

**alpha micro**

**SOFTWARE NOTES**

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## INTRODUCTION

This is the Alpha Micro Software Notes, a publication designed to give technical software information to our OEM/dealer network. Please address all inquiries or suggestions concerning this newsletter to:

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This issue contains information on the new AMOS Software Release, Version 4.5A, which contains support for some exciting new products. Also, please note the section below, "Important Software Change Notice Corrections," which contains important corrections to software patches that were in previous issues of the Software Notes.

## AMOS 4.5A SOFTWARE RELEASE

### Features and Enhancements

The new AMOS 4.5A Software Release is now available to our dealers and OEMs. (For information on ordering AMOS 4.5A software and manuals, contact the Alpha Micro Sales Order Department.)

For full information on the AMOS 4.5A Software Release, you will want to refer to the AMOS 4.5A Change Page Packet for the "AMOS Version 4.5 Software Update Documentation", DSS-10000-15. However, briefly-- The 4.5A Software Release contains software to support the following new products:

- \* The Model 1020 and 1021 Winchester disk-based systems. These systems (AM-100 and AM-100/T CPU-based, respectively) contain an 8.5 megabyte Winchester disk drive as the System Device and a 1.2 megabyte floppy disk drive as the backup device. The Winchester drive runs under the control of the AM-420 Hard Disk Controller. (This system alternatively boots from the floppy drive if a System Disk is in the floppy drive when the system is reset.)

The AMOS 4.5A Release contains the driver (420DVR.DVR) and disk certification (CRT420.PRG) programs for the Winchester disk drive. The Release also contains a set of programs that allow you to conveniently perform file-oriented backup from the Winchester to the floppy drive: WINFLP writes files from the Winchester drive to

one or more floppy disks, FLPWIN restores files from one or more floppy disks to the Winchester drive, and FLPDIR allows you to see what files were written to the floppy disk by the WINFLP program. These programs allow you to split one backup onto multiple floppy disks and even allow you to split a single file among more than one floppy disk.

For information on using the Winchester disk-based systems, refer to the "System Operator's Information" section of the AMOS 4.5A Change Page Packet.

- \* The AM-700 Memory Partition Controller (MPC). The Memory Partition Controller provides a form of memory allocation that is easier to use and implement than the bank-switching memory management technique you are already familiar with. Perhaps the most important enhancement offered by the AM-700 is more efficient allocation of memory; the MPC allows you to increase or shrink the size of the monitor by as little as 256 bytes (instead of the 16K bytes allowed by a bank-switching system using 32K-word Piceon boards). For those of you whose special applications make it difficult to keep the monitor below 32K, MPC is especially good news!

Some of the MPC support programs are: JOBSIZ (for allocating memory on an MPC system); MEMPLT (for displaying the current memory map on an MPC system); and, the /S switch of the BITMAP command (for allocating bitmaps in supplemental system memory). For full information on using an MPC system, see the document Memory Management with the Memory Partition Controller in the AMOS 4.5A Change Page Packet.

- \* The AM-960 Status Display. The AM-960 Status Display, currently part of the Model 1021 Winchester disk-based systems, provides a front panel display that the monitor uses to report system activities and problems. For example, a display of 03 indicates that a device error occurred during system bootup. For information on the various two-digit hexadecimal status codes, see the document Software Information for the Users of the AM-960 Status Display in the AMOS 4.5A Change Page Packet.

#### 4.5A Documentation

We have issued change page packets for several of our existing documents to update them for this Release:

AMOS 4.5A Change Page Packet for the "AMOS Version 4.5 Software Update Documentation", DSS-10000-15. This packet updates the existing AMOS Version 4.5 Software Update Documentation, DSS-10000-05, so that it reflects AMOS 4.5A. NOTE: This packet is a supplement to the AMOS 4.5 Software Update Documentation and does not replace it.

Change Page Packet #3 for the "AMOS System Commands Reference Manual", DSS-10000-14. This packet updates the AMOS System Commands Reference Manual by providing revised and new command reference sheets that reflect AMOS Version 4.5A.

Change Page Packet #1 for the "AMOS Monitor Calls Manual", DSS-10000-12. This packet updates the AMOS Monitor Calls Manual by giving more information on some of the new AMOS 4.5 monitor calls discussed in Revision B00 of this manual.

Change Page Packet #1 for the "TXTFMT User's Manual", DSS-10000-13. This packet updates the TXTFMT User's Manual by clarifying some of the command discussions in Revision B00 of that manual.

Change Page Packet #1 for the "AlphaVUE/TXTFMT Training Guide", DSS-10000-16. This packet updates the AlphaVUE/TXTFMT Training Guide with revised information on AMOS Version 4.5 TXTFMT.

### ALPHA BASIC VERSION 4.5

#### The INPUT Statement

The INPUT statement in past versions of AlphaBASIC did not handle inputting of data consistently when you mixed floating point and string data. (That is, sometimes you could separate data with spaces rather than commas and sometimes you had to use commas.) To eliminate ambiguity, AlphaBASIC 4.5 changed the way that the INPUT statement handles input data. You should be aware of this change in case your AlphaBASIC programs relied on the old INPUT statement's quirks. The rules for separating data that you are going to INPUT are the following:

1. When inputting multiple strings, you must separate them with commas.
2. When inputting multiple floating point data, you may separate them either with spaces or commas.

