# Pocket PC Issues

In our October issue we discussed backing up the PDA in case the battery discharged and a user needed to restore the 3rd party applications, like the PEAC-WMD application. The 3rd party applications are typically stored in main memory, which in the earlier versions of the Pocket PC operating system, is volatile memory, or memory that is lost when power is lost. This month I'll discuss some other issues related to the Pocket PC (PPC) operating system that may help users circumnavigate some differences between the PPC environment and the typical Windows environment.

## Background

The PPC operating system (OS) is the Windows operating system found in the PDAs that run the PEAC-WMD application. There are different versions of the PPC OS, which are very similar but have some differences. These are listed only to help readers understand that the PEAC-WMD application will run on the different version of the PPC OS – Pocket PC 2002, Pocket PC 2003 and Mobile 5. The Mobile 5 started showing up in summer of 2006 on PDAs and has one added benefit that is long overdue in the PPC OS, the automatic storage of 3rd party application in ROM so the application is not lost when power is lost to the volatile RAM.

The memory in the PPC OS is divided into four different types or areas:

1. RAM - which is volatile and all contents are lost when power is lost.
2. System ROM – which is non-volatile (persistent) and where all system applications that are provided with the PPC OS are stored.
3. User ROM – which is non-volatile and where a user can load or backup 3rd party application or data.
4. Storage card – either a Secure Digital (SD) or Compact Flash (CF) non-volatile memory card that is removable from the device and there can be multiple storage cards used by PDA. Some PDAs have more than one slot available for storage cards.

## Reboot / reset processes

Like any Microsoft Windows machine, there needs to be a boot-up or actually a reboot process when things get "balled up" and the unit doesn't seem to respond. There are two types of reboot or resets that can be used – a soft reset and a hard reset.

### Soft Reset

The Soft Reset just stops all running applications and restarts the PPC OS. Doing a soft reset should not remove any applications but if an application was running and new data had been entered, the new data will probably be lost. If the PPC OS is not responding this is probably the only solution to get things going again.

There are multiple PDAs on the market but AristaTek typically provides either the HP iPAQ, Dell Axim, or the Tripod Data Systems RECON when a customer purchases both hardware and software from AristaTek.

**Figure 1 - Soft reset on HP iPAQ 2000 Series**

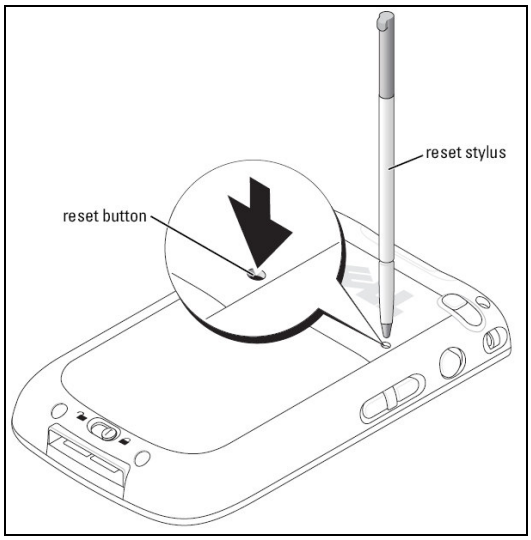


**Figure 2 - Soft reset on Dell Axim 50**

HP iPAQ - The Soft Reset can be initiated on an HP iPAQ by momentarily depressing the switch found on the bottom side of the PDA using the stylus. The switch location varies from the right to left side depending on the specific model of iPAQ (see Figure 1).

Dell Axim – The Soft Reset can be initiated similar to the iPAQ, by momentarily depressing the reset button or switch on the back of the PDA (Figure 2).

TDS RECON - Hold down the power button for about 3 seconds to display a countdown counter. Continuing to press the power button will cause a soft reset when the countdown reaches zero.

**Hard Reset**

The Hard Reset not only restarts or reboots the PPC OS, it also restores all the settings and RAM to the factory defaults. This will delete or remove any 3rd party applications or databases that have been installed on the PDA. If you decide to initiate a Hard Rest, understand the consequences for it can't be reversed!

**Figure 3 – Hard reset on HP iPAQ 2000 Series**

HP iPAQ - To perform a hard reset:

1. Press and hold down the **Calendar** and **iTask** buttons (two outside buttons).
2. While holding down these buttons, use the stylus to lightly press the **Reset** button on the bottom of the iPAQ Pocket PC for about two seconds (see Figure 3).
3. When the Pocket PC screen begins to fade, release the **Calendar** and **iTask** buttons first, and then remove the stylus from the **Reset** button.
4. The Pocket PC resets and powers on.

Dell Axim – To perform a hard reset:

1. Press and hold the power button.
2. Using the reset stylus, hold the reset button for about 2 seconds.
3. Follow the instructions on the screen.

TDS RECON - To perform a hard reset, press the **Power** and the **Start Menu** buttons simultaneously for eight to ten seconds. The reset menu will appear with a countdown warning. Continue to hold both buttons down. When the message "Booting - - - - >" appears, release both buttons. If a backup was previously performed the Recon will prompt you to restore the most recent backup after the rebooting process has completed.

