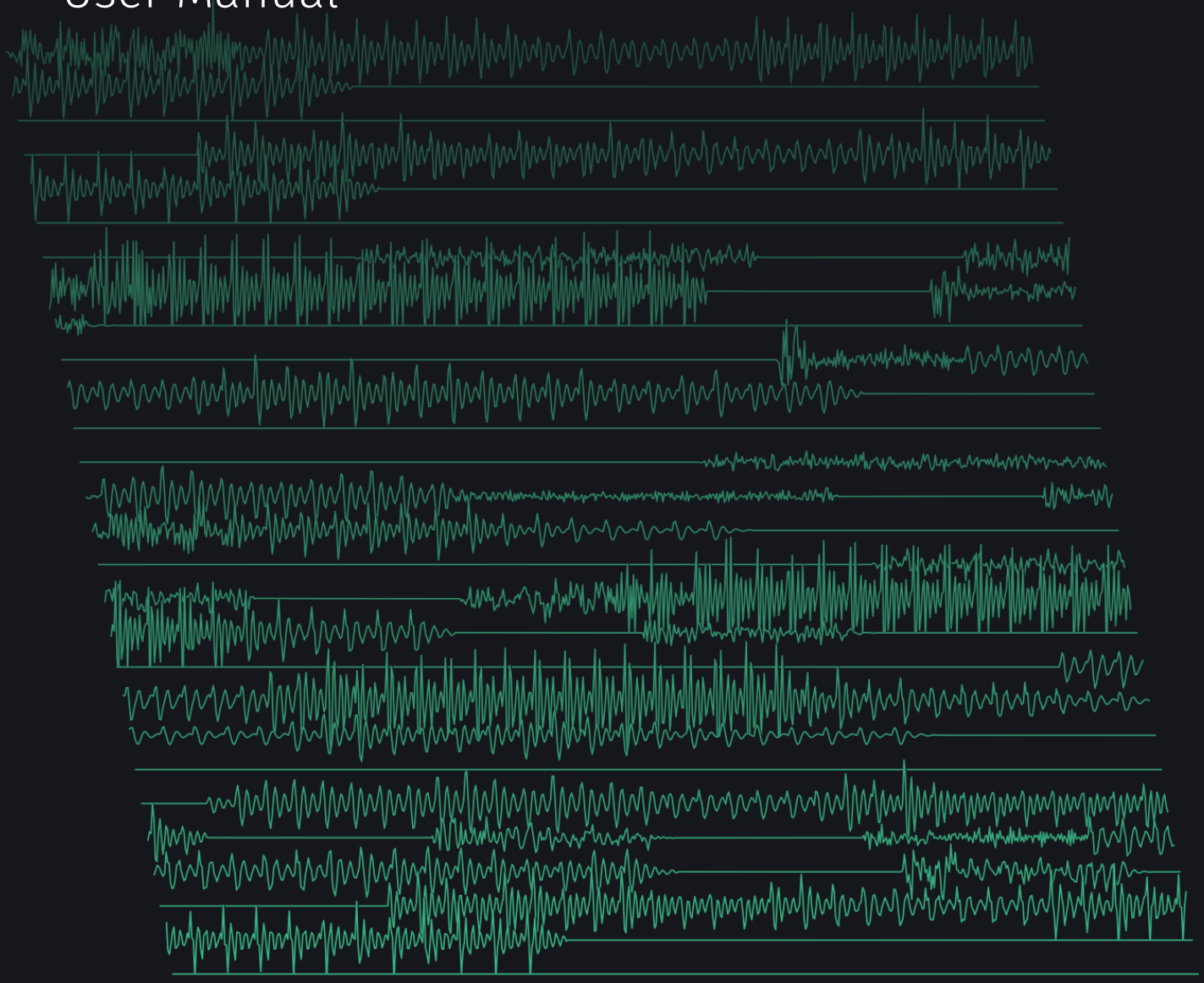
BLUE LANTERN MODULES · SPEECH AND VOCAL SYNTHESIZER

TecVox

User Manual



52 engines · talking robots · singing voices · effects · 1 V/oct

Eurorack module · Blue Lantern Modules, Chandler, Arizona

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CHAPTER 1

Welcome

TecVox is a Eurorack module that **talks and sings**. Robots announce your drops, toys count your bars, choirs sing your melodies, and everything follows 1 V/oct.

It brings back the sound of the first speech chips (the gritty allophone voice of early home-console voice modules and the buzzy LPC voice of educational talking toys) with a modern, playable twist. Every word is synthesized in real time by a formant speech synthesizer running on the module. There are no samples, so every word can be played at any pitch, at any speed, and crushed to taste.

Highlights

- **52 engines**, among them **10 talking engines**: a 48-word robot vocabulary, numbers 0–100, letters, a counter, a spelling game, single phonemes, gibberish, stutters and singing words.
- **6 singing engines**: vowel voice, choir, talk box, ring-mod robot, whisper and chant, all on 1 V/oct.
- **Two vintage voices**: the speech-chip voice (9.6 kHz) and the talking-toy voice (8 kHz, stepped and 10-bit).
- **Bit crusher**: LOFI puts the crush on COLOR, and BITS/RATE in the menu crush any engine.
- **Effects**: robot ring modulator, chorus and a warm tape-style echo on every engine.
- **More voices**: beatbox, throat singing, vocal chords, scat bass, droid talk, reverse speech; modular synth and music word banks, arpeggiator, gate hold, voice size, word select by V/OCT.
- **Instruments and characters**: vocoder, vowel supersaw, FM singer, opera, humming, whistle, jaw harp, didgeridoo, talking string, growl and wah basses, word scrubber, radio voice, alien language, laughter, chiptune voice, crowd, baby talk, yodel, monk chant, word sequencer and glitch.
- **Special voices**: tracker-chord voice, an endless rising voice, worn tape, singing bells, megaphone, a hard-tuned voice, talking drums and a telephone / walkie-talkie.
- **The MORE page**: an internal clock, ratchets, probability and swing, chord mode with strum, an ADSR, glide and vibrato, word tricks (random words, phrases, intonation, reverse), filter and drive, 8 presets, favorites and a word display.
- **Calibrated and playable**: 1 V/oct calibration, envelope, quantizer, META mode, bit crusher.

Quick start

1. Power on. A fresh module shows **VOWL**: you hear a sung vowel straight away. Play V/OCT and turn TIMBRE.
2. Turn the encoder to **WORD**. Patch a trigger or clock into **TRIG**: each trigger speaks the word chosen with TIMBRE.
3. Try **SING** with a melody on V/OCT, then **LOFI** with COLOR turned up.

NOTE Your calibration and settings are kept in the module's memory when the power is off.

CHAPTER 2

Panel and controls

Control	Function
Encoder + display	Turn to choose the engine. Click for the menu.
COARSE / FINE / V/OCT / FM	Pitch of the voice, 1 V/oct (calibrated).
TIMBRE knob + CV	What is said or sung: word, number, letter, phoneme or vowel.
COLOR knob + CV	How it's said: speed, crush, length, size, spread, resonance, glide...
TRIG (GATE)	Speaks (talking engines), next vowel (CHNT); also fires the internal envelope.
OUT	Audio output.



CHAPTER 3

How TecVox speaks

Formant synthesis

Human speech is a buzz from the vocal folds, shaped by the resonances of the mouth and throat (formants). TecVox models exactly that. A pulse source at the pitch you play (or noise, for consonants like S and SH) is filtered by four tuned resonators. A phoneme sequencer moves the resonances from sound to sound, with silences, bursts and breaths for consonants like P, T and K. Words are stored as strings of phonemes, so they cost almost no memory.

Two vintage voices

Voice	Character	Used by
Speech chip	9.6 kHz synthesis with a 4-pole output filter. Gritty, nasal, robotic.	WORD, ALLO, BABL, STUT
Talking toy	8 kHz, buzzy chirp excitation, parameters stepped every 12.5 ms, 10-bit sample-and-hold output.	NUMB, ABC, CNT, SPEL, LOFI
Singer	16–24 kHz, smooth glottal pulse and vibrato.	SING and the singing engines

Pitch

All engines follow V/OCT, COARSE, FINE and FM. Talking engines add a gentle falling intonation to each word; SING and the singing engines hold the exact pitch you play (within a few cents across five octaves).

Bit crusher

Two ways to crush:

- **LOFI** has a dedicated crusher on COLOR (knob and CV): 12 → 3 bits and up to 16× sample-rate reduction.
- **BITS** and **RATE** in the menu crush the output of any engine (2–16 bits, 4–96 kHz).

