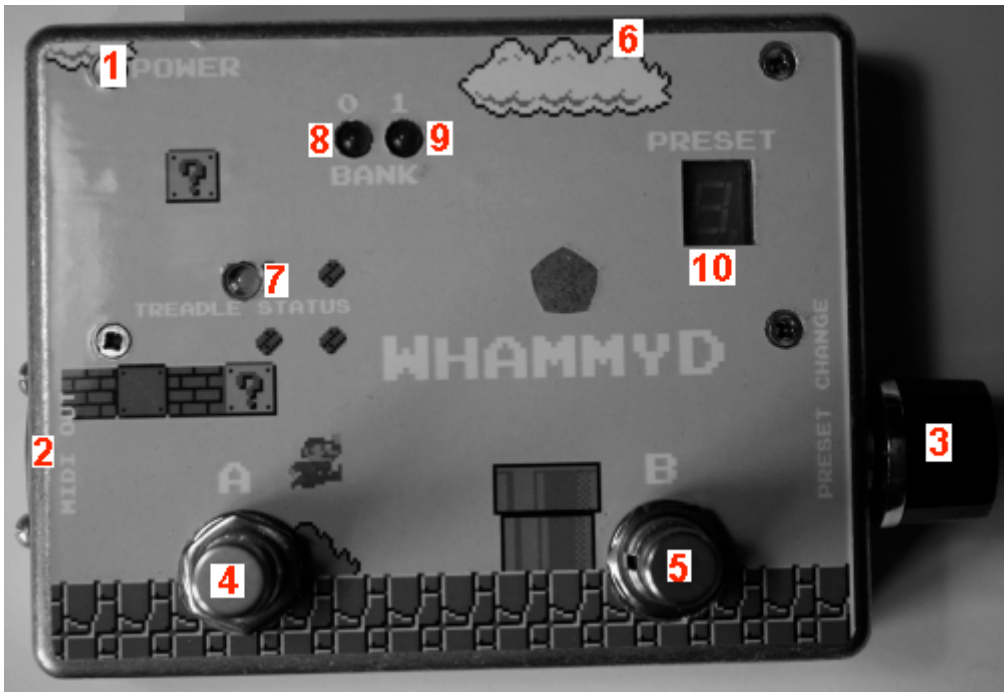
WhammyD – MIDI-controller for Digitech Whammy.

User Guide.

Introduction.

WhammyD – is a MIDI-controller for **Digitech Whammy IV Pedal**. It expands and complements Digitech Whammy functions without affecting the sound. WhammyD allows you to get a number of extra effects from yours Whammy Pedal, such as: chorus, frequency tremolo, arpeggiator, arpeggiator-harmonizer and momentary pitch in two octaves. You may also use a WhammyD as a footswitch to change programs in Digitech Whammy. There are 23 factory presets in WhammyDs memory banks where you can manually change arpeggios tempo or use a "Tap Tempo" function. There are also 7 programmable user presets. WhammyD might be reprogrammed without a computer. You just need your WhammyD, power adapter and Digitech Whammy to do that. Dynamic effects gives user an opportunity to change Whammy preset (by rotor switch on top panel Whammy) for experiments.

Controls.



1 – Power connector (You may use any power adaptor with voltage 9-12 V, 100 mA and more, AC/AC or AC/DC).

2 – MIDI out.

3 –`Preset Change` knob – this knob is made for preset change in WhammyD. It also might be used as an input data in program mode for programmable presets mode. When pushing down a B-footswitch in dynamic effects (presets 6-29) a tempo changes manualy (to the right - faster, to the left slower).

4 – `A` pushbutton. This switch turns back Digitech Whammy presets in WhammyD's preset 0, in WhammyD static presets (from 1 to 5) it changes a step of effect to the next one, in a dynamic WhammyD presets (6-29) it turns on/off a dynamic effect. In WhammyD program mode it switches a programming step back.

5 – `B` pushbutton. This switch changes Digitech Whammy presets at WhammyD's preset 0, in WhammyD static presets (from 1 to 5) it activates the current effect again. In dynamic WhammyD presets (6-29) it works as a "Tap Tempo" pushbutton. In WhammyD programming mode it switches next programming step. You need to push and hold down this button and use a Preset Change knob to change a tempo of arpeggios manually.

6 – Switch of programming WhammyD. In «Normal» mode (switched to the right) it does not affect WhammyDs work. In «Programming» mode (switched to the left) it activates programming mode for reprogramming 23-29 presets.

