

THE HP Palmtop Paper



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RAM Cards and RAM Card Drives

A RAM card expands the disk storage space on your 95LX. Is there a difference between the various cards available? Is there danger of losing files on a RAM card? Is it possible to use your RAM card like a floppy disk directly with your desktop PC?

Introduction

By Hal Goldstein

What follow are articles on PC Cards and Memory Card Drives. A PC Card (also known as a Memory Card or a RAM Card) fits in the slot on the left side of your HP 95LX. You can add up to 2 Megabytes of storage space on the 95LX by using a PC Card. Since PC Card usage is so central to 95LX users and to the future of computing, you will see a more articles on PC Card usage in subsequent issues of *The HP Palmtop Paper*.

Soon we will see a variety of PC Cards for the HP 95LX: Flash Cards, One Time Programmable (OTP) ROM Cards, Masked ROM Cards, and RAM and ROM combination cards. Each of these cards has the capability to store programs and data and each has certain advantages and disadvantages in terms of price and flexibility.

(Continued on page 10.)

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Publisher's Message



Hal Goldstein

The HP Palmtop Paper makes the HP 95LX more valuable and enjoyable by collecting, organizing, and disseminating the experiences of 95LX users worldwide. The breadth and depth of this first 1992 issue comes from the contributions readers have made. Just take a look at the many useful ideas you find in "Letters" and "Quick Tips." Novices can go to the "Getting Started" column, and the new "How Do You Do That?" column in which Bil. Alvernaz gets you started using a modem and the built-in COMM program.

Experienced data communications users can read Mark Scardina's "DOS Connection" for an alternative to COMM. The same column tells you how to run DOS applications from System Manager without exiting!

Want a strong MEMO alternative? See Ed Keefe's "Through the Looking Glass" column. Want to keep your 1-2-3 spreadsheets to manageable size? Check out Tom Page's "Savvy User." Programmers and would-be programmers, should see Ed Keefe's review of UTIL FORTH.

Of course you can always expect a listing of new 95LX-related products in "Third Party Products" (end of the issue). We also take a more in-depth look at Extended System's JetEye, the first commercial product to take advantage of the 95LX's Infrared port. JetEye lets your 95LX print to a LaserJet — without a cable.

A RAM Card increases the 95LX's usefulness. See the articles on selecting RAM Cards and Card drives. RAM Card users take special notice of the discussion on safeguarding files on your RAM Card.

We continue last issue's discussion on sources of HP 95LX support. First we review three new books on the 95LX. Then we continue with most frequently asked questions to HP Technical Support. Ted Dickens, the system operator for CompuServe's HPSYS forum, talks about the most popular programs available for the downloading. We also hear about HP 95LX support on Internet and UseNet.

In this issue I also discuss my experiences at a European HP 95LX developers' conference in Switzerland. Among other things, I discovered AA lithium batteries that last four times as long as alkaline batteries. Soon many Europeans and other nationalities will be able to order *The HP Palmtop Paper* products locally in their own currency with possible local language support.

Last but not least, we review games for the HP 95LX. Among its many virtues, the 95LX is a great game machine. Whether you want to play chess, blackjack, Tetris, or even space invaders, the HP 95LX is ready when you are.

Special thanks go to the advertisers in *The HP Palmtop Paper*. These companies were willing to gamble their resources to develop products for the HP 95LX. And the ad revenue we receive from these companies helps us to produce a quality newsletter. If you find the 95LX useful now, imagine how the products advertised and described in this issue will increase the value of your investment.

Finally, those of you interested in the freeware or shareware described each issue should see the back page discussion of *The HP Palmtop Paper ON DISK*.

The HP Palmtop Paper

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A Real Leather Case for the HP 95LX

OK, I'm a nerd. I never wore a slide rule on my belt, but I wore calculators on my belt in college.

When I started using a pocket computer — the Psion Organizer — I used a gray nylon belt case sold by one of their distributors. I got used to it: it was always right there when alarms went off or I needed to check a phone number.

Now that the 95LX has supplanted the Organizer for me, I needed a belt case for it. I was using a really ratty old HP-65 leather case and kept hoping some enterprising third party would fill the gap.

Nobody did, so I went to a local holster maker to see what he could do. Most pistol holsters are "molded", just like the old HP hard leather cases: wet leather is pressed over a form and the result stitched to a backing. The holster maker used cast aluminum forms for various pistols; subjecting the 95LX to the pressing operation didn't seem like a good idea.

The solution was simple: I had a friend with a milling machine (he's really handy to have around), machine a chunk of aluminum to the size and shape of the 95LX. I took this back to the holster maker and he came up with a very rugged hard leather case that's a perfect fit. Best of all, the price was surprisingly low: \$80 for a case that shames the old HP hard leather cases and is designed to my exact specifications.

My case is made from leather about twice as thick as the HP case leather, in a simple design with a spring steel belt clip and a Velcro secured flap. It's dyed a dark brown and has pigskin lining. At first my 95LX fit very snugly into the case and was a little difficult to remove. It took a week or

two for the case to "adapt" to the 95LX.

To sum up, I'm impressed! The case is sturdy and quite well made. I wish I could get shoes that nice.

I asked Brian (the holster maker) to put a basketweave pattern on the front of mine (like the pattern on some leather cases on a policeman's belt) and want him to make me a belt with the same pattern.

As I mentioned, the case is a bit tight on the 95LX, but I expect it'll wear in over time. I think that part of the problem is that the aluminum block used to form the leather doesn't allow for the four rubber feet on the 95LX. It's that close! I think Brian is planning to build the mold up a bit for future work.

The holster maker is Brian Digardi, and his business is called Digardi Leather Co. It's located in San Jose, CA and the phone number is (408) 371-6367. He still has the aluminum form and is thus in a unique position to make custom cases for the 95LX. Since each case is made to order, you decide what goes into it: RAM card pockets, type of leather used, belt or other type of case design, so on and so forth. If you're not local to the Bay Area, your best bet is to call him and arrange to send him a sketch of what you want.

He's been in business here a number of years and the local gun nuts tell me he's in high demand for custom gun holsters, knife sheaths, and so forth. I'm very impressed with my case (did I mention the matching belt? That was extra.), and I think you'd be pleased with anything he did for you as well.

I have no business connections with Digardi Leather.

Ed Greenberg
San Jose, CA, U.S.A.
CompuServe ID:[76703,1070]

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 address is:

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Hal Goldstein, [75300,2443]

(To send material to our street address, you may substitute "57 E. Broadway" for "PO Box 869".)

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To advertise in *The HP Palmtop Paper*, contact advertising sales director, Brian Teitzman.

To subscribe, change address, or clear up any problem with your subscription, contact our subscription department (Director, Margaret Martin).

For support: We are not staffed to answer your HP 95LX questions by phone. If you send us a letter describing your problem we may publish and respond to it. For faster response we suggest you:

1. Call HP at 800-443-1254 for pre-sales information, dealer locations, and answers to common questions.
2. Call HP for technical support at 900-288-0025 from 8am--3pm Pacific time. For non-U.S. customers, look in your User's Guide or call your local HP sales office.
3. Join the HP 95LX section of the CompuServe HPSYS Forum (call 800-848-8990 or 614-457-8650).

Corrections from the First Issue

File transfer

The answer to the battery question on cover page about turning serial port off and on was incorrect. The last line says that resident applications will turn on the serial port after the user has disabled it. That's not true, as we have seen many times when people discover FILER won't work with a PC.

Try it for yourself. Go into FILER, shell to System, type `serctl /o`. Then exit to FILER. Connect to the PC.

Establish the connection from the PC side. The 95LX will go into remote mode — but PC will say "Connection not established" or some such thing. That's because the receive side of the serial port is still active — but the send side has been disabled.

LIC character set

Also, in Programmer's Corner, middle of page 30, it says the 95LX does not use the LICS character set. It uses the PC-850 character set which is quite similar to PC-8. Some of the resident applications do use the LICS character set.

I hope Ed will devote at least part of a column to using Turbo Debugger with the 95LX, as that is by far the best tool for debugging 95LX applications.

Ted Dickens
Sysop, HP 95LX forum
Compuserve ID: [76701,272]

Bug in PHONE / APPT

On page 22 in the Fall, 1991 issue of *The HP Palmtop Paper*, you say that eventually you will regain control of the 95LX using Find in APPT or PHONE. Well, I was doing a Find in PHONE the other day and the system really locked up, with garbage displayed in the Function Key labels. Pressing <Ctrl>-<Alt>- did nothing. After waiting over 12 hours I did a hard reset (press <Ctrl>-<Shift>-<On>) and got the system back, but lost everything on system RAM. Have you heard of anyone else having similar problems with Find in PHONE?

Oh yes, great magazine!

Mike Levy
San Jose, CA, U.S.A.

Lotus "Bug" Not a Bug

Gerald Fuller's "bug" (Fall, 1991, page 3) is not really a bug. Just finish the keystrokes and the file will be printed to disk. Namely /Print File <name> Range a1..xx Go Quit.

Now, if you use Filer, you'll find that the named file is full. Lotus writes the file to a buffer when you use "Go" but doesn't flush the buffer and close the file (updating the DOS directory) until you press Quit. If you "peek" at the directory before closing the file, DOS will tell you that the file is empty. This is sometimes advantageous. You can press ESC or Ctrl-Break and abort the operation before the file goes on the disk, as long as you don't press Quit.

Ed Keefe
Ankeney, IA

Financial Software

There are already available in the U.K. 35 programmes covering Bonds, Leasing, Real Estate, etc.

These are available from Col. C. de Lisle, Rabley Park, Ridge, Nr. Potters Bar, Hertfordshire, EN6 3LX, United Kingdom (price on application).

A.L. Vann
London, England

How to Combine Phone Books

I am very pleased with *The HP Palmtop Paper*. It is

certainly written very well and is just what I need for help with my HP 95LX.

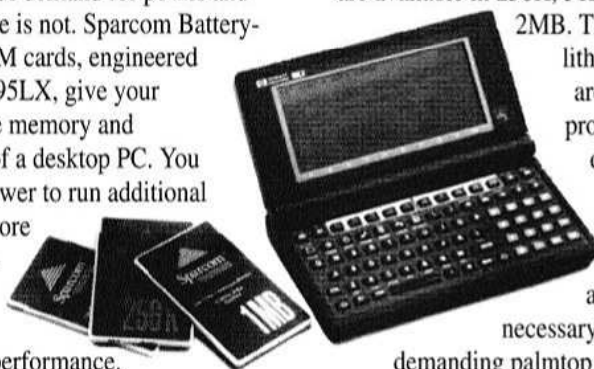
A question I have is, how can you combine two different files. I belong to, and am a control operator with The Gold Coast Amateur Radio Association. We have over 650 members and I completed a telephone directory with the first 500 of the names, telephone numbers, and addresses in one file, and I have the last part in another file. This makes it very difficult to find a member's address information quickly when

I'm talking with him on radio. I plan to cut the files to size through abbreviations, etc. The big question I have is how do I get both files back as one?

Also, I like programming in BASIC, and cannot do this yet with the 95LX. I have several small programs I would like to use on the 95LX. Is there a version of BASIC suitable for the 95LX? I wrote these program on a Radio Shack PC-6 (a small computer with BASIC built into it) and have the programs backed up on a cassette tape. At

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present I use a 512K RAM card to back up my 95LX.

Robert Hess

Tamarac, FL, U.S.A.

[Anyone with ideas on HP 95LX BASIC? One strategy for a large phone book is to split the PHONE file in two: A-M and N-Z. Then create a macro to go quickly between them like the macros suggested under PHONE in this issue's Quick Tips. — Hal.]

1-2-3 Population Growth Graph

I have enclosed a WK1 file (Lotus worksheet) as a candidate for inclusion in your free software, or for any use you might want to make of it. It is named CHAOS.WK1, and it provides the opportunity to observe how a graph changes when one or two variables change in the equation defining the graph.

The equation was originally used to model population development in a limited environment, where the next generation's population is determined by this generation's population, times a specified growth rate, times the distance the present population is from complete saturation of the environment.

Henry M. Pollock, M.D.
Peabody, MA, U.S.A.

[Thank you for your contribution. We will include it in this issue's HP Palmtop Paper ON DISK and make it a candidate for the Subscribers Disk. We encourage readers to send software they think others will benefit from. — Hal]

Software for the HP 95LX Expensive?

Having just outgrown my Radio Shack 16K pocket computer, I was evaluating the Atari, the Boss, and the Sharp Wizard. I had decided on the Wizard, due in part to the availability of support and a large number of software programs. On

my way to purchase the Wizard, I read an article about the HP 95LX. After some more research, I purchased the 95LX about three months ago from a mail order firm.

From what I have seen, it appears as if software applications for the 95LX are going to be expensive. Imagine paying \$195 for a dictionary/thesaurus program and \$300 or more for the RAM cards.

It appears to be able to utilize programs from desktop computers, but RAM cards are necessary. I had thought about purchasing software just to obtain the RAM storage cards. Why is there such a disparity in the price of Sharp Wizard software and programs for the HP 95LX?

Perhaps as I become more aware and involved in the 95LX world, I shall discover economical support, and as the 95LX becomes more widespread, the commercial support will become more economical and plentiful.

I just joined Prodigy to browse in the forum and I am looking forward to the next issue of *The HP Palmtop Paper*. I love the 95LX and am looking forward to developing and expanding my knowledge and base of operations.

Harry Brown, Jr.
Bernhards Bay, NY, U.S.A.

[RAM card prices should come down over time. There is a lot of free software and reasonably-priced shareware software available for the HP 95LX as chronicled in these pages. Checkout CompuServe's 95LX section of the HPSYS forum and on our HP Palmtop Paper ON DISK. It takes quite a bit of capital for a commercial software company to develop a product for an unknown market, hence the cost of the HP 95LX software so far — Hal.]

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Send your feedback to: Hal Goldstein, Thaddeus Computing, PO Box 869, Fairfield, IA 52556, Fax: 515 472 1879 or CompuServe ID 75300,2443.

Questions

I have several comments about the Fall 1991 issue of *The HP Palmtop Paper*:

1. With reference to the "Press space for colon" (Quick Tips, page 22), the User's Guide (page 17-5) documents the following characters that can be used to separate the components of dates and times: hyphen, slash, space, colon, period, and comma. I prefer the period, since it is located below the numeric keypad where my finger is located when entering digits for date and time.

2. Why are there two forms of TigerFox (TFOX.EXM 3.52, 8,315 bytes, located in the hidden C:_SYS directory and TF.COM, 8,170 bytes, located in C, the root directory? Is .EXM called by .COM? Trying to execute TFOX.EXM by copying it with a .COM extension and running it from FILER locks up the 95LX, requiring a hard reset.

3. On the subject of file extensions, many in the main directory and subdirectories are undocumented. How about listing all the file types by extension, and their purpose in a future issue?

Warren Anderson, M.D.
Kaneohe, HI, U.S.A.

[TF.COM and TF.EXM are independent files that invoke the same game of TigerFox. There was room

on the English language HP 95LX's for extra files in the hidden C:_SYS directory including TF.EXM. (Non-English contain support for both English and the other language.) See DOS Connection and Games articles for more on using .EXM files. We will document extensions in a future issue. — Hal]

Deleting the Lotus Templates

I have a problem that has bugged me in using my HP 95LX. Bear in mind that unlike most users, Lotus is one of my least-used applications. I've been trying to delete the built-in 123 templates (CARLOAN, CFLOW, EXPENSE, HOMEBUY, and STAT) without success. My latest attempt was with the MS-DOS command ATTRIB. This is not a major issue, but I would like to customize my set-up to that extent. Maybe one of your readers has the answer.

Stephen Green
Orleans, MA U.S.A.

[The .WK1 files cannot be deleted because they are part of the permanent ROM memory of the 95LX. They are not taking up any usable RAM memory. — Rich]

Poquet RAM Cards

I have noticed favorably priced Poquet brand cards in the local retail stores, but the stores have no technical

information on whether they work with the 95LX.

Don A. Williams, Jr.
Delphi Computer Systems
San Diego, CA, U.S.A.

[I talked with the Poquet technical support (408-764-9400 in the U.S.). They told me that all but the earliest Poquet RAM cards work in the 95LX. They also said that the 95LX low-power RAM cards sold by HP will work in the Poquet if you turn the Poquet's internal power management function off. They said that they had quite a few people call them that had both the HP 95LX and the Poquet - Rich.]

Creating a 95LX Printer Cable

I want a single cable to connect to my Diconix 150 Plus printer. Since the Connectivity Pack cable HP makes was the only thing available, I cut the cable in the middle and soldered the wires to a Radio Shack male 25-pin connector (Radio Shack #276-1547). The connections are: yellow lead to pin 2, white to pin 3, and red to pin 7. I coated the assembly with a household glue. This eliminates bulky adapters and greatly improves portability.

George S. Shaw
Indialantic, FL, U.S.A.

Likes The HP Palmtop Paper ON DISK

I was not interested in many of the items on the first *HP Palmtop Paper ON DISK* - the programmer's calculator, all the Compu-Serve access routines, the games, how a GVC modem works etc. I will take a closer look at DIET12, KBFIX2, SKPD and VDLC. I've installed TW12 on my (big) PC and am impressed. I'll use it on my next trip and depending on the result register with TravelWare.

So - of the 10 or so files which were distributed I

may pick up on 2 or 3 so that is probably not a bad score. Certainly it's in line with previous experience.

T.D. Craddock
Univ. of Western Ontario
London, Ontario, Canada

I volunteered to write for *The HP Palmtop Paper* ("How Do You Do That?" column). After reading the first issue, I was so impressed with this "start up" publication that I wanted to do all I could to help make it a success.

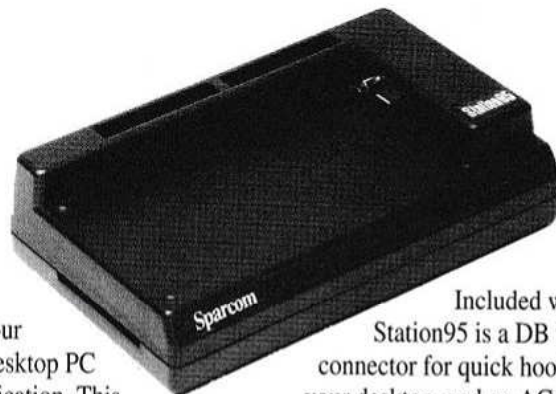
While I was impressed with the amount of useful and practical information I found in the first issue, I was even more pleasantly surprised to learn that all of that information - and more - is also available on disk ... *The HP Palmtop Paper ON DISK*. This disk is loaded with useful utility and shareware programs for the 95LX. Just the kind of stuff we're all looking for as we continue to blaze new territory with the HP 95LX (which is sure to become -

if it hasn't already - the standard for palmtops). The cost of the disk is a bargain and it's something all subscribers will find useful. I've even badgered Hal Goldstein into promoting the disk more (slap it on the cover in a ribbon, Hal).

Bill Alvernaz
MCI MAIL #207-8825
Livingston, CA, U.S.A.
[I "slapped" *The Palmtop Paper ON DISK* ad on the outside back cover - Hal.]

(Continued on page 37.)

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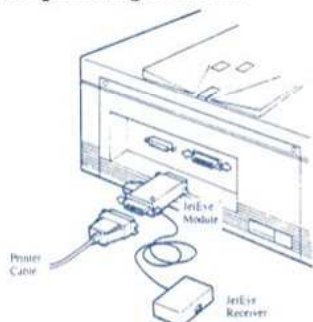
Infrared Interface for HP LaserJet Printers Lets You Print from Your 95LX Without Cables

Connect this little box and adapter to your LaserJet Printer's parallel port and you can send your printing jobs directly from your 95LX to your printer via the 95LX's hidden infrared port.

By Richard Hall

This is one of those simple products that really extends the usefulness of the HP 95LX. "JetEye" is an infrared receiver that connects directly to the parallel port of an HP LaserJet Printer. It lets you send printing jobs to the LaserJet via the 95LX's infrared port. (The Infrared port is located on the right side of the 95LX inside the same compartment as the backup battery.)

JetEye works with HP LaserJet printers, series II, IID, IIP, III, IIID, IIIP, and the IIISi. Once connected, you simply point your 95LX's infrared port at the JetEye receiver (within 8") and send your print job to the LaserJet. This eliminates the bother of connecting cables, or transferring files to your desktop and printing from it.

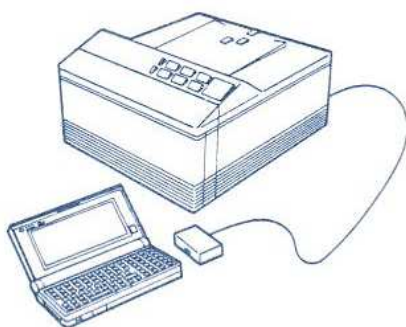


Installing the JetEye

JetEye consists of an infrared receiver connected by a 5-foot cable to the JetEye Module (a parallel port adapter with male and female parallel interfaces). Connect one end of the Module to the parallel port in the back of your LaserJet. Connect your desktop computer to the other parallel port on the JetEye Module and it can print to your LaserJet without interference by JetEye.

Printing with JetEye

To print to your LaserJet, position the JetEye receiver directly in line with the HP 95LX's infrared transmitter (located on the 95LX's right side, inside the plastic case and not visible from the outside).



Printing from the HP 95LX to the LaserJet Printer

You must enter the 95LX SETUP to configure your palmtop for infrared I/O in the Setup menu. Press **FILE**, **Printer Config Interface 3** (Infrared), quit SETUP. Print as usual from within your application. (Before you attempt to print from Lotus 1-2-3, you must select "Infrared" in the Worksheet Menu. From any worksheet press **MENU** Worksheet Global Default Printer Interface. Then press 4 to select the "Serial 2 - Infrared" port option.)

JetEye comes with JETEYE.SYS, a little 6K printer driver you can install on your 95LX. This printer driver provides handshaking ability between the printer and 95LX so you don't lose pages if your LaserJet

pauses in the middle of printing. I successfully printed a three-page MEMO document and a two-page spreadsheet without installing that printer driver.

JetEye and Other Printers

JetEye technical support has successfully tested it with the Texas Instrument MicroLaser and the DEC 3000 laser printers. The Canon LBP-8 R, LBP-8 T, and the DEC Laser 2200 work somewhat with JetEye (JetEye prints to these last three printers, but the JetEye printer driver that allows handshaking between the printer and 95LX does not). *JetEye does not work with, and may be damaged by the IBM 4029 & 4029, the QMS 410 and Apple Laser Writer.* A 95LX user mentioned on CompuServe that he had successfully tested JetEye with the HP DeskJet Plus.

JetEye requires a certain amount of current (supplied by the host printer) in order to operate. Although the data lines etc. are standard with most printers, the capability of the printer to supply the required amount of power is not. In a few cases, an incompatible parallel port can result in either the JetEye being fried, or the power supply of the printer burning out from the overload. JetEye was designed specifically for the HP LaserJet printers (which seem to be uniform in design).

Impressions

It works! I printed documents from all the built-in applications that print — without a hitch. JetEye is a simple piece of hardware that does a necessary job, for not much money. We'll keep our demo unit.

Availability NOW
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COMPANY: Extended Systems Inc., 6123 N. Meeker Ave., Boise, ID 83704; 800-235-7576, Fax: 406-587-9170, 208-322-7575; Fax: 208-377-1906.

