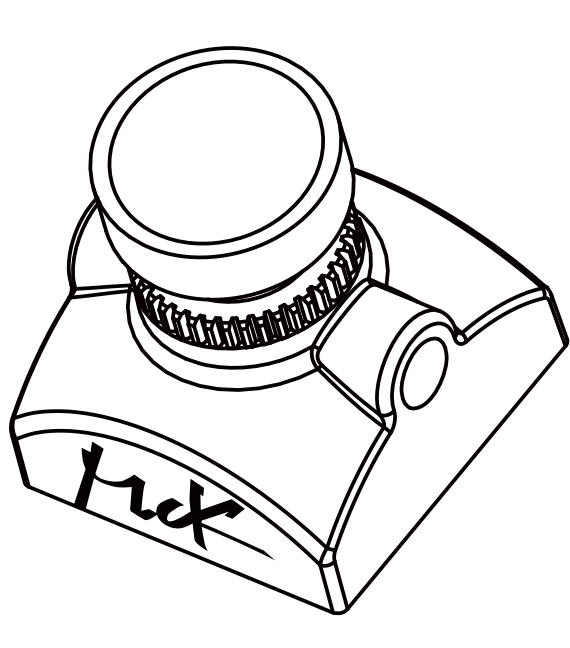




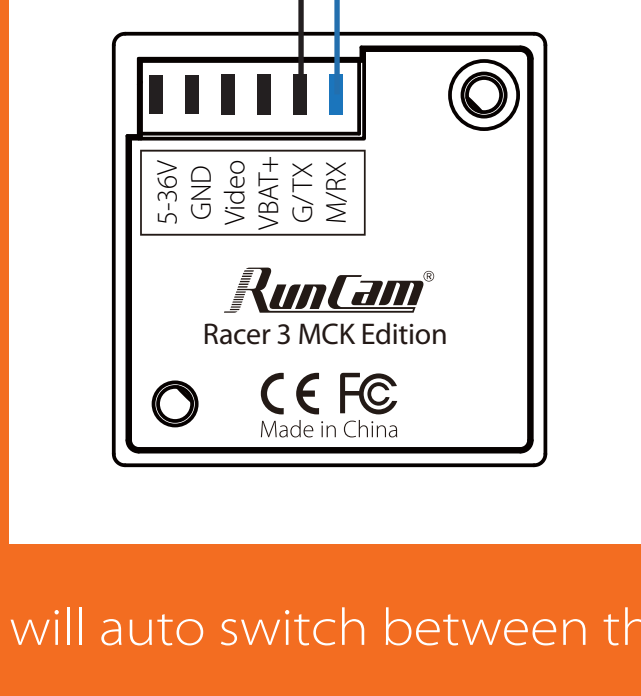
# RunCam Racer MCK Edition

## USER MANUAL

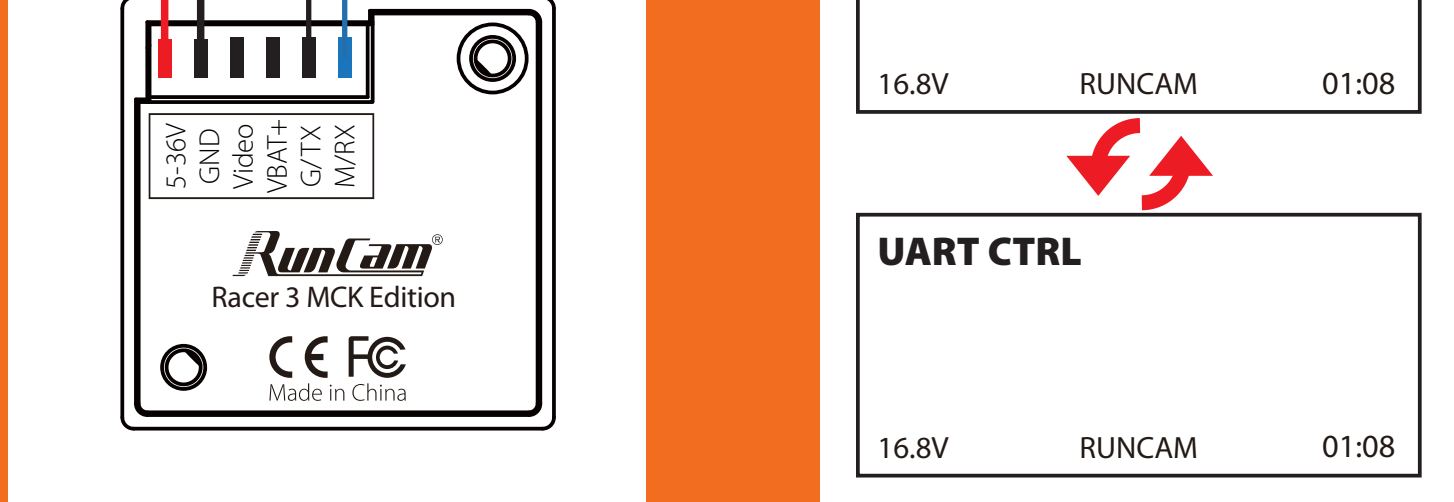
### Joystick Control & UART Control Switchable

