



M9 Stompbox Modeler v2.0

DELAY | MOD | DISTORTION | FILTER | VERB

Advanced Guide

An in-depth exploration of the digital technologies and musical machinations of the M9 Stompbox Modeler.

ElectroPhonic Limited Edition

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M9 v2.0 ADVANCED GUIDE



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FEATURES

Welcome to the M9 Stompbox Modeler v2.0 Advanced Guide. This guide contains in-depth details of your M9's features and functionality not included in the Pilot's Handbook.

With over 100 Models and a Looper in one device, there's a lot to work with. Our goal with this guide is to provide you with the information you need to make it easy to find the sounds you're looking for.

In the chapters that follow, we'll be referring to the six Knobs that adjust the various parameters of the M9 effects. These are located directly under the LCD display.

As illustrated in the graphic below, in the top row left is the Model Select knob. To the right of that are Knobs 1 and 2. Knobs 3, 4 and 5 are in the second row, left to right. So when we mention adjusting an effect's first parameter with Knob 1, we're referring to the knob to the right of the Model Select knob, labeled 1 in the illustration.

• The current effect's switch location (1B) is displayed upper left

• Push Model Select knob to select the FX type - turn it to select the individual effect



• The name of the currently selected effect is displayed here (Growler)

• Turn Knobs 1 thru 5 to adjust the 5 parameters of the current effect

When Relative Mode is active, settings smoothly change relative to knob position

Firmware Updates

As of October, 2009, Line 6 has released Flash Memory Update v2.0 for the M9, adding numerous new FX Models and features.

If you're not running v2.0 firmware or greater, be sure to visit www.Line6.com for the latest info, and see **Appendix B** for instructions on how to upgrade your M9 using the Line 6 Monkey application (for free).

Firmware Update v2.0

Here's an overview of the new features we've included in the v2.0 firmware update:

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New FX Models

We've added over 20 new models in the v2.0 firmware. These include Pitch Glide, Smart Harmony, 6 different Mod FX including 2 unique Flangers, a Pattern Tremolo and a hand-wired MXR® Phase 90-inspired Phaser, a new Particle Verb, a Bass Octaver, 5 custom EQs and 8 Wah models from the POD X3 series.

Sync To MIDI Clock

You can now sync your Tap-based M9 FX to external MIDI clock, a popular user request that we're happy to include in v2.0.

Re-syncable LFO

Sync your Mod FX to the downbeat by simply hitting the TAP switch while playing.

Relative Mode

For those who want smooth parameter changes when they 'wake up' their physical knobs to adjust parameter values, we've implemented a user-selectable Relative Mode. For example, if your virtual setting is at 10% but your knob is at 80%, your setting will smoothly move in the direction you turn the knob, instead of rudely jumping to the knob's 80% position.

Pixel Heel & Toe

Your expression pedal heel & toe values are now displayed as pixel cutouts in the LCD. See **Chapter 3** for details.

Dim FX LED On/Off

For those who want to see only the active FX LEDs, you can globally turn Dim mode off.

Scene Folders

You now have access to 4 Scene folders (24 Scenes), with the ability to backup/restore an individual Scene, a Scene folder of 6 Scenes, or all 4 Scene folders at once via MIDI.

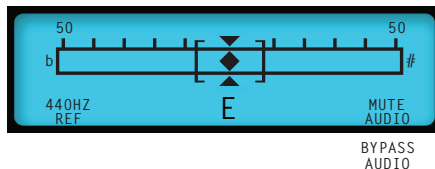
SETUP DETAILS

Before you begin using your M9, it's always a good idea to get in tune.

Tuner

To enter Tuner mode, press the 2B+3B switches simultaneously. The LCD will immediately display the Tuner. The current note you're tuning will be displayed in the lower center of the LCD.

If you'd like to tune to a reference other than standard 440, turn Knob 3 to select from 425 to 455. To toggle between Mute Audio (your guitar will be silent) and Bypass Audio (you'll hear your guitar dry with no FX), turn Knob 5.



Tuning is straightforward: when the graphic diamond is to the left of center, your note is flat; when it's to the right, you're sharp. When the diamond is precisely in the center, two triangles will appear above and below it, indicating your string is in tune.

To exit Tuner mode, press any footswitch and you'll return to normal operation.

Setup Mode

To enter Setup mode, press the 1B+2B switches simultaneously. The M9's LCD will display the first Setup screen, Looper: Levels & EQ. To access the three other Setup screens, one at a time, press the Model Select encoder. You'll toggle thru Tempo & Expression Pedals, Preferences & Scenes, MIDI, Gate & Display, then back to Looper: Levels & EQ again.

Remember how to enter Setup mode - we'll be referring to it several times in the chapters that follow. It's the first step in adjusting numerous settings that determine the way the M9 operates.

Depending on the way you like to work, most of your Global settings can be left alone after you've set them initially. They'll be recalled each time you power-up. Other settings are saved with individual presets. In the following pages we'll describe them all in detail.

Looper: Levels & EQ

In the first Setup screen you'll see two Looper Levels to adjust in the center of the LCD. The first is Play, which determines the volume of your Looper's playback as balanced with your live guitar. The second is Overdub, which determines the volume of your loop in Overdub mode.

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To clarify, if your Overdub Level is set to 90%, each time your loop begins a new overdub its volume will be reduced by 10%, sounding quieter and quieter with each overdub pass. The default level for Play and Overdub is 100%. Use Knobs 1 and 4 to adjust these levels.

