

Manual for Wireless Trigger Unit WTU1



The wireless trigger unit WTU1 is used to replace trigger cables if e.g. roads or rivers prevent a continuous seismic measurement. The wireless trigger unit WTU1 works with nearly all impulse sources including sledge hammers.

The wireless trigger unit WTU1 consists of two boxes which include the sender and the receiver unit. The sender will be connected to the source and the receiver to the seismograph. The sender and receiver units are placed in small and robust plastic cases which allow an easy operation.

1. Sender

The general sender function is shown in figure 1.

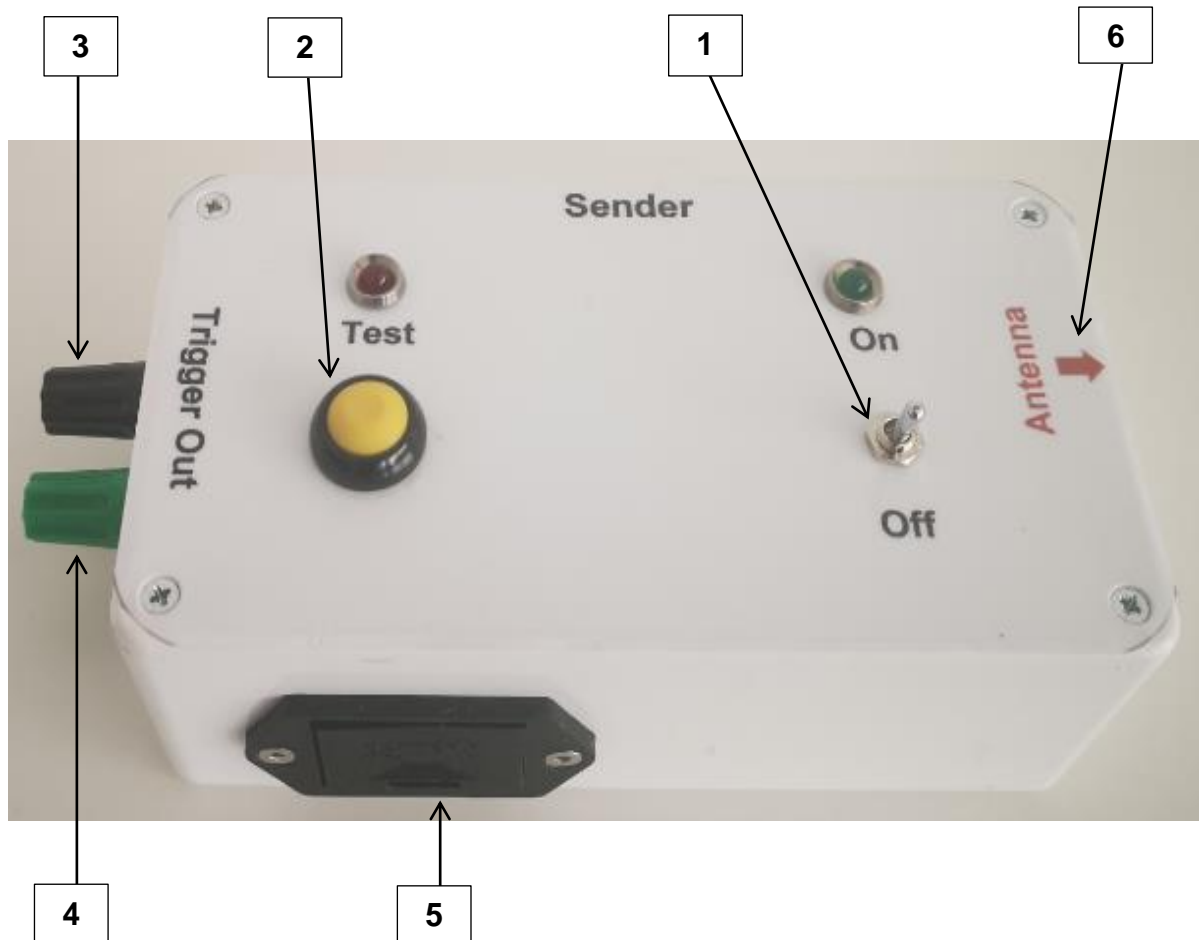


Fig. 1: Control panel at sender

The Sender provides following functions (see Fig. 1).

