

OWNER'S MANUAL

OrGigs

Elite

Three-manual organ, pipe organ and free-reed workstation with effects, a MIDI mixer, three MIDI Zones and a SEQTRAK remote, for the M-VAVE SMK-37 Elite.

Firmware package SMK-37 Elite_674110

November 2026

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1 Welcome

OrGigs turns the M-VAVE SMK-37 Elite into a complete organ: tonewheel and 1960s combo organs, baroque and cathedral pipe organs, and French musette and tango bandoneon reeds. It plays on three manuals, has a full effects rack, and works as a MIDI router, mixer and SEQTRAK remote.

Highlights

- **84 free-running tone generators** from C1 to B7. Every key gets its own sound, and no note is ever cut off to make room for another (no voice stealing).
- **Eight instrument models** in three departments: Vintage & Combo, Pipe, and Free Reed.
- **Three manuals** with independent registrations: Upper (9 drawbars), Lower (9 drawbars) and Pedal (4 stops).
- **Real drawbar handling**: eight knobs and a fader hold the nine drawbars, and the 16 pads show them in colour and push them in or pull them out in one touch.
- **Four panel layouts** for the stage: all pads on the drawbars, or the percussion, vibrato, rotary, drive, delay and the effect on pads in the colours of the screen, the MIDI switches of a zone, and the effect pages on the knobs while you play.
- **A sustain or an expression pedal** on the pedal socket: it holds the notes, or it is the swell, for the organ and over MIDI. The Elite tells the two apart by itself.
- **Effects per manual, like a mixer**: tube drive, scanner vibrato and chorus or tremulant, a rotary switch and sends to a stereo ping-pong delay and four reverbs. Four **Rotary cabinets**, two of them yours to shape. An **insert effect** slot with chorus, wah-wah, auto-wah, flanger, phaser, ring modulator and amp. A **master EQ and compressor**.
- **One list of drawbar registrations**: 36 classic tonewheel registrations, pipe and free-reed registrations, a pedal list, and 16 user slots. **16 performance setups** store the whole instrument, one on each pad.
- **Chord memory** while you play: hold a button, play a chord, and every key plays it.
- **A MIDI mixer**: 16 channels with volume, pan, reverb and delay, mute and solo on the pads.
- **Three MIDI Zones**, one per manual: channels, key ranges, transpose, velocity, a cloner, a nine-channel harmonic mapper and chord memory.
- **YST**: the Yamaha SEQTRAK's eleven tracks on the pads, their sounds in a browser by category, their filters on the knobs and faders.

How to read this manual

Panel buttons and controls are written as they are printed, like `FX` or `NOTE RPT`. The eight knobs are `K1`–`K8`, from left to right. The pads are numbered 1–8 on the top row and 9–16 on the bottom row. Text on the screen is written like `ROTARY FAST`. `SCALE` + `K1` means: hold `SCALE` and turn `K1`.

> **About SCALE.** `SCALE` is OrGigs's shift button. Held, it gives knobs, pads and buttons a second job, and the screen shows the second row of values (`2ND` in the button map).

The compact edition. OrGigs is designed around the Elite. A smaller edition of it runs on the M-VAVE FM-1, with its own manual: the same organ, effects and MIDI zones on four knobs and twelve buttons, without the rotary cabinets of your own, the expression pedal and the pad layouts. Both read each other's backups (chapter 7).

2 Quick start

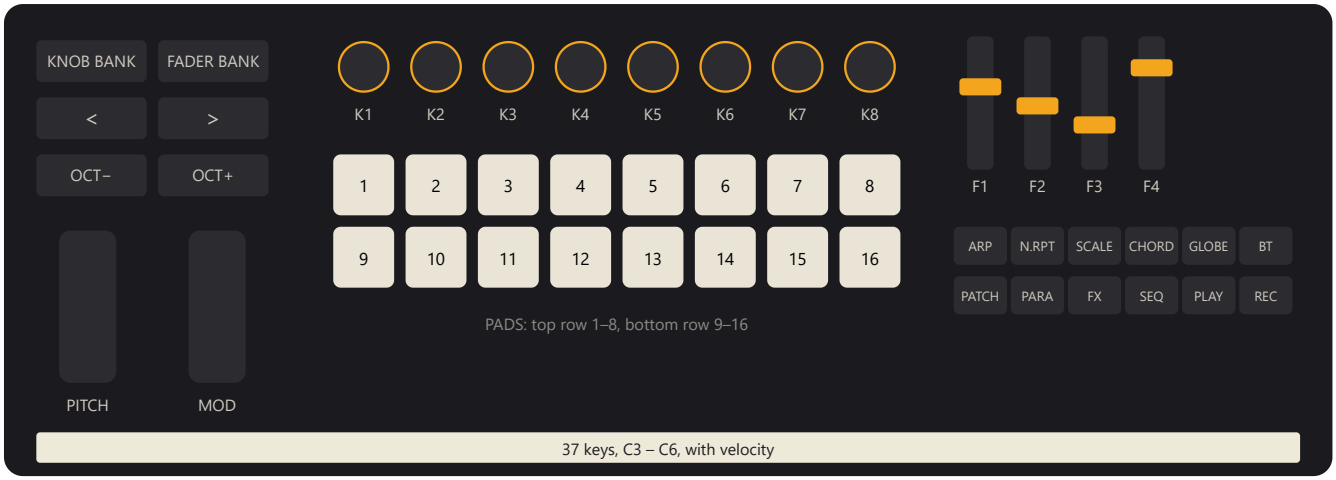
Five steps from power-on to a full organ sound.

1. **Power on.** OrGigs starts as you left it. On a new install that is performance setup 1, a tonewheel jazz sound with percussion and chorus.
2. **Play.** The 37 keys cover C3 to C6. [OCT−] and [OCT+] move them down two or up three octaves. Fader 4 is the volume.
3. **Try the 16 factory setups.** Hold [SCALE]: the pads light amber. Press one: 1 tonewheel jazz, 2 cathedral, 3 Paris musette, 4 Brit Combo, 5 tonewheel rock, 6 Italo Combo, 7 baroque organ, 8 tango bandoneon (top row), 9 British hard rock, 10 gospel, 11 baroque rock ballad, 12 60s transistor combo, 13 reggae, 14 cathedral trumpet, 15 musette master, 16 psychedelic space pad (bottom row).
4. **Pull the drawbars.** [K1]–[K8] are drawbars 1–8, fader 1 is drawbar 9. A top pad pushes its drawbar all the way in, the pad below pulls it all the way out. Or press [<] and [>] for ready-made registrations, from the classic jazz lead to the Mixtur.
5. **Speed up the rotary.** Press [REC], or push the mod wheel up, to switch the rotary speaker between slow and fast, and listen to it ramp up. [PLAY] brakes it to a stop.

To try another instrument, hold [SCALE] and press [<] or [>] (models 1–8). To keep what you've built, hold [BT] and press a pad: the whole instrument is stored in that performance setup.

3 The panel

Every control of the SMK-37 Elite and what OrGigs does with it.



A map of the controls, not to scale. Faders 1–4 sit above the first four button columns.

Rules that hold everywhere

CONTROL	ALWAYS DOES
Keys	Play. They never switch anything, on any screen.
`KNOB BANK`	The next manual (and its MIDI zone): `UPPER` → `LOWER` → `PEDAL`, when you let go. In the mixer: channels 1–8 ↔ 9–16
`KNOB BANK` + `FADER BANK`	**HOME**, pressed together: the upper manual, model 1, its first registration (*Classic Jazz Lead*), every coupler off, layout A (`PERF A`); the drawbar screen. The cloner stays as it is
`FX` · `GLOBE` · `PARA`	Open the FX pages, the MIDI screens, the mixer. Pressed again: back to the drawbars
`ARP` / `PATCH`	On the FX and MIDI screens: the previous / next page
`SCALE`	Shift. Pressed, it also shows the pedal socket's reading (0 to 1023), the processor load and the battery, `PED 0 DSP 10% BAT 94% 4.09V`
`PLAY` · `REC`	Rotary brake · rotary slow ↔ fast. `SCALE` + `REC`: the manual through the rotary or past it
`OCT−` `OCT+`	Octave of the keys, −2 … +3
Fader 4	Volume, everywhere
Faders 1–3	Pick up: after the value changed elsewhere (another manual, a preset, a setup, a knob) a fader does nothing until it reaches it. Meanwhile the message line says which way, for example `REVERB SEND: FADER UP TO 64`
Pedal socket	A sustain pedal holds the notes of the keys (CC 64), an expression pedal is the swell (CC 11), on the organ and over MIDI (chapter 4)
Pitch / mod wheel	Pitch bend (or rotary kick) · rotary slow / fast (chapter 4)

SCALE + pad · BT + pad	Recall · store performance setup 1–16 (not in the mixer, the FX pages and YST)
SCALE + GLOBE	The panel lights and the backup (chapter 12)
SCALE + PATCH	**Panic**: all notes off, inside and on all 16 MIDI channels

The buttons on the drawbar screen

The drawbar screen is where you play (the top bar says PERF A … PERF D: the bank PERFORMANCE and its layout). Here the buttons do:

BUTTON	FUNCTION	WITH SCALE HELD
< >	The previous / next registration of the drawbar list (when you let go)	The previous / next instrument model
KNOB BANK	The next manual	The next panel layout, A → B1 → B2 → C → D (chapter 4)
< + > held	K1 turns through the drawbar list, K2 through the models, K3 through the panel layouts (A to D; at either end it stops), K4 · K5 the SEQTRAK sound (chapter 11). Each step is active at once; a model or layout shows its name big over the screen. The pads: the cloner's channels (chapter 10); once K1–K3 turned, the layout's own pads, as they now are	—
ARP / PATCH	Drawbar 9 all the way in / out. Lit: drawbar 9 is in (0–3) / out (4–8)	PATCH: panic
CHORD	Chord memory: hold, play a chord, let go. A short press: off and on again (chapter 4)	—
NOTE RPT	Vibrato / chorus of the manual on and off (the tremulant on pipe and reed models)	—
PARA	The MIDI mixer (chapter 9)	—
FX	The FX pages (chapter 8)	—
GLOBE	The MIDI screens (chapter 10)	The panel lights
FADER BANK	The next panel layout, A → B1 → B2 → C → D → A, its name big over the screen. On any other screen: back to the drawbars first	—
BT	Tap: store the manual's drawbars in a user slot of the list. Hold + pad: store the performance setup	—
SEQ	Coupler II/I on and off (the upper keys also play the lower registration)	—
PLAY · REC	Rotary brake · slow ↔ fast	The manual through the rotary or not

