

THE HP Palmtop Paper



SPECIAL BONUS ISSUE

BEST PALMTOP TIPS

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Publisher's Message



Top: Hal Goldstein

Bottom: Robert Roney and Rich Hall

What a bear, but it was worth it! When I offered this *Best Palmtop Tips* issue, I thought we could put it together in a couple of weeks. After all, all we had to do was select the best of the letters, articles, and tips that we published in our first thirteen 1991-93 issues. Wrong!

We ran into two problems.

First, there is a lot of densely packed good material in those 13 issues. Robert, Richard and I met and developed criteria for selecting tips. We wanted each tip to be of value to most users, to be self-contained, and to be part of a balance of HP Palmtop topics we dealt with our first two years. Phase one involved the three of us selecting, debating selections, deleting selections, until we came up with the "raw" tips in an organization similar to

what you see here. (We ended up with twice as much material as I had originally planned for, but I could not bring myself to cut any more).

The second challenge was that much of the material was a little out of date. Also, much of the material was written for the HP 95LX, but with a little massaging could be made relevant to the HP 100LX. This meant that we had to edit almost every tip to bring it up to date and to where we could apply it to both HP Palmtops. (We did our best to be accurate with the updating, but there is so much material in this bonus issue, I'm sure astute readers will be able to make some corrections.)

We decided to include several articles with the tips. In particular the first "Review of the Basics" section contains important background material that all Palmtop should understand. Also, I ended up writing a new "Best Products" article.

Here also I ran into the abundance of material. Originally, my plan was to choose a half a dozen products for my "Best Products" article. However, as I got to thinking and writing, I was astounded to think of all the excellent, useful, break-through products. The article evolved into a survey of a number of the excellent products developed for the HP Palmtops over the past 2 1/2 years.

Finally, as we put together the issue the need for an associated disk emerged. Many of the tips as well as my "Best Products" article discussed freeware and shareware. The result: not one but two jammed 1.44 megabyte floppies came into to being containing the latest versions of software as well as the contents of this issue. We decided to make it a freebie for *The HP Palmtop Paper On Disk* subscribers (and available for separate purchase).

Enjoy.

Hal Goldstein

The HP Palmtop Paper

Volume 3, Bonus Issue #1

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The HP Palmtop Paper (ISSN 10656-189) is published bimonthly by Thaddeus Computing Inc., at 57 East Broadway Avenue, Fairfield, IA 52556. Second-class postage paid at Fairfield, Iowa. Subscription rates payable in U.S. dollars, checks drawn on a U.S. bank, or by credit card — one year: \$39; two years: \$69. Postage: U.S. and U.S. possessions free; Canada, Mexico add \$6 per year; other countries add \$18 per year. Please allow four to six weeks for receipt of first issue. Executive, Editorial, Circulation, Marketing and Advertising Offices: P.O. Box 869, Fairfield, IA 52556. Telephone: (515) 472-6330, FAX: (515) 472-1879. Copyright 1994, Thaddeus Computing, Inc., all rights reserved. No part of this publication may be reproduced without written permission. Reasonable efforts are made to provide accurate and useful information, but the reader must make his or her own investigations and decisions; the Publisher and Editorial Staff cannot assume any responsibility or liability for the use of information contained herein.

POSTMASTER: Please send any address changes to *The HP Palmtop Paper*, Attn: Thaddeus Computing, Inc., P.O. Box 869, Fairfield, IA 52556.

Review of the Basics

95LX 100LX

A Quick Review of the Basics

Files, bytes, RAM disk, System RAM, and directories: Understand these concepts and you'll get more out of your HP Palmtop!

By Hal Goldstein
(Article, Jan/Feb 93, page 47)

Users need to understand basic concepts to get the most out of their HP Palmtop. Hours of confusion and frustration can be avoided if the beginning user understands the fundamentals necessary to perform any activity on the 95LX or the 100LX.

I'll cover the applied value of each concept briefly. For a more in-depth treatment of each, look at the 1992 HP Palmtop Papers' Getting Started columns, consult the *HP 95LX User's Guide*, the *HP 100LX User's Guide*, or pick up an introductory book on personal computing.

Files

This is the single most important concept you should understand. Your PHONE book, MEMO notes, APPT book, Database, 1-2-3 spreadsheets, and HP CALC equations are all stored in separate files. When you save a file in any of these applications, the information contained in the file is accessible upon demand. In addition, you can transfer such files to other computers.

CAUTION: Remember, on the 95LX when you add something to any of these files (i.e., a new address to your Phone Book), the addition does not become a permanent part of the file until you save the file. (In MEMO, PHONE, and APPT you save a file by pressing **[MENU]** File Save **[ENTER]** Yes.)

On the 100LX files are automatically saved in APPT, PHONE, HP CALC, Database, and Note Taker. Automatic save can be selected in MEMO. On both Palmtops Lotus 1-2-3 files must be saved.

When you save a file for the first time, you are asked to give it a "filename" between one and eight characters long (filenames may not include blank spaces). Examples of some legal file names include BUDGET, YEAR_END, and SAM-MEMO. Both the 95LX and 100LX automatically "complete" the name by adding a three character "extension" to the filename. On the 95LX MEMO adds .TXT, PHONE adds .PBK, 1-2-3 adds .WK1, APPT adds .ABK, and HP CALC adds .EQN. On the 100LX MEMO adds .DOC, PHONE adds .PDB, 1-2-3 adds .WK1, APPT

adds .ADB, Database adds .GDB, Note Taker adds .NDB, and HP CALC adds .EQN. When you go into FILER and look at file names, you can easily identify the application the file was created by from its three character extension.

Bytes

The number of bytes in a file is a measure of the size of the file. Each byte contains approximately one character (i.e. a letter, number, punctuation mark, etc.) worth of information. One kilobyte refers to 1024 bytes (and is abbreviated by the letter K). So a 12K file

has roughly 12,000 characters worth of information.

RAM Disk / System RAM

The HP Palmtops come with a built-in RAM Disk (designated as the C drive). When you save a file, by default you save it to the C drive — onto the built-in RAM Disk. The double-A batteries (and if they fail, the back-up battery) provide the energy needed to maintain your files in RAM. If all batteries go dead, you lose the files on your RAM drive.

The Palmtops also have part of their RAM set aside as System RAM to run programs and hold temporary files. When you run an application such as PHONE, a copy of your phone book file is stored temporarily in System RAM (the 100LX only stores part of the file in System RAM). When you add a new phone number, the temporary copy of the file is updated.

Saving the PHONE book file on the 95LX by pressing **[MENU]** File Save **[ENTER]** Yes copies the updated temporary PHONE file from System RAM to the permanent file on the RAM Disk. The 100LX automatically copies the updated part of the phone book file to the permanent file on the RAM Disk.

System RAM / RAM Disk Ratio

On a 512K 95LX you start with a total of

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512K of RAM that gets divided between System RAM and RAM Disk. If the RAM disk has 254K then System RAM contains 258K. Similarly, a 1MB 95LX or 100LX contains 1024K bytes of RAM. Initially that gets divided, 398K for RAM Disk, 626K of System RAM. The 2MB 100LX gets divided into 1,376K for RAM disk and 636K of System RAM. The size of the RAM Disk can be increased or decreased.

You can change the System RAM/RAM Disk ratio by closing all applications: On the 95LX press **[Shift]-[FILER]** System Memory. Then use the left or right arrows to adjust the ratio and press **[ENTER]** **[ENTER]** to set the change. On the 100LX press **[&]**, **Setup**, **[MENU]**, **Option**, **System**, tab to Memory and use the right and left arrows to change the memory allocation.

The greater the size of the RAM Disk, the more space you have to permanently store data files and program files. (If you run out of space on the C drive, the internal RAM Disk, you can install a memory card in the PC card slot to store your files. This adds a second RAM Disk which the system designates as the A drive.)

The greater the System RAM, the more built-in applications (PHONE, MEMO, etc.) you can run at the same time. Larger System RAM also means that you can open bigger files (i.e. larger 1-2-3 worksheets). Therefore, if you want to switch back and forth between large PHONE, APPT, 1-2-3, and MEMO files, you might need to increase the size of the System RAM. In addition to the built-in applications the HP Palmtops can run other MS-DOS or System Manager Compliant programs that may require more System RAM.

MS-DOS

An operating system serves as the intermediary between the computer's hardware and the software it runs. The HP Palmtops, like any IBM PC or PC-compatible computer, is a "DOS machine." This means that the operating system is the Microsoft Disk Operating System (referred to as "MS-DOS" or just plain "DOS").

The fact the Palmtops are DOS machines means that many DOS programs originally designed for an IBM PC compatible computer will either run directly on the Palmtop, or can be modified to run (by the program's publisher) with relatively little effort. The 95LX's 40x16 screen, its small disk space, and its lack of PC-compatible graphics support are the major obstacles to software running on the 95LX. The 100LX will run more unmodified DOS programs because it supports CGA Graphics and an 80x25 screen.

System Manager

The HP Palmtop has the advantage of being both a DOS machine and of having a more friendly and powerful second layer operating system environment called "System Manager."

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System Manager allows users to open more than one program at once. This is not normally possible in a straight MS-DOS environment. Palmtop users don't think twice about opening their PHONE book, then switching to MEMO to jot down a note, going to Lotus 1-2-3 to check some figures, popping back to MEMO to finish the note, and then returning to PHONE, exactly where they left off.

In addition, you can add other System Manager programs to the Palmtops. "System Manager Compliant" programs are written to be opened and run at the same time as the built-in applications.

In general, System Manager and its FILER application do a good job of hiding many of the complexities of the DOS environment from the everyday user.

Directories

When you save a file, you save it into a directory. The HP Palmtops come with the C directory and the _DAT subdirectory built in. PHONE, COMM, APPT, and HP CALC files are automatically saved to the C:_DAT directory on the both Palmtops. Lotus 1-2-3 files are saved into the C:\ directory on the 95LX and to the C:_DAT directory on the 100LX.

The simplest way to get a practical understanding of this is to go into FILER. If the top line says C:\ you can press **[DownArrow]**

to see the names of all the files in C:\. To move to C:_DAT directory, put the black cursor line on _DAT and press **[ENTER]**. To go back to C:\, put the cursor on the line that says .. **View Up** and press **[ENTER]**.

In addition, the 95LX's C directory has a _SYS subdirectory. If you open up FILER you'll see _DAT, but not _SYS. That's because _SYS is a "hidden" subdirectory on the 95LX that doesn't display in FILER as a subdirectory of C:\, but it's still there and you can go to it and view its contents. With the cursor in the C:\ directory press **[F5]** (Goto), type in _SYS and press **[ENTER]**. You should get a listing of the files in the _SYS directory. These files are in permanent ROM. They can be copied elsewhere, but cannot be erased or modified and re-saved to the _SYS subdirectory on the 95LX.

The 100LX does not have a "hidden" _SYS directory. Its system files are in permanent ROM on the D drive. You can view these files in FILER by pressing **[ESC]** repeatedly until you see the listing of drive letters, select **[D-]** with the arrow keys and press **[ENTER]**. Again, these files can be copied elsewhere. But because they are in ROM, they cannot be erased or modified and re-saved to the D directory on the 100LX.

Spending the time needed to understand these concepts will make your HP Palmtop computing simpler and more effective.

Many Ways to Back Up Your Files and Many Ways to Lose Them!

Read this and obey! The frustration you avoid not having to re-enter lost files will pay for your subscription many times over!

By Hal Goldstein
(Article, Vol.1, No.6, Pg.57)

The real Palmtop expert develops a systematic procedure to back up data frequently. If you don't back up the information you generate on your HP Palmtop, it's only a matter of time before you lose something.

How Can I Lose My Work, Let Me Count the Ways ...

The purpose of this section IS to scare you! If you do not understand some of the concepts presented here, reread previous *HP Palmtop Paper* Getting Started columns, check your manual, ask a friend, or purchase a basic book on computers.

Here are some of the ways you can lose information on your HP Palmtop through your own folly.

1. On the 95LX: You do not save or update your MEMO, APPT, PHONE, 1-2-3, or HP CALC file when you exit the application normally, or when your system locks up and you must reboot (by pressing **CTRL-ALT-DEL**).
- 100LX applications except Lotus 1-2-3 and MEMO save files automatically.
2. You lose all battery power (for example, by leaving your HP Palmtop idle for a long time or by ignoring the bad or missing backup battery message).
3. You save a file using the name of a file that already exists. The initial file is overwritten and lost.
4. When trying to save new work, you run out of disk space and have nothing you can delete from FILER.
5. You delete a file by mistake.
6. You lose or damage your HP Palmtop.
7. You forget what you named a file and in what directory you put it.
8. You let your RAM card battery run out.
9. You inadvertently remove your RAM card battery.
10. You lose or remove the "device driver" files that allow you to access your ACE Double Card, Stacked RAM card, or SUNDISK Flash Card (on the 95LX).
11. You reformat your RAM card.
12. You accidentally format your C drive after performing a hot reboot.
13. You let someone mess around with your HP Palmtop.

Here are some more ways that the Palmtop itself, or software running on it, can cause you to lose information.

14. Bugs in the built-in programs or DOS.
15. Bugs in the Palmtop's firmware or hardware.
16. Running DOS programs or TSR's not designed with the HP Palmtops in mind.
17. Exiting programs incorrectly.
18. Exposing your Palmtop or RAM card to a very strong electromagnetic field.
19. Exposing your data to a virus.

Backup Solutions

Even though Palmtops are handy at storing and manipulating data, it only makes sense to use one if you regularly (hourly, daily, or weekly) back up all important information.

RAM Card Backup Strategies

The optional RAM card provides an easy means to backup your most critical C drive work. However, remember that the RAM card itself needs to be backed up. Even Flash cards that are not dependent on batteries to maintain their memory, can become corrupt.

1. Use FILER to copy crucial files such as main PHONE and APPT books, key spreadsheets to the A: drive RAM memory card. (Remember the built-in applications normally store files in the C:_DAT directory or in the case of 1-2-3 the C:\ directory on the 95LX.)
2. Purchase a RAM Card drive. These drives connect to a PC and allow it to read a memory card. To back up files first copy the desired files from the Palmtop to the memory card. Then put the RAM card in the RAM card drive and copy the files to the PC's hard disk or floppy disk using DOS Copy commands from the PC.
3. On the 100LX, create a nightly appointment that automatically runs a backup batch file (example page 16).

PC Backup Strategies

4. Purchase The HP Connectivity Packs (CPACK95, part #: HP F1001A; CPACK100, part #: HP F1021A). Use the Pack's cabling. Then follow instructions to backup files from the Palmtop to the PC using the FILER program on both computers.
5. Connect the Palmtop to a PC and run DOS Connect from the HP 95LX Connectivity Pack on both the 95LX (DCS95) and the PC (DC95). DCS95 will also work on the 100LX. The 100LX Connectivity Pack includes a similar program, Redirector, that connects with the 100LX's built-in Redirector. These make the

Palmtop disks directly accessible from the PC. (They appear to the PC as additional disk drives.) Use the DOS COPY or XCOPY commands, or a file management program on the PC to backup up the Palmtop's files to the PC.

6. MAC users can purchase the DataViz or Sparcom, Mac-to-HP Palmtop connectivity programs.
7. Windows users can use IntelLink or Sparcom Connectivity programs.
8. Purchase the HP F1015A Serial Interface Cable for a PC or the HP F1016A Cable for the MAC. Use communications software on the desktop and built-in COMM on the HP Palmtop. Use XMODEM or KERMIT protocol.
9. Connect Palmtop and PC with the HP F1015A Serial Interface Cable and run the ZIP.COM communications program on both the PC and the Palmtop.

You Only Have an HP Palmtop

Because of the dangers cited previously, even if you do not own another computer or a RAM card you should develop backup strategies that employ a combination of the items listed below.

10. Create duplicate copies of your PHONE Book, Appointment Book, and other important files. Use FILER to copy these files to a different directory on the Palmtop. If the original file gets corrupted or accidentally deleted, you've got a backup.
11. Purchase an HP F1015A Serial Interface Cable and a high density floppy disk. Make arrangements with a friend with a PC to borrow it for 10 minutes per week. Use one of the methods described above to back up files to the floppy.
12. Purchase the HP F1023A Serial Cable Adapter Kit, along with the HP F1015A Serial Interface Cable. Borrow a printer from a friend to create a "hard copy" of each of your most important files. You can print from your friend's PC. If the printer has a serial port, you can print directly from the Palmtop to the printer using the cabling described above.
- Similarly, borrow a friend's modem and connect it using the above cabling. Use built-in COMM to send key files via a phone line to a PC with a modem and communications software running.
13. Purchase an external 3.5" floppy drive designed to work with the Palmtop, such as the Sparcom's Drive95 or Drive100. Backup Palmtop files to a floppy disk using FILER.

Conclusion

Make one of these strategies work for you. If you are a complete novice (we all were at one time), make backup a priority. Grab a computer-literate friend, study back issues of *The HP Palmtop Paper*, read the manual ... do whatever it takes to develop a practical, consistent backup strategy.

Don't let a few months without data loss problems lull you into complacency. Backup your data now and develop a procedure for regular backups.

Powering Your HP Palmtop

⊕ Adapter

95LX 100LX

AC adapter for the HP 100LX works with the 95LX; original HP 95LX AC adapter does not work with 100LX!

The new HP 100LX adapter (HP F1011A, \$39.95) works with both the 100LX and the 95LX. However, *the original AC adapter for the 95LX (HP 82222A, \$35) does not work with the 100LX and can damage it!* The original 95LX adapter provides a 9 volt AC output, which can damage the 100LX. The 100LX adapter provides a 12 volt DC output, which the 95LX can accept.

Everett Kaser
CompuServe ID: [70662,2540]
(Vol. 2, No.4, pg. 50)

⊕ Battery

95LX 100LX

What to do when you see a low RAM card battery warning?

If you see a LOW CARD BATTERY message on the Palmtop, it's no joke! *You're RAM card has just lost, or is about to lose all its data!* If the message appears, do NOT turn the Palmtop off — keep it on! The main batteries will supply enough electricity to the card to prevent any further damage. In addition:

- Do NOT remove the card from the Palmtop.
- Do NOT perform a backup or any other operation that drain the main batteries.
- Replace the RAM card battery ASAP, with the Palmtop still ON.
- Once the RAM card battery is replaced, test all the files on the A drive. For a quick test use the DOS command, **COPY filename NUL**, to see if each file can be copied to the NUL device (computer nowhere land). Delete any files that don't copy. Copy the remaining files to blank disk — not your backup disk.
- Format the RAM card using the Format command in SETUP on the 95LX or in **[FILER]**, **O**ptions on the 100LX or use the Format program that came with your RAM card. Then restore the A disk from your backup disk and add any new or changed files from the other disk.

Ed Keefe
CompuServe ID: [75300,3667]
(Vol.1, No.4, Pg.29)

95LX 100LX

Changing a RAM card battery

HP, ACE, and some (but not all) other RAM cards allow you to change the card battery without removing the card from the card slot. Make sure that your RAM card is being powered by the Palmtop while you make the battery change or you may lose all your data.

When the RAM card is in the card slot and the Palmtop is switched ON, the card is powered from the Palmtop's main cells or AC adapter (if connected). Connecting the Palmtop to the AC adapter disables the auto-shut-off feature and gives you all the time you

need to change the battery.

If you don't have access to AC power when you need to change the battery, you have three minutes before the Palmtop powers down and cuts the power to your card. You can press a key every minute or so to keep the Palmtop from powering down. You can also disable the autotimeout by using SWITCH! or 95BUDDY or 100BUDDY, or TIMEOUT.COM.

Slide the lock lever at the end of the card to the unlock position and remove the little battery tray. Pop the battery out and replace it with the proper back up battery (a 3-volt CR-2025 coin cell for HP cards). Make sure the positive (+) side of the battery is sitting up in the tray. For more on changing card batteries, check your *User's Guide*.

Dave Snellard
CompuServe ID: [100064,1525]
(Vol.2, No.3, pg. 58)



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95LX 100LX

Changing a RAM card battery

Unless its battery is completely shot, a SRAM card (A drive RAM card) should retain memory long enough to allow you to change the battery. That means that with the card out of the Palmtop, you should be able to quickly remove the battery and insert a new one without losing data. That's one of the advantages of SRAM cards.

David Hamachek
CompuServe ID: [73700,2250]
(Vol.1, No.3, Pg.47)

95LX

Continuous "Main Battery Low" warning

The HP 95LX can develop a problem that causes it to continuously show the MAIN BATTERY LOW warning, even after installing fresh batteries. Try running BATT95 from the 1993 Power Disk to correct the problem. If this fails, you're experiencing a hardware problem. Contact HP Tech Support at 503-757-2004 for help. They may still fix it under extended warranty.

Rich Hall
(Vol.2, No.5, Pg.6)

95LX 100LX

Extending battery life

Probably the single most important thing you can do to extend your Palmtop's battery life is leave it connected to the AC adapter whenever you can.

You should also remove all high-current plug-in cards (i.e. modem cards, not memory cards) when you are not using them. These cards can drain batteries quickly, even when you're not using them. When you are using these cards, connect up the AC adapter whenever possible.

You can further reduce cost by using rechargeable Nickel-Cadmium (NiCd) batteries in the 100LX. To enable NiCd recharging in the 100LX, go into Set Up and press **[MENU]** Options Battery, highlight **Nickel Cadmium**, and press **[F10]** (OK). Whenever you connect your 100LX to the HP F1011A adapter your NiCd batteries will be recharged automatically. DO NOT enable NiCd recharging if you have any other type of battery in your 100LX. (HP warns against using other types of rechargeables. However, users have reported success with Nickel Metal Hydride rechargeables charged outside the 100LX.)

You cannot recharge batteries in the 95LX, but you can use rechargeables to power the 95LX. However, the 95LX's internal battery logic is set up to monitor alkalines, and low battery warnings are not accurate. If you use NiCd's or other non-alkaline batteries in the 95LX, you should also use third party battery monitoring software like BATTman from ACE Technologies, to monitor them.

Another point is that graphics intensive

programs like Tetris (TETLIX) use batteries at a rate of more than four times the built-in applications. This is because they bypass the light sleep mode. You should also never leave a graphics-intensive program like TETRIS running when you turn your HP Palmtop off for a period of time.

Finally, when you are finished using the HP Palmtop, turn it off. The three to five minute wait before the Palmtop automatically powers down can add up. Also, if you are running in DOS mode, the serial port is powered on. You can execute the SERCTL /O command in DOS to force the serial port off. Check your User's Manual for details on these options.

Rich Hall
Editor, The HP Palmtop Paper
(Vol.2, No.5, pg.51)

95LX 100LX

Battery monitoring software

The BATTman battery monitoring utility runs as a memory resident (TSR) program. It lets you select four types of batteries (NiCd, alkaline, lithium, or NMH) and can correctly judge when a pair of batteries are going to fall below the 1.8 volt battery level that puts the 95LX in backup mode (HP 100LX version expected soon). Contact: ACE Technologies, USA; Phone: 800-825-9977 or 408-428-9722; Fax: 408-428-9721.

There are other battery monitoring programs available. BATSET.COM lets you adjust the charging time for batteries recharging in the 100LX. BAT100.EXE is a program for the 100LX that displays main and backup battery voltages and good/bad status of the RAM card's battery. BAT95 does the same for the 95LX.

Rich Hall
Editor, The HP Palmtop Paper

95LX 100LX

Changing main and backup batteries

Before you take out the main batteries, "AA", make sure that the Palmtop is TURNED OFF.

Do NOT remove the main batteries at the same time as the backup battery. The backup battery provides the power to maintain RAM disk memory. If you take both main and backup batteries out, all of your internal RAM memory will be erased. As added insurance, you can leave the HP Palmtop plugged in to the AC power supply while changing batteries.

From HP Technical Support Staff
(Vol.1, No.6, Pg.62-63)

95LX 100LX

Battery types and test results

(Note: Tests were performed on batteries in a 95LX.) There are four types of AA batteries used in the HP Palmtops.

Alkaline Batteries — are quite common and available at most convenience stores. Radio

temperature, humidity, rain, light, wind, volts

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Shack sells a 4-pack for \$2.89.

Lithium Batteries — are marketed in the USA by Eveready under the "Energizer" name. Look for them in the camera departments of discount stores such as K-Mart for around \$5-7 a pair. International users may also find these marketed under the "LithEon" product name. [Thaddeus Computing sells a 4-pack for \$14 + \$2 shipping. Phone: (800) 373-6114; Fax: (515) 472-1879.]

Nickel-Metal-Hydride (NMH) Rechargeable Batteries — a pair from ACE Technologies retails for \$16.

Nickel-Cadmium (NiCd) Rechargeable Batteries — are commonly available, with varying retail prices. Radio Shack sells a pair for \$4.69.

The following chart represents a summary of my findings. Capacity is rated by the manufacturer in milliamp hours (mhr). A rating of 2200 mhr means that a device operating on an average of 2200 milliamps would deplete the batteries in one hour.

Unfortunately, most manufacturers consider batteries "dead" at a lower voltage than the 2.0 volts the 95LX's low battery warning is set to. This means that the actual battery life you get in the 95LX is about 70% of what you would expect based on the battery's milliamp hour rating.

Battery Type	Capacity /mhr	95LX Avg Life	Cost /pair	Cost /hour
Alkaline	2200	30 hr	\$1	\$.03
Lithium	3300	52 hr	\$5	\$.10
NiCd	600	12 hr	\$6	\$.001
NMH	1100	22 hr	\$18	\$.002

Battery Comparison Table

The figures above reflect a constant drain on the battery under test with one recovery period at approximately the 50% point in the test. The recovery period involved stopping the test and turning off the 95LX for approximately one hour. This was done to simulate the way the 95LX is actually used.

Mark Scardina [Team HP]
ACE Technologies
CompuServe ID: [76711,732]
(Vol.1, No.4, Pg.14)

95LX 100LX

Solar charger keeps NiCd batteries going

Electrical outlets were in short supply during our extended field training in Kuwait. Those outlets that did exist used industrial-type 3-prong outlets as well as 220-240 Alternating Current (AC). The fact that the Marines had a limited number of 110 volt AC converters on hand left my Palmtop without its life-sustaining electricity.

Fortunately Kuwait has a steady supply of sunshine. I found a compact Solar Powered Battery Charger for \$12 that charges up to four AA (see contact information, page 43). This three-ounce charger allowed me to charge my Millennium Nickel Cadmium (NiCd) 700 mAH AA batteries. Although the recharger's instructions indicate that two batteries can be charged in as little as 4 to 6 hours, it took *two full days* of continuous exposure to fully charge my batteries. This wasn't a problem since a charged pair of NiCds powered my 95LX for about a week.

