NOODLE RIDER

USER GUIDE — *V1.0*

INTRODUCTION

Noodle Rider is a four-track cassette player in eurorack format with variable-speed playback controlled by voltages or MIDI messages, including four audio outputs and one gate output.

SETUP IDEAS

- Play a pre-recorded single note loops on the tape tracks at various speeds to modulate the pitch.
- Blend all the tracks together to add complexity to the basic voice in subtractive synthesis or use each track as an independent source of voices chained by a pitch modulation.
- Engage your Tascam's Portastudio tapes in modular business, automate the mixing and layering with your modules.

SPECS

SIZE: 33HP

DEPTH: 130 mm

+12V: 165mA

-12V: 138mA

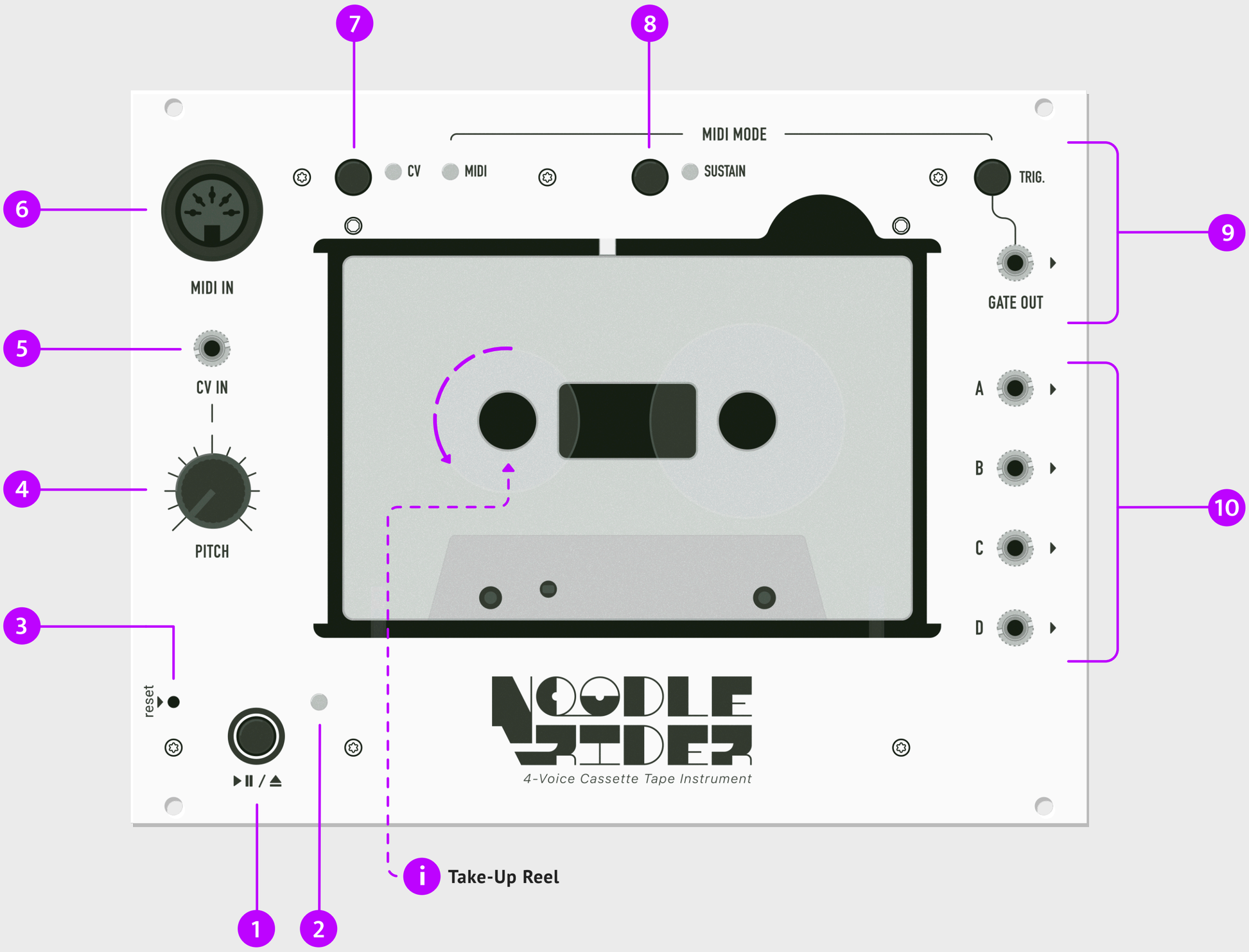
SPFB

Noodle Rider is an analog, open-hardware module.

Schematics, BOM and firmware can be found in nudlhed git repository.

nudlhed

MODULE REFERENCE



1. Function Main Button

2. Status Led

3. Reset Button

4. Pitch Knob

Control the speed of the playback manualy.

5. CV Input

0 to +5V, higher voltages are accepted.

Control the speed of the playback via control voltage, for example, from a linear CV sequencer or LFO module. Pitch range is 2 octaves.

6. MIDI Input

Twelve pre-mapped pitches can be controlled by the MIDI messages. Map a set of any pitches, corresponding them to twelve MIDI notes, to play these pre-mapped pitches back with MIDI device.

7. Playing Mode Switch

Switching between two main inputs to control the pitch: CV and MIDI.

8. Sustain Mode

Works in MIDI playing mode only. Sustain mode activation causes playback to sustain until the MIDI key is released.

9. Gate / Trigger Output

0 to +5V

Gate is generated by the MIDI messages (Note On / Note Off) regardless of playing mode. It goes high when a MIDI key is pressed and goes low when the key is released. Switch to the trigger mode if you need a trigger out.

10. Audio Outputs

BASIC OPERATIONS

> ⚠ **Mind that the player is designed for loop-tapes and doesn't have an auto-stop function,** so if using an ordinary audio cassette — stop playing promptly when the tape ends.

Loading Tape

1. Insert a cassette tape into the deck. Status led stops blinking.
