JIANT BYTE · SOUND · FX · MOD

engines, effects, modulation, sequencer and songs

firmware v0.14 · M-VAVE FM-1 · juanjiant-bit.github.io/JIANT-BYTE

ENGINES · EDIT 1 / EDIT 2

FOUR ENGINES

ENGINE	EDIT 1				EDIT 2				WHAT TO KNOW
FORM	STATE A	STATE B	MORPH	COLOR	GROOVE	DENSITY	SEED	EVOLVE	A part that plays itself: melody, bass, chords and drums from formulas. **36 states** (01 SCORE … 22 NESTED EQ, 23 STRUM 332 … 36 ACID); **MORPH composes**: between A and B each step takes its melody, each section its progression, from one or the other. **TIMBRE**: STYLE (AUTO, BYTE FLOAT FUNC HYBRID, **WOBBLE REESE GROWL RING SCREECH ACID**: a character bass) · DRIVE · TONE · WOBBLE (1/2 … 1/16; STEPS, JUMPS, BAR). **HARMONY**: HARMONY (AUTO CLASSIC DEGREES FAMILY PEDAL BITS: chords in the scale's degrees) · PROGRESS (AXIS II-V-I VAMP DESCEND FOURTHS EPIC POP CIRCLE) · CHORD · VOICING (CLOSE LEAD OPEN +BASS DROP QUARTAL NEAR WIDE). **LAYERS**: DRUMS DETUNE OCTAVE LEVEL. **CLOCK**: RUN (NOTE / SONG) RATE CYCLE SWING. Key and scale: SCL's, the song's. **SELECT** dices all of FORM, SEQ + SELECT its composition.
DRUM-X	MORPH	TUNE	TONE	DECAY	NOISE	MOD ENV	FOLD	DRIVE	8 sounds BD SD CP CH OH TM RS CB, sides A / B: **MORPH** morphs the kit; each lane a drum voice or a formula. The kit first: **KIT 3** BP FEEDBK, **KIT LFO** RATE DEPTH SHAPE RAND. Then a sound (KNOB 1 the sound): SIDE PITCH PMOD · DECAY NOISE COLOR · MODE PM.TYPE DRIVE · **LAYER** FEEDBK **SEND**. LEVELS and **STEREO** IMAGE.
WAVE	A	POS	WARP	AMT	B	MIX	DETUNE	SUB	A parametric wavetable of formulas: two formulas A and B, **POS** sweeps them, **WARP** bends the phase (sync, mirror, quantise, FM) by AMT; three detuned voices (DETUNE] and a SUB.
MATH	CHIP	WAVE	ALGO	VAR	MOTION	GRIT	BEND	LOOP	Formulas as voices. **BYTE** (48 bytebeats), **FLOAT** (48 floatbeats: GRIT is FB6), **USER** (your own text, or one SEED invents), **FUNC** (SONG / BEAT: the formula is the arrangement). **CAOS** folds, jumps and feeds the time back; **TIME** UNSYNC · SYNC · FIJO; MOTION a note value of the tempo.

FILTER · EVERY ENGINE

TYPE	CUT	RES	DRV

LP · HP · BP · COMB · COMB- · LP24 (LP24: four poles; DRV takes it from clean to a growl and a scream). COMB rings tuned to the note (COMB-: hollow, odd harmonics): CUT moves it ±32 st, RES how much it rings, MATH: per voice; the others: on the track, following LFO / ENV DEST FLT (DRV drives the track into the filter; DRUM-X: the track's DIST).

NOISE	RATE	MODE	DEST

FILTER 2: a modulator, NOISE its depth (±3.5 oct on CUT, ±1 oct on pitch); MODE **SOFT · STEP** random, gliding or held (RATE 0.4 .. 320 Hz), **METAL** audio-rate at a RATIO of the note (x0.5 .. x4: on pitch, FM), **BREAK** in time (DIV 1/8 .. 1/32). **DUST** spikes (RATE: density), **DEST** FILT · F75 · MIX · P75 · PITCH. **FILTER 3**: KEY tracking 0 .. 100 %. MOD source **F.NOISE**: the raw modulator. LP24 with DRV: level kept, RES top sings.

VOICE · PLAYING

VCE	GLD	GLMOD	PRIO

POLY · MONO · LEG · UNI · DRONE (held after the key, the next note glides; its key again lets it go, its keys lit): glide and its mode; LAST / LOW / HIGH priority. **8 voices** shared by the six tracks (MONO and LEGATO keep their note). **EDIT › VOICES 2 IMAGE** (V10.49; was its STEREO page): in POLY each voice its own place across the stereo field, drawn on the page (V10.52).