TIP Combine both: LOFI at moderate crush with RATE at 16 kHz is pure 1980s arcade.

Effects: ring, chorus, echo

Three effects work on every engine, after the bit crusher and the envelope, set in the menu:

- **RING**: a ring modulator for the classic robot voice. 30 or 50 Hz gives the sci-fi robot; higher settings give metallic, bell-like voices (OFF, 30, 50, 75, 100, 150, 200, 300, 500, 800, 1200 Hz).
- **CHOR**: chorus. LITE (one moving tap), DEEP (two taps, wide), ENS (three taps, ensemble). The CHOR engine always uses LITE: it is already a three-voice choir.
- **ECHO**, **TIME**, **FDBK**: an echo in the style of a bucket-brigade delay. ECHO is the echo level (0 = off), TIME the delay (125 ms to 1.2 s, or **CLK**: the period of the clock at TRIG), FDBK the number of repeats. Long times sound darker and warmer, and changing TIME bends the repeats like tape.

TIP Robot announcer: WORD, RING 50, ECHO 9, TIME 375, FDBK 9. Space station: ECHO 12, TIME 1000, FDBK 11.

CHAPTER 4

Talking engines

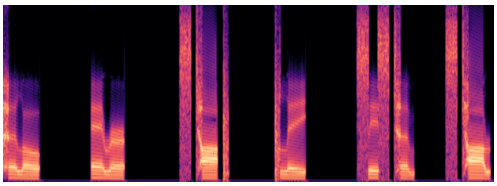
The talking engines speak when TRIG receives a trigger. Words are never cut off by knob movements: TIMBRE is read at each trigger.

Each engine has a *sound portrait*: five seconds of the module talking or singing. Time runs left to right, frequency (0–6 kHz) bottom to top; the bright bands are the formants.

WORD

Word

Engine 1 · Robot vocabulary · speech-chip voice



A 48-word vocabulary spoken in a gritty, robotic voice in the spirit of early home-console voice modules. Each word has a natural falling intonation, and the voice pitch follows V/OCT.

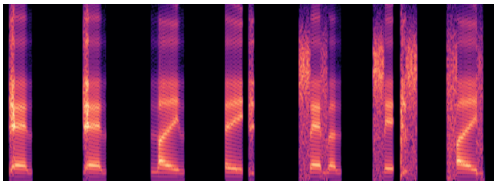
TIMBRE	Word (48, see the vocabulary page)
COLOR	Talking speed: 0.5× (CCW), normal (noon), 2× (CW)
TRIG	Speaks the word.

TIP Sequence TIMBRE with a stepped CV to build phrases: ACTIVATE · SYSTEM · ERROR.

NUMB

Numbers

Engine 2 · 0 to 100 · talking-toy voice



Numbers from zero to one hundred, built the way a person says them (“forty” + “two”), in a buzzy, stepped talking-toy voice.

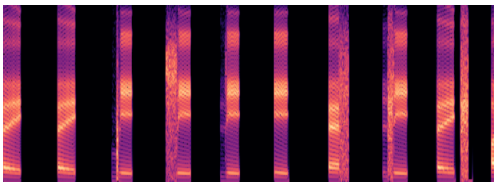
TIMBRE	Number 0–100
COLOR	Talking speed
TRIG	Speaks the number.

TIP A slow ramp into TIMBRE and a clock into TRIG make a countdown or count-up.

ABC

Letters

Engine 3 · A to Z · talking-toy voice



The alphabet, letter by letter, in the talking-toy voice.

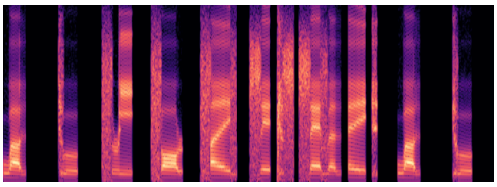
TIMBRE	Letter A–Z
COLOR	Talking speed
TRIG	Speaks the letter.

TIP Random CV into TIMBRE gives instant spelling-bee chaos.

CNT

Count

Engine 4 · Automatic counter



Each trigger says the next number, from 1 up to N, then starts again. Perfect for counting bars or beats out loud.

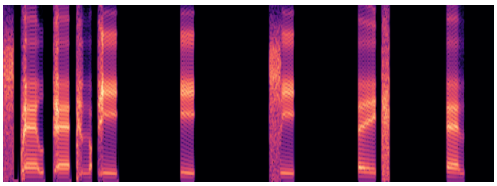
TIMBRE	N, the highest number (1–20)
COLOR	Talking speed
TRIG	Says the next number.

TIP N = 4 or 8 on a bar clock gives a live arrangement countdown.

SPEL

Spell

Engine 5 · Spelling game



Like an educational spelling toy: the first trigger says “SPELL <word>”, the next triggers spell it one letter at a time, and the last says the word again.

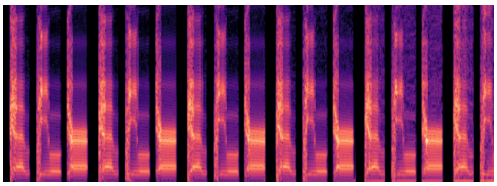
TIMBRE	Word (TECHNO, ROBOT, MUSIC, BASS, ACID, LASER, VOICE, DANCE, NOISE, SPACE, POWER, BLUE)
COLOR	Talking speed
TRIG	Next step of the game.

TIP Changing TIMBRE restarts the game with the new word.

LOFI

Lo-fi

Engine 6 · Vocabulary + bit crusher



The robot vocabulary in the talking-toy voice, followed by a bit crusher you control with COLOR (and CV): bit depth falls from 12 to 3 bits while the sample rate drops to 1/16.

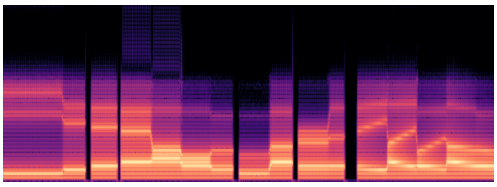
TIMBRE	Word (48)
COLOR	Crush amount
TRIG	Speaks the word.

TIP An envelope on COLOR (|COL in the menu) crushes each word as it decays.

ALLO

Allophone

Engine 7 · Single speech sounds



Plays one of 40 phonemes (vowels, diphthongs, consonants) per trigger, like programming an allophone speech chip by hand. Sequence TIMBRE to build your own words.

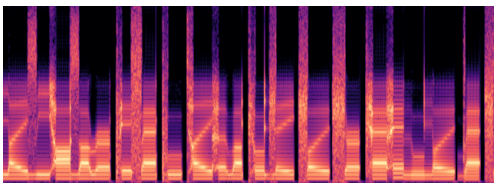
TIMBRE	Phoneme (40)
COLOR	Length 0.25× – 6×
TRIG	Plays the phoneme.

TIP Long vowels (COLOR high) on a sequencer turn ALLO into a vocal synth.

BABL

Babble

Engine 8 · Endless gibberish



A stream of random syllables that never stops: alien radio, robot chatter, scat. TRIG restarts with a new phrase.

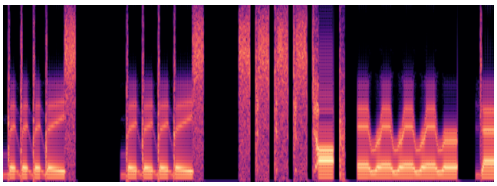
TIMBRE	Intonation range: monotone → ±7 semitones
COLOR	Talking speed
TRIG	New phrase.

TIP Low in the mix with reverb, it's an instant sci-fi background.

STUT

Stutter

Engine 9 · Glitched words



The start of the word repeats three times before the whole word plays: “b-b-b-bass”.

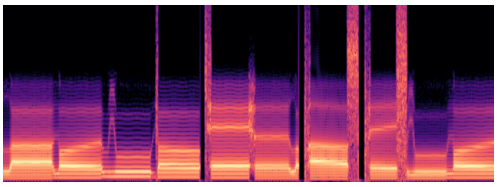
TIMBRE	Word (48)
COLOR	Stutter length 40–400 ms
TRIG	Stutters the word.

TIP Sync the stutter length to your tempo by ear for rhythmic vocal edits.

SING

Sing

Engine 10 · Words that sing



Words with stretched vowels, so they can be sung. The pitch follows V/OCT live with a short glide and vibrato, so a sequencer can make the robot sing a melody.

TIMBRE	Word (48)
COLOR	Vowel stretch 1×–8×
TRIG	Sings the word.

