

RX2SIM

Manual 1.2 EN

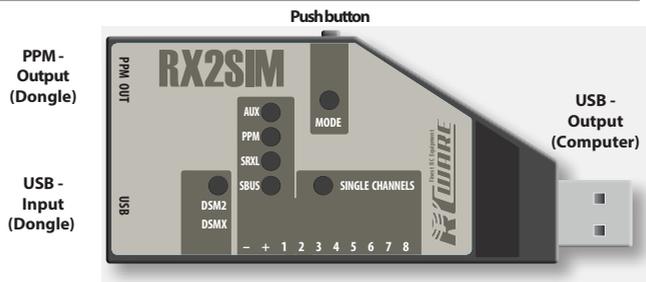


This instruction manual only applies to the latest RX2SIM firmware version!
Perform a firmware update with the StudioX software prior the first usage.

1.1 SPECIFICATION

- Operating Voltage: 3.8V – 6.0V (typical 5.0V)
- Satellite port: 3.3V, max. 100mA (unlimited)
- Dimensions (LxWxH): 92 x 42 x 20 mm
- Weight: 32g

1.2 OVERVIEW



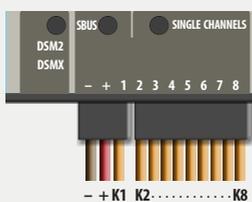
Spektrum®
DSM2/DSMX
remote satellite
JR® DMSS
satellite (RJ01)



- PPM
- SRXL
- S.Bus / S.Bus2
- USB2SYS



Servo
single channels



USB-Output (Computer):

This connects RX2SIM to the computer and also supplies power to RX2SIM. Connect RX2SIM either by plugging it into a USB socket of the PC directly or by using a standard type A USB extension cable. If the connection is made through a USB hub, the hub should provide a separate power supply in order to avoid current overload of the PC's USB port in case more than one USB device is active at the same time.

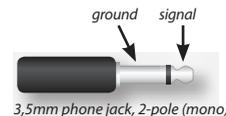
Receiver:

RX2SIM supports various types of RC receivers. Either you connect a receiver with up to eight separate servo channels or the functions are transmitted by one single line using a special Single-Line protocol. Here RX2SIM supports Futaba® S.Bus/S.Bus2, SRXL, PPM-serial signal (SPPM) or you can also connect one single Spektrum® DSM2/DSMX remote satellite or a JR® RJ01 DMSS satellite.

In general the receiver does not need a separate power supply as RX2SIM supplies 5V power to the receiver. Other devices (like servos) must not be connected to the receiver in order to avoid excessive current consumption! To prevent damage to RX2SIM or to the USB port the output current is limited to 100mA at port [- + 1]. If your receiver requires higher current or voltage you must power it separately. **In this case the (+) pole (red wire) between receiver and RX2SIM must be cut or unplugged to prevent from damaging the USB port due to overvoltage.**

PPM-Output:

This connector outputs the control signals to your simulator interface. The functionality matches the trainer port of your RC transmitter.



USB-Input (Dongle):

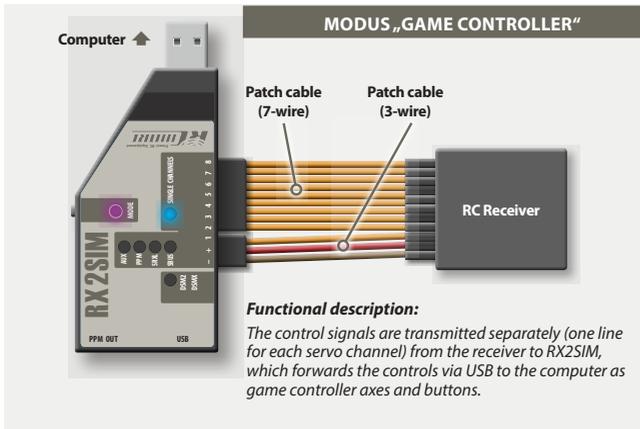
Here you can connect the USB interface or dongle of your simulator software. In operating mode "Simulator-Dongle", RX2SIM connects this port with the computer's USB port. In operating mode "Game Controller", this port is not active. If needed, connect your simulator dongle to another USB port of your computer.

