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DEEP FREEZE

User Manual

Sound Retainer



Welcome to the Electro-Harmonix Deep Freeze Sound Retainer. With the simple push of a button, the Deep Freeze allows you to sustain individual notes and chords indefinitely, gliss between frozen sounds, layer sounds and notes, and automatically freeze notes or chords as you play. All of this in an extremely compact, pedalboard-friendly package!

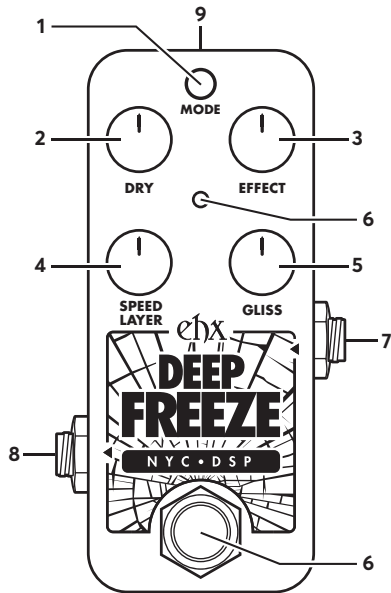
Operating Instructions

Insert the output plug from the supplied 9VDC AC adapter into the power jack at the top of the Deep Freeze. The unit must be powered to pass signal, even in bypass. The Deep Freeze features buffered analog bypass or digital bypass depending on settings. Connect an instrument cable from your instrument to the Input jack. Connect an instrument cable between the Output jack and a suitable amplifier. As a starting point, set the DRY and EFFECT knobs to 50% and the SPEED/LAYER and GLISS knobs to minimum.

Controls & Jacks

1. MODE Button Selects how the footswitch controls the effect.

LATCH (Green LED) Play a note or chord and then press and release the footswitch to activate the effect and light the LED green. After you release the footswitch, the effect remains active and your sound sustains indefinitely. Dou-



Power Supply Requirements: Voltage: 9VDC Current: 100mA Polarity: Center-Negative

This device comes equipped with an Electro-Harmonix 9.6DC-200 power supply. Use of the wrong adapter or a plug with the wrong polarity may damage the device and void the warranty. Do not exceed 10.5VDC on the power plug. Power supplies rated for less than 100mA may cause the device to act unreliably.

ble-tap the footswitch to end the frozen sound and enter bypass. Each time you press down on the footswitch, the sound present at the Input jack is frozen. The SPEED/LAYER knob allows you to layer frozen sounds. The setting of the knob—at the moment you press the footswitch—sets the volume level of previous layers. Turn down SPEED/LAYER to minimum to disable layering; set to max to allow frozen layers to remain at full volume.

MOMENT MODE (Orange) Play a note or chord and then press and hold the footswitch to activate the effect and light the LED. The freeze effect sustains indefinitely while you hold down the footswitch. Release the footswitch and the Deep Freeze enters bypass.

AUTO MODE (Red) The Deep Freeze detects each new note or chord you play and freezes it automatically. Press the footswitch to engage the effect and light the LED red. Double-tap the footswitch to return to bypass. The SPEED knob sets the fade-out time of the auto freeze. When SPEED is set to maximum, the sustained notes do not fade out. While Auto is engaged, press and hold the footswitch to stop accepting new notes and sustain the freeze indefinitely, allowing you to play over the frozen sound.

2. DRY Controls the output level of the dry signal.

3. EFFECT Controls the output level of the effect.

4. SPEED/LAYER In LATCH mode, this knob controls how much of the previously frozen sound is layered onto your new freeze. In MOMENT mode, this knob controls how quickly the frozen signal fades in and out. In AUTO mode, by default, this knob controls the fade-out time of the frozen sounds after you play a new note/chord. This can be changed to affect the attack instead of the decay of the signal, see the Auto Decay & Attack Modes section for more.

5. GLISS This knob adjusts the speed of the gliss effect. Gliss morphs one frozen note or chord into the next; it is similar to the portamento function found on many synthesizers. As you turn the GLISS knob clockwise, the gliss time increases. To turn gliss off completely, turn the GLISS knob down all the way to its full counterclockwise position. *PERFORMANCE NOTE: The easiest way to hear the gliss effect is to put the Deep Freeze into AUTO mode, completely turn down the DRY knob and set the GLISS and SPEED/LAYER knobs to 50% or higher.*

6. Footswitch and Status LED Footswitch engages or bypasses the effect. The LED color indicates the selected mode. In bypass mode, the LED is off.

7. Input Jack Impedance: 2.2M Ω , Max In: +1.5 dBu

8. Output Jack Impedance: 680 Ω , Max Out: +2.1 dBu

9. Power Jack Current draw: 100mA at 9.0VDC

Auto Decay & Attack Modes

While in Auto mode, by default, the Speed knob controls the decay time of the freeze effect. The higher the Speed knob setting, the longer the decay time. At maximum, the frozen signal does not decay, it continues indefinitely. Optionally, you can change the Speed knob to control attack time instead of decay. In this case, the higher the Speed knob setting, the slower the attack time.

To change the Auto Speed knob to Attack mode, do the following:

1. Press and hold the MODE button.
2. After two seconds, the LED rapidly cycles through its three colors.
3. Release the button; Auto Attack is now selected.
4. Repeat this procedure to change back to Auto Decay.

The Auto Speed knob setting is remembered through power-cycles so you can set it and forget it.

Bypass Modes & Selection

The Deep Freeze features three distinct bypass topologies:

Digital Bypass (Green) This is the default bypass type. In this scenario your signal is fully digital even in bypass. This bypass type allows for the smoothest transitions when entering and exiting bypass.

Analog Bypass (Orange) The bypass signal is analog and buffered. Analog bypass gives you the purest, least-colored sound in bypass mode.

Hybrid Bypass (Red) When you switch from effect to bypass, your bypass signal is initially digital, but the pedal will seamlessly switch to analog bypass when there's a brief gap in your playing. Hybrid Bypass allows for a smooth transition from effect to bypass, while allowing your bypass signal to be analog the vast majority of the time.

Digital bypass is selected by default from the factory. To change the bypass topology, do the following:

1. Power down the Deep Freeze.
2. Press and hold the footswitch.
3. While holding down the footswitch, apply power to the unit.
4. Continue to hold down the footswitch. After about 2 seconds, the LED begins blinking rapidly.
5. Release the footswitch. The color of the blinking LED represents the current bypass setting. Green is digital, orange is Analog, and red is Hybrid.
6. Press and release the MODE button. The LED color changes with each press.
7. When the LED color matches your desired bypass mode, press and release the footswitch once.

The bypass mode setting is remembered through power-cycles so you can set it and forget it.