The screens

The FX, mixer, lights and MIDI screens share one layout:

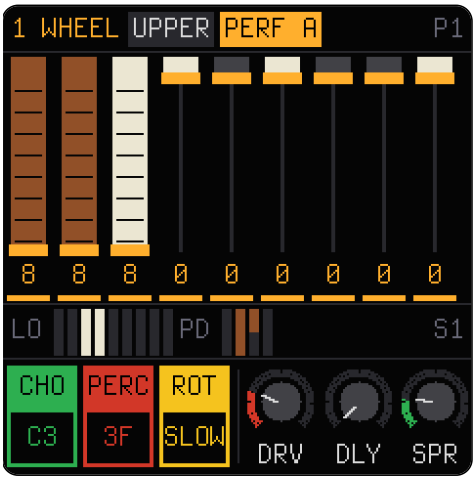
1. **Top bar**: what you're editing, and the manual (zone).
2. **Knob rows**: two rows of four values. The top row is `K1`–`K4`, the second `K5`–`K8`, in the order of the knobs. Some pages have a third row for `SCALE` + `K1`–`K4`.
3. **Message line**: the last change, or a hint for the screen.
4. **Button map**: the twelve buttons of the right block in their two rows of six, labelled with what they do on this screen. A lit button is a switch that is on.

The battery shows at the right end of every top bar. Below 20 % it turns red; below 10 % the message line warns `BATTERY LOW`, again every five minutes. A yellow **bolt** in the symbol means it is charging: the Elite is on a computer or the SEQTRAK, and there is no low-battery warning then. A plain USB charger charges too, but shows no bolt (nothing there talks to the keyboard). `SCALE` shows the charge and the voltage. On the cable it reads full (charging raises the voltage). The percentage follows a lithium cell's discharge curve, with empty taken as 3.40 V.

4 Playing the organ

The drawbar screen, and how the knobs, pads, faders and wheels play the organ.

The drawbar screen



1. **Top bar.** Model number and short name (`1 WHEEL`), the manual (`UPPER`), the bank and its layout (`PERF A`), and on the right the drawbar preset (`P1`) and the battery. A star (`P1*`) means the drawbars have been moved since the preset was recalled.
2. **Drawbars.** The nine drawbars of the manual, 0–8. The colour shows the family. Vintage: brown sub-harmonics, white octaves, dark grey the in-between footages, as on a tonewheel organ. Pipe: gold principals, blue flutes, red strings and reeds. Reed: violet the detuned reeds, grey the air.
3. **Mini-bars.** The other two manuals, so you see the whole registration; the coupler when it is on (`U+L`), and the performance setup (`S1`). When you change something, its name and value cover this strip for about one and a half seconds, for example `DRIVE 70`.
4. **Tabs.** Green: vibrato/chorus (`V1` … `C3`) or the tremulant. Red: percussion on the tonewheel (`2F` … `3S`; the tab says `SOFT` instead of `PERC` when it is soft), the coupler `CPL` (`U+L`, `U+P`, `L+P`, `ULP`) on the other models. Yellow: the rotary (`SLOW`, `FAST`, `BRK`), or `OFF` when the manual goes past it.
5. **Knobs** of this manual: drive (`DRV`), delay send (`DLY`), reverb send with its room (`SPR`ing, `STG` stage, `HAL`l, `CAT`hedral).

Drawbars on the knobs, the fader and the pads

As in layout A, the factory layout (the next section has the others):

CONTROL	DRAWBAR
`K1`–`K8`	Drawbars 1–8 of the manual. On the pedal: `K1`–`K4` the four stops
Fader 1	Drawbar 9, the way a drawbar is pulled: up = in (0), down = out (8)
Top pad 1–8	Pushes the drawbar of its column all the way in (0)
Bottom pad 9–16	Pulls the drawbar of its column all the way out (8)
`ARP` / `PATCH`	Drawbar 9 in / out

The pads show the drawbars: each column is one drawbar, its colours tell how far it is out. In the factory colours (`RED-GLOW`) one red light moves down the column as the drawbar comes out: pushed in, the top pad is bright red; all the way out, the bottom pad; in between both share it, in 9 steps. Chapter 12 has the other colour schemes. On the pedal, columns 1–4 show its four stops.

`KNOB BANK` chooses the manual. The faders act only when you move them, and they pick up: after a setup is recalled or another manual chosen, fader 1 changes drawbar 9 once it has reached the drawbar's position.

The five layouts

The pads can do more than the drawbars. FADER BANK (or SCALE + KNOB BANK) on the drawbar screen chooses the layout: A FULL DRAWBARS → B1 DRAWBARS + LIVE → B2 DRAWBARS + MIDI → C KNOBS + 16 PADS → D SOUND DESIGN. Or hold < and > together and turn K3, both ways, wherever you are on the organ's screens. The top bar shows it (PERF B1). Each performance setup keeps its layout: store a setup with BT + pad in layout C, and recalling it brings C back. In every layout K1–K8 are drawbars 1–8 on the drawbar screen and fader 1 is drawbar 9.

LAYOUT	TOP PADS 1–8	BOTTOM PADS 9–16
A Full drawbars	Drawbar 1–8 in (0)	Drawbar 1–8 out (8)
B1 Drawbars + live	The live switches	Drawbar 1–8 out (8), or in (0) when it is out at all
B2 Drawbars + MIDI	The manual, the coupler, the zone's CC filters, MIDI out, internal sound (as C's bottom row)	As B1
C Knobs + 16 pads	The live switches	The manual, the coupler, the zone's CC filters in and out, its MIDI out and its internal sound
D Sound design	The live switches	The pages FX, ROTARY, EFFECT, MASTER, MIXER on the knobs, and the manual

The live switches (B1, C, D): the top row

In the order and the colours of the drawbar screen's strip. A switch that is on lights bright, one that is off glows dim in its colour.

1 VIB	2 PERC	3 2F…3S	4 ROTARY	5 STOP	6 DRIVE	7 DELAY	8 EFFECT

PAD	FUNCTION
1	Vibrato / chorus of the manual on and off. Hold it and turn K1: its type, V1 … C3. On the pipe and reed models: the tremulant, K1 its depth
2	Percussion on and off (tonewheel). On the other models: the coupler, in turn (see “The coupler”)
3	The percussion's kind in turn: 2ND FAST → 2ND SLOW → 3RD FAST → 3RD SLOW → 4TH FAST → 4TH SLOW (the 2', up to the highest tonewheel, B, before it folds back). While it is off, this chooses what pad 2 brings back. Hold it and turn K1: left SOFT (6 dB quieter), right NORMAL. Hold it and turn K3: its decay (see the tonewheel percussion, “Your own decay”). Dark on the other models
4	Rotary slow ↔ fast. The pad pulses with the horn, once a turn: you see it speed up and slow down. Steady and dim when the manual goes past the rotary
5	Rotary stop (again: slow)
6	Drive of the manual on and off (back to where it was). Hold it and turn K6: the manual's drive
7	Delay send of the manual on and off (back to where it was). Hold it and turn K7: the delay time; K8: the manual's delay send
8	The insert effect on and off: the effect last chosen on the EFFECT page. Hold it and turn K8: the effect's MIX

Pads 1, 3, 6, 7 and 8 switch when you let go, so holding them for a knob does not switch them.

Layouts B1 and B2: the bottom row

Each pad is the drawbar of its column: one at 0 comes out to 8, one out at all goes in to 0. The colours are those of layout A's bottom row.

Layout B2: the top row

B2 is B1 with layout C's bottom row on top: pads 1–3 the manual, 4 the coupler (held + pad 1–3: the manuals coupled), 5 `FCCI`, 6 `FCCO`, 7 `MIDI OUT`, 8 `INT`. Everything as described for layout C below, one row up. Use it when you play over MIDI and want the drawbars under your fingers.

Layout C: the bottom row

9 UPPER	10 LOWER	11 PEDAL	12 COUPLER	13 FCCI	14 FCCO	15 MIDI OUT	16 INT

- Pads 9–11 choose the manual (bright: the one chosen), for the knobs and the top row's effects. Purple: the manual is coupled; blue: it is not, or the coupler is off.
- Pad 12 switches the coupler on and off (purple; bright: on). Hold pad 12 and tap pad 9, 10 or 11 to take that manual into the coupler or out of it; while you hold it, pads 9–11 show the coupled manuals in purple. The choice is remembered when you switch the coupler off and on again. See “The coupler” below.
- Pads 13–16 are switches of the manual's MIDI zone, the same as on the ZONE screen (chapter 10): `FCCI` (filter CC in: controllers coming in don't touch the organ), `FCCO` (filter CC out: the zone sends no controllers), `MIDI OUT` (off: the zone sends nothing, the organ still plays) and `INTERNAL SOUND` (off: the manual plays only over MIDI). Lit means the way is open: the filter is off, MIDI out and the internal sound are on. Dim: filtered, muted or off. Pads 13 and 15 are grey, 14 and 16 orange.

Layout D: the bottom row

9 FX	10 ROTARY	11 EFFECT	12 MASTER	13 MIXER	14 UPPER	15 LOWER	16 PEDAL

- Pads 9–13 open a page, and `K1`–`K8` set its eight values (chapters 8 and 9) while the top row keeps its switches: you shape the sound as you play. The page's pad again (bright: the page open) goes back to the drawbars.
- Pads 14–16 choose the manual, which the FX page's values belong to.
- On these pages the pads are D's. For what the pages put on their own pads (the cabinets, the choice of effect, EQ and compressor on and off, mute and solo), open them with `FX` or `PARA` as usual.

