

Keycron Keyboards

Keychron Mechanical Keyboards Reference Guide

This guide details operating modes, Bluetooth pairing, RGB/LED light controls, default hotkeys, QMK/VIA customization, and Sway WM configuration for **Keychron Mechanical Keyboards** (K Series, Q Series, V Series, Pro Series).

1. Bluetooth Pairing & Switch Control

Toggle Switches (Side / Rear Panel)

- **Mode Switch:**
 - **BT:** Bluetooth wireless mode.
 - **OFF:** Turns off battery power (wired USB connection still works).
 - **Cable:** USB Type-C wired mode (disables Bluetooth radio).
- **OS Switch:**
 - **Mac/iOS:** Maps Option to `Alt` and Command to `Win`. Uses **Layers 0 & 1** in QMK/VIA.
 - **Win/Android:** Standard Windows/Linux layout. Uses **Layers 2 & 3** in QMK/VIA.

Bluetooth Device Pairing & Switching

Keychron keyboards support up to 3 host devices:

- **Pairing Mode:** Hold `Fn + 1`, `Fn + 2`, or `Fn + 3` for **4 seconds** until the number key LED flashes rapidly. Select *Keychron K/Q Keyboard* in your host's Bluetooth menu.

- **Switching Devices:** Short-press **Fn + 1**, **Fn + 2**, or **Fn + 3** to switch between paired hosts (takes ~1-2 seconds to re-connect).
 - **Auto-Sleep / Power Saving:**
 - Disable Auto-Sleep: Hold **Fn + S + 0** for **4 seconds** (LED flashes to confirm).
 - Re-enable Auto-Sleep: Hold **Fn + S + 0** for **4 seconds**.
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2. LED Light & Backlight Controls

Keychron keyboards feature dedicated hardware keys and **Fn** shortcuts to control RGB/White backlighting:

Basic Backlight Controls

- **Toggle Light On/Off:** Press the **Light Effect Key** (top-right bulb icon key) or **Fn + Light Key** (or **Fn + Tab** on select models).
- **Change Light Effect Pattern:** Press **Fn + Q** or short-press the **Light Effect Key** to cycle through 18+ RGB animation modes.
- **Change Backlight Color:** Press **Fn + E** or **Fn + Right Arrow** / **Fn + Left Arrow** to cycle through static colors.

Brightness & Speed Adjustments

- **Increase Brightness:** **Fn + W** or **Fn + Up Arrow** (or **Fn + F6** in Windows mode).
 - **Decrease Brightness:** **Fn + S** or **Fn + Down Arrow** (or **Fn + F5** in Windows mode).
 - **Increase Effect Animation Speed:** **Fn + =** (Plus key) or **Fn + D**.
 - **Decrease Effect Animation Speed:** **Fn + -** (Minus key) or **Fn + A**.
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3. Core Hotkeys & Functional Shortcuts

Multimedia & Function Keys (**F1** – **F12**)

- **Mac Mode (Default):** Top row defaults to media functions (Brightness, Mission Control, Media Play/Pause, Volume). Press **Fn + F1..F12** for standard **F** keys.

- **Windows Mode:** Top row defaults to standard `F1..F12` keys. Press `Fn + F1..F12` for multimedia controls.
- **Toggle Function Key Mode:** Hold `Fn + K + C` for **4 seconds** to swap top-row default behavior between Media keys and `F1..F12`.

System Shortcuts & Troubleshooting

- **Factory Reset:** Hold `Fn + J + Z` for **4 seconds** until the backlight flashes 3 times.
- **Battery Level Indicator:** Press `Fn + B`. The backlight green/red bar indicates remaining battery percentage.
- **Windows Key Lock:** Press `Fn + Win` to disable the Windows Start key during gaming.

