

## 2.4G Radio System



### Corona 2.4GHz RF module & Receiver

*Thank you for purchasing our Corona 2.4Ghz RF transmitter module & receiver. In order to fully utilize the performance potential of this system, we suggest you first read the manual.*

### The Corona 2.4GHz DSSS system

*Our new Corona 2.4GHz transmitter module and receiver are designed to completely eliminate radio interference and glitches which have troubled model hobbyists for years. The software designed exclusively for the transmitting module and receiver instantly locates and assigns safe and protected channels. Other flyers in the area can not create interference that normally would corrupt the transmitter signals.*

*The Corona 2.4GHz adheres strictly to Direct Sequence Spread Spectrum (DSSS) communication standards by spreading signal data across a wide band of frequencies.*

*Combining Corona's software with DSSS we have designed a transmitter and receiver capable of providing modelers the highest performing radio system available today.*

### Features of Corona 2.4GHz transmitting module and receiver

*The new lightweight, advanced technology unit has the following features:*

- 1. Extended operating range >1.5 km range, which has been tested in a real flying environment.*
- 2. A 5dbi gain transmitting antenna ensures the wave lengths are evenly distributed throughout the transmitting horizon ensuring the stable signal.*
- 3. One-key user friendly setup mode.*
- 4. Dual receiver antennas to guarantee the model receives the signal regardless of the maneuver or attitude. Also longer antennas than other brands, easier to place them outside composite (carbon) airframes.*
- 5. The unique receiver design makes the Corona module easy to install and ensures reliability.*
- 6. Corona's advanced design ensures the lightest possible receiver.*

### Installation of the transmitting module

- 1. Remove the original transmitting module.*



- 2. Put the Corona 2.4 Ghz transmitting module into the module port and screw on the transmitting ant*

*enna.*



*3. Turn the transmitter power on and check the RF power indicators on the module operate, and also on the radio.*



**Transmitting and receiving communication setup.**

### **Installation of receivers.**

*The tip of the antenna cable is the receiving portion (the thinner part). The antennas should be oriented so the receiving tips point 90 degrees away from each other, and are separated as much as possible in the airframe. If possible place away from metal, wires or carbon parts of the airframe. Tape or glue them in position so they cannot move around. (See below)*



*As the wave length of 2.4GHz is shorter than older RC systems, its ability to go around solid obstacles is weaker than receivers with frequencies that are below the 100MHz. Therefore, when you locate the antennas you must avoid objects as much as practical with high conductivity, such as; metal parts, servos, ESC's, battery packs, wires, and carbon fiber structures. If possible put the tip of the antennas outside of the fuselage for maximum reception. Keep the separation of the antennas to maximum also, so they observe different signal paths.*

### **Receiver and Transmitter Setup Instructions**

By following these steps you will ensure your transmitter and receiver are properly setup and ready to fly.

1. Turn the transmitter on and adjust your transmitter to PPM mode (not PCM), and then turn the transmitter off.
2. Press and hold down the programming button on the transmitting module, then turn the transmitter on. The LED on the module will flash between red and yellow indicating the transmitter is ready to bind with a receiver.
3. Press and hold down the button on the receiver and connect the receiver to the battery. The LED on the receiver will flash red twice indicating the receiver is in binding mode. Within a few seconds the receiver LED will flash rapidly for a moment indicating that it has successfully bound to the transmitter module and both are now communicating on the same channels. Turn off the transmitter and receiver now.

Note: If the receiver did not flash rapidly then binding was not successful. Check that the transmitter module is flashing Red/Green, then restart the receiver binding by removing the receiver battery for a few seconds and then reapplying with the button pressed on it again. Binding is best done without any servos connected but this is normally not necessary.

4. Check the normal system operation. Turn the transmitter on, when the module LED is yellow then connect the receiver to the battery. The red LED on the receiver will be fully ON, indicating the receiver is operating properly. Receiver LED will be OFF when there is no signal.

Note: The transmitter MUST be turned on BEFORE the receiver is connected to the battery, or else the receiver will not initialize. This is also a best practice for RC model safety.

After following these steps to program your transmitter and receiver, both modules will continue to operate together each time you use the modules without further binding.

If there is a need to reprogram your modules (adding another receiver) please follow these steps above again.

### **Range checking**

*This is necessary for safe operation and must be incorporated into your setup and pre-flight operations.*

*You must conduct a range check as follows.*

- 1. Place the model at least two feet (60cm) above non-metal contaminated ground; for example a wooden bench. Remove the propeller or make sure the model cannot move under it's own power.*
- 2. Turn on the transmitter first, then connect the receiver battery.*
- 3. Move control sticks on the transmitter and verify that the model is responding normally..*
- 4. Move away from the model with the transmitter and move the sticks and observe the model.*
- 5. Model should respond normally at long visible distance, if not then there is a problem and model should not be flown till rectified.*

**Attention: Controlling distance is related to the transmitter power, please use freshly charged battery packs when you conduct the range test. Controlling distance is affected by the environment too. Please test it in the open away from any obstacles. The controlling distance in the air is normally greater than that on the ground. Our controlling range is based on a conservative ground test.**

We hope you enjoy your new 2.4 Ghz receiver and transmitter modules. They have been designed and produced using the highest quality control measures available. If you have any questions please do not hesitate to contact us or visit our website.