



What is a PDA? Just the FAQs, m'am!

Well, a computer that fits easily into your hand.

What PDA?

What PDA is for you?

- Palm 3 series
- Palm V
- WinCE HPC
(keyboarded unit)
- Pocket PC (no
keyboard)
- WinCE Pro
(mini-notebook size)
- Psion
- Handspring
used Newton
- Palm VII

It has an LCD **display**, same as a laptop, that comes in monochrome and color, depending on your budget. Unlike most notebooks, the screen accepts pen (and generally finger) input, which means that you can use its stylus to point to stuff on the screen and navigate around. The [Palm Pilot](#) (and other Palm OS units such as the Handspring Visor and TRG Pro), [IBM WorkPad](#) and the [Newton](#) offer **handwriting recognition** via the stylus as well. Some **WinCE** HPCs and all **Pocket PC** palm PCs (called a **PPC**) such as the now discontinued [Philips Nino](#), and [HP Jornada 540](#) series also offer handwriting recognition using the built-in character recognizer (for Pocket PCs), and bundled 3rd party software such as **Calligrapher** and **JOT**. You can buy these products separately if the WinCE device you chose does not come bundled with them. Don't be surprised that all **WinCE devices work only with PCs running Windows 9x or NT**. Microsoft has no interest in accommodating Mac users or folks on any other platform for that matter *sigh* The [Psion](#) consumer line of PDAs have keyboards, grayscale screens on the palm-sized units and color screens on the mini-notebook sized units such as the **Series 7**. They offer a touch screen and a stylus, but no included handwriting recognition software, though 3rd party software is available if you like. The Psion was designed to be used as a micro notebook if you will, with the excellent touch-type keyboard as the primary means of input. The stylus is used for navigation and for making sketches and handwritten notes on the screen.

Its got a **processor** of some kind. See individual computer pages for info on the processor in a given handheld.

Its got **memory** for storage and running programs. There is between 8 and 32MB RAM built into most handhelds, and this can be expanded by adding relatively inexpensive flash memory cards. The more memory built into the unit, the more expensive it is, generally. The Pilot has much less memory: about 2 to 8 megs, but needs less given the OS design. All of these devices use RAM as both memory for processing data/running programs, and as storage space (same as a hard drive on your PC). On WinCE devices, you can specify how much is dedicated to running programs, and how much is set aside for storing files and programs. The OS and built in programs are stored in ROM (read only memory), so they don't use up any RAM.

Only the [Psion](#) and WindowsCE handheld PCs (called **HPC**) and [WinCE Pro](#) computers come with an integrated **keyboard**. They resemble highly miniaturized notebook computers (they can fit in your coat pocket). External keyboards are available separately for many brands of Pocket PCs and also for **Palm Pilots**.

Pricing: Again, see individual computer pages for prices on various models. Many models on PDA Buyer's Guide will have links to places that sell them. I've done the shopping for you, and will list the lowest price I find among reputable retailers with whom I've done pleasurable business for years as a consumer. These include [Cyberian Outpost](#) and [Computers4Sure](#). Generally the cheapest are the Palm Pilot entry level models, priced just over \$100. Pocket PC computers cost from \$450-\$650, depending on the type and features such as color display. Psions generally start at \$400.

Palm OS

And of course, all these little buggers run an **operating system** and hardware designed to work with it: The Pilot family runs **Palm OS**. It's quite minimalistic, yet very useful and effective, which would explain why Palm has the lion's share of the PDA market (price being another reason). The Pilots have built-in Contacts, Calendar, Notes, Outlines and Preferences applications. One can choose these from the screen by tapping on the applications' respective icons, or by using the labeled buttons on the button, just below the screen. There are myriad commercial and shareware programs available for the Pilot- more full featured versions of the built-in applications, games, expense tracking, and much more. The Palm VII is the first PDA to offer built-in wireless access to the Internet via specialized applications called "PQAs". The sleek and diminutive Palm Vx and 500/505 models are the smallest PDAs on the market.

Windows CE

The **WinCE** PDAs come in three form factors: the Palm PC (**PPC**), Handheld PC (**HPC**) and WinCE Pro units. They all run some version of Microsoft's Windows CE operating system (including the new Pocket PCs), which is a stripped-down counterpart to Windows 95/98. It has much the same look and feel, but not all of the features (hey, how much can you get out of these tiny units?). You'll see the familiar Start Menu, desktop, Control Panels and so forth. Navigation is pen-based (or use your finger).