EUROPEAN CONTACT: Jerry Loyd, European Sales Manager, Extended Systems Inc., Reinhardstrasse 23, D-7034, Gärtringen, GERMANY; +49 7034/27326; Fax: +49 7034/27364. Jerry has the names of all the local European distributors.

"... Oh Yes, Some Games Please!"

A waste of time, maybe, but games are one of the most requested items from our User Questionnaire. Here's a listing of the games we've found so far.

By Richard Hall

We sent questionnaires to many of you who inquired about *The HP Palmtop Paper* last summer, in an attempt to find out what you wanted to see in the newsletter. Many of the returned questionnaires requested information on games for the HP 95LX. Why the interest in such an "unproductive" use of the 95LX? Maybe you have a few spare minutes waiting for a plane. Maybe you're tired of crunching numbers in Lotus. Maybe you just want to have a little excitement, challenge, and fun! Whatever the reason, your HP 95LX can become your "Gameboy" with some of the programs described below.

You'll find two different types of games available: logic games and arcade games. Logic games include checkers, chess, games of deduction and memory like Concentration and Hearts & Bones, and adventure games where you try to find the treasure or rescue the beautiful princess (or handsome prince). These games test your intelligence, and pit you against the computer.

Arcade games are fast-action games where you match your dexterity, intelligence, and skill against the computer's. These are the kind of games made popular by Atari and Nintendo; games like Pac-Man, Mario Brothers, Space Invaders, etc. Some are life-threatening shooting matches (like Space Invaders) and some are a little more refined intellectual challenges (like Tetris). But whichever one you choose, arcade games tend to elevate your metabolism a little more than logic games.

Below is a list of the games we've discovered so far. If you know of any others, please let us know.

Hearts & Bones, TigerFox

These two System-Manager-compliant games come built into the English language version of the 95LX. To install these, see sidebar, page 8.

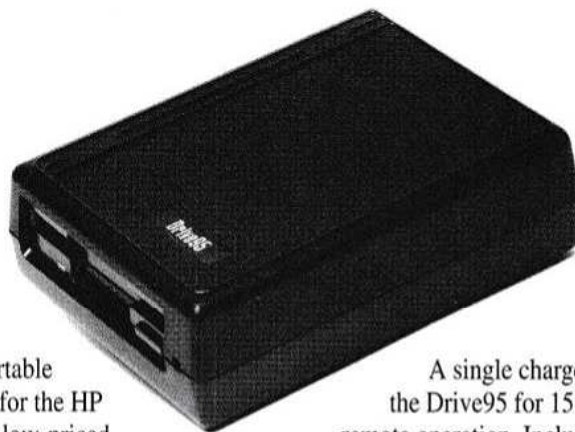
The Diversions Disk

This shareware collection of games, puzzles, and Lotus graphs, is from Ed Keefe, contributing editor to *The HP Palmtop Paper*.

Registered users receive the latest version of the programs, a 162 page Users Guide, and free updates for 1 year. Registered versions of the games are System Manager executable. You can configure them to pop up on top of built-in applications using a menu system provided by Ed (see page 19).

On *The HP Palmtop Paper ON DISK*, Fall 91.

Remote control.



Drive95™, the portable floppy disk drive for the HP 95LX, provides a low-priced data storage and transfer device for palmtops. Drive95 reads and writes in PC-DOS format on 3 1/2" disks. Programs are executed quickly and easily. Drive95 is small and lightweight and fits easily into your briefcase.

A single charge powers the Drive95 for 15 hours of remote operation. Included is an AC wall adapter and a preformatted 1.44 MB disk containing the device driver software. An intelligent cache memory minimizes power consumption. An AC battery adapter and serial cable are included.

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All of Ed's games use "Line Draw" characters for graphics. Because of this they don't consume as much battery when operating as other graphics-intensive games.

Checkers

CHKRS.EXE (9.2K): The classic board game. Enter the coordinates of your move and off you go.



Opening screen for Checkers

Concentration

CONCEN.EXE (6.9K): The memory exercise game where you try and match pairs in a field of 52 face-down playing cards.

Fastermind

FMD95.EXE (7.7K): "An exercise in deductive logic." The 95LX generates a hidden code of up to 10 numbers and you try to break this code by guessing numbers in a sequence.

FastPoet

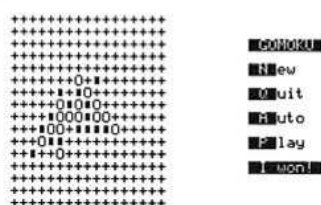
POET.EXE, FASTPOET.DTA (6.6K total): A program that generates lines of poetry: "while air shifted, sullen, heavy grasses glistening; always the clock and pen..."

Fox 'N' Hounds

FOX95.EXE (6.2K): Try to get your three hounds to box in the fox in less than 20 moves.

Go-Moku

GO95.EXE (5.8K): Also known as "Five In a Row," Go-Moku is a classic board game (like Tic-Tac-Toe).



Go-Moku Screen

Mini Adventure

MINIADV.EXE (11.4K): A text-based adventure game where you decide which way to go, reap the rewards, or suffer the consequences!

Petals Around the Rose

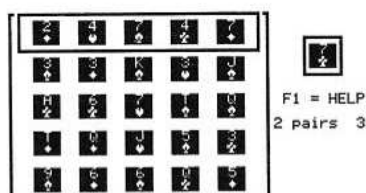
PTLS95.EXE (6.3K): The computer "rolls" five dice, you look at them and guess the number of petals around the rose. After seven correct responses you prove you know how to solve the puzzle and are admitted into the "Order of the Roses."

Poker

PKR95.EXE (11K): A simple version of Five Card Draw (like a Las Vegas slot machine). See chart for a free system-compliant version from another author.

Poker Solitaire

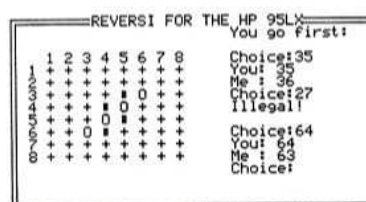
PKSL95.EXE (9K): Lay out your cards in any position on a 5 x 5 grid until 25 cards are "dealt" and get the best hand in each column/row.



Poker Solitaire Screen

Reversi

RVR95.EXE (8.7K): Classic board game similar to the one marketed under the trade name "Othello."



Reversi Screen

Outflanking game played on an 8-by-8 grid board. As you flank, or cut off a row of the opponents pieces, they become your pieces.

REVREV95.EXE: (10.6K) a meaner version of Reversi.

Installing TigerFox / 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>-.

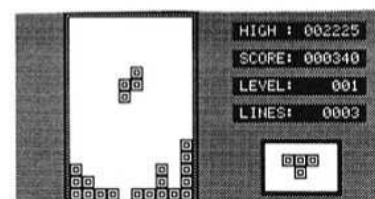
* NOTE: If APNAME.LST is already in your C:_DAT subdirectory, then you should add the above lines to it rather than create a new APNAME.LST file.

To bring up Tiger Fox press <Ctrl>-FILER. To bring up Hearts & Bones press <Ctrl>-COMM.

If you need a more specific step-by-step set of instructions for installing TigerFox or Hearts & Bones, send us a request along with a self-addressed stamped envelope.

Tetris

TETLIX.EXE (11,252): A simple version of the popular game Tetris. The object is to slip odd-shaped, falling pieces into empty places in the row below. Fill in a row, it disappears and you get more points and more room to manoeuvre. (Chart at end of article lists free version with better graphics.)



HPTRIS, Graphics version of Tetris

Unscramble

UNSC.EXE (7,257): Restore the scrambled characters to their original order (A, B, C, ... etc.) in as few moves as possible.

Ye Olde Toggle Block Game

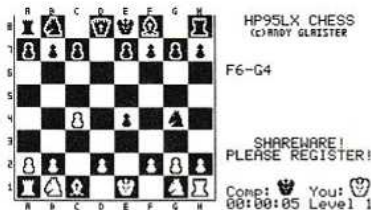
YOBG.EXE (7,304): Patterned after Merlin, one of the earliest handheld computer games. You are presented with a 3-by-3 grid with some of the squares occupied by dark blocks. The object is to turn off all darkened blocks by inverting small groups of them.

CHESS/Space Invaders

Two shareware games with good graphics. Look for AG.ZIP in the HP 95LX library of the HPSYS forum on CompuServe. Register your copy, and get System-Manager-compliant versions with improvements in graphics and features.

Chess

CHESS.EXE (5,731): A fast chess program with nice graphics and an excellent user interface. Move your pieces with the Arrow and Enter keys, not by entering coordinates.



Chess Screen

There are five levels of difficulty, from novice to experienced. On level 1 you can expect moves to be made in less than 10 seconds, level 2 in less than a minute. You will probably be able to beat level 1 if you don't make any mistakes and play a decent game of chess. Level 2 plays a good fast game.

Space Invaders

INVADERS.EXE (4,595): This is a clone of the classic arcade demon. Rows of bat-like space invaders descend upon you, level-by-level, from the top of the screen. Use your Right- and Left-Arrow keys to position your blaster below them, and dodge the bombs they drop.

 On The HP Palmtop Paper ON DISK, Jan/Feb 92.

There's a tendency to get excited and punch down on the 95LX's keys pretty hard, but the keyboard seems to be able to take it.

GAME Collection

These freeware are available in the HP 95LX library of HPSYS on CompuServe. All were written in Turbo v 2.0, come with source code, and fit on C: with room to spare.

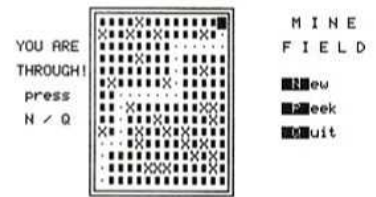
Go-Moku

GO.EXE (11,835): A simpler version of the popular tic-tack-toe-type game described in the Keefe Game

Collection above. This one is adapted from Borland Game Toolkit.

Mine Field

MINES.EXE (10,667) Mine field game: Hit a mine, you're history.



Mine Field Screen

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You are told how many mines are in squares adjacent to yours.

Sub Hunt

SUBS.EXE (10,571): You're a destroyer moving around the board. Press **ENTER** or **<SPACE>** to drop a mine. If you're on top of a submarine, you sink it. The computer tells you the distance to each sub whenever you drop a mine.

Blackjack for the 95LX

A System-Manager-compliant Blackjack game with graphically displayed hands, for one or two players. Computer automatically shuffles deck, deals, and tracks wagers. Activate an automatic card counting system, and "re-seed" the deck. The program is available in the HP 95LX section of the HPSYS forum on CompuServe.

A Note On Battery Life

Graphics-intensive games like TigerFox, Space Invaders, and the French version of Tetris (HPTRIX.EXE) consume quite a bit of energy and shorten the life of the HP 95LX batteries. The Keefe Game Collection puts everything in line-draw mode (including Tetris). This saves battery life.

Before playing TETRIS, or doing almost anything else in the FILER (or in DOS) you should first turn off the serial port. You can do this with the SERCTL command.

For instance, you could start Tetris with the following batch file:

```
serctl /o
c:\hptris
```

This would turn off the serial port and then start Tetris, assuming HPTRIS.EXE was on the C: drive.

ORDERING INFORMATION

All the freeware and shareware games described are available on the Jan/Feb edition of *The HP Palmtop Paper On Disk*. (See back cover for description/ordering information.) They're also available on the 95LX section of CompuServe's HPSYS forum.

BLACKJACK (free on CompuServe as BJ95.ZIP. Author requests you donate something your favorite charity;

CHESSEX/SPACE INVADERS (shareware on CompuServe as AG.ZIP) - Registered for \$25.00 from Andrew Glaister, 1391 S. Old Wilke Rd, Arlington Hts. IL 60005;

DIVERSION DISK (shareware on CompuServe as DIVDSK.ZIP) - Registered for \$29 (plus \$10, overseas shipping) from FastAid Co., 413 SW Logan, Ankeney, IA, 50021;

GAME COLLECTION (freeware on CompuServe as 95-GAM.ZIP);

TETRIS (freeware on CompuServe as HPTRIX.ZIP);

POKER (freeware on CompuServe as POKER.ZIP).

PC CARDS: RAM Cards & Card Drives

(Continued from front cover.)

For example, the RAM cards that are now available rank high in terms of flexibility (data and programs can be easily stored and erased) and high on price. On the other extreme a Masked ROM ranks low in terms of flexibility and low in terms of cost per unit: In terms of inflexibility, the minimum Masked ROM order is 2000 units, it may take four months to receive the order, whatever gets put on the masked ROM is permanent, that is, it can't be altered. The HP Dictionary / Thesaurus card is an example of a software program available on a masked ROM card. Look to future issues of *The HP Palmtop Paper* for further discussion on the different PC Cards and different capabilities in RAM Card Drives.

In the following article, contributing editor Mark Scardina talks about considerations when purchasing a RAM card and about protection of files on the RAM card once you start using one. Both issues

deal with how the battery in the RAM card interacts with the batteries in the HP 95LX.

Once you get a RAM card, you will want to seriously consider a RAM Card Drive for your desktop computer. A Card Drive acts like an additional disk drive for your PC. With a Card Drive you can exchange data between the HP 95LX and your desktop PC by inserting your HP 95LX RAM Card into the Card Drive attached to the PC. Peter McClean, whose company manufactures PAMCO PC Card Drives, discusses in general terms the basic uses of a Card Drive. In subsequent issues we will look at a variety of Card Drives and discuss what they can do.

About two months ago, I took the plunge and purchased a 1 MB RAM Card. Subsequently, I obtained a Card Drive. The 1 MB RAM Card completely changed the way I used the HP 95LX - it really made it a different machine for me. I stored more DOS software on my HP 95LX including Grandview, the powerful

outline organizer I use on my PC. I also had room to store more of my Lotus 1-2-3 reference files. And, of course, I could store the whole suite of games discussed elsewhere in this issue. For security I have a copy of my phone book and appointment book on both my C and A drives. I still have room left (although I am ready for a 2 MB card).

A Card Drive makes transferring and backing up files a snap. I simply remove my 1 MB RAM Card from my 95LX and put it into my PC's Card Drive. I use simple DOS commands on my PC to copy files back and forth.

Differences in RAM Cards

By Mark Scardina

It wasn't long after purchasing my HP 95LX that the desire for more file space welled up to the point where a RAM Card was the only item that would satisfy it. Having

read HP's warning about a significant shortening of battery life if non-HP cards were used, I hesitated in considering other sources, but it became apparent that even if HP was right, I could buy a lot of batteries for the difference in price.



Memory Card

I did settle on a non-HP card and experienced no significant change in battery life. Was this a valid warning or a ploy to convince you to buy HP? Since WESCON (the annual electronic component show) was in my city this year, I took the opportunity to investigate. The following is a compilation of my discussions with the major card manufacturers.

RAM Cards and Battery Life

The RAM Cards that are available for the HP 95LX are all "low power." RAM Cards can be thought of as operating in 3 different modes with the 95LX. When the 95LX is off, the RAM Card goes to sleep, drawing less than .01ma (milliamp) of current from its built-in battery. When the 95LX is on but not accessing the disk, a RAM card draws 1 - 1.5ma of current due to the 95LX polling the Card's address lines. The RAM Card draws 50ma when accessed.

Epson, the manufacturer of HP's cards, added an additional chip to their line of low power cards and created a new ultra low power RAM Card which draws only .25ma when in the idle mode. This was done with a gate array which basically "closed the door" on the polling activity, thereby reducing the load and the resulting current drain.

This is a unique design; therefore, HP's claims are valid. However,

the question that remains is that while this is an 80% reduction, what is its impact on battery life?

Let's look at how the HP 95LX uses battery power independent of the RAM Card. When the 95LX is on but idle and the serial port is not active, it draws 30-40ma. If FILER or COMM is open, unless the serial port is turned off using the `serctl /o` command, the 95LX idles at 40-50 ma. The 95LX draws 150-200ma when computing. Finally, when off, the 95LX draws 0.79ma. (Graphics-intensive applications such as TigerFox take significantly more amperage to run).

One can expect approximately 2000 ma-hours from a set of alkaline batteries until the low battery warning appears. Therefore, by dividing 2000 ma-hours by 30-40ma that the 95LX idles at, we can guess that the typical user will get roughly 60 hours of idling time (HP 95LX on) from a set of batteries. In that 60 hours the Epson Card saves about one additional milliamp per hour, for a total of 60ma - less than 1/30th of a set of batteries.

The Bottom Line

That means you will save one pair of batteries for every 30 pairs using the Epson/HP card! Compare this to the 10 milliamp difference between keeping FILER and DATACOMM closed (or the serial port off with the `serctl /o` command) and you will find that you save one pair for every 3 pair used. Now that's significant!

Danger - Safeguarding the Files on Your RAM Card

One very important battery is the one in the RAM Card. When the HP 95LX is on and the RAM Card is inserted, the AA batteries or the AC Adapter power the card. While the 95LX is off, the RAM Card's battery keeps all of your files intact. Unfortunately, the card low battery warning system on the HP 95LX is not an early one. Therefore, please follow this advice: Change your card battery every 8 months.

If you ever see the card low battery warning, do not remove the

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card until you have backed up all of your files and you are ready to change your battery. Do not turn the 95LX off or let it timeout. (Press a key every 5 minutes.) Plug it into its AC Adapter if possible. Do not remove the AA batteries when you have a bad card battery as this will eliminate your files. The backup battery in the 95LX does not send power to the RAM Card.

The lithium batteries used by RAM Cards have a 5-10 year shelf life, so you can keep a few spare batteries for emergencies. And it's a good idea to set an appointment and alarm for your next battery change.

In looking to purchase a RAM Card it is important to make sure it conforms to the PCMCIA 1.0 standard. Therefore, if you want the most efficient card on the market, buy an HP or Epson. However, if your card is more than a few dollars cheaper than the HP card, it will take hundreds of batteries to offset the savings.

Card Drives

By Peter McLean
CompuServe ID: [75366,1267]

What Is A Card drive?

A card drive is a device which allows your desktop PC to read from and write to the RAM memory card that is used with the HP 95LX. Card drives connect to either the parallel or serial port of your PC, and some are installed internally. In all cases, the card drive looks like a floppy disk drive to the operating system of your PC. Thus you can use any of the standard MS-DOS commands, such as COPY, DIR, or DEL to arrange the files on a memory card.

In addition, a card drive can be the default drive for your desktop's application programs, allowing you to save files directly to, and retrieve files from the memory card.



An External Card Drive

When you remove the memory card from the card drive and insert it into the memory card slot of your 95LX, all of the files and programs that were on the memory card when it was plugged into the card drive are available on drive A of the 95LX.

A card drive serves the same purpose as a 3.5 inch drive used to transfer files to and from a laptop and a desktop PC. If you didn't have a 3.5 inch floppy drive in your desktop PC, you would have to use a program such as LapLink to transfer your files. Likewise, a 95LX without a memory card and card drive must use a connectivity kit (either from HP or a third party) to transfer files. Because a connectivity kit uses the serial port of your PC, the data transfer rate is very slow. The transfer rate of a card

drive can be much faster if connected to the parallel port of your PC or connected directly to the data and address bus of your PC (the case with internal card drives).

Advantages of a Memory Card

You must purchase a RAM memory card if you are going to use a card drive. Using a memory card in your 95LX benefits you in other ways as well. If you always use the memory card for your files instead of using the C drive, you can change the allocation of internal RAM to free up more user RAM area. Storing your files and programs on a memory card also means that they are backed up and ready for copying to your PC via the card drive. Also, you can instantly "de-personalize" your 95LX by removing the memory card containing your files before lending your 95LX to someone.

Using memory cards and a card drive also means that the 95LX doesn't have to be there when you download files from your PC. You or someone in your group can copy the desired files to the memory card, and deliver the card to the 95LX.

Card Drive and Connectivity Kit

A card drive and memory card will not completely replace a connectivity kit. The software that comes with the HP Connectivity Kit allows you to run the 95LX's built-in applications on your PC, and the serial cable that comes with the Connectivity Kit is useful for printer and modem connections. Besides, you may run into a desktop computer that is not outfitted with a card drive. If you already have a Connectivity Kit, you haven't wasted your money. But you will enjoy the speed and convenience of using a card drive to transfer your files back-and-forth between your PC and HP 95LX.

Card drives and the Future

The age of palmtop and handheld computers is upon us, and these types of PC's do not have the physical room or power needed by rotating magnetic media. The memory cards used in the HP 95LX are stan-

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dard, PCMCIA-compatible cards that will be used in virtually all of the upcoming handheld and palmtop computers, many of which will be introduced this year. The card drive/memory card combination will become just another standard method of transferring data from one computer to another. Your desktop or laptop computer will not be complete without one.

Peter A. McLean is President of PAMCO Electronics Inc., the manufacturer of a small, external card drive that connects to a parallel port. The PAMCO card drive retails for \$169.95. For more information on PAMCO card drives contact: Pamco Electronics, 377 Carowinds Blvd., Fort Mill, SC 29715, U.S.A.; 800-255-6265 or 803-548-6740.

For more information on card drives, this issue, see Pamco ad, page 41, Databook ad, page 30, and Adtron ad, page 28. Also see Fall 1991 edition of *The HP Palmtop Paper*, page 38.

Questions Most Frequently Asked to HP 95LX Technical Support Staff

This article continues the one begun on the front cover of the Fall, 1991 issue of The HP Palmtop Paper. Thanks again to the HP technical support staff for compiling these answers to the most often asked HP 95LX questions. In the next issue we will list the most frequently asked questions about the HP 95LX on CompuServe's HPSYS forum.

By The Hewlett-Packard HP 95LX Support Staff

Can I change the default directory in MEMO from C:_DAT to another one?


NO! That is the default directory for MEMO and cannot be changed. That is also the default directory for APPT, PHONE, HP CALC, and COMM.


To override the default, you can create a user key macro to type in a different directory at the touch of a **CHAR**-F-key combination. Instructions for creating user key macros are found in the *HP 95LX User Guide* on pages 21-14 through 21-20. (Also see MEMO QuickTip, page 23, Fall 1991 issue, *The HP Palmtop Paper*.)

Lotus 1-2-3 will support a change in default directory. From within Lotus press **MENU** Worksheet

Global Default Directory and then enter the desired default directory.

What can you do with the 95LX's Infrared port?

You can transfer files between two HP 95LXs using FILER. You can transfer files between an HP 95LX and an HP 48SX using the Datacomm application. You can print the current screen to the Infrared printer (part number HP 82240A) using the Print Screen keys (press **ESC** and a special program which you can run on the HP 95LX. This Terminate-and-Stay-Resident program (TSR) provides access to the Infrared printer. This program can be downloaded from CompuServe Information Service. The program is stored in the HP 95LX section library in the HP Systems (HPSYS) Forum and is called 95IRP.ZIP .

 On The HP Palmtop Paper ON DISK, Jan/Feb 92.

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Can I print the graphics screens that I've developed in HP CALC and Lotus 1-2-3?

Using another TSR program, similar to the one described above, you can print graphics which are in the display by pressing the Print Screen key (\square -ESC). This program is called 95PS.EXE \square and is also found in the HP 95LX section (Library 14) of CompuServe's HPSYS forum.

How do I run a TSR (Terminate-and-Stay-Resident) program on the HP 95LX?

