MIDI COMMANDER

for Ableton Move

USER MANUAL

Version 2.2

RNBO Takeover Mode Device

Contents

Introduction

MIDI Commander turns your Ableton Move into a standalone MIDI controller. Think Faderfox EC4 or MIDI Fighter Twister, but running on hardware you already own. It operates as an RNBO Takeover Mode device — no computer required after loading.

Move's 8 encoders send MIDI CCs, SysEx, NRPN, and Program Change messages. 32 pads play notes with velocity. 16 step buttons select encoder banks. Presets configure which parameters each encoder controls. You can edit assignments on-device and save custom presets that persist across reboots.

Supports 4 encoder output modes — Absolute plus 3 Relative modes — for seamless DAW control surface use.

No audio DSP. Pure MIDI output. Minimal CPU usage.

What You Need

- Ableton Move with RNBO Takeover firmware installed
- A MIDI-capable synth, drum machine, or DAW connected via USB-A or USB-C (both ports output MIDI simultaneously)
- The MIDI Commander .rnbopack file loaded on your Move

What's New in Version 2.2

- **Template Page Categories** — Template presets are organized into categorized pages with named headers on the OLED: **Hardware** (Page 5), **Software** (Page 6), **Vintage** (Page 7).
- **Expanded Hardware Library** — New presets for **OP-Z** (16-page, all tracks across per-page channels), **Yamaha SeqTrak** (16-page including DX/FM), **Nord Drum 3P** (6 drums × tone/noise pages + mixer/FX), **microKORG** (5-page CC editor), and **Waldorf Blofeld** (16-page hybrid CC + SysEx Sound Mode editor).
- **Oberheim Matrix-1000 Template** — 10-page SysEx editor covering DCO1/2, VCF, three envelopes, LFOs, ramps, portamento, and performance CCs.
- **Spectrasonics Omnisphere 2 Template** — 15-page CC editor reconciled against an actual "Show Current Assignments" report. Covers Layer A/B oscillators, envelopes, filters, LFOs 1-4, FM/Ring/Waveshaper, Harmonia, Unison/Granular, Mod Matrix, FX inserts, Arp/Master FX, and globals.
- **Category Page Labels on OLED** — When browsing template pages, the display shows "P5 Hardware", "P6 Software", "P7 Vintage" instead of the generic "Template" label.
- **Improved Preset Page Navigation** — Selecting the first preset slot after switching pages now responds on the first press (fixed change detection issue).
- **On-Device Rename** — Rename encoder labels (3 chars) and preset names (14 chars) directly on Move using the knobs. Custom names persist across power cycles.
- **5 New Scales (13 total)** — Added Minor Pentatonic, Phrygian, Harmonic Minor, Whole Diminished, and Half Diminished. Plus a long-standing pentatonic/mixolydian index swap is fixed.
- **Default Velocity is Now Fixed @ 127** — Drum machines and step-input workflows now feel consistent on first boot. Velocity Curve `Fixed` was also bumped from 100 → 127.
- **16 Pad Colors (was 8)** — Added purple, teal, pink, lime, amber, coral, lavender, and ice.
- **Cold Boot Pad Init** — Pad LEDs now re-issue the redraw at 2s, 4s, and 6s after boot to catch late hardware init that previously left pads dark on a cold start.

What's New in Version 2.0

- **Relative Encoder Mode** — 3 relative output modes for DAW control (Ableton Live, Logic, Cubase, etc.). No more value jumps.
- **MIDI Transport** — Play button sends Start/Stop, Shift+Play sends Continue.
- **Ableton Link** — Wireless tempo sync with Link-enabled apps and devices.
- **Panic Button** — Shift+X kills all sound on all 16 channels instantly.
- **SysEx & NRPN Output** — Encoders can send SysEx messages or NRPN sequences for direct hardware synth parameter editing.
- **Per-Page MIDI Channels** — Different pages can target different MIDI channels within one preset.
- **Full Name Popups** — 8-character parameter names on the OLED (e.g., "Cutoff : 47").
- **Custom Bank Headers** — OLED shows custom page labels (e.g., "OPXY T1 Filter").
- **Encoder Value Recall** — Encoder positions are saved and restored with presets.
- **16-Page Preset System** — User pages, Default page, and Template pages for organized preset management.
- **Blank Template** preset for building custom CC maps from scratch.

