

# ***IP RECEIVER***

## ***New features GDD Rx program***

Version 5.3



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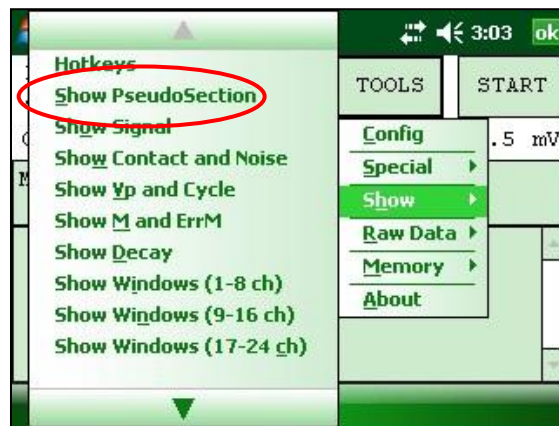
E-Mail: [info@gddinstruments.com](mailto:info@gddinstruments.com)  
Web site: [www.gddinstruments.com](http://www.gddinstruments.com)

## New features with version 4.2.39

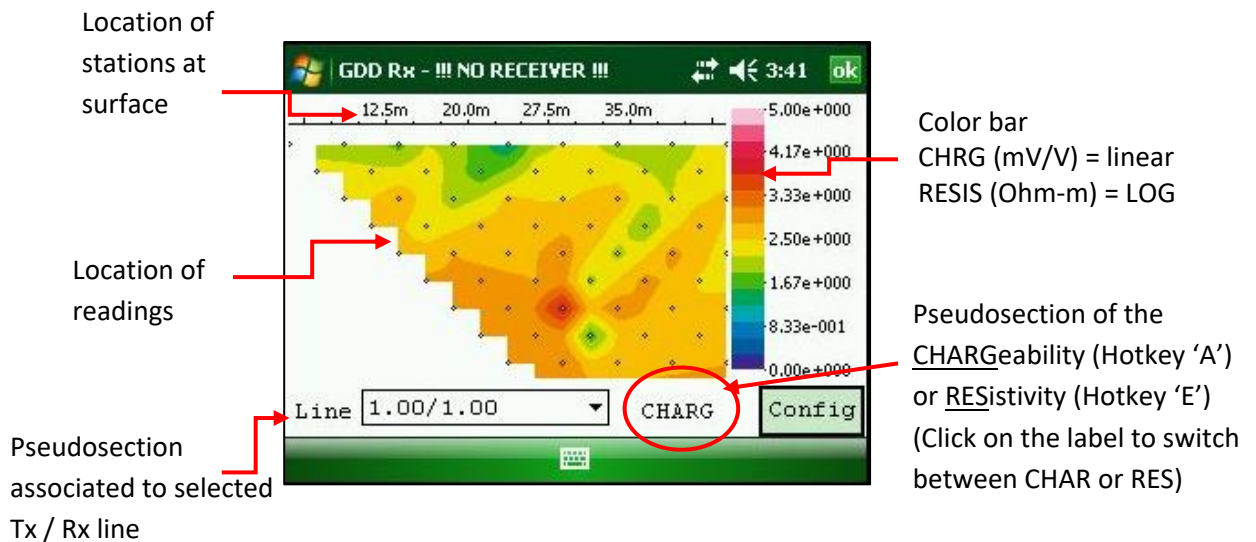
### PseudoSection

A new Pseudosection option is used to display the calculated pseudosection (in color) for each surveyed line.

1. Select Tools | Show | Show Pseudosection  
Hotkey 'U'



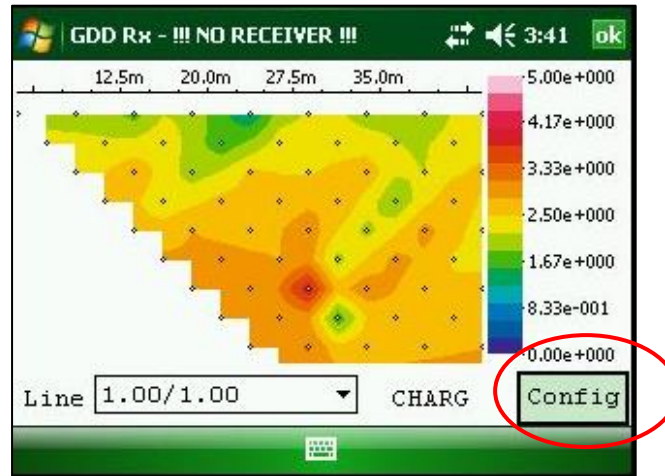
2. The following screen appears.



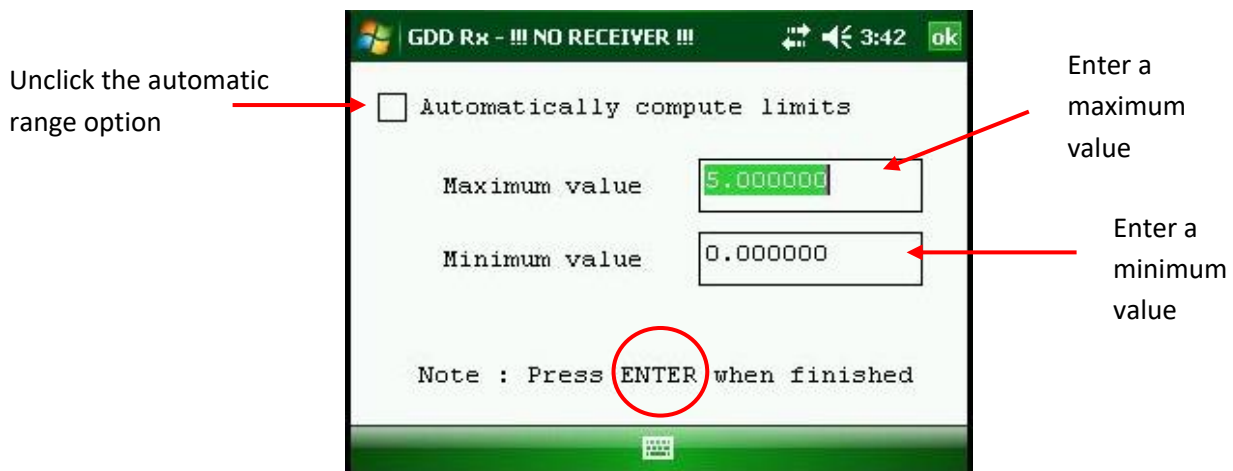
Note: Use the hotkey 'I' to invert the Pseudo colors.