Pocket PC

Speaking of the **Pocket PC**, this OS is the newest iteration of WinCE for the PPC. Microsoft felt it was different enough from Windows CE to warrant the new name. Also, Microsoft has never been able to gain a decent share of the palm sized PDA marketplace, and this new version and new name may help them break the "bad rep" of WinCE. Not that WinCE is bad, but it's more complex, being a version of Windows 98 ported to a very small unit, in many ways, and it required more learning and too many clicks to get to basic tasks. Pocket PC OS is faster than WinCE, and icons have been reduced from the 3D to 2D look to increase drawing speed. The familiar Windows Start menu has been moved to the top, so that your hand doesn't block the screen as you navigate the menu. They all include a stereo headphone jack and Windows MediaPlayer, which can play MP3 files on the units, and video players from 3rd party developers are quickly emerging. And one of the best improvements has been to ActiveSync, the desktop syncing app for Windows desktops. It now supports "partnerships" with 2 different computers (i.e. home and work), and file/application install capabilities from as many PCs as you like. Most all the Pocket PCs have USB as well as serial connections, and USB greatly speeds up the once terribly slow process of syncing your PPC to your desktop.

WinCE HPC (those with integrated keyboards)

The HPCs were the first to hit the market, and they look like coat-pocket sized notebooks. They have a little keyboard and a 320x240 pixel screen (half VGA), so one can do short bouts of work, such as word processing on them. They include such applications as *Pocket Word*, *Pocket Excel*, *Pocket PowerPoint* and *Pocket Outlook*. Honestly, the keyboard is so small, you'll find yourself doing two-fingered typing, and probably not 20 page documents. Voice Recording is available with most units, and works nicely. Some units have VGA connectors, so you can connect them to your external monitor. They also have PCMCIA slots to accommodate such things as modems (though many have built-in modems), network cards and VGA cards. Memory is expanded through a Compact Flash card slot, though some still accept PCMCIA flash memory cards. Compact flash cards are the same thing digital cameras use for expansion, so if you own both, you could actually swap the card between devices.

The **WinCE Pro** units are much the same as the HPCs, but larger. The keyboard is closer to notebook-sized, and the color display is generally sharp, clear with a VGA resolution (640x480). They include all the software described in the HPC section above. They have a VGA port, and a PCMCIA slot.

WinCE Pro

WindowsCE Pro Computers run Windows CE Professional, and resemble sub-notebooks. They're generally just under 1" thick, and measure 8"x10". The keyboard, being larger, is more suited to extended periods of typing. The screen is of course also larger than HPCs, making any attempt at serious work more realistic. They run *Pocket Office*, *Pocket Word*, *Pocket Excel* and *Pocket PowerPoint* just as the HPCs do. For those on the go, but not needing the power (or weight!) of a notebook, these are a viable alternative. The downside is that they cost almost \$1,000, and the savvy shopper can purchase a pretty decent new laptop for just \$300 more. These models are becoming hard to find, and in some cases have been reduced in price because they aren't selling well. The uniquely designed Vadem **Clio** is the best seller- check it out to see why.

All of the devices can accept **modems** of one sort or another. See the communications page for detailed information. Using a modem you can connect to the Internet to check your email, and perhaps even surf the web using the little screen of your handheld. For those of you who travel and don't really need a full-featured laptop, but do need to stay in touch via email, a handheld computer may be the choice since they are *smaller* and *cheaper*.

WinCE PPC (palm-sized)

The **PPC** is a little bit larger than a Palm III, and represents other manufacturers effort to encroach on the successful Palm Organizer concept. While it runs the WinCE operating system, it does not include the *Pocket Office* applications mentioned earlier. This is because the applications have been streamlined to fit the keyboard-less, shirt-pocket form factor of the PPC. Without a keyboard and larger screen, who would want to do full-fledged word processing, after all? Instead we see *Pocket Outlook* for mail, calendaring and task management, a Notetaker application, a Mobile Channels application which works with WinCE Active Desktop, among other applications. Input is done using the stylus and the on-screen keyboard, or via handwriting recognition programs usually bundled with the units. These recognition programs work remarkably well!

So the PPC has Palm functionality, with much greater processing, memory and graphics capability than the Pilots. Very nice color screens are commonly available in PPCs for about \$450. These units also offer Voice Recording, and some have Voice Command (if you don't mind telling your PPC what to do while standing in front of a bunch of strangers at the commuter station). If you're a Palm user who's looking for more, these are worth a look- I myself switched from the Palm to a Philips Nino 510 color PPC, the an [HP Jornada Pocket PC](#), and can't imagine going back! Though I do keep a Palm VII around for it's great wireless applications too.