4. QMK / VIA Customization

Keychron Q Series, V Series, and Pro Series models support real-time remapping via **VIA**:

1. **Access Configurator:** Open usevia.app or caniusevia.com in a WebHID-compatible browser (Chrome/Edge/Brave).
2. **Layer Mapping:**
 - **Layer 0:** Mac Base (Default Mac keys)
 - **Layer 1:** Mac Fn (Mac shortcuts & media keys)
 - **Layer 2:** Windows Base (Default Win/Linux keys)
 - **Layer 3:** Windows Fn (Windows shortcuts & lighting)
3. **Important Note for Windows/Linux Users:** When the physical switch is set to **Win/Android**, VIA edits must be made on **Layer 2** and **Layer 3** for changes to take effect.
4. **Linux Udev Permissions:** To allow Chrome/Chromium WebHID access to `/dev/hidraw*`, create `/etc/udev/rules.d/50-keychron.rules`:

```
KERNEL=="hidraw*", ATTRS{idVendor}=="3434", MODE="0666", TAG+="uaccess"
```

Reload udev rules:

```
sudo udevadm control --reload-rules && sudo udevadm trigger
```

5. Sway WM / Linux (Arch & Debian) Configuration

This section covers setting up Keychron keyboards, function keys (**F1**–**F12**), rotary knobs, and custom buttons under the **Sway** window manager on **Arch Linux** and **Debian / Ubuntu**.

5.1 Required Package Installation

Install the recommended utilities for audio, brightness, media control, screenshots, and event debugging:

Arch Linux:

```
sudo pacman -S --needed \  
  wireplumber \  
  pipewire-audio \  
  brightnessctl \  
  playerctl \  
  grim \  
  slurp \  
  wl-clipboard \  
  wev
```

Debian / Ubuntu:

```
sudo apt update && sudo apt install -y \  
  wireplumber \  
  pipewire-audio-client-libraries \  
  brightnessctl \  
  playerctl \  
  grim \  
  slurp \  
  wl-clipboard \  
  wev
```

5.2 Kernel Apple/Keychron Driver Options (`hid_apple`)

If top-row function keys trigger media keys instead of standard `F1`–`F12` (or vice-versa), configure the `hid_apple` kernel module:

Create or edit `/etc/modprobe.d/hid_apple.conf`:

```
options hid_apple fnmode=2
```

- `fnmode=2`: Top row defaults to standard `F1`–`F12` keys. Hold `Fn` for media functions.
- `fnmode=1`: Top row defaults to media functions. Hold `Fn` for standard `F1`–`F12`.

Regenerate initramfs and reboot:

- **Arch Linux:**

```
sudo mkinitcpio -P
```

- **Debian / Ubuntu:**

```
sudo update-initramfs -u
```

5.3 Debugging Key Signals (`wev`)

To identify keycodes emitted by the rotary knob or custom PlayStation/macro buttons under Wayland/Sway:

```
wev
```

Press or turn the control while focusing the `wev` window. Note the reported XKB keysym name (e.g. `XF86AudioRaiseVolume`, `XF86AudioPlay`) or numeric keycode.

5.4 Modular Sway Configuration (`include`)

Sway natively supports the `include` directive to organize keybindings into dedicated configuration files.

Add the `include` directive in `~/.config/sway/config`:

```
include config.d/*
```