The top left corner of the screen will shortly display the current control mode.  
The default is Joystick control mode.

- 1 Short the two camera control pins



- 2 Then power on, camera will auto switch between the two modes

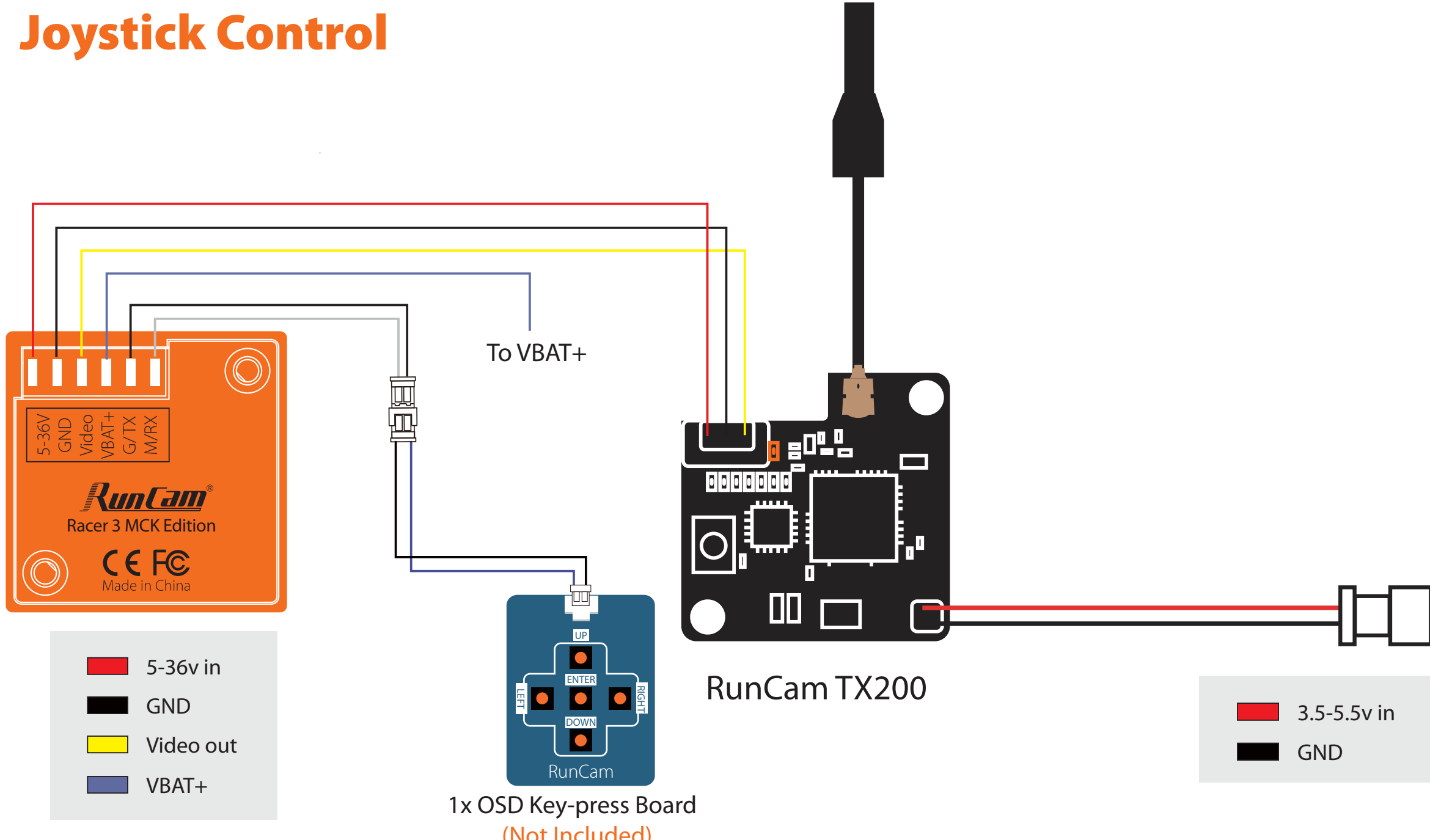


- 3 The mode can be saved after power off. After switching to the desired mode, please unplug the short-circuit cable.

