



Product No:
AQ2254/AQ2258
AQ2271/AQ2272
AQ2256/AQ2260

AQ2257

2.4GHz 6CH TRANSMITTER RF MODULE

INTRODUCTION

Congratulations on your purchase of the ACE RC 2.4GHz 6CH Transmitter RF module system. This system was specifically-designed with the latest wireless and Thunder Tiger advanced-programming technology and can be installed on the most popular Futaba/JR/Hitec RF module-type radios. Installing the ACE RC 2.4GHz 6CH Transmitter RF module system is a simple plug-and-play setup, no modification required.

Update your radio to the latest 2.4GHz radio system by incorporating ACE RC's advanced 2.4GHz interactive frequency hopping spread spectrum (iFHSS) radio system. The RF module combo version includes the TRS601DD diversity and dual antenna receiver.

Enjoy complete reliability & precise control on your current transmitter and model with the latest 2.4GHz technology.

FEATURES

■ RF Module

1. 2.4GHz Frequency Hopping Spread Spectrum (FHSS) wireless system
2. Security ID binding link
3. Interactive bi-direction communication
4. Range-checking function
5. Dual antenna
6. Simple Plug-&-Play design, no modification required

■ TR601DD Receiver

1. Dual Antenna & Diversity System
2. One-touch Easy Binding Process
3. Compact Size & Light-weight

CONTENTS

Item No	AQ2254	AQ2258	AQ2271	AQ2272	AQ2256	AQ2260
RF Module	1pc	1pc	1pc	1pc	1pc	1pc
Receiver		1pc		1pc		1pc
Manual	Y	Y	Y	Y	Y	Y

SPECIFICATION

Description	2.4GHz Transmitter RF Module System		
	AQ2254/AQ2258	AQ2271/AQ2272	AQ2256/AQ2260
Encoder	6Ch		
Frequency(MHz)	2.4GHz		
Frequency Band Width	2402~2479MHz		
Transmission System	FHSS		
Band No.	78CH		
ID No.	13bit		
Antenna Type	1/4 λ Dipole Sleeve		
Antenna Peak Gain	2dBi Typical		
Dimension (w/o Antenna)	58.8x37.2x55	64.2x48.5x32.5	58.8x37.2x55
Weight (g)	28.5g/39g	38.5g/49g	33.5g/44g
Compatible Radio	Futaba*- 7U, 8U, 8J, 9C, 9Z, and FN series	Compatible with JR airplanes/helis module-type radio series	Hitec* Optic 6 & ACE RC SkyTech TS6i radios

Description	TRS601DD
Item No	AQ2257
Frequency(MHz)	2.4GHz
Channel	6CH
BEC	No
Modulation	PPM
Type	Dual Antenna & Diversity
Battery Power	4.8~6V
Dimension(mm)	29.2x44.9x14.1
Weight(g/oz)	10.5g / 0.37oz

OPERATION

1) Installation of the RF Module

- a) Turn off the transmitter power and remove the original RF module from your transmitter.
- b) Plug-in the ACE RC RF module into the transmitter properly.

Note: Ensure the connecting pins are not bent during installation.

- c) Adjust the antenna to the suitable direction.

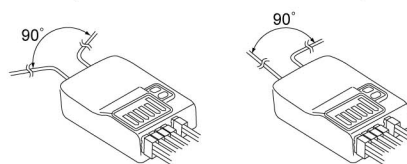
Note: The antenna can be set in 3 positions from down to 90 degrees up, and can be rotated 270 degree. Do not overstress the antenna during this procedure.

2) Installation of Receiver

Install the receiver in the aircraft using the same methodology as you would handle a standard receiver. That is, make sure that you wrap the receiver in foam rubber or other such material to make it less susceptible to vibration, etc.

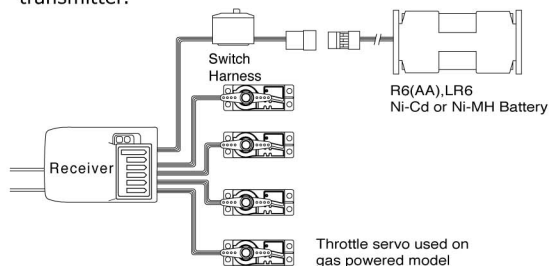
Ensure that the two receiver antennas are kept as straight as possible. This will allow you to obtain the maximum effective range from your model.

