



# ABEM

by Guideline Geo

## Technical Specification

### ABEM GroundTEM i-Series



Groundwater and environmental TEM surveys are now more affordable, less complex, and quicker with the ABEM GroundTEM i5, i10 and i20. These lowcost, user-friendly and app-controlled instruments complement the existing ABEM WalkTEM range perfectly. With system packages suitable for static survey and profiling, near-surface and deep survey, there are i-Series configurations for a host of survey needs.

Mapping resistivity variation with TEM can help locate groundwater, monitor aquifer health, identify recharge pathways, detect potential pollutants or saltwater intrusion, and distinguish between different geological deposits.

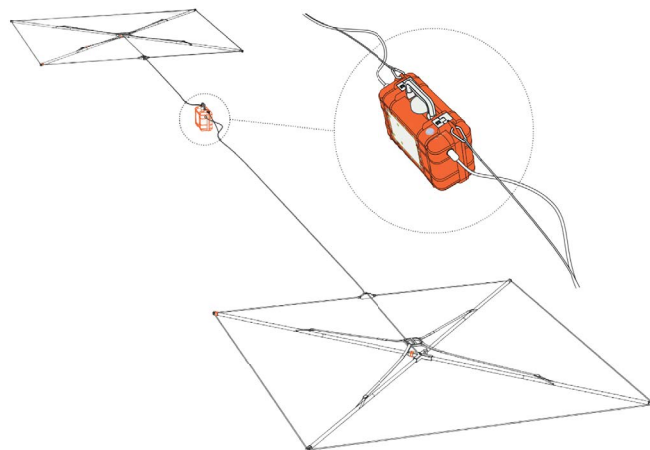
## General

GroundTEM App	Android 7.1 & above	Loop options	20 × 20 m (2.5 mm <sup>2</sup> , 1 turn)
	Instrument set-up		40 × 40 m (4.0 mm <sup>2</sup> , 1 turn)
	Data collection		80 × 80 m (6.0 mm <sup>2</sup> , 1 turn)
	Real-time inversion (premium license feature)	Explorer Coils (see next page)	
Onboard power (Rx + Tx)	2 × removeable Li-ion (i5/i10)	Receiver	1
	3 × removeable Li-ion (i20)	Channels	4 MHz
	14.4 V, 6.8 Ah, 99.4 Wh	Sample rate	4 MHz
Instrument weight	6 kg incl. batteries (i5/i10)	Coil options	3 × 3 m (4 turns, 200 kHz bandwidth)
	8 kg incl. batteries (i20)		5 × 5 m (4 turns, 100 kHz bandwidth)*
Environmental	IP65, -20 to +50 °C		*For use with 80 × 80 m Tx loop
Positioning	Onboard GNSS		Explorer Coils (see next page)
Upgrades & diagnostics	Remote, via internet		
Transmitter		Shipping cases	
Output current	Dual-moment	GroundTEM i-Series instruments include shipping cases.	
	1 A / 5 A (GroundTEM i5)	For 20 m and 40 m Tx packages, everything fits in one	
	1 A / 10 A (GroundTEM i10)	box (instrument, transmitter loop, receiver coil, and	
	1 A / 20 A (GroundTEM i20)	battery charger). Without batteries and charger, it can fly	
Switch-off	7 µs (low moment)	as standard hold luggage.	
	13 µs (high moment)		
Loop options	20 × 20 m (2.5 mm <sup>2</sup> , 1 turn)	Explorer Coil and 80 m Tx packages ship	
	40 × 40 m (4.0 mm <sup>2</sup> , 1 turn)	in two cases. See next page.	
	80 × 80 m (6.0 mm <sup>2</sup> , 1 turn)		
	Explorer Coils (see next page)		



# GroundTEM Explorer Coils

Groundwater and environmental TEM surveys are now more affordable, less complex, and quicker with the ABEM GroundTEM i5, i10 and i20. These lowcost, user-friendly and app-controlled instruments complement the existing ABEM WalkTEM range perfectly. With system packages suitable for static survey and profiling, near-surface and deep survey, there are i-Series configurations for a host of survey needs. Mapping resistivity variation with TEM can help locate groundwater, monitor aquifer health, identify recharge pathways, detect potential pollutants or saltwater intrusion, and distinguish between different geological deposits.



## General

1.6 m Explorer Coils	1.65 m × 1.65 m, 2 turn Tx coil – 1.65 m × 1.65 m, 4 turn Rx coil
3 m Explorer Coils	3.0 m × 3.0 m, 2 turn Tx coil – 3.0 m × 3.0 m, 4 turn Rx coil
Carrier Solution	Collapsible, poled frame, with ergonomic handles, carry straps and strain-relief cord
Tx-Rx Separation	10 m
Depth Range	1.6 m Explorer Coils: 50 - 100 m 3.0 m Explorer Coils: 75 - 150 m
Measurement Duration	From 15 seconds
Compatibility	GroundTEM i5 (3 m Explorer Coils only), i10, and i20
Explorer Coils Weight	1.6 m Explorer Coils ~9 kg (Tx coil, Rx coil, and carrier solution) 3 m Explorer Coils ~15 kg (Tx coil, Rx coil, and carrier solution)



80 × 60 × 43.3 cm

GroundTEM i5 / i10 / i20 instrument with 20 m / 40 m / 80 m Tx loop (includes a large case for instrument, Tx loop, Rx coil & accessories)



80 × 60 × 43.3 cm

GroundTEM Explorer Coils as an accessory to an existing i-Series package (only includes Explorer Coil case)



80 × 60 × 33.3 cm

120 × 40 × 16.8 cm

GroundTEM i5 / i10 / i20 instrument with only Explorer Coils (includes Explorer Coil case plus a small case for instrument & accessories)



80 × 60 × 43.3 cm

120 × 40 × 16.8 cm

GroundTEM i5 / i10 / i20 with 20 m / 40 m / 80 m Tx loop plus Explorer Coils (includes Explorer Coil case plus a large case for instrument, Tx loop, Rx coil & accessories)

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 **Guideline Geo**