7 – Treadle Status LED. This is a visual reflection of virtual Digitech Whammy treadle status. No light means treadle up, and max light means treadle down.

8,9 – Bank LED. This LEDs displays a bank of WhammyDs memory. The letter has 3 banks of memory. 0 bank – lights LED 0 (8 control, presets 0-9), 1 bank – lights LED 1 (9 control, presets 10-19), 2 bank – lights two LEDs (controls 8 and 9, presets 20-29).

10 – Indicator of preset number. It displays a number of a preset and number of a step in programming mode with LEDs bank.

Switching

1. Connect WhammyD to Digitech Whammy with standard MIDI-cable.
2. Connect electric guitar to Input of Digitech Whammy, and input of your amplifier to Wet Added output at Digitech Whammy panel.
3. Connect Digitech Whammy to power adapter.
4. Connect WhammyD to power adapter.
5. Plug in the adapters.
6. Everything is ready.

Preparing Digitech Whammy MIDI-channel for work with WhammyD.

In factory features Digitech Whammy can work with WhammyD without any customizing. But if MIDI-channel works incorrect, please use this instruction below.

1. Turn off your Digitech Whammy.
2. Push down and hold metal pushbutton on Digitech Whammy panel and turn the power on.
3. Release the button and set «Shallow» position with rotary switch on Digitech Whammy panel.
4. Please push and release pushbutton on Digitech Whammy panel for exit from midi-setup mode.
5. Connect WhammyD to Digitech Whammy and enjoy.

WhammyD presets.

Bank 1.

1. **Footswitch for Digitech Whammy.** In this preset B-button turns the next preset on, A-button turns Digitech Whammy Preset to the previous one. Please do not use rotary switch on Digitech Whammy panel in this WhammyD preset for the correct work of the device. It is also not recommended to change Digitech Whammy preset only with A and B pushbuttons.
2. **Unison (Whammy-chorus)-forth down-fifth up.** When you turn this preset on you`ll get a chorus effect. 1st 'A' pushbutton touch adds forth down, 2nd 'A' pushbutton touch adds fifth up, 3nd 'A' pushbutton touch gives you unison with whammy chorus again, etc.. 'B' pushbutton works as a second switch on for activeting the step without changing it. For example: after activating a fifth up step you can work with Whammy tread. For activation fifth up again you should click the button B.
3. **Unison (Whammy-chorus) fifth up-octave up.** To add a harmony note to your input guitar signal you should press an 'A' button. When 'unison with whammy chorus' preset is on you will have a number of variants of pushing an 'A' pushbutton. 1st push adds a fifth up, 2nd adds an octave up, 3nd gives you a unison with whammy chorus, etc.. 'B' pushbutton works as a second switch on for activating step without changing it. For example: after fifth up step is activated, you can work with Whammy tread. To activate fifth up again you can click the 'B' button.
4. **Momentary pitch on 2 octave.** When you turn on the 'unison' preset, 1st “A” pushbutton pressure gives you 2 octave pitch up, 2nd “A” pushbutton touch gives you a unison again.
5. **Pitch on forth down – 7-strings emu.** When you turn on the preset – unison, 1st “A” pushbutton pressure – pitch on quart down, 2nd “A” pushbutton pressure gives you a unison again.
6. **Pitch on octave + thrid (minor/major).** When turning on the unison preset, 1st “A” pushbutton pressure gives you a pitch on octave+minor third up, 2nd “A” pushbutton pressure – octave+major third up, 3nd “A” pushbutton pressure gives you a unison again.
7. **Arpeggio 1. Unison-third up-forth up-octave up. “**A” pushbutton pressure switches on/off an arpeggio, “B” pushbutton pressure works as “Tap Tempo”.
8. **Arpeggio 2. Unison-second up-unison-second down. “**A” pushbutton pressure switches on/off an arpeggio, “B” pushbutton pressure works as “Tap Tempo”.
9. **Arpeggio 3. Unison-octave up. “**A” pushbutton pressure switches on/off an arpeggio, “B” pushbutton pressure works as “Tap Tempo”.
10. **Arpeggio 4. Harmony unison-fifth up-octave up-fifth up. “**A” pushbutton pressure switches on/off an arpeggio, “B” pushbutton pressure works as “Tap Tempo”.

Bank 2.