First-Time Setup

This walks you through your first launch: getting MIDI Commander onto your Move, connecting it to your gear, and loading a preset tailored to your hardware.

Installing MIDI Commander

1. **Connect Move to your computer** via USB-C. Move appears on your network as `move.local`.
2. **Open the RNBO Graph editor** in your browser at **`http://move.local:3000`**. This is a separate web interface from the general Move app at `move.local`. The Graph editor is where RNBO patchers live, and where MIDI Commander gets installed.
3. **Click "Upload Package"** and select the `MIDI_Commander.rnbopack` file you downloaded from Gumroad.
4. After the upload finishes, `midi-commander` appears on the main page.
5. **Click `midi-commander`, then click Load.**
6. The OLED switches to the MIDI Commander display.

Upgrading from a Previous Version

If you already have an earlier version of MIDI Commander working on your Move, you don't have to do anything. Your existing setup keeps working. The patch code in v2.2 is identical to v2.1.

If you want to switch to the v2.2 install path (loading as a graph instead of a patcher), do this:

1. In `http://move.local:3000` → **Manage Resources**, delete the existing `midi-commander` graph and the `midi-commander` patcher. Leave the `spleen-8x16.bmp` data file alone.
2. Drag the v2.2 `.rnbopack` into the **Graphs** section under Manage Resources.
3. Click the newly imported `midi-commander` graph, then click **Load**.
4. You're loading the *graph* from now on, not the patcher. That's the only behavioral change.

Connecting to Your Gear

Connect Move to your target synth, drum machine, or DAW via USB. Both Move's USB-A and USB-C ports send MIDI simultaneously, so use whichever fits your cable.

Cable notes for OP-XY users: Move and OP-XY both have USB-C ports, so a standard USB-C-to-USB-C cable works directly between them. If you don't have a spare USB-C-to-USB-C cable handy, run a USB-A-to-USB-C cable from Move's USB-A port to OP-XY instead. Standard data-capable USB cables are required — charge-only cables won't pass MIDI.

Loading a Hardware Preset

By default, MIDI Commander boots into the **Generic Synth** preset on Page 4. To load a hardware-specific preset:

1. **Double-tap Shift** (the "..." three-dot button) to enter Preset Mode.
2. Press the **Right arrow** to page over to the next preset page. The OLED shows the page label (e.g., **"P5 Hardware"**). Press the Left arrow to go back.
3. Continue pressing Right until you reach the category you want — **Hardware (P5)**, **Software (P6)**, or **Vintage (P7)**.
4. Pick the preset using either method: - **Step button:** press the step button for the slot you want. - **Knob 1 + Capture:** turn Knob 1 to cycle through the presets on the current page (the name scrolls on the OLED), then press **Capture** to load the highlighted one.
5. The preset loads and Preset Mode exits automatically. You're now sending MIDI tailored to your hardware.

Preset slot reference:

Preset	Short	Page	Step
Generic Synth	—	4 (Default)	1
Blank Template	—	4 (Default)	2
SP-404MKII	404	5 (Hardware)	1
OP-XY	OPXY	5 (Hardware)	2
OP-Z	OPZ	5 (Hardware)	3
Yamaha SeqTrak	SQTK	5 (Hardware)	4
Nord Drum 3P	ND3P	5 (Hardware)	5
microKORG	mKRG	5 (Hardware)	6
Waldorf Blofeld	BFLD	5 (Hardware)	7
Korg M1	M1	6 (Software)	1
Omnisphere 2	OMNI	6 (Software)	2
Proteus 2000	EMU	7 (Vintage)	1
Matrix-1000	MTX	7 (Vintage)	2

Example: To load OP-XY → double-tap Shift → press Right arrow once (lands on P5 Hardware) → press Step 2.

