

# W/

Music, is sounds, are vibrations, as waves, of energy. One can wait all day for the perfect wave, though it may never come. In these ebbing moments we live inside of memories gone past.

These tiny histories aren't meant for books, nothing but personal fragments. Instead we capture these energetic wavings. Within W/.

## PERSONALITIES

Three ways of being, singularly focused on multiplying the power of an existing instrument. **W/Tape** expands your system through self-referential recording & playback, geared toward dense layering. **W/Del** leverages W/Tape manipulation methods, while zooming in to microsound possibilities. **W/Syn** presents a duality of rapid polyphony and structured FM exploration, draping harmonic textures behind your sound stage.

These three worlds are navigated from the Launcher. Accessible at any time for rapid context shifts, along with the simplest of preset systems.

With its diminutive interface, remote-control with II is a natural choice for W/. There is a rich interface for all three engines provided, expanding the panel-possibilities when controlled by monome & our crow module, or monome's teletype.

### POWER CONSUMPTION

59mA @ +12V  
13mA @ -12V

Red Stripe (-12v) toward center of module where 'power' is printed.

### FUTURE UPDATES

W/ has grown over the years taking it's two-point-oh form in early 2021. To update in the present future, hold record while engaging power to your case. Then play the update as audio to IN.

For the latest improvements and full instructions, visit:

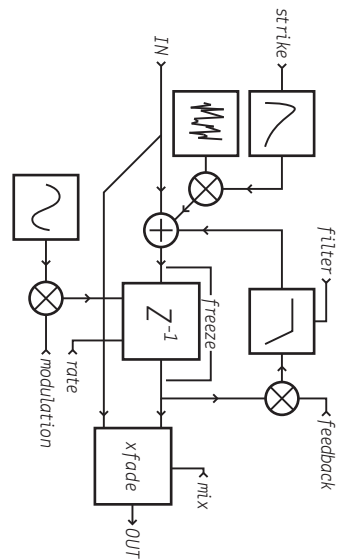
[github.com](https://github.com/whimsicaltraps)  
[/whimsicaltraps](https://whimsicaltraps.com)  
[/wslash](https://wslash.com)

## W/Del

A flexible delay line is a core element of many electronic music techniques. Short to long, and all the time between. W/Del can delay up to 4 seconds at full quality, or stretch out to a minute with degraded time stretching. Zoomed in, the delay approaches 1ms for all kinds of pitch effects like chorus & flange, and includes an exciter for Karplus-Strong strings.

Classical TIME, FEEDBACK, and MIX controls are familiar along with an adjustable lowpass FILTER in the feedback loop. Integrated MOD-ulation opens up vibrato and broken tape sounds, plus FREEZE locks in the current buffer for giant wavetable time-stretching.

TAP tempo, and direct LOOPing are available, while the new ZOOM controls allow dynamic buffer manipulation. Halve and double delay times in recursively nested loop slices.

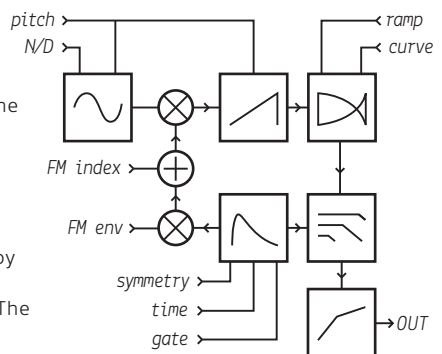


## W/Syn

Polyphony in a modular context is a can of worms, but sometimes faking it is just as satisfying as the real thing. W/Syn hides away four, 2-op-FM voices, accessible with a single GATE and PITCH(v8) control. Rapid arpeggios and long envelope tails will build ringing harmonic timbres.

Similar to JUST FRIENDS, waveshaping is performed by RAMP (saw/tri/ramp), and CURVE (sine/tri/square), extended by tightly coupled frequency modulation. The modulator generates sine waves with pitch directly related to the carrier. Set the ratio with NUMerator and DENOMinator for controlled yet complex timbres.

All voices pass through a Lowpass-Gate for dynamics control, struck by a vactrol-style GATE, highly sensitive to pulse-width for velocity control. Stretch & shape notes with TIME & SYMMETRY, applying the envelope to FM amount for brassy attacks. All voices are finally squished together with an output compressor ensuring smooth density.