Faders, wheels and the pedal

CONTROL	FUNCTION
Fader 1	Drawbar 9 (up = in)
Fader 2	Reverb send of the manual
Fader 3	The MIDI out's sum: every channel's volume of the MIDI mixer (CC 7) times this, sent to the channels in use (the SEQTRAK's tracks too). It starts at the top: move it all the way up once to pick it up. On the YST screen, faders 1–3 are the touch sliders (chapter 11)
Fader 4	Volume
Pitch wheel	What the WHEELS page gives it (chapter 8). On `AUTO`: what the `BEND` setting says (zone screen, `K8`; chapter 10): `PITCH` bends ±2 semitones, `ROTARY` makes up = rotary fast while held, down = tutti boost. The reed models always bend

Sustain pedal	Held down, the keys you let go keep sounding, on the organ and on the manual's MIDI channels, until you lift it. It sends CC 64 on the manual's channels (also to the SEQTRAK). Either kind (open or closed) works: switch the Elite on with the pedal plugged in and not pressed
Expression pedal	The swell, as on an organ's pedal: heel down soft, toe down full. All the way back it stays soft but audible (10 % of the level), it never goes silent. On the reed models it is the bellows. It sends CC 11 on the manual's MIDI channels (also to the SEQTRAK) and acts as the swell for `EXP` (velocity × expression). It learns its travel: press it once all the way down and back after switching on; until then the organ plays at full. A pedal with a TRS (stereo) plug, as for most keyboards
Mod wheel	What the WHEELS page gives it (chapter 8). It learns its travel: move it once all the way up and down after switching on. On `AUTO`: rotary slow (low half) / fast (high half); with `BEND ROTARY`: slow / brake / fast. On the reed models: the bellows. While the insert effect is `WAH-WAH`: its pedal

> **Plug the pedal in before you switch on, and don't press it then.** Pedals switch one way or the other depending on the make; OrGigs takes the way it rests at power-on as up. If it works the wrong way round, switch off and on again with the pedal up. `SCALE` shows the socket's reading (`PED`): it should change a lot when you press the pedal.

Chord memory

Hold `CHORD`, play a chord on the keys (up to eight notes) and let go of `CHORD`: `CHORD MEMORY NOTES 4`. From now on every single key plays that chord, built on the key you press, on the organ and on the manual's MIDI channels. `CHORD` is lit while it is on.

- A short press of `CHORD` without keys switches it off; another short press switches it on again, with the same chord.
- Holding `CHORD` and playing a new chord replaces the old one.
- The chord belongs to the manual (its zone) and is stored with the performance setup. It is the same chord memory as on the CHORD MIDI screen (chapter 10).

Vibrato, coupler, octave

`NOTE RPT` switches the vibrato / chorus (or the tremulant) of the manual on and off; its type is set on the FX page. `SEQ` steps the coupler (below). `OCT−` and `OCT+` shift the keys from −2 to +3 octaves.

The coupler

The coupler lets the Elite's keys play more than one manual at once, each with its own registration, effects and MIDI zone (out channel, cloner, harmonic). `SEQ` (or pad 2 on the models without percussion) steps through `OFF` → `UM+LM` → `UM+PM` → `LM+PM` → `UM+LM+PM`. In layout C, pad 12 switches it on and off, and pad 12 held + pad 9–11 picks the manuals.

- It acts when the manual you play (`KNOB BANK`) is one of the coupled ones. With `LM+PM` and the upper chosen, the upper plays alone.
- A coupled pedal takes only the lowest note you hold, as the auto-pedal does: a chord on the upper with `UM+PM` gives one bass note.
- Only the Elite's own keys are coupled. Notes coming in over MIDI (a second keyboard) play their zone only.

- The coupler is stored with the setup. A setup with the organ's old II/I (the factory ones) comes up as `UM+LM`.

The keys and velocity

All 37 keys play the manual you chose with `KNOB BANK`, and go out on its MIDI channel with the velocity you play (when the zone's `VEL` switch is on; else with its fixed velocity). The organ itself, like a real one, ignores velocity. With `K:ZN` (chapter 10) the keys play by the zone ranges instead, so you can split them.

> Changing the manual first releases the notes held on the keys, so no note is ever left hanging. Notes coming in over MIDI keep sounding.

5 The eight instruments

Choose a model with SCALE + < / >, or hold < and > together and turn K2. The model sets the waveforms, the meaning of the drawbars, and the attack and release.

#	MODEL	CHARACTER	REVERB IN ITS SETUPS
DEPARTMENT I — VINTAGE & COMBO ORGANS			
1	**Tonewheel Organ** WHEEL	Tonewheel sine tones with a touch of odd harmonics in the bass, key click, harmonic foldback, single-trigger percussion on the upper manual.	Spring
2	**Brit Combo** BRIT	Triangle-and-pulse divider tone with bright highs and a snappy electronic attack.	Spring
3	**Italo Combo** ITALO	Bright sawtooth/pulse combo bite of the sixties.	Spring
4	**Tokyo Combo** TOKYO	Rich, punchy transistor combo tone.	Stage
DEPARTMENT II — PIPE ORGANS			
5	**Baroque Organ** BAROQ	Principals, flutes and reeds with pipe "chiff" at the attack and a slight natural detune between pipes.	Hall
6	**Cathedral Organ** CATH	Slower, grander speech and a long release. Under chords of more than eight notes the wind sags a few cents flat and slightly softer, like a real wind chest.	Cathedral
DEPARTMENT III — FREE REEDS			
7	**Paris Musette** MUSET	Accordion with a wet three-reed musette (one reed tuned up, one down), wooden cassotto body.	Stage
8	**Tango Bandoneon** BANDO	Bandoneon reeds tuned closer together: less beating, a tighter, more serious tango tone.	Stage

What changes with the department

	VINTAGE & COMBO	PIPE	FREE REED
FX page, K5	Percussion (tonewheel)	Chiff (pipe attack noise)	Detune (musette width, in cents)
FX page, K2	Scanner vibrato / chorus	Tremulant	Tremulant
NOTE RPT	Vibrato on / off	Tremulant on / off	Tremulant on / off
FX page, K1 (drive)	The tube preamp itself	Tube saturation, blended in	Tube saturation, blended in
Mod wheel / CC 1	PITCH: rotary slow / fast. ROTARY: slow / brake / fast	Same as vintage	Bellows (volume and brightness)
Pitch wheel	PITCH: bends the pitch, ±2 semitones. ROTARY: up = rotary fast while held, down = tutti boost	Same as vintage	Bends the pitch

The effects belong to the manuals, not to the model: changing the model keeps drive, vibrato, rotary and sends as they are; a performance setup stores them. The drawbars stay where they are too; press < / > to pick a registration (the first time a model is chosen, the list starts in its department's part).

6 Drawbars and stops

Each manual has nine drawbars (0 = off, 8 = full). What they mean depends on the department. When you move one, the screen names it, for example `Oktave 4' 6`.

DB	CONTROL	VINTAGE & COMBO	PIPE ORGAN	FREE REED
1	K1	16'	Bourdon 16'	Bassoon 16'
2	K2	5 1/3'	Prinzipal 8'	Sub-fifth 5 1/3'
3	K3	8'	Rohrflöte 8'	Clarinet 8'
4	K4	4'	Gambe / Vox Celeste 8'	Violin 8' (tuned up)
5	K5	2 2/3'	Oktave 4'	Musette 8' (tuned down)
6	K6	2'	Spitzflöte 4' + Nasat 2 2/3'	Piccolo 4'
7	K7	1 3/5'	Superoktave 2' + Terz 1 3/5'	Bandoneon 4' (detuned)
8	K8	1 1/3'	Mixtur IV	Sheen 2 2/3' + 2'
9	Fader 1	1'	Trompete 8'	Valve & air noise

The pedal

When the manual is `PEDAL`, `K1`–`K4` and pad columns 1–4 are its four stops:

KNOB	STOP	SOUND
K1	Sub 32'	The deep floor an octave below 16'
K2	Bourdon 16'	The main bass
K3	Octave 8'	Definition and pitch
K4	Posaune 16'	A reed for weight and attack

The pedal is played from the keys (choose `PEDAL` with `KNOB BANK`), from an external pedalboard on its MIDI channel, or by the auto-pedal (chapter 10).

7 Drawbar presets and performance setups

Two kinds of memory: the drawbar list keeps registrations of one manual, performance setups keep the whole instrument.

The drawbar list

All models share one fixed list of registrations, sorted by department, and 16 user slots at its end. The pedal has its own list with 8 user slots. An entry holds only the drawbars (the pedal's four stops), nothing else.

- **Recall:** press `<` or `>` (the step comes when you let go). Faster: hold both and turn `K1`. The screen shows the manual, the number and the name, for example `UM 14 BRITISH HARD ROCK`; the top bar shows the number (`P14`).
- **Where it starts:** each model remembers per manual where in the list it was. The first time, it starts in its department's part: vintage upper at *Classic Jazz Lead*, lower at *Lower Manual Comping*; pipe upper at *Prinzipal 8'*, lower at *Begleitung*; free reed upper at *Clarinet*, lower at *Bass Chords*.
- **Save:** tap `BT`. On a user slot, the drawbars of the manual go into it; on a factory entry, into the first free user slot: `DRAWBARS SAVED UM USER 1`. When all user slots are taken, step to the one to overwrite.

A star after the number in the top bar (`P3*`) means the drawbars differ from the entry shown.

The manuals' list

NUMBERS	REGISTRATIONS
1–12 Vintage: jazz, soul, gospel	Classic Jazz Lead `888000000`, Warm Jazz Comp `848000000`, Lower Manual Comping `008400000`, Hollow Funk `800000888`, Memphis Soul `888800000`, Whistle / Soul Solo `888000008`, Gospel Shouting `668848588`, Gospel Simmering `830000378`, Real Gospel `800000678`, Mellow R&B Ballad `803600000`, Modern Jazz Solo `888400000`, Big Band Punch `888888000`
13–22 Vintage: rock, pop, reggae	Full Organ (All Out) `888888888`, British Hard Rock `888800000`, Baroque Rock Ballad `688600000`, Latin Rock Groove `886400000`, 60s Brit Soul `888880000`, Heavy Biker Rock `888686868`, Kingston Reggae Bubble `808000000`, Psychedelic Space Pad `008642000`, 70s Arena Rock `888888800`, 60s Transistor Combo `004888642`
23–36 Vintage: classical imitations	Stopped Flute 8', Dulciana 8', French Horn 8', Salicional 8', Flutes 8' & 4', Oboe 8', Swell Diapason 8', Trumpet 8', Full Swell, Cello 8', Flute & String 8', Clarinet 8', Theater Tibia 8', Vox Humana 8'
37–55 Pipe	Prinzipal 8', Prinzipal 8' 4', Begleitung, Rohrflöte 8', Flöten 8' 4', Flöte 4', Gambe Celeste, Streicher, Pianissimo, Trio, Cornet, Bourdon 16' 8', Trompete 8', Trompete + Prinzipal, Choral, Mixtur, Plenum, Organo pleno, Tutti
56–75 Free reed	Clarinet, Bass Chords, Musette, Violin, Bassoon, Piccolo, Organ, Bandoneon, Bando 4', Tango, Oboe, Accordion, Master, Harmonium, Bright, Dark, Soft, Whisper, Air, Full + Air
76–91	USER 1–16

Numbers 1–36 are the 36 classic tonewheel registrations of the list *drawbar_presets_36*; 23–36 imitate classical organ stops on the tonewheels.