Quick Start

Already familiar with the setup? Here's the short version:

1. Load MIDI Commander on Move via the RNBO Graph editor at `move.local:3000` (Upload Package → select `.rnbopack` → click `midi-commander` → Load).
2. Connect Move to your synth or DAW via **USB-A or USB-C**. Both ports send MIDI simultaneously.
3. Navigate to **User Views** to see the CC Map and send CCs with the encoders.
4. **Play pads** to send MIDI notes. **Turn encoders** to send CCs.
5. Switch encoder pages using the **16 step buttons** at the bottom, or the **Left/Right arrows** to step one bank at a time.
6. To adjust keyboard settings (scale, root note, pad color, MIDI channel, etc.), go to **Device Params**.
7. To load a hardware preset, double-tap Shift, use Left/Right arrows to find the page, and press a step button (see First-Time Setup above for details).

Where Things Live

MIDI Commander uses two different views on Move. Knowing which view does what is key:

User Views (CC Map) — This is your main performance view. The encoders send and edit MIDI CCs here. The OLED shows your current bank, CC assignments, and value popups. This is where you'll spend most of your time.

Device Params — This is where all keyboard and pad settings live: Root Note, Scale, Layout, Pad Mode, Drum Base Note, Pad Color, Velocity Curve, and MIDI Channel. When you're in Device Params, the encoders control these settings instead of sending CCs.

The **pads** send notes from either view. But the **encoders** behave differently depending on which view you're in — CCs in User Views, keyboard settings in Device Params.

Controls

Encoders (8 Knobs, Top Row)

The 8 rotary encoders are your primary CC controllers **when in User Views**.

Action	Result
Turn encoder (User Views)	Sends MIDI CC value (0-127) on the assigned CC number
Hold Shift + turn (User Views)	Reassigns the CC number for that encoder (0-128)
Touch encoder (capacitive)	Shows current value popup on the OLED display
Turn encoder (Device Params)	Adjusts keyboard/pad settings (scale, root note, etc.)
Turn Knob 8 (Preset Mode)	Cycles Relative Encoder Mode setting

The encoders are capacitive touch — just rest your finger on top to see the current value. No need to press down.

Some preset encoders send **SysEx** or **NRPN** messages instead of standard CCs. These are marked in the OLED popup and cannot be CC-reassigned via Shift+turn.

Step Buttons (16 Buttons, Bottom Row)

In normal operation, the step buttons select which encoder bank (page) is active. Each bank maps 8 encoders to different CC assignments, giving you up to 128 CCs across 16 banks.

LED Color	Meaning
Cyan	Current active bank (normal mode)
Orange	Current bank while Shift is held (CC edit mode)
Dim / unlit	Inactive bank

Step buttons also function as preset load/save targets when in Preset or Save mode — see the Shift Button section below.

Shift Button ("..." Three Dots)

The Shift button is the gateway to editing, presets, and saving. It has three distinct functions:

Hold Shift — CC Edit Mode

While holding Shift, turning any encoder changes its **CC assignment** instead of sending a CC value. The new CC number appears on the OLED. Release Shift to return to normal operation.

Double-Tap Shift — Preset Mode

Tap the Shift button twice quickly (under 300ms) to enter **Preset Mode**. The step button LEDs change to show your preset slots:

LED Color	Meaning
Green	Currently loaded preset
Red	Occupied slot (another preset)
Dim	Empty slot

Press any red or green step button to load that preset. Preset Mode exits automatically after loading. Double-tap Shift again to exit without loading.

While in Preset Mode, the encoders become **settings knobs** — see Preset Mode Settings below.

Save Mode

Save Mode lets you store your current configuration (all CC assignments, device settings, encoder values, and relative mode) to any preset slot. This is the most complex button combination in MIDI Commander, so here's the full sequence:

1. **Double-tap Shift** to enter Preset Mode first. (Step LEDs show green/red/dim.)
2. While in Preset Mode, **hold Shift + press Duplicate** to enter Save Mode.
3. The step LEDs update: **green** = overwrite current preset, **red** = overwrite an existing preset, **dim** = save to an empty slot.
4. **Press any step button** to save to that slot. A white LED flash confirms the save.
5. MIDI Commander returns to normal mode automatically.

To cancel: press Shift at any time during Save Mode to cancel and exit back to normal mode.

Transport & Link

Action	Result
Press Play	Toggle MIDI Start / Stop. Play LED = green when running, dark when stopped.
Shift + Play	Send MIDI Continue
Shift + Record	Toggle Ableton Link on/off. OLED shows "ABL Link On" / "ABL Link Off".

Ableton Link provides wireless tempo sync between Move and any Link-enabled app or device (Ableton Live, other Moves, iOS apps, etc.).

