

Handspring Treo 300 Palm-PDA/PCS Phone Review

By Tweeks, 2003-10-18

- Antenna, Display, Speaker, Keyboard, Microphone, Touch screen
- Stereo Headphones or Phone mic/headset
- 2.8 in x 0.8 in x 4.4 in
- Palm OS 3.5.2H6.3
- 16 MB



- MC68VZ328 33 MHz
- Disp: 12-bit (4K colors)
- Ports: 1 USB 4 pin USB Type A, 1 Infrared IrDA, 1 Headset
- Radio: CDMA2000 1X
- Batt: Li+ (150h standby)



Fig. 1 The Treo 300
Palm PDA/phone/net
device

The Treo 300 is a finely integrated PalmOS PDA, PCS/mobile phone, wireless internet access device. With all of the Palm software out there, the functionality of the address/phone book and the phone, this little device comes close to solving most all of my portable information system needs (there are even MS-word compliant word processors and the like for it).

My wife and I were early adopters of the Treo's grandfather technology, the GSM based Visorphone. Good idea, but GSM coverage in this country was too spotty at the time to rely on (as we found). This, plus it's bulky size and lack of GPRS digital service were a few more reasons for looking toward the Sprint/PCS based Treo300 solution. The final deciding factor was the Handspring \$99 special (with the \$300 Sprint service rebate) on the Treo 300*.

*Amazon now has a similar deal for FREE Treo after rebates.

<http://www.amazon.com/exec/obidos/tg/detail/-/B00006IRI7/qid%3D1066459923>

Birds Eye View

After a few weeks of my using the Treo 300 to replace my previous Handspring Visor with Visorphone, here are my initial positive impressions.

- With the \$0-99 price tag (after all service rebates are tallied) the end price ends up being a really great deal if you have no existing Sprint contract. Just be sure to verify that the Sprint service credit actually gets applied to your bill or you might end up losing out.
- Come Nov. 24th, you WILL be able to "move" other cell provider numbers (and SOME home/resident numbers) to the Treo/Sprint service, but you have to keep that number until then.
- Treo 300 has good battery life I get two solid days out of using it both a PDA and phone.
- Good "full duplex" digital voice service (very clear). Barely any digital "choppy-ness"
- Great signal strength/coverage (even in an elevator!)
- Internet bandwidth between 30-150kbps realized
- Monthly service for *two phones* is much cheaper overall. An 800minutes/mo shared, unlimited "vision (net) bandwidth", PCS-to-PCS minute free, free roaming/LD ~\$107/mo (for one phone would be been around \$80/mo)
- Treo 300 is flash upgradeable (already flash upgraded mine twice)
- Built in "Speaker Phone Mode" that's impressively strong. Good for hands free in the car
- Headset jack is "Nokia" 2.5mm 4 conductor type
- 16MB of RAM is plenty to store all your address/calendar info plus a lot of cool apps/games.
- Good Palm-OS compatibility (only found one app that would not run (TuSSH ssh client))

Some of the down sides were small things. The “always on” G3 technology was not truly on all the time. It essentially has to “dial up” and authenticate your connection to the net at which time you have full internet access via some type of NAT based gateway. Still, not too bad. You can be checking email or surfing in under 10 seconds. Another drawback is that there's no expansion capability whatsoever. No springboard, and no MMC/SD RAM slot. This makes some program compatibility a problem if you need access to random access media that lets you store files other than .prc and pdb files (e.g. mp3s, avi, etc)

Internet Bandwidth:

To test the on line bandwidth of the Treo/Spring service, I Ran bmeter from my Treo (see link further down) to my web server at Rackspace (must be running the chargen service on the server... e.g. For redhat systems, " chkconfig chargen on"). I tested this with a bmeter setting of 1k, 4k 16k, and 32k packet sizes. Here were the results:

packt size	min	avg	max (kbps)
1k	10	49	102
4k	28	77	4000 (bad data)
16k	32	83	254 (!)
32k	43	102	186

Table 1. Treo 300 network bandwidth (in kbps)



Fig.2 Using the keyboard

Internet Usability:

With the ability of being on line from anywhere, several cool applications and network utilities suddenly become de facto requirements for the hard core sys-admin. Among them are various web, mail, clients... well as telnet/ssh, and other remote access type clients. Combine this with all the various Treo specific programs, hacks, games, and utilities, and the list starts becoming pretty long. See the following pages for the full list of apps that I've found (and others have labeled as being) very useful.



Fig.3 Telnet/ssh-2 client Mochatelnet

VNC has always been tres cool. When it first came out for Palm it was lacking. But the features of V2 and other VNCs, along with added bandwidth on the Treo, make it a more viable solution in for getting on and rebooting that downed windows server.

