

THALES NAVIGATION	Technical Tips		
MobileMapper Office Manual		March 18th	By : Linda MALCOM Checked :
<p style="text-align: center;"> MobileMapper Handheld NMEA output </p>			

In the MobileMapper User Manual, page 58, the NMEA output choices on the MobileMapper handheld are described as

- V1.5APA: Autopilot Sentence "A"
- V1.5 XTE: Cross track error according to NMEA0183 V1.5
- V2.1GSA: Standard GPS position message according to NMEA103 standard in version 2.1

This note clarifies and corrects this information.

If either the V1.5APA or V1.5XTE are turned on, neither \$GPAPA or \$GPXTE output from the port. Instead, the \$GPVTG and \$GPGLL 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

```

Here is an example of the correct V1.5APA output

```
$GPAPA,A,A,0.10,R,N,V,V,011,M,DEST,011,M,011,M*82
```

and here is an example of the correct V1.5XTE output

```
$GPXTE,A,A,0.67,L,N*6F
```

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 V2.1GSA is turned on, the GLL, GGA, RMC, GSA, GSA, NST, and GSV messages will be output. Here is an example:

```
$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
```

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.

The manual incorrectly describes the GSA message. GSA does not contain position information, it only provides the DOP and active satellites. Positional information is provided in the GGA, GLL 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.