

**Product Introduction:**

ARKBIRD-433UHF is a 10-channel module designed for long-distance flight:

1. The advanced code division frequency hopping system (FHSS) produces the only way of frequency hopping sequence according to the only ID code of each transmitter, and receives it by different ID addresses with fast frequency hopping at full frequency;
2. Adjustable power (100mw-1400mw);
3. Both Tuner mode and Repeater station mode are optional, plug and play and automatically identify. Repeater mode can be compatible with all radio TXs;
4. No welding setup, wires are connected easily;
5. Receiver 10-channel Servo output interface, PPM output, 3.3V RSSI output interface, and head sensor interface;
6. Rapid response of 20ms, without delay.

With Arkbird OSD, it has the following functions:

7. It can be configured to single-wire PPM&RSSI output, three-wire transmission of 10-channel signal and RSSI, with very simple wire connecting; (Arkbird OSD needs to be upgraded to 3.1020 or newer firmware)
8. The original channel 1-4 input ports on Arkbird OSD; automatically become output ports which will output channel 7-10 of the radio TX control;
9. Output channel 9 and 10 can be configured to steering A Servo-Stabilizing-Gimbal for camera. Positive or negative, and the amount of stability augmentation can be adjusted.

Transmitter: working voltage: 2S-3S (7~12.6V)      peak current: 400mA@12V

Receiver: working voltage: 4~12V      peak current: 120mA@5V

**Attention:**

Read the instructions carefully before using, pay attention to details and wire connection, and avoid the

missing of important messages, which may become a hidden danger for the flight.

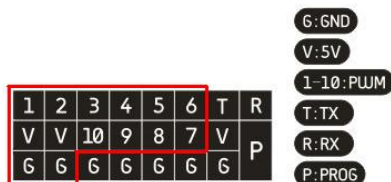
Video description: [http://v.youku.com/v\\_show/id\\_XNjM3NDcxODc2.html](http://v.youku.com/v_show/id_XNjM3NDcxODc2.html)

## 1. Transmitter Tuner Mode:



1. Please refer to the remote control instruction, and set the remote TX to PPM output. (**Attention! If it's set to PCM, it will not be identified.**)
2. Please turn off the remote control, insert the three wires of the '3S port' in the bottom left corner (black=ground wire, red=7-12V, white=PPM signal wire) into the remote control.
3. Please turn on the remote control after checking the wire connection. If PPM signal is identified, the status LED of transmitter will flicker fast; otherwise it will flicker slowly (one second one time).
4. The transmitting power can be adjusted by spinning the 'power adj' knob at the top-right corner of the transmitter.

## 2. Transmitter Repeater station mode:



1. Repeater mode provides a simple way to forward your 2.4G/72M receiver signal to the UHF receiver, suitable for the transmitter placed far to avoid interference to FPV Video RX, please ensure the UHF transmitter antenna vertically installed 1.5 m above the ground (A tripod is recommended).
2. Please refer to the above graph, connect the 2.4G/72M receiver channel 1-10 to the UHF transmitter, insert the V(5V) and G(ground wire) to power-up the receiver.
2. After checking the wire connection, please insert the balance charge port of the 3S lithium battery into the '3S port' in the bottom left corner to supply power. If receiver signal is identified, the status LED will flicker fast; otherwise it will flicker slowly (one second one time).
3. Please correctly set the Failsafe protection on both 2.4G/72M receiver and Arkbird UHF receiver!

### 3. The Receiver's ID Code matching / Failsafe Protection

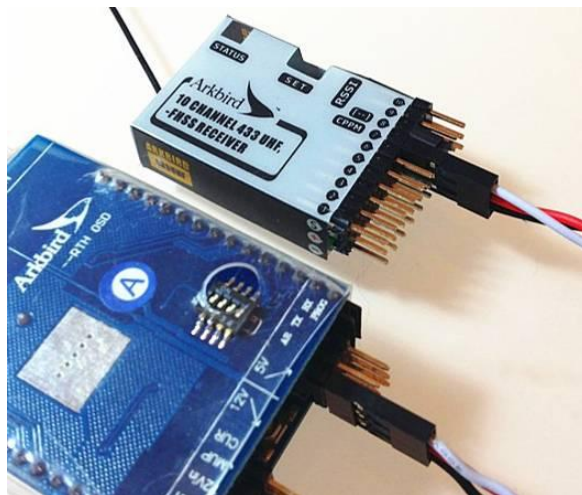
Press the SET button on the receiver for 10 seconds, then the receiver enters the ID code waiting status, LED flickers fast (5 times per second). Now reopen the transmitter to match Code. If succeeded, the receiver will automatically enter into the FHSS working condition.