TIP Quantize V/OCT (QNTZ) to your scale and step TIMBRE through LOVE, MUSIC, DANCE…

CHAPTER 5

Singing engines

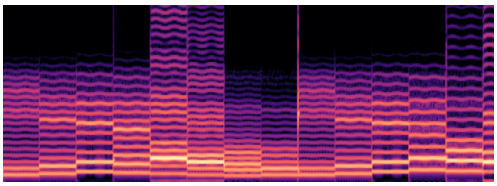
The singing engines sound continuously, like an oscillator. Shape them with a VCA, or turn on |VCA in the menu and play them from TRIG.

Each engine has a *sound portrait*: five seconds of the module talking or singing. Time runs left to right, frequency (0–6 kHz) bottom to top; the bright bands are the formants.

VOWL

Vowel

Engine 11 · Singing vowel voice



A continuous sung vowel with natural vibrato. TIMBRE morphs smoothly through eight vowels; COLOR changes the size of the singer, from a child to a giant.

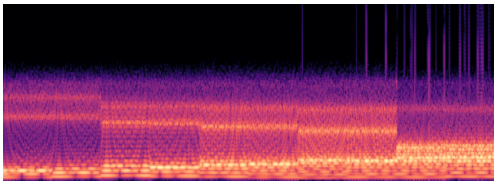
TIMBRE	Vowel: EE · IH · EH · AE · AH · AW · UH · OO
COLOR	Size (formants ×1.4 → ×0.75)
TRIG	–

TIP An LFO on TIMBRE gives “wah-yah-yah” vocal movement; slow CV gives talking pads.

CHOR

Choir

Engine 12 · Three-voice ensemble



Three detuned voices singing the same vowel, for choirs and vocal pads.

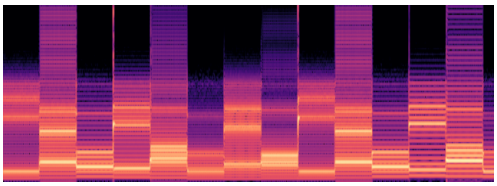
TIMBRE	Vowel
COLOR	Spread 0–40 cents
TRIG	–

TIP Long envelope on the VCA (|VCA) and a chord-like sequence = instant choir.

TBOX

Talk box

Engine 13 · Sawtooth through the vowels



A bright sawtooth through the vowel filter, like a talk box or vocoder lead.

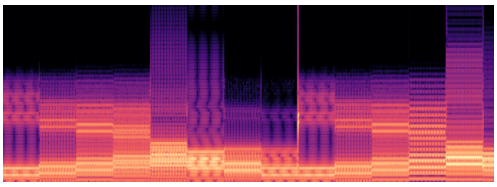
TIMBRE	Vowel
COLOR	Resonance
TRIG	–

TIP High COLOR and a fast LFO on TIMBRE for funky talk-box leads.

ROBO

Robot

Engine 14 · Ring-modulated voice



A monotone vowel through a ring modulator: the classic sci-fi robot voice.

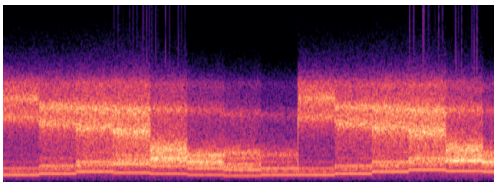
TIMBRE	Vowel
COLOR	Ring frequency 49 Hz – 1.6 kHz
TRIG	–

TIP Low COLOR settings give the menacing, metallic robot.

WHSP

Whisper

Engine 15 · Breath and air



Whispered vowels made from noise, blending into a breathy voice.

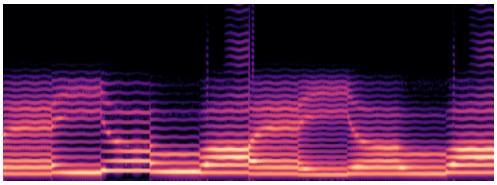
TIMBRE	Vowel
COLOR	Breath (CCW) → voice (CW)
TRIG	–

TIP Pure whisper with a filter after it makes eerie vocal ambiences.

CHNT

Chant

Engine 16 · Vowel sequences



Each trigger glides to the next vowel of a sequence (eight sequences, such as A-E-I-O-U or OO-AH).

TIMBRE	Sequence (8)
COLOR	Glide time 5–300 ms
TRIG	Next vowel.

TIP Clock TRIG with 8ths and play a bassline on V/OCT for a vocal riff.

CHAPTER 6

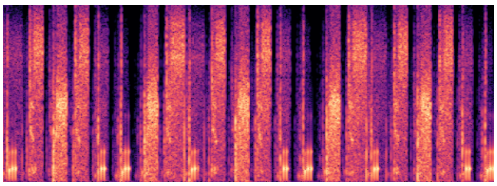
More voices

Six more voices. BBOX, DOO, BEEP and REV play on TRIG; TUVA and CHRD sound continuously.

Each engine has a *sound portrait*: five seconds of the module talking or singing. Time runs left to right, frequency (0–6 kHz) bottom to top; the bright bands are the formants.

BBOX Beatbox

Engine 17 · Vocal drum kit



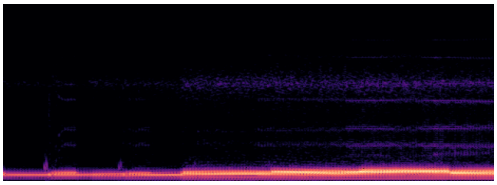
A beatbox made from mouth sounds: kick, boom, snare, hat, open hat, clap, tom and rim. TRIG plays the sound chosen with TIMBRE; V/OCT tunes it.

TIMBRE	Sound (8)
COLOR	Length: short (CCW) .. long (CW)
TRIG	Plays the sound.

TIP Sequence TIMBRE with a stepped CV and clock TRIG: a full beatbox groove from one module. Add ECHO.

TUVA Throat singing

Engine 18 · Drone with a whistling overtone



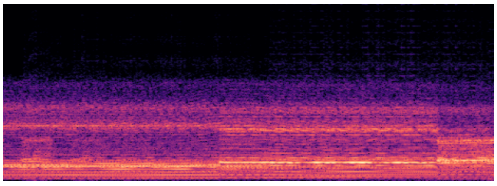
Overtone singing: a low drone, with a very sharp formant that picks out one harmonic, so it whistles a melody above the note.

TIMBRE	Harmonic 4..12 (glides between)
COLOR	Focus: soft .. piercing
TRIG	–

TIP Play a low note, then sequence TIMBRE slowly: the whistle plays the melody, the drone stays.

CHRD Vocal chords

Engine 19 · Three singers on a chord



Three voices singing a chord: maj, min, sus2, sus4, maj7, min7, add9 or quartal.

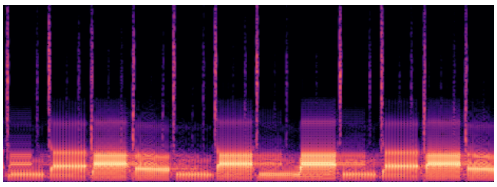
TIMBRE	Vowel
COLOR	Chord (8)
TRIG	–

TIP V/OCT plays the root, a CV on COLOR changes the chord: instant choir progressions.

DOO

Scat bass

Engine 20 · Vocal bass syllables



A deep voice singing “doo”, “dum”, “ba”, “bom”... on each trigger, at the pitch of V/OCT. Made for vocal basslines.

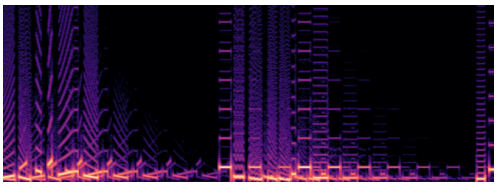
TIMBRE	Syllable (8)
COLOR	Length 1×–7×
TRIG	Sings the syllable.

TIP Patch a bassline into V/OCT and its gates into TRIG; HOLD sustains long notes.

BEEP

Droid talk

Engine 21 · Beeps and chirps



A sci-fi robot language of beeps, chirps, sweeps and warbles. Each trigger starts a new phrase.

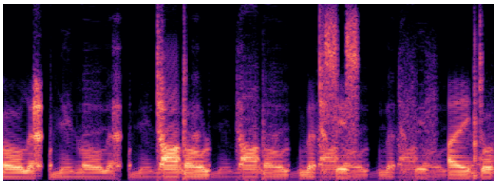
TIMBRE	Phrase length (2–12 beeps)
COLOR	Tone: pure .. buzzy
TRIG	Starts a phrase.

