

Newsletter

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ALPHA MICRO USERS SOCIETY
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AMUS office hours (for the summer) are from 8:00 a.m. to 4:00 p.m. mountain time. Our overworked Administrative Assistant (that women's libber talk for secretary) is Sharon Greene who is happy to assist you with any question you might have about AMUS, or the Alpha Micro Computer. If she doesn't know the answer to your question, she will try to direct you to someone who does.

The AMUS Newsletter is published monthly by AMUS, 934-B Pearl Street, Boulder, Colorado 80302. Subscription rates are \$10.00 per year. Each member representative receives a one year subscription, the cost of which is included in the annual dues.

Additional copies and back issues of the newsletter may be ordered from Sharon Greene. Bug fixes, articles, letters, reviews of software and information about Alpha Micro applications are happily accepted. Material must be received by the 20th of the month for inclusion in the following month's edition.

Each member is allotted one free page of advertising in the newsletter each year; further advertising is at the rate of \$50.00 per page with a minimum of 1/4 page. Ads must be camera-ready, black and white copy and be accompanied by the appropriate fee. Send all advertising to the editor at 1401 E. Bridge Street, Brighton, CO 80601.

The Alpha Micro Users Society Network is a computer system meant to give members access to information and other Alpha Micro users with similar interests. It consists of an Alpha Micro computer with a Hawk disk drive, a 300 baud modem, a 1200 baud modem, and 160K of memory. AMUS members are given an individual account and password on the Network so that they may receive personal electronic mail. Contact Sharon Greene for your account and password. Many thanks to Alpha Micro Systems of Irvine, California; North America Title Co. of Houston, Texas; and the Byte Shop of Reno, Nevada who have donated equipment and software to the Network.

AMUS has a library of programs which have been donated by members for distribution to other members. Programs are available either through the AMUS Network, or, if you prefer, we can make floppy or Hawk cartridge copies and mail them to you. Orders may be placed through Sharon Greene.

Application to mail at second-class postage rates is pending at Boulder, Colorado 80302.

FROM THE PRESIDENT

I wanted to label this column From the New President this month, but I doubt that the change would be noticed much. We have nearly elected a new board of directors. I say nearly because there is a three-way tie for the last seat on the Board of directors. The results of the elections can be seen on the inside front cover of this Newsletter. In the back of this newsletter is a ballot for you to fill out and mail in. The three board hopefuls; John Linisay, Jim Rea, and Fred Watterson are anxiously awaiting your decision, so please send the ballots in as soon as possible. They must be received no later than June 30, 1981.

We had an excellent AMUS general member's meeting at the Ascot Hotel in Chicago the 4th of May. Members voiced their complaints, met one another, and were treated to a surprise visit by Lloyd Lokka of Alpha Micro who confirmed rumors we had never heard that Alpha Micro plans to make a public offering of stock. More about that later.

In the course of the general meeting members expressed their extreme dissatisfaction with the recent board policy restricting the inclusion of prices in the newsletter. An overwhelming consensus of the membership stated that they felt paid advertising should be allowed to publish anything the advertiser felt like publishing short of advocating the forceful overthrow of the US government. The board of directors has since then had a meeting and concurred with the member's wishes. From the July Newsletter on any member may publish any price, comment, or whatever in their paid advertising space. AMUS will refrain from mentioning prices in articles, monthly columns, or product reviews. We assume that the AMUS members are sophisticated enough to judge for themselves what is a bargain, what is a questionable offering, and what is an honest statement of quality that will be backed up by the advertiser.

AMUS has two conferences scheduled as of now. They are a mid-summer conference held in Chicago the last week of July (see the announcement elsewhere in this newsletter) and a mid-winter conference to be hosted again by Bill Miller in Miami in July of 1982. These are well worth the effort you might have to make to attend. In a few short days you will meet fellow Alpha Micro owners, get a chance to see and use software and hardware you might be interested in, and pick up a wealth of information that can save you time, money, and heartaches. We plan to be there in full force, and welcome your support, ideas, and presence. There is another conference in the works for the summer of '82, but it's a bit early to make any public announcement about where to send your registration fees, so we'll just keep it in mind for the time being.

Another item of high interest at the Member's meeting in Chicago is the plan to bring out an AMUS member directory. AMUS will

publish a directory of all the members who wish to make their presence publicly known in August of this year. In order to be listed in the directory, you MUST fill out the card enclosed in this newsletter and tell us that you wish to be listed. If you do nothing, you will not appear in the directory. Whether or not you wish to be included in the directory, please fill out the bottom of the card telling us the name of your dealer. We have not been able to get a complete list of dealers from Alpha Micro, and there are many requests for this list, so we plan to collect the dealer names from our members and include the list of dealers in the upcoming directory. There's also a place on the card to put a comment or two in about your dealer. We won't print that, so feel free to speak your mind.

Alpha Microsystems had a very nice booth at the NCC this year with their 8+ Megabyte Winchester running. The Winchester is supposed to be available in July. They even made it up to the main floor! Much better than last year when they had a booth that was out in Kansas and had eight people in a 10 X 10 booth.

The Omnisoft group had a very nice hospitality suite at the Midland Hotel during the NCC. It was refreshing to be able to go somewhere and sit down to have someone show you a program or a piece of hardware. On the floor of the NCC there is never enough time to actually try something out. In a hospitality suite you can ask some pertinent questions and even get some replies. Angusglow of England had COBOL on display, CompuWest had SYNDEX and FORTHOUGHT there, Jim Rea showed off SuperVUE, Bob Salita had his APL and FORTRAN compilers on line and of course DRAVAC had AND1, TSASS, and their Menu generating programs there running on a 30 Megabyte Priam Winchester which Mike Lewis is now marketing. Lots of people, and lots of excitement.

Omnisoft held a meeting to answer questions about its intent (promoting software for its members by doing things like having a hospitality suite at conventions) and providing security for software on the Alpha Micro. Omnisoft has written up specifications for how to use a hardware lock to provide security. The Omnilock board (available from DRAVAC) meets these specifications and is available to all Alpha

Micro software developers regardless of whether or not they are Omnisoft members. Omnisoft membership information can be obtained from the president of Omnisoft, Richard Moule. Richard can be contacted through CompuWest in L.A., (213) 557-1770

2. The monitor maintains a terminal status word for each terminal. The monitor calls manual says bits 0, 1, 2, 4, 7, 9, 10 are defined. Bit 7 is the output in progress flag. It is a no-no to set it:

```
save terminal status word
      JOBGET RO,JOBTRM
      MOV     CRO,-(SP)
```

later restore terminal status word after zeroing nonuser flags

```
      JOBGET RO,JOBTRM
MSK:  AND     #^B10000010111,CSP
      MOV     (SP)+,CRO
```

If the line labelled MSK is omitted my system hangs; included, I get what I expected. It zeroes everything except the image mode, echo, escape, lower case and local flags. These are restored to the previous condition.

3. Vue is neat. This letter is written on a TI 810 on stock tab because I would rather write it in Vue than on letterhead using a regular typewriter.

AlphaVue 2.4 has a minor bug (or the documentation does). If you use control P to move a block of code and you just want to move one line hit ^P once on that line and you can move it down as expected. If you try to move it up the system hangs. If you hit ^P twice on the same line it works ok.

Steven Stallman mentioned the COLUMN command in the April Newsletter. It may not have been mentioned in the documentation because if you are editing a file larger than one screen and scroll down off the screen with this command on, Vue displays blank lines rather than the next lines of the file. You get a similar result scrolling up off the screen. No harm is actually done. Escape twice and the screen is properly displayed. But it is disconcerting the first time you seem to be losing your file.

4. Various Assembler Language subroutines like BASORT and SERCH can access files opened in BASIC if they are only passed the BASIC channel number. How does one write an Assembler routine to access these files?

5. Any easy way to use the BASIC subroutines, especially BASORT and SERCH, from Pascal? There may be a problem with SERCH since Pascal defines the first record as 0 but SERCH gets upset if you are not using FILEBASE 1.

Keep up the good work!

B U G L I S T #17

Following is Bob Fowler's bug list. Thank you Bob, et al.

Version 4.5 has been released to dealers for testing and should be out soon for the rest of us. I understand it has some neat things in Basic, like letting you call outside source files.

The new Winchester drive and 128k boards are also released - will get more from A/M for the next newsletter.

AMUS is going to spend this next year focusing on providing better services to its members, getting more members, and gaining better relations with its local chapters and with Alpha Micro. We welcome your ideas and energy, and would be happy to hear from you if you have any ideas about how AMUs can do its job better. We would like to present an open invitation to the folks at Alpha Micro to contact us any time they would like AMUS to announce new products, list updates on manuals or AMOS, etc. We try, but we just can't call every person at Alpha Micro asking for tidbits of information each month. As AMUS members, you can help out by sending us any information you have that you think would be of interest that should appear in the newsletter. We especially need articles about the ways in which you are putting your Alpha Micro to use.

Steve Elliott

A T T E N T I O N

We had a three-way tie for the fifth member of the Board. Therefore, we are asking all members to please vote for one of the following three people, and send your vote to AMUS, Sharon Greene, 934 Pearl, Suite B, Boulder, Colorado 80302.

Fred Watterson
Associated Computer Consultants
Columbia, MO

John Lindsay
David A. Bell, Inc.
Tarzaza, CA

Jim Rea
Micro Concepts
Fullerton, CA

Please get your vote in before July 1, 1981.

Three more sub-releases since the last buglist :

- 4.4B(3) --- More patches to 4.4B given in Software Notes #6 (12/31/80)
Programs affected were : BASIC (fixes interactive mode)
- 4.4B(4) --- More patches to 4.4B given in Software Notes II-1 (02/09/81)
Programs affected were : VUE(helps long-line problem),
LPR.DVR,SPOOL.SBR(doesn't destroy variable),XMOUNT.SBR(label)
- 4.4B(5) --- More patches to 4.4B given in Software Notes II-2 (03/04/81)
Programs affected were : RPN.FXO (a FIX overlay)
- 4.5 --- "Eminent" but still not released at this time.