3. Whenever you mix string data and floating point data (that is, you input both floating point and string data with the same INPUT statement-- e.g., INPUT A,A\$,B), you must separate the data with commas.

Improperly separating the data you are inputting may result in the INPUT statement losing part of the data.

The examples below show legal and illegal separation of input data. Each example uses the INPUT and PRINT statements as direct statements in interactive mode. After we enter the INPUT statement, BASIC returns with a ? prompt. At that point we enter the data requested by the INPUT statement. Then we PRINT the variables to see how BASIC interpreted our input.

Note that the first three examples show, respectively: 1) separating floating point data with spaces; 2) separating floating point data with commas; and, 3) separating floating point data with spaces and commas.

The next two examples show separation of string and floating point data with commas.

The last example shows improper data separation-- separation of floating point and string data with spaces.

```
INPUT A,B,C (RET)
? 12 34 56 (RET)
PRINT A,B,C (RET)
12      34      56
```

```
INPUT A,B,C (RET)
? 12,34,56 (RET)
PRINT A,B,C (RET)
12      34      56
```

```
INPUT A,B,C (RET)
? 12 34,56 (RET)
PRINT A,B,C (RET)
12      34      56
```

```
INPUT A$,B$,C$ (RET)
? CUSTOMER,ADDRESS,ZIP (RET)
PRINT A$,B$,C$ (RET)
CUSTOMER      ADDRESS      ZIP
```

```
INPUT A$,B,C$ (RET)
? AGE,34,HEIGHT (RET)
AGE      34      HEIGHT
```

The following shows illegal separation of data:

```

INPUT A,B$,C (RET)
? 256 HELLO 128 (RET)
PRINT A,B$,C (RET)
256      ELL0 128      0

```

### IMPORTANT "SOFTWARE CHANGE NOTICE" CORRECTIONS

#### DSKANA.PRG

In the last issue of the Software Notes, Volume II, #4 (June 1981), we gave a patch correcting a problem with 4.5 DSKANA. That patch contained a typographical error in one of the line numbers (line #1556 should have been #1566). We hope that if you made the patch you spotted the fact that your hash total after the patch did not match the hash total we gave, and that you then did not save your patched version of DSKANA. We are sorry for any inconvenience this error may have caused you.

To find out for sure whether the patch given in last month's issue was made on your system, log into DSK0:[1,4] and get a hash total for DSKANA.PRG:

```

.LOG SYS: (RET)
Logged into SYS:
.DIR DSKANA.PRG/H (RET)

```

If you see the following:

```

DSKANA PRG 9 577-437-636-123 DSK0:[1,4]

```

the faulty patch was made. In this case, perform the following patch which corrects the mistake:

```

.DIR/H DSKANA(RET)
DSKANA PRG 9 577-437-636-123 DSKO:[1,4]
.DDT DSKANA(RET)
PROGRAM BASE IS xxxxxx
PROGRAM SIZE IS 10526

1556/ CALL 7776 BIS R4,@R1 ↓
1560/ INC @R4 SUB 10462,R3(RET)

1566/ CMPB @R2,#57 CALL PC,7776(RET)

^C
.DIR MEM:DSKANA/H(RET)
DSKANA PRG 4438 046-372-325-456 MEM:
.SAVE DSKANA.PRG(RET)
ERASE DSKANA.PRG, SAVE DSKANA.PRG
-

```

However, if you get the following hash total:

```

DSKANA PRG 9 737-727-232-054 DSKO:[1,4]

```

a patch was not made. In that case, perform the patch below:

```

.DIR/H DSKANA(RET)
DSKANA PRG 9 737-727-232-054 DSKO:[1,4]
.DDT DSKANA(RET)
PROGRAM BASE IS xxxxxx
PROGRAM SIZE IS 10526

1566V CMPB @R2,#57 CALL PC,7776 ↓
1572V BNE 1600 117 ↓
1574V CALL 7776 BEQ 1602 ↓
1576V NEG @117(SP) JMP 136 ↓
1602V BNE 1566 0(RET)

^C
.DIR MEM:DSKANA/H(RET)
DSKANA PRG 4438 046-372-325-456 MEM:
.SAVE DSKANA.PRG(RET)
ERASE DSKANA.PRG, SAVE DSKANA.PRG
-

```

As always, you will want to make sure that the hash totals given above agree with your own hash totals, before saving your patched version of DSKANA.

#### SYSTEM.MON

Last month was not a good one for us. The other patch in last month's issue was for SYSTEM.MON to change the version number of your monitor from 4.5 to 4.5(1), indicating that you made the DSKANA patch given in that issue.

The second line of input was given as:

14/ 0      24491    ↓

It should have been:

14/ 0      24461    ↓

Again, we are sorry for any inconvenience this error may have caused you.

#### ACTIV.TDV

In Volume I, Issue #4 of the Software Notes (September 1980), we gave a patch for correcting a problem with the ACTIV.TDV terminal driver. It has just come to our attention that that hash total of the corrected driver was not given correctly. That issue lists the new hash total as 425-435-064-136. The hash total after the patch should be: 425-453-064-136.