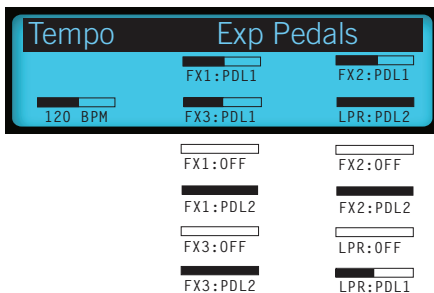


With Knobs 2 and 5 you can adjust Looper Hi Cut and Lo Cut EQ levels. Hi Cut rolls off the high end for loop playback (@2kHz), and Lo Cut rolls off the low end (@500Hz). If applied, this EQ affects the sound of loop playback only, having no effect on live guitar.

Knob 3 sets the Looper to play back Pre or Post the enabled FX in your current Scene. See **Chapter 5** for more details about using the Looper.

Tempo, Expression Pedals

Press the Model Select knob and you'll toggle to the second Setup screen, Tempo & Expression Pedals. In the lower left of the LCD you'll see a Tempo control, adjustable by turning Knob 3. This sets the global Tempo for FX that don't have a value assigned.



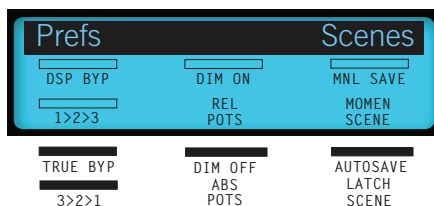
The other four Knobs in Setup screen 2 are dedicated to expression pedal assignments. Any or all 3 FX Units in the M9 can be controlled by an expression pedal when you plug one into the Pedal 1 or Pedal 2 jack. You can use up to 2 pedals at once.

Each pedal can be assigned to control an FX Unit or the Looper. You have 3 selection choices here: Off, Pedal 1 or Pedal 2. Knobs 1 & 2 set the assignments for FX 1 & FX 2, Knob 4 sets the assignment for FX 3, and Knob 5 sets the assignment for the Looper.

*Note: Looper pedal control is a global setting. FX pedal control settings are saved per Scene. See **Chapter 3** for more details on how to set up heel and toe pedal settings.

Preferences, Scenes

Press the Model Select knob while viewing the Tempo, Expression Pedals LCD and you'll toggle to Setup screen 3, Prefs & Scenes. In this LCD screen you can set Bypass Mode, Dim Mode, Routing, Relative Mode and Scene Modes. These are all global settings.



The Model Select knob toggles between True Bypass and DSP Bypass. In True Bypass, mechanically switching relays route your signal directly from input jack to output jack, bypassing all circuitry, for absolutely no processing or conversion all FX are bypassed.

If you're playing back a loop, however, or you want your Delay and Reverb trails to be heard when bypassing all FX, you must use DSP Bypass. If you want to use True Bypass, keep in mind that it can only be activated when all of the following conditions are met:

- True Bypass is enabled in Setup mode (via the Model Select knob).
- All 3 FX Units are in a bypass state.
- The looper is stopped.
- Looper mode is inactive (the Tap footswitch LED is not solid red).

Routing

Select your FX Routing setup with Knob 3: either 1>2>3 or 3>2>1. Please note that expression pedal assignments are retained per FX Unit # and follow the selected routing. For example, if FX1:PDL2, then PDL2 controls FX1 whether its first or last in the routing.

Dim

With the v2.0 update we've added a new feature that allows you to turn off the Dim setting for FX that are not active. With Dim set to OFF, only the active FX LEDs will be lit. All other LEDs will be off, making it easy to see which FX are currently ON. With Dim set to ON, the inactive FX LEDs will be dimly lit.

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Auto Save & Manual Save

Knob 2 in Setup screen 3 toggles between Auto Save and Manual Save. With Auto Save, every change you make to your Scene is saved, like a real pedal board. So if you select another Scene then return to the previous Scene, your settings will be just as you left them.

With Manual Save, changes made to your individual FX will be retained only if you don't change Scenes; if you do select a different Scene, all your changes will be lost. Manual Save is a good choice, however, when you want to be sure your Scenes will always be recalled exactly as you originally programmed them. See **Chapter 4** for more details.

Scene Modes

Knob 5 selects Momentary Scene or Latch Scene mode. In brief, Momentary mode lets you select a Scene and be able to tweak the individual FX in that Scene, where Latch mode lets you select a different Scene with each switch press.



The above graphic illustrates the LCD display for Scene Select mode. When in Latch Scene mode, the LCD remains displayed like this each time you select a Scene; in Momentary Scene mode, upon selecting a Scene you'll exit Scene Select mode, and the LCD will display the first active effect in the Scene you've selected. See **Chapter 4** for more in-depth info on Momentary Scene and Latch Scene modes.

Relative Pots

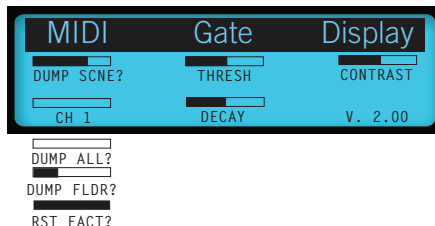
The M9 features Relative Mode for knob control, a popular user request. Use Knob 4 to select it. When you turn a knob with Relative Mode on, your parameter setting won't jump to the physical knob position, but will adjust its value smoothly, relative to the knob's current position. The other setting is Absolute, which means when you 'wake up' a knob by turning it, your parameter setting will instantly jump to the physical knob position.

To get to the fourth and final Setup screen from here, press the Model Select knob again.