I use the Blazer and Eudora browsers almost every day for everything from checking up on my servers, to hitting the yahoo movie listings. Besides this, the Treo/SPCS-Vision arrangement comes in handy during that boring meeting. I can either mock the torture of my meeting purgatory by hitting the latest Dilbert strip, or simply pop-ing down my mail to see what's going on in my favorite mail lists. Also, with lftp, and MochaTelnet (ssh) in place, along with some server-automation scripts (for speed), I can DL new Palm zip archives (via wget on th server), stick them in a special directory, turn on FTP on my server, and pull the .prc files directly to my palm for execution! Meetings were never so much fun.. All the while, me appearing to be feverishly taking notes... ;).

SYSTEM HACKS AND PROGRAMS:

Treo 300 Updater 1.0.1: **Free**

<http://support.handspring.com/esupport/forms/hsResolutionView.jsp?ResolutionId=9064>

The Treo 300 Updater 1.0.1 updates the CDMA radio in your Treo 300, and improves your device's performance with some minor changes. Re-flashes your PalmOS firmware version to 3.5.2H6.3.

Buttons-T Preference Panel For Treo: **Free**

<http://www.freewarepalm.com/utilities/buttons-t.shtml>

Allows control of the Treo's app buttons as well as what the Jog button and Flap-Open actions do.

PowerJOG 2.0: **\$15/demoware**

<http://www.palmgear.com/index.cfm?fuseaction=software.showsoftware&prodid=11514>

You can use Jog Dial in not only built in applications, but in most any program. Plus you can use the job dial to Push screen buttons, Execute menus, Go home, Power Off, Scroll screen, Choose pop ups, launch DAs, and so on.

X-Master: **Free**

<http://linksoft.com/xmaster>

Free, stable, easy-to-use PalmOS hack/extension management interface for controlling your favorite hacks (e.g. over clockers, back light control, etc)

Treo Keyboard Utils: **Free**

<http://www.freewarepalm.com/utilities/treokeyboardutils.shtml>

A HackMaster extension that enables cursor moving (in lieu of arrow keys) and enters accented characters using keyboard shortcuts.

Newpen v1.4: **Free**

<http://www.freewarepalm.com/utilities/newpen.shtml>

Newpen allows you to use the screen as the graffiti area instead of silkscreen (since there is no silkscreen/graffiti area on the Treo).

DA Launcher V5: **Free**

<http://www.palmgear.com/index.cfm?fuseaction=software.showsoftware&sid=412E78C8-4B62-4919-A417EAE0748BE514&prodID=8584>

Is a system enhancement program that launches Desk Accessory programs (or DAs) which are basically little TSR type applications for PalmOS hand-helds. You need a DA Lanching program to use these little DAs.

Expense Summary DA v.3.2: **Free**

<http://www.freewarepalm.com/financial/expensesummaryda.shtml>

This DA works with your expense program. It displays sum total amounts of your various expense accounts by either Category, Month, Type, Payment or Currency (since this is something always missing from the built in expense program).

Disable Buttons: **Free**

<http://www.freewarepalm.com/utilities/disablebuttons.shtml>

Good if you keep Palm in your pocket or purse. Keeps key presses from turning on device and killing your batteries.

Treo Helper: **Free**

<http://rallypilot.sourceforge.net/treohelper.html>

TreoHelper has options to help control phone and network operations of the Treo 180/270/300. You can assign on/off times for the phone, conditions for when to drop the network connection and/or turn off the phone. This can help you experiment with overcoming some known firmware issues on the device, such as the "turbo drain" and "red blink of death" syndromes.

UTILITIES AND PROGRAMS:

Keyring for Palm OS: **Free/GNU**

<http://gnukeyring.sourceforge.net>

Keyring for PalmOS lets you securely store secret information on your PalmOS (PalmPilot, Visor, WorkPad) hand-held computer. Employs secure triple-DES encryption using a 112-bit key (aka 128bit) derived from the password and can export records to the Memo Pad.

Palm Reader: **Free**

<http://www.palmdigitalmedia.com>

Probably the most common add-on program for the Palm is a DOC reader. There are thousands of documents and books that have been converted to this format for you to enjoy. Palm provides both a free reader that can handle both DOCs and their own proprietary format, and a Pro version that is nice as well.

CSpotRun: **Free/OS**

<http://www.32768.com/bill/palmos/cspotrun/index.html>

Another free DOC reader.

Wordsmith **\$29**

http://www.bluenomad.com/ws/prod_wordsmith_details.html

MS-Word DOC and Palm-Doc reader. Good if you need MS-Word compatibility on the go.

Screen Shot 2.1: **\$39/Shareware**

<http://linksoft.com/screenshot>

ScreenShot captures the current screen of any application. All color and gray scale modes, as well as extended screen sizes and virtual Graffiti areas are supported. Requires X-Master hack program.

Agendus Pro: **\$39**

<http://www.palmgear.com/index.cfm?fuseaction=software.showsoftware&prodID=49803>

Agendus for Palm OS Professional Edition is the only software to completely unite and enhance three essential applications: Address, Date Book, and To Dos--and integrate them with a powerful, attachment-supported email client for your hand-held device.