2. Ensure that the cassette is firmly seated in the compartment and then tap the main button once.
3. The cassette will be loaded and start to play automatically in one of two selected playing modes (CV or MIDI).

! If the cassette is not load properly, tap the main button twice to eject it. Check the cassette to seat firmly then try to load it once again

Pitch Controlling

BY CV

1. Switch to CV playing mode.
2. Turn the pitch knob in the fully clockwise position.
3. Plug your control voltage source to the CV input.

BY MIDI

1. Switch to MIDI playing mode.
2. Plug your controller to the MIDI input (use Channel #4).
3. Switch to sustain mode, if needed.

Pause

1. To pause a playback press the main button once. Status led starts blinking in green, indicating pause mode.
2. To resume playback, tap the main button once again and the player will start to play.

Ejecting Tape

1. In play or pause modes, tap the main button twice and the cassette will be ejected.
2. Or pull-up the cassette tape from the deck and cassette will be ejected automaticaly.

! If you need to get the cassete tape back without power, you can manually eject it. See Tutorial.

Mapping Mode

You can assign twelve specific keys on your MIDI device to switch between pitches. To map the pitches do the following:

1. Connect your MIDI controller (keyboard) to the module.
2. Switch to CV mode and turn the pitch knob in zero position.
3. Load tape and pause — status led starts blinking in green.
4. Press the main button for 2 seconds and release. Status led turns blue and starts blinking. Mapping mode is on.

> **Adjusting the pitch for the playful range can produce accurate results only for a single E note tone.**
>
> For better results, use E as a reference note at least for one pre-recorded track.

5. Set a desirable tone with the pitch knob and press the key on your MIDI controller that you want to map to the selected pitch. Status led in blue stops blinking, indicating that the pressed MIDI key is mapped.
6. Repeat action #5 for each key you want to map.

✓ **To save the map**, press the main button for 2 seconds and release — the cassette will be ejected.

