



HGS (INDIA) LIMITED



SPECIFICATION SHEET – WIRELESS TRIGGER BOX-4 SYSTEM

For All Mechanical Impact Sources- Wirelessly triggers any Seismographs

The Wireless Trigger Box 4 (WTB 4) system detects a mechanical impact source firing, and triggers the seismograph

A WTB 4 system has two components:

- One WTB 4, connected to the source, detects the trigger pulse from the source and then transmits it to the seismograph.
- The second WTB 4, connected to the seismograph, receives the message from the source and starts the seismograph.

Each WTB 4 unit consists of:

- Internal Radio Trigger Module
- Internal 3 watt VHF radio
- Internal 99 watt-hour rechargeable battery
- Internal GPS module

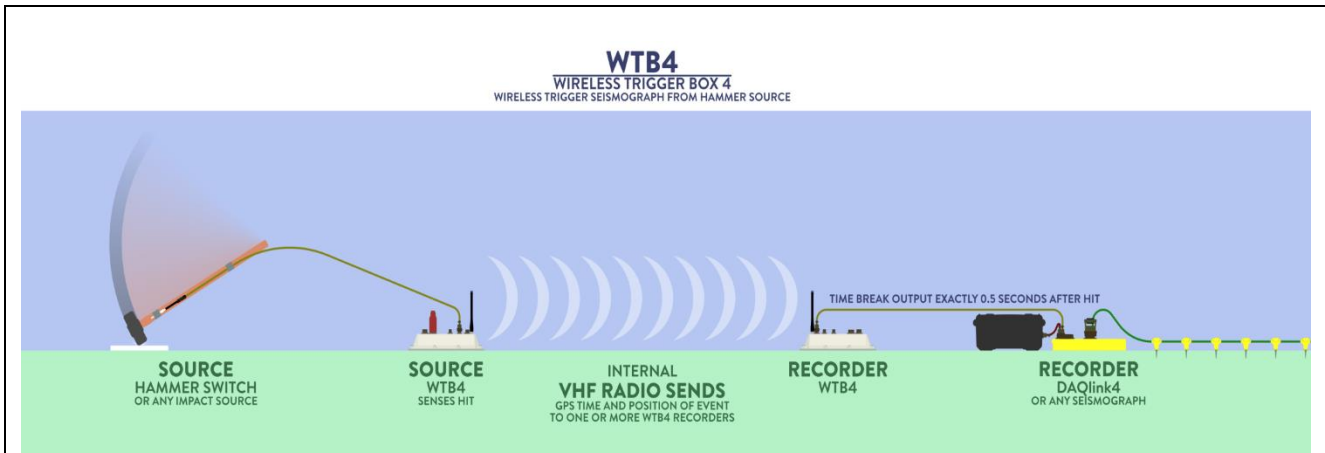
The WTB4 adds flexibility:

- The source WTB 4 can trigger multiple WTB 4 equipped seismograph.
- The recorder WTB 4 recorder can receive trigger messages from multiple WTB 4 equipped sources.

Multiple source and seismograph systems can be deployed in 2D or 3D configurations.

Wireless Trigger Box -4 unit



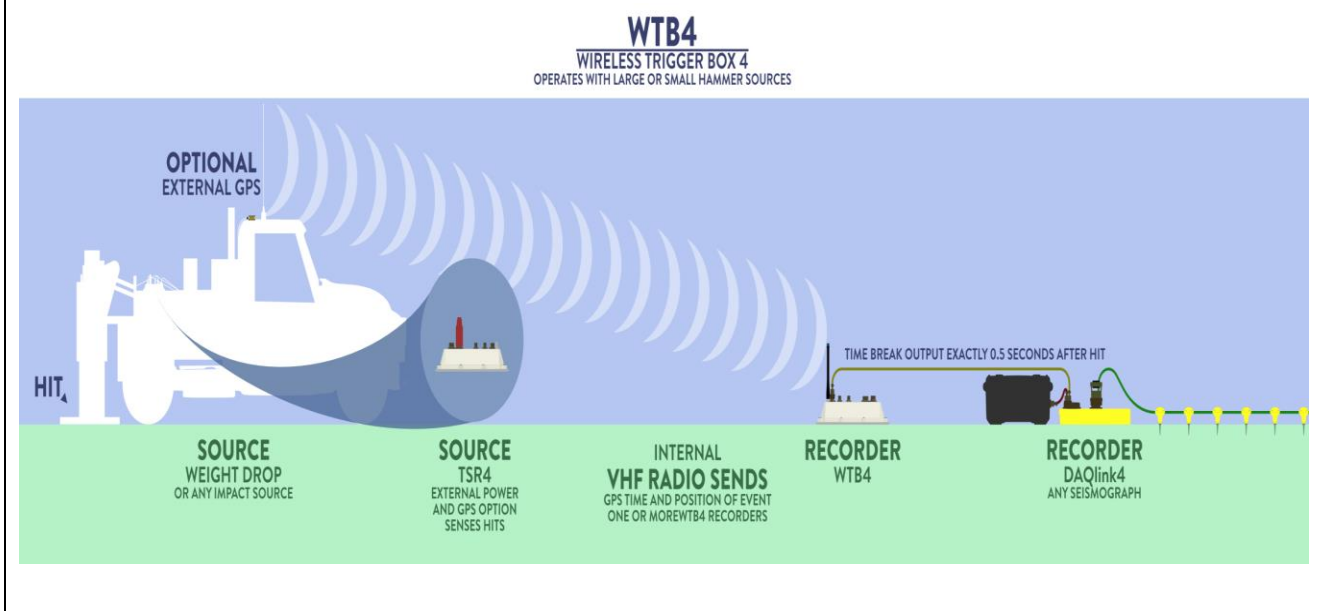


Theory of Operation:

Each Wireless Trigger Box 4 (WTB 4) unit must acquire a valid GPS lock from either the internal GPS or the optional external GPS unit.

The Source WTB 4 is connected to the source with a hammer switch or other device and detects the switch closure (the falling edge) of the signal. The Source WTB 4 calculates the GPS time of the event, then transmits that GPS time and position of the event to the Recorder WTB4 units via VHF radio. The Source WTB4 also saves the GPS time and position of the event on the optional Removable Ruggedized Memory Plug.

The Recorder WTB 4 receives the trigger time, then adds 1/2 second to it. The Recorder WTB 4 then sends a pulse exactly 1/2 seconds after the Source Trigger Time to trigger the seismograph. All seismographs then require a 1/2 second pre-trigger time offset to start recording.



Wireless Trigger Box 4 Specifications	
Trigger Signal	TTL or switch closure
Trigger Input	Detects Negative Edge
Trigger Output	TTL Negative Pulse
Accuracy	±1 µSecond
Radio cycle Time	500 mSeconds
Internal Wi-fi	Standard
Radio	3 watt
Radio Range	1 mile (3 mile with optional 1/2 wave antenna) (depends on terrain)
Weight	4.5 lbs. (2 kilograms) With radio and battery
Size	11.5 x 7.25 x 3.0 inches (292 x 184 x 76 mm) Without antenna
Optional Features:	
Removable External memory	Backup time breaks at the source
External GPS Module	To mount the GPS unit outside the source
Internal Battery	99.9 watt- hour LION (runs 24 hours depending on use)
External ½ Wave Radio Antenna	Extends radio range to 3 miles (depends on terrain)
Navigation App	Allows Navigation and viewing of WTB4 status

Ordering Information	
Item Description	HGS Part No.
WIRELESS TRIGGER BOX - WTB4	MK001481

Version 1.1



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