If possible, please make sure that the two antennas are placed at 90 degrees to each other. Please note: This is not a critical figure, however, it is important to keep the antennas away from each other as much as possible.



Radio installation

Before installing your radio into your model, connect the receiver, servos, and switch harness/battery pack as shown. In addition to checking for proper operation, this "bench test" helps you become familiar with the operation of your radio. After connecting the model components, turn on the transmitter, and then turn on the receiver switch. Make sure that all servos and trim levers are operating, and take a few moments to "play" with your system. After completion of your bench testing, turn off the receiver, followed by the transmitter.



WARNING

Always follow the "transmitter on first, off last" procedure. A good way to remember this is to remind yourself to always have your receiver "listening" to the transmitter. If you turn the transmitter off prior to turning off the receiver, the receiver has nothing to "listen to", and this condition can sometimes damage the servo output gear train because of "jitters" or excessive servo travel beyond normal limits.

Servos

Mount the servos as recommended in your model's instruction manual.

Receiver installation

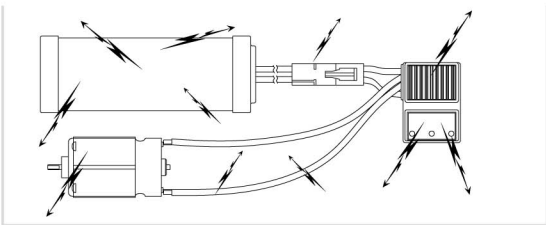
Note the location of the receiver in your model's instruction manual or building plans.

NOTE

We assume that all areas where large currents are flowing are generating noise, and noise is a type of radio wave. It is important to reduce the possibility of interference by locating a proper position for receiver and antenna.

HELPFUL HINT

Always install the receiver as far as possible from the motor, ESC, NiCd/NiMH batteries, motor wire or other noise sources. Especially, do not route the motor wire next to the receiver or receiver antenna. Noise suppression capacitors should be installed on almost all motors. If the proper capacitors are not installed, high frequency noise will reduce range and cause loss of control along with various other problems. Make sure your motor is equipped with noise suppression diodes or capacitors.



NOTE

FET servo wire (7.2V) can also generate noise, position them as far away as possible from the receiver and the antenna.

Space available in your model will determine how much padding can be placed around the receiver. Choose a good quality foam rubber, such as those available from Du-Bro, Carl Goldberg, Sig, and others. R/C foam is made from natural rubber, which eliminates vibration far better than synthetic foam, (such as the kind used for packing consumer goods).

CAUTION

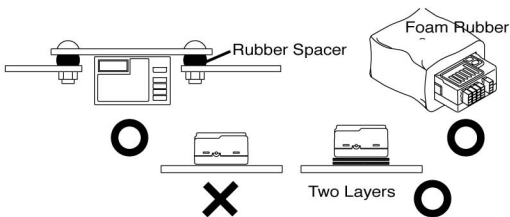
The receiver contains precision electronic parts. These parts are vulnerable to vibration and shock.

NOTE

When wrapping the receiver, keep in mind that you are trying to cushion a delicate piece of electronic equipment, so "wrap" the foam, don't "stretch" it around the receiver.

HELPFUL HINT

A simple way to isolate the receiver from vibration is by attaching it to the chassis or mounting plate with thick double-sided tape.



Many modelers prefer to install their receiver into the model at this point, with no further protection. Another sizeable group of modelers prefer to go a step further, and place the foam-wrapped receiver into a plastic bag, secured with a rubber band around the receiver case as well as the servo and battery wires.

The advantage of the plastic wrap is the protection against fuel or oil in the event of a major crash. The disadvantage of the plastic, especially if you run the model in very hot and humid conditions or wet days, is that moisture can accumulate inside the receiver.

CAUTION

Any contact with moisture i.e. water or condensation may cause malfunction and loss of control.

