(black model)

Whammy II

The xp100 has more presets.

Contents

Introduction

Congratulations and thank you for purchasing the latest in DigiTech's line of harmony products, the Whammy II pedal.

Once again, DigiTech brings you the latest in digital signal processing technology. New price and performance barriers have been broken using a custom integrated circuit to achieve smooth, seamless pitch bending. True 16-bit, full-bandwidth fidelity has been attained, giving you great sounding harmonies and pitch shifts. Also, in response to requests from our original Whammy pedal users, all controls and functions of your new Whammy II pedal can be controlled with the footswitches—giving you complete hands-free control.

The DigiTech Whammy II pedal allows you to:

- Perform smooth pitch bending. Five Whammy settings let you smoothly bend notes one tone down, one octave up or down, or two octaves up or down.
- Create two part harmonies from a single note. Six settings provide single-note chromatic harmony along with the input note.
- Apply thick detuning sounds. Detuning ranges from 0 to +18 cents and is controlled by the pedal position.

The Whammy II pedal comes complete with its own external AC power supply (DOD PS-750).

NOTE: Every time you power up the Whammy II pedal, it is necessary to move the pedal through its full range ONCE in order to calibrate the unit.

How the Whammy II Pedal Works

The Whammy II operates as a real-time sampler, constantly sampling and analyzing what you're playing. At the same time, the notes being sampled are sent back out at a different pitch.

Since the Whammy II recognizes the pitch of each note you play, it is able to automatically choose a looping point for the pitch-shifted output to create a natural sounding harmony—not a garbled, delayed one as with other pitch shifting pedals.

Control Descriptions

There are three controls on the Whammy II pedal: the Select switch, the Bypass switch, and the Input Level control (on the rear panel).

Select Switch

The Select switch is used for selecting Presets. A quick press and release of this switch will advance you through the 12 Presets sequentially. In Toggle mode (more on this later) this switch is used to toggle between your two favorite Presets (Figure 1).

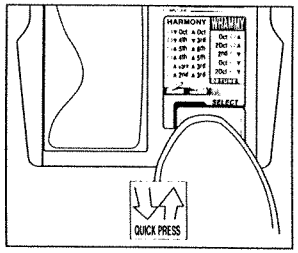

Figure 1

Bypass Switch

A quick press and release of the Bypass switch will deactivate the Whammy II (Figure 2). When the unit is bypassed, the Bypass LED is lit. The Bypass switch is also used to switch the pedal between Toggle and Performance modes (Figure 3). See *Modes of Operation* for details.

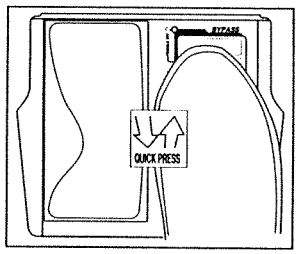

Figure 2

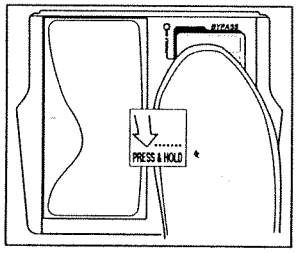

Figure 3

Input Level Control

This control allows you to optimize the signal level entering the Whammy II for the best possible pitch shifting sound.

Play your guitar and adjust the input level control (located on the rear panel) so that the green INPUT LEVEL LED lights for normal playing levels and the red peak LED indicator flashes only on the loudest peaks. Set the input level control carefully. Setting this level too high can result in unwanted distortion; setting it too low can affect the overall quality of the pitch shifting.

Jacks

Input Jack: A 1/4" phone jack that accepts mono phone plugs for an unbalanced connection.

Wet Output Jack: A 1/4" phone jack that accepts mono phone plugs for unbalanced connection. This jack outputs the Whammy II's processed sound in accordance with the mix settings described in the *Presets* section.

Dry Output Jack: A 1/4" phone jack that accepts mono phone plugs for unbalanced connection. This jack can be used to output an unprocessed signal for stereo effects, e.g., if you want to output a detuned signal to the left channel of a stereo effect while applying a dry signal to the right channel. Alternatively, you may want to layer additional effects on top of the Whammy II; the dry output provides you with an unprocessed signal for input to other effects.

Power Jack: Use only the 9 volt AC adapter supplied with the Whammy II.

PLEASE NOTE: THIS IS A SPECIAL SUPPLY - THOSE SUPPLIED WITH OTHER DOD PRODUCTS WILL NOT WORK. **Using any other power supply than the one supplied may damage the unit and void your warranty.**

Connection

If you are using a distortion device, we recommend that you connect your Whammy II pedal before the distortion device in the signal chain to ensure that the cleanest possible input signal is received by the Whammy II. Placing the Whammy II after the distortion device will work, but extremely distorted signals can disturb the pedal's pitch recognition process slightly. Try reducing the amount of distortion; experimenting is recommended. You may find that Harmony Presets sound better by placing the Whammy II after the distortion device, providing the amount of distortion is not excessive.

