
1. THE 6050X3K1B MINI TRASE KIT

The MiniTrase (6050X3) uses Time Domain Reflectometry (TDR) to measure instantaneously the volumetric water content of soils and other moist media. A variety of connectors and waveguides for depth measurements ranging from 15 cm to 70 cm are available, and can be used in a portable manner or permanently installed for periodic moisture monitoring. The volumetric moisture content is displayed on the Palm terminal, and the graph of the TDR pulse can also be tagged for identification and stored for later viewing and analysis on the PC. All stored data can be transferred either by hotsyncing the Palm to your PC or via an RS-232 port connection from the MiniTrase to the PC. The MiniTrase unit is designed for rugged field use and is environmentally sealed to prevent damage to sensitive electronic components.

Unpacking

The MiniTrase system shipped to you was thoroughly tested before shipment. When packed, it was in perfect order. Unpack with care being sure to remove all packing material. Follow the instructions carefully in order to ensure long, trouble-free service.

Cautions and Warnings

Handle all components of the system with care to avoid any damage to delicate electronic components.

Any damage found upon receipt should be reported immediately to the transport carrier for claim. It is important that you save the shipping container and all evidence to support your claim.

Be sure to read all operating instructions thoroughly before operating the unit.

Note

When in use, static discharge to waveguides or waveguide sockets may cause damage to sensitive electronic components.

Operating the system when the "OPR" (operating) light is flickering on the MiniTrase can result in incorrect readings and can cause loss of stored data.

MiniTrase involves proprietary electronic circuits and hardware. Repair of this precision instrument requires highly specialized equipment. For this reason, the unit should be returned to SEC for any major repair work. Tampering with the MiniTrase in any unauthorized manner prior to return will void warranty and make the user liable for costs of repair.

MiniTrase Warranty

Soilmoisture warrants all its products and related software to be free from defects for the period of one year.

Palm Warranty

The Palm® handheld terminal is warranted through Palm, Inc®. Please refer to Palm's operating instructions for the warranty period. Any mechanical or Palm operating system problems should be addressed directly with Palm, Inc.

Not Liable for Improper Use

Soilmoisture Equipment Corp. is not responsible for any damage actual or inferred for misuse or improper handling of this equipment. MiniTrase is designed to be used solely as directed by a prudent individual under normal conditions in the applications intended for this instrument.

GENERAL SPECIFICATIONS - MODEL 6050X3K1B MINITRASE

Measuring Range:	0-100% volumetric moisture content
Measuring Accuracy	±2% full scale or better with the standard waveguide connector
Operating Temperatures	0 to +45°C
Power Supply	<p>One each NiCad battery, supplied. Total capacity: 1.7 amp hr. Recharge time, internal charges up to 12 hours, optional external charger 35-40 minutes. Auxiliary power input 18 volt DC, 2.2 Amp AC Power Adapter for independent operation.</p> <p>External battery input, 12 volts DC minimum, for independent operation.</p>
Connecting Ports	<p>BNC Port – For waveguide connection DB-9 Serial Port – For data transfer DB-15 Multiplexer Port - for multiplexing Power Port – 8-pin DIN Bluetooth (Antenna) serial data</p>
MiniTrase Memory	<ul style="list-style-type: none">• Standard 256 Kb memory with storage capacity greater than 180 graphs/5,610 readings.• Optional 4 Mb memory board increases storage to greater than 3,900 graphs/122,880 readings.• Automatic data tagging with time and date plus user defineable Tag field.
MiniTrase Electronic Particulars	<p>Measuring pulse amplitude 1.6 volt peak Sampling resolution, 10 picoseconds Hardware – 5-slot card cage: 3 system boards, 1 optional slot (for optional expanded memory), and multiplexing board</p>
Included Items	<p>1 - MiniTrase with Multiplexer Card (6050X3K7B) 1 - Palm Handheld Terminal - (6910) 1 - TraseTerm software on CD (8008) 1 - WinTrase Software on CD (8001) 1 - Standard Waveguide Connector (6002F1) 1 - Set of 15 cm long Waveguides (6008L15) 1 - Internal Bluetooth Module 1 - Connector Cable from MiniTrase to PC (MEZ036) 1 - Power Supply unit for MiniTrase (6051V100-240) 1 - MiniTrase Backpack (6031) 1 - Set MiniTrase Operating Instructions on Mini CD (0898-6050X3K1) 1 - Set of 3-Letter Code Instructions (0898-60503LC-1)</p>
Optional:	<p>1 - MiniTrase Battery Charger (6053V120)</p>

PALM HANDHELD TERMINAL

The Palm terminal is a product manufactured by Palm, Inc. Any malfunctions in the Palm hardware and/or Palm operating system software must be addressed directly with Palm, Inc.

Please refer to the Palm operating instructions provided for you on the Palm Software CD or Palm's website at <http://www.palm.com>.

TraseTerm and WinTrase Software

The TraseTerm software, used with the Palm device to operate your MiniTrase, is a product of Soilmoisture. WinTrase is also a product of Soilmoisture. All TraseTerm and WinTrase software issues should be directed to Soilmoisture's technical staff or your local Soilmoisture representative.