

THE HP Palmtop Paper

U.S. \$7.95

MUSIC

and
the **Palmtop
Database**



KARAOKE
from the Palmtop

Palmtop helps to
RECORD NEW MUSIC CD

NEW!

**32 MEG
UPGRADE FOR
YOUR PALMTOP**

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32 Meg HP Palmtop Upgrade!	

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- Cases • High Capacity Rechargeable Batteries • Customized Newton Keyboards • Wireless Modems • Accessories...



Software

NEW!

WWW/LX and Post/LX: The graphical web browser and Internet e-mail client specifically designed for the 100/200LX

Quick/LX: The typing aid for the HP Palmtop

Magnify: Magnifies any area of the palmtop screen, making viewing much easier.

ABC/LX: adds intelligence to battery charging and monitors battery usage.

NEW!

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Much, much more...

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Weather Forecast		1	a		d	
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System Messages		1	a		d	
HP Handhelds	1 2 3 4 5 6 7 8 9 10 11 12	a			d	
WinCE & Vendors	1 2 3 4 5 6 7 8 9 10 11 12	a			d	
Ventura Publisher	1 2 3 4 5 6 7 8 9 10 11 12	a			d	
Corel Graphics	1 2 3 4 5 6 7 8 9 10 11 12	a			d	
Terminal Emulation		a			d	

acCIS4.0 Screen

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WWW/LX Screen

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Publisher's Message



Hal Goldstein

Wow! When I first heard the rumor of the latest development in Japan, I didn't believe it. I thought 8 Megabytes was stretching the HP Palmtop internal storage capability to the max. Wrong. Once again we have a whole new HP Palmtop with even greater possibilities. For the last few days I have been playing with a palmtop that has 2 Megabytes of C drive storage and 32 Megabytes of internal F drive storage capacity! In the PC slot I have an EXP fax/modem with 8 additional Megabytes of flash memory. Check out my User-to-User column for more details.

As a fitting accompaniment to this news of larger storage capacity, we have three articles about using the database application on the HP Palmtop. As it happens, each article has to do with music, but each author's ideas apply to whatever information you want accessible. My guess is that substantial databases will be one of the most important uses for the 32 Meg internal drive. The PC card slot can then be used for a fax/modem card or a printer/backup card. Alternatively, a 32 Megabyte palmtop user can employ a flash card to store additional data or software, or as a data redundancy backup tool.

Another use for 32 Megabytes would be to contain large DOS applications; for example, DOS versions of Word or WordPerfect — spelling checker, thesaurus and all. The article on MaxDOS shows how such programs can be run without shutting down built-in applications such as Lotus 1-2-3, PhoneBook, or ApptBook. With more data, users will want a more robust file manager than FILER. Ed Keefe provides a solution. He shows how to create a program that gives FILER users a choice as to whether to view, zip, modify, or execute a file.

Those of us who have stayed with our 200LX will be interested in Chris Lott's experience moving to the Windows CE 2.0 HP 360LX. (Hint: check out the punch line at the end of the article). Finally, you will want to read about Ted Hall's ingenious woodworking solution using the palmtop to control a woodworking tool.

Hal Goldstein

The HP Palmtop Paper

Increasing Your Personal
Power By Expanding Your
Palmtop's Potential

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Letters

Enjoyed programming article

As an HP 200LX reader, I look forward to each issue of *The HP Palmtop Paper*. Unlike other organizers I've owned, the more I use the HP 200LX, the more I like it whereas the more I used my Casio, the more I found it disappointing.

I really enjoyed Ed Keefe's article on LXBatch. Why not take this a little further and have a programming column every issue. Let Ed show us some more things he's written. Let some share their C code using the PAL library, etc. I know you're always looking for ideas to fill the magazine and I'd vote for this one. I also enjoy reading how different people use their Palmtops.

Joel Berman
JoelB@iatricsys.com

[EDITOR'S NOTE: see part two of Ed Keefe's LXBatch programming article in this issue.]

Closing of EduCALC

The latest issue of *The HP Palmtop Paper* is really great, even with the sad account of the end of an era, due to HP market-

ing shortsightedness from the latest business school-educated managers. It's sad.

Daniel Legendre
100572.3340@compuserve.com

Liked your article a lot, Hal. I'm with you...it definitely signals the end of an era. The sad thing is, it's not just EduCALC. A lot of the fun and the "pioneer spirit" has left the computer industry in general, and palmtops were one of the last frontiers for this, if you ask me. Oh well...at least I can say, "I was there when it all started."

Richard Wolfe, Jr.
Richard@IndUtil.com

My commitment to Thaddeus

Your recent *HP Palmtop Paper* (PTP) article on the demise of EduCALC saddened me greatly. I have been purchasing from EduCALC since 1980, but lost track of it in recent years partly for the reasons set forth in your article and also because I was using some of the other advertisers in the PTP (ACE, Shier, Accurite, etc.). I agree with everything stated in the article except your view that the golden age of palmtops is passing. This is entirely within our control and it DOES NOT

have to pass. I for one will not let it happen, even if it means giving up on HP. (I have been using HP products since 1978, including the HP22, 41, 71, 75, 48, 100 & 200.)

My suggestion for palmtop preservation centers around Thaddeus — you must survive — as well as some of your key advertisers. I hereby make the following commitment to you and your advertisers:

1. I will early renew my subscription to the PTP for as long as you allow.

2. I will upgrade my *HP Palmtop Paper* CD InfoBase and continue to buy your upgrades.

3. I will continue to purchase from your advertisers and mention the PTP when I do so.

4. When I use shareware provided in your articles I will register and mention PTP.

5. I will contribute articles and programs for the PTP.

6. I will shortly send you my spare HP200 for upgrading (doublespeed & memory) and when my HP200 4-mb machine goes out of warranty, I will do likewise.

7. When I need a new HP 200LX, I will buy it from you, not HP.

As you have indicated, the HP palmtop is dying technology, but the successors are poor substitutes at the present,

and with Microsoft's involvement will NEVER surpass the HP 200LX. HPCalc, Solver, Lotus 1-2-3, the databases, hundreds of useful DOS programs, and the special PAL and EXM programs are too much to give up just to get a bigger, faster machine. Not even color can substitute for the total functionality of the palmtop.

The Connectivity Pack still offers the best PIM package for me. I have tried converting my databases to Lotus Approach, Sidekick, and Outlook, but I haven't had much success. I have had great success moving everything to my Windows 95 desktop computer, but I have met with only modest and intermittent success on my Dell notebook running OSR2 version of Windows 95 (my IS person tells me that this version is even less DOS-compatible).

I have the windows versions of the ApptBook, PhoneBook and HPCalc, but these do not compare to the real thing (Connectivity Pack) and do not support modified PhoneBooks or the other databases. I am seriously considering the purchase of a Libretto 70 and would not hesitate if I could get the Connectivity Pack running on it. While the size is not in keeping with the palm-

(Continued on page 12)

New Products!

COMMERCIAL SOFTWARE

TTDEMO.ZIP ■

TimeTracker/LX, by Andreas Garzotto, was designed for the professional who bills customers by time, or anyone who has a need to track project time, or even for those of us who are constantly amazed about where the time has disappeared.

The program, which was built for the HP 100/200/700LX Palmtop, keeps track of the time it takes to do work. The data about your work, such as date, starting and ending times, duration, activity type, client and projects, is stored in records, similar to the entries you know from the PhoneBook and the Database applications. There are many ways to view the collected information.

A built-in reporting "language" is also included to add sophistication to the presentation of reported data. On-the-fly summations and totals based on projects, categories, and records are obtained at a touch of two or three keys.

The demo version is limited to 20 records.

Type: Commercial.

Price: \$39.95 license fee for full version of the program. Contact: D&A Software, Inc., 22817 Ventura Boulevard, #320, Woodland Hills, CA 91364-1202 USA; E-mail: info@dasoft.com; Web: www.dasoft.com

The demo version is available on this issue's *HP Palmtop Paper ON DISK*, and also on CompuServe's HPHAND forum, Library 14.

SHAREWARE/FREWARE

ESCAN04.ZIP ■ - v. 0.4

ESCAN.EXM, from Japan, is a scanner utility for the GT-6000/ES-300C scanner from Epson. It controls the scanner and saves the scanned image in BMP, ICN or PCX format on the HP 100/200LX. The scanner connects to the 200LX with a serial cable.

Type: Copyrighted freeware.

Available on this issue's *HP Palmtop Paper ON DISK*, and also on the Web at: www.palmtop.net/super.html

JAM125SW.ZIP ■ - v. 1.25

JAM, by George A. Reznik and others, is a real-time data compression utility that works well on the HP 100/200LX and is a good alternative to running Stacker. The program is a transparent hard disk compressor which enlarges your disk space.

Type: Freeware for non-commercial use, Shareware for any other use.

Available on this issue's *HP Palmtop Paper ON DISK*, and also on the Web at: www.palmtop.net/super.html

DISP.ZIP ■ - v. 1.0

DISP, by Laust Brock-Nannestad, is a small utility for the HP 100/200LX that turns the display on and off.

Turning off the display gives a speed increase, as well as a slightly lower power consumption. This makes the program useful for compiling or other work which does not require user interaction.

Type: Copyrighted freeware.

Available on this issue's *HP Palmtop Paper ON DISK*, and also on the Web at: www.palmtop.net/super.html

CORRECTIONS

HP Palmtop Software Kit

The recommended retail price of the HP Palmtop Software Kit is 129,00 DM. (See our review of the kit starting on page 11 of the January/February 1998 issue.)

Contact: Yellow Computing, Computersystem GmgH, Postfach 1136, D-74173 Bad Friedrichshall, Germany. Phone: +49 (0)7136/951143; Fax: -49 (0)7136/951111. E-mail: info@yellow.de Web: <http://www.yellow.de>

UPDATES

QVREM09.ZIP ■ - v.0.9

QVRemote, from Japan, is a program to remotely control a Casio digital camera, the QV-10/QV-100, from the HP 100/200LX. This program is a 200LX adaptation of QVplay, created by Ken-ichi Hayashi and itojun on the Unix platform.

Type: Copyrighted freeware.

Available on this issue's *HP Palmtop Paper ON DISK*, and also on the Web at: www.palmtop.net/super.html

VDE185.ZIP ■ - v. 1.85

VDE Editor, by Eric Meyer, is a small, fast, powerful editor/word processor that's gotten great reviews. Multiple files; windows; auto format; macros; menus or WordStar commands; block and column operations; multiple file formats; many printing features; extensive customization; and much more. Ideal editor to shell from applications, or for writing on portable, even palmtop, computers. Registered users get an integrated spelling checker.

Version 1.85 has improvements to macro commands, file browser, etc.

Type: Shareware.

Available on this issue's *HP Palmtop Paper ON DISK*; on CompuServe's HPHAND forum, Library 7; Web: www.palmtop.net/super.html

NTKPAC05.ZIP ■ - v. 0.5

On page 3 of the January/February 1998 issue we gave an incorrect file name for the Newton Keyboard Driver. The correct file name should be NTKPAC05.ZIP. Also, Mr. Adachi is the author of the driver, not Toshiki Sasabe. This freeware driver is available on the January/-February 1998 *HP Palmtop Paper ON DISK*, and also on the Web at: www.palmtop.net/super.html

Do you have a Palmtop you no longer use?

We'll buy it...even if it's broken!

Thaddeus Computing (that's us) can always use extra palmtops for various projects. If you want to mail in your Palmtop equipment and manuals to us, here is what we will pay.

Palmtop in good working order and good shape:*

HP 95LX (with manuals): \$ 55

HP 100LX (with manuals): \$75

HP 200LX (with manuals): \$100

* Without manuals: HP 95LX subtract \$5; HP 100LX or 200LX subtract \$10. We'll adjust the price if equipment works but has some significant damage.

Broken Palmtop:*

Broken 95LX (with manuals): \$25

Broken 100LX (with manuals): \$35

Broken 200LX (with manuals): \$35

SPECIAL!

We need HP 200LXs badly. We'll pay \$150 for your 200LX in good working condition, with or without manual, if you send it by March 31, and you mention this offer.

When you send in your palmtop, you'll receive a free one-year subscription (or renewal) to Handheld PC Magazine.

Offer good through April 30, 1998.

Accessories:

HP Connectivity Pack w/cable and manual: HP100/200LX: \$15; HP95LX: \$5
Uncompressed Flash and SRAM cards: \$5 per megabyte (e.g., 40 Meg=\$200)
Modem cards, cables, software, chargers, other items: we'll look things over, but we may not be able to offer much. We'll adjust price as appropriate if accessories come without manuals, or if other items are missing.

Send equipment to: HP Palmtop Used Equipment, Thaddeus Computing, 110 N. Court, Fairfield, IA 52556, USA. Include a note mentioning this offer with your phone and fax number. If you need to talk with us, you may call, 515-472-6330. You will receive reimbursement within three weeks after we receive the equipment.

HP Palmtop User Groups

Those interested in participating in an HP Palmtop users group should contact the following individuals. Send us contact information formatted as below if you wish to be added as a contact for a users group in your area. Some of the individuals listed offer Palmtop advice but may not be organizing an official users group.

HP Palmtop Worldwide User Group News

Send material about User Group activities to Conrad Cox; E-mail: 76164.467@compuserve.com; Website: www.ccnet.com/~cdcox

ARGENTINA — Buenos Aires: Miguel Angel Misseri; E-mail: 73070.3665@compuserve.com. **Cordoba:** Paul Nani; Tel: 54-51-715649; E-mail: pnani@si.cordoba.com.ar

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KS—Manhattan — Marietha Wilson; Tel: 913-532-9775.