Modes of Operation

The Whammy II features two convenient modes of operation: Performance and Toggle.

Performance Mode

This is the default mode of operation when the Whammy II is first powered up. A quick press and release of the Select switch will advance you through the 12 Presets, sequentially. The unit can be bypassed at any time with a quick press and release of the Bypass switch.

Toggle Mode

Toggle mode is a new feature exclusive to the Whammy II. It allows you to choose your two favorite settings and toggle between them during performance. The Whammy II even remembers your two favorite Presets after the unit is turned off, eliminating the need for re-programming at each gig!

To program your two favorite Presets into the Whammy II's toggle memory, follow these four simple steps:

1. Press and hold the Select button for two seconds; the *TOGGLE ON* LED will begin to flash, indicating that you are ready to select your two favorite Presets.

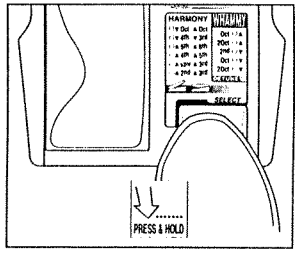

Figure 4

2. Use the Select button to choose the first of your two favorite Presets (Figure 5).

3. Press and hold the Select button until the Preset indicator LED begins flashing. This "locks in" your first selection (Figure 6). Now you are ready to select your second favorite Preset.

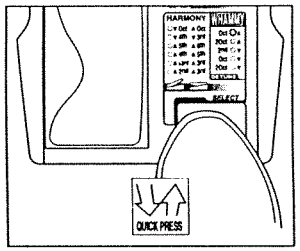

Figure 5

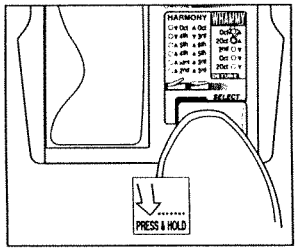

Figure 6

4. Use the Select button to advance to your second favorite Preset (Figure 7). Press and hold the Select button until the *TOGGLE ON* LED stops flashing and remains lit (Figure 8). Both selections are now locked in, and with the LED lit, the Whammy II is in Toggle mode.

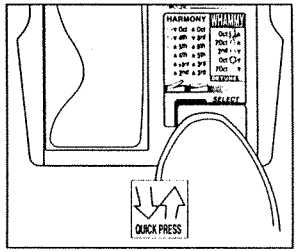

Figure 7

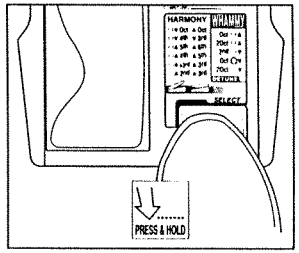

Figure 8

With the Whammy II in Toggle mode, a quick press and release of the Select button will toggle between your two favorite Presets. A quick press and release of the Bypass button will bypass the unit. If you want to leave Toggle mode and return to Performance mode, press and hold the Bypass button for two seconds. The *TOGGLE ON* LED will go out, indicating that the Whammy II is back in Performance mode. If you want to go back into Toggle mode (yes, the Whammy II has remembered your two favorite Presets)—press and hold the Bypass button until the *TOGGLE ON* LED lights, indicating that the Whammy II is in Toggle mode. The Bypass button can be used at any time to switch between Performance and Toggle modes.

Presets

Whammy Section

Oct ▲: Pedal back - no change
Pedal forward - one octave pitch shift up

2Oct ▲: Pedal back - no change
Pedal forward - two octaves pitch shift up

2nd ▼: Pedal back - no change
Pedal forward - 2nd (whole tone) pitch shift down

Oct ▼: Pedal back - no change
Pedal forward - one octave pitch shift down

2Oct ▼: Pedal back - no change
Pedal forward - two octaves pitch shift down

Note: All Whammy II Presets are 100% wet—your input sound is completely replaced by the pitch shifted output.

Harmony Section

▼ Oct ▲ Oct: Pedal back - harmony part is an octave down
Pedal forward - harmony part is an octave up

▼ 4th ▼ 3rd: Pedal back - harmony part is a 4th down
Pedal forward - harmony part is a major 3rd down

▲ 5th ▲ 6th: Pedal back - harmony part is a 5th up
Pedal forward - harmony part is a 6th up

▲ 4th ▲ 5th: Pedal back - harmony part is a 4th up
Pedal forward - harmony part is a 5th up

▲ b3rd ▲ 3rd: Pedal back - harmony part is a minor 3rd up
Pedal forward - harmony part is a major 3rd up

▲ 2nd ▲ 3rd: Pedal back - harmony part is a 2nd up
Pedal forward - harmony part is a major 3rd up

Note: All Presets in the Harmony section have a 50% mix of the shifted signal with the input signal.