## W/Tape

The original idea for a tiny tape recorder with overdubbable hours remains compelling and herewith. Three hours, tied start to end in a giant loop— it's enough to get lost in, and then find a new, or old, self. Recording is typically presented as a productive act, but not here. W/Tape defines the archive as an ephemeral entity; a medium to be manipulated in realtime in the most cavalier way. A history to be revisited and revised.

W/Tape is modelled after an open reel Tape Machine. A motor pushes and pulls the tape across the erase/playback/record heads, while impossibly instant tape-splicing forms dynamic loops. Separating these three elements of loop, play, and record enables a tiny interface to cover a great deal of functional ground.

### play

Press play. The tape will move, and recorded vibrations can be heard. Press again to stop. Reverse is a first-class citizen of W/Tape, distinguished only by the colour of pulsing play light. Playback speed can be increased and decreased in steps of half or double, slowing down to glittering low-quality sparkles. Tape motion can be encouraged by the toggle, nudged faster or slower while the tape is playing, or full fast-forward/rewind when stopped.

### record

Sound-on-sound recording is fundamental to W/Tape, always adding new sound to existing recordings. Press to punch-in and again to punch-out. Recording is independent of playback, so try dragging the tape with FF/RWD while engaged. When you want to cut away sounds, enable the erase head to record over previous material. Erase-strength can be set in-between overdub & overwrite, enabling gradually decaying sounds. Echo-mode extends this technique for loops by switching the play-head before the erase-head, hearing old sounds one last time.

### loop

Dynamic loop markers allow for rapid alternation between sketchpad and structured musical phrases. Set loops from the panel, or with a smartly quantized voltage trigger. Any captured loop time can be expanded or shrunk by a factor of 2, with context-aware nesting, for sequential fixed-time loops, or '90s techno risers.

# Engines & The Launcher

## LOADING ENGINES

When you start W/ you'll be running the W/Tape engine, with it's hours of malleable media. Once it's time to explore the other possibilities of W/Del and W/Syn, you'll need to access the Launcher:

Sequentially, press and hold:  
*record + play + loop*

The toggle lights will charge up, then start flashing. Release, and you're in the Launcher. The yellow *record* light will be throbbing, indicating W/Tape mode. The three engines are selected by the buttons, with a mnemonic light pattern per mode:

*loop* : W/Del  
*play* : W/Syn  
*record* : W/Tape

Once you've selected a new engine, hold *Down* and wait for the lights to charge after which your new engine will run.

Exit the launcher without change by pressing *Up*.

## PRESETS: W/Del & W/Syn

W/Del and W/Syn don't save changes by default. When you turn on your case, the most recent engine will be loaded with the default settings.

Both W/Del and W/Syn have a single preset which will override the defaults on load. Once you've found a sound you want to retain:

Open the launcher  
 White light will throb (ready to save)  
 Hold *Down* to save

If you've been experimenting but want to return to your saved preset:

Open the launcher  
 Press the current engine's key  
 White light will go dim  
 Hold *Down* to reload your preset

