



# TM14-2.4G/R6014FS/R608FS

## Radio Control

### Instruction Manual

#### **INTRODUCTION**

Thank you for purchasing a FutabaR digital proportional R/C system. In order for you to make the best use of your system and to use it safely, please read this manual carefully. If you have any difficulties while using your system, please consult the manual, our online Frequently Asked Questions (on the web pages referenced below), your hobby dealer, or the Futaba Service Center.

#### Owner's Manual and Additional Technical Help

This manual has been carefully written to be as helpful to you, the new owner, as possible. There are many pages of setup procedures and examples. However, it need not be your sole resource of setup guidelines. For example, the back cover includes a quick-start set of instructions and the Frequently Asked Questions web page referenced below includes this type of step-by-step setup instructions for a variety of other model types.

Due to potential unforeseen changes in production procedures, the information contained in this manual is subject to change without notice. No part of this manual may be reproduced in any form, at any time, without prior permission.

Support and Service: It is recommended to have your Futaba equipment serviced annually during your hobby's "off season" to ensure safe operation.

#### **IN NORTH AMERICA**

Please feel free to contact the Futaba Service Center for assistance in operation, use and programming. Please be sure to regularly visit the Frequently Asked Questions web site referenced below. This page includes extensive programming, use, set up and safety information on your radio system and is updated regularly. Any technical updates and US manual corrections will be available on this web page. If you do not find the answers to your questions there, please see the end of our F.A.Q. area for information on contacting us via email for the most rapid and convenient response.

**Futaba Service Center  
3002 N. Apollo Drive Suite 1  
Champaign, IL 61822  
TEL(217)398-8970, FAX(217)398-7721**

**HOW TO ACCESS to FAQ:**

<http://www.futaba-rc.com/>

**OUTSIDE NORTH AMERICA**

Please contact your Futaba importer in your region of the world to assist you with any questions, problems or service needs.

Please recognize that all information in this manual, and all support availability, is based upon the systems sold in North America only. Products purchased elsewhere may vary. Always contact your region's support center for assistance.

**The product is subject to regulations of the FCC and is restricted under United States law to such purposes.**

**(See end of this manual for detail)**

## *Physical Description*

### ***TM14-2.4G (Transmitter)***

#### *PIN ASSIGNMENT*

Back side of the TM14

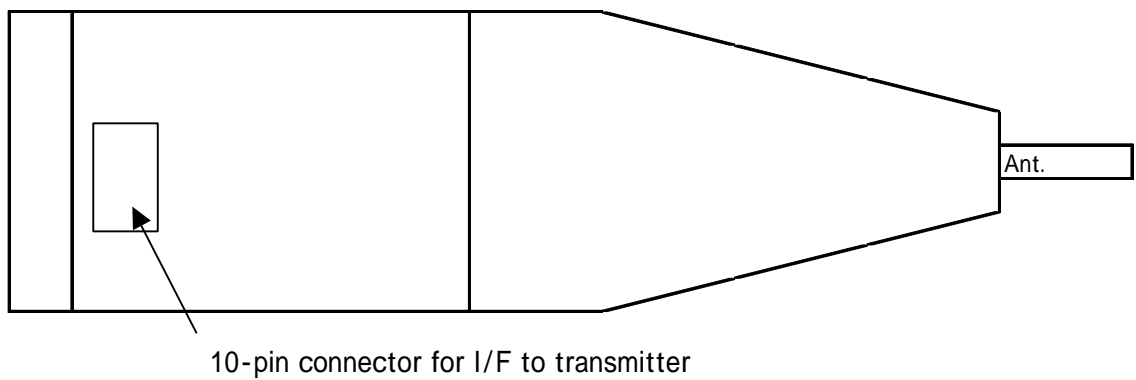


Fig.1 TM14 communication port location

1. Plug the TM14-2.4G into your T12FG transmitter.
2. Turn the T12FG on and please check the LED on the TM14 become solid green when it s normally operated.
3. Never point the anntena to the model when flying.

