

Link Backlight and RGB lighting

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2. Backlight and RGB lighting

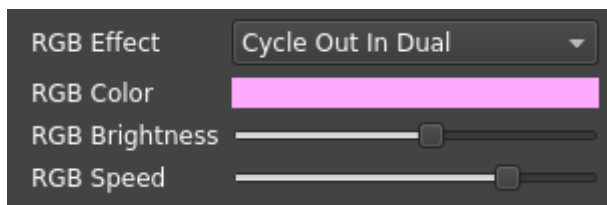
Vial support several QMK lighting modes including single-color backlight, RGB lighting and RGB matrix.

[↻](#) RGB Matrix / VialRGB

RGB matrix is a QMK lighting mode suitable for implementing per-key RGB lighting as well as a combination of per-key RGB and underglow. It is the recommended lighting mode for most purposes. In addition, Vial builds up on QMK RGB Matrix to provide direct RGB control with a script running on the computer.

In order to use RGB Matrix with Vial, first, follow [QMK documentation](#) to enable and configure the feature. Then, add `VIALRGB_ENABLE = yes` to your `keymaps/vial/rules.mk` and `"lighting": "vialrgb"`, to your `keymaps/vial/vial.json`.

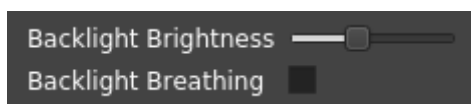
If you are having issues with VialRGB direct control mode (e.g. running out of memory), you can disable it by adding `#define VIALRGB_NO_DIRECT`.



Vial GUI allows configuring RGB Matrix effect (the list of effects will be automatically constructed based on RGB effects you have enabled), color, brightness and speed. Additionally, a raw HID API is provided for third-party applications to directly control the lights. An example script is available [here](#).

[↻](#) Backlight

Backlight here refers to the single-color key backlighting, typically achieved by soldering 2-pin LEDs to every switch position. Vial's backlighting feature lets users control backlight brightness and enable or disable breathing backlight animation.



In order to use this feature, ensure that [QMK's Backlight](#) is enabled (`BACKLIGHT_ENABLE = yes`). Make sure there's `#define BACKLIGHT_BREATHING` in your `config.h` so that the user can switch the breathing feature on and off in Vial GUI.

Finally, add `"lighting": "qmk_backlight"`, to your `vial.json` in order to activate this feature on the GUI side. [\(example\)](#)

RGB Lighting

RGB lighting is a lighting mode most suitable for keyboard underglow. Note that even if your keyboard only has underglow and no per-key RGB, it might be more suitable for your project to use RGB Matrix instead as that is a much more powerful feature.

To use this feature, first follow [QMK documentation](#) to enable RGB Lighting. Then, add `"lighting": "qmk_rgblight"`, to your `vial.json`. [\(example\)](#)

Combining Backlight and RGB Lighting

You can also have a keyboard that implements both Backlight and RGB Lighting features. First, follow the sections above in order to configure QMK firmware enabling both features. Then, in your `vial.json`, use `"lighting": "qmk_backlight_rgblight"`,. [\(example\)](#)