

JamMan

LOOPER/PHRASE
SAMPLER DELAY

Owner's Manual



IMPORTANT SAFETY INFORMATION



The symbols shown above are internationally accepted symbols that warn of potential hazards with electrical products. The lightning flash with arrowpoint in an equilateral triangle means that there are dangerous voltages present within the unit. The exclamation point in an equilateral triangle indicates that it is necessary for the user to refer to the owner's manual.

These symbols warn that there are no user serviceable parts inside the unit. Do not open the unit. Do not attempt to service the unit yourself. Refer all servicing to qualified personnel. Opening the chassis for any reason will void the manufacturer's warranty. Do not get the unit wet. If liquid is spilled on the unit, shut it off immediately and take it to a dealer for service. Disconnect the unit during storms to prevent damage.

SAFETY INSTRUCTIONS

NOTICE FOR CUSTOMERS IF YOUR UNIT IS EQUIPPED WITH A POWER CORD.

WARNING: THIS APPLIANCE SHALL BE CONNECTED TO A MAINS SOCKET OUTLET WITH A PROTECTIVE EARTHING CONNECTION.

The cores in the mains lead are coloured in accordance with the following code:

GREEN and YELLOW - Earth **BLUE** - Neutral **BROWN** - Live

As colours of the cores in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

- The core which is coloured green and yellow must be connected to the terminal in the plug marked with the letter E, or with the earth symbol, or coloured green, or green and yellow.
- The core which is coloured blue must be connected to the terminal marked N or coloured black.
- The core which is coloured brown must be connected to the terminal marked L or coloured red.

This equipment may require the use of a different line cord, attachment plug, or both, depending on the available power source at installation. If the attachment plug needs to be changed, refer servicing to qualified service personnel who should refer to the table below. The green/yellow wire shall be connected directly to the units chassis.

CONDUCTOR	WIRE COLOR	
	Normal	All
L	LIVE	BROWN BLACK
N	NEUTRAL	BLUE WHITE
E	EARTH GND	GREEN/ YEL GREEN

WARNING: If the ground is defeated, certain fault conditions in the unit or in the system to which it is connected can result in full line voltage between chassis and earth ground. Severe injury or death can then result if the chassis and earth ground are touched simultaneously.

WARNING FOR YOUR PROTECTION READ THE FOLLOWING:

KEEP THESE INSTRUCTIONS

HEED ALL WARNINGS

FOLLOW ALL INSTRUCTIONS

THE APPARATUS SHALL NOT BE EXPOSED TO DRIPPING OR SPLASHING LIQUID AND NO OBJECT FILLED WITH LIQUID, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS

CLEAN ONLY WITH A DRY CLOTH.

DO NOT BLOCK ANY OF THE VENTILATION OPENINGS. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

DO NOT INSTALL NEAR ANY HEAT SOURCES SUCH AS RADIATORS, HEAT REGISTERS, STOVES, OR OTHER APPARATUS (INCLUDING AMPLIFIERS) THAT PRODUCE HEAT.

ONLY USE ATTACHMENTS/ACCESSORIES SPECIFIED BY THE MANUFACTURER.

UNPLUG THIS APPARATUS DURING LIGHTNING STORMS OR WHEN UNUSED FOR LONG PERIODS OF TIME.

Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or third prong are provided for your safety. If the provided plug does not fit your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

MAINS DISCONNECT: The plug shall remain readily operable. For rack-mount or installation where plug is not accessible, an all-pole mains switch with a contact separation of at least 3 mm in each pole shall be incorporated into the electrical installation of the rack or building.

IMPORTANT SAFETY INFORMATION

ELECTROMAGNETIC COMPATIBILITY

This device complies with part 15 of the FCC Rules and the Product Specifications noted on the **Declaration of Conformity**. Operation is subject to the following two conditions:

- this device may not cause harmful interference, and
- this device must accept any interference received, including interference that may cause undesired operation.

Operation of this unit within significant electromagnetic fields should be avoided.

- use only shielded interconnecting cables.

U.K. MAINS PLUG WARNING

A molded mains plug that has been cut off from the cord is unsafe. Discard the mains plug at a suitable disposal facility.

NEVER UNDER ANY CIRCUMSTANCES SHOULD YOU INSERT A DAMAGED OR CUT MAINS PLUG INTO A 13 AMP POWER SOCKET.

Do not use the mains plug without the fuse cover in place. Replacement fuse covers can be obtained from your local retailer. Replacement fuses are 13 amps and **MUST** be ASTA approved to BS1362.



If you want to dispose this product, do not mix it with general household waste. There is a separate collection system for used electronic products in accordance with legislation that requires proper treatment, recovery and recycling.

Please household in the 25 member states of the EU, in Switzerland and Norway may return their used electronic products free of charge to designated collection facilities or to a retailer (if you purchase a similar new one).

For Countries not mentioned above, please contact your local authorities for a correct method of disposal. By doing so you will ensure that your disposed product undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health.

DECLARATION OF CONFORMITY

Manufacturer's Name: Harman Music Group
Manufacturer's Address: 8760 S. Sandy Parkway
Sandy, Utah 84070, USA

declares that the product:

Product name: JamMan Delay

Product option: all (requires Class II power adapter that conforms to the requirements of EN60065, EN60742, or equivalent.)

conforms to the following Product Specifications:

Safety: IEC 60065 -01+Amd 1
EMC: EN 55022:2006
EN 55024:1998
FCC Part 15

Supplementary Information:

The product herewith complies with the requirements of the:

Low Voltage Directive 2006/95/EC
EMC Directive 2004/108/EC.
RoHS Directive 2002/95/EC
WEEE Directive 2002/96/EC
EC Regulation 278/2009

With regard to Directive 2005/32/EC and EC Regulation 1275/2008 of 17 December 2008, this product is designed, produced, and classified as Professional Audio Equipment and thus is exempt from this Directive.

Director, Engineering
Signal Processing
8760 S. Sandy Parkway
Sandy, Utah 84070, USA
Date: April 28, 2011

European Contact:

Your local DigiTech Sales and Service Office or
Harman Music Group
8760 South Sandy Parkway
Sandy, Utah
84070 USA
Ph: (801) 566-8800
Fax: (801) 568-7583

Warranty

We at DigiTech® are very proud of our products and back up each one we sell with the following warranty:

1. The warranty registration card must be mailed within ten days after purchase date to validate this warranty, or you can register via our website (www.digitech.com).
2. DigiTech warrants this product, when used solely within the U.S., to be free from defects in materials and workmanship under normal use and service.
3. DigiTech liability under this warranty is limited to repairing or replacing defective materials that show evidence of defect, provided the product is returned to DigiTech WITH RETURN AUTHORIZATION, where all parts and labor will be covered up to a period of one year (this warranty is extended to a period of six years when the product has been properly registered by mail or through our website). A Return Authorization number may be obtained from DigiTech by telephone. The company shall not be liable for any consequential damage as a result of the product's use in any circuit or assembly.
4. Proof-of-purchase is considered to be the burden of the consumer.
5. DigiTech reserves the right to make changes in design, or make additions to, or improvements upon this product without incurring any obligation to install the same on products previously manufactured.
6. The consumer forfeits the benefits of this warranty if the product's main assembly is opened and tampered with by anyone other than a certified DigiTech technician or, if the product is used with AC voltages outside of the range suggested by the manufacturer.
7. The foregoing is in lieu of all other warranties, expressed or implied, and DigiTech neither assumes nor authorizes any person to assume any obligation or liability in connection with the sale of this product. In no event shall DigiTech or its dealers be liable for special or consequential damages or from any delay in the performance of this warranty due to causes beyond their control.

NOTE: The information contained in this manual is subject to change at any time without notification. Some information contained in this manual may also be inaccurate due to undocumented changes in the product or operating system since this version of the manual was completed. The information contained in this version of the owner's manual supersedes all previous versions.

Table of Contents

Overview	1
Quick Start - Connections	2
Quick Start - Looper	3
Quick Start - Delay	8
Guided Tour - Front Panel	12
Looper Controls.....	12
Delay Controls	15
Footswitches	17
Guided Tour - Rear Panel	18
Making Connections	20
Signal Path	24
Delay Types and Parameters	26
Storing and Recalling Delay Settings	28
Setting Delay Time with the Delay Tempo Footswitch	30
Synchronizing Delay Tempo to Loop Tempo	32
Using an Expression Pedal - Delay	34
Selecting a Loop	36
Recording a Loop	38
Recording Overdubs	40
Undo, Redo, and Clear	42
Undo an Overdub.....	42
Redo an Overdub	42
Clear Overdubs/Unstored Phrases	42
Stop Modes	44
Using Auto-Quantize Looping	45

Storing/Copying Phrases	46
Store Changes to a Loop.....	46
Copy a Loop to a Different Memory Location.....	46
Time Signature.....	48
Setting a Loop Tempo for Recording	50
Time Stretching a Loop	52
Time Stretch a Loop that is Stopped.....	52
Time Stretch a Loop that is Playing.....	52
Loop / Single Phrases.....	54
Rhythm Type	56
Using an Expression Pedal - Looper.....	58
Deleting Individual Loop Phrases.....	60
Erase All Loops - Internal Memory	62
Using Optional SD/SDHC Memory Cards	64
Formatting SD Cards.....	65
Unformatted Cards.....	65
Erase All Loops - Memory Card	66
Multiple Loop Playback	68
Optional FS3X Footswitch.....	69
Factory Restore.....	70
JamManager™ Librarian Software	71
Specifications.....	72

Overview

Congratulations and thank you for purchasing the JamMan® Delay! The JamMan Delay Looper features both true stereo looping and a fully programmable stereo delay with powerful control over both effects.

The Looper in the JamMan Delay Looper offers true stereo looping with 35 minutes of built-in memory, 99 internal loop memories, and an SD card expansion slot for an additional 99 loops and over 16 hours of stereo loop storage! USB connectivity provides syncing to DigiTech's free JamManager™ looper librarian software that organizes and saves your loops to a PC or Mac. JamManager also lets you quickly create custom loop JamLists to take to your gig.

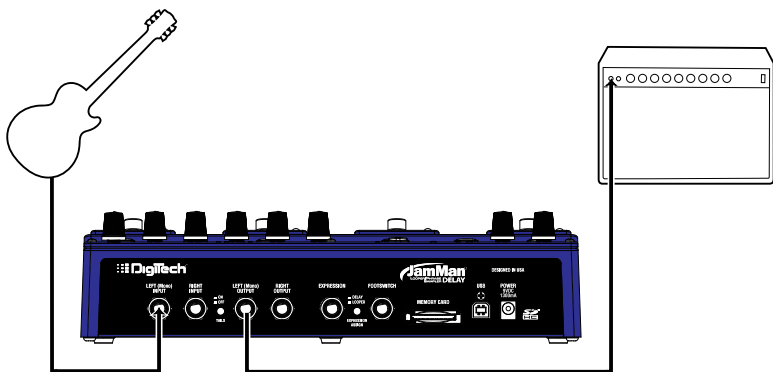
The JamMan Delay Looper's delay is a powerful stereo delay with 3 fully programmable preset memories that can be recalled instantly via dedicated footswitches. A palette of 8 delay types offers tremendous flexibility in crafting virtually any delay sound. With 16 seconds of delay time, a tap tempo footswitch, and full morphing of the delay controls via the expression input, the JamMan Delay is in a class all its own.

Features:

- Store over 35 minutes of stereo, CD-Quality loops in 99 internal memories
- Optional SDHC card can store over 16 hours* of CD-quality audio in 99 additional memories (198 memories total)
- Downloadable JamManager™ librarian for PC and Mac archives and organizes your loops over USB
- Reverse Loop Playback
- 3 Loop Stop modes (Stop, Finish, and Fade)
- Time Stretching lets you slow down or speed up loops without changing pitch
- 16 seconds of true stereo delay
- 3 fully programmable delay presets
- 8 unique delay types including Digital, Tape, Analog, Reverse, and Modulated delay
- Expression pedal input for morphing between 2 delay settings or controlling loop playback level
- Dry path defeat for parallel effects loops
- 8 Heavy-duty metal footswitches for looping and delay control
- Optional footswitch adds additional Hands-Free functionality

*with optional 16GB or higher SDHC memory card

Quick Start - Connections



Before powering up your JamMan[®] Delay:

1. Make Connections

1. Connect a guitar or bass to the **LEFT (Mono) IN** jack on the JamMan Delay's rear panel.
2. Connect the JamMan Delay's **LEFT (Mono) OUT** to the input of an amplifier.

2. Connect the Power Supply

1. Start with your amplifier and the JamMan turned off.
2. Turn the **LOOP LEVEL** and **RHYTHM LEVEL** knobs all the way down on the JamMan Delay.
3. Connect the power supply to the **POWER** jack on the JamMan Delay.
4. Connect the other end of the power supply to an AC outlet.
5. Turn your amplifier on and turn up its volume to a normal playing level.

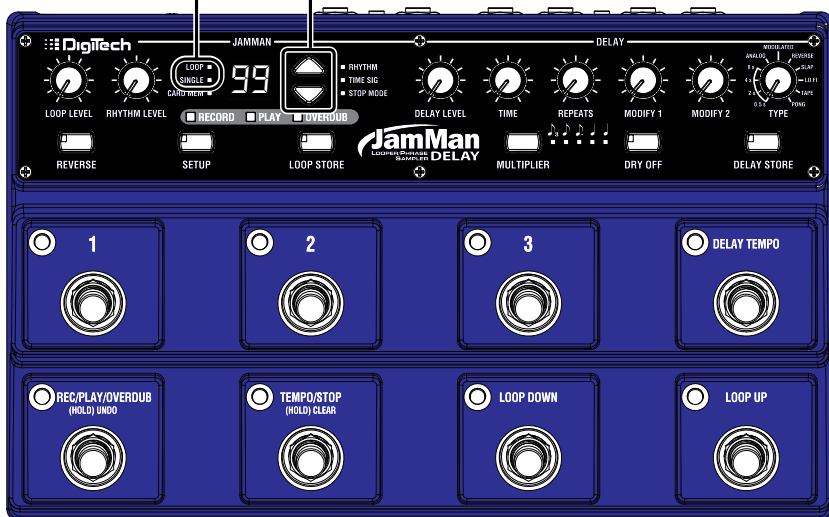
Quick Start - Looper

I. Select an Empty Loop

Press the **LOOP SELECT** buttons or the **LOOP UP/LOOP DOWN** footswitches until the **LOOP** and the **SINGLE** LEDs are off.

