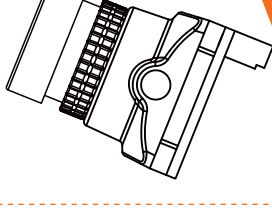


RUNCAM MicroSwift 3

USER MANUAL



1. Flight controller wiring

Note: Take UART3 for example

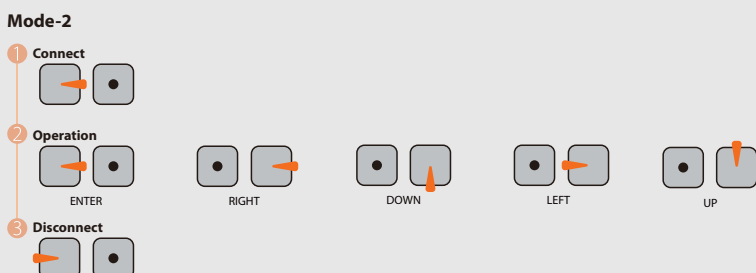


2. Betaflight 3.3 or above setting

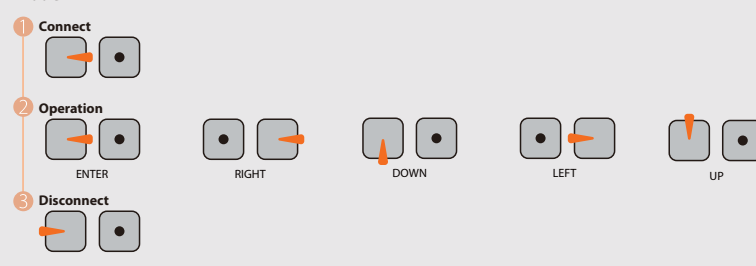
Identifier	Configuration/MS	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	115200		Disabled AUTO	Disabled AUTO	Disabled AUTO
UART1	115200		Disabled AUTO	Disabled AUTO	Disabled AUTO
UART2	115200		Disabled AUTO	Disabled AUTO	Disabled AUTO
UART3	115200		Disabled AUTO	Disabled AUTO	RunCam Device AUTO
UART4	115200		Disabled AUTO	Disabled AUTO	Disabled AUTO
UART5	115200		Disabled AUTO	Disabled AUTO	Disabled AUTO

3. Remote control

Mode-2



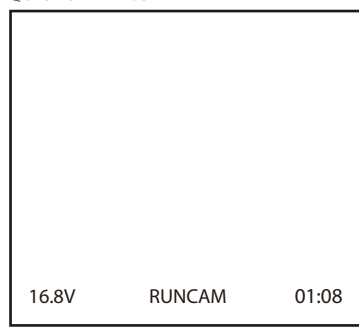
Mode-1



* When connected, Mode LED will be on and the buzzer on Flight Controller will beep for 3 times;
When disconnected, Mode LED will be off and the buzzer on Flight Controller will beep for 2 times only;
If connected successfully, take Micro Swift 2 for example, 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.

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 ten seconds to reset OSD settings to default
- Long press RIGHT button for three seconds to switch between the camera presets

OSD Menu

	1 2 3 4 5 6 7 8 9 0 A B C
	D E F G H I J K L M N O P Q
	R S T U V W X Y Z = / & : .
CLR	RUNCAM_
ALARM	: 11.1V
SCENE	: PERSONAL
SYSTEM	: ON POS ↵
PILOT	: ON POS ↵
TIMER	: ON POS ↵
VOLTAGE	: ON POS ↵
HORIZON	: OFF POS ↵
EXIT	

- 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;
- SCENE: switch the camera presets among Personal / Lightrax / Outdoor / Indoor / Cloudy / Twilight
- Press the middle button to switch ON / OFF, then move to POS to enter the position adjustment.