Use the built-in MEMO application to create two files: CONFIG.SYS and AUTOEXEC.BAT. The CONFIG.SYS file should contain the following line:

shell=command /p

(WARNING: It is important to include the single empty space between the word "command" and the "/p". You can lock up your 95LX otherwise.)

The AUTOEXEC.BAT file should contain the following two lines:

(tsr name)
\$sysmgr

The first line has the name of the TSR you want to run. The second has the command \$SYSMGR, which starts the built-in System Manager. These files should be put in the root directory of your RAM card if you have one. They will also work in the root directory of the internal RAM disk. These files are executed whenever the system is rebooted. Before rebooting the system, quit all of your open applications, making sure to save files that you have modified. Then press \square - \square - \square to reboot the system. During the process of restarting the system, your 95LX executes the AUTOEXEC.BAT and CONFIG.SYS files.

The HP 95LX User's Guide contains instructions on how to use the SHELL command on page B-24.

WARNING: These commands represent a serious modification to your HP 95LX. You should be experienced with the use of CONFIG.SYS and AUTOEXEC.BAT files. If you make a mistake in these files, you may not be able to reboot the system. Therefore, you should only install these files on a RAM card. If there is a problem, you can remove the RAM card and the system will boot up in the normal way. If you put these two files on your internal RAM disk, back up the contents of your C: drive first.

What programs will run on the HP 95LX?

Some programs that run on the IBM PC XT or clone can be run on the HP 95LX. The program must be able to work with an MDA display (no graphics). The program must also be able to execute within the available system RAM. A program which uses the serial port may not work, depending on the specifics of how it accesses the serial port. You may need a RAM card for additional file storage with larger programs.

If the program meets these criteria, it is worth a try to see what happens. Back up important files before you experiment with this.

Note that all programs which run on the HP 95LX may not be easy to use. The small screen (16 lines by 40 columns) may require too much extra scrolling for the program to be useful. (The display is moved around the 25-line by 80-column screen by pressing \square and any one of the Arrow Keys at the same time).

When I am in FILER, how do I change from the directory that I am viewing to another directory?

Move the scroll bar to a listed directory and press \square . This will move you into that directory. To get out of the directory you have entered, move the scroll bar to the top line in the list, which says VIEW

UP. Pressing \square will take you up one level in the directory tree structure.

To change from the C: drive (internal RAM disk) to the A: drive (RAM card) press \square (GOTO) in FILER. Then at the prompt at the top of the screen type A:\ and press \square . This will give you a list of the files on the A: drive. Return to the C: drive by pressing \square , typing C:, and pressing \square .

A useful feature in FILER is the split screen. Pressing \square splits the screen. You can view two different directories at the same time. The split screen makes it easy to copy files from one directory to another. The directories showing on the split screen are the default paths for the copy command (\square).

 On The HP Palmtop Paper ON DISK, Jan/Feb 92.

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Three Books for the HP 95LX

A thick, comprehensive reference, a small, pocket reference organized around tasks, and a well-organized Lotus tutorial are the first three books on the HP 95LX that we've seen.

By Richard Hall

Books for the HP 95LX are starting to spring up like flowers in Spring. As we find them, we'll get copies and do brief reviews. We would very much like to get your feedback on any books you find available for the HP 95LX.

Using Your HP 95LX

[For those who want a comprehensive reference, but find the 95LX's User's Guide documentation unfriendly and difficult to use.]

This book, jointly published by Hewlett-Packard and Addison-Wesley, is a thick (380 pages) reference, less formal and more friendly than the 95LX documentation.

The material covered in this book is similar to that in the 95LX documentation, with the exception of the section on Lotus 1-2-3 (a bit skimpy: 20 pages compared to over 200 in the User's Guide). However, *Using Your HP 95LX* makes fewer assumptions about what you know, and is presented in a less crammed format. In addition, it has a rich and well-indexed set of examples that should help the reader quickly grasp specific tasks on the 95LX.

The 95LX's documentation has more information, but *Using Your HP 95LX* is more accessible.

The Answers You Need for the HP 95LX Palmtop PC

[For those who need a quick, "how to do it" reference to the major topics covered in the 95LX documentation.]

This is a well-thought-out, \$9 pocket reference organized around

tasks, not specific applications.

This small book walks you through the organization, analysis, and sharing of information; communicating with other devices; optimizing work; troubleshooting the HP 95LX; and more.

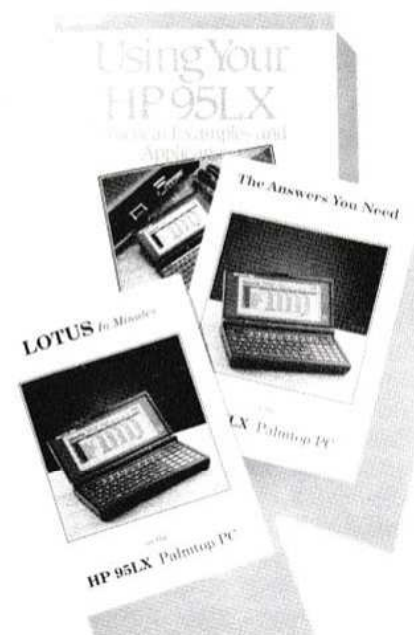
The Answers You Need... has plenty of examples, lots of nice tips and other well-organized information that make its 160 pages well worth \$9. You get:

1. A Solver equation to do Calendar Math, and other equations;
2. Examples of using the "Backsolve" feature;
3. A macro that saves all open files and exits to DOS;
4. Advice on avoiding data loss;
5. A reference section with a complete listing of the special characters and graphic characters that can be displayed on the 95LX, and the hexadecimal key codes for all 95LX keys, and <Ctrl>-, <Shift>-, and <Alt>-key combinations. (*Key codes can be used in the APNAME.LST file to set up keys or key combinations to start System-Manager-compliant applications.*)

Lotus In Minutes on the HP 95LX Palmtop PC

[A well-organized self-study for those who want a quick introduction to Lotus 1-2-3 on the HP 95LX.]

The section on Lotus in the *HP 95LX User's Guide*, though very thorough, is certainly designed as a reference for those who already know something about Lotus. This 132-page book was designed by a Lotus 1-2-3 expert and educator as a tutorial for Lotus on the HP 95LX.



It covers all the basics, from setting up a worksheet, performing calculations, printing worksheets, managing files, using databases and macros, and backsolving.

I'm using it as my first step into the world of Lotus 1-2-3 — and enjoying it. If you already have the basics down, you'll get more out of the *User's Guide*.

Ordering Information

Using Your HP 95LX retails for \$25.75 and was jointly published by Hewlett-Packard and Addison-Wesley. It should be available through HP dealers, or any good computer bookstore. You may order it directly from Addison-Wesley by calling (800) 447-2226.

INTERNATIONAL ORDERS: contact Addison-Wesley in your country or call Addison-Wesley in the U.S. at (617) 944-3700 and ask for "International Orders."

Prepaid U.S. orders are not charged shipping and handling and may be sent directly to Addison-Wesley Publishing Company, One Jacob Way, Reading, MA, 01867.

The Answers You Need... and *Lotus In Minutes...* each retail for \$9.00 plus shipping. To order contact Grapevine Publications, Inc., 626 N.W. 4th Street, Coral Gables, FL 33133-2449, U.S.A. Phone: (800) 338-4331 (US and Canada) or (503) 754-0583; Fax: (503)-754-6508.

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CompuServe's HPSYS Forum and the Files You Can Find There

This article covers recent changes in the HP Systems Forum, and discusses the most popular files you can get from the forum's libraries.

By Ted Dickens

There have been two significant changes in the HP Systems Forum since the last issue. First, we will add a second Systop to HPSYS. Miles Kehoe brings years of HP experience to the forum and will help with the behind-the-scenes stuff so vital to the forum's success. Second, we are starting a 95LX programming section to allow 95LX programmers and developers to focus on programming issues.

The Most Requested Files In the 95LX Section of HPSYS

Now on to the meat of this month's article: the most popular 95LX files on CompuServe. The two libraries now contain 135 files occupying 2.5MB of disk space. These files are proving popular; there have been over 25,000 downloads since we opened the 95LX section in April '91. Here are the top 25 downloads, in order of popularity:

1. **HP95LX.TXT** — uploaded by Scott Sprague [75410,337]. The most popular file is also the oldest — a data sheet for the 95LX of passing interest even to those who already own the 95LX.
2. **FAQ.95** — uploaded by Gene Dorr [75156,3132]. A list of the twenty-three most frequently asked questions from the forum, along with answers. This one's a must for every new 95LX owner!
3. **SW.95** — by Scott Sprague [75410,337]. A list of 3rd-party packages for the 95LX. Given the rapid pace of development for the 95LX, it's hard to keep this file current. But between the forum and *The HP Palmtop Paper*, users should be able to keep up with developments.
4. **RAMCRD.95** — by Scott Sprague [75410,337]. Everett Kaser, one of the software engineers re-

- sponsible for the 95LX, wrote an exceptional explanation of the ins and outs of RAM cards for the 95LX. Thinking of getting a RAM card? Get this file first.
5. **HP95LX.ANN** — by Scott Sprague [75410,337]. The official 95LX press release. The press release and the data sheet were available on CompuServe on the day the 95LX was introduced.
6. **HP95.HW** — by Gene Dorr [75156,3132]. Another excellent file from Gene, this one details the hardware used inside the 95LX.
7. **AG.ZIP** — by Andy Glaister [70023,2176]. Two extremely fast games for the 95LX: CHESS and INVADERS. These shareware (\$25) games are hand coded assembler using the 95LX's inherent graphics abilities.
8. **910717.95** — file from Ted Dickens [76701,272]. Just one of several conference transcripts. Conferences have guest speakers and attendees can ask questions. The whole thing is done electronically. When it's over, I clean up the transcript and upload it for others. In this one, guest speaker Ron Brooks of HP Corvallis talked about battery life, software for the 95LX, and service turnaround times.
9. **POKER.ZIP** — by Mike O'Connor, CIS ID: [76004,1447]. The name pretty much says it all. This Poker is SYSMGR-compliant.
10. **JAGUAR.ACC** — by Scott Sprague [75410,337]. An earlier listing of the third-party products available for the HP 95LX.
11. **WHY.LX** — by Gene Dorr [75156,3132]. This file of Gene's explains what "LX" means.
12. **TIWY.ANN** — by Marty Mankins [75300,1770]. "Take It With You," a newsletter for palmtop users, will cover the Atari Portfolio, Sharp Wizard, Poqet PC, the 95LX, and others.

Internet & Bitnet

Academic Computing Network and Electronic Mail

Many 95LX 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 95LX users). No doubt much of the discussion that takes place on CompuServe is similar to that on the UseNet news groups; certainly many of the "frequently asked questions" have appeared in **comp.sys.palmtops** and several HP employees are able to answer questions that are posed.

Thierry Priol at Campus Universitaire de Beaulieu, Rennes Cedex, France (priol@irisa.fr) has undertaken to make HP 95LX programs and utilities available by anonymous FTP (file transfer protocol). The 95LX material is located in directory HP 95LX on his machine. The Internet address for iris.fr is 131.254.2.3. FTP is a means by which one may log into a remote computer and retrieve files that are made available by that system's administrator.

HP 95LX 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.rr.i.uwo.ca

GEnie and Prodigy

I left CompuServe for GEnie some time ago. I hope you'll support their Laptop RoundTable.

Bob Preuss
Streator, IL, U.S.A.

[It would help if a subscriber could send in an article describing how much 95LX-related activity there is on GEnie (and Prodigy), the ins and outs of using the service, and the 95LX-related files found there — Hal.]

13. **910530.95** — by Ted Dickens [767-01,272]. Conference transcript with 95LX product managers. We talked about marketplace positioning and a wide range of design-related questions.
14. **HP95DM.ZIP** — by Gene Dorr [75156,3132]. If you're thinking of buying a 95LX — get this PC-based demo of 95LX's features.
15. **HPTRIX.ZIP** — by Yann Rouse [100010,3670]. *WARNING* This game can be hazardous to your productivity!! Yann has written a 95LX version of the game TETRIS.
16. **910619.95** — by Ted Dickens [76701,272]. A conference transcript with Everett Kaser and Steve Harper from the HP lab as guests — technical in nature.
17. **910627.PCM** — by Ted Dickens [76701,272]. A conference transcript with Terry Moore of Databook and Howard Honig of HP as guests. Terry and Howard are PCMCIA committee members (the group formulating standards for memory cards). We talked about version 1.0 of the standard, and what things are coming in the next version.
18. **PAGER.ANN** — by Ted Dickens [76701,272]. A key Motorola NewsStream person (and forum regular) provides answers to technical questions about this intriguing pager.
19. **0.BAT** — by Larry Lefkowitz [76137,155]. This batch file turns off the serial port (opened each time you load FILER).
20. **INTHE.95** — by Gene Dorr [76156,3132]. This file of Gene's lists the files and DOS commands you will find in the 95LX.
21. **APNAME.LST** — by Ted Dickens [76701,272]. This file tells how to invoke Hearts & Bones and the SYSMGR-compliant version of TigerFox found on the 95LX English-language versions.
22. **ACE.ANN** — by Andy Fu. This file gives the details of the ACE memory cards now available in 512KB, 1MB and 1.5MB versions. (Andy's president of ACE and a forum regular.)
23. **ALBERT.PCX** — by Daniele Coliva [100015,2644]. A new .PCX image to replace the top card image in your 95LX.

24. **1701D.PCK** — by Alan Zeichek. A .PCX graphic of the new Enterprise (from "Star Trek: The Next Generation") suitable for use as the top card display.
25. **95-GAM.ZIP**, by Dennis Wiser. A collection of three 95LX games: GO, MINES, and SUBS. Pascal source code is also included.


Finding & Downloading files

All of these files are located in the HP 95LX Palmtop library (library #14) of the HP Systems Forum. To get to the forum, type "GO HPSYS" at any CompuServe system prompt. To download files, you must be a forum member. If you haven't already done so, use the "JOIN" command to sign up. (There is no additional CompuServe charge for membership!) Once in the forum, type **lib 14** to go to the 95LX library.

To download 95-GAM.ZIP, for example, use the "DOW 95-GAM.ZIP" command. (Most CompuServe commands can be abbreviated to three letters.) You'll need a file transfer program that supports Xmodem, Kermit, or CIS-B (CompuServe's own file transfer protocol).


It's also easy to "stroll through" the library by using the "BROWSE" command. Used by itself, BROWSE will show you the files one at a time from newest to oldest. At the prompt, you can DOWNload the file, READ the file, or simply go on to the next file by pressing **ENTER**.

Creating a Library "Catalog"

Alternately, you could download a directory and browse it at your leisure. The file HPSL14.LIS  contains descriptions of each file in the library. It's updated monthly and sorted by download count, the most popular files at the head of the list.

You can also create your own catalog listings by turning on file capture in your datacomm program and using one of these commands:

- DIR LIB:14 — Lists file name, size, download count
- DIR SHORT LIB:14 — Lists file name, size, title
- DIR DES LIB:14 — Lists name, size, title, description...

 On The HP Palmtop Paper ON DISK, Jan/Feb 92.

Other interesting files

Mark Scardina [71551,467] has been doing a great deal of work on creating "loaders". These are programs that allow DOS programs to run alongside the resident applications. So instead of having to close all of your applications to run a DOS application, you can simply hot key into your DOS app -- just as though it were a SYSMGR-compliant application. Use the command "BRO KEY:LOADER" to list all the current loaders.

CIS users have recently completed beta testing two shareware applications that have been modified to work on the 95LX. VDE is a very small but potent editor. If you need something more powerful than the built-in MEMO application, download VDE.ZIP (see Ed Keefe's comments on VDE on page 27, this issue). COMMO is a datacomm package with a powerful scripting language. Mark Scardina worked with the program's author to develop the 95LX version. Download COMMO.ZIP and COMMO9.ZIP (see Mark Scardina's comments on COMMO, page 24 this issue).

95IRP.ZIP, provided as an unsupported utility from HP, lets the 95LX do screen dumps to the HP infrared printer.

Last are two of my favorites: WINDOW.PCX and MACDT.PCX. These small picture files can be used to replace the top card display with excellent recreations of the Windows and Mac desktop displays. Most people are impressed with the 95LX to begin with, but when I show them the 95LX "running" Windows, their jaws tend to sag. And when I then switch to running the Mac OS... (Who needs a Powerbook?)

Well, that's it: The 25 most popular HP 95LX files from the HP Systems Forum on CompuServe. There are more than 100 others, with new ones added each week.

See you on-line!

[Ted Dickens writes PC software for Niche Designs Corporation. He became a forum user in 1984, and was "demoted" (Ted's comment) to Sysop in 1987. He has spent the last two years in a room with a PC, modem, and fluffy white walls — Hal.]

What is System-Compliant Software?

This article discusses System-Manager-compliant software that will run in conjunction with the HP 95LX's built-in applications. Many future articles in this publication will be based on the ideas introduced here.

By Hal Goldstein

One of the nicest features about the HP 95LX is the ability to jump from one built-in application to another. An important feature not documented in the *HP 95LX User's Guide* is the ability to integrate other software into this built-in environment. Such software must be explicitly written for the HP 95LX in order to do this.

When the freeware, shareware, and commercial software described in *The HP Palmtop Paper* is said to be "system-compliant," it means the software runs "under" the System Manager. This system-compliant software can be run in conjunction with the HP 95LX's built-in software. For example, the registered version of chess described on page 9 is System Manager compliant. That means, once installed, you could pop chess up on top of your Lotus 1-2-3 spreadsheet. After a few moves you could switch to your phone book and then open MEMO to take some notes. Later in the day, you could resume your chess game where you left off.

Practically, you need to know only two basic things about such system-compliant software. First, the file name of the main, system-compliant program has the extension .EXM rather than .EXE or .COM. Second, you have to tell the System Manager about the new program by creating or appending a file named APNAME.LST within MEMO. (Caution - you can't just rename a .COM or .EXE file to .EXM - it won't work and can cause disk corruption).

We will be discussing this undocumented capability in detail in

subsequent issues of *The HP Palmtop Paper*. However, to get you started, see Sidebar labeled "Installing System-Manager-Compliant Applications." If you have an English version of the HP 95LX, go immediately to the sidebar labeled "Installing TigerFox / Hearts & Bones Into System Manager" on page 8 and install these built-in games into the System Manager.

DOS applications not rewritten for the HP 95LX cannot normally be run from the System Manager. Normally, to run such DOS software programs, you must first close all built-in applications and then enter DOS from FILER.

However, contributing editors Ed Keefe and Mark Scardina used the UTIL Forth package described on page 11 to create "System-Executable" menu systems. These menu programs allow you to run DOS programs without closing built-in applications. For example, with PHONE, APPT, and MENU open, you could access COMMO (the communications program reviewed by Mark Scardina on page 24). However, you cannot jump back to a built-in application like PHONE until you quit the DOS communications program.

See the next article for more information.

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.

In the example on page 8, ae00 assigns Ctrl-Filer to TigerFox and b200 assigns Ctrl-Comm to Hearts & Bones. Below is a keycode list for Alt and Ctrl combinations of all of the built-in application keys.

HP 95LX Keycode assignments

<Alt>-<Filer>	AB00	<Alt>-<Memo>	BB00	<Ctrl>-<Filer>	AE00	<Ctrl>-<Memo>	BE00
<Alt>-<Comm>	AF00	<Alt>-<1-2-3>	BF00	<Ctrl>-<Comm>	B200	<Ctrl>-<1-2-3>	C200
<Alt>-<Appt>	B300	<Alt>-<Calc>	C300	<Ctrl>-<Appt>	B600	<Ctrl>-<Calc>	C600
<Alt>-<Phone>	B700			<Ctrl>-<Phone>	BA00		

For a complete listing of keys download KEYS.95 from CompuServe or obtain the file on the Jan/Feb, 1992 issue of *The HP Palmtop Paper On Disk*.

Before creating the APNAME.LST, you should back up your files. Once APNAME.LST is created, reboot your 95LX by pressing <Ctrl>-<Alt>-.

See the sidebar on page 8 for an example of how to install two System-Manager-compliant applications.

Run DOS Programs Without Exiting Built-In 95LX Applications

These menu systems let you access DOS programs from a hotkey, much like the built-in applications.

MENU95

By Ed Keefe

The premier issue of *The HP Palmtop Paper* proposed a challenge: "HP 95LX users would like to go back and forth quickly between 95LX built-in applications and DOS software" (p.36, col.3). Perhaps *The HP Palmtop Paper* should offer more challenges. This one brought forth two independent solutions.

Mark Scardina and I (Ed Keefe) each used Forth from Essex Marketing, Inc. (see UTIL review, page 11) to create "loaders" that allowed specific DOS applications to pop up over most built-in 95LX programs.

It was only a matter of a few hours before both Mark and I had most of our favorite DOS programs popping up on top of FILER, CALC, MEMO, etc. At that time I discovered a human memory problem: I couldn't remember which hot key triggered what program!

A Pop-Up Menu Program

To get around the limitations of only eight add-in programs, and to overcome the lack of personal (human) short term memory, I developed a program I call MENU95. This menu program is a .EXM program that I have added to APNAME.LST. (See previous sidebar and Hearts & Bones/TigerFox sidebar, pages 18 and 8) It pops-up over the built-in programs and displays a list of all my add-in applications. My APNAME.LST file needs only one line, and better still, there's only one hot-key to remember.

When the hot-key is pressed, a menu of all the standard DOS programs appears. To run a program, you merely press a letter.

A "Menu Engine"

I have taken the idea one step further and created a menu system that will let you run up to 81 programs on your 95LX. The Menu Engine package, called MGN-LX, comes with a set of instructions to let you design your own menu system. Menu Engine lets you have either Lotus-style or pull-down menus. Currently, MGN-LX comes, as a bonus, to registered users of The Diversion Disk described in the games article on page 7.

JAGMENU

By Mark Scardina

A feature that separates the HP 95LX from other true pocket-size computers is its extensive DOS compatibility. However, having to close all of the built-in applications to access to DOS makes accessing other applications difficult.

As discussed above, there is now a way to launch DOS programs without going through the process of closing the built-in applications and going to FILER. I call this type of program, "System-Executable," to differentiate from a true System-Manager-compliant application (see sidebar).

JAGMENU was written to simplify the process of running DOS programs from System Manager. JAGMENU is a System-Executable menu system that permits an unlimited number of programs and DOS commands to be run from one APNAME.LST hotkey. Any command that can be run from a batch file can be used. JAGMENU also saves disk space since it allows all of your .BAT files that launch DOS applications to reside in one file.

When set up and activated by pressing **[ALT]-j**, JAGMENU displays a 22-item menu that allows activation of each item by simply pressing its associated letter. When the application or command is exited, you are returned to the menu. Pressing **x** returns you to your built-in applications right where you left off.

HP95 MENU			
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	COMMO		VDE
	Chess		
	DOS Shell		Games
	DEBUG		
	Grandview		Tetris
	Jyotish		Unerase C
			Exit

Enter a Letter from A to X:

JAGMENU Menu Screen

 On The HP Palmtop Paper ON DISK, Jan/Feb 92.