MIDI, Gate, Display

The MIDI, Gate, Display screen is where you can back up your Scenes and folders, perform a Factory Reset, set up the global Noise Gate and adjust the contrast of the LCD Display.

- MIDI Channel 1 thru 16 or Omni is set with Knob 3



- Threshold, Decay and Contrast are adjustable with Knobs 1, 4 & 2

With a MIDI interface and a sysex application, you can back up all your M9 Scenes to your computer. This makes it easy to build a custom Scenes library, or exchange Scenes with others. To backup your Scene folders, or to dump the current Scene, follow these steps:

- Turn Knob 3 to set your MIDI Channel (Ch. 1-16 or Omni - the default is Ch. 1).
- Turn the Model Select knob to select “DUMP ALL?” (to back up all 4 Scene folders), “DUMP FLDR?” (to back up your current Scene folder), or “DUMP SCNE?” (to back up just the current Scene in its current state).
- With your computer set up to record sysex, press and hold TAP while you press down on the Model Select knob.

The M9 will immediately transmit the sysex file to your computer, creating a backup of your Scenes that you can store and recall at any time.

To load Scenes back into your M9, simply transmit the sysex file from your computer into the M9 via MIDI. This will immediately load the data into the M9’s memory.
*Note: For best results, set your M9 to Manual Save mode when loading Scene folders.

For more details on backing up your Scenes with MIDI dumps, see **Appendix B: Tips**.

Factory Reset

There may be times when you’d like to reset your M9 to its Factory settings. You may want to recall a particular Factory Scene, for example, or just get back to square one.

To do a Factory Reset, first back up any Scenes you’d like to keep (as described above), then follow the steps on the next page.

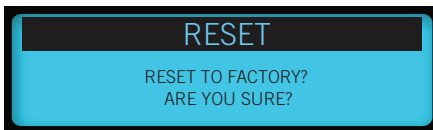
Setup Details

- Turn the Model Select knob until “RST FACT?” is displayed.



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- Press and hold TAP while you press down on the Model Select knob - “Reset To Factory? Are You Sure” will be displayed.



- To initiate the Factory Reset, press down on the Model Select knob again.

All Factory defaults will be reset, including Scene Presets and Global settings.

Gate

Knobs 1 and 4 in the center of the LCD control the Global Noise Gate. When activated, the Gate is in effect full time, for all your FX.

Knob 1 turns on the Gate and sets the Gate Threshold. Lower values make the Gate kick in at quieter levels; higher values make it kick in at louder levels.

Knob 4 sets the Gate Decay. Higher levels result in a longer transition time from non-gated to gated audio. Lower levels result in a quicker transition time.

Display

To adjust the contrast of the M9’s LCD display, use Knob 2. Set it to a value that looks good to you. Settings from 30-50% usually work well.

Version

Your current Flash Memory version number is displayed in the lower right of the LCD. This makes it easy to determine what version your M9 is currently running.

That basically covers the four Setup screens. When you’ve adjusted all the M9’s Setup parameters to your liking, press 1B+2B switches to exit Setup mode. As mentioned previously, the next time you power up your M9 all your Global settings will be recalled.

MODEL DETAILS

The following are details about a few late-breaking models and features that were implemented in the current M9 firmware. These were the result of customer requests, as well as features the development team wanted to add in the final months of development.

Tap-based FX

Many guitarists who use time-based FX like to set their delay times to a note value relative to the song tempo, as opposed to setting delay times in milliseconds. This has been included in the M9 as Tap-based FX. To set your delay time to tap tempo, turn Knob 1 to the far right and you'll see a quarter note symbol in the LCD. Change it to any note value you like. Now tap the desired tempo and your time-based effect will sync to it. Your note value is persistent, so when you scroll through other FX it will be retained. To set your delay time to ms, turn Knob 2 to the right again and you'll return to Time-based mode.

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Fine-Tune Mode

Fine-Tune Mode makes it easy to fine-tune just about any FX parameter in the M9. To fine-tune a parameter, simply press and hold TAP then turn the knob for the parameter you want to fine-tune.

For example, when you're in Time-based mode, you may want to fine-tune your delay time to an exact number. This may be necessary to match a song's tempo, or to set up precise stereo delays, to 240 ms L and 480 ms R for example. Here's how to do it:

- Adjust Knob 1 to set the L delay time close to the desired value.
- Press and hold the Tap switch and turn Knob 1 again to enter Fine-tune mode.
- Now fine-tune your L delay time to the ms with Knob 1 - repeat with Knob 3 for R.

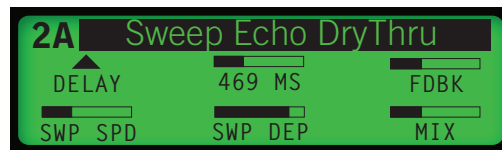


DryThru Models

Another popular request from DL4 users was to provide a completely dry signal path when using specific Delay models with a dry Mix setting, so that no tone coloration was added. When we originally created our Tape Echo, Tube Echo, Sweep Echo and Echo Platter models, for example, we also modeled the dry path of the classic delays these models were based on. We did this because the original effects added a certain tonal character to the sound when Mix was set to dry, and many guitar players wanted that sound.

3•2

To make everybody happy, we decided to add what we call DryThru models. These four models are identical to the original models of the same name, but when Mix is at 0%, we removed the tonal coloration of the originals, giving you a flat, uncolored sound.