UART Control works with Flight Controllers:

BetaFlight 3.3 or above / ButterFlight 3.4 or above / CleanFlight 2.2 or above / Kiss Flight RC36 or above

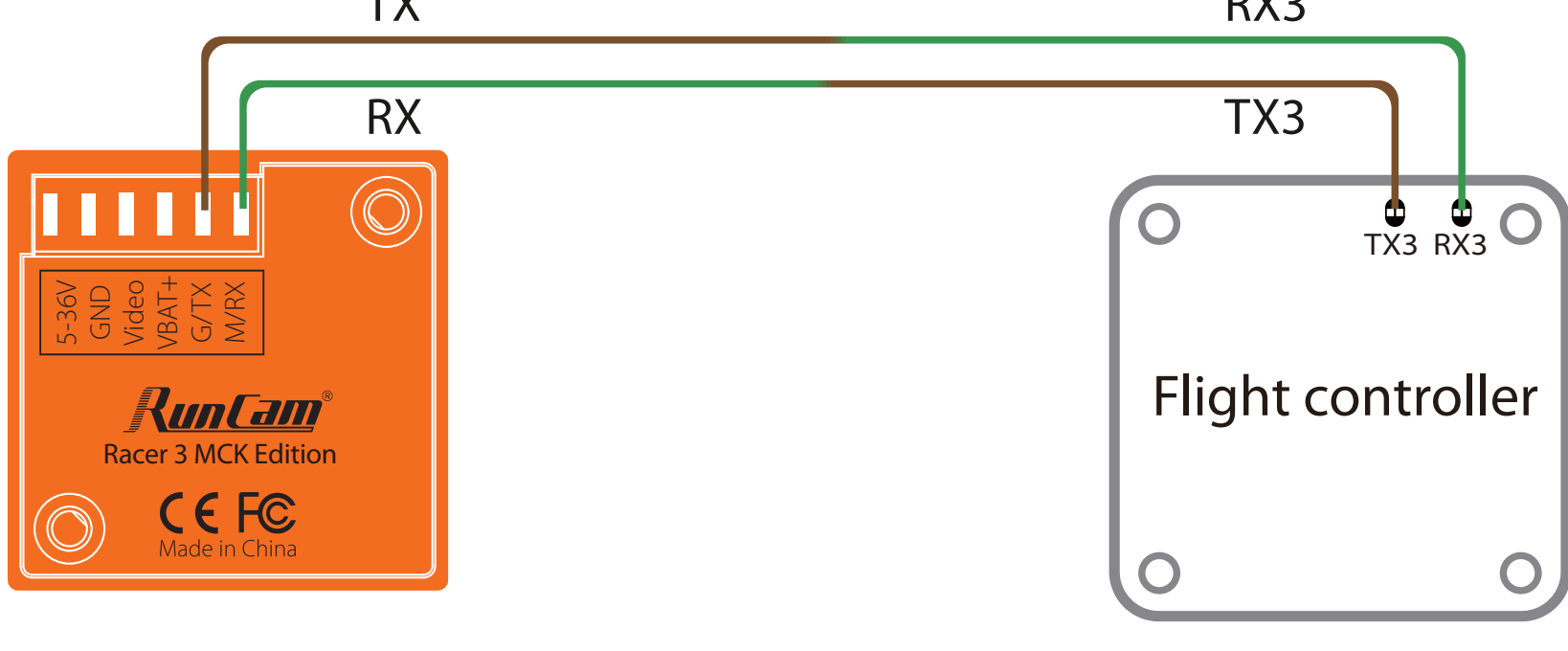
## Joystick Control



## UART Control

### 1.Flight controller wiring

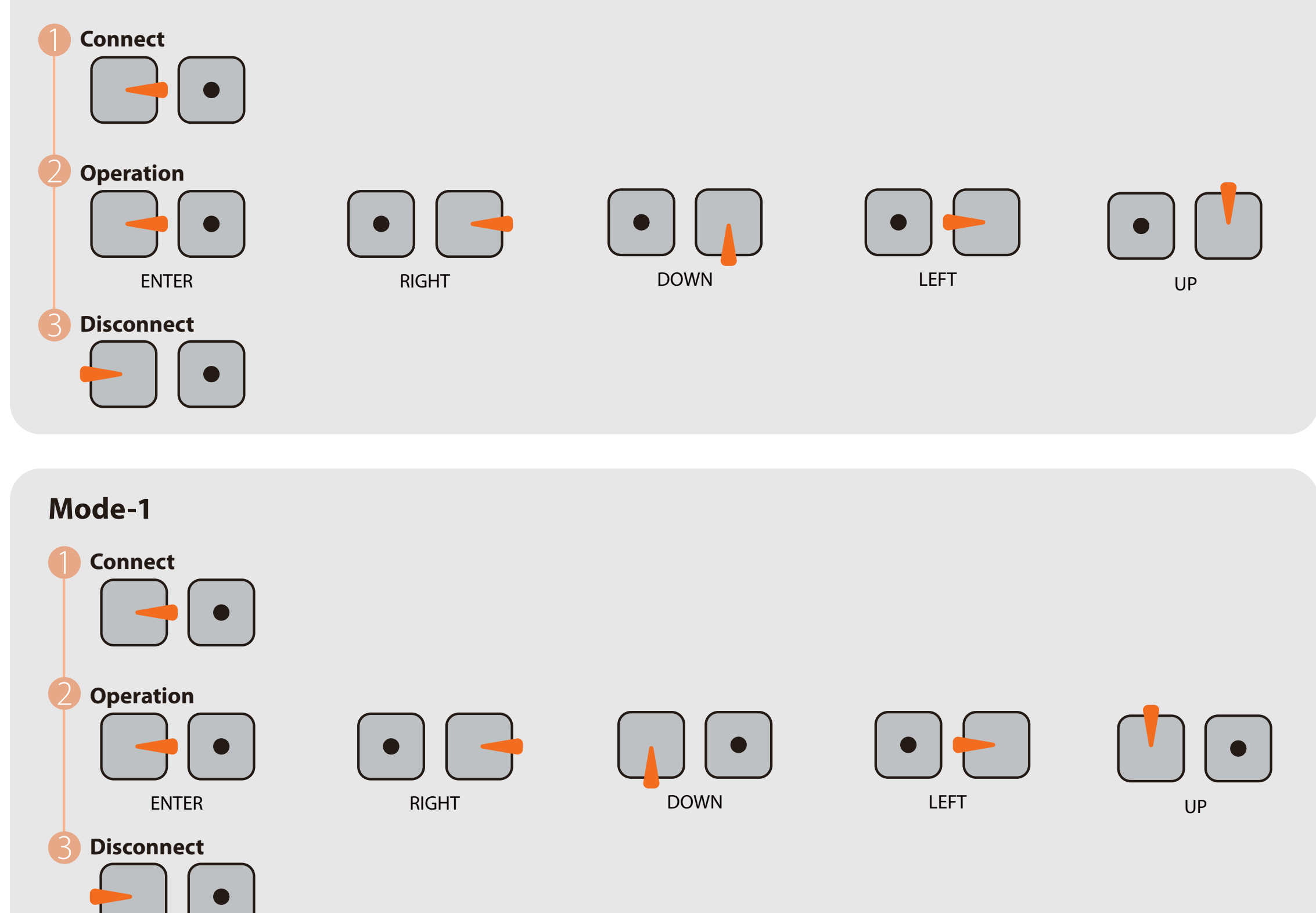
Note: Take UART3 for example



### 2.Betaflight 3.3 or above setting

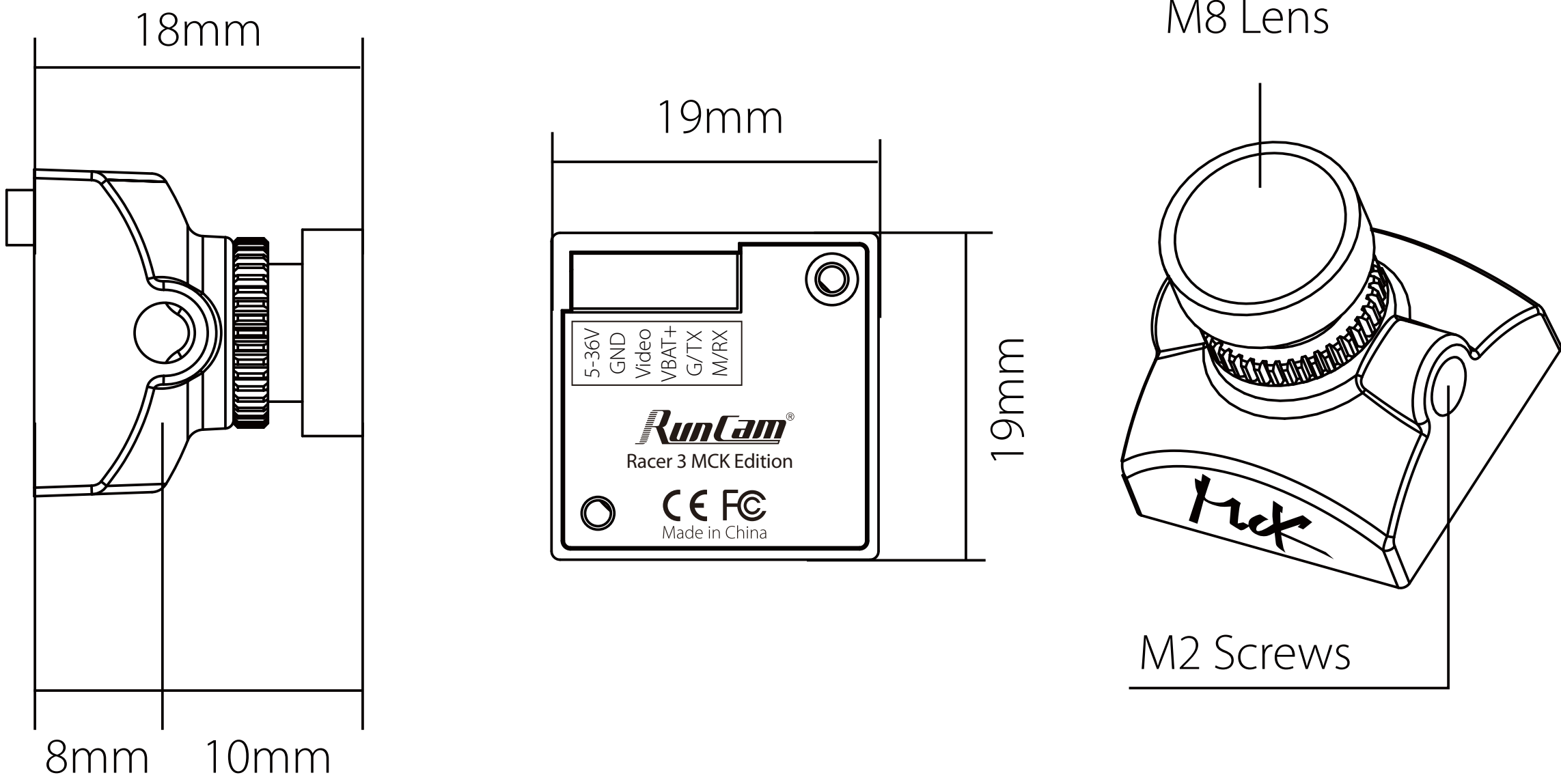
| Identifier | Configuration/MS                           | Serial Rx                           | Telemetry Output                                                                | Sensor Input                                                                    | Peripherals                                                                          |
|------------|--------------------------------------------|-------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| USB VCP    | <input checked="" type="checkbox"/> 115200 | <input type="checkbox"/>            | Disabled <input type="button" value="v"/> AUTO <input type="button" value="v"/> | Disabled <input type="button" value="v"/> AUTO <input type="button" value="v"/> | Disabled <input type="button" value="v"/> AUTO <input type="button" value="v"/>      |
| UART1      | <input type="checkbox"/> 115200            | <input type="checkbox"/>            | Disabled <input type="button" value="v"/> AUTO <input type="button" value="v"/> | Disabled <input type="button" value="v"/> AUTO <input type="button" value="v"/> | Disabled <input type="button" value="v"/> AUTO <input type="button" value="v"/>      |
| UART2      | <input type="checkbox"/> 115200            | <input checked="" type="checkbox"/> | Disabled <input type="button" value="v"/> AUTO <input type="button" value="v"/> | Disabled <input type="button" value="v"/> AUTO <input type="button" value="v"/> | Disabled <input type="button" value="v"/> AUTO <input type="button" value="v"/>      |
| UART3      | <input type="checkbox"/> 115200            | <input type="checkbox"/>            | Disabled <input type="button" value="v"/> AUTO <input type="button" value="v"/> | Disabled <input type="button" value="v"/> AUTO <input type="button" value="v"/> | RunCam Device <input type="button" value="v"/> AUTO <input type="button" value="v"/> |
| UART4      | <input type="checkbox"/> 115200            | <input type="checkbox"/>            | Disabled <input type="button" value="v"/> AUTO <input type="button" value="v"/> | Disabled <input type="button" value="v"/> AUTO <input type="button" value="v"/> | Disabled <input type="button" value="v"/> AUTO <input type="button" value="v"/>      |
| UART5      | <input type="checkbox"/> 115200            | <input type="checkbox"/>            | Disabled <input type="button" value="v"/> AUTO <input type="button" value="v"/> | Disabled <input type="button" value="v"/> AUTO <input type="button" value="v"/> | Disabled <input type="button" value="v"/> AUTO <input type="button" value="v"/>      |