3. Color bar editing.

Click on the “Config” button in the pseudosection main screen.



The following screen appears.



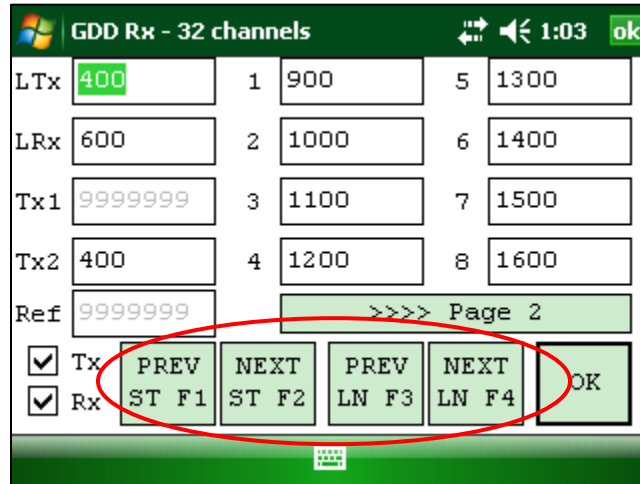
To validate and go back to the pseudosections view, you can either click on « Enter » or on the « OK » button.

4. To visualize the whole pseudosection, use the arrows on the PDA keyboard:



## Next/Previous Station hotkeys

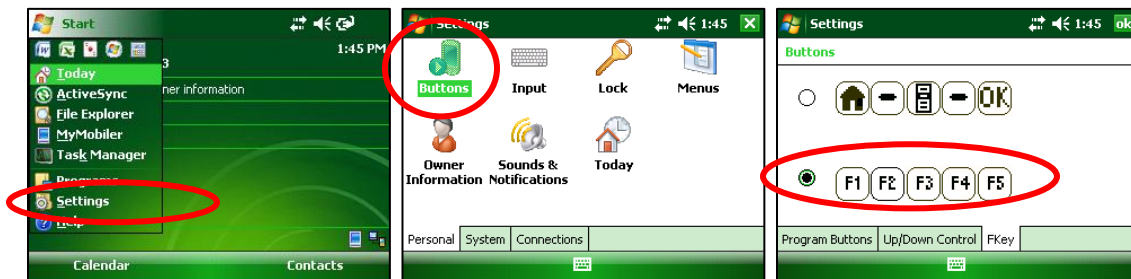
Hotkeys have been assigned to *Prev* and *Next* buttons (F1 to F4).



**Note that the positions of the Prev and Next buttons have been changed too.**

To exit this window, use one of the *OK* buttons on the screen or use *ESC* keystroke to cancel and keep the same settings than before or *Enter* keystroke to confirm your settings.

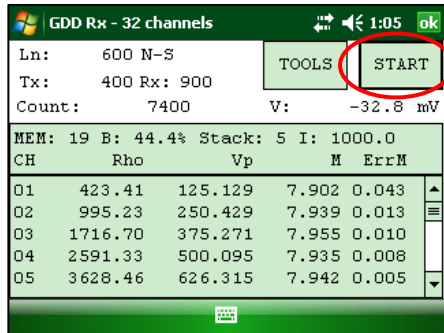
If *F1* to *F5* buttons do not work on your Allegro Mx, go to *Start Menu | Settings | Buttons | FKey* and enable *F* buttons.



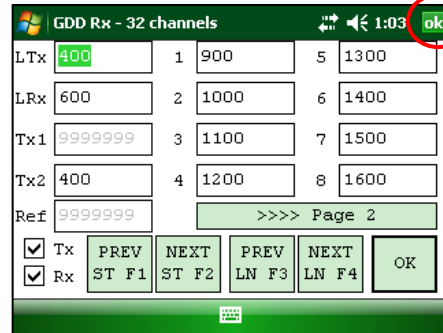
## Acquisition start-up process

Here is the new configuration for the Start-up process with Allegro Mx or Allegro<sup>2</sup>:

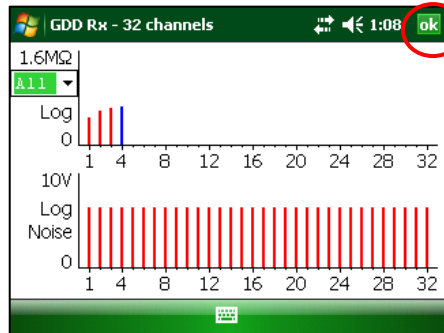
- 1) Click Start or use Enter keystroke



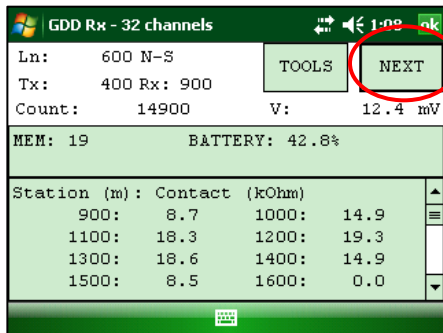
- 2) Click OK or use Enter keystroke



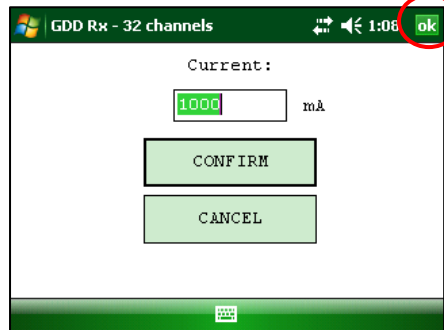
- 3) Click OK or use ESC keystroke



- 4) Click NEXT or use Enter keystroke



- 5) Click OK or use Enter keystroke



All buttons in the different windows are now in the upper right corner.

