Futaba®

R6203SB

FASST-2.4GHz (7ch/8ch/10ch/Multi-ch) System
S.BUS Port and 3 Channels for Conventional System
High-speed Receiver

FASST 2.4GHz   S.BUS   High Voltage System HV

Thank you for purchasing a Futaba **R6203SB FASST-2.4GHz** compatible receiver.

The **R6203SB** 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.

When the linking procedure is performed, R6203SB recognizes the signal mode (FASST-2.4GHz 7ch mode or 8ch/10ch/Multi-ch mode) automatically.

In addition, the operating mode (high-speed mode/normal mode) can be selected.

Usage condition for conventional system output (Ch1-3) on "High Speed mode"

⚠ CAUTION

The "High Speed mode" accept the digital servos only or most type of peripherals.

• If any analog servos connected to these output as it will cause malfunction. Please check the peripherals if there's any malfunction with whole stick lever throw. If any malfunction occur please change the operation mode to "Normal mode."

Applicable systems: FASST-2.4GHz 7ch or 8ch/10ch/Multi-ch system

Antenna installation precaution

⚠ WARNING

Be sure that the two antennas are placed at 90 degrees to each other.

• Futaba's dual antenna diversity, or DAD, then seamlessly selects the best signal reception between these antennas to ensure that there is no loss of signal.

Antenna installation for carbon fuse

⚠ WARNING

The antenna portion of 30mm tip must be fully exposed.

• Please make sure that the exposed portion won't be slided back in the fuse by the wind pressure or other force during the flight session.

Usage precautions about the power source

We do not recommend to use the power source of less than 4.0V but if to use the lower voltage source please keep in mind the condition shown below.

• Fail Safe function MUST be in "off" since the battery f/s will disturb the normal operation.

• Please make sure that the full loaded condition of the ESC and the servos won't disturb the receiver operation before start flight.

  This is very important since the receiver will stop operation when the supply voltage drops to less than 3.5V.

• Please be sure that the ESC or servos can keep flawless operation till such a lower voltage.

The power source voltage must not exceed the servo's rating.

(Antenna installation)
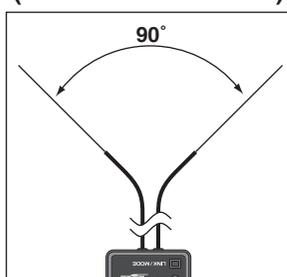
Link/Mode switch
LED
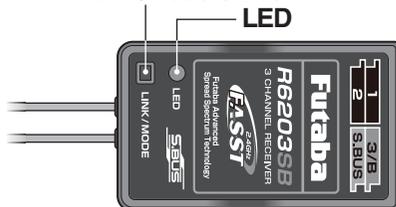
R6203SB

(Connectors)

• Channel 2 output for conventional system (**2**)
• Channel 1 output for conventional system (**1**)
• Channel 3 output for conventional system (**3**)/Battery terminal (**B**)
• S.BUS Port (**S.BUS**)

R6203SB Specifications

FASST-2.4GHz (7ch/8ch/10ch/Multi-ch) system/**S.BUS** port and 3 channels for conventional system/high-speed receiver

• Dual antenna diversity
• Size: 0.89 x 1.47 x 0.37 in. (22.5 x 37.4 x 9.3 mm)
• Weight: 0.25 oz. (7.2g)
• Power requirement: 3.7V to 7.4V(Voltage range: 3.5 to 8.4V)

  *Be sure that when using ESC's regulated output the 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 when on "Multi-ch" mode, however, it differs according to the transmitter. When on "7ch" mode, the fail safe function can be set for 3-channel only.
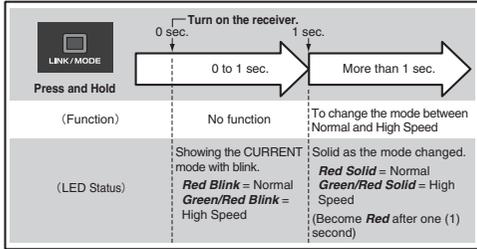
  *S.BUS port: R6203SB can be used up to 7 channels or less on the "7ch" mode and 16 channels + DG1/2 or less on the "8ch/10ch/Multi-ch" mode, however, it differs according to the transmitter.

Operation Mode Select

The operation mode is on "Normal mode" from factory shipping. When to change the mode, please follow the steps shown below.

1 Turn off the receiver.
2 Press and hold the **Link/Mode** switch and turn on the receiver. Keep the switch hold more than one(1) second. The **LED** starts flashing with the current status.
3 Release the switch.
4 Turn off the receiver.

By doing this step, the mode can switch over between two(2) modes.

Press and Hold	0 to 1 sec.	More than 1 sec.
(Function)	No function	To change the mode between Normal and High Speed
(LED Status)	Showing the CURRENT mode with blink. **Red Blink** = Normal **Green/Red Blink** = High Speed	Solid as the mode changed. **Red Solid** = Normal **Green/Red Solid** = High Speed (Become **Red** after one (1) second)

Please check the operation mode by observing the **LED** when turning on the receiver. If possible there's no **FASST** transmitter turned on around you in order to make firmer check.

When turn on the receiver, the **LED** will be;

• Red when on "Normal mode"
• Green and Red (makes Orange) when on "High Speed mode". (After two(2) seconds, change to Red.)
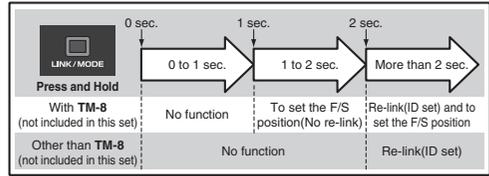
If there are some **FASST** transmitter turned on around the receiver, the **LED** may show the above status for a brief moment then changed to the status indication as shown in the "**LED** indication" table.

Link to the transmitter

1 Press and hold the **Link/Mode** switch more than two(2) seconds.

Re-adjust the F/S position (only for TM-8)

1 Press and hold the **Link/Mode** switch between one(1) and two(2) seconds.

	0 to 1 sec.	1 to 2 sec.	More than 2 sec.
Press and Hold With **TM-8** (not included in this set)	No function	To set the F/S position(No re-link)	Re-link(ID set) and to set the F/S position
Other than **TM-8** (not included in this set)	No function		Re-link(ID set)

⚠ 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.

❗ While 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.

LED Indication

Green	Red	Status
Solid	**Solid**	Initializing when on "High Speed mode"
Off	**Solid**	No signal reception
Solid	**Off**	Receiving signals
Blink	**Off**	Receiving signals but ID is unmatched
Alternate blink		Unrecoverable error (EEPROM, etc.)

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]
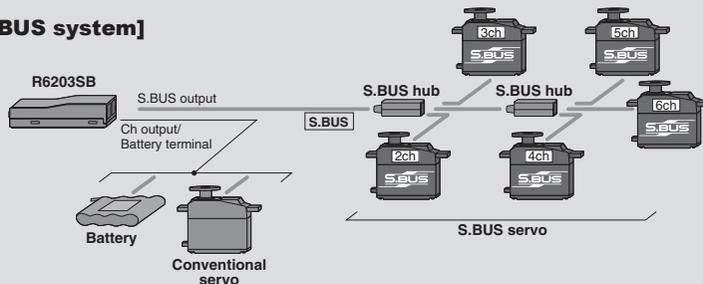
* Set the channel at the **S.BUS** servos by using an **SBC-1** channel changer or a **CIU-2** USB serial interface.
* Can also be used together with conventional servos. However, conventional servos cannot be used by the **S.BUS** output.
* When using servos with a remote battery pack, use **S.BUS** 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.