ColdSync: **Free/OSArtistic**

<http://www.coldsync.org>

Probably the best Linux backup utility backup program for the Palm or any derivative. Gets everything... data, apps, files, etc. If it were not for this program, many people I know would have lost all their data when nothing else (not even the Visor Backup Module) could help them! Get it.

RECOMMENDED NETWORKING UTILITIES:

Eudora Internet Suite V2.1: **Free**

<http://www.eudora.com/internetsuite>

-Direct (non-proxied) web browser with SSL/TLS support
-SMTP-Auth/POP3/SSL Mail client w/multi-accounts

iPanel Wireless (browser): **\$24**

<http://www.palmgear.com/index.cfm?fuseaction=software.showsoftware&prodID=48727>

Java capable, full page scalable, SSL + cookie, 65k color browser. Not too stable yet.

LFTP Client V1.86: **Free**

<http://www.freewarepalm.com/communication/lftp.shtml>

LFTP, an ftp client for Palm, based on NetSample from Palm SDK. With some extensions as scripted commands and new commands: pub, mkd, rmd.

Mocha Telnet V3: **\$25/share**

http://www.mochasoft.dk/f_view.html

<http://www.mochasoft.dk/ptelnet2.zip>

Telnet, ssh1/2 client for palm with full VT100/VT220 emulation. Very nice in a pinch.

PalmVNC V2.0: **Donations/GNU**

<http://palmvnc2.free.fr> (latest)

<http://sourceforge.net/projects/palmvnc2> (sourceforge)

<http://www.btinternet.com/~harakan/PalmVNC> (old)

VNC is a family of servers and clients that provide remote access to your Windows, Mac, or UNIX workstation over any TCP/IP connection such as an Internet connection. This is the client/server version of VNC for the Palms(client) and the Win32 server.

POPULAR GAMES:

Boulder Palm: **Free**

<http://www.freewarepalm.com/games/boulderpalm.shtml>

Boulderdash clone (from the 80's). Incredibly fun and addicting "digging" platform style game. Collect all the diamonds, while avoiding falling rocks and the flashing cubes.

Hoard of the Deep Realm: **\$10/shareware**

<http://www.freewarepalm.com/games/hoardsofthedeeprealm.shtml>

Hoard of the Deep Realm is a clone of the classic LodeRunner (BroderBund, 1983). The object is to collect all the jewels on the screen and avoiding the guards who protect them.

Space Trader: **Free**

<http://www.freewarepalm.com/games/spacetrader.shtml>

VERY popular "Trade Wars" style game. Desc: "Space Trader is a complex game, in which the player's aim is to amass enough money to be able to buy a moon to retire to. The player starts out with a small space ship, armed with one simple laser, and 1000 credits in cash. The safest and easiest way to earn money is to trade goods between neighbouring solar systems." ...

Vexed: **Free**

<http://www.freewarepalm.com/games/vexed.shtml>

Vexed is THE classic Palm OS puzzle game. It's addictive, challenging, and is a must-have for your Palm.

Rally 1000: **Free**

<http://www.freewarepalm.com/games/rally.shtml>

A road race card game. You compete against the Pilot to reach the destination first. It's fun and addicting.

CASES & ACCESORIES:

Good Leather Holster: **\$39**

<http://www.tuff-as-nuts.com/TREO.html>

Plastic, Sturdy, Belt Swivel Case: **\$24**

<http://handspring.com/products/Product.jhtml?id=300003&cat=230003>

Vaja Leather Case: **\$69**

<http://www.vajacases.com/vaja/catalogo.nsf/SelProdsEN/CUS788>

(deluxe hand stitched, nickel/bronze clip. Considered the best case made.)

Universal Leather FlipPhone SmartCase: **\$34**

<http://www.directcase.com/perl-bin/safe-shop?std-00280>

Handspring Treo Sport Case : **\$14**
<http://www.directcase.com/perl-bin/safe-shop?std-00421>

Convertible Leather Flip Case: **\$39**
<http://www.directcase.com/perl-bin/safe-shop?std-00267>

OTHER RESOURCES:

Contributed Palm-Reader/DOC Format Literature:
<http://www.memoware.com>

Other Good Stuff by Hacker-Dude-san:
<http://www.palmgear.com/satellite/index.cfm?siteid=32>

Good Software Sites:
<http://www.freewarepalm.com>
<http://palmgear.com>
<http://theplanet.pda.tucows.com/palm.html>
<http://www.ardiri.com>

Hardware Hacking the Treo:
<http://dan.nyip.net/pchaos/viewcat.php?id=20>
<http://www.handspringbattery.com/14-0024-00install.htm>
<http://web1.applelaptopbattery.com/ccp5/cgi-bin/cp-app.cgi?pg=prod&ref=PR2-HS280>
<http://www.fixup.net/tips/wireless/index.htm>

Info on The History and Theory Behind PalmOS Hacks:
<http://www.dseifert.de/hacks>