### 3.UART Control



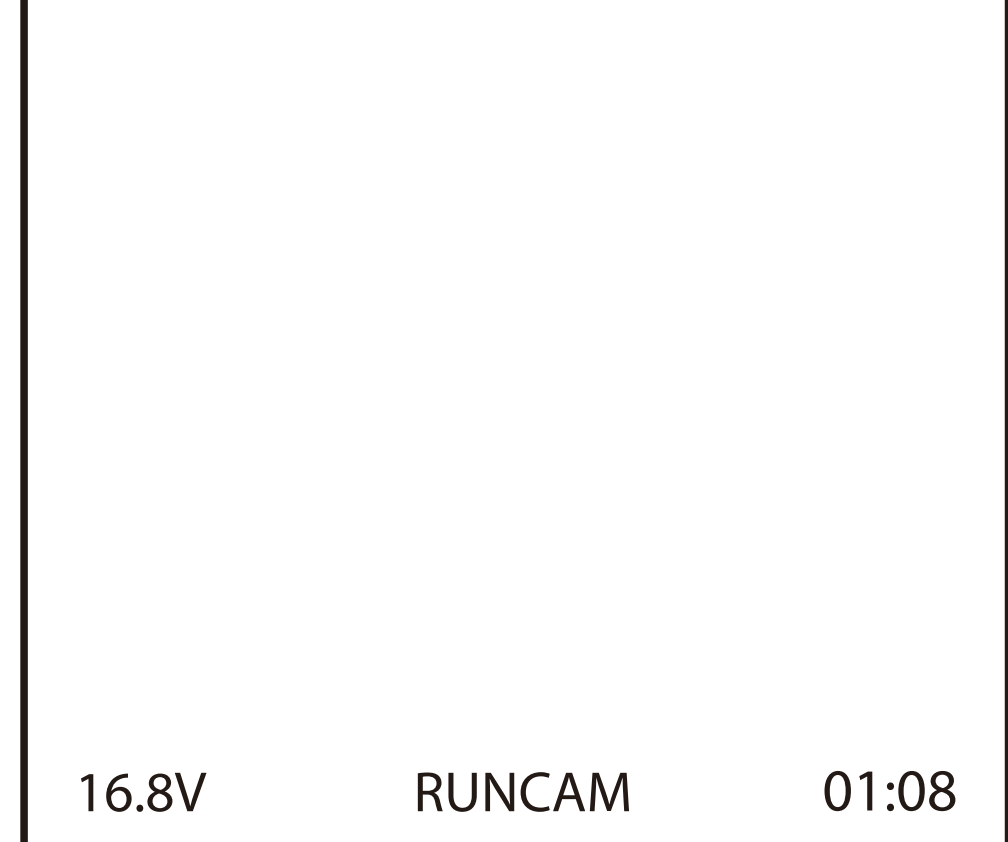
\* When connected, The buzzer on Flight Controller will beep for 3 times; When disconnected, The buzzer on Flight Controller will beep for 2 times only; If connected successfully, you can long press the up button to enter the OSD menu, right button to switch preset scenes, left button to calibrate voltage and down button to reset OSD.