Major James C. Cummiskey
(Vol.2, No.5, Pg.35)

95LX 100LX

Cold kills Palmtop batteries

Last weekend I went skiing and inadvertently left my 95LX in the glove compartment of my car for three days. At night the temperature was in the teens and during the day it rose to the thirties. When I returned home and turned it on, I got a faint screen, warnings of low main batteries and low backup battery, and that the C: drive was erased. Interestingly enough, the low power caused by the cold adversely affecting the battery power erased the RAM memory, but the A drive on my battery powered Ace DoubleCard was unaffected. All of the files on the RAM card were untouched.

I replaced the main batteries, and the backup came back to 2.78 volts, although it was measuring 3.0 prior to its ski trip. The RAM card battery registered 4.82, exactly where it has been since I first installed it.

Fortunately, I backup daily and was able to re-install everything quickly.

The 95LX is sensitive to the cold and should be backed up often.

Michael Allgood
Lafayette, CA, USA
(Vol.2, No.2, Pg.52)

[Lithium batteries generally perform very well in the cold, that is why we use them in flashlights for winter camping trips. They are usually unaffected by the cold. This explains why the RAM card survived so well (it uses a lithium backup battery). Since you probably lost the main AA's, the HP backup lithium was probably doing a lot of work and could not keep the memory going for that long. It might be better to use Eveready Hi-Energy Lithium Energizers as main batteries if you're going to expose your Palmtop to prolonged cold - Fred Kaufman, Rich Hall.]

95LX 100LX

Putting batteries in backwards is dangerous

Improper installation of rechargeable batteries on the HP 95LX can cause the batteries to short circuit and heat up. At the very least, this will discharge your batteries. At the most, the batteries could damage your Palmtop PC.

The 95LX contains circuitry that protects the computer against improper insertion of alkaline batteries (which are the only kind HP approves for use in the 95LX). Eveready designed its lithium batteries to shut down if short-circuited, but I don't know if that would happen before the 95LX was damaged.

The HP 100LX also has circuitry to protect it against improperly installed Alkaline and NiCds. NiCds can be recharged inside the 100LX.

Nickel-Metal-Hydrate batteries can be used, but *not recharged* in the 100LX!

The best solution is to be very careful to put the batteries in correctly.

Ted Dickens (HP Forums Sysop)
CompuServe ID: [76701,272]
(Vol. 2, No. 4, pg. 52)

95LX 100LX

Put the backup battery in right side up

The backup battery protects your data if the main batteries die, and when you change main batteries. However, you have to put it in the right way! There is a top/bottom +/- side to the 3-volt CR-2032 coin cell backup battery (available at Radio Shack or other electronics stores). You need to place the battery plus (+) side down in the plastic tray.

Fred Kaufman
CompuServe ID: [72560,36]
(Vol.2, No.2, pg. 53)

100LX

Check your battery configuration after a cold boot

The battery configuration (alkaline vs. NiCd) is reset to default (alkaline batteries) when you press **CTRL-Shift-ON** to reboot. If you're using NiCd batteries, the power detection circuitry will read the wrong battery type and give you inaccurate battery readings. Also, battery charging will be disabled. You will have to go into Set Up, press **Options Battery**, and select Nickel Cadmium so that you'll get the correct battery readings and be able to recharge your batteries.

Gary Fischman
CompuServe ID: [73750,2552]
(Vol.2, No.5, pg.53)

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Behind the Scenes

95LX

Rules for setting up your HP 95LX

■ When entering any DOS commands in batch files, including AUTOEXEC.BAT always use upper case for the drive and path. (This is a peculiarity of HP 95LX.)

```
PATH=C:\;C:\_DAT;A:\DATA
```

■ When creating a CONFIG.SYS file with the command: **SHELL=COMMAND /P** make sure there is a space between "command" and "/p" (otherwise, your 95LX will lock up).

■ If you use a RAM card, store your CONFIG.SYS and AUTOEXEC.BAT files on it. That way if you have a problem, you can reboot without the card.

■ If you use an AUTOEXEC.BAT file, to invoke SYSMGR, make the last three lines read as follows:

```
PATH={your path in upper case}
PAUSE
$SYSMGR
```

This allows you to exit to DOS with **CTRL-C**

at the prompt if you have a problem. The PATH command should always be the last environment statement to allow your hotkeys to work properly.

■ For maximum security your data files should reside on A. By using the proper extension, APPT - .ABK, PHONE - .PBK, and MEMO - .TXT and keeping these files in one subdirectory (say A:\DAT), you can use the following CHAR User key to get a listing of files for each application:

```
{MENU}FO{BACKSP}{BACKSP}
{BACKSP}{BACKSP}{BACKSP}
{BACKSP}{BACKSP}{BACKSP}
{BACKSP}A:\DAT\{ENTER}
```

■ If you run APNAME.LST programs from A: drive, keep a separate file A:\APNAME.LST. Do not include A: programs in C:_DAT\APNAME.LST.

■ If you run a number of DOS programs, you should change your 95LX's CONFIG.SYS file to: **SHELL=COMMAND /E:512 /P** leaving a space before each "/".

■ Before modifying CONFIG.SYS or APNAME.LST and AUTOEXEC.BAT always backup your files.

■ Do not use a compression utility on an .EXM file unless that utility runs as a TSR. STACKER and DIET (when resident) are OK, PKLITE is not.

■ Keep COMM closed when not in use as it saves 30% of your battery life. (The same is true for FILER on the original 512K 95LX's released before the 1MB upgrade.)

■ If your 95LX stops working and **CTRL-ALT-DEL** does not work, try **CTRL-<Shift>-ON** and answer No when asked if you want to initialize the disk.

■ You can save your USER Keys and Owner information by making a backup of SETUP.ENV. If you need to re-initialize the 95LX, restore your settings as follows:

A. with an attribute program such as DOS ATTRIB.EXE or FATR.COM, change the read-only status of the new SETUP.ENV;

B. delete it and copy your backup to C:_DAT. Reboot to restore your settings.

Mark Scardina
CompuServe ID: [71551,467]
(Vol.1, No.1, Pg.25)

95LX 100LX

File Compression with DIET

DIET.EXE (freeware) can as much as double your available file space. To gain

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HPP94

full advantage of DIET.EXE it needs to be memory-resident, installed into the DOS startup AUTOEXEC.BAT file. (See point 4 of APNAME.LST Rules, page 13.) That way all data files (ie 1-2-3 .WK1 and MEMO .TXT files) are automatically compressed. DIET does not have to be present if it is used only to compress EXE and COM files.

Detailed descriptions of how to use DIET 1.22 along with potential pitfalls can be found in the Fall '91 issue page 17 and on page 20 of the Jan/Feb issue and in DIET95 .ZIP on the CompuServe HPHAND forum. We recommend using DIET 1.22 available on *Best Palmtop Tips ON DISK*, as users have reported problems with later versions and DIET 1.22 is known to work well. A new version has just been released, DIET 1.45A. One user has had success in using it on the 100LX. DIETONHP.ZIP included on *Best Palmtop Tips ON DISK* will contain all available information on using these versions of DIET on the 95LX and 100LX.

Hal Goldstein
Editor, The HP Palmtop Paper

95LX 100LX

Topcard reward screen

Misplacing the Palmtop is an ever present worry. If it happens, you want to encourage its return. Where better to do that than on the topcard. On the 95LX under SET UP, select Owner. On the 100LX press [MENU] [Options] Owner. Then enter the following:

Name: <Your Name>
Title: RETURN FOR REWARD!
Company: <Your phone number>

Gary Oliver
Milsons Point, NSW, AUSTRALIA
(Vol.1, No.6, Pg.67)

95LX 100LX

Optimum RAM disk / system RAM size

In general, if you have a lot of data and only use the built-in applications, set the System RAM at the minimum needed to run the applications (about 250K-300K). That way you have the largest possible RAM Disk to store text, data, and configuration files. However, if you keep a number of your built-in applications open at the same time, you may need to set up more system RAM.

If you run DOS programs that require lots of system RAM, and have very little data to store on the C: drive, set the System RAM as high as you can (394K for the 512K 95LX and 640K for the 1MB version).

If you work with large Lotus spreadsheets, you'll need a lot of system RAM to load them into 1-2-3.

Finally, if you use a memory card for file storage, you can probably set the system RAM high.

There may be a multitude of gradations between the extremes, so you may have to experiment to find the right balance.

Frank Nagle
CompuServe ID: [71140,1253]
(Vol.1, No.6, Pg.67)

95LX

Setting a password on the HP 95LX

You can password protect your 95LX so no one but you can turn it on. Exit all your built-in applications, go to FILER and press [MENU] System. At the DOS prompt type password and you will be prompted to enter and verify your password. Now if you want to password protect your 95LX, turn it off by pressing [ALT]-[OFF]. The next time you try to press [ON], the 95LX will prompt you for the password. If you don't enter the password, the 95LX will not come on. The password is case sensitive so if you enter it in uppercase it will only recognize uppercase. If you forget the password, you're out of luck! You'll have to remove the batteries and lose your data.

If you've forgotten your password and it isn't locked yet, you can find your password with a shareware program called STATUS.

Rich Hall
Editor, The HP Palmtop Paper
(Vol.2, No.2, pg. 53)

95LX 100LX

How to change the automatic timeout on the HP Palmtops

The HP Palmtops automatically turn themselves off after three minutes if you leave them on and do not press any keys. This can be a problem if it happens while you're transferring large files to your Palmtop. You can use TIMEOUT.COM, a 95LX timeout program, to set a new timeout on the 100LX.

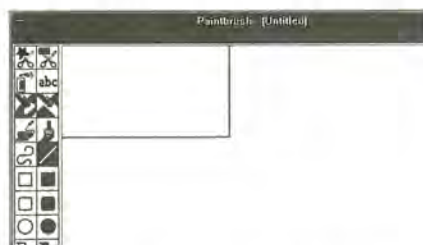
Mark Scardina [TeamHP]
CompuServe ID: [76711,732]
(Vol.2, No.5, pg.55)

95LX 100LX

Create topcard (PCX) files using Windows 3.1 Paintbrush program

Activate Windows 3.1, and double click on the Paintbrush icon. When Paintbrush is active, pull down the Options submenu and select Image attributes to change the size of the drawing area.

Go to the Windows box of the Image Attributes dialog box and click on pels. In the Colors Box, select Black and white. Set width to 240 and height to 128. Click [OK] to lock this in. You should see a small rectangular box in the upper left corner of the work area.



Windows Paintbrush Screen after changing drawing area size

Use one of Paintbrush's drawing tools, or select Text Fonts to enter text into the picture. Remember that black and white will be reversed on the HP 95LX. If you want to have black text on a white background, you have to create white text on a black background in Paintbrush.

Save your work with the .PCX extension and use ZIP.COM or another file transfer program to transfer it back to the HP 95LX _DAT subdirectory. Go into SET UP and press Owner Picture-File [ESC] and move the cursor to the .PCX file you just created. Exit SET UP and the other built-in applications, and the new PCX file will appear on the screen when you turn the 95LX on.

Ed Keefe
CompuServe ID: [75300,3667]
(Vol.1, No.5, Pg.33)

95LX 100LX

Fast typing and other uses for the HP Palmtop

It's fairly simple for me to type on the Palmtop. I cradle the Palmtop in my two hands, holding it by my thumbs and ring fingers. This leaves my index fingers free to type. Based on my experience, I think that touch typing imprints the brain with the hand that is supposed to hit a key, as well as the finger. My index fingers seem to know right where a letter is on the keyboard, even though that letter is not the responsibility of the index fingers on the larger machines.

King Waters
(Vol.1, No.3, Pg.11)

95LX 100LX

Creating special characters using [CHAR] and [ALT]

HP 95LX

You can create special characters on the 95LX using the CHAR key by pressing and releasing [CHAR] once, and then pressing a keyboard key to access its alternate. For example, you can press [CHAR] L to produce £ (British Pound symbol).

You can also create a special character on the 95LX by holding down [ALT] and entering a 2- or 3-number character code. For example, press [ALT]-169 to create a ® (Registered symbol). An alternate key map for the 95LX is found on page E-3 of the HP 95LX User's Guide. A keycode table is found on page E-2.

HP 100LX

Creating special characters on the 100LX is a little different. Press [Fn] and a letter to access the alternate keys on the keyboard. Press and hold down [ALT]-[MENU] and then enter the character codes. An alternate key map for the 100LX is found on page B-4 of HP 100LX User's Guide. The keycode table is found on page B-2.

BiL Alvernaz
MCI MAIL #207-8825
(Vol.1, No.2, Pg.40)

Serious "hard reset" bug

When all else fails in curing a 95LX problem such as system lockup or serial port not working, you can do a hard reset on the HP 95LX by pressing **CTRL**-**<Shift>**-**ON** (no reformat). However, due to a 95LX bug, this may corrupt one of your built-in C drive files or subdirectories. If a file gets corrupted, you will get an "I/O error" when trying to read it.

The problem may or may not occur depending on where files happen to be located on the built-in RAM Disk. The problem will not occur on 1-Megabyte units with a RAM disk size of 512K bytes or less.

One way to test for corrupted files is to enter DOS and copy them to nowhere using the **copy *.* nul** command. (The DOS CHKDSK command will not detect the error). If no errors occur, your files are all right.

Dave Goodman
CompuServe ID: [72330,130]
(Vol.1, No.6, Pg.67)

95LX 100LX

Resetting the HP Palmtop

If you lock up in the middle of an application, here are some steps you can try to eliminate the problem. *[Try these steps in order, one at a time. When you find one that works, go no further. You lose all the data on the C drive with steps 6 and 7.]*

1. Press **ESC** — restores menu of some programs;
2. Press **CTRL**-**C** — halts execution of some programs;
3. Press **CTRL**-**ALT**-**DEL** — warm reboot;
4. Press **CTRL**-**<Shift>**-**ON** — hard reboot, answer **No** when asked if you want to initialize RAM disk;
5. Turn the Palmtop off and remove the AA batteries, not the 3-volt backup battery. This causes the system to reset, but you will hopefully not lose files on the C drive;
6. **CTRL**-**<Shift>**-**ON** — serious hard reboot, answer **Yes** when asked if you'll initialize RAM disk. *[WARNING: this erases the contents of your C drive];*
7. Turn the Palmtop off and remove both AA batteries and the 3 volt lithium backup battery. *[WARNING: this will erase the contents of your C drive.]*

These procedures work the same on the 100LX, with the exception that after pressing **CTRL**-**<Shift>**-**ON** — hard reboot or **CTRL**-**ALT**-**DEL** — warm reboot, you can press the **ALT** key and get a menu of startup options to start from a specific drive, A, C, or D and to skip processing startup files, CONFIG.SYS or AUTOEXEC.BAT.

The same warnings about losing your data described in points 6 & 7 still apply.

Ted Dickens (Sysop for the 95LX forum on CompuServe) warns that removing batteries from a machine that is turned on may blow the 95LX's RAM disk.

Hal Goldstein
Editor, The HP Palmtop Paper
(Vol.1, No.1, Pg.25)

Will X-rays damage the Palmtop?

X-rays don't do anything to micro-circuits. The only computer-related risk from X-ray machines is for magnetic media, and that has nothing to do with X-rays. X-ray machines use electromagnets to focus their beam, and magnetic fields can affect disks. For most X-ray machines, however, the magnetic field is stronger outside the machine than inside. It's usually safe to put a computer or diskettes **through** the machine, but *keep them away from the sides of the machine on the outside.*

Larry Finch
CompuServe ID: [73677,3414]
(Vol.2, No.5, pg.54)

95LX 100LX

Severe temperature affects the Palmtop screen

All LCD's (Liquid Crystal Displays) are thermally sensitive. If you get one hot enough, the display will become solid black. Conversely, if you get it too cold, it may not work at all until it heats up. Nothing to worry about most of the time, but it is possible to crack a display by freezing it.

David J. Marsh
CompuServe ID: [70750,3146]
(Vol.2, No.5, pg.55)

95LX 100LX

Reverse screen, change contrast to see better

In low light conditions, when you're having trouble seeing the 100LX display, press **ON**-**□** and the screen will switch to white letters against a black background. This is also useful in PHONE when you've highlighted the name of the person you want to call. Press **ON**-**□** to put the screen in reverse video and the highlighted entry becomes easier to read and the rest of the screen is dark and no distraction.



100LX Screen Reversed in PHONE

You can change screen contrast on either the HP 100LX or 95LX by pressing **ON**-**□** or **ON**-**□**. Pressing **ON**-***** or **ON**-**□** on the 100LX changes grey scales, important in running some DOS (CGA) applications.

Rich Hall
Editor, The HP Palmtop Paper
(Vol.2, No.4, pg.51)

HP 95LX bugs

[Excerpted from the 95BUDDY manual.]

■ When you cold boot (press **CTRL**-**<Shift>**-**ON**), one of your RAM disk files may be corrupted even if you answer "no" to the disk format prompt. (You will get an I/O error when you try to read it.) This is bad, very bad. The problem can be corrected with a small TSR program called UNRESET, written by Dave Goodman, CompuServe ID: [72330,130] *(This problem does not occur on 1MB units with a RAM disk size of 512K or less.)*

■ MEMO will claim your disk is full (when it is not) and destroy your file if you use cut & paste on a large file (over 30K). If this happens to you, don't panic. Cut as big a hunk out of your file as MEMO will allow, then save what's left (it should work). Then press **MENU** File New **F4** (PASTE), and save that piece as a second file.

■ After deleting text in MEMO, you may see some little square symbols with holes on the middle appear in your text where some other characters used to be. Usually, they show up at the beginning of lines. This is not a major problem.

■ Mistakes in your APNAME.LST file can cause all sorts of weird behavior, such as beeping when you push a blue key, or very slow operations (see pages 12-14).

■ Lotus 1-2-3 reminds you to save your work if you quit without saving a modified file. However, if you call up another worksheet, Lotus will dump the one you are working on without saving it. Actually, this is not a bug; it's a Lotus-ism.

■ If you set the Appointment Book default lead time to other than 5 minutes (press **MENU** Settings Leadtime) an alarm with a leadtime of exactly 5 minutes will not sound an alarm.

■ If you set an appointment alarm mode to "enable" and later change the setting back to "disable," the alarm will still go off as originally scheduled. Scheduling a later appointment will sometimes correct the problem, or you can reboot.

■ If you use the Appointment Book's Remove function to clear out old appointments (press **MENU** Remove), the 95LX does not "think" you have modified the file. This means that if you quit APPT (press **MENU** Quit, **MENU** q, **MENU** @, or MassExit), you will not be reminded to save your file, and thus, will not update your appointment file. When you do "MENU remove," change/insert an appointment to mark your file modified.

■ If you try to open a MEMO file that has no file extension, you get a file not found error. 95BUDDY fixes this problem.

Jeffrey Mattox
CompuServe ID: [71044,2356]
(Vol.2, No.1, pg.54)

Adding System-Manager Compliant Applications

[The HP Palmtop's System Manager lets you switch from one built-in application to another without having to close the first application. So, for example, if you're working on a 1-2-3 spreadsheet and need to check an appointment, you can do so easily, without losing your place in the spreadsheet.]

A feature not documented in the 95LX User's Guide is that you can install additional System-Manager compliant software in the 95LX by creating or modifying the APNAME.LST file. This article describes how to do that.

Additional System-Manager compliant software can also be added to the 100LX through the Application Manager. For more information see the tip in this issue, "Adding DOS programs to AppManager" on page 14. You can also check the 100LX User's Guide for more information.]

By Mark Scardina
(Vol.1, No.2, Pg.9-10)

The HP 95LX differs from other IBM PC compatibles in its ability to utilize System-

Installing TigerFox and Hearts & Bones into System Manager

HP built two games into the English language versions on the 95LX: TigerFox and Hearts & Bones. (TigerFox is provided in all versions of the 95LX as a non-System-Manager-compliant .COM program.) To install these System-Manager-compliant programs, follow these instructions:

1. For safety sake back up your C drive before proceeding.
2. * Start MEMO and enter the following:

```
C:\_SYS\TFOX.EXM, AE00, TFOX
C:\_SYS\HB.EXM, B200, HP
```

Make sure you press **ENTER** after both lines.

3. Save the file as APNAME.LST in the C:_DAT subdirectory.
4. Reboot (press **CTRL-ALT-DEL**)

* NOTE: If APNAME.LST is already in your C:_DAT subdirectory, then you should add the above lines to it rather than create a new APNAME.LST file.

To bring up Tiger Fox press **CTRL-FILER**.
To bring up Hearts & Bones press **CTRL-COMM**.

Rich Hall
Editor, The HP Palmtop Paper
(Vol.1, No.1, Pg.8)

Manager Compliant (.EXM) software. A System Manager compliant program has the following characteristics:

- It can be activated by hotkey,
- Any of the built-in applications can be run on top of it when there is sufficient memory,
- All alarms and warnings will be displayed while it is running,
- It's able to remove itself from memory and release that space when exited.
- CHAR and CUT/PASTE functions are supported if applicable.

You can only access .EXM files through hotkeys. Information on hotkey assignments is stored in APNAME.LST. Whenever you reboot your HP 95LX (by pressing **CTRL-ALT-DEL**), System Manager reads the APNAME.LST on the C drive and inserts that information in its task table in memory. If a memory card is in the card drive, System Manager reads its APNAME.LST file (if it has one). System Manager only accepts a total of 8 entries in its task table. If you have 8 entries in the APNAME.LST file on your C drive, System Manager ignores any entries on your A Drive.

Before you proceed, you MUST create a CONFIG.SYS and an AUTOEXEC.BAT file and put them in your C:\ or A:\ directory. This will save you from losing your data. Mistakes made in your APNAME.LST file can cause your 95LX to lock up. This will force you to re-initialize your unit, thereby erasing all of your files. If you have a CONFIG.SYS and AUTOEXEC.BAT file on your system, you will be able to access DOS before System Manager loads. You can rename a bad APNAME.LST file and avoid a lockup (and loss of data).

Here are sample AUTOEXEC.BAT and CONFIG.SYS files. You can create or modify these files using MEMO. These files are also discussed in detail in the Quick Tips section, of the Fall 1991 and Jan/Feb 92 issues of The HP Palmtop Paper and on page 36, this issue.

AUTOEXEC.BAT file:

```
PAUSE
$SYSMGR
```

CONFIG.SYS file:
(the space before /P is necessary)
SHELL=C:_COMMAND.COM /P

95LX

Installing System-Manager compliant applications

Installing a system-compliant program involves using MEMO to add one line to file APNAME.LST. If the system-compliant file

resides on the C drive, APNAME.LST must reside in C:_DAT. A separate APNAME.LST file residing on A:\ should be created for any system-compliant .EXM files on the A drive. The maximum number of entries collectively allowed in both APNAME.LST files is eight.

The line in APNAME.LST is of the form:

```
DRIVE:\PATH\FILENAME.EXM,XXXX,NAME
```

where "DRIVE:\PATH" is the location of the file and should be in caps; "filename.exm" is the DOS name of the application file; "xxxx" is the numerical code for the key combination to which you're assigning this program; and "name" is the name you give the application. "xxxx" varies depending on which key you're assigning the program to.

Let's say you wanted to assign hot keys **CTRL-FILER** and **CTRL-COMM** to the two games TigerFox and Hearts & Bones. (TFOX.EXM and HB.EXM are found in the C:_SYS directory on the English language 95LX and in HP_TFOX.ZIP.) You would add the following two lines to APNAME.LST:

```
C:\_SYS\TFOX.EXM, AE00, TFOX
C:\_SYS\HP.EXM, B200, H&B
```

Below is a keycode list for Alt and Ctrl combinations of the built-in application keys.

HP 95LX Keycode assignments

ALT-FILER	AB00
ALT-COMM	AF00
ALT-APPT	B300
ALT-PHONE	B700
ALT-HP CALC	C300
ALT-123	BF00
ALT-MEMO	BB00
CTRL-PHONE	BA00
CTRL-APPT	B600
CTRL-HP CALC	C600
CTRL-COMM	B200
CTRL-123	C200
CTRL-FILER	AE00
CTRL-MEMO	BE00

See KEYS95 for a complete key code list.

Before creating the APNAME.LST, you should back up your files. Once APNAME.LST is created, reboot your 95LX by pressing **CTRL-ALT-DEL**.

Hal Goldstein
Publisher, The HP Palmtop Paper
(Vol.1, No.1, Pg.18)

95LX

APNAME.LST Rules

1. All listings in your APNAME file should be in uppercase.
2. The C Drive's APNAME.LST must reside in C:_DAT. The A Drive's in A:\. Any APNAME.LST elsewhere will not be read.
3. The maximum number of entries allowed is eight. The ones in C:_DAT\APNAME.LST are counted first. Any entries greater than eight will be ignored.

4. Your AUTOEXEC.BAT directly influences the operation of your hotkeys. The command lines in AUTOEXEC.BAT *must* be in this order:

```
SET and PROMPT statements
PATH statement
DIET (if applicable)
Other TSRs
PAUSE
$SYSMGR
```

If you issue secondary PROMPT or SET statements prior to loading \$SYSMGR (System Manager) your APNAME hotkeys will not work.

5. If a line in an APNAME.LST file refers to a non-existing program, all listings after it will not work. This can happen if you move or delete a program. The C:_DAT\APNAME file is read only upon starting System Manager, while the APNAME.LST file on the memory card in the A drive is read every

time the card is inserted.

6. An APNAME.LST program cannot be compressed unless the decompression utility is memory resident. STACKER and DIET (when resident) are OK, PKLite is not. Do not remove the compression utility from your AUTOEXEC.BAT file unless you have decompressed *all* .EXM files. If you have been running DIET as a TSR (i.e. from AUTOEXEC.BAT) and you decide you want to remove it, unDIET all your .EXM files first with the following command: **DIET -RA <file.exm>**.

7. There must be a carriage return at the end of the last line of the APNAME.LST file.

8. Removing a card removes its APNAME.LST hotkey assignments. Inserting a card loads its APNAME.LST hotkey assignments. This allows you to spread out your 95LX applications over more than one RAM card.

However, you should not remove a card if any of its applications are still open. If you have a problem using a file on a card, investigate that card's APNAME.LST file, or the programs that are listed in the APNAME.LST file.

9. Every entry in APNAME.LST must refer to a .EXM program, not a .EXE or .COM program. Ignoring this rule will lock up your 95LX.

10. If a TSR is preventing your hotkeys from working, try loading them with the prefix **COMMAND /C** (i.e., **COMMAND /C DIET -Z -P**).