Camera Menu

• MAIN MENU

PERSONAL MENU	
EXPOSURE	↵
BACKLIGHT	OFF
WHITE BAL	ATW1
DAY & NIGHT	COLOR
IMAGE ADJ	↵
DPC	↵
LANGUAGE	ENGLISH
RESET	↵
EXIT	

• EXPOSURE

EXPOSURE	
SHUTTER	AUTO
BRIGHTNESS	050
AGC	OFF
DWDR	ON ↵
RETURN	RET ↵

- LANGUAGE (English/中文)
- WHITE BAL (ATW1 / ATW2 / AWC→ SET / MANUAL: MANUAL)
- DPC (Cover the lens then press enter key)

- SHUTTER (AUTO / 50-100000 / FLK)
- BRIGHTNESS (50 / 0-255)
- AGC (OFF / LOW / MIDDLE / HIGH)
- DWDR (ON: 63 0-63 / OFF)

Camera Menu

• IMAGE ADJ

IMAGE ADJ	
LENS SHAD	OFF
2DNR	OFF
MIRROR	OFF
FONT COLOR	↵
CONTRAST	110
SHARPNESS	026
DISPLAY	USER ↵
NEG IMAGE	OFF
RETURN	

USER ADJ.	
GAMMA	0.50
PED LEVEL	017
COLOR GAIN	176
RETURN	RET ↵

- LENS SHAD (OFF / ON:22 0-255)
- CONTRAST (110 / 0-255)
- SHARPNESS (26 / 0-31)
- DISPLAY (CRT/LCD/USER)

- GAMMA (0.5 / 0.05-1.0)
- PED LEVEL (17 / 0-63)
- COLOR GAIN (176 / 0-255)

Camera Menu

• BACKLIGHT (BLC / HLC / OFF)

BLC	
AREA SEL	AREA1
AREA STATE	ON
GAIN	042
HEIGHT	004
WIDTH	003
LEFT/RIGHT	006
TOP/BOTTOM	005
RETURN	RET ↵

HLC	
LEVEL	200
MODE	ALL DAY
RETURN	RET ↵

- AREA SEL (AREA1/AREA2)
- GAIN (042 / 0-255)
- HEIGHT (4 / 0-10)
- WIDTH (3 / 0-9)
- LEFT/RIGHT (6 / 0-6)
- TOP/BOTTOM (10 / 0-10)

- LEVEL (200 / 0-255)
- MODE (ALL DAY / NIGHT ONLY)

Camera Menu

• DAY & NIGHT (AUTO / COLOR / B&W / EXT)

D & N AUTO	
D→N LEVEL	080
D→N DELAY	3 SEC
N→D LEVEL	032
N→D DELAY	1 SEC
RETURN	RET ↵

D & N B & W	
BURST	OFF
IR SMART	OFF
IR LEVEL	HIGH
RETURN	RET ↵

- DAY → NIGHT LEVEL (80 / 0-176)
- DAY → NIGHT DELAY (3 / 1-30)
- NIGHT → DAY LEVEL (032 / 0-255)
- NIGHT → DAY DELAY (1 / 1-30)

- BURST (OFF/ON)
- IR SMART (OFF/ON)
- IR LEVEL (HIGH/LOW)

Parameters

Model	RunCam Micro Swift 3
Image Sensor	1/3" SONY Super HAD II CCD
Horizontal Resolution	600TVL
Lens	2.1mm (M12) FOV165° / 2.3mm(M12) FOV 150°
Signal System	PAL/NTSC
Integrated OSD	Yes
One Touch Scene Setting	Personal / Lightrax / Outdoor / Indoor / Cloudy / Twilight
S/N Ratio	>60dB (AGC OFF)
Electronic Shutter Speed	PAL: 1/50~100,000; NTSC: 1/60~100,000
Auto Gain Control (AGC)	Yes
Min. Illumination	0.01Lux@1.2F
WDR	D-WDR
DNR	2DNR
Day/Night	Color/Auto/B&W
Remote Control	Flight Controllers : BetaFlight 3.3 / ButterFlight 3.4 / Cleanflight 2.2
Power	DC 5-36V
Working Current	60mA@12V / 120mA@5V
Net Weight	9g(2.3mm) / 11g(2.1mm)
Dimensions	19mm*19mm*25mm