

Remote Control Systems

2.4 Ghz RADIO CONTROL

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TX-4

Digital Proportional R/C

Thank you for purchasing this DSM2 3 channel TX handpiece.

INSTRUCTION MANUAL

THESE INSTRUCTIONS REFER SPECIFICALLY TO THE DELTANG R/C BASED TX-4 HANDPIECE.

They should be read in conjunction with the RCS ESC you are using.



SWITCH SETS THE DIRECTION.
300° KNOB CONTROL OF REGULATOR.
1 X FULL THROW SERVO FOR WHISTLE.
2 X ½ SERVO PUSHBUTTONS.



REMOVE REAR OF TX-4 TO INSERT
THE 9 VOLT BATTERY.
LED BLINKS WHEN BATTERY LOW.
A HIGH QUALITY 9V SNAP IS USED.



WHEN USED FOR BATTERY R/C
LARGE KNOB HAS CENTRE "CLICK" OFF
WITH 150° EITHER SIDE SETS THE
DIRECTION & SPEED.
3 X BUTTONS FOR SOUND TRIGGER.

FOR USE WITH "CENTRE OFF" BATTERY R/C ESC's & MOST RCS "LOW OFF" ESC's

THE TX-4 IS GUARANTEED FOR ONE YEAR.

When used for battery R/C you will supply a locomotive or trail car, the 14 – 20 volt traction batteries (depending on ESC), a fuse, ON-OFF switch and wires where necessary, to connect the ESC to the battery and motor(s).

Where soldering is necessary, we recommend a low wattage soldering iron and resin core solder.

TO AVOID CONFUSION WITH OTHER OPERATORS, WE SUGGEST YOU MARK THE TX TO SHOW WHICH LOCO IT IS OPERATING.

CAUTION

DO NOT ATTEMPT TO ALTER THE TUNING OF THE RADIO EQUIPMENT.
DO NOT USE RADIO CONTROL EQUIPMENT IN THUNDERSTORMS.

CHILDREN UNDER 12: ADULT SUPERVISION RECOMMENDED DURING USE.

RCS TX & RX PRODUCTS MUST NOT BE USED FOR CONTROLLING RIDE ON LOCOMOTIVES CAPABLE OF
CARRYING MEMBERS OF THE GENERAL PUBLIC.

PREPARING THE #TX-4

THESE INSTRUCTIONS REFER TO THE **RCS TX-4** 2.4 GHz 5 CHANNEL R/C.
LAYOUT OF THE TX-4 TRANSMITTER HAND PIECE.

The valve gear SWITCH is in the upper middle. The larger speed control knob sits just below.
Top left is the ON – OFF switch with LED. Top right is the Bind/Ch # 5 pushbutton. Use for servo whistle.

1. “BINDING”.

The 1st procedure is to “BIND” the receiver (RX) to the Transmitter (TX).

“BINDING” is accomplished by following a few simple steps below.

When binding we recommend removing the servos from the RX in case they are not correctly adjusted. Adjust servo parameters after binding has taken place..

HOW TO “BIND” USING A DSM2 RX.

MANUAL BINDING using a binding plug.

1.1 Insert the “BINDING” plug supplied with the DSM2 RX into the “BINDING” pins on the **RX**.

You can also use the # BINDER switch assembly if you do not wish to get inside the loco.

1.2. The RX LED will start blinking very rapidly to indicate it is ready to be bound.

AUTOMATIC BINDING = no binding plug.

1.3 Turn the Auto Bind RX ON and the RX LED will blink slowly looking for a TX. Wait 20 seconds for the RX to enter bind mode. The RX LED (& slave front headlight if programmed to) will blink rapidly and is ready to be bound.



FUNCTIONS OF TX-4



ON – OFF SWITCH



BUTTONS TO HOLD DURING BINDING

1.4 Press **and hold** the right pushbutton on the handpiece marked with a hexagonal symbol. You may need to keep TX & RX about 1 x metre apart for binding to take place.

1.5 Then press **and hold** the ON – OFF button to **ON**. Hold both buttons until the RX LED stops flickering & starts blinking slowly. Then let both TX buttons go. The TX button also blinks slowly & then goes to solid ON.