✗ **To resume mapping mode without saving** — tap the main button once to get back to pause mode or tap twice to eject.

PITCH MAP

Each note should have its own voltage (from 0 to +5) associated with its pitch. Keep in mind, only 12 MIDI notes will be sent for the whole octave range.

OCTAVES	C	C#	D	D#	E	F	F#	G	G#	A	A#	B
0	[0]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
1	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
2	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
3	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
4	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
5	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
6	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
7	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
8	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
9	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
10	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]				

NOTES

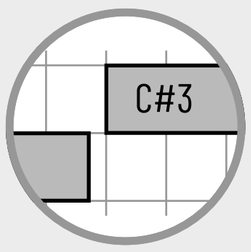
BASIC OPERATIONS

Using Gate and Trigger

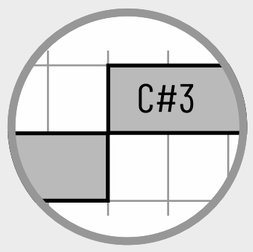
Gate/Trigger is active whenever a key is pressed or a note message from the DAW is generated.

The Gate signal can be generated by the MIDI in both playing modes (MIDI or CV). So it enable to send gate or trigger signal from the MIDI *(for example, the Trigger signal can be used as a clock sourse using a note sequence as a clock pattern)* and controll the pitch with voltages at the same time.

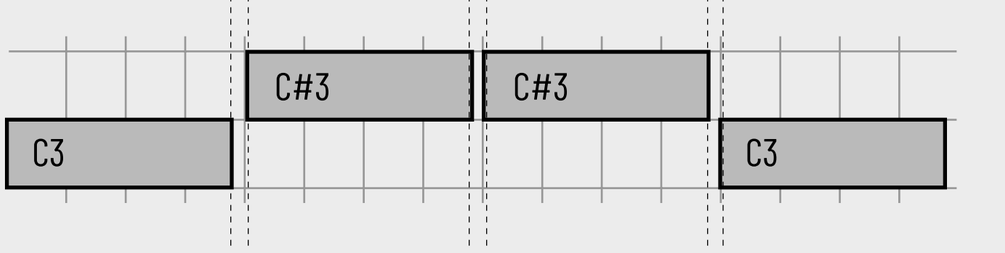
! To get the Gate signal from your DAW properly, always live a gap between the bars. Otherwise, the module wouldn't trigger the Gate signal.



