GEOSCANNERS
advanced survey systems



RX501

The RX501 receiver is a specially designed plug-in receiver for antennas compatible with GSSI SIR® ground penetrating systems. The receive is for bi-static use only and that means one must have a separate transmitter to be able to make the measurements.

With many improvements in the design of the electronics and high reliability the RX501 fills a void in the industry of ground penetrating radar and gives the customer the flexibility of bi-static measurements.

Electrical Specifications

Low Voltage Power Consumption	0.480 W
RX Aperture Time	520 ps
RX RF Bandwidth	962 Mhz
RX RF Dynamic Range	56.53 dB
RX Noise Figure	11.2 dB

All values are measured at 50 kHz PRF with a 300 Ohms load and with no averaging.

Mechanical Specifications

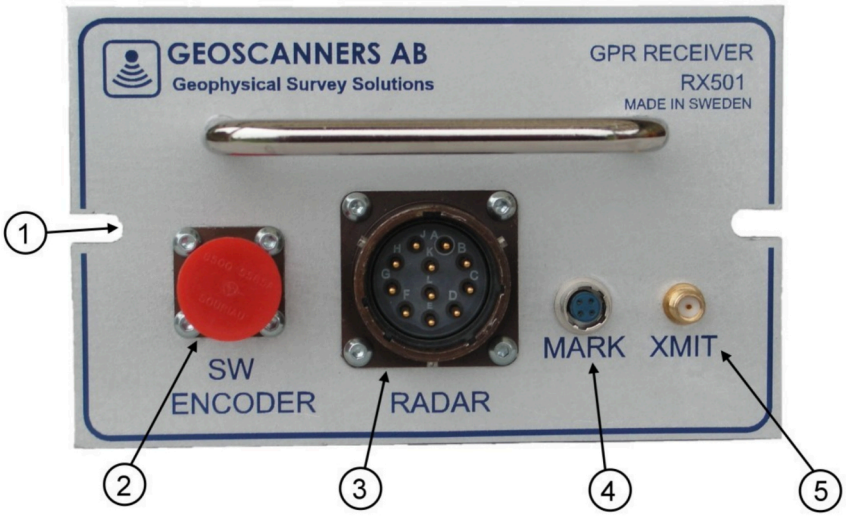
Dimensions (LxWxH) mm/inch	230x133x82 (mm) / 9.0x5.2x3.2 (inch)
Weight kg/Lbs	0.3 kg / 0.66 Lbs
Ingress Protection Rating	IP51

Environmental Specifications

Maximum Temperature °C / °F	+40 °C / +104 °F
Minimum Temperature °C / °F	-10 °C / +14 °F
Maximum Humidity (non condensing)	96% RH
RoHS compliant	Yes

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Operating Instructions

1. Insert the plug-in electronics RX501 into the antenna slot. Pay attention that the letters on the antenna and on the TR501 must be facing the same direction.

2. Secure with two bolts the plug-in electronics inserting them through the slots (1) and fastening them to the threads in the antenna case.

3. Attach the radar control cable to the plug-in electronics connector (3).

4. Connect the coaxial cable to drive the external transmitter to the connector labeled “XMIT” (5).

5. Connect the other end of the coaxial cable to the connector on the transmitter plug-in electronics.

6. Make sure that the receiver and the transmitter in the second antenna are firmly attached to the antennas before starting operating the units or powering the radar unit.

7. If survey wheel encoder operation is desired then connect a GSSI compatible survey wheel cable to the connector (2) in the front panel of the RX501. If you have any doubts whether or not your survey wheel encoder is compatible with GSSI hardware please contact us before attaching it to the unit.

8. A marker button can be attached to the marker connector (4) in the front panel.

9. Please pay attention to the fact that very high power transmitters might required external supporting units in order to work at higher PRF. If your unit is having trouble starting up check the PRF and the scan rate setting in your radar unit.

Turn on the radar and proceed with the survey.

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