The pedal's list

NUMBERS	REGISTRATIONS (SUB 32', BOURDON 16', OCTAVE 8', POSAUNE 16')
1–8 Vintage	16' 8', 16', Soft, Full, 32' 16', Punch, Walking, Rock
9–16 Pipe	Plenum, Subbass 16', 32' 16' 8', Posaune 16', Oktavbass 8', Soft 16', Cantus firmus, Tutti
17–24 Free reed	Bass, Deep, Reedy, Tango, Sub, Light, Ballad, Dark
25–32	USER 1–8

Performance setups

A performance setup is the whole instrument, ready for a song. There are 16, one on each pad.

- **Recall:** hold SCALE. The pads light amber and the screen says `SETUP: PADS 1-16`. Press a pad: `PERFORMANCE SETUP 3`.
- **Save:** hold BT: the pads light red. Press one: `SETUP STORED 3`. Letting go of BT after that does not also store the drawbars.
- In both, the setup you recalled or stored last lights **white**, so you see where you are. The Elite keeps it after power-off.

Recall and save work on the drawbar screen and the MIDI screens, not in the mixer, on the FX pages or in YST, where the pads have other jobs.

What a setup stores

- The instrument model, and all drawbars of all three manuals, including the pedal stops
- The effects of each manual: drive, vibrato or chorus, tremulant, rotary on or off, delay send and reverb send
- The shared effects: percussion, chiff / detune, delay time and feedback, reverb room; the coupler
- The MIDI mixer's 16 volumes
- The manual, the octave and the places in the drawbar list shown
- The complete MIDI Zones: channels, ranges, transpose, velocity, filters, the clone, harmonic and chord settings, and whether YST is on
- The panel layout (A–D) and whether the percussion is soft

Not stored in a setup, but kept as they are: the rotary speed, the rotary cabinet, the insert effect, the master EQ and compressor, the mixer's pan, reverb, delay, mutes and solos, the panel lights, and the MIDI rate.

Factory setups

PAD	NAME	SOUND
1	Tonewheel Jazz	Tonewheel Organ, upper `888000000`, 3rd percussion fast, chorus C3, rotary, spring reverb
2	Cathedral Plenum	Cathedral organ: bourdon, principal, octave, super-octave and mixture; pedal 32' 16' 8'; cathedral reverb
3	Paris Musette	Three wet 8' reeds with a little air, tremulant, a touch of delay, stage reverb
4	Brit Combo	Brit Combo 8' 4' 2 2/3' 2', vibrato V2, rotary, a little delay
5	Tonewheel Rock	Tonewheel Organ, all drawbars out, heavy drive, chorus, stage reverb
6	Italo Combo	Italo Combo, bright, a short slapback delay

7	Baroque	Baroque organ, principals 8' 4', flutes on the lower manual, hall
8	Tango	Tango bandoneon, bassoon + clarinet, a light tremulant
9	British Hard Rock	Tonewheel `888800000` hard into the tube, no vibrato, rotary
10	Gospel	Tonewheel Gospel Shouting `668848588` over Lower Manual Comping, chorus
11	Baroque Rock Ballad	Tonewheel `688600000`, chorus, rotary, hall
12	60s Transistor Combo	Brit Combo `004888642`, vibrato V2, no rotary
13	Reggae Bubble	Tonewheel `808000000`, chorus C1, a delay on the upper manual
14	Cathedral Trumpet	Plenum with Trompete over the accompaniment, pedal with Posaune, cathedral reverb
15	Musette Master	All reeds of the musette, wide detune
16	Psychedelic Space Pad	Tokyo Combo `008642000`, chorus, rotary, a long delay into the hall

All 16 start with the standard MIDI Zones (upper on channel 1, lower on 2, pedal on 3, full key range, velocity through) and the mixer at 100.

What is kept after power-off

Everything: the instrument as you left it, the 16 setups, the user slots of the drawbar lists, the rotary cabinets, the insert effect, the master, the layout, the panel lights and the MIDI rate.

> OrGigs writes to its memory about 2 seconds after your last change, and only when nothing is sounding, because writing would interrupt the audio for a moment. Before switching off, take your hands off the keys for a couple of seconds.

Backing up your settings

Everything OrGigs keeps fits into one small backup file, sent over the USB cable as MIDI SysEx: the 16 setups, the instrument as you left it, the user drawbars, the lights, the insert effect and the master, and on the Elite also the rotary cabinets `USER 1` and `USER 2` and the layouts. Keep one before you install another firmware: the SMK-37's memory is shared, and another firmware clears OrGigs's settings.

On the computer, `tools/orgigs_backup.py` (Python with mido and python-rtmidi, as the installer) does it; close other programs that use the OrGigs MIDI port first.

COMMAND	WHAT IT DOES
`orgigs_backup.py --save my.syx`	Fetches everything into `my.syx`
`orgigs_backup.py --save s3.syx --setup 3`	Fetches setup 3 alone
`orgigs_backup.py --listen my.syx`	Waits, then keeps what you send from the panel: `SCALE` + `GLOBE`, then `SEQ`
`orgigs_backup.py --load my.syx`	Sends the backup to OrGigs: it replaces everything
`orgigs_backup.py --load my.syx --setup 3 --to 7`	Takes setup 3 out of a whole backup and loads it into setup 7; the rest stays

`orgigs_backup.py --show my.syx`	Tells what a file holds

A backup coming in never loads by itself. The screen asks `LOAD BACKUP? BT: YES` (or `LOAD INTO SETUP 7?`): `BT` loads it, any other button keeps everything as it is; after a minute without an answer nothing is loaded. Before it loads, OrGigs sends back everything as it was, and the tool keeps that as `my-before-DATE.syx`, so one `--load` of that file undoes it.

The FM-1 and the Elite read each other's backups. A backup from the FM-1, or one made before the Elite's extras existed, leaves the rotary cabinets, the effect, the master and the layouts as they are. The FM-1 skips the Elite's extras.

The files are plain SysEx: any SysEx program (MIDI-OX, SysEx Librarian, …) can receive and keep them, and send them back with about 50 ms between the messages. A damaged file, or one from another OrGigs settings version, is refused (`BACKUP: DAMAGED` / `OTHER VERSION`).

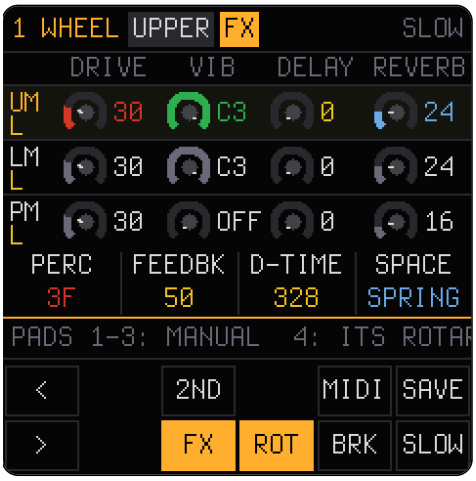
8 Effects: the five FX pages

Press FX. Five pages, turned with ARP (back) and PATCH (on), in a circle: FX → ROTARY → EFFECT → MASTER → WHEELS → FX. FX again goes back to the drawbars.

The sound passes through these stages, in this order:

```
each manual:  body + drive ─▶ vibrato / chorus / tremulant ─▶ [insert effect] ─▶ rotary or past it
                                                              └─ delay send, reverb send
all together: rotary ─▶ + delay + reverb ─▶ [master EQ ─▶ compressor] ─▶ swell ─▶ volume
```

The FX page: the manuals' strips and the shared effects



A row per manual: UM upper, LM lower, PM pedal. The lit row is the manual the knobs move; pads 1–3 choose it (or KNOB BANK). The L under the name lights when the manual goes through the rotary; pad 4 or SEQ switches it. The bottom row shows the shared effects.

KNOB	THE MANUAL'S	KNOB	SHARED
K1	Drive	K5	Percussion (tonewheel), chiff (pipe), detune (reed)
K2	Vibrato & chorus (vintage) or tremulant (pipe, reed)	K6	Delay feedback
K3	Delay send	K7	Delay time, 20–1000 ms
K4	Reverb send	K8	Reverb room

Body and drive

- **Vintage & Combo:** asymmetric tube overdrive into a speaker cabinet. More DRIVE gives more growl, especially with full drawbars.
- **Pipe:** a clean limiter; DRIVE blends tube saturation in. The CHIFF (K5) is the breathy "spit" of a pipe as it starts speaking.
- **Free reed:** the wooden cassotto chamber of an accordion, with brightness following the bellows; DRIVE blends tube saturation in. K5 sets the musette DETUNE C (in cents): wider is wetter.

Vibrato, chorus and tremulant

Vintage models have the classic scanner settings V1 V2 V3 (vibrato, increasing depth) and C1 C2 C3 (chorus, vibrato mixed with the dry sound). Pipe and reed models have a 4.8 Hz tremulant with adjustable depth instead. NOTE RPT on the drawbar screen switches it off and back on.