11. To make more System RAM available, many users run DOS applications without loading System Manager. Upon exiting the DOS application, you can type **\$sysmgr** to go to your built-in applications. If you have loaded any TSRs from your AUTOEXEC

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.BAT you will find that your APNAME.LST hotkeys may not work. The rule is either load all TSRs and System Manager from your AUTOEXEC.BAT or run them all from the DOS prompt.

12. One long and two short beeps when you press a hotkey means that System Manager cannot find the program you are calling. This means that you either deleted it or are mixing drive letters in the APNAME.LST file.

13. Do not assign an ALT-Letter key to a program if you plan to use that key in a Lotus macro. The Lotus macro will not run.

14. If you use the same hotkey for more than one application, only the last one listed will work. In this case A: will have priority over C: as it is read last.

15. The entire program path should be included in the listing. There is however, a 30-character limit to its length. For example, the path C:\DATA\HB.EXM is fine, but C:\FUNGAMES\ARCADE\HPTETRIS.EXM is not.

Mark Scardina [Team HP]
ACE Technologies
CompuServe ID: [76711,732]
(Vol.1, No.2, Pg.9-10)

&... App Manager

100LX

Adding DOS programs to Applications Manager

The HP 100LX Applications Manager lets you open built-in applications and easily add up to a total of 38 DOS or System-Manager compliant applications to your 100LX. Specific instructions for adding applications to AppManager are found in HP 100LX User's Guide. There is an excellent article on AppManager by Mark Scardina, found on page 40-43 of the Sep/Oct 93 issue of The HP Palmtop Paper. A few points from that article are worth mentioning here:

- Up to 38 applications can be launched from AppManager. Any number of these may be DOS programs.

- When entering the name of the application, precede any character in the Name field with the "&" symbol and that character becomes launch key for that program. You should exercise care in selecting startup characters. Many of them are already taken for the built-in applications and there appears to be no way to edit the Name field in a built-in application. If you use the same startup character in two or more applications, AppManager starts the first application in the list with that letter.

- If there is not enough System RAM specified in SET UP, the program you add to AppManager will not launch. Fortunately you can add a | symbol (press [Shift+] [I]) to the end of your Path line to over-ride the Setup allocation. If you use a | without anything else, your DOS program will be given all

available System RAM memory. By adding a number to the end, such as |200, you can specify the exact amount of KBytes of System RAM to be given to an application.

Determining the correct figure may take a bit of trial and error. Don't cut it too close because some programs behave erratically if they are working at the memory limit. [If you routinely use DOS applications on your 100LX, spend some time to see just how much memory they need. Then create an application entry for each of them that specifies the right amount of RAM. Doing so means that you will never have more memory tied up in the DOS box than you actually need — Ted Dickens, HP Forums Sysop.]

- You can assign a start up key for System-Manager compliant applications (.EXM files), however, you cannot edit the **Key Assignment** field for DOS applications. It will always display **Ctrl+123**, the hotkey for returning to the DOS program once it has been launched (or going to DOS if a DOS program is not running). Once the DOS program is launched, you can even close AppManager to save memory and use [Ctrl]-[123] to go back and forth between the built-in applications.

- You can use the **Comments** field for a short note. There are also two undocumented uses for this field.

1. Include an upside down question mark (press [Fn] ?) and you eliminate the "Press any key to continue" message and return directly to AppManager when you exit your DOS program.

2. Include an upside down exclamation point (press [Fn] !) and you prevent System Manager from interfering with DOS programs when they are communicating with the serial port. Unfortunately, this also eliminates your ability to task switch to built-in applications.

- **Icon** — this field allows you to specify the icon displayed on the Menu. While an icon editor is not provided with the HP 100LX, the file ICON.ZIP, a freeware program, is available in CompuServe's HP Hand forum.

The icon file (with an .ICO extension) must be in the same directory as the DOS program file in order for the icon to be displayed as a selection. Once the icon is included in your menu, the icon file can be moved or deleted.

Mark Scardina
(Vol.2, No.5, Pg.40-43)

100LX

AppManager limitations and using APLOAD to overcome them

Here are some of the AppManager limitations you may come up against.

- Some DOS programs require that they be launched from a specific drive and directory. There's no way to specify this in AppManager.

- Some DOS programs look best in a specific screen display mode. There's no way to specify that in AppManager.

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- You lose task-switching capability when you use the upside-down ! which prevents System Manager from interfering with a DOS program's use of the serial port.

- Some programs, most notably ACT! for the 95LX, will not task-switch at all.

Many of these problems can be addressed by creating batch files for each application and launching the batch file from AppManager instead of the program. However, batch files take up precious disk space and do not handle all variations. I wrote APLOAD.COM and AppMan (a commercial product available from ACE Technologies) to help solve these problems. It is a utility designed to be used with the 100LX AppManager. It lets you pre-configure the 100LX to your DOS application's requirements during the launch process.

Mark Scardina
(Vol.2, No.5, Pg.40-43)

100LX

Breaking the Applications Manager barrier

Application Manager will accommodate up to 38 applications. However, since 17 of the slots are taken up by the built in applications, you're left with 21 slots to use for your own applications.

Even though you can never have more than 21 of your applications available in APPMGR at one time, you can have more than one set of 21 applications by using **more than one APPMGR.DAT File**

To get another set of 21 slots in APPMGR, you have to create, and manage, a duplicate APPMGR.DAT file and one or more new APNAME.LST files. (For complete details see Ed's article in Nov/Dec 1993 HP Palmtop Paper page 40.

Ed Keefe
(Vol.2, No.6, Pg.40)

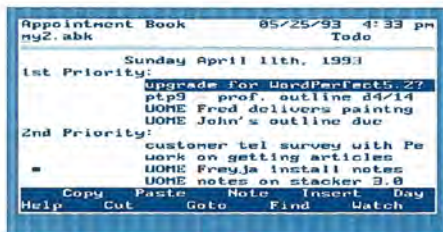
Built-in Applications

Appt

95LX 100LX

Categories instead of priorities in To-Do list

I have a number of standing categories in my Todo list. One of these, UOME (You Owe Me), is for people who have agreed to get back to me on something, or do something for me. Let's say I chose to use 1st Priority for this standing category. The initial 1st priority entry is the category name in caps (i.e. UOME). I place all You Owe Me's in the Todo list as 1st priorities.



Standing Categories in a Todo List

I have additional categories, all in 1st priority. The category headings are always in CAPS and entries within each category are always indented. Single items due well in the future are entered in on the dates they are due, or a few days earlier if they need prior review.

I use the other priorities for additional categories. The 2nd priority, I list ongoing projects related to work (e.g. HARDWARE UPGRADES, etc.). 3rd priority gets home related projects.

I use the F6 feature on 95Buddy 2.3 to link a note (UOME.TXT) to the Todo list for all the tasks due. Each item in UOME.TXT is date stamped as to when it was agreed to and when it is due.

Greg Alter
CompuServe ID: [70412,2041]
(Vol.2, No.3, pg. 58)

95LX 100LX

Spacebar produces colon when entering time

When entering time in appointments or using the watch function, you do not have to enter

a colon between the hour and minutes (i.e. 9:30). You can hit **<Spacebar>** rather than colon when you want to enter time (and for a backslash between the elements of a date). You can also hit hyphen, slash, period, or comma instead of a colon.

Usually, you don't have to enter the punctuation at all between the hour and minutes on the 100LX. For 9:30, just enter **930**. The 100LX will put the colon in. However, if you try to enter 1:05 or 1:15 without a colon, the Palmtop assumes you meant 10:50 or 11:50. You need to put the colon in.

Hal Goldstein
Editor, The Palmtop Paper
(Vol.1, No.1, Pg.23)

95LX

Data space limited to 64K

Each of the built-in HP 95LX system manager applications (except 1-2-3) is limited to 64K of data space. That 64K holds the programs variables and the entire data file. That's why the limits exist. A phone book file can be as large as 56K. An appointment book is a bit smaller, a MEMO file can be just about the full 64K.

Ted Dickens (Sysop)
CompuServe ID: [76701,272]
(Vol.1, No.1, Pg.23)

[The HP 100LX does not have these file-size constraints — Rich.]

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100LX

Make your APPT alarms musical

The "beep" or alarm sounds supplied with the Appointment Manager are a little dull. Below are a some alarms that are more interesting and will surely get a bit more attention than a couple of random toots.

Type the desired selection below, without the title, into MEMO. The blank spaces between the groups of characters are there to make it easier for you to read the code. Although not absolutely necessary, leave the spaces in. It will make it easier to go back and correct a mistake.

[Editor's Note: The letter "L," is entered in upper case to distinguish it from the number "1." The alarm function doesn't care whether the letters are upper or lower case.

The entries below are word wrapped to fit into the format of The HP Palmtop Paper. Type the entries on one long line. Where a line wraps below, leave a blank space.]

```
BACH:
t200 k1 o3 v3 daf. L16
edfedc#e L4 o2 a

BRAHMS:
t200 k1 v3 L8 o2 a o3 d.
L64 efede L8 fa o4 L8 d.
L16 dc#def L8 c#. L16
dc#def L4 c#

RAVEL:
t200 k1 o3 v3 L32
agdegbagdegba L64 abag L8
a L64 abag L8 a L32
agdegbagdegba L64 abag L8
a L64 abag L8 a

WIDOR:
t200 k1 o4 v3 L32 fefc o3
afa o4 c edec o3 afa o4
c dcdc o3 afa o4 c edec
o3 afa o4 c fefc o3 afa
o4 c edec o3 afa o4 c
dcdc o3 afa o4 c ede o3
bfdfb o4 c o4 o3 b o4 c
o3 gecge o4 L4 c
```

After you have finished entering the desired tune, save the file as C:_DAT\ALARM.SND. Then in APPT press (MENU) Options Alarm Beep... and select Custom. You can press S to Test your new alarm. If you like it press OK and the new sound will be used for your Appointment Book alarms.

C. E. Stewart Dewar
CompuServe ID: [71165,1115]
(Vol.2, No.5, pg.53)

[The above alarms are archived in ALARMS.TXT. For more information on setting up music alarms, and many more examples, check out MUS-LX.ZIP on the 1993 Subscribers PowerDisk — Hal]

100LX

Use Appointment Book to do a timed automatic backup

I am using a batch file started from the Appointment Book to backup my files every night. It copies all files which have been changed on drive C: to my RAM card, drive A:. The batch file also writes the date and

time to a file to verify that the backup actually took place (it always has). I have it set to start at 2:00 am every morning. My BACKUP.BAT file looks like this:

```
echo aef
rem --- RUN DAILY BACKUP OF C:
rem --- and subdirectories
rem --- to A:\backup\full
rem --- Start in C:
cd c:
rem --- Remove time stamp
del a:\backup\datetime
rem --- Complete Backup to A:
xcopy c:\* a:\backup\full /s /m /w
rem --- When was this job done?
date > a:\backup\datetime & a:\backup\cr.txt
time >> a:\backup\datetime & a:\backup-cr.txt
rem --- Return control to SYMBIOS
exit
```

The file CR.TXT accessed from the batch file in the third-to-last line contains one carriage return. Create the file by going into MEMO and press (ENTER) once and save it as the file CR.TXT in the A:\BACKUP directory on the RAM card. Then set up BACKUP.BAT as a repeating appointment in APPT using the vertical bar in the description field: IC:\backup.bat. You will also need to put Q in the location field to suppress the "Press any key..." message and allow the computer to return to System Manager. (See pages 13-18 in the HP 100LX User's Guide for more on this subject.)

If you have problems running this, you might need more system memory. You could have APPT run a macro that terminates all programs before running this backup batch file. Also, make sure a DOS applications is not open before going to bed.

Iver Erling Aarva
CompuServe ID: [70630,553]
(Vol.2, No.6, Pg.57)

100LX

Display analog clock and day bar in Appointment Book

You can customize your Appointments (or ToDo List) screen to display an analog clock in the upper right corner instead of the small calendar of the month.


To customize the Appointments screen, press (MENU) Options A (to go to the Customize Appointments View box).

Then use the up or down arrow key to highlight Appointments With Clock and press (ENTER). If you had selected Appointments, your screen would be displayed without clock, calendar, or todo list.

To modify the ToDo List screen, press (MENU) Options O and follow the same procedure.





Appointments screen displaying analog clock and day graph



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You can tab to the **Day Graph** option in the Customize box and press (Spacebar) (ENTER) to select it. This displays a time bar to the left of your Appointments or ToDo list, graphically representing your appointments in a 24 hour period.

You might want to set up the Appointments screen with a calendar and the ToDo List screen with a clock. You can easily toggle between the two views by pressing (F9) (Appt) and (F10) (Todo).

Robert Roney
Editor, HP Palmtop Paper
(Vol.2, No.6, Pg.55)

95LX 100LX

"Appointments Only" simplifies display

When first using APPT I had a few appointments spread throughout a 9-5 day, and scrolling through them was time consuming and frustrating. Then I learned to set the appointments display to Appts-Only (display only those time slots with an appointment scheduled). Instead of a long list of time slots with many empty spaces, I can see up to 9 appointments at a glance and scroll down if there are more. This lets me quickly look at all my appointments and it's easier to see at a glance if there are any time conflicts.

ON THE HP 95LX IN APPT
Press (MENU) Settings Timeline Appts-Only.

ON THE HP 100LX IN APPT
Go to your Appointments screen and press ZOOM (Fn) (Spacebar). You'll toggle through displaying appointments every hour, half-hour, 15 minutes, and appointments only.

Robert Roney
Editor, The HP Palmtop Paper
(Vol.1, No.6, Pg.65)

HP Calc

95LX 100LX

Copy and Paste to other built-in applications

Let's say you want to copy the results of a calculation into a MEMO letter.

First, copy the results in the Calc line into memory: On the 95LX press **CTRL-F2**; on the 100LX press **Fn-□**. Next go into MEMO and position the cursor at the location you want the results to appear. Finally, paste the results in: On the 95LX press **F4**; on the 100LX press **Fn-+**.

Hal Goldstein
(Vol.2, No.5, Pg.47)

95LX 100LX

Transfer numbers between HP CALC and 1-2-3

If you use the copy and paste method described above to transfer HP CALC data to your Lotus spreadsheet, the data is treated as a label (text) by Lotus.

There is another way to move numbers from HP CALC into Lotus 1-2-3. First, make sure you have 1-2-3 open. Go back to HP CALC and complete your calculation. Then press **STO @** on the 95LX, or press **STO <Spacebar>** on the 100LX and you're automatically transferred to Lotus. Move the cursor to the cell in which you want to copy the number and press **ENTER**. The result is placed in your spreadsheet as a number.

Hal Goldstein
(Vol.2, No.5, Pg.47)

95LX 100LX

Starting to use Solver

Solver is one of the most powerful and useful HP CALC applications. It lets you write your own equations and have the Palmtop solve them. An example will help clarify its use.

Let's say our favorite store is having a 15% off sale and we want to compute the price of some items. To do this we must multiply the percent discount times the retail price and then subtract that quantity from the retail price. On a \$100 item we subtract 15% * \$100 from \$100 to get \$85. A generic algebraic equation for this using words for variables would look like this:

ListPrice-Discount*ListPrice=IPay

Go to the main Solver screen. On the 100LX press **F2** (Insert) and **F6** (Edit). On the 95LX press **F4** (Insert) and **F2** (Edit). Type in the above formula. Make sure you type in the word "ListPrice" exactly the same (including capitalization) both times. When done, press **F10** on the 100LX or **ENTER** on the 95LX. With the equation you just entered highlighted, move the cursor to the left and type a name for the formula (e.g. "Sale"). Now press **F9** (Calc). You'll see a screen similar to this:



Solver screen, HP 95LX

Note that the labels above F2, F3, and F4 reflect the name of our variables. Let's say we came across an item priced at \$49.95. Type **49.95** and press **F2** (ListPr). Then type **.15** (for 15%) and press **F3** (Discou). Finally press **F4** (IPay) to reveal the sale price — \$42.46.

You can use this same formula any time in the future, no matter the discount or list price. Just change the numbers as you need them. To save your formulas on the 95LX, press


MENU File Save and give a file name. The HP 100LX automatically saves formulas.

Hal Goldstein
(Vol.2, No.6, Pg.51)

95LX 100LX

Backsolving with Solver and 1-2-3

Backsolving is a powerful technique that combines the abilities of HP CALC and Lotus 1-2-3 to solve problems. Let's use as an example a simple algebraic formula: $A1+B1=C1$. You can enter the equation $A1+B1$ into cell C1 in Lotus. When you assign numerical values to cells A1 and B1, cell C1 will compute the answer. However, Lotus cannot backsolve. That is, once you've entered $A1+B1$ into cell C1, it will not let you assign a value to cell A1 and C1 and solve for B1.




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You can use Solver alone to backsolve. For example, in the above case you can substitute constants for any of the variables. The Palmtops' User's Guides give examples of using the backsolving technique, including using HP Calc to let Lotus backsolve. See "Using the Solver in a 1-2-3 Worksheet," page 28-21 of the *HP 95LX User's Guide*, and page 29-13 of the *HP 100LX User's Guide*. Also see Ed Keefe's article on backsolving on page 31 of the Jan/Feb 93 issue.

Rich Hall
Editor, The HP Palmtop Paper

95LX 100LX

LET and GET Solver functions

[Note: The following was extracted from a Palmtop Paper article, which has some examples that make the points clearer.]

LET and GET are a couple of powerful Solver functions with some very interesting characteristics.

L(x,alg) evaluates an algebraic expression and stores it in a variable. So, for example, L(X, Y^2) means "let the solution to Y^2 be stored in the variable X" (^ means "to the power of," so Y^2=Y^2). L(x,alg) stores the solution in a variable, allowing you to pass the result on.

G(X) stands for "Get X" and returns the contents of the variable X.

The complete rule for using L(.) and G(.) is: To make a variable disappear from a menu list, use it only as the first argument in the L(.) function and only use it outside of L(.) when it is "wrapped up" in G(.). Any other use of the variable in a Solver equation will make it appear in the menu list. This includes using the variable on the right side of the "=" in L(.).

One of the reasons for using the L(.) and G(.) functions is to hide variables from the users of your equations. A more practical use of the L(.) function is to solve for more than one variable at a time. It also gives you a way to impose your own order on the items listed in the variable menu. Probably the most important function of L(.) is to save key-strokes by re-entering complex expressions.

The L(x,alg) and G(x) functions are briefly described in "Solver Functions" on page 29-8 of *The HP 95LX Users' Guide* and on page 30-8 of the *HP 100LX User's Guide*. They are not mentioned anywhere else, and I can see why not. It would take a small book to explain what these functions can do.

There is a small book that does a good job of showing how to use these two functions: *Technical Applications: Step-by-Step Solutions for Your HP-27S 19B Calculator* (Hewlett-Packard, 1987, HP# 00027-90045).

Ed Keefe
(Vol.1, No.3, Pg.27)

95LX 100LX

Use "automatic constant" feature to figure discounts

The Palmtop is very helpful for those "store wide 25% off" sales. You can use the automatic constant feature in HP CALC to figure

out the discounted price of an item.

Let's say you go into a store with a 25% off sale. What that means is that you will pay 75% of the original price (original price * .75 = discounted price). Use HP CALC to figure out the price of the first item (say its list price is 125.00).

Go into HP CALC, on the 95LX key in 125.00 and press [ESC] * (the times key twice), on the 100LX just press * (the times key twice). Then enter .75 and press [=]. The result, 93.75, appears at the bottom right of the screen along with [0.75].

When you pressed [=] the second time, you told the Palmtop to use the next number as the automatic constant.

The Palmtop automatically multiplies future entries by this number. For example, to calculate the discounted price of the next 25% off item, key in the regular price and press [=].

You can create automatic constants for +, -, *, /, or ^ (raising a number to a power). For more on this subject, see page 23-6 of *HP 95LX User's Guide* or page 22-5 of *HP 100LX User's Guide*.

Palmtop Paper Staff
(Vol.2, No.3, pg.57)

95LX 100LX

Using non-currency factors in Currency Conversion

The Conversion application lets you convert length, area, volume, mass, and currency (the 100LX adds temperature conversion to this list). You can also insert your favorite non-currency conversion factors into the currency conversion menu of HP CALC.

First go into the Conversion function. On the 95LX, start HP CALC press [MENU] Conv Currency. On the 100LX, start HP CALC and press [CTRL]-O and select Currency.

Then press [F2] to Edit the currency conversion list and [F10] (More) a couple of times until you get to the end of the list. You can add up to 5 more conversion factors to the list. You can add more conversion factors by replacing some of the existing ones that you don't use (e.g. Peseta, Yen, etc.).

EXAMPLE:

Suppose you enter a store that is having a sale and offering two different discounts. Some items are discounted 15% and others 25%. From the Currency Conversions list press [F2] (Edit) [F10] (More) until you get to the end of the currency conversion rates list. You should see five blank lines available for additional currency rates.

Currency Conversions	
Canadian \$	1.16
Yen	148.00
List Price	100.00
15% Discount	85.00
25% Discount	75.00
.....	
75.00	
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Currency Conversions screen, additional lines

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Highlight the first available blank line, press [F2] (Name), type in List Price and press [ENTER]. Use the same procedure to enter the names 15% Discount and 25% Discount on the next two available blank lines.

Move the cursor back up to List Price, key in 100 and press [ENTER]. Next move the cursor to 15% Discount, key in 85 and press [ENTER]. Move to 25% Discount, key in 75 and press [ENTER]. Finally, press [ESC] and you're ready to go shopping.

Let's say you see a great pair of pants for \$54.95. Move the cursor up to List Price, type in 54.95 and press [ENTER]. You'll see the 15% discount price is \$46.71 and the 25% discount price as \$41.21.

Hermann Schmitt
Winnweiler, GERMANY
(Vol.1, No.4, Pg.47)

95LX 100LX

Reference books on using HP CALC's Solver

HP CALC is modeled after the HP19BII Calculator. A good resource/reference on using Solver is *An Easy Course in Using the HP19BII* by Grapevine Press (800-338-4331 or 503-754-0583).

Fred Kaufman
CompuServe ID: [72560,36]
(Vol.2, No.1, pg.54)

All the HP 19BII application books can be used with the HP 95LX except that the 95LX lacks a forecasting exponential, power, logarithmic function. If you need a jump-start in the 95LX equation solver, buy the *Advanced Technical Solutions using HP SOLVE*. EducALC 800-677-7001, carries it (stk ID:548 for \$9.95).

Tim Schweikert
CompuServe ID: [72037,754]
(Vol.1, No.1, Pg.23)

Use HP CALC for quick calculations like a regular handheld calculator

HP CALC is easy to use for the simple calculations you do with inexpensive handheld calculators. If you want to add 5 and 2, go into HP CALC and make sure you are in the "Calculator Arithmetic" screen. Press **5 + 2 =** and 7 appears at the bottom right of the screen. To divide 66 by 3, press **66 / 3 =** and 33 appears.

The memory functions (MC, MR, M-, and M+) that you typically find on the right side of a calculator's keypad are activated by the Palmtop function keys F7, F8, F9, and F10 respectively. F7 clears the memory, F8 recalls the number in memory, F9 adds the current number to whatever is in memory, and F10 subtracts the current number from whatever is in memory. (For more on memory functions, see "Using Registers" beginning on page 23-12 of the *HP 95LX User's Guide* and on page 21-7 of the *HP 100LX User's Guide*.)

(Vol.2, No.3, pg.57)

Data Base

(See Phone & Database)

DataComm

(See Communications & Connectivity)

Filer

95LX 100LX

Shutting down FILER doesn't save RAM memory

Leave FILER open. HP and Lotus decided that the FILER functions always needed to be available. For example, if an application runs out of disk space, you can always go to FILER, delete some files or move them to another drive, and then go back into the first program and let the operation continue.

System Manager always reserves the memory required for FILER to open. You don't gain extra system RAM by closing it.

Ronald Vieceli

CompuServe ID: [73310,3663]

Ted Dickens (HP Forum Sysop)

CompuServe ID: [76701,272]

(Vol.1, No.6, Pg.66)

95LX 100LX

View large files in FILER

You can view large text files with FILER that you may not be able to edit in MEMO. In FILER place the cursor on the file you wish to view and press **ENTER** on the 95LX or **F8** on the 100LX.

Robert Roney

(Vol.2, No.4, Pg.5)

Lotus 1-2-3

95LX 100LX

How to create a Lotus keystroke macros

Many computers and software programs have macro capability. This lets you record a series of repetitive keystrokes and play them back at a later time by pressing one, or just a few keys. A macro can store text, or the keystrokes needed to carry out a program task.

Lotus 1-2-3 has macro capability and stores its macros in empty cells, so the first thing you have to do is move the cursor to a spot in your worksheet that won't be used for anything else. Then type in an apostrophe ('), the keystrokes you want, and then press **ENTER**. For example, to create a macro to format a range of cells to display two places after the decimal point in currency (e.g. 25.98), you would move to an empty cell (say, D1), type in **'/r/c2-** and press **ENTER**. (This is the same as pressing: **MENU** Range Format Currency 2 **ENTER**.) There is also a macro Learn mode that lets Lotus record your keystrokes into macro instructions. (For more on this feature, see page 13-27 of the *HP 95LX User's Guide* or page 12-9 in the *100LX User's Guide*.)

You can access this macro by pressing

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[ALT]-[F3] (Macro to run:), type in the cell where the macro is located (i.e. D1), and press [ENTER]. 1-2-3 will play back the keystrokes as if you had just typed them in. The message "Range to format: A1..A1" will appear on the prompt line. (The A1..A1 part of the message will vary depending on the current location of the cursor.) You would then type in the range and press [ENTER].

You can run a keystroke macro more easily by doing the following. First, give the cell in which the macro is located a special name. To do this, press [MENU] Range Name Create [F] [ENTER] D1 [ENTER], where F is the name you've assigned to the cell, and D1 is the location of the macro. Note that the backslash (\) key on the 95LX is the Shifted closed parenthesis key, not [MENU]. The backslash stands for [ALT] in 1-2-3 macro language. So to activate the macro located in D1, all you do is press [ALT]-[F].

It's kind of magical to press two keys and watch a large series of keystrokes executed automatically. It's this magic that has hooked a lot of good people into creating large libraries of Lotus keystroke macros.

Ed Keefe
(Vol.2, No.3, Pg.46)

95LX 100LX

Constants aren't

One of "Murphy's Laws" for computer programmers is: "Constants aren't". As soon as you put a constant value into a spreadsheet you discover that the value needs to be able to change and you really should have put in a variable. (An example of this is using the actual sales tax percentage to calculate retail sales in a spreadsheet. PRICE * .05 = INVOICE TOTAL. When the sales tax % changes, and you know it will, you will have to find and change all the occurrences of .05 to the current percentage. If the formula was PRICE * SALES TAX = INVOICE TOTAL, you would only have to change one value.)

