

Instruction Manual

DFX9
DIGITAL
DELAY

DFX91
DIGITAL
DELAY /
SAMPLER

DFX94
DIGITAL
DELAY /
SAMPLER

INFORMATION TO USERS

This equipment generates and uses radio frequency and if not installed and used properly, that is—in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits of a Class B computing device in accordance with the specifications in Subpart J of Part 15 of F.C.C. Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no such guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient the receiving antenna.
2. Relocate the digital effects device with respect to the receiver.
3. Move the digital effects unit away from the receiver.
4. Plug the digital effects unit into a different outlet so that the effects unit and the receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the F.C.C. helpful: *How to Identify and Resolve Radio-TV Interference Problems*.

This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402
Stock Number: 004-000-00345-4.

WHAT THE DFX 9, DFX 91 AND DFX 94 DO

The DFX 9, DFX 91 and DFX 94 are digital audio delays that delay sound to make effects. When mixed with the original signal, these effects include doubling, slapback, and echoes. Other useful effects are infinite repeat; and with the DFX 91 and DFX 94, sampling.

These effects units convert sound into digits, ones and zeros, that are stored in a computer memory. The stored sound is read out from the memory at a delay time set by you on the unit. The ones and zeros are converted back into sound. Because this process is digital, the sound doesn't suffer the degradation as with an analog delay. Also, the data may be looped back into the memory easily to make it repeat infinitely. The sound may also be sampled and held in memory and played out on command.

These digital delays make use of the latest technology. We have used a custom Very Large Scale Integrated circuit (VLSI) to give you high quality sound from a very small package.

HOOKING UP THE DFX FOOTSWITCH

Connect the INPUT of the DFX pedal to your guitar with a 1/4" mono phone plug. Connect the OUTPUT of the DFX pedal to your amplifier (or to the input of another effects device you may be running in series) using a 1/4" mono phone plug. To eliminate the need for a 9-volt battery, attach either the DOD PS 3, PS 50, or PS 125 A.C. adapter to the 3.5mm POWER jack on the chassis of the unit.

FEATURES

The DFX 9, DFX 91 and DFX 94 are digital delay/sampling effects units. Each is equipped with four control knobs to let you customize the delay effect. The DFX 9 and DFX 91 offer up to one full second of delay or delay/sampling time, while the DFX 94 offers up to four full seconds of delay/sampling time.

All three DFX pedals offer the following features:

- LED indicators that show the operating status of the effects
- No tools, easy access battery compartment
- Power jack for A.C. adapter operation
- Rugged die-cast metal case
- Catalyzed paint for a long wearing finish
- Three-year limited warranty
- Non-skid rubber bottom
- Sensitive foot pad for responsive performance

CONTROLS

LEVEL: This control changes the output effect level with regard to the original signal. Fully counterclockwise, there is no delayed signal sent to the output, while the original signal is at full strength. Fully clockwise, a mixture of the delayed signal to the original signal is 50% to 50%. That is, the delayed signal is the same strength as the input signal. This is not a mixture control in the true sense, in that it does not alter the strength of the original signal.

REPEAT: This control changes the amount of the delay signal that is fed back to the delay circuit to

create the number of repeats of a sound you want. Fully counterclockwise, one repeat is produced. Fully clockwise, at least twenty repeats may be heard before the repeats die out.

DELAY: This control changes the amount of delay time within the DELAY RANGE selected on the RANGE/MODE control. Fully counterclockwise, the shortest delay time in the selected DELAY RANGE is produced. Fully clockwise, the longest delay time in the selected DELAY RANGE is produced.

RANGE/MODE: This rotary switch selects DELAY RANGE of the digital delay, or the sampling functions of the unit.

