

mPTX Personal Transponder Instructions

The **MRT mPTX** transponder is compatible with all RC systems up to RC4 version 4.4 firmware. Operation is purely lap counting and timing utilising its **7 DIGIT** main ID number, LED 'one flash' (or 'alternative' ALT ID numbers, LED 'two flashes' to LED 'five flashes' if required). The ALT ID can be selected by following the instructions below that explain how to switch between the main supplied ID and the alternative ID. The **mPTX** is ready to be used as supplied. Connect to a suitable battery or plug in to a free receiver channel or the BATT socket. The LED will flash to display which ID is currently set (main or ALT) and will then stay on.

mPTX Setup Mode

To switch between the main and ALT numbers the **mPTX** needs to enter its setup mode. To enter setup mode the **mPTX** must go through a special power up sequence. Firstly the **mPTX** must be turned on and off five times. The minimum turn on and off time is 0.2 seconds and the maximum turn on and off time is before the start up ID number flashes have finished. When the **mPTX** has been correctly turned on and off five times, the next turn on will enter a fast flash sequence. This sequence lasts for seven seconds. After seven seconds the **mPTX** will flash the LED slowly. The **mPTX** special power up sequence is now complete. When the **mPTX** is turned off and on again it will enter the set up mode.

mPTX Main ID / ALT ID Change

Once the **mPTX** is in set up mode as described in the previous section, the LED will flash to show which ID the **mPTX** will be set on. The LED will flash once then two times, then three times, then four times, then five times, then back to once. To set the **mPTX** on the desired ID number, turn it off after the correct number of flashes are displayed. The **mPTX** will store this ID number as the current number.

mPTX Power Lead Replacement

The **mPTX** is waterproof when supplied, in order to maintain the waterproofing integrity **MRT** trust users to be responsible and take **EXTREME CARE** opening the **mPTX** case to replace the power lead. Failure to solder **ONLY** on to the **mPTX** PCB PADS could damage the unit and will **VOID WARRANTY**.

Providing the above warning has been observed, the procedure for replacing the lead is as follows:

*Remove case screw using a suitable screwdriver. Carefully separate the **mPTX** case top from base. Remove the **mPTX** circuit board from the case. Carefully desolder the power lead, tin PCB pads. Solder new lead to PCB pads (**DO NOT** overheat) making sure **+VE** and **-VE** wire polarity is correct. Re-assemble case, **DO NOT** overtighten screw!!*

mPTX Installation and Mounting

It is recommended that the **mPTX** is mounted flat on to the chassis in a horizontal position clear of 'signal strength reducing' obstructions (aligning transponder is important because maximum effective height from loop detection is from top and bottom of the **mPTX**) take care to install for optimum signal strength. The **mPTX** should be mounted securely in a safe place which is not adjacent to radio/electronic equipment, components or wiring etc. The **mPTX** location **must** be away from heat and/or vibration and should also be safe from any potential impact or crash damage.

To ensure maximum signal transmission refer to 'mPTX Optimum Signal Strength Detect' section of instructions. It is important to follow the installation guide recommendations!

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mPTX ID:

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mPTX Direct Powered (DP) Transponder Specifications

ID numbers: Main 7 Digit ID / Alternative 7 Digit ID (ALT)

Stealth Case: 19 x 16 x 6mm, waterproof and fuel-proof

Mounting options: 3-hole tabs or direct fit (tabs removed)

Weight: 3g approx. (PCB & case without power lead fitted)

Temperature range: 0°- 50°C (32°-122° F)

Signal transfer: magnetic induction HD (Hybrid Detection)

Power feed: from free RX channel CH3 or BATT (battery)

Power lead length: standard 190mm (approx. 7.5 inch)

Connection plug: standard servo plug

Operating voltage: 2.1V - 16V DC (rev. polarity protected)

Power consumption: approx 8mA @ 6V DC

Display LED: Ultra-bright Neon Blue

Compliance statement (part 15.19)

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Warning (part 15.21)

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

RF Exposure (OET Bulletin 65)

To comply with FCC RF exposure requirements for mobile transmitting devices, this transmitter should only be used or installed at locations where there is at least 20cm separation distance between the antenna and all persons.

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