1. **Arpeggio 5. Harmony. "**A" pushbutton pressure switches on/off an arpeggio, "B" pushbutton pressure works as "Tap Tempo".
2. **Arpeggio 6. Harmony. "**A" pushbutton pressure switches on/off an arpeggio, "B" pushbutton pressure works as "Tap Tempo".
3. **Arpeggio 7. Triplets. "**A" pushbutton pressure switches on/off an arpeggio, "B" pushbutton pressure works as "Tap Tempo".
4. **Arpeggio 8. Triplets. "**A" pushbutton pressure switches on/off an arpeggio, "B" pushbutton pressure works as "Tap Tempo".
5. **Arpeggio 9. 16th. "**A" pushbutton pressure switches on/off an arpeggio, "B" pushbutton pressure works as "Tap Tempo".
6. **Arpeggio 10. ""**A" pushbutton pressure switches on/off an arpeggio, "B" pushbutton pressure works as "Tap Tempo".
7. **Arpeggio 11. Arpeggio 64th. Dendy style or Mario attack. "**A" pushbutton pressure switches on/off an arpeggio, "B" pushbutton pressure works as "Tap Tempo".
8. **Ambulance. "**A" pushbutton pressure switches on/off an ambulance effect.
9. **Sweep. "**A" pushbutton pressure switches on/off a sweep effect.
10. **Manual sweep. "**A" pushbutton pressure switches on/off a sweep effect, but it works only if you hold down "A" pushbutton.

Bank 3.

1. **Frequency tremolo. "**A" pushbutton pressure switches on/off a tremolo effect, "B" pushbutton pressure works as "Tap Tempo".
2. **Wide frequency tremolo. "**A" pushbutton pressure switches on/off a tremolo effect, "B" pushbutton pressure works as "Tap Tempo".
3. **Tap detune. "**A" pushbutton pressure switches on/off an arpeggio detune effect, "B" pushbutton pressure works as "Tap Tempo".
4. **Presets 3-9 are programmable by user arpeggio up to 16 notes. "**A" pushbutton pressure switches on/off an arpeggio, "B" pushbutton pressure works as "Tap Tempo". Programming arpeggios are described below.

Programming.

Unfortunately, the programming process in WhammyD is not as easy as we all want it to be. But it is the only way to make it work effectively. That's why you need to know exactly what you want to hear to get a good result.
To enter a programming mode you should turn a toggle switch «Programming Mode» situated on the back panel of WhammyD into a «PGM» position.
When switching among the programming steps you will see a number of a step you are switching on right now. A number of a step has a triple flash out signal «Treadle Status».
'A' and 'B' pushbuttons in programming mode work as switchers of the programming steps where 'A' is back and 'B' is forward.
To choose a number of a step you should use a 'Preset Change'.
To turn off a programming mode you should switch a knob 'Programming Mode' into 'Normal'.
When programming in a zero step mode you should choose a suitable step in Digitech Whammy then you should choose a meaning of the note in steps 1-16 and enter an appropriate one (see the chart below). Steps 17-32 are made to enter the length of every chosen note (see the chart below). 33-d step is for writing any changes.
You can get up to 16 note arpeggio in every user programmed preset. For example you needed only 5 note arpeggio but then you decided to add a 6-th note. To make the process right choose a «Stop Note» (see the chart), while the arpeggio is on. Next notes played after 'Stop Note' won't be played.

How to program an arpeggio.

Firstly choose a user preset in WhammyD, which will be rewritten. Use a Preset Change button to do that. Then use a programming knob on the back panel of WhammyD to turn the pedal into a programming mode. Now you are in a zero programming step:

0. Here you should choose a Digitech Whammy preset for which the arpeggio will be written. Use the Preset Change knob to chose a right preset in Whammy (don't forget to connect you Digitech Whammy with WhammyD by MIDI-cable). When the right preset on Whammy is chosen, press a 'B' button to change a programming step.

1,2,3,4...16. Steps 1,2,3..16 are made to choose an interval for shifting a tone for the 1-st 16-th of the arpeggio. Use a Preset Change knob and the indicator to make the right choice. Correlation between shifting a tone and this number is given in a chart below. The bigger chart is for Whammy preset working in a 2 octave diapason, the shorter one is for one octave or less then an octave diapason. Let us take for instance a 'C' note as a note with zero shifts. To switch next programming step press a 'B' button. To get back press a 'A' button. Be careful because you'll loose a written. You should choose a «Stop Note» after the last note of an arpeggio for programming less then 16 note arpeggios.