1. Button switch On/Off (On = LED lights)
2. Test signal (LED lights, when the signal is transmitted)
3. The grounding
4. Trigger signal coming from the seismic source
5. 9V power supply
6. The antenna side

2. Receiver

The general receiver function is shown in figure 2.

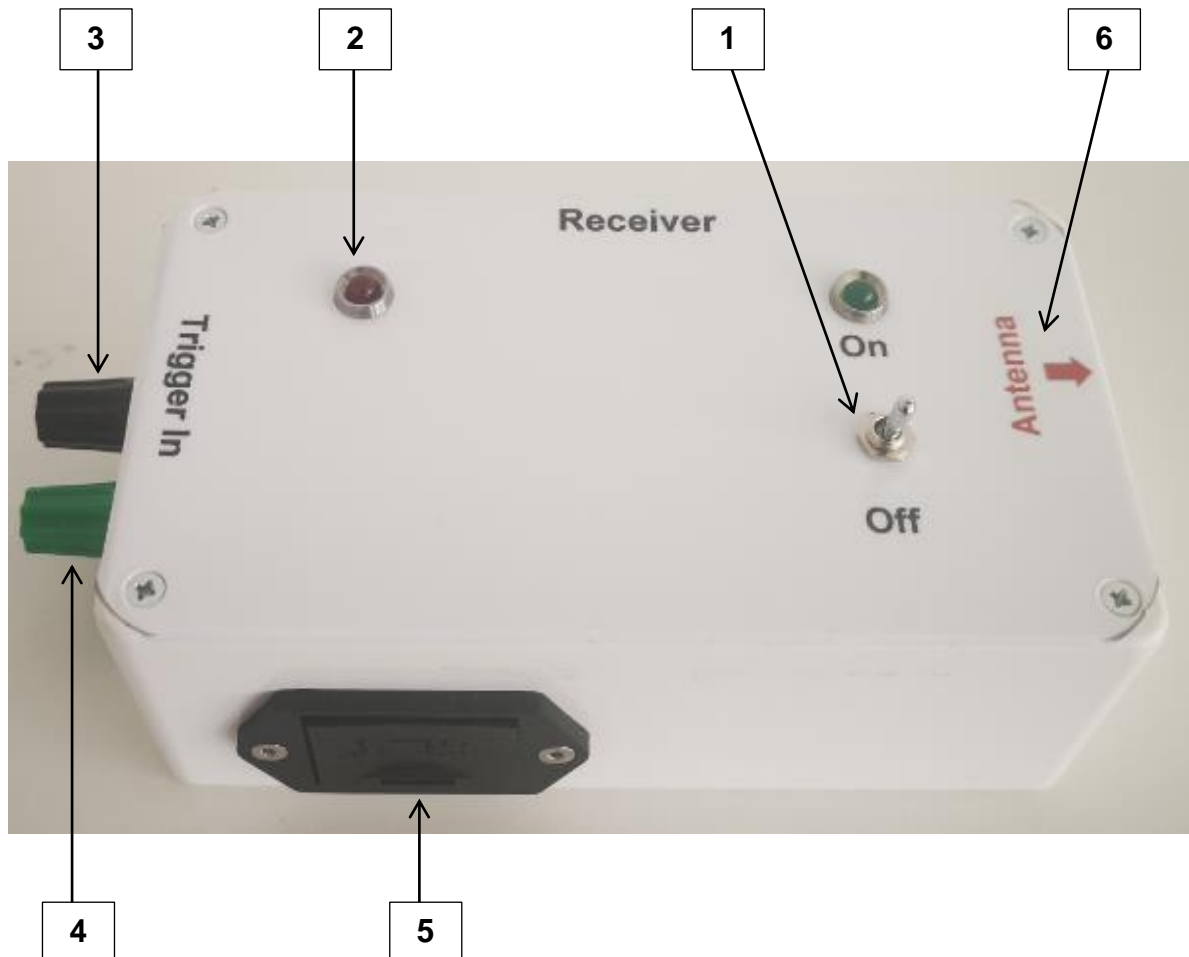


Fig. 2: Control panel at receiver

The receiver provides following functions (see Fig. 2).

