October 1985 - Vol 1, Issue 2

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Updates! Updates!

This issue attempts to bring you up-to-date on some of the changes that have occurred to the many and varied products on Stride machines. Besides letting you know what they are, Tech Notes is making it easy to get the updates via a special order form in the middle of this issue. Most of the updates discussed can be purchased at a small cost (most are $25) which covers shipping and handling, etc.

Not all of the updates are new, but you may have missed the announcement or felt that you were going to wait awhile before getting updated. Stride has also changed the update policy slightly this year, hopefully we can make changes available to you sooner.

Most computer products, software and hardware, are constantly changing and growing. Some companies make major releases every four to six months which incorporate all the small changes done over that period. If Stride is a distributor of a product handled this way by its vendor, we can only update you when the vendor updates us. Most vendors also require a new royalty for the new version. This is the case with the p-System IV.21 update from version IV.20.

However, products developed internally by Stride Micro, such as our BIOS and MCUBIOS are handled a bit differently. Any time a change is made, an update diskette is created and given to Tech Support. If a user calls in needing that change, he can get the update diskette immediately for only $25!

Stride does not automatically update every user, but, through the Tech Notes, we will be letting our registered users know about the changes.

What is a registered user? If you’re receiving Tech Notes you’re registered. Any Stride/Sage owner can register simply by sending in their name, address and machine serial number to Stride Micro at our Reno address. Just buying a machine does not automatically register you since most machines and software are sold through dealers and distributors -- Stride Micro Reno does not know who you are. There is a card in the shipping box that new owners are supposed to fill out and return. You would be surprised how many don’t!

Updates are announced through In Stride, and our dealer bulletins. Major announcements also are made over the various electronic mail systems.

Updates to certain products require proof that you purchased the original product. Your Purchase Order number or the Serial number of products (such as CP/M) and the Serial Number of your Stride/Sage machine are necessary in order to purchase the update.

If an item on the order form in the back is not clear to you, look through this issue. Most items are explained with a short paragraph. The p-System update was explained in detail in the last issue of Tech Notes, Volume 1.

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CMOS Memory Map

The CMOS Memory Map shown on page 219 of the February Stride Owner’s Manual is incomplete (refer to page 182 of the September edition). The CMOS memory map is shown correctly on the right.

Note that there is a 1024 byte area (FF8000 – FF80FF) reserved for applications programs. As the battery backup circuit protects all CMOS, this area is handy as a small RAM Disk for sensitive information. CMOS RAM is a bit slower than regular RAM -- but a lot faster than disk.

Other applications are allowed to use this area, so it is best to initialize it at the start of your program. If used to transfer data between programs, make sure that there is no way another program can be called in between that might kill the area. Most operating systems have ways that programs can chain or pipe to each other safely.

These locations are specific to the 400 Series, the Sage computers do not have an equivalent CMOS area.

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*In Stride Tech Notes* • October, 1985
Four Quick Ways To Interrogate Stride Hardware.

When a program must run on different kinds of hardware, it is very useful for the program to know how much memory it has, what version of the system is running, etc. The following routines are part of the STRIDE.CODE and SAGE.CODE programs released with the IV.21 p- SYSTEM, but can be converted to almost any operating system that allows access to memory or BIOS calls. (UNIX doesn’t).

Which Machine?

The first program is a simple procedure that tells you which machine, 400 Series or Sage that you have by a BIOS call. On the Stride 400 machines, the string ‘STRIDE’ will be returned. The characters returned from a SAGE may vary and may not be printable characters.

How Much RAM Memory?

The second program determines the amount of RAM memory in the machine. Change ADDR1 to ADDR2 in the line indicated to read the memory size of a Sage machine.

What Version Of The BIOS?

The third program works for either a SAGE or 400 Series machine and determines what version of the BIOS or MU.BIOS you have. This can be used to tell your program if Cache is available to you or not since versions prior to 5.3 did not have Cache. (It doesn’t tell you if Cache is turned on.)

How Big Is The Disk?

The fourth program reads the hard disk drive map area to determine how large of a disk you have. See the comments to change it to run on Sage machines. By changing the variable WDRV from 0-3, you can do this for all four hard disk drives.

The program above checks for a Sage or 400 Series machine.

The program above finds the memory size of the machine.