Model Defaults

All FX in the M9 are programmed with Model Default settings. These provide you with a good musical experience when you first load up each effect, giving you great “stock” settings for that model. Some are also pre-configured for expression pedal control. So if you have an expression pedal plugged in and assigned to an FX Unit, when you select a new model we start you off with what we think is a good expression pedal setup for it. (See the next page for more info on setting heel and toe values for expression pedals).

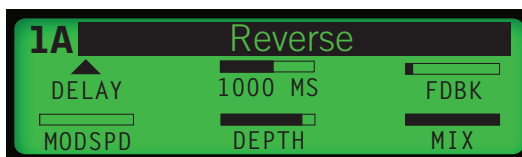
Mix

As with all other model details, the Mix control is set up to work like it did on the DL4, MM4 or other Line 6 product that first introduced a particular model. In keeping with this, you may notice that setting Mix to 100% sometimes engages a special setting found on the original effect, like vibrato in the U-Vibe, or a richer Leslie® sound in Rotary Dnm/Hrn.

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Expression Pedal Details

Almost any parameter in the M9 can be controlled by an expression pedal, as long as you've set up your FX Units and Looper assignments accordingly in Setup Mode. To set up expression pedal heel and toe values for the parameter you'd like to control, here's an example of how to do it. Let's say you'd like to control the Mix level of a Reverse Delay.



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- Select Reverse Delay in FX Unit 1A and adjust the sound to your liking.
- Plug in your expression pedal, then set it to the heel down position.
- Adjust the Mix level of the Reverse Delay with Knob 5 - set it to 0%.
- Put your expression pedal in the toe down position and set the Mix level to 100%.
- Play your guitar and work your pedal; the reverse delay will fade in and out.

You can repeat this with any effect parameters you like. Your expression pedal will control them simultaneously. If you get to a point where you want to start over, simply unplug your pedal from the rear panel and all unsaved pedal assignments will be cleared.

Pixel Heel & Toe

In v2.0 firmware or greater we've added a new Pixel Heel & Toe feature to display your current heel and toe expression pedal values. As illustrated in the LCD below, your heel and toe values will be displayed in the horizontal or vertical parameter bars as a clear pixel cutout. This enables you to see exactly where your heel and toe values are set.



If no expression pedal heel and toe values are set for a particular parameter, there will be no pixel cutout in the graphic.

Tube Compressor Model

In addition to the 5 compressors taken from the original M13 Stompbox Modeler, which are all typical stomp box type compressors, we've included a new Tube Comp model in the M9 based on the studio classic Teletronix LA-2A® Optical Compressor, known for its smooth, easy to adjust, tube sound. You'll find it at the end of the Distortion FX group.

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Here's how it works:

- Adjust Knob 1 to set the Threshold - lower values result in more compression, along with an automatic makeup gain stage dependent upon the Threshold setting.
- Set the output Level with Knob 2. To use the Tube Comp model for boost only, use a high Threshold value and adjust your Level as desired.

*For a detailed look at all the FX models in the M9 (over 100 of them), please download the **M9 & M13 v2.0 FX Parameters** pdf at www.line6.com/manuals.

SCENE MODE DETAILS

The M9 offers you two different ways to select your Scenes, depending on how you like to work. Your choices are Momentary Scene mode or Latch Scene mode.

To clarify what we mean by a Scene, it's basically the equivalent of a unique pedal board setup, which you can program yourself. It includes up to 3 active FX and another 3 FX set up but bypassed. When you select a particular Scene, all 6 FX are immediately loaded into your M9, exactly the way they were saved. You can switch on any of the 3 bypassed FX at any time, replacing any of the 3 active FX Units in their respective rows.

If you use an expression pedal in your rig, you should know that all of your heel & toe pedal assignments can be stored in a Scene, making many unique combinations possible. Here are some details explaining Momentary Scene mode and Latch Scene mode.

4•1

Momentary Scene Mode

With your M9 in Momentary Scene mode, when you step on the 3A+Tap switches to enter Scene Select mode the LCD will display the 6 Scenes available as 3 rows of A & B, representing each of the 3 rows of FXA and FXB footswitches, as illustrated below.

• These 6 Scene names represent the 6 Scene memory locations

• To select a different Scene folder, turn the Model Select knob

• To select a Scene, step on one of the FX Unit A or B footswitches



• Scene 2A is the current Scene, as indicated by the inverted letter A

• Press the Tap switch to exit Scene Select mode and return to the current Scene

- You select a Scene by stepping on one of the FX A or B switches that correspond to the A or B displayed in the LCD. The Scene you select will be loaded immediately.
- If you select a different Scene folder (1 thru 4), you must then select a Scene within 3 seconds; otherwise, the display will time out and revert to the current Scene folder.

Scene Mode Details

- When your Scene loads, you'll see its first active effect displayed in the LCD. You can tweak the parameters, if you like, or you can activate any of the bypassed FX.



- To see the next effect displayed in the LCD, press the Tap switch + the Model Select knob simultaneously.
- If you're in Auto Save mode, any changes you make to the Scene will be saved, like a real pedal board. (see **Page 3•2** for details on Auto Save vs. Manual Save)
- To select a new Scene, step on the 3A+Tap switches again and you'll return to Scene Select mode. Repeat the steps above and select a new Scene.

Latch Scene Mode

In Latch Scene mode the main difference is, when you enter Scene Select mode the 3 rows of A & B Scene names remain displayed in the LCD.



Any Scene you select will be loaded in the usual way, but you won't see its FX displayed in the LCD. The advantage to Latch Scene mode is, you're always only 1 switch away from selecting a new Scene. So you can have 6 completely different setups ready to go, each only 1 switch away. The disadvantage is, you can't tweak or bypass any of the individual FX directly, but you can bypass the current Scene by pressing its switch (its LED will flash).