The first AMUS convention. This was held 1981 Jan 18-24 in Miami, Florida. Thanks Bill Miller & Associates for all your planning & running around. Steve Elliott gave a pretty good summary of what happened in the March AMUS. Just a couple of additional points. Geographical breakdown of participants
AK(1),AL(3),CA(17),CN(1),CO(5),DC(3),FL(47),ID(1),IL(8),IN(3),LA(3),
MD(4),MI(4),MN(3),MO(1),NC(2),NJ(3),NV(2),NY(6),PA(3),TN(2),TX(5),
VA(3),WI(2), England(5), France(2), Colombia(1), Bahamas(2).
And second, there was indeed very little spare time ! Speakers were all OVER-prepared and ready to go overtime (in fact, many did !) Great !

I wish to express my appreciation to Jeff Kreider for the follow-up he is giving to the SPR's; he is "doing what AM said they would do" with SPRs, and doing it well. Bob Currier, AMUS, users, dealers, please take note. In my particular case, he is processing several dozen SPR's per buglist, and I am receiving replies, references, "will-be-done"s, "you goofed"s, etc

The last 2 AMUS Newsletters have incorrect volume & # designations.
Mar 1981 is Vol 4 #3 (not Vol 3 #2); Apr 1981 is Vol 4 #4 (not Vol 3 #4).

Finally, I have observed the increasing number of local AMUS chapters, and their potential impact(s) on the information transfer which is AMUS. To be specific, local chapters vastly increase local information exchange, but often do so at the expense of global dissemination of the information. I know of at least one instance where an article in an AMUS newsletter from a local chapter outside of our own area saved us a lot of wasted time (the Hawk 4.4 DSKCPY problem reported in SC/AMUS). What about others ? My own local area is forming a local chapter, and so I myself will soon be dealing with the same phenomenon. May I offer some guidelines for us all ?

- (a) AMUS could get the ball rolling by setting aside 1 page per newsletter for information on all known local chapters (maybe 1/2 page initially). Listed below is everything I know concerning all local chapters. I believe the list is complete for the USA.
- (b) When someone wishes to organize a local chapter, send AMUS a letter. Organizer : keep the letter short & insure its inclusion on the 1 page. AMUS : give priority to these letters to improve their timeliness.
- (c) Local chapters : send a copy of all publications, announcements, dues, meeting dates to AMUS and to ALL OTHER CURRENTLY KNOWN LOCAL CHAPTERS. Until this dissemination is agreed upon & automatic, local chapters can write/phone the other chapters and (if necessary) buy "subscriptions".
- (d) Ideally, the Local Chapter page in central AMUS newsletter will change very little, like the inside front cover. Hence, easy maintenance.

By following the above guidelines, central AMUS will do very little, and the (initial) burden of contacts will be borne solely by the forming chapter. Once this system is in effect, even this initial "burden" will be slight.

Bob Fowler / A. I. S. / 800 San Antonio Ave / Palo Alto, CA 94043

- (1) NY/AMUS - "AM-100 User's Group" - First Newsletter was on Jul 1978.

Contact : Lefford F Lowden / 616 Long Pond Road / Rochester, NY 14612.
Phone : [changed since his last newsletter]
A one-man operation from the start. Lowden disassembles, makes buglists, fixes, prints, publishes, mails. Superb newsletters (Jul 78 to Jun 80). Since Jun 1980 few folks have been able to contact him ("give us more!"), but he is evidently up and running again, gradually catching up on his newsletters without a break (Jul/Aug 1980 issues arrived here in March). All those who sent checks, please allow them to clear.
If you can locate past issues, look 'em over; they are still very useful. I would like to encourage 'efford to reprint his old issues.

- (2) D./AMUS - [no publications as of Jan 1981]

Contact . J Gorely / 903 C Street NE / Washington, DC 20002
I met a DC/AMUS member at the Miami convention, and verified this info.

- (3) LA/AMUS - "SC/AMUS"

Contact : Bob Alex / 17632 Fiesta Way / Santa Ana, CA 92705
Phone : 714-544-8388
Meetings : Fullerton Sav. & Loan / 12860 Euclid / Garden Grove, CA 92643
2nd Sunday of each month (Holidays : 3rd Sunday) at 1-5 PM
Dues : \$10 initially + \$12 per year.
Newsletters each month since Jan 1980. Only have 2 so far.
Newsletter rates : \$5/year, \$0.50/issue, free to members.
Back issues : \$0.25/issue to members.

- (4) SF/AMUS - "FAMUS" - First meeting was in Nov 1980

Contact : George Hoover / 2021 Francisco Blvd / San Rafael, CA 94901
Phone : 415-456-2712
Meetings : Bechtel Power Corp / 50 Beale Street / San Francisco, CA
1st Thursday of each month (Holidays : 2nd Thursday) 7 PM
Note : both the contact (Hoover) & meeting place/time are temporary
Tentative dues : \$20/half-year
No newsletters yet. Will inform AMUS if & when they appear, as this is my own area's local chapter, and I attend the meetings.

- (5) CH/AMUS - [not formed yet] - being organized by Data Domain of Schaumburg

Contact : Jeff Fisher / 1612 E Algonquin Road / Schaumburg, IL 60195
Phone : 312-397-8700
Note : I talked with Jeff at Miami convention about this.

AMOS BUGS (Version 4.4B)

(1) VUE --- yet more detail on the GLOBAL/REPLACE/SEARCH bugs

This bug was reported in buglist #14, bug #22, and dates back to at least 4.2. Also see additional GLOBAL bugs in Buglist #16, bug #9. We think we now have all the details on this bug(s). A "submatch" is an incomplete match (eg, if we search for "ABC", the submatch "AB" would be found within the text string "ABD". For all 3 VUE search commands, a match will never be found if it immediately follows a submatch, because VUE skips over 1 additional character after the submatch. Thus, "ABC" will be found within text "AB ABC" but not within "ABABC". A slightly different bug occurs in the REPLACE command; if you type a "Y" response, the same problem occurs as explained above. If you type a "N" response, however, then instead of VUE skipping over just 1 extra character, it skips over as many characters as are in the replace string. Thus, if you put "AAAAAAAAA" into a file, and REPLACE "A" with "BBB", and type all "N" responses, VUE will stop at the 1st,5th,9th positions. [thanks, Lai]

(2) VUE --- REPLACE doesn't always finish up with same display parameters

An additional inconsistency : after all matches have been found, and you are in command mode, an escape will display the last screen exactly as it appeared before if a SEARCH was done, but will SOMETIMES (!) display the last match line at the top line if a REPLACE was done.

(3) VUE --- problems with nulls (hex 00) also true for hex 80 characters

Buglist #15 reported problems when VUEing files that have nulls in them. VUE sometimes deletes all lines following a null, but not in all cases. The same thing also happens with hex 80 characters (null + 128 bit).

(4) BASIC --- ON ERROR GOTO within Error routine gives erroneous error

According to the BASIC manual, the following program should be legit :

```

10 ON ERROR GOTO 40      ! trap any errors
20 X=X/0                ! causes branch to error routine
30 END
40 ON ERROR GOTO 0      ! causes original AMOS error to display
50 RESUME               ! delete this & same thing happens

```

What actually happens is that BASIC displays the following :

```

?Error during error trapping
Divide by zero in line 40
The second error message is expected, but the first is not correct !
Also, "in line 40" rather than "in line 20" is exasperating !

```

(5) COMPIL --- another bizarre problem case

COMPIL the following program :

```

10 MAP1 A(2,2),B,1
20 IF(A(1)=0) THEN B=0      ! note subscript disagreement
30 IF(A(1)=0) THEN B=0
40 GO TO C                 ! note missing label
50 END

```

First, the subscript disagreement is not reported. Second, the system hangs up for about 2 minutes during COMPIL. Third, the label problem is detected, but it is reported (incorrectly) as occurring on line 50. Delete line 20 & COMPIL won't hang up, but gives same error message. Or insert a line "45 C:", COMPIL still hangs up and gives wrong message. Note that COMPIL <prog>/T, reports the problem during pass 1 (useful).

(6) COMPIL --- another example

The following program also does strange things when COMPIL'ed :

```

10 MAP1 A(2),F
20 PRINT A()

```

It gives "undefined line number or label" on line 10, and gives "illegal [nothing]" on line 20. Again, COMPIL/T is quite helpful here.

(7) PRINT.SBR --- a fix for the CONAME file problem

Buglist #15 reported problems with PRINT; further report on one problem : CONAME file specs > 21 characters will destroy your memory map !

We have dis-assembled PRINT.SBR and have a DDT fix for this problem :

```

202/ CLR B 2732      CLR B 2740 <cr>
216/ SET B 2732      SET B 2740 <cr>
374/ TST B 2732      TST B 2740 <cr>
2734/                0          <lf>
2736/                0          <lf>
2740/                0          <cr>

```

This is a bug only for users who have implemented PPNs in accounting. Hash codes : 155-760-564-361 (before) 705-677-006-074 (after fix).

If you do NOT want XCALL PRINT to set your print string to a null string after printing, apply also this DDT fix (this is not really a bug) :

```

326/ CLR B @20(R3)   BR 332
[thanks, Dave S]

```

(8) SPOOL.SBR --- a better fix from Peter (FORTRAN 77) Jacobson

Buglist #16 had an 8-line fix for this bug. A 2-line fix from Peter is :

```

DDT PRINT.SBR
54/  MOV B @0(SP),R0  MOV B @0(SP),-(R5)
112/ MOV B R0,@(SP)+ MOV B (R5)+,@(SP)+

```

Addendum : Peter sent this to AM. Exactly the same fix appeared 2 weeks later in Software Notes (no credits given).

(9) NOECHO.SBR & ECHO.SBR --- one of these sets upper case conversion flag

Type in the following program and run it :

```

10 INPUT A$ : PRINT A$      ! input "a" , "a" printed
20 XCALL NOECHO : XCALL ECHO
30 INPUT A$ : PRINT A$      ! input "a" , "A" printed

```

Before the XCALLs, things are normal. Afterwards, all inputted characters are converted to upper case.