In the **DFX 9** the delay ranges and functions are:

- Position 1: 3.5 to 15.6 milliseconds delay
- Position 2: 13.8 to 62.5 milliseconds delay
- Position 3: 55.5 to 250 milliseconds delay
- Position 4: 222 to 1,000 milliseconds delay
- Position 5: Infinite Repeat (only on longest range)

In the **DFX 91** the delay ranges and functions are:

- Position 1: 55.5 to 250 milliseconds delay
- Position 2: 222 to 1,000 milliseconds delay
- Position 3: Infinite Repeat (only on longest range)
- Position 4: Trigger (only on longest range)
- Position 5: Sample Record (only on longest range)

In the **DFX 94** the delay ranges and functions are:

- Position 1: 55.5 to 250 milliseconds delay
- Position 2: 222 to 1,000 milliseconds delay
- Position 3: 888 milliseconds to 4 seconds delay
- Position 4: Infinite Repeat (only on longest range)
- Position 5: Trigger (only on longest range)
- Position 6: Sample Record (only on longest range)

HOW TO OPERATE THE DFX FOOTSWITCH

HOW TO OPERATE THE DFX FOOTSWITCH AS A DIGITAL DELAY

1. Select the DELAY RANGE with the RANGE/MODE switch.
2. Adjust the amount of delay you want within the delay range you've selected with the DELAY control.
3. Set the repeat effect level with the LEVEL control.
4. Set the number of repeats of the echo with the REPEAT control.

Unless you're just making a doubling effect, a multiple echo effect is more pleasing if it blends with the tempo of the music you're playing.

HOW TO OPERATE THE DFX's INFINITE REPEAT FUNCTION

1. Select the INFINITE REPEAT position on the RANGE/MODE switch. In this mode the BYPASS footswitch becomes the INFINITE REPEAT footswitch only.

2. Adjust the amount of repeated time you want with the DELAY control.
3. Play along with the delayed line until you are playing precisely over the top of it.
4. Tap the INFINITE REPEAT footswitch. The line you've put into the DFX unit will repeat infinitely.

This riff is great for playing over as a basic rhythm. With practice, by putting the unit into and out of INFINITE REPEAT for one cycle, you can layer more lines onto this basic riff.

HOW TO OPERATE THE DFX 91 AND DFX 94'S SAMPLE AND TRIGGER FUNCTIONS

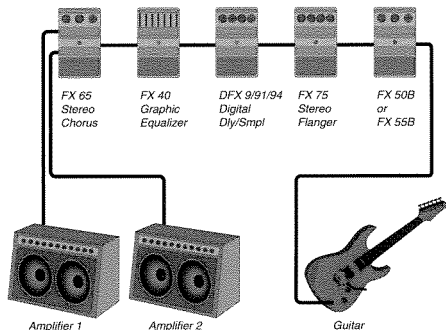
1. Select the SAMPLE position on the RANGE/MODE switch. In this mode the BYPASS footswitch becomes the SAMPLE footswitch only.
2. Adjust the amount of repeated time you want with the DELAY control.
3. Tap the footswitch. The INFINITE REPEAT/ SAMPLE LED will go *OUT*. The line you've put into the DFX unit is now sample recording. The LED comes back *ON* when the sample record time is done.
4. Select the TRIGGER position on the RANGE/MODE switch. In this mode the BYPASS footswitch becomes the SAMPLE TRIGGER footswitch only.

5. Whenever you wish to TRIGGER the playback of your recorded sample sound, tap the footswitch.

With practice, by putting the unit into and out of SAMPLE RECORD for one cycle, you can layer more lines onto a sampled sound, creating whole new expressions in your music.

After recording a sample sound, you can also turn the RANGE/MODE switch to INFINITE REPEAT and play back a repeating loop of your recorded sample.

A stereo multiple effects setup using the DFX 9, DFX 91 or DFX 94 might look like this:



IMPORTANT NOTES

- When you're not going to use the DFX digital effects unit be sure to unplug the INPUT jack. This will prevent unnecessary battery drain.