## Dimensions & Installation



## OSD Menu

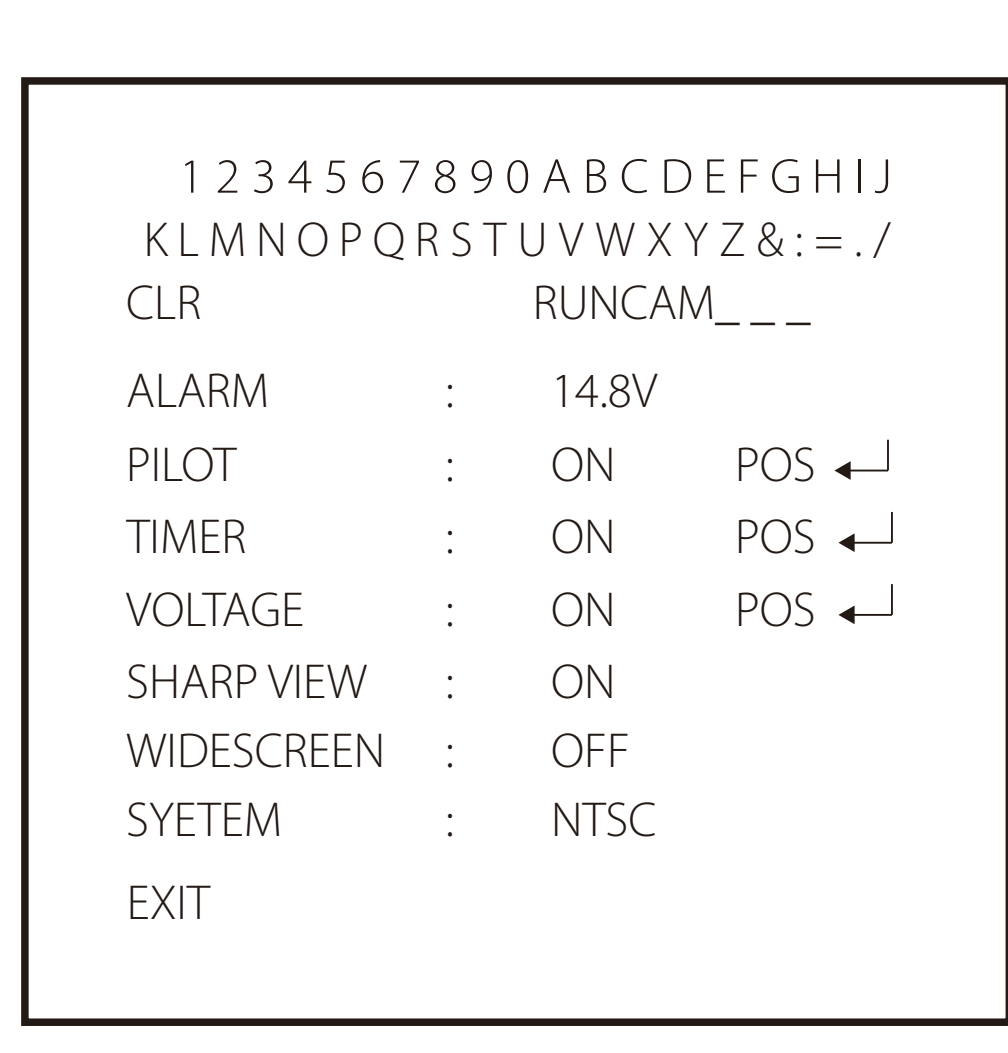
### •QUICK SETTINGS



Quick settings:

- Long press UP button for three seconds to access to the OSD setting's screen
- Long press LEFT button for three seconds to calibrate the voltage. When the voltage text flashes, press UP/DOWN button to adjust it
- Long press DOWN button for six seconds to reset OSD settings to default
- Long press RIGHT button for three seconds to switch between the camera presets

