

GPS Map

Version 2.0 Supplement



Introduction

GPS Map 2.0 is a new, NOS2.x savvy version with some new, impressive features.

This document describes the added functionality only. For a full overview of *GPS Map* features please also read the standard *GPS Map 1.x* manual.

PDA Requirements

GPS Map 2.0 runs only on Newtons running OS version 2.0 or 2.1. It is highly optimized for the *MessagePad 2x00* family, although it should also run on *MessagePad 130*. The (upgraded) *MessagePad 120* has too less heap space for running the 2.0 version. Use the 1.x version instead.

GPS Requirements

There are the same requirements as for *GPS Map 1.x*, except that you may now specify other baud rates and a string for initialising the GPS receiver as needed by some units (e.g. *TripMate* or *Centennial GPS Card*). The new versions also support connecting the GPS to the second serial port (MP2x00 only) or to a PCMCIA Serial I/O Card (e.g. *Socket Communications Single Serial Card*).

Also included is an external GPS driver for supporting the binary version of the *Centennial PCMCIA SatNav GPS Card*.

New registration method

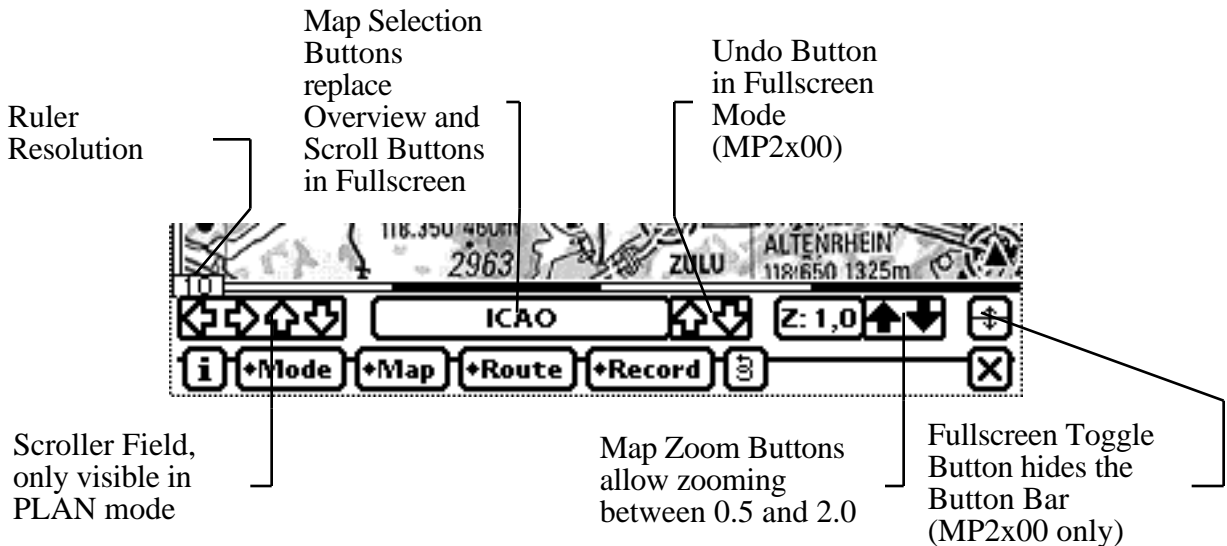
Previous versions of *GPS Map* have been registered based on the active „owner card“ (set within the Owner Info application) and the hardware serial number on MP2x00s.

This method worked fine, but failed if there was more than one owner card and the user switched to another one.

Therefore *GPS Map 2.0* now uses the popular *NewtonID* registration method. Prior to using *GPS Map 2.0* you must install and setup the *NewtonID* package and enter a Newton hardware name (e.g. your name) into the *NewtonID* setup window. For getting a *GPS Map 2.0* registration code you must send that name together with the displayed Newton serial number to the author.

After getting your registration code you should start *GPS Map*, select „Register“ within the „info“ menu and enter the code.

New features



There are lots of little improvements such as new window layouts which are self-explanatory. This manual only lists totally new features.