TIP Random triggers and ECHO on CLK: a busy little droid in your rack.

REV

Reverse

Engine 22 · Words backwards



Says the word with its sounds in reverse order, like a tape played backwards. Uses the selected BANK.

TIMBRE	Word (48)
COLOR	Speed
TRIG	Speaks the word backwards.

TIP Deep chorus and long echo: instant eerie sound design.

Arpeggio, gate hold, size, word select

- **ARP / ACRD**: an arpeggiator for every engine. Each trigger moves the voice to the next note of the chord (ACRD: OCT, 5TH, MAJ, MIN, SUS4, MAJ7, MIN7, DOM7, ADD9, DIM) in the ARP pattern (UP, DOWN, UPDN, RAND, UP2 over two octaves). Talking engines say each word on the next note.
- **HOLD**: while the gate at TRIG stays high, the last vowel of the word keeps singing (“hellooooo”). Works on every talking engine, SING and DOO.
- **SIZE**: the size of the voice, −8 (small) to +7 (giant), on every formant engine.
- **WSEL**: TIMB (TIMBRE picks the word) or V/OC. In V/OC, the semitone at V/OCT picks the word (or number, letter, phoneme): C1 (0 V) is word 1, C#1 word 2, and so on. The voice then plays at C3 (+ FINE and OCTV). Any sequencer can call exact words.

TIP WSEL V/OC with a quantized sequencer: each note of your sequence is a word.

CHAPTER 7

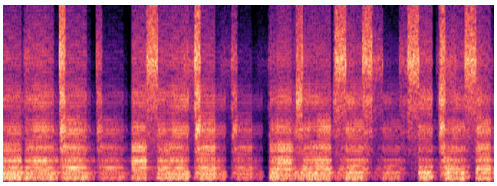
Instruments and voices

Eleven engines that turn the voice into instruments: vocoder, pads, singers, mouth instruments and basses. They play on 1 V/oct; VOCD, OPRA, WHST, JAWH, DIDG, PLUK and YOI also use TRIG.

Each engine has a *sound portrait*: five seconds of the module talking or singing. Time runs left to right, frequency (0–6 kHz) bottom to top; the bright bands are the formants.

VOCD Vocoder

Engine 23 · Words on a synth chord



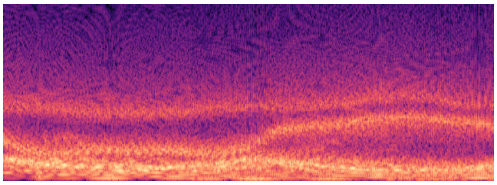
The classic vocoder sound: the words of the selected BANK, spoken through an 8-band vocoder that plays a sawtooth chord. The carrier follows V/OCT; the word is the modulator.

TIMBRE	Word (48, BANK)
COLOR	Chord: single, octave, 5th, maj, min, sus4, maj7, min7
TRIG	Speaks the word.

TIP COLOR on min7 and a slow chord sequence on V/OCT: robot soul. HOLD keeps the last vowel ringing.

VSAW Vowel supersaw

Engine 24 · Pad through vowel formants



Five detuned sawtooth waves through the vowel formants: a big, singing pad.

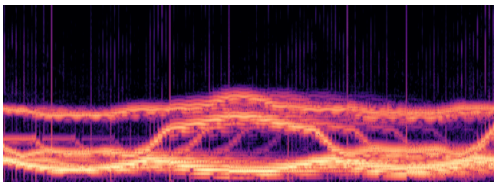
TIMBRE	Vowel (ee .. oo)
COLOR	Detune
TRIG	–

TIP A slow LFO on TIMBRE and CHOR DEEP: the pad slowly says “ee-ah-oo”.

FMVX

FM singer

Engine 25 · Glassy FM choir voice



A digital FM voice in the style of 80s FM choirs: each formant is an FM carrier on the harmonics nearest to it, so the vowel stays in place while the note moves.

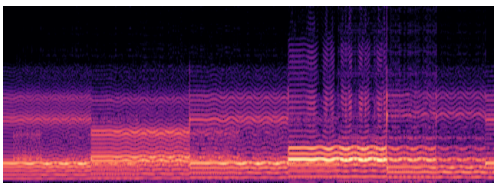
TIMBRE	Vowel
COLOR	FM index (pure .. bright)
TRIG	–

TIP Play chords from a sequencer through ECHO: a clean digital choir.

OPRA

Opera

Engine 26 · Soprano with blooming vibrato



A soprano. On high notes, the first formant is raised to follow the note, as trained singers do. After each trigger the vibrato blooms in.

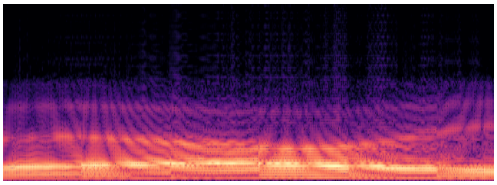
TIMBRE	Vowel
COLOR	Vibrato depth
TRIG	Restarts the vibrato bloom.

TIP Gates from a melody into TRIG: each note starts straight and blooms into vibrato.

HUM

Humming

Engine 27 · Closed mouth M, N, NG



A hummed voice, mouth closed: M, N and NG, opening up to “ah” with COLOR.

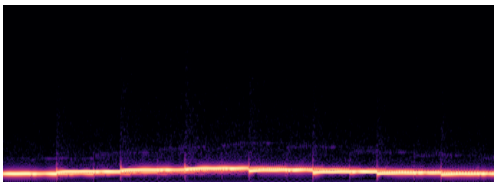
TIMBRE	M → N → NG
COLOR	Mouth: closed → open (“mmm-ah”)
TRIG	–

TIP An envelope on COLOR: each note opens from a hum into a vowel.

WHST

Whistle

Engine 28 · Human whistling



A whistled melody two octaves above the note, with breath noise. Each trigger scoops up into the note.

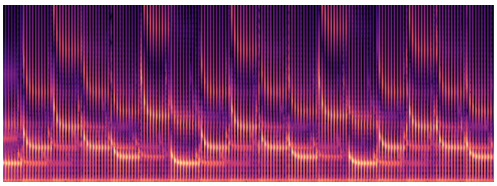
TIMBRE	Scoop and vibrato
COLOR	Breath
TRIG	Scoops into the note.

TIP Melody plus gates into TRIG, ECHO on CLK: a western whistle.

JAWH

Jaw harp

Engine 29 · “Boing”



A plucked jaw harp: a buzzing reed shaped by the mouth. Each trigger plucks with a “boing”.

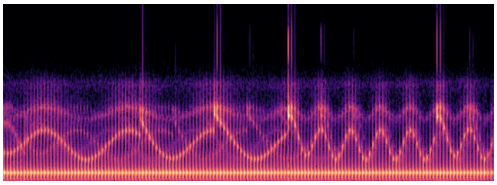
TIMBRE	Mouth (tongue position)
COLOR	Decay
TRIG	Plucks.

TIP A steady clock into TRIG and a stepped CV on TIMBRE: rhythmic mouth harp.

DIDG

Didgeridoo

Engine 30 · Drone with a wah mouth



A deep buzzing drone with a mouth formant that sweeps by itself. COLOR adds a growl one octave below.

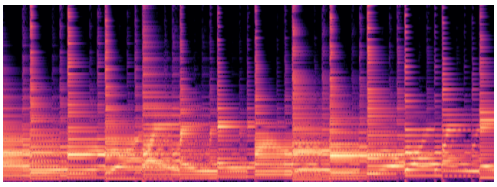
TIMBRE	Wah rate (0.1 – 8 Hz)
COLOR	Growl
TRIG	Accent (“toot”).

TIP Low note, slow rate, triggers on the off-beats for accents.

PLUK

Talking string

Engine 31 · Plucked string that speaks



A plucked string (physical model) through vowel formants that open on each pluck: the string says “yow”.

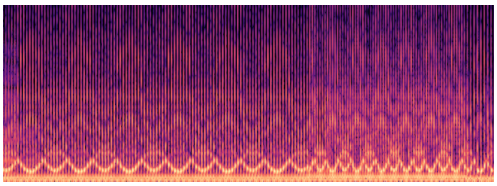
TIMBRE	Vowel
COLOR	Decay
TRIG	Plucks.

TIP Arpeggiator (ARP UP2) and a slow LFO on TIMBRE: a talking harp.