Percussion (tonewheel only)

K5: 2ND FAST, 2ND SLOW, 3RD FAST, 3RD SLOW, 4TH FAST, 4TH SLOW or OFF. The percussion adds a decaying 4' (2nd), 2 2/3' (3rd) or 2' (4th, an octave above the 2nd; not on the original) on the upper manual. Fast decays in about 0.2 s, slow in about 1 s. It is single-trigger, like the original: it only sounds when all upper keys were

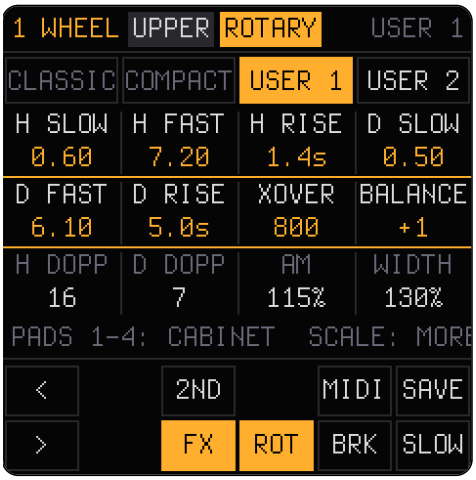
released before the new note, so it disappears under legato. SOFT (pad 3 held + K1 in layouts B–D) makes it 6 dB quieter.

Your own decay. In layouts B–D hold pad 3 and turn K3: 3RD FAST DECAY 304 MS. Each of the six kinds has its own: tap pad 3 to another one and back, and yours is still there. The first half of the knob's way is fine, from 100 ms to 1.5 s; then it gets coarser up to 12 s, and the last step is HOLD: the percussion sounds as long as you hold the key. On the original's value the screen says CLASSIC (200 ms fast, 989 ms slow), so you always find it again. Your values last until the Elite is switched off; setups and the backup don't keep them.

Delay and reverb

Each manual sends to a stereo ping-pong delay (20–1000 ms, with feedback) and to the reverb, each with its own amount: a dry pedal under a wet upper manual is two knobs. The sends are taken after the manual's vibrato, before the rotary. The reverb rooms: SPRING (the spring tank of an organ amp), STAGE (a club, 0.9 s), HALL (a concert hall, 2.8 s), CATHEDRAL (a stone church, 7.5 s with 45 ms pre-delay).

The ROTARY page: four cabinets



A horn and a drum turn against each other, each with its own inertia, which gives the famous "ramp" between slow and fast. Pads 1–4 choose the cabinet; the choice is kept, for all setups.

- CLASSIC: big and deep. OrGigs's original rotary.
- COMPACT: smaller and closer, a little quicker.
- USER 1: yours to shape. It starts as a gospel cabinet: a slow, dramatic rise, wide.
- USER 2: yours to shape. It starts as a single-rotor cabinet: nearly all horn, narrow.

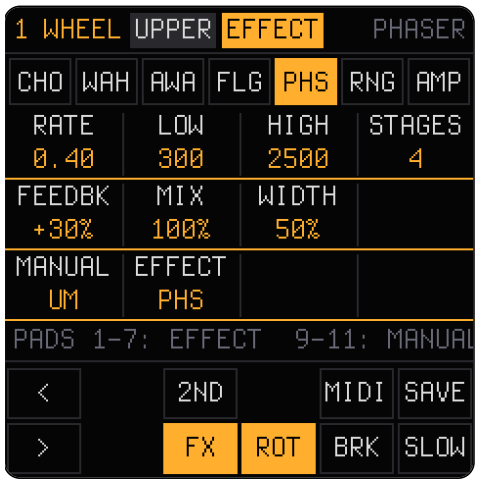
The CLASSIC and COMPACT are fixed. BT + pad 3 / pad 4 copies the cabinet shown into USER 1 / USER 2. What you change on a USER cabinet stays as it is, also after power-off; there is no way back to its first values (copy the CLASSIC or the COMPACT to start again).

KNOB	VALUE	WHAT IT DOES
K1 · K2	H SLOW · H FAST	Horn speed slow (0.30–1.50 Hz) and fast (3.00–9.00 Hz)
K3	H RISE	How long the horn takes to change speed (0.2–4.0 s)
K4 · K5	D SLOW · D FAST	Drum speed slow (0.20–1.50 Hz) and fast (3.00–8.00 Hz)
K6	D RISE	How long the heavy drum takes (0.5–10 s)
K7	XOVER	Crossover between drum and horn, 200–2000 Hz
K8	BALANCE	Drum (−10) against horn (+10)
SCALE + K1 · K2	H DOPP · D DOPP	Pitch wobble (Doppler) of the horn and the drum
SCALE + K3	AM	Level swing, in % of the CLASSIC
SCALE + K4	WIDTH	Stereo width, in % of the CLASSIC

ROTARY CONTROL	RESULT
REC or the mod wheel	ROTARY SLOW ↔ ROTARY FAST

PLAY	ROTARY BRAKE: the rotors coast to a stop. Press again for slow
Pad 4 or SEQ on the FX page, SCALE + REC	The manual through the rotary or past it, on every model: a cathedral organ through a rotary is possible
Pitch wheel up / down	With BEND ROTARY: fast while held ("kick") / tutti boost while held

The EFFECT page: the insert effect



One effect at a time, on one manual, after its vibrato and before its rotary. Pads 1–7 choose the effect: CHORUS, WAH-WAH, AUTO-WAH, FLANGER, PHASER, RING MOD, AMP; its pad again switches it off. Pads 9–11 choose the manual it is on (upper, lower, pedal).

K1–K8 are the effect's values. Each effect keeps its own, also after power-off and while another effect is chosen. The effect and its manual are kept for all setups.

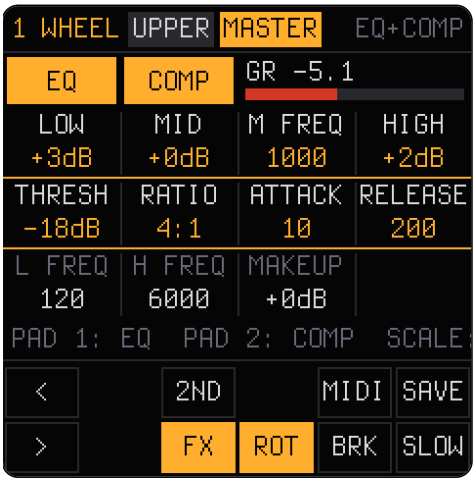
EFFECT	K1	K2	K3	K4	K5	K6	K7	K8
Chorus	Rate 0.10–5 Hz	Depth	Delay 3–25 ms	Mix	Width	Feedback		
Wah-wah	Pedal	Low 200–800 Hz	High 1–4 kHz	Resonance 1–10	Mix	Level		
Auto-wah	Sensitivity	LFO rate (0 = off)	Low	High	Resonance	Decay 20–2000 ms	Mix	Level
Flanger	Rate	Depth	Delay 0.5–5 ms	Feedback ±90 %	Mix	Width		
Phaser	Rate	Low 100–1000 Hz	High 1–6 kHz	Stages 2–8	Feedback ±90 %	Mix	Width	
Ring mod	Frequency 20–2000 Hz	Mix	LFO rate (0 = off)	LFO depth	Width			
Amp	Model	Gain	Tone ±10	Cabinet	Level	Mix		

- **Chorus**: a lush stereo chorus, kept at the level of the dry sound. Feedback makes it richer.
- **Wah-wah**: while it is chosen, the **mod wheel is the wah pedal** (and not the rotary switch); K1 sets the pedal too. Low and High set the travel of the pedal, Resonance how vocal it is.
- **Auto-wah**: the wah follows how loud you play: chords open it, and it closes with the Decay. Sensitivity sets how far it opens. With an LFO rate above 0 it also sweeps by itself.
- **Flanger**: the jet sweep. Negative feedback sounds hollow, positive metallic.
- **Phaser**: notches sweeping between Low and High; more stages, more notches.
- **Ring mod**: the sound multiplied with a sine: bells and robots. Small frequencies turn into a tremolo. The LFO wobbles the frequency.

- **Amp**: a guitar amp for the organ. Models `CLEAN`, `CRUNCH`, `LEAD` (two stages) and `FUZZ`; Tone tilts dark to bright; Cabinet `OFF`, `1X12`, `2X12`, `4X12`. The level holds when you turn up the gain.

Mix is the share of the effect (100 % = only the effect), Width how far it spreads in stereo, Level the effect's loudness. Rates are in Hz.

The MASTER page: EQ and compressor



A three-band EQ and a compressor on the whole sound, after the delay and the reverb, before the swell and the volume. Pad 1 switches the EQ, pad 2 the compressor (lit: on). The bar shows how many dB the compressor takes off right now (`GR -5.1`). Both are kept for all setups.

KNOB	VALUE
K1 · K2 · K4	EQ low · mid · high, ±12 dB
K3	EQ mid frequency, 200–5000 Hz
K5 · K6	Compressor threshold (−40–0 dB) · ratio (1:1–20:1)
K7 · K8	Attack (1–100 ms) · release (20–1000 ms)
SCALE + K1 · K2	EQ low frequency (50–400 Hz) · high frequency (2–12 kHz)
SCALE + K3	Make-up gain, 0–12 dB

The WHEELS page: what the wheels move

`K1` chooses what the mod wheel moves, `K5` what the pitch-bend wheel moves, `K3` the CC of the YST action pad (pad 12 in bank YST, chapter 11), `K4` what the pedal socket takes (below). The bars at the top show where the wheels stand. Each performance setup keeps its choice: store it with `BT` + pad.

TARGET	WHAT THE WHEEL DOES
`AUTO`	As before: the mod wheel the WAH's pedal while WAH-WAH is in, else the rotary; the pitch wheel as the `BEND` setting says (chapter 4). The factory choice
`ROTARY`	Mod wheel: the rotary's speed. Pitch wheel: up = rotary fast while held, down = tutti boost
`PITCH`	Pitch wheel only: ±2 semitones, on every model
`SHIFT 1 · 2 · 3`	Pitch wheel only, the pitch shifter: all the way up or down moves every note 1, 2 or 3 octaves, smoothly. It turns the tonewheels themselves, so it stays clean, chords too, and acts on all three manuals at once, like a motor running faster or slower. At the top of +3 octaves the highest harmonics fade out before they would whistle
`DRIVE` · `DLY SEND` · `REV SEND`	The manual's drive, delay send or reverb send
`FX RATE`, `FX DEPTH` …	One value of the insert effect that is in (its names change with the effect; chosen on the EFFECT page)

- A value moves from where its knob has set it: the mod wheel from there up to the top, the pitch wheel up to the top and down to the bottom. Back at rest, the knob's setting is there again. So the pitch wheel suits values that swing both ways, the mod wheel those that grow.

