Pocket PC Tips

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Overview
Pocket PCs are amazing devices. They offer a lot of processor power and a user-friendly touchscreen user interface in a small package. A large market keeps the prices relatively low. However, there are some things you need to know when you start using a Pocket PC. **Reading and following the directions in this document will save you many hours of frustration at the airport and will help assure that your Pocket PC is ready for the big flight when you are.** Every time you buy a new Pocket PC you should go through this document with the Pocket PC in hand.

This document is available at: http://www.cumulus-soaring.com/pda.htm

Turn off the Receive all incoming beams feature
This is an important step. Pocket PCs can accept IR (infrared) communications through a window on the top of the unit. Sunlight can cause the Pocket PC to start trying to accept an incoming message. To disable that processor intensive effort, go to: Start Menu/Setting/Connections (tab)/Beam (icon) and uncheck the checkbox labeled: "Receive all incoming beams".

Charging
When not at the airport - Always keep the Pocket PC in the cradle with the cradle plugged in so the battery will remain charged. If you don't keep it charged, **the battery will die in a few days and you'll have to reload the software onto the Pocket PC.** Also, if the Pocket PC is not nearly fully charged when you connect it to your glider's power system it will draw a lot of current (up to 1 A).

Enter Owner Name
It is a good idea to enter your name into the Owner Information screen so that the Pocket PC can be returned to you if you lose it. Go to Start Menu/Settings/Owner Information (icon). Enter your personal data and click OK when done.

Set Pocket PC Clock and Calendar
It is a good idea to set the Pocket PC clock and calendar. Some soaring software programs use the Pocket PC clock and calendar rather than the GPS clock for some data. Go to Start Menu/Settings/System (tab)/Clock (icon). Enter the correct date and time and click OK.

Screen Brightness
The first time you view your Pocket PC in bright sunlight you will probably be

disappointed with the brightness of the screen. Hopefully new technology will improve the sunlight readability of Pocket PCs in the next few years. Until then, we are all making due with the available screens. Some pilots have gone as far as to stop using their Pocket PCs in gliders but many pilots find the screens acceptable if not ideal. There are a few things you can do to increase the readability of the display.

- Many Pocket PCs have screens that are very shiny. That is not ideal for use in a glider because it acts like a mirror - rather than seeing the moving map on the screen, you see a reflection of yourself. Screen protectors are made of thin, clear plastic. They are designed to protect the screen while reducing glare. I'm impressed with the BoxWave ClearTouch product. Other products reduce screen clarity and brightness too much. BoxWave ClearTouch works great. You can see details here: http://www.cumulus-soaring.com/ppc.htm#BoxWave
- For color Pocket PCs I recommend increasing the screen brightness to its highest level (see below).
- Color moving maps are very cool, but they may not make sense at all times. We want high contrast images on the display for the best readability. Most soaring software programs allow the color maps to be disabled so that you see only waypoints and SUA data. You can always pull up the color maps when you need them. The most visible screen is one that displays black on white images.

Screen Brightness and Backlight Dimming Settings

For all Pocket PCs that have color screens, I recommend that you turn the backlight up to its highest brightness to make sure you can see the screen as well as possible in sunlight and when in the shade under clouds. Pocket PCs with black and white (grayscale) screens do not need to turn on the backlight. The downside is that this increases the current draw, but I feel it is necessary. To adjust the brightness setting go to: Start Menu/Settings/System (tab)/Backlight (icon)/Brightness (tab) and slide both sliders up to the top.

I also recommend that you disable the auto-dimming feature related to both battery and external power. Go to: Start Menu/Settings/System (tab)/Backlight (icon)/Battery Power (tab) and uncheck the checkbox labeled: “Turn off backlight if device is not used for:” Also, Go to: Start Menu/Settings/System (tab)/Backlight (icon)/External Power (tab) and uncheck the checkbox labeled: “Turn off backlight if device is not used for:”

Power Requirements

Pocket PCs require 5V power. The amount of current required varies greatly. A Compaq Aero 1500 Pocket PC requires only a few hundred mA. An iPAQ with the backlight on full power requires about 500 mA – as long as the battery is fully charged. If you connect a Pocket PC with a low battery to a power source it will draw up to 1 A.

On/Off Button

Pocket PCs don’t really turn off when you press the off button. All running applications are still open while the Pocket PC is “turned off”. A small amount of battery power is required to maintain the application data in the memory. That is why the Pocket PC needs to be charged every night. If it is not charged every night the battery will die in a few days and you will need to re-install all programs, waypoint files, maps, SUA files, etc.