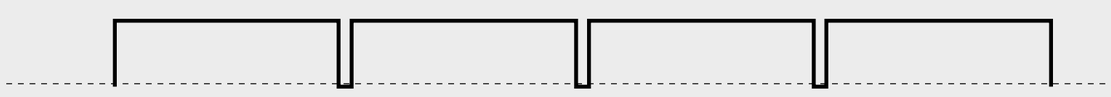
Correct



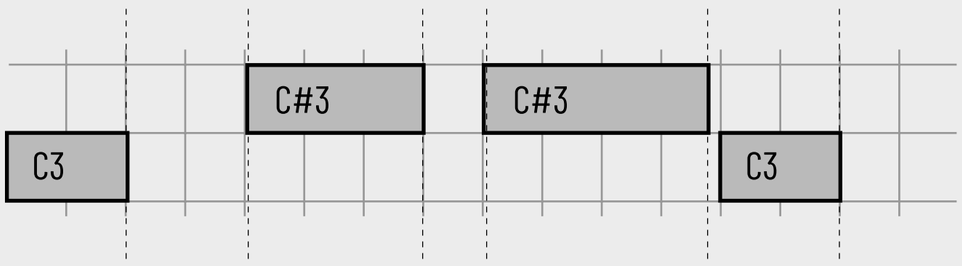
NOT Correct



Gate



Trigger



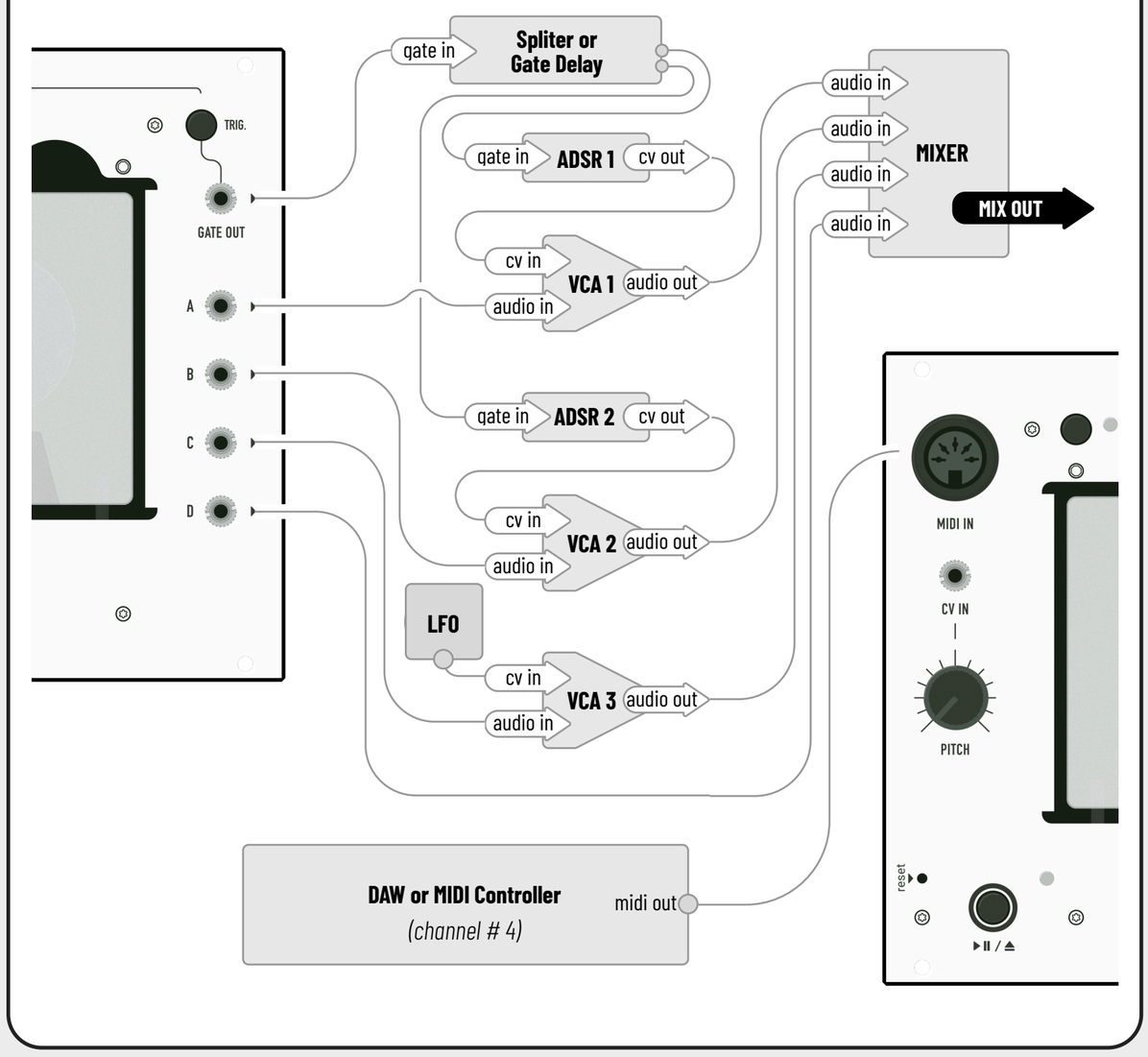
Gate

Playback pitch *(Sustain Mode is on)*

Playback pitch *(Sustain Mode is off)*

BASIC PATCHES

Patch Example 1



Patch Example 2