The program above reads the BIOS version number.
PROGRAM DiskSize;
USES $SU !UTILITY! TOOLS! CODE| WIN_Unit, Config_Unit;

FOR a SAGE machine change the USES line above:
Replace UTILITY! TOOLS! CODE with SGUTIL! SAGE! TOOLS! CODE
Replace Config_Unit with Config_Sage.

TYPE LONG=INTEGER[32];
VAR MVRV:INTEGER;
DiskConf:Conf_Winch;
Diskimage:ARRAY[0..3] OF Win_Diskimage;
Dsize,Memory:STRING;

FUNCTION GetDiskSize(WDRV:INTEGER):BOOLEAN;
VAR
Dmeg : LONG;
Diskimage : ARRAY[0..3] OF Win_Diskimage;
BEGIN
Conf_Assign(17,9,(MDRV+16));

{ A SAGE needs two values from the BIOS which must be set
correctly for disk access to work right. The line below
is not used on the 400 Series but must be added to access
a SAGE.
}
Conf_RD_Winch(9,DiskConf);

{ $1-{
UNITREAD(17,Diskimage[MDRV],SIZEOF(Win_Diskimage),0,0);
IF IORESULT <> 0 THEN
BEGIN
GetDiskSize =FALSE;
END
ELSE WITH Diskimage[MDRV].Praminfo DO
BEGIN
GetDiskSize =TRUE;
Dsize ="":[Clear
Dmeg =Heads;
Dmeg =Dmeg *Cylinders;
] IF a SAGE then replace the line above with:
Dmeg =Dmeg *DiskConf.Cylinders;
Dmeg =Dmeg*SectorsPerTrack;
Dmeg =((Dmeg * BytesPerSector) DIV 1024) DIV 1024;
Convert to Mbytes{
Dmeg =Dmeg+1;
STR(Dmeg,Dsize);
Dsize =CONCAT(Dsize);
WHILE LENGTH(Dsize)<4 DO INSERT("","Dsize,1);
END;
}$1-{
Conf_Restore;
END;
BEGIN
WDRV :=0;
IF GetDiskSize(WDRV) THEN WRITELN("Disk Size =",Dsize," Mbytes.");
ELSE WRITELN("No Disk");
END;

The program above reads the hard disk size.

---

Running With Both CACHE & RAM Disk

In last month’s Tech Notes, we discussed the new CACHE feature of
the 400 Series BIOS (page 9 of that issue). Since then, we’ve had some
feedback on the operation of the feature. One user reported that his
application, generating a report, ran 3
times faster under CACHE operation.

Stride originally intended that
CACHE be a substitute for RAM Disk.
It is better protected and does not
require loading any files. However, during Beta test it was found that
many applications were designed
around RAM Disk and needed that area.

Additional changes were made to the
BIOS to oblige these users. The final
release of the BIOS, (Oct. 15th) will
allow both CACHE and RAM Disk
areas in the Multi user BIOS. (But not
in the single user). This was fairly easy
to implement as MU.BIOS already
supported four RAM Disks. The first
RAM Disk becomes the CACHE Disk.
Both CACHE and RAM Disk are
memory hogs. It is not recommended
that a CACHE be much smaller than
200K bytes. Disk performance may
actually degrade if too small of an area
is assigned.

Installation

Use MU.UTIL and set RAM Disk #1
address boundaries and enable as cache. Set RAM Disk #2’s low address to the
high address of RAM Disk #1
(CACHE). Enable initialization.

Use MU.UTIL to define which users
get access to the RAM Disk #2. All
users get the advantages of CACHE. In
the channel map of each user, map #11
to #53 (RAM Disk #2 = device 63).
Save the new Multiuser configuration
and reboot.

Operation

CACHE will be invisible to the
operating system. RAM Disk #2 will
appear in the p—System Filer as the
first RAM Disk. RAMDISK0:

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*In Stride Tech Notes • October, 1985*
APL: More Than A Language, It's A Problem Solving Tool!

By Sahara Software, Ltd.

APL is considered a VIALL (Very High Level Language). It employs a high level of abstraction, isolating the user from machine activities, thus freeing him to concentrate on the problems he wants to solve. In that respect, APL is a human oriented language, not a computer oriented one. APL uses a very terse syntax, representing basic functions by symbols rather than keywords. APL features a unique character set, thus requiring a special APL/ASCII terminal.

The use of special symbols is one of the reasons why the language has been dubbed anything from cryptic to difficult and hard to learn.