Press the SET button of the receiver for 5 seconds, set the failsafe protection. (The LED will flicker slowly for 3 times after the setting.)

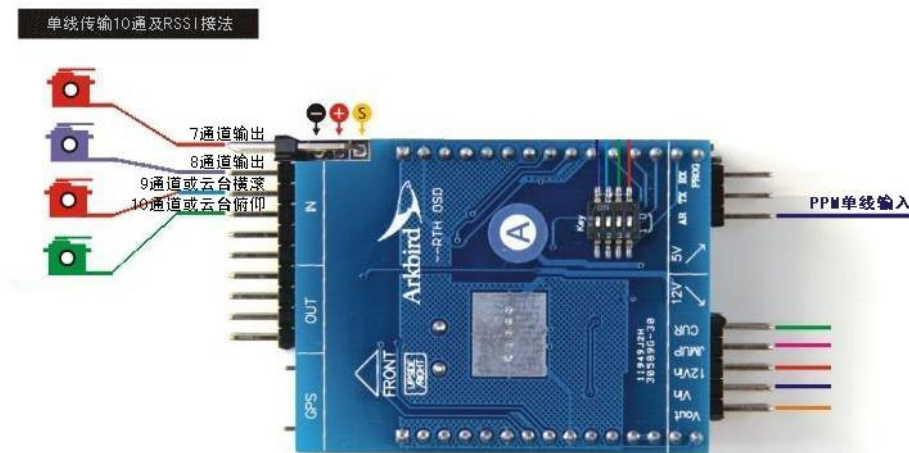
If the receiver is receiving the signal, the status LED will flicker fast, otherwise flicker slowly (one second one time).

### 4. Receiver Single-line PPM & RSSI Output

Make a short circuit between the Channel 8's signal to the 5V (in the middle row) using jumper cap. Then channel 7 will output composite PPM signal. It can be connected to Arkbird OSD's AR port, and make single-wire transfer of the 10 channels and RSSI value.



On the Arkbird OSD, the original 1-4 channel input ports which used to connect common receivers, automatically become output ports which will output the controlling value of channel 7-10 of the remote control.





The OSD interface automatically displays the RSSI strength A99.

Flight / Mix / Gimbal can be selected on the OSD menu, by which channel 9 and 10 output can be set to steer a Servo-Stabilizing-Gimbal for camera (radio TX channel 7&8 can control direction & pitch). Positive & negative compensation and the controlling amount can be adjusted.

## 5. Frequently Asked Questions (FAQ)

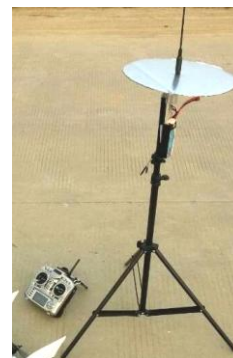
Q: receiver working not ideal, not smooth?

A: During communication, transmitter and receiver LED will flash fast and smoothly (no lost step). If the LED is flashing all right, there may be UHF transmitter power suppression on radio TX or 2.4G/72M receiver.

Adjust UHF power to minimum; connect a servo to the 2.4G/72M receiver to test.

Recommend to use the Repeater station mode, with a vehicle mounted antenna extension lines, so that the antenna could be placed far from the 2.4G/72M receiver.

Use attached foil to wrap up the 2.4G/72M receiver (don't wrap up the antenna). Or use foil and cardboard to make a 18cm-radius isolation plate (isolation plate should be in contact with the antenna ground); which can isolate interference as well as improve the UHF signal effect. (Pictured at right)



Q: Single-line PPM&RSSI Output to Arkbird OSD, the aileron, elevator channel control is not corresponding.

A: single-line transmission 1-6 channels as follows: aileron, elevator, throttle, direction and 2 auxiliary channels. If no corresponding, please change the servo line sequence, or set the radio TX's PPM 1-6 channel as the above order.

**Attentions:**

**Be sure to read the Safety precautions of Arkbird equipment carefully:**

1. The Arkbird equipment can only be used for small aircraft model entertainment. Please do not install it in the camera plane which may fly over the crowds. Fly should be done in open field, and the loss of people and property caused by any accident should be prevented.
2. The equipment must be installed and used according to requirements, and the check for the working condition should be done before every fly.
3. Since equipments on the plane and any other electronics are not completely reliable, you should evaluate the product when using it, and should use it according to the related rules. The system provider is not responsible for any direct or indirect losses and effects caused by using the product.
4. It is strictly prohibited to open this tuner near the gas station, or place where the radio signal is prohibited!

