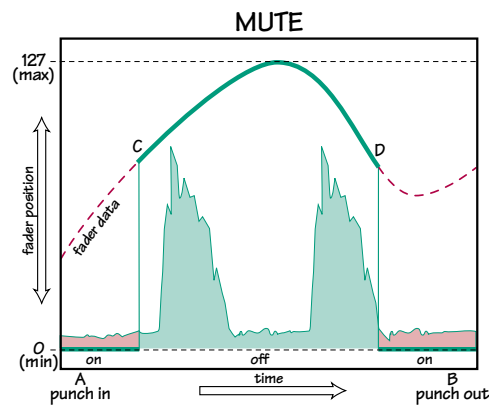


MUTE FUNCTIONS

You can use UltraMix to program mutes throughout your mix. All mute data is recorded separately from fader-level data. That means that any fader moves recorded before you muted a track are still there; in fact, you can still see them happening on-screen. If you remove the mute, the pre-recorded fader levels are still there. As in most consoles, all UltraMix mutes are post-fader.



NOTE: The Ultra-34 Mute toggles on rapidly (approximately 1 millisecond) and toggles off less rapidly (approximately 50 milliseconds). The reason is that a rapidly opening mute (mute off) would cause audible artifacts. To achieve very precise timing, move any mute events forward or backward in time using the Event Editor.


 To record mutes:

1. Disable all recording modes by clicking on whichever record mode button (Replace, Null, or Trim) is currently lit. All three must be unlit.

EXTREMELY IMPORTANT: If you do not disable recording modes, then you might discover you're recording new fader levels as determined by current controller positions, whether or not that's what you intended to do.

2. Enable Mute record by clicking the Mute button on UltraMix's control bar, or on the UltraPilot by pressing the Shift button (right column) Soft Mode button 13 to light the Mute LED.

3. Place any tracks where mutes are desired into Record/Ready mode.
4. Enable the Master Record button.
5. Roll your mix.
6. Press the Mute Soft Button on UltraPilot or click the Mute button (the one with the “M”) on the session window. This mutes the track. The Mute button will light on the session window, and the LED next to the Soft Button on the UltraPilot will light up as well.
7. Press or click again to unmute the track. The Soft Button LED and “M” button will go off.

 *To mute tracks using the computer keyboard:*

1. Select the track(s) you want to mute.
2. Arm the track(s) in Record/Ready.
3. Hit the M key to mute the track(s).
4. Hit the “,” (comma) key or Shift-M to unmute the track(s).

The computer keyboard technique is an easy way to accurately mute a number of tracks simultaneously, particularly if the tracks are nonadjacent. Also, by using the computer keyboard, you can toggle mutes between two tracks, or between one track and several other tracks. This is handy for building comp tracks for a lead vocal, or creating dynamic interplay between one or more instruments and several other instruments.

 *To toggle mutes:*

1. Select all tracks you want to toggle between, or among. If only two are selected, the mute will toggle between those two. If more than two are selected, the toggling will happen between the first track(s) muted and all remaining tracks.
2. Place all selected tracks in Record/Ready.
3. Mute the first track(s) using UltraPilot or by dragging across the Mute buttons in the UltraMix session window.
4. Press the T button on the computer keyboard. Currently muted track(s) will unmute, and all other selected and armed tracks will mute.

5. Press T again and the first track(s) will mute, while the others will unmute. Toggling can continue indefinitely.

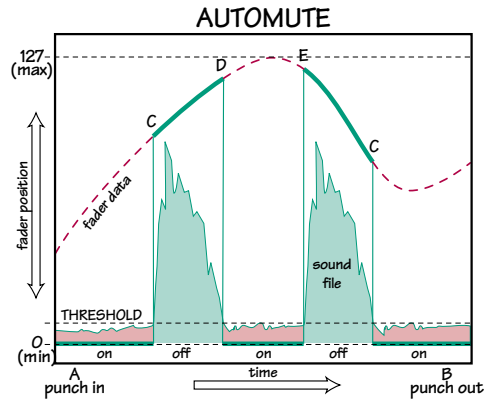
If you want to change your mutes, you can punch in new ones at any time. If you want to remove a mute completely (and it's too late to use Undo), you can do it very easily in the Event Editor, as explained later.

