

Crossover1760 (CO1760) Data Sheet

Part of the Crossover series, the Crossover1760 is a dual channel GPR system which uses a 170MHZ low and a 600 MHZ high frequency antenna. As standard, it comes as a dual channel, however depending on the operators requirements the system can be configured to single channel and used as either a high frequency or a low frequency system. If the user chooses to have the system as standard, the GPR can obtain data from two depth ranges using the two frequency antenna (approx. 3m & 10m depth in the UK under good ground conditions). The data is acquired simultaneously using real time sampling for quick and accurate results allowing the operator to identify, locate and mark targets in good time.

Its middle range antenna frequencies allow the operator to apply/ use the ground penetrating radar system in a variety of environmental, archaeological, UXO and civil projects. Used to image the near surface at high resolutions, at a medium depth range. Similar to the C0480 the CO1760 is available in a cart and sled configuration, enabling the user to access restricted, uneven terrain and other surface types, whilst maintaining an easy to use comfortable design which you can transport and adjust in the field.

The system connects remotely via WIFI to an android device/ tablet which has the viewpoint software installed (freely available) removing the need for extra cabling which speeds up and aids the in- field set up process. The system has its own internal GPS system for the PPS signal, an external GPS can then be connected to the system to obtain more accurate measurement points, for example an RTK system which outputs a NEMA GGA string.



Fig.1 Depicts all of the components of the CO1760 in the cart/push configuration. (Image courteously provided by Impulse Radar)

Features

- . RTS- Based Technology
- . Dual-Channel (LF and HF)
- . Android driven logger/interface

- . Wireless data collection & Internal data security
- . Integrated GPS
- . 7 Hour Battery life with no survey speed limits

Typical Applications

- . Archaeology . Environmental Assessment . Forensics . Geological investigation (e.g. lithostratigraphic mapping) . Military or Forensic use . UXO and deep utility detection

Product Dimensions

Physical	Dimensions (L x W x H)	Weight
(instrument only)	695 mm x 445 mm x 205 mm	9.5 kg (inc battery)

Technical Specifications

N.o Channels:	2
Center Frequency:	170Mhz (Channel 1, Low Frequency) & 600Mhz (Channel 2, High Frequency)
Bandwidth:	> 120%, fractional -10 dB
Signal to noise ratio (SNR):	>100dB
N.o. Scans per second:	>800
Survey Speed:	>130km/h @5cm point interval
Time window:	1050 ns (LF) / 263 ns (HF)
Acquisition/Positioning:	Wheel, time or manual; Wheel Encoder, Internal DGPS and External GPS (NMEA 0183 protocol)
Power Supply and Consumption:	12V Li-ion rechargeable battery (an external 12v DC source can also be provided); 1.3A
Operation:	7 Hours
Weight and dimensions (inc battery)- Antenna:	9.5kg; 695 x 445 x 205 mm
Operating Temperature:	-20°C to +50°C
Environmental and Regulatory Certification:	IP65, CE,FCC
Cart dimensions (when in transport):	920 x 640 x 390 mm, 25.7kg (cart, antenna and display)

Display:	720 x 1280 pixel or better
Operating system and memory:	Android (>ver. 5 Lollipop) or later; 2.7GB SDRAM or better

Videos

ImpulseRadar Fitting the CrossOver Measuring Wheel & Battery to the CrossOver GPR antenna.

https://www.youtube.com/watch?v=ZmQbAB_mKBQ

ImpulseRadar Folding the CrossOver Cart ground penetrating radar

<https://www.youtube.com/watch?v=A1qDDMi8ewM>