MA—Boston — Bryan Krauthamer; Tel: 617-374-9600 x 197 (work); Fax: 617-374-9620; CompuServe ID: [70444,41].

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ME—Orono — University Palmtop User's Group; E-mail: palmtop@tree.net; Website: www.tree.net/palmtop

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How will you know if it is time to give up your HP100 or 200LX?

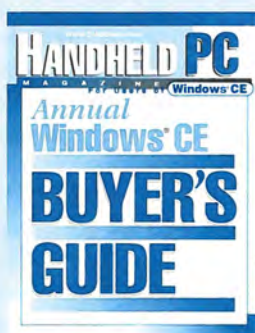
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User to User: 32 Meg HP Palmtop Upgrade!

Hal discusses the new upgraded palmtops, rechargeable batteries, and whether DOS is still alive and well.

By Hal Goldstein

The big news this issue is the availability of the "Thirty-Something-Meg" upgraded HP Palmtop. Once again, pioneering work took place in Japan. Independently, U.S.-based Mack Baggette of Times2 Tech took a different approach and developed the 32 Meg chip set and has written the required special software drivers. We, Thaddeus Computing, along with two other trained retailers (see page 9 sidebar) will be performing upgrades.

The details

The 8 Meg upgrade requires removing the original C drive RAM chips. The 32 Meg upgrade is actually added on to the original configuration. So, an upgraded 1 Meg 200LX still retains its 1 Meg C drive. In addition, the user gains a second new 32 Meg internal drive (usually F). Similarly, a 2 Meg 200LX has a 2 Meg C drive and a 32 Meg F drive. However, due to hardware reasons, 4 Meg 200LX users also end up with a 2 Meg C drive and 32 Meg F drive.

The new 32 Meg drive requires a device driver, and a line that gets placed in the CONFIG.SYS file. That driver allows users to access the 32 Meg as a RAM (e.g., F) drive. Further, Mack supplies another piece of software that allows the

user to swap the C and F drive. In other words, running this software the C drive becomes the 32 Meg drive and the F drive, 1 or 2 Meg.

Mack reports that the upgrade is quite safe based on several months of beta testing. I only received a unit a day before this article deadline so I can't yet give you a hands-on report.

Upgrading 8 Meg users

Users owning 2 or 4 meg palmtops with serial number SG6 or greater will be able to upgrade to 32 Meg right away. Mack is working on a solution for 1 meg palmtops and those palmtops with earlier serial numbers that have already been upgraded to 8 Meg; it should be ready by next issue. The solution will most likely create a 2 Megabyte C drive and a 32 Meg F drive.

Cost

The nice thing about this solution is that the cost per megabyte of the upgrade is roughly the same as the cost of a PC Flash Card with comparable memory. The advantage, of course, of this internal memory upgrade is the PCMCIA slot remains open.

See the sidebar for details on the pricing of various combinations. The 32 Megabyte upgrade with double speed will be \$499.95.

Original 2 or 4 meg palmtop users already with the 8 meg double speed upgrade and serial numbers starting with SG6 or greater can deduct \$125 (5 or 6 meg palmtops can be upgraded in all cases. Users can deduct \$50).

Battery power and compatibility considerations

According to Mack, the 32 Meg upgrade makes about the same power demands as the 8 Meg upgrade, maybe slightly more. These memory upgrades make an additional 10-15% demand on the palmtop. The doublespeed upgrade takes another 10-15% toll. In other words, users should expect about a 25% reduction in battery life for a memory-upgraded doublespeed unit.

Mack recommends rechargeable batteries. He has found a pair of 1350 MaH nickel metal hydride rechargeables that he strongly recommends — significantly better on the palmtop than others available. Initial charging takes 16 hours with the HP adapter. After that you can charge the battery, as convenient, to top it off. In Mack's experience, normal/light use of a non-upgraded unit lasts about 4-6 weeks; very heavy use of an upgraded unit, 2-3 weeks. Mack tells me they hold charge much longer than alterna-

tives, even when not being used. These batteries can be purchased from Thaddeus Computing (\$29 for a 4-pack in North America, includes shipping; \$35 outside North America).

Mack also recommends the ABC/LX software program from D&A Software (\$34.95, available now from Shier Systems) to monitor battery life. Besides the environment and long-term cost, a chief advantage of rechargeables is that users won't have to depend on the backup battery system when changing batteries — in other words, data on internal drives are safer using rechargeables. Batteries are charged in the HP Palmtop using the Palmtop's AC adapter (HP F1011A).

We are often asked about compatibility. These upgrades have proven quite robust. There are no known problems with memory upgrades. The Silicom PCMCIA

Ethernet card is the only problem we are aware of with the double-speed upgrade, and Mack is looking into that.

Possible uses and configurations

Freeing the PC Card slot, the 32 Meg upgrade is enough storage space for most users. The slot can be used for a modem card, a wireless card, or the Trans Digital parallel port printer/backup card. Specialized vertical databases such as ones for physicians or other professionals can be stored internally. I'll be very interested to hear of the uses as they evolve. I'm at hal_goldstein@thaddeus.com.

DOS: alive and well?

I read with interest Nicholas Petreley's Jan 19 InfoWorld column entitled, "Reasons you may be using DOS again soon and actually (gasp!) liking it." It seems that in mid-1996 Caldera purchased Novell

DOS and gave it back its original name, Dr DOS. They are developing a DOS web browser, a beta of which is available at www.caldera.com/dos/html/webspy.html. (Unfortunately, according to their Web page, it requires a 486 to run). The main point of the article was that DOS will be a popular embedded systems operating system.

Embedded systems refers to the fact that many electronic devices have built-in computer intelligence. You've probably read about Bill Gates' high tech house — a prototype for the rest of us in the coming years. Toasters, TVs, and car navigation systems will all have a brain; that is, a CPU computer chip. The software operating system that will allow us to take advantage of the intelligence (CPU) in the appliance is called an embedded system.

Microsoft is positioning Windows CE as the embedded systems operating system of choice. In fact

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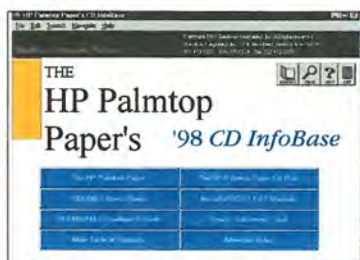
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"Best Tips ON DISK" comes free with *The HP Palmtop Paper ON DISK* subscription

Microsoft recently announced the Windows CE-based AutoPC, which we discuss in the March/April issue of our sister magazine, *Handheld PC Magazine, For Users of Windows CE*. AutoPC takes voice commands and

functions as a car's entertainment and navigation system.

However, for many developers DOS may be the embedded systems operating system of choice. The reasons will sound familiar to HP Palmtop users: There are legions of programmers familiar with DOS and its most subtle inner workings. As Petreley points out, DOS will probably remain smaller, faster and more familiar than Windows CE. It runs on cheap X86 processors. Dr DOS supports protected-mode multitasking, will support networking, and can execute directly from ROM. The DOS kernel is open, and can be downloaded from. That means DR DOS developers can fine-tune anything and will never be dependent on undocumented, moving-target specifications.

I am not sure whether this development will have a direct impact on HP Palmtop users. DOS may be dead on desktop machines,

but the incredible uses of the HP Palmtop, written about in these pages over the past seven years, document the usefulness of small DOS systems.

32 Megabyte Upgrades

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Upgrading to the HP 360LX

This long-time LX user, who recently purchased a new Windows CE Handheld PC, describes his experience and first impressions.

By Chris Lott

I have been using the HP 200LX palmtop computer for a little over three years now, preceded by a 95LX model. I have always been enamoured with the HP quality in their calculators, and was pleased that their approach translated so well into the palmtop series.

I recently decided to take the plunge and upgrade to the newly announced HP 360LX palmtop WIN CE computer.

The upgrade to the 360LX model, however, has been somewhat disappointing, despite the many advances that this palmtop computer brings to the market. One of the important advantages that I was looking forward to was compatibility with the ubiquitous Microsoft Office files that all my colleagues are using. Currently, I have to translate any Excel files to 1-2-3 format, or save Word files as text in order to carry them on my 200LX palmtop. And I can forget about Power Point slide shows. The 360LX seemed like its time had come for me, and I was looking forward to the upgrade.

Finding and buying the 360LX

The first problem was locating the palmtop. I have been following the development of the 300 series in *The HP Palmtop Paper* and decided that

the 360 model had been improved to the point that I would upgrade.

I checked our local sources here in Huntsville and found that nobody sold the 360 yet, and that they were all sold out of the 320 models. I toyed with the thought of buying a 320 and getting it upgraded for free by HP, but decided not to. The information I could find on the upgrade didn't make it clear whether the resulting unit would have just Windows CE 2.0, or would also include all the new features of the 360LX, particularly Power Point.

I then called EduCALC, from whom I have purchased palmtop accessories in the past, and found that they were getting out of the palmtop business. They recommended another mail order company, PC Mall, where I ordered the unit and had it shipped overnight for a reasonable \$7 fee.

When the unit arrived, I noticed its slightly larger size, as compared with my 200LX. I was expecting this, but it was still a shock to place them side by side. I am also concerned with the wimpy rubber feet that are used on the 360LX. The 200LX had plenty small feet by my experience, but those on the 360 make them look huge. The keyboard is a pleasure to type on — I'm typing this article right now, using standard touch typing and just loving it. This is a big improvement on the 200LX, although I do miss the 200LX's number pad. The touch screen takes some getting used to, but isn't at all hard to use.

The installation process

I installed the accompanying software on my desktop. First was the Windows CE installation, followed by the HP-specific software. My office computer runs NT 4.0 and



ABOUT THE AUTHOR

Chris Lott spends his days designing electronics for Phase IV Systems, Inc., a small business in Huntsville, Alabama. He is currently working on a novel, low-cost avionics system for a NASA research program. Chris has a wife and three children, and when they aren't keeping him busy, he enjoys woodworking and ham radio. He can be reached at rclott@ro.com

I had some problems installing the HP programs. I finally had to poke around in a command shell and figure out which batch file was needed to install the PIM translation software. Even then, the batch file didn't run on my computer, and I had to examine it and figure out what .exe file I needed to run manually.

Also, the Microsoft disk installation process didn't match the printed instructions, but the differences were minor and easy to figure out. I do wish some explanation was given for installing the optional features — I'm still not sure what they're for and which ones would be good to install.

The 360LX also lacked a good manual. Nothing like a traditional HP manual was included. I guess we're supposed to rely on the built-in help screens, which I didn't find very helpful the many times that I consulted them.

I finally got the Mobile Devices explorer window running on my computer after tracking down the service pack 3 disk, which is one of Microsoft's periodic bug patches. The installation process warned me that I might need to re-install the service pack, and indeed I did. Once this was done, I promptly translated my appointment and phone book files from my 200LX, and copied over from my PC to the new 360LX a few example files in Word, Excel and Power Point to try out. I needed these documents on a business trip, and decided to take them along electronically in my palmtop.

Finally before leaving, I set up the remote networking features and confirmed that I could establish a PPP connection and terminal connection to my ISP. I could, but I have yet to figure out how to set up a script file so that I don't have to manually login each time.

Terminal emulation

The terminal application turns out to be basically useless for me — the screen fonts are unreadable at

standard 24x80 settings, and there seemed to be no way to change to a more readable font. You could zoom to a readable font, but it was so big that the 24x80 window needed scroll bars. This didn't work well with the standard UNIX mail reader programs and editors. This was my first disappointment of many.

Word, Excel, and Power Point

The Word, Excel and Power Point files all worked reasonably well. However, I was particularly disappointed with the Power Point editing capabilities. During my trip, I had occasion to insert a couple of charts. I couldn't figure out how this was done — the only capability I could find for editing was to insert a title sheet, and to add digital "ink" to a slide, although it appears that this isn't saved with the file.

On the return flight I decided to begin inserting the "facing page text" into my slide presentation. I didn't think twice about this capability being absent, as it is just text editing like Word. Well, I couldn't figure out how to do this, either. You can select a notes page view, but this must only be to examine previously written notes, not insert any. I had great expectations for this version of Pocket Power Point, but have decided that it is basically worthless for my needs.

The versions of Pocket Excel and Word are quite impressive, in spite of the fact that they omit certain features, and the menus have been changed around a little bit. In Excel, I do miss the capability to get to the end or beginning of a column of contiguous values by using the END/UP-ARROW or END/DOWN-ARROW sequences. If equivalent keystrokes are available, I haven't figured them out yet.

Also, I can't figure out how to turn off automatic re-calculation. I had a particularly large spreadsheet, and it took several seconds to calculate it on the 360LX. I looked through the help screens and

menus, but couldn't find it anywhere. All in all, however, I think the compromises made for these two programs are reasonable and work well enough.

Battery life

The battery life on this model is a real change. I would get two-plus weeks out of my 200LX, but the 360LX eats batteries at a phenomenal rate. While I have used the 360LX for less than a week, I have gone through two sets of alkaline batteries, and am working on a set of Lithium's, which seem to be holding up better. I have kept the backlight time to a minimum, but wonder about other accessories that might consume power, such as the serial and IR ports. I can't find a way to turn these on or off, although I've gotten an alert message on several occasions that the batteries are low, and the serial port will consume extra power.

