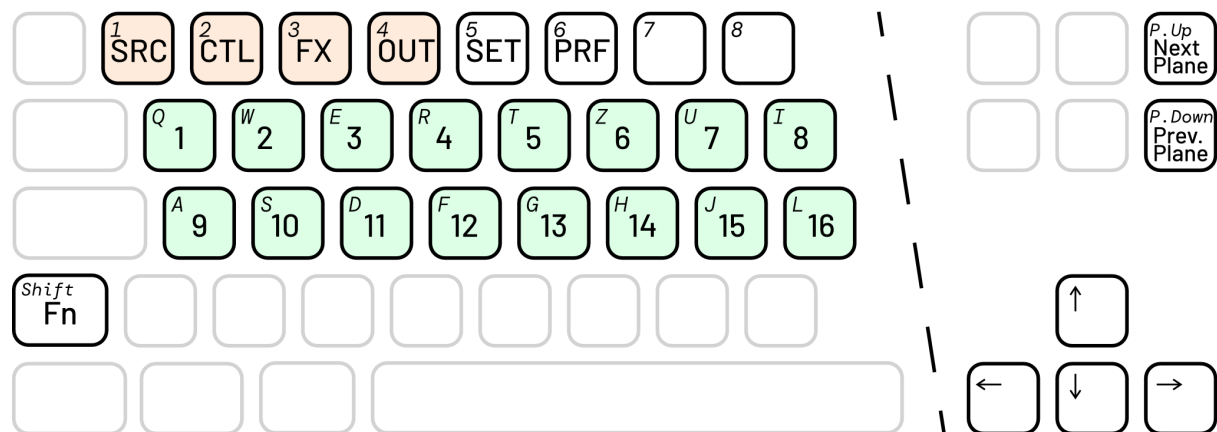


VM-1 User Manual

Build Instructions

→ Download the build instructions on vm-1.com

Keyboard Layout



VM-1 key	Keyboard key	Description
1-16	Q-I, A-L	Media Buttons. Press a Media Button to select and play a Media Slot . Press it again to stop a Media Slot. Press it in combination with Fn to select the Media Slot without playing.
SRC	1	Source. Assign a media source to a Media Slot.
CTL	2	Control. Adjust settings for the currently selected Media Slot.
FX	3	Effects. Add effects to the currently selected Plane .
OUT	4	Output. Adjust settings for the currently selected Plane .
SET	5	Settings. Adjust Fade Time, Volume, Connect to the VM-1, Re-Initialize HDMI outputs and inputs, About.
PRF	6	Performance. Overview of the currently playing Media Slots and Planes.

Arrow Keys	Arrow Keys	Menu Navigation. Use in Combination with Fn to change values or e.g. move the edges of a plane in the OUT menu for projection mapping.
Next / Previous Plane	Page Up / Down	Next / Previous Plane. Change currently selected plane (available only in FX and OUT menu).
Fn	Shift	Additional Functions for the Menu Keys.
Fn + Menu keys	Shift + 1-8	Select bank A to H for Media Slots.

Video Codec Settings

Format/Container	<i>MPEG-4 (.mp4) (or QuickTime (.mov))</i>
Resolution	<i>1920 × 1080 (VM-1 plays videos up to 2048×2048)</i>
Codec	<i>H.265 / HEVC (not H.264)</i>
Frame rate	<i>30 fps (60 fps works but drops frames when playing four videos simultaneously)</i>
Encoder	<i>MainConcept or Native (or choose automatic)</i>
Key Frames	<i>Every 1 Frames / each frame (best for looping videos)</i>
Encoding Profile	<i>Main or 8-Bit (not 10-Bit or HDR)</i>
Quality	<i>20.000 Kbit/s or 20 Mbit/s or 2.5 MByte/s</i>

Recording Video for VM-1

Best practice is to record directly with 30 fps or 60 fps.

→ On iOS, we recommend the KINO application by Lux Optics. Here are some settings we would like to recommend:

- **Disable rotation-lock** in iPhone settings. Otherwise, even horizontal videos are stored in portrait-format. However, VM-1 can easily rotate videos.
- use these record settings:
 - **resolution:** FHD - 1920×1080
 - **frame rate:** 30 fps
 - **color space:** sRGB/SDR
 - **codec:** HEVC (H.265)

- **Enable stabilization.** Even though tiny movements might look artificial. Without stabilizer, the video tend to get too shaky.
- **Disable instant grade.**

Connect to the VM-1 and Uploading Media

1. Go to the **Settings** menu and select **Connect to VM-1**.
2. Connect to VM-1's internal **WiFi** via the QR-Code or the SSID and password. Each VM-1 has a random unique number.
3. Choose **File Manager** to access Tiny File Manager via Qr-Code or the URL.
4. In your browser (mobile or desktop), select **Upload** in the top right menu.



IMPORTANT: Today's smartphones record videos in H.265, which the VM-1 is optimized for. When uploading videos from your smartphone, make sure to select "Current Format" within the sharing options. iOS will otherwise convert the video to H.264 ("Most Compatible"), which will not play on VM-1.