

DTRx37f Instructions



DelTang YouTube Channel: <http://www.youtube.com/user/now4dt>

DelTang website: <http://www.deltang.co.uk>

The DTRx37f is a receiver designed to be easy to work with and wire up. The first point you'll notice is that there are ample pads to connect not just signal wires but all pos and neg wires as well. Couple this with the ability to wire all 7 servo channels directly to pads on the receiver and you have a truly versatile Rx unit.

The receiver also has the ability to handle "Differential Thrust Steering". To do this it has two x 2Amp brushed ESCs onboard which can each power their own brushed motor. "Differential Thrust Steering" can also be configured for brushless motors.

This is a DSM2 compatible receiver unit which can be bound to a Spektrum DSM2 capable transmitter or any other transmitter which is DSM2 capable.

VERSION: 3.4.3

1. GENERAL:

3-10v may be connected with correct orientation to +/- points.

The Rx is not insulated so take care to avoid short circuits.

The PCB is thin so do not bend it or exert great force on it.

2. LED:

Led On = perfect reception (real-time indicator).

1 flash = Scanning (~2sec between flashes; wrong model if never stops).

2 flash = Brownout (receiver voltage went too low; check battery/servo load).

3. FAILSAFE:

Outputs are not driven (do nothing) on startup and while scanning.

Outputs 'hold' on short signal losses (<1sec) and then do nothing (>1s).

4. BINDING: (Demonstration Video - <http://youtu.be/eYeutjiS8vc>)

1. Switch Rx on and wait ~20s until led flickers fast.

2. Switch Tx on in bind mode and Rx led should flash slowly and then go solid.

3. Change distance between Tx/Rx if binding does not work.

5.1 'SERVO' OUTPUTS:

Pads 1-7 will normally be used for servos or an external ESC on Pad1 (default)

Pad 4 can be set to Sum-PPM for quadcopter type models.

Pad 7 can be set to drive a second external ESC for 'dual-brushless' (see 5.3).

5.2 BRUSHED ESC's:

Set Ch1/Throttle throws to 100%.

Close throttle to arm the ESC's.

Differential thrust steering mix can be enabled by setting 'mix' to 12.5-100% (0%=disabled).

A 3.0v LVC is enabled by default but can be disabled.

The ESC will rearm if the throttle is closed briefly.

The led will have a 2-flash if LVC is triggered.

5.3 'DUAL BRUSHLESS':

Pads 1 and 7 can drive two external ESC's (eg: brushless) with steering mix. This feature is programmed with Levels 3 and 4 both set to 2 flashes.

6.1 PROGRAMMING:



1. Switch Transmitter on with left/right sticks in towards middle of Tx.
2. Switch Receiver on and wait for the Led to flicker very fast then release all sticks.
3. The led flashes the setting for the first 'Level' (eg: 1 flash = 0% Steering Mix).
4. Yes = push the Ch3 (Elevator) stick forward (to top of Tx) to accept choice and advance to next Level.
5. No = pull the Ch3 (Elevator) stick back (to bottom of Tx) to see next choice for same Level.
6. Continue through all Levels until Led comes on solid.
7. Settings are saved automatically at the end so switch off at any time to abort.
8. Say 'yes' to every item to just see what is currently set.

Example – To enable twin-steering: (YouTube Video link - <http://youtu.be/l7Jbo2nw9Mk>)

Level 1: 1-flash NO, 2-flash NO, 3-flash YES = Option 3 (25%) & move to next level

Level 2-6: YES to all.

6.2 PROGRAM LEVELS / NUMBER OF FLASHES:

Level 1: Steering Mix %

1 = 0% (Default)

2 = 12.5%

3 = 25%

4 = 50%

5 = 100%

Use 'Travel Adjust' in the Transmitter to fine-tune steering sensitivity.