Press the Loop Select buttons...

...until these LEDs
are off.



Quick Start - Looper

2. Adjust Loop and Rhythm Levels

Set the **LOOP LEVEL** knob to 12 o'clock. Set the **RHYTHM LEVEL** knob to the 9 o'clock position.

Set the LOOP LEVEL to 12 o'clock
and the RHYTHM LEVEL knob
to 9 o'clock



Quick Start - Looper

3. Start Recording

Press the **REC/PLAY/OVERDUB** (lower left) footswitch to start recording. While recording, the **REC/PLAY/OVERDUB** footswitch and **RECORD** LEDs will light red.



Press the **REC/PLAY/OVERDUB** footswitch.

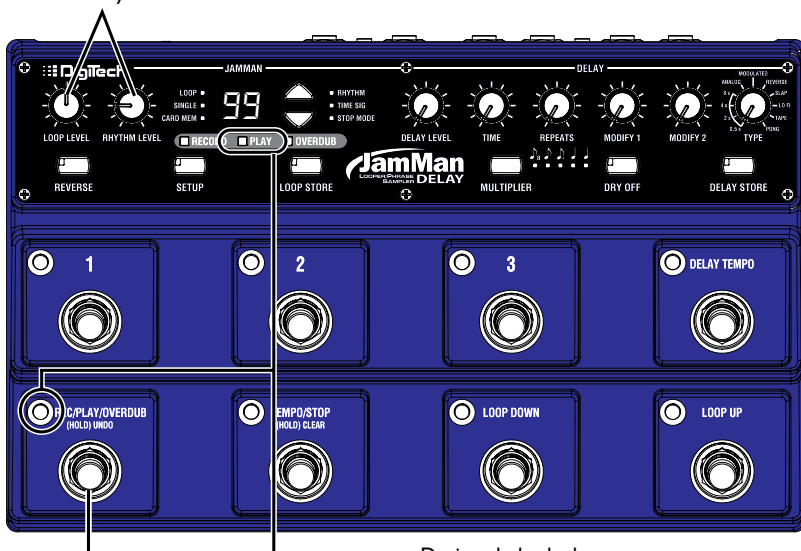
While recording, the **RECORD** and **REC/PLAY/OVERDUB** LEDs light solid red.

Quick Start - Looper

4. Start Loop Playback

Press the **REC/PLAY/OVERDUB** footswitch while recording to set the loop point and start playing back from the beginning. The **REC/PLAY/OVERDUB** footswitch and **PLAY** LEDs light green. Adjust the **LOOP LEVEL** and **RHYTHM LEVEL** knobs as needed.

Adjust the **LOOP LEVEL**
and **RHYTHM LEVEL** knobs
as necessary.



Press the **REC/PLAY/OVERDUB** footswitch while recording to stop recording and start playback.

During playback, the **PLAY** and **REC/PLAY/OVERDUB** LEDs light solid green.

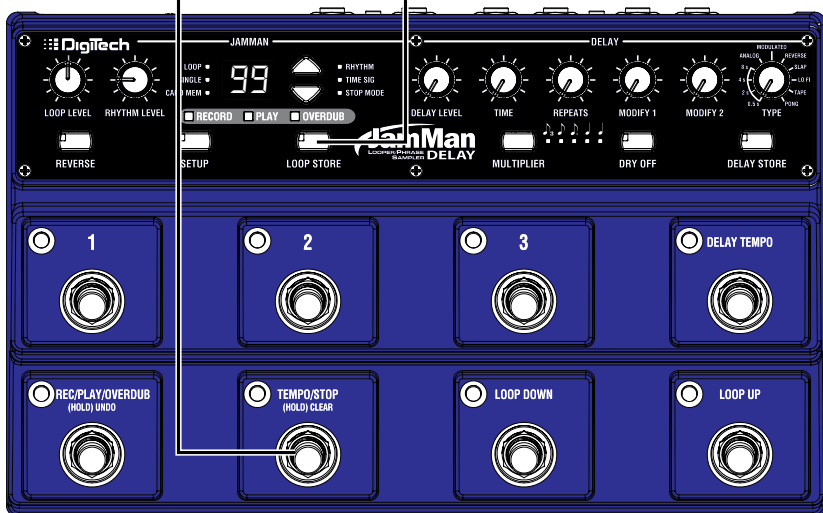
Quick Start - Looper

5. Stop Playback/Store the Loop

Press the **TEMPO/STOP** footswitch to stop playback, then press the **LOOP STORE** button twice to store the loop.

First press the **TEMPO/STOP** footswitch to stop playback.

Then press the **LOOP STORE** button twice to store the loop.



Quick Start - Delay

I. Select a Delay Type.

Step on a Delay footswitch to turn on the delay, then select a delay type. For this example, set the **TYPE** knob to **ANALOG**.



Quick Start - Delay

2. Adjust the Delay Level, Time, Repeats, and parameters.

Set the **DELAY LEVEL, TIME, REPEATS, MODIFY 1** and **MODIFY 2** knobs to 12 o'clock.

Set these knobs
to 12 o'clock.



Quick Start - Delay

3. Set the delay tempo with the Delay Tempo footswitch.

Tap the **DELAY TEMPO** footswitch at least two times to set a new delay tempo. The last two footswitch tap intervals set the delay tempo.

Tap the DELAY TEMPO footswitch at least two times to set the Delay Tempo.



Note: You can set the delay tempo to match a loop's tempo; see page 32 for more information.

Quick Start - Delay

4. Store the delay.

Press the **DELAY STORE** button, then press one of the flashing **DELAY FOOTSWITCHES** to store the delay settings to that footswitch.

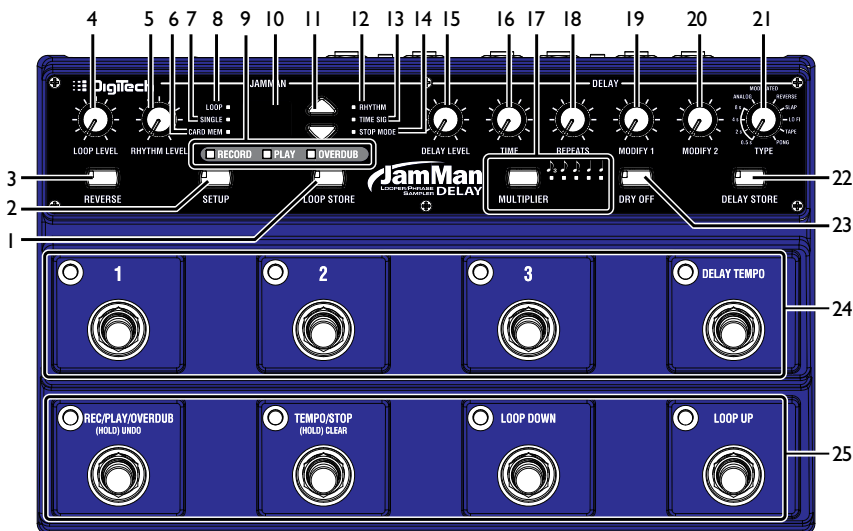
Press the DELAY STORE button...

...then press a DELAY FOOTSWITCH to store delay settings.



Guided Tour - Front Panel

Looper Controls



1. Loop Store Button

Used to store and copy recorded loops and changes to loop attributes to the memory. Pressing and holding this button will initiate the deletion of the current loop memory.

2. Setup Button

Press to cycle through options to set Loop/Single phrase status, Rhythm Type, Time Signature, or Stop Mode.

3. Reverse Button

Press to play the loop phrase in reverse. This function can also be turned on and off via the optional FS3X footswitch.

Guided Tour - Front Panel

4. **Loop Level**

Controls the playback level of the loop phrase.

5. **Rhythm Level**

Controls the level of the Rhythm guide track.

6. **Card Memory LED**

This red LED is lit when you are selecting loop memories on the optional SD/SDHC memory. When this LED is off, loops are being selected from the JamMan® Delay's internal memory.

7. **Single LED**

This yellow LED indicates the current phrase memory is set to playback only once when play is initiated. Single phrases can be converted to Loop phrases and vice versa.

8. **Loop LED**

This green LED indicates the current phrase memory is set to playback continuously as a loop when play is initiated. Loop is the default setting when a phrase is recorded; any audio that is recorded will be recorded as a loop phrase. Loop phrases can be converted to Single phrases and vice versa.

9. **Looper Status LEDs**

These three LEDs indicate the looping status: Record, Playback, and Overdub. Each will light individually during the process of recording, playing back, and overdubbing a loop phrase.

10. **Display**

The main purpose for the display is to show the currently selected

Guided Tour - Front Panel

loop memory location. It also shows information during store/copy procedures, during Time Signature and Rhythm Type setup, file deletion, and card formatting procedures.

11. **Loop Select buttons**

The Loop Select buttons are used for selecting different loop memories and making selections when in other modes (such as Time Signature, Rhythm Type, and Stop Mode).

12. **Rhythm LED**

This red LED will light when selecting the Rhythm guide track to record and play with. You can hear the changes as you make them if the Rhythm Level knob is turned up.

13. **Time Signature LED**

This red LED will light when selecting the Time Signature for a new loop memory location. Note that Time Signature can only be changed for a memory location that has no phrase recorded in it. You can select from 2 to 15 beats per measure. This means if you want to record in 5/4 time, select 5 in the display. To record in 7/8 time, select 7, and so forth.

14. **Stop Mode LED**

This red LED will light when selecting the Stop Mode for the current loop. Press the Setup button until this LED lights and then use the Loop Select Up/Down buttons to change between one of the three Stop Modes, Stop, Finish, and Fade.

Guided Tour - Front Panel

Delay Controls

15. Level Knob

The Level knob controls the delay effect's output level. Turn this knob clockwise to increase the output level, and counter-clockwise to decrease the output level.

When Reverse Delay is selected, the Level knob behaves like a wet/dry mix control. When the knob is turned fully clockwise, only delayed signal (no dry signal) is heard. Any other position will give you a mix of the dry and wet (delayed) signals

16. Time Knob

Controls the amount of delay time specified by the range selected with the Type knob. The knob's minimum position is the shortest delay time for the given range. The knob's maximum position is the longest delay time for the given range (see page 26 for exact ranges). You can increase the delay time by tapping in a longer time using the Delay Tempo footswitch (see page 30).

17. Multiplier Button and LEDs

The tempo multiplier allows you to change the current time pattern repeat rate by a fixed multiple or sub-multiple of the delay time. The tempo multiplier also makes it easier to create off-beat delay patterns. For example, by using the dotted eighth note setting with a single delay, you can play on eighth note boundaries and get delays played back in between your own notes.

When Delay Tempo Sync is enabled, a 6th Multiplier can be accessed (all Multiplier LEDs lit). In this state, the delay time will try and match the length of the loop phrase up to 16 seconds. If the loop phrase is longer

Guided Tour - Front Panel

than 16 seconds, the delay time will divide in half as needed to match the loop length.

18. **Repeats Knob**

The Repeats knob controls the number of delay repeats. Turn this knob clockwise to increase the number of repeats, and counter-clockwise to decrease the number of repeats. Turning this knob to the maximum position engages repeat-hold in some of the delay types (see page 27).

19. **Modify 1 Knob**

This knob controls a delay type specific parameter. See page 27 for more information.

20. **Modify 2 Knob**

This knob controls a delay type specific parameter. See page 27 for more information.

21. **Type Knob**

The Type knob selects from a variety of delay types and delay time ranges. See page 26 for a list of delay types.

22. **Delay Store Button**

This button is used to store delay settings to one of the 3 numbered footswitches for instant recall.

23. **Dry Off Button**

This button mutes the dry signal path through the JamMan® Delay. Enable this button when running the JamMan Delay in a parallel effects loop where dry signal is already present. Press and hold this button for 2 seconds to enable or disable this feature.

Guided Tour - Front Panel

Footswitches

24. Delay Footswitches

These footswitches are used to turn on and off the JamMan® Delay's delay effect. Footswitches 1 – 3 select three different pre-programmed delay settings. Press any of these to turn on the delay effect (LED is on). To bypass the delay effect, press the active footswitch again (LED will turn off).

The Tempo footswitch is used to modify the delay time by tapping in the desired delay tempo.

Looper Footswitches

This row of 4 footswitches is used to control the JamMan Delay's looper.

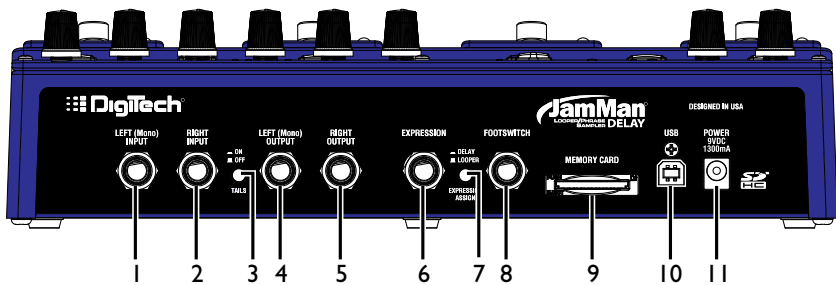
The **Rec/Play/Overdub** footswitch initiates recording (LED lights red) and playing (LED lights green) of the loop phrase. When a phrase is playing back, it can be used to enable overdubbing (LED lights yellow) over the recorded phrase. During playback, this footswitch can be pressed and held to undo or redo the last overdub take.