Like James Robertson in his article (see Vol. 6 No. 5 of *The HP Palmtop Paper*), I tried to use the flash disk from my 200LX. Even though it has Stacker on it, I expected to be able to view the uncompressed portion of the volume. Alas, when I plugged in my card, I was prompted for the name of the driver to use — no default filename, no browse option. I don't know how to proceed here. My flash card is the 30/60MB model sold by ACE (made by IBM).

My modem, a 19200-baud PCMCIA card made by Megahertz, on the other hand, worked like a charm. I didn't have to provide any information at all, and it was just plug and play. I have noticed that it usually causes the screen to go blank or to have vertical stripes every time it is initialized, but it doesn't seem to be doing any harm.

PIM software

The PIM translation software did a passable job for my files, contrary to Mr. Robertson's experi-

ences. I noticed that the category field wasn't transferred properly, and I had to enter them all in again to several hundred entries. Also, the 360LX phone book seems to automatically recognize phone numbers with their area codes.

For some reason, the translation program didn't handle my phone numbers correctly. I discovered that I could cut and paste a phone number, and the program would then recognize it. I could tell this because I had used a dash to separate the area code from the phone number. After the cut and paste, the program would reformat them its own way, using parentheses around the area code. Why the translation program didn't do this escapes me. Also, I couldn't figure out how to change the name of a category. There was an option to delete or create one, but it appears that you're stuck with your original name, like it or not.

File translation

I am also disappointed with the file format translation technique. As mentioned earlier, one reason I decided to try out the 360LX was because so many of my colleagues are using the Office products, such as Excel and Word. During my

recent trip, a Word file was sent to me by e-mail. First, I had problems getting the Inbox to properly receive and download the file attachment. But assuming that I solve that problem, there wasn't any way that I could read the file without being at my desktop computer to translate it into the Pocket Word format.

Upon further reflection, I have decided that this isn't any better than the process I used with the 200LX, when I would translate a Word file to ASCII text, or an Excel file to Lotus 1-2-3 format. I see an opportunity for someone to provide an online file translation service — send a Word or Excel file by e-mail, and it is returned in the appropriate Pocket format. Until then, the attractiveness of Office compatibility is greatly diminished for me.

Missing functions

There were other basic functions that I wished were included in the unit. I was hoping for telnet and ftp capabilities, but found that these were only available as third-party products. It seems odd to support full graphical Web browsing, yet not have provisions for these basic services. The calculator program was functional, but I found it hard to use. I have been using HP RPN calculators for 20 years, and found the sudden transition to an algebraic calculator tough.

I also miss the Quicken capability, but noticed that a "financial program" was included free with the HP CD-ROM. I haven't installed this yet, but I presume this is a replacement for Quicken. The absence of the database engine, as noted by others, was a big problem. I have several databases, and don't know what to do with them.

I just can't decide whether to keep my 360LX or not. There are certainly a number of improvements, but my disappointments have been many. Time will tell.

Addendum

After trying the HP 360LX for about two weeks, I simply gave up on it and returned it. It lacked too many functions and connectivity features, so I decided it wasn't worth my trouble.

I have resumed using my trusty HP 200LX, and haven't regretted it for a moment.

Letters Cont. from p.2

top, it may be the best compromise for the future.

Another solution would be to develop a DOS emulator for the WIN CE machines. I have seen discussion of this, but nothing concrete. Much of what I value could be preserved with a DOS emulator. Perhaps Thaddeus could support such a project? It would hedge your bet, just as you are doing with the *Handheld PC Magazine* (I subscribe to that as well).

Since Thaddeus is obviously looking for new opportunities, why not take on the Libretto and WIN CE-DOS emulator projects? I would purchase either of these products from you if you could get the Connectivity Pack or its equivalent fully operational on them.

Thank you for all you've done to support the palmtop. I find it very interesting that your three most recent editions of *The HP Palmtop Paper* have been among the most helpful and informative. You are still taking your commitment to the palmtop and your subscribers most seriously! Only time will tell if we can make the same commitment to you.

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We Compare...

The HP 200LX, 360LX & 620LX Palmtop PCs



HP 200LX



HP 360LX



HP 620LX

Size and weight

Hewlett-Packard's new entries in the Windows CE handheld market are the 360LX and 620LX Palmtop PCs. Both use the Windows CE 2.0 operating system and both are larger and heavier than the 200LX. Although you can still fit the 620LX in a coat pocket, it's now a bit of a squeeze.

Palmtop PC	Size	Weight (with batteries)
200LX	6.3 x 3.4 x 1 in (16 x 8.64 x 2.54 cm)	11 oz 312 g
360LX	7.2 x 3.67 x 1.1 in (18.3 x 9.4 x 2.9 cm)	15.6 oz 442 g
620LX	7.8 x 4.1 x 1.4 in (17.8 x 10.4 x 3.6 cm)	20.6 oz 86 g

CPU and Memory

On paper, the newer Palmtop PCs look more powerful, with faster processors and larger amounts of internal RAM. But they are running a more complex operating system and applications. These more powerful processors don't necessarily mean faster operation. For example, the 620LX is powered by a 75 MHz processor, while the 200LX's processor runs at about 8MHz. But many 200LX users who have compared the two say that they can access information faster on the 200LX.

Palmtop PC	CPU speed	RAM Memory	ROM Memory
200LX	8 MHz*	2-4 MB**	3 MB
360LX	60 MHz	8 MB	10 MB
620LX	75 MHz	16 MB	10 MB

* The CPU speed of the 200LX can be doubled via upgrade (see page 29)

** The internal RAM memory of the 200LX can be increased to as much as 32 MB (see page 6 and 29).

Additional hardware features and battery life

Both of the new Palmtop PCs have a standard PC Card slot, a CompactFlash slot, and IrDA-compliant infrared port and a serial port. The 200LX comes with a standard PC Card slot, an IrDA infrared port and a serial port. The 620LX comes with a backlit color screen, which

is easy to read and looks nice, but drains the batteries quickly. The 360LX has a monochrome screen and has a better battery life, but it is still considerably less than the battery life of a 200LX.

Palmtop PC	Battery life (hours of continuous use)
200LX	25-40 hrs (on a pair of high-capacity lithium batteries)
360LX	10-15 hrs (on a pair of NiMH rechargeable batteries)
620LX	5-7 hrs (on a fully charged Lithium-ion battery pack)

Operating system and software

The 360LX and 620LX both run v. 2.0 of the Windows CE operating system, and come with the standard Windows CE applications, including Pocket Outlook (Calendar, Contacts and Tasks), Pocket Word, Pocket Excel, Pocket PowerPoint, World Clock, Calculator (basic), Pocket Internet Explorer, Pocket Windows Explorer, Inbox, various setup utilities, Solitaire.

The 200LX runs the MS-DOS 5.0 operating system and comes with an Application Manager and standard PIM applications, including Appointment Book and PhoneBook. In addition, the 200LX has the following applications built-in: Memo, NoteTaker, Database, Pocket Quicken, Lotus 123, HP Calc, cc:Mail, Filer, World Time System Macros DataComm, LapLink Remote, Stopwatch, and a setup utility.

Synchronization

The 360LX and 620LX come with a connectivity cable and Windows CE Services, a desktop PC program that lets you connect to and synchronize with Outlook and a desktop PC, as well as transfer files back and fourth and convert them. Third-party solutions are available to synchronize with other desktop PIM programs.

The 200LX has an optional connectivity pack that includes a connectivity cable and software that lets you transfer files back and fourth between your 200LX and desktop PC. Third-party synchronization solutions are available for the 200LX.

Price

HP 620LX Palmtop PC	— \$889
HP 360LX Palmtop PC	— \$599
HP 200LX Palmtop PC (2MB RAM)	— \$495
HP 200LX Palmtop PC (4 MB RAM)	— \$595

HP 200LX Palmtop Runs Computer-Controlled Workshop Router

Typically, the entry-level cost for a "Computer Numerically Controlled" router is over \$20,000. But this palmtop user has developed an HP 200LX-controlled woodworking router that's available for much less.

By Ted Hall

I have been an HP 200LX nut for several years now — it's just the perfect little computer for me. Since I've had my palmtop doing just about everything in my life, it only seemed natural to want it to be able to run the inexpensive CNC router that our new company has developed. Our CNC router (CNC stands for Computer Numerically Controlled) is a computer-controlled woodworking tool. It is capable of moving a router (sort of a generic cutting and machining tool) in 3-Dimensions over a 4' by 8' by 6" work area with reasonable power, speed, and precision. It can thus cut, machine, or carve just about anything. You control/-guide/direct/program the tool with a PC. We call the tool a 'ShopBot', short for workshop robot. (See the sidebar at the end of this article for pricing and contact information.)

I run ShopBots on all sorts of PCs, but my favorite is the palmtop. At the time we were creating the software for ShopBot our goal was to have it run on as low a level PC as possible. But I confess that in the back of my mind was always the



ABOUT THE AUTHOR

Ted Hall is a research scientist who is also a plywood boat-building enthusiast. His interest in boat building led first to his creation of a software package for designing plywood boats (yes, it will run on the palmtop) and then to a need for a CNC router to cut his boat projects. Being convinced that such tools were basically giant plotters and that it should be possible to make one for a lot less than the \$20,000 entry level price of a conventional CNC router, he spent three years puttering in his spare time to develop ShopBot. In the last two years about 150 ShopBots have been sold to customers in the North America, Europe, South America and Asia.

idea of being able to run it with my palmtop. For this reason, the software that controls the tool and cuts 'Parts' files (files with cutting instructions for complex shapes or parts) is DOS software that uses text mode and CGA graphics only, and is efficient enough that it will move the tool at a good clip using an 8086 (XT) and up. It also requires only about 400K of memory to run. This all means that the software runs fine on the palmtop.

ShopBot is attached to computers through a serial port, so it hooks right up to the 200LX using the cable and adapter from the Connectivity Pack. I also have to

router on and actually do some cutting — with all the action being controlled by punching commands into the palmtop.

I like the impact of demonstrating our tool with the palmtop. But there are a number of reasons that make the palmtop an excellent choice as a workshop computer for an application such as this. First, it's small and convenient in the shop, and you can move it around with you as you work on the project. Some of the high-end CNC tools actually offer the option of a 'training pendant,' which is a small keyboard you can take over to the tool on a cable to allow you to control

for our customer support database and service management at ShopBot as well). We're looking forward to setting more and more woodworkers up with ShopBots that are controlled by palmtops as a way to bring the creative possibilities of computer-controlled tools to small shops and home workshops.

I run ShopBots on all sorts of PCs, but my favorite is the palmtop.

confess — as you might have guessed from my palmtop enthusiasm — that my 200LX has the speed and memory upgrade (from Times2 Tech). The speed upgrade is useful for ShopBot because it allows it to run at near full speed. The memory is not needed — though I love it.

Those are the basics of running our tool with the palmtop. Now let me give you a feel for why I get such a kick out of this capability. I frequently demo the ShopBot that is in my workshop to potential customers. As we walk out to my shop, the question frequently comes up regarding how big a computer is required to run ShopBot. I say "not very" with a twinkle in my eye. When we get into the shop and start having a look at the tool, rather than hooking the ShopBot into a desktop computer or the Pentium notebook that I usually have around, I pull my palmtop out of my pocket and plug ShopBot's cable into it and start running the thing around. This invariably captures attention. I usually start off moving the tool through a couple of ellipses and 'jogging' (fast move mode) it around, then we turn the

the tool from up close. This is a capability that is automatic and natural with the palmtop.

Second, because the palmtop does not have a vulnerable disk drive and is pretty well sealed, it is a lot less susceptible to problems from sawdust and other debris in the shop — not to mention that you can just close it up and put it away if things get really messy.

Finally, the way many of our users work, they create a drawing of a part or project using a CAD system on their office or home computer and then transfer this drawing to a 'Parts' file that they bring out to the shop on a disk. With the palmtop, I just download the 'Parts' file into the palmtop and I'm ready to go (and in this regard, I do appreciate *The HP Palmtop Paper's* information on how to get CPACK working in Win95). [EDITOR'S NOTE: see "Using the HP Connectivity Pack with a desktop PC running Windows 95" in the November/December 1995 issue of *The HP Palmtop Paper*.]

That's my story of our application for palmtops (though I might also mention that we use palmtops

Commercial products mentioned in this article

The ShopBot CNC Router - \$2,795 (full-size unit; some assembly is required); \$2,495 (the smaller Table-Top unit, ready to go out of the box).

CONTACT: Ted Hall, ShopBot Tools, Inc., 911-C East Trinity Avenue, Durham, NC 27704; Phone: 919-680-4800; Fax: 919 680-4900; E-mail: Ted@ShopBotTools.com or INFO@ShopBotTools.com; WebPage: www.ShopBotTools.com

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HP Palmtop Helps Create New Music CD

This musician used his HP Palmtop to keep on schedule and within budget while recording his band's new CD.

By Tom Boyles

When I first started out as a musician and began recording in a recording studio, I was 18 years old. That was in 1985, and everything in the recording studios was analog. I don't think there was any recording on digital, at least not in the studios that I could afford to record in at that time.

We recorded on 8-track, 1-inch, reel-to-reel tape, and keeping track of who recorded what on each track was, at times, pretty difficult. I even went out and bought my own 4-track, reel-to-reel multi-track recorder, with visions of having my own recording studio.