Prerequisite: On the Move RNBO runner, go to Transport menu and set **Sync: On** before enabling Link.

Panic

Shift + X sends All Sound Off (CC 120) and All Notes Off (CC 123) on all 16 MIDI channels simultaneously. The OLED confirms with **"PANIC SENT!"**

Use this to kill hanging notes or runaway sounds instantly — one button combo, 32 messages, every channel.

Octave Buttons (Up/Down)

- **Up arrow:** Octave +1 (max 8)
- **Down arrow:** Octave -1 (min 0)
- Works from any view

Page Navigation Arrows (Left/Right)

The **Left** and **Right** arrow buttons (separate from the Up/Down octave buttons) handle page navigation in both User Views and Preset Mode — the context determines what "page" means.

In User Views (normal operation): cycle through the 16 encoder banks (parameter pages) of the current preset — same destinations as pressing Steps 1–16, just one-at-a-time forward or back.

- **Right arrow:** Next encoder bank (wraps Bank 16 → Bank 1)
- **Left arrow:** Previous encoder bank (wraps Bank 1 → Bank 16)

In Preset Mode (after double-tap Shift): cycle through the preset pages.

- **Right arrow:** Next preset page (e.g., Page 4 Default → Page 5 Hardware → Page 6 Software → Page 7 Vintage). Wraps at the end.
- **Left arrow:** Previous preset page. Wraps at the start.

The OLED shows the current page label (e.g., the custom bank header in User Views, or "P5 Hardware" in Preset Mode) as you navigate.

Pads (32 Pads, 4x8 Grid)

The pad grid sends MIDI notes with velocity sensitivity. Pads work from both User Views and Device Params.

- Note mapping is determined by your Scale, Layout, Root Note, and Octave settings (configured in Device Params)
- LED colors: **root note** = user-selected color, **in-scale** = gray, **out-of-scale** = unlit
- White flash on note-on, restores original color on note-off

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Relative Encoder Mode

MIDI Commander supports 4 encoder output modes. This is a **per-preset setting** — each preset remembers its own mode.

Mode	+1 Click	-1 Click	Best For
Absolute (default)	Sends actual value (0-127)	Sends actual value	Hardware synths, any gear expecting standard CC values
Relative 1	1	127	Ableton Live, Bitwig, many DAWs
Relative 2	65	1	Some Native Instruments controllers
Relative 3	65	63	Mackie Control protocol (Logic, Cubase, ProTools)

Why Use Relative Mode?

In Absolute mode, if your synth's filter is at 90 but MIDI Commander's encoder is at 0, the first turn snaps the synth to 1 — a jarring jump. Relative mode avoids this entirely. Every click nudges the parameter from wherever it currently is on the receiving end. No jumps, no pickup problems.

This is how professional DAW controllers (Faderfox, MIDI Fighter Twister, Mackie Control surfaces) work with software — and now Move can do it too.

Changing the Mode

1. **Double-tap Shift** to enter Preset Mode.
2. **Turn Knob 8** to cycle through: Absolute > Relative 1 > Relative 2 > Relative 3.
3. The OLED shows the current mode name.
4. **Exit Preset Mode** (hold Shift or double-tap Shift again).
5. **Save your preset** to keep the setting.

Notes

- SysEx, NRPN, and Program Change encoders always send absolute values regardless of mode.
- The OLED popup still shows a value when turning in relative mode. This is an internal estimate and may drift from the synth's actual value over time.
- If your DAW doesn't respond or moves the wrong direction when you turn encoders, try a different relative mode — the most common mistake is having the wrong mode selected for your DAW.

CC Edit Mode

You can reassign any encoder's CC number directly on the device, without a computer:

1. **Hold Shift** (three dots button). The step button LEDs turn orange.
2. **Turn any encoder** — the OLED shows the new CC number being assigned.
3. **Release Shift** — the encoder now sends the new CC number.

CC Range

Encoders can be assigned to any CC from 0-127. CC 128 is a special assignment that sends Program Change messages (0xC0) instead of standard CC messages (0xB0).

Safe CC Map

The default preset assignments skip 28 potentially dangerous CCs (bank select, all-notes-off, reset controllers, etc.) to prevent accidental issues with connected gear. When you manually reassign via Shift + encoder, the full 0-128 range is available.