The **Tempo/Stop** footswitch is used for stopping playback of a recorded phrase and setting the loop tempo. Pressing and holding this footswitch will clear any unstored loop audio.

The **Loop Down** footswitch will select the previous loop. If a loop is currently playing, this will cue up the next loop to play as indicated by the flashing number in the display. Press and hold to scroll.

The **Loop Up** footswitch will select the next loop. If a loop is currently playing, this will cue up the next loop to play as indicated by the flashing number in the display. Press and hold to scroll.

Guided Tour - Rear Panel



1. Left (Mono) Input

Connect your instrument, additional pedal, or an amp effects send to this jack. Signals are heard at both outputs when only the Left (Mono) jack is used.

2. Right Input

Connect a second input to this jack for stereo operation. Left and Right inputs are processed separately through the stereo delay and looper effects and then fed to the Left and Right outputs to keep true stereo separation between channels.

3. Tails On/Off Switch

This switch allows the delay repeats to continue being heard after the effect is bypassed, or cuts them off immediately. When the Tails Switch is set ON, delay repeats will continue to be heard until they decay completely. When the Tails Switch is OFF, delay repeats are cut off immediately when the effect is bypassed.

4. Left (Mono) Output

Connect this output to the input of a single guitar amplifier, another pedal input, or amp effects return.

Guided Tour - Rear Panel

5. **Right Output**

Connect this output to the input of a second guitar amplifier when a second amp is being used.

6. **Expression Input**

Connect a mono (tip/sleeve) passive expression or volume pedal to this input to morph between two different delay settings or to control the output level of loop playback. When using a volume pedal connect to one of the outputs. Do not use the tuner out. If the pedal has a minimum volume control, set the knob so the pedal's range is full volume to no volume. When using a TRS style expression pedal, ensure the tip/ring switch is set to "tip."

7. **Expression Assign Switch**

This switch changes whether a connected expression pedal controls the delay parameters or the looper's playback level.

8. **Footswitch Jack**

This jack is for connecting an optional 3-button FS3X footswitch for remote selection of Undo/Redo, Loop Reverse, and Loop Tempo.

9. **SD/SDHC Card Slot**

The JamMan® Delay is compatible with optional SD/SDHC memory cards up to 32GB in size for expanding the total amount of loop storage time available. Adding an SD card also increases the number of available loops from 99 to 198. New cards should be formatted in the JamMan Delay before use. The JamMan Delay comes equipped with 35 minutes of internal loop storage.

10. **USB Jack**

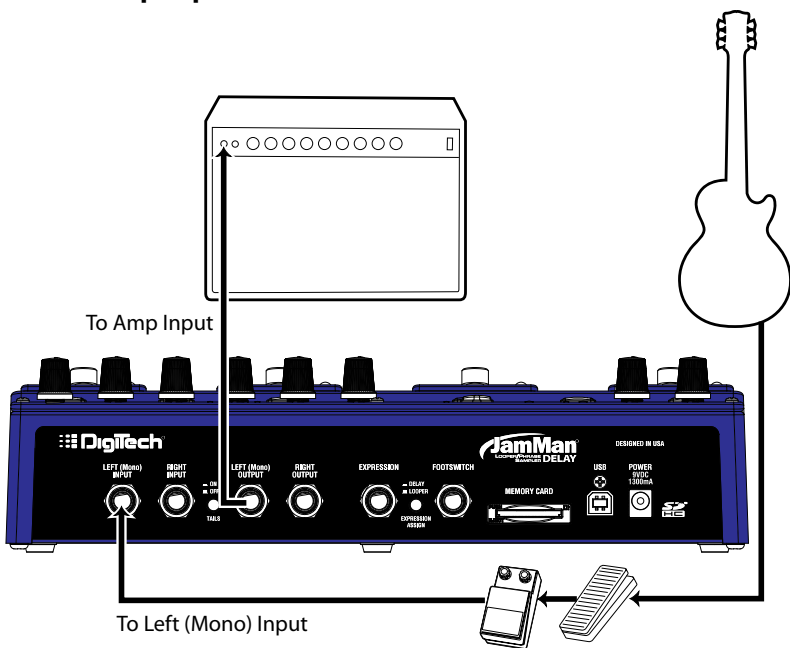
The mini USB jack provides a connection to a Windows or Mac computer for transferring loop files to and from the JamMan Delay via the downloadable JamManager Loop Librarian.

11. **Power Jack**

Connect the included power supply here. The JamMan Delay can only be powered by using the external adapter.

Making Connections

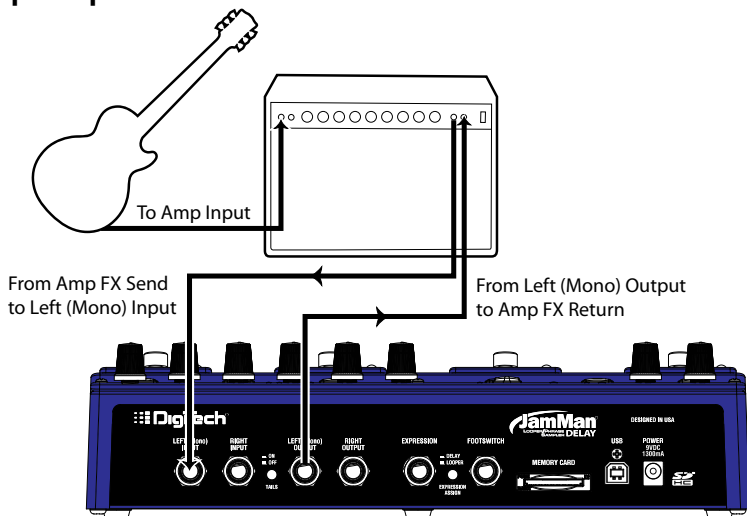
Mono Amp Input



Mono Amp Input is the most common usage where the guitar plugs into the JamMan® Delay's **LEFT (MONO)** Input and the **LEFT (MONO)** Output connects to the amp input. The **DRY OFF** button should be OFF for this setup.

Making Connections

Amp Loop

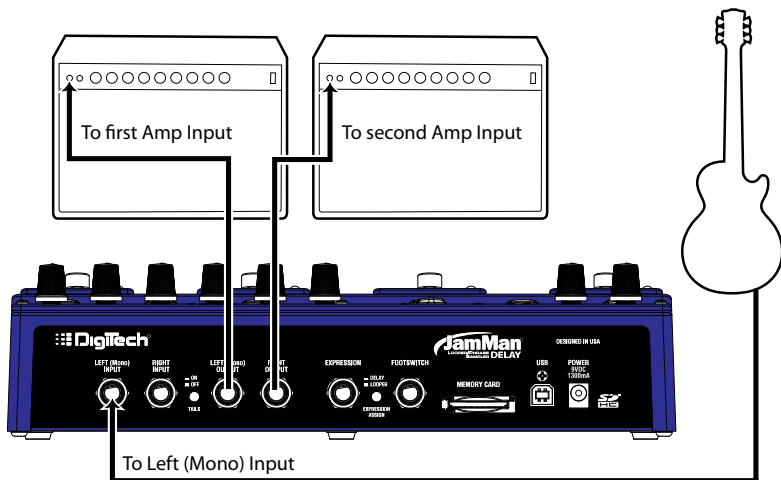


The Amp Loop connection can be used if your amp has an effects loop. Connect the guitar to the amp's input. Connect the amp loop's Send jack to the JamMan® Delay's **LEFT (MONO) Input**. Connect the JamMan Delay's **LEFT (MONO) Output** to the amp loop's Return jack.

If the amp's effects loop is a serial effects loop (no parallel dry path) set the **DRY OFF** button to OFF. If the amp's effects loop has a parallel loop (typically has a Mix control), you can set the **DRY OFF** button to be ON and use amp's loop Mix control and the JamMan Delay's **DELAY LEVEL** and **LOOP LEVEL** knobs to balance the effect level.

Making Connections

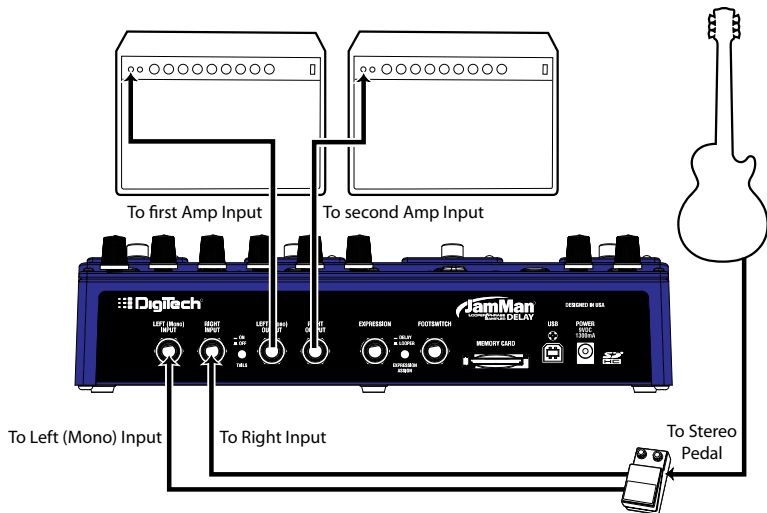
Mono Input / Stereo Amp



The Mono Input / Stereo Amp option provides the best stereo imaging for the Modulation and Pong delay types. Connect the guitar to the JamMan® Delay's **LEFT (MONO)** Input and connect the **LEFT (MONO)** and Right outputs to the inputs of each amp. The **DRY OFF** button should be OFF for this setup.

Making Connections

Stereo Input / Stereo Amp



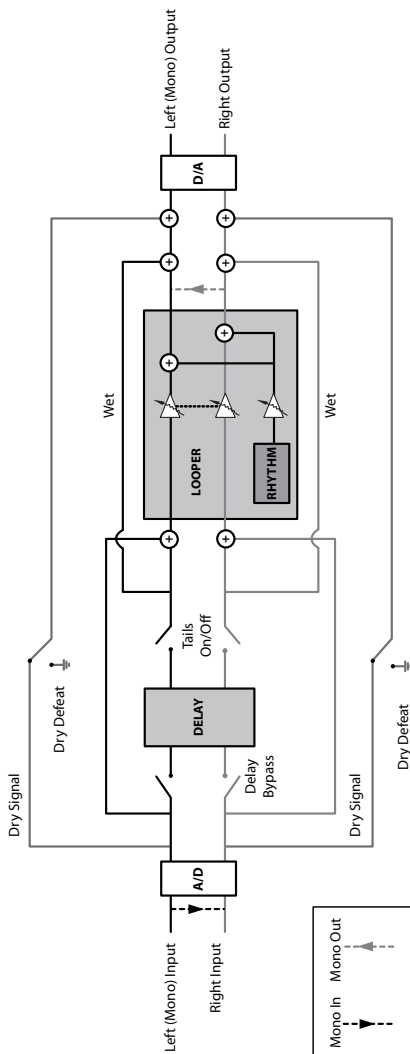
The Stereo Input / Stereo Amp option lets you utilize true stereo effects prior to the JamMan® Delay in a stereo amp setup. This setup also provides the best stereo imaging for the JamMan Delay's Modulation and Pong delay types. Connect the outputs of your stereo effects pedal to the JamMan Delay's **LEFT (MONO)** and **RIGHT** Inputs and connect the **LEFT (MONO)** and **RIGHT** Outputs to the inputs of each amp. The **DRY OFF** button should be OFF for this setup.

Signal Path

The JamMan® Delay has a stereo signal path with both a Left (mono) and Right input. This signal passes through the A/D converter and into the DSP where it then goes through the Delay and then the Looper. The signal then passes through a D/A converter and then to the outputs.

The dry signal has a Dry Off option for when the JamMan Delay is used in a parallel effects loop. The Dry Off button should be set to ON to prevent an unwanted second dry path from the JamMan Delay being mixed in with the parallel dry path of the loop. If you are using a series effects loop or running into the front end of an amplifier, the Dry Off button should be set to OFF to keep the dry path active.

Signal Path



Delay Types and Parameters

The Type knob selects from a variety of delay types and delay time ranges. As the types are changed, default settings for all controls except Level will be loaded.

0.5 Second	Digital delay. Time knob range* of 15 to 500 milliseconds.
2 Seconds	Digital delay. Time knob range* of 0.5 seconds to 2 seconds.
4 Seconds	Digital delay. Time knob range* of 2 seconds to 4 seconds.
8 Seconds	Digital delay. Time knob range* of 4 seconds to 8 seconds.
Analog	Modeled after a vintage bucket brigade analog delay circuit. Time knob range* is 35 milliseconds to 500 milliseconds.
Modulated	Delay with chorused repeats. Time knob range* is 100 ms-1 sec.
Reverse	A delay where the repeats are played backwards. Time knob range* is 500 milliseconds to 4 seconds.
Slapback	Uses the Tape Delay algorithm. Time knob range* is 50 to 150 milliseconds.
Lo Fi	A low-fidelity delay that has limited bandwidth and reduced bit-depth to approximate the effects of low sample rate and 8-bit signal processing used in vintage digital delays. Time knob range* is 100 milliseconds to 1 second.
Tape	Modeled after a classic tube tape echo. Time knob range* is 100 milliseconds to 1 second.
Pong	Based on the Digital Delay, this delay alternates repeats between the left and right outputs. Time knob range* is 500 milliseconds to 2 seconds. NOTE: When both inputs are connected (stereo in), only the left input is processed through the delay. The dry path does maintain stereo separation.