Level 2: Steering channel (for mix)

1 = Ch4/Rudder

2 = Ch2/Aileron (Default)

Level 3: Pad 1 output ('brushless 1')

1 = Normal Ch1/Throttle (Default)

2 = Throttle + Steering mix

Level 4: Pad 7 output ('brushless 2')

1 = Normal Ch7/Aux2 output (Default)

2 = Throttle + Steering mix

Level 5: Low Voltage Cutoff (brushed ESC's only)

1 = Disabled

2 = Enabled (Default)

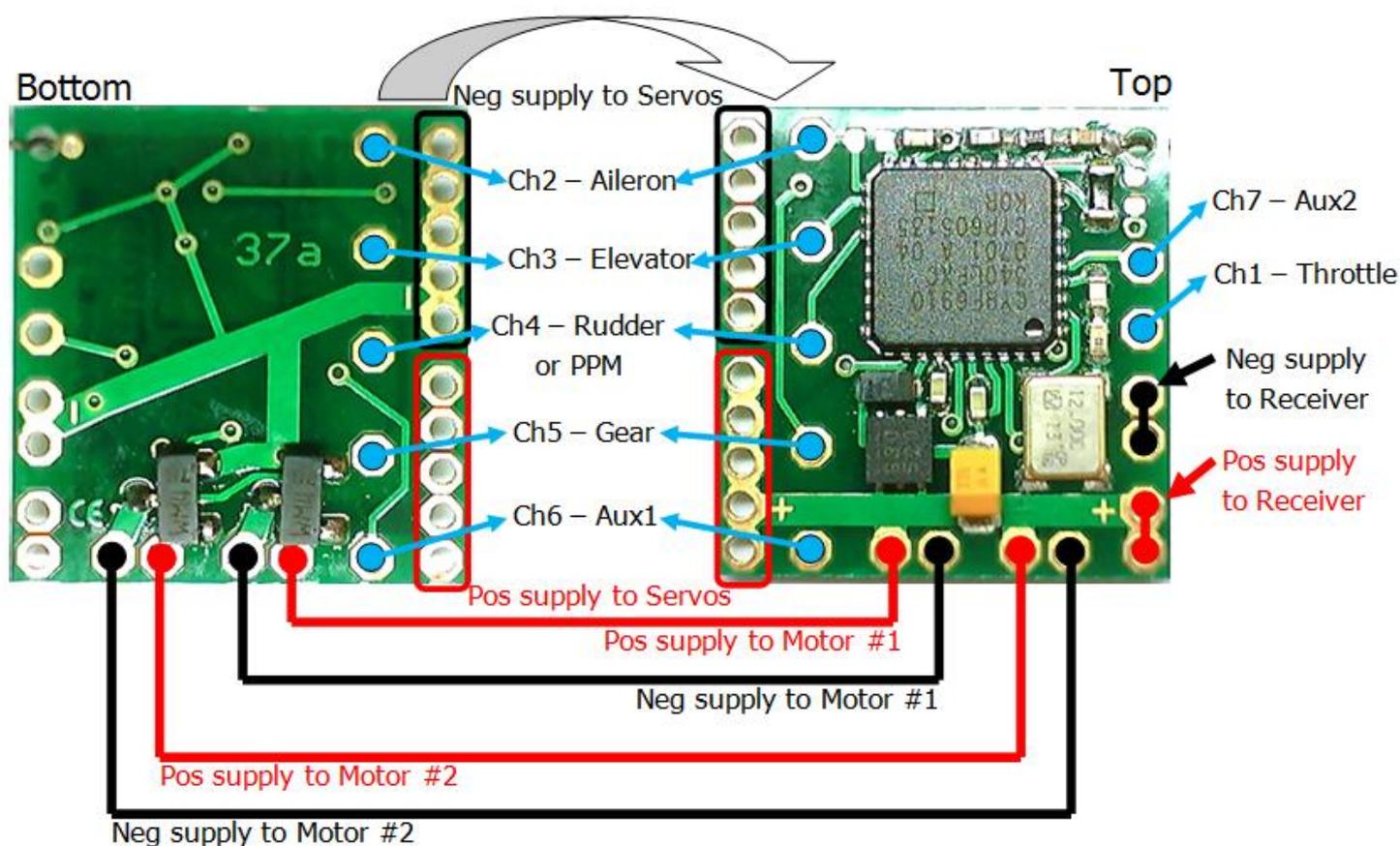
Level 6: Servo/Sum-PPM outputs

1 = Sum-PPM on Pin4

2 = Normal Servo outputs on all pads (Default)