Create `~/.config/sway/config.d/keychron.conf` and populate it with your keyboard bindings:

```
# =====  
# Keychron Keyboard & Function Key Bindings for Sway  
# Location: ~/.config/sway/config.d/keychron.conf  
# =====  
  
# --- Volume & Rotary Knob Controls ---  
# Knob Clockwise: Volume Up  
bindsym XF86AudioRaiseVolume exec wpctl set-volume @DEFAULT_AUDIO_SINK@ 5%+  
# Knob Counter-Clockwise: Volume Down  
bindsym XF86AudioLowerVolume exec wpctl set-volume @DEFAULT_AUDIO_SINK@ 5%-  
# Knob Click: Mute Audio  
bindsym XF86AudioMute          exec wpctl set-mute @DEFAULT_AUDIO_SINK@ toggle  
# Microphone Mute (if mapped)  
bindsym XF86AudioMicMute      exec wpctl set-mute @DEFAULT_AUDIO_SOURCE@ toggle  
  
# --- Media Playback Controls ---  
# Play / Pause Toggle  
bindsym XF86AudioPlay          exec playerctl play-pause  
bindsym XF86AudioPause         exec playerctl pause  
# Next Track  
bindsym XF86AudioNext          exec playerctl next  
# Previous Track  
bindsym XF86AudioPrev          exec playerctl previous  
# Stop Playback  
bindsym XF86AudioStop          exec playerctl stop  
  
# --- Display & Keyboard Backlight Brightness ---  
# Screen Brightness Up / Down (F1 / F2 or dedicated keys)  
bindsym XF86MonBrightnessUp    exec brightnessctl set +5%  
bindsym XF86MonBrightnessDown  exec brightnessctl set 5%-  
  
# Keyboard LED Backlight (Hardware controlled or software via brightnessctl)  
bindsym XF86KbdBrightnessUp    exec brightnessctl --device='*kbd*' set +10%  
bindsym XF86KbdBrightnessDown  exec brightnessctl --device='*kbd*' set 10%-  
  
# --- Screenshots & Special Function Keys ---
```

```
# Screenshot Key / Keychron Camera Key
bindsym Print                exec grim -g "${slurp}" - | wl-copy
bindsym XF86SelectiveScreenshot  exec grim -g "${slurp}" - | wl-copy

# App Launchers / Search / Calculator Keys
bindsym XF86Calculator        exec foot -e python3
bindsym XF86Search            exec rofi -show drun
bindsym XF86Launch1           exec rofi -show drun

# --- Custom Knob & PlayStation / Macro Buttons (Remapped via VIA) ---
# If remapped in VIA to send unused function keys (F13 - F24):
# Example: Rotary Knob mapped to Screen Brightness (F13/F14)
bindsym F13 exec brightnessctl set 5%-
bindsym F14 exec brightnessctl set +5%

# Example: PlayStation / Novelty Macro Buttons (F15 - F18)
bindsym F15 exec foot
bindsym F16 exec rofi -show drun
bindsym F17 exec swaymsg workspace 1
bindsym F18 exec swaymsg workspace 2
```

5.5 Modifier Combinations with the Rotary Knob

You can bind modifier keys (`Ctrl`, `Alt/Mod1`, `Shift`, `Super/Mod4`) combined with knob rotation or press in `~/.config/sway/config.d/keychron.conf`:

```
# --- Unmodified Knob Turn: Volume ---
bindsym XF86AudioRaiseVolume exec wpctl set-volume @DEFAULT_AUDIO_SINK@ 5%+
bindsym XF86AudioLowerVolume exec wpctl set-volume @DEFAULT_AUDIO_SINK@ 5%-
bindsym XF86AudioMute        exec wpctl set-mute @DEFAULT_AUDIO_SINK@ toggle

# --- Alt + Knob Turn: Screen Brightness ---
bindsym Mod1+XF86AudioRaiseVolume exec brightnessctl set +5%
bindsym Mod1+XF86AudioLowerVolume exec brightnessctl set 5%-

# --- Ctrl + Knob Turn: Track Prev / Next ---
bindsym Control+XF86AudioRaiseVolume exec playerctl next
```

```
bindsym Control+XF86AudioLowerVolume exec playerctl previous
bindsym Control+XF86AudioMute          exec playerctl play-pause

# --- Shift + Knob Turn: Switch Sway Workspaces ---
bindsym Shift+XF86AudioRaiseVolume exec swaymsg workspace next
bindsym Shift+XF86AudioLowerVolume exec swaymsg workspace prev
```

Reload Sway config after editing:

```
swaymsg reload
```

Keyboards

Home Office: Keychron Q6 Pro 2026-08-07 / Gateron Banana



Personal Desktop: Keychron Q6 QMK 2023-11-07 / Gateron G Pro Brown



Studio: Keychron Q6 Pro 2023-11-07 / K Pro Banana



Portable: Keychron C1 87 Key TKL Wired 2025-03-20 / Gateron Brown

Work Office: Keychron Q6 QMK 2024-09-06 / Gateron G Pro Brown

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