- K4 `PEDAL`: `AUTO` (the factory choice) tells the two kinds apart: an expression pedal that rests between its ends at power-on, or that stays there for a moment, is the swell until you switch off. Started at its very end, the first move holds the sustain for 0.3 s before it becomes the swell. `SUSTAIN` or `SWELL` fix it. Below it the page shows the pedal: `SUSTAIN UP` / `DOWN`, or `SWELL` with its percent (`MOVE IT`: its travel not learned yet). Kept with the settings, not per setup.
- `AUTO`, `ROTARY`, `PITCH` and `SHIFT` also send the wheel over MIDI (CC 1, pitch bend). With `PITCH` and `SHIFT` the Elite tells the manual's MIDI channels the bend range (RPN 0: 2, 12, 24 or 36 semitones), so a SEQTRAK or another synth bends just as far; leaving them sets 2 again. A value target sends nothing.

9 The MIDI mixer

Press PARA, on the drawbar screen or a MIDI screen: 16 MIDI channels on the eight knobs, mute and solo on the pads. PARA or PATCH goes back.



- KNOB BANK chooses the page: channels 1–8 or 9–16; its two rows are lit. K1–K8 move the page's eight channels.
- < > choose what the knobs set: VOLUME (CC 7), PAN (CC 10), REVERB (CC 91) or DELAY (CC 94) of the channel. The top bar shows it (VOL). Turning sends at once, so it acts on notes that already sound.
- **Top pads 1–8** mute the page's channels (lit red), **bottom pads 9–16** solo them (lit dark blue). A solo silences every channel that plays and is not soloed.

The channels the manuals send on are named UM, LM and PM; channels the zones play are green; SEQTRAK tracks show their names (chapter 11). Here channel 3 is muted and channel 5 soloed.

Mute works through the channel's volume (it goes to 0 and comes back as it was); a SEQTRAK track uses its own mute instead, the same as in YST. A solo only silences the channels the zones play and the SEQTRAK's tracks, not every channel.

The 16 volumes belong to the performance setup: recalling a setup sends its volumes to the channels that setup plays. Pan, reverb, delay, mute and solo are sent as you set them and not stored. The zones' velocity (chapter 10) is separate: it sets how hard the notes are played, the mixer how loud the channel is.

10 MIDI Zones

The Elite connects over USB as a MIDI device. Three MIDI Zones, one for each manual, take the notes that come in and the notes of the keys, play them on the organ and send them on to your synths.

What a zone does

Each zone belongs to one manual: upper, lower, pedal. A zone

1. listens to its **MIDI-in channel** (factory: 1 upper, 2 lower, 3 pedal),
2. takes only the notes in its **key range**, lowest to highest key. Zones may overlap: a note in two ranges plays both manuals,
3. plays them on its manual inside (unless its internal sound is off),
4. sends them out on its **MIDI-out channel**, **transposed** and shifted by **octaves** if you like, with the **velocity** they came with or a fixed one,
5. and, switched on per zone, passes them through **chord memory**, the **cloner** (more channels) and the **harmonic mapper** (nine channels, one per drawbar footage).

CC, aftertouch and program changes go out on the zone's channels too, unless you filter them. Pitch bend always does. A sustain pedal (CC 64) holds the notes that came in on its channel, on the organ and on the out channels, until you lift it. With `FCCI` on, the zone's controllers act only outside: a second keyboard's sustain then holds its own synth, not the organ. Transpose and octave shift the MIDI output only; the organ plays the note you play.

A typical setup

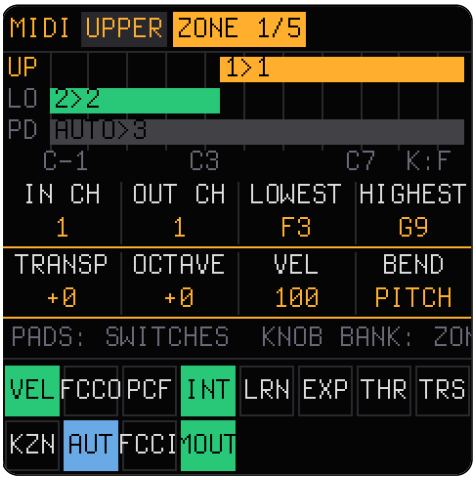
```
keyboard ── USB ──▶ MIDI host (e.g. CME H4MIDI WC) ──▶ Elite (USB MIDI in)
Elite (USB MIDI out) ──▶ MIDI host ──▶ synth, sequencer (USB or 5-pin DIN)
```

> **Avoid loops.** Don't route the Elite's output back into the Elite (in the MIDI host, or with "MIDI thru" in a DAW): every note would come back and go out again, without end.

The five screens

Press `GLOBE`. `PATCH` goes to the next screen, `ARP` to the one before: `ZONE` → `CLONE` → `YST` → `HARMONIC` → `CHORD`. The top bar shows where you are (`ZONE 1/5`). `KNOB BANK` chooses the zone you edit, `PARA` opens the mixer, `GLOBE` again goes back to the drawbars. `CHORD` switches the screen's module on and off (lit: on). The keys keep playing.

ZONE: channels, range, transpose, velocity



The bars show the key range of each zone over the whole MIDI range (C-1 to G9), with its in and out channels (`1>1`). The zone you edit is amber. Here the lower zone takes everything up to E3 and the upper zone F3 and up: a split for an external keyboard. The pedal is played by the auto-pedal. The pads hold the switches, drawn as they sit at the bottom of the screen.

KNOB	VALUE	KNOB	VALUE
K1	MIDI-in channel 1–16, OFF	K5	Transpose, ±24 semitones
K2	MIDI-out channel 1–16, OFF	K6	Octave, ±3
K3	Lowest key	K7	Fixed velocity 1–127
K4	Highest key	K8	`BEND`, for all zones: `PITCH` or `ROTARY` (chapter 4)

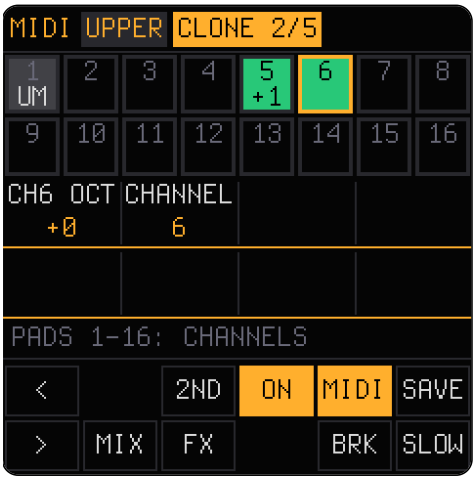
PAD	SCREEN	SWITCH (GREEN: ON, FOR THIS ZONE)
1	`VEL`	Velocity through: the velocity of the note goes out. Off: the fixed velocity
2	`FCCO`	Filter CC out: controllers and aftertouch are not sent on
3	`PCF`	Filter program changes
4	`INT`	Internal sound of the zone on/off. Off: the zone only sends MIDI
5	`LRN`	Learn the range: play the lowest and the highest key (on the Elite or on the zone's channel). Amber while it listens
6	`EXP`	Velocity × expression: scaled by the swell (CC 11) or the bellows
FOR ALL ZONES (BLUE: ON)		
7	`THR`	Channels no zone listens to pass through unchanged (with clock and start/stop)
8	`TRS`	MIDI rate TRS-SAFE (on) or USB-FAST (off). TRS-SAFE paces the messages for a 5-pin DIN cable behind a MIDI host
9	`KZN`	The Elite's keys play by the zone ranges (on), or follow the manual chosen with `KNOB BANK` (off)
10	`AUT`	Auto-pedal: the pedal zone plays the lowest note held in the lower zone (within the pedal zone's range)
11	`FCCI`	Filter CC in: controllers and pitch bend coming in on the zone's channel don't touch the organ (drawbars, rotary, swell, sustain, bend); they still go out unless `FCCO` is on
12	`MOUT`	MIDI out of the zone on/off. Off: the zone sends nothing at all (notes, controllers, program changes), the organ still plays. Handy to silence a synth for a song without touching its channel

Leaving the out channel at `OFF` makes a zone internal only; switching `INT` off makes it MIDI only. Notes on a channel no zone listens to are dropped, unless `THR` is on.

Example: a split on the Elite's keys

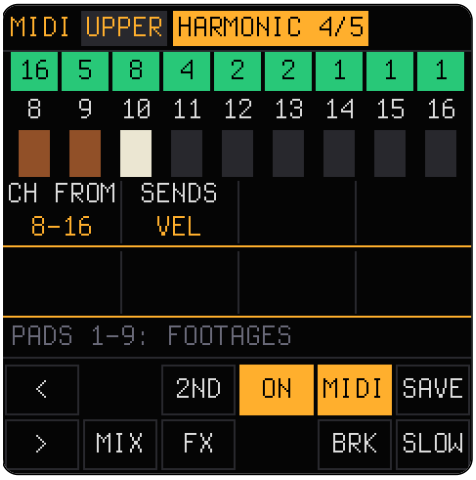
1. On the zone screen, choose LOWER with KNOB BANK, press pad 5 (LRN) and play C3 and B3.
2. Choose UPPER, learn C4 and C6.
3. Pad 9 (KZN) and pad 10 (AUT) on. The left hand plays the lower manual and its lowest note the pedal.
4. Hold BT and press a pad to keep it in a setup.

CLONE: more channels



Pads 1–16 switch channels 1–16 (green); the zone's notes go out on each of them as well as on its own out channel, marked with the manual's name (UM) and white on the pads. Choosing a channel switches the cloner on, letting go of the last one off. CHORD switches it on and off and keeps the channels (off: they are dim green). Anywhere else, hold < and > together: the pads show the same for the manual chosen, and switch its channels. K2 chooses a channel (a pad press chooses it too), K1 its octave (±3). Here the upper zone also plays channel 5 an octave up and channel 6.