2.1 CONNECTING A RECEIVER WITH SEPARATE SERVO OUTPUT CHANNELS

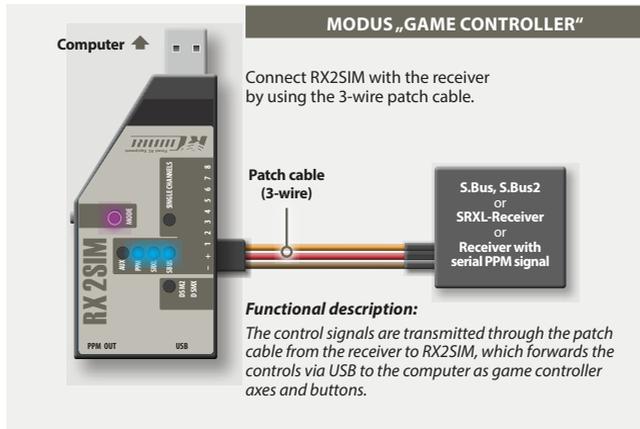
Connect the first servo output channel from the receiver with RX2SIM via the three-wire patch cable. This connection also supplies voltage for the receiver. Connect channels 2 to 8 using the 7-wire patch cable. On these servo plugs only the signal line (orange wire) is connected.

Please refer to your receiver's manual or the imprint on its case to determine which pin is the impulse line on each servo connector.

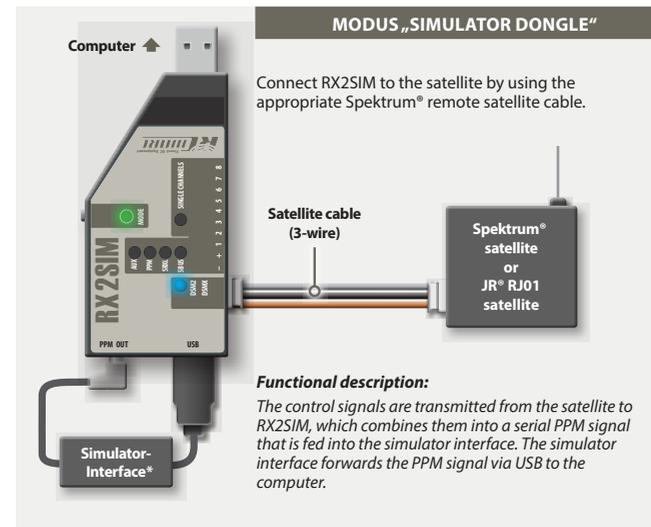
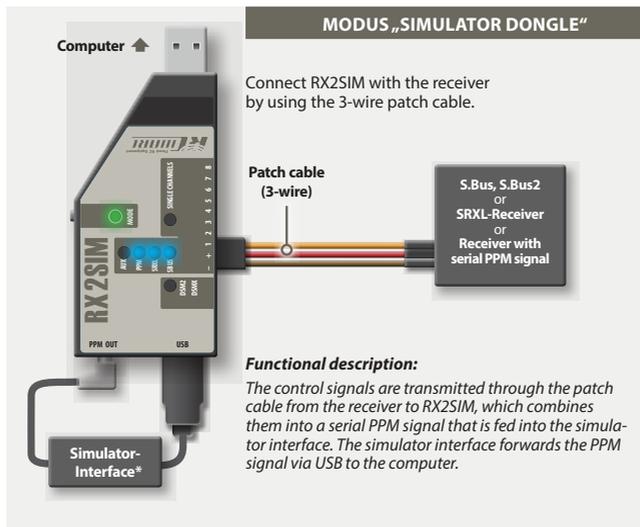
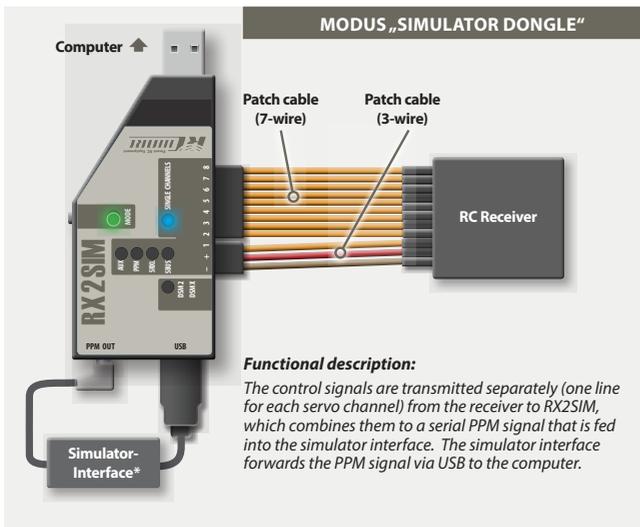
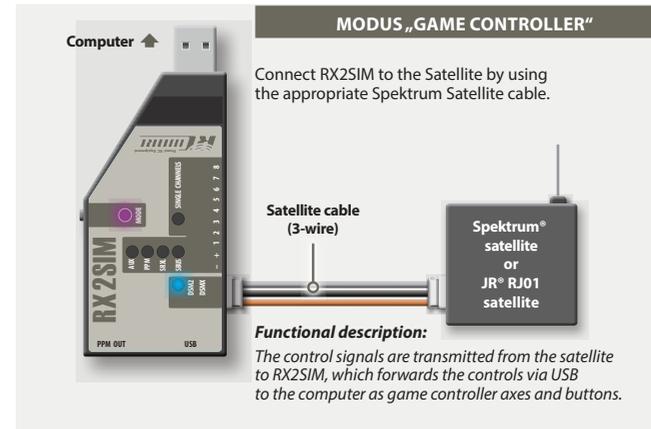
2.1 CONNECTING A RECEIVER WITH SEPARATE SERVO OUTPUT CHANNELS



