

KT-10 Magnetic Susceptibility Meter

Terraplus is pleased to introduce the KT-10, a new generation magnetic susceptibility meter. The KT-10 is one order of magnitude more sensitive than its predecessor and incorporates a range of new technologies including Bluetooth Wireless Communication to store Magnetic Susceptibility Readings integrated with GPS coordinates, Wireless Data Transfer, more Accurate Scanning, Windows Data Transfer and Visualization Software.



Major Benefits

- **Higher Sensitivity**

The KT-10 is one order of magnitude more sensitive than its predecessor when used on smooth surfaces. This maximum sensitivity is now 1×10^{-6} SI units.

- **Better Sample Measurements**

The KT-10 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-10 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.

- **Larger Memory**

The KT-10 stores up to 1000 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-10 digital voice recorder.

- **More Accurate Scanning**

The KT-10 scans up to 20 readings per second therefore providing more information. The operator can also add markers to the data set to identify the location of those measurements.

- **Improved PC Interface**

The KT-10 now includes **GeoView**, a Windows[®] based software, for Data Transfers and Data Visualization. It is now possible to download and visualize your KT-10's data with the click of a few buttons. **GeoView** can also play back the voice notes stored along side your readings, change KT-10's settings and export your data to database / spreadsheet compatible formats.

Other Benefits

- **Variable Audio Capability**

When used in the **Scan Mode**, the KT-10 speaker allows the operator to monitor the variation in the magnetic susceptibility measurements with a variable audio tone, which reflects the relative intensity of the reading. The voice recorder allows the recording and replaying of voice messages through the speaker as well

- **Large LCD Display**

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

- **USB Data Transfer**

The KT-10 uses USB communication standards as the default mode of communication. It allows fast data transfer of measured values and digital voice streams for the unit to any Windows PC. The USB can also be used for firmware upgrades and parameter settings.

- **Bluetooth Connectivity**

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

- **Smaller and Easier to use**

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

- **Power Supplies**

The KT-10 standard configuration is available with two Alkaline AA size cell batteries, which have an expected 100 hours of operation when the optional voice recorder is not being used.

- **More Reliable**

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

- **Storage/Transportation**

The KT-10 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-10, either by using the optional Susceptibility Standard shown below or with a known sample which susceptibility is closer to the samples or cores you want to measure.

Optional:

KT-10 Susceptibility Standard

A susceptibility standard is now available as an option for the KT-10. The standard is manufactured from a suitable magnetic powder which is then compacted with plaster. Its purpose is to confirm that the KT-10 is operating properly or to recalibrate the unit.

| | |
|----------------------------------|---------------------------|
| Nominal susceptibility typically | 55.7* 10 ⁻³ SI |
| Diameter | 205 mm |
| Height | 90mm |
| Density | 0.993g/ccm |



GeoView PC Interface Software:

- Data Organization**

The **GeoView** Software allows you to organize your KT-10 data by date and by serial number. It also facilitates the data transfer from your KT-10 into your data base for further correlation and interpretation.

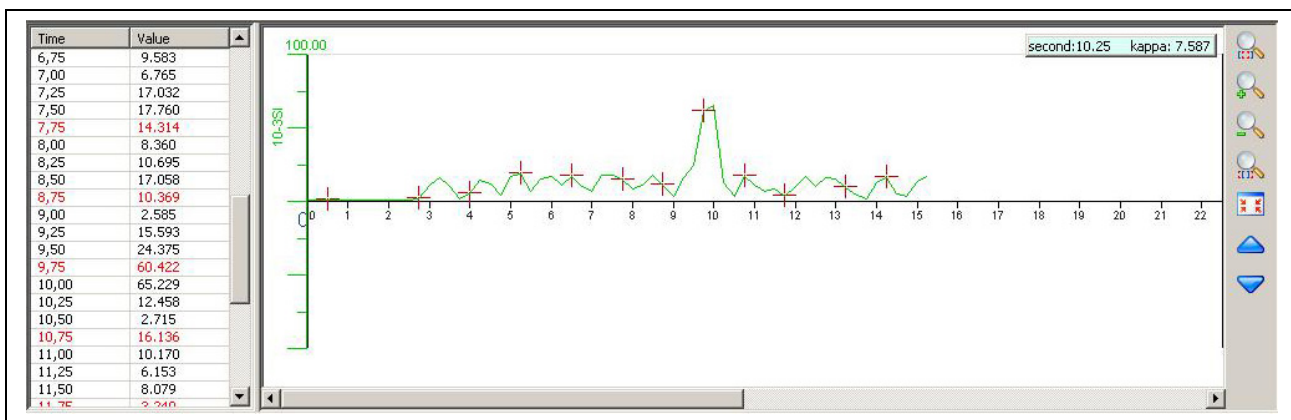
As you can see below, averaged readings are grouped together with records containing date, time, value, voice notes and optional GPS positions, all in one convenient location. Users can also add custom fields to enter field data which is then contained in the exported file.

| Id | Time | Kappa[10-351] | 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 graphical mode. Using markers can quickly identify visual indicators or units of measurement along the core sample



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Specifications:

| | |
|-------------------------------|---|
| Sensitivity: | 1x10 ⁻⁶ SI Units |
| Measurement range: | 0.001x10 ⁻³ to 999.99x10 ⁻³ SI Units Auto-Ranging |
| Operating frequency: | 10 kHz |
| Measurement frequency: | 20 times per second in Scan mode |
| Display: | High Contrast LCD Graphic Display with 104 x 88 pixels |
| Memory: | Up to 1000 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: | Approximately 100 hours 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 |



Standard Configuration

The KT-10 standard System is supplied with:

- KT-10 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