Actually, the contrary is true; APL is a language that is easily learned. Its terseness and compactness make it very powerful and flexible and can increase development productivity significantly.

Take a minute and think about how much time you would save if the language you are currently using had these APL features: data types that did not require declaration in advance, open arrays (so maximum array size) and arrays that can be operated on without the need for loops.

IBM internal statistics have shown that by using APL, a 5–10 fold decrease in development time can be achieved.

History of APL

APL was originally conceived as a mathematical notation by Kenneth Iverson at Harvard, to effectively describe algorithms in applied mathematics to his students.

APL shows its mathematical roots in the terminology applied by the language (rank for the dimension of an array, scalar, inner and outer product) and also in its heavy use of mathematical symbols and expressions.

After Iverson joined IBM in 1960, a development phase began that was followed by the first actual computer implementation of the language in 1966 on an IBM/360.
Between 1952 and 1966, the language syntax was simplified and its functions were extended. The definition of the character set was based on the IBM 10500 terminal, which utilized the Selectric print element. The limitations of this 88 element character set led to two important syntax definitions: to represent both monadic (one argument) or dyadic (two arguments) by the same symbol and to generate composite symbols by means of overstriking basic characters.

Because APL existed and evolved in an academic environment, its notation and basic design philosophy were not initially restricted by the limitations of real-world computer systems, as is the case with most other programming languages.

This is one reason APL should not be thought of as a language, but as a highly sophisticated set of tools for computer processing.

**APL.68000 and the STRIDE**

APL.68000 is a superset of the IBM VS APL de-facto standard implementation. It is available on SAGE and STRIDE computers under the MIRAGE multiuser, time-sharing operating system.

Unlike many other multiuser, multi-tasking operating systems, MIRAGE has many features that make it an ideal environment for APL. APL.68000 and the MicroAPL utility libraries allow the user to completely control a MIRAGE environment from within APL. There are even functions that allow it to temporarily leave APL, exit to MIRAGE, perform certain functions or run a program, and return to the APL workspace.

APL.68000 offers a sophisticated multiuser file system, access to the MIRAGE printer spooler, and interfaces to 68000 Assembly and other language compilers available under MIRAGE. The component file system treats files as a collection of records, each one of arbitrary length or type. In addition, a filing utility for keyed record access is available.

**APL Calculator Mode**

To get a feeling for APL.68000, look at the example on the previous page. It shows several expressions for operations commonly needed in programming and how to implement them in APL. Array manipulations are easily done in APL with simple one-line commands.
APL Functions

In fact, the statements in the example look much like a sophisticated calculator's statements. Correct! Up to now, we have only used APL in its desk calculator mode. The real power of APL is the ability to define functions that behave exactly the same way the built-in functions do.

The same rules that apply to primitive operators, right-to-left order of execution, monadic (one argument) or dyadic (two arguments), apply also to user defined functions. In addition, a user defined function can be niladic (no arguments) and can explicitly return a result or no result.

The syntax for function definitions is shown in the box on page 7.

The second box shows a few examples of some simple functions using the APL syntax.

User defined functions extend to arrays on an element-by-element basis. In APL, a program is a collection of independent user defined functions that can be kept in libraries and copied (COPY command) into a workspace. Many functions have 10 or fewer lines and are easy to write and maintain.

APL SYSTEM Commands

APL is organized around the concept of a WORKSPACE (notice the similarity to today's popular desktop metaphor). The interpreter offers a large set of system commands to manage your workspace.

All system commands begin with a left parenthesis '(' which cannot appear in the first column of a valid APL statement.

To the right, you will see a list of some of the system commands. In addition to SYSTEM commands, a variety of SYSTEM functions and variables provide the user with built-in utilities.

(Continued on page 9)
Performance & Versatility

Simple syntax rules, many powerful primitive operators, few expression types and uncomplicated execution rules make APL a versatile multi-purpose programming language suitable not only for number crunching applications, but also for database management, statistical analysis and office automation systems.

APL is an interpretive language, an interactive programming environment and it actually aids the user in developing problem solutions.

The interpreter really shines, especially on Stride hardware.

Here are a few benchmark tests comparing APL.68000 on a 10 MHz Stride 440 with IBM APL on an IBM-PC and STSC APL Plus on an IBM-PC.