[thanks, Earl Hunt]

(10) SERCH.SBR --- search mode 6 not documented

There are 5 modes documented for the SERCH subroutine in the Accounting System. Mode 6 also exists. It performs a binary search, then goes sequential back to find the first occurrence of the key. This is useful when there are duplicate (but sorted) keys. [thanks, Adrian Charron]

(11) FLOCK.SBR --- docs, page 7, lines 15 & 28, "ommitted" should be "omitted"

(12) FIX --- docs, Page vi, line 12. "page up...control-E" should be control-R

(13) SEND --- mis-spelled error message

Type "SEND" and you will see "? Job specificaion error".

(14) ISAM --- bug ?

The following was passed on to me, and I have not personally checked it. If AM wishes to ask any questions, please call Roy Cook at 208-664-3034, write Panhandle Data Processing/2304 Mullan Ave/Coeur d'Alene, ID 83814. An ISAM sequential read (#2) thru file doesn't end with error #38 (ie, "last record") if the last record is at the end of an index block. When re-creating this problem, enter records BACKWARDS so that the index block doesn't split during entry (ISAM always splits an index block when an entry goes at the end of the current index block).
[thanks, Roy Cook]

(15) 210DVR ---- bug in stalling method after head load

The 4.4 210DVR.DVR is subject to "lockup" after each head load in a multi-user environment (for 65535 clock ticks). AM is aware of this problem (dealers see Software Notes for Dec 1980). AM's advice to "use the 4.3 driver" doesn't help (it has same problem). Here is a DDT fix that should solve the problem (use on 4.4 210DVR.DVR).

```
DDT 210DVR.DVR
1260/  ADDI 4,R1      MOV #4,-(SP) <lf>
1264/  SVCA 22       BR 1520    <cr>
1520/  CMP @#122,R1  <lf>
1524/  BNE 1520      <lf>
1526/  MOV @#122,R1  <lf>
1532/  DEC @SP       <lf>
1534/  BNE 1520      <lf>
1536/  IW2 SP       <lf>
1540/  BR 1270      <lf>
```

Hash codes. Old : 547-727-063-500 , New : 542-325-467-501
Remember to use FIXDVR afterwards, COPY STD.DVR=<name>.DVR, re-boot.
AM please note : 4.4 200DVR.DVR has the same problem, though fewer users.

After each new drive select and after each seek (write or read), a 4 clock-tick stall is being made to allow the head load to settle down.

[current code]	[suggested change]
MOV @#TIME,R1	MOV @#TIME,R1
ADDI 4,R1	PUSH #4
WAIT: CMP @#TIME,R1	WAIT: CMP @#TIME,R1
BNE WAIT	BNE WAIT
	MOV @#TIME,R1
	DEC @SP
	BNE WAIT
	POP

If another job happens to interrupt this process in such a way that the critical 4th clock tick never gets checked, the loop will have to go through 65536 more clock ticks (or 65536n !) before it stops
[thanks, Gerry]

(16) AM100T.IDV --- bug ?

The following was passed on to me, and I have not checked it out. Hence, I cannot vouch for its validity, but please (AM) check it out. AM100T.MAC appears to have a mistake in the line preceeding label INI.1 "MOV #37712,R1" should read "MOV #37716,R1", according to the instructions given in the AM-100T Installation Manual.
[thanks, ?]

(1) BASIC --- objection to handling of automatic variable conversions

All of the ways in which BASIC automatically converts between modes and evaluates functions (arithmetic, logical, trig, string, USING) occur in a very orderly and logical way, with one very important exception. I find it HIGHLY objectionable that BASIC "expects" certain modes so absolutely, that this takes priority over both the "=" and "()" symbols. It means that parenthesis do NOT take highest precedence, which is just plain obscene in the eyes of all that it decent in the software world. To be graphic : A\$(1+1) comes out as "11", and A=(1+1) comes out as 2 ! This means that what goes on inside of two parenthesis is dependent on what happens OUTSIDE of the parenthesis, or even across the "=" sign !! It is a highly unlikely that this will ever be changed because of the Alpha Accounting package.
[thanks, all 3 of us programmers]

(2) BASIC --- evaluate A\$[1,0] as an empty string rather than as A\$[1,1]

All substrings of form A\$[n,n-1] evaluate to an empty string except A\$[1,0], which BASIC evaluates as the first character of A\$. This gets in the way of at least one particular program problem, namely "given a string A\$, remove character #N from it". If the above suggestion were implemented, the program would look thus :
A\$=A\$[1,N-1]+A\$[N+1,LEN(A\$)] ! CURRENTLY FAILS FOR N=1
Evidently, BASIC currently evaluates A\$[a,b] for non-negative a,b thus :
(1) a' = 1 max a b' = (1 max b) min LEN(A\$)
(2) IF a'>b' THEN A\$[a,b]=empty ELSE A\$[a,b]=substring
What I am suggesting can be implemented by simply reversing (1) and (2).

(3) VUE --- allow full 256-character set in CONTROL mode

VUE now allows 251 ASCII characters in CONTROL=TRUE mode. It disallows rub(127), return(13), and line feed(10) (for ease of implementation ?). In addition, the problems with null (00) and high-bit null(128) discussed in other bug reports (above) effectively exclude both of these bytes. VUE currently throws away all line feeds when reading in a file, and adds a line feed to each carriage return when writing out a finished file. It seems that the logic is available to VUE to allow all 256 characters. This would allow full binary editing, at the expense of some editing room (because line feeds would now have to be stored in memory). The losers would be users who want CONTROL TRUE without storing line feeds (who ?).

(4) BASORT.SBR --- XCALL BASORT parameters may not be B format

BASORT documentation says that BASORT parameters may be S or F format, but it should CLEARLY warn against using B format variables. It took us several hours to track this down. It usually crashes AMOS.
[thanks, Lai]

(5) TXTFMT --- change order of underline characters to improve TYPE output

Underlining is accomplished by using a sequence of 3 ASCII characters : a character to be underlined, a back space, then the underline. If this sequence were reversed (underline, back space, character), it would not change the printed result, but would change a crt TYPE-out to show the actual characters underlined (rather than the underlines). This may be preferred by users who use TYPE before actually printing.
[thanks, Jan]

(6) ERASE --- display consequences first ?

This is a cute feature on the Durango system. ERASE *.* will cause an immediate display of all files that will actually be deleted (like DIR), and then ask the user to verify if this is what he really wants (Y or N). On a hard-disk system this might not always be desirable (allow ^C), but the idea is well-worth considering, don't you think ? Not hard to implement, it seems. How about using "SET WARN/NOWARN". [thanks, Alan]

(7) PRINT --- implement /Q option

Since PRINT uses SCNWLD just like COPY/ERASE/RENAME, this should be easy. The situations where it is used would be similiar to the other three. [thanks, ?]

(8) DSKANA --- PPNs should ignore SET HEX

If SET HEX is entered prior to DSKANA, the display will show PPNs in hex. This is contrary to the general philosophy that PPNs are always in octal. [thanks, ?]

(9) EDIT --- allow search for control characters

There are still cases where EDIT is preferable over VUE, so please (Alpha Micro) don't think that it isn't worth revising. I would like to be able to search for control characters in EDIT. VUE currently has problems when nulls exist in the middle of a text, and the easiest solution is to use EDIT to remove them before VUEing. This is an infrequent need, & thus befits EDIT's role as a "system tool". Use the syntax "nS\$", analogous to the syntax "nI\$" for insertion.

(10) Queue system --- check if full

On QADD & QINS monitor calls, check for queue full and if so then put requesting job to sleep until ready.

(11) DSKPAK --- 3 suggestions

- (a) DSKPAK does not appear to check for too many files (out of memory). This check would be easy to implement.
- (b) DSKPAK could be speeded up if some attempt were made to fill up the ever-increasing "gap" that DSKPAK builds up as it goes along. This gap causes ever-increasing seek times to pack the files; every block packed requires 2 seeks across the entire gap (!) After each file is packed, a search should be made among remaining unpacked files to see if someone near the end will fill up the gap. An easy-to-implement improvement would be this : after each pack, check to see if the lowest unpacked random file(s) fit into the current gap. If so, stuff it in. Repeat for the new lowest file.
- (c) A whole new approach to DSKPAK would be to keep an additional table of random files, sorted by size; this table would then be used to decide who would most efficiently be packed into which gap. However, this would require substantial coding + more storage room.

(13) BADBLK --- allow global default

"BADBLK devn:" is allowed now. I suggest "BADBLK" or "BADBLK ALL:" to display all bad track/block tables currently mounted.

(1) BASIC --- FILEBASE n causes limit of 65536-n on all "real" record numbers

Define "real" record number = record number - FILEBASE.
If no FILEBASE or FILEBASE 0 is used, real record numbers may go to 2**39. If FILEBASE n is used (n > 0) then real record numbers must be < 65536-n. This happens because FILEBASE calculations are done in B2 format, whereas record numbers themselves are stored in F6 format. [thanks, Adrian]

(2) ANYCN.SBR --- no parameters makes system "sick" or crash

"XCALL ANYCN" in a BASIC program is not checked by ANYCN; it tries to return a value for the missing parameter & clobbers something else. [thanks, ?]

(3) XLOCK.SBR --- parameters must be on word boundaries

XLOCK parameters must be in B2 format (documented) and on word boundaries (undocumented). The following will cause problems :

```
MAP1 X
MAP2 FILLER,S,1
MAP2 MODE,B,2
MAP2 LOCK1,B,2
MAP2 LOCK2,B,2
XCALL XLOCK, MODE,LOCK1,LOCK2
```

[thanks, ?]

(4) SORT.PRG --- new features & error messages apparently undocumented

Documentation on SORT hasn't changed since 4.3, but the massive changes in the 4.4 sorting programs evidently introduced new SORT functions. You can now type "SORT <random file>", and two additional questions will be asked, namely, the "Record Count" for the file, and the "Key Type" for each of the sort keys. In addition, there are 17 new error messages that can appear. To see them all, type :

```
LOG SYS:
DUMP SORT
```

[thanks, Tina]

(5) CMD and DO file :T,:R,:S commands --- must be upper case

A ":t" command will do nothing in a DO or CMD; must be upper case ":T". Try bringing up VUE from a command file with no ":T" in it (or a ":t") & see what happens ! [thanks, ?]