The JamMan® Delay's delay has a Tempo footswitch that can be used for setting the delay time by tapping in the rhythm. Simply press the footswitch in time with the music to adjust the delay time. Tempo works in conjunction with the Multiplier button so you can tap in quarter notes but get variations on the delay time depending on which Multiplier is selected.

* With **MULTIPLIER** at quarter note setting. You can also tap in times beyond the listed ranges with the Tempo footswitch.

Delay Types and Parameters

Each delay type has a common set of controls for setting up the delay (Delay Level, Time, and Repeats). There are also two custom controls (Modify 1, Modify 2) that offer added flexibility by controlling specific settings for each delay type. The table below shows what each these knobs control with each delay type.

	Modify 1	Modify 2
0.5 - 8 Seconds	Bass	Treble
Reverse	Trigger Sensitivity	Tone
Modulated	Modulation	Tone
Analog	Modulation	Tone
Slapback	Drive	Tone
LoFi	Low Pass	High Pass
Tape	Drive	Wow/Flutter
Pong	Ratio	Spread

The 0.5–8 second (Digital), Modulated, Reverse, and Pong delay types have a repeat hold function when the Repeats knob is turned fully clockwise. This means the input of the delay is shut off and the delay will repeat indefinitely until the Repeats knob is moved off the maximum position.

Analog, Slap, LoFi, and Tape delays have an “analog” behavior (pitch shifting sound) when the Time is changed. When the Repeats knob is set to the maximum setting, these delays can become unstable just like the actual delays they were modeled from do.

The Modulation parameter adds chorusing or a vibrato effect to the delay. The first half of the knob range is chorusing with increasing depth. The second half of the knob range is vibrato with increasing depth.

Storing and Recalling Delay Settings

The JamMan® Delay's delay settings can be stored to any of the numbered footswitches allowing instant recall of these settings during performance. When delay settings are modified by turning the knobs, the **DELAY STORE** button will light. To store modified settings to the footswitches, follow these steps:

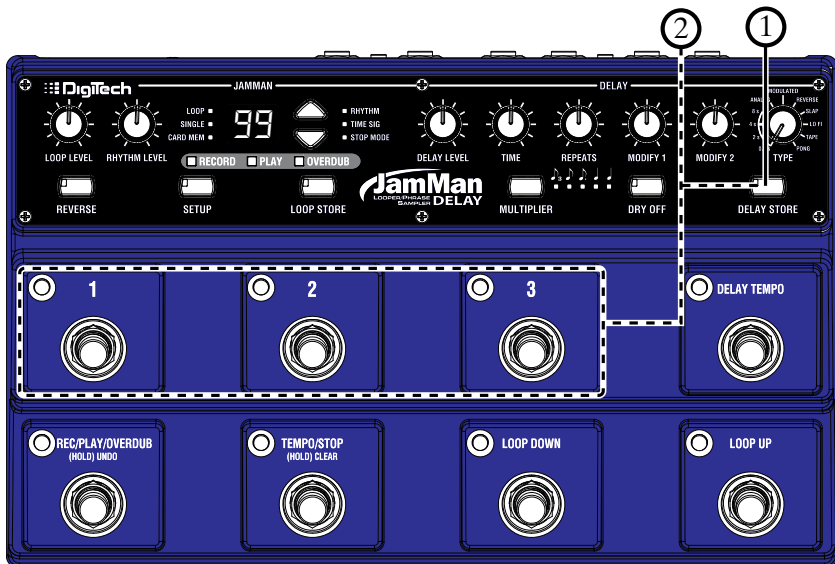
1. Press the **DELAY STORE** button. This button will now be lit and the **DELAY FOOTSWITCHES** will begin flashing.
2. Press any flashing **DELAY FOOTSWITCH** to store the settings to that footswitch (or press the **DELAY STORE** button again to store the settings to the currently active **DELAY FOOTSWITCH**).
3. The **DELAY STORE** button will turn off and the active footswitch will stop flashing and light solid to indicate the new settings have now been stored to this location.

To recall stored delay settings, press the **DELAY FOOTSWITCH** they were stored to.

You can also store delay settings during live performance (such as a new tapped tempo) by pressing and holding the active delay memory footswitch for 3 seconds.

NOTE: Delay settings cannot be edited or stored when the delay effect is bypassed.

Storing and Recalling Delay Settings

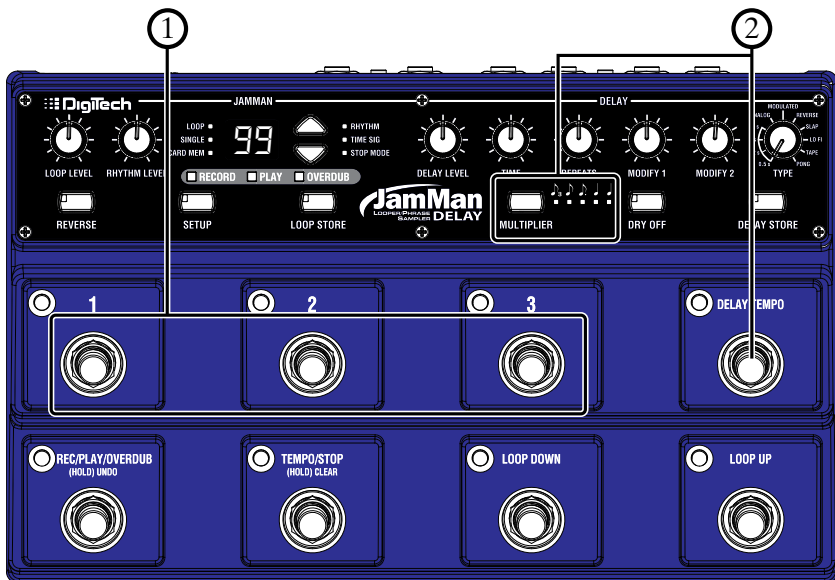


Setting Delay Time with the Delay Tempo Footswitch

The JamMan® Delay's delay has a Tempo footswitch that can be used for setting the delay time by tapping in the rhythm.

1. Step on a **DELAY FOOTSWITCH** to enable a delay preset.
2. Press the **DELAY TEMPO** footswitch in time with the music to adjust the delay time. Tempo works in conjunction with the Multiplier button so you can tap in quarter notes but get variations on the delay time depending on which Multiplier is selected.

Setting Delay Time with the Delay Tempo Footswitch



Synchronizing Delay Tempo to Loop Tempo

The JamMan® Delay's delay time can be synchronized with the Looper's tempo. This is an extremely useful feature that allows the delay time to be automatically set based on the tempo of any loop that is playing.

To enable Delay Tempo synchronization, follow these steps:

1. Press and hold the **DELAY TEMPO** footswitch for 2 seconds until its LED stops flashing and lights solid red (this indicates Delay Tempo Sync mode).
2. You can now use the looper's **TEMPO/STOP** footswitch to tap in the tempo for both the loop and the delay.

When Delay Tempo Sync mode is active, you can change loops and the delay Tempo will automatically be set to the loop's tempo. This ensures your delay time will always be synced with the loop that is playing. To exit Delay Tempo Sync mode, simply tap the delay Tempo footswitch once or turn the Time knob.

Another feature that can be used when Delay Tempo Sync is enabled is a 6th Multiplier. While Sync is enabled, press the **MULTIPLIER** button until all **MULTIPLIER** LEDs light. In this state, the delay time will match the length of the loop phrase up to 16 seconds. If the loop phrase is longer than 16 seconds, the delay time will divide in half as needed to match the loop length.

NOTE: Delay Tempo Sync only works with the active delay memory. If a different delay memory is selected, Delay Tempo Sync will be defeated and will need to be re-enabled. The JamMan Delay can not store Delay Tempo Sync or 6th Multiplier settings.

Synchronizing Delay Tempo to Loop Tempo



Using an Expression Pedal - Delay

Using an expression pedal with the JamMan® Delay is an easy way to unlock a whole new set of time-varying delay effects. An expression pedal lets you morph between different settings for a given delay type, allowing control over Delay Level, Repeats, Time, Modify 1/2, and Multiplier settings.

To use an expression pedal with the JamMan Delay's delay, follow these steps:

1. Begin with the JamMan Delay power disconnected.
2. Plug your expression pedal's mono Tip/Sleeve 1/4" connector into the **EXPRESSION PEDAL** input on the back panel and apply power.
3. Set the **EXPRESSION ASSIGN** switch to the In position (Delay).
4. Rock the expression pedal back and forth 2-3 times to calibrate the pedal with the JamMan Delay.
5. Rock the pedal forward to the toe down position.
6. Adjust one or more of the **DELAY LEVEL, TIME, REPEATS, MODIFY 1, MODIFY 2** knobs, and the **MULTIPLIER** setting to get the sound that you like.
7. Rock the expression pedal back to the toe up position.
8. Adjust the delay controls again to get a starting sound that you like.
NOTE: You cannot change delay types while using this expression pedal. Changing types will reset the toe and heel settings.
9. Move the pedal from the heel to the toe position while you're playing and listen to the delay morph between these two settings.
10. Store your changes to a delay footswitch.

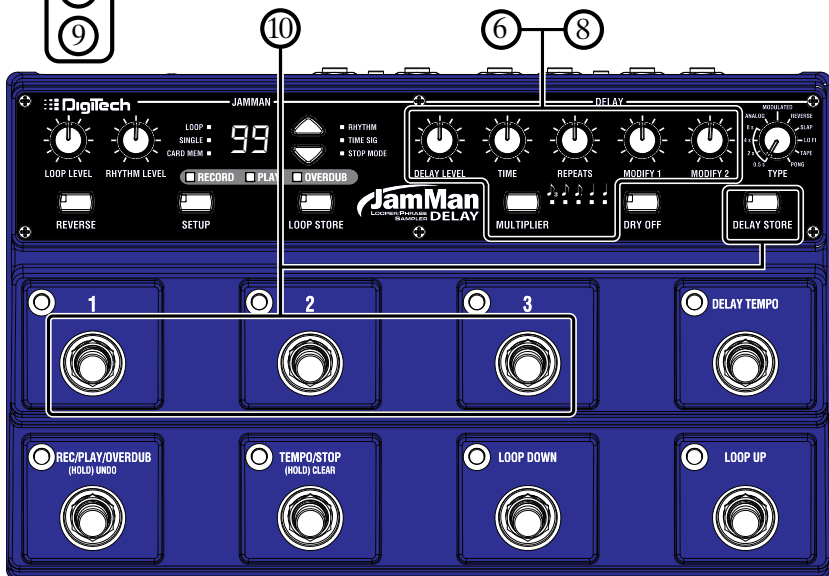
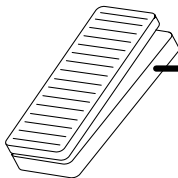
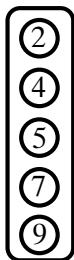
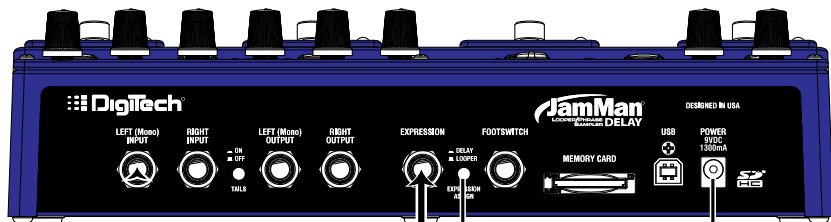
When you store your changes to a footswitch, the heel, toe, and the expression pedal's current position are stored. If you don't have an expression pedal connected when that footswitch is selected, you'll hear the position the pedal was in when it was stored.

To set the same settings for the heel and toe positions, follow these steps:

1. Rock the pedal to the toe down position.
2. Adjust the delay controls and multiplier to the desired settings.
3. Press and hold the **MULTIPLIER** button until the selected multiplier LED flashes.

Now both the heel and toe positions will have the same settings.

Using an Expression Pedal - Delay



Selecting a Loop

The JamMan® Delay has two banks of loop memory, internal and optional card memory. There are 99 memory locations available in each of these banks for a total of 198 memories when an optional SD/SDHC memory card is installed. The card memory bank is only available when a memory card is installed.

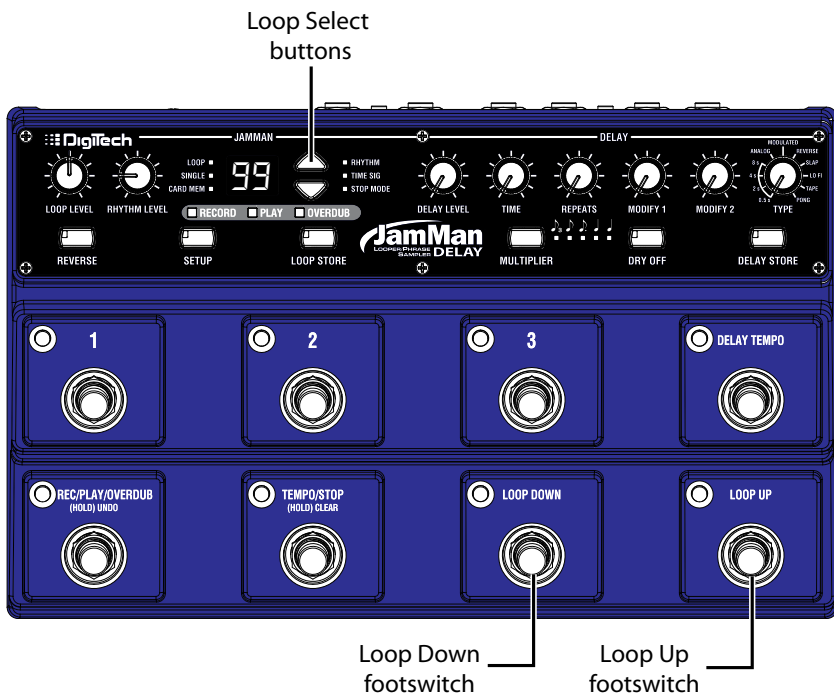
To select loops, Press either the **LOOP UP** or **LOOP DOWN** footswitches or use the **LOOP SELECT** buttons next to the **DISPLAY**.