A good programmer, spreadsheet designer, or analyst of any kind will check the validity of his or her assumptions by varying all the elements of the equation. This helps to show the effects of changing the underlying assumptions, and can help to define the critical variables in a problem.

Thomas Page
(Vol.1, No.6, Pg.42)

95LX 100LX

Use Lotus as a PHONE Book

Most people use Lotus 1-2-3 as a data base by allotting 1 row of cells per record. So, for example, you might set up your phone book as follows: Column A - Last name, B - First name, C - Company, D - Address, E - ZIP, F - Country, G - Codes, H - Comments. Using the Menu Data Sort command, one could sort the names by any field such as Last name, ZIP, Country, or Codes.

Hal Goldstein
Publisher, The HP Palmtop Paper
(Vol.1, No.4, Pg.37)

95LX 100LX

Lotus checkbook

I decided Lotus could best act as my *bank accounts manager*. I no longer enter check numbers, amounts, and descriptions in my checkbook. I enter the information for both my checking and savings accounts into a 1-2-3 spreadsheet (CHKBOOK.ZIP). The calculation of the account balance is done automatically with the @SUM function.

The only thing I update is a monthly interest dividend. Since Lotus files take up a lot of room and I rarely need to identify checks more than a month back, I copy the file off the 95LX about every six months to free up space.

The first row at the top of the spreadsheet simply identifies the account number in A1. In B1, I have the @SUM function which calculates the current account balance (@SUM(B2..B4)). Each time I insert a new row to enter a new check, the last cell in the @SUM function gets automatically moved down, so that all the entries are included in the summation. In C1, I entered an @NOW function and formatted the cell for DATE to have the current date displayed. I put the column labels in row 2: Date in A2, Amount in B2, Check# in C2 and Description in D2. Below the column labels in row three, the individual checks or deposits are entered, date in column A, amount in B, check number in C, description in D. They can be in any order as long as the @SUM references the proper column. With this format it is easy to see the account balance at the top of the worksheet. I enter my macro functions below and to the right of the data fields.

When I need to insert a check I use the following Lotus macro to do the job:

```
'(GOTO)A3~/WIR~/RFD2~(GOTO)
B3~/RFF2~(LEFT)
```

This macro quickly adds a row at row 3, the top of the list of checks and below the column labels. It then formats the date and amount cells. This puts the most recent check at the top. I also have a macro, to save the spreadsheet; /FS~R~.

Mark Snyder
Somerville, New Jersey; USA
(Vol.2, No.4, Pg.27)

95LX 100LX

Automatically load worksheet when you start 1-2-3

Say you have one particular worksheet that you always want loaded when you start Lotus 1-2-3.

Go into FILER on the 100LX, highlight the worksheet you always want loaded, press [MENU] File Re(n)ame and rename it AUTO-123.WK1. On the 95LX, highlight the file and press [F6] to rename it. Whenever Lotus starts, it checks to see if a file named AUTO-123.WK1 exists in the default directory. If it does, Lotus loads it when it starts.

Rich Hall
Editor, The HP Palmtop Paper
(Vol.2, No.5, Pg.51)

95LX

Deleting built-in WK1 files

The bad news is that it is impossible for U.S. HP 95LX users to delete the *.WK1 templates that come with the HP 95LX. The good news is that they do not occupy any useable space, so they are just a cosmetic annoyance.

The HP 95LX was designed to provide enough space in ROM for an English and a European language version of all the built-in software. (Any software etched in ROM is a permanent part of the machine.) HP engineers finding extra space in ROM on U.S. versions of the HP 95LX kindly added unadvertised and undocumented extras, including Lotus templates and other files.

You can make a copy of these spreadsheets and modify the copy to make them more useful. But take heed of the note in the 95LX User's Manual, page 16-1: "These templates contain formulas and range names that if altered, will cause the template to give incorrect results."

Hal Goldstein
Editor, The HP Palmtop Paper
(Vol.1, No.0, Pg.22)

100LX

Use 95LX built-in spreadsheets on the 100LX

The 95LX built-in spreadsheet files are not found on the HP 100LX, but will work on its newer version of Lotus. The spreadsheets, _CARLOAN, _CFLOW, _EXPENSE, _HOMEBUY, and _STAT can be found in _HPWK1.ZIP.

(Vol.1, No.6, Pg.65)

95LX 100LX

Password protection in Lotus on the HP Palmtops

One way to protect your sensitive information is to keep it in a Lotus worksheet and save it with a Password. To do this when saving the worksheet, type in the name you wish to save the file under, followed by an empty space and the letter P. Then press [ENTER]. You will be prompted to enter a password (see page 6-11 of the HP 95LX User's Guide and page 8-31 of HP 100LX User's Guide). The password is required to retrieve the worksheet into Lotus, and the sensitive data is not visible with any hex file editor like Norton Utilities.

A LOTUS spreadsheet damage recovery program called RESCUE has an included program that will rescue a forgotten password.

Another way to encrypt data is to use a file compression program like DIET.

Marc Schiffing
CompuServe ID: [72311,173]
Michael Gilchrist
CompuServe ID: [73557,2232]
(Vol.1, No.5, Pg.50)

Which Lotus add-ins work

[Although not tested on the HP 100LX, much of the following tip should apply to the newer Palmtop — Rich Hall.]

Preliminary testing of 1-2-3 on the 95LX produces some disappointing results regarding add-ins. Add-ins that only implement new @functions should work; others will probably not. We have tested the current versions of 14 popular commercial add-ins. Here are the results:

These don't work: SeeMORE (Personics); @BASE (Personics); Look&Link (Personics); Macro Editor/Debugger (Personics); Sideways (Funk); Allways (Funk); Noteworthy (Funk); Worksheet Utilities (Funk); 2D graphics (Intex); 3D graphics (Intex); 4WORD (Symantec); Budget Express (Symantec)

These do work: Rescue (only some parts) (Intex); @EASE (Spreadsheet Solutions)

There are a variety of technical reasons. The two major reasons are:

1. Most commercial add-ins hook into 1-2-3's jump table which is in the code segment. In the 95LX, the code segment is in ROM which makes it rather hard to change!
2. Some add-ins use their own drivers. The 95LX has a hardcoded driver set.

It also appears that once you attach an add-in, you should not detach it. We're doing some additional testing to narrow this problem, but at the moment it appears that detaching an add-in can quickly lead to a system crash.

Ted Dickens (Sysop)
CompuServe ID: [76701,272]
(Vol.1, No.1, Pg.22)

[We have published several tips about using the Macro Manager add-in from the desktop PC version of Lotus 123, version 2.2. Some people report using it for more than a year without any problems. Others have found that it causes "bad" system crashes on the 95LX.

If you want to use this very useful utility for Lotus, keep many good backups. Proceed carefully at your own risk — Rich.]

Memo

95LX 100LX

Line delete macro for Memo

The HP 100LX lets you delete a MEMO line by moving the cursor to any point in line you want to delete and press **CTRL-DEL**. Unfortunately, this feature is not found on the 95LX.

Since I use MEMO frequently, I need the standard functions of a word processor. Line delete is one of the most usable functions of a word processor. I wrote a small macro using the MARK and CUT functions of MEMO. Whenever you need to delete a line just place the cursor on the line and press the defined [CHAR] F-key. You can place the cursor wherever you like on the line and you can assign this function to one of the ten

macro keys.

Here is the procedure;

1. Enter SETUP and type Char
2. Choose one of the functions keys to hold the macro and press **ENTER**.
3. Fill the COMMENT and press **ENTER**.
4. Write the below macro to the COMMENTS: {HOME}{F9}{END}{F3}
5. Press **F10 ESC** to exit Char and quit the SETUP menu.

Enter MEMO, write or retrieve some text and choose a line to delete. Carry the cursor to that line. Press **[CHAR]-(<F-Key>)** to delete the line.

Ahmet G. Oezisik
(Vol.1, No.4, Pg.46)

Phone Book and Data Base

95LX 100LX

Use Subsets to do a 95LX-like "Only" search in the 100LX's Phone Book or Data Base

The 95LX PHONE application lets you press **F6** (Only) to create a subset of the PHONE Book list. Let's say on the 95LX you wanted to create a subset listing of every reference to

the area code 206 in your phone book. In your phone book, suppose you have entered all area codes in brackets to distinguish them from other numbers. From the PHONE application, press **F6**, **(206)** and press **ENTER**. The subset list will display all the records that have (206) in any field in the record.

The 100LX lets you define and select many different subsets of the same phone book (or any database). To do a 95LX-like Only search from within PHONE, press **F6** (Subset) **F2** (Define) and you are presented with the Define Subset screen.

PHONE's Subset screen, HP 100LX

In the Name field type ***(206)** and press **F10** (OK). Give the Subset a name (e.g., "Area Code 206") and press **ENTER**. Then, with **Area Code 206** highlighted, press **ENTER** once more. All the records that have (206) in any field will be displayed.

If you don't use the asterisk before the selection criteria, the Subset will select only those records with the selection criteria in the

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Name field. The asterisk tells the 100LX to look for (206) in any field.

Robert Roney
Editor, HP Palmtop Paper
(Vol.2, No.6, Pg.55)

95LX

ESC undoes card insert/modification

Press **[ESC]** while inserting a new Phone Book card and any information you have entered will be erased. Press **[ESC]** while modifying an existing card, and any changes you have made will be eliminated. Suppose you accidentally typed over, or modified one of your most important Phone Book entries. Press **[ESC]** before pressing **[F10]** (Done) and the original, unmodified card comes back. If you are adding a new card and change your mind, press (ESC) and it just won't be added.

(Vol.1, No.6, Pg.65)

95LX

How to split a PHONE file

The largest Phone Book file you can have is 47K. Depending on how much information you have on each entry, this translates to about 400-600 names. To increase capacity, some users keep two .PBK files, one for A-M and another for N-Z names. You'll need to split your existing Phone Book to do this.

Make two copies of your original PBK file by going to FILER, highlighting the PBK file, pressing **[F2]** (Copy), giving the file a new name, and pressing **[ENTER]** (do this two times). Now you've got three identical Phone Book files (say, PHONE.PBK, PHONE1.PBK and PHONE2.PBK).

Now open PHONE2.PBK within the PHONE application by pressing **[MENU]** File Open, selecting the file and pressing **[ENTER]**. Then use **[F3]** (Cut) to delete half of the entries out (i.e. A-M) and save it. Next, open PHONE1.PBK and delete the other half of the entries (i.e. N-Z).

You should now have 3 files PHONE.PBK — your original complete phone book, PHONE1.PBK — your A-M's, and PHONE2.PBK — your N-Z's.

Stanley Dobrowski
CompuServe ID: [71031,2162]
(Vol.2, No.2, pg. 53)

95LX

Use Lotus for large phone books

For those having large phone books who do not want to divide them up into separate files, consider using Lotus. Lotus has database functions, can be programmed for your personal needs, and is limited only by memory. There may even be address book applications out there already. Check the Lotus and IBM CompuServe forums. (See Lotus section, page 20 for example of a 1-2-3 database.)

Larry Lefkowitz
CompuServe ID: [76137,155]
(Vol.1, No.1, Pg.23)

100LX

Phone Book can be modified

The PHONE database can be modified. I created a phone book named TEST using PHONE (press **[MENU]** File New, enter **test** and press **[ENTER]**). Then I opened DATABASE and loaded that file into DATABASE (press **[MENU]** File Open, type in **test.pdb** and press **[ENTER]**). Then press **[MENU]** File Modify to enter the Modify screen.

Use the techniques described on pages 17-3 through 17-10 of the *HP 100LX User's Guide* to add, delete, move, and adjust the size of database fields. I deleted Address2; moved City, State, and Zip up one line; added a new date field called Last Contact; narrowed the Notes display area; and added a group box with four radio buttons. Not only can I view this modified file in Database, it still works with PHONE!

Caution: If you modify the PHONE file, the 100LX Connectivity Pack and the Omni-Book's built-in PIM software will not be able to read it!

Ted Dickens (HP Forums Sysop)
CompuServe ID: [76701,272]
(Vol.2, No.4, pg.54)

[Warning: Once the PhoneBook is modified, you will not be able to use the Connectivity Pack's or Intellilink's translation utilities with it. It becomes much more difficult to convert your phone book from PC application software to the HP 100LX formats — Hal.]

95LX

Cut and Paste PHONE address into MEMO

Instead of typing the name and address of a contact into a letter or memo, you can cut and paste them in from your Phone Book. Open PHONE and move the cursor to the name you want. Press **[F2]** (Copy), go back to MEMO and move the cursor to the "To:" line and press **[F4]** (Paste). The name, number and address will appear in your memo and you can edit or change it to complete the note.

(Vol.2, No.3, pg. 57)

95LX

Strategies for using PHONE as a database

Put all numbers you call in your Phone Book. That way, if you ever forget a name or a number, you can usually find the right person by doing ONLY searches. You must come up with unique and consistent ways of representing data so that you can use the ONLY (F5) command to search for subsets of that data.

1. When entering phone numbers into PHONE, surround the area code with parentheses and use a dash to separate the prefix with the final four digits: (444) 555-6666. That way if you know someone is in the (444) area code but can't remember the name, you can perform an ONLY search on (444), and not get the names of people who's Zip code or street address have 444 in it. Similar-

ly, you can find a name at HP corporate offices by searching for 857-, corporate's phone number prefix.

2. Place an empty space in front of the company affiliations, to help guarantee uniqueness. That way you can search for NU (Northwestern University), by doing an ONLY search on <Space> nu <Space>. Because of the leading and ending spaces, you will not find Sanunu's or Nusbaum's in the search.


3. Let's say you create a PHONE database listing the Chicago Cubs baseball schedule. You list all dates with a foreslash between the month and day (06/25). You indicate Home or Away games with an H or A followed by a space. An ONLY search on 6/ finds all June games. An ONLY search on 6/2 finds all games between 6/20 and 6/29. An ONLY search on h <space> Lists all Home games.


The FIND (F7) command can be used within the entries found from the ONLY search. In the Cub's PhoneBook example, after an ONLY search on Home games, you can find all home games with the Giants by doing a FIND (F7) search on GI. Press **[F8]** **[ENTER]** to clear an ONLY screen and go back to all entries.

Tom Anderson
(Vol.1, No.3, Pg.38)

95LX

Phone book to-do list

PHONE has three fields for information: Name, Number, and Address. Even though HP chiseled those field names into ROM, you can put any information you want into them. (The current 95Buddy  lets you change field names.)

I created a separate .PBK file for my to-do list (TODOPBK.ZIP ). In my PHONE to-do list, I enter a priority code and the task in the Name field, a reference in the Number field, and any other information about the to-do item (questions, notes, etc.) in Address field. The main Phone screen looks like this:

p1 CALL, broker	re: IRA Status
p2 PICK UP, gift	for Ayleen
p3 CALL, Pauls auto	oil change
w1 LETTER, Carson	re: Noland case
w3 CALL, Sheriff	re: Johnson case

The first letter in the entry (p or w) indicates whether the task is personal or work related. The number following the p or w indicates the priority level (1=high, 9=low). PHONE alphabetizes the entries, grouping personal and work to-dos separately, with highest priority to-dos appearing first in each group.

The task category (CALL, MEET, LETTER, etc.) appears next. I create task-oriented sub-categories within both personal and work-related to-dos. For example, the first to-do above indicates that I have to CALL my broker, the fourth above indicates that I have to write a LETTER to Carson. When PHONE alphabetizes the list, all LETTERS, CALLS, etc. of the same priority are grouped together.

Glenn C. Etelson
CompuServe ID: [70550,1074]
(Vol.2, No.3, Pg.43)

System Macros

95LX 100LX

Creating User Keys / System Macros

Programming is usually reserved for advanced users. However, you can easily use the built-in User Key / System macro capability to program your HP Palmtop to save repetitive keystrokes. See page 21-14 in *The HP 95LX User's Guide* and page 6-1 in *The HP 100LX User's Guide* for instructions on User Keys/System Macros.

Hal Goldstein
Publisher, *The HP Palmtop Paper*
(Vol.1, No.2, Pg.41,42)

95LX

System macro to change default directory

My solution is to create a User Defined Function Key (or "macro") that clears C:_DAT directory and changes to A:\WORK, the WORK subdirectory on the RAM card in my Memory Card slot. This macro can be created using the 95LX's learn option. (For more on creating CHAR macros, see page 21-14 of *HP 95LX User's Guide*.)

To view the F-key macro definitions press **<Shift> [FILER] Char**. Here is the macro I wrote just as it appears on the 95LX's Macro Definition screen:

```
{MENU}FO{BACKSP}{BACKSP}{BACKSP}
{BACKSP}{BACKSP}{BACKSP}{BACKSP}
{BACKSP}{BACKSP}A:\WORK\
```

Here's a macro to switch you between two or more phone books, and to display a list of phone books that you have. (If you have made changes to the active phone book be sure to save it before attempting to execute this macro. If you don't, the macro will crash.)

```
{MENU}FO{BACKSP}{BACKSP}{BACKSP}
{BACKSP}{BACKSP}{BACKSP}{BACKSP}
{BACKSP}{BACKSP}A:\WORK\*.PBK{ENTER}
```

Thomas Page
CompuServe ID: [76011,3655]
(Vol.1, No.2, Pg.37)

95LX

Overcoming the ten-key barrier

As most of us already know, only ten macros can be active on the 95LX at any given time. This feature was probably incorporated into the 95LX because it only has ten F-keys. Here's how to get around that limitation.

User Keys are kept in the SETUP.ENV file in the C:_DAT directory. If you want more than ten User Keys, you'll need to use alternate SETUP.ENV files. Here's one way to get another SETUP.ENV file.

First, use FILER to copy your existing SETUP.ENV to SETUP.OLD. The SETUP.OLD file will save all your original macros. Then press **[SetUp] Char** and delete any (or all) of the User Keys. You now have room to enter additional User Keys.

To reinstall your original macros, use FILER to rename SETUP.ENV to SETUP.NEW and rename SETUP.OLD to SET-

UP.ENV. You might even create a User Key to automate this process.

Ed Keefe
(Vol.2, No.2, Pg.40)

95LX

Macro for backing up Appointment Book

This macro automatically saves changes for the appointment book, closes the application and creates a file backup in card A. It could be easily adapted to any other application.

A RAM card should be installed and the

95LX switched to English language. The name of the appointment file I use is CAL-ENDA1.ABK and its path is C:_DAT\CALENDA1.ABK. You can change the name and path to suit yourself. This macro also assumes that A:\BACKUP already exists.

```
{MENU}qy{ENTER}y{FILER}{F7}{RIGHT}
{F5}a:\backup{ENTER}{LEFT}{F5}
c:\_dat\calenda1.abk{ENTER}{ESC}
{F2}{ENTER}y{MENU}q
```

José M. Lafora Garía
HP Española
Madrid, SPAIN
(Vol.1, No.5, Pg.50)

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- Simplifies, factors and expands expressions.
- Does exponential, logarithmic, trigonometric, hyperbolic and probability functions.
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- Can generate Fortran, Pascal and Basic statements.

System requirements
PC version: MS-DOS 2.1 or later, only 512Kb RAM and one 3.5" or 5.25" disk drive. Suggested retail price is \$125

ROM-card version: Hewlett-Packard 95LX and 100LX Palmtop computers. Suggested retail price is \$125

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Communications & Connectivity

Communications

95LX 100LX

Using Datacomm

The communications program built into the HP Palmtop is called Datacomm. Whenever you press (COMM) on your 95LX or **[&...]** Comm on your 100LX, that's the program you'll be using. If you're familiar with using your PC and communications software to access CompuServe or MCI Mail, you'll feel like Datacomm is an old friend. If you haven't done much with communications, the HP Palmtop is an ideal starting point because much of the hard work has already been done for you. Everything is ready to go. All you need to do is be sure things are set up right (which we're going to cover in this column) and provide the correct phone number. (*Article, Vol.1, No.1, Pg.34*)

Here's what you need for communications on the HP Palmtop:

- a Hayes-compatible modem (1200, 2400, or 9600 baud);
- AC Adapter for the modem;
- AC Adapter for the Palmtop (HP F1011A)
- Serial cable for the Palmtop (comes with HP 95LX Connectivity Kit (HP F1001A) 100LX Connectivity Pack (HP F1021A), or independently as HP F1051A);
- Null modem gender changer. I Recommend Serial Cable adapter kit (HP F1023A).

*HP Technical Support
(Vol.1, No.5, Pg.25)*

95LX 100LX

Capturing text in Datacomm

To retain data received by the Palmtop in a file, whether it be simple keyboard activity or TEXT transmissions, use the Datacomm CAPTURE feature. On the 100LX, in DataCOMM, press **[F5]** to initiate a capture. On the 95LX, press and hold **[CTRL]** until the menu appears, then press and release **[F5]** (Capture).

A display will prompt:

```
Save incoming data as:  
C:\_DATA\*.CAP
```

Any existing capture (.CAP) files will also be displayed. Type a file name or select an existing file. The display will return to Datacomm and all incoming data will be saved to the file until **[F5]** on the 100LX or **[CTRL]-[F5]** on the 95LX is again pressed, closing the file. The Datacomm configuration menu provides

three options for the Capture feature. The None setting captures all data. Refer to the manual for details on Filter and Map.

*HP Technical Support
(Vol.1, No.5, Pg.28)*

100LX

Enabling serial port

If your DOS application uses the serial port, then some extra steps may be needed, since System Manager likes to turn off the serial port to save battery power.

When you exit the System Manager to go to DOS or boot directly to DOS; the serial port is always on when System Manager is not loaded.

For other methods of going to DOS however, there are two considerations. First, the status of COM1 is controlled from SETUP. Press **[MENU]** Options Communications Port... and you will see a box labelled "Enable COM1 Port in DOS". That box should be checked when you are running a DOS datacomm program under System Manager.

However, while System Manager turns the port on - it does so rather too exuberantly. Every few seconds, it will go back to the serial port and turn it on again - just in case. This can wreak havoc. To circumvent this behavior, create an entry in Application Manager, **[&...]**, press **[F2]** (Add) and fill out the form for your datacomm program. In the Comments field, place an upside down question mark (**[?]**), which you create by pressing **[Fn]-[FILER]**.

A better solution is to use Mark Scardina's ASERCTL **[?]** program, which you can download from the HP Handhelds Forum on CompuServe. ASERCTL lets you turn the serial port on and off as needed.

*Ted Dickens
(Vol.2, No.4, Pg.30)*

Fax/Modems

95LX 100LX

Fax/modem card tips

1. Cards can drain batteries.

PCMCIA card data/fax modems draw their power from the computer in which they are inserted. This will drain your 100LX's batteries. It's best to connect the 100LX to the AC adapter when using a fax/modem card and to remove the card when not using it.

2. Fax capabilities may not work.

Fax software may be too big to fit on the 100LX's internal C drive. Since the fax/modem card occupies the memory card slot,

putting the software on a memory card is no solution. You may not be able to use the fax capabilities of some of these cards in the 100LX.

3. Installing Fax/Modem cards:

Follow the instructions in the *HP 100LX User's Guide* (pages 37-3 to 37-4). If the fax/modem card does not work, contact the manufacturer of the card. They will be able to help you better than HP Tech Support. Remember, the Fax portion of these cards may not work.

*Rich Hall
(Vol.2, No.6, Pg.11)*

95LX 100LX

External fax/modems

1. Most AC Powered Modems Work

Most AC powered modems will work with the HP Palmtop. However, their size, and the need to be close to an AC outlet, makes them inconvenient to use with the HP Palmtop.

2. Most Line Powered Modems Don't Work With the HP Palmtop

Line powered modems do not require a battery because they derive their power from both the phone line and the serial port of the computer they are connected to. While these modems work well with most desktop and laptop systems, the Palmtop cannot provide them with the power they need to operate. There are a couple of line-powered modems, however, that can be made to work with the Palmtop through hardware modification. See the modem list that follows. If you are so inclined, you may find that you can modify your line-powered modem to work with the Palmtop.

*Larry Leffkowitz
(Vol.2, No.1, Pg.17)*

95LX 100LX

Modems that work with the HP 95LX

[100LX note: All of the external modems should work the same on the 100LX, but we have not tested them.]

The following modems are known to work with the HP 95LX. Some modems require modification to work properly, and are so noted. Most modifications are too detailed to reproduce here. Files detailing the modifications are available on the CompuServe Information Service, in the 95LX Communications Library (6) of the HP Handhelds Forum (GO HPHAND). Specific file names are mentioned in the modem list. Before using any of modems listed below with the HP 95LX, send the AT &D0 &W command to the modem. (*See article, Vol.2, No.1, Pg.14 for more on getting modems to work with the Palmtop. Contact information for modems listed below is on page 43 of this issue.*)

■ PalmModem 2400

[New Media has a new model for the 100LX.]

This PCMCIA-compatible 2400 baud modem card fits in the card slot of the HP 95LX Palmtop PC. Resident in the PalmModem is PalmTerm, a terminal emulation program and fax software optimized for Palmtop computer use.

■ WorldPort V.42bis Modem

The V.42bis is a 2400 baud modem that slides directly into the DataLink cradle.

■ WorldPort Palmtop Fax/Data Modem

A portable send-fax modem with a 2400 bps data channel, designed for palmtop computers. Users have reported good results with this modem.

■ WorldPort 2400

This modem is recommended by HP for use with the 95LX. By placing switch 3 in the ON position, the modem will not require DTR for power-on to occur. When switch 3 is on, the modem looks at the Transmit Data signal (TXD, see figure 1 in article) as an on/off switch. Therefore, to insure the modem is off after use, you must disconnect the modem cable. Note: The Worldport 2400-MNP version of this modem will only work with the HP 95LX on AC power.

■ 9624 VAP Pocket Fax/Modem

Compact, fully Hayes compatible 9600 bps send/receive fax & 2400 bps data modem. Connects to standard 9-pin RS-232C connector and runs on external adaptor or internal 9-volt battery.

■ Macronix MaxLite 96/PC

This 9600 baud data/fax modem works right out of the box with the HP 95LX. The fax feature will not work with the HP 95LX.

■ Telebit Qblazer

This 9600 baud modem works right out of the box with the HP 95LX. The modem received a PC Magazine "Editor's Choice" recommendation in a comparison of high speed portable modems.