System-Compliant Applications


The term "System Compliant" is used throughout this publication. Any system-compliant program has a .EXM extension. In addition, a system-compliant program meets all of the following criteria:

1. It can be activated by hotkey (e.g. by pressing <Alt>-<P>, or <Ctrl>-<Filer>) when the built-in applications are running and there is sufficient memory.
2. Any of the built-in applications can be run from within it when there is sufficient memory.
3. All alarms and warnings will be displayed while it is running.
4. It's able to remove itself from memory and release that space when exited.
5. CHAR and CUT/PASTE functions are supported if applicable.

System-Executable Applications

There is a class of programs that also share the .EXM extension but only satisfy criteria #1 above. These are called "System Executable," because that is the only criterion the programs satisfy. Battery warnings are displayed, but alarms only appear upon returning to a built-in application.

Mark Scardina
CompuServe ID:71551,467

 On The HP Palmtop Paper ON DISK, Jan/Feb 92.

JAGMENU has three modules:

- JAGMENU.EXM — The System-Executable Loader [E];
- JAGMENU.BAT — The setup batch file [E];
- BAT2EXEC.EXE — The file compiler for JAGMENU.BAT.

BAT2EXEC.EXE is an optional PC Magazine utility that converts JAGMENU.BAT into a .COM file for faster execution.

Setup is simply a matter of editing JAGMENU.BAT in MEMO and then optionally using BAT2EXE to compile it.

You are not limited to one menu, additional ones can be called from the main one. This allows for a great deal of customization and an unlimited number of choices. Each menu takes only 6-7K of memory when run and removes itself when you exit the menu.

The existence of JAGMENU and other similar programs increases the usability of the HP 95LX enormously. A little effort is required to set this type of program up, but in the end the resulting ease of operation is impressive and indeed worthwhile.

Limitations

All of these menu systems go a long way toward making it easier to use standard DOS applications on the 95LX. However, they do have their limitations. In particular, when you're running a standard DOS program from the menu systems, not all of the built-in applications are available. Specifically, when you are in a MENU95 or JAGMENU application there is no way to pop-up FILER, MEMO, or APPT. While in JAGMENU or MENU95 you don't have access to any of the 95LX's built-in applications. You have to quit DOS program to use any one of the 95LX's ROM-based applications.

Neither menu systems will pop up as long as Lotus 1-2-3 is active. In some cases, if PHONE or APPT are running and contain large data files, the menu systems will fail.

SETTING UP DIET

(DIET available on *The HP Palmtop Paper ON DISK*, Fall 92.)

In last issue (Fall 91, page 17) I discussed a powerful file compression program, DIET.EXE that can as much as double the amount of your available file space. To gain full advantage of DIET.EXE it needs to be memory-resident, installed into the DOS startup AUTOEXEC.BAT file (see Fall 1991 issue, page 18).

Various readers reported problems with using System-Manager compliant (.EXM) programs in conjunction with DIET. (See page 18 in this issue for a discussion of System Compliancy.)

Based on my experimentation, I have come up with a number of rules for ordering DOS commands in the AUTOEXEC.BAT file (whether or not AUTOEXEC.BAT includes the DIET command). These rules increase the chances of System-Manager-compliant software working in conjunction with TSR's (memory resident programs such as DIET).

Order of Commands:

This is the general order the commands in your AUTOEXEC.BAT file must be in. All drive letters should be upper case.

- | | |
|------------------------------|---------------|
| 1. SET and PROMPT statements | 4. Other TSRs |
| 2. PATH Statement | 5. PAUSE |
| 3. DIET | 6. \$SYSMGR |

If you still have problems with DIET, try the following.

1. Do not DIET any .EXM files until DIET is resident and APNAME.LST is working.
2. If you are going to remove DIET and reboot you must decompress all .EXM files first.
3. Start with the following AUTOEXEC.BAT file:

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

Verify that your System Manager hotkeys work. You must use upper case in your drive/path statements. If the hot keys do not work, delete APNAME.LST and retype it. Try again.

4. Add the following as the third line (between PATH and CLS)

```
diet -z -p
```

Reboot (press <Ctrl>-<Alt>-) and verify hotkeys.

5. Add any remaining commands one by one (after DIET but before CLS). Check hotkeys after each one.
6. If you find a problem try changing the order but only between the PATH and CLS statements.
7. If you still have an offending entry try prefacing it with COMMAND /C.

```
command /c diet -z -p
```

8. Once DIET is resident and all your hotkeys are working with your desired startup files you can then DIET EXM files.
9. As a last resort, if your System-Manger hot keys don't work, remove all TSRs from your AUTOEXEC.BAT, including the command \$SYSMGR. Reboot and at the DOS command line enter the TSRs one at a time starting with DIET and ending with \$SYSMGR. All of your hotkeys should now work.

Mark Scardina
CompuServe ID: [71551.467]

If you have more than two or three DOS applications on the HP 95LX, you owe it to yourself to get a copy of one of these menu systems and try it out.

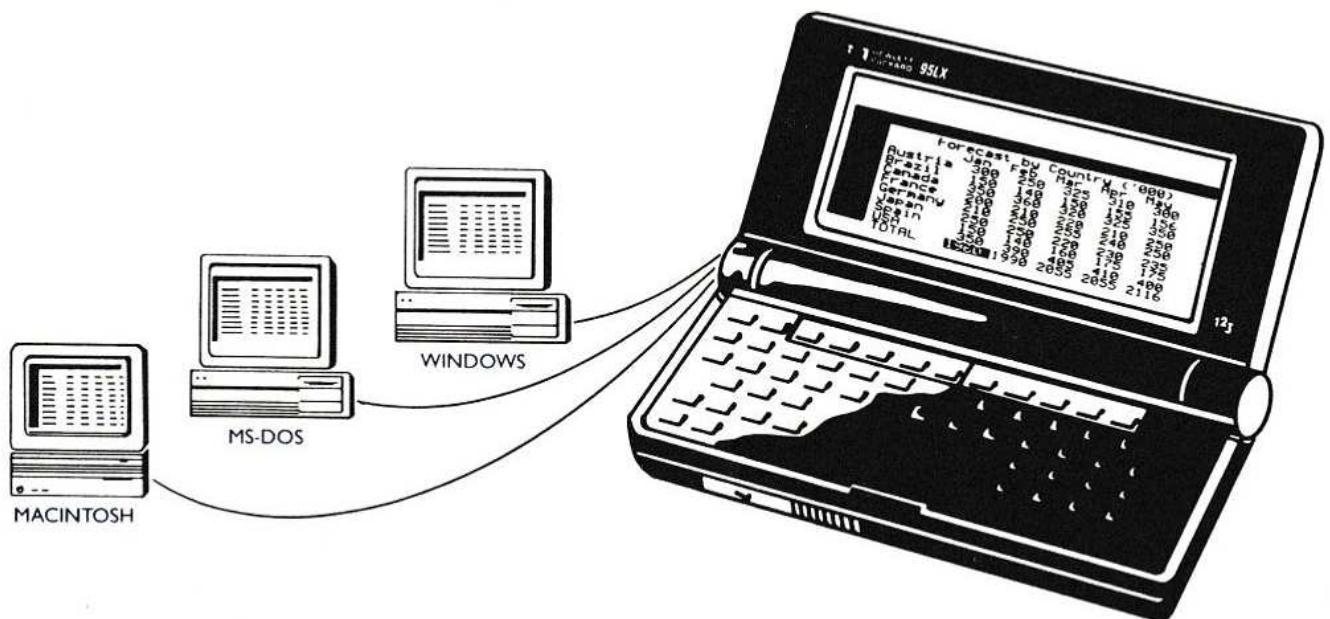
Availability

Both MENU95 [E] and JAGMENU [E] are freeware and can be found in

the HPSYS forum on Compuserve (as MENU95.ZIP and JAGMENU.ZIP). Both programs will also be included on this issue of *The HP Palmtop Paper On Disk*.

[E] On *The HP Palmtop Paper ON DISK*, Jan/Feb 92.

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Lotus

CATALOGING PHOTOS

I am using a simple 1-2-3 spreadsheet and entering information as I shoot. I will print it all out after the trip and then decide what slides to mount. I mark up the printout and go back to the office to print labels for the photos. I have left a column at the end of the line to add a code for things like which slides were mounted, ones with people in them, etc. The big advantage I see is the portability and the ability to document my work a little at a time.

Charles A. Ridgway
CompuServe ID: [75056,1317]

CLOSING CONTRACTS

I closed a contract today via use of a Lotus spreadsheet. In the past, I'd either have had to return to the office to "run the numbers" or, at best, accept the offer contingent upon the offer "testing out." I've found the HP 95LX to be simply indispensable in being able to construct the contracting economic models and being able to work through proposals on the spot. And, as the economic issues become more complicated, the 95LX becomes more valuable.

Rick Mons
Shoreview, MN, U.S.A.

ADD-IN OUTLINER WORKS

I just tried Outliner, the 1-2-3 add-in from Symantec. It works just fine with the 95LX.

Richard Kauthan
University of Utah, U.S.A.

Appt

APPT & PHONE

RE-LOAD FILES ON RAM CARD
PHONE and APPT keep track of the last open file; they will automatically reload that file. So if I use A:\MY.PBK, PHONE will automatically load it. But if I use the File Open command -- PHONE will again default to the C:_DAT directory.

Ted Dickens (Sysop)
CompuServe ID: [76701,272]

Battery

CHANGE BACKUP BATTERY

Pressing the SETUP key (<Shift>-Filer) gives a battery level indication. This indicator worked

well for me initially, but as time went on, it appeared to fail. Actually, it wasn't failing at all. What was happening is that my backup battery was low (6 months after purchase). Since replacing the backup battery, my 95LX has become much more tolerant of partially-drained main batteries.

Suggestion: replace the backup battery when the 95LX starts rejecting moderately good main batteries.

Manual Blum
University of California, Berkeley

BEST BATTERIES

"Consumers Reports" ran a comparison of AA batteries, both alkaline and rechargeables. They tried them out in a 'toy' and a 'stereo' (simulations designed to mimic the demands of each). For the 'stereo' test (probably closer to the demands of the 95LX) the Duracell MN1500B, the Panasonic AM3, the Eveready Energizer E91, the Sears DieHard 93095, the Kodak Supralife KAA, and the Radio Shack 23-552 did the best (median life around 15 hours). At the other end, the Rayovac Maximum 815 had a median life around 11 hours.

Larry Lefkowitz
West Palm Beach, FL, U.S.A.

RAM CARD BATTERY LOW

When the HP 95LX is off, the RAM Card battery keeps the RAM Card files alive. When the 95LX is on, it powers the card via its AA batteries or AC Adapter.

Unfortunately, the warning system on the 95LX is not an early one. Therefore, if the RAM Card battery is weak and the HP turns off through normal timeout or from pressing the OFF key, all of the files on your RAM Card may be lost. This is my advice:

1. If you see the RAM Card low battery warning, do not remove the card until you have backed up all of your files.
2. If you see the RAM Card low battery warning, keep the 95LX on by hitting a key every couple of minutes. Plug the 95LX in if you can. Do not remove the AA batteries with a bad RAM Card battery as this will eliminate your files. The 95LX backup battery does not support the RAM Card.

3. Change RAM Card batteries every 8 months. (They are inexpensive and probably available at your local Radio Shack.) Remind yourself by setting an appointment in the APPT application.

4. Download TIMOUT.ZIP [7], Ted Dicken's utility from the CompuServe HPSYS forum, section 14 and keep it on your HP 95LX C drive. If you ever get the RAM Card, low battery warning, immediately run the TIMOUT program and set the timeout to 0 seconds. This will keep the 95LX on until you can change the RAM Card battery.

Mark Scardina
CompuServe ID: [71551,467]
(with help from) Andy Fu
President, ACE technologies

Connectivity

CONNECTING 95LX TO A MAC

You can do this with the cable used for connecting the HP 48 calculator to the Mac (# HP 2223A). For software, the 95LX will do file transfers with any Mac comm program that speaks XMODEM or Kermit. A nicer way to operate is to use the 95LX Connectivity Pack under SoftPC - that's the way I operate, and it's pretty slick.

Dennis Brothers
CompuServe ID #: [76703,2067]

IBM 3270 EMULATION

Some customers have found the need emulate an IBM 3270 terminal in order to communicate with IBM mainframes. You can accomplish this with some third party communication programs. Procomm Plus communication software has been used successfully to do this.

To do this, copy the following PROCOMM files to a 512K or greater RAM card (file size in bytes):

PCEDIT.EXE (53,680)
PCPLUS.DIR (23,050)
PCPLUS.EXE (211,488)
PCPLUS.KEY (540K)
PCPLUS.LOG (0K)
PCPLUS.PRM (1,264)
PCPLUS.XLT (256)
PCSETUP.EXE (41,269)

Run the Procomm programs as specified in the Procomm manual. Specify a 3270 terminal emulation. You will need to use the <Alt>-

<Arrow keys> combination to scroll around the screen when using the Procomm software.

Hal Goldstein
Editor, The HP Palmtop Paper

DOS Tips

NEED SPACE IN CONFIG.SYS LINE

WARNING: In last issue's DOS tips we said that you could create a file named CONFIG.SYS and include the following line:

shell=c:\command.com /p.

The purpose of this suggestion was to provide a way for a quick exit to DOS, freeing up space normally occupied by the system manager and the built in applications. There are many other uses for the CONFIG.SYS and AUTOEXEC.BAT files. To avoid potential data loss, heed the following advice whenever creating the CONFIG.SYS file:

- First, back up your files to another computer or at least to a RAM card.

- Be sure you leave a blank space between the last "m" in command.com and the /p. Failure to leave the blank space will cause your 95LX to lock up and make it necessary to do a hard reboot (press <Ctrl>-<Shift>-<On>) and then re-initialize the C drive, losing all C drive data.

If you lock up the 95LX this way, the only way to avoid re-initializing the C drive is to borrow someone else's 95LX and create on a RAM Card (A drive) a correct copy of the CONFIG.SYS file. Put that RAM Card in your HP 95LX and reboot (press <Ctrl>-<Alt>-). Once you're 95LX is running again, enter MEMO and fix C: CONFIG.SYS so you don't lock up again.

(Your HP Dealer may have a self-booting Demonstration RAM Card. Insert that in your card slot and reboot as described above.)

- If you have a RAM card, put the CONFIG.SYS file on the RAM card, not on the C drive. If you made a mistake creating the CONFIG.SYS file, simply remove the RAM Card from the card slot and reboot (<Ctrl>-<Alt>-) to get the system back. Then insert the RAM card again and use MEMO to fix CONFIG.SYS on the RAM Card.

On The HP Palmtop Paper on Disk, Jan/Feb 92 issue.

Filer

POWER NOT SAVED

FILER does not consume extra power when the machine is off, so exiting FILER before turning off the system won't have any effect.

Ted Dickens (Sysop)
CompuServe ID: [76701,272]

Help!

RESETTING THE HP 95LX

If you lockup 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. <Esc> restores menu of some programs;
2. <Ctrl>-C — halts execution of some programs;
3. <Ctrl>-<Alt>- — warm reboot;
4. <Ctrl>-<Shift>-<On> — hard reboot, answer No when asked if you want to initialize RAM disk;
5. Turn the 95LX off and remove the AA batteries, not the 3-volt lithium backup battery. This will cause the system to reset, but you will 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 95LX off and remove both AA batteries and the 3 volt lithium backup battery. *[WARNING: this will erase the contents of your C drive.]*

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

Memo

WORDPERFECT 4.2 ON A 512K RAM CARD

WordPerfect 4.2 is good for the 95LX because it only requires 256K to run, its setup facility allows the use of an 80 X 16 display, it's command driven, and extremely powerful.

The program takes less than 300K without spell checker and 600K with spell/help file. If you have WP Executive you can use its LEX.WP file (120K) for spell checking. With this you could have

a word processor with spell on a 512K with room left for data.

I have my memory set to 322K now, with 48K being used by Stacker (a file compression utility) and WordPerfect works great, spell and all.

David Hayden
CompuServe ID: [70530,541]

Phone

USE PHONE AS DATA BASE

One of the applications missing from the HP-95LX is a generic card file for recording information - a free form data base for storing ideas.

I've been using the phone book for that function. I have a "misc.pbk" file that I open, which contains all sorts of interesting info.

Each card has a title line, and eight data lines. The "Name" line serves as the title for the card. I typically leave the "Number" line blank although there may be creative ways for using this field, perhaps as a category. I just fill in the "Address" lines with whatever data I want to keep.

I use this for all sorts of odd pieces of information. It has the advantage of a very compact file size, since the PHONE .PBK files are compressed and take little file space.

The index sorts my cards by "Name" automatically. To find information that I have stored in my informational data base, I use the <F6> Only command or <F7> Find command.

Ed Greenberg
CompuServe ID: 76703,1070

SWITCH BETWEEN PHONE LISTS WITH MACROS

I have my phone list divided into three directories - Home, Business and FAX. That way I can see someone's Fax number on the main screen in my Fax directory.

To switch between the directories I have programmed F1, F2, and F3 so that when I am in the Home directory I can hit <Char>-<F2> to switch to the Business directory and <Char>-<F3> will get me to the FAX directory. Pressing <Char>-<F1> returns to the list of Home numbers. The macros stored under the function keys look like:

- F1 Move to home phone list
{ESC}{MENU}foHOME.PBK{ENTER}
F2 Move to business phone book
{ESC}{MENU}foBUS.PBK{ENTER}
F3 Move to FAX phone book
{ESC}{MENU}foFAX.PBK{ENTER}

Note the ESCapes that start each macro are to make sure that you are in the phone list and not Card.

(See HP 95LX User's Guide, beginning on page 15-1 for info on how to create these macros.)

Misc

INSURE YOUR 95LX

An accidental drop down the stairs totally wiped out my 95LX's screen. I discovered that neither my insurance company nor HP would cover the cost of its repair. HP because the accident was my fault and my insurance company because I had not yet listed it on my home insurance. Protect yourself from these accidents by listing the 95LX on your homeowners insurance as soon as you get it and make sure it's covered for accidental damage both inside and outside the house.

Lloyd Wasser
CompuServe ID: [71131,2674]

Programming

RUNNING PERSONAL C COMPILER ON THE 95LX

Personal C works quite well on the 95LX. The following files are required to compile code: PCC.EXE PC2.EXE PCCA.EXE PCCL.EXE PCCS.S. A couple of smaller object libraries are needed for running external programs and screen IO.

You can Diet all the files (they take up about 180k un-Dieted and 100k Dieted), but then you must run Diet in the memory-resident mode for it to work. If you're not running Diet in memory-resident mode, you can still Diet PCC.EXE & PCCL.EXE. It's best to squeeze this on a RAM card, although it can fit on an un-carded system.

Personal C is shareware (\$35), (on CompuServe in IBMPROG).

Larry Lefkowitz
CompuServe ID: [76137,155]

Set Up

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 SYMGR, make the last three lines read as follows:

PATH=(your path in upper case)
PAUSE
\$SYSGR

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 sub-directory (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 attempting 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 FILER and COMM closed when they are not in use as it saves 30% of your battery life.

■ If your 95LX stops working and <Ctrl>-<Alt>- does not work, try <Shift>-<Ctrl>-<On> and answer "N" to the initialize question.

■ You can save your USER Keys and Owner information by making a backup of SETUP.ENV. If you ever need to re-initialize the 95LX you can restore your settings as follows: (A) with an attribute program such as DOS ATTRIB.EXE or CHANGE.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]

 On The HP Palmtop Paper on Disk, Jan/Feb 92 issue.

COMMO: Small Yet Powerful Shareware Alternative to COMM

By Mark Scardina

This month we will first take a look at a most important function of the HP 95LX: Communications. I find its pocket size allows me to take it anywhere. Therefore, the ability to communicate with my home, office, and information services is an essential feature.


HP obviously agreed and included a communications program with the built-in applications. COMM is a good basic program that allows access to many information services and includes the Xmodem and Kermit protocols for file transfers. There is a limitation to COMM, however, in that the scripting language is very primitive. This is significant to daily users of bulletin board services. They like to be able to do most of their reading and responding to mail off-line when the clock isn't ticking. COMM is not designed to handle this and is more suited for real-time access. A further limitation is that the scripting language has a time limit of 30 seconds between commands. Also, a script cannot be continued if it has stopped. This situation led to my search for an alternative communications program that could deliver these capabilities, without the limitations associated with COMM.

Since there are, as of the time of writing this article, no 95LX-specific communications programs, I had to turn to the existing world of DOS applications. Two aspects of the 95LX further limited this evaluation: it's physical size, and a defect in the 95LX's serial. Most of the commercial communications programs are too large in both system memory requirements and file size. Also, many programs use a technique called "interrupt driven transmission" to allow for high speed communications. Due to a defect in the implementation of the HP 95LX


serial port, this type of program will lockup the 95LX.


Of the commercial programs, ProComm and CrossTalk are able to run. However, these are large programs and require a 512K or larger RAM card to even be considered. There is, however, a shareware program that not only is small but has been modified to run successfully on the 95LX.

COMMO

COMMO  is an assembly language, full-featured communications program, written by Fred Brucker. The complete program contains five files, the main program, COMMO.COM; the macro file, COMMO.MAC; the dialing directory, COMMO.FON; the setup file, COMMO.SET; and the help file, COMMO.HLP. These files when compressed or DIETed take up less than 50K of file space! (See *Fall 1991, page 17 for more on the DIET file compression program.*) Several additional small files are included in the 95LX version that gives COMMO the ability to be started from the built-in applications.

COMMO has several features that make it well suited to the 95LX. All the support files are simple ASCII text files and can be easily customized not only to the 40 x 16 screen, but to the user's individual requirements. The program has a rich scripting/macro language that allows for total on-line automation and efficiency. Included in the program are Xmodem CRC and Xmodem - 1K file transfer protocols. The author has also adapted several of the program's features to work within the limited display of the 95LX. Though the terminal screen is still 80 x 25, the prompts are displayed from the upper left corner for easy viewing.

 On The HP Palmtop Paper ON DISK, Jan/Feb 92.

COMMO's use of assembly language allows it to be both small and extremely fast. It's COMM's macro language, however, that really allows users to save time and money while on-line. There is available on CompuServe a COMMO script named CISMESS.ZIP . It allows the downloading and uploading of CompuServe messages from forums and E-mail in a completely automatic fashion similar to ATO or TAPCIS. Additional scripts are available for other bulletin boards such as Wildcat and PC Board.

One feature of the macro language will bring applause from COMM users. If the macro finds an error or misses a prompt while running, you can "corrector skip" the step. The macro will then continue. I know of no other communications programs that allows real time debugging of their macros.

HP 95LX Version of COMMO

Since COMMO is shareware, it is available on many BBSs as well as on CompuServe. For 95LX users there has been a special version made available in the HPSYS Forum, Library 14. This version includes the support files already set up and formatted for the 95LX. It also can be used on your desktop. The program setup is very simple because COMMO simply reads the COMMO.SET file on startup. This file is a simple text file that can be edited by MEMO or COMMO's own editor. If you obtain the 95LX-specific version, you simply copy the five files to your 95LX, rename them without the "95," and edit the paths if necessary in COMMO.SET. You are then ready to go on-line. The included document file is extensive and worth printing out. I did some time learning COMMO, but after a few hours with the instructions, I found I was ready to even write my own scripts.