On-Device Rename

You can rename encoder labels (the 3-character abbreviations on rows 2 and 3 of the OLED) and preset names (the 14-character names shown when browsing) directly on Move. Custom names persist across power cycles.

Renaming Encoder Labels

1. **Double-tap Shift** to enter Preset Mode.
2. **Turn Knob 2** to enter label rename mode.
3. **Press Step 1-8** to choose which encoder on the current bank to rename.
4. **Knob 1** scrolls characters at the cursor (A-Z, a-z, 0-9, symbols, space).
5. **Knob 2** moves the cursor across the 3 character positions. A blinking underscore on the row above indicates the cursor.
6. **Press Capture** to confirm. **Press Shift** to cancel without saving.
7. Save the preset (Shift + Duplicate → step) to make the rename permanent across reboots.

All 128 encoder labels (16 banks × 8 encoders) can be renamed independently.

Renaming Presets on Save

When you save a preset with **Shift + Duplicate → step button**, a name editor appears before the save finalizes:

- **Knob 1** scrolls characters.
- **Knob 2** moves the cursor across 14 character positions.
- **Press Capture** to confirm the name and complete the save.
- **Press Shift** to skip naming and use the default slot name.

Custom preset names show during preset browse (Knob 1 in Preset Mode) so you can find them by name.

OLED Display

The OLED screen (visible in User Views) shows your current encoder assignments:

Row	Content
1	Bank header (custom name or "Bank N") + mode indicator ("EDIT" / "PRESET" / "SAVE")
2	Encoders 1-4: 3-character labels or CC numbers
3	Encoders 5-8: 3-character labels or CC numbers
4	Context-sensitive popup (see below)

Popup Types

Trigger	Display
Turn/touch encoder (with full name)	`Cutoff : 47` (8-char parameter name + value)
Turn/touch encoder (CC only)	`CC 74 : 47`
Turn/touch encoder (Program Change)	`PC : 12`
Change page (Preset Mode)	`P 4 Default` / `P 1 User` / `P 5 Hardware` / `P 6 Software` / `P 7 Vintage`
Shift + X	`PANIC SENT!`
Shift + Record	`ABL Link On` / `ABL Link Off`
Knob 8 in Preset Mode	`ABSOLUTE` / `RELATIVE 1` / `RELATIVE 2` / `RELATIVE 3`
Drum Base Note change	`Drum 36 C 1` (note number + note name)

- Labels show 3-character abbreviations (e.g., **Ton** for Tone, **Pre** for Presence)
- If no label is defined, the raw CC number is displayed
- Unassigned encoders show **---**. Program Change encoders show **PC**
- Popup appears on encoder touch or turn and auto-dismisses after 2 seconds

Presets

Page System

MIDI Commander organizes presets into a 16-page system with three tiers:

Pages	Type	OLED Label	Behavior
Pages 1-3	**User**	User	Writable. Your custom presets. Saved to persistent buffer.
Page 4	**Default**	Default	Boot page. Ships with Generic Synth and Blank Template. Writable.
Page 5	**Hardware**	Hardware	Read-only templates for modern hardware (SP-404MKII, OP-XY).
Page 6	**Software**	Software	Read-only templates for VSTs and DAW instruments (Korg M1).
Page 7	**Vintage**	Vintage	Read-only templates for vintage synths via SysEx (Proteus 2000, Matrix-1000).
Pages 8-16	*(empty)*	Template	Reserved for future templates.

Page 4 is where you land on boot. Templates on Pages 5-7 are read-only — to customize one, load it and save a copy to a User page or an empty Page 4 slot.

Template Page Categories

Template presets are organized into named categories. The OLED shows the category name when browsing (e.g., "P5 Hardware"). Each category page holds up to 16 presets.

