tides

_travelers guide
_for escaping gravity wells

4 outputs	3 ramp modes	4 output modes

[range] press **[range]** hold › then noon = 12 o'clock cw / ccw = clockwise / counter

flow: a voltage goes up · ebb: it comes back down · envelopes, lfos, oscillators, four outputs

the 2018 tides, firmware 1.2 · long press = 1.2 s

magenta = hold

01 buttons

t2_01 · each press steps on

[range]	● low · ● medium · ● high (fig.04)
[ramp]	● AD · ● cyclic · ● AR (03)
[output mode]	○ shapes · ● amplitudes · ● times · ● frequencies (04)
[range] + **[output]** 1.2 s	**calibration** (08)

02 knobs

t2_02

[frequency]	±4 octaves around the range · **cw = faster**, even for envelopes · clocked: the ratio
[shape]	the curve of the rise and the fall
[slope]	how the time splits between rise and fall · set speed first, then this
[smoothness]	noon = raw · ccw = 2-pole low-pass · cw = wavefolder
[shift / level]	output mode ○: output 1's level and polarity · otherwise the spread between the four

03 ramp modes

t2_03 · **[ramp]**

● AD	a trigger restarts from 0 v and always finishes · 0 to +8 v
● cyclic	loops, ±5 v · a trigger restarts the rise
● AR	gate up: rise to +8 v from wherever it is · gate down: fall from wherever it is

04 output modes

t2_04 · **[output mode]** · fig.02

○ shapes	1 main (shift = its level) · 2 raw asymmetric triangle · 3 end of attack · 4 end of release
● amplitudes	shift sends the signal to 1, 2, 3 or 4, crossfading between neighbours
● times	shift spreads the peak in time: a different slope per output, or a phase offset when cycling
● frequencies	noon = all the same · cw = 2, 3, 4 faster · ccw = slower · polyrhythms, or just-intonation chords

06 clocked

t2_06 · **[clock]**

[frequency]	becomes the ratio to the clock, 1/16 to 16× · noon = 1:1
trig empty	an envelope fires on every clock tick, in phase
trig patched	triggers fire it, the clock sets how long it lasts
low / medium	locks to the phase · follows swing and irregular, repeating patterns
high range	tracks pitch from an audio signal · 1.2 eases into its phase over a few seconds

10 the module

t2_10 · 2018–2022

size	14 hp · 25 mm · 50 mA +12 v · 20 mA −12 v
outputs	±5 v when cycling · +8 v envelopes and gates · 14-bit, 62.5 khz

__fig.01 : three dimensions

the wave, bent



three knobs, three directions · each has its own cv input and attenuverter

__fig.02 : four outputs, four ways

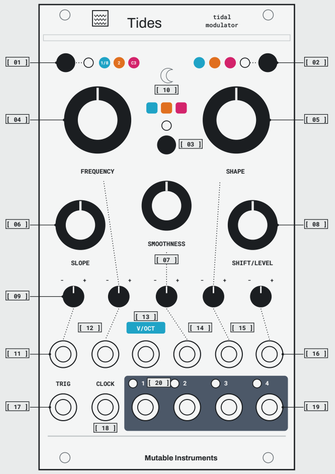
output mode × shift



shift / level is the lever in each one: level · where it goes · how far apart · how far out of tune

__fig.03 : front panel

01–10 = controls · 11–20 = jacks + LEDs

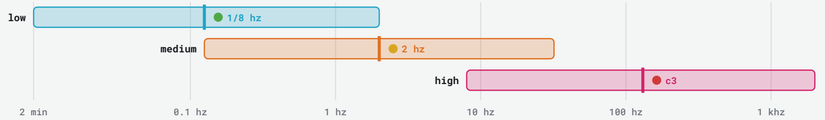


[01]	**range :** low · medium · high
[02]	**output mode :** four ways (fig.02)
[03]	**ramp :** AD · cyclic · AR
[04]	**frequency :** ±4 oct · clock ratio
[05]	**shape :** the curve
[06]	**slope :** rise vs fall
[07]	**smoothness :** filter ‹ › fold
[08]	**shift / level :** spread or level
[09]	**attenuverters :** cv amount ±
[10]	**LEDs :** ramp · range · output

[11]	**slope :** cv in
[12]	**fm :** exponential
[13]	**v/oct :** pitch, −3 to +7 v
[14]	**smooth :** cv in
[15]	**shape :** cv in
[16]	**shift :** cv in
[17]	**trig :** trigger · gate
[18]	**clock :** sync · pitch track
[19]	**out 1–4 :** per output mode
[20]	**out LEDs :** brightness = level

__fig.04 : three ranges

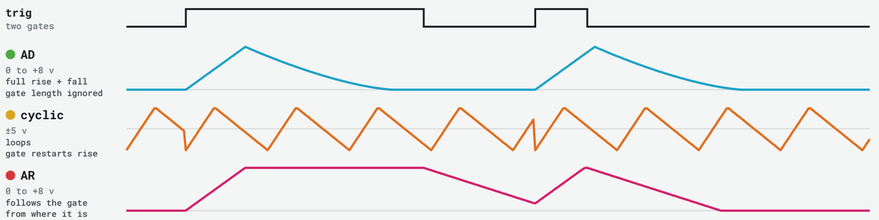
frequency, log scale



each band = ±4 octaves of the frequency knob around its centre · v/oct pushes further

__fig.05 : one gate, three modes

[ramp]



05 inputs

t2_05 · 100k, dc to 7.8 khz

[slope] **[smooth]** **[shape]** **[shift]**	±8 v through their attenuverters
[fm]	exponential fm, amount and polarity on its attenuverter
[v/oct]	−3 to +7 v · an offset here widens the range
[trig] **[clock]**	0 to +8 v, protected

09 firmware

t2_09 · v1.2, the last

1. unplug everything · audio out of your computer into **[slope]** cv · slope knob mid
2. power on holding **[range]**
3. play tides_1.2.wav · range LED = level meter, orange is right · slope knob = gain

   it restarts by itself when done · all LEDs red = level wrong: press ramp, raise the gain, start again

07 audio rate

t2_07 · **[range]** ●

[shape]	a different set of shapes that sound different
[slope]	linear instead of exponential: smooth pwm
high notes	shape and smoothness narrow to stop aliasing

08 calibration

t2_08

1. unplug every cv · a calibrated keyboard or midi-cv into **[v/oct]**
2. hold **[range]** + **[output mode]** › range LED blinks ●
3. send 1.000 v · press any button › output LED blinks ●
4. send 3.000 v · press any button › done

_where things hide

no menus · t2_12

held buttons

- **range + output 1.2 s** calibration (08)
- **any button** next calibration step

at power on

- **hold range** firmware update (09)
- **hold output mode** colour-blind LEDs
- **remembered** range, ramp, output mode

LED codes

the LED beside each button

range	● low ● medium ● high
ramp	● AD ● cyclic ● AR
output mode	○ shapes ● amplitudes ● times ● frequencies
outputs 1–4	brightness follows the voltage
calibration	● range send 1 v ● output send 3 v
firmware	range level meter, orange = right ● all level wrong