(6) WAIT --- waits until TIW, SLP, or EXW state (but can be changed)

There are some programs that will sleep for short periods of time. If you WAIT for such a program to finish in another job, then WAIT will exit when the other job starts to SLEEP. To remedy this, COPY WAIT into (eg) WAIT2, and use DDT to change the states being tested :

```
DDT WAIT2
46/ BIT #52,@R0 BIT #<bits>,@R0
```

where 52 = 40(external wait) + 10(sleep) + 2(terminal input wait state) and <bits> is the set of states that you want WAIT2 to wait for. The various state bits are listed in SYS.MAC (they are JOBSTS bits). [thanks, Ray & Bill]

(7) PASCAL --- beware of out-of-bound integers

If I is defined as INTEGER and 2*I appears in an expression, then the result of 2*I is also an integer. Simple ? Almost. If 16384 < I < 32768, then I will be positive & 2*I will be negative. AlphaPASCAL gives no overflow message; it uses 2*I as a 2's complement (negative) signed integer. Hence, faster in most cases, but the user is now responsible for range checking.
[thanks , Lai]

(8) FIX --- "NOSVC T" not documented

This is a cutie. FIX normally executes a monitor call with each return. But if you enter "NOSVC T" in command mode, then you can step through the individual instructions in each monitor call. Be careful though ! Things such as (un)locks and sleeps can get you into trouble in realtime.
[thanks, Peter Jacobson]

(9) Bit test Macros BRON, BROFF, JMPON, JMPOFF --- a good idea !

I don't know about you, but I can never remember the relation between the condition code settings after a BIT and the subsequent BNE/BEQ. My solution was to put a note on the wall : BEQ for 0 bit, BNE for 1 bit. Better solution : use 4 macro definitions (eg, DEFINE BRON TAG=BNE TAG).
[thanks, John Salita]

(10) FIXDVR --- beware of what you name your new driver !

An interesting subtlety here. Let's say you are logged into an STD disk (peripheral to Hawk or Phoenix) and the STD.DVR driver is not resident in system or user memory. Then you use FIXDVR to create an STD driver for a different piece of hardware. After you leave FIXDVR, the driver STD will be left in memory. If you now execute a SAVE *, AMOS will look for STD.DVR in memory, find it (the wrong one !) and then crash. The moral : always name new drivers with 6-letter names, save to disk, and then copy them into the corresponding 3-letter file name when needed.
[thanks, Ira]

(11) 200DVR.DVR --- some embarrassing notes

The 200DVR in 4.4 removed the JLOCK & JUNLCK that were present in 4.3; this was the only change, and it was evidently a mistake. The DDT fixes to 4.4 200DVR that came out in Software Notes of July 1980 did 3 things :

- (a) In effect, restored the JLOCK & JONLCK [a messy patch ...]
- (b) changed the error message "record" to "block" [ok]
- (c) corrected an old bug; during device error messages, a default (login) device name was not being displayed correctly. [read on]

It turns out that (c) was not coded correctly, and is fixed thusly :

```
DDT 200DVR.DVR
734/ TST @R0      TST @R1
```

The same code in 210DVR.DVR was done correctly, and need not be fixed.

(12) SCNWLD.SYS missing on DSK0 --- a good test problem for system programmers

Rename SCNWLD.SYS, and then try to restore it sometime. Good luck !
Can't use : RENAME,COPY,BASIC to copy,VUE to UNYANK,LOAD to rename.
Answer at end of this gulist.

(13) Sales Tax --- SF counties only, but the method is probably general

The following is the 6.5% sales tax schedule for the counties near SF :

```
10      TAX=0
20 IF CENTS > 10 THEN TAX=INT((CENTS*10+114)/158)
30 IF CENTS > 100 THEN TAX=INT((CENTS*13+100)/200)
```

This same algorithm (with different constants within the INT expression) has applied to all California taxes I have seen over the last 10 years. All constants are easy to derive except those in line 20 (ie 10,114,158). Line 20 computes tax on purchases between \$.10 and \$1, which are higher.

(14) AM-210 Alignment --- should always be checked by dealers

A dealer outside the LA area had many troubles with 4 CDC floppy drives. They would do COPYs okay, but would have troubles on DSKCPYs, sometimes trashing BOTH disks during the DSKCPY, even if write protected !! As it turned out, all were significantly out of alignment. Our local tech expert says that dealers should NOT assume that CDC drives are properly aligned, especially after being shipped very far. There is only 1 alignment on the drive ("index-to-burst" alignment). This alignment is made on the AM-210 board (the only pot on the board), and requires a dual trace oscilloscope.
[thanks, Gerry & Jerry]

(15) Diablo --- some notes on Diablo problems

- (a) A Diablo spooler appears to die when busy and another job is running. A customer of ours has this problem, and everything runs fine as long as no one (including the person who typed PRINT) does anything until the Diablo finishes printing.
- (b) Pat Seitsinger had (has?) Diablo problems which still occur. See AMUS Newsletters for Oct 1980 (page 3) and Feb 1981 (near end). Pat --- please publish your Diablo troubleshooting checklist ! *NEED MOUNT!*
- (c) Earl Hunt COMPIL's a 2-line BASIC program which crashes the spooler as soon as the COMPIL program exits (related to COMPIL slow exit ?). Earl Hunt's dealer also appears to have the same problem. Neither of the DDT fixes made to 4.4B BASIC and COMPIL via Software Notes appear to apply.

(16) 3 files on SYSTEM.MON --- call up the AMUS computer and get them

These first appeared in Lowden's (NY) AMUS Newsletter as a 5-part series. They were written by Peter Jacobson, and he has donated them to AMUS. They are named SYSMON.TXT, TRMFIL.TXT, EXEC.TXT.

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| 6) Critical Path Method (CPM) | 19) Present Value of a Tax Deduction |
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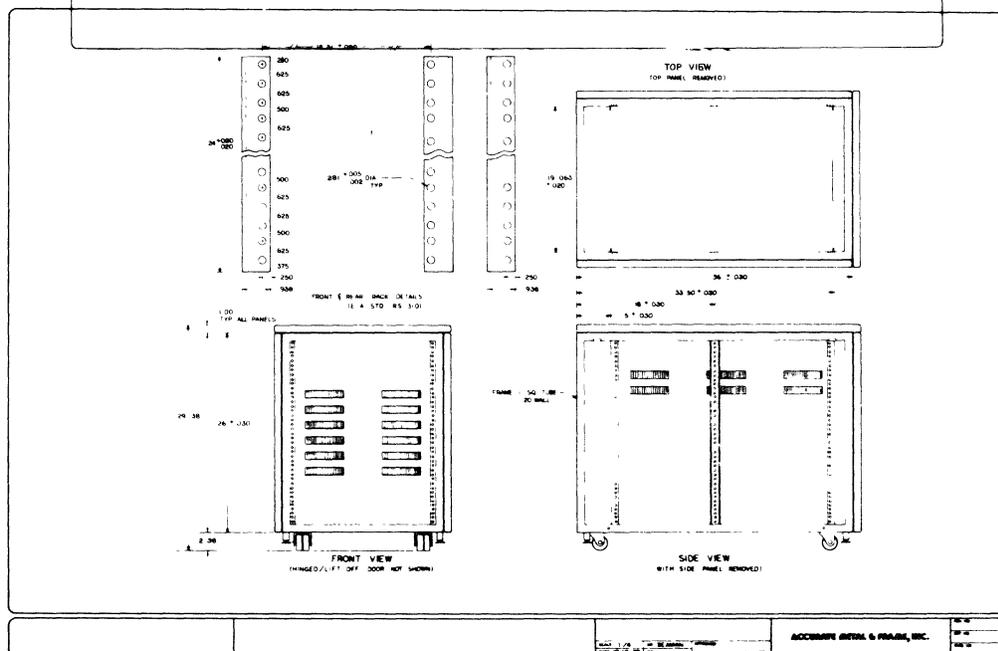
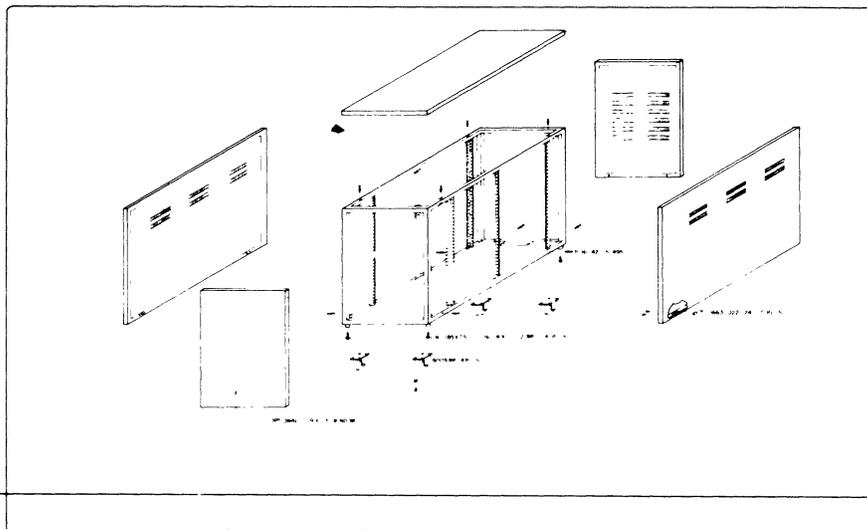
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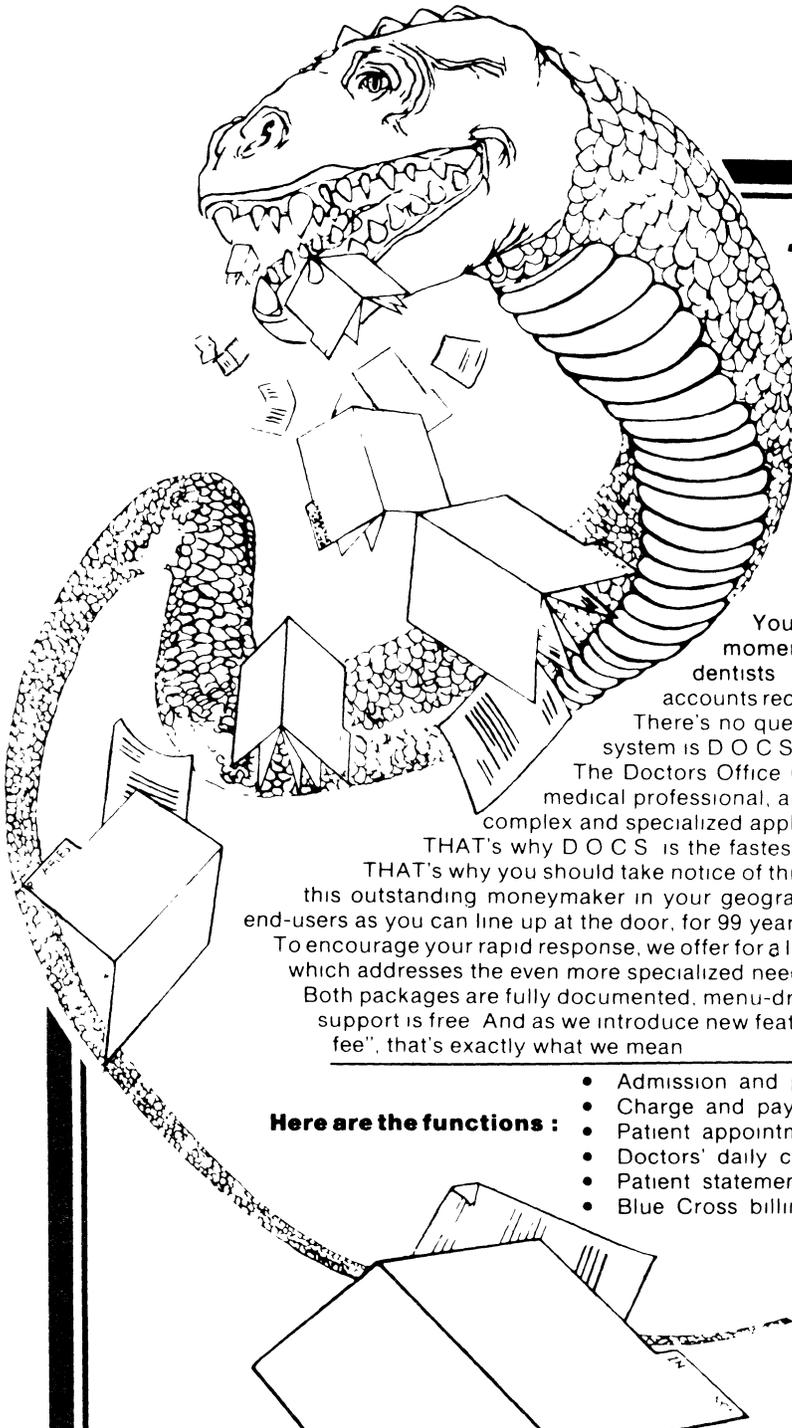
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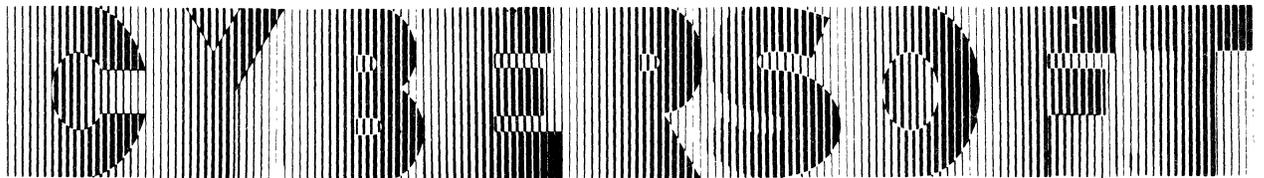
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```