Page	Category	Presets
5	**Hardware**	SP-404MKII, OP-XY, OP-Z, SeqTrak, Nord Drum 3P, microKORG, Blofeld
6	**Software**	Korg M1, Omnisphere 2
7	**Vintage**	Proteus 2000, Matrix-1000

Full per-encoder, per-page control layout for each template lives in its own PDF in the Template Guides folder (e.g. `Template Guides/sp-404mkii.pdf` *).*

Loading a Preset

1. **Double-tap Shift** (three dots button) to enter Preset Mode.
2. Use the **Left/Right arrow buttons** to navigate between preset pages. The OLED shows the current page label as you move (e.g., "P4 Default", "P5 Hardware", "P6 Software", "P7 Vintage").
3. Step LEDs show the contents of the current page: **green** = currently loaded, **red** = other saved presets, **dim** = empty.
4. Load a preset using either method: - **Step button:** press any red or green step button to load that preset. - **Knob 1 + Capture:** turn Knob 1 to cycle through the presets on the current page (name shown on the OLED), then press **Capture** to load it.
5. Preset Mode exits automatically.

All Notes Off is sent automatically when switching presets to prevent hanging notes.

To find a specific hardware preset (OP-XY, SP-404MKII, etc.), see the slot reference table in the First-Time Setup → Loading a Hardware Preset section.

Saving a Preset

1. **Double-tap Shift** to enter Preset Mode.
2. Hold **Shift + press Duplicate** to enter Save Mode.
3. Press any step button to save your current configuration to that slot.
4. **White LED flash** confirms the save. Returns to normal mode automatically.

To cancel: press Shift while in Save Mode.

Template Library

MIDI Commander ships with two default presets plus 11 templates for hardware and software synths/samplers across three category pages. Each template has its own reference guide in the **Template Guides** folder shipped alongside this manual, with the full page-by-page parameter breakdown.

Slot	Template	Short	Category
4/1	Generic Synth	—	Default (P4)
4/2	Blank Template	—	Default (P4)
5/1	Roland SP-404MKII	404	Hardware (P5)
5/2	TE OP-XY	OPXY	Hardware (P5)
5/3	TE OP-Z	OPZ	Hardware (P5)
5/4	Yamaha SeqTrak	SQTK	Hardware (P5)
5/5	Nord Drum 3P	ND3P	Hardware (P5)
5/6	Korg microKORG	mKRG	Hardware (P5)
5/7	Waldorf Blofeld	BFLD	Hardware (P5)
6/1	Korg M1 (VST)	M1	Software (P6)
6/2	Spectrasonics Omnisphere 2	OMNI	Software (P6)
7/1	E-mu Proteus 2000	EMU	Vintage (P7)
7/2	Oberheim Matrix-1000	MTX	Vintage (P7)

See the individual template guides (e.g. `Template Guides/sp-404mkii.pdf`) for the full encoder layout per page.

What Gets Saved Per Preset

- All 128 CC assignments (16 banks x 8 encoders)
- All 128 encoder values (resume where you left off)
- All 8 device params: Scale, Root Note, Layout, Pad Mode, Drum Base, Pad Color, Velocity Curve, MIDI Channel
- Relative encoder mode setting (Absolute / Rel 1 / Rel 2 / Rel 3)
- Encoder labels, full names, lookup tables, and SysEx/NRPN data inherited from the parent preset

Persistence

User-saved presets persist across power cycles automatically. When you save a preset with **Shift + Duplicate → step button**, it gets written to Move's storage and auto-restores on every reboot. The install covers it. Nothing extra to enable.

If you ever need a more comprehensive snapshot, you can also save a **Move Device Preset** to capture the current state of all 16 banks. Loading that Device Preset later restores everything. This is useful for swapping between completely different MIDI Commander setups on the same Move.

Preset Mode Settings

While in Preset Mode (double-tap Shift), the encoders become **settings knobs** instead of sending MIDI:

Knob	Setting
Knob 1	Cycle through presets on the current page (turn to scroll, press **Capture** to load)
Knob 2	Enter Label Rename mode — see **On-Device Rename**
Knob 8	Relative Encoder Mode (Absolute / Rel 1 / Rel 2 / Rel 3)
Knobs 3-7	Reserved for future settings

These settings are saved when you save a preset.

Known Limitations

- Save-to-self for device params (scale, color, etc.) may not update correctly. Save to a new slot instead.
- Enum parameter labels on Move may show stale display values after a preset load. This is cosmetic only — the actual values are correct.

