unda legio

_travelers guide
_for riding the gravity waves

2	3	6
switches · 3 ways	cv inputs	hp

[pitch] press [pitch] hold › then noon = 12 o'clock tags = the panel drawing

two-operator fm voice · adsr, asr or ar envelope · chainable for generative patches

← back to the legio starsystem

= hold

01 what it is

un_01

2-op fm	a modulator into a carrier
envelope	four, three or two stages
chain	mix inputs stack voices without a mixer
in L R	mix · audio in · L feeds R if alone
out L R	stereo out, up to 16 V peak to peak
platform	a legio firmware · other firmwares

02 pitch

un_02 · enc

[enc] turn	fine tune
[enc] press + turn	coarse tune
enc jack	pitch jack · –2 to +5 V

10 first flight

un_10 · the manual's tutorial

1. a pitch sequence into enc
2. gates into trig
3. gates: asr or adsr · triggers: ar
4. set 1 and 2
5. chain a second unda into in

03 time · timbre

un_03 · knobs 1 + 2

1 [time]	relative time of every envelope stage
2 [timbre]	modulator amplitude

04 mod · mode

un_04 · s1 · s2 · top → bottom

s1 mod	modulator octave · +1 · 0 · –1
s2 adsr	holds at sustain while the gate is high
s2 asr	attack, hold, release
s2 ar	attack, release · for triggers

__fig.01 : signal path

in → out



as the manual describes it

05 jacks

un_05 · trig · cv · audio

trig hit	gate / trigger · near +1.6 V
in mix L R	audio mixed in · L feeds R
out L R	up to 16 V peak to peak
cv	pitch –2 to +5 V · time + timbre 0 – 5 V

__fig.02 : envelope

time knob scales every stage



08 patch ideas

un_08 · the manual

ambient pad — adsr
long gates, long time

plucks — ar
triggers, short time

stacked — any
one unda's out into the next one's in

__fig.03 : the panel

numbers match the legend



enc	pitch · fine tune
1	time · relative time of every envelope stage
2	timbre · modulator amplitude
s1	mod · +1 · 0 · –1
s2	mode · adsr · asr · ar
trig	hit · gate / trigger
cv	pitch · 1 · 2 · pitch –2…+5 V · others …
in	mix L / R · L feeds R if alone
out	out L / R · stereo out

09 specs

un_09

size	6 hp · 1.5 in deep
power	140 mA +12 V · 22 mA –12 V
cv in	0 – 5 V · pitch –2 to +5 V
trig	rising edge near +1.6 V
boot LEDs	cyan / cyan

design homage to the house of x / powers of x data pages — designed by tom muller with jonathan hickman · panel drawing after the noise engineering legio overlay template
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