

# Futaba® R2008SB

**S-FHSS/FHSS-2.4GHz System**  
**S.BUS Port and 8 Channels for Conventional System Receiver**



Thank you for purchasing a Futaba **R2008SB S-FHSS/FHSS-2.4GHz** compatible receiver.

The **R2008SB** has an **S.BUS** system output port and a conventional system channel outputs. It can also be used with conventional system servos, etc. in addition to **S.BUS** system compatible servos and gyros, etc.

## Applicable systems: Futaba S-FHSS/FHSS-2.4GHz system and TM-FH RF Module

### Usage precaution

- Futaba S-FHSS/FHSS system does not work with current Futaba FASST system. Futaba FASST system and S-FHSS/FHSS system are not compatible each other.

### ⚠ WARNING

- ❶ Wrap the receiver with something soft, such as foam rubber, to avoid vibration. Moreover, The receiver must not get wet.
- ❷ Keep away from conductive material to avoid the short circuit.

### Antenna installation precaution

- ⊘ Do not cut or bundle the receiver antenna wire.
- ⊘ Do not bend the coaxial cable . It causes damage.
- ⊘ The antenna should not be pulled.
- ❶ Keep the antenna away from the motor, ESC and other noise sources as you can.
- ❷ Be sure that the two antennas are placed at 90 degrees to each other.
- The R2008SB has two antennas. In order to maximize

signal reception and promote safe modeling Futaba has adopted a diversity antenna system. This allows the receiver to obtain RF signals on both antennas and fly problem-free.

### Antenna installation for carbon fuse

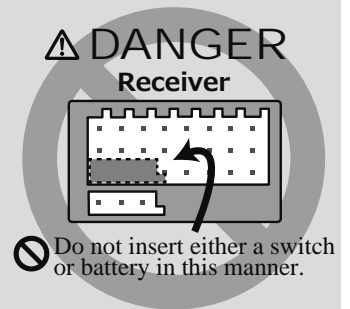
### ⚠ WARNING

- ❶ The antenna portion of 30mm tip must be fully exposed.
- Please make sure that the exposed portion won't be slid back in the fuse by the wind pressure or other force during the flight session.

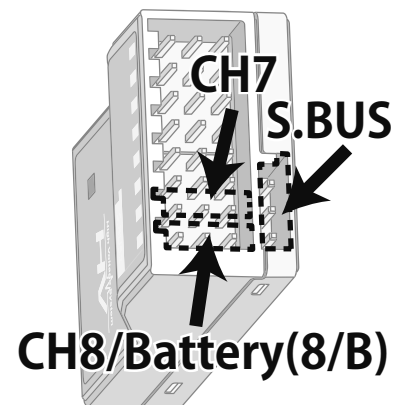
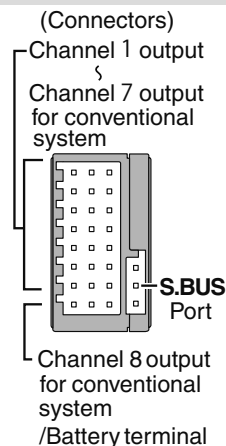
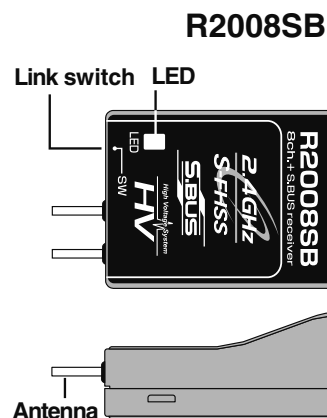
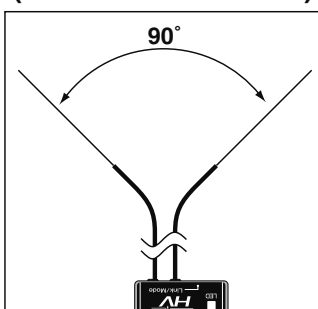
### S.BUS connector insertion precaution

### ⚠ DANGER

- ⊘ Do not insert a connector, as shown right.
- It will occur short-circuit, by inserting this way. A short circuit across the battery terminals may cause abnormal heat, fire and burning.



### (Antenna installation)



## R2008SB Specifications

**S-FHSS/FHSS-2.4GHz system/S.BUS port and 8 channels for conventional system receiver**

- Dual antenna diversity
- Size: 0.98 x 1.69 x 0.55 in. (24.9 x 42.8 x 14.0 mm)
- Weight: 0.34 oz. (9.5g)
- Power requirement: 4.8V to 7.4V
- Battery F/S Voltage: 3.8V

\* Be sure that when using ESC's regulated output the current capacity of the ESC must meet your usage condition.

