The EDIROL M-16DX 16-Channel Digital Mixer delivers the power of digital mixing to musicians at an incredibly affordable price. This crystal-clear 24-bit digital mixer supports sample rates up to 96 kHz, and it's extremely flexible, with a wide range of analog and digital inputs and outputs, and effects. The M-16DX's USB connectivity makes it an ideal partner for a computer-based digital audio workstation, and features such its pro EQ and the innovative Room Acoustic Control make it an excellent live mixer as well.

Each M-16DX Workshop Series booklet focuses on one M-16DX topic, and is intended as a companion to the *M-16DX Owner's Manual*.

The M-16DX Workshop booklets require M-16DX O.S. Version 2.00 or higher. You can download the latest O.S. for free from *www.RolandUS.com/EDIROL*.

About This Booklet

The M-16DX's Alt bus allows you to group related signals into a stereo submix so you can more easily control them as a single entity within the overall mix. A submix can make working with any group of related signals easier, from mics on drums or backup singers, to a rack of keyboards, to background elements in an audio/video production. This booklet explains how to use the Alt bus to create a submix.

Understanding the Symbols in This Booklet

Throughout this booklet, you'll come across information that deserves special attention—that's the reason it's labeled with one of the following symbols.

A note is something that adds information about the topic at hand.

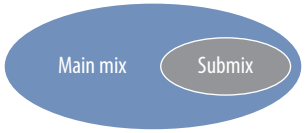
A tip offers suggestions for using the feature being discussed.

Warnings contain important information that can help you avoid possible damage to your equipment, your data, or yourself.

The Idea of a Submix

Within a mix, there will often be groups of signals that go together, groups of signals that have to sit well against each other. Once you've got them balanced correctly and sounding the way you want, you can place the group of them in the overall mix.

As you work out the group's level in the mix, you have to individually adjust the level of each signal in the group. This can take lots of time, and requires precise adjustments to keep the signals balanced against each other the way you want. An easier way to handle things is to create a submix of the signals—with a submix, you can raise or lower the level of the entire group at once using a single LEVEL control. You can also add an effect to the entire group at once.

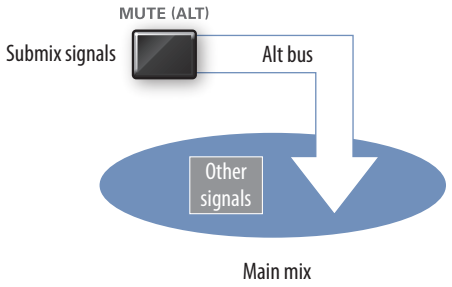


Some people call a submix a "subgroup."

How a Submix Works

You create a submix in the M-16DX by

- *sending all of the related signals to a separate mix bus*—in the M-16DX, this is the Alt bus, and you send each signal there by pressing its MUTE/ALT button.
- *bringing the Alt bus into the main mix*—so you can hear it and use it in the mix.



You continue by

- *getting the submix to sound the way you want*—using each signal's channel strip to set its level relative to the other signals in the submix, pan it to the desired stereo location, and add EQ or effects if you want.
- *adjusting the submix's level in the mix*—using the submix's LEVEL knob. You can also add effects to the submix at this point.

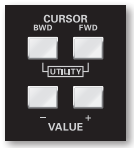
Setting Up Your Submix

You'll need a pair of 1/4" cables to set up your submix.

You'll need an unused pair of stereo input channels for control of the submix.

Here's how to set up an M-16DX submix:

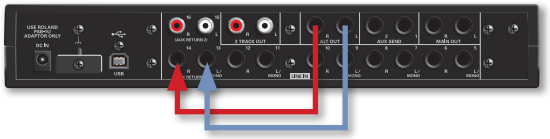
1 Hold down CURSOR BWD and FWD at the same time to display the UTILITY menu, locate the CTRL to ALT parameter, and make sure it's turned off.



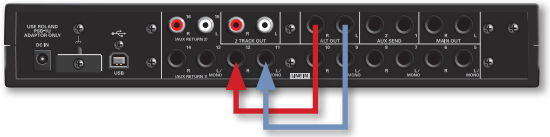
2 In the M-16DX's MAIN MIX and PHONE/CTRL ROOM areas, make sure the ALT button isn't pressed in during your setup.

3 On the back of the M-16DX I/O module, connect the ALT OUT L and R jacks to a pair of input jacks. If you'd like to:

- *adjust only the level of the submix*—connect the ALT OUT L and R jacks to LINE IN L and R 13/14 or LINE IN L and R 15/16.



- *control the level, add effects, and/or pan the entire submix*—connect the ALT OUT L and R jacks to an unused odd/even pair of inputs, from LINE IN L and R 5/6 to LINE IN L and R 11/12.

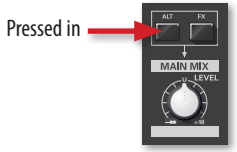


See "About Submix Effects" on Page 4 for some thoughts on using effects in a submix.

4 Press in the MUTE/ALT button on each channel strip that carries a signal you want to include in the submix.

When you silence, or "mute," a channel on the M-16DX, the signal is removed from the main mix, and switched over to the Alt bus.

5 In the MAIN MIX area, press in the ALT button to send the submix into the main mix.



About Submix Effects

To learn about the M-16DX's insert and loop effects, see the Workshop booklet called *The M-16DX Effects*.

Insert effects

If your submix includes signals going through Input Channels 1 and/or 2, you can use the channels' insert effect as you normally would.

Loop Effects

Individual Signals

You can add a loop effect to an individual submix signal from its channel strip. You might want to do this, for example, in a drum-kit submix where you'd like reverb on the snare but not on the rest of the kit.

The Whole Submix

You can also add a loop effect to the entire submix from the submix's channel strip. You could, for example, add reverb to a group of submixed backup singers.

As we noted in "Setting Up Your Submix," you can add an effect to an entire submix only when the submix is controlled by Channel Strip 5/6, 7/8, 9/10, or 11/12 because only those stereo channels have the requisite AUX 1 knob.

Mixing with a Submix

1. Turn down all of the input channels that *aren't* being sent to the submix.

Don't mute these channels because doing so will send them to the submix!

2. Mix the submix's signals together as desired, using EQ and insert effects where applicable, and adding effects to individual channels if you want to.
3. Once the submix sounds the way you want it, bring up your other channels to create the rest of your main mix around the submix.
4. As you hear the rest of your mix, you can tweak any individual signal within the submix as necessary using its channel strip controls.
5. To adjust the level of the entire submix, adjust its channel strip's LEVEL knob.

The End

We hope you've found this workshop helpful. You'll find other M-16DX Workshop booklets available for downloading at *www.RolandUS.com/EDIROL.*