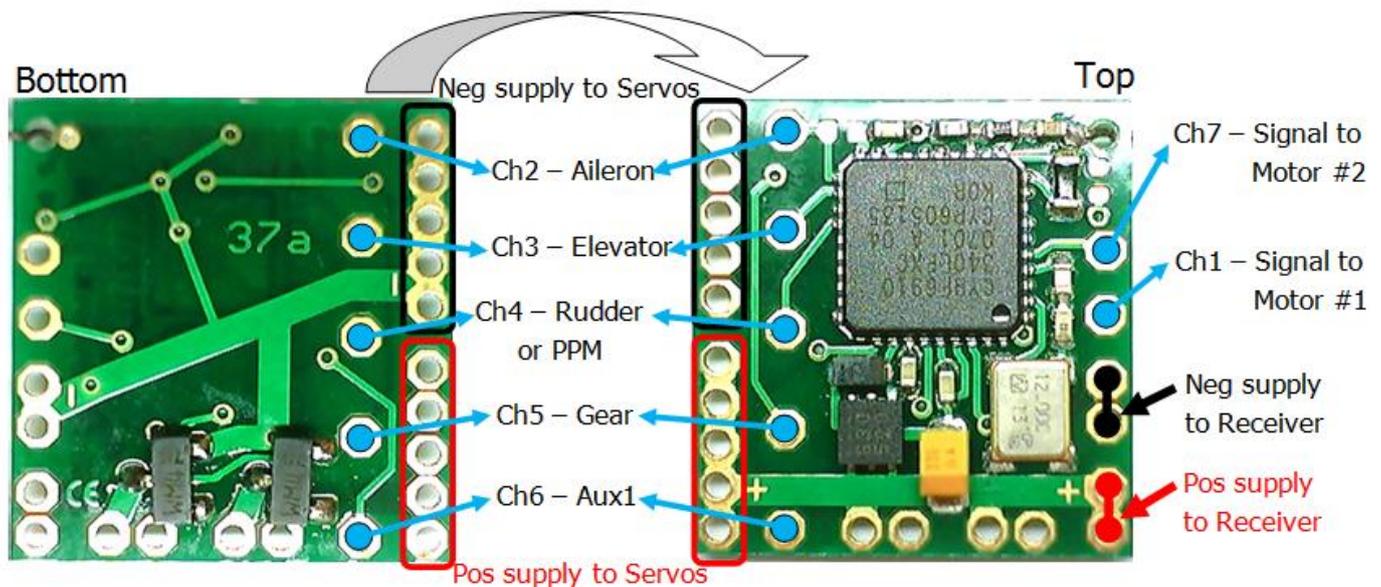
Example Wiring Configurations

DelTangRx37f – Wiring for single or dual brushed motor output



In this brushed motor configuration Ch1 – throttle is not used as the receiver is controlling power to the brushed motors. For single motor setups use only motor#1. Differential steering may also be enabled when running dual motor systems. In this case the Aileron or optionally the rudder can be set to control the yaw.

DelTangRx37f – Wiring for single or dual brushless motor output



With the above brushless configuration Ch1 supplies the signal for motor #1 to the ESC unit. If dual motors are being used then Ch7 supplied the signal for Motor #2. Differential steering may also be enabled when running dual motor systems. In this case the Aileron or optionally the rudder can be set to control the yaw. Power for the motors can be supplied directly from the battery. Alternatively, it can also be supplied from the spare “Power Supply to Receiver” pads or from the spare “Pos/Neg Supply to Servos” pads.

DTRx37f Main Features

The DtRx37f is a light weight but full featured Rx unit. It has ample spacing for connecting all signal wires as well as power leads for motors and servos.

1. Differential Steering – The inclusion of 2 x 2AMP onboard ESC units allows two motors to be connected and controlled by the receiver. In addition to this, varying amounts of steering mix can be set for each.
2. Power Outputs - The DTRx37f has dedicated Pos and Neg power output pads for each motor as well as dedicated pads for supply of power to the board and to each servo.
3. The ability to wire all three wires for a full 7 servo channels directly to the board make this unit a very neat and easy to configure receiver