

KT-10H Magnetic Susceptibility Meter

The KT-10H Magnetic Susceptibility Meter includes a number of major benefits such as being one order of magnitude more sensitive than its predecessor, Bluetooth communication to store readings integrated with GPS coordinates and data transfer, fast and accurate scanning and data management and visualization software for the PC. The KT-10H can also be upgraded to a KT-10H Plus Magnetic Susceptibility Meter.



Major Benefits

- **Higher Sensitivity**

The KT-10H is one order of magnitude more sensitive than its predecessor when used on smooth surfaces. This maximum sensitivity is now 1×10^{-7} SI units with a 3318m^2 total sensor measurement area.

- **Better Sample Measurements**

The KT-10H can be used with a pin for rough surface measurements or without a pin when you can establish direct contact with the sample. When pressing the pin against field samples or outcrops, and when the susceptibility meter is kept parallel to the surface, it provides a reading with increased accuracy. It also automatically corrects and displays the true magnetic susceptibility.

- **Improved Data Averaging**

The KT-10H has a user configurable data averaging capability. You can store a number of consecutive readings from a sample, their average and their standard deviation for quality control.

- **Large Memory**

The KT-10H stores up to **3,000** readings in its internal non-volatile memory. Average readings and standard deviation are also stored. The operator can record up to one minute of comments associated to each specific reading through the KT-10H digital voice recorder.

- **Fast and Accurate Scanning**

The KT-10H scans **20** readings per second and stores 4 averaged readings during the same period. The operator can also add markers to the data set to identify the location of those measurements.

- **Flexible PC Interface**

The KT-10H includes **GeoView**, a multi-platform software which allows the operator to download and visualize the KT-10H data with the click of a few buttons. **GeoView** can also play back the voice notes stored along side the readings, change the KT-10H's settings and transfer the data to a spreadsheet. It also allows the operator to view or export GPS paths into a Google Earth compatible format.



Other Benefits

- **Variable Audio Capability**

When used in the **Scan Mode**, the KT-10H speaker allows the operator to monitor the variations in the magnetic susceptibility measurements with a variable audio sound, which is relative to the intensity of the reading. The voice recorder also allows for the recording and replaying of voice messages through the instrument's speaker.

- **Large LCD Display**

A high contrast LCD is utilized for the display of the magnetic susceptibility readings. It also serves as the interface for operating the instrument. Together with two buttons and graphical menus, operators can interactively navigate the instrument's different functions. Icons allow the operator to monitor the battery status, Bluetooth connectivity, GPS support and more.

- **USB Data Transfer**

The KT-10H uses USB communication standards as its default mode of communication. This allows for the fast transfer of measurements and digital voice streams from the unit to a PC. The USB can also be used for firmware upgrades and parameter settings.

- **Bluetooth Connectivity**

Bluetooth is already standard with the KT-10H. So when an operator uses a Bluetooth enabled GPS, it allows them to store the GPS coordinates in the KT-10H memory along with the readings. Bluetooth can also be used to download readings **wirelessly** from the unit along with the voice streams.

- **Smaller and Easy to Use**

The KT-10H's smaller size and ergonomic design make it easier to use and carry. Its interactive menu also facilitates its operation.

- **Power Supplies**

The KT-10H standard configuration is available with two Alkaline AA size cell batteries, which allows the operator to take up to 4,000 readings when the optional voice recorder is not being used.

- **Rugged and Reliable**

The KT-10H meets IP65 standards, and is therefore protected against dust and provides additional protection in rainy or high humidity conditions.

- **Storage/Transportation**

The KT-10H is delivered in a small pouch with a foam insert. The pouch can be mounted on a belt and comfortably carried on the waist. A set of spare batteries and **PIN** can be also placed in the pouch for storage.

- **Programmable Calibration**

You can now recalibrate your KT-10H either by using the optional Magnetic Susceptibility Calibration Pad or, with a known sample which susceptibility is closer to the samples or cores you want to measure.