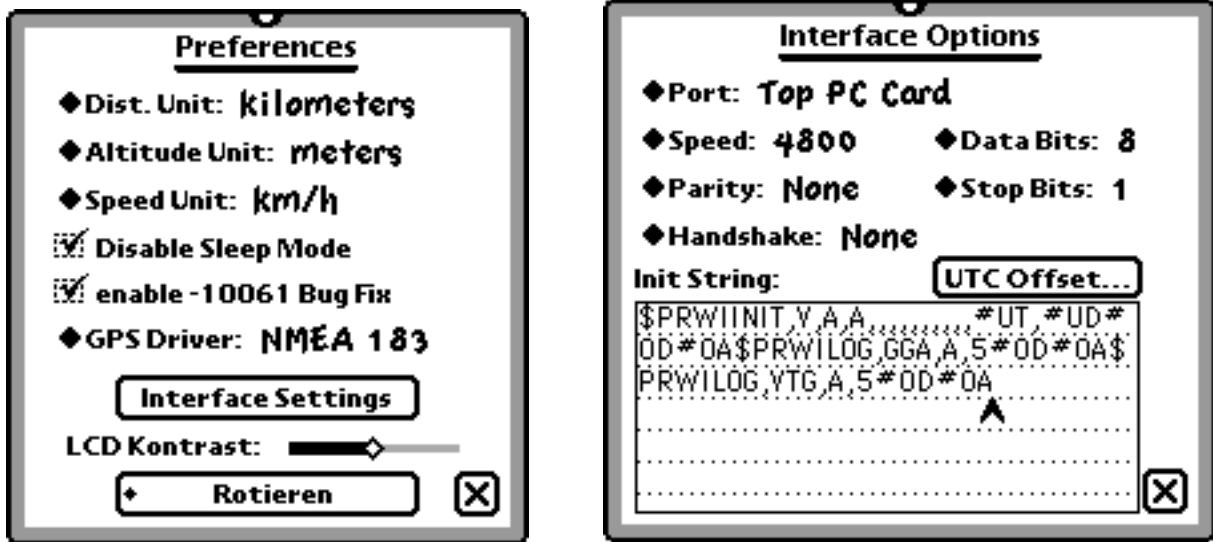
As the *MessagePad 2x00* has a soft button bar it is now possible to hide the standard button bar for using the whole screen for displaying maps. New buttons have been added for replacing the overview-, scroll-, and undo buttons as contained within the standard button bar. The name of the actual map is displayed within the button left to the scale change arrows.

Zoom buttons support zooming the map to a magnification between 0.5 and 2.0. The actual zoom state is displayed left to the zoom arrows. Tapping the zoom state will reset the magnification to 1.0.

The actual map ruler resolution is now printed at the left side of the horizontal ruler. The map ruler unit is the same as the preference setting for distance units.

Enhanced Preferences

In addition to setting the LCD contrast and rotating the screen without quitting *GPS Map* and enabling a special -10061 bug workaround on MP2x00, you have now full control over the GPS interface, and you may switch between different GPS drivers without restarting *GPS Map*.



As you might probably know, the latest Newton OS version as built into the MP2100 has a bug causing randomly screen freezes or -10061 error messages. *GPS Map* is sensitive against this bug while scrolling maps, both manually or by GPS position changes. For preventing this bug you may check the „enable -10061 bug fix“ option within the preferences panel. Setting this option will slow down map scrolling significantly, but seems to reliably prevent the bug occurrence. Other bug fixes available on the internet (up to May 24th) are ineffective for use with *GPS Map*.

For changing the GPS driver simply select the new driver through the „GPS Driver“ popup menu. The „Interface Settings“ button will disappear while *GPS Map* closes the current and opens the new GPS driver.

After the „Interface Settings“ button is visible again you may tap on it for changing the driver settings.

The standard NMEA driver has been enhanced with various new features:

An initialisation string may be needed by some GPS receivers to enable them for outputting NMEA data. You may enter both ASCII and binary data into the input field.

Each binary byte must be prefixed by a # sign, followed by two hexadecimal digits. If the # sign should occur as an ASCII character within the string you must type it twice.

Example 1: Entering „\$ASTRAL#0D#0A“ represents the string „\$ASTRAL“, followed by a return and a linefeed character as needed for initialising the *TripMate* active GPS antenna.

Please note: As it is difficult to recognise hexadecimal data (e.g. to distinguish between a O and a 0) you should use the keyboard by double-tapping into the input field instead of handwriting.

Some receivers, e.g. the *Centennial PCMCIA SatNav GPS Card* offer an option for initialising them with the actual date and time for speeding up the time until getting the first fix. You may insert the strings #UD for Universal Date and #UT for Universal Time (UTC) into the initialisation string.

Example 2: The string:

```
$PRWIINIT,V,A,A,,,,,,,,, #UT, #UD#0D#0A$PRWILOG,GGA,A,5#0D#0A  
$PRWILOG,VTG,A,5#0D#0A
```

as shown within the screen shot above will initialise the NMEA version of the *Centennial PCMCIA SatNav GPS Card* with date and time, and set its update rate for both the \$GPGGA and \$GPVTG messages to once per five seconds for reducing power consumption. If you have the binary protocol version of that card please note that you will need to install and select the special GPS driver included with this delivery!

Although *GPS Map* will calculate UTC automatically based on Newton's time, date, the current location as set within the Time Zones application and the actual daylight settings for that location you should check and eventually correct the time offset by clicking the „UTC Offset“ button.

After closing the preferences window *GPS Map* will switch to the new interface settings and again listen to your receiver.

If data is incoming for a few seconds *GPS Map* will adapt its driver to the best data message combination found in the data stream as explained within the 1.x manual.

GPS Map 2.0 will go final as soon as Apple tells us a reliable way how to the -10067 bug.

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