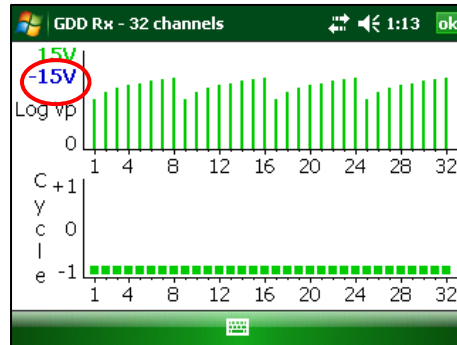
The keystrokes used to start acquisition are:

*Enter, Enter, ESC, Enter et Enter*

**With Allegro Cx, there is a difference for the first window: with the keyboard you have to press on *Tab* keystroke until the *Start* button is highlighted. Then, press on *Enter* keystroke to begin the acquisition process.**

## Negative value in Vp graph

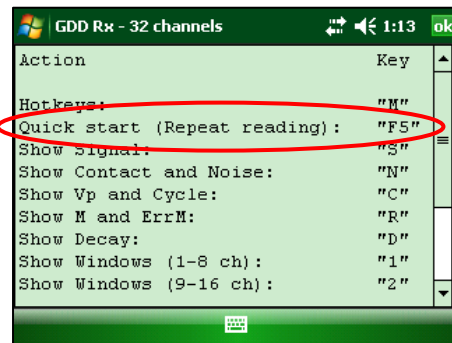
The negative Vp values will be displayed in blue in the same graph. The height of the bars still indicates the absolute value of the Vp and the color indicates the sign (green for positive values and blue for negative values).



## Acquisition Quick Start

It is now possible to start the acquisition process with the same settings by using *F5* keystroke. You have to start the first acquisition normally before being able to use *F5* for the next acquisitions. Using *F5* will skip all configuration and contact resistance windows.

Press on *M* keystroke to see Hotkeys.



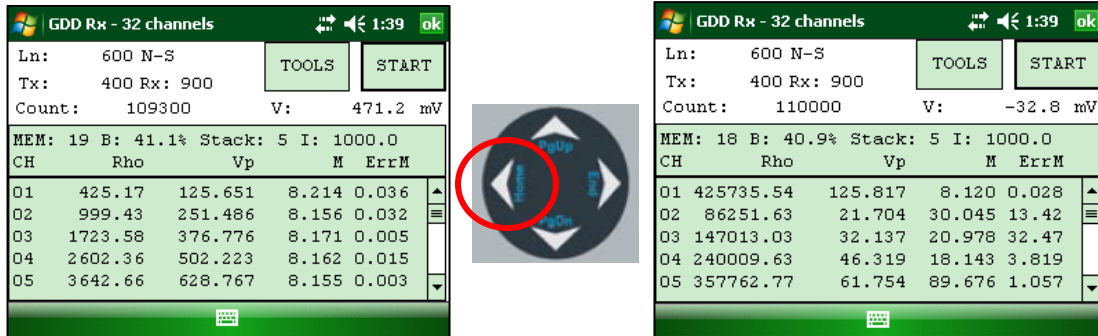
If *F1* to *F5* buttons do not work on your Allegro Mx, go to *Start Menu | Settings | Buttons | FKey* and enable *F* buttons.



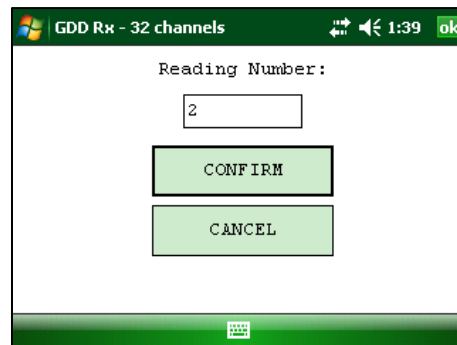
## Comparing Data

In the readings window, you can now move between your readings by using left and right arrow keys.

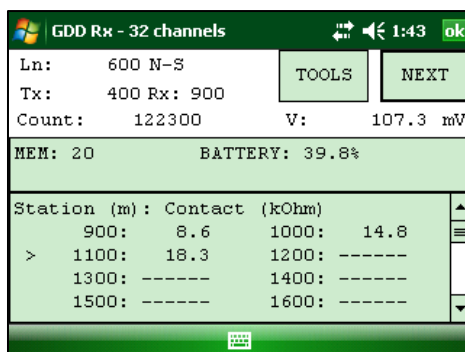
Once your acquisition process is finished, use the left arrow keystroke to compare your current data with those of your previous acquisitions. Use Up and Down arrows to see all channels.



If you have to see data from an acquisition that is not close to the current one, use Display Readings option to select the acquisition you want to see.

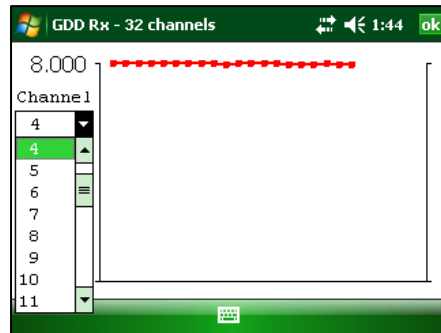


You can start again your acquisition process by clicking on *Start*. The program will automatically come back to the last acquisition.