APL.68000 is distributed in the U.S. by Network Nexus, 1521 Old Bayshore HWY, Burlingame, CA. 94010 (415)–892–4747

In Europe, contact: Sahara Software, Ltd., Unit 1F, Tideway Industrial Estate, 87 Kirtling Street London SW8 5BP. Tele: 01 – 622 0395

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<thead>
<tr>
<th>BENCHMARK (IN MILLISECONDS)</th>
<th>FUNCTION</th>
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</thead>
<tbody>
<tr>
<td>1. PLUS REDUCTION</td>
<td>( Z +/ \text{VI} )</td>
</tr>
<tr>
<td>2. LOGICAL REDUCTION</td>
<td>( Z +/ \text{VL} )</td>
</tr>
<tr>
<td>3. MAXIMUM REDUCTION</td>
<td>( Z +/ [ / \text{VI}] ) M1</td>
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<tr>
<td>4. EXPONENTIATION</td>
<td>( Z +/ \text{VI}^* .1 )</td>
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<tr>
<td>5. ABSOLUTE VALUE</td>
<td>( Z +/ \text{VR} )</td>
</tr>
<tr>
<td>6. INDEXING</td>
<td>( Z +/ \text{VR} [\text{VI} # 20]] )</td>
</tr>
<tr>
<td>7. SORTING</td>
<td>( Z +/ \text{VI} )</td>
</tr>
<tr>
<td>8. TAKE</td>
<td>( Z +/ \text{VI} ) MR</td>
</tr>
<tr>
<td>9. MEMBERSHIP</td>
<td>( Z +/ \text{VI} )</td>
</tr>
<tr>
<td>10. TRANPOSITION</td>
<td>( Z +/ \text{VI} ) M</td>
</tr>
<tr>
<td>11. OUTER PRODUCT</td>
<td>( Z +/ \text{VI} ) C</td>
</tr>
<tr>
<td>12. OUTER PRODUCT</td>
<td>( Z +/ \text{VI} ) C.</td>
</tr>
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<td>13. INNER PRODUCT</td>
<td>( Z +/ \text{VI} ) 0.50</td>
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<td>14. MATRIX DIVISION</td>
<td>( Z +/ \text{VI} ) VR</td>
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<tr>
<td>15. MULTIPLICATION</td>
<td>( Z +/ \text{VI} ) 10</td>
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<td>16. DIVISION</td>
<td>( Z +/ \text{VI} ) 3.14</td>
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<td>17. LOGARITHM</td>
<td>( Z +/ \text{VI} ) VR</td>
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<tr>
<td>18. SINE</td>
<td>( Z +/ \text{VI} ) VR</td>
</tr>
<tr>
<td>19. SIEVE (in SECONDS!)</td>
<td>( \text{APL} # \text{LISTING} )</td>
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</table>

<table>
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<tr>
<th>FUNCTION</th>
<th>IBM APL</th>
<th>IBM APL/PLUS</th>
<th>STSC APL</th>
<th>APL.68000</th>
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<td>( Z +/ \text{VI} )</td>
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<td>0.01</td>
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<td>3.00</td>
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<td>25.00</td>
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<td>( Z +/ \text{VI}^* .1 )</td>
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<td>2400.00</td>
<td>2080.00</td>
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<td>( Z +/ \text{VR} )</td>
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<td>( Z +/ \text{VI} ) MR</td>
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<tr>
<td>( Z +/ \text{VI} )</td>
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<td>146.00</td>
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<tr>
<td>( Z +/ \text{VI} ) M</td>
<td>450.00</td>
<td>60.00</td>
<td>18.00</td>
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</tr>
<tr>
<td>( Z +/ \text{VI} ) C</td>
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<td>( Z +/ \text{VI} ) 0.50</td>
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<td>439.00</td>
<td>64.00</td>
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</tr>
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<td>( Z +/ \text{VI} ) VR</td>
<td>210.00</td>
<td>546.00</td>
<td>60.00</td>
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</tr>
<tr>
<td>( Z +/ \text{VI} ) 10</td>
<td>70.00</td>
<td>2206.00</td>
<td>120.00</td>
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</tr>
<tr>
<td>( Z +/ \text{VI} ) 3.14</td>
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<td>468.00</td>
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</tr>
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<td>( Z +/ \text{VI} ) 3.14</td>
<td>110.00</td>
<td>724.00</td>
<td>162.00</td>
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</tr>
<tr>
<td>( Z +/ \text{VI} ) VR</td>
<td>150.00</td>
<td>5094.00</td>
<td>1180.00</td>
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<tr>
<td>( Z +/ \text{VI} ) x.1</td>
<td>411.00</td>
<td>12009.00</td>
<td>1386.00</td>
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</tr>
</tbody>
</table>

