ScoutMaster GPS™
Land Navigation Field Mapping Kit

Features

- Library Transfer Utility: library upload and download software
- Scout It Out: mapping and data logging software
- User-selectable map coordinate system display:
  latitude, longitude and altitude
  Universal Transverse Mercator (UTM)
  TOPO GPS™ (7.5 USGS) (optional)
  Maidenhead and Trimble Grid Locator™
  Thomas Brothers "Page and Grid"
  Ordnance Survey of Great Britain (OSGB
- Over and Up™ calculations
- 250-stored-locations library
- Target Track™: navigation function displays distance, direction, speed and estimated time of arrival (ETA)
- Screen backlight for night-time operation
- Seven languages: English, Spanish, French, German, Italian, Japanese, Norwegian
- Navstar GPS satellite status including azimuth, elevation, User Range Accuracy (URA), Position Dilution of Precision (PDOP), Real-time differential range correction
- Worldwide and user-defined datums (123 plus 2 custom)
- 10 routes with 10 legs
- Selective Availability (SA) Filter™
  (proprietary filter minimizes effects of SA)
- Acu-Lock™ (10-meter static solution without differential correction)
- Real-time differential GPS capability (sub 10-meter accuracy) using standard RTCM SC-104 or FM sub-carrier inputs

Interfacing Capability

Serial Output:	Single RS-232 channel; NMEA 0183 (ASCII), Trimble (Trimble Standard Interface Protocol), UTC time sentence (ASCII) synchronized to the pulse-per-second output; 1 PPS MasterClock (optional).
NMEA 0183:	Selectable output sentences: APA, APB, BWC, GGA, GLL, GSA, GSV, RMB, RMC, VTG, WCV, XTE and ZTG
Serial Input:	Single RS-232 channel; Trimble, RTCM SC-104

Physical Characteristics

Dimensions:	3.3"W x 6.8"H x 1.3"D (8.4 cm W x 17.3 cm H x 3.3 cm D)
Weight:	14 ounces (397 g)
Power:	4 AA batteries; 6 hours average continuous use; 10 hours in power saving mode
Display:	4-line, 16-character, backlit LCD
Operating temp:	+24º to +140ºF (-10º to +60ºC)
Storage temp:	-4º to +158ºF (-20º to +70ºC)
Humidity:	95% non-condensing
Communications:	Single EIA-RS-232 serial port

⚓ Trimble
T H E   G P S   S O L U T I O N

GPS Performance Characteristics

General:	3-channel digital GPS receiver Tracks up to 8 satellites
Update rate:	1.5 seconds on external power 1.5 or 5 seconds on battery power (selectable)
Acquisition time:	<2 minutes (typical)
Accuracy* (typical):	Position: 100 feet (30 meters) RMS Velocity: 0.1 m/sec RMS steady state
Timing pulse (1PPS):	One microsecond wide pulse synchronized to UTC ±1 microsecond (optional)

Applications

Library Transfer Utility™:
Provides the patent pending ability to 1) upload location data from a computer to ScoutMaster, and 2) download location data, collected in the field, from ScoutMaster to a computer. The Utility will download the following information for each location: name of location, latitude, longitude, elevation, date and time (UTC) and method of collection (manual, GPS2D, GPS3D, DGPS2D, DGPS3D). Location format is compatible with universal spreadsheet programs, such as Lotus 123 and Microsoft Excel.

Scout It Out™:
Provides the unique capability to 1) graphically view locations on a computer (locations are either downloaded from ScoutMaster or created on a computer using a spreadsheet program); 2) plot location data, to-scale, for overlay on any topographical map; and 3) utilize a portable computer's serial port for real-time data collection.

SMPTE Time Code Generator / Reader:
ScoutMaster is compatible with the Denecke Dcode™ Time Code Products, designed to work specifically with Society of Motion Picture Television Engineers (SMPTE) / European Broadcast Union (EBU) time code for both film and video production. ScoutMaster provides UTC time and date outputs used to remotely sync SB2-GPS time code generator / reader for video and sound recording. Denecke, Inc., North Hollywood, CA. (Tel: 800-866-3525 or 818-766-3525)

Differential Corrections Incorporated (DCI) RDS-1000:
ScoutMaster is compatible with real-time differential broadcasts via FM sub-carrier. Differential Corrections Incorporated in Cupertino, CA, provides a pocket pager (DCI RDS-1000) for urban applications. (Tel 408-446-8350 or 800-446-0015)

Apple Newton™:
An innovative emergency management solution utilizes the Apple Newton as a data entry and output device. ScoutMaster determines the GPS location, a DCI pager provides corrections for sub 10-meter solutions and AllPen's custom software links the system together. AllPen Software, Los Gatos, CA. (Tel: 408-399-8800).

Note: All GPS receivers are subject to degradation of position and velocity accuracies under Department of Defense imposed S/A (Selective Availability). Position may be degraded up to 100 meters 2D RMS.

Specifications subject to change without notice.

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Upload, download and overlay your discoveries.

Trimble's ScoutMaster uses signals from the 24 Global Positioning System (GPS) satellites to pinpoint your position anywhere on Earth, at any time of day, in any weather.

In addition to calculating positions and providing navigation data, ScoutMaster can save 250 locations in memory, and, via its serial RS-232 I/O port, download them to a computer. ScoutMaster uploads location data as well. And its mapping software plots your data to scale. It also helps you output your data onto a transparent overlay, which can be placed directly over any topographical map.

Furthermore, ScoutMaster can help you find your position on USGS topo maps. Using an internal database of 53,689 7.5-minute maps, ScoutMaster displays the name and state of the topo map for your location, determines which of nine 2.5-minute quadrants you're in, and automatically selects the nearest 2.5-minute southeast reference point. ScoutMaster then displays, in inches or centimeters, how far "over" (to the left) and how far "up" (vertically) you are from that reference point. To find your location, just open your map, take out a ruler, and measure.

Film and video production companies can use ScoutMaster's MasterClock™ or atomic clock performance to synchronize video and sound equipment in multiple camera shots. Plug ScoutMaster into an SMPTE time-code generator and use the date- and time-coded outputs (UTC) to match the time on each frame.

ScoutMaster is also differential capable, which means it can give you accuracies of better than ten meters in real time.

ScoutMaster GPS. The ultimate land navigation tool.