Since there is a specific HP 95LX version, setup is very easy. The 95LX does not support the full range of modem functions and the COMMO.SET file is pre-configured

GETTING A GRIP ON YOUR CREDIT

If you are like me, having more plastic than paper in your wallet, you need help keeping track of all those cards. I have just the program for you. It's called **MONEY MANAGER** and it is made by **AUTOBYTE PRODUCTS Inc.**

The program is specially made for the HP 95LX's 40 X 16 screen. All functions are menu driven, so there is no need to learn a complicated set of commands. The program itself only takes up 80K bytes of your RAM disk space. As for the data produced by the program, it never exceeds 15K bytes of disk space (data size depends on the number of entries for one month). So if you purchase a 128K SRAM card to store the program and its data, you will still have some memory left for your address and appointment books.

If you do not purchase the program on the SRAM card, it comes on diskettes in both 5.25" and 3.5" low density formats. The program must then be transferred to the 95LX, from a PC, using the connectivity pack or any other communication program. Most dealers will be happy to assist you in this task if you do not own a PC. Speaking of the PC's and compatible, a PC version is also on the disks. So you can use your HP to record all your transactions, and when you get to your home or office, transfer the data over to your PC and continue working on your finances. And guess what folks??? The PC version is a TSR. This means that once the program is loaded into the computer, it sits there and waits for you to call it. This means you can be running your favourite spreadsheet or text editor, press the **MONEY MANAGER** trigger (CONTROL

AND SHIFT) and the program will pop-up. When you're done with the financial stuff, select EXIT and return to whatever program you interrupted.

It sure would be nice to have that kind of functionality on the HP 95LX. Imagine you are entering a check and you want to calculate a tax, press the CALC application key, find the tax amount, press the FILER key to return to **MONEY MANAGER** and finish entering the transaction. Or, say you are working on a budget and someone asks you for a phone number, press the PHONE application key, find the number, get the guy off your back, and pop back into the **MONEY MANAGER** with the touch of one key. Well that's just what the **MONEY MANAGER** does. With the press of one key, you can access all of the HP 95LX's applications and return to **MONEY MANAGER** by simply pressing the FILER key. Now that's functionality. By now you might be asking yourself: "What can this program do for me???" The true answer is: "As little or as much of your bookkeeping as you want". You could use it to simply keep track of your bank accounts (up to 5) and credit cards (up to 9). Or you could go crazy with it and do amortizing, budgeting, automatic transactions, and some other voodoo that accountants do. But remember this, whether you use some or all of the functions, the program will always go out of its way to simplify your task.

The **MONEY MANAGER** will produce financial statements such as a balance sheet, p&l statement, general ledger and journals. But it will also produce detailed expense statements for up to five projects at a time. Travelling salespersons know how

tedious the task of writing an expense statement is, well **MONEY MANAGER** will do it for you, in seconds.

Now for credit cards. The **MONEY MANAGER** will keep track of up to nine individual cards, warning you when you reach the limit. It will also simplify the verification of the dreaded monthly statements with a point-and-click-to-remove window. By the way, those of you who are thinking "This must require a lot of typing" will be pleasantly surprised. On average, entering a transaction requires only 15 keystrokes, and if you use the automatic labelling function, you can get away with pressing only 5 (yes five) keystrokes.

Carrying your bookkeeping around with you has never been easier. The HP 95LX and the **MONEY MANAGER** are the perfect combination for people on the move. Here is what some users are saying:

"...best bookkeeping program."
John T. Portland OR

"compact, yet powerful..."
Debra C. Houston TX

"...sensational, because it is easy to learn and use..."
Albert M. Shelter Island NY

MONEY MANAGER retails for 59.95 US (69.95 CDN) and is available from your HP dealer or from AUTOBYTE at:
1-800-465-4925 US
1-514-634-7741 Canada



AUTOBYTE CORPORATION.
Trimex Building, Route 11
Mooers, NY 12958-9801

to account for this. In fact the only setup that I had to do was to specify the drive that my COMMO directory was on. The macro file, COMMO.MAC, has logon scripts for CompuServe and generic BBS's. The dialing directory, COMMO.FON, comes preset with a number of entries. The built-in text editor makes the modification of these files a snap.

The full power of COMMO cannot be fully utilized without its ability to 'pop-up' whenever you need it. The ability to use it without closing all of the built-in applications and shelling to DOS is a high priority on any 95LX user's list. Included with the 95LX version is a package of files that I wrote to achieve this end. When installed, pressing **CTRL-COMM** starts COMMO as long as Lotus 1-2-3 is not open.

Conclusions on COMMO

Using COMMO is a real joy because the author has made many intelligent choices on the implementation of its features. It is obvious that it is the result of many years of effort and refinement. After using it for several months, I still am amazed that so many features can be packed in so little code. One such feature that I have found especially attractive is the SCROLLBACK BUFFER. For those of us who forget to start a capture file until it's too late — this feature is a godsend. While COMMO is active, the terminal screen input is stored in memory. Up to 64K (user-defined) can be stored, irrespective of capture files. While on-line, or after hanging up, pressing **ALT-k** allows you to view, edit, and save parts of this buffer.

There are many communication packages on the market, and it is very hard to buy a single disk program anymore. Many computer people consider VDE and QEDIT to be the highest form of word processing programming art. They do in less than 50K what many are unable to do in 500K. To a communications list, one must surely add COMMO. At a shareware registration fee of \$35 dollars, COMMO

ranks as a must-have for any user who needs to communicate with his 95LX.

COMMO is available on CompuServe. Select GO HPSYS, LIB 14. The files are COMMO.ZIP and COMMO9.ZIP. If you are interested in a CompuServe message management program similar to TAPCIS for the 95LX, download CISMES.ZIP while you are at it. COMMO is also available on disk directly from the author at a cost of \$40 for a registered copy. Specify 3.5" or 5.25" disks and send a check or money order to: Fred Brucker, P.O. Box

9103, Santa Rosa, CA 95405, U.S.A. Fred will send the disks. Alternative: COMMO is on *The HP Palmtop Paper On Disk*. If you like it, then send Fred his \$35 registration fee.

[Mark uses his 95LX for PIM, E-mail, entertainment, and programming sophisticated audio/video systems. He is President of Audio Video Entertainment Media, an A/V communications firm. Those needing audio/video equipment assistance can call him at (415) 681-9672 in the U.S. his CompuServe ID# is [71551-467].]

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Through the Looking Glass

Ed reviews Video Display Editor (VDE), a popular freeware word processor modified to run on the 95LX.

By Ed Keefe

Video Display Editor, Version 1.62

The word processing program, Video Display Editor (VDE) [V], first came to my attention in December of 1988. It had been around for several years before that. I just hadn't paid any attention to what other users told me about the program.

When I first tried an early version of the program, I was not impressed. It seemed to be another send-up, or maybe a rip-off, of my favorite word processor, WordStar.

What caught my attention was that the program could be made to run on my HP Portable Plus and HP 110 laptop computers.

Not only did it work on these computers, it actually worked better than WordStar. It had all the Control-key commands of WordStar, and then some. It would let me edit two files at once and move text from one document to another. It also let me add new commands, attached to the function keys. This was something unheard of with WordStar.

The Best Feature of VDE

Better still, the price of VDE is just right: free for individual users.

Eric Meyer, the author of VDE, requires no fee for individuals to use his program, although a \$30 registration fee is encourage

Eric has been most gracious to users of HP portable computers. He went out of his way to customize VDE and optimize it for use on the HP Portable Plus. The enhanced VDE program ran faster on the Portable Plus than it did on my desktop computer.

It Just Gets Better

Over the past three years, Eric has continued to upgrade the VDE program. VDE is now able to edit up to eight documents at once instead of just two. It can import documents from other word processors such as Wordstar 5.5, WordPerfect 5.1, and XYWrite. It can also create documents that are usable by these word processing programs.

For those who never used WordStar, or didn't like it, Eric added a method of running the program completely from a menu system.

He has also included a feature that makes VDE usable by those who are visually impaired. (This feature requires a desktop computer with an EGA or VGA monitor.)

Most recently, Eric has upgraded VDE so that it will run on the HP 95LX. The version number of the program is 1.62b. It is available in the HPSYS forum on Compuserve. It was also included in the Fall 1991 issue of *The HP Palmtop Paper On Disk*.

With this one product, word processing on the HP 95LX takes on a whole new dimension.

Some Other Features of VDE

VDE has all of the standard features of most word processors. It will let you edit more than one document at a time. On the HP 95 LX it is possible to see parts of two documents at the same time and to flip from one to the other. There is even a way to compare two documents, a feature that is sometimes useful when you've made minor revisions to a letter or document, and want to see what the differences look like.

For those of us who have "grown up" using WordStar, VDE looks and feels like our favorite text editor. If you know WordStar, you should be able to use VDE immediately, without reading the documentation file.

If you can twist your fingers around **CTRL-kb** and **CTRL-kk**, you'll be able to create blocks of text and move, copy, and delete them or write them to disk files.

For those who don't want to learn WordStar commands, VDE offers a 1-2-3 style menu. You can start the menu mode by pressing **ESC** and **?**. From that point on, you can activate the menu by pressing **ESC**. You trigger any of the commands in the menu by pressing the first letter in the command word. There is no sliding highlighter.

If you prefer the menu type of operation, there is even a way to make that the default mode of operation. You can get this to happen by running a separate installation program called VINST.COM.

Installing VDE on the 95LX

You need to run VINST before VDE will work on the HP 95LX.

I'd recommend running VINST on a desktop computer. Make any modifications you wish. Then copy the modified version of VDE to the 95LX. In VINST, pick Install by pressing **I**, then press **E** to Edit the installation and choose the 95LX option. Then press **ESC** to get back to the main menu in VINST. From there you can install other Options, Printer drivers, Macro and Function key assignments.

The list of options is mind-boggling. And here is where some people get turned off. There just isn't enough time in the week to figure out how to get VDE to work in the way you want it to work.

VDE is not a "plug-n-go" program. It is more like a programmable text editor that allows you to make it into your word processor. That takes time, experimentation, and patience. It also requires reading the documentation files: no small task for a busy person. If you want more word processing power on the HP 95LX, count on spending several hours playing with VDE to make it "just right" for you. I think your time will be well spent.

 On The HP Palmtop Paper ON DISK, Fall 91.

Automating VDE on the 95LX

On the downside, VDE is not yet System Manager compliant. If you want to run VDE on the 95LX, you must close all of the built-in applications and start VDE with FILER. That can get to be a nuisance. (See the article in this issue by Ed Keefe and Mark Scardina entitled "Run DOS Commands From One APNAME.LST Hotkey," page 19. It tells how to get VDE or any other DOS program to pop-up on top of most built-in applications.)

Cutting and Pasting in VDE

Since VDE is not yet System Manager compliant, it doesn't let you cut and paste from one application into another. However, VDE has its own built-in cut and paste commands ((ALT)-C and (ALT)-P) which let you copy and paste blocks of text from one document to another. See the documentation file for more details about making this feature work. The (ALT)-C command behaves like the Mark and Copy operation in MEMO. It does not delete the original text.

If you ever need help in VDE, press (CTRL)-(ENTER) to get one of several, abbreviated help screens. Press (▶) to view the right-most part of the help screen. You don't need to use the (ALT)-Arrow Key combination to scroll horizontally when using VDE: a single key moves you back and forth across the full screen. The up and down arrow keys will let you page through the help screens.

Look and Feel of WordPerfect

For those who are more familiar with WordPerfect commands, Eric Meyer has provided a set of macros that will redefine the function keys to make them perform some of the same operations as they do in WordPerfect. The macro definitions are contained in a file called WP.VDF (WordPerfect Video Display Function keys).

I have added to Eric's WP.VDF file to make VDE behave even more like WordPerfect. Since I do not use WordPerfect every day, I also creat-

ed a small help file that pops up in VDE whenever I press the Help key ((F3)). I've posted this on the HPSYS forum of Compuserve. The file is called VDE-LX.ZIP [7]. It will also be available on this issue of *The HP Palmtop Paper on Disk*.

When you unzip the file, you will find instructions on how to install the function key file in your copy of VDE. If you like WordPerfect, I'd recommend that you take a look at my small offering. Let me know what you think.

Tips on Compression

The VDE.COM file weighs in at almost 60K bytes. If you want to compress the file before copying it to the HP 95LX, I'd recommend using the PKLite [7] program rather than DIET. I've tried both compression programs and found that VDE pops up more quickly when it has been compressed with PKLite. The compressed program still occupies


almost 40K bytes on the 95LX's C drive.

One final note. Be sure to try VDE on a desktop computer with an EGA (or better) monitor. Issue the DOS command "MODE 40" to put the monitor in 40 column mode and then run VDE. If you have the VDEOPT.DAT file in the current directory, you can press (ALT)-e and a and you'll see a sight for your sore and tired eyes. Neat!

Until next time, Happy Porting.

[Ed Keefe is an author, programmer, computer science instructor, and long-time contributor to support publications for Hewlett-Packard computers. He is the president of the Fast Aid Company, 314 S.W. Logan, Ankeney, IA 50021. Ed's CompuServe ID# is [73277-1064].]

On The HP Palmtop Paper ON DISK, Jan/Feb 92.



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The Savvy User

Tom discusses CompuServe, fixing the problem with his 95LX's serial port, his new 1MB memory card, and making Lotus spreadsheets more space-efficient.

By Thomas Page

Last Issue and CompuServe

I have just received my first issue of *The Palmtop Paper* and found it loaded with useful information. Probably the most useful tip was the introduction to CompuServe and the HP Forum. There's more good information, tips, and programs for your 95LX there than anywhere else in the world.

In the last issue Ed Keefe asked if ANSI.SYS would work with the 95LX. Yes Ed, it does. I discovered this by reading messages in the HP Forum. I also discovered a batch file, AA.BAT [1], in the download section that quickly converts the 95LX between SYSMGR and straight DOS. I took these two concepts and improved on them. The results are contained in a file AAAX.COM [2] that I uploaded to the HP Forum. It includes an enhanced version of AA.BAT that installs ANSI.SYS and FK.BAT [3] that uses ANSI.SYS to set function keys to perform chores more useful than the defaults.

Another file I would suggest you look for is KEYS.95 [4]. If you are at all interested in adding new applications and customizing your 95LX APNAME.LST, this file contains essential information, including the codes for each 95LX key.

Last issue I reported some success using the WorldPort MNP modem with the 95LX. Unfortunately I did not get to fully test the setup before the serial port of my 95LX went bad (so I thought) and to meet the publisher's deadline I had to make an incomplete report, or not have a column at all. Just like you folks I am learning this machine and what I write about here will

usually be something I just discovered. To make a long story short, I got my serial port working and did more extensive tests with the WorldPort MNP modem and I had no better luck using it than anyone else. When the modem is on battery power it can be activated and it will operate for about 3 to 5 minutes and then turn off. I don't understand why this happens but it explains why I thought I was making it work. My first tests were of very short duration. I did not keep the modem on long enough for it to turn off. Now I guess the question is who is going to build a small battery-powered reliable MNP modem that is compatible with the 95LX?

Serial Port Repair

I must tell you about my experience getting the serial port on my 95LX working. The first indication that the serial port was not working was the inability to use the Connectivity Pack program to transfer files between my roommate's computer and my 95LX. When I attempted to connect the 95LX to the PC I would get a message that the host computer was not responding. It took me a while to figure out what was happening. At first I just thought I had got my roommate's computer misconfigured some way or another, but when I could not get my modem to respond I began to think there might be a serial port problem. I then tried a direct serial port connection to my HP Portable Plus (one of HP's original portable computers). This was a setup that I had a great deal of knowledge about, and if anything should not work I felt confident I would be able to identify the problem. I couldn't send characters from the Portable Plus to the 95LX, but could send characters from the 95LX to the Plus.

This pretty well convinced me that there was a problem with the serial port. I thought there was a break somewhere in the 95LX's receive line. I later discovered that all I needed to do was reset the 95LX to restore the serial port. To do this, press **CTRL**-**ALT**-**ON** and answer **No**. You will then have to reset your time and date.

One MB Memory Card

I have just installed a 1MB memory card in my 95LX. I think it will add a new dimension to 95LX computing. I just doubled my memory and increased disk storage 4 times. The RAM card is read as the A drive on the 95LX. To allow me to increase working memory I moved most of my software and data from the C drive to the A drive. I reduced the C drive to the smallest size possible.

My 1MB card is from ACE technologies, Inc. The card comes with several HP 95LX games pre-installed in a subdirectory named \GAMES. It also comes with an additional 3.5" disk containing even more 95LX software.

You may find the first time installation of this, or any other RAM card, a little difficult. The first time I put my 1MB card in my 95LX it took significant pressure to get it to seat flush with the side of the computer and when I tried to remove it I had to push the release switch pretty hard. Several installations and removals have loosened it up to where it feels just about right.

Squeezing Worksheets Into a Small Space

Years ago when I bought my first computer, I bought an HP Portable because I could take it with me, and it would run 1-2-3. Nothing else made much difference to me. Lotus is one of my most important programs and I have considerable experience using it on a little computer. Although my HP Portable's screen (80-columns by 16-lines) is twice as large as the 95LX's, it's significantly smaller than standard 80-column by 25-line screens. And even without a RAM card, the 95LX has over twice the memory of my old HP Portable.

[1] On The HP Palmtop Paper ON DISK, Jan/Feb 92.

Because of all this, I have some experience squeezing worksheets into a small space. I'm willing to share some techniques with you, but some of them are pretty obvious.

Occasionally we fail to do the obvious, like *make columns no wider than necessary*, or *design the spreadsheet for the 95 LX's screen, not a piece of paper*. Most likely spreadsheets used on the 95LX will primarily be used to do quick studies for use on the spot — not to prepare presentations. Given this assumption, *you don't need a column of line numbers or a line of column numbers*. Simply use the Lotus spreadsheet line and column designations for navigation. If you want to build a combination spreadsheet that can be used for formal reports as well as quick studies, don't try to display this data when using the spreadsheet on the 95LX.

Another useful trick is to *keep descriptions as short as possible (i.e. abbreviate)*. When abbreviating, periods add no useful information, but take up space so — don't use them. *If you split your line descriptions across two or more columns, you can have a long description for printed reports and a shorter description (the first characters) for use on the screen.*

A lot of people like to use an underscore before a total. In 1-2-3 this uses up a line. I personally find that underscores add little information to a spreadsheet and I generally *avoid underscoring*. The last number in a column is the total. This makes it impossible to use the old trick of extending ranges for sums through, and underscoring to make inserting lines at the end of a range easy. However, I consider saving a line on a little screen a reasonable trade off.

Another thing I have seen is underscores used to tie related columns together. What follows in the next column is an example spreadsheet of the way I tied related columns together. It looks better than an underscore and it saves a line. The \$000 at the column top indicates the units used in the column. Displaying this line is optional.

	A	B	C	D
1	-----First Quarter Results-----			
2	Total January Februray March			
3	\$000	\$000	\$000	\$000
4				

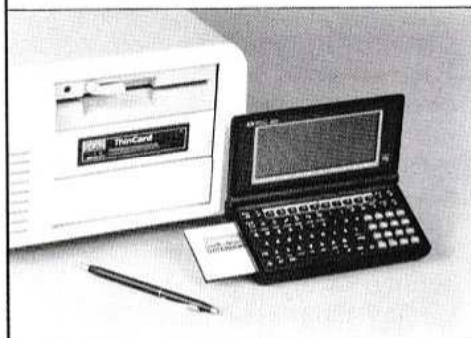
Putting the dollar sign at the top of the column allows using a narrower column since it is not necessary to reserve a column for the dollar sign. You should be aware of the accuracy really needed for the problem. In the example above the results are shown in thousands of dollars. I can see only very few palmtop 1-2-3 application requiring penny accuracy and really doubt that many even require dollar accuracy. I have a friend who works in forecasting. He will readily admit that carrying the numbers he works with beyond millions is imagination, but he also admits to not having enough testosterone to round off at millions. Instead he carries his calculations out

to 100 thousands and displays the results in millions carrying one digit to the right of the decimal point. If he were to use a 95LX he would quickly drop the tenths-of-million.

Setting up a spreadsheet on the 95LX may be a good familiarization exercise, but there is nothing wrong with developing spreadsheets for the 95LX on a big computer and then transferring them to the Palmtop. Just keep in mind the size of the display the spreadsheet will be using. In fact, you may want to mark coordinates on your big computer's display with an erasable marker or piece of tape to remind you of the size of the 95LX's screen.

[Tom works for a natural gas pipeline company in Houston, Texas, and was one of the first to use PC's in the natural gas industry. He has been a regular contributor to support publications of Hewlett-Packard computers for many years. Tom's CompuServe ID# is [76011,3655].]

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Programmer's Corner

Ed reviews Forth programming on the HP 95LX using Essex Marketing Service's UTIL package. He also finds a source for Turbo Pascal 3.02

By Ed Keefe

Forth Programming on the HP 95LX

Most programmers have heard of Forth. However, relatively few programmers have written software using Forth. Fewer still claim to have mastered Forth. The few who have readily admit that they are Forth fanatics.

My Forth-programming acquaintances have all the characteristics of being "true believers." To hear them speak of their devotion to Forth, you would get the impression they had undergone some sort of "peak experience." The evangelical fervor with which they talk about Forth is unlike anything I've heard from C, Pascal, or Assembler programmers. They're the kind of people who have their T-shirts emblazoned with the motto: "May the Forth Be With You!"

I tried learning Forth ten years ago when I was working with the HP 41C. I never did get to the point of thinking in Forth, so I do not claim to be an enlightened Forth programmer. I can, however, force myself into Forth when needed.

UTIL

Recently, Essex Marketing Services sent me a copy of UTIL for evaluation. UTIL is a Forth programming system for the HP 95LX and/or the Atari Portfolio computers.

The UTIL User's Guide explains how to install the three necessary files on either the HP 95LX or the Portfolio. The User's Guide is very clear on which parts of the manual pertain to one, the other, or both of these palmtop computers.

UTIL 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 95LX, MEMO serves as the editor for writing Forth programs. In this way UTIL is "less filling," but the question remains: "does it taste great?"

A Matter of Taste

Like olives, beer, or cottage cheese, Forth is an acquired taste. If you enjoy programming the HP 41C or the HP 48SX, you already have a taste of Forth. I'd recommend trying the real thing.

On the other hand, if you're a programmer who likes to work in C, Pascal, or BASIC, you may not get beyond the first few bytes before setting Forth aside and returning to the sweet taste of success with C or Pascal.

Post-Fix Logic

To begin with, Forth uses something called post-fix logic. To add two numbers in Forth, you key in 12 73 +. The + operator comes after the two numbers. That's just like using the RPN (Reverse Polish Notation) option in the 95LX's HP CALC program, right?

Then, to frustrate your fingers, Forth uses spaces all over the place. Thus, 12 73+ will never do what you expect: 12 73 + will! The space before the "+" sign is critical. The use of spaces is one of the rules of the Forth language, and it takes some getting used to.

Once you get beyond the hurdle of spaces and post-fix notation, you run into backwards code. For example, Forth uses "IF...ELSE...THEN" when everyone knows that the correct wording is "IF...THEN...ELSE" (or is it the other way around?)

UTIL's Unique Features

UTIL on the HP 95LX goes a long way to help you acquire a taste for Forth. For one thing, UTIL comes with several sample programs.

MUSIC — lets you turn the keyboard of the 95LX into a musical keyboard. Or, if you're conversant with musical notation, you can compose melodies in MEMO and play them with UTIL.