**⊗ at top right of windows is NOT EXIT**

Any user that has used the Microsoft Windows OS is accustom to exiting an application by clicking on the **[x]** at the top right corner of a window. The natural extension would be that the ⊗ at the top right of those PPC applications have a similar function. But the truth is that tapping that ⊗ only minimizes the application, which in the PPC OS means the window the application is running just disappears from the screen. It sure seems like the application is not running anymore, but in truth it is still running.

This causes some unexpected problems with the PPC OS that can confuse users, in fact, it can irritate the living daylights out of most people! The problem is that the PPC OS and all the applications, whether built-in applications or 3rd party applications, are running in RAM, then eventually the PPC OS runs out of enough RAM and the system seems to quite responding. Which is exactly what happens, it just runs out of memory and stops responding. There are two ways to correct that problem. First a soft reset will stop all applications and return the system to a responsive mode. The other method, which gives the user some control over what applications are stopped, but takes a little longer to execute. To view what applications are executing in memory at any time, from the Start Menu tap Settings (Figure 4), then select Settings (Figure 5), then select the System tab at the bottom of the screen. On the screen find and tap the Memory icon (Figure 5).


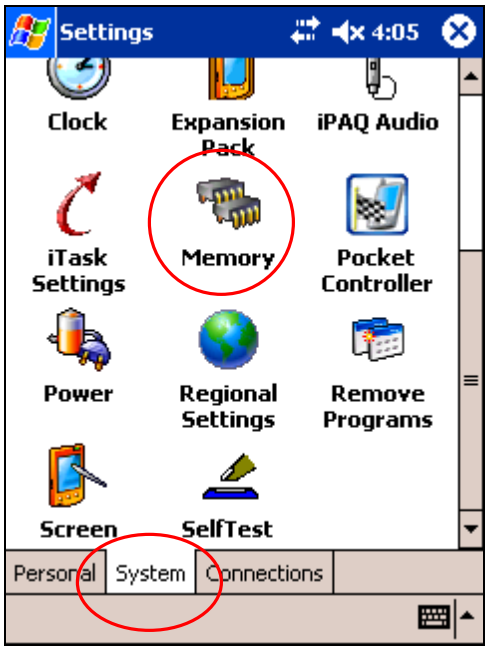

**Figure 4 – Tap the Setting entry on the Start Menu**

**Figure 5 – Tap the System tab and then find and tap the Memory icon**

On the Memory screen, the default display is for Main Memory (Figure 6), which gives the user some information on how memory is currently being utilized for storage of applications and programs. To view the currently executing applications, tap the Running Programs tab to display a screen similar to that shown in Figure 7.

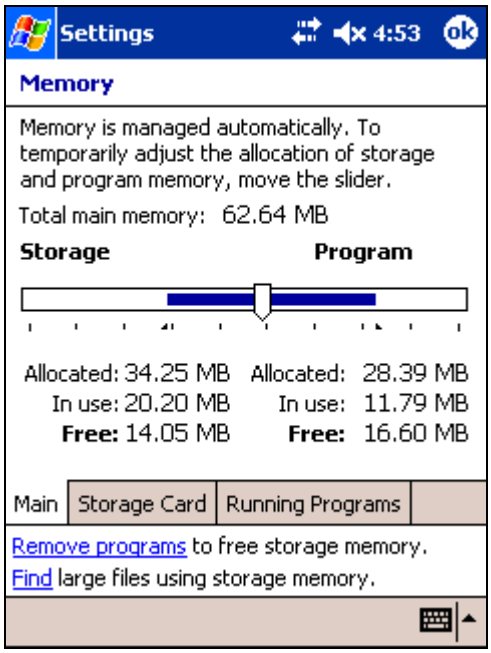


**Figure 6 – The Memory screen viewing the default Main tab**


**Figure 7 – Tap Running Programs to display the list of application executing**

As shown in Figure 7, I need to stop playing **Solitaire** and get back to work! To stop execution, simply highlight the desired application in the list by tapping on its name and tap the **[Stop]** button below the list of applications. The user can stop all applications by tapping the **[Stop All]** button. But remember, if synched up to a PC with ActiveSync, as shown in Figure 7, this might have some unintended effects although normally a warning screen will appear and allow canceling the termination of ActiveSync.

## How to exit the PEAC-WMD Application

Now that we know that tapping the ⊗ only minimizes the application, it should be pointed out how to exit PEAC-WMD without having to go through the above described process of running the Memory application. This is done quite easily by following these instructions:

1. Tap the **File & Edit Menu** icon [▤] at the bottom left of the PEAC-WMD screen (Figure 8).
2. Tap the **Exit** selection on the list of options (Figure 9).
3. The PEAC-WMD 2007 application will terminate and free up memory for other applications to execute.