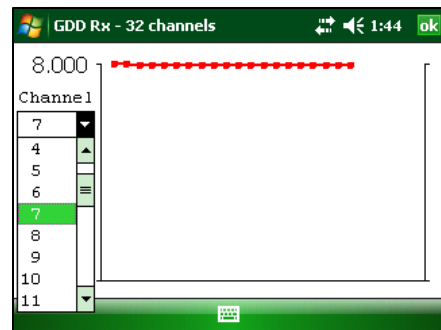


## Scrolling up and down through decays

Unfortunately, because of how the Microsoft system is configured, we cannot get the same process with the Allegro Mx or the Allegro<sup>2</sup> than one we have with the Allegro Cx. But we added the possibility to use *Enter* keystroke to go to the channel field.

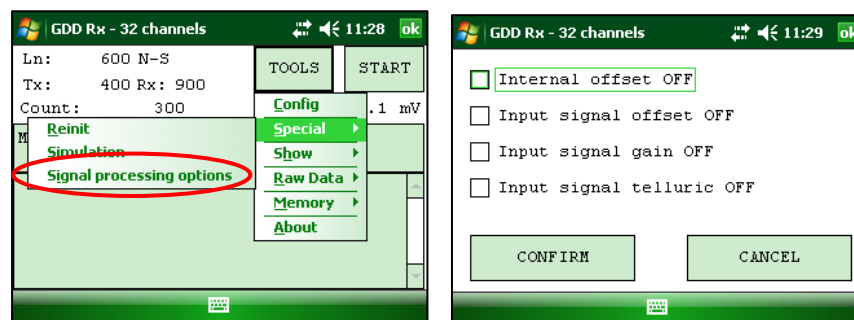


Once the decay field is opened you can use Up and Down arrow keys to select the channel.



## GDD – Special processing options

This option allows you to disable the default gain and offset settings.



**Note that the gains and offsets are enabled every time you start the program even if you disabled them the last time you used it.**





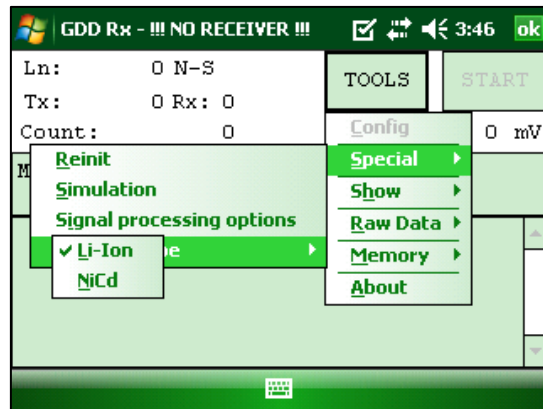
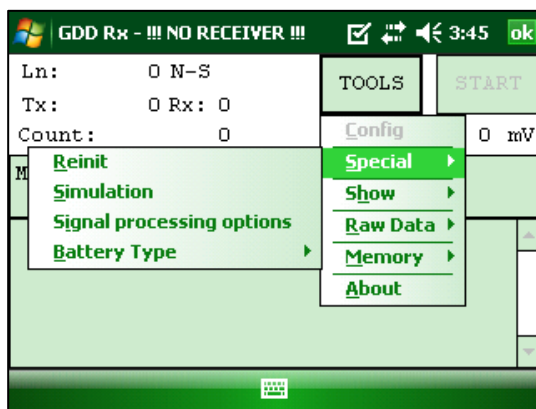
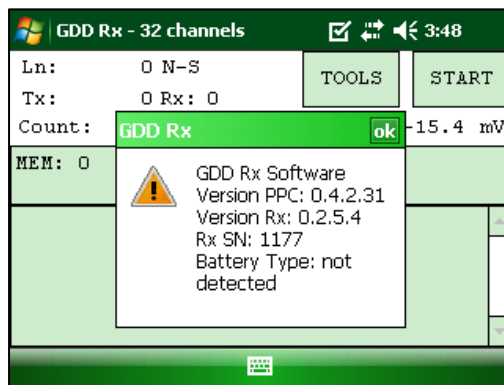




## Battery type selector

The battery type of the GRx8-32 receiver will be detected by the GDD Rx program if your GRx8-32 receiver has firmware version 2.5.8 (or newer versions). If your GRx8-32 receiver has firmware version 2.5.4 or earlier, the GDD Rx program cannot detect the battery type automatically and you have to select battery type in the TOOLS menu (in that case, the default setting would be Ni-CD). See Section 8.2.4 in the Instruction Manual for more details.

If the *Battery Type* menu is grey (disabled), it means that the battery type is detected by the GDD Rx program and you do not need to set it manually.



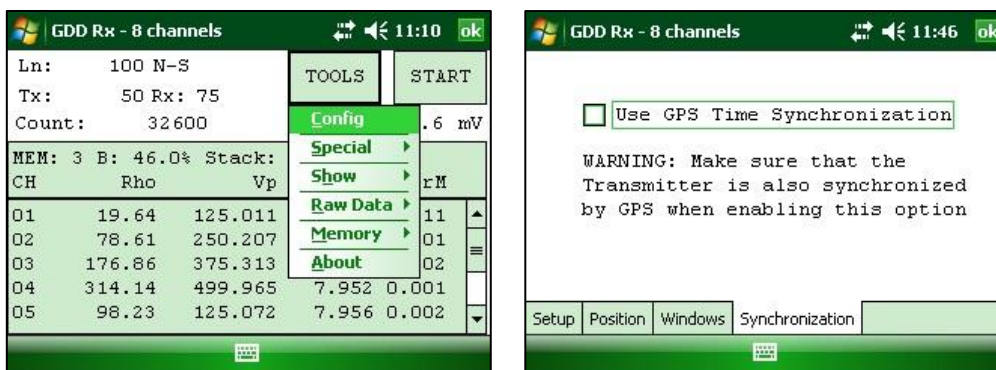
If you do not select the right battery type, the battery level shown in the GDD Rx program will be a little bit different than the real level.