GRAPHICS — a demo program of what can be done with the graphics screen of the 95LX. Most, if not all of the graphics commands are implemented as Forth words (i.e. functions). There are commands to fill rectangles, draw circles, and finger-paint. The source code for this program, and all sample programs, is included on the distribution disk.

GAMES — Merlin and Mastermind are puzzles that have been on computers for almost a decade. Here they are again, this time written in Forth. Merlin is a tough puzzle to figure out. Mastermind works, but it lacks a good user interface. Apparently that is left as an exercise for the interested programmer. Both games can be run from within the UTIL program, or they can be compiled and run as stand-alone .COM files.

System-Manager Compliant

UTIL can pop up over most of the HP 95LX's built-in applications. Likewise, MEMO can pop up on top of UTIL. This feature will let you load, edit, and save a program file that you're working on, and then return to UTIL to test the program.

I have not been able to get UTIL to pop-up on top of Lotus 1-2-3. I suspect that there is not enough memory on my machine for both programs to exist simultaneously.

Creating System-Manager-Compliant Programs

UTIL already has most of the code to let you create programs that are System-Manager-compliant. So even if you're not a registered Systems Developer, you can still write programs that do task-switching.

There are more than 25 Forth

words (functions) implemented in UTIL that will let you talk to the System Manager and do such things as disabling light sleep mode for speed-critical applications. There are other words that manipulate the cursor and let you pull up menus and save and load a screen.

Creating System-Manager-Executable Programs

Beyond using Forth words to write System-Manager-compliant programs, there is a simple way to make almost any .EXE or .COM file a "System-Executable" program. The procedure involves modifying the UTIL.EXM program rather than the .COM or .EXE file. A system-executable program will pop up over all built-in applications except Lotus 1-2-3. To re-enter a built-in application one must exit the system-executable program. (For more on creating System-Executable applications, see page 19, this issue.)

UTIL.EXM is 208 byte program that invokes, loads and runs the REAL Forth program, called SMU.COM. The Users' Guide shows how to modify UTIL.EXM so that it can load and run any small, .EXE or .COM file.

I followed the procedure in the Users' Guide and created a 208 byte file called HPTRIS.EXM which let me load and run the program called HPTRIS.EXE. I added the following line to my APNAME.LST file in my _DAT subdirectory:

```
c:\hptris.exm,2300,tetris
```

I then reset the 95LX and pressed **[ALT]-h**. Up popped my favorite battery waster: Tetris.

I performed a similar modification for a 39K byte, compressed version of VDE, my favorite text editor. Now VDE pops up on top of UTIL and makes a much better editor for writing Forth programs.

The procedure for making system-executable software is not too difficult to follow, but novices should not rush out and buy UTIL just to use this one feature. Instead, see discussion on menuing systems, page 19, developed from the UTIL Forth package.

Peculiarities of UTIL

UTIL, like most small Forth compilers, does not support floating point arithmetic. Most Forth programmers seem to take this in stride. If something like floating point math is essential, you could probably use in-line assembler code to create a floating point math package. By the time this report appears in print, Essex Marketing expects to have a floating point package available for UTIL. In addition, the implementation of a screen-size edit buffer and clipboard support should be complete.

Another peculiarity of UTIL is that you need to be very specific when opening or saving files. The full path and file name is necessary when writing a file on the RAM disk of the 95LX. If you don't include the path, your file will probably wind up in the root directory. When trying to read a file, a missing path usually means you'll get an error message.

UTIL does not have any way to use the clipboard. Essex Marketing says that this feature is high on their list of enhancements for a future release of UTIL. I wish it was already implemented.

UTIL On a Conventional PC

One of the drawbacks for program development on the HP 95LX is the small keyboard. Even if you get used to typing memos and appointments, it's another matter altogether trying to type Forth code on the 95LX. I suppose anything is possible, but not all things are desirable. And one of the less desirable things in life would be entering Forth (or any language) source code on the 95LX.

I tried running UTIL.EXM on my desktop PC under the APP95 program (from the HP Connectivity Pack). I put the following in the APNAME.LST file on the desktop:

```
c:\cpack\util.exm,2f00,util
```

I then started up the APP95 program. Pressing the hot key got me nowhere. The UTIL program would not run.

However, I did find a way to get the SMU.COM program to work on the PC. Just use APP95's FILER to highlight the SMU.COM file and press **[F4]**. You'll see the UTIL screen in glorious light grey on blue.

This desktop environment will let you develop programs and test them out much more quickly than could be done on the 95LX alone. The people at Essex Marketing Services assured me that UTIL.EXM will work with the TKERNEL program from the Developer's Pack.

Getting Your Own Copy of UTIL

UTIL retails for \$70 and is available from Essex Marketing Services, Inc. 272 Old Farms Road Simsbury, CT 06070-1009, U.S.A.; Phone: (203) 651-8284; Fax: (203) 76-9481.

To Learn More About Forth

If you are not familiar with Forth and would like to find out more about it, I'd recommend the following books.

- *Starting Forth*, Brodie, L., Englewood Cliffs, NJ: Prentice Hall, 1981.
- *Thinking Forth*, Brodie, L., Englewood Cliffs, NJ: Prentice Hall, 1984.
- *Mastering Forth* (2nd ed), Tracy, M. and Anderson, A., New York, NY: Brady Books, 1986.
- *Dr. Dobbs Toolbook of Forth*, Ouverson, Marlin (ed), Redwood City, CA: M&T Press, Vol.1, 1986, Vol.2, 1987.
- *Object Oriented Forth*, Pountain, R., New York, NY: Academic Press, 1987.

You may be able to find these books at your school or public library. The Brodie books are out of print.

You can't learn Forth just by reading about it. You have to play with it on a PC to see what will happen when you try to define your own words and compile them. To do this, I would recommend getting one or more public domain or shareware versions of Forth and trying them out on your desktop computer.

There is a Forth forum on CompuServe (GO Forth) which

contains PYG.ARC [E] and UDFORT.ZIP [E], a couple of small Forth compilers, as well as the biggest rendition of Forth to date. (See all 5 files of FPC35.ZIP. There's almost one megabyte of compressed code and documents in FPC [Forth-PC].)

In short, if you're familiar with Forth, or you want to try something new and different, I'd recommend UTIL Forth.


For those of you who have already purchased a license for UTIL, I'd like to hear your experiences and reactions to this fine product.

Pascal 3.02 on the HP 95LX

In the premiere issue of *The HP Palmtop Paper*, I showed how to get Version 3.02 of Turbo Pascal to run on the HP 95LX (See Vol.1, No.0, Pg.31). Since then, I have had a number of requests for copies of the Turbo Pascal compiler and editor. The good news is that Borland, the creator of Turbo Pascal, has licensed at least one person to market and provide support for versions 3.01 and 3.02 of this out-of-print product. Those interested should contact:

Joe Wright, 711 Chatsworth Pl., San Jose, CA 95128, U.S.A.; Phone: (408) 297-5594. Joe will provide you with a copy of Turbo Pascal 3.02 for \$90.00 + 3.00 S/H.

[Ed Keefe is an author, programmer, computer science instructor, and long-time contributor to support publications for Hewlett-Packard computers. He is the president of the Fast Aid Company, 314 S.W. Logan, Ankeney, IA 50021. Ed's CompuServe ID# is [73277-1064].]

 On The HP Palmtop Paper ON DISK, Jan/Feb 92.

COLUMN: How Do You Do That?

How Do You Use DATACOMM

Bil. Alvernaz inaugurates his new "How Do You Do That" column by explaining how to set up and use the built-in Datacomm program. He demonstrates HP 95LX communications capabilities showing how to access CompuServe and MCI Mail.

By Bil. Alvernaz

It doesn't take much time at all to learn the basics in using the HP 95LX. It's a pleasant surprise to discover just how intuitive the 95LX is to use. Most people start using 1-2-3, the calculator, the phone book, the appointment scheduler, and the memo editor right away.

It's a different story, however, with the more advanced features of the HP 95LX. It isn't that they are complicated or too hard to master. It's just that you need to take the time to look up things in the documentation. Since most of us are busy, we don't have an abundance of extra time on our hands. After all, we bought the 95LX to help us save time.

Which brings us to the whole purpose of this column. Over the course of the coming issues we're going to cover those HP 95LX topics most people haven't yet learned or mastered (for whatever reason).

Now you'll have a reference point where you can learn the "ins and outs" of doing more with your HP 95LX.

It needs to be said that HP's documentation for the 95LX isn't bad at all - it's just that there is so much of it (weighing in at two and half pounds!) to wade through; and, many times, we don't know the exact term or name of whatever it is we're trying to look for. And, let's face it, most of us will avoid using the manual at all costs anyway.

The name of this column says it all - we're going to answer your questions about how to do things on the HP 95LX, and we'll carefully explain step-by-step procedures to get you going. While we have a basic idea of topics to cover for this column, we're looking for your input. You can contact us directly at *The HP Palmtop Paper* or get in touch with me (more details at the end of this article).

Communications with the HP 95LX

The topic for this issue's column is communications using Datacomm, which is one of the built-in applications on the HP 95LX. Before we get started there are a few points we need to cover.

A lot of people confuse Datacomm with the Connectivity Pack. The Connectivity Pack is designed specifically for exchanging data between the HP 95LX and your desktop PC. Datacomm is designed for use with a modem to access electronic mail or to talk to remote computers through the phone line. (If you do not have The Connectivity Pack, or if you have a non-IBM compatible computer, the Datacomm program can also be used to exchange files. Instead of using the phone lines to connect the computers, serial cabling can be used.)

You can start using Datacomm the day you buy your HP 95LX, provided you have a modem and the right cable. We're going to cover all of that in step-by-step detail. The Connectivity Pack does not come with the 95LX. It's something you must buy additionally. We'll cover all of the details in future columns.

If you haven't already bought an AC Adapter for your HP 95LX, it would be a good idea to get one before using either Datacomm, The Connectivity Pack, or the Filer. Otherwise you're going to be putting a considerable drain on the 95LX batteries. While it's true that you

can use your 95LX, as well as some modems, without an AC adapter, the reality is that your batteries will quickly wear down (both on the 95LX and the modem).

Unless your modem was designed explicitly with the HP 95LX in mind, the modem may not work properly without its AC adapter. Future issues of *The HP Palmtop Paper* will make recommendations about specific modems. (See letter, page 2, Fall, 1991 issue.)

Using COMM

The communications program built into the HP 95LX is called Datacomm. Whenever you press **COMM** on your 95LX, 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 95LX is an ideal starting point because all 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.

Here's what you need for communications on the HP 95LX:

- a Hayes-compatible modem (1200, 2400, or 9600 baud);
- AC Adapter for the modem (see discussion above);
- AC Adapter for the HP 95LX, part number HP 822241A (see discussion above);
- Serial cable for the HP 95LX (comes with HP Connectivity Kit, HP F1001A, or independently as HP 82222A);
- Null modem gender changer. I Recommend Serial Cable adapter kit, HP 82224A.

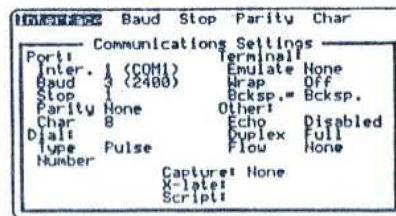
It's best to get the serial cable (part number HP 82224A) from Hewlett-Packard because the 95LX requires a 4-pin connector on one end of the cable. In fact, Hewlett-Packard also sells a Serial Cable Adapter Kit (part number HP 82222A) which "adapts" the HP serial cable for a printer or a modem with two separate 9-pin to 25-pin adapters.

For the HP 95LX to work with the modem, the serial cable and adapter(s) must be correct. The adapter(s) that connect the 9-pin female end of the HP serial cable to the modem must accomplish the following:

1. Switch pins 2 and 3. Accomplish this by commercially available "null modem adapters;"
2. Change genders as needed;
3. Change pin size (25-pin or 9-pin) as needed.

Usually this can be accomplished with one adapter from HP or Radio Shack or an electronics store. In most cases a 9-pin male to 25-pin male null modem adapter will do the trick. Cabling is the first thing to check if you are unsuccessful with your 95LX and modem.

Once you have your HP 95LX connected to the modem, be sure the modem is turned on. Next, press **COMM** on your 95LX. Press **MENU** to activate the Datacomm menu — **Settings** will be highlighted. Then press **ENTER** to select that item. That will take you to the Communications Settings screen shown in Figure #1. The **Use** option will be highlighted. Press **ENTER** again to select it.



Comm Settings Screen

For the purposes of our example here, we're going to select a setting for accessing CompuServe. To accomplish that all we need to do is press **ENTER** because CompuServe (COMPUSRV.DCF) is already highlighted as the file to be selected for the communications settings. Once we have done that, all that needs to be done is to enter the correct access phone number for this particular area.

If you don't know the local access number for CompuServe in the U.S. call 800-635-6225 to find a number in your area. (Users not in the U.S. should see page 11 in the

Fall, 1991 issue for phone numbers).

To enter the CompuServe number you need to highlight **Config** and press **ENTER**. At the next menu highlight **Dial** and press **ENTER**. Now highlight **Number** and press **ENTER** again. Type in the CompuServe number. When you press **ENTER** you will be taken back to the menu screen where you selected **Dial**. If you need to change the baud rate, select **Port**, otherwise you just press **ESC** to move back to the Config menu screen. Press **ESC** once more. Your screen will now be blank except for the four menu choices at the top of the screen.

Highlight **Connect** and press **ENTER**. That will then dial the number for you and connect you to CompuServe. You will then need to enter the proper information and data to access your CompuServe account - just as you would with any other communications program. While on CompuServe you can capture text as it whizzes past, by pressing **CTRL-F5**. When you have signed off from CompuServe, you can press **CTRL-F7** to hang up the phone.

To upload or transmit data/files, you'll need to work from the **Transfer** menu screen. Datacomm can transmit data with the Kermit, XMODEM, or Text protocols.

Using XMODEM to Download Files from CompuServe

Here's what to do to download CompuServe files using Xmodem.

The 95LX's built-in configuration file for CompuServe communications sets the serial port to operate with 7 data bits and even parity. Since the XMODEM protocol uses 8 bits, no parity, you'll need to modify the configuration file to include those changes (the **Menu Settings Use** command again). Once you connect to CompuServe, the first prompt from CompuServe will likely consist of nonsensical characters, but enter your user ID anyway. CompuServe will then detect that you are using 8 bits, no parity and automatically switch to support that. XMODEM transfers should now work without any hitches.

Downloading Files From MCI MAIL

Signing on to MCI MAIL using the HP 95LX is similar to that of Compu Serve.

Once you press **COMM** on the HP 95LX you'll need to press **MENU**. Press **ENTER** to select the **Settings** options (See Figure #1). The **Use** option will now be highlighted, press **ENTER** again. Using **▶** move until you highlight **MCI.DCF** and then press **ENTER**. Now all you need to do is enter the number for MCI MAIL. You do that by highlight **Config** and pressing **ENTER**. Select **Dial** and then **Number** to enter the phone number. MCI MAIL's toll-free numbers are 800-234-6245 (for 1200 baud) and 800-456-6245 (for 2400 baud). These numbers are for access from anywhere within the U.S.A. at no cost except normal MCI charges. If you

want to check for local access numbers, call MCI at 800-444-6245. International MCI should call (202) 833-8484 in the U.S.

Once you have entered the MCI MAIL access number (be sure you have the baud rate set properly, too), pressing **ENTER** will take you back to the menu screen where you selected **Dial**. Press **ESC** twice to return to the main menu screen of Datacomm. Now highlight **Connect** to access MCI MAIL.

While Datacomm isn't the most sophisticated communications program on the market, it does the job. For me, it's made traveling much easier. I no longer lug my laptop or notebook computers through airports. Usually when I travel I only need to check my MCI Mail, which is a breeze on the HP 95LX. Given the fact that my 95LX, via MCI MAIL, can even send FAXes, complete with

my letterhead and signature printed on them (you can send FAXes on CompuServe, too), I can literally do office work out of a hotel room anywhere in the U.S.

[Bil. Alvernaz has been working with palmtop computers for over two years and has picked the HP 95LX as his preferred choice. He is currently working on The Complete Pocket Reference Guide for The HP 95LX. During the past decade he has written about computers for USA TODAY, PC Magazine, United Feature Syndicate, and several other publications. Through his company, Computer Resources, Bill specializes in desktop publishing, as well as writing, media relations, and helping people get the most out of working with computers, including the HP 95LX. You can reach him at (209) 394-8188, Fax: (209) 394-8918 or MCI MAIL #207-8825.

COLUMN: Getting Started

Built-in RAM: Part 2 — System RAM

What is System RAM, the RAM Disk, and the relationship between them? How do you adjust the ratio between them and what do you have to watch out for?

By Hal Goldstein

In the last issue we discussed "long term" memory — the RAM Disk. We emphasized the importance of saving our memo, address, appointment, equation, and Lotus files to the RAM Disk. In the discussion we also introduced the concepts of RAM Card, File, A Drive, C Drive, Byte, Kilobyte, and most importantly the meaning of "replacing current file."

In this column we will talk about "short term" memory, also known as System RAM.

What is System RAM?

Suppose we are in a meeting and we want to make some notes in the 95LX's MEMO program. We press **MEMO** and type several phrases.

The HP 95LX "remembers" those

phrases: the phrases remain, even if we do not take more notes for a while, and the HP 95LX turns itself off in five minutes.

Those phrases remain in short term memory, in System RAM.

The HP 95LX is actually always "on" as long as its batteries remain good. When we turn the HP 95LX "off" by pressing **ON** again, we are really just turning off the screen and other internal mechanisms that consume battery strength. The computer itself remains on.

Therefore, when the HP 95LX screen goes blank from five minutes of non-use or from pressing **ON**, all our work in short term memory (System RAM) remains alive. This is very convenient since we may have just added a new phone number and notes from the meeting. We then get

absorbed in the meeting. A half hour later, we press **ON** to turn the screen back on, and the phone number is not lost, and we can resume our notes.

The most important point to remember is that until we **Save** our work to the C Drive RAM Disk or an A Drive RAM card, the work is not permanent. The phone number can get lost, the notes from the meeting can disappear.

An Example

Suppose we are taking notes at our meeting in MEMO. In the course of the meeting, we add several appointments in APPT to our appointment book. We also add a phone number in PHONE. We also open Lotus to look up some numbers on a spreadsheet. Finally, we modify one of our HP Solve equations as a consequence of some of the discussion in the meeting.

Given the scenario described above we have "opened" a MEMO file, an APPT file, a PHONE file, a 1-2-3 file, and an HP CALC file. Even if the HP 95LX shuts itself off after five minutes, these files remain open in System RAM.

To prevent the possibility of

losing our work, we will want to "save" any modified file to our RAM Disk (C drive) or RAM Card (A drive).

Since the meeting notes is a new file, within MEMO we would issue the **Menu File Save meeting** command to save the file with the name MEETING.TXT (MEMO automatically adds .TXT unless we tell it otherwise).

The Lotus file we opened was only for reference. We made no changes to the Lotus spreadsheet. Therefore, there is no need to save the file again.

The APPT, PHONE, and HP CALC files are another matter. These files previously existed (were previously saved). We have now modified these files (i.e. by adding a new phone number to the open PHONE file, appointments to our APPT file, and a modification to the equation in our HP CALC file). Our new modifications to these files have only been made in short term System RAM. On our RAM disk resides APPT, PHONE, and HP CALC files as they were before we modified them.

When it is time to save our APPT, PHONE, and HP CALC files, we will use the **Menu File Save** command in the given application. In PHONE and APPT we are asked whether we wish to **Replace current file?** In HP CALC we are asked whether to **Overwrite equation file?** In either case the question is the same. Do we want to replace the file that is currently on the disk with a copy of our newly modified file. In most cases the answer will be yes.

Losing Work

Let's look at some of the ways that it is possible to lose work in System RAM if it has not been saved to the RAM Disk.

1. The primary way to lose work in System RAM is from loss of battery power. If the AA batteries go bad in the HP 95LX, we will lose work in System RAM. Fortunately, the HP 95LX was designed to flash **MAIN BATTERY LOW** on the screen to give significant time to save work. (In

some of the early versions of the HP 95LX, the battery goes out without sufficient warning to save the files from the temporary System RAM. In that case contact your local HP service center, listed on the last page of the Users Guide, and HP will fix the problem under warranty.)

2. If we forget to save our open files before changing batteries, we will lose that work.
3. Another way to lose all work in System RAM is if we are forced to or choose to "reboot." We can reboot by holding down the **CTRL** and **ALT** keys and pressing **DEL**, or more seriously by holding down **CTRL** and **ON** and pressing **ON**. If our 95LX locks up we may be forced to reboot as the only way to regain control of our HP 95LX.
4. We may wish to exit an application (PHONE, MEMO, 1-2-3) for a variety of reasons (i.e. to go to DOS, to free up System RAM to run a large Lotus spreadsheet, or to change the RAM Disk / System RAM ratio). *If we exit an application without saving the changes we made to a file, we will lose those changes.*

Changing the RAM Disk and System RAM Ratio

Let's say that when we enter SET UP (press **CTRL**-**FILER**), it shows RAM Disk at 254K and System RAM at 258K.

System	Date	Time	International
Printer	Char	Owner	Format
	System-wide	Settings	
Total Memory:	512		
RAM Disk:	254		
System RAM:	258		
Date:	01/13/92		
Time:	9:00 am		
Plug-in device:	Installed		
Battery Level:	E		F
Help			

95LX Setup Screen

What does that mean? Can we change those numbers? Why would we want to change those numbers?

The RAM Disk / System RAM numbers mean that we have 254K reserved for our C drive RAM disk and 258K left for System RAM. This ratio can be changed by entering

SET UP, pressing **System Memory**, and using **←** or **→** to adjust the ratio (listed at the bottom of the screen). Press **ENTER** to lock in the change before pressing **Quit**.

However, before the HP 95LX will let us change that ratio, it insists that we first close any of our open files. In other words we will need to go into each application in which we are working on a file and exit that application. Remember, save any files in which we made changes. If we exit a program without saving our work, we will lose any modifications to that file since the last time we saved it.

After closing all our applications, return to SET UP and change the RAM Disk / System RAM ratio. The HP 95LX will not let us make the RAM Disk size smaller than the size needed to hold the files we currently have stored on the C drive.

Why we might change the RAM Disk / System RAM ratio

As we become more sophisticated in our use of the HP 95LX, there are a number of reasons why we might want to change the RAM Disk / System RAM ratio. In doing so we must weigh the pros and cons. For example, we might want to optimize the size of our RAM Disk to be able to save more files. However, by doing so, we may only be allowing ourself the ability to keep one or two of the built-in applications open at any one time. (The built-in applications use the System RAM we just gave up to make a larger the RAM Disk.)

Why we might want to increase the RAM Disk, thus decreasing System RAM:

1. We want more C drive space for files such as Lotus spreadsheets and MEMO documents.
2. We want more C drive space to store DOS utilities and programs.

Why we might increase System RAM, thus decreasing RAM Disk:

1. Our Lotus 1-2-3 spreadsheet grows and we get an "Out of

Memory" message. That means there is not enough room for our spreadsheet in System RAM. We will have to decrease the size of our spreadsheet or increase System RAM.

2. The size of our application files have increased so more System RAM is required. For example, perhaps our phone book has grown, we have a significantly-sized 1-2-3 spreadsheet open and we are working on a MEMO document. When we try to open APPT, the HP 95LX advises us to close some of our built-in applications.

