



## Firmware Release Notes

## Survey/GIS

Date: April 07, 2008  
Product: PM3  
Subject: PM3 Surveying&Mapping Firmware Release V2.11  
Number: PM32008\_04 revA

### Introduction:

The PM3 Surveying&Mapping software applications V2.11 is a no-cost firmware update for the PM3 receiver. It fixes some firmware defects that have been reported by users, dealers and Magellan Navigation Technical Support staff.

These versions of receiver software should be used with operating system version **2.16** and GPS firmware version **P010**. All three programs are available for free download from [ftp.magellangps.com](http://ftp.magellangps.com) in the following folders:

- Operating system version 2.16 :/Land Survey/PM3/Firmware/Operating System
- GPS firmware version P010 :/Land Survey/PM3/Firmware/GPS firmware
- Software version 2.11 :/Land Survey/PM3/Software/ Surveying&Mobilemapping

There are two versions of PM3 V2\_1: PM3NAV2\_1.ZIP file for North, Central and South America and PM3EUV2\_1.ZIP for the rest of the world. The only difference between the two versions is the background map.

### Upgrade procedure

**Warning: If you already are a user of the RTK option, you will need to re-enter the activation code this option after upgrading the firmware. So if you have lost this code, please do the following before upgrading: run the “unlock RTK option” utility so you can view and write down this code.**

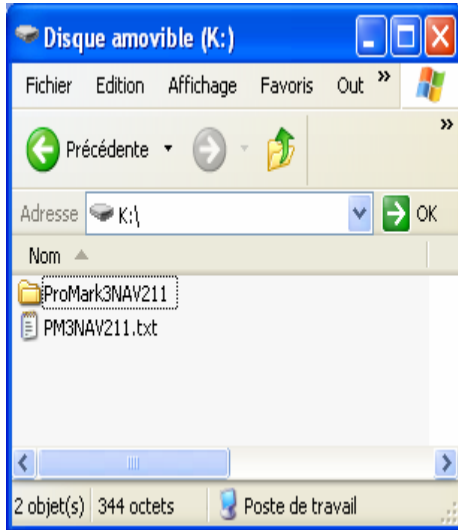
#### **1-Updating the Surveying & Mapping Software Applications**

The upgrade procedure is as follows:

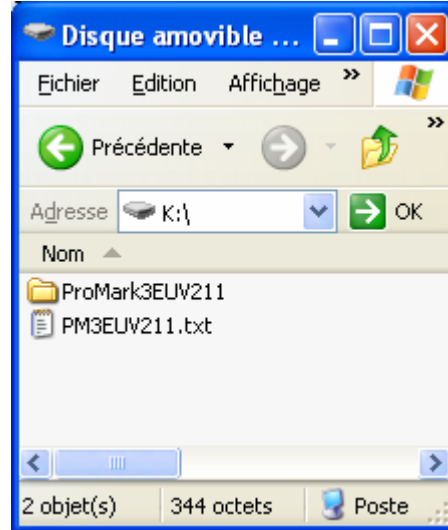
1. Go to the [ftp.magellangps.com](http://ftp.magellangps.com) FTP site and download the PM3 V2.1 firmware from the /Land Survey/PM3/Software/ Surveying&Mobilemapping folder to your office computer. Choose the firmware version that is suitable for your location.
2. Extract the files from the Zip file, making sure you preserve the folder structure while doing this (see below).
3. Insert a SD card into the card reader of your office computer. Using Windows Explorer on your PC, navigate to the drive used by the card reader, right-click on it and select the Format option. Select FAT32 as the file system for cards 64 MB or larger. Formatting the card will delete all its data.

- Copy the unzipped files and folders to the SD Card. The content of the SD card should then be as follows:

For North, Central and South America:



For the rest of the world:



- Remove the SD card from the card reader and insert it into the PM3
- On the PM3, double tap Utilities and then AutoLoader.
- Select the PM3NAV211.txt for North, Central and South America or PM3EUV2117.txt for the rest of the world, and then tap OK. Let the unit complete the installation.
- At the end of the installation, restore the factory settings by pressing simultaneously the following keys LOG+IN+MENU.