GRWL

Growl bass

Engine 32 · Talking dubstep bass



An FM and sawtooth bass through vowel formants and a wavefolder. Modulate TIMBRE for the “yaow” wobble.

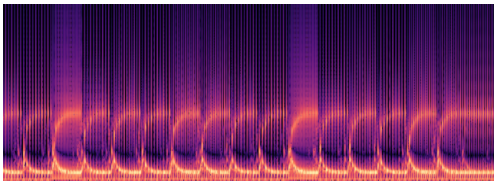
TIMBRE	Vowel
COLOR	Drive (FM and folding)
TRIG	–

TIP A synced LFO on TIMBRE (2 or 4 per bar) and a low note: the wobble bass.

YOI

Wah bass

Engine 33 · “Yoi” acid bass



A sawtooth bass with a sub octave, through formants that sweep “u-o-i” on each trigger.

TIMBRE	Sweep time
COLOR	Resonance
TRIG	Sweeps the vowel.

TIP Bassline on V/OCT with gates into TRIG: talking acid.

CHAPTER 8

Characters and tricks

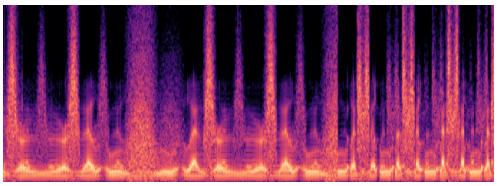
Eleven engines: characters, crowds and tricks with words. The word engines use the BANK and WSEL settings like WORD.

Each engine has a *sound portrait*: five seconds of the module talking or singing. Time runs left to right, frequency (0–6 kHz) bottom to top; the bright bands are the formants.

SCRB

Word scrubber

Engine 34 · Tape under your finger



TIMBRE moves through the word like tape under a finger: freeze any syllable or scratch through it with an LFO.

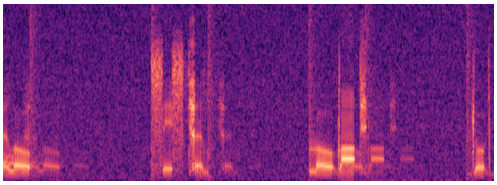
TIMBRE	Position in the word
COLOR	Word (48, BANK)
TRIG	–

TIP A triangle LFO on TIMBRE: the word is scratched back and forth.

RDIO

Radio voice

Engine 35 · Walkie-talkie



Words over a walkie-talkie: a narrow, driven voice with squelch bursts before and after each word.

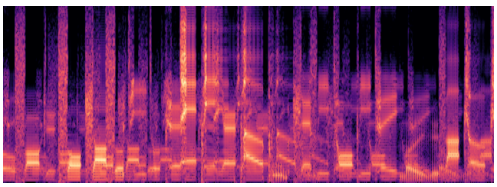
TIMBRE	Word (48, BANK)
COLOR	Hiss
TRIG	Speaks the word.

TIP Mission control: HELLO, SYSTEM, READY on a slow clock.

ALIN

Alien language

Engine 36 · Gibberish from other worlds



Endless made-up speech with shifted voices and pitch jumps. TRIG starts a new phrase.

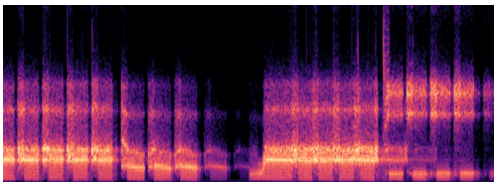
TIMBRE	Weirdness
COLOR	Speed
TRIG	New phrase.

TIP TIMBRE fully clockwise and RING on: first contact.

LAF

Laughter

Engine 37 · Ha ha, ho ho ho



Laughs: ha ha, heh heh, ho ho ho, tee hee, mwahaha, hah, huh huh, hyuk.

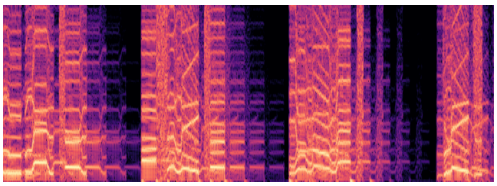
TIMBRE	Laugh (8)
COLOR	Speed
TRIG	Laughs.

TIP Random triggers on a slow clock and ECHO: the haunted house.

CHIP

Chiptune voice

Engine 38 · 8-bit console speech



The words played by square waves synced to the note, one per formant, plus a noise channel, like an 8-bit game console trying to speak.

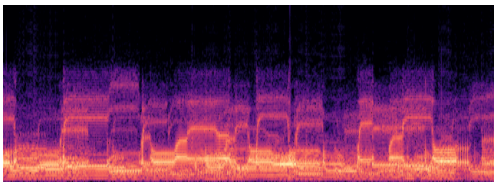
TIMBRE	Word (48, BANK)
COLOR	Pulse width
TRIG	Speaks the word.

TIP BITS 4 and ARP UP: a game boss announcing the level.

MURM

Crowd

Engine 39 · Three voices chattering



Three voices chattering random vowels: a crowd, a choir warming up, a busy room.

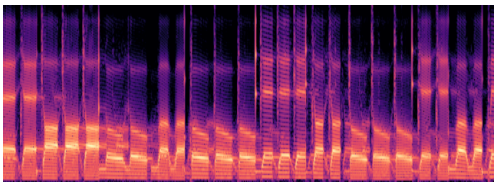
TIMBRE	Pitch spread
COLOR	Chatter speed
TRIG	–

TIP Low level under a track, with long ECHO: an audience before the show.

BABY

Baby talk

Engine 40 · Ba-ba, da-da, ma-ma



A small high voice babbling “ba-ba”, “da-da”, “ma-ma”.

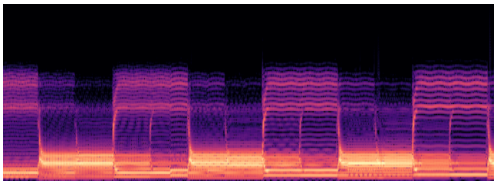
TIMBRE	Pitch range
COLOR	Speed
TRIG	New phrase.

TIP SIZE −4 for an even smaller voice.

YODL

Yodel

Engine 41 · Chest voice to head voice



Flips between a low chest voice (“oh”) and a high head voice (“ee”), with the vocal break in between. Above CCW, COLOR yodels by itself.

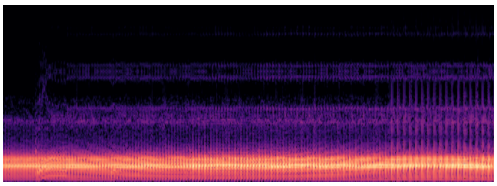
TIMBRE	Leap: 4th, 5th, 6th, octave, 10th
COLOR	Auto yodel rate (CCW: off)
TRIG	Flips the voice.

TIP COLOR CCW and a clock into TRIG: yodel in time.

MONK

Monk chant

Engine 42 · Deep voice with undertone



A deep chanting voice with an undertone one octave below, as in Tibetan chant.

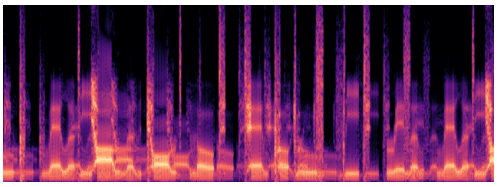
TIMBRE	Vowel (ah, oh, oo)
COLOR	Undertone
TRIG	–

TIP A low drone with long ECHO and CHOR LITE.

WSEQ

Word sequencer

Engine 43 · Next word on each trigger



Each trigger says the next word of the bank, from the first word (TIMBRE) for 1 to 16 words, then loops.

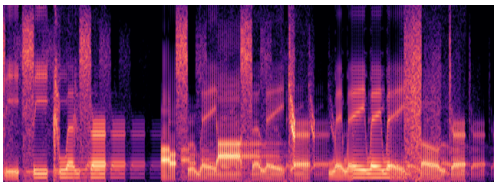
TIMBRE	First word
COLOR	Loop length (1–16)
TRIG	Next word.

TIP MUSC bank from BEAT, 8 words: a ready-made vocal hook.

GLCH

Glitch

Engine 44 · Chopped words



The word is chopped by random repeats, pitch jumps, voice size jumps and crushing.

TIMBRE	Word (48, BANK)
COLOR	Glitch amount
TRIG	Speaks (and glitches) the word.

TIP Fast clock and a random CV on TIMBRE: glitch vocals.