Memory Cards
CF (Compact Flash) and SD (Secure Data) cards are a great place to store soaring programs, waypoint and SUA files. The data stored on the card will not be lost if the battery in the Pocket PC runs down. If you forget to charge your Pocket PC and the battery runs down you will need to recharge the Pocket PCs battery and copy all soaring programs, waypoint and SUA files back into the Pocket PCs memory. It is possible to run some soaring programs directly from the memory card, but I recommend copying them to the Pocket PC memory for two reasons. First, theoretically the program will run faster from Pocket PC memory than from SD or CF card memory. The difference is very small though. The main reason is that I wouldn't want to accidentally bump the SD card and have it pop out of the Pocket PC in flight - and cause the Pocket PC to lock-up. CF cards are held quite securely in the Pocket PC so it is not as much of a concern for them. But SD cards are often easy to eject by accident as they use a spring mechanism for ejection. I've never had that happen to me in flight, but it is very possible. I tend to keep backup copies of the program and waypoint and SUA files on my memory card and I copy them all to Pocket PC memory and run them from there. That way I get the fastest program execution possible and I don't need to worry about bumping the memory card.

Pocket*StrePla has a very cool feature related to memory cards. When you install pocket*StrePla onto the Pocket PC using StrePla you can install it directly onto a CF or SD card. When you run it from the SD card pocket*StrePla automatically copies the necessary files on the Pocket PC. When using other programs you can manually copy the files using the “File Explorer” program on the Pocket PC.

Serial Communication Ports
Only one program can communicate through a serial communications port at a time. It is common for ActiveSync to tie up the same comm port that is required for communicating with a GPS. If your soaring software cannot connect to a GPS, try doing a “soft reset” (see below).

Every Pocket PC I’ve tested uses comm port #1 for serial communications with external devices through the connector on the bottom of the unit. When using CF card GPS units or iPAQ expansion pack GPS units it is not easy to predict which serial port will be used for sending GPS data from the GPS to the Pocket PC. I recommend the use of a free utility to search for GPS data. The utility is called Crux_View.exe and it is available here: http://www.cumulus-soaring.com/gps.htm To run the program you will need to copy it to your Pocket PC. I recommend that you copy it into the Windows/Start Menu directory so that it will be available in the Start Menu.

Soft Reset
If your Pocket PC locks up, or if your soaring software cannot connect to your GPS, try a soft reset. It is similar to restarting a desktop or laptop PC. It does not erase anything from memory in the Pocket PC. It does stop all programs that are running. If you have not saved changes in any running programs, the data will be lost. To do a soft reset simply insert the stylus (pen like pointing device) into the small hole on the bottom or back side of the Pocket PC. It will take a few seconds to restart.

Hard Reset
A hard reset is a last resort. It will erase everything from your Pocket PCs memory so that you will need to re-install all programs and files. It is a good way to be certain you remove any programs that believe to be tying up comm ports needed for GPS communication. Different methods are used to perform a hard reset on different model Pocket PCs. Please refer to the Pocket PCs manual. Removing all batteries from the Pocket PC will probably cause a hard reset.

Application Buttons
It is possible to re-assign the 4 buttons on the front of the Pocket PC to run any application or utility you desire. It is very common to assign the leftmost button to run the soaring software program. Glide Navigator II users sometimes assign the "Input Panel" (keyboard) to another button. To change the application button assignments go to: Start Menu/Settings/Buttons (icon). Select the button you want to change in the top window and then use the drop down list is the lower window to select the desired action. To use an application button to launch a program, it must be available in the Start Menu (see below).

Start Menu
The Start Menu is accessed by touching the top left area of the Pocket PC screen. You can touch the Windows icon or the text to the right of it. Note: Older model Pocket PCs have the Start Menu on the bottom of the screen – it may also be "hidden" such that you need to touch the bottom line of the screen to pop-up the start menu. Many soaring software programs automatically install themselves so that they are available in the Start Menu. But some (like Glide Navigator II) don't use automatic installation programs (so that the file download is small) so they must be manually copied into the Windows/Start Menu directory if you want to be able to run them from the Start Menu. Note that there is limited space for applications in the Start Menu. If you have too many applications in that directory the program may not show up in the Start Menu. To remove applications you don't need from the Start Menu go to: Start Menu/Settings/Menus (icon). Remove check marks from the applications you don't use to make room for your soaring applications.

Hiding the Menu Bar
If you switch between applications it is possible that you will return to your soaring software and the top (or bottom) of the screen may be covered by the Start Menu. To bring the application back to the front again and hide the Start Menu you can re-run the software using either of the methods listed below:

- Touch the Start Menu and then select the application name from the Start Menu list. It will not run the application a 2nd time. It will bring the application back to the front.
- If you have assigned an application button to run the desired program (see above) you can simply press that button again. It will not run the application a 2nd time. It will bring the application back to the front.

Battery Settings
I recommend that you change the default settings on the Pocket PC so that it does not turn-off automatically after a few minutes – that can be very frustrating while flying. Go to: Start Menu/Settings/System (tab)/Power/Advanced and uncheck the checkboxes for

“Turn off device if not used for:”. If you are using the Pocket PCs battery (not external power) you will want to be sure to uncheck the checkbox under “On battery power”. If you are using an external battery you will want to uncheck the “On external power” checkbox.

Note: If you disable the auto-off feature related to battery power it is very easy to leave the Pocket PC on and drain the battery. If you have any appointments scheduled in Outlook on the Pocket PC the Pocket PC will turn itself on to remind you of the appointment – and it won’t turn itself off again if you have disabled the auto-off feature.

Good Soaring,

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