The variables used in these benchmarks are defined as follows:

\( \text{MI} +/ 10 \text{ pVI} +/ (100 \text{ p}0 \ 1 \text{ 0 0 1})/1 \text{ 500} \)
\( \text{VL} +/ 10 \text{ pVI} 1 \text{ 0 0 0 1} \)
\( \text{MR} +/ 10 \text{ pVR} +/ \text{VI} +/ 0.1 \)
\( \text{MC} +/ 26 \text{ pVC} +/ 1 \text{ 23 EF GHIJKLMN OPQRSTUVWXYZ} \)

All timings for IBM–APL were taken with the 8087 math coprocessor.

(IBM–APL REQUIRES the 8087 to be present).

The timings for STSC APL are without an FPU.

APL.68000 timings are without an FPU on the Stride.

UNIX APL

UNIX fans who are also APL lovers should take heed — APL is being ported to Stride's UNIX and will be available in the near future.

Watch for an announcement here.
SALE — $150 Buys A Stride/Sage QVT102 Terminal!

The Stride Reno Factory is clearing out our used Qume QVT102 terminals. These are working terminals, in good condition and fully functional, less than a year old. They were used in-house by our Stride employees and are being replaced by the newer Stride terminal. A limited supply is available at $150 each. No warranty is included; all sales are on an "as is" basis.

Some have a "SAGE" logo as shown in the photo, some have the Qume logo. Sorry, but you don't get to choose. Key action is "hard" versus "light".

One or two amber QVT102's are available, please check with Sales Reno on amber availability.

No discounts apply. To order, use the form on page 11 in this issue or call Allison Brown at (702) 322-6868.

This is a great buy for a good terminal. Offer is open while supply lasts.
Update Order Form

To be eligible for some updates, you must prove prior purchase (attach a copy of the PO, invoice and/or the software serial number) and the serial number of your machine. No discounts apply. All sales are final. Manuals are not included, some items will have release notes.

NAME ___________________________________________ DATE: ________________________
ADDRESS __________________________________________ TELEPHONE: ________________

Time to call above number: ________________________

<table>
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<tr>
<th>Part #</th>
<th>Description</th>
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<tr>
<td>DKO999</td>
<td>CPU Circuit Board Poster</td>
<td>$25</td>
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<tr>
<td>DKO999</td>
<td>Winchester Board Circuit Board Poster</td>
<td>$25</td>
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<tr>
<td>DKO999</td>
<td>Used Quate QVT102 Terminal</td>
<td>$150</td>
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<tr>
<td>CCO138</td>
<td>&quot;Stride Universal Cable adaptor kit. All the parts needed to make an</td>
<td>$30</td>
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<td></td>
<td>adaptor between a DB25 RS232 cable to a Stride &quot;phone-plug&quot; cable.</td>
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<tr>
<td>DKO100</td>
<td>400 Series BIOS Update, New BIOS, MU.BIOS, UTIL.</td>
<td>$25</td>
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<tr>
<td>DKO1010</td>
<td>Streaming Tape Partition Backup Program. Backs up and restores hard disk</td>
<td>$25</td>
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<td>partitions. Requires DKO100 or p-System IV.21 update.</td>
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<tr>
<td>SF0181</td>
<td>Sage II/IV Run-time Update to p-System IV.21.</td>
<td>$99</td>
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<tr>
<td>SF0162</td>
<td>Sage II/IV Development Update to p-System IV.21.</td>
<td>$150</td>
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<tr>
<td>SF0159</td>
<td>Requires prior Development purchase:</td>
<td></td>
</tr>
<tr>
<td>SF0160</td>
<td>400 Series Run-time Update to p-System IV.21.</td>
<td>$99</td>
</tr>
<tr>
<td></td>
<td>Includes new BIOS and UTIL files.</td>
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<td>SF0160</td>
<td>400 Series Development Update to p-System IV.21.</td>
<td>$150</td>
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<td>Includes new BIOS and UTIL files.</td>
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<tr>
<td>SF0121</td>
<td>400 Series BIOS Source. (3 diskettes). Source to the single user PROM,</td>
<td>$50</td>
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<td></td>
<td>BIOS, UTIL and boot routines.</td>
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<tr>
<td>DKO141</td>
<td>Stride/Wyse WT-50 Timberline SpreadSheet SPEC.</td>
<td>$25</td>
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<td>DKO110</td>
<td>Graphic Update diskette #1 (source). Requires prior SpreadSheet purchase:</td>
<td>$25</td>
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<tr>
<td>DKO142</td>
<td>Graphics Update diskette #2 (code). Requires prior Graphics purchase:</td>
<td>$25</td>
</tr>
</tbody>
</table>