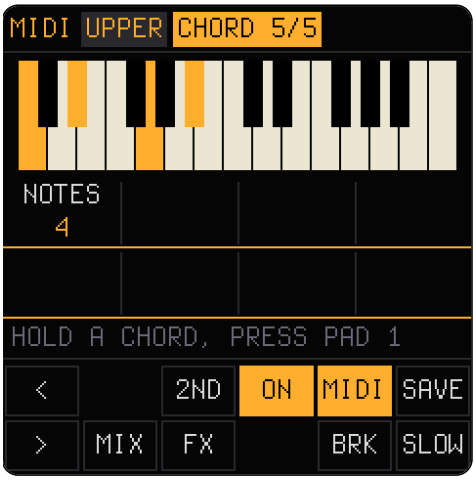
HARMONIC: nine channels, one per drawbar



Turns the zone's drawbars into a MIDI additive synth. CHORD switches it on. Nine channels, from the one set with K1, each get the note transposed to their drawbar's footage. Pads 1–9 switch the footages (lit red). K2: the drawbar sets each note's velocity (VEL), or moving a drawbar sends that channel's volume (CC7/CC11), so the mix changes while notes hold. Only footages that are switched on and whose drawbar is above 0 sound. Not for the pedal zone.

FOOTAGE	16'	5 1/3'	8'	4'	2 2/3'	2'	1 3/5'	1 1/3'	1'
Semitones	−12	+7	0	+12	+19	+24	+28	+31	+36

CHORD: one key, one chord



The chord memory of chapter 4, with a picture. Hold a chord of up to eight notes (on the keys or on the zone's channel) and press pad 1 (or `NOTE RPT`): `CHORD NOTES 4`. With `CHORD` on, every single note then plays that chord shape from its own root, on the organ and on all the zone's channels. Pad 2 clears it. The keyboard shows the chord over its lowest note; here C minor 7.

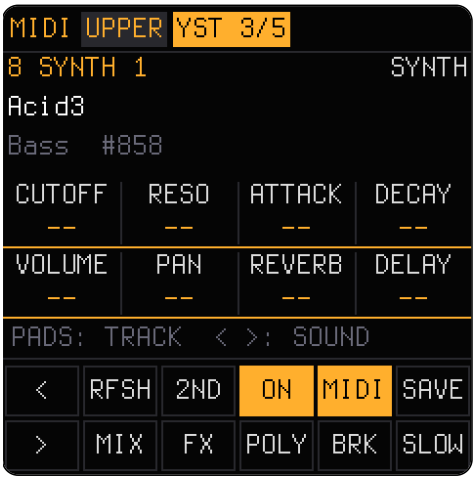
MIDI in: what else comes in

MESSAGE	EFFECT
CC 12–20	Drawbars 1–9 of the zone's manual (0–127 → 0–8); pedal: CC 12–15
CC 1	Rotary slow / fast (`BEND ROTARY`: slow / brake / fast), or the bellows on the reed models
CC 11	Expression (swell)
Pitch bend	Bends the pitch ±2 semitones (organs with `BEND ROTARY`: rotary kick / tutti)
CC 64	Sustain: the notes of that channel keep sounding until the pedal lifts
CC 120 / 123, 121	All notes off on that channel; 121 (reset controllers) lifts the sustain

Each is also sent on to the zone's channels (CC unless filtered).

11 YST: the Yamaha SEQTRAK

Connect a SEQTRAK with a USB-C cable: it is the host and powers the Elite, the Elite is its keyboard and remote. Press GLOBE and go to the third MIDI screen with PATCH: YST, the SEQTRAK's screen. GLOBE or FADER BANK goes back to the drawbars.



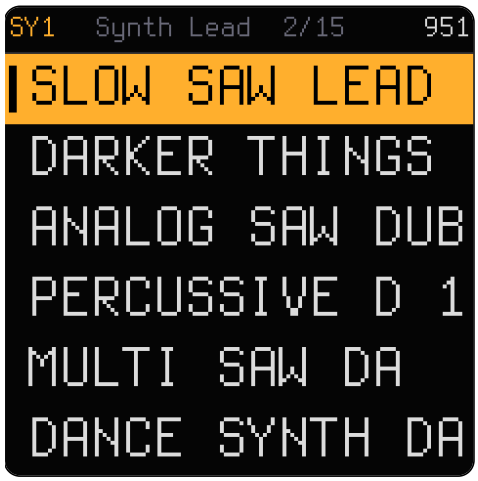
YST is off from the factory; CHORD switches it on (the setup keeps it). Then OrGigs asks the SEQTRAK what its 11 tracks hold (SEQTRAK CONNECTED, TRACKS READ), and again whenever the cable is plugged in. After loading another project on the SEQTRAK, press NOTE RPT (RFSH) to read it again. In between OrGigs follows what the SEQTRAK sends when you play it: its sounds, its knobs, a drum track turned into a synth track (OS 2.0).

The screen shows the track (8 SYNTH 1), its type, its sound and the sound's category and number. A value shows -- until it has been turned once, here or on the SEQTRAK.

CONTROL	IN YST
Pads 1–11	Choose the track: 1 KCK, 2 SNR, 3 CLP, 4 HH1, 5 HH2, 6 PC1, 7 PC2 (drums), 8 SY1, 9 SY2 (synths), 10 DX, 11 SMP (sampler). The SEQTRAK switches to it too, and the other way round. The pads are coloured by the track's type, the chosen one white, a muted one dark
SCALE + pad	Mutes / unmutes the track
Pad 12	The action pad (pink): while you hold it, it pulls a SEQTRAK effect up, the harder you strike the faster (hard: at once, soft: about 3 s); let go and it drops to 0. It sends the CC chosen on the WHEELS page (K3): MST1 P1 (CC 102, the factory choice) to MST3 P1 (CC 106) on channel 1 for the master effects, TRK P1–P3 (CC 107–109) on the chosen track's channel for its single effect. Set the SEQTRAK's master effect to VINYL BREAK (OTHER, no. 8) and pad 12 is the record stopping
Pads 13 · 14 · 15	STOP (white), PLAY / PAUSE (green), REC (red). Bright: the state the SEQTRAK is in; pad 14 blinks while paused. The SEQTRAK's own PLAY key shows here too. The SEQTRAK takes no record command over MIDI, so pad 15 does nothing yet
Pad 16	The sound browser (below)
< >	The previous / next sound of the track (the drum, synth, DX or sampler list, 2424 in all)
K1–K8	Cutoff, resonance, attack, decay, volume, pan, reverb send, delay send of the track
SCALE + K1–K4	The DX track's FM: algorithm, amount, frequency, feedback
Faders 1–3	The SEQTRAK's touch sliders: FX LEVEL, HIGH PASS, REPEATER (CC 102, 105, 106 on channel 1)
Fader 4	The volume, as everywhere
SEQ	A synth or DX track: mono, poly or chord

KNOB BANK	The zone (manual) that plays the track: its MIDI out channel follows the track. Whether the organ sounds along is the zone's INT switch

The sound browser



Press pad 16 (it glows amber, bright while the browser is open). It takes the whole screen: on top, small, the track, the category of the sound under the cursor (Synth Lead 2/15: the second of 15) and its number; below, six sounds of the track's type in big letters, the full width. A name too long for the line runs along under the cursor; the others are cut. The loaded sound is amber, with a bar at the left; a thin line marks where a new category starts.

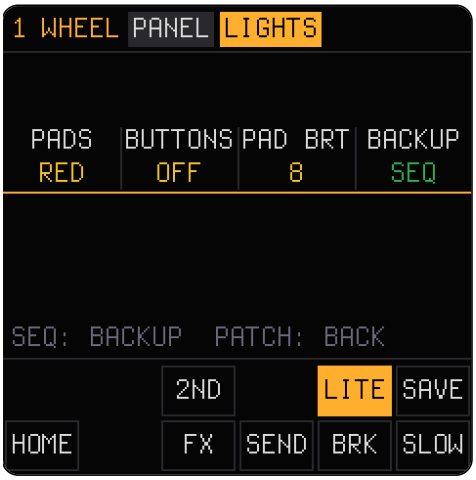
- K1 chooses the category: its first sound comes to the top.
- K2 scrolls through the sounds, on over the categories. The list moves only when the cursor reaches its top or bottom.
- The sound loads once the knob rests for a moment, so you hear it right away on the keys; scrolling fast loads nothing on the way.
- < > still step sound by sound, the pads still choose the track; the browser follows.
- Pad 16 or GLOBE goes back.

From anywhere: hold < and > together and turn K4 (the category) or K5 (the sound). The browser opens for the SEQTRAK track the focused manual plays, and the sound changes as you turn. Let go of the two buttons: the browser closes and you are back where you were.

Drum kit tracks. A drum track the SEQTRAK has turned into a DRUM KIT track gets no list: its kits are not among the 2424 sounds. The browser shows KIT TRACK, and neither the knobs nor < > change its sound. Pick the kit on the SEQTRAK; the keys play it as usual.

> While the SEQTRAK is connected, everything it sends on channels 1–11 (its knobs, sound changes, the notes of its keys and patterns) and its clock belong to YST: none of it plays the organ or goes back out. Otherwise the zones, listening on channels 1–3, would send the SEQTRAK's own notes straight back to it.
>
> If the SEQTRAK does not answer, the screen says so and counts the questions that could not be sent and those that got no answer; NOTE RPT tries again. Close the SEQTRAK app (Bluetooth) while you play it from OrGigs. A SEQTRAK with a low battery behaves oddly and may stop answering: charge it. OrGigs never waits for the SEQTRAK: whatever it does, the keys and the organ keep playing.

12 The panel lights



Hold SCALE and press GLOBE. PATCH (or SCALE + GLOBE again) goes back. The lights are kept across power-off, not per setup.

KNOB	VALUE	WHAT IT DOES
K1	PADS	The pads' colour scheme for the drawbars (below)
K2	BUTTONS	OFF: only what matters lights. FULL: every button lit, what matters blinks
K3	PAD BRT	Brightness of the pads, 1–8

SEQ (SEND) sends all your settings to the computer as a backup (chapter 7).