Four-tracks would quickly become not enough tracks, and what is called "ping-ponging" would be used. This means that recorded tracks from three tracks, for example, would be mixed and recorded to the fourth track. Then the three original tracks could be used again for more recording. Whether on the old 4-track multi-tracker or the 8-track multi-tracker, when tracks got "ping-ponged" around, the whole recording process could get to be a huge mess.

The spiral notebook

I put together a spiral notebook with pages and pages of notes of what was recorded and how things

got "ping-ponged," so I would know what sound and what instrument was recorded where, and what still needed to be recorded. This notebook was usually a pain to have around because it was large and cumbersome, besides forcing me to thumb through all these pages to find one single bit of information needed to continue the actual recording process.

It wasn't out of the ordinary for me to spend more time looking through all my notes in that notebook, instead of playing a guitar, bass or keyboard track. Oh, what I would have done back then to have something ...anything... even close to my HP Palmtop PC.

The digital age is now here, and we're smack dab in the middle of very complex recordings far beyond 4-track and 8-track, let alone the mess that ping-ponging can make of the recording project. Studios today have 16-track, 32-track, 64-track, and 128-track multi-tracker recorders that just get messy and compli-

cated all on their own. (No need to ping-pong tracks anymore.)

A good engineer will keep some sort of report or journal containing all kinds of settings: what was recorded, what will be recorded, and what effects are to be used on each track — all organized — and all this usually in a version of the old notebook I used to have. Good recording engineers also are adept at thumbing through their notes, and they spend a lot less time in the notes than I ever did.

For the past several months I have left the recording engineering to someone else so I could concentrate on being a musician. My band, Corduroy Bloom, currently is recording its first full-length CD, and we have to stay very organized to get this project done in the time frame we have projected for it.

Studio time and the recording engineer's time is expensive, and usually bands can't afford to spend time in the studio or waste the engineer's time trying to organize



ABOUT THE AUTHOR

Tom Boyles is the bassist and guitarist in the San Jose, California-based acoustic alternative band, Corduroy Bloom. He resides in San Jose, CA with his wife Laura. Tom is also a Technical Support Engineer for SMART Modular Technologies/Apex Data in Fremont, CA. Corduroy Bloom has a web page at www.corduroybloom.com and Tom can be reached via email at: tom@corduroybloom.com

instead of working on the main objective, which is recording the tracks.

We also need to keep complete, detailed notes of specific items so that information can be added to our CD album insert. The most important task is keeping the recording process organized and well-planned out so that the goals for each session are accomplished, and that the least amount of time and money is spent.

Using my 200LX

Enter my HP 200LX Palmtop PC. I might as well strap a guitar on the little guy because he's in the studio with me 100% of the time. I can jot notes down during a session quickly and have them well organized. I can also keep track of the number of hours spent in the studio for each session. This lets me keep tabs on how much is spent, and also keeps us within our projected budget for the album.

I designed a database template that allows me to quickly enter specific information I need throughout the entire recording process each day until the whole project is done. Our estimated time for recording our current project is four months. Our projected budget for the album is \$9,500.00.

As each recording session is completed, I can look back through the database and review the entire process. I can easily assess whether we are staying on schedule, and if we are staying within our projected budget. If I didn't use the database, I wouldn't be able to stay organized. And without organization, we could end up spending two or three times as much money, and taking two years for the project, instead of four months.

My 200LX Palmtop PC does the job, and does it well. I have yet to allow the group to get over budget, and we have easily stayed on schedule. We started recording at the beginning of October 1997, and as

Date	Total
10/01/97	
10/11/97	4
10/12/97	5
10/13/97	3
10/21/97	3
10/23/97	3
10/25/97	5
10/28/97	3
11/01/97	3
11/04/97	3
11/06/97	3

Start	End	Total Hours
12:00 pm	3:00 pm	3

Song: All I Am

Producer: Corduroy Bloom
 Engineer: Wade Baynham
 Day: \$ 165.00
 Balance: \$1595.00

Press F3 for NOTES...

Screen 1. The fields in the author's custom database allow him to store notes about what's on different tracks, as well as time spent in the studio each day.

Date 11/01/1997 Start Time 12:00pm End Time 3:00pm

Song Title All I Am Total Hours 3

Producer Corduroy Bloom Engineer Wade Baynham

Track-by-Track Notes

- 1 - Sequencer
- 2 - Scratch Acoustic Guitar (Deb Stephenson)
- 3 - Scratch Lead Vocal (Deb)
- 10 - Bass (Tom Boyles)
- 11-16 - Percussion (Chad Sylva)

Final Day Cost \$ 165.00 Balance \$1595.00

Screen 2. The author has edited the display of his DataCard so that he can quickly view necessary information without having to open each day's record.

Database:CB MIX Data Item 01/29/98 12:00 pm

CD Track Mix Database - Corduroy Bloom

Song Title Believe It

Date Mixed 1/27/1998 Time Dubbed 7:38pm

Version

☒ Wade's ☐ minus 1 db ☐ plus 1 db

☒ Done Album Order (1-12) NYD

Notes The plus 1 db version caused the vocal track to be too far out front. Not much difference between Wade's first mix and the mix with vocals down 1 db. Stay with Wade's first mix. (Wade also has a new mix with a few other minor adjustments.)

Screen 3. This special database helps the author keep organized during the mixing process.

Database:CB MIX CD Mix Database 01/29/98 12:00 pm

! Song Title

- ☒ Believe It
- ☒ Complaining to James
- ☒ Everlasting
- Holy Frustration
- Jonah
- Little Girl
- Psalm 99
- Reality Makes It's M
- Sentiment
- We All Bloom
- You Are The One

Believe It Done?: ☒

Mixed: 01/27/98
 Dubbed: 7:38 pm
 Version: Wade's

Album Order (1-12): NYD

+ Press F3 for detailed notes.. (2/12)

Screen 4. The DataCard has been edited to allow quick scanning of the database.

we close in on the end of January 1998 we are getting close to finishing this project. Even though spending this amount of money on the project is painful, it would be even more painful if we went over budget and spent even more than we expected.

My studio database

In the database that I created (Screen 1), I first enter the date. This allows me to track the day we recorded. Next I enter the start time and the end time, so I can calculate the number of hours in the studio each day.

Next I enter the song title that we worked on during that session. I also have in this database a place for the producer's and the engineer's names. Throughout the album these names likely don't change, but in case we have someone else come in the studio for individual songs, this change can be documented for easy access to the needed information when we start developing the layout of the CD insert.

In a notes field I have track-by-track notes. This is what makes the palmtop so awesome. I have every bit of information I need for staying organized and also have all the notes I need, no matter where I am. The notes can be easily typed in and there's no limit to how much is typed in, and everything can be categorized and organized so individual bits of information can be found quickly and easily.

Then I enter the final day cost (number of hours by amount per hour) and then the balance, which is calculated by adding the previous recording session's amount to the current day recording session amount.

My studio DataCard

On the DataCard (see Screen 2), I have organized this information so I can easily scroll through the records and see specific items of information to quickly determine what was done, who was involved, and how much time and money has been spent. (Editor's note: see pages 31 and 32 of the January/February 1998 issue of *The HP Palmtop Paper* for a detailed discussion of how to alter the display on the DataCard.)

With my palmtop with me in the studio, I can easily review this information and enter new data. My palmtop quickly shows me how much time and money is needed, and what has to be done during the next recording session. This provides a well-organized plan for keeping each recording session running smoothly and spending the least amount of money, but getting the

most quality out of the time spent.

Without my palmtop, I would be hauling around a big spiral notebook and spending more time looking at notes than doing what needs to be done, and what is most fun — recording the tracks of the album!

Mixing the recording

Mixing the completed recording is the next and probably most important part of making your own CD. My palmtop again plays the part of keeping the information organized. During mixing, the individual tracks are adjusted in volume, and different special effects are added to each track, as needed, to make the entire song sound great.

Only one song a day is mixed, so with our album as an example, it will take 12 days to mix, because we have 12 songs. Each day that a song is mixed, a lot of information is discussed about each song.

To prevent ourselves from forgetting which information goes along with each song, I created a special database for the mixing process (see Screen 3). This database keeps me organized and allows me to access information at any time I need it.

For example, I need to know the date the song was mixed, and what time it was dubbed to a stereo cassette. The database also tells me the order in which all the songs were mixed when they are all finished. Additionally, I can tell if an individual song was mixed during the day, or in the evening.

Keeping track of mixes

I will also need to know what version of mix we decide on. Each song on our album is mixed three times. The first is a general mix, the second is mixed with the vocal tracks mixed 1 decibel lower from the general mix, and the third is mixed with the vocal tracks mixed 1 decibel higher from the general mix. Deciding which version to use is very important, of course.

Once the entire project is mixed,

we decide in what order the songs will appear on the album. The palmtop allows me to add to the database a place for that, and it can easily be adjusted as we make that decision. Finally, the Notes field provides a very important place for all the detailed notes I need for each song as it is mixed.

With the DataCard displayed (see Screen 4), I can quickly scan the entire database to know what songs are done and which still need work. The DataCard also makes it possible to take a "quick-glance" and get the information I describe above.

The HP 200LX has been a huge and absolutely necessary part of the recording process of the CD project my band is working on.

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Corduroy Bloom is the band's name and I am the bass player. You can find out about the group by visiting our web site at <http://www.corduroybloom.com>. Orders will be taken via our web site starting around March 1st. You can also send e-mail to order the album to: tom@corduroybloom.com. Order tracking will be handled via another database template on my palmtop and any e-mail you send to the above address is received and answered by my palmtop.

Using My Palmtop During Musical Practice Sessions

By Ray Kump

I play the bass guitar at Mass every Sunday. The music ministry has acoustic guitars, an electric guitar, saxophone, and drums in addition to the choir. My son Edmund plays the electric guitar. We practice on Thursday evenings.

After my first practice I realized that taping and playing back the practice would be a big help, since just one practice session where we try to learn five or six new songs every week would not be enough. I also realized that taping over the prior practice would be a bad idea. Without any hesitation, I knew my HP 200LX would keep track of which songs would be on which tape.

When I review the tape for the first time I enter the song, date, tape number and counter number into the database so that I can find the song later if needed (see Screen 1, next page). The counter number indicates at what spot on the tape the song starts.

I often need to review the tapes in subsequent weeks because some songs are repeated each Sunday and not always played at practice. Although everyone else already knows the material, I am still new to the group, so this review helps keep the Thursday practices to a reasonable length.

Last summer I played at the church every Sunday, even though there was no practice scheduled during the summer. I was able to practice the songs because I had a

collection of the prior practices on tape to review.

Different subsets

I have two subsets for viewing the song list. The normal view is by date and counter order. This is the easiest view when going over the upcoming Sunday's songs. The second subset is by song title order. This comes in handy when you are looking for a song and need to find what tape it is on and its counter position.

When my son Edmund joined the group a few months ago, he was able to review the tapes to help him step in without missing a beat. If one of us misses a practice we are able to keep up by using the tapes.

Without the 200LX I would not know where the songs were on different tapes. Sure, I could keep track of it on paper, but that is cumbersome. After a few weeks it would become difficult to quickly find the songs I need from previous tapes. If the information is not easy to retrieve the whole process breaks down. Since my 200LX is always with me, the information is always available.

For Christmas I got a Boss ME-8B Bass Multi-Effects pedal. This device contains almost all of the effects I need to use with my bass. This includes digital delay, compression, reverb, flanger, synth effects, de-frettor, distortion, and many more. I am able to create different patches of effects by selecting which effects are included in a patch and the individual settings.

I am able to create a sound by choosing different effects and customizing the settings and saving it as a patch and recalling that patch at the press of a button. I have a lot of options and storage patches available to me. With all these options comes the task of organizing the patches.

Boss was kind enough to include a blank template to notate the effects and setting used in each patch. I thought I had a handle on the editing because I had the foresight to use a pencil with an eraser. I quickly discovered that editing the template would be a hassle: moving a patch from one column to another used a lot of eraser.



ABOUT THE AUTHOR

Raymond J. Kump, C.P.A., graduated from Hofstra University with a B.B.A. in public accounting and joined the firm of Coopers & Lybrand at their New York City office. In 1983 he started his own practice, Kump Associates C.P.A., P.C., 111 Smithtown Bypass, Suite 207, Hauppauge, NY 11788. He and his wife Marianna and their two sons are all HP Palmtop users. You can reach Ray at 516-360-3215 or on CompuServe at [71773,1274].

A Lotus template

I used Lotus 1-2-3 on my palmtop to recreate the template (see Screen 2). I then entered the data into the Lotus template and I could move entire columns easily if I wanted to change the location of the patches. By grouping the patches logically, I am able to change patches with little or no fuss when I play the bass. The more I use the ME-8B the more I change and customize the settings, and my template stays clean and easy to read. Printing a copy of the template is easy. While playing, I prefer to use the paper copy, rather than looking at the palmtop's screen.

When I least expect it, another use for my 200LX pops up.

Database: CHUR-MUS Data Item 01/26/98 11:15:04 am

Song Mass of Creation, Holy, Memm Accel, Amen, Lamb of God

Tape Side Counter 365

Date 12/29/1996

Note

370	Holy
384	Christ has died
392	Great Amen
410	Lam of God

Help Add Note Find Clip Prev Next Cancel Done

Screen 1: This custom database keeps track of which songs are on which tape.