THE AUTOMUTE FUNCTION

Automute is a feature (exclusive to UltraMix as of this writing) that automatically performs one of the most tedious tasks of multitrack audio mixing: muting unused portions of tracks. This procedure is important because unused bits of tracks contribute to noise build-up in your final mix. This is true even if you record using a digital recorder and virtual MIDI tracks, because the output section of any instrument will produce some noise.

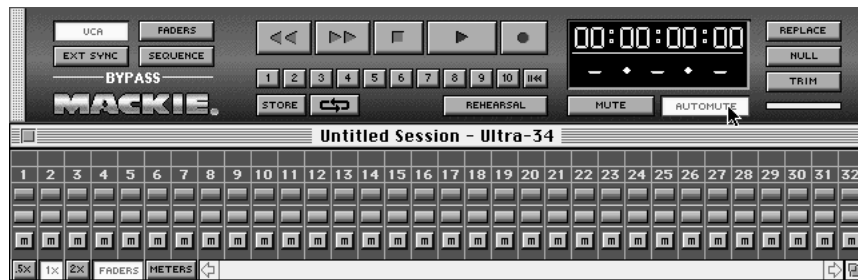
The secret behind Automute is UltraMix's unique level-sensing capability. (That's why only UltraMix automation offers a metering mode.) Inside each channel of the Ultra-34, a circuit detects the instantaneous input level, encodes it as MIDI data, and sends the information back to the UltraMix Pro software. Since UltraMix knows when a track is active and when it isn't, it can do your mutes for you! Here's how you make it happen.

TIP: It is best to avoid stopping and starting while recording an Automute pass. Due to the nature of sync following tape and external time code, hiccups (indiscreet interruptions) are avoided when you allow for a fresh start.



To Automute:

1. Enable Automute by clicking the Automute button on UltraMix's control bar, or by pressing Shift/Soft Key 14 on the UltraPilot.



Note that any fader record modes are automatically disabled, and VCA bypass toggles on so you can listen to your tracks during the Automute pass. Also, the fader window disappears. Don't panic. This is normal, and you won't need it anyway.

2. Place all tracks you want included in the Automute pass in Record/Ready. In most cases, this will be all tracks. Exceptions might be tracks with a wide dynamic range or very low-level signals, right down near the noise floor, that you want to keep. You may have to do manual mutes with these. However, even if you do include these low-level tracks in your Automute pass and have problems, changing or erasing

Automute events in the Event Editor window is rather easy. For information on fine-tuning an Automute pass, see the Event Editor section on page 152.

3. Enable the Master Record button.

4. Roll your mix. You will hear input signals at Unity because VCA bypass is enabled; you will NOT hear Automute working in real time. During this pass, Automute is scanning your input levels and “taking notes.” Whenever the input level falls below the preset threshold (see below), Automute records a mute event. When it comes back above the threshold, that channel is unmuted. Automute events are indicated by the yellow bars that go on and off right under the manual Mute button: on when muted, off when unmuted.

5. Have a cup of coffee, scan the sports page, or dream up new harmonies for the chorus.

6. Rewind, and see if all the mutes are where you want them.

Automute works much like auto-gating, and is certainly much less expensive than equipping each channel with a high-quality dynamics processor. Because it doesn't work in real time, Automute has an advantage: it backtimes and adds a few frames before each mute, so the “gate” opens a fraction of a second before the leading edge of the signal. That means you don't get any dulling of attack transients.

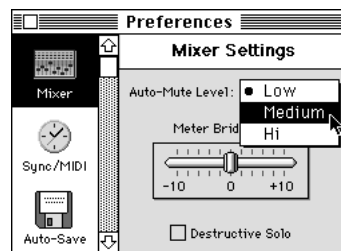
If Automute is letting noise through, or if it is cutting off a desired signal, you can adjust the threshold as follows.

