

Whimsical Raps WSLASH2 Uniz Slash 2 Plus 3D Printer



Whimsical Raps WSLASH2 Uniz Slash 2 Plus 3D Printer User Manual

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Whimsical Raps

Whimsical Raps WSLASH2 Uniz Slash 2 Plus 3D Printer



Product Information

Specifications

- Power Consumption: 59mA @ +12V, 13mA @ -12V

W/ – Personalities

W/ is a versatile product that offers three different personalities, each focused on enhancing the power of an existing instrument:

1. **W/Tape:** This personality allows for self-referential recording and playback, ideal for dense layering.
2. **W/Del:** W/Del leverages the manipulation methods of W/Tape while exploring microsound possibilities. It offers a flexible delay line that can delay up to 4 seconds at full quality or stretch out to a minute with degraded time stretching. It also includes an exciter for Karplus-Strong strings.
3. **W/Syn:** W/Syn presents a duality of rapid polyphony and structured FM exploration. It hides four 2-op-FM voices that can be controlled with a single GATE and PITCH control. It offers waveshaping capabilities with RAMP and CURVE, as well as frequency modulation for complex timbres.

Product Usage Instructions

Power Connection

Connect the power supply to the module using the provided cable. Ensure that the red stripe (-12v) is facing towards the center of the module where “power” is printed.

Firmware Update

To update the firmware of W/, follow these steps:

1. Hold down the “record” button.
2. Engage power to your case.
3. Play the firmware update as audio to the IN port.

For the latest improvements and full instructions, visit github.com/whimsicalraps/wslash.

W/Del – Delay Line

W/Del offers a flexible delay line with various controls:

- **TIME:** Adjusts the delay time from short to long.
- **FEEDBACK:** Controls the amount of feedback in the delay loop.
- **MIX:** Adjusts the balance between the dry and delayed signals.
- **OUT:** Outputs the delayed signal.
- **Filter:** An adjustable lowpass filter in the feedback loop.
- **FREEZE:** Locks in the current buffer for wavetable time-stretching.
- **Z-1:** Zoom controls for dynamic buffer manipulation.

W/Syn – FM Voices

W/Syn provides four 2-op-FM voices with various controls:

- **PITCH:** Controls the pitch of the FM voices.
- **FM index:** Adjusts the amount of frequency modulation applied to the voices.
- **FM env:** Controls the envelope of the frequency modulation.
- **RAMP:** Waveshaping control for saw/tri/ramp waveforms.
- **CURVE:** Waveshaping control for sine/tri/square waveforms.
- **TIME:** Controls the dynamics of the voices.
- **SYMMETRY:** Adjusts the symmetry of the envelope.
- **OUT:** Outputs the combined voices.

Remote Control and Additional Interfaces

W/ can be remote-controlled using the II interface, which offers expanded panel possibilities when controlled by monome & our crow module or monome’s teletype.

Frequently Asked Questions (FAQ)

Q: How much power does W/ consume?

A: W/ consumes 59mA at +12V and 13mA at -12V.

Q: How can I update the firmware of W/?

A: To update the firmware, hold down the “record” button while engaging power to your case. Then, play the firmware update as audio to the IN port. For detailed instructions, visit github.com/whimsicalraps/wslash.

Q: What are the different personalities of W/?

A: W/ has three different personalities:

- W/Tape: Self-referential recording and playback for dense layering.
- W/Del: Flexible delay line with various time stretching and modulation capabilities.

- W/Syn: Rapid polyphony and structured FM exploration with waveshaping controls.

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.