Auto Save

Whether you're in Momentary Scene mode or Latch Scene mode, your choice of Auto Save or Manual Save is an important one. In Auto Save mode, any change you make to your Scene is saved automatically. This includes not only the on or off state of the individual FX in your Scene, but every parameter you adjust in every effect.

Let's load a Factory Scene and see what happens in Auto Save mode. Make sure you're in Auto Save and Momentary Scene mode first, so you can access the individual FX. To double-check, press the 1B+2B switches simultaneously to enter Setup mode. Navigate to the Prefs LCD and look under 'Scenes' to see if AUTOSAVE and MOMEN SCENE are assigned. If you see MNL SAVE and LATCH SCENE, change them with Knob 2 and Knob 5.



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Now press 3A+Tap to enter Scene Select mode. Choose Scene 2A, center row. Notice the three A switches are lit. That's because the active FX are loaded in the A locations of all 3 FX Units. You should see the first effect, Tube Drive displayed in the LCD.



Play your guitar for a minute. You'll hear a heavy Flanging Reverse Delay sound. Step on all three B switches now and play. It's a very different sound. Now enter Scene Select mode (3A+Tap) and select 1B. It's a Sub Octave Fuzz preset. Enter Scene Select again, select 2A and play. 2A has lost its Flanging Reverse Delay sound. That's because the M9 has saved your previous changes. Notice all three B switches are lit, just as you left them.

Manual Save

To see how Manual Save differs from Auto Save, let's do a Factory Reset and start over. If you have any special Scenes saved, you can defer this exercise until you back up your Scenes. Assuming you're okay to do a reset, press the 1B+2B switches simultaneously to enter Setup mode. Navigate to the MIDI screen and turn the Model Select knob so it displays RST FACT?



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Now hold TAP and press down on the Model Select knob (you'll see "Are You Sure?"). Press Model Select again to confirm. After your M9 resets, enter Setup mode again (press 1B+2B), navigate to the Prefs LCD and select MNL SAVE under Scenes by turning Knob 2.



Now repeat the same steps you did in the Auto Save exercise. Enter Scene Select mode (3A+Tap), select Scene 2A, then switch on all the B switches to change the sound of the Scene. Enter Scene Select mode again, select Scene 1B for a moment, re-enter Scene Select mode and select Scene 2A again. Now play your guitar - you'll hear Reverse Delay.



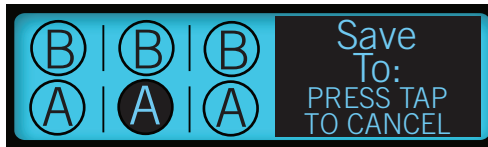
Notice all the A switches are lit this time. Scene 2A did not retain the changes you made. In Manual Save mode, every time you select a Scene, it will be recalled exactly the same way the next time you select it, even if you make temporary changes to it.

Scene Copy

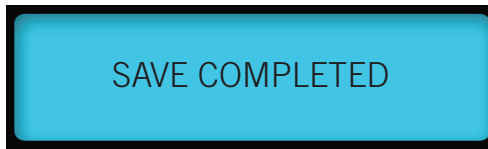
With the M9 you can create your own custom Scenes and save them in all 6 Scene memory locations. You also have 4 Scene folders that you can back up on your computer, as described below and in **Chapter I**. This gives you the flexibility to customize and store an unlimited number of Scenes to build your own M9 library of sounds.

Once you begin tweaking your FX models and creating combinations you like, you'll want to familiarize yourself with Scene Setup mode. This is the mode in which you'll store your custom Scenes. Let's take it step by step and you'll see how easy it is. First set up a combination of FX you'd like to store as a Scene, then do the following:

- Press and hold the 3A+Tap switches simultaneously for a few seconds.
- The LCD will briefly enter Scene Select mode, then change to Scene Setup mode. You'll see "Save To:" displayed in the LCD, indicating you're about to save a Scene.



- Select the destination of your Save by pressing the FX switch of your choice.



- "Save Completed" will appear in the LCD. You've just saved your first Scene.

You can use this same method to move Scenes around or customize them. Just start with the Scene you want to save, enter Scene Setup mode, then save it to any A or B location.

Scene Folders

As described earlier, we've added 4 Scene Folders to the M9, each consisting of 6 Scenes, for a total of 24 Scene memories. Whenever you're in Scene Select mode, you can access any Scene in any of the 4 Scene folders by simply turning the Model Select knob.

When the Scene folder number you're looking for is displayed in the LCD, select any A or B Scene in that folder by pressing the appropriate FX switch. You must select a Scene within a few seconds, or the M9 will time out and revert to the current Scene folder. If this happens before you make your selection, just turn the Model Select knob again and select your Scene. For info on Scene folder backup/restore, see **Chapter I** and **Appendix A**.

Effect Copy

The main purpose of Effect Copy is to enable you to copy your current effect to another FX A or B location, and to save it there with all your edits intact. This can be very useful when you've been tweaking an effect and you get it sounding exactly right, but you'd rather have it routed either before or after another effect in your Scene. Effect Copy makes this extremely easy to do. Here's how - in FX 1A, select Growler from the Filter FX group:

- Play your guitar for a minute and adjust the parameters to your liking.

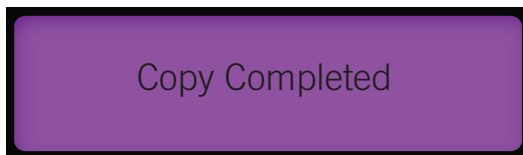


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- Press and hold the Model Select knob - the LCD will display the following:



- Press the FX 3A footswitch as the new destination for your edited Growler effect.