DICE

EDIT + SELECT: a random factory preset of the engine, every parameter moved up to a quarter of its range. **FORM**: its own dice, all of it coherent (states, timbre, harmony, rules, clock); SEQ + SELECT its composition alone. DRUM-X: both sides of every sound around the factory kit. Heard at once: OCT+ OK keeps it, OCT- CANCEL brings the sound back. SEQ / LFO / FX + SELECT: the sequence, the LFO, the effects, the same way. HOME + SELECT (or HOME twice on HOME): **GEN**, the song generator, HOME's last three pages: GENRE (**EXPLORE**, where it opens: no genre, every rule broken; RANDOM; 43 genres; PRESETS too) · SEED · ENERGY · FORM; DRUMS · BASS · CHORDS · ARP · LEAD amounts; COMPLEX · SWING · HUMAN (SELECT: the next page). OCT+ makes the piece (again: a new seed), OCT- back to MACROS. GLO + G4 undoes.

MODULATION

ENV · LFO

ENV

ATK	DEC	SUS	REL

ENV DEST

FLT	PIT	SHP	LOOP

LOOP: held, the envelope cycles from the sustain: an ADSR-shaped LFO. **ENV 2** (V10.22): a second ADSR, MOD SRC ENV2 on any destination.

LFO

RATE	WAVE	MODE	FADE

SIN TRI SAW SQR S&H **DRIFT** (V10.36: a smooth random wander; at 4BAR–16BAR pads breathe) · RATE up to 16BAR · MODE TRIG / FREE · LFO 2: PHASE

LFO DEST

PIT	FLT	SHP	AMP

MOD MATRIX · 4 SLOTS A TRACK

SLOT	SRC	DST	AMT

SOURCES

LFO ENV VEL KEY RAND MODW AT EXPR M1 M2 M3 M4 STEP NOISE PROX ENV2 FOLLOW OCT+ OCT-

DESTINATIONS

PITCH CUT SHP AMP PAN DIST CHO DLY REV RATE VIB E1..E8 CLIP PNCH D.TIM D.FB D.TON D.MIX R.SIZ R.DMP C.RAT C.DEP F.CUT LEVEL LIFE

FORM'S OWN (A FORM TRACK)

STYLE DRIVE TONE WOBBLE HARMONY PROGRESS OCTAVE CHORD VOICING DRUMS DETUNE SWING RATE CYCLE

E1..E8: the engine's own EDIT knobs. CLIP / PNCH: the master. D. R. C.: the DELAY, REVERB and CHORUS buses (a STEP source on D.TIM sequences the delay time). **PROX**: how close the Bluetooth phone is (or AIR: a hand); MENU › SYSTEM › BLUETOOTH, OCT+: FAR / NEAR, MIN MAX SPD. **FOLLOW**: the audio input's envelope (an input opens a filter, ducks a pad). **OCT+ / OCT-**: the expression keys (a note held + OCT): routed, they sweep / wobble the DEST instead of the pitch. **LIFE / BEING**: the track's breath, its being's swim (HOME › LIFE). **T1–T6 ENV**: a track's level; DEST **LIFE**: how much it lives.

STEP MOD · MACROS

STEP MOD · A CV SEQUENCER PER TRACK

STEP	LVL	LEN	SLEW

16 levels, DIV on STEP MOD 2, in time with the transport. Use it from MATRIX, SRC STEP.

MACROS M1–M4

Hold LFO: the knobs are M1–M4, latched until LFO again. Each session starts with 2 random routes a track: F3 rolls new ones, G3 clears. By hand: MOD, SRC M1..M4. Saved with the project.