/Variables
ALABOR=6.75
#RIVET=0.40
/
/Calculations
3=1*2
/
ESTIMATE FOR: Alpha Job #234                                DATE: 1/1/81
  
```

QTY	Description	Unit Price	Ext. Price.
/FIELDS			
[1]		[2]	[3]
30	Ft.	4" Flat steel	1.95
18	ea	#8 Rivets	@RIVET
2	hr	Assembly Labor	@ALABOR
Subtotal			S****
Sales Tax			.0675S****
GRAND TOTAL			T****

Exiting VUE with a G would then process this file and produce the following output:

```

ESTIMATE FOR: Alpha Job #234                                DATE: 1/1/81
  
```

QTY	Description	Unit Price	Ext Price
30	Ft	4" Flat steel	1.95
18	ea	#Flat steel	.40
2	hr	Assembly Labor	6.75
Subtotal			58.70
Sales Tax			3.96
GRAND TOTAL			62.66

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Visual screen building: All screen images are entered into screen table files through a screen building program that is easy to learn and use. Text strings can be entered, and then moved anywhere by moving the cursor with use of a specially designated "keypad". During editing the screen image always appears as it would if accessed by an AlphaBASIC program.

Full input/output control: A text string can be specified as permanent, as a status message, or as an input specification. Activated inputs turn bright for easy identification. Multiple text lines can be used for each input. Status messages appear at the bottom of the screen and can be followed by an input field. Full formatted input is used everywhere; overwrite is impossible!

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Features:

Only changed files are backed up: A complete device scan determines which files have changed since the last backup. Only those files are backed up. A backup interrupted with a Control-C can later be resumed without backing up the same files again!

Easy file restore: When files are backed up, their location and current date are stored. When a file is restored, the exact location is already known; no fumbling with disks to find out where it is! **back/it** can provide an inexpensive system for keeping permanent copies of all files. Further, if **back/it** finds a file, that file has been backed up and can be erased.

All output mediums are identified: Whenever a new output medium is used, it is checked to see if it has been used before. If not, it is initialized uniquely for backups, and is assigned a number. Then **back/it** can assure that the correct output medium is used!

No file is too large: If a file is backed up that is larger than space available on the output medium, as much as possible will be written to the current medium, then a new medium will be requested.

Screen-oriented: For easy use, the backup and restoration procedures are fully screen-oriented. The status of the backup is always fully displayed.

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back/it: Complete package includes manual and software on floppy diskette. Software available on 5 or 15 megabyte hard disk pack. Manual available on money-back guarantee. Package runs on Alpha Micro AM-100* computer with 32K user memory and mass storage unit.

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Innovative computer software artists

proof/it: A Spelling Error Detection/Correction Package

General Description:

proof/ittm is a set of programs that compares all words in a text file with those in one or more dictionaries. If a word is not found in any specified dictionary, the user is asked if the word is correctly spelled. If it is, the word can be added automatically to a selected dictionary. If it is not, a correctly spelled word can be directly substituted for the incorrectly spelled word in the text file and placed in a dictionary. TXTFMT and form/ittm commands are ignored.

Features:

Screen-oriented: The active line of text is always displayed and the word being compared is accented in bright mode. If a comparison fails, the terminal bell will sound, and a status line appears in bright mode asking if the word is spelled correctly. Options can then be selected from the menu that is always present on the top half of the screen.

Uses multiple dictionaries: Six different dictionaries can be used with one text file. A master dictionary is provided (its size depends on the storage medium, see below). Secondary dictionaries can contain specialized words. A secondary dictionary can be the master dictionary (e.g. a dictionary of names and places might be used exclusively in proofing a mailing list). File locking allows simultaneous use of common dictionaries by multiple users. Dictionary words are stored in an exceptionally compact form and accessed via WAMtm (Word Access Method), an extremely high speed procedure written in MACRO assembler specifically for proof/it.

Corrects a text file: Correctly spelled words can be substituted directly into the text file. A further edit is not required to change misspelled words!

Expands dictionaries automatically: Any identified word can be added to a dictionary at any time automatically. Any further occurrences of this word will be recognized as correctly spelled.

Complete maintenance program: This program is used to create new dictionaries, merge dictionaries, change words in dictionaries, etc. An alphabetized secondary dictionary can be displayed or printed for examination.

Ordering:

proof/it: Complete package includes manual and software on floppy diskette with over 10,000 word dictionary. Software available on 5 or 15 megabyte hard disk packs with 30,000 word dictionary. Manual available on money-back guarantee. Software runs on Alpha Micro AM-100* computer with 32K user memory and mass storage unit.

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The system is full multi-user and ISAM-based and individual modules may be installed stand-alone or as an integrated package. Our products have been extensively field proven with a large installed user base.

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IBM DATA EXCHANGE SOFTWARE

With this package you can dump data files or program files to/from your Alpha Micro formatted disks (either hard disks or floppies) from/to an IBM 3740 format floppy disk.

ASCII from/to EBCDIC translations are automatically performed. Any length record from 1 to 128 characters can be transferred.

Included are seven assembly language subroutines called from a user AlphaBasic program. These subroutines allow you to open an IBM floppy for input or output and read and write data. These subroutines are used with a basic program which controls the Alpha Micro file structure and any record reformatting.

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All orders must be prepaid or COD. To order or request a the documentation package write or call today. Make your checks payable to North America Title Company.

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AUTO-BOOT is designed from any modem or remote terminal connected to the Alpha Micro with a RS-232 serial connection. AUTO-BOOT listens for the break key from the terminal and will reset the system after giving a 1 minute audible alarm. We have tested AUTO-BOOT with Vadic modems and MI**2 modems. It is currently in use with several other modems.

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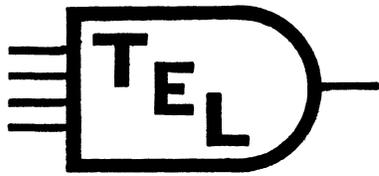
The new DEC VT100 family of terminals is now supported on the Alpha Micro. We have available an excellent driver which provides you easy access to all of the terminal attributes of this terminal. This driver will also work with any DEC VT100 look alikes such as the Visual 100 terminal.

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- SHOW.OVR Fix overlay displays code used by the monitor for SVCA calls: Example EXIT, TRMBFQ,..... \$99.95 on a single density STD format floppy. (OVR only)
- RESTOR.PRG Allows the user to un-erase a file(s) provided that no one has written to the disk since the file was erased. \$99.95 on a single density STD format floppy. (PRG only)
- TXTFMT.PRG Trace option (/T) used in conjunction with Alpha Micros TXTFMT allows the user to locate errors much easier, by displaying each line as it is processed by TXTFMT. \$34.95 on a single density STD format floppy. (PRG only)
- HELLO.PRG Allows a user to log on by mneumonic names rather than by PPNs. \$34.95 on a single density STD format floppy. (PRG and MAC)

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Consulting

Having problems installing a SECOND PHOENIX drive on your system? We may be able to help. Need a cash register interfaced? Maybe a comodidies line? Or how about the New York Stock Exchange? Or better yet, you name what you would like interfaced to the Alpha Micro. We've probably done it because we've INTERFACED and written DRIVERS for things you haven't even thought of yet. And if we have not, we would sure like to do it, or help you do it yourself.

Software and Subsystem terms: prepaid only

Advantages of EDIT

