

DIGITAL DELAY SAMPLER DDS-100

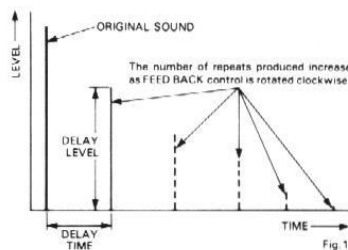
THE DIGITAL DELAY SAMPLER EFFECT

The YAMAHA DDS-100 is a compact digital delay that can produce the "feedback echo" effect over a range of 22 to 1400 milliseconds, and in addition can be used as a sampler to record a short musical phrase up to 1400 milliseconds long.

In the three delay modes (Short, Middle, Long), incoming signals are echoed after the delay time set by DELAY TIME. The number of decaying echoes is determined by the FEED BACK setting. The footswitch turns the effect on and off.

In R/P mode (record/play), press the footswitch to begin recording. As long as you hold down the footswitch, the DDS-100 will continue to record and reproduce your playing. If FEED BACK is turned up, previous playing will be "layered" underneath the new playing. In this way, you can build up complex polyphonic parts. To clear the memory, turn FEED BACK

all the way down and press the footswitch. In P mode (play), press the footswitch to start playing the recorded phrase. If you press and hold the footswitch, the phrase will continue repeating.



CONTROLS



DELAY TIME Control

Adjusts delay time within each of the available ranges: S, M and L. Adjusts recording time and playback speed in the sampling mode.

Effect Indicator

Lights when the effect is ON, and goes out when the effect is turned OFF. If the indicator does not light even when the footswitch is pressed, the battery must be replaced. Lights during recording or playback in the sampling mode.

DELAY LEVEL Control

Determines the level of the delay (effect) sound in relation to the direct sound. Rotated fully counter-clockwise only the direct sound will be heard. As this control is rotated clockwise the level of the affect sound approaches that of the direct sound.

FEED BACK Control

Determines the number of delay repeats produced. If turned full counter-clockwise only a single repeat will be heard. The number of repeats produced increase as this control is rotated clockwise.

MODE Selector

Effect Footswitch

In the three delay modes (S, M, L), this turns the effect ON and OFF. In R/P mode, pressing the footswitch will begin recording. In P mode, pressing the footswitch will begin playback.

MODE Selector

Sets the operating mode of the delay unit.

S : Short Delay Mode.

In this mode the delay time is 22 ~ 88 milliseconds.

M : Middle Delay Mode.

In this mode the delay time is 88 ~ 350 milliseconds.

L : Long Delay Mode.

In this mode the delay time is 350 ~ 1400 milliseconds.

R/P : Sampling Mode.

In this mode sounds can be "recorded" in the digital memory, and played back along with the direct instrument sound.

P : Playback Mode.

This mode is used for playback of sampled sounds.

SETTING EXAMPLES

Before using the device in delay mode, here is how to erase unwanted sounds that may still be in the memory.

— Clear Memory —

Set the MODE switch to L of the delay mode, turn FEED BACK full left, and press the foot-switch (the indicator lights). Then press the foot-switch again (the indicator goes off). This will clear the memory.

Example 1)

A basic setting suitable for lead solos.

(1) Press the footswitch to turn the effect on.

The indicator will light.

(2) Set MODE to the M position (middle delay).

(3) Set DELAY TIME, FEED BACK and DELAY LEVEL as shown at right.



Example 2)

A setting for long delay.

- (1) Press the footswitch to turn the effect on.
The indicator will light.
- (2) Set MODE to the L position (long delay).
- (3) Set DELAY TIME, FEED BACK and DELAY LEVEL as shown at right.



SAMPLING OPERATION

—Recording—

- (1) Erase the unwanted sound in the memory.
Set MODE to R/P position, turn FEED BACK full left, press the footswitch (indicator lights), and press the footswitch again (indicator goes off). This clears the memory.
- (2) Set MODE to R/P position (See Fig. A).
- (3) Turn DELAY LEVEL full right, and FEED BACK full left. (See Fig. A).
- (4) Set DELAY TIME to the length of time you want to record. You can record a phrase 0.35—1.4 seconds long (350 ms—1400 ms). When DELAY TIME is full right, the time is 1.4 seconds. When full left, the time is 0.35 seconds. (See Fig. A).
- (5) At the beginning of the phrase you want to record, press and quickly release the footswitch. The indicator will light for the length of time set by DELAY TIME, and when recording is over, the indicator will go off.

