Junior Racer RTF

Quick start manual

catalog

Junior Racer Whoop Drone include

1x Junior Racer(with Frsky XM+ Receiver)

1x Radio(support Frsky XM+)

1x fpv goggles

1x B3 Chager

1x 300mAh 3S 45C Battery

2x Lipo Battery Strap

1x Props Removal Tool

2x Dipole 5.8G Antennas

1x GEMFAN 1636 4-blade Propeller(4pcs)

1x Nylon Cable Tie(5pcs)

1x M1.4*6mm Screw(6pcs)

Operate Junior Racer Whoop Drone

***Power On/Off:** connect the power cable of to Junior Racer 75 the battery, the power LED, receiver LED and FC LED are on, then the FC LED flashes and the receiver LED turns off. After using, unplug the connection, and all LED will turn off.

***Battery:** connect the battery to the voltage tester to display the current voltage value of the battery.

***Charge:** connect the battery to the charger supplied with the adapter or other 5V power. The LED will show red light when charging; the LED will show green light when finishing charging.

F411 12A AIO FC

FC Parameters:
CPU: STM32F411CEU6 (100MHZ)
Six axis: MPU6000 (SPI connection)
Size: 26mmx26mm
Firmware version: BetaflightTCMM-F411
RC sharing: UART1-RX
OSD: Built-in BetaflightOSD (STM32 controls the OSD chip through SPI in DMA mode)
Receiver: Support FrskyXM/XM+ receiver/Futaba receiver/Flysky receiver/TBS Crossfire receiver
Support programmable LED such as WS2812
Built-in current sensor
Reserved buzzer interface
Reserve DJI port
Weight: 5.07g

ESC Parameters
Support: BLheli/BLHELI_S
Support: PWM, Oneshot125, Oneshot42, Multishot, Dshot150, Dshot300, Dshot600
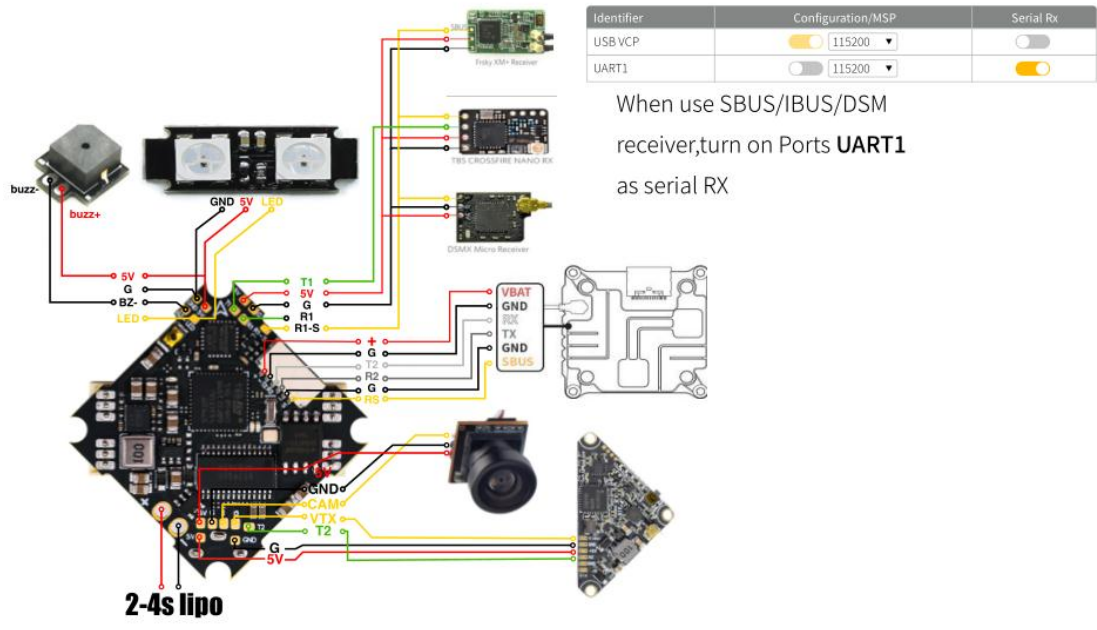Input voltage: 2S-4SLipo
Continuous current: 12A
Peak current: 13A
Firmware: BLHELI_S
Processor: SILABSEFM8BB21F16G
Motor connector: 1.25mm pin header connector
Factory firmware: GH-30-16.7

