

WinFrog Device Group:	GPS
Device Name/Model:	MX300
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:	Pseudorange and Ephemeris (See Configuration Details for further information.
WinFrog Data String(s) Output to Device:	Nil
WinFrog .raw Data Record Type(s):	Type: 303

DEVICE DESCRIPTION:

The Leica MX300 is a six channel (12 channel optional) GPS receiver used for marine positioning applications. The MX 300 was replaced by the MX400 and then by the MX412B. The 'B' in MX412B indicates that the system has a Coast Guard differential beacon receiver built into the unit.

In the case of using the MX300 with WinFrog, the receiver can be set up to provide WinFrog with either DGPS positions or pseudorange and ephemeris data through a single serial port. If pseudorange and ephemeris data is being output, WinFrog's GPS Calculations extension module must be used to combine this raw data to calculate the antenna's latitude/longitude and height.

The following paragraphs refer to the use of the MX300 with WinFrog.

Note: The MX300 requires firmware version 1.8 or greater for Y2K compliance.

DEVICE CONFIGURATION INSTRUCTIONS:

Baud Rate: 19200

Data Bits: 8

Stop Bits: 1

Parity: None

Refer to the MX300 Operators' manual for information on setting up the receiver to output pseudorange and ephemeris data. Due to the instrument's age, no documentation was available at the time this document was printed.

Information output by the MX300:

Ephemeris parameters from SUBFRAME 1:

- week num, aodc, tgd, toc, af2, af1, af0

Ephemeris parameters from SUBFRAME 2:

- aode, crs, deltan, em0, cuc, e, cus, sqrt_a, toe

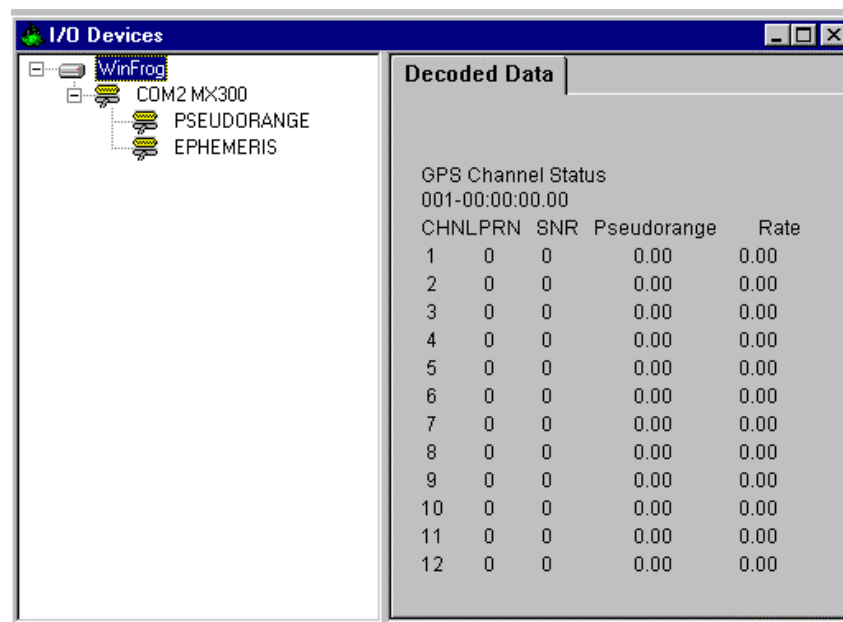
Ephemeris parameters from SUBFRAME 3:

- cic, omega0, cis, ei0, crc, w, omegadot, eidot

WINFROG I/O DEVICES > CONFIG OPTIONS:

The MX300 is added to WinFrog from the GPS device category. Adding a single MX300 device provides WinFrog with 2 data items: Pseudorange and Ephemeris. Refer to the *I/O Devices* figure below.

No device configuration is required from within the I/O Devices window.

**WINFROG VEHICLE > DEVICE > EDIT OPTIONS:**

Both the Ephemeris and Pseudorange Data Items must be added to the vehicle's Device list.

The MX300 Pseudorange device must be edited to suit the application. The editing of the MX 300 Pseudorange device is similar to that of other GPS Pseudorange devices. Refer to the documentation on the Novatel Console GPS device for details on configuring a Pseudorange Device. The MX300 Ephemeris device requires no editing once added to the vehicle's Device list.

CONFIGURATION DETAILS:

See the Novatel Console GPS device for details on configuring the Pseudorange data item.