CHAPTER 9

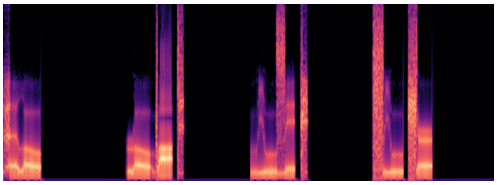
Special voices

Eight engines that put the voice through a machine: chip chords, an endless riser, tape, bells, a megaphone, a pitch corrector, a drum machine and a phone line. All of them speak on TRIG; SHEP keeps talking on its own. The word engines use the BANK and WSEL settings like WORD.

Each engine has a *sound portrait*: five seconds of the module talking or singing. Time runs left to right, frequency (0–6 kHz) bottom to top; the bright bands are the formants.

TRKV Tracker voice

Engine 45 · Chip chords



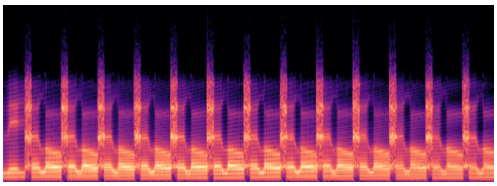
The words, with the pitch jumping through a chord 50 times a second: the chip-music trick that makes one voice sound like a chord.

TIMBRE	Word (48, BANK)
COLOR	Chord: octave, power, major, minor, sus4, maj7, min7, diminished
TRIG	Speaks the word.

TIP Play roots on V/OCT and step COLOR through major and minor for a talking 8-bit chord progression.

SHEP Endless voice

Engine 46 · Shepard tone



The word repeats on three octaves that glide up (or down) forever, fading in at the bottom and out at the top, so the voice seems to rise without end.

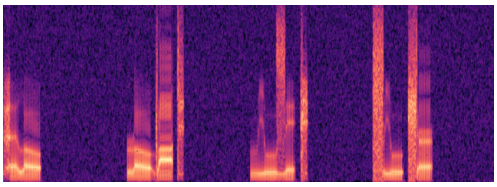
TIMBRE	Word (48, BANK)
COLOR	Direction and speed: 12 o'clock still, clockwise rises, counter-clockwise falls
TRIG	Starts the word again.

TIP COLOR a little clockwise and a long ECHO: an endless riser for a build-up.

TAPE

Worn tape

Engine 47 · Old answering machine



The voice as if played from a worn cassette: wow and flutter wobble the pitch, the tape saturates, the highs roll off and hiss creeps in.

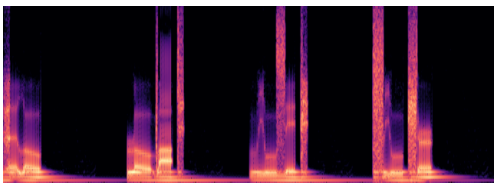
TIMBRE	Word (48, BANK)
COLOR	Wear: clean to well-loved
TRIG	Speaks the word.

TIP TAPE plays chords from the MORE page: CHRD MIN7 with the ADSR for lo-fi vocal pads.

VBEL

Singing bells

Engine 48 · Metallic choir



The voice strikes three tuned resonators, so every word rings like a marimba, a glockenspiel bar or a bell.

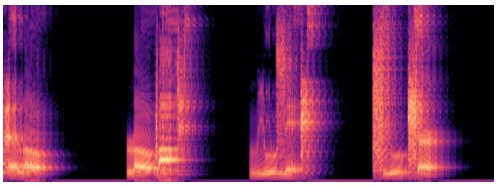
TIMBRE	Word (48, BANK)
COLOR	Material: marimba → bar → bell
TRIG	Speaks the word.

TIP Play a melody on V/OCT: the resonators follow the note and ring after each word.

MEGA

Megaphone

Engine 49 · Stadium announcer



A narrow horn sound with overdrive and a slap-back echo off the stands.

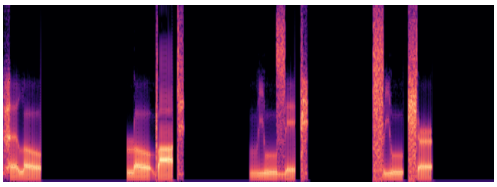
TIMBRE	Word (48, BANK)
COLOR	Drive and slap echo
TRIG	Speaks the word.

TIP WARNING, DANGER, READY, GO on a slow clock: the stadium countdown.

AUTO

Hard-tuned voice

Engine 50 · Robotic pitch snap



The melody of the speech snaps to semitones with a robotic jump, like a hard pitch corrector.

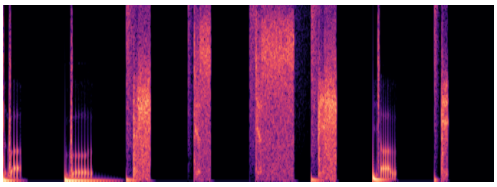
TIMBRE	Word (48, BANK)
COLOR	Retune speed: natural glide → instant snap
TRIG	Speaks the word.

TIP Sequence a melody on V/OCT with QNTZ on and COLOR fully clockwise for the hard-tuned pop vocal.

VDRM

Talking drums

Engine 51 · Drum machine that speaks



Each trigger beatboxes a drum and plays a synthesized drum under it: boom, tss, ka and pah layered with a real kick, hat, snare or clap.

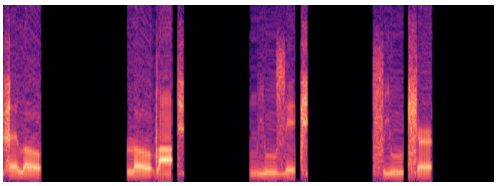
TIMBRE	Balance: voice to drum
COLOR	Drum: kick, boom, snare, hat, open hat, clap, tom, rim
TRIG	Hits the drum.

TIP A stepped CV on COLOR from a sequencer picks the drum on every step: a whole kit from one module.

TELE

Telephone

Engine 52 · Phone line and walkie-talkie



A crunchy, band-limited line. Past 12 o'clock it becomes a walkie-talkie, with squelch noise and a roger beep when the phrase ends.

TIMBRE	Word (48, BANK)
COLOR	Line crunch; walkie-talkie above 12 o'clock
TRIG	Speaks the word.

TIP HELLO, SYSTEM, READY with COLOR at 3 o'clock: mission control on the radio.

CHAPTER 10

Performance tricks

TecVox has a second page of settings, so the main menu stays short. In the menu, scroll to **MORE** and click: the MORE page opens. **BACK** (first and last item) returns to the main menu. Settings are edited as usual: click to edit, turn, click to return. Everything is saved with your settings, and the calibration is never touched.

TIP Every trick works on every engine unless noted. Start with ICLK (no patching needed), then add RTCH, PROB.

FM jack and randomness

Item	Values	What it does
FMDS	PTCH SIZE TIMB COLR ECHO RING CHRD PRST	What the FM jack controls: pitch (default), size, TIMBRE, COLOR, echo, ring frequency, the chord, or the preset (PRST: 0–5 V picks preset 1–8).
RNDT / RNDC	0–15	Each trigger moves TIMBRE / COLOR by a random amount.

Rhythm and triggers

Item	Values	What it does
RTCH	1–4	Ratchet: each note repeats 1–4 times, spread over one clock step.
PROB	6–100 %	Probability that a trigger plays.
SWNG	50–75 %	Swing: every other note is played late.
ICLK	OFF, 40–240 BPM	Internal clock (quarter notes): the module talks and sings with nothing patched.
GATE	13–100 %	Gate length of the notes made by ICLK and ratchets (for the ADSR).
TRNT	OFF 1OCT 2OCT	Each note jumps to a random note (in the QNTZ scale when one is set).
OCTJ	OFF 25–100 %	Chance of a random octave jump, up or down.

Words

Item	Values	What it does
WMOD	NORM RAND WALK	Word order: TIMBRE as usual, a random word at each trigger, or a random walk to nearby words.
PHRS	1–4	Phrase: each trigger says 1–4 words in a row from the bank (“BLUE LANTERN MODULAR”).
INTN	AUTO ROBO STMT QUES EXCT	Intonation: as the engine likes, flat robot, statement (falling), question (rising) or excited.
ACNT	OFF ON	Accent: one word in three is said higher and a bit slower.
SPED	−8 .. +7	Talking speed of every talking engine.
RVRS	OFF ON	Every word backwards.

Voice

Item	Values	What it does
GLID	0–15	Glide between notes (up to 2.5 s).
VIB / VRAT	0–15 / 0–15	Vibrato depth (up to a semitone) and rate (2–9.5 Hz).
DRFT	0–15	Slow random pitch drift: a more human voice.
BRTH	0–15	Breath noise that follows the voice.
GNDR	NORM MALE FEML CHLD GIAN	Voice type: formants and pitch change together (female +10 semitones, child +17, giant −12).
DTUN	0–15	Unison: two detuned copies of the voice (formant engines).