2.2 RECEIVER WITH S.BUS, S.BUS2, SRXL OR SERIAL PPM PORT



2.3 SPEKTRUM® OR JR® REMOTE SATELLITE



* Simulator-Interface (Dongle) not included. This is part of your RC flight simulator.

3 SETUP PROCEDURE

Connect RX2SIM to your RC receiver and simulator interface according to the applicable picture. Then plug RX2SIM to an available USB port of your computer.

Please do not press the button on RX2SIM at this time. Otherwise you may enter firmware update mode.

3.1 OPERATION MODE

By briefly pressing the button you can change the operation mode. RX2SIM will show the preselected operation mode by flashing mode LED in the color of the new mode. After a few seconds without further button press the preselected mode will become active and the mode LED stops flashing. The selected mode will stay selected even when the device is powered off. By default you can choose between the following operation modes:

Green: Simulator-Dongle

The receiver output signals are available at the PPM output jack. Any simulator interface or USB-Dongle that is connected to RX2SIM will be connected through RX2SIM with the computer's USB port. So this operation mode can be used for flying your RC flight simulator wireless and without the need for connecting the simulator to your transmitter's trainer port.

Purple: Game Controller

In this mode RX2SIM operates as a USB game controller. The various RC servo channels are mapped to the different axes and buttons of the game controller. So you can use your RC transmitter as wireless joystick for computer games or different flight simulators. Also the controls are available at the PPM output jack but in comparance to the „Simulator-Dongle“ mode the USB-input port will not be powered and is not connected to the USB-output.

Orange: USB2SYS

In this mode RX2SIM acts as BEASTX USB2SYS interface and can be used as communication interface for MICROBEAST/MICROBEAST PLUS. Connect the 3-wire patch cable to the very left port at RX2SYS marked [- + 1]. The other end of the cable connects to the SYS port of MICROBEAST/MICROBEAST PLUS. Watch out for correct polarity! Note: You mustn't connect any servos to MICROBEAST when RX2SIM is used to power the device. **Otherwise when MICROBEAST is powered by a separate power supply (i. e. for power the servos) this must not provide more than 6V output voltage!** Otherwise RX2SIM or the computer's USB port will get damaged. So when you power MICROBEAST with a higher voltage level disconnect or cut the (+) pole (red wire) between RX2SIM and SYS port.