- The LCD will display "Copy Completed"- then Growler will appear in location 3A.



That's all there is to it. You can use Effect Copy to simply re-arrange your existing FX in a Scene, or experiment with duplicates of a particular sound you've created in the same Scene for an extreme or unique musical effect.

LOOPER DETAILS

The Looper in the M9 is similar to the looper in the DL4 Stompbox Modeler. It gives you up to 28 seconds of mono recording time at normal speed, or 56 seconds at half speed. Keep in mind your loop will play back in mono, even if you're running stereo FX.

Looper & Live Guitar

When you record and play back a loop, your current Scene will still be active. In fact, while your loop is playing you can select a new Scene at any time. Just press and hold the Tap switch to exit Looper mode, then select a Scene as usual and tweak your effects.

Since the M9 responds to MIDI messages, you can optionally set up a MIDI control device to control the looper, leaving all 6 of your FX Unit switches dedicated to your M9 effects. That way you could switch your M9's 3 sets of A and B effects on or off at any time and still control Play, Record, Overdub, Half Speed and Reverse.

Below is a Reference Table of MIDI CC values for controlling the M9 Looper functions via MIDI. For a more comprehensive list of M9 MIDI messages, see **Appendix A**.

MIDI CC Reference Table : Looper Control

M9 Footswitch	MIDI CC#	Looper Function
Record/Overdub	50	0 to 63 = Overdub 64 to 127 = Record
Play/Stop	28	0 to 63 = Stop 64 to 127 = Play
Half Speed	36	Toggles between Half Speed & Normal Speed
Reverse	85	Toggles Reverse On or Off
Undo/Redo	82	Activates Undo/Redo
Play Once	80	Activates Play Once function
Pre/Post (in Setup)	84	0 to 63 = Pre 64 to 127 = Post
Looper Control	86	0 to 63 = Exit 64 to 127 = Enter

Expression Pedal Control

You can optionally control Looper EQ, Playback and Overdub Levels with an expression pedal by setting up your heel and toe values and assignments in Setup Mode, as described in **Chapter 2•2**. Also see **Chapter 3** for more expression pedal info.

Looper Mode

You enter Looper mode by pressing and holding the TAP switch. In Looper mode, the six A B switches control the Looper, enabling you to record and play back a loop while your current Scene is active. Here are the details:



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1 Looper Switch – when you press and hold the TAP switch for a few seconds it will remain lit solid red, indicating the two rows of FX A & B switches will now control various functions of the looper. You’ll also see LPR ON briefly displayed in the LCD. Your current Scene will still be active, and the first effect in your Scene will be displayed in the LCD.

2 Record/Overdub – to record a guitar loop, step on this switch and the looper will record up to 28 seconds of whatever you play. Step on it a second time and your recorded loop will play back immediately, with Overdub mode activated (its LED will flash).

Overdubbing – once you have a loop recorded, you can layer an overdub with your current loop at any time. Simply play back the loop and step on the Record/Overdub switch. Your new live guitar will be recorded along with your previous guitar track.

Looper Levels – the Playback and Overdub Level of your loop will be determined by the Looper Levels you set in Setup mode (see **Chapter 2•2**). Play Level is the volume of your recorded loop in relation to your live guitar volume. Overdub Level is the level of your loop that will be recorded each time the loop cycles in Overdub mode.

To clarify, if Overdub Level is set at 80%, every time your loop cycles in Overdub mode it will decrease in volume by 20% in relation to your live guitar. For no reduction in volume, set Overdub Level to 100%, but be aware that hot levels may build up and distort.

EQ – your recorded loop will also be affected by the EQ settings you make in Setup mode. If Hi Cut is set to On, your loop will play back with the high end slightly attenuated. Conversely, if Low Cut is set to On, your loop will play back with the low end slightly cut. Both Hi Cut and Low Cut can be active or off at the same time.

3 Play/Stop – this switch simply plays or stops your loop. When in Play mode, you can step on Record/Overdub at any time to overdub live guitar with your recorded loop.

4 Play Once – when you step on this switch, your loop will play once then stop.

5 Undo/Redo – to undo your most recent take you recorded in Overdub mode, step on the Undo switch. Your earlier recording will remain intact. Only the last take will be undone. Press the Undo switch again to Redo the last Overdub (new feature in v2.0).
*Note: there's no way to archive loops in memory. Only the current loop session is saved.

6 Half Speed – step on this switch while in Play mode and your loop will play back at half speed. If you switch it again it will toggle back to normal speed. If you want to record an overdub while your loop is playing back at half speed, simply step on the Record switch and play. If you then switch back to normal speed, your new track will play at double speed, while your original track will play at normal speed, as it was originally recorded.
*Tip: Double your loop time to 56 seconds by recording your entire loop in Half Speed mode.

7 Reverse – this switch puts your loop into reverse, so it will play backwards. You can activate Reverse at normal speed or half speed, and you can also record an overdub while Reverse is activated. If you do so, when you exit Reverse your newly recorded track will play backwards, and the original track will play back normally, as it was recorded.

Looper Pre/Post – the Looper Pre/Post setting is available in Setup mode. To adjust it, press the 1B+2B switches simultaneously to enter Setup mode, then navigate to the Looper: Levels screen. The LPR PRE or POST setting determines whether your loop will play back pre or post the FX in your current Scene. If set to PRE, this means your loop will not pass thru the current FX. If set to POST, your loop will play back with your Scene FX applied. Experiment with the two different settings to hear the difference.