Pressing the **LOOP UP** footswitch will select the next loop above the current loop. Pressing the **LOOP DOWN** footswitch will select the previous loop below. Pressing and holding either of these footswitches will scroll through the loop memories in its respective direction. The **DISPLAY** will show the memory location number as these buttons are pressed.

When Loop 99 is reached, pressing the **LOOP UP** footswitch will return to the first memory location (1 will be shown in the display). Likewise, if Loop 1 is reached, pressing the **LOOP DOWN** footswitch will return to the last memory location (99 will be shown in the **DISPLAY**). If an optional memory card is installed, pressing the **LOOP UP** or **LOOP DOWN** footswitches will alternate through one bank of memories and then the next (1-99 internal and then 1-99 card). The **CARD MEM** LED will light when memories are selected on the optional external card.

As loops are selected, the **LOOP** or **SINGLE** LED will flash as the loop is loaded from internal or optional card memory. Trying to store, copy, or change the loop tempo during this time is ignored (bu will be displayed indicating the JamMan Delay is busy loading a loop from memory).

Selecting a Loop



Recording a Loop

The JamMan® Delay is designed to be very simple to use right out of the box. This section explains how to record a phrase and play it back as a continuous loop. You should have an instrument or audio device connected to the 1/4" inputs before proceeding.

NOTE: The maximum loop time the JamMan Delay can record or play is 10 minutes.

1. Select an empty memory location using the **LOOP SELECT** buttons or the **LOOP UP/LOOP DOWN** footswitches (the **LOOP** and **SINGLE** LEDs will be off).
2. (Optional) If you would like to perform to a guide track, you must set a tempo. The rhythm guide track will not be heard until a tempo has been set. You can set a tempo by tapping the **TEMPO/STOP** footswitch (see page 50). Adjust the **RHYTHM LEVEL** knob to a suitable volume. The **TEMPO/STOP** footswitch will now be flashing at the set tempo.
3. (Optional) Set the Time Signature to something other than 4/4, if desired (see page 48).
4. Press the **REC/PLAY/OVERDUB** footswitch and begin playing to start recording. If a tempo has been set, there will be a single measure count-in indicated by the **TEMPO** footswitch before recording begins. The **REC/PLAY/OVERDUB** footswitch will then light solid red, the **LOOP** LED will light, and recording will start. If no tempo has been set, recording will begin instantly after the **REC/PLAY/OVERDUB** footswitch is pressed and you begin playing.
5. When you are ready to set the loop point for your phrase, press the **REC/PLAY/OVERDUB** footswitch to set the loop point and have the phrase play back in a repeating loop. The **REC/PLAY/OVERDUB** footswitch and **PLAY** status LEDs will light solid green.
6. Press the **TEMPO/STOP** footswitch to stop the loop playback.

Once you are finished recording, the **STORE** button will be lit indicating the phrase must be stored to memory to be recalled later.

Recording a Loop



Recording Overdubs

Once a loop phrase is recorded, you can add overdubs over the top of it. Overdubs can only be recorded to Loop phrases and not to Single phrases.

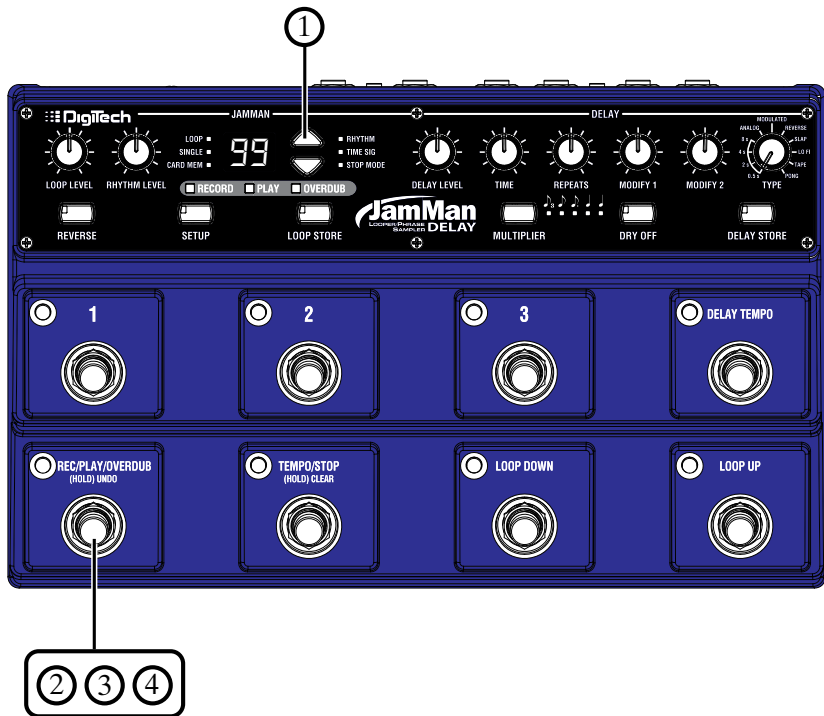
1. Use the **LOOP SELECT** buttons or the **LOOP UP/LOOP DOWN** footswitches to select a previously recorded Loop phrase, or use a newly recorded phrase that has not yet been stored. The **LOOP** LED must be lit if a previously recorded phrase is selected. If the **CARD MEM** LED is lit, you have selected a loop on the optional memory card.
2. Press the **REC/PLAY/OVERDUB** footswitch. This footswitch and the **PLAY** status LEDs will light solid green and the phrase will begin playing.
3. Press and release the **REC/PLAY/OVERDUB** footswitch again to begin overdub recording. This footswitch and the **OVERDUB** status LEDs will now light solid yellow and any audio introduced on the selected input will be added to the audio playback.
4. When you have an overdub you are happy with, press the **REC/PLAY/OVERDUB** footswitch to disable overdubbing and continue playback (this footswitch and the **PLAY** status LEDs will light solid green).

You can continue adding overdubs by continuing to press the **REC/PLAY/OVERDUB** footswitch. Each time an overdub is added, the last overdub is merged with the original loop and it can no longer be undone using the Undo functions (see page 42).

Once you are finished with overdubbing, press the **TEMPO/STOP** footswitch to stop playback/overdubbing.

NOTE: Changing loops discards any overdubs that have not been stored to memory. Storing overdubs will remove the ability to undo or clear overdubs.

Recording Overdubs



Undo, Redo, and Clear

You can undo or redo an overdub anytime you remain in the current memory where the overdub was recorded. You can also use a footswitch to clear all unstored loop phrase audio.

NOTE: Changing loops discards any unstored overdubs. Storing the overdubs will also remove the ability to undo or clear overdubs.

Undo an Overdub

Press and hold the **REC/PLAY/OVERDUB** footswitch for two seconds to undo your last overdub. The **REC/PLAY/OVERDUB** and **OVERDUB** status LEDs flash yellow and the display briefly shows UD when the undo takes place. You can also use an optional FS3X footswitch to undo overdubs (see page 69).

Redo an Overdub

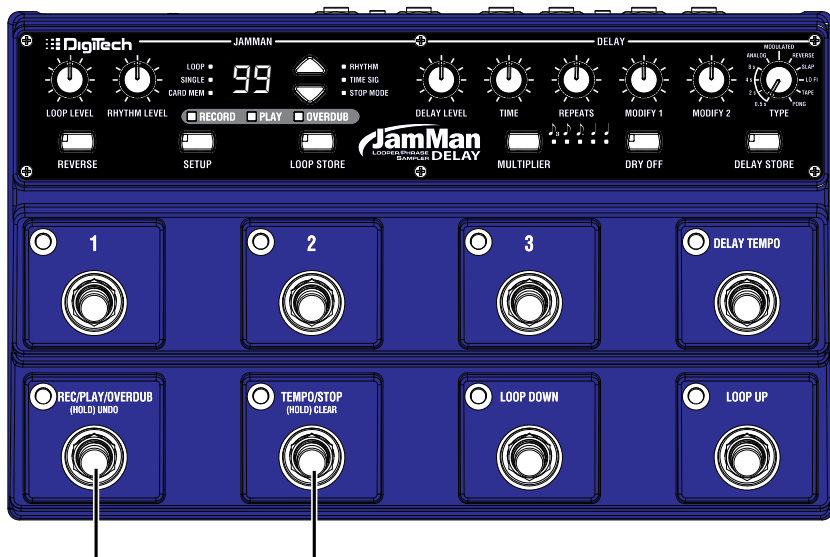
Press and hold the **REC/PLAY/OVERDUB** footswitch to redo the last undone overdub; the **REC/PLAY/OVERDUB** and **OVERDUB** status LEDs flash yellow and the display briefly shows RD to indicate a redo has been performed. You can also use an optional FS3X footswitch to redo overdubs (see page 69).

Clear Overdubs/Unstored Phrases

Press and hold the **TEMPO/STOP** footswitch for two seconds to clear the unstored recording/overdubs. The **RECORD** status LED will flash and the display will show CL to confirm the clearing. If the loop had been previously stored, the clear action will only clear unstored phrases and overdubs but leave the original loop that had been stored untouched.

Changing to a different loop also clears any unstored phrases and overdubs.

Undo, Redo, and Clear



Press and hold
to undo or redo
an overdub.

Press and hold to
clear overdubs and
unstored phrases.

Stop Modes

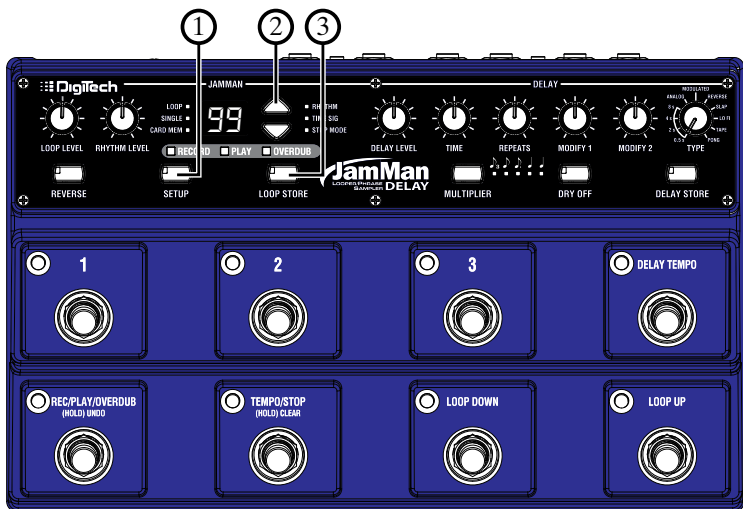
Loop Phrases can be stopped in three ways after the **TEMPO/STOP** footswitch is pressed:

- Stop (**St**): Stops the phrase immediately when Stop is pressed.
- Finish (**F**): Finishes playing to the end of the phrase and stops after Stop is pressed.
- Fade (**FA**): Fades the phrase volume to 0 over a 10 second period and then stops after Stop is pressed.

To change Stop Modes, follow these steps:

1. Press the **SETUP** button until the **STOP MODE** LED is lit
2. Press the up or down **LOOP SELECT** buttons to select the Stop Mode you want to use. The Stop Mode names appear in the **DISPLAY**.
3. Press the **LOOP STORE** button twice to store the changes, if desired.

NOTE: Stop modes must be stored with each phrase individually.



Using Auto-Quantize Looping

There are two ways you can record loops using the JamMan® Delay, free-form looping or using the JamMan Delay's Auto-Quantize feature.

Free-form looping (see page 38) is the standard way loopers have been used since their inception. You initiate recording, play, and then set the loop point when you reach the end of your passage. The loop point is set exactly when you press the pedal and the tempo for the loop is then calculated and displayed. Getting an accurately timed and seamless loop takes practice but offers the flexibility experienced loopers need.

Auto-Quantized looping makes getting accurately timed loop points easy. Begin by first setting the Tempo you want before recording the loop's first pass. This is done by using the **TEMPO/STOP** footswitch (see page 50). Once the tempo is established, initiate record, play in time with the set tempo, and then set the loop point at the end of a measure.

If your timing was a little early or late when setting the loop point, not to worry. The JamMan Delay automatically adjusts the loop length exactly to the measure length set by the Tempo and Time Signature.

Storing/Copying Phrases

Anytime a change is made to a loop memory location (Rhythm Type, Tempo, Time Signature, Record, Overdubs etc.) the **LOOP STORE** button will immediately light. This indicates that the changes will be lost unless a store procedure is performed before selecting a new loop memory location or turning off the power.

Store Changes to a Loop

1. Stop any recording activity using the **TEMPO/STOP** footswitch.
2. Press the **LOOP STORE** button. The **LOOP STORE** button and the **DISPLAY** will begin to flash (the **DISPLAY** shows the current loop memory location).
3. (Optional) Use the **SELECT** buttons to select an empty loop memory location to store the loop with its changes (the **LOOP** or **SINGLE** LEDs are off), or press **SETUP** to abort.
4. Press the **LOOP STORE** button again. The changes are now saved and the **LOOP STORE** button turns off.

Copy a Loop to a Different Memory Location

1. Stop any record activity using the **TEMPO/STOP** footswitch.
2. Use the **SELECT** buttons to select a memory location that contains a loop (either the **LOOP** or **SINGLE** LED is lit).
3. Press the **LOOP STORE** button. The **DISPLAY** and the **LOOP STORE** button will begin to flash.
4. Use the **SELECT** buttons until an empty memory location is selected (the **LOOP** and **SINGLE** LEDs are off), or press **SETUP** to abort.
5. Press the **LOOP STORE** button again. The loop is now copied to the new memory location.