Psion

The current Psion computers are in a league of thier own as members of what is perhaps the longest lived line of commercially popular handheld computers. Psion is a U.K. company founded in 1980-- a long way back in the PDA timeline! Psions runs EPOC, a 32 bit multitasking OS, using a Strong ARM processor (the same family of processors used by the Newton, though the units bear no other similarities), and are compatible with both Windows and Mac OS (though you must purchase *MacConnect* software separately with newer Psions). EPOC is produced by Symbian, formerly the software division of Psion PLC. Symbian is owned by Psion, Motorola, Ericsson, Panasonic and Nokia: a powerful group of players. You can guess why the OS is making its way to cell phones and other communications devices.

Psion have a nice graphical user interface, powerful word processing and spreadsheet programs, and a very strong, loyal following. Though the OS and applications are Psion's and Symbian's own creation, the Psion has plenty of converters which allow you to easily transfer spreadsheet and word processing documents to your desktop running MS Word and Excel. For those looking for a keyboard-based, full-featured PDA with Office-type apps and utilities, but wishing to use something other than MicroSloth's ubiquitous OS, the Psion is a wonderful alternative. If you need Mac connectivity, which WinCE doesn't offer, then the Psion is also an attractive alternative.

Newton & E-mate

What can I say? There's nothing like the venerable, and at times maligned Newton and it's highly original operating system! Despite an early bumpy ride down the handwriting recognition road, the Newton's handwriting recognition became first class, and was the first to attempt cursive (script) recognition. Sadly, Interim CEO Steve Jobs decided to kill the [Newton](#) in Feb. 1998. There are a huge number of commercial and shareware programs available for the Newton, thanks to its strong following from 1993-present.

Newton evolved greatly over the years, with many upgrades to hardware, but the OS remained quite consistent. It offered an applications screen or palette, where icons for installed programs and e-books lived. Built-in notes, calendar, outline and in-basket applications are standard with all Newts. One could chose any of these as the standard backdrop or application run whenever Newton was powered on. Newtons Message Pad models 130 and 2000 were email and Internet capable, using a PPP connection and standard PCMCIA PC card modems. Qualcomm marketed *Eudora* for the Newt, and Newt shipped with a bundled Internet Browser.

Screen navigation was stylus (and finger) based. Apple sold an nearly full-sized external keyboard which was compatible with later model Newtons. The screen could be rotated to a landscape orientation, so that one could work process and see the entire line of text as typed. It's the only PDA I'm aware of that could rotate the display to accommodate portrait, landscape and flipped positions to make us lefties happy!

Near the end of Newton's career, Apple released the **E-mate**, which had a translucent clamshell case design, with built-in keyboard. The E-mate was designed for the K-12 education market, but it was so popular, Apple started selling it to non-education buyers. The units ran Newton OS, and added NewtonWorks, an home-office software similar to *Claris Works*, which offered word processing, and spreadsheet capabilities. The deep purplish-blue **translucent** case design lived on and gave birth the brightly colored *iMac*, newest *PowerMac G3* and various peripherals so popular today!

[Home](#) / [Pilot](#) / [WinCE Pro](#) / [PPC](#) / [Newton](#) / [HPC](#) / [Psion](#) / [Notebook](#) / [WorkPad](#) / [Handspring](#) / [TRGpro](#) / [Links](#) / [FAQ](#) / [Discussion Board](#) / [SiteMap](#) / [Search](#) / [PDA Poll](#) / [Software](#) / [Classifieds](#)



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Palm vs. Pocket PC: which one is for you?

Folks often write to us asking which they should choose, a Palm OS PDA or a Pocket PC. I'm not going to tell you that one is better than another, they each have their strengths, and after all, I'm a PDA geek-- I love them all. Instead I'm going to outline several key considerations that usually help folks decide which will suit their needs.