Larry Lefkowitz
(Vol.2, No.1, Pg.17)

95LX 100LX

Using acoustic couplers with modems

I have one of those battery operated acoustic couplers and can use any pay phone or hotel phone without worry. I simply dial out by hand. (I use my AT&T card and dial direct in the U.S. This even works using a live oper-

ator when calling from outside the U.S.) Once the connection is made, I enter the ATDC command sequence, which tells the modem to connect without dialing.

David Shier
CompuServe ID: [75030,3374]
(Vol.2, No.5, pg.53)

95LX 100LX

Cables, couplers and adapters needed to connect to modems

The following items may be necessary to connect specific fax/modems. (See Contact Information, page 43 for price and contact.)

■ HP 95LX Connectivity Pack

(HP F1001A) Transfer files between 95LX and PC. Includes software, serial cable, 9-pin-to-25-pin adapter.

■ HP 100LX Connectivity Pack

(HP F1021A) Includes software, serial cable, 9-pin-to-25-pin adapter.

■ AC Adapter

(HP F1011A), retail: \$39.95)

■ PC Connectivity Cable

(HP F1015A) Serial cable for HP 100LX. Adapter included allows it to connect to

THE ALL-IN-ONE PCMCIA MESSAGING CARD FOR YOUR HP 100LX!

The AccessCard™ is the most advanced messaging card for your palmtop or subnotebook. Receive urgent messages, e-mail, news updates, etc. Receive messages forwarded seamlessly from applications such as Excel, Lotus 1-2-3, WordPerfect, MS Mail, and Schedule Plus.



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- 32K MESSAGE MEMORY
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- WORKS WITH ANY MAJOR PAGING CARRIER

To learn more about the AccessCard and how to send wireless electronic messages to your HP 100LX or OmniBook, fax this form to 1-408-383-0503.

Name _____ Company _____

Address: _____ City _____ State _____ ZIP _____

Phone _____ Fax _____ E-mail _____

How should we send you more info? Fax _____ Phone _____ Mail _____ E-Mail _____

Wireless Access Inc. 125 Nicholson Lane San Jose, CA 95134 408-383-1900



95LX 4-pin port. Need Connect/Adapter Kit below to connect to modem.

■ Connect/Adapter Kit

(HP F1023A) Kit includes two 9-pin-to-25-pin adapters, one for connecting to modems and another for connecting to printers.

■ TeleCoupler II Acoustic Coupler

This coupler lets you connect all but "line powered" modems to a telephone handset.

*Larry Lefkowitz
(Vol.2, No.1, Pg.18)*

Wireless Comm

95LX 100LX

Access VCR/TV remote from Palmtop

There are two software programs that let you turn your HP Palmtop into a remote control for your TV, VCR or stereo system:

■ myREMOTE (95LX only, \$29) — ACE Technologies, USA; Phone: 800-825-9977; Fax: 408-428-9721. ((Vol.1, No.6, Pg.28).

■ RemCOM (both Palmtops, \$30) — On the Best Palmtop Tips ON DISK. Also available in the HPHAND forum of CompuServe. (Vol.2, No.6, Pg.26)

95LX 100LX

SkyTel and Embarc

SkyTel and EMBARC serve different niches — SkyTel focuses on shorter transmissions (up to 240 characters) for immediate delivery to groups of up to 40 individuals. EMBARC provides less immediate delivery (15 minutes minimum) of longer messages (up to 30,000 bytes) to unlimited sized groups. EMBARC handles either text or binary files, and sends daily broadcasts of news, sports, and weather. With SkyTel, the receiver pays on a per message plan; with EMBARC the sender pays for the transmission.

Both services provide wireless reception of messages. A SkyTel subscriber sends messages using a modem or touch tone phone. An EMBARC subscriber sends messages via a modem or e-mail system.

*Rick Shaddock
(Vol.2, No.2, Pg.20)*

Connectivity

Connectivity includes anything used to connect the Palmtops to another computer.

95LX

CC:Mail-Remote working on the 95LX

You must use version 3.2. I have the program and associated files on the root directory of a

1MB RAM card (A:\). I invoke the program with:

```
remote a: msgsize/10 comm/int14
```

The A: is required to keep the program from asking you to insert disks (memory cards). The MSGSIZE/10 limits the maximum message size to 10Kbytes. The COMM/INT14 is required to circumvent an HP 95LX hardware bug.

I find that I must run at 2400 baud maximum. If necessary, to enable the serial port (serctl /w), with cursor tracking (dispctl +k +c), and set current directory to A: before running.

*Paul Laughton
CompuServe ID: [70313,2755]
(Vol.1, No.5, Pg.51)*

95LX 100LX

What works on the 100LX from the 95LX Connectivity Pack

The FILER and the DC95/ DCS95 programs from the HP 95LX Connectivity Pack work with the 100LX, the other applications do not.

*Ted Dickens (HP Forums Sysop)
CompuServe ID: [76701,272]
(Vol.2, No.4,pg.52)*

95LX

Making APP95 Small & Portable

I have discovered that the minimum files needed to use the HP Connectivity Pack's APP95 to move files back and forth between the 95LX and another PC are as follows:

Filename	Filesize
APNAMEUS.LST	52
APP95.EXE	44,330
SETUP.ENV	5,842
FILER.ENV	16
JFRESUS.RI	4,264
MQBTASU.RI	2,146
MFILER.EXM	55,271
MTASK0.EXM	11,271
Total:	123,192

To access APP95's setup, you'll also need MSETUPM.EXM and MSETUPUS.RI.

I edited APNAMEUS.LST to maintain only the two EXM's listed here. App95 restores the SETUP.ENV file even if you erase it, so you could eliminate that one to reduce further the number of files you put on the disk. Carrying a disk with these files and a 95LX serial cable and you can connect to another PC when you're away from home.

*Fred Kaufman
CompuServe ID: [72560,36]
(Vol.2, No.2, pg.54)*

95LX 100LX

Connectivity with MS-DOS 6.0

DOS version 6.0 is out and it supports a new feature for connecting to, and transferring files between laptops (and the HP Palmtops as it turns out). DOS 6.0 must be installed on your desktop PC. Make sure that INTERLNK .EXE is in the C:\DOS directory of your PC and add the following line to your PC's CONFIG.SYS file:

```
device=c:\dos\interlnk.exe
```

Next load a 38K file named INTERSVR.EXE

Comparison between EMBARC and SkyTel	
EMBARC	SkyTel
■ Both use the HP 95LX, and Accessory Cradle; ■ Both use a Motorola receiver; ■ Both offer electronic messaging to the HP 95LX; ■ Both are national RCC's (Radio Common Carriers); ■ Both are very cost effective for messaging	
Broadcasts on 931.9 MHz	Broadcasts on 931.9 Mhz
No touchtone, modem, e-mail service used	Paging via variety of 800 #, modem, e-mail
A variety of USA Today News, Sports, Health, Business news broadcast every day to Palmtops plus news abstracts from Individual Inc., and Reuters	SkyNews: Twice a day, domestic, international, and business.
1500 bytes/message, software will recombine longer messages seamlessly up to 30Kbytes	240 bytes per message. HP 95LX can append messages together
Sender can choose 15 minute, hour, or 3 hour delivery times	Message received generally within 60 seconds; not guaranteed
Sender is billed on a variety of plans	Receiver is billed on a variety of plans
A variety of larger groups can be defined	User defined groups of 40, broadcast unlimited.
230 cities in US & Canada as of February 1994.	250 cities US, 75 Canada, 25 Mexico, Singapore, Hong Kong, Bahamas, Bermuda, Malaysia.

onto your Palmtop. Then connect your HP Palmtop to your PC via the serial cable, run INTERSVR.EXE for your HP Palmtop and INTERLNK.EXE from your PC. That's all you need to do to make the HP Palmtop's drives accessible to your PC.

Bruce A. Kessel
CompuServe ID: [72740,2310]
(Vol.2, No.4, pg.52)

[Some users have reported problems in FILER with this arrangement. Make sure to quit all other built-in applications — Rich.]

95LX 100LX

Automate backup of the HP Palmtop

I have a simple BATch file that accomplishes a backup using DCS95:

```
echo assuming HP95 is running DSC95.EXE...
cd \comm\cpack
dc95
xcopy d:\*.* c:\comm\cpack\backup\ /s /e /y
xcopy e:\*.* c:\comm\cpack\backup\ /s /e /y
dc95 -u
```

I run it every night without fail. I feel a little better all day.

Greg Witek
CompuServe ID: [72611,2114]
(Vol.1, No.5, Pg.50)

95LX 100LX

System RAM Required to Run DCS95 on the HP Palmtop

To run the DOS connectivity utility DCS95.EXE on the HP Palmtop requires the System RAM to be at least 242K. Anything smaller causes error messages.

Phillip Simpson
Clayton, Victoria, AUSTRALIA
(Vol.1, No.5, Pg.50)

95LX

95LX-to-95LX communication: infrared port transfer procedure

HP 95LXs with the ROM (1.03A) will not establish a remote connection with another unit without first waking up the IR port on each unit.

To determine the software version on your 95LX:

1. Close all open applications.
2. Turn off the HP 95LX.
3. Hold down (ESC) and press (ON) to display the self-test menu and "revision" number. "Revision 9/20/91" indicates version 1.03A.
4. Press (ESC) to leave test menu.

When communicating between two version 1.03A HP 95LXs via the infrared port, the IR port must be turned on manually, either:

1. Press [COMM] to turn on ports unconditionally. After doing file transfer, return

to [COMM] and press [MENU] Quit to turn off the ports, or;

2. Press [FILER] [F6] on the 95LX that will act as receiver. Wait until the connection attempt errors out (about 11 seconds). Press [ESC] to clear the error condition.

To establish a remote infrared connection between two HP 95LXs version 1.03A. Save any open files before attempting a transfer:

Place the receiving HP 95LX to the right with the display facing away from you, the sending HP 95LX to the left with the screen facing you, and set each 95LX to the IR port by pressing [FILER] [MENU] Remote-Set Config Interface, 3 (Infrared) as described on page 20-19 of the HP 95LX User's Guide. Then press Quit to return to FILER'S main screen.

On the receiving 95LX press [COMM] to turn on the IR port and [FILER] to return to Filer.

On the sending 95LX press [FILER], [F7] (Split Screen), and [F6] (Remote) to establish the infrared connection. Then you can perform any desired file transfers or directory operations between the two 95LXs.

When you are finished press [ALT]-[F6] to disconnect the infrared connection on the sending 95LX, and exit COMM on the receiving 95LX to turn off the IR port (press

[COMM] [MENU] Quit).

If only one 95LX has ROM version 1.03 A, you can follow the procedure above, or let the 1.03 A version be the local (sender) unit.

HP Tech Support
(Vol.1, No.3, Pg.12)

95LX

I get "Packed files corrupt" when I try to install the HP Connectivity Pack software on my PC?

At the DOS prompt A:> (or whichever drive has the Connectivity Pack disk), type **LOADFIX INSTALL**. You may see your PC's DOS 5.0 documentation for information on the LOADFIX command.

From HP Technical Support Staff
(Vol.1, No.6, Pg.62-63)

100LX

Comparative timed tests of CPACK 100 Redirector

I ran some timing tests copying 4.4MB of files from my HP Flash Card to the PC hard disk using LapLink 3.0a, ZIP.COM, 100LX Connectivity Pack REDIRECTOR and FILER, and INTERLINK from DOS 6.0.

All tests were conducted at 115,200 baud,

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June, 1993

"IntelliLink is a major step forward in the effort to make your palmtop and desktop machines a smoothly functioning team."

PC Magazine,

April 28, 1992

"IntelliLink removes the user from the complexities of accurately translating data between file formats."

The HP Palmtop Paper,

March/April 1992

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except where noted. The REDIRECTOR would not run beyond 38,400 bps without FS.COM. I found no errors in the transferred files. The higher KB/sec numbers indicate that the file transfer is faster:

Description	Speed KB/sec
LapLink 3.0a	
From HP SysMan; Turbo Mode	13.1
From DOS; Turbo Mode	13.1
Device driver from DOS; Xcopy/S	10.4
Device driver from DOS; Copy/V/S	9.3
ZIP.COM	8.1
CPACK 100	
Filer (Tag All files & dirs)	2.9
Redirector (19,200 bps)	1.2
Redirector (38,400 bps)	1.9
Redirector w/FS.COM (57,600 bps)	2.4
DOS 6 INTERLNK/INTERSVR	
Xcopy/S	7.2
Copy/V	7.4

It is obvious that CPACK transfers are in a different league — the slowest. LapLink was the fastest at file transfer. ZIP.COM was the fastest non-Laplink alternative, three times faster than CPACK.

LapLink 3.0 has an installable device driver which functions just like the CPACK redirector or DOS 6.0 Interlnk/Intersvr. It allows you to map the drives of one machine onto the other. You can then run any other DOS command or program to access the mapped drives.

Ron Crain
CompuServe ID: [70011,307]
(Vol.2, No.5, Pg.16)

100LX

Speed up the Redirector

The Redirector is a program that lets users directly access HP 100LX drives from your PC, and PC drives from your 100LX. At higher baud rates, an increasing number of transmission errors start happening, and when the Redirector gets transmission errors, it "times out" before retrying. The more errors, the more "time out" periods.

FS.COM is a TSR that comes with the CPACK 100, but it is not documented. It was a late addition which IMPROVES (not fixes) the speed issue with REDIRECTOR at higher baud rates. It also fixes a bug in the 100LX ROM version of the REDIRECTOR that can destroy database files when running as the client. The bug was actually fixed in the CPACK 100 version of the REDIRECTOR.

You have to copy FS.COM over to your 100LX and create an AUTOEXEC.BAT file that runs FS before 100 (SysMgr). After you have created the AUTOEXEC.BAT file, closed all 100LX applications and then reboot the system (press **CTRL-ALT-DEL**).

Everett Kaser
CompuServe ID: [70662,2540]
(Vol.2, No.5, Pg.16)

[Note: In recent 100LX ROMs (versions 1.04 or greater, these problems were fixed and FS.COM is not necessary.)]

100LX

Find missing directories

Some users have reported subdirectories missing when viewing their hard drives from FILER or PHONE in CPACK 100, even when they are visible from DOS. This is due to a variable space limit that normally would not effect 100LX users, but might on a hard disk system with lots of files. You can still access the unseen directories from PHONE's File Open dialogue box by typing in the path name directly.

Mark Scardina [TeamHP]
CompuServe ID: [76711,732]
and ACE Technologies
(Vol.2, No.5, Pg.16)

95LX 100LX

New serial cable for both Palmtops

HP has discontinued the original HP 95LX PC Serial Cable. The new PC Connectivity Cable (HP F1015A, retail: \$24.95) works with the HP 100LX and comes with a little adapter so that it can be used with the HP 95LX or the HP 48SX calculator.

The new HP 100LX Macintosh Connectivity Cable (HP F1016A, retail: \$24.95) also comes with adapters so it can be used with the 95LX or 48SX.

Rich Hall
(Vol.2, No.5, Pg.6)

95LX 100LX

File transfer software

You can back up your Palmtop files to a RAM card but a less expensive solution is to use a file transfer program and serial cable to backup to a PC. A variety of programs and connectivity packages are available, allowing you to connect to PCs or Macs. If you're on the road, you can take the software and serial cable with you and connect to almost anyone's computer.

This approach has two problems associated with it. The first is the 95LX's non-standard serial port. This very basic three-wire port does not support a standard serial port's DTS and DTR signals. This handicaps performance with file transfer programs like LapLink and FastLynx, which can support 7-wire serial cables. The 100LX port is more standard.

The other difficulty associated with the serial transfer approach is getting the transfer software on to the Palmtop in the first place. For this you can use the built-in COMM program and a communications package on a desktop PC or you can use the HP Connectiv-

If you see . . .

File I/O error or RAM Disk Corrupt

and you can't remember when you last backed-up your file, then you need

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ity Pack. Following is a list of file transfer programs that have been used on the 95LX and 100LX (see Contact Information box, page 43 of this issue for more information on these products):

- **MacLinkPlus HP Palmtop — \$129**
Macintosh to HP Palmtop file transfer software.
(Works with both Palmtops.)
- **Mac Data Exchange — \$89.95**
95LX only Mac file transfer software.
- **PC Data Exchange — \$69.95**
PC file transfer software.
- **Station95 with**
MAC Data Exchange — \$199.95
Docking station with connectivity software.
- **Station95 with**
PC Data Exchange — \$129.95
Docking station with connectivity software. Data exchange software also comes with the SmartDoc ComStation and SmartDoc PrintStation.
- **HP Connectivity Pack — \$100**
File transfer software/serial cable from HP. Available for both Palmtops.
- **FastLynx — \$169.99**
A fast DOS file transfer software.
- **Norton Commander 3.0 — \$149**
File manager with file transfer feature.
- **IntelliLink for Windows — \$99.95**
File transfer and translation utility program that runs under Windows.

- **LapLink V** — \$169.95
- **LapLink Pro** — \$169.95
File transfer software.
- **ZIP.COM** ■ **file transfer software**
Shareware file transfer software.
- **KERM2.ZIP** ■
File transfer software for PC.
- **KERMIT.ZIP** ■
File transfer software for Mac.

NOTE: Price listed is suggested retail price at the at the time of original publication, not including shipping and handling. You may be able to purchase the product for less from a software retailer.

Tony McNamara
(Vol.2, No.2, Pg.12-19)

95LX

App95 "System resource missing" error message

You will receive this message if you have installed the Connectivity Pack on a drive other than the C drive, or in a directory other than CPACK. This is okay if the APP95 program can find where you've put the Connectivity Pack modules. To find them it looks to the DOS environment for a variable named PIMS which should be set with the path to the Connectivity modules. The command to define this variable is the following:

SET PIMS=C:\CPACK (replace C:\CPACK with your installation location).

To display the current values of the DOS environment file, type SET at the DOS prompt. PATH and PIMS should both contain the path to the Connectivity Pack software.

The SET PIMS command should be in the AUTOEXEC.BAT file. The problem may be that the SET PIMS command is not executed during the start-up process because it is preceded by the execution of another program. To fix this, put the SET PIMS command closer to the beginning of the AUTOEXEC.BAT file. Save the AUTOEXEC.BAT file and reboot the PC. After rebooting, type APP95 and then press **[ENTER]**.

HP Technical Support
(Vol.2, No.1, Pg.41-42)

Macintosh Connectivity

95LX 100LX

Mac connectivity

I found a copy of Mac Kermit in the CompuServe Mac Communications Forum and it works great. Both Kermit ■ and Xmodem protocols are provided on the Palmtop. All you need is the cable to connect the Palmtop to the Mac (HP F1016A). If you do not have communications software for your Mac, you may order the "HP 48SX to Apple Macintosh" serial interface kit (HP 82209A), which includes serial cable and Kermit for the Mac.

To run XMODEM, HP to Mac, run a Comm program on the Mac and set it up to receive a file. Start COMM on the Palmtop and set it up to send a file.

To run XMODEM, Mac to HP, use above procedure but swap the send and receive.

To run Kermit, connect and run Kermit on both systems. Place one of the systems in "Server" mode. On the non-server system use GET, SEND or RECEIVE to send files to or from the "Server".

For backing up the Palmtop I set it to "K-Server" and use GET FILE... from the FILE menu on the Mac. GET FILE accepts wild cards for file names, thereby allowing groups of files to be sent at one time.

Don Class
CompuServe ID: [73477,2460]
(Vol.1, No.3, Pg.47)

95LX 100LX

HP Palmtop backups to Mac

The Hypercard stack, MACBAK.SIT ■ (M/J 93) by R. David Mitchell, was written for the HP 95LX, but also works with the HP 100LX. It seems to be the most economical and simplest Mac backup and file transfer method for the HP Palmtops and the Mac available at this time. A related program, called DIRST.EXE ■, is first run on the palmtop to create a text file listing all files on your HP and RAM card. Transfer this text file to the Mac, and then the Hypercard stack uses that file to copy the listed files.

To transfer files, simply connect the Mac and the Palmtop with the HP's Mac Connectivity Cable (HP 1016A for the 100LX or 95LX) while both computers are off. Then press **[CTRL] [CC:MAIL]** on the 100LX or **[COMM]**



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cellular phone, a fax/data modem, plus an AXCELL cellular interface.

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on the 95LX to launch the DataComm application. Press **[MENU]** Connect Settings on the 100LX or **[MENU]** Settings on the 95LX and enter the following parameters: Baud: **19200**, Interface: **Com1**, Parity: **none**, Data Bits: **8**, Stop Bits: **1**. Press **[ENTER]** on the 100LX or **[ESC]** Quit on the 95LX to return to the DataComm screen.

Launch the Hypercard stack from the Mac and go back to your Palmtop. On the 100LX, press **[MENU]** Connect Kermit, select **Put 100LX in server mode** and press **[ENTER]**. On the 95LX, press **[MENU]** Transfer Kermit K-Server. Follow the Hypercard stack's instructions for file transfer and backup.

I recently discovered that this Hypercard stack has problems transferring certain file types back to the Palmtop. You may need to use Kermit  (the freeware Mac desktop version) on your Mac, another terminal emulation program, or MacLinkPlus to send all file types back to the Palmtops. MacBak still remains the easiest, automated backup solution for Apple Macintosh owners.

Craig de Fassel
AOL ID: PDA Craig
CompuServe ID: [76500,1440]
(Vol.2, No.4, pg.53)

95LX 100LX

Macintosh to HP Palmtop connectivity with MACLINK PLUS HP Palmtop

DataViz, Inc. manufactures a software program called MACLINK PLUS HP Palmtop that enables your Macintosh and HP Palmtop to transfer files. It also provides translation of certain Macintosh file formats to/from the file formats of the 95LX and 100LX's built-in applications.

Once set-up, your Palmtop works as if it were another Mac drive. You can back-up your Palmtop's files onto your Mac's hard drive or a DOS-formatted diskette in the Mac's 1.4MB Superdrive through the Apple directory dialog box. (MacLinkPlus contact information in Product Information box, page 43.)

Bernie Kim
CompuServe ID: [71621,232]
(Vol.1, No.2, Pg.17-18)

CompuServe

95LX 100LX

World of support on CompuServe

The CompuServe Information Service (CIS) is a public-access computer system that offers a world of useful knowledge about your 95LX and 100LX through the HP Handhelds Forum. If you have a CompuServe account, access the forum by typing GO HPHAND. If you don't have a CompuServe account, you

can obtain a free Introductory Membership by calling 800-848-8199. Ask for representative #231. International users can call 614-457-0802 (USA) or one of the numbers listed below:

Country	Phone Within Country / From this Country
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US & Canada	(800) 848-8199 / (614) 457-0802
Venezuela	(+58) 2-793-2984, 2384, 8694

CompuServe provides more than 1400 different information services. In the personal computing area, CIS forums cover the full range of hardware, software, and even paperware (magazines). Besides the forums for HP, you'll find IBM, Apple, Microsoft, Lotus, Borland, Novell... All told, there are more than 200 computer companies active on CompuServe.

The forums are great places to get questions answered, keep up with the latest from HP and other vendors, get software updates, and tap into the wealth of public domain and shareware software. And unlike HP's support channels, the HP Forums are open 24 hours a day, seven days a week.

If you have used an electronic bulletin board system (BBS), most of the forum concepts will be familiar. Each forum has three main areas:

- Message boards, where you can read and write messages;
- Libraries, where you can find files;
- Conference rooms, where you can "meet" on-line with other users.

Ted Dickens
(Vol.1, No.6, Pg.47)

95LX 100LX

Strategies to keep cost down

CIS is not free, but some simple strategies can keep your costs within reason.

- Choose your baud rate carefully. If you log on interactively, consider 300 baud. That's roughly 300 words per minute which most of us can read comfortably. Use faster, more expensive rates only if you are going to be downloading files or using an automated access program. In fact, while you are learning to use CIS, 300-baud is ideal. The \$15 usage credit in the introductory membership will pay for two hours of access at 300 baud — enough to learn your way around.
- Be selective about what you look at. In

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each forum you can select sections of interest. CIS will then only show you messages from those sections. Further, you can "scan headers" and only read "threads" that sound interesting. You'll spend less time on line, and less money for connect charges.

■ Use an automated access program. These programs are written just to access CIS and while they have different user interfaces, they share an underlying philosophy: Do it off-line. The programs log on, pick up the messages you want, then log off. You read and reply to the messages off-line, then the program logs back on and uploads the messages you have written. This can cut your CIS bill by 90%. (See next tip for more on automated access programs.)

■ Make your introductory membership credit last even longer by using the GO PRACTICE command to get into the CIS Practice Forum. Not only will you find a "Sysops" (knowledgeable person in charge of the forum) who specializes in helping new users, you'll find lots of files of tips and tricks — and it's all free to any user. While you are in the Practice Forum, CompuServe suspends the normal connect charges. (You still have a phone bill.) So you can learn to read and write messages, upload and download files all without paying for it.

(Overseas users, beware. Network charges are not suspended. In much of North America and some international sites, network charges are only 30 cents/hour. But for other places, the network charges can be significant.)

*Ted Dickens
(Vol.1, No.6, Pg.48-49)*

95LX 100LX

Automate your CompuServe access

Automated access program can save you time and money on CompuServe. Here are some of them:

■ **accis/SM 2.0** — a powerful CompuServe access manager, specially designed for use on the HP Palmtop PC. Requires COMMO or fastCOMM to run. This \$35 shareware runs under System Manager. CONTACT: *AcCIS/SM 2.0 can be downloaded from CompuServe HPHAND forum, library 5 as ACCIS9.ZIP*.

■ **Message** — This shareware program is written specifically for the Palmtop. Download MESSG.ZIP. The recommended editor to use with Message is VDE. Requires COMMO or fastCOMM to run.

■ **Tapcis** — is available in the TAPCIS Library (1) of the TAPCIS Forum (GO TAPCIS). TAP542 is a shareware program (\$79) that runs on IBM and compatible computers.

■ **Autosig** — is available in the AUTOSIG library (1) of the IBM Communications Forum (GO IBMCOM). ATO69A.ZIP is a freeware program that runs on IBM compatible computers.

■ **Navigator** — is available from the CompuServe online store, and may be ordered online (GO ORDER). NAVIGATOR runs on Macintosh computers. NAVIGATOR costs \$50, and comes with a \$10 CompuServe usage credit.

*Larry Lefkowitz
(Vol.1, No.2, Pg.28)*

95LX 100LX

Using HP Palmtops on CompuServe

To get onto CompuServe follow the directions in the start-up kit. In general, after your modem makes connection, get the USER ID prompt by typing **CTRL-C**. If you get the "HOST SYSTEM" prompt, type **CIS**.