3. We install other software that runs under System Manager with the built-in applications. For example, we run TigerFox or Hearts and Bones as System-Manager-compliant programs (see page 8) or we install programs that require quite a bit of System RAM. In such cases we may need more System RAM.
4. We are running a DOS application that complains there is not enough memory to run (or simply refuses to run). Increasing System RAM may solve that problem.

If we are continually squeezed for RAM Disk space and System RAM, we might purchase a RAM Card. Then we can store most of our files on the A drive RAM Card and increase the size of our System RAM.

The Future of This Column

I need to find out if you found "Getting Started" helpful, and whether we should continue it. Please drop me a note if you wish me to continue discussing the basics. If the column is too elementary or not elementary enough, tell me. Also, if there are topics you wish me to discuss, please mention that.

LETTERS: Continued from page 5.

Thermal Printer for 95

I found a wonderful portable printer to go with the 95LX. It's the Seiko DPU-411, a battery-powered thermal printer. The printer does not have software hand-shaking ability, but has a 7K buffer. If you do not print more than 6.7K characters at a time, the buffer will not overflow, and the printing will be OK.

Göran Thörnblad
Bromma, Sweden

Wants to Start User's Group in Calgary

I would like to start an HP 95LX user's group in the Calgary, Alberta, CANADA area. If you have any interest, please contact me at any of these phone numbers: work: (403) 270-0492; home: (403) 274-7497; fax: (403) 275-4231.

Mike Bullis
Alberta, CANADA

[If there is enough interest, we can use this publication to organize HP 95LX users groups worldwide. - Hal]

An Apple IIc User

Although a user of an Apple IIc clone, my attention was drawn to the HP 95LX and I purchased one about three months ago. I realize that the 95LX is IBM compatible (aren't they all?) and since

my desktop is an Apple I didn't request your Subscribers Disk.

So far I have successfully converted and installed about a dozen AppleWorks spreadsheets as Lotus 1-2-3 spreadsheets. Some of the spreadsheets had fairly complicated formulas and I was impressed with the ease of transfer.

In using HP CALC, I found that I accumulate a large number of Solve catalogues, all filed under names that I hadn't knowingly given them. I think I have the new equations under control now, but I can't delete the ones I had accumulated originally. FILER does not list them in the C Drive. Is there a way to delete these unwanted Solve catalogs?

Harold Hoots
Decatur, Illinois, U.S.A.

[We are sending out the Subscribers Disk on PC-formatted disks (and perhaps Mac-formatted disks). If we have more than 10 requests on a specific format, we'll make the Subscribers Disk available on that format.

Your SOLVE catalogs can be found in your DAT subdirectory, the files with the .EQN extensions. From FILER go into DAT by moving to the line containing

DAT and pressing return. Then press <MENU>, File-Sort, Extension, and scroll down to the .EQN files. Place the cursor on a .EQN file and press return to view the file content. Delete unwanted files with the FILER Delete function key - Rich.]

Advertisers Like The HP Palmtop Paper

I was extremely impressed by The HP Palmtop Paper. As a software designer and retailer for the 95LX, I have run across many little problems with HP's Palmtop. The "Quick Tips" section is very informative and our programmers are constantly referring to your magazine.

Thaddeus Computing's ability to situate itself in a market that is sure to grow shows terrific insight. We have been able to solve some of our programming problems via other individuals associated with your magazine. Because of The HP Palmtop Paper, we have built business relationships that will make our future work more productive.

Thanks again and I look forward to

future issues of The HP Palmtop Paper.

Matthew E. Schiff
Financial Data Planning
Miami, FL, U.S.A.

Many thanks for your excellent first issue. At last a journal which has in-depth articles, rather than assorted text interspersed amongst swatches of repetitive advertisements.

Our ad (Pocket Sales Force) in the first issue has already paid for itself - what more can one ask for?

Richard Hill
C M Software
Oxford, United Kingdom

Bonds • Options • MBS

Analyze Investments on
Your Palmtop with
@ Function Add-Ins for
Lotus® 1-2-3®

bond @analyst

US and Foreign Bonds, Bills & CD's. Price/Yield, Duration, Convexity, Accrued, Val32, ValBP, CBOT/FINEX Factors, Carry, Forward, Tails, Strips, Date and After-Tax Calculations. MORE! SIA & AIBD Compatible.

options @analyst

American & European options on stocks, futures, commodities, foreign exchange & bonds. Black-Scholes & Binomial Models. Holding cost & dividend adjustments. Sensitivities. Historical & Implied Volatilities.

mbs @analyst

Mortgage-backed securities. Price/Yield, Duration, WAL, Implied Speed, Factors, Components. CPR, PSA, FHA & Custom Speeds.



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HP 95LX European Developer's Conference

Hal talks about some of the products he saw at a conference for European HP 95LX developers and discusses the distribution of The HP Palmtop Paper outside the U.S.

By Hal Goldstein

In November, I had the good fortune to speak at a conference for European developers of HP 95LX products held in Montreaux, Switzerland. For three days over 70 attendees networked with one another and listened to sessions on the HP 95LX. It's astounding all the energy, creativity, and intelligence going into making the HP 95LX even more useful than it already is.

European Distribution of The HP Palmtop Paper

At the conference I made contact with distributors of HP 95LX products from a number of European countries. I have also spoken or written to distributors in other countries. The idea is to have a major distributor for every country with a significant number of HP 95LX users. The distributor will be responsible for selling in the local currency and mailing out *The HP Palmtop Paper* and related products. That distributor may bundle his own materials with the mailing of *The HP Palmtop Paper*. In many cases those materials will include an additional newsletter in the country's language dealing with local issues and translating the most important articles from *The HP Palmtop Paper*.

We have contacted potential distributors in the following countries: Australia, Belgium, Denmark, France, Germany, Italy, The Netherlands, Norway, South Africa, Sweden, Switzerland, The United Kingdom, and Venezuela.

(If you have an HP distributorship, especially in a country not listed above, fax, write, or call me,

and perhaps you can represent *The HP Palmtop Paper* in your country.)

Five of these distributors were able to respond to our proposal in time to include them in this issue. Next issue we hope to publish a more complete listing of local HP 95LX distributors. At present, the following countries can purchase *The HP Palmtop Paper* and *The HP Palmtop Paper ON DISK* in their local currency:

Belgium and Luxembourg contact: Bytecom SPRL, Luc Smeesters, Av. De La Seigneurie, 28, B-1325 Dion-Valmont, Belgium; Phone: 32 10 223455; Fax: 32 10 241730.

Dutch contact: ELDATA, Jan van de Ven, Weteringschans 129, 1017 SC Amsterdam, The Netherlands; Phone: 020 6360 901; Fax: 020 6325 111.

English contact: DIP Ltd., 32 Frederick Sanger Road, Surrey Research Park, Guildford GU2 5XN, United Kingdom; Phone: 44 483 301555; Fax: 44 483 301434.

French contact: Gilles Quera, President Directeur General, APSYLOG S.A., 8-12, rue Vauvillers, 75001 Paris, France; Phone: 40.26.22.32; Fax: 40.26.94.32.

German contact: Wilfried Kötz, Geschäftsführer, W&W Software Products GmbH, Odenthaler Straße 214, 5060 Bergisch Gladbach 2, Germany; Phone: 22 02/42021; Fax: 22 02 / 32794

European Products of Interest to 95LX Users

Lithium Batteries — four times the life of Alkalines

Probably the most important product I saw in Europe was a set of 1.5

Volt AA lithium mercury-free batteries given to me by an HP Geneva Support Manager. I only found them in Switzerland. I understand that Eveready will introduce these high-energy lithium batteries in the U.S. sometime in 1992.

I didn't really believe the Support Manager when he told me that these batteries lasted four times as long as alkaline batteries. However, since I was going through a pair of batteries in my HP 95LX on my three week European trip every four or five days, I was certainly willing to try. To my amazement and pleasure, the batteries lasted at least four times as long. During that time period, I put my HP 95LX through rigorous testing, playing the graphics-oriented Tetris game during the European train rides. The battery life indicator (from the Shift Filer menu) seemed to work properly - I couldn't believe how long it stayed on "full." I still got a good two days of work when the "battery low" indicator started flashing.

As I hear more about the availability of the product, I'll report it. Unfortunately, these batteries are priced about four times the cost of Alkaline batteries. Hopefully, as these batteries gain popularity the price will come down.

This "Hi Energy Lithium Battery" is available from, Ralston Energy Systems SA, Chemin Louis-Dunant 17, CH-1211, Geneva, Switzerland.

MEMORY

Store up to 2 MB of data on your HP95LX with High performance, credit card sized Static RAM IC cards—available from 64KB to 2 MB. Call or FAX

ADTRON CORPORATION

(602) 926-9324

FAX (602) 926-9359

CARDS

EduCALC ...The one stop source for all your 95LX accessories.

Software:

Derive 2.06

Simplifies BIG Algebraic expressions for you. Features symbolic algebra, derivatives, vectors, matrices, trig, statistics, finance, plus 2D and 3D plots!
Stock #2348 (Derive 2.06, ROM Card).....\$249.95

Money Manager

Program features banking, checking, credit card, and expense functions. Comes with 95 and PC versions; disk version requires 512K RAM card and Connectivity Pack.
Stock #2492 (95 Money Manager, 3.5" & 5.25") List \$60.....\$54.95
Stock #2494 (128K RAM Card with MM installed).....\$214.95

Connect your 95 to PC Windows with

IntelliLink

Import/export to and from Windows at the field level with a few clicks of your mouse. Requires serial cable and PC running Windows 3.0
Stock #2517 (IntelliLink 2.1, 5.25" & 3.5") List \$100.....\$89.95

Mechanical Engineering Equation Library

160 of the most used equations for ME, plus Lotus 1-2-3 spreadsheets. Requires Connectivity Pack.
Stock #2535 (ME Library for HP 95, 5.25").....\$29.95

95 Utility Pack

36 small, efficient programs written for the 95 and its 40 column display. Requires Connectivity Pack.
Stock #2467 (95 Utility Pack, 3.5 & 5.25 Disks) List \$35.....\$27.95

FX-7 Flight Pak

Includes flight plans, DUATS weather briefings, E6B and weight and balance. Requires Connectivity Pack.
Stock #2544 (FX-7 Flight Pak).....\$194

Contact 95

Contact Manager for HP 95 and Windows, featuring integrated appointment book with Hot Key access functions. Requires 1Meg RAM card and Connectivity Pack.
Stock #2559 (CONTACT 95, 5.25).....\$199

TravelWare

Keep all your trip records on the HP 95. Requires Connectivity Pack.
Stock #2555 (95 TravelWare, 5.25).....\$29.95

Foreign Language Translation

Sentence by sentence translation including idiomatic expressions of Spanish, French, and German.
Stock #2566 (95 Spanish, 2 cards) List \$299.....\$279
Stock #2567 (95 French, 2 cards) List \$299.....\$279
Stock #2568 (95 German, 2 cards) List \$299.....\$279

Curve Fit: Linear Regression Software

Enter up to 99 points and find area under the curve, do graphs, and compare standard deviations for linear regression.
Stock #2545 (Curve Fit ROM card) List \$260.....\$235

95LX-UTIL FORTH Programming System

Turn your 95 into a software development system.
Stock #2562 (95LX-UTIL, 5.25) List \$70.....\$64.95

muLISP for the HP95

Fast, Compact language customized for the 95. Requires Connectivity Pack.
Stock #2560 (95 muLISP, 5.25).....\$399

HP 95LX Books:

Lotus in Minutes on the HP 95LX Palmtop

The essential commands and procedures of Lotus 1-2-3 in the 95, such as global commands, formulas, macros, and databases.
Stock #2469, Lotus in Minutes, 124p softbound.....\$8.95

The Answers You Need for the HP 95LX

Palmtop PC

The perfect, quick and easy reference book to keep on the desk beside your 95.
Stock #2468, Answers for the 95, 112p softbound.....\$8.95

Explorer's Guide to the HP 95 Palmtop PC

Stock #2534, Explorer's Guide to HP95, 112p softbound.....\$17.95

Using Your HP 95LX: Practical

Examples and Applications

More than 150 real-life examples from HP and Lotus experts
Stock #2564, Using Your HP 95LX, 380p softbound.....\$24.95

Hardware:

HP 95LX

Stock #HP95LX (Palmtop Computer) List \$699.....\$499

Palmtree SolidState Data Drive

Connects to any serial port on a PC/Compatible. Up to 115,200 baud data transfer rate.
Stock #2362 (External Data Drive) List \$299.....\$279

Internal ThinCard Drive

Include half-length PC board and Drive which fits into 3.5" or 5.25" Drives. Includes software
Stock #TM2000 (ThinCard Drive).....\$289

Touchbase WorldPort Modems

HP's Suggested standard issue modem for HP 95LX communications.
Stock #2461 (WorldPort 1200 Modem) List \$159.....\$134.95
Stock #2462 (WorldPort 2400 Modem) List \$229.....\$194.95
Stock #2489 (WorldPort 2400/V.42 BIS) List \$349.....\$299.95
Stock #2481 (Tandy Acoustic Coupler 2).....\$79.95

2400 bps miniModem

This is a Low Cost, pocket sized Solution from EduCALC.
Stock #MM24B (2400bps miniModem).....\$139.95

Diconix 180si Portable Printer

Features Centronics and Serial interfaces. Uses HP Ink-Jet Printheads.
Stock #K150P (Diconix Serial Printer) List \$450.....\$339

RAM Cards/Interfacing Equipment:

Palmtree Products

Stock #2363 (1MB RAM Palmtree) List \$649.....\$629
Stock #2364 (2MB RAM Palmtree) List \$995.....\$945
Hewlett-Packard
Stock #1002A (128K RAM Card) List \$200.....\$159.95
Stock #1003A (512K RAM Card) List \$400.....\$319.95

Sparcom

Stock #2368 (256K RAM Card) List \$199.....\$169
Stock #2369 (1M RAM Card) List \$500.....\$459

ACE card

Stock #2521 (512K RAM ACE card).....\$219
Stock #2522 (1M RAM ACE card).....\$429
Stock #2523 (1.5M RAM ACE card).....\$629
Stock #2396 (2M RAM ACE card).....\$829

Here's how you hook your 95 up to a PC, printer, or modem.

Stock #F1001A (Connectivity Pack) List \$100.....\$79.95
Stock #82222A (Serial Interface Cable only) List \$35.....\$29.95
Stock #82224A (Serial Cable Adapter Kit) List \$15.....\$14.95
Stock #2533 (95 Serial Interface Kit, 5.25").....\$36.96

Nuvotech

Stock #2556 (PC Connectivity Kit, 3.5 & 5.25) List \$99.....\$89.95

JetEye to LaserJet

Stock #ESI9500A (JetEye Interface) List \$129.....\$114.95
Stock #SPX325 (Serial-Parallel Converter).....\$106.95
Stock #2449 (Dual Purpose Cable).....\$34.95

Accessories:

Cases:

Stock #2519 (Nylon 95 Carry Case, black) List \$25.....\$19.95
Stock #2520 (Leather 95 Carry Case, black) List \$40.....\$27.95
Stock #2361 (Leather DeLuxe 95 Carry Case, burgundy) List \$50.....\$44.95
Stock #2354 (Pocket Prof. Organizer).....\$69.95

Adaptors:

Stock #2569 (Cigarette-Lighter Adaptor) List \$40.....\$34.95
Stock #82241A (AC Adaptor, for USA).....\$14.95
Stock #82241AB (AC Adaptor for Europe, 220v 50Hz).....\$14.95
Stock #82241AU (AC Adaptor for the UK, 240v 50Hz).....\$14.95
Stock #82241AJ (AC Adaptor for Japan, 100v 50/60Hz).....\$14.95
Stock #82241AG (AC Adaptor for Australia, 240v 50Hz).....\$14.95

Call us 8 to 5, Monday through Friday, West Coast Time, for ordering and technical assistance. 30-Day money back guarantee; overnight shipping available.

Send for **FREE** Catalog:



EduCALC

27953 Cabot Rd.
Laguna Niguel, CA. 92677
(800) 535-9650, ext. M

Voyager Modems

The HP Support Manager who told me about the batteries also mentioned to me his experience with the Voyager modems. Compared to the modems he has tested he felt the Voyager won, hands down. The Voyager was able to run trouble-free from battery mode with the HP 95LX in a number of the European countries. (See advertisement, this page for more information.)

Serial-to-Parallel Adapter

Mark Needham of Widget Software Ltd handed me the **Paralink 3**, a small battery-powered device that looks like a cable adapter. In fact this 2.75" by 2" adapter connects to the HP 95LX serial cable and turns it into a parallel cable. Connect the 95LX to this adapter and you can print to parallel printers. (See page 42 for more information.)

Contact Manager

Richard Hill of CM Software finally got me to install Pocket Sales Force at the end of the conference. I wish I'd had it at the beginning so I could have used it rather than Lotus as my contact manager. Pocket Sales Force is System-Manager-compliant program, which means it works in conjunction with the built-in HP 95LX applications. And it's only 55K, which means it can be used even without a RAM Card.

I never had the chance to test it, but the manual and user interface seemed straightforward. I talked with two participants who used the program regularly and swore by it. Its advantages are its system compliance, its simplicity, its small size, and the fact that it is shipping! (See ad, page 12 for more info.)

Two Other Contact Managers

I am looking forward to trying DYNAXX's **Contact 95** and 4 Software's **INFO Manager** data base / contact manager program. Both programs sport many features. Where Pocket Sales Force is a simple program, **Contact 95** is apparently your mid-sized contact manager. For a full-featured data base program that requires a RAM card or a custom ROM card, 4 Software's **INFO**

Manager fits the bill. See "Contact Management," page 42 for more information on these programs. **INFO Manager's** author Johann K  hberger won praise from the HP 95LX Corvallis developer support engineer for creating the first successful large-sized XIP (execute in place) application. That means that **INFO Manager** will execute out of ROM and not take much System RAM space similar to how Lotus 1-2-3 operates.

@finance

Another set of programs that won high praise from users at the conference was Deltasoft Ltd's 1-2-3 add-in financial functions @invest, @leasing, @loan. David Branston, president of Deltasoft, told me that U.S. users could order directly from his company until he finalizes arrangements with U.S. distributors. (See page 42 for more information.)

GPS pac

Finally, a most technically interesting product is the GPS pac. This combination of the HP 95LX and Rockwell's NavCore V GPS Receiver will be available in mid 1992. GPS pac uses information from the Global Positioning System's 24 orbiting satellites to enable a marine, aviation, or other user's receiver to calculate position, altitude, and velocity, anywhere in the world.

GPS pac interfaces directly with the 95LX via the HP Mobile Data Link Cradle, or serial cable.

The GPS pac software will be fully System-Manager-compliant, allowing data to be transferred to other applications (data can be transferred into Lotus spreadsheets for conversion, graphing, etc.).

The 95LX with GPS pac could be used in marine and aviation navigation, surveying, expeditions, etc.

This product fits in the same HP Mobile Data Link Cradle built for the Motorola Pager. (See Fall 1991, page 4 for more information on the Mobile Data Link Cradle.)

For more information contact: **General Engineering & Systems S.A.**, 45a rte des Acacias, CH 1227 Geneva, Switzerland; Phone: 41(22) 42 78 06; Fax 41(22) 42 78 05.

Der Palmtop HP 95LX

We've received favorable reports of this book published in Germany by Markt & Technik.

Altec Card Drive

This drive has received praise from those who have used it in Europe. (See page 42 for more information.)

Ordering European Products from the U.S.

The quickest, most reliable way to do this is to Fax orders or requests for information, and pay by credit card for simpler currency transfer.

IPPO - European Vendors Band Together

A number of the conference participants discussed the possibility of forming an organization of European developers and marketers of HP 95LX products. The feeling was that a valuable synergy could be created by a European-based organization dedicated exclusively to developing and promoting 95LX products and related services. Those interested in IPPO ("Independent Palmtop Product Organization") should contact: **Richard Hill, CM Software, England, Phone: 081-449 1558, Fax: 081 441 0189; or Heinz Schulte, ALTEC, Germany, Phone: 0511/6308836, Fax: 0511/6308849; or Johann Pellicaan, ICT International, Netherlands, Phone: 031-4192 19585, Fax: 031-4192 19595.**

Print to Parallel Printers from the HP 95LX

Paralink 3 is for those times you need to print to a parallel printer from the HP 95LX. Just connect one end of the **Paralink 3** adapter to your printer's 36-pin female parallel port, and the other to the 95LX via the serial cable from the Connectivity Pack.

Paralink 3 is battery powered and works with most parallel parallel printers. It's light, small, and easy to carry.

Paralink 3 retails for £59.95.

To Order

Call: 011-44-438-815444

Fax: 011-44-438-815222

(AmEx, Visa, MasterCard Accepted)

WIDGET
SOFTWARE

121 London Road, Knebworth,
Herts SG3 6EX United Kingdom

New Non-HP Products designed to work with the HP 95LX

By Richard Hall and Hal Goldstein

Last issue we listed over 60 hardware and software products already available from third-party manufacturers and developers. We will continue to list 95LX hardware and software as we discover them. Vendors of 95LX-related products should send us information.

CompuServe members can check the 95LX forum library for additional freeware and shareware.

We have given only brief product descriptions and have done our best to list these products in an accurate and unbiased way. We apologize for omissions or incorrect data. Please see advertisements in this issue or contact the distributor directly for more information.

In future issues we'll discuss, compare, and review many of these products. If you wish to share your experience with any of these products, please write, and we'll do our best to publish your comments. Those interested in reviewing products should write or call, telling us your interests and background.

Hardware

Communications

Voyager Modems

These small modems the size of a deck of cards come in 1200 bps and 2400 MNP versions. Voyagers are battery-powered modems with RJ-11 line interface and acoustic coupler. Compatible with V.21, V.22, V.23, Bell 103 and 212A (more on pg. 40).

Availability NOW
Pricing, 2400 bps \$390
1200 bps call or fax
(with MNP4 & MNP5 protocols)

COMPANY: Com 1 Data Communication, 5120 Avenida Encinas, Suite C, Carlesbad, CA 92008, U.S.A.; (800) 280-2661, (619) 431-5606; Fax: (619) 431-5744.

EUROPEAN CONTACT: COM1 S.A., Parc Technologique de Marticot, 33610 Bordeaux Cestas, FRANCE; 56.78.84.00; Fax: 56.78.84.78.

Connectivity

Station95

Station95 links your 95LX and desktop PC for instant communication, saving time and battery power too. (See advertisement, page 5.)

Availability NOW
Pricing \$59.95
COMPANY: Sparcom Corporation, 897 NW Grant Ave., Corvallis, OR 97330, U.S.A.; Phone: (503) 757-8416; Fax: (503) 753-7821.

JetEye Infrared Connector

An infrared accessory that connects to your LaserJet printer and lets your HP 95LX send print jobs directly to it (see review on page 6).

Availability NOW
Pricing \$129
COMPANY: Extended Systems, 26 S. Grand Avenue, P.O. Box 6368, Bozeman, MT 59771; 800-235-7576; Fax: 406-587-9170.

EUROPEAN CONTACT: Jerry Loyd, European Sales Manager, Extended Systems Inc., Reinhardstrasse 23, D-7034, Gärtringen, GERMANY; +49 7034/27326; Fax: +49 7034/27364. Jerry has a list of all European distributors.