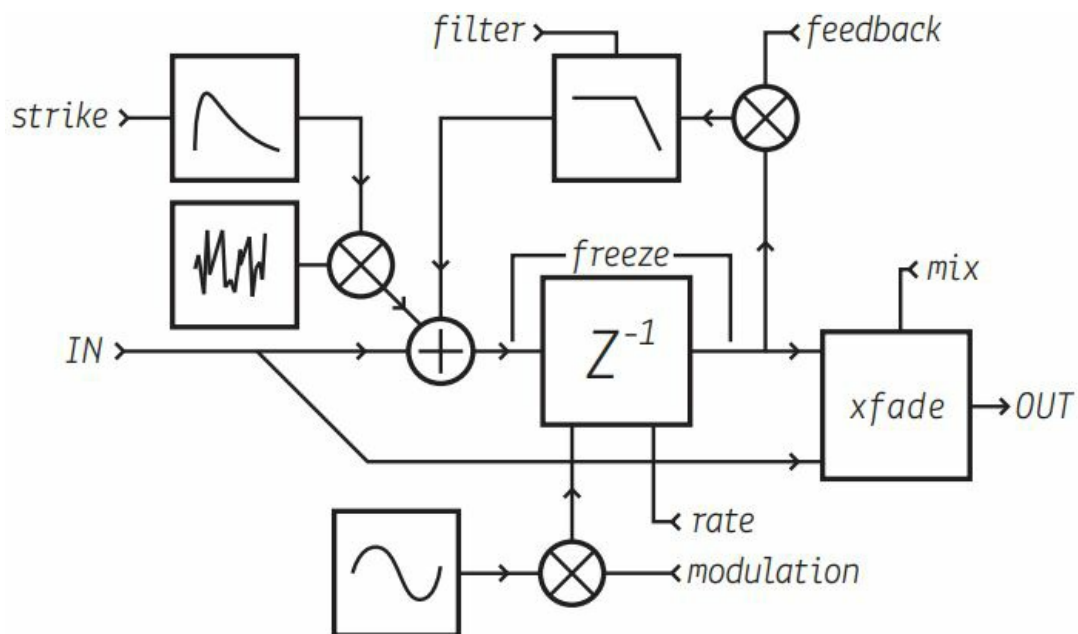
For the latest improvements and full instructions, visit: github.com/whimsicalraps/wslash

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 allkinds 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.

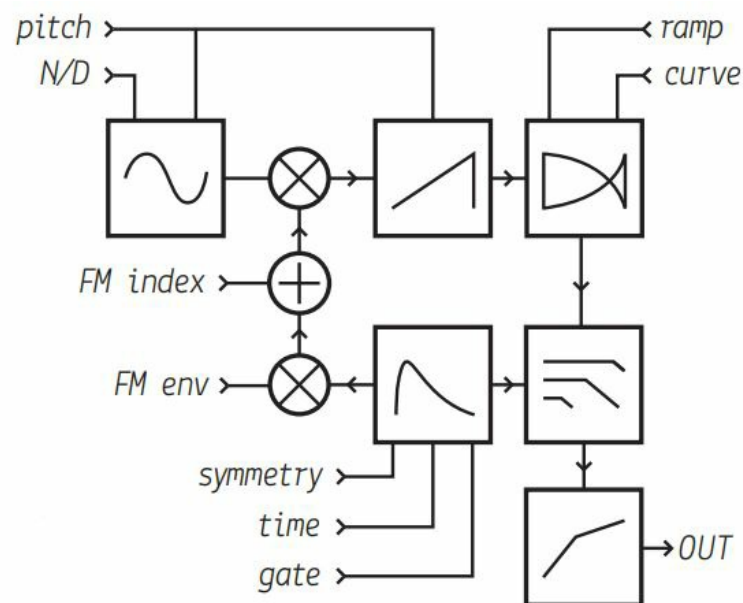


W/Syn

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-splic-ing 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