## GPS time synchronization

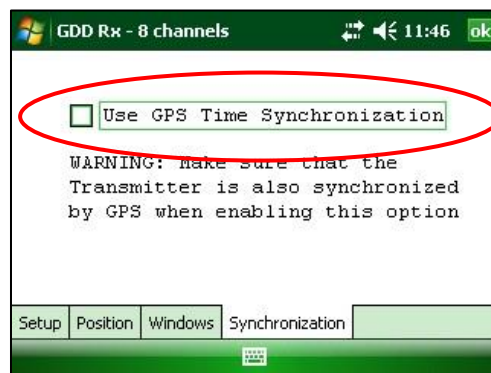
Use the GPS time synchronization if you need to synchronize your receiver to your transmitter using GPS time.

### Requirements :

- Your receiver must be equipped with an internal GPS module.
  - Your Allegro PDA must have the Rx software version # 4.2.39 and your receiver must have Rx firmware # 0.2.5.9 (or newer versions).
  - Your transmitter (itself or linked to another unit) must be synchronized with a GPS.
1. Refer to *Section 7.4* to verify if a satellite is being tracked by the GPS module of your receiver.
  2. Select Tools | Config | Synchronization. The following screen appears.



3. Check *Use GPS Time Synchronization* to enable the GPS synchronization.



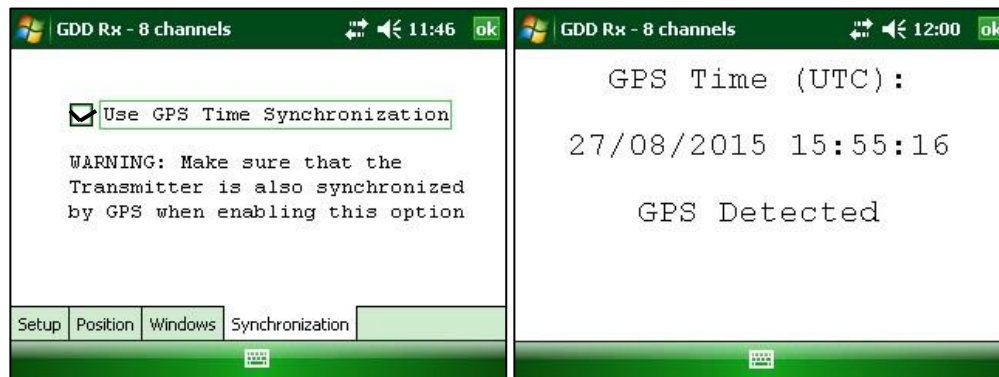
**IMPORTANT: Make sure that your transmitter is also synchronized by GPS before using this option.**

**Note that the GPS synchronization is disabled every time you start the program even if you checked it the last time you used it.**

4. Before starting your acquisition process, make sure your transmitter and your receiver are well synchronized :
  - Wait for about 15 minutes before taking your first reading to ensure that the GPS module of the receiver gets the real UTC GPS time.
  - If possible, compare the GPS time of your transmitter with the GPS time of your receiver. They must have exactly the same GPS time (see *Section 7.4* to know how to get the GPS time of the receiver).
5. During the acquisition process, you can verify if your receiver is still synchronized with GPS (see *Section 7.4* to know how to verify the GPS signal):

#### GPS well synchronized

If you checked *Use GPS Time synchronization* and if a GPS signal is detected, your receiver will be synchronized with GPS.

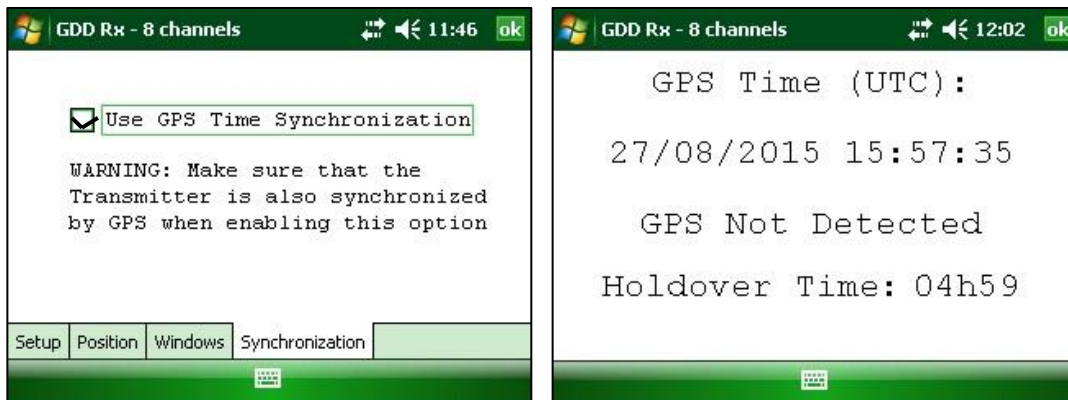


**IMPORTANT: it does not confirm that your receiver is well synchronized with your transmitter. In the case that your transmitter and your receiver are not well synchronized together, your data could be erroneous.**

#### GPS signal lost for less than 5 hours

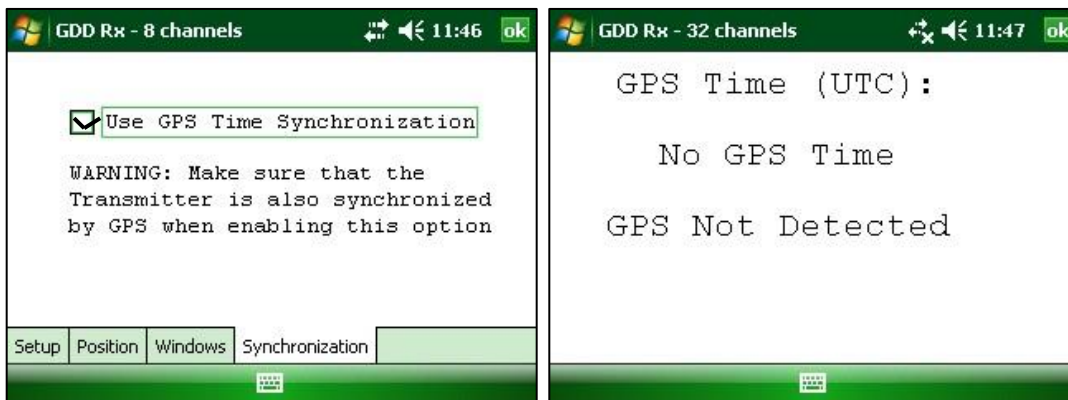
If you checked *Use GPS Time synchronization* and if the GPS signal is lost for less than 5 hours, your receiver will still be synchronized with GPS using the internal GPS clock.





