Battery and Charger Maintenance

How is the handheld computer powered?

The high-quality main lithium-ion battery installed in VIASAT GPS Systems is specified to be rechargeable over 500 times. The unit uses a specially designed and tested battery to ensure quick charging time, long battery life and resistance to shocks and vibrations.

Even if the main battery is too low to power the handheld computer, enough energy remains to power the memory for a period of about 30-50 hours without using a second internal backup battery. The backup battery is recharged every time the main battery is recharged, and even from the main battery when the unit is not on the charger. The lifespan of the backup battery alone is about 12 hours at room temperature. The backup battery is turned on to maintain the memory only when the main battery is completely dead.

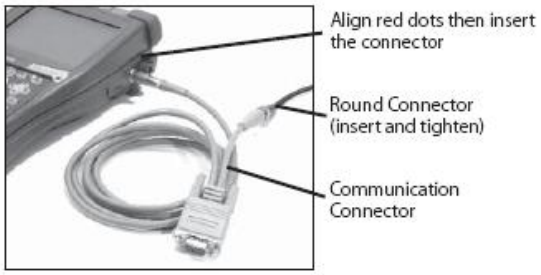
How long can the handheld computer operate on main battery power?

Typically 15 hours with the GPS receiver in use, the backlight disabled and moderate use of the keyboard and system sounds. Cold operating temperatures (below –10 Celsius) can badly affect main battery capacity, but an entire day of operation can easily be achieved in most cases.

How do I recharge the handheld computer?

5000X only

The handheld computer can be recharged using the communication cable connected to the LEMO connector. Connect the charger to the communication cable, then insert the LEMO connector into the LEMO port.



The 5000X Battery Status Indicator will turn red in the next 5 seconds indicating that charging is in progress and will turn green when charging is completed.

3000X and 5000X

The communication cradle can also be used to recharge the unit. Connect the charger to the cradle, then slide the unit into the cradle.

The Battery Status Indicator will turn red in the next 5 seconds indicating that charging is in progress and will turn green when charging is completed.

Charging time:
5000X: up to 5 hours
3000X: up to 3 hours

Does the main battery develop memory effects?

Lithium-Ion batteries do not suffer from the dreaded memory effect and can be recharged anytime.

What happens if I forget the unit on the charger for a long time?

The unit can be left on the charger for a few weeks without affecting battery life or damaging the handheld computer.

The unit cannot be turned off when charging. Is that normal?

Yes. The device will not turn off when charging.

Why does the battery power drop slowly even if the unit is turned off?

The volatile memory (information not stored in a file) needs energy to be maintained.

What must I do if the main battery gets too low to power the unit?

Recharge the battery before using the unit. If the unit was left without charging for a long time, you may have to restore the memory from a backup set.

Note: Programs and files stored in flash storage memory are not affected by a power loss. However, data and settings stored in main memory may be affected. Some programs may not run correctly if these settings are lost. To avoid problems, back up the main memory regularly, and always back up the main memory after installing software.

Is it possible to replace the main battery?

Yes. The main battery can be replaced on all VIASAT GPS Systems.

What accessories are available to power the unit?

Vehicle cradle (12 Vdc)

5000X only

Charger (12 Vcc)

5000X, 3000X

Stand-Alone Charger for 1 Battery Pack

5000X only

Battery Pack Lithium-Ion

5000X, 3000X

Why does the unit refuse to turn on when I press the *ON* key?

If the unit was left with the main battery charge at a very low level for some time, you may have to recharge it for a few minutes before it can be turned on normally.

How can I calibrate the system power gauge or condition the main battery?

A badly calibrated power gauge does not affect battery life or charging time. The purpose of calibration is to enable the operating system to accurately report the remaining capacity of the main battery. To calibrate the power gauge, connect the unit to the charger or slide the unit into the cradle with the charger connected, then press ***CTRL+F2*** on the keyboard. In the ***Battery Manager*** application, click ***Start Calibration*** in the ***File*** menu. Calibration is in progress and will take about 20 hours to complete.

How do I maximize the main battery's life?

Several things can be done to maximize the battery's productive life. Briefly:

- Properly condition your battery when it is new, then perform battery calibration on a regular basis (monthly).
- Always fully charge your battery before use.
- To preserve battery integrity, recharging must only take place when the battery is at a temperature between 5°C (44°F) and 45°C (113°F). The Battery Status Indicator of the unit glows yellow if the battery is too hot or too cold to be charged, and the charging system is disabled.
- Avoid exposing the battery to extreme heat or cold.
- Use the battery. If possible, avoid letting your battery sit dormant for long periods of time.
- If the battery is to be idle for an extended period (three weeks or more), store it in a cool, clean, dry place. Charge and re-condition it upon re-use.

How can I preserve battery power when the unit is not used for a long time?

If the unit is not going to be used for a few days, you can just keep it on the charger.

For a storage period of a few weeks, fully recharge the unit, turn it off and store the unit at room temperature. This procedure can be used for a storage period shorter than three (3) weeks.
After the specified period. you must fully recharge the battery if you wish to continue storing for an additional period.

You can keep the unit on the charger continuously (for a long period of time), but that will affect battery capacity over time.