

1M23N28504

**Futaba.**

**R304SB-E**

T-FHSS-2.4GHz System  
S.BUS2, 4-Channel  
Built-in Antenna Receiver  
for EP Car Models



**WARNING**

**NEVER** use dry batteries for the power supply of the R304SB-E as this may cause difficulties with the receiver's operation.

**NEVER** use the R304SB-E in GP (Engine) cars.

Wrap the receiver with something soft, such as foam rubber, to avoid vibration. Do not splash water over the receiver.

Since the receiver generates a certain amount of heat, install the place with good ventilation.

Thank you for purchasing the R304SB-E receiver. The R304SB-E is designed for use with the Futaba T-FHSS system transmitter.

The R304SB-E receiver has adopted the newly developed bidirectional communication system "T-FHSS".

**•Telemetry system**

With the **telemetry system**, the running status can be displayed at the transmitter. The telemetry data can be checked at the transmitter by connecting the **telemetry sensor** sold separately to the **S.BUS2** connector of the **R304SB-E** receiver.

**•Normal mode/High Speed mode**

The "Normal mode" accepts any type of servos or the peripheral. The "High Speed mode" only accepts the digital servos, including BLS series, and most peripheral equipments such as the brushless ESCs. Please pay special attention to the information contained within this manual and transmitter's manual in order to have a pleasant running experience.

**•Built-in antenna**

The **R304SB-E** receiver is designed to be used only for EP Car models.

**Link Procedure**

Each transmitter has an individually assigned, unique ID code. In order to start operation, the receiver must be linked with the ID code of the transmitter with which it is being paired. Once the link is made, the ID code is stored in the receiver and no further linking is necessary unless the receiver is to be used with another transmitter.

- 1 Place the transmitter and the receiver close to each other within half (0.5) meter.
- 2 Place the transmitter into the linking mode, and turn on the receiver.
- 3 During countdown, push the receiver tact switch for approximately 2 seconds. The LED will begin to blink red. After the receiver LED switches from blinking red to green → red steady light, If the transmitter and receiver are linked normally, set the power switch to the OFF position and then turn on the PWR ON position. If the receiver LED lights green, linking was succeeded. Actually check servo operation.

\*Please refer to the table below for LED status and receiver condition.

No signal reception	LED: Red
Receiving signals	LED: Green
Unrecoverable failure (EEPROM, etc.)	LED: Red and Green turn on alternately

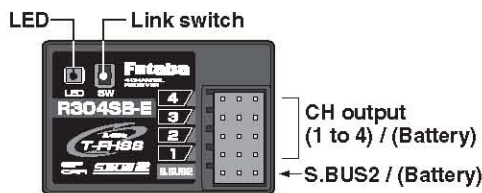
\*Refer to the transmitters operation manual for complete details on how to place the transmitter into the linking mode.

\*If there are many T-FHSS systems turned on in close area, your receiver might have difficult in establishing a link to your transmitter. This is a rare occurrence. Your receiver may link to the undesirable transmitter. This is very dangerous if you do not notice this situation. In order to avoid the problem, we strongly recommend you double check whether your receiver is really under control by your transmitter.

**Note: The R304SB-E is compatible with the T-FHSS system transmitters.**

**The receiver type setting of the transmitter is set T-FHSS.**

\*Futaba T-FHSS system does not work with current Futaba S-FHSS/FHSS/FASST-est/FASST system.



**Operating Precautions:**  
Once the R304SB-E detects the T-FHSS normal mode or T-FHSS high speed mode, the detected mode is locked as long as the power is ON. When need to change the mode, please cycle power.