No GPS signal from the beginning, GPS signal lost for more than 5 hours or Use GPS Time synchronization unchecked

If your checked Use GPS Time synchronization and if there is no GPS signal or if it is lost for more than 5 hours, the receiver will automatically switch to synchronize with the ground signal.



Note that the data acquired with the GPS synchronization can be more accurate than those acquired with the ground signal, especially over noisy environment.

**IMPORTANT:** During the acquisition process, if all your Vp values are negative, you can switch the polarity of the current transmission at the transmitter (switch the wires at the HV block) and all de Vp will become positive.



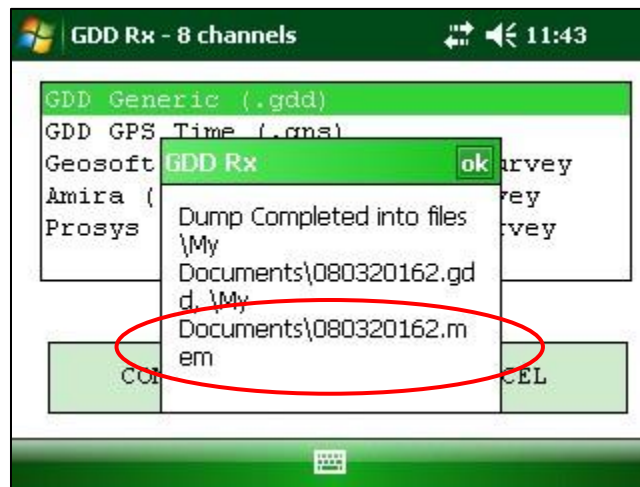


## New features with version 4.2.40

### New .mem file for GDD IP Post Process software

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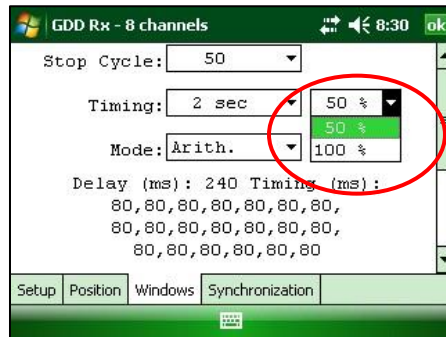
When you save your files at the end of the acquisition (*Memory Option – Save File*), a new *.mem* file is automatically created. This new file has a specific format required to be used with the new GDD IP Post Process software. Contact GDD for more information about this new software.



## New features with version 4.2.42

### Duty Cycle 100%

It is now possible to measure induced polarization in the ON time using the Duty Cycle parameter (100%).

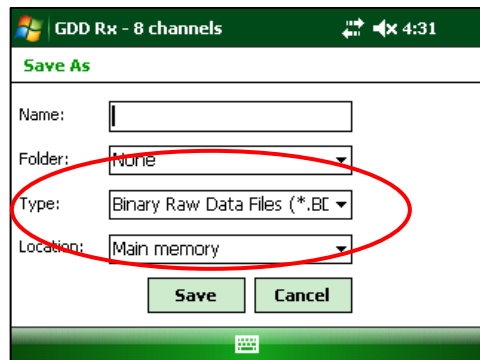


This parameter appears in the *.gdd* and *.gps* files.

Sym(%)	M	ErrM	In	Time	DC	Stack	M01	M02	M03	M04
100	3.935	0.008	1000.000	2000	50	3	3.956	3.910	3.951	3.957
100	3.915	0.001	1000.000	2000	50	3	3.922	3.915	3.927	3.915
100	3.908	0.006	1000.000	2000	50	3	3.936	3.916	3.917	3.905
100	3.903	0.004	1000.000	2000	50	3	3.893	3.900	3.919	3.912
100	3.906	0.000	1000.000	2000	50	3	3.924	3.907	3.916	3.910
100	3.908	0.001	1000.000	2000	50	3	3.931	3.916	3.906	3.905
100	3.908	0.001	1000.000	2000	50	3	3.927	3.910	3.912	3.914