 *To adjust the Automute threshold:*

1. Choose Preferences from the File menu.

File	
New Session	⌘N
Open Session...	⌘O
Close Window	⌘W
Save Session	⌘S
Save Session As	
Save As Default	
Preferences	⌘V
Page Setup	
Print TrackSheet	⌘P
Import Win95 Session...	
Quit	⌘Q

2. Select the Mixer icon.
3. Choose Low, Medium or Hi from the Automute Level menu. The three settings are about 10dB apart.



Remember, the same setting is global for all tracks subject to the Automute function on a given pass. If one threshold doesn't work for all tracks, you can do multiple passes at different thresholds. Or you can try rerouting inputs through the channel Line Input (rather than the Tape input) and using the Trim control to reduce the gain of any signals that are too "hot." Or, patch into an unused Ultra-34 channel from a post-fader direct out for full fader trim.

There are no hard and fast rules regarding Automute. Some users will find it a powerful tool for cleaning up tracks, and perhaps even for creating special mixing effects. Others may prefer doing all mutes manually. We suggest you at least experiment with it for awhile, and find out if and when you want to include it in your mixing procedures.

SUGGESTED APPROACHES FOR BEGINNING YOUR MIX

There is no one best way to mix with UltraMix. No single technique has yet received the Good Mixkeeping Seal of Approval, and no Holy Person of any spiritual persuasion has blessed any one method.

After all, what's best for you may be a total nightmare for the folks working in a studio just down the street. And, from your own experience, you probably know that what works for a four-minute music track may be totally wrong for a 30-second radio spot.

So the following procedures are suggested as ways to get started. Once you've done a few mixes, you'll naturally develop your own approaches.

Also, the order of procedures in the following section is not fixed. (Well, it is for our purposes here, but...) In some cases, you can move them around; in other cases it would complicate matters. Let common sense be your guide.

Open And Name A New Mix File

This part is pretty self-explanatory. If you are opening your template file, don't forget to "Save As" and rename it immediately.

Set UltraMix Levels To Unity Gain

The easiest way to do this is by using either the Modify Levels or Set Default Levels commands as already explained (page 65). The Unity fader levels should match your console levels (toggling VCA bypass on and off has no audible effect).

DO A MUTE PASS

Get those tracks quieted down now as described in The Automute Function section on page 109. If you're not into Automute, proceed to...

Do A Manual Mute Pass For Track Segments You Don't Want

You could do this before you record any fader moves, but you'd probably be making many of those decisions while making your rough balances anyway. So dump all the stuff you don't want now! If you didn't do an Automute pass, you can mute inactive tracks manually now. If you did do an Automute, but it missed a few things, you can try cleaning up any little blemishes by ear.

DETERMINE YOUR DYNAMIC MIX STRATEGY

Now it's time to determine your basic approach to dynamic fader moves. And, as Click and Clack (the Tappet Brothers) would say, you can go about it in basically three ways: Method I, Method B, or Method III.

Method 1: UltraPilot One Bank At A Time

With this method, you build your dynamic mix in small numbers of channels (less than 16). In other words, in each mix recording pass, you make your moves in real time using UltraPilot faders, while never switching to the other bank in

that window, or to other Ultra-34 windows. This is the easiest and most intuitive way to go about it, and you'll probably find it works in the vast majority of cases.

Method B: Simultaneous Faders And Mouse

With this method, you assign your UltraPilot to the bank wherein you will be doing most of your moves. But, if you have one or two moves on the other bank, you can arm (put in Record/Ready) all the tracks in both banks that you will be recording on that pass, then use the faders to make moves in one bank and the mouse to make moves in the other bank.

Method III: Bank Switching

If you really want to simulate the time-honored (non-automated) way of doing all your moves in one pass, you can do it. But it's tricky. Of course, the good news is that if you fluff a move, it's easy to go back and fix the part you fluffed.