Looper Tutorial

If you're new to loopers, here's a basic example of how you might use the M9 Looper along with your live guitar. We'll step thru the recording of a loop, add an overdub or two, then experiment with Half Speed and Reverse.

Before we begin, make sure you're in Momentary Scene mode. Press 1B+2B to enter Setup mode, then navigate to the Prefs / Scenes LCD and make sure MOMEN SCENE is displayed in the lower right. If it's set to LATCH SCENE, turn Knob 5, bottom row right, to toggle it to MOMEN SCENE. When you've done that, press 1B+2B to exit Setup mode.

Now enter Scene Select mode (press 3A+Tap) and you'll see the 3 rows of A B Scenes displayed in the LCD. Select a Scene by stepping on any A or B switch, and you'll see the first loaded FX model for that Scene displayed in the LCD.

Play your guitar to make sure you're happy with the sound. If not, select a different Scene. When you're ready, press and hold the TAP switch to enter Looper mode, making sure the TAP light is lit solid red (not flashing), Now follow these steps:

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- Step on the Record switch and play. Make sure you hit the downbeat accurately, so when you play back the loop it will start exactly on the beat. This is especially important if you want the loop to be rhythmically correct when it cycles around.
- When you reach a good out-point, step on the Play switch. This will take your new loop out of record and immediately play it back. Let it loop around a few times and see if sounds good. If it doesn't sync quite right, press Stop then record a new take.
- If you're happy with your loop, decide what you'd like to play as an overdub. Jam along with your loop a few times in Play mode, then when you're ready to layer an overdub, step on the Overdub switch and play your part. Press Stop when you're done. If you made a mistake, press Undo to clear it. Press Redo to get it back.
- Press Play and listen to your loop. You should hear your original guitar part plus your overdub. As it plays, press the Half Speed switch. You'll hear your loop an octave lower, at half its normal speed. Press Half Speed again to return to normal speed.
- As your loop continues to play, press the Reverse switch. You'll hear your loop play backwards. As an experiment, let it roll and hit the Overdub switch. Play for the duration of your loop then hit Stop.
- Hit the Reverse switch to exit, then press Play. You'll hear your initial loop and your first overdub as originally recorded, while your second overdub plays in reverse.

This should demonstrate a few of the possibilities. Feel free to experiment on your own.

APPENDIX A : REFERENCE

MIDI Control

The M9 will send and receive MIDI CC and Program Change messages on any MIDI Channel from 1 thru 16 or Omni, selectable from the MIDI screen in Setup mode. MIDI implementation includes MIDI CCs for Looper Control, FX Unit On and Bypass messages, Tap Tempo, Expression Pedal CCs and Program Change messages for Scene select. It is therefore possible to control the M9 from a MIDI controller or a computer sequencer.

The most common application would probably be to use a separate MIDI controller to control the M9 Looper, so that all 6 Scene select switches on the M9 would be available for individual FX control.

Individual Model selection and assignment for each FX Unit from the 5 different FX groups is not implemented, but individual FX loaded into the A and B memory locations of all 3 FX Units can be engaged or bypassed via MIDI CCs. The MIDI Reference Tables in this chapter represent the currently implemented MIDI spec.

Looper & Expression Pedals

M9 Footswitch	MIDI CC#	Looper Function
Record/Overdub	50	0 to 63 = Overdub 64 to 127 = Record
Play/Stop	28	0 to 63 = Stop 64 to 127 = Play
Half Speed	36	Toggles between Half Speed & Normal Speed
Reverse	85	Toggles Reverse On or Off
Undo/Redo	82	Activates Undo/Redo
Play Once	80	Activates Play Once function
Pre/Post (in Setup)	84	0 to 63 = Pre 64 to 127 = Post
Looper Control	86	0 to 63 = Exit 64 to 127 = Enter
Expression Pedal 1	1	0 to 127
Expression Pedal 2	2	0 to 127
Tap Tempo	64	2 taps determine tempo

FX On/Off Toggle

Memory Location	MIDI CC#	
FX Unit 1A	11	0 to 63 = Bypass 64 to 127 = On
FX Unit 1B	12	0 to 63 = Bypass 64 to 127 = On
FX Unit 2A	14	0 to 63 = Bypass 64 to 127 = On
FX Unit 2B	15	0 to 63 = Bypass 64 to 127 = On
FX Unit 3A	17	0 to 63 = Bypass 64 to 127 = On
FX Unit 3B	18	0 to 63 = Bypass 64 to 127 = On