3.2 RECEIVER TYPE SELECTION

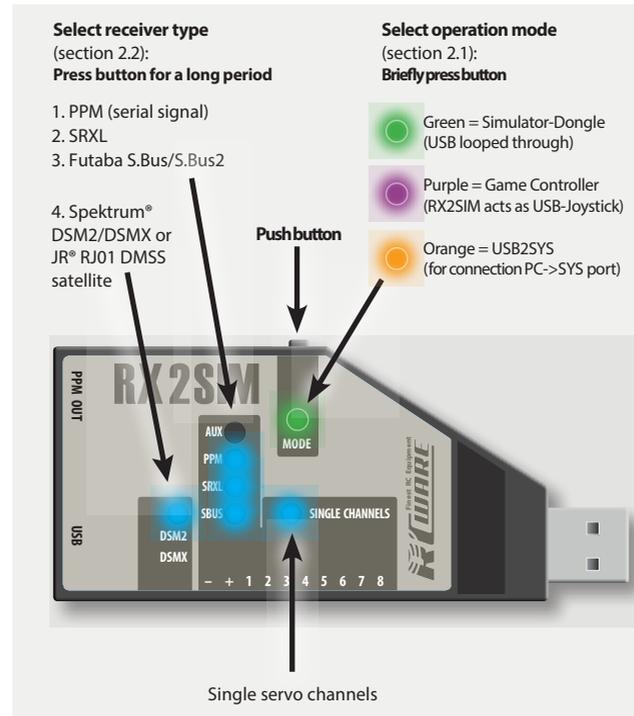
(applicable for operating modes Simulator-Dongle and Game Controller)

In order to decode the control signals from the connected receiver RX2SIM has to be set to the appropriate receiver type.

IMPORTANT: Press and hold RX2SIM's button for a long period (> 5 seconds) until the appropriate LED of your receiver type lights up or flashes. Then release the button.

- The LED will light up continuously if RX2SIM detects proper signals from the receiver.
- The LED flashes if there is no valid RX signal detected, which, for instance, might be caused by selecting a wrong receiver type, transmitter turned off or improper operation of the receiver itself.

The selected receiver type will stay selected even when the device is powered off.



4 ADDITIONAL OPTIONS

4.1 RECEIVER BINDING

To bind the receiver to the transmitter please follow the instruction manual of your radio control system. There is one specialty when using a **single Spektrum® remote satellite** connected to RX2SIM. In this case the bind sequence on the receiver must be initiated by RX2SYS. For this connect RX2SIM to the computer and set „Spektrum®“ as receiver type on the RX2SIM (see section 3.2) before connecting the Spektrum® satellite to RX2SIM. When using a **DSM2 remote satellite** additionally connect the 3-wire patch cable to the very left port marked [- + 1] on RX2SIM. The other end of the patch cable plugs into one of the other ports on the right. To bind a **DSMX remote satellite** you don't connect the patch cable. Now please plug in the satellite connector quickly, so that all contacts connect nearly at the same time. This will place the satellite in bind mode (satellite LED flashing quickly) and you can initiate bind sequence on the transmitter. If this does not work immediately, repeat plugging the satellite out and in again for another trial.

4.2 RESET TO FACTORY DEFAULTS

In order to reset RX2SIM to factory defaults press and hold the button while connecting it to the computer. Then release the button. Two blue LEDs will light up. Now press and hold the button again until the red flashing LED turns into continuous light. Release the button now to restore RX2SIM's factory defaults.

4.3 FIRMWARE UPDATE/INSTALLATION OF ADDITIONAL FUNCTIONS

The firmware of RX2SIM can be upgraded or updated to newer releases by using the StudioX software. To start RX2SIM in firmware update mode press and hold the button before and while connecting RX2SIM to the computer. Then immediately release the button so that the two blue LEDs will light up constantly. Now start StudioX on the computer and follow the update instructions of the software. When the update was finished successfully RX2SIM will restart automatically with the new or updated firmware.

4.4 ENABLE OR DISABLE OPERATING MODES

Unused operating modes can be disabled so you don't have to skip them anytime when switching between operating modes. Likewise, disabled modes can be enabled again. Press and hold the button while connecting RX2SIM to the computer. Hold the button until the Mode LED shows the color of the mode you wish to enable or disable. To enable the mode release the button while the blue LEDs are on. To disable the mode release the button while the blue LEDs are off.

DECLARATION OF CONFORMITY

This device conforms to the basic requirements and other relevant regulations of corresponding CE directives.

The original Declaration of Conformity can be found on the Internet at www.rcware.de at the respective product description.