17,18,19..32. Steps 17,18,19..32 are made to choose a length of every note in a arpeggio. Use a 'Preset Change' knob to choose a number ion the indicator. Correlation of this number and the length is given in the chart below. To switch next programming step press a 'B' button. To get back press an 'A' button.

33. The last programming step is made to save all settings. By choosing this step you can save all your changes. When the changes are saved, Whammy D goes back to zero step. To exit a programming mode you should turn a knob on the back panel into a Normal position. Arpeggio is ready.

Whammy indicators for semitones in one octave:

Indicated number	Shifting from the support note 'C' (for the 'octave up' preset)	Shift*	Demonstrating a number on the indicator**
0	C	+0	Bank 0 [x] Bank 1 [ ] + 0
1	C#	+0,5	Bank 0 [x] Bank 1 [ ] + 1
2	D	+1	Bank 0 [x] Bank 1 [ ] + 2
3	D#	+1,5	Bank 0 [x] Bank 1 [ ] + 3
4	E	+2	Bank 0 [x] Bank 1 [ ] + 4
5	F	+2,5	Bank 0 [x] Bank 1 [ ] + 5
6	F#	+3	Bank 0 [x] Bank 1 [ ] + 6
7	G	+3,5	Bank 0 [x] Bank 1 [ ] + 7
8	G#	+4	Bank 0 [x] Bank 1 [ ] + 8
9	A	+4,5	Bank 0 [x] Bank 1 [ ] + 9
10	A#	+5	Bank 0 [ ] Bank 1 [x] + 0
11	B	+5,5	Bank 0 [ ] Bank 1 [x] + 1
12	C (+octave)	+6	Bank 0 [ ] Bank 1 [x] + 2
13	Stop Note	-	Bank 0 [ ] Bank 1 [x] + 3

* This shift is given for an octave up. For the octave down all shifts are the same but in a negative way. For the other presets (except 2 octave) the shifts are not revealed.

** Here [ ] – Lights off LED. [x] – Lights on LED.

Whammy indicators for semitones in two octaves:

Indicated number	Shifting from the support note 'C' (for the 'octave up' preset)	Shift*	Displaying a number on the indicator**
0	C	+0	Bank 0 [x] Bank 1 [ ] + 0
1	C#	+0,5	Bank 0 [x] Bank 1 [ ] + 1
2	D	+1	Bank 0 [x] Bank 1 [ ] + 2
3	D#	+1,5	Bank 0 [x] Bank 1 [ ] + 3
4	E	+2	Bank 0 [x] Bank 1 [ ] + 4
5	F	+2,5	Bank 0 [x] Bank 1 [ ] + 5
6	F#	+3	Bank 0 [x] Bank 1 [ ] + 6
7	G	+3,5	Bank 0 [x] Bank 1 [ ] + 7
8	G#	+4	Bank 0 [x] Bank 1 [ ] + 8
9	A	+4,5	Bank 0 [x] Bank 1 [ ] + 9
10	A#	+5	Bank 0 [ ] Bank 1 [x] + 0
11	B	+5,5	Bank 0 [ ] Bank 1 [x] + 1
12	C (+octave)	+6	Bank 0 [ ] Bank 1 [x] + 2
13	C#	+6,5	Bank 0 [ ] Bank 1 [x] + 3
14	D	+7	Bank 0 [ ] Bank 1 [x] + 4
15	D#	+7,5	Bank 0 [ ] Bank 1 [x] + 5
16	E	+8	Bank 0 [ ] Bank 1 [x] + 6
17	F	+8,5	Bank 0 [ ] Bank 1 [x] + 7
18	F#	+9	Bank 0 [ ] Bank 1 [x] + 8
19	G	+9,5	Bank 0 [ ] Bank 1 [x] + 9
20	G#	+10	Bank 0 [x] Bank 1 [x] + 0
21	A	+10,5	Bank 0 [x] Bank 1 [x] + 1
22	A#	+11	Bank 0 [x] Bank 1 [x] + 2
23	B	+11,5	Bank 0 [x] Bank 1 [x] + 3
24	C (+2 octaves)	+12	Bank 0 [x] Bank 1 [x] + 4
25	Stop Note	-	Bank 0 [x] Bank 1 [x] + 5

* This shift is given for two octaves up. For two octave down all shifts are the same but in a negative way. For the other presets the shifts are not revealed.
** Here [ ] – Lights off LED. [x] – Lights on LED.