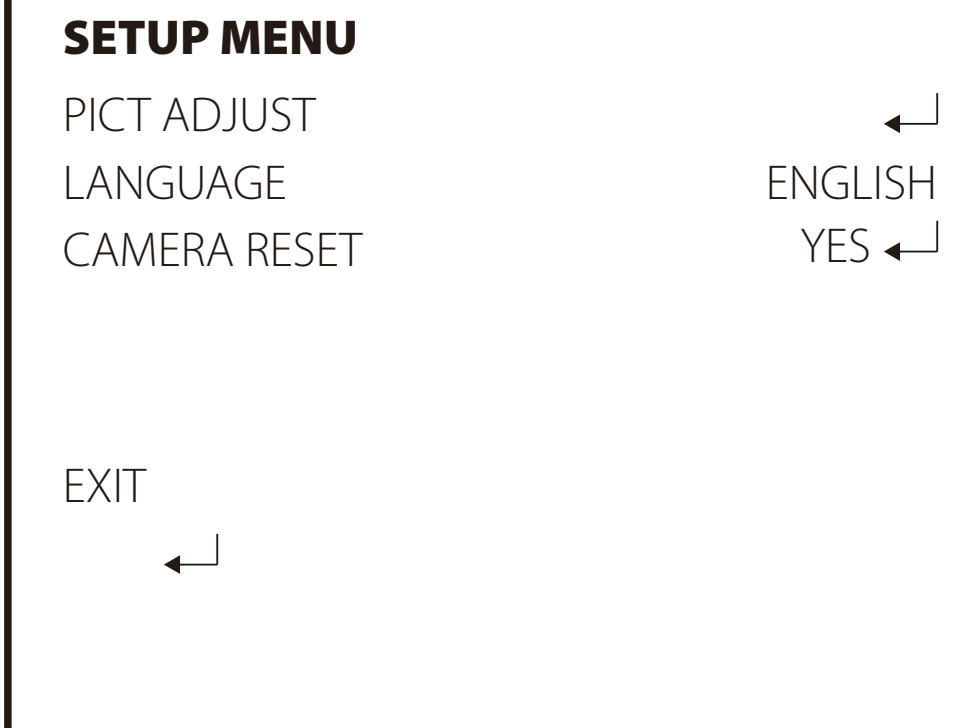
## OSD Menu



- CLR: clear the ID character;
- ALARM: low voltage warning value, smartly judge the warning value of the battery when it's low; if set it manually, then it saves the manual preset value;
- Press the middle button to switch ON / OFF, then move to POS to enter the position adjustment.
- Sharp View: Turn on, it will increase the image details, but also noise.
- WIDESCREEN: Dynamic stretching to aspect ratio of 16:9 to match with screen in 16:9, the image center won't change but the edge will be widened.

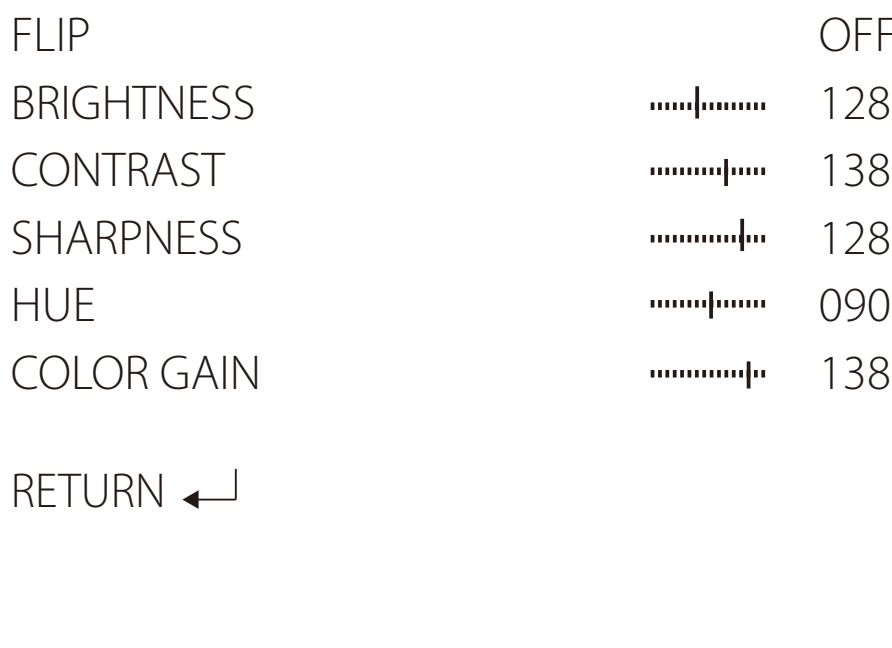
## Camera Menu

### • SETUP MENU



- LANGUAGE ( ENGLISH / DEUTSCH / FRANCAIS / PYCCKNN / PORTUGUES / ESPANOL / 中文 )

### PICT ADJUST



- FLIP ( OFF / H-FLIP / V-FLIP / HV-FLIP )
- BRIGHTNESS ( 128 / 0-255 )
- CONTRAST ( 138 / 0-255 )
- SHARPNESS ( 128 / 0-255 )
- HUE ( 90 / 0-180 )
- COLOR GAIN ( 138 / 0-255 )

## Parameters

| Model                    | RunCam Racer MCK Edition                   |
|--------------------------|--------------------------------------------|
| Image Sensor             | Super WDR CMOS Sensor                      |
| Horizontal Resolution    | 1000TVL                                    |
| Lens                     | 1.8mm FOV 160°                             |
| Screen Format            | 4:3 / Widescreen Switchable                |
| Signal System            | NTSC / PAL Switchable                      |
| Mirror/Flip              | Available                                  |
| Integrated OSD           | Yes                                        |
| One Touch Scene Setting  | Personal/Lightrax                          |
| S/N Ratio                | >50dB                                      |
| Electronic Shutter Speed | Auto                                       |
| Min. Illumination        | 0.01Lux@1.2F                               |
| WDR                      | Super WDR                                  |
| Day/Night                | Auto                                       |
| Menu Control             | Joystick Control / UART Control Switchable |
| Power                    | DC 5-36V                                   |
| Current                  | 110mA@5V / 40mA@12V                        |
| Housing Material         | ABS                                        |
| Net Weight               | 5.5g                                       |
| Dimensions               | L19mm*W19mm*H18mm                          |