When use SBUS/IBUS/DSM
receiver,turn on Ports **UART1**
as serial RX

LED Status	Reason	solution
Power LED off	1.Insufficient battery 2.FC is broken	1. Charge the battery 2. Replace the FC
FC LED off and Receiver LED solid	FC is broken	Replace the FC
FC LED flashes Bule at high frequency	Out of control or BB ringing mode enabled	There are many reasons, and the reasons need to be investigated step by step
FC LED flashes Red at high frequency	Low battery voltage	Replacement battery
FC LED flashes Bule at Slow flashing	normal	

Operate the radio
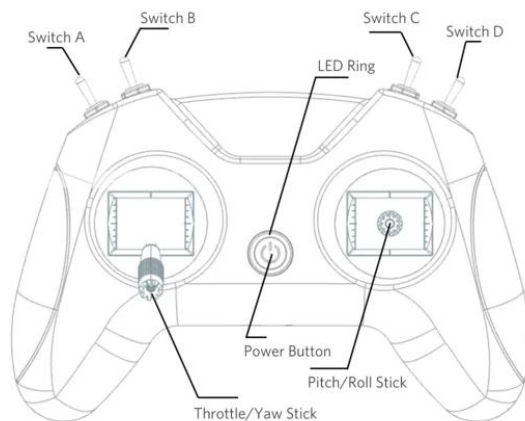
·**Install Battery:** remove the back cover of the transmitter, connect the battery inside to the power interface correctly, and install the back cover.

·**Power On:** Long press the power button for about 3 seconds, then pull the throttle to the lowest position, release the button after the radio vibrates twice, and the power indicator turns from green to blue, indicating that the radio is turned on.

·**Binding:** 1. First press and hold the bind of the receiver, and then power on the aircraft (the receiver's traffic light is always on at this time)

2. After the remote control is turned on, short press the Bind button on the back of the remote control, the power indicator will be red

The color and blue flash alternately and enter the linking state for about 10 seconds.

3. If the receiver flashes red, it means the linking is successful

4. After successful linking, the aircraft can be used again after power on

If it is unsuccessful, repeat the above actions and link again. When the throttle is hit to the lowest level, toggle switch A to unlock, and the motor starts to rotate.

·**Power Off:** press and hold the power button for about 5 seconds, release the button after the transmitter vibrates, and the power indicator light turns off, transmitter is turned off.

·**Charge:** the power indicator light flashes blue slowly and vibrates when the battery approaches the low voltage limit. it need to be stopped immediately. Connect the USB cable to the power supply, and the power LED will show

·**red when charging;** the power LED turns off after the charging process is done.

| LED Status	Reason	Solution
Red Solid	The throttle stick or switches are not in the lowest	Lower throttle and switches to the lowest position. Turn to blue then.
Green Solid	The system is loading.	Wait for the system load completes
Blue Flash Slow	The battery reaches the low voltage limit	Charging the batteries

NVISION A01 VTX

Description:

*Switchable power includes 0mW, 25mW and 200mW.
*This VTX includes SmartAudio function. The flight controller can use the audio cable to communicate with the video transmitter. It allows the flight controller to know the frequency used by the VTX and make changes.
*This VTX supports PitMode.
*Dipole whip high sensitivity antenna. It is mounted to the VTX board durable.
*Output power: 0mW, 25mW and 200mW (adjustable)
*Power supply voltage: 5V. Does not support direct connection to 1S battery
*Weight: 2.0g
*Frequency: 5.8GHz 6 frequency band 48 channels, competition frequency band: 5362~5945MHz

