

Industrial Music Electronics – Piston Honda

- [Manual PDF](#)
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[Official Piston Honda MkIII Manual PDF](#)

Industrial Music Electronics – Piston Honda MKIII Cheat Sheet

Firmware v1.1 • Dual Wavetable Oscillator with Morphing & Nonlinear Waveshaping

PANEL OVERVIEW

- **Osc A/B:** Independent or linked digital wavetable oscillators, each w/ extensive CV controls.
 - **Preset/Manager:** Instantly recall/store 8 global snapshots; morph/cycle between presets.
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JACK & CONTROL REFERENCE

JACK/ CONTROL	TYPE	VOLTAGE RANGE	FUNCTION
CV (XYZ axis)	Input (attn'd)	±8V	Morphs X/Y/Z axis of wavetable "cube" (8×8×8 = 512 waves)

JACK/ CONTROL	TYPE	VOLTAGE RANGE	FUNCTION
1V/Oct	Input	0–8V recommended	Exponential V/O pitch; follows standard 1V/ oct scaling
CV (General)	Input (attn'veter)	±8V (±10V max)	Modulates pitch/ frequency (good for vibrato, mod wheel)
FM/Ext In	Input	AC, up to 10Vpp	Audio-rate TZFM OR waveshaper input (via MODE button)
Sync	Input	0–5V	Resets oscillator cycle (hard sync)
Mix Output	Output	Audio	Mix of both Oscillators
Osc Outputs	Output	Audio	Individual out for Osc A/B
Preset CV	Input (attn)	±8V	Preset morph/cycle/ trigger/random (configurable behavior)
MicroSD	Slot	n/a	Load custom wavetables (see below)

CONTROL ELEMENTS

CONTROL	TYPE	FUNCTION
Freq (Large knob) / Fine (Small knob)	Pot	Coarse/fine tuning; Assignable/reversed in global settings
XYZ Sliders	Slider	Manual position on X, Y, Z axis of wavetable cube
XYZ Attn'verters	Pot	CV polarity/amount for each axis; share CV input between both oscillators
MODE button	Button	Toggles between oscillator/Ext In processing
SELECT button	Button	Focuses OSC for slider/CV assignment and tuning display
LINK button	Button	Links Osc B tuning to Osc A (B becomes a follower w/ optional offset/vibrato etc.)
PRESET button	Button	Engage preset/recall mode, edit, or enter preset-morph mode
Encoder	Knob+Button	Menu navigation; quick shortcuts for unison/octave; edits presets when pressed

KEY OPERATION MODES

Oscillator Mode

- Each OSC may run independently or B can LINK to A for unison/hard sync/supersaw.
- All tuning and morphing assignable by manual controls & CV.

External In Mode

- Engage by pressing **MODE**.
- FM/Ext In jack becomes a signal processor (shapes input through selected wavetable).
- Large freq knob = input gain.

Preset Manager

- Store/recall/morph all settings (8 slots):
 - **Press PRESET**: Scroll/load with encoder or CV input.
 - **Press PRESET again**: Enter MORPH (CV = smooth morph).
 - **Save**: Must use menu command to store permanently.

Preset CV Input Modes (Global Config): - **CV+Offset**: Manual scan & morph via CV + knob for offset. - **CV+Atten**: CV + knob is attenuator. - **Trig+Offset**: CV input = trigger to step through presets; knob scans manual. - **Trig Random**: Each trigger randomizes patch.

SHORTCUTS

- **Unison (Add detuned sub-osc)**: Hold Encoder, press SELECT for Oscillator
 - **Octave Shift**: Hold SELECT, turn Encoder.
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Wavetable Editing/Loading

- Wavetables: 8 files (1.wav–8.wav), each = 64 waves × 256 samples.
 - Use free [WaveEdit](#) or similar.
 - MicroSD card (FAT): Only correct format/naming will load.
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VOLTAGE REFERENCE SUMMARY

- **CV inputs (XYZ, Main)**: ±8V ($\pm 10\text{V}$ ok); musical range $\sim \pm 5\text{V}$
 - **1V/Oct**: 0–8V (C0 at 0V)
 - **FM/Ext**: AC ($\pm 5\text{V}$ – 10V peak); audio-rate signals only
 - **Sync**: 0–5V
 - **Preset CV**: ±8V
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MENU ACCESS

MENU	ACCESS	FUNCTION
OSC A/B:	Enc+MODE	Unison, Octave, Morph, Tone
Global:	Enc+LINK	Link, knob assign, load waves, reboot
Preset:	Enc+PRESET	Save, randomize, initialize, reload

FACTORY/UTILITY

- **Firmware**: Update via Pickit3 (see website)
 - **Calibration**: 1V/Oct tested at 1V & 7V, set trimmer on module rear.
 - **Factory Reset**: Power on w/ PRESET button held, no cables inserted.
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QUICK PATCH IDEAS

- **Detuned "supersaw":** LINK B to A, dial fine tune for chorus.
 - **Stereo/table morphing:** Separate outs, morph/sequence the X/Y/Z axes.
 - **Waveshaper/processor:** MODE to Ext In, feed OSC B output to A input for complex waveforms.
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[Module Website](#), [Waves](#), [Firmware](#), [Docs](#)

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