Why use EDIT ? There are still particular cases when EDIT is quite useful. The cases described first are those in which EDIT is the only choice.

- (1) SMALL.
If you are stuck with < 8K of memory, this is enough room to EDIT the SYSTEM.INI and successfully exit.
- (2) ANY TDV WILL DO.
Some people think that if they boot up with the wrong TDV driver in the INI, that they are stuck (because VUE cannot properly edit the INI). Wrong --- use EDIT to edit the INI.
- (3) NICE SCAN DISPLAYS.
If you want to search for a particular string, and see up to 24 occurrence lines per crt screen, EDIT will do this very nicely; VUE won't.
- (4) WORKS WITH BINARY FILES.
EDIT can be used to add/change/delete bytes from a .PRG file, or any sequential file --- VUE will destroy PRG files.
- (5) NO SPECIAL CHARACTERS EXCEPT ESCAPE.
EDIT searches for spaces,tabs,returns just as easily as letters.
- (6) TELECOMMUNICATIONS.
Allows files to be transferred over the phone lines (Telecommunications).
- (7) LINES > 510 CHARACTERS.
If, for some strange reason, you need lines longer than 510 characters, then EDIT has no problem.

The following describe cases where EDIT is sometimes preferable to VUE.

- (1) TABLE RE-FORMATTING EASIER.
If you have a 500-line table built up using VUE, and you want to add a new column of (eg) 5 characters to the table, EDIT can create this new column using less than 20 keystrokes.
- (2) MORE ROOM FOR FILE.
For large files, EDIT is sometimes preferable simply because the entire data file will fit into memory (especially if a single edit is needed).
- (3) REPETITIONS EASY.
For very repetitive things, EDIT is marvelous, because of the general way in which any legitimate command can be multiply performed.
- (4) LESS INPUT & OUTPUT.
If you are on a 110 or 300 baud connection, VUE can be sloooooow. Or, if you are on a printing terminal, VUE doesn't work too well. In either case, EDIT minimizes input/output, saving time/paper/patience.

Disadvantages : will be obvious.

POWER AND YOUR ALPHA-MICRO

In the April, 1981 issue of the AMUS NEWSLETTER, I outlined our system hardware, software, and the background to the problems we encountered in stabilizing our Alpha-Micro computer system.

As indicated, our system instability was the direct result of a poor power supply. When our equipment was initially installed, we had equipped the power supply with Isolated Ground Circuits. The purpose of these circuits are to isolate the computer equipment from any "noise" in the AC power system from slipping in through the ground wire and causing problems. The principle is to isolate the computer ground from the normal ground in the building by terminating the ground wires from the plugs on a ceramic (or similar non-conductive) terminal strip in the power panel and then running a separate ground wire directly to the "street side" of the water meter or to a separate ground rod.

I have seen power related problems disappear when Isolated Ground Circuits are correctly installed. In our case, they did not help. There were three reasons why they didn't help. Firstly, when originally installed, the electrical contractor that did the work was unfamiliar with them and managed to cross-connect the wires as well as tying the isolated circuits into the air conditioner circuit. This problem has been rectified but our AC power problem was more basic.

The second problem with our original installation was a result of ground loops. As defined in the first part of this article, ground loops result when "two or more points that are nominally at ground potential are connected by a conducting path such that either or both points are not at the same ground potential". In very simple terms, ground loops occur when a point has two paths to ground and the two grounds are joined together by some conducting material such that there is a complete circuit created. In our case, a ground loop resulted because of the age of the power distribution system used in our building. The building is 25 years old. When it was constructed, the building and electrical codes allowed the metal conduit used to run the wires in to also be used as the main grounding grid. We ended up with ground loops when the isolation ground wire was inadvertently connected to the panel box which was also tied into the building ground through the conduit.

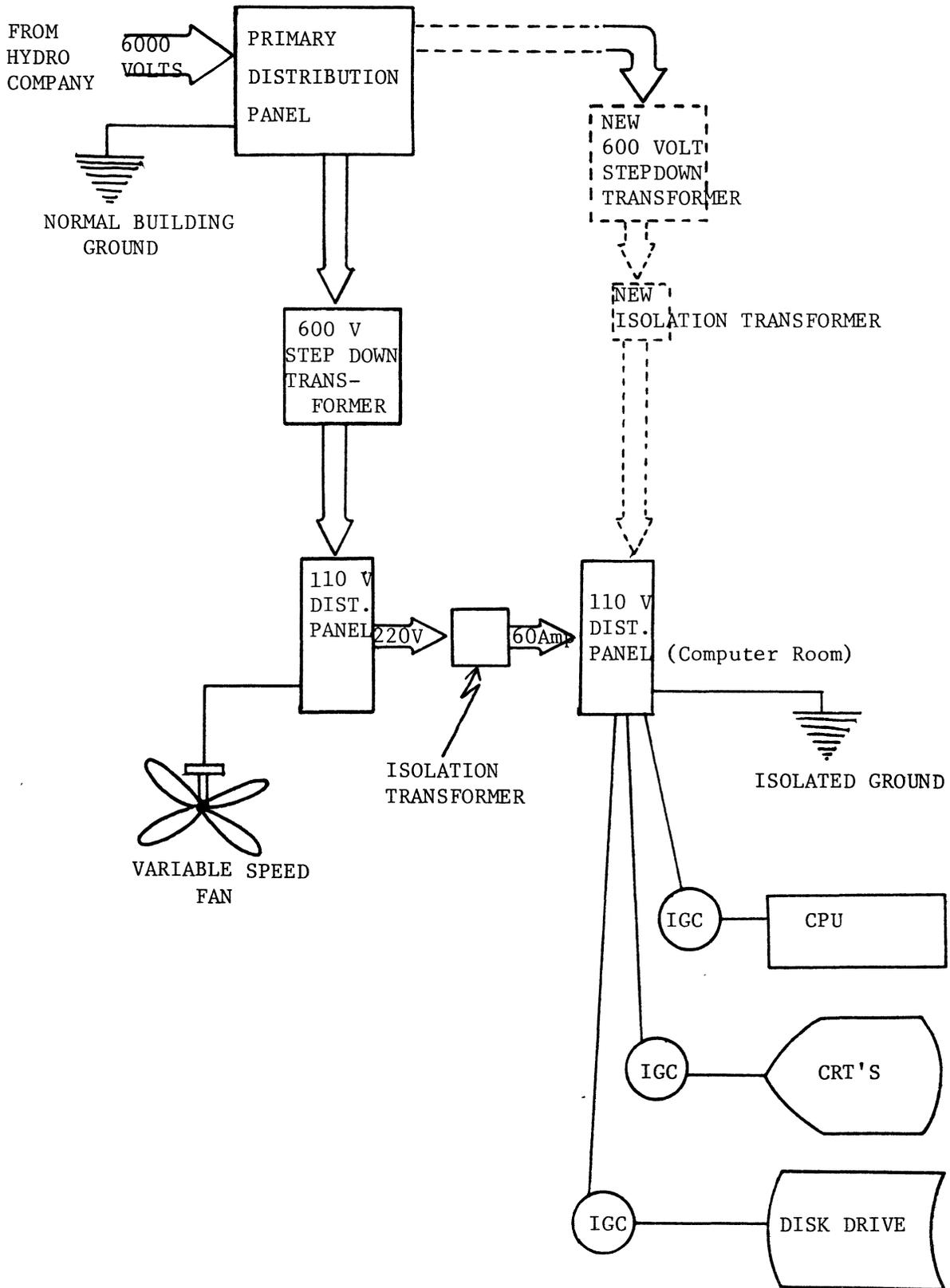
Author's Note: I have no formal training in electrical systems and do not profess to be an expert in the field. What I have attempted to do is explain the steps we took to isolate and identify the source of our problem and what steps we took to eliminate the cause.

I owe a large thank you to our supplier (Micro-Byte), our electrical engineers, and the electricians who worked on this with me and without whose help I wouldn't be able to say: "OUR ALPHA-MICRO RUNS 24 HOURS PER DAY, SEVEN DAYS A WEEK WITHOUT HANGING-UP".

Also, a thank you to those AMUS members who responded to my plea for help in the February, 1981 issue of the AMUS NEWSLETTER.

FIGURE 1

Power Distribution Diagram



The third reason why isolated ground circuits did not help was that the source of our power problem was on the "hot" feed of the AC power supply.

In order to understand the cause of, and solution to, our power problem, I will describe in brief terms, our power supply within the building. As we are involved in a manufacturing and repair operation, we have a fairly large power supply to meet our needs. Our main power supply into the complex is a 6000 Volt, 3 phase power feed from the local Hydro Company. The primary power panel splits this into a multitude of 600 Volt power feeds that run throughout the building terminating at 600 Volt Step-down transformers. These then supply standard 110 Volt distribution panels. From one of these distribution panels we took a 210 Volt, 60 AMP feed to a distribution panel in the computer room which in turn fed the isolation ground circuits for our computer and peripheral devices. (If you are confused, don't feel too bad. I was too, so I have included a diagram (Fig. 1) to help follow the story).

In addition, when we corrected the wiring problems with the Isolated Ground Circuits, we installed an Isolation Transformer between the 110 Volt distribution panel and the computer room distribution panel. A word of caution...Isolation Transformers do not clean up any variations in the power supply. Their sole purpose is to isolate one power system from another power system by removing any direct metallic contact. Any "noise" on the power is passed through the transformer.

To track down our problem and the source of the problem, we used an oscilloscope. When we tested the power supply at the isolated ground circuits in the computer room, we found a very rapid voltage irregularity on the "hot" side of our power. (Note: The irregularity was also found on both the neutral and ground leads but to a lesser extent. If you are finding a similar pattern, the problem is originating on the power lead that gives you the strongest reading). Figure 2 shows what a normal "sine" wave should look like while Figure 3 shows what we were finding.

In order to identify the source of the problem, we methodically tested out each circuit on the computer room panel. The same pattern was found on each circuit. We then tested the power supply into the computer room panel. It showed the same pattern.

The next step was to move back to the distribution panel from which our power was being drawn. Again, each circuit was tested and again each circuit showed the same pattern. The next step was to eliminate each circuit, one at a time. By turning one circuit breaker off at a time and monitoring the pattern on the oscilloscope, we were able to isolate the problem.

Two of the circuits running off of the panel were feeding variable speed overhead fans in our warehouse area. The speed of the fans were controlled by a rheostat type of switch (like the light dimmer switches some of you may have in your house).

FIGURE 2

Normal Sine Wave Pattern for
110 Volt, 60 Cycle A.C. Power

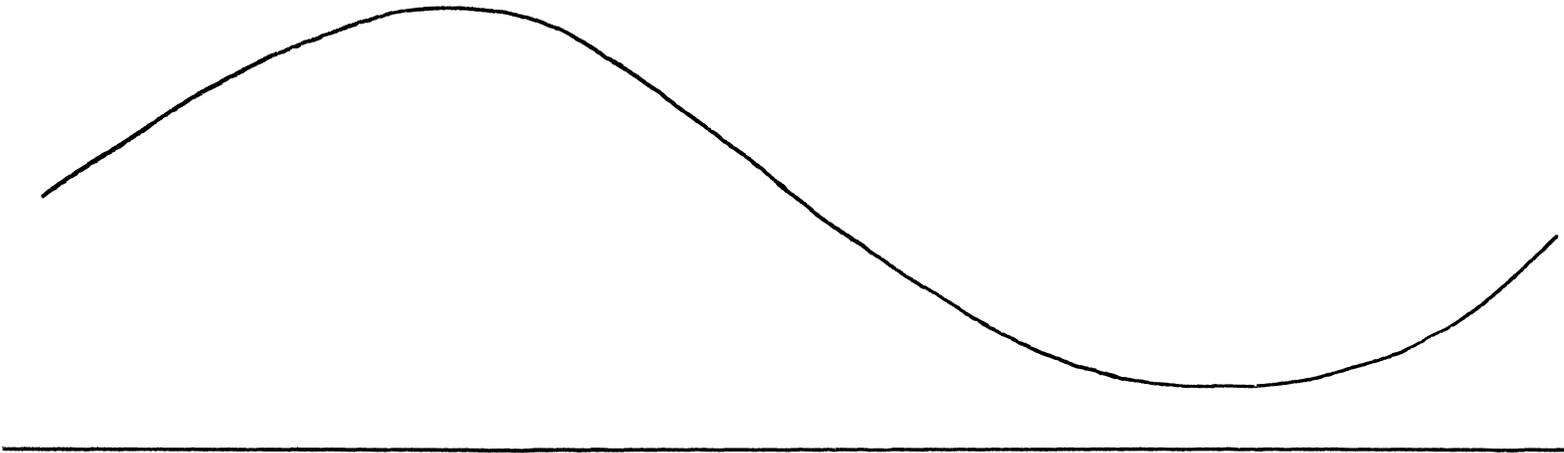
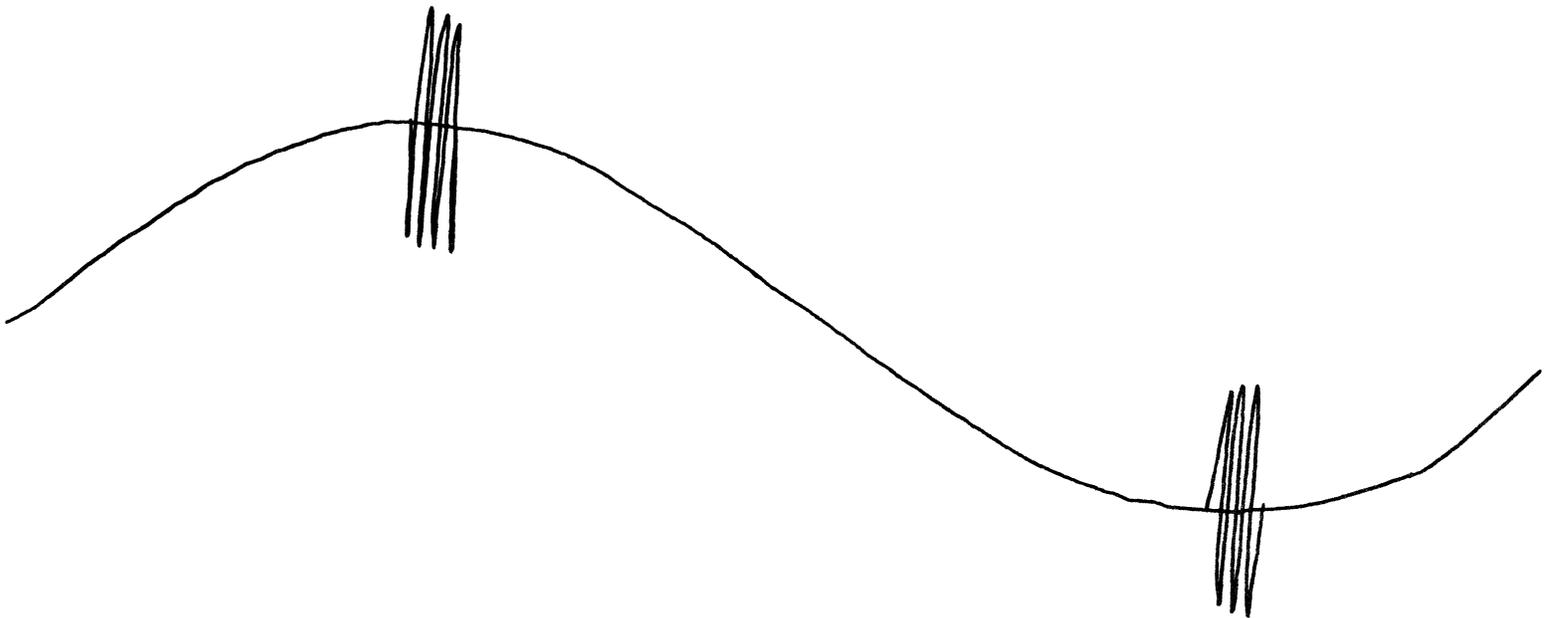


FIGURE 3

Trouble Sine Wave



Apparently, these switches control the speed of the fan by "chopping" the sine wave and only allowing a portion of the power cycle through to the fan motor. This "chopping" signal is what we found being super imposed onto our power supply to the computer room.

The power problems were rectified by installing a new step-down transformer and an isolation transformer off of the primary distribution panel. As this took approximately six weeks to do, we temporarily solved our problem by finding a "clean" power plug that was being powered off a different transformer and used a 25 foot extension cord to run power to the equipment.