Displaying length of notes:

Number on the indicator	Length	Displaying a number on the indicator *
0	1/4	Bank 0 [x] Bank 1 [ ] + 0
1	2 * 1/16 (triplets)	Bank 0 [x] Bank 1 [ ] + 1
2	1/8	Bank 0 [x] Bank 1 [ ] + 2
3	1/16 (triplets)	Bank 0 [x] Bank 1 [ ] + 3
4	1/16	Bank 0 [x] Bank 1 [ ] + 4
5	1/32 (triplets)	Bank 0 [x] Bank 1 [ ] + 5
6	1/32	Bank 0 [x] Bank 1 [ ] + 6
7	1/64	Bank 0 [x] Bank 1 [ ] + 7

* Here [ ] – Lights off LED. [x] – Lights on LED

Displaying a number of the step on the indicator:

Number of a programming step	Displaying a number of a programming step on the indiator*
0	Bank 0 [ ] Bank 1 [ ] + 0
1	Bank 0 [ ] Bank 1 [ ] + 1
2	Bank 0 [ ] Bank 1 [ ] + 2
3	Bank 0 [ ] Bank 1 [ ] + 3
4	Bank 0 [ ] Bank 1 [ ] + 4
5	Bank 0 [ ] Bank 1 [ ] + 5
6	Bank 0 [ ] Bank 1 [ ] + 6
7	Bank 0 [ ] Bank 1 [ ] + 7
8	Bank 0 [ ] Bank 1 [ ] + 8
9	Bank 0 [ ] Bank 1 [ ] + 9
10	Bank 0 [x] Bank 1 [ ] + 0
11	Bank 0 [x] Bank 1 [ ] + 1
12	Bank 0 [x] Bank 1 [ ] + 2
13	Bank 0 [x] Bank 1 [ ] + 3
14	Bank 0 [x] Bank 1 [ ] + 4
15	Bank 0 [x] Bank 1 [ ] + 5
16	Bank 0 [x] Bank 1 [ ] + 6
17	Bank 0 [x] Bank 1 [ ] + 7
18	Bank 0 [x] Bank 1 [ ] + 8
19	Bank 0 [x] Bank 1 [ ] + 9
20	Bank 0 [ ] Bank 1 [x] + 0
21	Bank 0 [ ] Bank 1 [x] + 1
22	Bank 0 [ ] Bank 1 [x] + 2
23	Bank 0 [ ] Bank 1 [x] + 3
24	Bank 0 [ ] Bank 1 [x] + 4
25	Bank 0 [ ] Bank 1 [x] + 5
26	Bank 0 [ ] Bank 1 [x] + 6
27	Bank 0 [ ] Bank 1 [x] + 7
28	Bank 0 [ ] Bank 1 [x] + 8
29	Bank 0 [ ] Bank 1 [x] + 9
30	Bank 0 [x] Bank 1 [x] + 0
31	Bank 0 [x] Bank 1 [x] + 1
32	Bank 0 [x] Bank 1 [x] + 2
33	Bank 0 [x] Bank 1 [x] + 3

* Here [ ] – Lights off LED. [x] – Lights on LED

Troubleshooting.

- WhammyD suddenly stopped working.
Preset Change knob is not in a fixed position. Turn it to the left or right to fix the position of the knob.
- Turning on the WhammyD preset, switches off Whammies' presets made customly before.
That's a pity but there is no MIDI reading function in Digitech Whammy ,that's why you've got no chance to get back to you previous presets. WhammyD sets up Whammy to work with presets of WhammyD.
- Digitech Whammy does nor react on WhammyDs commands.
Check up the connection between WhammyD and Digitech Whammy. If the connection is OK and Whammy does not react to the commands of WhammyD, set up Digitech Whammy as it is recommended above in the chapter 'Preparing Digitech Whammy MIDI-channel for work with WhammyD'.
- You here some sound delay when working with some of the effects.
This delay is made by Digitech Whammy Pedal
- You here a detune.
This detune is made by Digitech Whammy Pedal
- You here some 'digital noise'.
This' digital noise' is made by Digitech Whammy Pedal
- You hear some extra noise and sounds when working with some effects.
It could sound strange, but this extra noise and sounds are made by Digitech Whammy Pedal. Try to use Whammy Pedal in maximum closed position.