■ To exit at any ! prompt, type **OFF**.

■ If your system locks up from within COMM on the 95LX, press **CTRL-F7** to hang up. On the 100LX, press **F10**.

■ Press **MENU** at any point to get to the main menu. Then press **Connect** to get back to the communications screen.

■ If you want to "capture" parts of your

communications session such as sessions described in this article, press **CTRL-F5** (Capture) on the 95LX and **F5** on the 100LX. Enter the filename you want to save it in when asked. **CTRL-F5** again turns off capture mode on the 95LX, and **F5** turns it off on the 100LX. You can read the captured file later in MEMO.

*Larry Lefkowitz
(Vol.1, No.2, Pg.27)*

Other On Line Services

95LX 100LX

Other bulletin board systems

There are a number of other BBSs that might be of interest to Palmtop users.

■ Nybble's Byte

This electronic bulletin board system is dedicated to HP handhelds and palmtops. It supports HP 48, 95LX, 100LX, 28, 41, 71/ 75, etc. Contains an assortment of HP palmtop files, HP 48 Goodies Disks, and much more.

Hours of operation are US Central Time: Sun-Thurs except 7-10-pm; Fri & Sat except 12-10pm. The BBS phone number is 708-304-0666.

■ Access

The ACCESS BBS of the University of Alabama in Huntsville has opened a files conference (#17) on HP's line of handheld products, including the 28 and 48 calculators and the 95LX and 100LX Palmtops. This is a community service BBS dedicated to the advancement of personal computing.

The sysop is Jim McCullars. The BBS's phone numbers are: for 300-2400 service, 205-895-6152; for 9600-14400 V.32bis, 205-895-6992.

■ America OnLine

America Online's (AOL) offers a Palmtop Special Interest Group (SIG). The Keyword once you sign on is PALMTOP, which takes you directly to the SIG message boards and file libraries.

The rates for AOL are very reasonable, and new members are given five hours online time plus the first month's base charge of \$9.95 FREE. After the first month the rates are \$9.95 for the first two hours of usage and then \$0.055 per minute. There are no additional surcharges for the use of the service between the hours of 6:00 PM and 6:00 AM EST.

We would appreciate your E-Mailing (or regular mailing) Palmtop-related programs and files to either of us and so we may upload them to the Palmtop Library. Please include a brief description (noting any special requirements) of the program so we can post an exciting preview of the file.

*Jeff Zorn
CompuServe ID: [71165,1650]
or AOL: PDA Jeff
Craig de Fasselle
CompuServe ID: [76500,1440]
or AOL: PDA Craig
(Vol.2, No.2, Pg.4)*

■ Prodigy

Prodigy is an on-line service available in the U.S., a joint-venture of IBM and Sears. To use Prodigy (often abbreviated as P*), you must have an Apple or IBM compatible computer and a modem. Prodigy software will not run on the 95LX, but some users have run it on the 100LX.

The main advantages of Prodigy over CIS is its lack of on-line access charges and its ease of use. Anybody can run Prodigy, including small children (who love the graphic interface and find it entertaining).

Prodigy has a small number of special interest bulletin boards (BBS) similar to the CIS forum message sections. Questions and comments regarding the HP Palmtops are posted on the Computer Club BBS. The best topic to use is **Hardware: Systems**, although Palmtop messages are often found under the topic: **Other PC Topics**.

Prodigy has a base cost of \$14.95 per month with 2 hours of Plus services during market hours, 9:40AM to 4:20PM EST, and 30 messages. Additional plus hours are billed at \$0.06 per minute and additional messages at \$0.25 per message. The startup kit, \$4.95 including software, can be ordered from Prodigy Information Services, 445 Hamilton Ave., White Plains, NY 10601 or by calling 1-800-776-3449.

*Dave Shier
Prodigy ID: CXBG88A.
CompuServe ID: [75030,3374]
(Vol.1, No.5, Pg.29)*

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■ Internet & Bitnet

Many Palmtop users are in the academic arena and, as such, usually have access to Internet or Bitnet, the academic computing network. Apart from e-mail most sites that are connected to Internet also offer UseNet which is a form of bulletin board consisting of close to 1000 different news groups and discussion forums. Palmtop-related news groups include **comp.sys.handhelds** (which mostly attracts HP 48 calculator users) and **comp.sys.palmtops** (frequented by HP Palmtop users).

HP Palmtop owners in the academic community who do not already have access to Internet might wish to contact their local campus system administrator with a view to opening an account on the institution's computer. The cost will depend upon local circumstances and some readers may be surprised to discover that they can connect to Internet with little or no cost.

*T.D. Craddock
Univ. Western Ontario
London, Ontario, Canada
Internet ID: craddock@irus.rii.uwo.ca
(Vol.1, No.1, Pg.16)*

Printers

95LX 100LX

General tips for printing from the HP Palmtops

The procedure for connecting an HP Palmtop to a printer is relatively straight-forward, and discussed in the documentation (beginning on page C-1 in the *HP 95LX User's Guide* and page 36-3 in the *HP 100LX User's Guide*.) A few other points are worth mentioning:

1. To connect the Palmtop to a serial printer: use HP's Serial Interface Cable (HP F1015A). This cable was designed for the 100LX, but HP supplies a small 10-pin-to-4-pin adapter that allows you to use it with the HP 95LX. The small 10-pin end goes into the 100LX (use the 10 to 4 pin adapter with the 95LX). You will also need the correct 9-to-25-pin adapter to connect the 9-pin end of the serial cable to the 25-pin printer port. We used the Printer Adapter from the HP Connector/Adapter kit (HP F1023A) to connect the serial cable to the Diconix 180si serial port.

1A. Most printers do not have serial ports. To connect the Palmtop to a parallel port printer you need a serial-to-parallel adapter. (See Product Information box, page 43 for a listing of these adapters.)

2. Configure the Palmtop: On the 95LX press **[SETUP]** Printer Config Name and select either the (Epson FX80), (IBM Proprinter), or

(HP LaserJet), depending upon which selection your printer emulates (check your printer manual if you're not sure). On the 100LX press **[&]**, **[SetUp]**, **[MENU]**, **[Options]**, **[Printer...]** and select the printer, baud rate, and interface. Make sure your interface is set to (COM1). Make sure the Baud rate on your Palmtop is set the same as your printer's (usually 9600).

3. Configure the printer: Printer settings are very standard and you may want to skip this step and come back to it if your print test fails. To configure the printer, make sure the printer's baud rate is the same as the Palmtop (9600). Make sure your printer uses these settings: 8 bits per character, 1 stop bit, no parity, XON/XOFF software handshaking enabled, and hardware handshaking disabled.

4. Turn the printer on: (Off and on again if you've changed settings in point 3 above). Make sure the printer is on line.

5. Test print: Press PRT SC (**[<Shift>]**-**[ESC]**) on the 95LX or **[Fn]**-**[0]** on the 100LX to send your current screen to the printer. You may have to take the printer Off Line and press the Form Feed button to eject the page from the printer. If this test works, you're ready to go. If the test fails, try printing from MEMO (In MEMO on the 100LX press **[MENU]** **[File]** **[Print]**. On the 95LX press **[MENU]** **[Print]**.)

Print Test Fails: Troubleshooting

- Make sure printer is On and On Line.
- Make sure the connection between the Palmtop is correct and tight.
- Make sure the Palmtop and printer are configured properly, points 2 & 3.
- 95 Buddy users — see 95Buddy Manual to make sure PRT SC (**[<Shift>]**-**[ESC]**) is enabled or test by printing from MEMO.
- Call printer or HP technical support.

*The HP Palmtop Paper
(Vol.1, No.5, Pg.5)*

95LX 100LX

Using parallel printers with the HP Palmtops

Both HP Palmtops come with serial communications ports and most printers connect via parallel port. To connect the Palmtop to a parallel port printer, you need the HP connectivity cable, and adapter to match the gender and pin configuration of the printer port, and a serial-to-parallel adapter.

The connectivity cable is available separately (HP F1015A), or in the HP 95LX (HP F1001A) or 100LX (HP F1021A) Connectivity Pack. A gender/pin adapter for printers comes in the HP Connect/Adapter Kit (HP F1023A). See HP Products section of the Contact Information index on page 43 of this issue.

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A number of serial-to-parallel adapters are available from third-party vendors. See "Serial/Parallel Adapters" in the Contact Information index, page 43.

*Rich Hall
Editor, The HP Palmtop Paper*

95LX 100LX

Do you really need a printer on the road?

Even the lightest of printers will triple the weight you carry on the road. There are already millions of computers and printers all over the world — in the businesses you visit and in the hotels you stay in. Here are some alternatives to carrying a printer along with you.

1. Postpone all unnecessary printing chores until you get home.
2. Upload files, via modem, to your office back home and have your assistant format, print out, and send your correspondence wherever it needs to go. (You'll need to carry a serial cable, 9-25 pin modem adapter, and the modem along with you.)
3. Transfer the file you want printed over to someone else's computer and have them

print it out on their printer. (You'll need to carry a serial cable, and file transfer software with you.)

4. Use someone else's printer. (You'll need to carry a serial cable, serial-to-parallel adapter, and the HP adapter kit with you to connect directly to someone else's printer.)
5. Carry a small, portable fax/modem with you and fax the page you want to print to a local fax machine (in the hotel lobby or at the business you're visiting). (You'll need the fax/modem, serial cable, and the necessary adapters.)

The HP Palmtop Paper
(Vol.1, No.5, Pg.7)

95LX 100LX

Printers owners have used with the HP Palmtops

All the printers require a serial cable to connect to the HP Palmtops and a pin adapter. Parallel port printers also require a serial-to-parallel adapter. (The information below was originally published in the Sep/Oct 92 issue of *The HP Palmtop Paper*, pages 5-10. See Contact Information box, page 43 of this issue for more information.)

■ Canon Bubble Jet 10sx — \$349

An inkjet printer with laser-like output at an affordable 9 cents per page. The 4.6 lb printer is the size of a notebook computer. The Bubble Jet needs a serial-to-parallel adapter to connect to the HP Palmtops.

■ Citizen PN48 — \$259

The PN48 is a combination of laser-like output and small size, 2.6 lb. However, its high operating cost (36 cents/page for the single-strike ribbon), slower operating speeds, and lack of sheet feeder make this printer a questionable choice as a primary printer.

It needs a Serial-to-Parallel Adapter and Citizen's KB48 adapter to connect their proprietary printer cable to the Serial-to-parallel adapter.

■ Kodak Diconix 180si — \$419

The 180si is a 4 lb. inkjet printer for those who want letter quality (190 dpi) output at an affordable 12 cents per sheet. It comes with tractor, as well as sheet feed capability and they make serial port version, that does not require a serial-to-parallel adapter.

95LX 100LX

Print to HP infrared printers

Subscriber Dave Marsh developed a printer utility (IRPRT.COM) that does allow you to print to the HP Infrared Printer from the 95LX. In addition, subscriber Thomas Rundel has developed IRPRNT.ZIP, that lets 100LX users print text files and the contents

of the clipboard to HP 92240A and 82240B infrared printers.

Richard Hall
(Vol.2, No.4, Pg.5)

95LX

Getting Print Screen to work

The PRT SC feature sends text characters, but not graphics, from your HP 95LX to the printer. In addition, depending on which printer driver you have selected and which printer you are using, it may not print many international characters. I use the HP DeskJet 500 with my 95LX and found that I could only get international characters to print (i.e. the German diphthongs ä, ö, ü, ß, etc.) if I selected the IBM Proprinter driver by pressing **[SetUp] Printer Config Name 3).**

I use PS.COM (archived in 95PS.EXE) to print graphic screens (both pictures and graphic representations of text). It is particularly useful in saving proof of some of the unbelievable end games I've had with **Chess**, **Gomoku**, and other games. I found that selecting the HP LaserJet option in Set Up produced the best results with this program. (Press **[SetUp] Printer Config Name 2).** I did notice that after activating PS.COM from the DOS prompt, my .EXM programs could not be evoked, even with SWITCH!. However, if I ran PS .COM from SWITCH!, I could evoke the .EXM programs. Therefore, I don't evoke PS.COM from my AUTOEXEC.BAT file anymore.

Hermann Schmitt
Winnweiler, GERMANY
(Vol.2, No.3, pg.59)

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MS-DOS Operating System

100LX

Maximizing system RAM for DOS use

On the 100LX there are seven methods to access DOS summarized in the following tables. Each method makes a different amount of memory available to DOS. In addition to this there are other things which consume DOS memory; making those things smaller gives more System RAM space for DOS programs. Caution: changing some of these configuration values can adversely affect system performance. One would be well-served by backing up the system before experimenting.

CONFIG.SYS

As with any MS-DOS system, the 100LX uses some memory for open files, disk buffers, and drive designations. When an MS-DOS machine boots up it looks for a CONFIG.SYS file and if it finds one, it then looks for an AUTOEXEC.BAT file. Both of these files can contain DOS commands that affect the amount of memory that DOS uses. By controlling these values in your C:\CONFIG.SYS file, you can free up additional DOS program space. NOTE: If you create C:\CONFIG.SYS, you should copy D:\AUTOEXEC.BAT to C:\AUTOEXEC.BAT. Otherwise you'll be left at the DOS prompt when you reboot.

The DOS commands that can be adjusted to increase useable memory in the CONFIG.SYS file on the 100LX are, FILES=, BUFFERS=, and LASTDRIVE=:

- **FILES** = DOS needs roughly 56 bytes to keep track of each open file handle, internal file identifier. By default, the 100LX sets up for 25 files, using 1520 bytes in the process. Setting FILES= to a lesser number frees up System RAM, but this can be counterproductive since we are trying to make space for DOS programs and many of them use multiple file handles.
- **BUFFERS** = DOS uses RAM buffers to speed I/O to hard disks. Since the 100LX uses only RAM disks, buffering has less of an impact. Reducing the number of buffers frees up more System RAM.
- **LASTDRIVE** = By default, the 100LX sets up for 10 logical drives: A: through J: and in the process chews up 896 bytes. Setting LASTDRIVE=D frees up 432 bytes.

AUTOEXEC.BAT

The default AUTOEXEC.BAT is fairly innocuous, but it has a line that is a bit odd. The line **assign e:=a:** tells the 100LX to access the A: drive whenever software attempts to

Summary of Methods of Accessing DOS from the 100LX

(Ted Dickens, Vol.2, No.4, Pg.34)

Method	Default DOS memory	Maximum DOS memory	Run other Apps?	Switch to other Apps?
1. Press CTRL - 123 or select DOS icon in AppMgr	95,408	452,784	mem	yes
2. In FILER press MENU Options DOS	418,528	452,944	before	yes
3. Highlight DOS application in FILER, press ENTER	421,328	455,744	before	yes
4. Launch program icon from Application Manager	401,256	435,632	mem	yes
5. In 1-2-3, press MENU System	307,920	342,366	no	no
6. In AppMgr press MENU Application Terminate	620,160	634,272	n/a	n/a
7. Press CTRL - ALT - DEL Press ALT for "boot options" Select option 6	626,240	626,240	n/a	n/a

■ **Default DOS mem:** The amount of memory available to the DOS application with the default 100LX configuration. ■ **Maximum DOS mem:** The amount of memory available to the DOS application with the recommendations followed. ■ **Run other Apps?: no:** Can't run other applications before or after launching the DOS application; **before:** Can only run other applications before launching the DOS application; **mem:** Can run other applications if there is memory available; **n/a:** Not applicable. ■ **Switch to other Apps?: yes:** Can switch to other applications after launching the DOS application; **no:** Can't switch to other applications after launching the DOS application; **n/a:** Not applicable.

Methods of Accessing DOS from the 95LX

(Robert Roney, Vol.2, No.4, Pg.37)

Method of entering DOS	RAM available to DOS	How to return to SysMgr
1. Press FILER System	535,712	Type exit from DOS prompt
2. Highlight DOS program in FILER, press F4	537,536	Quit DOS program and press any key
3. Bypass SysMgr	622,352	Type \$sysmgr at DOS prompt

The space available for DOS was tested on a 1MB 95LX configured with 626K of System RAM and 398K for the RAM disk. You might increase RAM available by reducing the number of FILES and BUFFERS, and by changing LASTDRIVE in the CONFIG.SYS file as Ted Dickens suggests for the 100LX. However, HP warns in the HP 95LX User's Guide (page B-25) that decreasing the number of STACK frames below the default of 9 and the frame size below 128 could cause a system failure.

access the E: drive. There's nothing wrong with the statement, but there are few places where it would be useful and getting rid of it frees up 1600 bytes.

SYSTEM MANAGER SET UP

There are changes you can make to System Manager Setup that will free up more System RAM. In general, once you make the configuration change to Setup, you will have to reboot for the change to take effect. The Clipboard, DOS, and Static settings are made from the Advanced memory options of Setup; run Setup, then select **[MENU] Options System Advanced...**

- **Clipboard** — is used by the Cut, Copy, and Paste functions of System Manager applications. The default size is 4K. Reducing it to 2K frees up 2048 bytes.
- **Static** — The "Static RAM" area is for applications which need static RAM. While you can set Static to 0K, it will still reserve 1760 bytes, leaving an additional 8,480 bytes free.
- **DOS** — the DOS setting in the Advanced menu controls the default size of the DOS box.
- **Redirector** — If you don't use the HP 100LX Connectivity Pack you can disable the Redirector and gain 9760 bytes. To disable the Redirector, run Setup and select **[MENU] Redirector Disable Server.** (Reboot to make the change take effect.)

*Ted Dickens (HP Forums Sysop)
CompuServe ID: [76701.272]
(Vol.2, No.4, Pg.31)*

100LX

Shelling to DOS in 1-2-3 or bypassing DOS disables alarms

There is only one way to shell to DOS from System Manager: Run 1-2-3 and press **[MENU] System.** Only use this method if you have 1-2-3 macros which use the /System command (need to exit to DOS). It gives less room for DOS applications and prevents application switching. To get back to DOS, type **exit** at the DOS prompt.

You can also bypass the System Manager using methods 6 & 7 in the table. However, any APPT alarms that come due while you're shelled to DOS, or have bypassed it, will not be processed until you re-start System Manager (type **100** at the DOS prompt).

*Ted Dickens (HP Forums Sysop)
CompuServe ID: [76701.272]
(Vol.2, No.4, Pg.31)*

100LX

Changing the size of the "DOS box"

To change the size of the DOS box, go into Setup. Select **[MENU] Options System Advanced DOS.** (If there are other applications open, you'll get a warning message which you can safely ignore; just press OK and continue.) Specify the DOS box size in kilobytes (K). (NOTE: While the prompt says you can

specify values up to 512K — it's a myth. If you specify a value larger than available System memory, attempting to create the DOS box just causes a beep. The actual maximum value varies, but with the default configuration, the maximum usable value is 413K.)

*Ted Dickens (HP Forums Sysop)
CompuServe ID: [76701.272]
(Vol.2, No.4, Pg.28)*

95LX 100LX

SERCTL — serial port power control

The serial port power normally is on when you are in DOS on the Palmtop — this uses up batteries!

Fortunately, the HP Palmtops come with an additional DOS command, SERCTL, to help alleviate this problem. You can run it either from the DOS prompt or a batch file.

SERCTL — allows you to turn the serial port on or off and switch between the serial port and the infrared port. Use the commands listed below:

SERCTL /O — Turns off the power to the active port.
SERCTL /W — Turns power on and activates serial port.
SERCTL /I — Turns the power on, activates the infrared port and sets baud rate to 2400.

*Robert Roney
(Vol.2, No.4, Pg.37)*

95LX 100LX

Viewing an 80-column by 25-line DOS program on the 95LX or smaller 100LX screen

When you are operating from DOS the 95LX display shows you part of the full 80-column by 25-line DOS screen. Also, you can press **[Fn]-[Spacebar]** in DOS on the 100LX, to zoom from a full 80x25 screen, to a small portion of that screen. Whenever your cursor moves out of the screen in any direction, the Palmtop window adjusts to show the portion of the screen the cursor has moved into. This feature is called "cursor tracking."

The DISPCTL command enables or disables the automatic cursor tracking and/or the Alt-Arrow key movement while operating from DOS. On the 100LX it enables or disables the Menu-Arrow key movement. (The default setting when you boot your system is for both to be enabled.)

Disabling the automatic cursor tracking is desirable if, while operating some DOS programs, you find your display jumping around to undesired areas of the screen. For example, Norton Utilities seems to leave the cursor at the bottom right corner of an 80x25 screen all the time. Every time Norton Utilities writes to the screen, the 95LX user has to scroll the display up to see what's written at the top. With cursor tracking disabled, the screen only scrolls when you use the Alt or Alt-Shift cursor keys. To disable automatic cursor tracking enter the following command from the DOS prompt:

dispctl -c

To enable automatic cursor tracking, reboot the system (press **[CTRL]-[ALT]-[DEL]**) or enter **dispctl +c** from the DOS prompt.

The **[ALT]-[<ArrowKey>]** and the **[<Shift>]-[ALT]-[<ArrowKey>]** on the HP 95LX Palmtop and the **[MENU]-[<ArrowKey>]** and **[<Shift>]-[MENU]-[<ArrowKey>]** on the 100LX move you around the full 80-column screen. You can disable these keys with **dispctl -k** and enable them with a reboot or **dispctl +k**. Both C and K can be used together, but you must use at least one of them with the command.

*Mark Scardina [Team HP]
ACE Technologies
CompuServe ID: [76711.732]
(Vol.1, No.3, Pg.18)*

95LX 100LX

How to get back to System Manager from the DOS prompt

When you load software onto your HP 95LX, many programs, such as Switch, ACT!, or the HP Palmtop Paper Subscribers Disk add an AUTOEXEC.BAT file or modify your existing file. If your AUTOEXEC.BAT file gets further changed, or deleted and you press **[CTRL]-[ALT]-[DEL]** to reboot, you may end up in DOS without any way to access the regular built-in applications.

You must return to the System Manager in order to use the built-in applications. To do so from the C:\ prompt, type **\$sysmgr** on the 95LX or **100** on the 100LX and press **[ENTER]**. This starts System Manager and allows you to use the built-in applications.

You should then call your AUTOEXEC.BAT file into MEMO and make sure that it has **\$sysmgr** or **100** commands as the last line of the file. You may have to create a new AUTOEXEC.BAT file if your original file has been deleted.

*Larry Tachna
CompuServe ID: [76520.1630]
(Vol.2, No.2, pg.54)*

95LX 100LX

Disabling Lite Sleep

To conserve battery power, the Palmtop enters a light sleep mode when it is waiting for keyboard input. DOS programs which poll the keyboard (regularly check if a key has been pressed) but continue to process will still cause the Palmtop to go into light sleep mode. Such programs are slow on the Palmtop.

For example, suppose you have a program that prepares a report from a database. It has to read information from all records in the database, but the programmers also wanted you to be able to interrupt the program in the middle of a report.

So the program reads a few records, then checks the keyboard, reads a few more records, checks the keyboard, etc. If you run this program on the Palmtop, it will take forever to finish. The Palmtop sees the constant keyboard polling and assumes the program is idling, waiting for keyboard input.

To successfully run the program, you'll need to disable light sleep mode, or keep your finger on a key that won't disrupt the program but will overcome the light sleep mode. To disable light sleep mode, you can use HP95CT . Light sleep can be controlled on the 100LX using ALOAD.COM .

*Ted Dickens (HP Forum Sysop)
CompuServe ID: [76701,272]
(Vol.1, No.6, Pg.66)*

95LX 100LX

Where to put AUTOEXEC.BAT & CONFIG.SYS

If you have a memory card I recommend keeping AUTOEXEC.BAT and/or CONFIG.SYS in A:\. If something goes wrong, and you can't boot from the A drive, you can just pull the card and reboot with a plain configuration.

*Ted Dickens (HP Forum Sysop)
CompuServe ID: [76701,272]
(Vol.2, No.3, pg.59)*

100LX

DOS 5.0 command help

The DOS 5.0 commands on the 100LX provide their own built-in help. For example, at the DOS prompt, type **dir /?** and see what you get. Even **debug /?** gives you help getting started, and once DEBUG is running, you can type **?** and press to get more help. The same is true for most of the DOS 5.0 commands.

*Ed Keeffe
CompuServe ID: [75300,3667]
(Vol. 2, No. 4, pg. 53)*

DOS Programs

100LX

Running DOS programs on the HP 100LX

For a DOS program to run on the 100LX it must be able to display in either Monochrome or CGA compatible mode and run on an 8086 CPU. Programs that need a 286-or-greater CPU and must display in EGA or VGA modes will not work on the 100LX. In addition, the necessary program files must be able to fit on the 100LX. This is not much of a problem if you have a RAM card, but can be if you are storing all of your files on the C: drive. Programs that require Expanded Memory or Extended Memory will not run on the 95LX.

*Rich Hall
Editor, The HP Palmtop Paper*

95LX

Checking a DOS program's compatibility with the 95LX

Display requirements — any program which cannot work with an MDA (Monochrome

Display Adaptor) display, cannot function on the 95LX. The 95LX does display graphics, but it does so in a non-compatible mode due to its screen size. Programs requiring CGA, EGA, or VGA displays will not work on the 95LX.

Memory requirements — a program's memory requirements tell you how much system RAM you must have available to run the program. You can check your available memory by running CHKDSK on your 95LX from DOS. Go to FILER, highlight CHKDSK and press (Run). You can adjust the amount of system RAM you have by entering SET UP and then pressing **System Memory**. Press or to decrease or increase the amount of System RAM and RAM disk you have allotted. Press when you're finished.

Due to their size, some programs may require you to run them without System Manager (SYSMGR) being loaded. Disabling System Manager (and the built-in applications with it) saves an additional 80-85K of memory. Pressing Menu System to enter DOS does not disable System Manager or save you any disk space.

How to disable System Manager on the 95LX to gain more System RAM

1. Enter MEMO and create a new file named CONFIG.SYS (or modify an existing CONFIG.SYS file).
2. Put the following command as the first line in CONFIG.SYS:

shell=command /p

(be sure there is an empty space between "command" and "/p").

3. Save the file and reboot your 95LX (press). Your 95LX should come up with the DOS C prompt.

If, after this procedure, you ever need System Manager, type **\$sysmgr** from the DOS prompt. This can be done with an AUTOEXEC.BAT file which can be created in MEMO. In the AUTOEXEC.BAT file you can start TSR's and setup a method of choosing between DOS and System Manager whenever you press to reboot. (See sidebar tip this page for more information.) Any TSR you want to run must precede the line **\$SYSMGR** which will start the built-in System Manager.