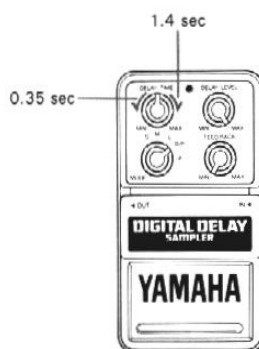


Fig. A

* If you press the footswitch too late, you will lose the beginning of your phrase, and if you are too early, you will get unwanted sound. Practice to get the right timing. If you continue pressing the footswitch for longer than the specified delay time, the recorded phrase will be played back immediately, and re-recorded along with whatever else you play. See "Layering" for details.

—Playback—

- (6) Set the MODE switch to P position.
(See Fig. B).
- (7) Set the controls for playback. If you want the playback sound to be softer, set DELAY LEVEL appropriately. By changing the DELAY TIME setting, you can change the playback speed/pitch of the phrase.
(See Fig. B).
- (8) Now playback. While you press the footswitch, the recorded phrase will be continuously played back. You can play along on your instrument.

* To clear the memory, follow the steps explained in (1).

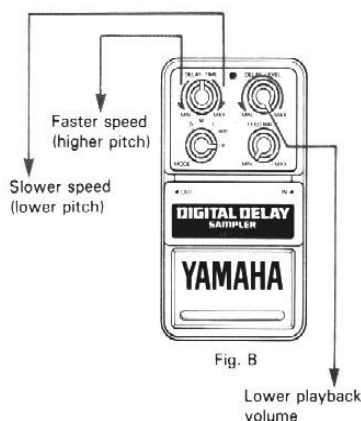


Fig. B

—Layering—

You can use the R/P position to layer a phrase on top of an already recorded phrase, as follows.

- (1) Record a phrase as explained in steps (1)–(5).
- (2) Set the controls for playback. If you want the playback sound to be softer, turn DELAY LEVEL towards the left. By changing the DELAY TIME setting, you can change the playback speed/pitch of the phrase already recorded. By turning FEED BACK towards the right, you can increase the number of times the recorded sound will be “fed back”. (See Fig. C).
- (3) Press the footswitch to start playback, and at the same time, begin playing another phrase to layer on top of the recorded phrase. The newly recorded phrases will be played back along with the previously recorded phrases. Each repetition will

decrease in volume and finally die away, according to the FEED BACK setting.

* If you stop playing, the recorded sound will go away. To record again, follow the steps in “Recording (1)”.

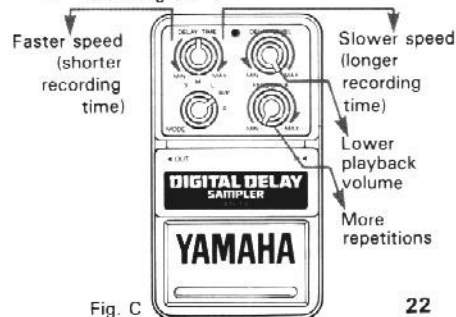


Fig. C

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SPECIFICATIONS

• Type	: Logarithmic analog compression, 12 bit quantization
• Input Impedance	: 1 MΩ
• Output Impedance	: Less than 2 kΩ
• Max. Input Level	: +4 dB, @ 0 dB = 775 mV
• Noise Level	: IHF-A, -90 dB, equiv.input, @ 0 dB = 775 mV, input shorted, FEED BACK at max.
• Frequency Characteristics	: 20 Hz ~ 100 kHz +0, -3 dB (Effect OFF)
• Sampling Frequency Characteristics	: 100 Hz ~ 7 kHz +1, -3 dB (Effect ON)
• T.H.D.	: 0.5% (1 kHz, -10 dB)
• Delay Time	: Short 22 ms ~ 88 ms, Middle 88 ms ~ 350 ms, Long 350 ms ~ 1400 ms
• Sampling Time	: 350 ms ~ 1400 ms
• Mode Select	: Delay mode (S, M, L), Sampling mode (R/P, P)
• Functions	: DELAY TIME, DELAY LEVEL, MODE (S, M, L, R/P, P), FEED BACK, EFFECT FOOT SW, EFFECT INDICATOR
• Terminals	: INPUT, OUTPUT
• Power Consumption	: 50 mA (DC 9V)
• Battery Life	: Approx. 1 hours continuous.
• Power Source	: 9V dry battery (006P or 6F22) or AC adapter.
• Dimensions (W × H × D)	: 70 × 61 × 126 mm (2-3/4" × 2-3/8" × 4-15/16")
• Weight	: 430 grams (15 oz) with battery.
• Accessory	: 9V dry battery (006P or 6F22) × 1

* Specifications and external appearance are subject to change without notice.