\*The Battery F/S voltage is set for 4-cell NiCd/NiMH battery. Battery F/S function doesn't work properly when other type battery is used.

\*The fail safe function can be set for each channel , however it differs according to the transmitter. When you use TM-FH RF Module , the fail safe function can be set for 3-channel only.

\*S.BUS port: R2008SB can be used up to 8 channels , however, it differs according to the transmitter. An unused channel is a neutral signal. The F/S setting channel at F/S is F/S position. Another, it is Hold signal.

## Link to the transmitter

- 1 Bring the transmitter and the receiver close to each other, within 20 inches (half meter).
- 2 Turn on the transmitter .
- 3 Turn on the receiver .
- 4 Press and hold the Link switch more than two(2) seconds. When the link is complete, the LED in the receiver changes to solid green. When the ID cannot be read due to the surrounding environment, try reading it with the transmitter and receiver antennas touched.

- When you use TM-FH RF Module , the fail safe function can be set for 3-channel only. The throttle stick is set the position of hope (slow) and above-mentioned Link is set.
- If there are many S-FHSS/FHSS systems turned on in close proximity, your receiver might not link to your transmitter. In this case, even if the receiver's LED stays solid green, unfortunately the receiver might have established a link to one of other transmitters. This is very dangerous if you do not notice this situation. In order to avoid the problem, we strongly recommend you to doublecheck whether your receiver is really under control by your transmitter by giving the stick input and then checking the servo response.

## ⚠ WARNING

⊘ Do not perform the linking procedure with motor's main wire is connected or the engine is operating as it may result in serious injury.

❗ When 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.

Please refer the table below for LED status vs receiver's condition.

### LED Indication

Green	Red	Status
<b>Off</b>	<b>Solid</b>	No signal reception
<b>Solid</b>	<b>Off</b>	Receiving signals
<b>Blink</b>	<b>Off</b>	Receiving signals but ID is unmatched
<b>Alternate blink</b>		Unrecoverable error (Memory, etc.)

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

This device, trade name Futaba Corporation, model number R2008SB, complies with part15 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.

The responsible party of this device compliance is:

Futaba Service Center

3002 N Apollo Drive Suite 1, Champaign, IL 61822 U.S.A.

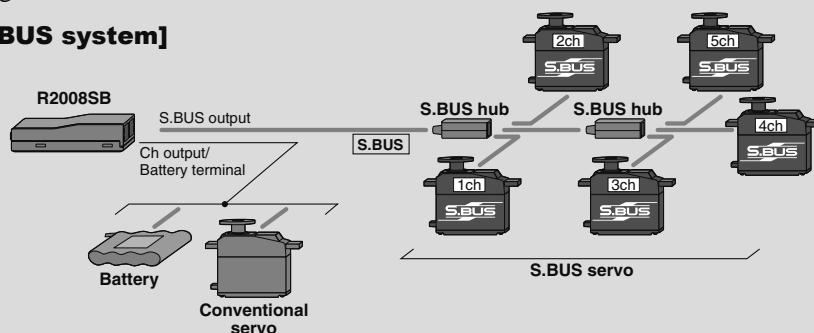
TEL (217)398-8970 or E-mail: support@futaba-rc.com (Support)

## What is S.BUS?

Different from conventional radio control systems the **S.BUS** system uses data communication to transmit control signals from a receiver to a servo, gyro, or other **S.BUS** compatible device. This data includes commands such as “move the channel 3 servo to 15 degrees, move the channel 5 servo to

30 degrees” to multiple devices. The **S.BUS** devices execute only those commands for their own set channel. For this reason, it can be used by connecting multiple servos to the same signal line.

### [Connection by S.BUS system]



\* Set the channel at the **S.BUS** servos by using an **SBC-1** channel changer or a **CIU-2** USB serial interface.

\* Can also be used together with conventional servos. However, conventional servos cannot be used by the **S.BUS** output.

\* When using servos with a remote battery pack, use **S.BUS** Hub with Cable (2-way/remote battery pack use).

Please refer to the instruction manual of **S.BUS** Hub with Cable (2-way/remote battery pack use) for the connection method.

## ⚠ WARNING

❗ Turn on the power on transmitter → receiver in order. In addition, always check the operation of all the servos before flight.

⊘ Do not insert or remove the servo connector while the receiver power is ON.

Since the S.BUS servo switches the operation mode automatically according to the type of signal (S.BUS signal/PWM signal) from the receiver, if the connector is inserted or removed while the power is ON, an S.BUS connected servo will be erroneously recognized and may stop.

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