HP Tech Support WARNING: The addition of or change to the CONFIG.SYS and AUTOEXEC.BAT files represent a serious modification to your HP 95LX. If you make a mistake in these files, you may not be able to reboot your computer. Therefore, these files should be put in the root directory of your RAM card if you have one. Then if there is a problem, you can remove the RAM card and the system will boot up in the normal way. (They will also work in the root directory of the internal RAM disk, drive C).

These files are executed whenever the system is rebooted. Before rebooting the sys-

tem, quit all of your open applications, making sure to save files that you have modified. Then, press to reboot the system. During the process of restarting the system, your AUTOEXEC.BAT and CONFIG.SYS files will be executed. The 95LX User's Guide contains instructions for the SHELL command on page B-24. (Vol.2, No.1, Pg.39-40)

Even after following this procedure, programs that require Expanded Memory or Extended Memory will not run on the 95LX.

Serial port requirements on the 95LX — programs that access the serial port will fail on the 95LX if they try to access COM2, or attempt to transmit or receive data using interrupts. This information is not easy to find in documentation, but a call to the program's tech support number, or the programmer, should provide the answers. Most file transfer programs do not use interrupts, while most communication programs do.

*Mark Scardina [Team HP]
ACE Technologies
CompuServe ID: [76711,732]
(Vol.1, No.3, Pg.17)*

95LX

Setting up AUTOEXEC.BAT on the HP 95LX

The simplest AUTOEXEC.BAT file I recommend is the following:

```
echo off
path=C:\;C:\_DAT
cls
echo Press CTRL-C to enter DOS
echo Press any key to enter SYSMGR
pause > nul
$sysmgr
```

This file gets executed when the HP 95LX is rebooted. It allows you to go to DOS rather than System Manager by pressing , maximizing the amount of System RAM for your DOS application.

Based on my experimentation, I have come up with a number of rules for ordering DOS commands in the AUTOEXEC.BAT file (see point 4 of the APNAME.LST Rules, page 13 this issue.)

*Mark Scardina
CompuServe ID: [71551,467]*

95LX 100LX

Eliminate unnecessary files when running DOS programs

Many programs come with files that are unnecessary for the program to run on the HP Palmtops. After determining that a program may run, you need to determine which files are necessary and which you can eliminate to save disk space. Most of the time you can eliminate the following types of files: Documentation, Help, Install, Display Drivers, Fonts, Text Files.

My approach is to create a temporary directory on my desktop PC, copy all of the files there, and then examine them one by

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one, making note of what program functions I lose if I eliminate the file. I decide what I really want out of a program and load only the files I need. If I've eliminated too many files, the program will either not run or will run and prompt me for the file it needs but can't find.

Mark Scardina [Team HP]
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(Vol.1, No.3, Pg.17)

[The Program's documentation may list files that may be deleted after installation — Rich.]

95LX 100LX

Commercial, PC-compatible programs that have been successfully run on the HP 95LX

All of these commercial programs were tested on the 95LX. They should also work on the 100LX. For shareware and freeware programs, take a look at the Palmtop Paper ON

DISK index at the end of this issue. Listed below are just a few of the commercial programs that have been successfully used on the Palmtop.

(Commercial software available through retailers. Some versions may be out of date.)

- ACT!—contact manager (Vol.1, No.3, Pg.5)
- CrossTalk—comm (Vol.1, No.0, Pg.28)
- FastLynx—file transfer (Vol.1, No.3, Pg.20)
- Grandview—outliner (Vol.1, No.3, Pg.20)
- GWBasic—programming language (Vol.1, No.5, Pg.43)
- InfoSelect—database (Vol.2, No.1, Pg.35-37)
- Lotus Agenda—(Vol.1, No.5, Pg.20-21)
- PCAnywhere—remote access (Vol.2, No.2, Pg.46)
- Stacker—file compression (Vol.1, No.3, Pg.20)
- WORDPERFECT 4.2—(Vol.1, No.6, Pg.44)



Programming Languages

95LX 100LX

Built-in programming languages

You don't have to use an "imported" lan-

guage to program your HP Palmtop. Believe it or not, the 95LX and the 100LX contain no less than five built-in programming languages: HP CALC's Solver language; Lotus's macro language, DEBUG's arcane assembler, System Macros (SETUP's CHAR language on the 95LX and Fn-key language on the 100LX), and MS-DOS's batch command language.

■ **Lotus Macro Language** — without a doubt, this is the most popular programming language that has ever been developed. More applications have been written in this language than in any of the structured languages.

Most of the spreadsheet applications have been designed to solve unique problems and, hence, do not have wide appeal.

■ **Debug** — trying to master assembler language programming with DEBUG is best left to experts, such as Palmtop Paper contributor Ed Keefe.

■ **User Keys/System Macros** — these are limited to the size of the editing buffer, 255 key strokes. On the 100LX you can link System Macros to go beyond the 255 key barrier.

■ **Solver** — Solver's language is great for developing quick-and-dirty solutions to problems that can be solved with a business calculator. However, Solver is not a full-blown language. It doesn't have any obvious ways to create loops and branches, although clever uses of its built-in functions can do quite a bit.

■ **Batch files** — perhaps the least appreciated programming language in the HP Palmtop is MS-DOS's batch command language. The batch language commands are few and awkward to use. There are no easy ways to create loops, no obvious way to implement subroutines and only a few ways to implement branching. Yet creating elaborate batch files has become a favorite pastime of many programmers, including yours truly.

Thomas Page
CompuServe ID: [73277,1064]
(Vol.1, No.3, Pg.35)

95LX 100LX

Programming languages

The following are programming languages that have been used on the 95LX and the 100LX (see *Contact Information*, page 43 this issue for more information). Some were tested on the 95LX, but all should run on both machines:

■ **Swift!BASIC** — Lets you write System-Manager compliant programs out of the box. It is the preferred version of BASIC for the HP 95LX. Swift!BASIC is designed exclusively for the HP 95LX. It also handles the 95LX's graphics and sound functions. Here are some files that relate to this fine commercial product. (See review, page 32, Jul/Aug 92 issue.) (Vol.1, No.2, Pg.38)

Programming Summary Chart

	Debug	MASM	TASM	AWK-320	GW BASIC	Quick BASIC	Swift! BASIC	MS QuickC	Bor C++2	PCC	MIX POW-ER	UTIL Forth	Turb Pascal 3.02	Borland Pascal 7.0
Runs on 95LX	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y with patches	Y
Runs on 100LX	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y
Program Sysmgr Compliant (SMC)	N	N	N	N	N	N	Y	N	N	N	N	loader	N	N
Can create SMC programs	?	Y	Y	N	N	N	Y	Y	Y	Y	?	N	N	N
Good for beginners	N	N	N	N	Y	Y	Y	N	N	N	N	?	Y	Y
Good for intermediate	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Good for advanced	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
System RAM needed to compile program	256K	256K	256K	256K	256K	512K	384K	400K	MAX	256K	MAX	128K	128K	384K
Disk space needed	0.15K	250K+	250K+	47K	??	190K-322K	95K	750K-3MB	4.5M	300K	400K	128K	128K	125K (Command line version)
Versions for 95LX	Internal	All	2.5	3.20	1.0	NA	1.06	All	NA	Shareware	Mix	2.4+	2-3.02	Ver 4.0-7.0
Versions for 100LX	Internal	All	2.5	3.20	1.0	Ver 1.0	NA	All	Ver 1.5-2.0	Shareware	Mix	NA	2-3.02	Ver 4.0-7.0
Availability	Internal	Micro-soft	Bor-land	CIS	DOS 3.X	DOS 5.0	Edu-Calc	Micro-soft	Ver 3.1	Des-met	Direct	Edu-Calc	NA	Ver 7.0
Cost	NA	\$199	\$150	\$40	NA	NA	\$169	\$50-100	\$750	\$40 ?	\$50	\$70	\$99	\$149
Graphics	?	Y	Y	N	Y	Y	Y	100LX	Excell	Y	Y	Y	No/Yes	100LX Good
Limitations	COM files	None	None	Inter-preted	Inter-preted	100LX Only	95LX	None	None	Non-ANSI	Good	RPN Style	64K COM Files	Graphics: 95
Sample code	Y	N	Y	Y	Y	Some	Snip-pets	Y, In Help	In Help	Some	Y	Some	Y	Y

Explanation of chart: Line 5,6,7: Who is the language suitable for? This is a judgment call on my part; Line 8: System RAM needed to compile programs. Line 9: Disk space: there's a lot of variables here. The amount of disk space often depends on how much of the product you need.

■ **Turbo Pascal** – Turbo Pascal runs on the Palmtop. Version 3.02 is preferred for its small size (about 40K bytes compressed). If you want Object Oriented Programming (OOP), you will need to use Borland Pascal 5.0 or later.

TP95.ZIP [E] contains a text file telling how to get Turbo Pascal 3.02A to run on the HP 95LX. It includes a sample Pascal program of Conway's Game of Life which may be loaded into the 95LX and run using the Turbo Pascal compiler. The graphics part of TP 3.02 does not work on the 95LX.

The file, TP95INST.ZIP [E], contains a complete set of instructions for modifying Turbo Pascal 3.02a using INSTX.COM as well as the Borland TINST.COM program. (Vol.1, No.2, Pg.38)

■ **Util Forth** – Some programmers prefer the Forth Language for quick prototyping and design of programs. UTIL FORTH conforms to most of the '83 Forth standards for the language. It has almost all the features of Forth: a small interpreter/compiler, a small library, and a built-in assembler/disassembler. The whole package runs in less than 30K bytes of RAM. UTIL, unlike other Forths, does not have its own text editor. On the Palmtop, MEMO serves as the editor for writing Forth programs.

Version 3.0 of UTIL Forth is shipping for the 95LX and a version for the 100LX should

be available in the 1st quarter of 1994. Version 3.0 will let you write System-Manager compliant programs. (Vol.1, No.1, Pg.31)

■ **Assembler** – Those who want to try their hand at using Assembler on the HP 95LX or 100LX should take a look at **Microsoft Assembler (MASM)** and Borland's **Turbo Assembler (TASM)**. Both work well on the HP 95LX. The HP Independent System Developers documentation gives examples of using Microsoft's MASM to write System Manager Compliant programs. (Vol.2, No.5, Pg.28)

■ **Personal C Compiler Support** – PCC [E] is a popular shareware alternative to Microsoft C and Borland C. Registered users receive a usable debugger, and some other utilities. (Vol.2, No.5, Pgs.50-51)

■ **AWK** – Originally a UNIX pattern-matching utility, AWK grew into a powerful programming language eventually ported to the PC environment. AWK.ZIP [E] is a collection of useful AWK programs for the HP 95LX, including code for an Editor, a couple of different ways to do MORE, a 40-column formatter (FMT.AWK), a Hex/Decimal/Octal calculator, and file management utilities DU and WC. (Vol.2, No.5, Pg.50-51)

■ **GWBasic** – It only uses 80K of disk space, and you can DIET it to 62K. You can also benefit from GWBasic's abbreviated typing

and press [ALT] and a letter to obtain a whole word (i.e. [ALT]-P = Print, [ALT]-I = Input). This feature is much easier to use if you have the STICK.COM [E] utility.

I expanded the size of my blinking cursor by typing LOCATE ,,0 in GWBasic direct mode. You can also include this command in your programs.

I also found that GWBasic's sound command works differently on the 95LX. For example, if you type SOUND 200,2 in direct mode you cause a tone to sound that continues until you type in SOUND 200,0. If you enter any other SOUND command before SOUND 200,0, you'll lock up the 95LX.

*Pablo Miras
Buenos Aires, ARGENTINA
(Vol.2, No.1, Pg.50)*

*Olivier Sokal
France
(Vol.2, No.1, Pg.50)*

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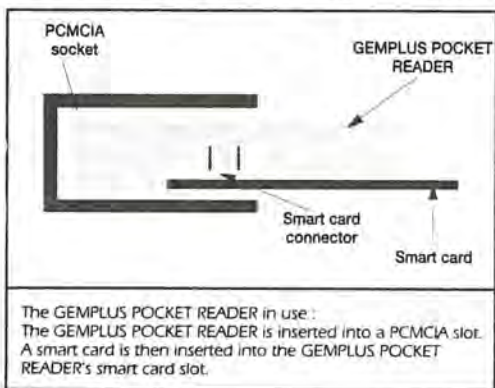
Programmers support on CompuServe

I strongly suggest that all Palmtop programmers check out the programmer's section of the CompuServe HP Handheld forum. There, programmers congregate and answer each others' questions and upload support files.

*Hal Goldstein
(Vol.2, No.5, Pg.50)*

GEMPLUS SMART CARDS & PCMCIA

The GEMPLUS POCKET READER is the first smart card reader/writer in PCMCIA card format, uniting the worlds of smart cards and mobile computing. Transform PCMCIA compatible devices into a smart card terminal for applications including health, banking, telecommunications, or transportation.



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TECHNICAL SPECIFICATIONS

- ▶ Conforms to PCMCIA standard release 1.0 & 2.0
- ▶ Power supply provided by the PCMCIA interface
- ▶ Weight: 15 g (0.5 ounces)
- ▶ Maximum physical dimensions: 54 x 85 x 3.3mm (2.1 x 3.3 x 0.13 inches).
- ▶ Power consumption: 0 mA idle, 50 mA maximum operating mode
- ▶ Reads and writes to all smart cards complying with ISO 7816-1,2,3 (Protocol T=0 and T=1, single 5V supply) and all GEMPLUS memory cards with single 5V or compatible products.
- ▶ 128kbyte flash memory for resident smart card applications and/or plain or ciphered data files. Larger memory sizes are available.

For more information call or write:



GEMPLUS CARD INTERNATIONAL
656 Quince Orchard Rd, Suite 610
Gaithersburg, MD 20878

Phone: 301-990-8800 • Fax: 301-990-8801

Getting Support

There is a great support network for the HP Palmtops. It starts with HP's own technical support (503-757-2004), which is free. Their support policies are described below.

The HP Palmtop Paper and the HP Palmtop Paper OnDisk provide a steady stream of information and access to software for Palmtop user throughout the year.

The online services: CompuServe Information Service, America OnLine, Prodigy, and Internet, have areas dedicated to Palmtop users. We recommend CompuServe. (See the Communications, page 30 for details.)

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HP Palmtop service agreements

HP offers the following support service agreements for the HP Palmtops:

The HP 95LX (512K and 1MB versions) come with a one-year warranty. While the unit is still under warranty, you can purchase a one-year extension for \$50 or a three year extension for \$135.

If your unit is no longer under warranty and you send it in for repairs, any repairs made are covered by a 90-day warranty. Within that 90-day warranty, you can purchase a service agreement extension.

The HP 100LX comes with a one-year warranty with HP Express Exchange service. Under Express Exchange, if you have a defective unit, call HP technical support at 503-757-2004. They determine if your unit is defective and arrange to ship a replacement unit to you via Overnight Express. When you receive the replacement, take it out of the box, put your defective unit in the box, seal and label it with the FedEx 2nd day label included, and call FedEx for drop off instructions.

You may purchase a two-year extension to the warranty while your 100LX is under its original warranty. Purchase the HP Support Pack (H5465A, \$85) directly from your HP dealer within 30-days of purchasing your 100LX. After that time, you can purchase the warranty extension from the *HP Corvallis Service Center*; Phone: 503-757-2002.

Finding an HP 100LX Dealer

HP's 24-hour automated dealer locator service (call 800-752-0900) should help you find an HP dealer in your area. If you're in a small town not close to a metropolitan area, the service may not be able to help you.

Fortunately the Calculator Division has its own locator service (call 503-752-7736; business hours: 8:00 am to 3:00 pm Pacific

Time, Monday through Friday). You go through a couple of computer options and then talk to a customer service representative who will look up the closest dealer to you that has received shipments of the HP 100LX.

There are also VAR's (value-added resellers) that market the HP 100LX. Contact: *ACE Technologies* at 800-825-9977 or 408-428-9722; Fax: 408-428-9721. *EduCALC* at 800-677-7001; Fax: 714-582-1445. *Global Connections* at 608-752-1537; Fax: 608-752-9548. *Classic Computers* at 515-472-0383; Fax: 515-472-0393.

Rich Hall
(Vol.2, No.5, Pg.6)

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What HP Will Fix For Free (and what they won't)

If your 100LX is under warranty (all are as of this printing) Hewlett-Packard will fix your unit at no charge. HP's Express Exchange for the HP 100LX and HP OmniBook is a marvelous service. Call tech support, **503-750-2004**. Once they give the OK that something is wrong with your unit, they will mail you a 100LX. After you receive it, then send your HP 100LX in, and that's it.

Their address is: *Hewlett-Packard Corvallis Service Center, 1030 NE Circle Blvd, Corvallis, OR 97330*.

HP 95LX's are not covered under Express Exchange, and many HP 95LX's are no longer under warranty. Most repair bills are in the \$160 to \$200 range. HP Palmtop users should consider extended warranty contracts (see first tip this section tip).

Based on comments of other readers, Hewlett Packard will fix HP 95LX's with loose hinges (see sidebar) and those in which the "low battery warning" won't go away, without charge. (No guarantees on this one. You might call HP tech support [503-750-2004] or the repair center [503-757-2002] in the U.S. first.)

Unfortunately, the other relatively common HP 95LX problem, the screen failure, costs about \$190 to repair. The symptoms begin with lines on the display and intermittent disappearance and fade out of the display contents. At first turning the On/Off button or pressing the screen solves the problem. But unfortunately, once the symptoms appear, the slow death of the display is inevitable. And there is no way anyone has discovered to repair the screen without sending the unit into HP. I had one unit that was sent in twice, under warranty, with this problem.

Hal Goldstein
(Vol.2, No.6, Pg.23)

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Back issues of The HP Palmtop Paper

While supplies last, you may purchase sets of back issues of *The HP Palmtop Paper* or *The HP Palmtop Paper ON DISK*. Use the enclosed order card or contact Thaddeus Computing Inc, Phone: 800-373-6114 or 515-472-6330; Fax: 515-472-1879.

(Vol.1, No.6, Pg.11)

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HP Palmtop users groups

If you are interested in participating in an HP Palmtop users group, please contact the following individuals. Write us if you wish to be added as a user group contact.

■ Cleveland, OH Users Group

95LX/100LX users in the Cleveland area: *Craig de Fasselle, c/o MEM, Inc., 4702 East 355th St., Willoughby, OH 44094; Work Phone: 216-951-1333; Home Phone: 216-256-1339.*

■ Detroit, Michigan Users Group

95LX/100LX users in the Detroit area: *Jeff Zorn, 29311 Aranel, Farmington Hills, MI 48334-2815; Phone: 313-489-1855 (EST) or Louis Peeples, St. Clair Shores MI 48080; Home Phone: 313-774-5065; Work Phone: 313-777-9390.*

■ Florida (Central) Users Group

95LX/100LX users in the central Florida area: *Roger Prokic CIS: [73044,3700]; Phone: 407-799-0583.*

■ Illinois Users Group

95LX/100LX users in the Chicago area: *Gordon Campbell, 29W051 Barnes Ave, West Chicago IL 60185; Phone 708-231-6796.*

■ Los Angeles, California Users Group

95LX/100LX users in the LA area: *Dave Shier at 805-498-6787; Fax: 805-498-8174; CIS: [75030,3374].*

■ NJ/NY (USA) Users Group

95LX/100LX users in the New Jersey/New York area:

Stanley Dobrowski, 113 Carlton Avenue, East Rutherford, NJ, 07073-1038; CIS ID: [71031, 2162]; Phone: 201-807-5857 (work).

■ Richmond, VA (USA) Users Group

For 95LX/100LX users in the Central Virginia area:

John Haskell, 7102 Three Chopt Road, Richmond, VA 23226-3615. CIS ID: [70750,1243] or Phone: 804-288-6073 (work).

■ Southern African HP Palmtop/Omnibook Users Group

HP Palmtop/Omnibook in South Africa:

James Dean. CIS ID: [70714,613]; Phone: (011) 806-1382 (O/H); Fax: (011) 806-1353.

Best Products

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The following is an unscientific, somewhat subjective selection of the most important products we've come across for the HP Palmtops.

I used the following criteria in selecting products for this article.

1. The product significantly enhanced what a user could do with his HP Palmtop.
2. The product is easy-to-learn and use.
3. The product is popular among CompuServe HP Handheld participants (a group of sophisticated, enthusiastic HP Palmtop users).
4. The product is unique and represents a technological advance.

Commercial hardware and software make up a good part of the list. In addition, many of the most important products are free or shareware (some of which became commercial). All freeware and shareware mentioned here and in this issue will be included on the special *Best Palmtop Tips ON DISK* associated with this issue.

If you feel, I left worthy products out of this discussion, please write. There were so many fine and innovative products and services that it was hard to limit this selection, and I most likely missed some that should have been mentioned.

Palmtop Buddies

95Buddy and **100Buddy** are perhaps the most useful of the palmtop products because they affect all aspects of every day work on the HP Palmtop. There are literally a hundred useful utilities crammed into 95Buddy and 100Buddy.

Author, Jeffrey Mattox, a Macintosh user and an MS-DOS hater, created 95Buddy thinking he could fix a few problems he read about in early issues of *The HP Palmtop Paper*. Based on his experience on the Mac, he felt HP Palmtop functions should be done in an easier, more intuitive, less keystroke-intensive way. Some of 95Buddy's ideas were in fact incorporated into the HP 100LX. For Buddy specifics refer to articles and tips in past (and future) *Palmtop Papers*. If you use the HP Palmtop daily, you'll wonder how you have lived without Buddy.

For the HP 95LX Only

One product I have not played with but has received rave reviews from HP 95LX users is **Notepad** by Charles Hayden. (It runs on the HP 100LX but is geared for the HP 95LX). Notepad can be used for note-taking,

database work, organizing random information, and manipulating PHONE and APPT data. It combines the free-form editing of MEMO with the structure of APPT and PHONE. It can in fact read and write MEMO, PHONE and APPT files and convert between them. This System Manager Compliant program includes hypertext capability, mail-merge, database import / export, outlining, and PCX display.

Two other HP 95LX favorites, **ABKTool** and **Multiday**, make up for limitations in APPT. These programs expand your ability to view weekly and monthly activities and offer many convenience functions for appointments and to do lists.

Sparcom introduced a number of HP 95LX favorites (and promise to do so for the HP 100LX). Their **Games95** consists of a well-implemented, fun-to-use graphical versions of Chess, Backgammon, Checkers, Space Invaders, and Tetris. (Most of these games also work on the HP 100LX). **Drive95**, a 3 1/2 inch floppy drive that attaches to the HP 95LX serial port, proved quite convenient to users without PC's or who didn't want to bother with connectivity software and cabling. With Drive95 users could easily backup data and transfer programs between a floppy disk and the Palmtop. **SmartDock** allowed users to place their HP 95LX in a docking station and connect to a PC or Macintosh and optionally print or fax.

HP 95LX programmers appreciated **Swift!Basic** and **Util Forth**. Both were HP 95LX aware and pioneered the facilitation of writing "loaders" (Util Forth) and System Compliant applications (Swift!Basic).

ACE Advances

ACE Technologies comes out on top for advancing HP Palmtop productivity with their many offerings, most of which deserve to be mentioned in this best products discussion. On the HP 95LX front, *HP Palmtop Paper* contributor Mark Scardina led the way with his **SWITCH!** program and ACE's fastSERIES of products. Switch opens up the HP by allowing users to "switch" with a hot key when using built-in applications to "SWITCHable" applications such as **fastCOMM**, **fastWRITE**, **fastLINE**, **fastNOTES**, **ACT!95**, and **Checkview**. SWITCH also makes getting to DOS on the HP 95LX easier and gives the user more control over the HP

95LX functioning. SWITCH's predecessor, Mark Scardina's **SYSMGR95.EXE** is free-ware and facilitates DOS access while fixing problems involved with installing System Compliant software on the HP 95LX.

More Top Software for Both Palmtops

Many mobile professionals find Symantec's **ACT!95** extremely useful for maintaining contact information. Act95! works on the HP 100LX and an 100LX version is expected soon. The original developers of ACT!, Contact Software, managed to shrink the program to fit on the HP 95LX while maintaining most of the PC version functionality.

HP Palmtop users who find HP's built-in DataComm communications program sparse will want to look into Fred Brucker's **COMMO** program. COMMO is compact, yet powerful data communications shareware for the HP 100LX. Its commercial version with more HP Palmtop specific features is **fastCOMM** and works on both palmtops. HP Palmtop CompuServe users continue to sing the praises of **acCIS**. This software which requires fastCOMM or COMMO automates CompuServe sessions, saving dollars and frustration.

For those who need more word processing power, consider Eric Meyer's **VDE** or the commercial HP Palmtop version with spell checker **fastWrite**.

Quicken fans, and those who want to keep track of their check writing, credit card charging, and personal money management, should strongly consider **Checkview**. Checkview data can be exchanged with popular PC programs, Quicken and Managing Your Money.

Another quite popular HP 95LX product from ACE is **BATTman**, especially useful for rechargeables and other battery alternatives. (A 100LX version is expected soon).

PCMCIA Cards

On the PCMCIA card front New Media **PalmModem** and Sundisk's **Flash Card** deserve accolades for technological achievement and for significantly enhancing the usefulness of HP Palmtops. New Media's PalmModem created the only fax/modem to be able to use the HP 95LX release 1 PCMCIA slot. PalmModem's communications and fax software reside on the card itself, not taking precious C drive space. A PalmModem is also available for the HP 100LX.

Sundisk is the original manufacturer of all **ATA Flash Cards** for the HP Palmtops such as for those distributed by HP and ACE. It is now possible (with disk compression) to store up to 80MB on a card that fits into your HP Palmtop. Even the ability to store more affordable 5 to 20MB in a palmtop is quite remarkable. Larger DOS programs and moderately-sized databases can now be kept in your pocket.

Look Mom, no cables

In the world of wireless the HP Palmtop and associated products led the industry. HP,

Motorola, and SkyTel deserve credit for its **Skystream Receiver** and **HP Cradle**. The cradle attaches to the HP 95LX lengthening it a few inches. With the Skystream attachment the HP 95LX can receive E-MAIL, APPT / PHONE / 1-2-3 updates, and news reports wirelessly.

On the Infrared front Extended Systems **JetEye** lets you use the HP 95LX or HP 100LX infrared port for printing. No HP Palmtop cable required. **RECOM** allows both HP 100LX and HP 95LX users to control their TV, VCR, and Stereo system. The program is great for going into airport bars and changing channels much to everyone's bewilderment and amazement.