Chords

In chord mode the voices run at 12 kHz (like CHOR), and the chorus stays on LITE. VSAW, FMVX, PLUK, GRWL, YOI, WHST, JAWH, CHIP, BEEP and VOCD play one note; CHOR, CHRD, MURM, MONK and SHEP already have several voices.

Item	Values	What it does
CHRD	OFF OCT 5TH MAJ MIN SUS4 MAJ7 MIN7 DOM7 ADD9 DIM	Chord mode: three voices on a chord, on the formant engines (talking and vowel engines). Four-note chords leave out the fifth.
STRM	0–15	Strum: the notes of the chord start up to 30 ms apart.
INV	ROOT 1ST 2ND	Chord inversion.
SPRD	OFF ON	Spread: the top note goes up an octave.
HARM	OFF ON	Chord and arpeggio notes stay in the QNTZ scale (diatonic chords).
ARNG	1–3	Arpeggiator range in octaves. ARP also has a new pattern, CONV (outside in).

Effects

The TIME menu also gets CLK. (dotted), CLKT (triplet), CL/2 and CLx2 for the echo.

Item	Values	What it does
DRIV	0–15	Drive (soft saturation).
FILT / FCUT	OFF LP HP BP / 0–31	Output filter and its cutoff (40 Hz to 8 kHz).

Presets and workflow

A preset stores the engine and every sound setting, from both pages. With FMDS on PRST, a CV on the FM jack switches presets.

Item	Values	What it does
SAVE	SV 1–SV 8	Choose a slot, then **hold** the encoder: the display says SAVD.

Item	Values	What it does
LOAD	LD 1–LD 8	Choose a slot, then **hold** the encoder: LOAD (or EMPT for an empty slot).
INIT	–	Hold the encoder: all sound settings back to default (calibration, presets and favorites stay).
FAVS	OFF ON	On the engine screen, **hold** the encoder to mark an engine as a favorite (FAV+ / FAV–). With FAVS ON, the encoder only stops on favorites.

Display

Item	Values	What it does
DISP	NAME WORD NOTE LEVL	Engine screen: the engine name, the word being spoken (scrolling), the note being played, or a level meter.
SAVR	OFF 1MIN 5MIN 10M	Screensaver: the logo text scrolls after this long without touching the encoder.
LOGO	OFF ON	Boot logo: the logo text scrolls at power-up. **Hold** the encoder on LOGO to edit the text (turn to choose each letter, click for the next).

ADSR

The envelope items of the main menu get **ENV** (AD or ADSR), **|SUS** and **|REL**. With ENV on ADSR, the envelope follows the gate at TRIG: attack (|ATT), decay (|DEC) to the sustain level (|SUS) while the gate is high, and release (|REL) when it goes low. It drives the VCA (|VCA ON), TIMBRE (|TIM) and COLOR (|COL), like the AD envelope. A word that has started always finishes before the release.

TIP Vocal pad: VSAW or CHOR, ENV ADSR, |ATT 9, |SUS 12, |REL 11, |VCA ON, then play chords from a keyboard gate.

CHAPTER 11

Vocabulary

Three banks of 48 words, chosen with **BANK** in the menu (WORD, LOFI, STUT, SING, REV). TIMBRE selects words in this order, from fully counter-clockwise (1) to fully clockwise (48): each word takes about 1/48 of the TIMBRE range (about 0.1 V). With WSEL = V/OC, word 1 is at C1 (0 V), one word per semitone.

ROBO bank

#	Word	#	Word	#	Word	#	Word
1	**TECHNO**	13	**BASS**	25	**WARNING**	37	**ATTACK**
2	**ROBOT**	14	**DROP**	26	**DANGER**	38	**DECAY**
3	**COMPUTER**	15	**ACID**	27	**MODULAR**	39	**FILTER**
4	**SYSTEM**	16	**DANCE**	28	**VOLTAGE**	40	**ACTIVATE**
5	**ERROR**	17	**MUSIC**	29	**SIGNAL**	41	**PROGRAM**
6	**HELLO**	18	**VOICE**	30	**NOISE**	42	**CORRECT**
7	**GOODBYE**	19	**MACHINE**	31	**PLAY**	43	**WRONG**
8	**YES**	20	**ELECTRIC**	32	**AGAIN**	44	**SPELL**
9	**NO**	21	**LASER**	33	**READY**	45	**YOU WIN**
10	**START**	22	**POWER**	34	**LOVE**	46	**TRY AGAIN**
11	**STOP**	23	**DATA**	35	**FUTURE**	47	**BLUE**
12	**GO**	24	**ALERT**	36	**SPACE**	48	**LANTERN**

Numbers, letters and phonemes

NUMB says any number from 0 to 100. **ABC** says A to Z. **SPEL** uses 12 words: TECHNO, ROBOT, MUSIC, BASS, ACID, LASER, VOICE, DANCE, NOISE, SPACE, POWER, BLUE.
ALLO phonemes in TIMBRE order: IY IH EH AE AA AO UH UW AH ER AX (vowels), EY AY OY AW OW (diphthongs), W Y R L M N NG (glides, liquids, nasals), F TH S SH V DH Z ZH HH (fricatives), P B T D K G CH JH (stops and affricates).

SYNT bank (modular synth words)

#	Word	#	Word	#	Word	#	Word
1	BLUE LANTERN	13	SEQUENCER	25	WAVETABLE	37	AMPLITUDE
2	MODULE	14	PATCH	26	WAVEFOLDER	38	PULSE WIDTH
3	EURORACK	15	CABLE	27	RING MOD	39	SYNC
4	OSCILLATOR	16	GATE	28	MIXER	40	FM
5	VCO	17	TRIGGER	29	ATTENUATOR	41	PITCH
6	VCF	18	CLOCK	30	OFFSET	42	TIMBRE
7	VCA	19	CONTROL VOLTAGE	31	SAMPLE AND HOLD	43	COLOR
8	LFO	20	SINE	32	QUANTIZER	44	BRAIDS
9	ENVELOPE	21	SQUARE	33	SLEW	45	ANALOG
10	FILTER	22	SAW	34	FEEDBACK	46	DIGITAL
11	RESONANCE	23	TRIANGLE	35	MODULATION	47	SYNTHESIZER
12	CUTOFF	24	WHITE NOISE	36	FREQUENCY	48	MODULAR SYNTH

MUSC bank (music words)

#	Word	#	Word	#	Word	#	Word
1	BEAT	13	CLAP	25	OCTAVE	37	DISTORTION
2	RHYTHM	14	DRUM	26	TUNE	38	STEREO
3	MELODY	15	LOOP	27	SONG	39	VOLUME
4	HARMONY	16	SAMPLE	28	VERSE	40	LOUDER
5	CHORD	17	REMIX	29	CHORUS	41	FASTER
6	NOTE	18	BREAKDOWN	30	BRIDGE	42	SLOWER
7	TEMPO	19	BUILD UP	31	INTRO	43	UP
8	GROOVE	20	DROP IT	32	OUTRO	44	DOWN
9	BASSLINE	21	KEY	33	ONE TWO THREE FOUR	45	JAM
10	KICK	22	MAJOR	34	ECHO	46	RECORD
11	SNARE	23	MINOR	35	REVERB	47	DJ
12	HI HAT	24	SCALE	36	DELAY	48	PARTY

Laughs (LAF)

In TIMBRE order: HA HA, HEH HEH, HO HO HO, TEE HEE, MWAHAHA, HAH, HUH HUH, HYUK.

CHAPTER 12

Settings menu and calibration

Click the encoder to enter the menu, turn to choose an item, and click to edit it. The performance tricks are on the MORE page (chapter 10).