**WARNING**

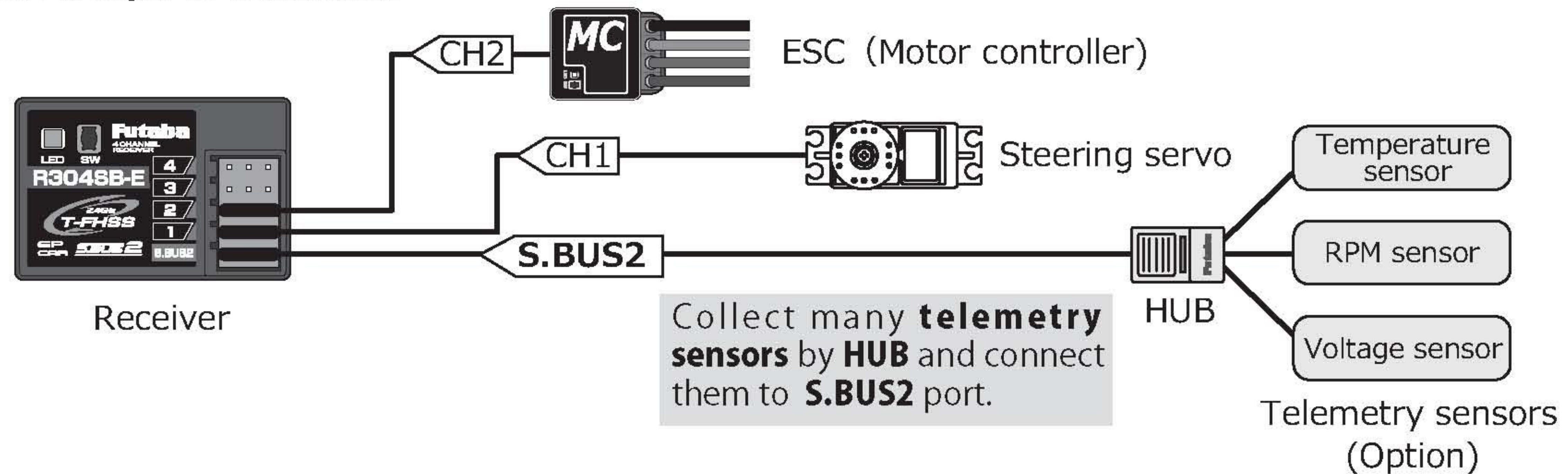
- After the linking is done, please cycle receiver power and check if the receiver to be linked is really under the control by the transmitter to be linked.
- Do not perform the linking procedure with motor's main wire connected or with the engine operating as it may result in serious injury.

**Usage condition on "High Speed mode"**

**CAUTION**

- When using the high-speed mode, use a Futaba digital servo (including brushless servo). Analog servos cannot be used.
- The use of analog servos may cause servo trouble.

## The Example of Connection



## Compliance Information Statement (for U.S.A.)

This device, trade name Futaba Corporation of America, model number R304SB-E, complies with part 5 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.

### 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.
2. This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

To meet the RF exposure requirements of the FCC this device shall not be co-located with another transmitting device.

The responsible party of this device compliance is:  
 Futaba Service Center  
 3002 N Apollo Drive Suite 1, Champaign, IL 61822 U.S.A.  
 TEL (217)398-8970 or E-mail: support@futaba-rc.com (Support)

本產品符合低功率電波輻射性電機管理辦法 第十二條、第十四條等條文規定  
 1. 經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。  
 2. 低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。  
 前項合法通信，指依電信法規定作業之無線電通信。  
 低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

### R304SB-E Specifications:

#### R304SB-E Specifications:

(T-FHSS system, S.BUS2, 4-channel receiver)

- Receiving on 2.4GHz band
- System: T-FHSS system  
 At Normal/High speed mode (auto detection)
- Receiving Range : 70m (230ft.)(at the best conditions)
- Power requirement Rated voltage: 4.8V-7.4V / Usable voltage: 3.5-8.4V
- F/S and Battery F/S function: It is set according to the transmitter used.
- Battery F/S voltage: Set it with the transmitter arbitrarily.
- Size: 1.38x0.91x0.33" (35.1x23.2x12.5mm)
- Weight: 0.23oz. (6.7g)

FUTABA CORPORATION

1080 Yabutsuka, Chosei-mura, Chosei-gun, Chiba-ken, 299-4395, Japan  
 Phone: +81 475 32 6982, Facsimile: +81 475 32 6983

©FUTABA CORPORATION 2013, 9 (1)