**R6014FS/R608FS(Receiver)**

**Power requirement: 4.8V or 6.0V**

**Fail Safe function and Battery Fail Safe function.**

**Preparatin for operaion:**

**Set frequency SW 1sec PUSH for ID-match with the TM14 to be linked.**

**The LED on the receiver turns to solid green, then the R6014FS/R608FS is OK for use with the TM14-2.4G. Once the link procedure is done not need to re-link.**

**Frequency Allocation**

The TM14-2.4G/R6014FS/R608FS can operate on 36 available frequencies between 2405.376 MHz and 2479.104 MHz with 2.048 MHz separation between each frequency. See the table below for the exact frequency assignments.

Table 1 : Frequency Channel

Channel	Frequency (MHz)	Channel	Frequency (MHz)
02	2 4 0 5 . 3 7 6	38	2 4 4 2 . 2 4 0
04	2 4 0 7 . 4 2 4	40	2 4 4 4 . 2 8 8
06	2 4 0 9 . 4 7 2	42	2 4 4 6 . 3 3 6
08	2 4 1 1 . 5 2 0	44	2 4 4 8 . 3 8 4
10	2 4 1 3 . 5 6 8	46	2 4 5 0 . 4 3 2
12	2 4 1 5 . 6 1 6	48	2 4 5 2 . 4 8 0
14	2 4 1 7 . 6 6 4	50	2 4 5 4 . 5 2 8
16	2 4 1 9 . 7 1 2	52	2 4 5 6 . 5 7 6
18	2 4 2 1 . 7 6 0	54	2 4 5 8 . 6 2 4
20	2 4 2 3 . 8 0 8	56	2 4 6 0 . 6 7 2
22	2 4 2 5 . 8 5 6	58	2 4 6 2 . 7 2 0
24	2 4 2 7 . 9 0 4	60	2 4 6 4 . 7 6 8
26	2 4 2 9 . 9 5 2	62	2 4 6 6 . 8 1 6
28	2 4 3 2 . 0 0 0	64	2 4 6 8 . 8 6 4
30	2 4 3 4 . 0 4 8	66	2 4 7 0 . 9 1 2
32	2 4 3 6 . 0 9 6	68	2 4 7 2 . 9 6 0
34	2 4 3 8 . 1 4 4	70	2 4 7 5 . 0 0 8
36	2 4 4 0 . 1 9 2	72	2 4 7 7 . 0 5 6
		74	2 4 7 9 . 1 0 4

## **Specification**

### TM14-2.4G SPECIFICATIONS

1 Radio Characteristics	
RF power output	100mW EIRP
Modulation	Direct-Sequence Spread-Spectrum
Frequency band	2405.376MHz - 2479.104MHz
Channel	36
Antenna	1/2 Pencil type antenna 1.6dBi
2 Radio communication control	
Error checking	CRC-CCITT
3 Terminal interface	
Physical interface	10 pins
4 Power Supplying	
Supply voltage	7.4V/3.3V DC
Current consumption	150 mA(Approx.)
5 Environmental	
Operating temperature	-10 to +60
Storage temperature	-20 to +70
6 Miscellaneous	
Indicator	2 color LED

### R6014FS/R608FS SPECIFICATIONS

1 Radio Characteristics	
Frequency band	2405.376MHz - 2479.104MHz
2 Radio communication control	
Error checking	CRC-CCITT
3 Power Requirement	
Supply voltage	4.8 or 6.0V DC
Current consumption	80 mA
5 Environmental	
Operating temperature	-10 to +60
Storage temperature	-20 to +70
6 Miscellaneous	
Indicator	2 color LED
Case	Plastic

# INSTRUCTIONS MANUAL

## FEDERAL COMMUNICATIONS COMMISSION

### INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used according to the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which it found by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet other than the receiver's
- Consult the dealer or an experienced radio/TV technician for assistance.

#### CAUTION:

To assure continued FCC compliance:

- (1) Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

#### FCC Label Compliance Statement:

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.

#### Exposure to Radio Frequency Radiation

To comply with FCC RF exposure compliance requirements, a separation distance of at least 20cm must be maintained between the antenna of this device and all persons. This device must not be co-located or operating in conjunction with any other antenna or transmitter.