Device Parameters (Keyboard & Pad Settings)

Access these by navigating to **Device Params** on Move. One page of 8 knobs controls all keyboard and pad behavior:

Knob	Parameter	Values	Default
1	Root Note	C, C#, D, D#, E, F, F#, G, G#, A, A#, B	C
2	Scale	13 scales (see Scales section)	Chromatic
3	Layout	Octaves, Fourths, Sequential, Chromatic	Fourths
4	Pad Mode	Chromatic, Drum, Custom	Chromatic
5	Drum Base Note	0-96 (note name shown, e.g. `36:C1`)	36 (GM Kick)
6	Pad Color	16 colors (see Pad Colors section)	Cyan
7	Velocity Curve	Linear, Light, Heavy, Fixed	**Fixed**
8	MIDI Channel	1-16	1

Remember: when you're in Device Params, the encoders adjust these settings. Switch back to User Views to send CCs.

Pad Layouts & Scales

Layouts

The pad grid is 4 rows tall and 8 columns wide. The layout setting determines how notes are arranged across the grid:

Layout	Description	Moving Left/Right	Moving Up/Down
Octaves	In-key, each row spans one octave	+/-1 scale degree	+/-1 octave
Fourths	In-key, isomorphic (guitar-like)	+/-1 scale degree	+/-4 scale degrees
Sequential	In-key, linear wrap for max range	+/-1 scale degree	Continues sequence
Chromatic	All 12 notes, out-of-scale unlit	+/-1 semitone	+/-5 semitones (P4)

Scales

13 scales total:

Chromatic, Major, Minor (natural), Dorian, Mixolydian, Pentatonic (major), Blues, Whole Tone, Minor Pentatonic, Phrygian, Harmonic Minor, Whole Diminished, Half Diminished.

Drum Mode

1. Set **Pad Mode = Drum** in Device Params (Knob 4).
2. Pads send sequential notes starting from **Drum Base Note** (Knob 5, default 36 = GM Kick).
3. Pad 1 = base note, Pad 2 = base+1, Pad 3 = base+2, and so on.
4. Works best with **Root = C, Octave = 0**.

LED pattern in drum mode: amber with track color every 4th pad.

Velocity Curves

Curve	Behavior
Linear	Raw velocity pass-through
Light	Square root curve — more sensitive to soft touches
Heavy	Square curve — requires harder hits to reach high velocities
Fixed	Constant velocity of **127** regardless of how hard you hit (default)

Pad Colors

16 colors are available for the root-note LED via Device Params Knob 6:

Cyan, Orange, Magenta, Green, Red, Blue, Yellow, White, Purple, Teal, Pink, Lime, Amber, Coral, Lavender, Ice.

In-scale pads always render as light gray; out-of-scale pads (chromatic layout) are unlit. The selected color is the *root note* highlight only.

MIDI Output Reference

Output Types

- **Connection:** Move outputs MIDI via both USB-A and USB-C simultaneously. Connect either or both to your gear.
- **Notes:** Sent on the active MIDI channel (1-16) with velocity sensitivity.
- **CCs:** Sent on the active MIDI channel. In Absolute mode, sends the actual value (0-127). In Relative modes, sends delta-encoded values (see Relative Encoder Mode).
- **Program Change:** Sent when an encoder is assigned to CC 128. Outputs standard Program Change (0xC0) instead of CC (0xB0). Always absolute.
- **SysEx:** Some template presets send SysEx messages for direct hardware synth parameter editing. Supports 7 checksum types (Roland, Yamaha, Waldorf, Kawai, E-mu, Oberheim, generic). Always absolute. Requires a direct MIDI connection — some DAWs filter SysEx.
- **NRPN:** Some template presets send NRPN 4-CC sequences (CC99/98/6/38) for synths that use NRPN parameter addressing. Always absolute.
- **Transport:** Play sends Start (0xFA) / Stop (0xFC). Shift+Play sends Continue (0xFB).
- **All Notes Off:** Sent automatically on every preset switch. Also sent manually via Shift+X (Panic) on all 16 channels.

Per-Page MIDI Channels

Some presets assign different MIDI channels to different pages. When a page has a dedicated channel, it overrides the global MIDI Channel from Device Params (Knob 8). Pages without a dedicated channel use the global setting. Per-page channels are baked into each preset and can't be changed on-device.