Standard Configuration

The KT-10H standard System is supplied with:

- KT-10H Console with pin, and wrist strap
- Two Alkaline AA Batteries
- Spare Pin
- USB Cable
- CD with GeoView Data Transfer Software
- Operations Manual and a Quick Start Guide
- Small Pouch with Foam Insert
- White Cardboard Box

GeoView PC Interface Software:

- Data Management**

GeoView is a multi-platform software that allows users to organize their KT-10H data by date and serial number. It also facilitates the transfer of data from the KT-10H to a personal database for further correlation and interpretation. GeoView is compatible with both Windows and Linux operating systems.

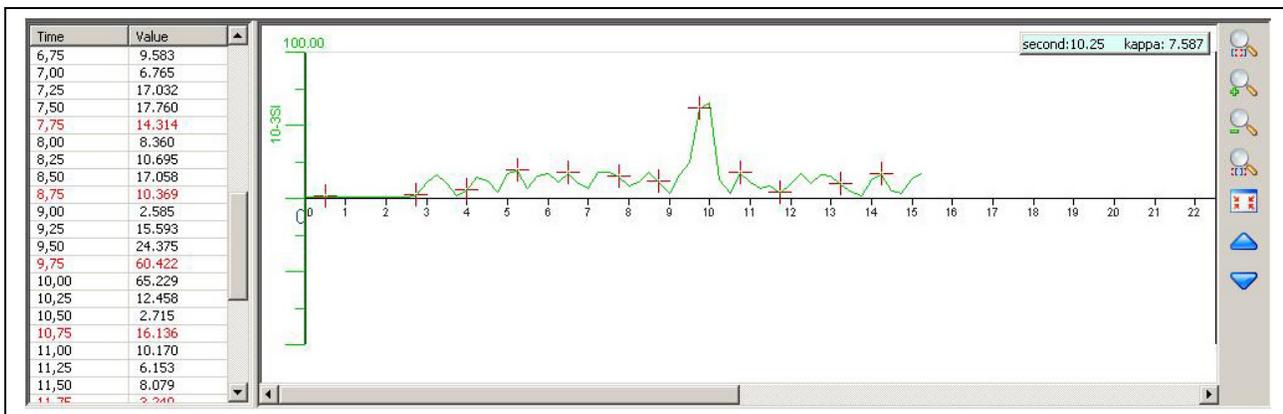
As presented below, averaged readings are grouped together with records (containing date, time, value, voice notes and optional GPS positions) in one convenient location. Users can also add new column headers to enter additional information specific to the data collection.

| Id | Time | Kappa[10-35I] | Average +/- std | Information | Voice note | Latitude | Longitude | Altitude | Description | SampleID |
|------|------------|---------------|-------------------|-------------|------------|--------------|---------------|----------|-------------|----------|
| 1514 | 4:51:44 PM | 322.016 | | | | 43o54'5.92"N | 78o49'25.79"W | 90m | | |
| 1515 | 4:52:02 PM | 307.251 | | | | 43o54'5.92"N | 78o49'25.79"W | 90m | | |
| 1516 | 4:52:19 PM | 309.435 | | | | 43o54'5.62"N | 78o49'25.51"W | 90m | | |
| 1517 | 4:52:31 PM | 303.711 | 310.102 +/- 6.121 | | | 43o54'5.62"N | 78o49'25.51"W | 90m | | |
| 1518 | 4:52:52 PM | 306.161 | | | | 43o54'5.87"N | 78o49'25.69"W | 109m | | |
| 1519 | 4:53:06 PM | 300.090 | | | | | | | | |
| 1520 | 4:53:23 PM | 298.038 | | | | 43o54'5.87"N | 78o49'25.72"W | 109m | | |
| 1521 | 4:53:54 PM | 306.528 | | | | 43o54'6.02"N | 78o49'25.78"W | 119m | | |
| 1522 | 4:54:07 PM | 299.697 | | | | 43o54'6.02"N | 78o49'25.78"W | 119m | | |
| 1523 | 4:54:59 PM | 300.685 | 301.866 +/- 3.578 | | | 43o54'5.81"N | 78o49'25.44"W | 97m | | |
| 1524 | 4:56:20 PM | 333.007 | | | | 43o54'5.90"N | 78o49'25.55"W | 101m | | |
| 1525 | 4:56:36 PM | 332.195 | | | | 43o54'5.90"N | 78o49'25.55"W | 101m | | |
| 1526 | 4:56:47 PM | 329.013 | | | | 43o54'5.90"N | 78o49'25.55"W | 101m | | |
| 1527 | 4:57:01 PM | 333.279 | | | | 43o54'5.78"N | 78o49'25.55"W | 92m | | |
| 1528 | 4:57:22 PM | 328.360 | 331.171 +/- 2.310 | | | 43o54'5.98"N | 78o49'25.60"W | 109m | | |
| 1529 | 4:58:38 PM | | | Scanner | | 43o54'5.98"N | 78o49'25.60"W | 109m | | |
| 1530 | 4:59:03 PM | | | Scanner | | 43o54'5.79"N | 78o49'25.64"W | 106m | | |
| 1531 | 5:00:12 PM | | | Scanner | | 43o54'5.87"N | 78o49'25.70"W | 106m | | |
| 1532 | 5:01:22 PM | | | Scanner | | 43o54'5.87"N | 78o49'25.70"W | 106m | | |
| 1533 | 5:02:21 PM | | | Scanner | | 43o54'5.87"N | 78o49'25.70"W | 106m | | |