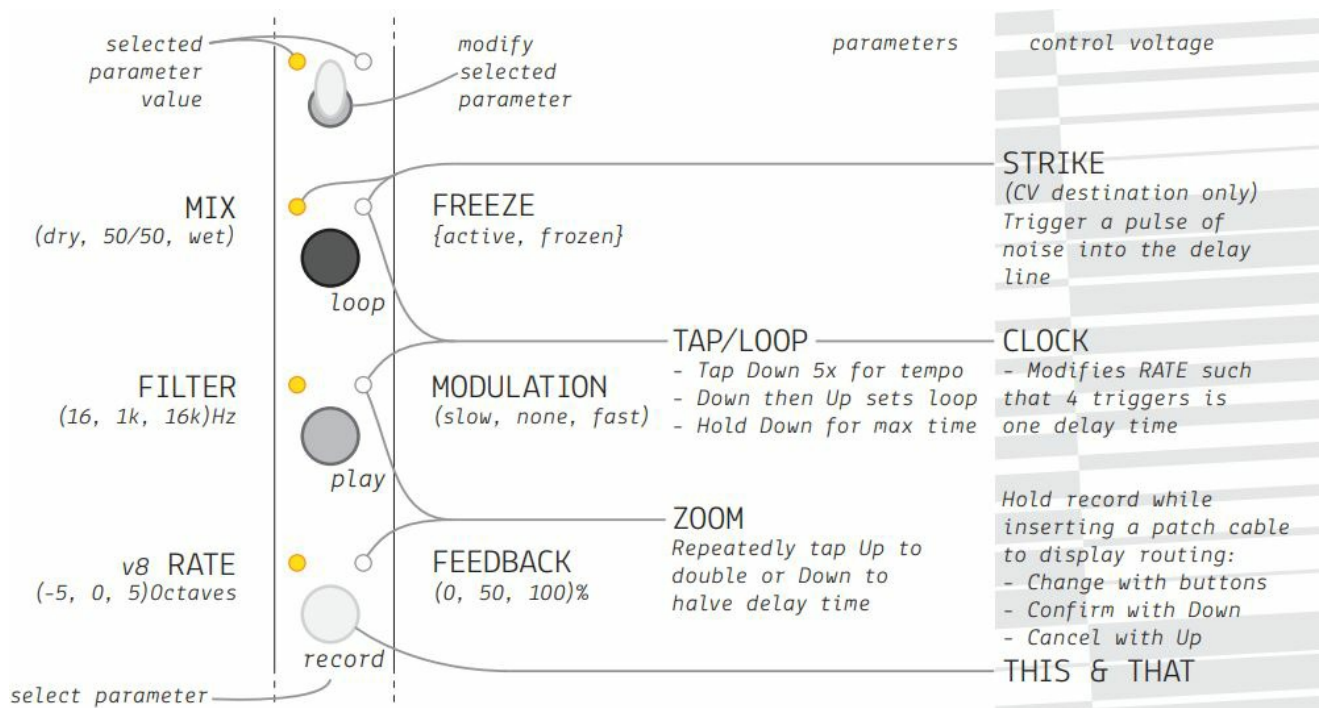
A CLEAN TAPE: W/Tape

From time to time you may desire to clear the tape, abandoning any prior record-ings. The command is the same as return-ing to the default preset (Del/Syn):