HELPFUL HINT

If you choose to wrap your receiver in both foam and a plastic bag, it is recommended to periodically remove the receiver from your model, remove the foam and bag to let the receiver "air out". This maintenance procedure will let you determine if any moisture is accumulating in the protective wrap. Small holes cut into the bag will allow airflow into the receiver, and eliminate the need for the periodic checks, although you will lose a certain amount of protection against fuel or oil with this step.

Battery installation

Always wrap the battery pack in foam, and mount it in the location specified in your models instructions. It is also recommended to wrap the battery pack in a plastic bag, as its location (close to engine and fuel tank) makes fuel proofing vital.

Switch installation

Pick the most convenient location for your on/off switch as required by your particular model. Always mount the switch on the opposite side of the engine exhaust. After mounting the switch, carefully bundle any excess servo wires with cable ties, keeping them away from any moving item (pushrod, servo arm, etc.) that could catch and cut the wires. Any empty space in your fuselage radio compartment can be filled with excess foam.

3) Binding Procedure

A binding function is included with the ACE RC iFHSS 2.4 GHz system, ensuring transmitter RF Module and receiver bind properly and prevent interference from other controllers. To bind Tx RF module and receiver, please proceed as per the following:

- Install the RF module into the transmitter.
- Press and hold the "Binding SW" button located on the right lower side of the transmitter RF module.
- Simultaneously, turn on the transmitter power.
- Release the "Binding SW" button. The binding LED will blink rapidly, indicating the transmitter is binding.
- Press and hold the BINDING push button on the Receiver, and turn on the Rx power. Then release the BINDING push button.
- Successful binding is confirmed by the binding LED changing from a rapid blink to a slow flash on the transmitter. The LED will turn green on the receiver. Upon confirmation, turn off power on the receiver and transmitter and launch normal start-up procedures.

Note: Binding process may take 3~10 seconds to execute. If binding fails, the LED light on the receiver will turn red. Please turn off power and repeat the above steps from b) ~ f).

4) Range Checking

A built-in range-check function on the transmitter RF module reduces signal strength for pre-flight range-check. When this function is activated, signal strength is weak. Use the weak signal strength for pre-flight range-check to confirm wireless radio control system is working properly. It is recommended to perform a range-check before every flight. "Range-Checking" procedure:

- Turn both transmitter and model power on and ensure the system is functioning properly.
- Take the transmitter to a distance of about 20~30m from the model.
- Press and hold the "Binding SW" button on the RF module. Signal strength is now weak. Please do not release "Binding SW" at this stage.
- Operate both left and right sticks to drive movement on the servos. Visually confirm that all movements are accurate and signal is interference-free.
- Release "Binding SW" button. Signal reverses back to full strength and warning tone stops.
- Model is ready to fly.

Note: Never activate the "Binding SW" button during flight. Flying under weak signal strength will result in signal loss and model crash.

FCC RULES AND REGULATIONS

You are responsible for the proper operation of your station (transmitter) at all times and are responsible for observations, servicing, and maintenance as often as may be necessary to ensure proper operation. Each internal repair and each internal adjustment to an FCC type accepted R/C transmitter must be made in accordance with the technical regulations specified by the FCC. The internal adjustments should be performed by, or under the immediate supervision and responsibility of, a person certified as technically qualified to perform transmitter maintenance and repair duties in the private land mobile services and fixed services by an organization or committee representative of users in those services. The FCC at this time does not require the modeler to obtain a special license for the operation of this unit. However, it is still the owner's responsibility to observe all FCC rules & regulations governing its use. For a copy of these rules write to: Federal Communications Commission, Washington, DC 20554

FCC Caution: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

SERVICE

Thank you for purchasing the ACE RC 2.4GHz RF module. This RF module was produced by Thunder Tiger Corp., a guarantee for high quality, services, and hours of trouble-free operation. Thunder Tiger products are sold worldwide through authorized distributors supported directly by Thunder Tiger. To receive the latest product information and enjoy full technical support, please contact your nearest hobby shop or Thunder Tiger authorized distributor.

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.

FCC Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.