SEQUENCER

64 steps a track, up to 4 notes a step, piano roll and drum grid. One chain (V10.6): STEP (the roll / grid, K1 all 64 steps) · LENGTH · TRACK · EUCLID · MODES · MUTATE · PLAYHEADS · STRETCH · COMP · COMP 2 · LOCKS, SELECT walks, SEQ jumps to the next group, PRESETS loads a pattern. **Hold a step + turn a knob**: a parameter lock. STEP K4 **VEL** (V10.8): 1–127, then ACC, SLD, A+S. Step recording: hold a chord + KNOB 1 its length; + ARP: arpeggiated (K1 rate, K2 order, K3 oct). COMP / COMP 2: two components a step, each ACTION · LENGTH · CONDITION · VALUE: ARP, SEQ, OCT+, OCT–, RATCH, SELECT walks, SEQ jumps to the next group, PRESETS loads a pattern, STUTT, MUTE, TRANS, RAND, LOCK, **RAMP** (V10.6v, JUMP's place: the step's lock glides there over 1–32 steps or 1–16 bars, LIN EXP LOG S STEPS ZIGZAG), SOUND (a kit's SHORT / GHOST / FLAM), BEND, SHIFT, CHORD, **TRIG** (MUTE the other way: plays only when its CONDITION holds, TRIG 4:4 the 4th pass); CONDITION ALWAYS, 25 / 50 / 75 %, 1ST, FILL, PRE, NEI (and their !), NAM, ELSE (C2: MONO). REC keeps lengths, legato (SLIDE) and velocity; GATE 100 % for new tracks (V10.6z4). TRACK: PITCH, CHANCE thins the whole track, HUMAN one amount (velocity, timing, gate, decay / release), REC Q. STRETCH / REPEAT act as the knob turns; ROTATE reads the sequence from another step; NUDGE in red (OCT+) moves the cursor step off the grid in 64ths (REC 0 0 % records where you played, to the 64th). **EUCLID** (V10.6: V10.16 VARY in four turns A A' A" B, and **MUTATE**: EVERY 1–16 bars, AMOUNT, ORBIT / DRIFT / PULSE. GROOVE / RHYTHM / FEEL / ALL, OCT+ now, OCT– the anchor): HITS, STEPS 2–64, ROTATE write the track's pattern live; K4 LANE (DRUM-X: each sound its own; V10.7 **ALL**, the default: K1 DENSITY 1–8 writes a whole kit, a lane picked writes only that lane) or VARY; MODES adds ACCENT GHOST RATCHET VARY (DRUM-X) or MOTION HARMONY OCTAVE SLIDE; notes in the track's SCL, else the key the other tracks fit (FROM Tn), else NEW KEY; OCT+ a new variation, OCT– the one before. REC + knobs while playing: automation (64 records a section; LOCKS plays, clears and edits them, each a LOCK or a REC). EUCLID starts at 0 and transforms the track's own sequence, giving it back as it was at rest (V10.29–V10.31). STRETCH › NUDGE: OCT– the whole sequence by steps, OCT+ the cursor step in 64ths (V10.25). Longer than 16 steps, the roll follows the playhead (V10.47).

LENGTH · TRACK

LEN	DIV	SWG	GATE
PIT	CHN	HUM	RECQ

SCALE · ARP

ROOT and SCALE are every melodic track's: CHR MAJ MIN DOR MIX PEN MPEN HARM PHRY LYD LOC MEL BLUES WHOLE DIMHW DIMWH. KEY SNAP snaps keys or the sequence, **TRANSP** (SCALE KNOB 4) moves every sequence along the scale. **CHORD**: a key plays a chord (TRIAD 7TH ADD9 SUS2 SUS4 in key, MAJ MIN 7 MAJ7 MIN7 POWER), VOICING LEAD leads each to the next, STRUM as a harp. **SCENE** (V10.24): each track a role (KEEP CHORD ARP BASS LEAD DRUM; BASS / LEAD a PATTERN, DRUM a STYLE or GEN) and one key plays them all; OCT+ dices the roles, REC records each.

ARP MODES

OFF UP DN UPDN RND ORD REPEAT DNUP UP+8 CONV DIVG PINKY THUMB WALK CHORD **TRNS** (the keys transpose the sequence)

SONGS

6 projects × 4 sections (A–D) (V10.6p: 8 before), a song of up to 16 rows by bars (HOME › ARRANGE, OCT+ adds a row, OCT– deletes one, PLAY plays; END: STOP, x2–x8, LOOP), SLOOP style. **TIMELINE** (V10.6o; on HOME since V10.7.3Z, after MACROS): the song as blocks, the row picked opened by track: K1 row K2 part K3 bars K4 the track's **VAR** (MUTE THIN FILL HALF REV SHIFT OCT+ VAR 1–4), F3–D4 mutes, F4–B4 **FROM** A–D, PLAY loops the row. **PARTS** (CLIPS' grid, V10.7.32): 6 tracks × 4 parts; a part's head: OCT+ loops it, OCT– the song; a cell: OCT+ on the next bar, OCT– the track stops; REC writes the rows. A sound changed while the song plays stays (V10.6z8; EDIT › RECALL). Each row can hold a **scene**: mutes, DRUM-X group mutes, macros and MIDI punch-ins. SAVE held plays sections live on the next bar, stores them, records the song (SONG REC). Each section keeps its sounds, steps, motion, kit and its SLICER.