SmartConverter

A battery-powered serial-to-parallel converter that lets your HP 95LX (or HP 48SX calculator) connect and print to a parallel printer. The Smart Converter is about the size of a deck of playing cards.

Availability NOW
Pricing \$119.95
COMPANY: EduCALC, 27953 Cabot Road, Laguna Niguel, CA 92677, U.S.A. 800-677-7001.

EUROPEAN CONTACT: Smart Technology, Via Varese 67, 41100 Modena, ITALY. 059/440404; Fax: 059/304490.

PAMCO ELECTRONICS, INC.



Model CD3568 CARD DRIVE

Plug the **PAMCO** CD3568 CARD DRIVE into the parallel printer port of your desktop PC and enjoy the convenient, low cost and fast way to transfer files, programs and data from your HP95LX to your PC or from your PC to your HP95LX, using the memory cards available from Hewlett-Packard or **PAMCO** in place of a floppy disk.

- Fast! 80,000 CPS!
- Plug In Installation! No Need to Take Your PC Apart!
- Low Cost! Only \$169.95 suggested retail!
- Easy to Use! Works Just Like A Floppy Disk Drive!

To Order Your CD3568 and memory cards, call or write **PAMCO** or your local dealer.

PAMCO ELECTRONICS, INC.

377 Carowinds Blvd. • Fort Mill, SC 29715 • (803) 548-6740 • (800) 255-6265

Paralink 3

A battery-powered serial-to-parallel adapter that lets the 95LX print to parallel printers (see advertisement, this page for more information).

Availability NOW
Pricing £59.95
COMPANY: Widget Software, 121 London Road, Knebworth, Herts SG3 6EX, United Kingdom; Phone: 011-44-438-815444; Fax: 011-44-438-815222.

RAM Card Drives

Memory Card Drive

The MCD3 Memory Card Drive is for data transfer between 95LX and desktop PC. Fits into the 3.5" drive slot (optional 5.25") on your desktop and reads PCMCIA/JEIDA memory cards. Can read/write SRAM and Flash EPROM cards (optional OTP and EPROM card programmer).

Availability NOW
Pricing call or fax
COMPANY: ALTEC Electronic GmbH, Vahrenwalder Str. 205/7 D - 3000 Hannover 1, GERMANY; (49)-511-6308836; Fax: (49)-511-6308849.

Software

Contact Management

Contact 95

Contact manager for both the HP 95LX and PC compatibles. Contact 95 integrates with the 95LX Appointment Book application, provides hot-key access to its functions, pick-lists for fast record input and editing, user-definable fields, record-level notepad with auto date and time stamping, cut and paste between fields, pick-lists, and notes, and import/export to ASCII and .DBF file formats. Must be loaded on a 1MB or more RAM card.

Availability NOW
Medium floppy disk
(Must be loaded on a 1MB RAM card.)
Runs under SysMgr No
Pricing \$149.00
(Plus \$10 shipping)
COMPANY: DYNaXX, 12, rue de Marivaux, 75002, Paris, FRANCE; (331) 42 96 15 49; Fax: (331) 42 96 00 95.

INFO Manager

This free-form database integrates text-oriented and structured data, as well as graphical images. It allows you to search, organize, and edit your data, create macros for repetitive key strokes, print reports, and transfer information between the program and other software applications.

INFO Manager can be used on both your desktop PC and HP 95LX. You can download the INFO Manager database into your 95LX for portability, and upload any changes to your desktop PC when you return to the office.

Availability Feb 1992
Medium RAM Card
Runs under SysMgr Yes
Pricing \$700
(Includes price of software and RAM Card.)
COMPANY: 4-You Software, Inc., 4230 Redondo Beach Blvd., Suite 705, Torrance, CA 90504; 310-323-7740.

EUROPEAN CONTACT: 4-You Software Ges.m.b.H., Freidrich-Thurner Strasse 16, A-4910, Ried im Innkreis, AUSTRIA; Phone: 011-43 7752 80444; Fax: 011 43 7752 804446.

Lotus Utilities

1-2-3 Add-Ons

These add-on modules for Lotus expand the range of financial calculations you can do on the 95LX, without programming it yourself. Files are loaded into a directory, and then attached with the Lotus Add-in manager. The following modules are available:

@invest - lets you perform sophisticated Discounted Cash Flow (DCF) analysis for any investment scenario, from a simple loan to the most complex interest-bearing security traded in international markets.

@leasing - lets you perform leasing-related calculations including payments, advance payments, deferral of payment start date, interest rate conversions, hire purchase, and more.

@loan - perform loan-related calculations including payment calculations, repayment loans with payments in arrears, start date deferral, annuities, secondary loans, low start loans, and more.

All three modules are available for the 95LX. They are available now in the U. K., and should be available in the U.S., first quarter, 1992.

Availability NOW
Medium Floppy disk
Runs under SysMgr Yes
Pricing (plus VAT)

@invest £79

@leasing £99

@loan £99

COMPANY: Deltasoft Ltd, FREEPOST, 100a Victoria Street, Ipswich, Suffolk, IP1 2BR, England; (0473) 233234; Fax: (0473) 250910.

Specialized Products

Pocket RD II

"Comprehensive nutrition software" providing nutrition and fitness information for health professionals and individuals interested in health, nutrition, and fitness.

Includes a database that gives the nutrient analysis of over 5,000 food items, calories burned per specific activities, diabetic exchange database, and more. Calculates calorie needs and expenditure of the day and other specific nutritional parameters. Software comes on a 1MB ROM card.

Availability NOW
Medium ROM Card
Runs under SysMgr No
Pricing \$379
COMPANY: Poly-Bytes, Inc., P.O. Box 770070, Coral Springs, FL, 33077-0070. (305) 344-0501; Fax: 305-344-0522.

Publishers and Dealers Only

Major Software Distributor is looking for HP 95LX software for distribution to dealers.

If you are a developer and would like to have your software in the distribution channel, contact **Mr. Curry**.

If you are a dealer looking for a full-service distributor of HP 95LX software and hardware, contact **Barbara McLongstreet**.

Pacific Software Supply
Phone: (800) 327-0425
Fax: (805) 549-0549

LinksCard

An integrated golf scorecard, game analysis, and records system. LinksCard handles all Match, Stroke, Skins, Par, and Stableford games, both individual and partnership.

Specifically designed for ease of use on the golf course, LinksCard lets you: define golf course once and save many definitions, automatic scorecard preparation, multiple private games besides main event, fast stroke entry with putts optional, exceptions handled easily, PGA-style play statistics with hole-by-hole and rounds, next-hole statistics to improve your strategy, retains and prints old scorecards.

Linkscard comes with a comprehensive owner's manual and detailed tutorial.

Availability 2/92
Medium ROM card
Runs under SysMgr No
Pricing \$129.00
(Shipping from US/Europe add (US) \$12)
COMPANY: Olympic Computer Systems, P.O.
Box 53, Castle Hill, NSW 2154, Australia;
Phone: Sydney 634-5495; Fax: 975-4290.

Palmtext

This software package allows the HP 95LX to be used with any Videotext system conforming to the Prestel standard used in many systems in the U.K. and Europe. Palmtext supports the full Prestel character set, including graphics, separated graphics, double height and blinking. All national character sets are built in.

Medium 3.5" floppy disk
(5.25" disk on request)
Runs under SysMgr No
Pricing call or fax
COMPANY: Upward Systems, P.C. Boutenslaan 40, 2283 GT Rijswijk ZH, THE NETHERLANDS; 070-3960117; Fax: 070-3937940.

Technical

Hex Editor

HED is a full-screen Hex editor for use with small files (under 50K) on the HP 95LX. The program is System Manager compliant. In addition to the HED executable file, HED is supplied with a complete Forth source code listing. Users of UTIL Forth can modify the source code for

Software Included on The HP Palmtop Paper on Disk (Jan/Feb 1992, Issue 2)

Product	Function	Type	Page
COMMO.ZIP	Application: Small and robust communications program	Shareware	24
COMMO9.ZIP	Application: Adaptation of COMMO for HP 95LX	Shareware	24
AG.ZIP	Games: Chess and Space Invaders (good graphics)	Shareware	9
BJ95.ZIP	Game: System-Manager compliant Blackjack game	Free*	10
95-GAM.ZIP	Games: Go-Moku, Mine Field, Sub Hunt, with source code	Free	9
CHAOS.WK1	Spreadsheet: Population Growth graph	Free	4
VDE-LX.ZIP	Utility: Configures VDE to act like WordPerfect	Free	28
ARCE.COM	Utility: Decompresses ARC files	Free	na
UNZIP.EXE	Utility: Decompresses ZIP files	Free	na
JAGMENU.ZIP	Utility: Runs DOS programs without exiting built-in applications	Free	19
MENU95.ZIP	Utility: Runs DOS programs without exiting built-in applications	Free	19
95IRP.ZIP	Utility: Print Screen to an HP 82240A infrared printer	Free	13
95PS.EXE	Utility: Send graphics with Print Screen to a printer	Free	14
AAAX.COM	Utility: Switch between SYSMGR & DOS and set function keys	Free	29
AA.BAT	Utility: Batch file to switch between SYSMGR and DOS	Free	29
FK.BAT	Utility: Sets function keys using ANSI.SYS	Free	29
PKL103.ZIP	Utility: Compression program for .COM and .EXE files	Shareware	28
TIMOUT.ZIP	Utility: Lets you set time for when 95LX shuts itself off	Free	22
PCC.ZIP	Programming: C-compiler that works nicely on the 95LX	Shareware	23
PYG.ARC	Programming: A small Forth programming language compiler	Shareware	33
UDFORT.ZIP	Programming: A small Forth programming language compiler	Shareware	33
HPSL14.LIS	Text: Latest HP 95LX CompuServe library files listing	Free	17
KEYS.95	Text: Info necessary to assign hot keys to System-Compliant applications	Free	29
ADVERT.ZIP	Text: In-depth descriptions, products advertised this issue	na	
PTP1.ZIP	Text: The HP Palmtop Paper, Jan-Feb, 1992	na	

Software mentioned in this issue and included in the Fall 1991 issue of The HP Palmtop Paper On Disk.

DIET12.EXE	Utility program: Powerful compression program well-suited for the HP 95LX	Free	20
DIVDSK.ZIP	Games: 15 Games (checkers, othello, fastermind, etc.)	Shareware	7
VDE.ZIP	Application: Compact powerful text editor MEMO alternative	Shareware	27
CHMODC.ZIP	Utility: Changes File Attribute. Can use to safeguard files	Freeware	23

NOTE: The HP Palmtop Paper On Disk, Fall 1991, consisted of over 20 files, including those mentioned on page 36 of the Fall 1991 issue of The HP Palmtop Paper.

* Donation to favorite charity requested.

specific applications, and then recompile to create their own custom editor.

Availability Jan. 1991
Medium Floppy Disk
(Specify 3.5" or 5.25")
Runs under SysMgr Yes
Pricing \$40.00
COMPANY: Essex Marketing Services Inc.,
272 Old Farms Road, Simsbury, CT 06070,
U.S.A.; Phone: 203-651-8284; Fax: 203-676-9481.

Utilities

Stacker 2.0

Stacker is a data compression utility which increases the storage capacity of you RAM disk or RAM

card. Stacker is a TSR (terminate and stay resident) program that is installed when the 95LX is turned on. Stacker automatically compresses files whenever you save them (once installed, you are unaware of its operation). Stacker requires about 40K of your system RAM to operate, but should more than double your 95LX's RAM disk, or RAM card storage capacity.

Availability NOW
Medium Floppy disk
Runs under SysMgr n.a.
Pricing \$149.00
COMPANY: STAC Electronics, 5993 Avenida Encinas, Carlsbad, CA 92008, U.S.A.; 619-431-7474; Fax: 619-431-0880.

Other Products and Services

Newsletters

Take It With You

A newsletter focusing on palmtop computing in general as opposed to a specific palmtop computer. *Take It With You* promises coverage on the HP 95LX, Atari Portfolio, Sharp Wizard, Poqet PC, plus articles on general topics such as To-do lists, Traveling with palmtops, and more.

Availability NOW
Medium Newsletter
Pricing \$18.00
(1-year subscription, sample issue \$1.50)
COMPANY: *Perfection Applied, Attn: Palmtop Newsletter, 454 West 1010 North, Orem, UT 84057*

Datafile Newsletter

This newsletter is the journal of The Handheld and Portable Computer Club, based in the United Kingdom. Datafile is published eight times a year, with 36-40 pages each issue. It supports all HP handhelds and portables, but focuses on the HP 28, HP 41, HP 42, HP 48, and the 95LX.

The Handheld and Portable Computer Club maintains a reference library with materials available on loan to UK-based members, as well as a library of programs for the HP 41.

CONTACT: *Handheld & Portable Computer Club, Geggs Lodge, Hempton Road, Deddington, Banbury, Oxford OX15 0QG, United Kingdom.*

Conferences

Spring 1992 HP Handheld Users' Conference

This two-day conference (March 28-29, 1992) is sponsored by the Philadelphia Area HP Handheld Club. The conference will cover many aspects of handheld computing, with an emphasis on the HP 48 and the HP 95LX. It includes talks, presentation, demonstrations, and more. Vendors are welcome.

Registration fee, lodging, and transportation details are being finalized. Single attendee fee for the conference will be less than \$50.

Products Advertised in The Palmtop Paper

Company	Product	Page number
ACE	(RAM Memory Cards)	inside front
Adtron	(RAM Card Drive)	28
	(RAM Memory Cards)	38
Autobyte	(Money Manager)	25
C M Software	(Pocket Sales Force)	12
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Essex Marketing Services	(UTIL - Forth)	11
EduCALC	(95LX Accessories Catalog)	39
Globalink	(Foreign Language Translation)	inside back
Imaging Supplies Express	(RAM Memory Cards)	14
Nuvotech	(MAC, Windows, DOS Connectivity Kits)	21
Pacific Software Supply	(Service of 95LX software distributors)	42
Palmtree Products	(Cases, RAM cards, serial-parallel adapters, software)	13
Pamco Electronics	(RAM Card Drive)	41
Soft Warehouse	(DERIVE - Mathematical Assistant)	26
Sparcom	(RAM Memory Cards)	3
	(Station95 docking station)	5
	(Drive95 floppy disk drive)	7
	(Pocket Professional Organizer)	9
Tech Hackers	(Investment Analysis Software)	37
Thaddeus Computing	(The HP Palmtop Paper on Disk)	back cover
Widget	(Paralink 3 serial-to-parallel adapter)	40

CONTACT: *Jake Schwartz, 135 Saxby Terrace, Cherry Hill, NJ 08003, U.S.A.; Phone: 609-751-1310.*

CONTACT: *PROMPT HP-GC, Gerlof Donga, Tuinstraat 34, 1506 VX Zaandam, NETHERLANDS; 075-704205.*

Fall HP Handheld Users' Conference in London

The Fall, 1992 "Anniversary Conference" will be hosted by the British HP Handheld Club and will take place in London, England, on the weekend of September 19 and 20. The conference will include talks, presentations, demonstrations, an anniversary party celebrating the 20th birthday of the HP 35 calculator, and more.

Registration fee, lodging, and transportation details are being finalized. Single attendee fee for the conference will be around UK £30.

CONTACT: *Handheld and Portable Computer Club, c/o Dr. Wlodek Mier-Jędrzejowicz, Space & Atmospheric Physics, Imperial College, London SW7 2BZ, United Kingdom.*

Organizations

Handheld European Exchange (HEX)

HEX is a proposed affiliation of European HP Handheld clubs (i.e. clubs formed around the HP handheld calculators or the HP 95LX). HEX is formed to provide a loose structure through which HP Handheld clubs can communicate, and pursue common goals. European users may contact the following:

Services

"Ports" Software to Memory Cards

Memory Card Associates "ports" DOS-compatible software programs (including WordPerfect, D-base, Quicken, PC Anywhere, and GrandView) to memory cards. The customers send in their original floppy disks to prove that they are legally licensed to use the software. Memory Card Associates then configures the software for the HP 95LX, compresses program files where possible, and copies the software onto Flash EPROM, SRAM, and OTP ROM cards. The original software disks and memory cards are returned (free second day delivery). Prices vary depending upon software and memory cards used.

The service is provided for end users, software developers, or memory-card-based computer manufacturers.

Availability NOW
Medium Memory Card
Runs under SysMgr No
Pricing varies
COMPANY: *Memory Card Associates, 1016 E. El Camino Real, Suite 273, Sunnyvale, CA 94087; 408-236-2623; Fax: 408-736-0247.*

ForeignLanguage **TRANSLATION...**

on an IC CARD for the HP 95LX

IMPOSSIBLE! That's the reaction from virtually everyone. But, it's true! Fully automated, grammatical translation capability comparable to mainframes or PCs, all in economical IC Cards designed for the HP 95LX palmtop computer or compatible.

The **Globalink Translation System** gives you sentence-by-sentence translations with up to 90% accuracy. You can even load a file of 5 or 10 pages and have it translated while you read a book or watch a movie. Target language output may be post-edited one sentence at a time, or after an entire file has been translated. Some of the many amazing features the Globalink translation IC Cards include:



- Handling of idiomatic expressions.
- Multiple translations of a single word in a sentence based on part of speech (noun, verb, adjective).
- Comprehensive general dictionary of over 60,000 terms.
- Input of foreign language accents on the English keyboard.
- On-screen editing with 95LX Memo text editor.
- Interlinear translation file.
- These and many more.



ACTUAL SIZE

There are dozens of ways this low-cost, high-quality translation system can be useful to you, either for production, informational or educational purposes.

Whether you are at home, on an airplane, in a hotel, on vacation, in a meeting or in your office... high-quality foreign language translation is available to you in minutes.

In production: Available in Late November 1991*



- (Suggested Retail Price)
- Spanish to/from English* \$299
 - French to/from English* \$299
 - German to/from English* \$299

*Two IC Cards per product

You've read it in print — now get it on disk!

The HP Palmtop Paper ON DISK: 5 great benefits even the printed version doesn't have!

Now you can receive *The HP Palmtop Paper ON DISK* with every printed issue. Here are the benefits:

1. Locate items of interest fast

Each issue of *The HP Palmtop Paper ON DISK* contains the entire editorial content of the corresponding printed issue. The text is stored in ASCII format, and is readable by any word processor.

To locate an item of interest, just do an automated search for any keyword. The information you're looking for will appear on your screen instantly.

But fast access to items of interest is only the beginning, because you also get:

2. Access to almost every freeware and shareware program mentioned in the printed issue

That's right — virtually every freeware and shareware program mentioned in each printed issue is included in the corresponding *HP Palmtop Paper ON DISK*, along with documentation.

These programs are useful! Many of them have been written or specially adapted just for the HP 95LX.

To give you an idea just how useful these programs can be, we've summarized the contents of recent issues — see box at right.

Please note:

1. If you decide to use a shareware program, you are required to pay the shareware author his fee. Fees usually range from \$5 to \$45 — a fraction of the

cost of equivalent commercial programs.

2. We are unable to support you in using *The HP Palmtop Paper ON DISK* software.

3. Saves you time and money

Dozens of man-hours go into collecting, organizing, modifying, and documenting the programs in each *HP Palmtop Paper ON DISK*. Having the disks saves you the time and expense of doing all this work yourself.

4. In-depth descriptions of advertised products

Each issue of *The HP Palmtop Paper ON DISK* also includes detailed descriptions of some of the products advertised or listed in the printed issue. This helps you learn more about products of interest without having to call the manufacturer.

5. It costs so little!

The HP Palmtop Paper ON DISK consists of 2-4 360K floppy disks that you will receive along with each printed issue.

A year's subscription to *The HP Palmtop Paper ON DISK* (6 issues) is just \$139. Shipping is included for North American customers.

That's less than \$24 per set of disks. *It's a great buy even if you only use one program per disk!*

Individual issues of *The HP Palmtop Paper ON DISK* are \$33 within North America, so a year's subscription saves you \$92.

You can save an additional \$19 by subscribing for two years for \$259.

Satisfaction guaranteed!

Should you ever become dissatisfied with *The HP Palmtop Paper ON DISK*, just let us know. The unused portion of your payment will be promptly refunded.

**TO SUBSCRIBE,
USE THE ENCLOSED
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TOLL-FREE:
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TREMENDOUS VALUE!

Each issue of *The HP Palmtop Paper ON DISK* contains the complete editorial content of the printed issue, descriptions of advertised products, and virtually all the freeware and shareware mentioned in the issue.

To give you an idea of the tremendous value this represents, here are just a few of the highlights of the software included in recent issues of *The HP Palmtop Paper ON DISK*:

Instructions and utilities for accessing all programs are included on each disk.

WORD PROCESSING

VDE: Compact, powerful text editor — a great alternative to MEMO.

VDE-LX.ZIP: Makes VDE work like Word Perfect.

COMMUNICATIONS

COMMO.ZIP: Full-featured communications program — richer scripting language than the 95LX's built-in program — easier to automate your activities.

UTILITIES

MENU95.ZIP: Lets you run DOS programs without having to close the built-in applications you're working on.

DIET: Compresses files. DIET can double your disk space.

TIMEOUT.ZIP: Lets you adjust automatic shut-off time on your HP 95LX — saves batteries!

HPSL14.LIS: Description of HP 95LX CompuServe Library (updated each issue).

ATO: Automates CompuServe activities. Allows you to perform functions off-line, saving you line charges.

GAMES

AG.ZIP: Chess and Space Invaders (good graphics).

BJ95.ZIP: A Blackjack game you can run from the System Manager. Helps you "count" cards!

DIVDSK: Checkers, Go-Moku, Tetris, Othello, Mastermind, Adventure, and 9 other games. Enjoy!

Plus travel organizer, language compilers, screen printing utilities, other games, and lots more! (See Issue #1 p.36 and Issue #2 p.43 for complete listings.)

HOW DOES IT COMPARE WITH THE SUBSCRIBER DISK?

The HP Palmtop Paper ON DISK is not to be confused with the Subscriber Disk that you receive free with each year's subscription to *The HP Palmtop Paper*.

The annual Subscriber Disk is one or two 360K floppies containing some of the best freeware for the HP 95LX (no shareware).

FREE BONUS!

Each 1992 subscription to *The HP Palmtop Paper ON DISK* includes Issue #1 (Fall 1991) — absolutely FREE!

If you have already purchased Issue #1, you may deduct \$33 from the price of your 1-year or 2-year subscription. (Outside U.S. and Canada, deduct \$38.)

Customers outside North America:

Please add \$30 shipping for a one-year subscription, \$60 for two years. Add \$5 shipping for each issue ordered individually. You may pay by credit card, check, or money order. Check or money order must be in U.S. dollars drawn on a U.S. bank.

Or order from one of our European distributors: (Contact them for pricing in local currency.)

Country	Phone	FAX
Luxembourg & Belgium (BYTECOM)	+32 (0)10 223455	+32 (0)10 241730
France (PalmSoft)	1.44.76.11.00	1.40.26.94.32
Germany (W&W Prods)	0 22 02 / 42021	0 22 02 / 32794
Netherlands (Eldata)	+31 (0)20 6247284	+31 (0)20 6325111
U.K. (DIP LTD)	+44 (0)483 301555	+44 (0)483 301434

(More countries being added. Write or Fax us for current listing.)