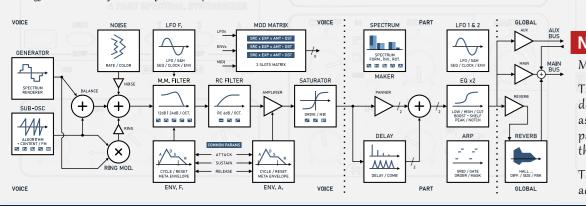
A set of dual-core 16-bit DSPs combined with Burr-Brown DACs and advanced signal processing mathematics deliver modern and crisp sound quality at a 64kHz sampling rate.

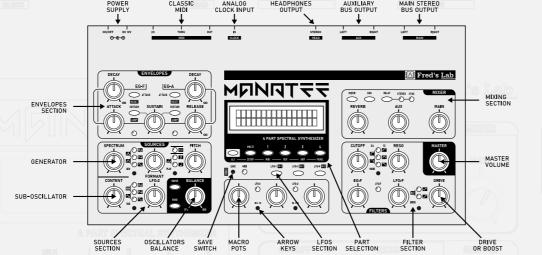
Now just attach a MIDI controller to the Manatee MIDI IN socket, connect the MAIN LEFT & RIGHT line outputs to your sound system or audio interface ... and power the machine up!

VOICE ARCHITECTURE

The instrument relies on a dual-Oscillator, Noise, Ring Modulator, dual-Filter & Saturator voice scheme. For modulations: 2x Envelopes & 1x LFO per Voice; 2x LFOs & 1x ARP + many Expressors per Part. For effects: 1x Delay & 2x Equalizers per Part; a master Reverb unit.



FRONT PANEL



NAVIGATION

Manatee interface is divided into four major sections: Envelopes, Sources, Filter, and Mixing sections.

These sections contain pots and switches made for direct parameter access. Moving them will jump to the desired section and refresh the display accordingly. The Macro pots (below the display) are always assigned to the on screen parameters. With the Arrow keys (between the Macro pots) advanced parameters can be reached, navigating the extended pages. Pressing any section switch once will jump to the section without changes. Section pots and Macro pots can respond in jump, move or grab modes.

The ALT switch allows access to SETUP, REVERB & ARP pages, but also helps with setting coarse adjustments while turning pots. The secret ALT + GEN switch combination jumps to the spectrum editor.

HOW TO?

SELECT A PRESET

- 1- Activate the desired Part with one of the part switches
- 2- Use the left & middle Macro pots to select the Preset Bank & Slot / alternatively use the Arrow keys

SELECT A MULTI

Same operation after pressing the MULTI switch

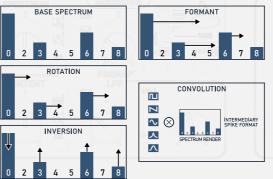
SAVE A PRESET

- 1- Activate the desired Part with one of the Part switches
- 2- Press the Save switch once
- 3- Edit the preset name using the Macro pots
- 4- Select the destination Slot using the Arrow keys
- 5- Press the Save switch one more time

SAVE A MULTI

Same operation after pressing the Multi switch Presets used are always copied within the Multi

SPECTRAL SYNTHESIS



EXPORT A PRESET

- 1- Attach Manatee MIDI OUT to a MIDI interface
- 2- Execute a SYSEX manager app and set it to listen
- 3- Do a long press on the desired Part switch to transfe
- 4- Wait until the end of the SYSEX transfer

EXPORT A MULTI

Same operation with long pressing the Multi switch

LOCK / UNLOCK ALT

- 1- Double click on the ALT switch to lock the mode
- 2- Click on the ALT switch to unlock it

ACCESS SETUP CONFIGURATION

1- Press the ALT + Multi / Setup switch

SYNC SOUND & PANEL POTENTIOMETERS

1- Press the ALT + Part 4 / Panel switch

TRIGGER MIDI PANIC

1- Do a long press on the Drive switch (in filter section

Spectral synthesis in the Manatee is a form of

additive synthesis that focuses on an harmonic spectrum. Rich sound timbres are reconstructed using carriers which may not be the classic sinusoidal used in Fourier transform. Fred's Lab tech also enables accurate transien modeling for a bright and punchy sound

Spectra can be edited and animated using tools such as the: spectrum editor, formant shifter, rotation, and inversion modifiers. A Part has one spectrum maker so each voice from this part shares the same Spectrum.

MODULATIONS

Catchy & expressive sounds are achieved through smart use of modulations. Manatee offers 3 ways to patch the modulators - LFOs, Envelopes & MIDI Inputs - to the various sound modules parameters.

HARD WIRED MODULATIONS

Filter ENV-F amount, Filter FM with LFO-F, Sub-osc LFO-2 amount, or ENV-F FM in 2-op modes. are hard wired modulations. They offer the best resolution and should be used in priority.

MODULATORS TARGETS

Each modulator features a Target parameter to set an extra modulation destination. The extent of modulation is determined by both the Amount parameter and, if specified, the Expressor.

MODULATION MATRIX

As a last resort for all advanced modulation needs (like patching per-voice sources to per-part modules), the modulation matrix offers 3x slots. A comprehensive list of modulation Sources, Targets and Expressors ... is provided at the end of the Quickstart manual.

MANAGING VOLUMES

Given its polyphony & wide dynamics, Manatee must have enough headroom. Levels & gains need to be carefully adjusted to fit the use.

There are multiple volume controls to fine-tune the sound: Master volume, Part volume, Inserts -Main, Aux, Reverb - EQs gains, Preset volume and, finally Delays & Reverb mix volumes.

Setting these properly ensures a great dynamic range. Part EQs can also help free up headroom and Drive control will act as a Preset volume boost, when the Saturator is disabled.

MANAGING PERFORMANCE

Manatee dynamically adjusts its voice count based on presets complexity. To get the best performance, unused modules can be disabled.

On Part page is shown the amount of voices played and the total percentage of secondary cores computing resource usage (voices + delays).

On Multi page is shown the percentage of main cores resource usage (reverb + equalizers)

Note that unison voices demand more resources as generators vs sub-oscillators, and 24dB/octave filters vs 12dB/octave ones.

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