EFFECTS

PER TRACK

FX · SENDS

DST	CHO	DLY	REV

DIST

DST	TYPE	TONE	NOISE

SOFT · HARD · FOLD · RECT · AMP. **CRUSH** (bits, rate): EDIT › VOICES 3, the track's, DIST on or off.

AUTO PAN

DEPTH	RATE	SYNC	WAVE

The track's pan swung L–R around its PAN. SYNC **BEAT**: RATE 4 BARS … 1/32, in time with the bar; **FREE**: in Hz. SIN · TRI · SAW · SQR · S&H, never a click.

SLICER · ONE ON A BUS

SLCR	PAT	RATE	DEPTH

OFF · GATE · STUT, 16 patterns, 1/8 … 32T. **SLICER IN**: T1–T6 and **FX** (the delay / reverb / chorus returns) ON / OFF: everything on = the whole mix chopped after the effects. **SL.PITCH**: the repeats' 16-step pitch (±24 st, tape style, QNT SCL to the scale).

DELAY · CHORUS

DLY

TIME	FDBK	TONE	MIX

DLY 2

WIDE	PITCH	SPRY	MOD

DLY 3

TYPE	PING	DRIVE	R TIME

Synced (4BAR … 1/32; V10.8 dotted 1/4D 1/8D 1/16D) or free (5 ms – 2.65 s; past 0.74 s darker); PITCH / SPRY: a grain delay. TYPE ANALOG / DIGITAL, PING-PONG, DRIVE the loop. **R TIME** (V10.49): the right echo's time as a ratio of TIME (=L, x1/2, x2/3, x3/4, x4/3, x3/2, x2; 1/8 with x3/2 is 3/16); not with PING or the grains.

CHORUS

RATE	DEPTH	STER	-

STER: 0 as always, down to mono, up to twice as wide.

REVERB · FIVE MODELS

TYPE	SIZE	DAMP	PRE
MOD	RATE	FILT	WIDE

TYPE	WHAT IT IS	SIZE	DAMP	MOD	RATE	WIDE
ROOM	Classic room	decay	darkens	chorus on the tail	its speed	stereo
SPRING	Amp spring tank	length · decay	darkens	wobble	wobble speed	stereo
SHIMR	Up an octave on every pass; **PRE → AIR** (±24 st: down darker and lower, up airier and higher)	decay	darkens	how much shimmer	—	—
RESO	4 strings tuned to the scale; **PRE → PITCH** (0–14 steps up), **DAMP → FOLW** (OFF / T1–T6: the chord follows that track's notes)	how long they ring	FOLW	past half: the chord opens	—	—
CLOUD	Granular wash; SIZE max **freezes** it; **PRE → AIR** (±24 st: the cloud down / up, darker / airier)	decay · freeze	darkens	grains pitched + chorus	grain density	grain spread

MASTER

CLIP	PNCH	DUCK	REL

CLIP saturates without getting louder. **PNCH** drives the drums: denser body. **DUCK**: the kick pulls the rest down (REL its release). An always-on **leveler** (slow 2:1, –9..+6 dB) before the limiter keeps patches at a steady volume.

TAPE

TAPE	WOW	-	-

After MASTER: TAPE saturates, darkens the highs and lifts the lows; WOW the wow and flutter (par3: much stronger at 100).

EQ · 4 BANDS (par9)

LOW	LO MID	HI MID	HIGH

–12…+12 dB, wide and gentle (~200 Hz, 1 kHz, 4 kHz); at 0 it costs nothing. The page draws the curve (SCOPE ON: the master live behind it); EQ and TAPE change only when a project loads.

PUNCH-IN FX (FX HELD)

REPEAT 1/8 · 1/16 · 1/32 (1/8 from 41 BPM, 1/16 from 21: V10.59), REVERSE, TAPE STOP, PITCH UP / DOWN, FREEZE, REV ALL, DLY ALL, RING, LIFE MAX, LOOP 3 / 5 / 7, GLITCH on the grid; WOBBLE, DLY 1/16, COMB; on the notes: OCT–/+, ½ TEMPO, STUTTER, ATK+, ARP, RANDOM. FX KNOBS: FILTER CRUSH THROW DEPTH (FX + PRESETS: the lane's). Recordable per section.