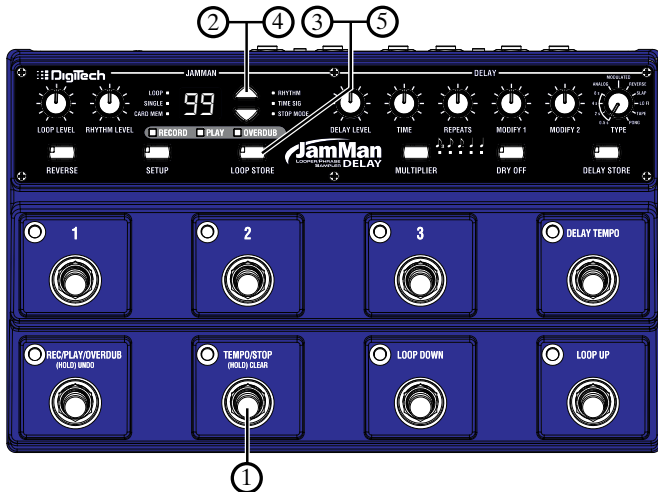
NOTE: The Clear and Overdub Undo/Redo functions cannot be performed to the loop after a Store/Copy procedure.

Storing/Copying Phrases

Store Changes to a Loop



Copy a Loop to a Different Memory Location



Time Signature

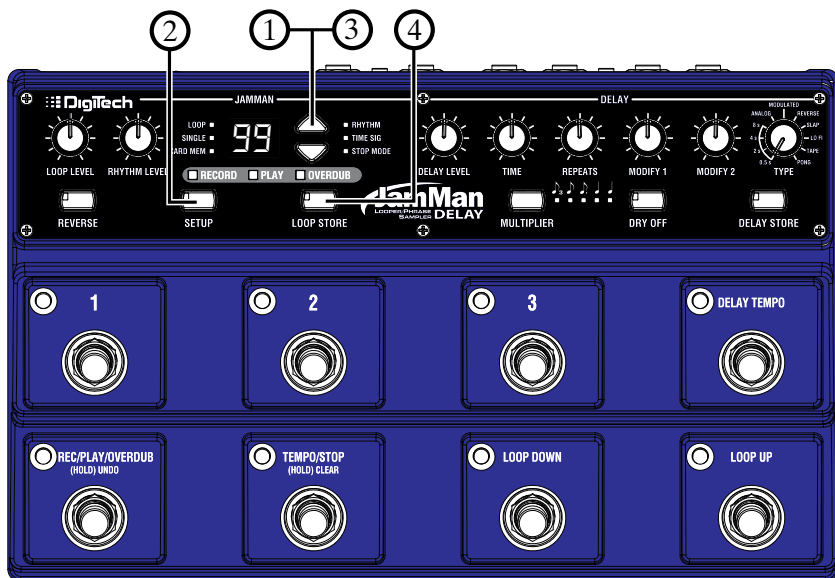
The JamMan® Delay is capable of recording in different Time Signatures. A Time Signature must be set up prior to recording in a memory location. Once a phrase has been recorded, Time Signature cannot be changed. To set the Time Signature, follow these steps:

1. Use the **SELECT** buttons or **LOOP UP/DOWN** footswitches to select a new memory location. (The **LOOP LED** and **SINGLE LED** will be off.)
2. Press the **SETUP** button until the **TIME SIG LED** is lit. The **TIME SIG LED** will now be lit, and the **DISPLAY** will show the number 4 indicating the default Time Signature of four beats per measure.
3. Use the **SELECT** buttons to change the Time Signature. You can select from 2 to 15 beats per measure. This means if you want to record in 5/4 time, select 5. To record in 7/8 time, select 7, and so forth.
4. Press the **LOOP STORE** button twice to store the changes, if desired, or press the **SETUP** button twice to exit Setup mode.

The **LOOP STORE** button will light when Time Signature is changed but you can immediately begin recording without having to store this change first. If a tempo has been set up the **TEMPO/STOP** footswitch LED will light red for the downbeat and then green for the rest of the beats of the measure.

When accessing the Time Signature setting of a loop (newly recorded or stored), the loop's Time Signature appears in the **DISPLAY**, but it cannot be changed.

Time Signature



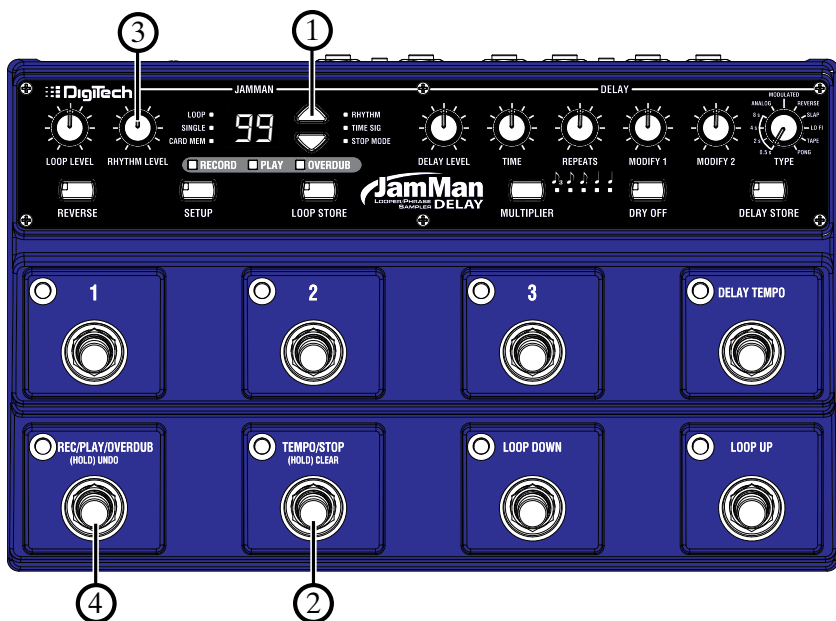
Setting a Loop Tempo for Recording

Before you begin recording a phrase, you may want to set a tempo at which you want to record the loop at. Setting the tempo in an empty loop memory location automatically starts playing the rhythm guide track (Rhythm Level must be turned up to hear the guide track). You can use the rhythm guide track as a metronome for recording against to help keep a consistent tempo of your performance. To set the tempo for recording, follow these steps:

1. Use the **SELECT** buttons to select a new memory location. (The **LOOP** LED and **SINGLE** LED will be off.)
2. Tap the **TEMPO/STOP** footswitch at least 2 times (4 or more times is recommended). The **TEMPO/STOP** footswitch LED will begin flashing at the tempo that has been tapped in. The first downbeat of the measure flashes red and the other beats flash green.
3. Turn up the **RHYTHM LEVEL** knob (if it hasn't been already) to hear the rhythm guide track.
4. To begin recording, press the **REC/PLAY/OVERDUB** footswitch, wait for the one-measure count-in and begin playing.

If you want to set up a memory location with a tempo but not record to it, you can just follow steps 1 and 2, but you must then store the new tempo using the Store procedure. When you return to the empty loop location, the tempo will already be set as indicated by the **TEMPO/STOP** footswitch LED flashing. This can be used to set up several unrecorded loop memories to the same tempo.

Setting a Loop Tempo for Recording



Time Stretching a Loop

Once a loop phrase is recorded, you can change the playback tempo which speeds up or slows down the playback of the phrase without changing its pitch (Time Stretch). Time Stretching a loop is a very useful feature in case the band is playing slightly slower or faster than normal or you just want to change the pace of a backing track slightly. You can Time Stretch a loop while stopped or during playback. To Time Stretch a loop, follow these steps:

Time Stretch a Loop that is Stopped

1. Select a previously recorded Loop phrase (**LOOP** or **SINGLE LED** is lit) using the **LOOP UP/DOWN** footswitches or **LOOP SELECT** buttons. The **TEMPO/STOP** footswitch LED will begin flashing at the phrase's stored tempo.
2. Tap the **TEMPO/STOP** footswitch two or more times. Tapping quicker than the stored tempo rate will speed up playback while tapping slower than the stored tempo rate will slow down playback.
3. To return to the original tempo, press and hold the **TEMPO/STOP** footswitch for two seconds and the phrase will return to the original stored tempo.

Time Stretch a Loop that is Playing

To time stretch a loop while it is playing requires an optional FS3X footswitch to be connected to the footswitch jack on the rear panel of the JamMan® Delay.

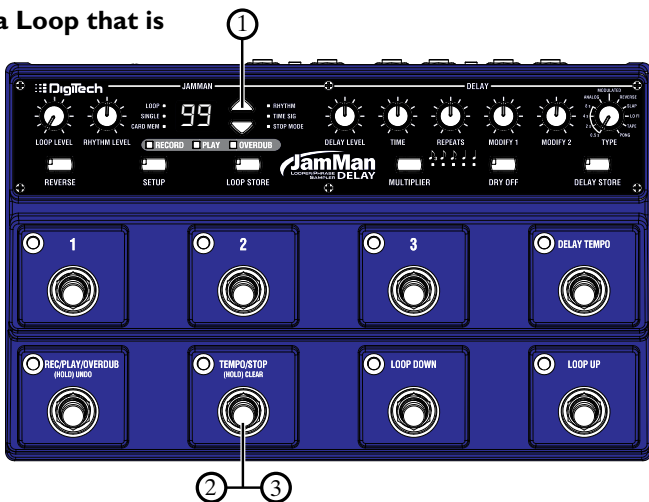
1. Press the **REC/PLAY/OVERDUB** footswitch to begin playback.
2. Tap in a new tempo using the **UP** footswitch on the FS3X. You will hear the tempo changes in real time. To return to the original tempo, press and hold the **UP** footswitch for two seconds and the phrase will return to the original stored tempo.

Press the **LOOP STORE** button twice to store the changes if desired. You can play along with the adjusted playback speed and still be in tune since the pitch does not change based on playback speed.

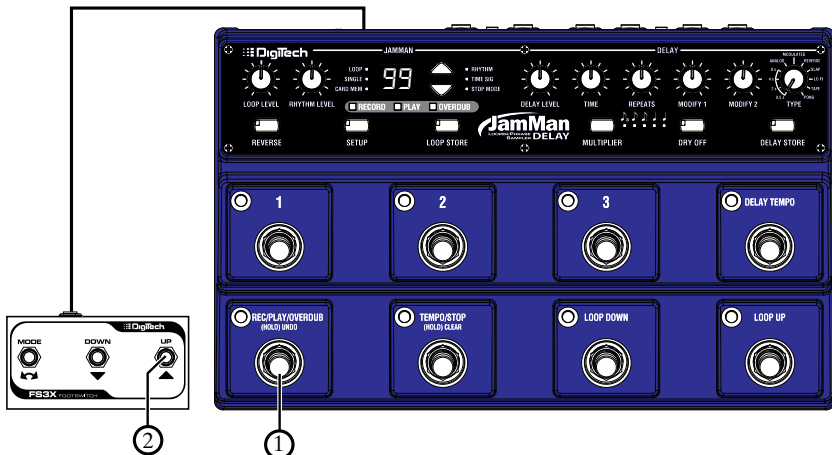
NOTE: Restoring the tempo by pressing and holding the **TEMPO/STOP** footswitch will also clear any newly recorded audio and overdubs.

Time Stretching a Loop

Time Stretch a Loop that is Stopped



Time Stretch a Loop that is Playing



Loop / Single Phrases

Any phrase recorded into the JamMan® Delay can be played in two ways: Either as a continuous Loop, or as a Single “one-shot” sample.

Single phrases are designed to play the recorded phrase only once and stop. All phrases are recorded as loops by default but they can be changed to a Single phrase if desired. You can always change Single phrases back to Loops later without harming the phrase. To change between Single and Loop, follow these steps:

1. Select a previously recorded Loop phrase (**LOOP LED** is lit) using the **LOOP UP/LOOP DOWN** footswitches or **SELECT** buttons. If the **CARD MEM LED** is lit, you have selected a memory location on the optional memory card.
2. Press the **SETUP** button once. The **LOOP** or **SINGLE LED** will now be lit, and the **DISPLAY** will show **L** (loop) or **S** (single).
3. Use the **SELECT** buttons to select **LOOP** or **SINGLE**.
4. The **LOOP STORE** button will light to indicate this change must be stored if it is to be recalled later. Press the **LOOP STORE** button twice to store the changes, if desired, or press the **SETUP** button four times to exit Setup mode.

Single phrases cannot have overdubs added to them. Repeated presses of the **REC/PLAY/OVERDUB** footswitch will just restart the Single phrase playback from the beginning.

Loop / Single Phrases



Rhythm Type

The JamMan® Delay's guide track has 9 rhythm types to select from. These range from a simple click metronome to various drum samples as the rhythm guide (a tempo must be defined and the **RHYTHM LEVEL** knob must be turned up to hear the guide track). To change the Rhythm Type, follow these steps:

1. Select a memory location using the **SELECT** buttons.
2. If the memory location is empty (**LOOP** and **SINGLE** LEDs are off), set a tempo using the **TEMPO/STOP** footswitch. If the memory location contains a loop (**LOOP** or **SINGLE** LED is on), press the **REC/PLAY/OVERDUB** footswitch to start playback.
3. Turn up the **RHYTHM LEVEL** knob to hear the guide track.
4. Press the **SETUP** button until the **RHYTHM** LED is lit. The **DISPLAY** will now show $r5$ indicating the default **RHYTHM TYPE**.
5. Use the **SELECT** buttons to choose your desired rhythm sound (designated by $\square F$ (off), and $r1 - r9$ in the **DISPLAY**). Selecting $\square F$ turns the rhythm sound off even if the **RHYTHM LEVEL** knob is turned up.
6. The **LOOP STORE** button will light to indicate this change must be stored if it is to be recalled later. Press the **LOOP STORE** button twice to store the changes, if desired, or press the **SETUP** button three times to exit setup mode.