D21: [W4] \-

READY

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Group 1	Parameter	1	2	3	4			1	2	3	4	
14	Overdrive	Type											
15	Distortion	Drive											
16	Fuzz	Treble											
17		Bass											
18		B.Amp Sim											
19		Level											
20		D.Level											
21													
22	Humanizer	Mode											
23	Equalizer	Vowel-1/Hig											
26	Jan-98	11:36 AM											

Screen 2: The author's Lotus 1-2-3 template stores effects and settings used in each editing patch.



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A Karaoke and Performance Song Database

Even if you're not a professional vocalist or musician, your palmtop can make singing or performing easier and more enjoyable.

by Conrad Cox

I am not a professional musician, but I love to sing and play the guitar with others. I don't do either often enough.

When I do get the chance, I don't want to waste time thinking about what Beatles songs I can play, or whether a particular song has to be sung at the extreme ends of my vocal range.

The SONGS database that I created helps me keep track of the songs I can sing and play. I also enter into the database songs that I think I might want to learn in the future.

Why a database?

The idea for the database started during last summer's vacation. The bar in the hotel where we stayed had Karaoke. I had been spending too much time looking through loose-leaf binders of song titles trying to find songs I thought I could sing.

Why wait, I thought, until I'm in the bar to choose songs? With a database I could view a list of songs I knew, and see if the Karaoke operator had one of them.

I carry an HP 200LX everywhere, so having a database of songs in my pocket made sense. Now when I go to a Karaoke bar or someone's house for a sing-along, I open the database. In just a moment

I can start things off without thinking too much about what songs I can sing or play.

The database fields

People have asked me how I select songs to sing or play. As I hear a song that interests me, I just enter its name on the spot. This works well, except when I am driving. To cover those times when I'm in the car, I've started carrying a small voice recorder. Almost no idea falls through the cracks, be it a song or a business-related thought!

Screen 1 shows a typical database record. All data appear on a single screen. Most fields are self-explanatory. The TITLE, ARTIST and ALBUM fields define the song and its style. (Bonnie Raitt's version of "Runaway" is quite different than Del Shannon's version.)

Since the 200LX database allows only one CATEGORY field, I chose it to describe the type of music: classic rock, ballad, country, classical,

and so on. The key and guitar tuning completes the song information.

The middle of the screen contains the heart of the database's information. On the left are option buttons indicating whether I can sing or am learning to sing the song. I also rate how difficult the song is for me to sing.

On the right side of the screen I enter status on learning to play the song on my guitar. I've included a field for the key and tuning (which could be different from the original) and any capo position I might use.

I recently added a check box and a text field to indicate if the song requires or has opportunities to harmonize or add other instruments.

The NOTE field acts as a catch-all for comments, notes and lyrics. I find it helpful to include lyrics for songs I sing and perform.

Putting it to use

I rely heavily on the use of Subsets to extract information.

ABOUT THE AUTHOR

When he's not visiting Karaoke bars, Conrad Cox leads a San Francisco-based palmtop user's group called the Society for Palmtop Advancement Through Meetings. He contributes to *The HP Palmtop Paper* and *Mobilis Magazine*. Contact him at cdcox@ccnet.com

Database: SONGS Data Item 01/26/98 7:23 pm

Title Suite For Judy Blue Eyes

Artist Crosby Stills & Nash Genre Classic Rock

CD/Album Crosby Stills & Nash Key/Tuning E / Open E

Karaoke? ☐ Don't Know ☐ Learning ☒ Know

Difficulty ☒ Difficult ☐ Moderate ☐ Easy

Performance? ☐ No ☐ Practicing ☒ Yes

Key E

Capo

Tuning Open E

☒ Harmonies Accompaniment Second guitar with Std tuning

Note

2.62 Add Note Find Clip Prev Next Cancel Done

Screen 1. This database helps the author keep track of the songs he sings and plays.

Database: SONGS All Database Items 01/26/98 7:59 pm

Title Subsets View Subset

All D

All D

All m

Alrea

Day I

Despe

Don't

Honey

Hotel

I Hea

Lola

Karaoke I am learning

Karaoke I don't know

Songs I can perform

Learning to perform

Cannot Perform

Easy Karaoke

Hard Karaoke I know

Original Songs

Beatles Karaoke I know

OK

Cancel

Define... Rename... Edit... Delete...

2.62 Define Rename Edit Delete Cancel OK

Screen 2. The author's many subsets allow him to view just the records he needs at the moment.

Screen 2 shows just some of the subsets I created. Whatever the situation, I can pull up a subset to extract and view just the records I need at the moment.

I measure the success of the database in time savings. When I know I will be going to Karaoke, I check the database. It reminds me what I can do, and it helps me to plan my practice sessions. I don't waste fifteen minutes trying to think of two songs I can sing.

In my mind, the SONGS database puts just that much more information — and power — in my pocket.

What is Karaoke?

Karaoke is a form of entertainment where people gather in a public place, like a bar or club, to sing popular songs accompanied by pre-recorded music. Karaoke has become a popular after-work activity in Japan, where it originated. People can have a few drinks and unwind. Karaoke is becoming more popular in the rest of the world.

You don't need to be a singer to participate in Karaoke. When someone sings, the rest of the people clap their hands and even sing the chorus.

You can learn more about Karaoke by logging on to the Online Karaoke Entertainment Guide. Point your browser to www.navicom.com/~okeg/home.html

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Running DOS Programs From System Manager

Use MaxDOS to run DOS programs without having to exit System Manager; then add HDM, which can handle up to 120 DOS programs.

By Jorgen Wallgren

The great thing about the HP Palmtop is that it's a DOS machine – and there is a lot of DOS software still available. You should be able to run almost any DOS program on the Palmtop, provided it does not use extended or expanded memory and can display in character or CGA graphic mode.

Some DOS programs need so much of the 640Kb of system RAM, that you have to terminate System Manager and run them from the DOS prompt. Here is a tip on how you can run many of these memory hungry programs directly from your Application Manager using a nifty utility called MaxDOS ■.

Get and install MaxDOS

To do this magic, you need a great Japanese freeware program called MaxDOS (written by MeW). MaxDOS uses a special "swap" file to save the current System Manager session. It then unloads System Manager, leaving you the maximum amount of system RAM available to run your DOS program. When you exit the DOS program, MaxDOS automatically reloads the System Manager session you saved. (I would like to thank my friend Fong, from Thailand. Fong introduced me to the program and showed me how to install it. MaxDOS is now

available with English documentation — thanks to Mr. Toshiki Sasabe (Janbe) who has translated the original Japanese documentation.)

1. First do a backup of everything on your Palmtop, just in case something goes wrong.
2. Make a directory called C:\TEMP and another called C:\BIN.
3. Copy all the MaxDOS files into C:\BIN.
4. Modify AUTOEXEC.BAT to automatically load MaxDOS. Add the following line to the AUTO EXEC.BAT file, before the line that starts System Manager (i.e., the line that reads "200").

```
C:\BIN\MAXDOS -L -E25 -WC:\TEMP -AC:\BIN\ALERT.SND
```

The -L switch loads MaxDOS as

a TSR. The -E25 tells MaxDOS the number of pages of EMM ■ to use (25 in this case). (EMM is a freeware EMS driver for the HP 100/200LX that assigns EMS memory to the C: drive, and can speed up applications that can use EMS. The use of the EMM program is optional; in other words, it's not necessary to employ EMM in order to use MaxDOS to run DOS programs.) If you only use option -E without the number of pages specified, all your EMM pages will be used. If you use EMM memory, you have to add option -Ex. The -W is followed by the swap file's temporary directory. The -A is followed by the complete directory and name of a sound file. Note: The option -A is not necessary. But if you use it, your Appointment Book alarms will even go off if you are in a MaxDOS session.



ABOUT THE AUTHOR

Jorgen Wallgren works as Product Manager for HP Palmtop PCs at Hewlett-Packard Far East Pte Ltd in Singapore. As a Product Manager in the Marketing Department for Asia Pacific, he takes care of technical solutions, technical training and is working closely with Independent Software Vendors regarding corporate solutions for HP Palmtop PCs. He graduated from the Royal Institute of Technology in Stockholm with a M.Sc. degree in Mechanical Engineering, and moved to Singapore in early 1991. He can be reached

via e-mail at: jorgen@palmtop.net

You can remove MaxDOS by exiting System Manager, typing C:\BIN\MAXDOS -R at the DOS prompt and pressing (Enter).

The swap file will take about 230KB of memory (without EMM installed). You should put the swap file on the C drive. If you use MaxDOS with the swap file located on a flash card, the startup time for your program will be very long. You get the best performance if you are using a "double speed" palmtop and have the swap file on the C drive.

How to use MaxDOS

After you have successfully installed MaxDOS, you can install your favorite memory hog DOS program in Application Manager and run it without any memory problems. Again, this is for programs that will normally run if you have terminated System Manager, but won't run from Application Manager.

As an example, we'll install WordPerfect 5.1 for DOS on the HP 200LX.

1. First install the program as you would any other DOS program. From the Application Manager screen, press (F2) to add a program and fill in the program name and path statement (see Screen 1.) Note the upside down question mark in the Comments field suppresses the "Press any key to return" message after you exit the DOS program.)

Don't press (F10) yet! Instead, add "C:\bin\maxdos.com" to the path line in front of the ordinary path instruction (see Screen 2.)

Now you can press (F10) (OK). You can now run WordPerfect 5.1 for DOS (or your favorite DOS program) from the Application Manager, even if it takes a lots of memory.

Access a DOS prompt with lots of memory

You've probably noticed that Application Manager has a DOS prompt icon that lets you shell

Screen 1.

Screen 2.

Screen 3.

Screen 4.

directly to DOS. Unfortunately, this method of accessing the DOS prompt leaves System Manager running. At best, you can only have about 435 Kb of system RAM available for DOS programs.

Fortunately, we can use MaxDOS to add another DOS icon to Application Manager. When we access DOS using this icon, we'll have the maximum amount of free system RAM possible.

From Application Manager, add a "new application" as shown in Screen 3.

Please note that there is the "&" character in front of "DOS" on the NAME line. This lets you open Application Manager and press "D" to go to the new DOS prompt. There will be two applications with "D" as their hotkey. The new MaxDOS icon and the original DOS prompt icon. Application Manager

will open the first application it finds, so make sure you place the MaxDOS icon before the other. Application Manager looks for applications line by line, left to right. To move an application icon, use the arrow keys to select it, press (F7), move it where you want it, and press (Enter) (see Screen 4, previous page).

Add a DOS program manager

I have a lot of DOS programs I like to run. Application Manager is limited to the number of extra application that can be added, so I use HDM ■ by Harry Konstas.

HDM adds a program manager for DOS programs. It can handle up to 200 programs and has the look and feel of the System Manager's AppManager.

From Application Manager, press (F2) and add HDM as an application. Be sure and place `c:\bin\maxdos.com` before the application start up command in the Path field.

You should see the HDM icon in Application Manager. When you start HDM, you get a program menu similar to Application Manager. Add your DOS applications to this menu. The screen below shows some of the programs I've added to HDM (see Screen 5).

You can go one step further and organize your DOS programs in "folders" (just like they do in Microsoft Windows). Screen 5 shows a games icon in HDM. This is my Games folder. I select and "start" that folder and another DOS Application Manager screen appears, displaying my games (see Screen 6).

What's really happening here is that HDM is starting itself up again, this time with a different data file displaying only my games.

I did this by opening HDM, pressing (F2) to add a program, and filling in add a program dialog box as shown in Screen 7.

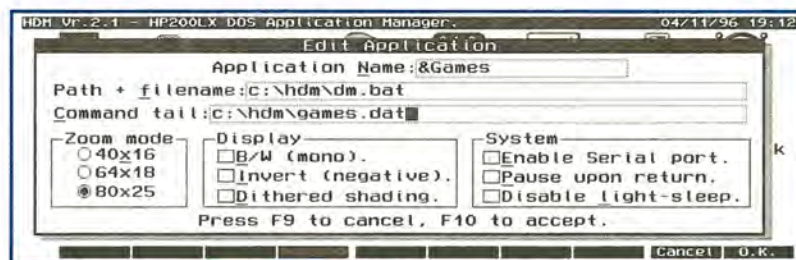
I filled in the name of my "fold-



Screen 5.



Screen 6.



Screen 7.

er" as "&Games". Then I filled in the path + filename as "`c:\hdm\dm.bat`" (I start HDM with a batch file, instead of DM.EXE — there is more about how to do this in the HDM.DOC file). Then I filled in the "Command tail," specifying `games.dat` as the new data file. Then I opened my Games folder and added my games.

I hope you enjoy using these programs to organize your DOS programs and run them without having to exit System Manager. I've used this system for a while and it's worked fine. However, that's no guarantee that you won't experience some problems. Please take this as a disclaimer that you do this at your own risk and that I am not responsible for any problems you might experience. Please be sure to back up your 200LX before attempting any of this.

