SR300 Instruction Manual

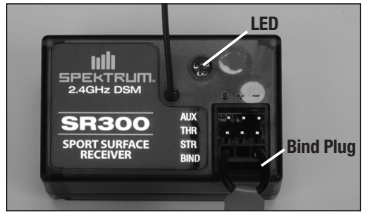
Spektrum's SR300 3-channel DSM® Sport Surface receiver is compatible with all Spektrum surface transmitters and operates in DSM mode.

Specifications

Type: DSM
Channels: 3
Band: 2.4GHz
Dimensions (LxWxH): 1.60 x 1.06 x .58 in (41 x 27 x 15mm)
Weight: .3 oz (9 g)
Voltage Range: 3.5–9.6V

Binding Receiver to Transmitter

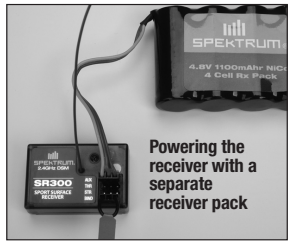
In order to operate, the receiver must be bound to the transmitter. Binding is the process of teaching the receiver the specific transmitter's code called GUID (Globally Unique Identifier). When a receiver is bound to a transmitter/model memory, the receiver will only respond to that specific transmitter/model memory.

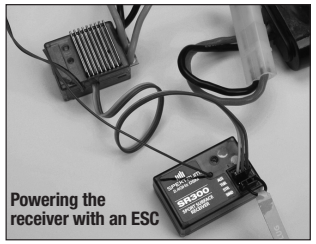


Binding

Note: The SR300 receiver utilizes the DSM protocol.

1. With the receiver off, insert the bind plug into the BIND port in the receiver.
2. Power the receiver through any port. If an ESC is being used, power on the ESC with the ESC lead plugged in the throttle channel port. The green LED will flash continuously indicating that the receiver is in bind mode.





3. With the steering wheel, throttle trigger and Aux channel (if applicable) in the desired preset failsafe positions, initiate the bind process with your Spektrum transmitter which will also store the failsafe positions. Please see the next section for more information about Failsafe.
4. The LED on the receiver should now be solid, indicating a successful bind has taken place.
5. Once the bind process is complete and before power is cycled on the receiver, remove the bind plug and store it in a convenient place. Failure to remove the bind plug will result in the receiver going back into bind mode.

Note: The only time it is necessary to do a rebind is if different failsafe positions are desired e.g., servo travel has been reversed after the initial bind, or if the receiver is to be bound to a different model memory.

Failsafe

Failsafe positions are also set during binding. In the unlikely event that the radio link is lost during use, the receiver will drive the servos to their preprogrammed failsafe positions (normally full brakes and straight steering). If the receiver is turned on prior to turning on the transmitter, the receiver will enter failsafe mode, driving the servos to their preset failsafe positions. When the transmitter is turned on, normal control is resumed.

Tips on Using Spektrum 2.4GHz

Your DSM equipped 2.4GHz system is intuitive to operate, functioning nearly identically to FM systems. Following are a few common questions from customers.

1. Q: Which do I turn on first, the transmitter or the receiver?

A: It doesn't matter, if the receiver is turned on first, all channels will be driven to the failsafe position set during binding. When the transmitter is then turned on, the transmitter scans the 2.4GHz band and acquires an open channel. Then the receiver that was previously bound to the transmitter scans the band and finds the GUID (Globally Unique Identifier code) stored during binding. The system then connects and operates normally. If the transmitter is turned on first, the transmitter scans the 2.4GHz band and acquires an open channel. When the receiver is turned on, the receiver scans the 2.4GHz band looking for the previously stored GUID. When it locates the specific GUID code and confirms uncorrupted repeatable packet information, the system connects and normal operation takes place. Typically this takes 2 to 6 seconds.

2. Q: Sometimes the system takes longer to connect and sometimes it doesn't connect at all. Why?

A: In order for the system to connect (after the receiver is bound) the receiver must receive a large number of consecutive uninterrupted perfect packets from the transmitter. This process is purposely critical of the environment ensuring that it's safe to use when the system does connect. If the transmitter is too close to the receiver (less than 4 ft) or if the transmitter is located near metal objects (metal Tx case, the bed of a truck, the top of a metal work bench, etc.), connection will take longer and in some cases connection will not occur as the system is receiving reflected 2.4GHz energy from itself and is interpreting this as unfriendly noise. Moving the system away from metal objects or moving the transmitter away from the receiver and powering the system again will cause a connection to occur. This only happens during the initial connection. Once connected the system is locked in and should a loss of signal occur (failsafe) the system connects immediately (4ms) when signal is regained.

3. Q: I've heard that the DSM system is less tolerant of low voltage. Is this correct?

A: The SR300 has an operational voltage range of 3.5 to 9.6 volts. With most systems this is not a problem as in fact most servos cease to operate at around 3.8 volts. When using multiple high-current draw servos with an inadequate battery/power source, heavy momentary loads can cause the voltage to dip below this 3.5-volt threshold thus causing the entire system (servos and receiver) to brown out. When the voltage drops below the low voltage threshold (3.5 volts), the receiver must reboot.

4. Q: Sometimes my receiver loses its bind and won't connect, requiring rebinding. What happens if the bind is lost during use?

A: The receiver will never lose its bind unless it's instructed to. It's important to understand that during the binding process the receiver not only learns the GUID (code) of the transmitter but the transmitter learns and stores the type of receiver that it's bound to.

If the system fails to connect, more than likely the transmitter is near conductive material (transmitter case, truck bed, etc.) and the reflected 2.4GHz energy is preventing the system from connecting. (See #2 above)

Declaration of Conformity

(in accordance with ISO/IEC 17050-1)

No. HH2008111002

Product(s):	SR300 Receiver
Item Number(s):	SPMSR300
Equipment class:	1

The object of declaration described above is in conformity with the requirements of the specifications listed below, following the provisions of the European R&TTE directive 1999/5/EC:

EN 301 489-1, 301 489-17 General EMC requirements for Radio equipment

Signed for and on behalf of:
Horizon Hobby, Inc.
Champaign, IL USA
Nov. 10, 2008

Steven A. Hall
Vice President
International Operations and Risk Management
Horizon Hobby, Inc.

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