Item	Function
WAVE	Engine selection (52 engines).
META	FM input selects the engine.
BANK	Word bank: ROBO, SYNT (modular words), MUSC (music words).
WSEL	Word select: TIMB (TIMBRE) or V/OC (one word per semitone at V/OCT).
HOLD	Gate hold: OFF, ON (the vowel sustains while TRIG is high).
SIZE	Voice size: −8 .. +7.
ARP / ACRD	Arpeggiator pattern (OFF, UP, DOWN, UPDN, RAND, UP2, CONV) and chord (10).
BITS / RATE	Global bit crusher: bit depth and sample rate of the output.
TSRC	Trigger source (AUTO speaks on every pitch change).
ENV	Envelope type: AD (on each trigger) or ADSR (follows the gate).
|ATT |DEC |SUS |REL	Envelope times and sustain level (|SUS, |REL: ADSR only).
|TIM |COL |VCA	Envelope to TIMBRE, COLOR and volume: with |VCA on, the singing engines become notes.
RANG / OCTV / QNTZ / ROOT	Pitch range, octave and quantizer: keep the singers in key.
CHOR	Chorus: OFF, LITE, DEEP, ENS.
RING	Robot ring modulator: OFF, 30 ... 1200 Hz.
ECHO / TIME / FDBK	Echo level (0 = off), time (125–1200 ms, CLK), repeats (0–15).
MORE	Opens the MORE page (chapter 10).
BRIG	Display brightness.
CAL.	V/OCT calibration (below).
TVOX	Version. Holding the encoder here restores factory settings and erases the calibration. (To reset only the sound, use INIT on the MORE page.)

Calibrating V/OCT

1. Disconnect the **FM** input. Set **COARSE** and **FINE** to 12 o'clock.
2. Choose **VOWL** so you can hear the pitch, and connect a calibrated V/OCT source.
3. In the menu, go to **CAL.** and hold the encoder for 1 second. The display shows **>C2**.
4. Send exactly **1 V** and click. The display shows **>C4**.
5. Send exactly **3 V** and click. Calibration is saved.

CHAPTER 13

Patch ideas

Patch	Engine	How
Robot MC	WORD	Clock on every bar, stepped random CV into TIMBRE. Add reverb: the robot announces your set.
Countdown	CNT	N = 8 on a bar clock, COLOR at noon. The module counts the bars of your build-up.
Vocal melody	SING	Sequence V/OCT with QNTZ on, step TIMBRE through LOVE / MUSIC / DANCE, COLOR at 2 o'clock.
Crushed vocals	LOFI	Envelope on COLOR (|COL in the menu) so each word starts clean and dissolves into bits.
Talking acid	TBOX	Bassline on V/OCT, a fast external LFO on TIMBRE, COLOR high, external VCA with short decay.
Choir pad	CHOR	Hold chords from a sequencer, a slow external LFO on TIMBRE, long |VCA envelope.
Alien radio	BABL	Intonation high, speed fast, ring-modulate with another oscillator.
Build your own word	ALLO	Program a sequencer with phonemes on TIMBRE and gates on TRIG.
Vocoder hook	VOCD	BANK SYNT, COLOR on min7, chords on V/OCT, BLUE LANTERN on every bar.
Wobble bass	GRWL	A clock-synced external LFO on TIMBRE, low notes on V/OCT, ECHO on CLK.
Word scratch	SCRB	A triangle LFO on TIMBRE from another module, sped up and slowed down by hand.
Vocal hook	WSEQ	BANK MUSC, TIMBRE on BEAT, 8 words, clock on 8ths.
Talking drum machine	BBOX	ICLK 110, SWNG 60 %, RTCH 2, PROB 81 %, RNDT 15: an endless beatbox.
Robot choir	SING	CHRD MIN7, STRM 6, ENV ADSR with |VCA, chords from a sequencer.
Question time	WORD	INTN QUES, PHRS 2, WMOD RAND, ICLK 70: it keeps asking questions.
Wah robot	TBOX	FILT BP, FCUT 20, DRIV 6, and sweep TIMBRE by hand or with CV.
Chip choir	TRKV	Roots on V/OCT, COLOR on MAJ or MIN, ECHO 4 on CLK: 8-bit vocal chords.
Endless riser	SHEP	COLOR a little clockwise, ECHO 9, FDBK 10: tension that never resolves.
Mission control	TELE	HELLO / SYSTEM / READY on a slow clock, COLOR past 12 o'clock for the roger beep.
One-module drum kit	VDRM	A sequencer's stepped CV on COLOR picks the drum, its gate on TRIG.

Patch	Engine	How
Pop vocal	AUTO	Melody on V/OCT with QNTZ on, COLOR fully clockwise, CHOR LITE.

CHAPTER 14

Quick reference

#	Display	TIMBRE	COLOR	TRIG
1	WORD	Word	Speed	Speak
2	NUMB	Number	Speed	Speak
3	ABC	Letter	Speed	Speak
4	CNT	N	Speed	Next number
5	SPEL	Word	Speed	Next step
6	LOFI	Word	Crush	Speak
7	ALLO	Phoneme	Length	Play
8	BABL	Intonation	Speed	New phrase
9	STUT	Word	Stutter length	Stutter
10	SING	Word	Vowel stretch	Sing
11	VOWL	Vowel	Size	–
12	CHOR	Vowel	Spread	–
13	TBOX	Vowel	Resonance	–
14	ROBO	Vowel	Ring freq	–
15	WHSP	Vowel	Breath/voice	–
16	CHNT	Sequence	Glide	Next vowel
17	BBOX	Sound	Length	Plays
18	TUVA	Harmonic	Focus	–
19	CHRD	Vowel	Chord	–
20	DOO	Syllable	Length	Sings
21	BEEP	Phrase length	Tone	Starts phrase
22	REV	Word	Speed	Speaks
23	VOCD	Word	Chord	Speak
24	VSAW	Vowel	Detune	–
25	FMVX	Vowel	FM index	–
26	OPRA	Vowel	Vibrato	Bloom
27	HUM	M/N/NG	Mouth	–
28	WHST	Scoop	Breath	Scoop
29	JAWH	Mouth	Decay	Pluck
30	DIDG	Wah rate	Growl	Accent
31	PLUK	Vowel	Decay	Pluck
32	GRWL	Vowel	Drive	–
33	YOI	Sweep time	Resonance	Sweep

#	Display	TIMBRE	COLOR	TRIG
34	SCRB	Position	Word	–
35	RDIO	Word	Hiss	Speak
36	ALIN	Weirdness	Speed	New phrase
37	LAF	Laugh	Speed	Laugh
38	CHIP	Word	Pulse width	Speak
39	MURM	Spread	Speed	–
40	BABY	Pitch range	Speed	New phrase
41	YODL	Leap	Auto rate	Flip
42	MONK	Vowel	Undertone	–
43	WSEQ	First word	Length	Next word
44	GLCH	Word	Glitch	Speak
45	TRKV	Word	Chord	Speak
46	SHEP	Word	Up / down speed	Restart
47	TAPE	Word	Wear	Speak
48	VBEL	Word	Material	Speak
49	MEGA	Word	Drive / slap	Speak
50	AUTO	Word	Snap speed	Speak
51	VDRM	Voice / drum	Drum	Hit
52	TELE	Word	Crunch / walkie	Speak

CHAPTER 15

Specifications

Engines	52: 10 talking, 6 singing, 6 more voices, 11 instruments and voices, 11 characters and tricks, 8 special voices
Synthesis	Real-time cascade formant synthesis: glottal pulse, chirp, sawtooth and noise sources; 4 formant resonators; frication branch; phoneme sequencer with transitions, closures, bursts and aspiration; plus 8-band vocoder, formant FM, plucked-string model, supersaw, wavefolder, tuned resonators and tape model
Vocabulary	144 words in 3 banks (robot, modular synth, music), numbers 0–100, letters A–Z, 40 phonemes, 12 spelling words, 8 vowel chants, 8 beatbox sounds, 8 scat syllables, 8 laughs
Performance	Arpeggiator (6 patterns, 10 chords, 1–3 octaves), chord mode (3 voices, strum, inversions), gate hold, voice size, word select by V/OCT, FM jack routing, internal clock, ratchet, probability, swing, ADSR, 8 presets
Voices	Speech chip (9.6 kHz), talking toy (8 kHz, stepped, 10-bit), singer (16–24 kHz), instruments (24–96 kHz)
Bit crusher	LOFI: 12 → 3 bits, sample rate ÷1 → ÷16 on COLOR; global BITS (2–16) and RATE (4–96 kHz)
Pitch	1 V/oct calibrated, within ±2.5 cents from C1 to C5 (singing engines)
Data	Original phoneme tables and vocabulary; no samples and no speech-chip ROM data
Format	Eurorack module with a 4-character LED display
Effects	Ring modulator 30 Hz–1.2 kHz; chorus (1–3 taps); BBD-style echo 125 ms–1.2 s or clock-synced (with dotted/triplet); drive; LP/HP/BP filter

References to early speech chips and talking toys describe a style of sound; TecVox is not affiliated with or endorsed by the makers of those products.

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