Rhythm Types are:

$\square F$ – Off

$r1$ – Wood Blocks

$r2$ – Sticks

$r3$ – Click

$r4$ – Alternative Kick / High Hat

$r5$ – Studio Kick / High Hat

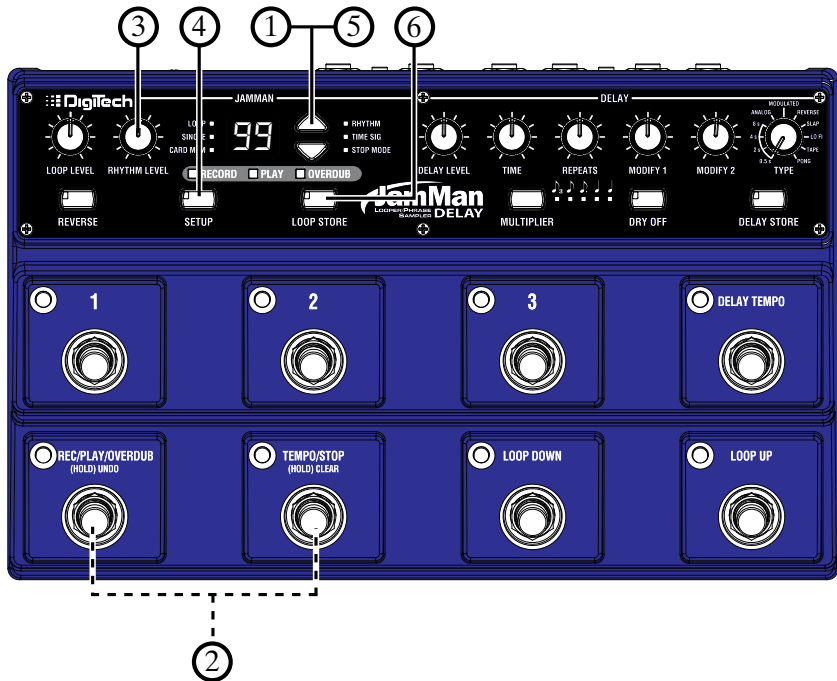
$r6$ – Techno Kick / High Hat

$r7$ – Cowbell

$r8$ – Conga

$r9$ – Tambourine

Rhythm Type



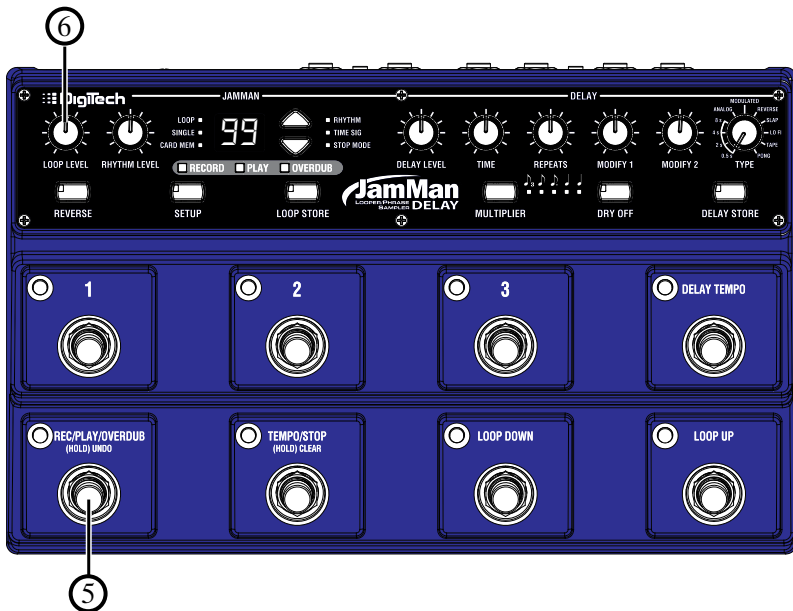
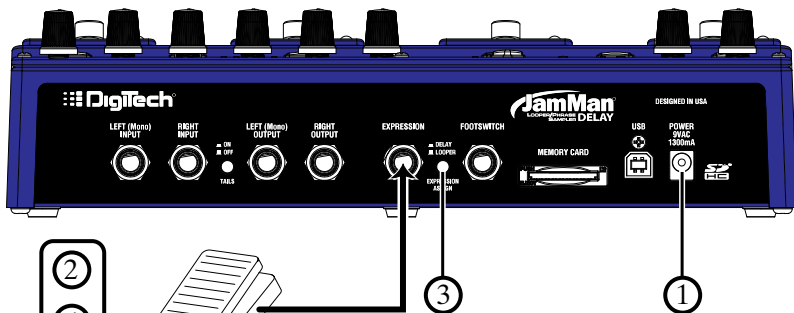
Using an Expression Pedal - Looper

You can also use an expression pedal to control the Looper's level during performance. To do this, follow these steps:

1. Begin with the JamMan® Delay power disconnected.
2. Plug your expression pedal's standard 1/4" connector into the **EXPRESSION PEDAL** input on the back panel and apply power.
3. Set the **EXPRESSION ASSIGN** switch to the Out position (Looper).
4. Rock the expression pedal back and forth 2-3 times to calibrate the pedal with the JamMan Delay.
5. Start playback of the looper by pressing the **REC/PLAY/OVERDUB** footswitch.
6. Adjust the **LOOP LEVEL** knob to the maximum output level you want the loop to playback at.
7. Rock the expression pedal forward (toe down) and back (toe up) at least 2 times.

The expression pedal is now calibrated to give you the maximum level set by the **LOOP LEVEL** knob in the toe down position and silence in the toe up position. This way you can add overdubs to your loops and bring back the mix back a bit during performance as needed.

Using an Expression Pedal - Looper



Deleting Individual Loop Phrases

The JamMan® Delay has 99 memory locations and at some time you may need to delete the contents of a memory location so it may be reused or to free up memory. To delete a loop from a memory location, follow these steps:

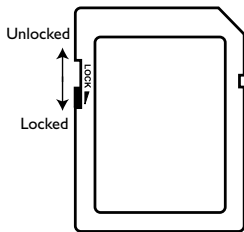
1. Select the phrase you want to delete using the **LOOP SELECT** buttons. If the **CARD MEM** LED is lit, you have selected a loop on the optional memory card.
2. Press and hold the **LOOP STORE** button for 2 seconds until the **DISPLAY** shows $E L$ and release. The **LOOP STORE** button will begin flashing waiting for a delete confirmation.

NOTE: If the **DISPLAY** shows $E 1$, $E C$, or $F \square$ you have held the **LOOP STORE** button too long and need to abort this procedure and start over. Press the **SETUP** button at this point to abort the procedure.

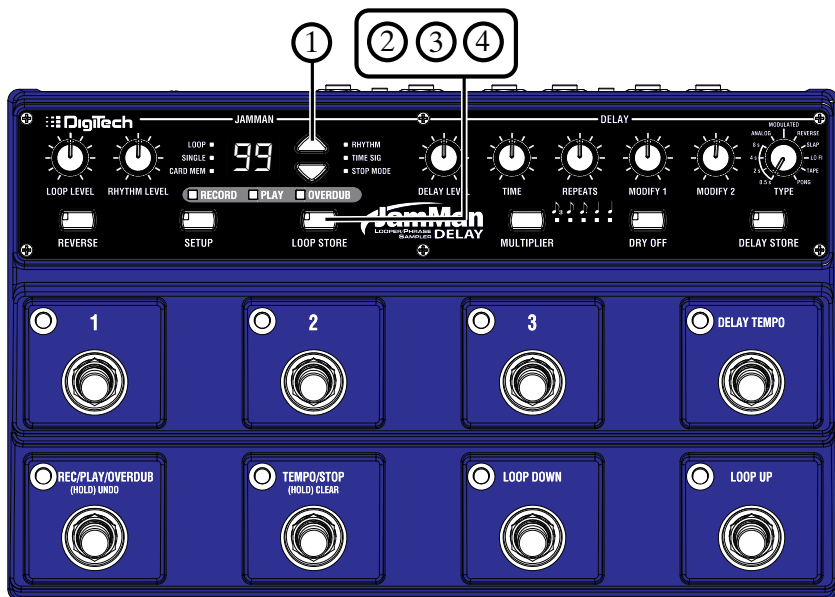
3. Press the **LOOP STORE** button again. The display reads $E ?$ (Erase Loop?). The **LOOP STORE** button will continue to flash. To abort this procedure at any time, press the **SETUP** button at any time.
4. If you want to delete the contents from this memory location and return it to its default state, press and hold the **LOOP STORE** button for two seconds. The **DISPLAY** will briefly read $d E$ when the delete procedure is complete and then return to the memory number.

Warning: Deleting a memory location is irreversible and will erase any recorded information that resides here. Use the Delete function with caution.

NOTE: If when you try to delete a loop from SD card the **DISPLAY** flashes $C P$, the SD copy protection switch is in the “Locked” position.



Deleting Individual Loop Phrases



Erase All Loops - Internal Memory

The JamMan® Delay uses both internal memory and optional external memory for the storage of loop files. You can delete all loops from internal memory or from external memory without having to delete them one at a time.

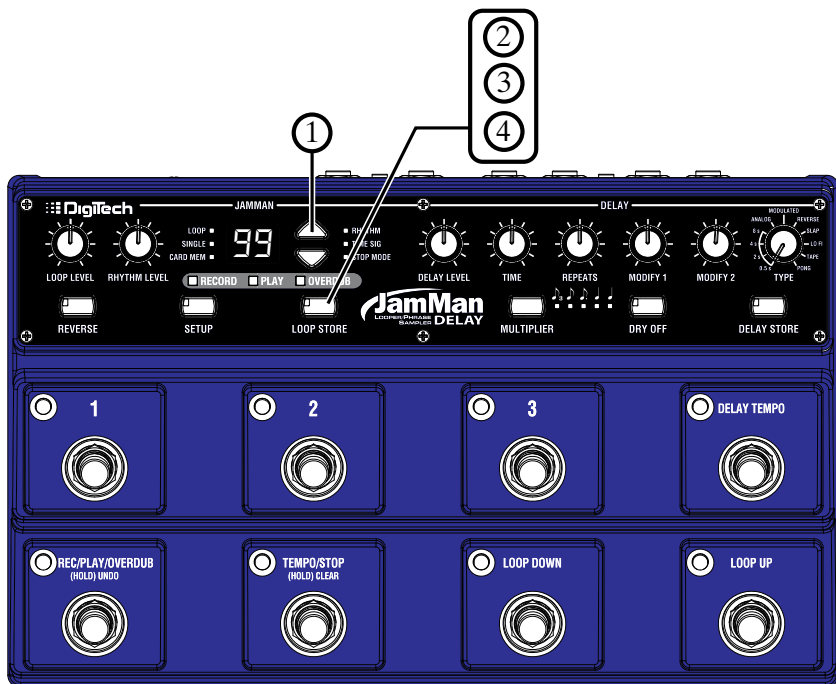
To delete all loops from internal memory, follow these steps:

1. Select a loop memory location that does not light the **CARD MEM LED**.
2. Press and hold the **LOOP STORE** button for four seconds until $E \square$ (Erase Internal Memory Loops) appears in the Display and release ($E \square$ will show briefly first but keep holding the button). The **LOOP STORE** button will now be flashing.

NOTE: If the **DISPLAY** shows $F \square$, you have held the **LOOP STORE** button too long and need to abort this procedure and start over. Press the **SETUP** button at this point to abort the procedure.

3. Press the **LOOP STORE** button again. The **DISPLAY** will now read $E ?$ (Erase Loops?) and the button will continue to flash. To abort this procedure, press the **SETUP** button at any time.
4. To erase all loop data, press and hold the **LOOP STORE** button again for two more seconds. The **DISPLAY** will show $b \square$ indicating the card is being erased.

Erase All Loops - Internal Memory

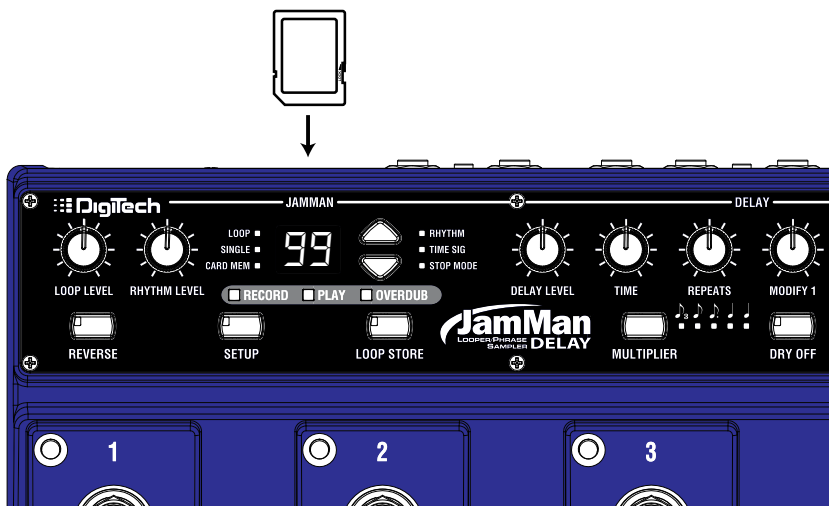


Using Optional SD/SDHC Memory Cards

The JamMan® Delay offers 35 minutes of total built-in loop memory storage. You can increase the loop memory by installing an optional SD/SDHC memory card in the memory card slot on the rear panel. The JamMan Delay is compatible with SD/SDHC card sizes up to 32GB for over 16 hours of total loop memory.

The first time a memory card is inserted into the JamMan Delay, it is recommended that you format the card using the JamMan Delay's format procedure (see page 65).

To install an optional SD/SDHC memory card into the JamMan Delay, insert the card into the Memory Card slot on the back panel with the label face up and the angled part of the card pointing toward the chassis.