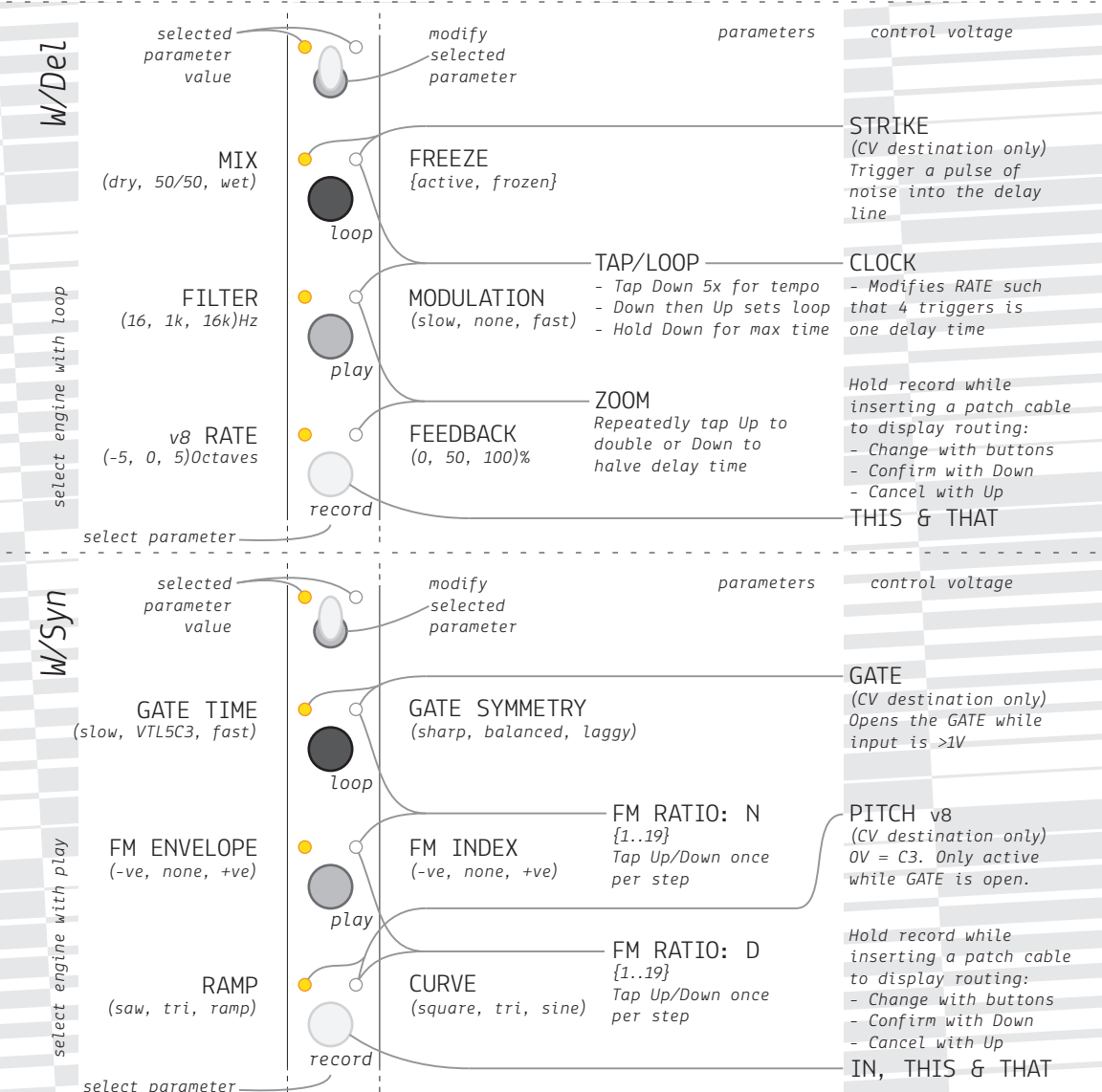
Perhaps your tired of the preset and want to start from scratch:

Open the launcher  
 Press the current engine 3 times  
 White light will flicker  
 Hold *Down* to clear and load defaults

## A CLEAN TAPE: W/Tape

From time to time you may desire to clear the tape, abandoning any prior recordings. The command is the same as returning to the default preset (Del/Syn):

Open the launcher  
 Tap *record* 3 times quickly  
*record's* white light will flash  
 Hold *Down* to clear the tape



## THIS & THAT

Hold *record* while inserting a patch cable to display current routing:  
 - Select routing with buttons  
 - Confirm with *Down*  
 - Cancel with *Up*

LOOP: Clock Quantized Looping  
 Attach a trigger or cycling-signal at the loop-rate. Press *loop* to arm looping. The next CV events set start & end points. Further CV events reset the loop

LOOP+PLAY: Monitor level  
 Acts as a VCA over signal from *IN* to *OUT*. Through-zero.

PLAY (yellow): Linear Speed  
 Directly control tape speed. Negative values go through-zero to reverse speeds.

PLAY (white): Expo Speed v8  
 Modify current tape speed such that 1V = 2x speed (1octave higher). Requires *PLAY* state.

PLAY+RECORD: Input Gain  
 Set volume of signal going to tape machine. Attach an envelope!

RECORD: Gain & Erase Macro  
 0V = No recording  
 +ve fades toward current record setting. -ve same as +ve but with opposite erase-strength.