The main thing to remember here is that you don't want to arm any tracks on the bank you are switching to until AFTER you make the switch. That's because, when you switch over, you could record unwanted level jumps as UltraMix interprets the new UltraPilot controller position as a move. Instead, you switch the bank first, line up your fader for a move, and then hit the track Record/Ready key to punch into record. With a little practice, you'll find you can do this quickly, even on two or three tracks at once. The Null mode may prove easiest to use across banks.

Rather than dealing with banking and record toggling, you can use grouped faders across banks and windows. (See the Grouping Faders section on page 125.)

EDITING YOUR MIX USING EDIT MENU COMMANDS

You can use the familiar Cut, Copy, Paste, and Clear commands in your Edit menu to quickly make changes to your mix. These commands can be very useful in a number of circumstances. For example, if you've worked out some tricky moves and mutes for a vocal line and you want to patch them into another channel for stereo, you can transfer all your automation moves into that second fader in just a few seconds using the Copy command.

Intro To Edit Functions

In some cases, this will eliminate the need to go back and punch in changes on another pass.

There are two basic approaches to editing faders and mute events, either from selected faders in the fader windows (session or group master), or from selected faders and event types within the Event Editor. The fader window edit procedure is more “global” in nature and applies to any selected faders for the entire mix, inclusive of everything you have recorded on the faders. Using the Event Editor to manipulate data allows for concise editing of specific event types within certain time ranges on single or multiple faders, true. But the Event Editor has a local, small-town charm to it, too.

“Global” Fader Editing And The Edit Filter

Editing tools such as Cut, Copy, Paste, and Clear (“c/c/p/c”) are common functions that allow us to save a lot of time and energy over manual mixing (one of the main reasons that word processing on computers has replaced typewriters). UltraMix’s edit functions allow you to hone or construct a mix with maximum mix processing flexibility, allowing you to flow with patching or signal-routing changes, to avoid the “start from scratch” syndrome, and to easily come up with some creative ideas.

UltraMix offers an additional aid called the Edit Filter, which you’ll come across when using the c/c/p/c tools. A dialog prompt will be displayed, asking you what you’d like to edit or move on any selected fader. Each fader may contain level, mute and Automute events, depending on what you have recorded on various passes. This “what?” prompt is an UltraMix power tool (not a toy) that you will come to appreciate after a few mixes. Let’s start in on a few examples to learn about UltraMix fader editing.

To Copy events from one fader to another:

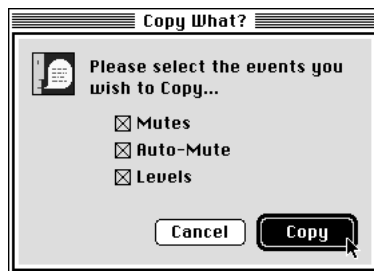
1. Select a fader that you’ve recorded events on (in this example, fader 1), using the mouse or left/right arrow keys.

2. From the Edit menu, select Copy Fader and you'll get the following prompt:



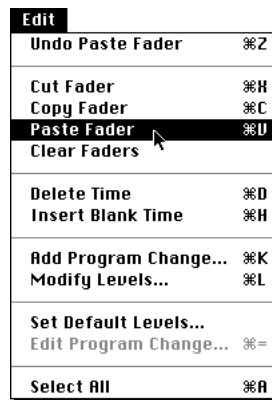
In this example, if you had just changed channel 1 from mono to stereo, using channel 2 as the second channel, you would probably want to duplicate the fader 1 moves (without having to rerecord them) by first copying them, and then pasting them over to fader 2. You would also want to retain the original channel 1 events as they are.

Since this Copy/Paste operation is global in nature, all of the events for the entire track duration will be copied and moved. The Edit Filter is the multiple-choice checkbox listing that allows you to choose any or all of the level, mute or Automutes to be used. Simply select or clear the appropriate checkboxes and click the Copy button. Once you click the Copy button you have succeeded in copying those "filtered" events into the computer's clipboard memory (but not yet onto the other fader).



