

Remote Dethermaliser

Phil_G

This is a PPM encoder which drives a conventional 2.4g RF module for the purpose of a remote, one-shot dethermaliser for free-flight model aircraft. The encoder is extremely simple but is based on well tested hardware and similar assembler routines to those used in the far more complex Single-Channel & Reeds Revival projects.

The DT trip encoder connects to a 2.4g RF module such as the Frsky DFT, Spektrum DM8 or the much cheaper OrangeRx DSM2/DSMX module for Futaba which is available from HobbyKing for about £18.

Transmitter controls are simply an on-off switch and a DT trip-button.
When the trip button is pressed, the DT servo operates for a short period then returns.

At the receiver, although there is only one function, four channels are provided for convenience as follows:

Channel	Servo response
1	Normal direction, full throw
2	Reversed direction, full throw
3	Normal direction, half throw
4	Reversed direction, half throw

In practise only one receiver channel will be used, the idea is to choose the channel which best suits the installation, although some receivers have failsafe only on channel 1, so this should be used if possible.

OrangeRx binding follows normal Spektrum procedure: Insert the bind plug into the receiver bind slot, and power up.

Whilst holding down the button on the module, power up the transmitter.

Once bound, the bind-plug can be removed.

Some micro-receivers enter bind mode automatically when powered up first before the transmitter.

Connections – the three-wire goes to the RF module, pos neg and PPM.

The two-wire red/black is switched battery power – a small 2S or 3S lipo is ideal, the battery type isn't critical – 8 nimh or even a PP3 Duracell will suffice.

The button connects to the black/white two-wire. The button itself is a normal single pole make contact and the on-off switch can be a small toggle or slide switch. Either can be changed to suit personal preferences.

Failsafe – may or may not be required, ie trip the DT on failsafe? Bear in mind that OrangeRx receivers and most small Spektrum receivers only have failsafe on channel 1 (normally throttle).

Any feedback would be appreciated, comments to philg@talk21.com please.

Cheers

Phil