(All Four) | Sage CP/M-68K Update Diskette A.                                        | $75   |
| DKO039  | Sage CP/M-68K Update Diskette B.                                          |       |
| DKO040  | Sage CP/M-68K Update Diskette C.                                          |       |
| DKO041  | Sage CP/M-68K Update Diskette UTILITY.                                     |       |

(All Four) | 400 Series CP/M-68K Update Diskette A.                                    | $75   |
| DKO074  | 400 Series CP/M-68K Update Diskette B.                                    |       |
| DKO075  | 400 Series CP/M-68K Update Diskette C.                                    |       |
| DKO077  | 400 Series CP/M-68K Update Diskette UTILITY.                              |       |

*** Requires prior CP/M purchase: Serial#***

TOTAL $________

PAYMENT: VISA# __________________________ MasterCard# ______________________ Check Enclosed ☐

Serial# __________________________ Model# __________________________
(required) (Sage II/IV, 420, 440 or 460)

Main Use of Computer __________________________ (Optional)

Memory (K bytes) ______ Hard disk (M bytes) ______ Tape (Yes/No) (1 or 2 drives) ______

VMEbus __________________________ Software __________________________
(list non-Stride cards used and Vendor)
(list programs you use regularly)

In Stride Tech Notes • October, 1985

Page-11 •
WORD7 File Extension

WORD7 files end in \D. This extension distinguishes WORD7 files from other text files on the system. If the file is changed from \D to a normal .TEXT extension, most other programs can then access the file.

Just naming a file .TEXT does not convert it to a TEXT file, however. You can see the type of a file if you do an extended listing in the file.

WORD7 Files created under p-System IV.13 will be seen as TEXT files. If they are moved to version IV.21, however, they will appear as DATA files. This bug causes no problems as long as you are not trying to move the WORD7 file to another program requiring a true TEXT file. The authors of WORD7 will soon have a fix for this minor problem.

Until then, this program will convert the files. The two units used are found on the UTILITY: DISK in the UNITS subvolume.

UNIX Modem Cable
The Stride modem cable needs changed to work correctly under UNIX. Move pin 4 to pin 20 on the modem end of the cable.

Graphics Update
The Graphics Update is a new release with a few bug fixes and Turtlegraphics software.

CPM Update
The CPM Update is NOT new but offered just in case you missed it last time around.
Disk Specs

We get asked this a lot, so here are the specifications of the various disk drives used by Stride Micro, now, and in the past.

In the chart below, the drives shown with an asterisk are those currently offered on the 400 Series.

Capacity for both the 19 blocks per track format and for the 16 blocks per track format is given. Remember that UNIX can only operate with the 16 blocks per track format. The p-System and CP/M-88K are capable of operating with either format.

On the 400 Series the system map area required is 1 track + (10 tracks per head). The user area is not shown, but can be calculated with this equation:

\[(\text{Trks} - 1 - (10 \times \text{Hds})) \times 512 \times \text{Blocks Per Track}\]

Sage systems use a smaller map area, \(1 + (4 \text{ tracks per head})\).

Note that, in general, the bigger the drive the faster it seeks.

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Model</th>
<th>Access (ms)</th>
<th>Cyl</th>
<th>Hds</th>
<th>Trks</th>
<th>Capacity (M bytes)</th>
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<td></td>
<td></td>
<td>Avg Max Tk-Tk</td>
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<td></td>
<td></td>
<td>19 blk/trk 16 blk/trk Raw</td>
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<tr>
<td>TMI</td>
<td>500A-H</td>
<td>88 120 18.5</td>
<td>306</td>
<td>2</td>
<td>612</td>
<td>5.95</td>
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<td>11.20</td>
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</table>

* These are the disks currently offered on the 400 Series.
New Tape Backup Program & Update

Stride has obsoleted the ATMS QIC-02 backup program. A new tape program, which does disk partition backups, is now available as an update for $25. You will also need to order the BIOS update disk. See order form in this issue. Before installing, contact Stride's Technical Support group, (702) 322-8668, to check the revision level of your board.