Bank Select Automation

MIDI Commander includes intelligent bank select behavior for hardware that uses multi-message program navigation:

- Changing **CC 0 (Bank MSB)** automatically sends CC 32 (LSB) = 0 and re-fires the current Program Change
- Changing **CC 32 (Bank LSB)** also re-fires the current Program Change

This lets you browse banks and presets on compatible gear without manually re-sending Program Change each time. Bank Select automation only applies in Absolute mode.

Button Reference

Button	Function
Shift (three dots "...")	Hold = CC edit mode, Double-tap = Preset Mode
Shift + X	Panic — All Sound Off + All Notes Off, all 16 channels
Shift + Play	Send MIDI Continue
Shift + Record	Toggle Ableton Link on/off
Play	Toggle MIDI Start / Stop
Up arrow	Octave +1
Down arrow	Octave -1
Right arrow	User Views: next encoder bank. Preset Mode: next preset page (P4 → P5 → P6 → P7).
Left arrow	User Views: previous encoder bank. Preset Mode: previous preset page.
Duplicate	Hold Shift + press in Preset Mode to enter Save Mode
Step 1-16	Bank select / Preset load / Save target / Encoder pick in label rename
Encoder touch	Shows current value popup on OLED
Knob 1 (in Preset Mode)	Cycle through presets on the current page (press **Capture** to load)
Knob 2 (in Preset Mode)	Enter Label Rename mode
Knob 8 (in Preset Mode)	Cycle Relative Encoder Mode
Capture (in Preset Mode)	Load the preset highlighted by Knob 1
Capture (in Rename mode)	Confirm the rename

Workflow Examples

Customizing for a New Synth

1. Start from the Generic Synth preset (loaded by default).
2. Navigate to User Views so the encoders are in CC mode.
3. Hold Shift + turn each encoder to reassign CCs matching your synth's parameters.
4. Use the step buttons to switch banks and set up multiple pages of controls.
5. Double-tap Shift > Hold Shift + Duplicate > press an empty step button to save.

Building a Multi-Page CC Template

1. Start from the Blank Template (Page 4, Slot 2) or any preset. Make sure you're in User Views.
2. Step buttons 1-16 each represent a bank of 8 encoders — that's 128 CC assignments total.
3. Navigate to bank 1 (Step 1), hold Shift, and assign your first 8 CCs.
4. Navigate to bank 2 (Step 2), hold Shift, assign the next 8.
5. Repeat for as many banks as you need.
6. Save your template to a preset slot for instant recall.

Setting Up Keyboard and Pads

1. Navigate to Device Params on Move.
2. Set your Root Note (Knob 1), Scale (Knob 2), and Layout (Knob 3).
3. Choose a Pad Color (Knob 6) and Velocity Curve (Knob 7).
4. Set MIDI Channel (Knob 8) to match your receiving device.
5. Switch back to User Views to play pads and control CCs simultaneously.

Using as a DAW Control Surface

1. Double-tap Shift to enter Preset Mode.
2. Turn Knob 8 to select the right relative mode for your DAW: - **Ableton Live / Bitwig:** Relative 1 - **Logic / Cubase / ProTools:** Relative 3 - **Native Instruments:** Relative 2
3. Exit Preset Mode. Save the preset to keep the setting.
4. In your DAW, set the MIDI controller input to the matching relative/encoder mode.
5. Map encoders to parameters — smooth control with no value jumps.

Using Ableton Link

1. On Move: RNBO runner menu > Transport > **Sync: On**.
2. On your DAW or app: enable Ableton Link.
3. Press **Shift + Record** on Move. OLED shows "ABL Link On".
4. Press **Play** — transport syncs wirelessly with all Link-enabled devices.
5. Press **Shift + Record** again to disable Link.

Technical Notes

- MIDI Commander runs in RNBO Takeover Mode. Move's normal instruments are disabled while loaded.
- Pure MIDI device — no audio processing, minimal CPU footprint.
- MIDI outputs via both USB-A and USB-C simultaneously.
- Presets persist via Move's Device Preset system. Save a Device Preset after customizing to keep your setup across reboots.
- SysEx output requires a direct MIDI connection (USB or DIN). Some DAWs and MIDI routing software filter SysEx messages.

MIDI Commander v2.2 — Made for Ableton Move For per-template page-by-page parameter references, see the **Template Guides** folder shipped with this manual.