Using Optional SD/SDHC Memory Cards

Formatting SD Cards

Although it may not be mandatory, it is recommended any memory card that is inserted into the JamMan® Delay for the first time should be formatted using the JamMan Delay's format procedure. To format an SD/SDHC Card in the JamMan Delay, follow these steps:

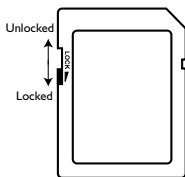
1. Insert an optional SD/SDHC card in the **MEMORY CARD** slot on the rear panel. Press and hold the **LOOP STORE** button for six seconds until the **DISPLAY** shows $F \square$ (Format) and the **LOOP STORE** button begins flashing.
2. Press the **LOOP STORE** button again. The **DISPLAY** will read $F ?$ (Format ?) and the **LOOP STORE** button will continue to flash. To abort this procedure, press the **SETUP** button.
3. To initiate the card formatting procedure, press and hold the **LOOP STORE** button for two seconds. The **DISPLAY** will show bu indicating the card is being formatted.

Unformatted Cards

If a memory card is inserted into the JamMan Delay that does not have a valid format, the JamMan Delay will not recognize it and the **DISPLAY** will read nF . The card must be formatted before the JamMan Delay can use it. To format the card, follow these steps:

1. While the **DISPLAY** reads nF , the **STORE** button will begin flashing prompting for a format confirmation.
2. Press the flashing **LOOP STORE** button. The **DISPLAY** will read $F ?$ and the **LOOP STORE** button will continue to flash. You can press the **SETUP** button to abort the procedure.
3. To initiate the card formatting procedure, press and hold the **LOOP STORE** button for two seconds. The **DISPLAY** will show bu indicating the card is being formatted. Once completed, the **DISPLAY** will read l and the card is now ready for recording.

NOTE: If when you try to format an SD card the **DISPLAY** flashes $\square P$, the SD copy protection switch is in the "Locked" position.



Erase All Loops - Memory Card

The Erase Loops procedure only erases JamMan® Delay loop data from a memory card. All other data and files on the card are left untouched.

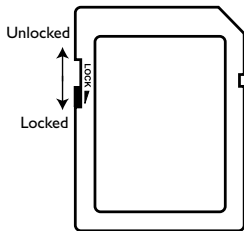
To erase all loops from an optional SD/SDHC memory card, follow these steps:

1. Install an optional SD/SDHC memory card in the JamMan Delay's memory card slot.
2. Select a loop memory location that lights the **CARD MEM LED**.
3. Press and hold the **LOOP STORE** button for four seconds until EE (Erase Card Memory Loops) appears in the **DISPLAY** and release (EL will show briefly first but keep holding the button). The **LOOP STORE** button will now be flashing.

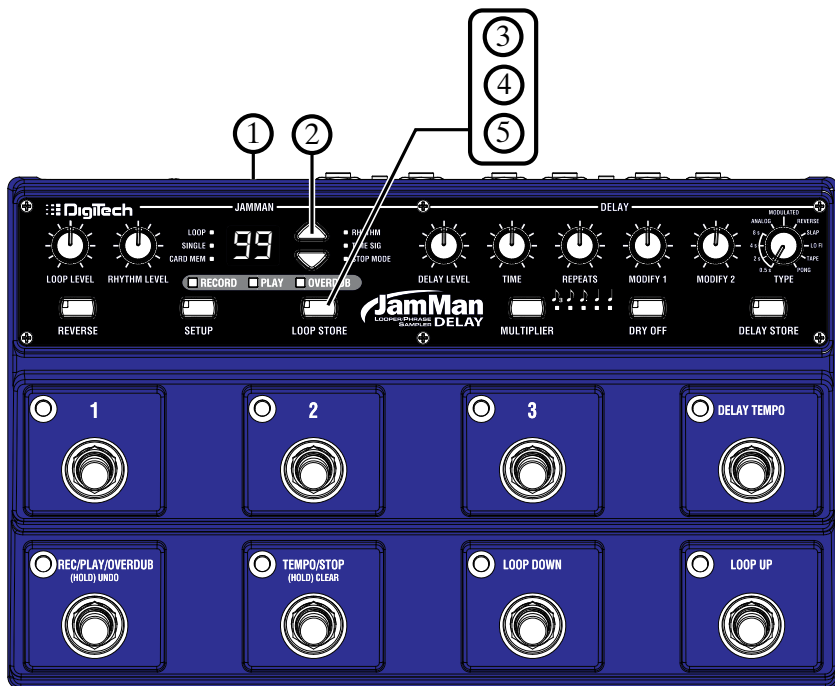
NOTE: If the **DISPLAY** shows $F\Box$, you have held the **LOOP STORE** button too long and need to abort this procedure and start over. Press the **SETUP** button at this point to abort the procedure.

4. Press the **LOOP STORE** button again. The **DISPLAY** will now read $E?$ (Erase Loops?) and the button will continue to flash. To abort this procedure, press the **SETUP** button at any time.
5. To erase all loop data, press and hold the **LOOP STORE** button again for two more seconds. The **DISPLAY** will show bW indicating the card is being erased.

NOTE: If when you try to delete a loop from SD card the **DISPLAY** flashes $\Box P$, the SD copy protection switch is in the “Locked” position.



Erase All Loops - Memory Card



Multiple Loop Playback

Another great feature of the JamMan® Delay is its ability to play different loops back to back during performance. This lets you play a verse > chorus > verse > bridge progression seamlessly using three different loops.

To set up multiple loops for verse/chorus/verse/bridge playback, follow these steps:

1. Record the verse loop and store it to memory location 1.
2. Record the chorus loop and store it to memory location 2.
3. Record the bridge loop and store it to memory location 3.

To use these three loops in a performance, follow these steps:

1. Select Loop 1 (verse loop) and press the **REC/PLAY OVERDUB** footswitch. Loop 1 will begin playing back.
2. To switch to Loop 2 (chorus loop), press the **LOOP UP** footswitch at least two seconds before the end of Loop 1. Once Loop 2 is selected, the **DISPLAY** will show a flashing $\overline{2}$, indicating Loop 2 is cued up to play once Loop 1 finishes. Once Loop 2 begins playing, the **DISPLAY** will stop flashing.
3. To select Loop 1 again, press the **LOOP DOWN** footswitch.
4. After Loop 1 begins playing again, you can then select Loop 3 (bridge loop) by pressing the **LOOP UP** footswitch twice. The **DISPLAY** will show a flashing $\overline{3}$.

Memory locations 1, 2, and 3 are used for this example, but any memory locations can be used for multiple loop playback.

If either the **LOOP UP** or **LOOP DOWN** footswitch is pressed less than two seconds before the end of a playing loop, the JamMan® Delay will not have enough time to cue up the next loop and the current loop will continue to play one more time. If any overdubs were recorded during this type of performance, they will be lost when the next loop is selected and begins playing back.

Optional FS3X Footswitch

The optional FS3X Footswitch gives you hands-free control over loop selection, tempo, and stop functions.

Mode Switch

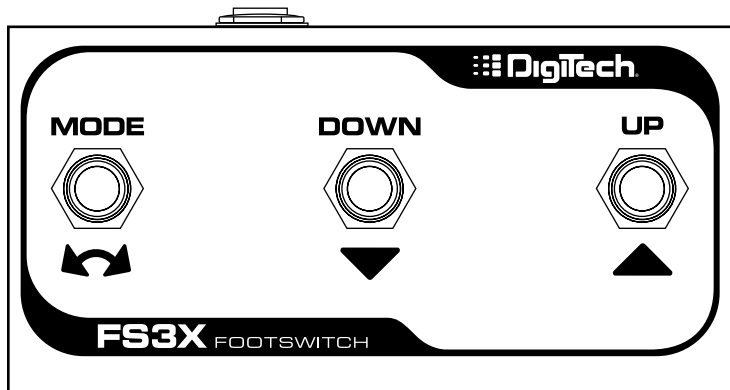
This footswitch is used for immediately undoing and redoing the last recorded overdub.

Down Switch

This footswitch is used to play the recorded phrase in reverse.

Up Switch

This footswitch can be used to set the tempo of a new loop or change the tempo (Time Stretch) of a stored loop. Playback Tempo can be changed even while the loop is playing using this footswitch.



Factory Restore

This procedure will return the JamMan® Delay to its original factory settings. All internal loop memories will be reformatted and the original 10 loops that shipped with the JamMan Delay will be restored. Factory Restore does not affect any loops on the optional external SD memory card.

WARNING: The Factory Restore procedure will erase all loops from the JamMan Delay internal memory and restore it to its factory state. This procedure is permanent and cannot be reversed. Use the Factory Restore procedure with caution. It is recommended you back up your internal loops to your computer with the JamManager™ software and USB connection.

1. Press and hold the **LOOP STORE** button while powering up the JamMan Delay.
2. When the display shows F_r , release the **LOOP STORE** button which will now be flashing.
3. Press the **LOOP STORE** button again. This display will now show $r ?$ asking if you are sure you want to restore the internal memory to its factory state. To abort this procedure at this time, press the **SETUP** button.
4. To confirm the restore procedure, press and hold the **LOOP STORE** button until bu appears in the Display. The JamMan Delay will return to normal operation shortly as indicated by loop memory 1 being shown in the Display.

JamManager™ Librarian Software

The JamManager™ loop librarian software is available as a free download from the DigiTech website. This application runs on both Windows XP/ Vista/7 and Mac OS X computer systems, and lets you archive and transfer loops between the JamMan® Delay and your computer. For more information, visit www.digitech.com.

System Requirements

Windows® Vista (32/64-bit), 7 (32/64-bit), XP Home/Professional (32-bit)

- Intel® or AMD® XP Processor
- 1 GB of memory (2GB recommended)
- Microsoft® Silverlight™ 4.0 installed
- Available USB port
- Internet connection (for updates)

Mac® OS 10.5.8 or later

- Intel® Core Processor
- 1 GB of memory (2GB recommended)
- Microsoft® Silverlight™ 4.0 installed
- Available USB port
- Internet connection (for updates)

Specifications

Digital

A/D/A Conversion:	24-bit
Sampling Frequency:	44.1 kHz
Loop File Format:	44.1 kHz, 16-bit (stereo), uncompressed WAV file
USB:	2.0 High Speed (USB 1.1 compatible)
Connector Type:	4-pin Type B
Max. Individual Loop Time:	10 minutes
Internal Memory Capacity:	Over 35 minutes total loop time (up to 99 loops total)
External Memory Type:	SD/SDHC up to 32GB (optional)
External Memory Capacity:	Over 16 hours (10.6MB/minute) of recording time, when using 16GB or larger SDHC card (up to 99 loops total)

Inputs/Outputs

Left(Mono)/Right Inputs

Connector Type:	1/4" Unbalanced (Tip-Sleeve)
Input Impedance:	500 k Ω Mono/1 M Ω Stereo
Unity Gain Input to Output:	4 dBu DFS

Left(Mono)/Right Outputs

Connector Type:	1/4" Unbalanced (Tip-Sleeve)/Balanced (Tip-Ring-Sleeve)
Output Impedance:	1 k Ω Unbalanced/ 2 k Ω Balanced
Maximum Output Level:	10 dBu DFS
Playback Unity Gain:	Loop Level knob set to 12 o'clock position

Expression Input

Connector Type:	1/4" Stereo (Tip-Sleeve) – compatible with passive Expression / Volume Pedals
-----------------	---

Footswitch Input

Connector Type:	1/4" Stereo (Tip-Ring-Sleeve), compatible with optional DigiTech® FS3X 3-button footswitch
-----------------	--

Line Inputs to Outputs

Dynamic Range:	108 dB A-weighted
Frequency Response:	+0/-2 dB 20-20 kHz
Voltage Rails:	+/-14 V

Specifications

General

Power:	< 6 Watts
Current Draw:	< 0.6 A
Dimensions:	6.83" (L) x 11.0" (W) x 2.88" (H) 173.5 mm (L) x 279.4 mm (W) x 73.2 mm (H)
Weight:	3.42 lbs, 1.55 kg

JamManager™ Librarian Software System Requirements

Windows XP Home/Pro (32-bit), Vista (32/64-bit), 7 (32/64-bit)

- Pentium®/Athlon XP processor
- 1GB RAM (2GB RAM recommended)
- USB Port

Mac

- OS X 10.5 or later
- Intel Core processor
- 1GB RAM (2GB RAM recommended)
- USB Port

Power Adapter: ***IMPORTANT NOTE:** There are two different models of this product. If purchasing a replacement power supply, ensure that you properly match the power requirements screening on the back panel of the product with the corresponding adapter model listed below.

Power Requirements: 9 VAC 1.3 A*

<u>Country (Voltage)</u>	<u>Adapter Model</u>
Japan (100 VAC, 50/60 Hz):	PS0913B-100*
US and Canada (120 VAC, 60 Hz):	PS0913B-120*
Europe (230 VAC, 50 Hz):	PS0913B-230*
UK (240 VAC, 50 Hz):	PS0913B-240*
Australia (240 VAC, 50 Hz):	PS0913B-240-AU*

Power Requirements: 9 VDC 1.3 A*

<u>Country (Voltage)</u>	<u>Adapter Model</u>
US, Canada, Europe, Japan (100-240 VDC, 50/60 Hz):	PS0913DC-01*
Australia & UK (100-240 VDC, 50/60 Hz):	PS0913DC-02*

DigiTech® engineers are constantly working to improve the quality of our products. Specifications are therefore subject to change without notice.

DigiTech®
8760 South Sandy Parkway
Sandy, Utah 84070
PH (801) 566-8800
FAX (801) 566-7005
www.digitech.com

JamMan® Delay Owner's Manual 18-0687V-B
Printed in China

DigiTech and JamMan Delay are registered trademarks of HARMAN. All other product name and trademarks are the property of their respective owners, which are in no way associated with DigiTech.

©2011 HARMAN
All rights reserved