Component Layout Diagram for NVISION A01 VTX:
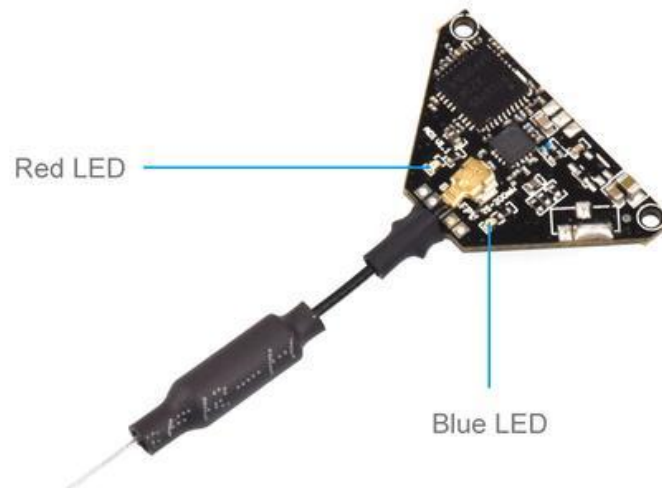
| Blue LED	Red LED	Power Status
Flash Solid	Off	25mW
Flash Solid	Flash Solid	200mW
Off	Flash Solid	PitMode
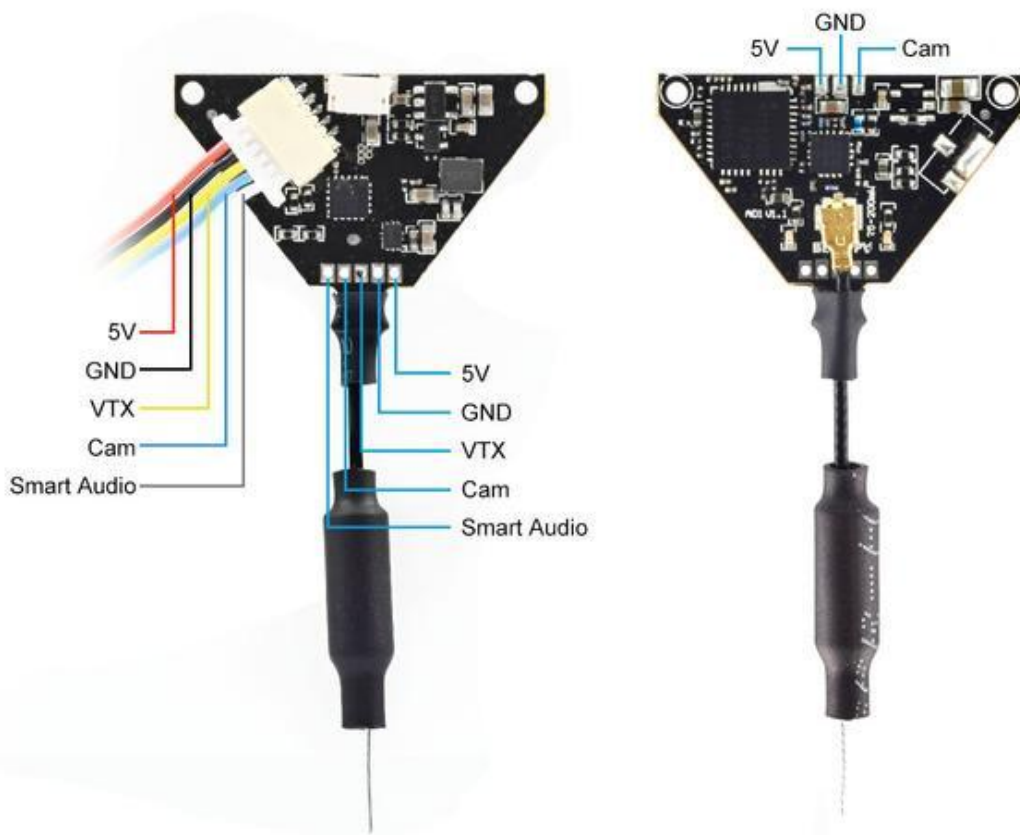
How to Change Frequency & Channel & Power

Only support frequency and power change through the SmartAudio interface.

Method 1: Use the OSD menu.

Enter the OSD menu by radio transmitter sticks (Pitch Stick UP and Yaw Stick Left). Then
FEATURES -> VTX SA to change the frequency and power.
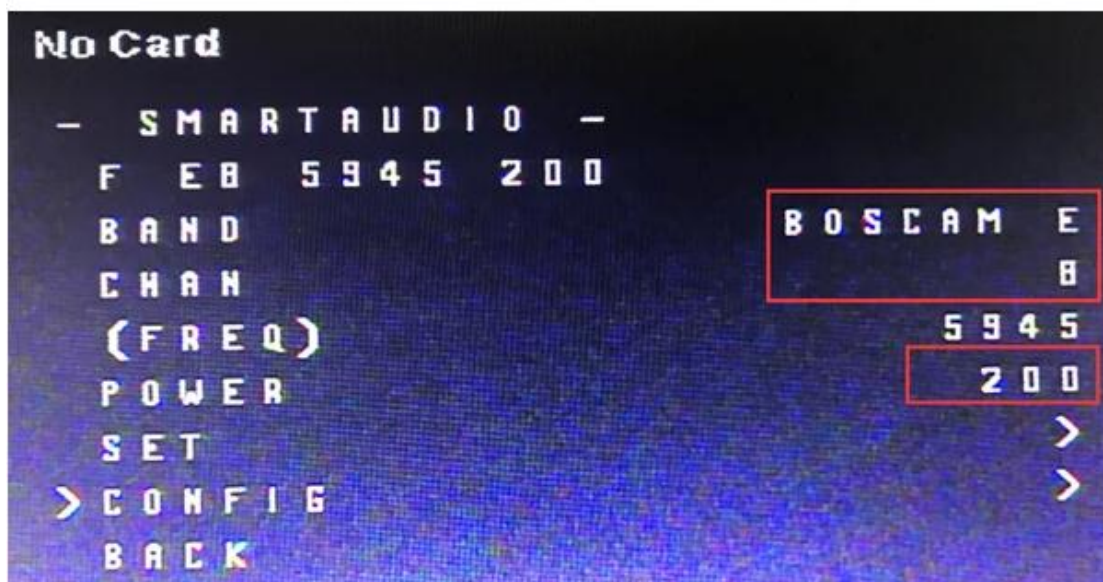
Method 2: Use the Betaflight GUI command.

