

WinFrog Device Group:	GPS
Device Name/Model:	MC1000
Device Manufacturer:	Leica Geosystems Inc 23868 Hawthorne Boulevard Torrence, CA 95050 USA Tel: (310) 7915300 Fax:(310) 791-6108 E-mail: info@leica-gps.com
Device Data String(s) Output to WinFrog:	NMEA 0183 (Proprietary) See Configuration Details for String Contents
WinFrog Data String(s) Output to Device:	N/A
WinFrog .raw Data Record Type(s):	Type: 303

DEVICE DESCRIPTION:

Leica's MC1000 is a dual frequency GPS receiver that can provide the user with ten independent real-time position solutions every second, at a latency of 0.03 seconds. The unit can be utilized for base station and remote station applications. RTK (Real Time Kinematic) positioning can be configured if a MC1000 is also set up as a base station, providing the Leica format RTK corrections to the remote MC1000. The MC1000 is also compatible with standard RTCM format DGPS corrections. The MC1000 can output data in NMEA, RINEX, and the Leica binary format. The MC1000 has 24 channels (12 L1 and 12 L2), built-in RTK positioning at up to 10 times per second and four I/O ports configurable for RS-232 or RS-422 output. This instrument also has the ability to input and process data from two separate radio links simultaneously.



Leica MC1000

DEVICE CONFIGURATION INSTRUCTIONS:

Baud Rate: Configurable (300 to 115k)
Data Bits: Configurable
Stop Bits: Configurable
Parity: Configurable

The unit is capable of Bi-directional (full duplex) data control, and is voltage protected.

WINFROG I/O DEVICES > CONFIG OPTIONS:

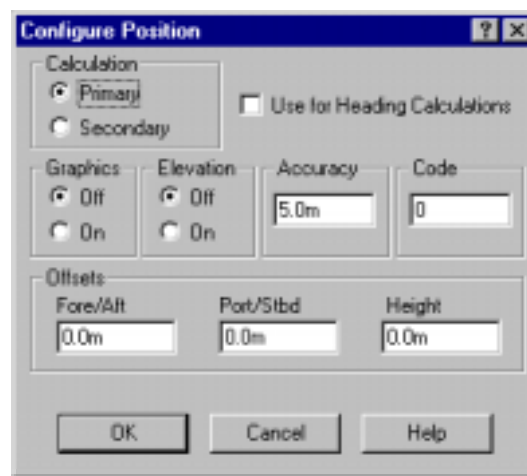
The MC1000 is added to WinFrog from the GPS device category. There is no device configuration required or available in the I/O Device window.

If the position output from the MC1000 is an RTK position it will be indicated in the I/O Devices / Decoded Data window by: **Solution Type: Differential Phase**. However it will be utilized by WinFrog whether the position output is actually Differential Phase or Differential Code.

WINFROG VEHICLE TEXT WINDOW > CONFIGURE VEHICLE DEVICES > DEVICE > EDIT OPTIONS:

The MC1000's configuration must be edited once it has been added to a vehicle's device list. The Configure Position window is presented to the operator, as seen below.

The MC1000 position configuration parameters are similar to those found for any GPS position device. Refer to the NMEA GPS device documentation for information on the configuration this window.



CONFIGURATION DETAILS:

The Leica MC1000 is supplied with a Control, Display and Logging CDU program. This program requires interfacing to a PC running the MC1000 setup software to initialize the unit for the various possible applications. Refer to the MC1000's User's Guide for more information.

RAW DATA LOGGING:

MC1000 data is recorded in WinFrog's raw data files as type 303 data. See the WinFrog User's Guide appendix titled WinFrog Raw File formats for details on the raw data string contents.

The MC1000 can log raw GPS data internally if it is configured with internal memory (20 or 60 MB available). Leica's "SKI" post processing software must then be used for processing of the raw GPS data.

SPECIFICATIONS: (Manufacturer supplied)

RTK accuracy: 1cm +1ppm, Hor., 1 sigma
 2cm +2ppm, Vert., 1 sigma

DGPS accuracy: 30cm +2ppm, Hor., 1 sigma
 60cm +2ppm, Vert., 1 sigma

Four Serial Ports: RS-232 or RS-422 programmable
 Data rate 300 – 115k baud
 Bi-directional (full duplex)
 Over voltage protection