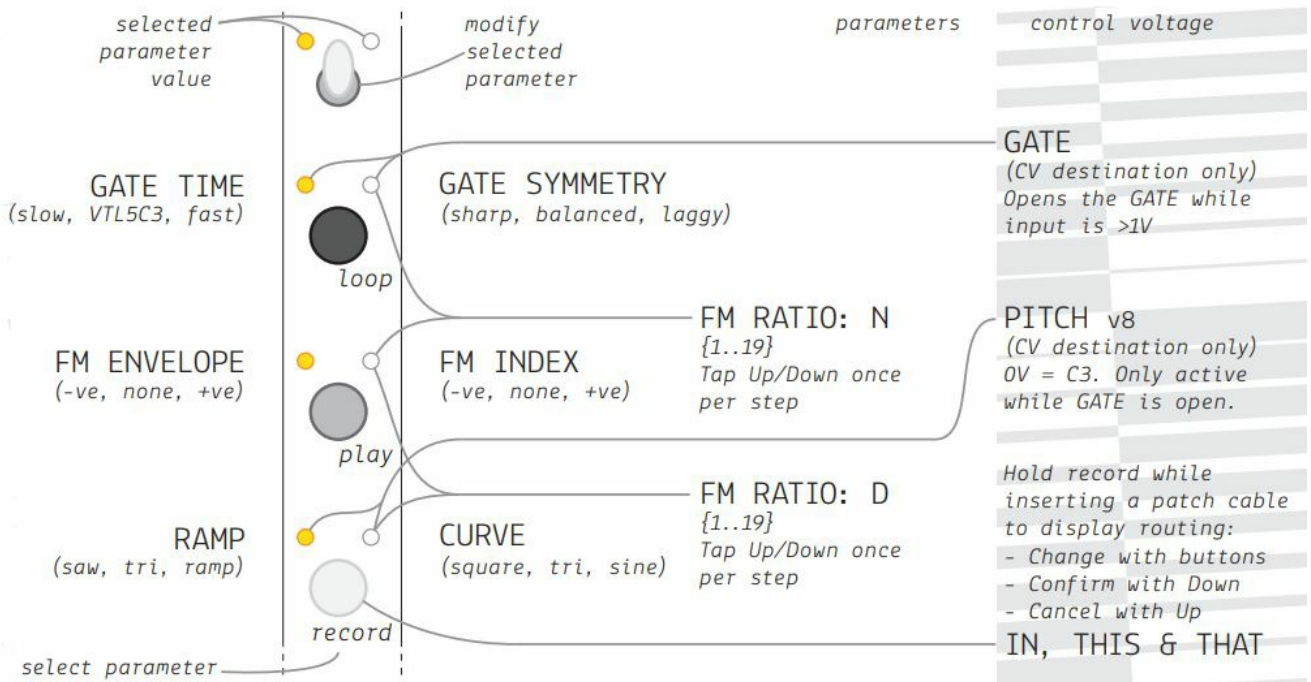
Open the launcher

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

W/Del



W/Syn



UP/DOWN

While stopped: SEEK

Up fast-forward with acceleration Down rewind with acceleration While playing: NUDGE Up speed up, accelerating to 1.5x Down slow down, decelerating to 0.75x



THIS & THAT

Hold record while inserting a patch cable to display current routing:

- Select routing with buttons
- Confirm with Down
- Cancel with Up

LOOP

Lights off indicates no current loop To set a loop, play the tape then:

Press loop to set the start point Press loop again to set the end-point Now you're looping:
Reset to the start by pressing loop Clear a loop by holding loop

Change loop size:

- 2x size: Hold loop then press Up
- 1/2x size: Hold loop then press Down
- NB: Release loop first to avoid reset

THIS & THAT

LOOP: Clock Quantized Looping

Attach a trigger or cycling-sig-nal 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

Press play to start playback

White = forward. Yellow = reverse

Speed indicated by pulsing

Press play again to stop (lights off)

Direction:

- Forward: Hold Up then press play Reverse: Hold Down then press play

Speed Modifier:

- 2x Speed: Hold play then press Up
- 1/2x Speed: Hold play then press Down

THIS & THAT

- **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

Toggle recording on/off with record

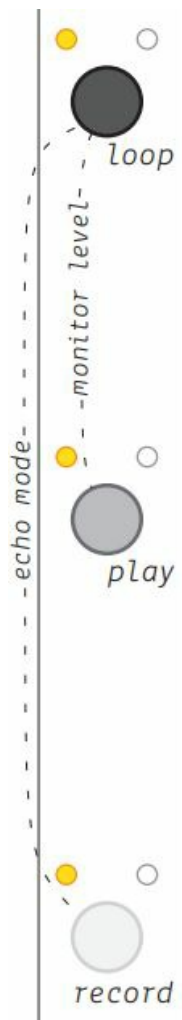
- Erase Strength: Hold Up/Down to set
- record + Up: Stronger (overwrite)
- record + Down: Weaker (sound-on-sound)

THIS & THAT

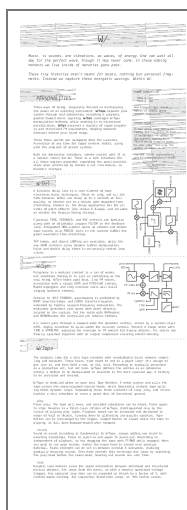
RECORD: Gain & Erase Macro

0V = No recording

+ve fades toward current record setting. -ve same as +ve but with opposite erase-strength.



Documents / Resources



[Whimsical Raps WSLASH2 Uniz Slash 2 Plus 3D Printer](#) [pdf] User Manual
WSLASH2 Uniz Slash 2 Plus 3D Printer, WSLASH2, Uniz Slash 2 Plus 3D Printer, Slash 2 Plus 3D Printer, 2 Plus 3D Printer, 3D Printer

References

- [GitHub: Let's build from here · GitHub](#)
- [User Manual](#)