- Data Visualization**

Numerical display allows for quick review of field data while graphical display aids in the interpretation of scanner data.

As shown below, the scanned data is displayed in a graphical mode. The use of markers can assist operators to orient the readings to a physical location.



KT-10H Options:

KT-10H Plus Iron Ore Concentration Measurement Estimates

The KT-10H is upgradable to a KT-10H Plus for measuring iron ore samples and core up to 10 SI units. With this extended range and pre-installed calibration curve, it is possible to obtain the concentration estimate of iron ore directly from the KT-10H Plus. If the samples and cores you are working with have a different composition or structure than those used to set up the calibration curve included in your KT-10H Plus, you can program yourself up to 2 calibration curves which are specific to the samples and cores you are measuring.

Magnetic Susceptibility Calibration Pad

A magnetic susceptibility calibration pad is now available as an option for the KT-10H and KT-10H Plus. The calibration pad is manufactured from a suitable Mn-Zn Ferrite compacted with mudstone. Its purpose is to confirm that the KT-10H and KT-10H Plus are operating properly or to recalibrate the unit.

Nominal susceptibility will vary between calibration pads.

Typically 34 x 10⁻³ SI
 Diameter 145 mm
 Height 70mm
 Density 2.2g/cm³
 Weight: 2.65kg



Specifications:

| | |
|---------------------------------------|--|
| Sensitivity: | 1x10 ⁻⁷ SI Units |
| Measurement range: | 0.001x10 ⁻³ to 1999.99 x10 ⁻³ SI Units Auto-Ranging |
| Total Sensor Measurement Area: | 3318 mm ² |
| Operating frequency: | 10 kHz |
| Measurement frequency: | 20 times per second (in Scan mode, 5 readings averaged together and 4 readings /second stored |
| Display: | High Contrast LCD Graphic Display with 104 x 88 pixels |
| Memory: | Up to 3000 measurements or 2000 measurements with one minute of comments per reading |
| Control: | 1 button with up / down function & pin for rough surfaces |
| Data Input/Output: | USB, Bluetooth with GPS link via Bluetooth |
| Power Supply: | 2 AA Alkaline Batteries or 2 optional AA Rechargeable Batteries |
| Battery life: | Up to 4000 readings without voice recorder |
| Operating temperature: | -20 °C to 60 °C |
| Dimensions: | 200mm x 57mm X 30mm |
| Coil Diameter: | 65 mm with a 45 degree angle |
| Weight: | 0.30 kg |

Specifications subject to change without notice # 06-11-13