Outputting NMEA Messages from a MobileMapper Pro

10 July 2007

To output NMEA messages from the MobileMapper Pro's serial port and cable, turn on the receiver, press the **MENU** button, select the **Setup** option and then the **NMEA** option. The default option is **Off** but there are three other choices:
- V1.5 APA
- V1.5 XTE
- V2.1 GSA

The V1.5APA or V1.5XTE options are mislabeled in that neither option will output APA or XTE messages. Instead, VTG and GLL message strings will be output. Here is an example:

```
$GPVTG,000,T,345,M,00.0,N,00.0,K
$GPGLL,3721.06,N,12156.11,W
$GPVTG,000,T,345,M,00.0,N,00.0,K
$GPGLL,3721.06,N,12156.11,W
$GPVTG,000,T,345,M,00.0,N,00.0,K
$GPGLL,3721.06,N,12156.11,W
```

Note that neither the VTG nor the GLL messages contain UTC time tags. The resolution of the latitude and longitude in the GLL message is to two decimal places of minutes.

If the V2.1GSA option is selected, GLL, GGA, RMC, GSA, GSA, NST, and GSV messages are output. Note that all of these messages types are output. It is not possible to select only a single message type or subset of message types. Here is an example of the output:

```
$GPGLL,3721.0688,N,12156.1175,W,001248.000,A*2B
$GPGGA,001248.00,3721.0688,N,12156.1175,W,1,05,3.2,00030,M,,,,*39
$GPRMC,001248.00,A,3721.0688,N,12156.1175,W,00.0,000.0,180304,15,E*53
$GPGSA,A,3,18,03,14,22,15,,,,,,,,10.1,03.2,09.6*07
$GPGSV,3,1,10,22,71,299,38,15,68,348,36,18,57,037,46,21,46,095,*75
$GPGSV,3,2,10,03,45,289,45,14,33,190,42,31,15,318,,09,13,087,*7A
$GPGSV,3,3,10,16,06,238,36,26,04,035,,122,08,104,,134,15,251,*7B
$PMGNST,05.38,3,T,605,08.2,-01828,00*41
```

Also note that the GGA and RMC messages contain a UTC time tag in HHMMSS.SS format. For the GGA, GLL and RMC messages, the resolution of the latitude and longitude in this case are to four decimal places.

The $PMGNST message is a proprietary Magellan sentence. The format for this message is as follows: $PMGNST,02.12,3,T,534,05.0,+03327,00*40

Output periodicity is hard-coded for one-second output intervals.

To set the Baud rate of NMEA output from the MobileMapper Pro receiver, press **MENU > Setup > Rate.** Press **ENTER**, select the rate you wish to use for communication with the external device and press ENTER again.

The GSA message provides the DOP and the IDs of active satellites. Positional information is provided in the GGA, SLL and RMC messages, which are compatible with many "moving map" software programs. The specified formats for all NMEA messages can be found in the NMEA Standards manual, which can be obtained from the National Marine Electronics Association, www.nmea.org.