PPM ENCODER

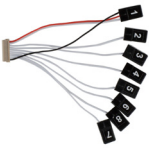**PPM encoder module**
Translates up to eight PWM (pulse width modulation) signals into one PPM (pulse position modulation) signal, allowing you to connect a PWM receiver to a PPM-compatible autopilot over one wire

Three-wire cable (12 cm)
DF13 three-position to servo cable connects the encoder to the autopilot
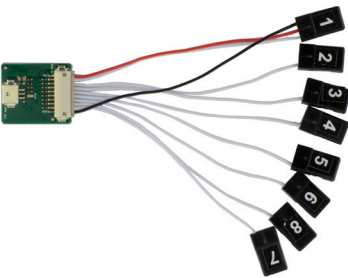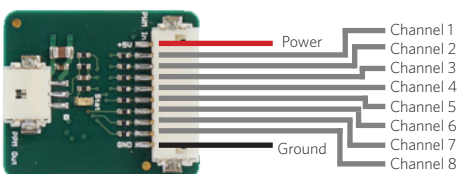
Ten-wire cable (7 cm)
DF13 ten-position to servo cable connects the PWM receiver to the encoder
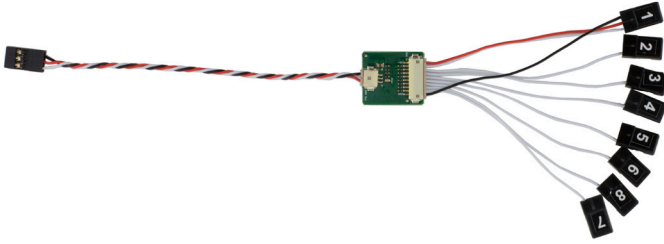
Connect a PPM receiver

1 Connect the ten-wire cable to the encoder's ten-position port.

2 Connect each wire to your RC receiver. Connect the red wire to power, the black wire to ground, and the white wires to channels one through eight as shown below.

Power
Channel 1
Channel 2
Channel 3
Channel 4
Channel 5
Channel 6
Channel 7
Ground
Channel 8

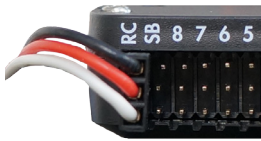3 Connect the three-wire cable to
the encoder's three-position port.

4 Connect the three-wire cable to
your autopilot's input pins.

Pixhawk
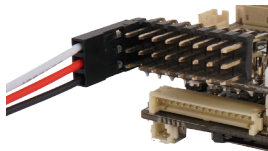
Connect to RC pins.

ground (-) black wire
power (+) red wire
signal (s) white wire

PX4

Connect to signal, power,
and ground input pins 1.

signal (s) white wire
power (+) red wire
ground (-) black wire

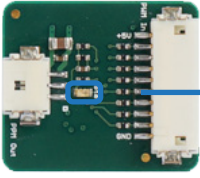**APM 2.6**

Connect a PPM jumper (included with APM)
to signal pins 2 and 3. Connect three-wire
cable to ground, power, and signal pins 1.

PPM jumper

signal (s) white wire
power (+) red wire
ground (-) black wire

LED

When powered, the LED indicates the status of the radio signal.

○●○● Slow to fast blinking blue: signal in good health, speed corresponds to throttle channel position

●●○● Very fast to constant blue: throttle channel lost or all channels lost

Configuration

No configuration is necessary to use the PPM encoder out of the box, just connect and power to translate PWM into PPM over one wire. For information on reloading firmware onto the encoder, visit the APM Wiki page here.

The ATmega328p firmware can be downloaded here for planes and rovers and here for copters.

Failsafe configuration

Failsafes can protect your vehicle from loss of radio signal. To learn more about configuring failsafes with your PPM encoder, visit the APM Wiki page here.

Specifications

- ATmega328p microcontroller, firmware upgrade enabled through AVRISP programmer
- 22 x 19 x 5.5 mm (without cables)
- 1.45 g

Support

For customer support, contact us at **help@3dr.com** or call our support line at **+1 (858) 225-1414** Monday through Friday, from 8 am to 5 pm, PST.

3D Robotics