at legio

_travelers guide
_for decoding alien chiptunes

2	3	6
switches · 3 ways	cv inputs	hp

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

stereo chiptune oscillator · ataraxic translatron lfsr algorithms · a second mod oscillator, chorus and stereo input

← back to the legio starsystem

= hold

01 what it is

at_01

chiptune	linear-feedback shift register oscillators, after the ataraxic translatron
two oscs	a carrier plus a modulating oscillator
stereo in	process or mix outside audio
in L R	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

at_02 · enc

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

10 first flight

at_10 · the manual's tutorial

1. out to the mixer
2. both switches down (mix · 0)
3. 1 [tone] + 2 [mod] at minimum
4. sweep tone, then mod
5. a pitch sequence into enc

03 tone · mod

at_03 · knobs 1 + 2

1 [tone]	carrier shape
2 [mod]	shape and octave of the modulating oscillator

04 input · chorus

at_04 · s1 · s2 · top → bottom

s1 env	the input's envelope shapes the oscillator
s1 rm	ring-mods the input with the oscillator
s1 mix	input mixed with the oscillator · use this standalone
note	env and rm are silent with nothing in
s2 chorus	II lots · I some · 0 off

__fig.01 : signal path

in → out



as the manual describes it

05 jacks

at_05 · trig · cv · audio

trig sync	hard sync · rising edge near +1.6 V
in L R	audio in · L feeds R if alone
out L R	up to 16 V peak to peak
cv	pitch –2 to +5 V · tone + mod 0 – 5 V

__fig.02 : waveforms

shape · mod



08 patch ideas

at_08 · the manual

hard sync — mult another oscillator to sync and in L · tune both — mix

stereo ring mod — one oscillator in L, another in R — rm

dynamics — a kick or other percussive source into in — env

synth voice — pitch sequence in · out through envelope-driven vcas — chorus I · II

__fig.03 : the panel

numbers match the legend



- enc pitch · fine tune
- 1 tone · carrier shape
- 2 mod · shape and octave of the modulating o…
- s1 input · env · rm · mix
- s2 chorus · II · I · 0
- trig sync · hard sync
- cv pitch · 1 · 2 · pitch –2…+5 V · others …
- in in L / R · L feeds R if alone
- out out L / R · stereo out

09 specs

at_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	red / red

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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