 *To Paste events from one fader to another:*

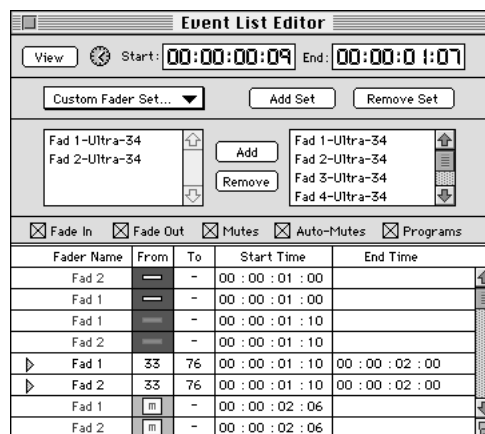
1. Select fader 2 with the mouse or arrow keys. Let's assume you haven't recorded any events on fader 2. If you had, it is important to note that all previous fader 2 events would be completely replaced(!) once the Paste action is completed.
2. Select Paste Fader from the Edit menu, click Paste, and you've successfully copied the events from the clipboard into fader 2.



You're done with this cloning exercise. If you play back the session in the above example, fader 1 and 2 will be identical.

 *To have some extra fun (that is, to see what you just did):*

1. Select both faders 1 and 2 and then choose Event Editor from the Windows menu (⌘/Ctrl-E or Windows>Event editor).



If you had enabled the Level, Mute and Automute filters, the list displays double everything: twins of each event, one per fader. Don't worry, it's still safe to drive. Close the Event Editor or play around a bit – we'll be revisiting it later (see page 152).

Another scenario: If you were unsure about the levels on a certain fader (say fader 5) and you wanted to rerecord them, but were uncertain enough to first back up the levels to an unused channel (fader 31) – you could use the Cut function. Let's also say that you like the Automute and mute events on fader 5, and that you only want to try recording the levels again.

 *To Cut events from one fader and Paste onto another:*

1. Start by selecting fader 5 with the mouse or left/right arrow keys. Choose Cut Fader from the Edit menu (⌘/Ctrl-X)...



...And the "Cut What?" dialog is displayed.



2. Clear the Auto-Mute and mute checkboxes – leave Levels checked – and click on the Cut button.



You have now removed the level data from the fader and placed it in the computer clipboard. This is different than copying, which would have left the data behind on fader 5. Cut allows for a fresh start with no level remnants to bother you.

3. Select fader 31 and then choose Paste Fader from the Edit menu. You now have the fader 5 Levels backed up on fader 31. Note that this Edit Filter function did not overwrite any current mutes or Automutes on fader 31, but replaced only the levels on fader 31, if any were present.

If you want to clear levels, mutes, or Automutes on any number of faders, use the Clear Faders command on the Edit menu. This command is especially handy for starting from scratch, that is, returning a fader to having a “clean slate.”

 *To Clear events from faders:*

1. Select any faders you want to clear by using the mouse or keyboard commands, then choose Clear Faders from the Edit menu.



The “Clear what?” dialog box is displayed. Select the event types that you want to remove from the selected faders, then click on the Clear button or hit the Enter key.



Some Basic Rules For Fader Edit Functions

- You can Undo any of the Cut/Copy/Paste/Clear functions. For instance, if you Paste information into the wrong place (oops!), immediately go to the Edit menu and select Undo (at least before you go on to something else). Your Paste command has been canceled. (If you had previously Cut or Copied a fader, it will still be saved on the clipboard). Undo is a single-step function, though, so you can only go back one step.

Edit	
Undo Clear Faders	⌘Z
Cut Fader	⌘H
Copy Fader	⌘C
Paste Fader	⌘U
Clear Faders	
Delete Time	⌘D
Insert Blank Time	⌘H
Add Program Change...	⌘K
Modify Levels...	⌘L
Set Default Levels...	
Edit Program Change...	⌘=
Select All	⌘A

- You can only Cut or Copy a single fader inside of a fader window and paste it elsewhere. You can Clear multiple faders.
- C/c/p/c occurs over the duration of the track. For instance, if you Cut or Copy a fader that contains only three minutes of data and Paste it onto a fader that has ten minutes of data, the three minutes (beginning to end, all inclusive) replaces the ten minutes of data.