Detune Section

Pedal back - 0 cents detune
Pedal forward - +18 cents detune

Indicator LEDs

Bypass LED: Located at the upper-left of the Bypass switch, this LED is lit when the Whammy II is bypassed and dark when the effect is active.

Toggle On LED: This LED is lit when the Whammy II is in Toggle mode; it is dark when the unit is in Performance mode.

Input Level LEDs: The green Input Level LED is lit when there is adequate signal present at the Whammy II's input. The red peak LED should light only on the loudest musical peaks.

Preset Indicator LEDs: Each Preset on the Whammy II has a Preset Indicator LED associated with it. At any given time, the currently selected Preset's indicator LED will be lit.

Applications

Detune

The Whammy II provides lush chorusing and detuning effects. The amount of detune can be adjusted continuously with the pedal anywhere from 0 to +18 cents; this gives you complete control over the detune depth and opens up new possibilities for your sound palette. Detune works perfectly with chordal or single-note inputs.

Whammy Presets

The Whammy Presets offer the same types of features as a whammy bar, but without many of the drawbacks.

The Whammy II pedal has the following advantages:

- Your guitar stays in tune.
- There's no "fluttering bridge" to worry about.
- You don't break strings doing radical upward bends.
- You don't need to modify your guitar to add a whammy bar system.
- There's no sustain loss

Here's a few suggestions for using the Whammy Presets:

- 2nd ▼: Emulate a whammy bar with your favorite lead

lines, or emulate slide guitar.

- Oct ▼ and 2Oct ▼: Great for dive-bombs through one or two octaves. Use it with your pick-harmonic squeals.

- Oct ▲ and 2Oct ▲: Now you can do whammy bar effects up as well as down! Use one or two octave up bends for your screaming leads! You can also get both pull-up and dive-bomb effects in this mode. For example, say you're playing a solo in G. You go up an octave and finger-bend a note, and then intensify it by doing a one octave pitch bend up with the Whammy II. Now you want a dive-bomb effect. You can do this by leaving the Whammy II pedal in the forward position (full up one octave) and playing down an octave on the fretboard. Even though you've moved your hand position down an octave, you still sound as if you're up an octave because you've left the Whammy pedal forward. Now, hit the note you want to dive-bomb and move the pedal to the full up position.

Try experimenting with the Whammy II in the octave forward setting and you'll see just how versatile the Whammy II can be!

Note: The Whammy Presets work best with single-note input. You can play chords and get good results when bending them down. The Whammy II has some limitations when attempting to shift chords up, but with some

experimenting you can achieve reasonable results with most Presets.

Harmony Presets

The Harmony Presets can be used to achieve a variety of interesting effects.

Try using the 5th ▲ 6th ▲ Preset for "rock n' roll"; the 4th ▼ 3rd ▼ and 4th ▼ 5th ▼ Presets are great for lead lines and blues.

The 2nd ▲ 3rd ▲ and b3rd ▲ 3rd ▲ Presets are great for Country or pedal steel effects.

The Oct ▼ Oct ▲ Preset can be used for cool special effects, such as sweeping slowly from one pedal extreme to the other.

Experiment, and above all, have fun with it!

Notice to Users

This equipment generates and uses radio frequencies, and if not installed and used properly 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 Sub Part 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 digital effects unit and the receiver are on different branch circuits.

If necessary, the user should consult the dealer and/or an experienced radio/television technician for additional suggestions. The booklet *How to Identify and Resolve Radio-TV Interference Problems* may also be helpful. This booklet was prepared by the F.C.C and is available from the U.S. Government Printing Office, Washington, D.C. 20402. Stock Number: 004-000-000345-4.

Specifications

Total Effects: 3

Total Presets: 12

Effects:

5 Whammy (pitch bending)
6 Harmony (two-part, bendable)
1 Detune

Bend Range: +/- 2 Octaves

Processor: 24-bit Custom DSP

Signal/Noise Ratio: 90 dB

Sampling Frequency: 45 kHz

Bandwidth: 20 Hz - 18 kHz
THD: 0.06% (wet), 0.01% (dry)

Input Level Range: -20 dBu to +4 dBu

Max. Output: +4 dBu

Led Indicators: Preset Select, Bypass, Toggle Mode, Signal Present, Clip

Controls: Bypass/Toggle Mode switch, Preset Select switch

Size: 1.8" H x 8" W x 6.2" D

Weight: 5.5 lbs (2.5 kg)