**2 -Activating the RTK software**

- To unlock the RTK option for the Surveying and Mobile Mapping application, go in the “Utility” directory and run the “Unlock RTK option” utility.
- Enter the RTK code and then tap OK. An acknowledgement message should appear.

**Compatibility**

This release of PM3 is compliant with the following versions of:

GNSS Solutions	Release >2.50.06
Mobile Mapper Office	Release >3.4

**New features**

None

## Resolved Problems/Improvements

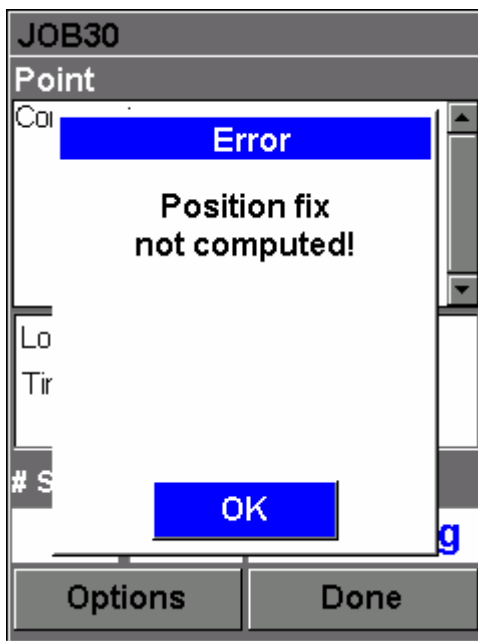
### Surveying application firmware:

1. The Scale Factor field in the menu User Grid.
2. Adaptive SBAS under estimation enhanced. (Detection of suspiciously slow satellite dynamic), included from v2.09 which repairs an issue due to one **EGNOS sat in Europe**. The consequence of that problem is that the TTFF was very long, more than 10-15 mn and the accuracy of the fixed solution very bad.
3. Improved time management to prevent incorrect time sometimes being written into log files, which doesn't allow further post-processing by PC sw tools.

### Mobile Mapping application firmware:

The MMJ file data loss issue has been fixed in the two following ways:

1. A protection has been implemented to prevent a feature from being logged to the MMJ file in cases where the software does not recognize any valid GPS position fixes recorded within the time interval of feature observation. Regardless the root cause of the problem (e.g. too short an observation interval or a clock issue), it will indicate to the user that the captured feature may not be properly handled by the office software. The protection results from displaying the following warning message:



After the message is acknowledged by the user, the program keeps displaying the feature logging screen. In this situation it is recommended that the user waits at least a

couple of seconds and then try closing the feature one more time. If the message appears again, then the user needs to exit the application by means of the main menu. If the problem is persistent even after the application is restarted, then the user needs to power cycle the unit or to do GPS cold reset.

2. Internal clock management of the application has been improved to prevent a wrong time initialization in cases where the program is started before a valid GPS position fix is computed, resulting in the real-time clock being wrong. In this subject version the application fully synchronizes its internal clock every second, while in previous versions the clock used to be fully synchronized only once the program started up, and then it was maintaining the clock from raw data messages. Thus with the previous implementation the problem may occur in cases where the initial date/time were wrong. Then when the time eventually got fixed, the application was unable to detect this clock jump.

## Recommendations

### Surveying firmware:

- RTK Initialization in KPI mode: It's preferable to use the "Log" function than the "Menu" function. In the first one, you can check and modify the antenna parameters (specially height)
- We recommend using the serial port to transfer data from/to GNSS Solutions on the PC and the Surveying program on the PM3
- The raster maps must be referenced in meters, never in feet.
- Chinese language : Surveying is not available in Chinese language. If you want to use this language, you should use FAST Survey.

### Mobile Mapping:

- It's not possible to configure your receiver as a real-time base station with the **Mobile Mapping** application: the "base configuration" menu, available by pressing the **LOG** button, launches only the raw data record (as with the previous release). If you want to configure your PM3 as real-time base station, you must use the **Surveying** application
- We recommend using the USB port to transfer data from/to MobileMapper Office to Mobile Mapping.

**US Radio:** Channels 8 and 30 are not available.