- 1. Price.** Palm OS devices tend to be cheaper than [Pocket PCs](#), unless you want the color [Palm IIIc](#) which is fairly expensive. Palm OS devices run from \$150 for the entry level [Palm M100](#) and [Handspring Visor](#) to \$400 for the [Palm Vx](#) with 8 megs of RAM. Palm OS devices are cheaper because they have grayscale displays, which are cheaper, and slower processors with less memory than Pocket PCs. That doesn't mean they're slow, rather the Palm OS is a highly optimized and low frills OS that doesn't need much horsepower to run. Pocket PCs cost \$500 to \$600, but you get a very nice color display, audio playback and recording (MP3 too!), a 133 MHz processor and between 16 and 32 megs of RAM (memory). The Pocket PC OS is based on MS Windows, so it's resource demands are higher, and it needs all that speed and memory to run speedily. This gives you more flexibility as to the kinds of programs you can run, but costs you more money.
- 2. Pocket PCs integrate extremely well with MS Office apps and files** (Microsoft makes all those products, after all). Pocket Word and Excel can read and write your existing desktop files- just copy them to your Pocket PC, and back to your desktop as needed. Palm is a simpler OS with less horsepower, so it isn't really made to work well with Word and Excel files. There are 3rd party programs available that do let you do some work with Word and Excel files however. If you need to work with and especially edit MS Office files on your PDA, you probably want a Pocket PC. If you're content to view a few docs and spreadsheets on your PDA for reference, the Palm will do just fine. If you want to do a great deal of editing and document creation, forget either of these and look at a keyboarded PDA such as the [Window CE handheld PCs](#) (HPCs) or the Psion models.
- 3. Both handle contact management, calendaring and to-do lists** quite well. If this is the main reason you're getting a PDA (as is the case for most people), get a Palm. It's smaller, cheaper and excels as a PIM tool.
- 4. If you need to integrate with Outlook**, the Pocket PC does it out of the box (again, all Microsoft products). The Palm and it's Palm Desktop software can't do this. There is a program called Pocket Mirror that can allow you to sync your Palm to Outlook. It comes with selected Palm models (Palm V, for example). Otherwise you have to buy it separately.
- 5. Size and weight:** many people want something that slips unobtrusively into their pocket or purse. Nothing beats the [Palm V](#) and Palm Vx! It's slim, super-light and very elegant looking. I've yet to meet anyone who hadn't fallen in love with the design on first sight.
- 6. Battery life:** The Palms (other than the IIIc) get up to one month on a set of AAA alkaline batteries. You can travel, camp and hang out in the Outback for quite a while on one set. And these batteries are readily available across the world at most stores. Pocket PCs have rechargeable lithium batteries that last about 8 hours per charge. You don't have to shell out bucks for batteries, and you're being kind to the environment with rechargeables, but if you aren't near an outlet when your time is up, you're out of luck. The Palm V and Vx also use rechargeable batteries, but you'll probably get nearly a week from one charge.
- 7. Music, MP3.** If you gotta have it, get a Pocket PC, which doubles as a pocket MP3 player. While the sound out of the speaker is murky, you'll be amazed what you hear through a pair of stereo headphones (all Pocket PCs have a stereo headphone jack. Speaking of audio, Pocket PCs also double as voice recorders.
- 8. Simplicity:** the Palm OS wins this one, hands down. The interface is so intuitive, you'll be a power user in no time. While Microsoft has greatly improved the Windows CE interface with the introduction of the Pocket PC, it is a little cousin to Windows, which means while it's quite powerful, it also has a bit more of a learning curve. Palm's simplicity, combined with its low price are what got it the lion's share of the PDA market. However, the new Pocket PCs are much friendlier, and they are gaining market share just a few months after their intro. In sum, if you mostly need calendaring, to-do's and contact management, the Palm will be your best buddy. If you need to work with Office documents a lot, especially editing them, then Pocket PC is the way to go. And if you want to view color images, say from your digital camera, play MP3 files, record meetings or voice notes then get yourself a Pocket PC.
- 9. Modems and Internet connectivity.** Both can use modems and connect to the Internet, so you can choose either one.

In sum, if simple, quick and easy contact management, calendaring and reminders are what you crave in a small and affordable package, go for a Palm OS PDA. If you have greater demands, crave a good color screen, the ability to work with Word and Excel files, play MP3s and record voice notes, look at the lovely new Pocket PCs. Both do an admirable job, and both offer very good handwriting recognition (with Palm, you'll have to learn the Graffiti alphabet, however, and that takes a few hours practice).

Also see:

[Pocket PC Comparison](#)

[Our Palm Reviews](#)

[Our Pocket PC Page](#)

[Our Handspring Page](#)

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PDA/Handhelds Websites

www.zdnet.com

This site has a Handheld SuperCenter.

www.cnet.com

Reviews, Downloads, Editors' Picks

www.avantgo.com

A great site for getting Web content on your PDA.

www.palm.com

Palm's home.

www.service911.com/egghead/

Tutorials for a number of PDA's.

www.pdastreet.com

Neat site. Message boards, news, downloads.

pda.rcp.net.pe/index.html

Tucows PDA software download site.

www.pdamart.com

PDA news, technical support.

www.pdabuyersguide.com

Excellent site, good links, tips & hints, and classifieds.

www.microsoft.com/mobile/default.asp

Microsoft's Windows CE site.