Shareware/Freeware mentioned in this article

HDM ■ - V. 2.2, by Harry Konstas. A DOS menu program that allows you to manage up to 200 DOS applications on your LX. Freeware. Available on *The HP Palmtop Paper's 1998 CD Infobase*, and also on the Web: www.palmtop.net/super.html

MaxDOS ■ - V. 0.3.7, by MeW. This program allows you to run any size DOS program from System Manager by swapping the running session to disk. Copyrighted freeware. Available on *The HP Palmtop Paper's 1998 CD Infobase*, and also on the Web: www.palmtop.net/super.html

EMM ■ - v. 2.00 EMM is a freeware EMS driver for the HP 100/200LX that assigns EMS memory to the C: drive, and can speed up applications that can use EMS. Copyrighted freeware. Available on *The HP Palmtop Paper's 1998 CD Infobase*, and also on the Web: www.palmtop.net/super.html

Programmers Corner:

LXBatch Programming, Part II

Ed demonstrates some of the commands available in the LXBatch programming language and creates a program to enhance FILER on the HP 200LX.

by Ed Keefe

In a previous installment of the Programmer's Corner, we started to explore some of the commands built into the LXBatch language from Rob Koenis.

In this article, we'll delve into more of these commands and create a handy utility program that will breathe new life into an undocumented feature of FILER on the HP 200LX.

The Problem

The undocumented feature on the HP 200LX is called "file association." It relies upon a file called "FILER.INI" which you create and save in the C:_DAT directory. For example, suppose you create the following file in MEMO and save it as C:_DAT\FILER.INI

```
[LAUNCHER]
TXT=A:\WRD\PE.EXE %
```

Now, when you go to FILER and highlight a file with the extension .TXT and press Enter, the association feature will "launch" PalEdit (A:\WRD\PE.EXE) along with the highlighted .TXT file. The "%" sign in the association statement stands for the name of the data file. Without the FILER.INI file, you'd get an error message: "Cannot run file: file extension must be .BAT, .COM, or .EXE".



Screen 1: Stereo Shell works only in DOS.

Buddy ■ users have grown accustomed to this association feature since the days of the HP 95LX. Windows users have a similar feature on their desktop. However, the association feature in FILER, as well as in Buddy and in Windows, has a short-coming: you can hook files to only one program.

For example, you might associate an .SND file with the PLAY EX.EXE ■ program. This would let you highlight .SND files in FILER and play them by pressing the Enter key. It won't let you associate

an .SND file with an editor, viewer or another player program.

On the other hand, the MS-DOS file manager, Stereo Shell ■, gives you a choice of things to do with any file. You can point at a file, press Enter and get a menu that will let you either Run, View, or Edit a .BAT file. If the file is something other than a .BAT, .COM, or .EXE file, Stereo Shell modifies the choices so that you can Edit, View, or Launch a program that will use the data file. Unfortunately, Stereo Shell only works in DOS (Screen 1).



ABOUT THE AUTHOR

A long time contributor to Hewlett-Packard Handheld support publications, Ed Keefe is an author, editor, programmer, computer science instructor, and part-time consultant in the computer industry. He is also the editor of the book *PC In Your Pocket: Information When You Need It*. Ed can be reached at 75300.3667@compuserve.com

CHOICE.LXB

CHOICE.LXB is a program you can create which will display a list of things you can do with any data file.

```
=====
;CHOICE.LXB // The semicolon is the LXB comment marker.
```

```
screenssetup // LXB command to put the palmtop in graphics mode
```

```
upper *ext %1 // Gets commandline arguments (%1 and %2) ,
upper *fqm %2 // converts them to uppercase and stores them in
// LXB global variables.
```

```
goto @ext@ // Jump to the section of the code that deals with
// files that have the extension stored in @ext@
```

```
=====
;Global subroutines:can be used by several types of files
=====
```

```
:WIN //A label for a subroutine
screenssetup Choices for @fqm@ //Show the name of the file
RETURN //at the top of the screen.
```

```
:1MNT
winopen 280 80 360 110 One // "One Moment" message in a
windisplay 10 1 2 Moment //small two-line window
RETURN
```

```
:SELECT //Pick a new file with the
//extension given in @ext@
```

```
Dirbrowse *aFile *.@ext@ Choose a different *.@ext@ file
//Dirbrowse puts a directory
//browser on the screen. It lets
//you select different drives,
//directories and only those files
//with the extension in @ext@. Once
//you've picked a file, its name
//will be stored in the *aFile
//variable.
```

```
if "@aFile@" == "" goto skip //Test for the case when no file
//was selected otherwise goto :SKIP.
```

```
set *fqm @aFile@ //Copy the @aFile@ variable to the
//fqm variable for further use.
```

```
:SKIP
goto @ext@ //Return to sender...
```

```
=====
;Compressed files menu
=====
```

```
:LZH
:ZIP
gosub win // execute ":WIN"
menu "&List all files" "&Test all files" "&View a text file" "&Extract a file" "&Pick a
New File" "&Quit
```

```
onerrorgoto end list@ext@ test@ext@ view@ext@ extract@ext@ select end
// "menu" is a LXB command.
// If a menu item is more than one
// word, enclose it in quotes.
// Use "&" before any "hot key".
// "onerrorgoto" is a LXB command.
// The first choice should be a way
// to exit via the ESC key. The second
// option refers to the first item in
// the menu list; the third option
// refers to the second item in the
// list and so on. All items refer to
// the routines below except for
// "Pick a New File" which refers to
// the ":SELECT" routine shown above.
// NOTE: you can concatenate an LXB
// variable to another word as in
// "list@ext@" (Neat feature!)
```

```
:LISTLZH // CHOICES to show a list of files
:LISTZIP // in a compressed file...
```

```
gosub 1MNT // run the ":1MNT" subroutine
if "@ext@" == "LZH" lha /n @fqm@ >filelist
// i.e. if the extension is "LZH"
```

```
// run the LHA program on the
// given .LZH file (shown as @fqm@)
// and send the list to a file called
// "filelist" using the DOS I/O
// redirection operator (> ).
if "@ext@" == "ZIP" fv @fqm@ >filelist
// If the extension is .ZIP, use
// Vernon Bueg's FV.COM program to
// send a list of files to the
// "filelist" file.
```

```
FileDisplay filelist // "FileDisplay" is a LXB command
// that displays any text file in
// an onscreen window.
```

```
del filelist // Erase the filelist file when
// you're done with it.
goto @ext@ // Loop back to the start of the
// Menu routine.
```

```
:TESTLZH // Routines to test the integrity
:TESTZIP // of a compressed file.
```

```
gosub 1MNT
if "@ext@" == "ZIP" goto ziptest
// If the extension is ZIP jump to the
// next section, otherwise set the
screenrestore // screen to text mode
lha t @fqm@ // Use the LHA program to test the
// .LZH file and show it on the screen.
```

```
pause
screenssetup // Set graphics mode.
goto @ext@ // Loop back to the menu.
```

```
:ZIPTEST
pkunzip -t @fqm@ > filelist // Send the test results to
// "filelist" and
FileDisplay filelist // display the results.
del filelist
goto @ext@ // Loop back
```

```
:VIEWLZH // Routines to view a single file
:VIEWZIP // in a compressed file.
input *vufile "Which file? "
// "input" is a LXB command that
// asks for the name of a file and
// stores the name in a LXB variable
// I named *vufile.
```

```
if "@vufile@" == "" goto @ext@ // Test for no input
// otherwise...
gosub 1MNT
if "@ext@" == "LZH" lha x/n @fqm@ @vufile@
if "@ext@" == "ZIP" pkunzip -e @fqm@ @vufile@ >no
// Extract the vufile from the
// compressed file.
```

```
Filedisplay @vufile@ // Display the file.
del @vufile@ // Erase the temporary file.
set *vufile "" // Reset the *vufile variable
goto @ext@
```

```
:EXTRACTLZH // File extraction routines
```

```
:EXTRACTZIP
input *vufile "Which file? "
if "@vufile@" == "" goto @ext@
gosub 1MNT
if "@ext@" == "LZH" lha x/n @fqm@ @vufile@
if "@ext@" == "ZIP" pkunzip -e @fqm@ @vufile@
// The extraction process will
// clutter the display, so
screenrestore // switch in and out of text mode
screenssetup // to refresh the screen.
goto @ext@
```

```
:END
screenrestore //Restore the screen and stop
stop
```


You can't use Stereo Shell within System Manager.

The Solution

Here's the challenge: create a program, called CHOICE.LXB ■, that will make FILER act like Stereo Shell; namely, present a list of things you can do with any data file. We can omit the choices of copying, moving, or deleting files, since FILER itself performs these tasks well enough.

For the sake of expediency, we'll show how to create a part of this program for files that have the extensions .ZIP or .LZH. A more complete version of CHOICE.LXB is available on this issue's *The HP Palmtop Paper ON DISK* and from either www.thaddeus.com or from the HPHAND forum on CompuServe.

CHOICE.LXB

The listing of the CHOICE.LXB file that will accomplish this task can be seen on the previous page. If you type this into your palmtop, don't type the " //" or anything after this on the line. The " //" marker signifies a remark about the command.

To see if the program will work,



Screen 2: This is what you'll see after highlighting an .LZH or .ZIP file and pressing enter.

you need to create a FILER.INI file and save it in the C:_DAT directory. The file should contain the following lines.

I keep the LXB.EXE ■ (which is the LXBatch program) and CHOICE.LXB files in my A:\BAT directory. You may have to change

CHOICE.LXB is a prime example of non-structured programming. It's full of GOTO statements which betrays its DOS batch-file heritage. Yet it's somewhat like a Windows event-driven program. It certainly is easier to use than hacking away for hours with a C compiler and the PAL library functions.

```
[LAUNCHER]
LZH=A:\BAT\LXB.EXE  LXBFILE
A:\BAT\CHOICE.LXB BEGIN LZH %
ZIP=A:\BAT\LXB.EXE  LXBFILE
A:\BAT\CHOICE.LXB BEGIN ZIP %
```

"A:\BAT" to reflect the drive and directory where you keep these files.

If you already have a FILER.INI file, you can add these new lines to the file and comment out any lines that start with LZH or ZIP by putting a ";" at the start of the old lines.

(Don't ignore the "BEGIN" word in the above lines. It tells the LXB.EXE program where to start interpreting the CHOICE.LXB file.) Once the CHOICE.LXB program and the FILER.INI file are in place, go to FILER and highlight any file that ends with .LZH or .ZIP and press ENTER. You should see the screen that's displayed in Screen 2.

Use the ESC key or press Q or highlight the Quit option to exit the program. Try highlighting a menu item and then press ENTER to activate the selection. Try the "Pick a New File" option by pressing the "P" key to see if that works.

If you made typing mistakes, or something in your system interferes with the CHOICE.LXB program, the program will unceremoniously terminate and dump you back in FILER without letting you know

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what happened. (I wish that weren't so, but such is the nature of the program.) On a few occasions while developing this program, my palmtop suffered a hard crash. I had to press CTRL-SHIFT-ON and answer N to recover. So be forewarned: back up everything in sight before you start, and proceed with caution.

Programming Considerations

CHOICE.LXB is a prime example of non-structured programming. It's full of GOTO statements which betrays its DOS batch-file heritage. Yet it's somewhat like a Windows event-driven program. It certainly is easier to use than hacking away for hours with a C compiler and the PAL library functions.

Rob Koenis has done a marvelous job of making it easy to create simple programs on the palmtop. With just a little pain, you can gain results that work efficiently and effectively.

More, more, more

As mentioned above, a more complete version of the CHOICE.LXB program is available on this

On a few occasions while developing this program, my palmtop suffered a hard crash. I had to press CTRL-SHIFT-ON and answer N to recover. So be forewarned: back up everything in sight before you start, and proceed with caution.

issue's *HP Palmtop Paper ON DISK* or for down-loading from www.thaddeus.com or the HPHAND forum on CompuServe.

The archive called CHOICE.ZIP contains a much more elaborate version of a FILER.INI file with associations for almost any type of file you could have in your palmtop. The CHOICE.LXB program in the archive shows how to use the LXB commands "stuffkey" to have an LXBatch file run a built in application such as the Database or NoteTaker. It also demonstrates how to create a CHOICE.INI configuration file for CHOICE.LXB and how to use that file as well.

Be aware, however, that the added complexity of the larger version means that you'll have to spend some time getting the bigger

version of CHOICE.LXB "tweaked and tuned" for your system. This is definitely not a "plug and play" operation.

Have fun with this one. I hope it proves to be a useful piece of programming.

Shareware/Freeware mentioned in this article

CHOICE.LXB is available on this issue's *The HP Palmtop Paper ON DISK* and from www.thaddeus.com. All other programs available on *The HP Palmtop Paper's 1998 CD InfoBase* and from www.palmtop.net/super.html

BUDDY ■ – An add-in utility for the palmtop that provides many features (smart capitalization, macro file handling, flashing alarms; many, many more features. Shareware.

CHOICE.LXB ■ – An LXBatch program that makes FILER present you with a list of things you can do with any data file. Freeware.

LXB.EXE (LXB30.ZIP) ■ – LXBatch, the powerful batch tool for the HP 100/200LX. Postcardware.

PalEdit ■ – A very good text editor for the palmtop. Copyrighted freeware.

PLAYEX.EXE ■ – A program that enhances the sound function for playback of alarm sound data. Copyrighted freeware.

Stereo Shell ■ (*STS410.ZIP*) – A dual-windowed file manager application similar to FILER.

New! Link-A-Printer II

Smaller size & Attached cable



Link-A-Printer II is a serial to parallel converter that allows direct printing from your OmniGo 100 to any parallel printer. It also works with the HP 100/200LX.

\$79

Link-A-Printer II has a built-in connectivity cable that plugs into your OmniGo 100. Since it does not require batteries or extra cable, Link-A-Printer II is simple and easy to use.

Also Available Link-A-Printer I

Requires connectivity cable and optional battery. Features auto on/off fixed 9600 baud.