### Binary raw data file (.bdf)

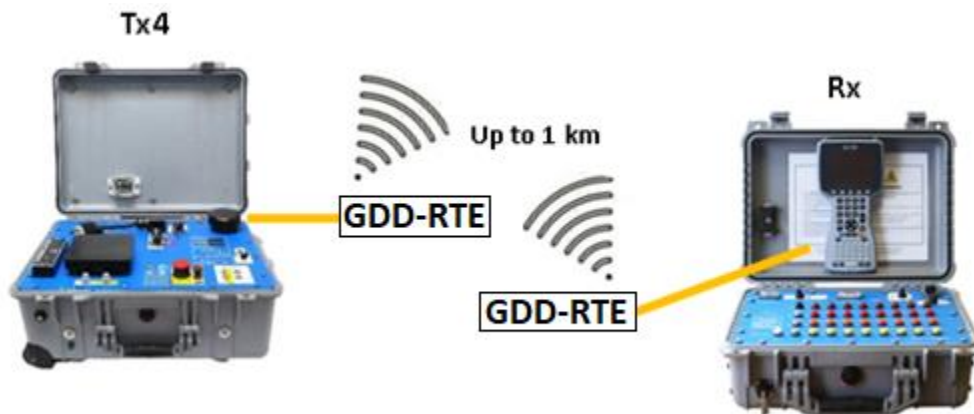
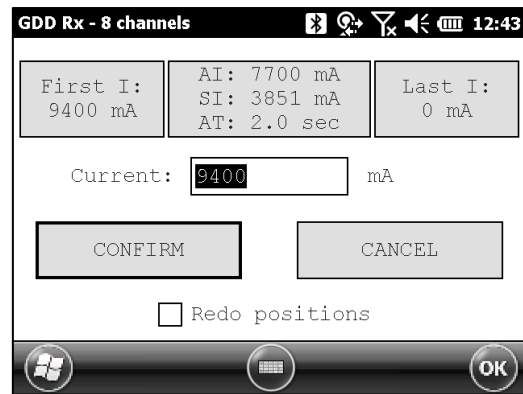
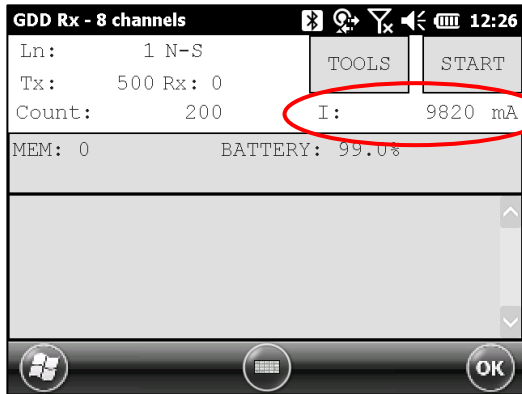
The *.rdf* file has been replaced by a binary file with the extension *.bdf*. The function is still the same: recording raw data without any synchronization with a transmitter signal. This new binary file can be used to remove telluric noise from the data using the new GDD IP Post Process software. See Section 8.4.2 of the Instruction Manual to know how to record raw data. At the end of the process, you will be prompted to name and save your *.bdf* file.



## New features with version 4.2.43

### Monitor and record Tx output current and Power at the PDA

When using the optional GDD-RTE communication boxes to collect live information broadcasted by the GDD IP Transmitter, model Tx4, the Tx current "I" and power "P" can be displayed alternatively in the Rx PDA main screen under the TOOLS and STOP/START buttons. To switch from one information to the other, use the following shortcut Key: "V" or click on the text label directly on the screen.

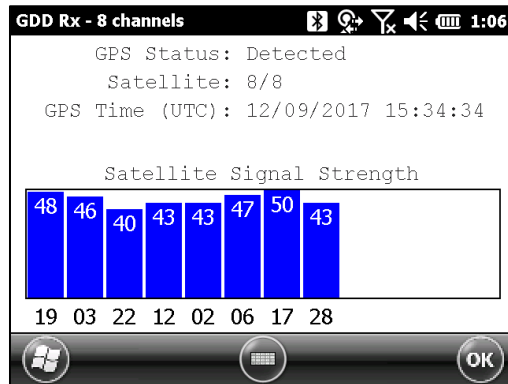


When using the GDD-RTE communication boxes, an ascii file (gdd\_rte.log) will be created at the same location than your IP data. This gdd\_rte.log file contains the output current and power values broadcasted by the GDD IP Transmitter, model Tx4.

## Monitor Satellite Signal Strength

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If the external GPS antenna is connected to the IP Receiver, the satellite signal strength can be monitored in the TOOLS \ Raw Data \ Check GPS menu

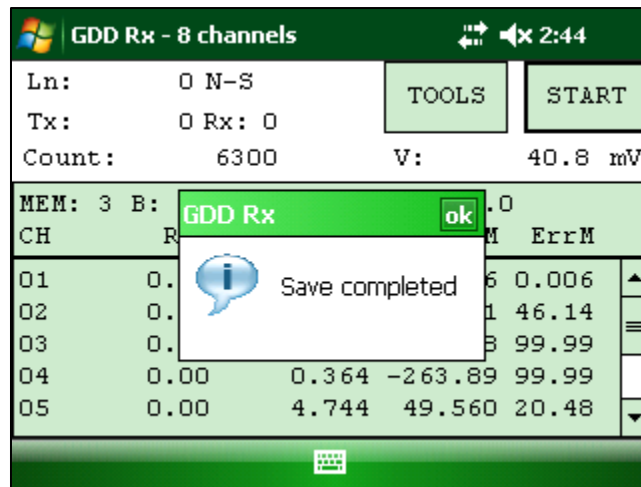


## New features with version 4.2.44

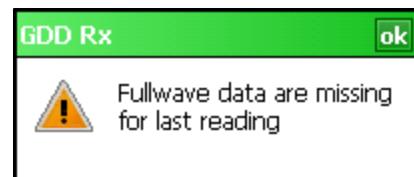
### Verification of the integrity of the last reading

When you save a reading, there is a lot of data (Fullwave) that has to be stored in the memory, so it takes few seconds to complete saving reading. If, while saving reading, you turn the PDA OFF or the PDA battery goes down or any problem occur making the PDA restart, the last reading might be corrupted.

To avoid this problem, first of all, wait until the following message confirms the completion of saving reading.



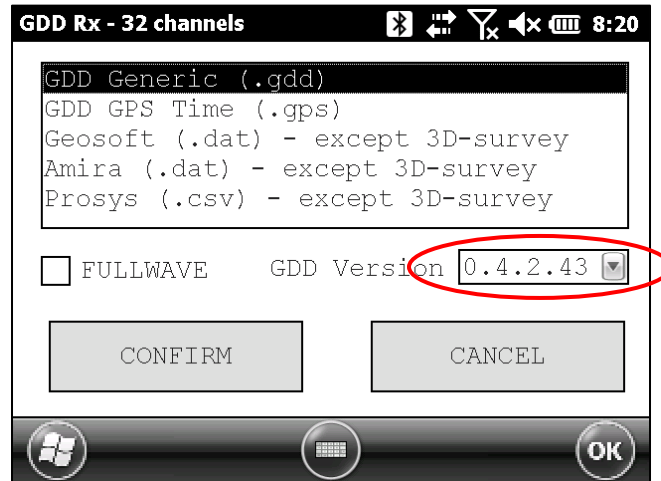
If, nevertheless, your memory file gets corrupted, the next time you launch the software you will be aware of that situation by the following message and the memory file will be fixed by truncating missing Fullwave data.