1. Button switch On/Off (On = LED lights)
2. LED lights, when the signal is received
3. The grounding
4. Trigger signal to the seismograph
5. 9V power supply
6. The antenna side

3. General instructions

- ✚ The antennas must be arranged as shown in the 3. figure. Red arrows have to face each other.
- ✚ The boxes must be placed at the same height.



Fig. 3: Arrangement of sender and receiver.

- ✚ Do not stay between the boxes, otherwise the communication will be interrupted.



- ✚ Also further obstacles might reduce the quality and range of the signal
- ✚ The max. range of the antenna is 18 meters.
- ✚ Check if 9V battery is fully charged. Not fully charged battery might lead to transmission errors.
- ✚ The trigger delay is 0,334ms.

4. Method of Operation

The sender will be connected to the sledge hammer or another impulse source and the receiver to the seismograph as shown in figure 4, using the ports available on each box.

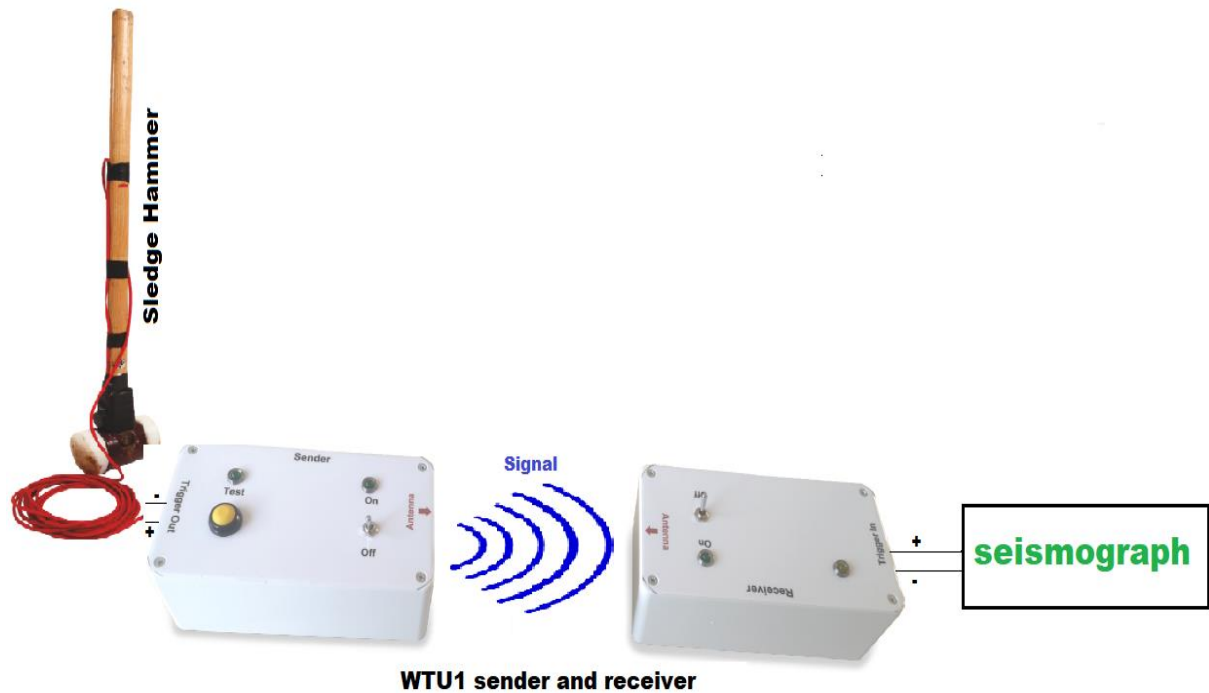


Fig. 4: WTU1 operation mode