\$59



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Greenwich Instruments LTD
European Distributor
Tel: 011-44-181-302-4931
Fax: 011-44-181-302-4933

••• BASIC TIPS •••

FILER

Deleting "read-only" files

If you try to delete a file from within FILER and you get an error box saying, "Cannot delete read-only file," (see Screen 1) one of two things is happening. First, it's possible that the file you're trying to delete is open in an application. Go back into the application in which the file was created (for example, Database, or PhoneBook) and Quit the application. You should now be able to return to FILER and delete the file.

Second, it is possible that the file's attribute is set to "read-only." (Often, after downloading a file from the Internet, I discover that the file's attribute has been set to "read-only.") If your file is set to "read-only," although you will be able to "read" the file (i.e., load it into MEMO or another program, or TYPE it from DOS, or View it in FILER) you won't be able to alter it or delete it unless you disable the read-only attribute. (The "read-only" attribute is a hidden code stored with a file's directory.)

To find out whether the file's read-only attribute is enabled or disabled, go into DOS and go to the drive and directory where the file is located. Then use the DOS ATTRIB command. Type

```
ATTRIB filename [RETURN]
```

Insert in the place of "filename" the name of the file that you're not able to delete. (Alternately, you can just type ATTRIB without specifying a file name. This will produce a list of all the files in that directory, along with each file's attribute.) If the file is read-only, you'll see something like the following:

```
R          A:\OLD.EXE
```

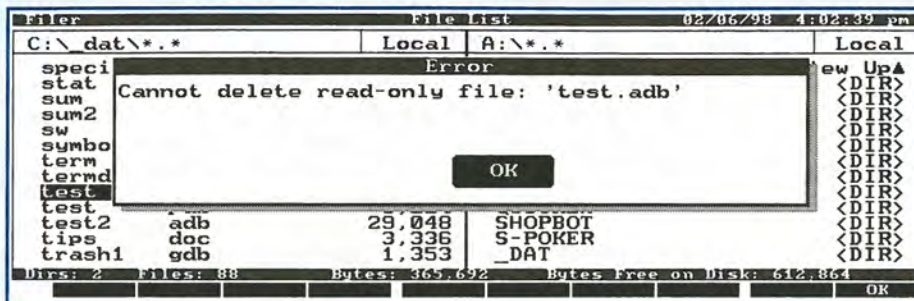
The "R" means that the file OLD.EXE (which is on the A:\ drive) has its read-only attribute enabled.

To disable the file's read-only attribute, type

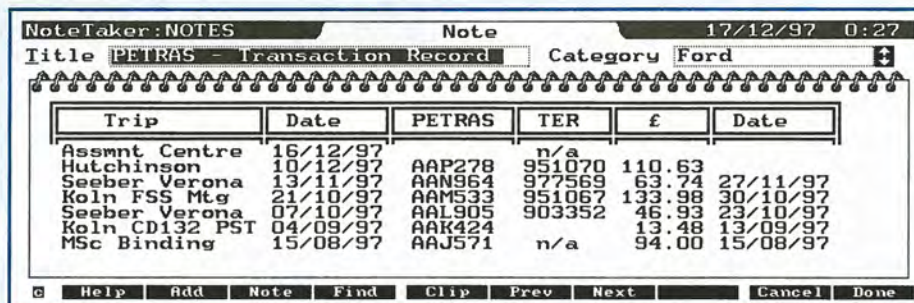
```
ATTRIB -r OLD.EXE
```

Alternately, you could type:

```
ATTRIB -r *.*
```



Screen 1: Trying to delete a read-only file is not the only action that can produce this Error box.



Screen 2: By adding column headings and dividers, NoteTaker lists become easier to read.

This will remove the read-only status from all files in that directory (*. * means "all files.")

In some situations, you might want to enable, rather than disable, a file's read-only status. For example, maybe you have a MEMO file that you don't want anyone else to alter or delete (or you want to prevent yourself from mistakenly deleting).

To enable read-only status on a file, you would type at the DOS prompt:

```
ATTRIB +r OLD.EXE
```

To sum up, "-r" in conjunction with the ATTRIB command disables read-only status, whereas "+r" enables it.

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Managing Editor
The HP Palmtop Paper
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NoteTaker

Formatting notes in NoteTaker (or PhoneBook or Database or WorldTime)

Spending a little time formatting the text in your notes can make them easier to read and quicker to update. If you are

like me, you will have many notes which are basically lists (See Screen 2). As you can see, I've added column headings and vertical and horizontal dividers to some of my notes using the ALT+Fn+(ASCII code) key-combination.

For example, for the "corner character" ¶ I first refer to page C-3 of my HP 200LX User's Guide, which contains the "850 Multilingual" character font. In the table on that page, I see that the "corner character" is assigned to ASCII code 201. Next, (with the Full Screen Note screen open in NoteTaker), I press and hold down ALT, and then press and hold down MENU, and then type 201. When I remove my fingers from the keyboard, the "corner character" appears on the screen. In like manner, I refer to the table on page C-3 to find out the 3-digit ASCII codes for the other vertical and horizontal dividers that I'd like to use. Then I add those characters to the note.

Once a little of the formatting has been created, I find it quicker to complete it by cutting, pasting and editing, rather than by entering all the characters by their three-key combination. As part of the design, you might want to consider what the formatted table looks like on the DataCard (see Screen 3). (Editor's note: see pages 31 and 32 in the January/February 1998 issue for specifics on how to alter the display of

the DataCard.)

Even if you don't format your notes as I suggest, it's a good idea to enter your data in reverse order, so that the last entry is at the top. Working this way avoids always having to scroll to the bottom of a long note to add new data. This also applies to the Note field of the other built-in applications.

Matt Haigh
e-mail mhaigh@compuserve.com

MEMO

Using templates in Memo

I keep templates of documents in MEMO that I can quickly edit for my immediate purposes. For example, I have templates for business letters, personal letters and for faxes (see Screen 4). I've also recreated the standard business forms I use regularly. I've used the line graphics and special characters described previously to create borders, boxes, shading, and simple graphics which I use time and time again.

If you try this, remember to save any files that you edit under new file-names so that you don't corrupt the templates.

In order to prevent myself from corrupting the templates, I have used the DOS ATTRIB command to set the attributes of the template files to read-only (see the tip above). This way, I get a 'Error writing file' message if I inadvertently attempt to overwrite the document.

Matt Haigh
e-mail mhaigh@compuserve.com

ApptBook

Using the Leadtime feature

The Leadtime field in an Appointment record lets you set the alarm to go off a specific number of minutes before the Start Time of the appointment. You can thus choose how far in advance of the appointment you'd like to be notified, allowing time to walk to a restaurant, take a taxi to the airport, etc.

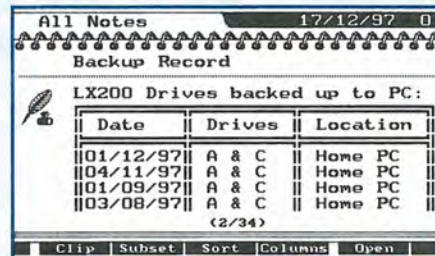
The default leadtime is set to 5 minutes, which means that if you create an appointment for 2:25pm, the alarm will actually go off at 2:20pm.

To set the leadtime, open ApptBook, then press (F2) (Add) and fill in

Description and Start Time fields. (See Screen 5.) Next, TAB down to the Leadtime field, or go there directly by pressing (Alt+L). Then type in the length of leadtime, either as minutes (for example, 90) or as hours:minutes (for example, 1:30).

The leadtime can be set anywhere from 0 minutes to 23 hours and 59 minutes. However, in order to use a leadtime, the alarm has to be enabled. Pressing (Alt)+(B) toggles the alarm on or off.

The majority of my appointments are



All Notes 17/12/97 0:

Backup Record

LX200 Drives backed up to PC:


Date	Drives	Location
01/12/97	A & C	Home PC
04/11/97	A & C	Home PC
01/09/97	A & C	Home PC
03/08/97	A & C	Home PC

(2/34)

Clip Subset Sort Columns Open

Screen 3: Even your DataCard can display the vertical and horizontal dividers in your notes.

ralph_turner@thaddeus.com



Memo: FAXBLANK.TXT 17/12/97 0:28

REPLACE ASCII LINE: 1 COL: 9

To:

From: Matt Haigh

Phone: +44 (0)1245 400900

Fax: +44 (0)1245 400900

Subject:

Help Find Fnd&Rep Swap Case Repeat Open Save

Screen 4: This MEMO document uses line graphics and special characters to create a good-looking FAX template.



ApptBook:TEST Appointment/Event 02/06/98 4:11:34 pm

Description Post bail for Gramps

Start Time 4:00pm Start Date 2/06/1998

End Time 5:00pm No. Consecutive Days 1

Location

Alarm ☒ Enabled Views ☒ Week ☒ Month

Leadtime 1:30 Repeat Status: None

Note Also call Mrs. Withers & apologize. He didn't mean it.

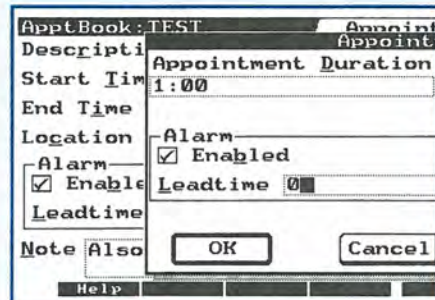
Help Add Note Find Clip Calendr Repeat Cancel Done

Screen 5: An appointment with the leadtime set to 90 minutes.)

reminders to call people, so I've set the default leadtime to 0 minutes. To choose a new default, press (MENU) Options, Appointment Defaults. When the defaults window appears, TAB down to Leadtime and type in 0, or whatever number of minutes you'd like. (See Screen 6.)

When I create a 12:00pm business lunch appointment for some day in the future, I usually set the leadtime to three hours. That way, I'm reminded earlier enough (9am) to allow time for any last minute preparations I need to do, such as reading through an outline, or printing out a report.

Ralph C. Turner
Managing Editor, The HP Palmtop Paper



ApptBook:TEST Appointment

Description Appointment Duration

Start Time 1:00

End Time

Location

Alarm ☒ Enabled

Leadtime 0

Note Also

OK Cancel

Help

Screen 6: By setting the leadtime default, you won't have to set individual leadtimes in each new record.

... QUICK TIPS ...

ApptBook

Creating your own alarm sound files

From time to time we print in The HP Palmtop Paper the contents of a customized sound file. Such a file, after it has been named ALARM.SND and placed in the C:_DAT folder, will replace the standard alarm sounds (such as Beep, Trumpet, or Chime) that get played whenever one of your ApptBook alarms goes off.

An ALARM.SND file consists of, in its simplest form, a string of letters that represent the different notes of a particular song. For example, if you open MEMO and type CDE

and then save the file as an ASCII file to C:_DAT\ALARM.SND, the next time one of your appointment alarms goes off, the musical notes "C" then "D" then "E" will be played. (Actually, there's one other thing you'll have to do: press MENU in ApptBook, then choose Options, Beep, Custom. This will force ApptBook to use your customized ALARM.SND file.)

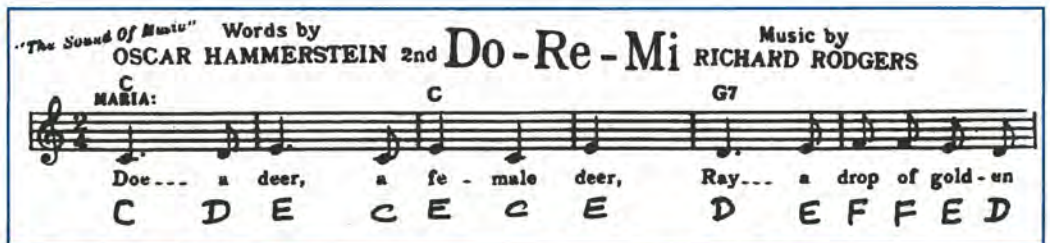
Anyone can create customized sound in MEMO, or in any other word processor or text editor. If you look up "Alarms, programming" in your HP 100LX or HP 200LX User's Guide, you'll find a list of commands for creating your own song scripts.

In addition to including letters representing different notes, you can include instructions that set the length, octave, tempo, volume, and other particulars of whatever song you'd like to have played.

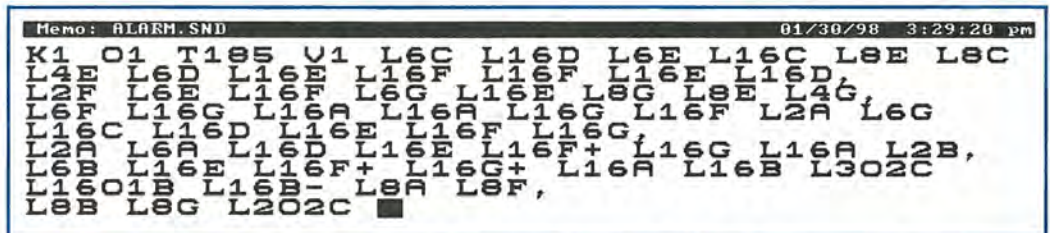
The more adept you are



Screen 1: Refer to this staff to find out what the letter designations are for the notes in your favorite song.



Screen 2: After referring to Screen 1, we've added the note designation (C, D, E, etc.) to the song Do-Re-Me.