HP 95LX and 100LX Connectivity Packs

Although flawed, these kits made it possible to run HP Palmtop software on a PC and to transfer files back and forth. **Intellilink's** translation software lets you convert phone numbers and addresses in PC Personal Information Management (PIM) software such as ECCO, Lotus Organizer and PackRat to and from the HP Palmtops. **MacLinkPlus** opened up 95LX connectivity possibilities for Apple Macintosh users (a 100LX version has just been announced).

Finally, many users (such as myself) depend on Eric Meyer's **ZIP** a mean and lean software transfer utility (works on both palmtops). When I travel with my HP 100LX, I always bring ZIP and ZIPDUP and an **HP Connectivity Cable** (HP F1015A). With ZIPDUP (on the HP 100LX only) I can transfer ZIP.COM to the PC from my HP 100LX, and then run ZIP on both systems to transfer files between my palmtop and the PC.

A "Novel" Use of the HP Palmtop

Gilles Khol **Vertical Reader** (VR95, VR100) adds the ability to read short stories, documentation, and novels on the HP Palmtop. After a number of years, literature becomes copy-right free. That means that Edgar Allen Poe's poetry, the Bhagavad Gita, or Moby Dick can be stored on a Flash card and read in one of Gilles custom fonts on the HP 95LX or HP 100LX.



Vertical Reader

Top HP 100LX Utilities

A number of important utilities have emerged for the HP 100LX. Mark Scardina has updat-

ed versions of freeware **ASERCTL** and **APLOAD** since the 1993 Subscriber Power-Disk. ASERCTL gives the user more control over the serial port thus enabling certain software packages to run that might otherwise have difficulties. Similarly, APLOAD facilitates running DOS programs on the 100LX.

Craig Payne has contributed several free utilities for the HP 100LX valued by many. **GDBIO** allows for importing and exporting data to and from the HP 100LX PHONE and DATA BASE programs for PC applications. Running **REMKEY**, connect the HP 100LX to your PC with the HP serial cable. REMKEY lets you use a hot key from your desktop PC to toggle between the desktop and the palmtop. You can now access or enter data in either your PC or Palmtop from your desktop PC's keyboard.

Increase storage capacity with compression software

Last and perhaps most, disk compression software has proven invaluable for HP Palmtop users. Freeware **DIET 1.20** (a later version doesn't work as well) allowed users on both Palmtops to compress EXE and COM programs and, when run as a TSR, compress other bloated files such as Lotus 1-2-3 WK1 spreadsheets.

ACE technologies pioneered the use of Stacker on SRAM and Flash memory cards with their adaptation called **DoubleCard** and **DoubleFlash**. Now Stacker comes standard on many PCMCIA memory card offerings. However, ACE's implementation goes farther: their implementation is truly "plug and play"; their special driver fixes certain serious bugs on the HP Palmtops; and their version allows compression of the built-in C drive.

Kudos to HP

None of these products would have been possible without the creation of the HP 95LX and HP 100LX. I believe the innovation and usefulness of the HP Palmtop is what has inspired the forward-thinking and technically creative developers who created the products described here. Quality HP Palmtop products inspire quality HP Palmtop developers. HP and these third party developers owe each other a debt of gratitude.

We, the users, benefit and appreciate.

95LX, 100LX

Carrying cases

Readers have reported a variety of sources for cases that fit the HP 95LX and the HP 100LX. These range from a \$99 Sharper Image case to a Wal-Mart \$5.80 camera case. Also we've heard that people use the Wizard case, cases from other HP calculators and custom leather cases.

Below is a brief list of some of the cases that have been mentioned in *The HP Palmtop Paper* by a number of different authors.

■ **Custom Leather Palmtop Case** — a hard leather "molded" case for \$80.

Contact: *Digardi Leather Co., San Jose, CA; Phone: 408-371-6367. (Ed Greenberg, San Jose, CA, USA.)*

■ **Custom Palmtop Cases** — Hard leather cases custom made of water resistant natural color cowhide, featuring a flush belt loop and "tuck" style camera case fastener. Price: \$56;

Contact: *C.R. Cusack, USA; Phone: 303-279-1279. — (Rich Hall, HP Palmtop Paper)*

■ **Leather Desk** (#2764) — High quality black leather case with six card slots, interior pockets, pen loop, detachable strap, and a mounting bracket for the Palmtop which is velcroed to the case. Price: \$64.95.

Contact: *EduCALC, USA; Phone: 800-677-7001; Fax: 714-582-1445. — (This and next three case tips from James Cumiskey, CompuServe ID: [72777, 2266].)*

■ **TimeBoss Leather Case** — a compact case less functional than the Leather Desk, but with better leather. Retail for \$59.95.

Contact: *Global Connection; Phone: 608 757 0673; Fax: 608 755 1744.*

■ **The Pouch** — (#2736) — Custom made for HP Palmtops. Attaches to your belt. The alarming "RRRRRIIIIPPPP" of the velcro fastener provides wonderful pickpocket protection. Retail for \$19.95.

Contact: *EduCALC, see above.*

■ **EduCalc Leather Wallet** (#2638) — Well made, but the mounting system is not very secure. Not enough room inside and has fewer features than the Leather Desk.

Contact: *EduCALC, see above.*

Nintendo Cases for Palmtops

The Nintendo Gameboy belt carrying case holds a Palmtop perfectly. There is a little pouch in front for batteries, cables, etc. — (Stanley Dobrowski, CompuServe ID: [71031,2162])

Soft Leather Case Adds No Bulk

I use the HP 28S soft leather case for my 100LX. It doesn't add much more size to the entire package and is easy to use and carry, although there's no belt loop for those who like to carry it on their belt.

Contact: *EduCALC, see above — (Roger Prokic, Coco Beach, FL)*

Likes Palmtree's Leather Case

Adds minimum size to the 100LX, and has room inside for several cards.

Contact: *Palmtree Products; Phone: 617-871-7050; Fax: 617-871-6018.*

E & B Leather Cases

These leather cases for the 95LX/100LX combine features designed for office executives and frequent flyers. Price: \$69.95.

Contact: *E & B Company, 1013 McRae Way, Roseville, CA 95678, USA; Phone: 916-782-9219. — (Rich Hall, HP Palmtop Paper)*

Contact Information for Products Mentioned

HP PRODUCTS

HP 100LX 2MB — \$749
(HP F1022A)

HP 100LX 1MB — \$549
(HP F1020A)

512K RAM Card — \$special
Limited supply
(HP F1003A)

5MB.12v Flash Card — \$499
(HP F1012A) with Stacker 3.0 data compression software (not for the 95LX).

10MB/12V Flash Card — \$879
(HP F1013A) with Stacker 3.0 data compression software (not for the 95LX).

Dictionary/Thesaurus Card — \$149.95
(HP F1005A)

AC/DC Adapter (HP F1011A) — \$39.95
USA/Canada Adapter (Opt. ABA)
Europe (Opt. ABB)
Australia (Opt. ABG)
United Kingdom (Opt. ABU)
South Africa (Opt. ABQ)

PC Connectivity Cable — \$24.95
(HP F1015A) Connect 95LX and 100LX to DOS compatible PC.

MAC Connectivity Cable — \$24.95
(HP F1016A) Connect 95LX and 100LX to Apple PCs/MACs.

95LX Connectivity Pack — \$119.49
(HP F1001A)

100LX Connectivity Pack — \$119.49
(HP F1021A)

Connect/Adapter Kit — \$24.95
(HP F1023A) Four adapters for connecting the 100LX to modems, printers, and PCs.

100LX Accessory Cradle — \$79
(HP F1027A) Connects the 100LX to U.S. Robotics WorldPort V.42bis Modem, Skytel pager, and other products.

95LX Accessory Cradle — \$60
(HP F1006A)
Contact: 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 & 100LX and its accessories from ACE Technologies at 800-825-9977 or 408-428-9722; Fax: 408-428-9721. EduCALC at 800-677-7001; Fax: 714-582-1445. Global Connections at 608-752-1537; Fax: 608-752-9548. Classic Computers at 515-472-0383; Fax: 515-472-0393.

NOTE: Suggested retail price listed.

OTHER PRODUCTS

9624 VAP Pocket Fax/Modem — \$199
Contact: Neutek International Corp., USA; Phone: 602-731-7211; Fax: 602-731-7212.

ACT195 — \$149
Contact: Symantec, USA; Phone: 800-441-7234 or 408-253-9600; Fax: 408-255-3344.

Advanced Technical Solutions Using HP Solve — \$9.95
Contact: EduCALC, USA; Phone: 800-677-7001 or 714-582-2637; Fax: 714-582-1445.

America OnLine BBS — \$varies
Contact: America Online, USA; Phone: 800-827-6364.

An Easy Course in Using the HP 19BII — \$19.95
Contact: Grapevine Press, USA; Phone: 800-338-4331 or 503-754-0583.

AWK 1.4b — n/a
AWK 2.03 — \$249
Contact: Thompson Automation, USA; Phone: 800-944-0139 503-224-1639 503-224-3230.

Back issues, HP Palmtop Paper
Contact: Thaddeus Computing, USA; Phone: 800-373-6114; Fax: 515-472-1879.

Batteries, lithium AAs (4-pack) — \$14
(plus \$2 shipping)
Contact: Thaddeus Computing Inc, USA; Phone: 800-373-6114; Fax: 515-472-1879.

BATTman — \$49
Contact: ACE Technologies, USA; Phone: 800-825-9977 or 408-428-9722; Fax: 408-428-9721.

Bulletin Board Services
Contact: See page 31, this issue for listing of on-line BBSs.

Canon BubbleJet — \$499
Contact: Canon USA; Phone: 800-848-4123.

Carrying Cases
See tip, page 42 this issue.

CC:Mail-Remote — \$295
Contact: Lotus Corporation; Phone: 800-343-5414; Fax: 617-693-3899.

Checkview — \$49
Contact: ACE Technologies, USA; Phone: 800-825-9977 or 408-428-9722; Fax: 408-428-9721.

Citizen PN49 — \$469
Contact: Citizen America USA; Phone: 800-477-4683 or 310-453-0614; Fax: 310-453-0614.

CompuServe BBS service — \$varies
Contact: CompuServe USA; Phone: 800-848-8199 or 614-457-0802. See more international numbers on page 30 of this issue.

DoubleCard RAM cards — \$varies
DoubleFlash cards — \$varies
Contact: ACE Technologies, USA; Phone: 800-825-9977 or 408-428-9722; Fax: 408-428-9721.

Embarc — \$varies
Contact: EMBARC/Motorola, USA; Phone: 407-364-2000; Fax: 407-364-3683.

FastLynx — \$169.99
Contact: Rupp Technologies, USA; Phone: 800-844-7775 or 602-224-9922; Fax: 602-224-0898.

fastCOMM — \$59
fastLINE — \$49
fastNOTES — \$49
fastWRITE — \$99
Contact: ACE Technologies, USA; Phone: 800-825-9977 or 408-428-9722; Fax: 408-428-9721.

Fax/Modems from WorldPort V.42bis Modem — \$249
Palmtop Fax/Data Modem — \$249
2400 — \$229
Contact: U.S. Robotics, USA; Phone: 800-342-5877 or 708-982-5010; Fax: 708-982-5235.

Flash RAM Cards — \$varies
Manufactured by Sundisk, marketed by others including HP (see HP listing above).
Contact: Sundisk, USA; Phone: 408-562-0595; Fax: 408-562-3403.

Games95 — \$49.95
Contact: Sparcom USA; Phone: 800-827-8416 or 503-757-8416; Fax: 503-753-7821; CompuServe ID: [75320,2440].

IntelliLink for Windows — \$69.95
Contact: IntelliLink, USA; Phone: 603-888-0666; Fax: 603-888-9817.

JetEye for the 95LX — \$95
JetEye for the 100LX — \$117
Contact: Extended Systems, USA; Phone: 800-235-7576 or 406-587-7575; Fax: 406-587-9170.

Kodak Diconix 180si — \$349
Contact: Kodak Company, USA; Phone: 800-344-0006 or 716-724-3592; Fax: 716-726-3108.

LapLink V — \$169.95
LapLink Pro — \$169.95
Contact: Traveling Software, USA; Phone: 800-343-8080 or 206-483-8088; Fax: 206-485-6786.

Lotus Add-Ins — \$varies
Contact: Software retailers or catalog outlets.

MacLinkPlus HP Palmtop — \$129
Contact: DataViz Inc., USA; Phone: 800-733-0030 or 203-268-0300; Fax: 203-268-4345.

Macronix MaxLite 96/PC — \$595
Contact: Macronix Inc., USA; Phone: 800-468-4629 or 408-453-8088; Fax: 408-453-8488.

MS-DOS 6.0 — \$49
Microsoft Assembler (6.1) — \$199
GW-BASIC — with DOS 3.x
Quick Basic (4.5) — \$199
MS C (5.1) — discontinued
Contact: Microsoft Corporation, USA; Phone: 800-426-9400; Fax: 206-635-6100; Canada: 800-563-9048; International: 206-936-8661.

Norton Commander 3.0 — \$149
Contact: Symantec Corp., USA; Phone: 800-441-7234 or 408-253-9600; Fax: 408-255-3344.

PalmModem 2400/PalmFax — \$269
Contact: New Media Corporation, USA; Phone: 800-453-0550 or 714-453-0100; Fax: 714-453-0114.

Power C — \$19.95
Contact: MIX Software, USA; Phone: 800-333-0330 or 214-783-6001; Fax: 214-783-1404.

Programming Software
Other retail sources for programming software.
Programmer's Paradise, 1163 Shrewsbury Ave., Shrewsbury, NJ 07702, USA; Phone: 800-445-7899 or 908-389-9228; Fax: 908-389-9227.
The Programmer's Shop, 90 Industrial Park Rd., Hingham, MA 02043, USA; Phone: 617-740-2017.

RAM Card Battery — approx \$3
The CR-2023 coin cell used in both the Palmtop and RAM cards.
Contact: Radio Shack, or any place that carries watch batteries.

Rescue — \$129.95
Spreadsheet damage recovery program.
Contact: Lotus USA; Phone: 800-343-5414; Fax: 617-693-3899.

Serial-To-Parallel Adapters
BSE Parallel Port — \$79.95
Contact: The BSE Company, USA; Phone: 602-527-8843; Fax: 602-527-1540.

Convertor Cable — \$125
Contact: Imaging Supplies Express, USA; Phone: 800-462-4309; Fax: 310-370-3265.

GA 935 — \$79.95
Contact: Greenwich Instruments, USA; Phone: 800-476-4070; Fax: 704-335-8707.

Paralink 3 — \$79.95
Contact: WIDGET Software, UK; Phone: 011-44-438-815444; Fax: 011-44-438-815222.

Sparcom Print Station
Comes with serial/parallel adapter (See Sparcom listing this page.)

Service Agreements
For U.S. HP Palmtop users. Units must be under warranty to extend.
95LX, 1-year extension — \$50
95LX, 3-year extension — \$135
100LX, 2-year extension — \$85
Contact: Hewlett-Packard, Corvallis Service Center, USA; Phone: 503-757-2002.

Skystream Receiver — \$350
SkyTel Wireless Service — \$varies
Contact: SkyTel USA; Phone: 800-456-3333 or 202-408-7444; Fax: 202-336-5333.

Solar battery charger — \$12
Contact: CampMor; Phone 201-445-5000; Fax: 201-445-6619

Sparcom
Mac Data Exchange — \$89.95
PC Data Exchange — \$79.95
File transfer software.
Drive95 — \$329.95
Drive100 — \$329.95
External floppy drive, also available in international voltages.

Mac Station95 — \$79.95
Docking stations with cables.
With connect software — \$129.95

PC Station 95 — \$59.95
Docking stations with cables.
With connect software — \$129.95

PC Station 100 — \$79.95
Docking stations with cables.
With connect software — \$129.95

SwiftBASIC — \$159.95
Contact: Sparcom Corporation, USA; Phone: 800-827-8416 or 503-757-8416; Fax: 503-753-7821; CompuServe ID: [75320, 2440].

SWITCH! — \$59
Contact: ACE Technologies, Inc., USA; Phone: 800-825-9977 or 408-428-9722; Fax: 408-428-9721.

Technical Applications: Step-by-Step Solutions for Your HP-27S or HP-19B Calculator — \$10
HP 1987, Mfg #00027-90045.
Contact: EduCALC, USA; Phone: 800-677-7001; Fax: 714-582-1445.

Telebit Qblazer — \$299
Contact: Telebit Corp., USA; Phone: 408-734-4333; Fax: 408-734-3333.

TeleCouplerII — \$139.95
Acoustic coupler
Contact: CP+, USA; Phone: 800-274-4277; Fax: 714-848-6850.

Turbo Assembler — discontinued
Turbo C++ (2.0) — \$99.95
Contact: Borland International, USA; Phone: 800-331-0877 or 408-431-1000.

TurboPascal 3.02A — \$90
Contact: Joe Wright, 711 Chatsworth Place, San Jose, CA 95128, USA. (Last known contact, we cannot reach him.)

User's Groups See tip, page 40 this issue.

UTIL Forth — \$70
Contact: Essex Marketing Services USA; Phone: 203-651-8284; Fax: 203-651-7926.

HOW TO CONTACT US

There are a number of ways to get in touch with *The HP Palmtop Paper* staff. You can write; mail us a disk with your comments; send CompuServe mail; fax; or call. Our mailing address and contact information is:

Thaddeus Computing, Inc.,
P.O. Box 869 or 57 E. Broadway,
Fairfield, IA 52556, U.S.A.
Phone: 515-472-6330 or 800-373-6114;
Fax #:515-472-1879;
CIS ID: Hal Goldstein, [75300,2443]

To advertise in *The HP Palmtop Paper*, contact Brian Teitzman or Margaret Martin.

To subscribe, change address, or clear up any problem with your subscription, contact our subscription department (Director Sharon Dilmore).

Technical Support

HP Technical Support — HP offers these options:

- **FREE TECHNICAL SUPPORT**— is offered to all Palmtop users and is available by calling 503-757-2004.
- **FREE AUTOMATED SUPPORT**— is offered 24 hours a day by calling 800-443-1254.
- **REQUEST FAXED OR MAILED INFORMATION** — 800-752-0900.

On-Line Support— offered by these bulletin board services.

- **COMPUSERVE GO HPHAND FORUM** - Call 800-848-8199 or 614-457-0802: For FREE membership state #231.

- **AMERICA ON LINE** Keyword PALMTOP - Call 800-227-6364 or 703-893-6288 for membership information.

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] or send disk or hard copy to Hal Goldstein or Rich Hall 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. 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.

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

Products advertised in *Best Tips of the HP Palmtop Paper*

Company	Product (Phone/Fax numbers)	Page number
ACE	(Serial-to-parallel converter)	[800-825-9977; Fax: 408-428-9721]..7
ATS Case	(Travel Light, mobile office)	[800-451-4242; Fax: 508-393-9508]..29
CP+	(Road Warrior/TeleCoupler II)	[800-274-4277; Fax: 714-848-6850]..9
Coastal Electronics	(PCMCIA card reader)	[800-721-5465; Fax: 619-454-2611]..14
Databook	(Memory card drive)	[716-889-4204; Fax: 2593]..21
DataViz	(MacLinkPlus)	[800-733-0030; Fax: 203-268-4345]..inside front
E & B	(Leather cases)	[800-896-CASE; Fax: 916-782-9306]..5
EduCALC	(Accessories catalog)	[800-677-7001; Fax: 714-582-1445]..19
EME Systems	(Sensor interface)	[510-848-5725; Fax: 5748]..6
Envoy Data	(PCMCIA products)	[602-892-0954; Fax: 0029]..30
EXP Computer	(ThinFAX)	[800-EXP-NYCA; Fax: 714-453-1319]..outside back
Extended Systems	(JetEye, infrared printing)	[800-235-7576; Fax:406-587-9170]..16
File Recovery	(File recovery service)	[503-737-3908; Fax: 2400]..28
GemPlus	(Smart Card reader/writer)	[301-990-8800; Fax: 8801]..39
Global Connection	(Cases/Accessories)	[608-752-1537; Fax: 9548]..3
Golfsoft	(Golf software)	[615-584-8827; Fax: 615-546-1847]..18
Greenwich Instruments	(Serial-to-parallel converter)	[800-476-4070; Fax: 704-335-8707]..2
IntelliLink	(Windows/95-100LX connectivity software)	[603-888-0666; Fax: 9817]..27
Nav95	(Navigation software)	[808-924-7155]..31
On-Site Information	(EMBARC Motorola)	[800-333-6200; Fax: 800-338-4147]..15
Profilix	(Physicians medical reference)	[913-492-7300; Fax: 7396]..17
SCM Microsystems	(Desktop card reader)	[408-395-9292; Fax: 8782]..33
SoftwareHouse	(DERIVE)	[808-734-5801; Fax: 808-735-1105]..23
Sparcom	(SmartDock Drives, Data Exchange)	[800-827-8416; Fax: 503-753-7821]..13
Steele Creek	(File transfer)	[Phone & Fax: 704-588-1780]..32
Thaddeus Computing	(HP Palmtop Paper, ON DISK)	[800-373-6114; Fax:515-472-1879]..8, 37, inside back
Wireless Access	(AccessCard)	[408-383-1900; Fax:408-383-0503]..25



Software on the *Best HP Palmtop Paper Tips ON DISK*

Product	Description	Type	Page
ACCIS9.ZIP	Application: CompuServe access manager ver. 2.0 for Palmtops	Shareware	31,41
ATO69A.ZIP	Application: AUTOSIG 6.9A a CompuServe access program for PCs	Free	31
COMMO.ZIP	Application: Version 5.52 of communications program for 100LX	Shareware	31,41
DIET12.ZIP	Application: Version 1.20 file compression utility	Free	9,10,13,20,42
DIET145F.ZIP	Application: New version 1.45F of file compression utility	Free	9,10,13,20
ICON.ZIP	Application: Draw "icons" for use with 100LX AppManager	Free	14
KERM2.ZIP	Application: PC Comm program with VT102 emulation	Free	29
KERMIT.ZIP	Application: Macintosh Comm program with VT102 emulation	Free	29,30
MESSG.ZIP	Application: Message 2.0 automates CompuServe access for Palmtops	Shareware	31
NETEPAD.ZIP	Application: Note taker that links PHONE & APPT files for the 95LX	Shareware	41
TAP542.ZIP	Application: TAPCIS 5.42 - automates CompuServe on PC	Shareware	31
VDE171.ZIP	Application: VDE 1.71, a compact powerful text editor MEMO alternative	Shareware	31,41
VR100.ZIP	Application: Vertical text reader for the 100LX	Shareware	42
VR95.ZIP	Application: Vertical text reader for the 95LX	Shareware	42
ABKTOOL.ZIP	APPT: ABKTool 3.1, a stand alone Appointment Book viewer, editor	Shareware	41
MULTIDAY.ZIP	APPT: Multiday 3.07b of the daily or weekly list view of .ABK files	Shareware	41
MUS-LX.ZIP	Entertainment: Plays music on your palmtop	Free	16
HB_TFOX.ZIP	Game: Hearts & Bones and Tiger Fox for 100LX & non-English 95LXs	Free	12
TETLIX.ZIP	Game: A Tetris like game	Free	6
HPWK1.ZIP	Lotus 1-2-3: Built-in worksheets from the 95LX for 100LX users	Free	20
CHEKBOOK.ZIP	Lotus 1-2-3: Manage your bank accounts	Free	20
TODOPBK.ZIP	PHONE: A sample using .PBK file as a to-do list	Free	22
AWK.ZIP	Programming: High level programming language	Shareware	39
PCC.ZIP	Programming: C-compiler that works nicely on the 95LX	Shareware	39
100BUDDY.ZIP	Utility: Version 1.0b enhancement program for 100LX	Shareware	5,41
95BUDDY.ZIP	Utility: Version 3.1 enhancement program for 95LX	Shareware	5,11,15,22,41
95PS.ZIP	Utility: Send graphics with Print Screen to a printer	Free	33
ALARMS.TXT	Utility: Musical alarm sounds for 100LX	Free	16
APLOAD.ZIP	Utility: Version 1.3 makes 100LX Application Manager more flexible	Free	14,36,42
ASERCL.ZIP	Utility: Version 1.3 allows control of the serial port for the 100LX	Shareware	24,42
BAT100.ZIP	Utility: Version 1.1 reports status of all 100LX batteries	Free	6
BATT95.ZIP	Utility: Reports status of all 95LX batteries	Free	6
BATSET.ZIP	Utility: Reset the charge time on the 100LX	Free	6
DIRLUS.EXE	Utility: Creates directory listing of 95LX drives for MACBAK	Free	29
FATR.EXE	Utility: Change the file attribute setting, replaces DOS ATTRIB command	Free	9
GOBIO.ZIP	Utility: Import or export to/from 100LX Database or Phone files, ver. 0.93	Free	42
HP95CT.ZIP	Utility: Toggles serial port, cursor tracking, and more	Free	36
IRPRT.ZIP	Utility: 100LX users print text files and clipboard to HP IR printers	Shareware	33
IRPRT.COM	Utility: Print 95LX output to an HP infrared printer	Free	33
MACPBK.SIT	Utility: Hypercard stack, backup & convert PHONE to Mac files	Free	29
REMCOM.ZIP	Utility: Remote control for TV, VCR, etc. on 95LX/100LX	Shareware	26,42
REMKEY.ZIP	Utility: Use desktop keyboard to run HP Palmtops	Free	42
STATUS.ZIP	Utility: Displays password on 95LX	Shareware	10
STICK.COM	Utility: Makes ALT and CTRL keys "sticky" like SHIFT and CHAR keys	Free	39
SYSMGR95.ZIP	Utility: For the 95LX use in place of \$SYSMGR	Free	41
TIMOUT.ZIP	Utility: Change auto shutoff time on 95LX and 100LX	Free	5,10
TP95.ZIP	Utility: Modify Turbo Pascal 3.02a for 16-line display	Free	39
TP95INST.ZIP	Utility: Modify Turbo Pascal 3.02a with INSTX.COM & TINST.COM	Free	39
UNZIP.EXE	Utility: Decompresses .ZIP files	Free	na
ZIP171.ZIP	Utility: ZIP.COM 1.71 file transfer program: works on 95LX and 100LX	Free	10,27,28,29,42
BESTTIPS.ZIP	Text: The HP Palmtop Paper, Best Palmtop Tips	na	na
DIETONHP.ZIP	Text: How to set up DIET on the 95LX and the 100LX	na	10
KEYS95.ZIP	Text: Assign hot keys to System-Compliant applications	Free	12
README.ZIP	Text: Cover letter for the HP Palmtop Paper Best Tips OnDisk	na	na

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