The pads' colour schemes

SCHEME	HOW A DRAWBAR COLUMN LOOKS
RED-GLOW (factory)	One red over both pads, together always as bright: pushed in, the top pad; all the way out, the bottom pad; in between it moves down in 9 steps
SPLIT 4+4	The top pad counts 1–4 in cold colours (blue to yellow); from 5 the bottom pad takes over in warm colours (amber to red)
SPECTRUM	A thermal scale, blue (little) to red (full), the bottom pad shows the drawbar out
SPECTRUM WARM	As SPECTRUM, the other pad a warm white growing with the drawbar
FOOTAGE	The top pad the footage's colour: amber the sub-harmonics (16', 5 1/3'), white the octaves, violet the mutations; brighter when out. The bottom pad the thermal scale
DUAL RES	The top pad the third the drawbar is in (1–3 blue, 4–6 green, 7–8 red), the bottom pad the step inside it
GLOW	From white to red through yellow and orange. All the way out: the bottom pad red; pushed in: the top pad white (the factory colours before RED-GLOW)

On the other screens the pads use their own colours: amber for a choice, red for mute, dark blue for solo, green for channels and zone switches, white for the chosen SEQTRAK track.

13 Installing, updating, going back

OrGigs is installed over USB from a web page, the OrGigs installer: the **Install** button on OrGigs's card on The Firmware Hub (`thefirmwarehub.com`) leads there. It runs in Chrome, Edge or Firefox on a computer; nothing else needs to be installed.

> **Windows, first install over M-VAVE's firmware: use Firefox.** Chrome and Edge freeze on Windows when the Elite switches from its stock firmware to update mode (a bug of theirs with the stock firmware's three MIDI ports); the page warns about it. Updates of OrGigs work in all three browsers. Firefox asks to add a site permission for MIDI: allow it.

> **Plug in only the Elite** while installing. The FM-1 and the SMK-37 use the same update path; with both plugged in, the installer may pick the wrong one. The Elite needs M-VAVE's firmware V016 (or a custom one) before the first install.

Install or update

1. Connect the Elite with a USB **data** cable (not a charge-only cable). Close other programs that use its MIDI port (DAWs, other browser tabs with Web MIDI).
2. Open the installer and press **Install**. Allow MIDI access, with SysEx, when the browser asks.
3. The page finds the Elite, picks its package and checks it, switches the Elite to update mode, writes the firmware and restarts it. It ends with `Done. OrGigs is installed.`

Your setups, presets, rotary cabinets, effect and master are kept. Coming from another firmware, OrGigs starts with its factory settings. If the page finds an older M-VAVE firmware or another model, it says so and writes nothing.

> **During installation** don't unplug the Elite. If the write is cut off anyway, plug it in again and press **Install**: it goes on where it stopped.

Without a browser

OrGigs's source also has an installer script, `tools/fm1_install.py` (Python 3.12 with `mido` and `python-rtmidi`). In the source folder, `py -3.12 tools\fm1_install.py --info` only reads and shows the running firmware, for example `SMK-37 Elite_674110 [running]`; `py -3.12 tools\fm1_install.py orgigs-1.1-smk37-elite.fwsc` installs a package.

Going back to the original firmware

- **Make a backup first** (chapter 7): the SMK-37's settings memory is shared, and the stock firmware, or another custom one, clears OrGigs's settings when it starts.
- Install the stock firmware with M-VAVE's updater and the Elite's own factory package, or use the **SMK-37 Firmware Hub** at `thefirmwarehub.com/smk37`.
- If the Elite doesn't start normally, hold `OCT-` while switching it on. It starts in USB rescue mode, ready for the installer or the Firmware Hub.

OrGigs never touches the Elite's Bluetooth pairing, its key and pad calibration or the stock resources. Installing custom firmware is at your own risk.

14 Specifications and limits

ITEM	VALUE
Tone generation	84 free-running generators, C1–B7; full polyphony, no voice stealing
Waveforms	8 wavetables, each in 4 band-limited versions (no aliasing up to B7)
Models	8, in 3 departments
Manuals	Upper 9 drawbars, Lower 9 drawbars, Pedal 4 stops
Keyboard	37 keys (C3–C6) with velocity (MIDI out), octave −2…+3
Controls	8 knobs, 4 faders, 16 RGB pads, pitch and mod wheels, 18 buttons
Effects	Per manual: drive / limiter / cassotto, scanner vibrato & chorus or tremulant, rotary on/off, delay and reverb sends. Shared: percussion, two-rotor rotary with 4 cabinets (2 user), stereo delay up to 1 s, 4 reverbs up to 7.5 s. Insert: chorus, wah-wah, auto-wah, flanger, phaser, ring modulator, amp. Master: 3-band EQ, compressor
Audio	44.1 kHz stereo, 256-sample blocks (5.8 ms)
Memory	16 performance setups; a drawbar list of 75 registrations + 16 user slots, a pedal list of 24 + 8; kept across power-off
MIDI mixer	16 channels: volume (per setup), pan, reverb, delay, mute, solo
MIDI	USB MIDI in and out; 3 zones with channel, range, transpose, velocity, filters; cloner, 9-channel harmonic mapper, chord memory per zone; up to 48 incoming notes held at once
SEQTRAK	11 tracks, 2424 sounds by name and category, track select both ways, mute, 8 parameters + FM
Firmware package	SMK-37 Elite_674110

Known limits

- **MIDI in and out are USB only**, over the one USB port. No Bluetooth MIDI and no DIN MIDI: for DIN gear use a MIDI host with `TRS` on.
- **The pedal socket** takes a sustain pedal (a switch), not an expression pedal.
- **The organ isn't velocity sensitive**, like a real one. The keys' velocity goes out over MIDI.
- **The button lights** are on or off; they can't glow dimly.

A MIDI implementation chart

FUNCTION	RECEIVED	TRANSMITTED
Channels	Each zone's in channel (factory 1 upper, 2 lower, 3 pedal); others dropped or passed through (THR). With YST on: channels 1–11 from the SEQTRAK	Each zone's out channel, plus its clone and harmonic channels; the mixer on all 16
Note on / off	Yes, within each zone's key range	Yes, with the keys' velocity. Note-off as note-on velocity 0 in TRS-SAFE
Velocity	Passed on (organ sound ignores it)	Through, fixed 1–127, or scaled by expression; per drawbar in the harmonic mapper
Pitch bend	Bend ±2 semitones, or rotary kick / tutti (`BEND ROTARY`)	Passed on to the zone's channels
CC 1 Modulation	Rotary speed / bellows	Passed on unless filtered
CC 7 Volume	—	Mixer volume, mute; harmonic mapper with `CC7`; passed on unless filtered
CC 10 / 91 / 94	—	Mixer pan, reverb, delay
CC 11 Expression	Expression	Harmonic mapper with `CC11`; passed on unless filtered
CC 12–20	Drawbars 1–9 of the zone's manual (pedal: CC 12–15)	Passed on unless filtered
CC 64 / 120 / 121 / 123	64: sustain. 120, 123: all notes off on that channel. 121: sustain lifted	Passed on; 64 from the sustain pedal on the manual's channels; on all 16 channels at panic (`SCALE` + `PATCH`)
Aftertouch	—	Passed on unless CC is filtered
Program change	—	Passed on unless filtered
SysEx	OrGigs backups (F0 7D 4F 47 …); Yamaha SEQTRAK parameters (F0 43 …) with YST on	Backups; SEQTRAK requests and parameters with YST on
Clock, start, stop	—	Passed on with THR
Running status	Yes	In TRS-SAFE

B Troubleshooting

PROBLEM	SOLUTION
No sound	Move fader 4 (volume) up; an expression pedal on MIDI (CC 11) at 0 silences the organ too. Check that some drawbars of the manual you're playing are above 0. On the zone screen check `INT` (pad 4 lit = the zone sounds). Is the master compressor's make-up or the EQ far off?
A fader does nothing	Faders act only when moved. In YST faders 1–4 pick up only once they meet the track's value; fader 4 is the volume again back on the drawbars once it meets where the volume was.
The mod wheel doesn't switch the rotary	The insert effect is `WAH-WAH`: the wheel is its pedal. Choose another effect or switch it off (EFFECT page).
A USER rotary sounds wrong	Copy the CLASSIC or the COMPACT into it (`BT` + pad 3 / 4 on the ROTARY page) and start again.
An external keyboard plays nothing	Check the zone's in channel and key range on the zone screen, and that the MIDI host routes the keyboard to the Elite.
The sound is very different from before	Another setup, model or drawbar preset is active. Check the top bar; hold `SCALE` to see the setups. The insert effect and the master are not part of a setup: check the EFFECT and MASTER pages.
The pads don't move the drawbars	Another layout is chosen (top bar `PERF B1` … `PERF D`). `SCALE` + `KNOB BANK` (or `<` + `>` + `K3`) until it says `PERF A`; recalled setups bring their own layout.
The sustain pedal works the wrong way round, or not at all	Switch off, plug the pedal in, switch on without pressing it. `SCALE` shows its reading (`PED`); if it doesn't change when you press, the pedal or its cable is faulty.
No percussion	Percussion only works on the Tonewheel Organ model, on the upper manual, and only on detached (non-legato) playing.
A synth receives nothing	Check the zone's out channel (not `OFF`), the filters, and mute / solo in the mixer.
Notes repeat without end	A MIDI loop: the Elite's output is routed back into the Elite. Remove that route in the MIDI host or DAW.
Notes missing on a DIN synth via a MIDI host	Switch on `TRS` (pad 8 on the zone screen).
The SEQTRAK doesn't answer	Charge the SEQTRAK, close its app, replug the cable, press `NOTE RPT` on the YST screen.
Settings were lost after switching off	OrGigs saves 2 s after the last change, and only while nothing sounds. Release all keys for a moment before switching off.
The installer reports `FM-1 not found`	Use a USB data cable, close other programs that use the Elite's MIDI port, and try again.
A note keeps sounding (stuck note)	Press `SCALE` + `PATCH` (`PANIC ALL NOTES OFF`). Everything stops at once, the reverb and delay tails included, and all 16 MIDI channels get *all notes off*.

Crackles under heavy playing	Press **SCALE** to see the processor load (`DSP 30%`). If it is near 100, use fewer effects, or play fewer manuals at full registration.