Scene Select

Memory Location	Program Change #	Scene Selected
Scene 1A (Fldr 1; 3)	0 (Fldr 1); 12 (Fldr 3)	1A (Fldr 1); 1A (Fldr 3)
Scene 1B (Fldr 1; 3)	1 (Fldr 1); 13 (Fldr 3)	1B (Fldr 1); 1B (Fldr 3)
Scene 2A (Fldr 1; 3)	2 (Fldr 1); 14 (Fldr 3)	2A (Fldr 1); 2A (Fldr 3)
Scene 2B (Fldr 1; 3)	3 (Fldr 1); 15 (Fldr 3)	2B (Fldr 1); 2B (Fldr 3)
Scene 3A (Fldr 1; 3)	4 (Fldr 1); 16 (Fldr 3)	3A (Fldr 1); 3A (Fldr 3)
Scene 3B (Fldr 1; 3)	5 (Fldr 1); 17 (Fldr 3)	3B (Fldr 1); 3B (Fldr 3)
Scene 1A (Fldr 2; 4)	6 (Fldr 2); 18 (Fldr 4)	1A (Fldr 2); 1A (Fldr 4)
Scene 1B (Fldr 2; 4)	7 (Fldr 2); 19 (Fldr 4)	1B (Fldr 2); 1B (Fldr 4)
Scene 2A (Fldr 2; 4)	8 (Fldr 2); 20 (Fldr 4)	2A (Fldr 2); 2A (Fldr 4)
Scene 2B (Fldr 2; 4)	9 (Fldr 2); 21 (Fldr 4)	2B (Fldr 2); 2B (Fldr 4)
Scene 3A (Fldr 2; 4)	10 (Fldr 2); 22 (Fldr 4)	3A (Fldr 2); 3A (Fldr 4)
Scene 3B (Fldr 2; 4)	11 (Fldr 2); 23 (Fldr 4)	3B (Fldr 2); 3B (Fldr 4)

BPM / Milliseconds

BPM	1/4 Note	1/8 Note	1/16 Note	1/4 Triplet	1/8 Triplet	1/32 Note
80	750	375	187.5	500	250	94
82	732	366	183	488	244	91
84	714	357	178	476	238	89
86	698	348	174	465	233	87
88	682	341	170	455	227	85
90	667	333	167	444	222	83
92	652	326	163	435	217	82
94	638	319	159	426	213	80
96	625	312	156	417	208	78
98	612	306	153	408	204	77
100	600	300	150	400	200	75
102	588	294	147	392	196	74
104	577	288	144	385	192	72
106	566	283	142	377	189	71
108	555	277	139	370	185	69
110	545	272	136	364	182	68
112	536	268	134	357	179	67
114	526	263	132	351	175	66
116	517	259	129	345	172	65
118	508	254	127	339	169	64
120	500	250	125	333	167	63
122	492	246	123	328	164	61
124	484	242	121	323	161	60
126	476	238	119	317	159	60
128	469	234	117	312	156	59
130	462	231	115	308	154	58
132	455	227	113	303	152	57

Miscellaneous CC Commands

Command	MIDI CC#	
Bypass All + FX Loop	23	0 to 63 = Bypass 64 to 127 = Undo Byp.
Bypass All - FX Loop	24	0 to 63 = Bypass 64 to 127 = Undo Byp.
Tuner Mode	69	0 to 63 = Exit 64 to 127 = Enter
Looper Levels	---	Controlled via EXP pedal only -- not MIDI CC

APPENDIX B : TIPS

This chapter includes some helpful tips on how to save and recall your custom Scenes, as well as step by step instructions on how to update your firmware.

It's important to be aware that the M9 will function differently depending on whether you have it set to Auto Save or Manual Save mode, as described in **Chapter 4**. In the following examples, we'll outline those differences and hopefully answer any questions you may have regarding saving and recalling Scenes.

MIDI Dumps

When saving Scenes via MIDI Dumps and loading them back into your M9, you should be aware of the fact that Auto Save and Manual Save will have an effect on whether your Scenes are automatically saved in your M9 or not.

For example, if you back up a single custom Scene to your computer via MIDI using the DUMP SCENE command, then later you want to load that Scene back into your M9, here are your two options for saving your Scene:

1. With your M9 set to Auto Save...

- Select the destination Scene location you want to use in your M9 (such as Scene 1A), then send the sysex from your computer via MIDI. Your custom Scene will load into Scene 1A and automatically save to that location.

2. With your M9 set to Manual Save...

- Select the destination Scene location you want to use in your M9 (such as Scene 1A), then send the sysex from your computer via MIDI. Your custom Scene will load into Scene 1A, but it will NOT automatically save to that location. To save it, you must immediately enter Scene Setup mode after you load the Scene into location 1A, then manually save that Scene (as described on **Page 4•4**).

The exception to this rule is when you use the DUMP ALL or DUMP FLDR commands to back up your Scene folders to your computer, then you want to load those Scene folders into your M9 again. In this case, it's best to set the M9 to Manual Save mode. Then when you send the sysex via MIDI from your computer into your M9, all your Scenes will load and be saved in your M9 automatically.

Recalling The Current Scene

If you change a Scene's configuration, then you enter Scene Select mode and recall the same Scene you're already on, the Scene will not change from its current settings.

If you select a different Scene, however, then go back to your previous scene, you will get different results depending on whether you're in Manual Save or Auto Save mode, as follows:

- When in Auto Save mode, the M9 will retain all the changes you just made. All the previously saved settings will be overwritten with your most recent settings.
- When In Manual Save mode, the M9 will NOT retain all the changes you just made. Instead, it will recall the Scene's previously saved settings.

Flash Memory Update Instructions

Here are some instructions on how to update your M9's Flash Memory using your computer. Visit www.Line6.com to keep up-to-date on the latest M9 news - that's the best place to get information about any new firmware update that may be released.

Needed:

- A MIDI interface that connects to your computer via USB (download the current Driver for it if you don't already have it installed).
- 2 MIDI cables (or a MIDI interface that comes with MIDI cables attached).
- The latest Line 6 Monkey application installed on your computer.

Procedure:

- Connect your M9 to your computer via your MIDI interface and MIDI cables.
- Make sure your MIDI interface Driver is installed and working.
- Launch the Line 6 Monkey application.
- You should see your M9 as a connected device.
- Select the Flash Memory line item.
- Click the blue button and follow the on-screen instructions.
- Line 6 Monkey will install the latest firmware into your M9.