Screen 3: This MEMO file will play the song Do-Re-Me whenever an ApptBook alarm goes off.

at reading a musical score, the easier it will be to create your own custom alarm file that contains one of your favorite songs. However, even if you don't know very much about music, you may be able to create a simple sound file. Here's what to do.

First, go to your local public library and find a book of musical song scores. Look through the book and find a song that is in the key of C. Songs in the key of C will be much easier to program than songs in another key.

Songs in the key of C will not have any musical symbols representing flats (b) or sharps (#) after the musical cleft at the beginning of the song. If you have any doubts about whether a particular song is in the key of C, ask a friend who is a

musician, or someone who sings in a choir.

Screen 1 shows letter designations for each note on the staff. For instance, a note that is positioned on the top line of the staff is an F. Using the information in Screen 1, you can assign the letters A through G to the notes of a song you've found in a music book.

For instance, in Screen 2, which shows the first line of the score of the well-known song, Do-Re-Me, from The Sound of Music, I've written the correct letters below each note (C, D, E, etc.). Now we're ready to create a sound file.

Look at Screen 3 to see what the completed file looks like (DO-RE-ME.SND). At the beginning of the file the letters "K1" appear.

This command allows you to terminate the alarm by pressing any keystroke. "L0" would disable this feature.

The next thing to note is the appearance of spaces, and a few commas, throughout the file. Neither spaces nor commas have any effect on the file. However, they can be used to make your commands more readable. For instance, I separate each note with a space, and each line of the score with a comma.

"O1" appears next. "O" followed by a number from 0 to 7 sets the octave. Lower numbers represent lower octaves.

"T" followed by a number from 0 to 255 sets the tempo. I experimented with different tempos, then finally settled on "T185." "V" followed by a number from 0 to

The rest of the notes appear next, with each note assigned a specific length.

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Creating rosters in HTML

Once the desired Subset has been selected, the Smart Clip comes into play. From PhoneBook, press the Clip function key (F5) then the Define key (F2), then prepare the Smart Clip definition that's shown in Screen 4. You may, of course, want

[illegible]

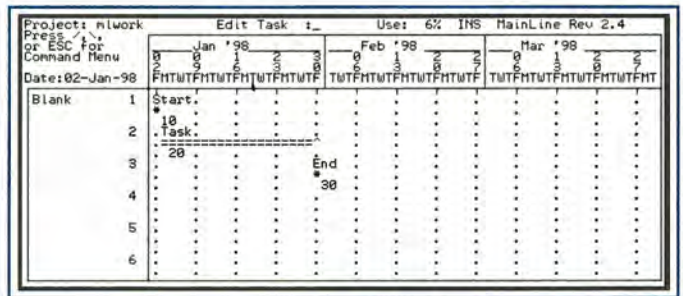
Screen 4: This Smart Clip converts PhoneBook data into HTML format.

The final step is to create a template file in MEMO. This file will be created only once, and used repeatedly each time a new table is prepared (when someone moves or changes phone numbers, for instance). An example of such a template file is as follows:

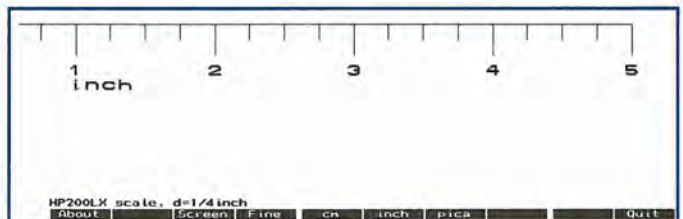
<!-- PASTE CLIPBOARD
CONTENTS HERE -->->

```
</TABLE>
</BODY>
</HTML>
```

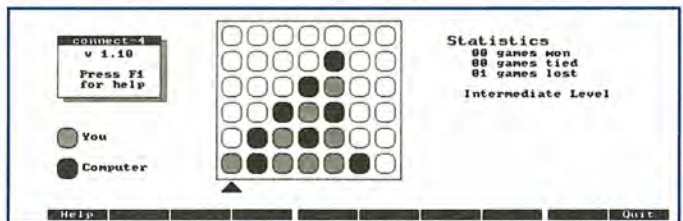
Save this file as TEM-



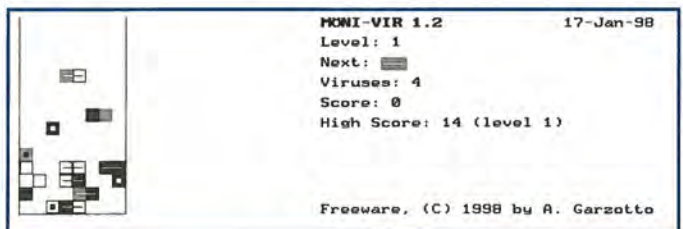
Screen 5:



Screen 6:



Screen 7:



Screen 8:

PLATE.HTM. Now open it up again and save it with whatever final name you want, such as ROSTER.HTM. Then position the cursor where indicated by the

"clipboard" line, and insert the clipboard contents using FN-PASTE. Then save one last time.

Voila. Now you have an HTML roster ready to go. It

takes more time to explain than to do - it goes very fast in practice. Updates are a breeze. The template file in MEMO can be modified to fit your exact format, and the Smart Clip can be altered to include the desired data for your specific needs. Happy rostering!

Chris Lott
Huntsville, AL
lott@phase4.com

New Software

MAINLINE.ZIP ■ - v. 2.5

MainLine, by Minuteman Systems (see Screen 5), is a DOS-based project management tool that will run on the HP 100/200LX. The program's primary function is to develop a chart to show the relationships of tasks in a project and their durations in time. The format of the schedule has several unique characteristics:

- Several tasks may be shown on one line on the schedule.

- All MainLine reports, including the schedule, can be output as text files.

The program, which is Shareware, was written for those who need to quickly and easily develop project schedules and convey the information to other people.

SCALE10.ZIP ■ - v. 1.0

SCALE (see Screen 6) is a configurable screen scale for the HP 100/200LX. Units of measurement can be switched quickly from inches to centimeters to pixels, and measurements can be made from the case of the palmtop, or against just the screen. Shareware.

C4_112.ZIP ■ - v. 1.12

Connect-4 (see Screen 7), by Eric Wong, is the HP 100/200LX version of the classic game of the same name. The goal of this Freeware game is to get four of your pieces in a row (horizontally, vertically or diagonally.)

To play a piece, you move the cursor (the little black triangle below the playing field) with the palmtop's cursor keys to the column you want. You press the space bar or the down key to drop a piece.

The playing level can be set at beginner, intermediate and expert levels.

VIR12.ZIP ■ - v. 1.2

VIR (see Screen 8), by Andreas Garzotto, is a falling block game for the HP 100/200LX that is similar to a virus eliminator game on the Gameboy.

The goal of the game is to eliminate all viruses,

which are depicted as blocks falling into the playing area. Using the cursor keys (or '.' and '+'), they can be moved left and right while falling. The cursor up key (or

the space bar) turns the piece clockwise and Shift-up turns it counter-clockwise. The down key makes a piece falling faster.

Shareware/Freeware mentioned in this article

C4_112.ZIP ■ - v. 1.12.

Connect-4 is the LX version of the classic game. Freeware. Available on this issue's *Palmtop Paper ON DISK*, and also on the Web at: www.palmtop.net/super.html

MAINLINE.ZIP ■ - v. 2.5

A DOS-based project management tool. Shareware. Available on this issue's *Palmtop Paper ON DISK*, and also on the Web at: www.palmtop.net/super.html

SCALE10.ZIP ■ - v. 1.0

SCALE is a configurable screen scale for the HP 100/200LX. Available on this issue's *Palmtop Paper ON DISK*, and also on the Web at: www.palmtop.net/super.html

VIR12.ZIP ■ - v. 1.2

VIR is a falling block game for the HP 100/200LX. Available on this issue's *Palmtop Paper ON DISK*, and also on the Web at: www.palmtop.net/super.html

HP Product Index

HP Products contact information: Authorized HP computer dealers worldwide (i.e. the same place you can purchase an HP LaserJet). To locate an authorized dealer in the USA, call 800-443-1254. You can also purchase the 95LX & 100/200LX and its accessories from: Your One-Stop Palmtop Shop at 800-709-9494 or 608-752-1537, Fax: 608-752-9548; PDA Direct at 800-279-4732 ext 130; Shier Systems at 805-371-9391, Fax: 805-371-9454.

HP 360LX Palmtop PC — \$599

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(versions available include: US English, UK English, German, Spanish, and French)

HP OmniGo 700LX — \$NA

(Combination HP 200LX, fax software and Nokia GSM cellular phone.)

1.8 Mb Flash Disk (HP F1024A, with Stacker) — \$199

6 Mb Flash Disk (HP F1215C, with Stacker) — \$425

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Palmtop Maintenance Kit (replacement parts) (F1216-60998) (US only) — \$20

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For U.S. HP Palmtop users. Units must be under warranty to extend.

Contact: HP, Corvallis Service Center, USA; Phone: 503-757-2002.

NOTE: Prices listed are suggested retail price. Dealer prices may vary.

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- ☐ COMPU SERVE: GO HPHAND FORUM — Call 800-848-8990 or 614-457-8650.
- ☐ AMERICA ON LINE: Keyword PALMTOP — Call 888-265-8001 for membership information.
- ☐ INTERNET NEWS GROUPS: news:comp.sys.palmtops.hp news:comp.sys.handhelds

How to Submit an Article

The richness of *The HP Palmtop Paper* comes from the contributions of Palmtop PC users. We and your fellow users welcome your submissions. (We do not offer payment for articles, your reward is knowing that you've helped others.)

If you have a good idea and want to "go for it," send it in via CompuServe e-mail [75300,2443], Internet: hal_goldstein@thaddeus.com, or send disk or hard copy to Hal Goldstein or Ralph C. Turner at the above address. Alternatively you can send an outline of your idea. We will try to guide you as to when and whether we would use the article and contact you if we need clarification or have any suggestions — please include your phone number. We may want to use an article but for a variety of reasons you may not see it for many months. Please understand that we cannot promise to run any particular article at any particular time.

If you can, especially if you write a Palmtop Profile, send us a photo of yourself.

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A One Stop Palmtop Shop	(Accessories).....	800-709-9494 or 608-752-1537; Fax: 608-752-9548	20
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Aware	Micro Roentgen Radiation Monitor	800-729-5397 or 302-655-3800; Fax: 302-655-3800	12
EXP Computer	ThinFax Modem	800-EXP-6922 ext. 641 or 714-453-1020; Fax: 714-453-1319	BC
Greenwich	Link-A-Printer	800-476-4070 or 704-875-8490; Fax: 704-875-2801	30
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Kingmax Micro	Peripherals.....	714-454-9888; Fax: 714-454-9499	9
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	Vertical Market Upgrades.....		28, 35
	Handheld PC Magazine.....		5
Trans Digital	Trans PC Card-Universal Parallel Port	916-482-5599; Fax: 916-482-5598	15

Shareware and Freeware Index

March/April 1998

Software on The HP Palmtop Paper ON DISK

PRODUCT	FUNCTION	CIS FORUM / LIBRARY	TYPE	PAGE
C4_112.ZIP	100/200LX version of the game Connect-4.	NA*	Freeware.....	35
CHOICE.ZIP	LXBatch program: more options in FILER.	NA**	Freeware.....	30
DO-RE-ME.ZIP ...	ApptBook alarm sound file: "DO-RE-ME" song.	NA.....	Freeware.....	33
DISP.ZIP	Utility that turns the display on and off.	NA*	Freeware.....	3
ESCAN04.ZIP	Scanner utility for Epson GT-6000/ES-300C.	NA*	Freeware.....	3
EMM200.ZIP	EMS driver; assigns EMS memory to C: drive.	HPHAND, 11*	Freeware.....	25
HDM.ZIP	DOS memory program.	HPHAND, 11*	Freeware.....	25
JAM125SW.ZIP ...	Data compression utility.	HPHAND, 11*	Freeware.....	3
MAINLINE.ZIP	DOS-based projext management tool.	NA*	Shareware	35
MAXD03B.ZIP	Run any size DOS program from Sys-Manager.	NA*	Freeware.....	25
PTP38.ZIP	Text: The HP Palmtop Paper, Mar/April 1998	NA.....	NA.....	NA
PTPDSK38.ZIP	Database: PTP ON DISK Index in .GDB format.	NA.....	NA.....	NA
QVREM09.ZIP	Control Casio digital camera from 100/200LX.	NA*	Freeware.....	3
README.ZIP	Text: cover letter to the HP Palmtop Paper ON DISK.	NA.....	NA.....	NA
SCALE10.ZIP	Screen scale program for the 100/200LX.	NA*	Shareware	35
TTDEMO.ZIP	Time tracking/billing program for the 100/200LX.	HPHAND, 14	Demo	3
VDE185.ZIP	Editor/word processor.	HPHAND, 7*	Shareware	3
VIR12.ZIP	Falling block game for the 100/200LX.	NA*	Freeware.....	35

* On the Web at: www.palmtop.net/super.html

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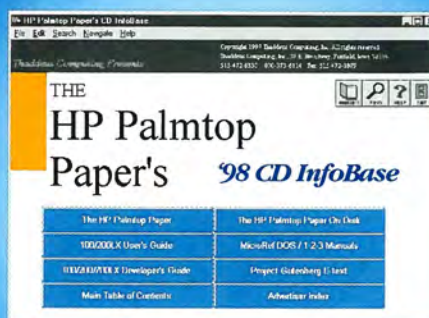
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