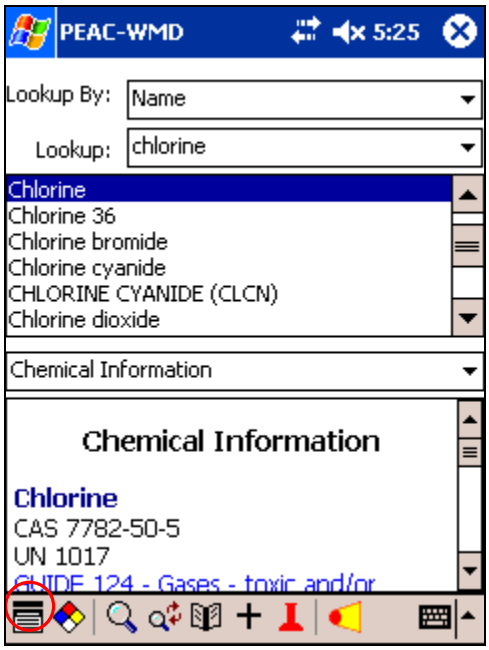


**Figure 8 – Tap the File & Edit Menu icon to display options**

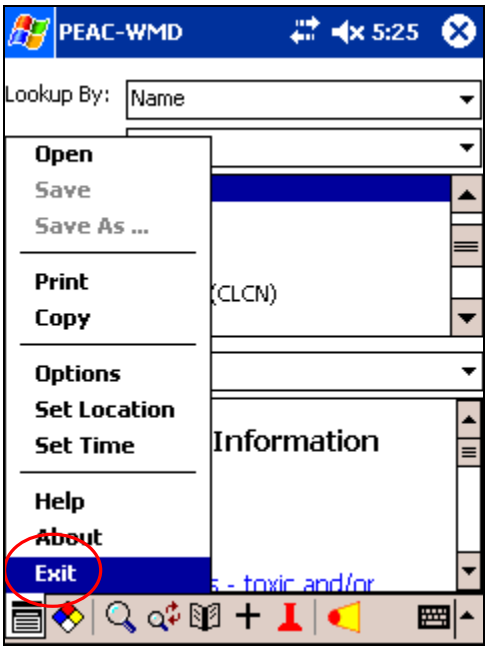


**Figure 9 – Tap the Exit selection to terminate the PEAC-WMD application**

**Improving battery performance**

One last point that might help users with their PDAs and using the PEAC-WMD application is how to extend their battery performance. One of the things that some customers have experienced is unsatisfactory battery performance that was due to leaving their wireless features turned on all the time. In some cases the customer wasn't aware they had either the Bluetooth and/or the Wi-Fi (802.11) wireless feature turned on. How that feature is turned ON or OFF varies depending on the PPC OS, but I'll try to give an example that should be similar if your PPC is slightly different.

HP iPAQ – There are a lot of different iPAQs on the market but the example I'm using is the iPAQ 5550 which has been out of production for a couple of years. On the front of the iPAQ 5550 there are three LEDs at the top left (Figure 10). If the center LED (blue in color) is ON, then a wireless feature (Bluetooth in the iPAQ 5550) feature is turned on and that requires additional power or reduced battery life. In addition there is normally an icon at the bottom of the screen that can be tapped to display the small window as shown in Figure 10. That allows the user to turn ON/OFF the wireless feature. The icon will appear differently on those units having the Wi-Fi option plus the Bluetooth feature.


**Figure 10 – Bluetooth LED on iPAQ 5550**

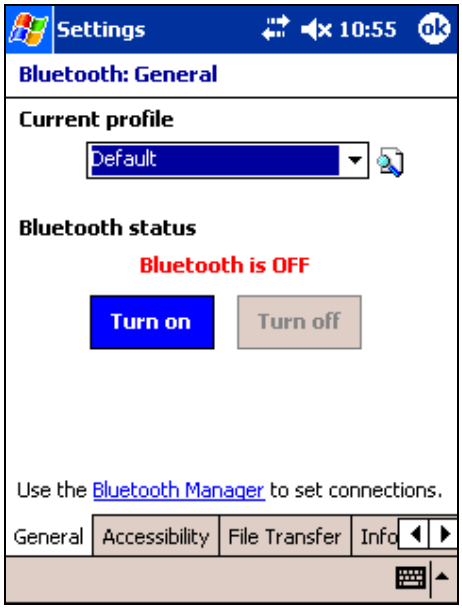


**Figure 11 – Accessing the Bluetooth status via Settings|System and Bluetooth application icon**

The user can also access the Bluetooth status via **Settings|System** and tapping the Bluetooth application icon. That will display a screen similar to Figure 11, and the user can turn ON/OFF the Bluetooth wireless feature.

For other PDAs there should be similar screen icons or built-in applications that provide comparable control over the wireless features available on the device. Turning these systems off when not in use will extend battery performance.

**Travel on commercial aircraft with PDAs**

If you travel and take your PDA with wireless capabilities on a commercial aircraft, then when the crew asks you to turn off electronic equipment, remember that turning off the display on a PPC doesn't turn off the device, it just turns off the display. To keep the aircrew happy, be sure you have turned OFF the wireless features and then turn off the display. Your PDA is always running when a charged battery is installed, turning off the display just helps to reduce the power drain on the battery.