## Different versions of output file format

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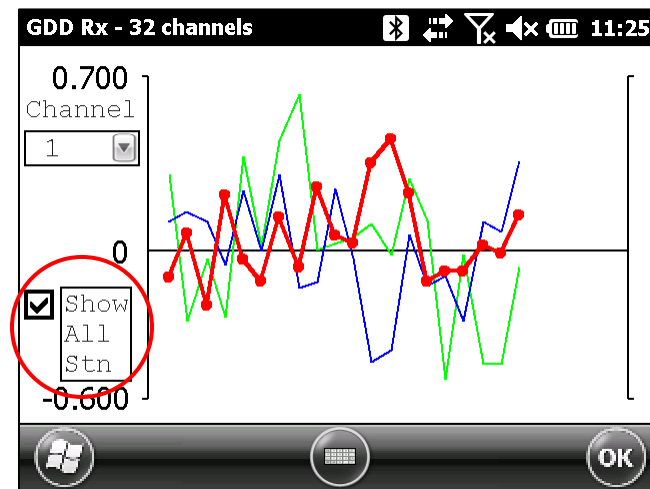
GDD Instrumentation constantly improves the GDD Rx software. Sometimes we need to add an additional parameter or change the format of an existing parameter in the output files (.gdd, .gps, .dat or .csv). To preserve compatibility with existing software that need legacy format you can choose version of the format to use while saving output files.



## New features with version 4.2.45

### “Show All Stations” function

When you watch Decay curve for the current reading (available from software version 4.2.46) or for a previous reading in Preview mode, you can choose option “Show All Stations”. This way, you will see Decay curves of the same channel for all readings in the memory which has been taken at the same station (Tx and Rx positions) with the same parameters (Timing, Windows, etc.). This option allows you to compare the quality of different readings taken in the same conditions.









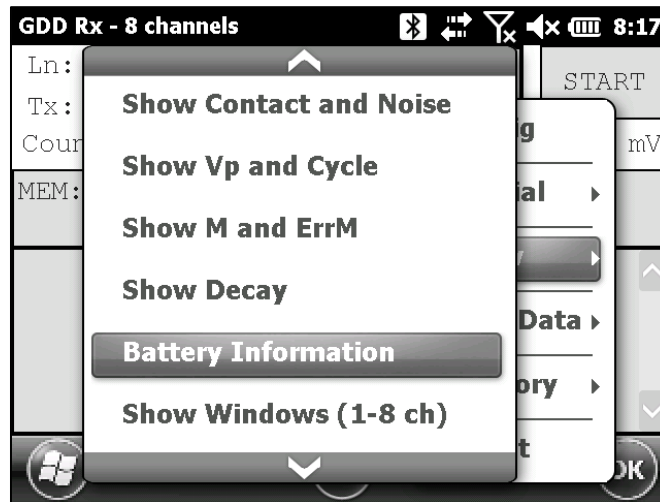
## New features with version 5.3

### Battery Monitor

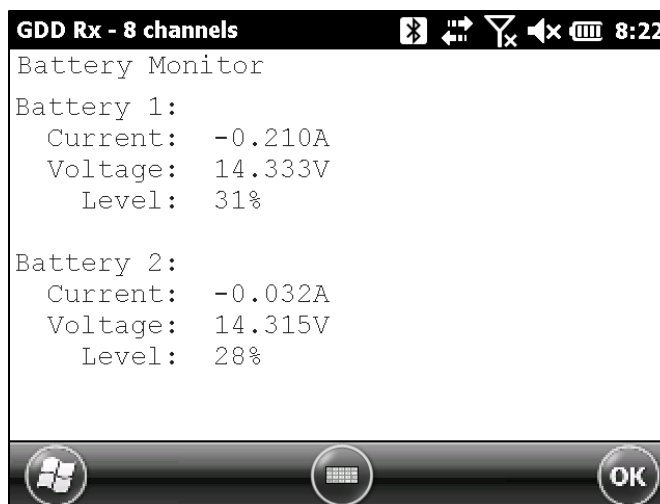
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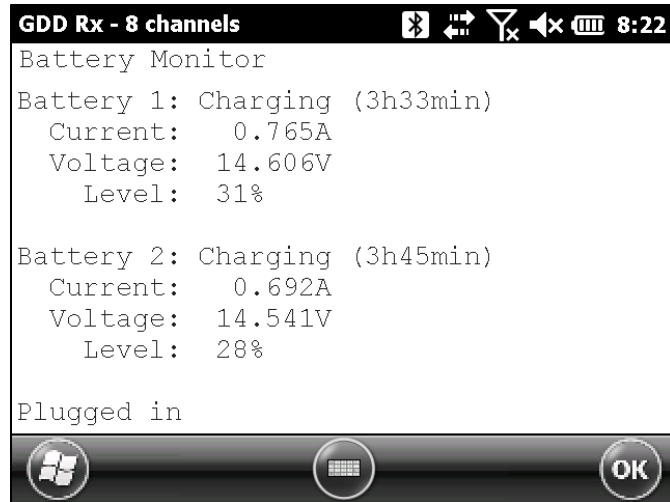
Now you can see the battery status in the window that you can find in

**TOOLS->Show->Battery information:**



You can find here the information about the residual battery voltage (V), the current consumption (A) and the residual battery capacity (%). When the charger is plugged, the time to complete the charge is displayed.





This feature is available for the GRx2 model with the Firmware version 0.5.1.11 and later and for the GRx8mini model with the Firmware version 8.1.0.5 and later.

If the Firmware version of the unit does not support the feature, the following message is displayed in the Battery Monitor.