Work-Around For Timberline SS

Save Option Bug

While testing software under the new IV.21 p—System release, a bug was found in the Timberline Spreadsheet. The bug is documented in the spreadsheet manual but is fairly obscure. It occurs under all versions of the p—System.

The problem occurs when a large spreadsheet has been edited and the user tries to save it. If there is not enough room to save the file, it hangs the system. Typing a Ctrl/@ will return to the operating system, but the edit session has been lost.

Even if you have a big open area before editing, lockups can occur.

Work-around: To avoid this problem, save your edits under a new name. Clean up old copies before starting a session or when you need room.

Wyse WY-50 Spec

For those buying the new Stride terminal or the Wyse WY-50 terminal, a new SPEC file is available on an update disk. (See page 12.) Note that spreadsheets created under one terminal cannot usually be read or updated under a new SPEC file.

Yogi's California Earthquake Hot Line

The tragedy of the Mexico City earthquake makes us all wonder what we should do in such a crisis. If you are a resident of California, you can now find out. Call toll-free 1-800-FOR-YOGI and get up-to-date information on earthquake safety from our friend, YOGI BEAR, of TV cartoon fame.

YOGI works with a SAGE IV computer and voice recorder to give you a quiz on earthquake safety. If you have a touch-tone phone, you answer yes or no by pushing the 1 or 2 key. YOGI lets you know if you answered correctly.

The station is operated by the California Office of Emergency Services.

ASE File Lookup

The ASE editor has become the programming editor of choice among the p—System users. Although, the standard p—System editor is a first cousin of ASE and has many of the same commands, ASE has more powerful features. For example, ASE will handle large text files up to 32K blocks long (the limit of the file system), nested edits and file lookup.

The file lookup is truly useful, you don't have to leave the editor and go to the file you have forgotten the file name. ASE will bring up a list of the files on the volume and let you select the one you want. However, differences exist between ASE 0.9 for the IV.13 p—System release and ASE 1.0 for versions IV.20 and IV.21. The file lookup facility of ASE 0.9 under IV.13 does not always see files created by ASE 1.0 and the standard p—System editor (SOE) under IV.21.

If you receive some ASE 1.0 files but are using ASE 0.9 you can make the files visible again. Use this instruction in the file: Change =,= This changes all of the files as needed but their original names are saved.

Circuit Board Poster Available

Some of you liked the cover of the new In Stride Tech Notes so well that you asked where we got the drawing. The circuit shown is the 400 Series Winchester board, drawn by Stride's CAD/CAM plotter.

Due to the interest, Bob Needham, Stride founder and CAD/CAM boss, has made this kindly offer: Stride will custom draw (via the plotter) a red/blue/green poster, size (24" x 18"), of either the CPU or Winchester board for $25. The poster has a 2" white border that can be trimmed as needed for mounting and framing. See the order sheet in this issue.

Note the offer is open only as long as Bob has the patience and time to run the posters! Thanks, Bob!

People & Products

David G. Stork currently runs the symbolic manipulation program REDUCE 3.0. He's interested in talking to others working with REDUCE and perhaps starting a users' group. If you're interested, you can reach David at: Department of Physics, 690 Main Street, Worcester, MA 01610 (617) 792-7189.

DBMaster is a database program distributed by Stoneware. As DBMaster accesses the p—System kernel directly, a different version of DBMaster is needed for each p—System version: IV.13, IV.20 and IV.21. Versions are currently available for IV.13 and IV.20 but not for IV.21 at this time. A new version is in the works by author Jerry Mason and we will let you know when it is available.
Editor: Verlene Joyce Benham

In Stride Tech Notes is a publication of Stride Micro, issued eight times yearly. Subscriptions are $12 for one year and include the In Stride patent magazine which is published quarterly, for a total of 12 issues per year.

Tech Notes back issues are also available for $0.50 and In Stride back issues for $2.00 as supply lasts.

Purchase of a Stride computer includes a one-year subscription upon receipt by Stride Micro, Reno, of a fully completed owner's registration card.

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