We could also use the Betaflight CLI commands to change the frequency and power of the VTX.

For example, set the frequency to 5865 and power to 200mW (1 for 25mW / 2 for 200mW);

set vtx_band=1
set vtx_channel=1
*set vtx_freq=5865*
set vtx_power = 2
save

How to Use the PitMode
PitMode allows racers to power up their video transmitters during race events without interfering with other racers and still having the ability to change VTX settings or do some testing. Range is limited to 2-3m and transmission happens on the selected frequency. The PitMode is active when only red LED flash solid.

How to active the PitMode: Enter the OSD menu by radio transmitter sticks. FEATURES -> VTX SA -> CONFIG -> PIT FMODE. Then select the PIR status.

How to exit the PitMode: As the same above, select the OP MODEL to FREE to close the PitMode. Then the VTX will recover to the 25mW power status.
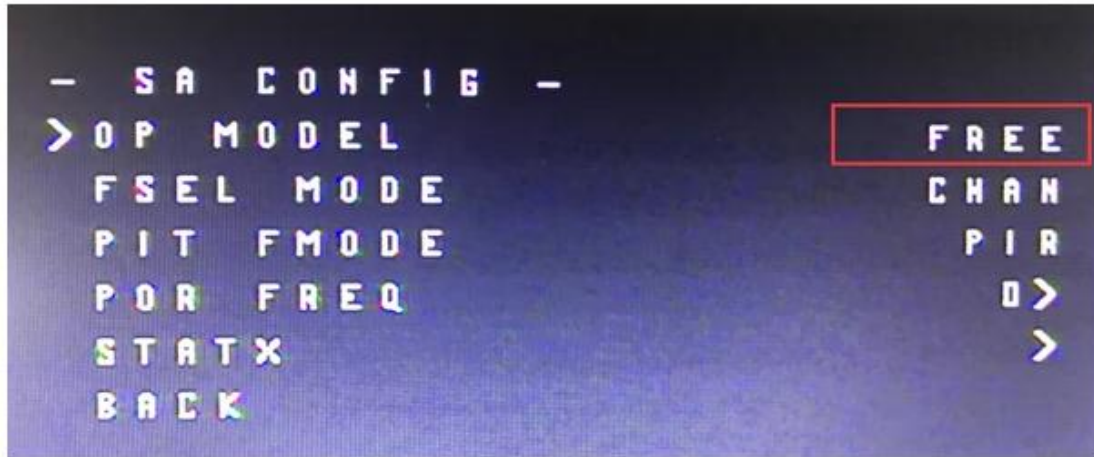
TRANSMISSION FREQUENCY TABLE

This A01 VTX could support 3 frequency table according to your local law. The tables below is for all the frequency is valid.

USA frequency table bleow. The frequency in red item is invalid.

Band Channel	A	B	E	Fatshark	RaceBand
1	5865	5733	5705	5740	5658
2	5845	5752	5685	5760	5695
3	5825	5771	5665	5780	5732
4	5805	5790	5645	5800	5769
5	5785	5809	5885	5820	5806
6	5765	5828	5905	5840	5843
7	5745	5847	5925	5860	5880
8	5725	5866	5945	5880	5917

Europe frequncy table below. The frequency in red item is invalid.

Band Channel	A	B	E	Fatshark	RaceBand
1	5865	5733	5705	5740	5658
2	5845	5752	5685	5760	5695
3	5825	5771	5665	5780	5732
4	5805	5790	5645	5800	5769
5	5785	5809	5885	5820	5806
6	5765	5828	5905	5840	5843
7	5745	5847	5925	5860	5880
8	5725	5866	5945	5880	5917