1.6 The LED on all RX's will blink more slowly & then go solid ON when “BINDING” is complete.

N.B. “BINDING” plug MUST be removed BEFORE the SYSTEM is turned OFF. (AB RX's have no binding plug)

1.7 The “BINDING” plug is removed & stored safely.

RCS offers an optional extra # **BINDER** cable and switch. When fitted R/C this will enable any non RCS loco to be bound to any TX without requiring access to the inside of the loco. This will enable any loco to be swapped between any other DSM2 TX's. You will be able to “hand off” speed matched locos for MU'ing into a consist. **(Uneded with #BASIC-3)**

4. OPERATING BATTERY R/C LOCOS.

GENERAL INFORMATION.

If the directional lights are incorrect, swap over the wiring to them so they match the loco speed and direction.

If your non RCS ESC does not have directional lights, the RCS # DSM2-EM(AB) RX has directional lighting outputs for add on extra LED's. Or, RCS has a small add on module # **2-M-F** that reads the speed & direction of either Channel # 1 (Centre OFF) or the Channel # 3 (Low OFF) output for direction & switches lights accordingly. A standard servo "Y" cable is needed. Not supplied.

If the loco runs backwards we reverse the motor wiring to correct the direction and maintain the standard.

The bind button also controls Ch # 5. You can add a servo for mechanical operation. EG a Kadee servo uncoupler.

If the directional lights are incorrect, swap over the wiring to them so they match the loco speed and direction.

With Rx65b & ALPHA-3v2 the Ch # 5 button can also be used as a sound trigger.

The TX-4 is used to program the RX65b & ALPHA-3v2 ESC's. Their instructions show how to invoke programming.

4A. USING THE TX-4 WITH A "CENTRE OFF" ESC'.

We use the # Rx65b, ALPHA-3v2 set to "CENTRE OFF". The Ch # 5 Bind button is programmed as a sound trigger.

The RCS # OMEGA-3v6 ESC cannot be used in "CENTRE OFF" format.

The TX-4 can be used intuitively with most of the centre off ESC's that are available.

The large knob uses Ch # 1 to control both the direction & speed. It is most important that this large knob is centered at the built in Centre Click before switching the TX-4 on. The dot on the knob should face forward.

Unless binding, always switch on the TX-4 first & then the ESC. Most Centre Off **ESC's** will calibrate themselves.

Twist the knob gently left or right until the loco starts moving.

The TX-4 has been designed so that normally twisting the knob to the right (CW) is forwards direction and movement.

If the loco runs backwards we reverse the motor wiring to correct the direction and maintain the control standard.

Turn the knob back to the left to slow down. You can feel the Centre "Click" as you arrive at neutral.

Then, once in neutral wait 1 x second before you can twist the large knob to the left (CCW) to go backwards.

The bind button also controls Ch # 5. With non RCS ESC's you can add a servo for mechanical operation. EG a Kadee servo uncoupler.



NEUTRAL OFF POSITION OF THE TX-4 WHEN USED FOR "CENTRE OFF" MODE.



SET FORWARD SPEED & DIRECTION.



SET REVERSE SPEED & DIRECTION.

4B. USING THE TX-4 WITH AN RCS "LOW OFF" ESC'.

The TX-4 can be used with RCS LOW OFF ESC's such as the Rx65b, ALPHA-3v2 & OMEGA-3v6k.

We use the # Rx65b, ALPHA-3v2 set to "LOW OFF". The Ch # 5 Bind button is programmed as a sound trigger.

This TX-4 hand piece is essentially a 5 channel stick R/C in a smaller case.

Make sure the large throttle knob is fully CCW (OFF) and small knob is centered before you switch the system on. Switch on the TX-4 first & then the ESC. (Unless binding)

1. The large knob controls channel # 1, the throttle. Make sure the knob is fully CCW before switching on. This is the same as the Channel # 1 stick being fully down.

2. The small knob is the same as a Ch # 3 elevator stick.

Turning the small knob to the right (CW) is the same as pushing the elevator stick forwards.

Turning the small knob to the left (CCW) is the same as pulling the elevator stick backwards.

3. From neutral, set the small knob to the direction you want and leave it there. CW for forwards.

4. Twist the large throttle knob to the right (CW) to accelerate.

5. To slow down twist the large knob to the left (CCW) until desired speed is reached.

6. To stop loco turn the large knob fully to the left (CCW). Ignore the knob Centre "Click".

Throttle must be at OFF before changing direction. Pause at neutral for one second when changing direction.

7. To select reverse direction turn the small knob to the left (CCW) and leave it there.

To speed up, slow down & stop in reverse, repeat steps 4, 5, 6, & 7.



SET THE FORWARDS DIRECTION.



SET THE REVERSE DIRECTION.



INCREASE THE SPEED