- If you are not going to use the DFX digital effects unit for an extended period of time, remove the battery to avoid possible damage to the unit from leaking battery fluids.
- It is a good idea to keep a fresh battery installed in you're DFX effects pedal while playing so that even if the A.C. adapter should accidentally come out, your DFX pedal will continue to work.
- The use of any other A.C. adapter other than a DOD PS 3, PS 50, or PS 125 will void the warranty of this product.
- Unauthorized repair of the DFX digital effects unit will void the warranty. Should your Digital Delay/Sampler require service, contact you DOD dealer for return/repair information.

CHANGING THE BATTERY

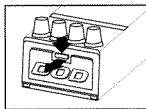


Figure 1

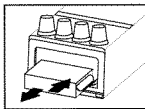


Figure 2

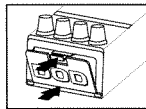


Figure 3

Figure 1: Push battery compartment cover tab down and pull out at top.

Figure 2: Remove used battery. Replace with an EVEREADY® or ENERGIZER® 9-volt battery No. 522. Snap on new battery and replace as shown.

Figure 3: Insert compartment cover in bottom groove and push the top closed to latch.

IMPORTANT BATTERY NOTE

The DFX 9/91/94 are digital units and provide the user with far greater power than conventional analog pedals. For this reason it is not possible to achieve long battery life while retaining features. Battery life for the DFX 9/91/94 is approximately four hours. Distortion, humming, or strange noises in the effect usually indicate low battery power. Before flinging your new pedal off a bridge from the window of a moving car (or sending the unit back to the factory for "repair"), check to see that the battery is still good. The DOD PS 3 or PS 50 A.C. adapters are recommended for use with the DFX 9/91/94, and can be obtained from your local DOD dealer.

SPECIFICATIONS DFX 9, DFX 91, DFX 94

DELAY RANGES DFX 9:

3.5 to 15.6 milliseconds
 13.8 to 62.5 milliseconds
 55.5 to 250 milliseconds
 222 to 1,000 milliseconds
 Infinite Repeat (only on longest range)

DELAY RANGES DFX 91:

55.5 to 250 milliseconds
 222 to 1,000 milliseconds
 Infinite Repeat (only on longest range)
 Trigger (only on longest range)
 Sample Record (only on longest range)

DELAY RANGES **DFX 94**:

55.5 to 250 milliseconds
222 to 1,000 milliseconds
888 milliseconds to 4 seconds
Infinite Repeat (only on longest range)
Trigger (only on longest range)
Sample Record (only on longest range)

SIGNAL TO NOISE RATIO: 92 dB typical

INPUT IMPEDANCE: 470 kohms

OUTPUT IMPEDANCE: 4.7 kohms

MAXIMUM OUTPUT LEVEL: 5 VPP

BANDWIDTH: Dry -40 Hz to 20 kHz; Wet -40 Hz
to 10 kHz

DIGITAL RESOLUTION: 12 bit

POWER SUPPLY: One 9-volt alkaline battery, or
DOD PS 3, PS 50, or PS 125 A.C. adapter

SIZE: 5" x 3" x 2 $\frac{1}{4}$ " (126 mm x 77mm x 57mm)

WEIGHT: 1.2 lbs (.55 kg)

DOD WARRANTY

1. The warranty registration card must be mailed within ten days after purchase date to validate this warranty.
2. DOD warrants this product, when used solely within the U.S., to be free from defects in material and workmanship under normal use.
3. DOD Electronics' liability under this warranty is limited to repairing or replacing defective materials that show evidence of defect, provided the product is returned through the original dealer, where all parts and labor will be covered up to a period of three years. 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 date of purchase is considered to be the burden of the consumer.
5. If this product is battery operated: batteries are not covered by this warranty. Please remove weak or dead batteries in order to prevent corrosion damage.
6. DOD 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.
7. The foregoing is in lieu of all other warranties, expressed or implied, and DOD neither assumes nor authorizes any person to assume for it any obligation or liability in connection with the sale of this product. In no event shall DOD 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.

DOD Electronics Corporation

8760 Sandy Parkway
Sandy, Utah 84070

Telephone (801) 566-8800
FAX (801) 566-7005

International FAX (603) 672-4246

H A Harman International Company

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Printed in USA

Made in USA