This process we went through is not recommended for the layman with little or no knowledge of power. I would strongly recommend that any attempt at following the same or similar process that we used be done by qualified electricians that have had experience in computer power installations. If you have trouble finding such electrical contractors, you could try contacting the local office of one of the larger mainframe suppliers (such as IBM, NCR, etc.) and asking them who they recommend to their clients.

An easy experiment to try is to invest in a good heavy duty power extension cord and try different plugs around your office that are on a different power panel from the one currently feeding the plugs to your computer.

About the author: Wayne Sanderson has a B.Sc. in Computer Science from the University of Manitoba and has nine years experience in the data processing field. For the last two years, he has been involved in Operations Research, mainly in the area of advance Inventory Control procedures.

1200 BAUD DATA TRANSFER

Thanks to Larry White of Larry White Computer Services, we found that we really can transfer data between two Alphas at 1200 baud, even though one them has an originate only modem. Here's how - and it really works.

In case you're not familiar with transferring files (which I certainly was not, I'll start by telling you that only source files (.BAS, .MAC, .TXT may be transferred). The rule I've been following is that if you can type or print it, you can transfer it.

First, in TALKTO.MAC, add the following statement:

BIS #123,@R3

immediately following

BIS #123,@R4

Then, MACRO TALKTO and transfer TALKTO.PRG to DSK0:[1,4].

This gets the remote trmdef. Rename Larry's old SEND.* to PUT.* in order to avoid confusion with it and A/M's SEND.PRG.

Increase the input buffer on the phone trmdef statement to something huge (I set mine at 200). This is the number of characters the computer can get behind.

Connect the modem to the AM-300 as follows:

Computer	Modem
Pin 2	Pin 3
3	2
7	7
6	20

To transfer information from your originate only system to another system (which, incidentally, must have a real receive modem):

1. Enter 'TALKTO MODEM', modem being the trmdef name for your phone. You will be asked for an exit character (I use ^).
2. Dial the remote system and make the connection.
3. Log to the ppn on the remote computer where you wish your file saved.
4. Enter 'MAKE filename.ext', where filename.ext is the name of the file you wis to appear on the remote system.
5. SET NOECHO (after this, your input characters will not display).
6. EDIT filename.ext
7. I

8. Go to another terminal on YOUR system and enter

PUT MODEM filename.ext

where filename.ext is the name of YOUR file that you wish to transfer to the remote system.

9. The file will then be transferred to the remote system and the echoing done on the second CRT. If another CRT is not used for the transfer, the trmdef fills with line feeds.
10. After the data is transferred, return to CRT1 and enter two escape characters to finish the insert edit mode.
11. Enter 'E', escape, escape, to close and save the edit file.
12. SET ECHO

Your file should be transferred to the remote site.

To transfer files FROM the remote system using your originate only modem, connect the pins as described above - this time you only need one terminal.

1. Enter

GET MODEM filename.ext

where modem is the trmdef name for your phone and filename.ext is the name of the file as you wish it to appear on YOUR system.

2. You will be asked for an exit character.
3. Dial the remote system and establish the carrier connection.
4. Enter your exit character (I use ^) and log on to the remote system.
5. Enter

TYPE filename.ext

where filename.ext is the name of the file on the remote system you wish to copy.

6. The file will be typed on your screen and recorded to the disk into the first filename you specified. EVERYTHING you enter or get back from the remote system will be recorded as a part of this file. You can simply use Vue to eliminate the garbage when you're done.
7. After the file is transferred, you may log off the remote system, hit your exit character and go back to work.

What I find most useful about all this is the ability to run around both yours' and the remote system using TALKTO (where you're just plain communicating), GET (where your conversation is recorded), and PUT (where you can send stuff), and back to your system to check your file, look for something else to do, etc.

A very special to Larry White for helping me with this when I really needed to transfer a file. Incidentally, Larry has written a new set of telecommunications software which allows data transfer at high baud rates without all this hinked up mess. It also allows the transfer of .RUN files and double checks that the data transferred matches the data on the sending end. Anyone interested, please call Larry at (213) 795-0141.

I'm just learning telecommunications - so you'll be hearing more.

Pat

C L A S S I F I E D

F O R S A L E

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F O R S A L E

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Two - Soroc IQ 120 terminals, approximately two years old - excellent condition. \$550.00 each.

May purchase all four for \$2,300.00. They are being sold in order that we may upgrade to a more sophisticated terminal.

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(179) 351-8100

* * * * *

W A N T E D

Hazeltine 1520 - must be in good condition.

Program which will accept times from time cards and print out analysis of:

each employee, dates worked, regular hours and overtime hours. Our pay period is two weeks. Files should handle a month. Exact cut-off for assigning 1/4 hour increments (in minutes) should be user definable. Would be super if it would interface to Alpha Accounting.

W. F. Casteen, M.D.
P. O. Box 99
Bakersfield, CA 93302
(805) 322-8716

* * * * *

W A N T E D

We need a program to enable us to provide multiple distribution to the G/L system from the A/R, and P/R systems.

The alphaccounting transfer capability does not permit multiple distributions to profit centers as we require for our business.

If you have a solutio to this problem, please call (809) 726-2896, telex 325-262, cable TRIRUB, or write to below.

Mr. John Sherwood
Tristani Rubber Industries
P. O. Box 14127
Bo. Obrero Station
Santurce, P.R 00916

* * * * *

letters

Buena Vista College
Storm Lake, Iowa
50588

The computing group at Buena Vista College would like to introduce our-selves to you. We come from a variety of backgrounds: chemistry, mathematics, physics, psychology, and business (and we are hoping to add a computer scientist in the near future). Along with a Wang 2200, three Apples, and a NYCAA, we both teach with and use an Alpha Micro AM100-T configured as follows:

core: 326K (ECM)
storage: two Hawk 10MB drives
terminals: 8 SCROC IQ120 CRTs
printer: one TI 820 (second on order)
Software added: COBOL
to date Paine-Jackson Accounting
TSASS (Dravac) purchased,
but not yet implemented

Clearly a large system for a micro, we run under a hostile environment of active multiuser status. Because most of our users are students, we experience the pangs of novice programmers taking the machine down frequently, sometimes as often as several times per hour. (They learn quickly to SAVE frequently.)

Of several problems we experienced due to the large number of users, one totally surprised us: we had failed to anticipate that a single disk could only contain 63 accounts. With hundreds of students needing machine access, we were preplexed as to how to save class work, maintain distinctions, keep individual student records, and load specific programs to specific students easily. Perhaps our solution will be helpful to some AMUS users.

To handle multiple students in few accounts, we did the following.

Case I: For the general use by "anybody" we created five "black board accounts" with no passwords, one for each of the five student work stations. These are always available for any user, with the understanding that the directory for each is not secure.

Case II: For specific classes, we execute a DO file which (1) logs each terminal into specific class accounts, (2) loads that particular student's files (from a general account) into the user account. Thus, his active directory has only his files. At the end of the class, we copy his directory into the permanent lab account, and erase the temporary user account to prepare for the next class.

An example may help. Consider three students in the fourth lab section of a course. On the disk is an account (called the lab account) for that specific lab containing all the files from that lab. The names of the files are coded: the first character of the file name is a digit indicating which

terminal that student uses (the students are assigned to particular terminals at the beginning of the semester). Thus, the files in lab account 100,4 ("4" for the fourth lab in this class) will contain files of the types 2xxxxx.xxx, 3xxxxx.xxx, 4xxxxx.xxx. As the class begins, the instructor issues .FILL 4 on the operator terminal from account (1,2). FILL.DO is as follows:

```
:T
:<THIS DO FILE FILLS THE TERMINAL ACCOUNTS
FROM THE LAB STORAGE ACCOUNT
>
FORCE JOB2 LOG (102,1)
FORCE JOB3 LOG (103,1)
FORCE JOB4 LOG (104,1)
ERASE DSK1:*. *[102,1]
ERASE DSK1:*. *[103,1]
ERASE DSK1:*. *[104,1]
COPY DSK1:*. *[102,1]=DSK1:2*. *[100,$0]
COPY DSK1:*. *[103,1]=DSK1:3*. *[100,$0]
COPY DSK1:*. *[104,1]=DSK1:4*. *[100,$0]
```

The FORCE commands log the students into the proper account, the ERASE commands clean out their temporary directories, and the COPY commands load the particular students' files into his account from the particular lab account ([100,4] in this case).

At the end of class, we use an "EMPTY 4" command to copy the new work into permanent storage in lab account (100,4).

```
EMPTY DO:
:T
:<THIS DO FILE STORES TERMINAL ACCOUNTS
INTO LAB ACCOUNTS
>
COPY DSK1:*. *[100,$0]=DSK1:*. *[102,1]
COPY DSK1:*. *[100,$0]=DSK1:*. *[103,1]
COPY DSK1:*. *[100,$0]=DSK1:*. *[104,1]
```

```
ERASE DSK1:*. *[102,1]
ERASE DSK1:*. *[103,1]
ERASE DSK1:*. *[104,1]
```

Finally, there are times that we wish to put a particular file into each student's account for class demonstration purposes. The following DO file executed from operator account (1,2) will put PROG1.BAS from account [23,4] on disk 1 into each classroom terminal account by giving DEMO DSK1: PROG1.BAS[23,4].

```
DEMO:
:T
:<THIS DO FILE PUTS THE NAMED FILE
INTO THE CLASS USER ACCOUNTS
>
COPY DSK1:[102,1]=$0
COPY DSK1:[103,1]=$0
COPY DSK1:[104,1]=$0
:
:
:
etc.
```

We hope the above are helpful. They have allowed us to serve many students in few accounts (one for each lab plus one for each terminal) and to transfer files quickly and easily.

We look forward to interacting with you on educational uses of the Alpha Micro.

Joseph G. Taylor, Ph.D.
Kenneth G. Schweller, Ph.D.
Charles F. Slagle, Ph.D.
Ben Donath, MA.

Buena Vista College
Storm Lake, Iowa
50588

* * * * *

Mark Penn
Penn + Schoen Associates
1501 Third Avenue
New York, NY 10028

As an Alpha Micro user and a long-time member of AMUS, I write to most strongly complain about the society's new policy of not publishing prices of items offered for sale.

This policy can have only one effect: to make shopping for equipment and software more difficult and to limit price comparisons.

The reason given in the letter from the president is that some prices which appeared in a recent newsletter were for dealers only. I think it's the dealers responsibility to figure out who reads the AMUS newsletter.

If the editors do not want to talk about pricing in their editorial columns, I have no objection to that, but a ban on their advertisers seems to me to be unwarranted and a great disservice to the members of the society.

In recent cases, the Supreme Court has ruled that professional groups could no longer ban the advertising of prices. Advertising including pricing information was held to be protected speech by the first amendment and those practices were struck down.

I am not asserting you are necessarily violating the Supreme Court ruling. I am suggesting you are going against its spirit and its reasoning. After careful evaluation, banning price information has most recently been found to be a restrictive trade practice designed to limit consumer's information by making it more difficult for him to shop around. There are always exceptions to the general rule -- some price advertising may be misleading, but it is important to realize that the courts and the FTC have found that on balance it serves to help the consumer.

The note from the President in the April newsletter goes on to say that they are interested in disseminating information, not what an item costs. But what an item costs is an important piece of information -- the best Alpha Micro advancement would be useless

if the cost were higher than the work it would perform. Conversely, the most trivial Alpha-Micro utility might be worthwhile if the price was very low. In fact, the entire achievement of someone's work might be that they have found out how to do the same thing less expensively.

It is important to remember that this is a USERS society, and I am sure that users who receive the newsletter want to see prices advertised if the manufacturer or company cares to advertise them. They want as much information as possible. To the extent they have to write letters and phone calls just to find out the basic information, it deprives them of the benefit of the newsletter and of the advertising.

P.S. I want to comment on one point raised by Stephen B. Patterson in the April issue. I think that Alpha Micro's requirements of "bundled" sales (as well as some of its other practices) may well violate the anti-trust laws. I believe this is a valid topic for the membership to discuss and I for one would be willing to contribute to a legal fund or head a committee of users to look into this.

Mark Penn

* * * * *

Richard T. Brown
Larry H. Heim
U. S. Gold & Silver Investments, Inc.
729 SW Alier St., Suite 420
Portland, Oregon 97205
(503) 228-9555

We are interested in getting in touch with anyone who has developed graphics capabilities for the Alpha Micro. We will consider any high resolution graphics terminal but would particularly like to use a Hewlett Packard 2648 terminal with the Alpha. If anyone has written a driver for this terminal, or has been working on something that is bound to be dubbed AlphaGraphics, please give us a call at 1-800-547-1680.

Richard T. Brown

* * * * *

Bill Trotter
Carera World, Inc.
5340 Oporto Avenue
Birmingham, AL 36210
(205) 595-9563

We are a camera store with a 100T Alpha Micro. Our system is using Alpha Accounting with several modifications, such as each

inventory item has two vendors from A/P, a function to write letters to A/R customers by ageing with each customer's name and charges merged into the letter text, selectable interest/letter on each customer, etc. We also have a camera store data base system that allows us to keep track of our customer's repairs, photo-finishing, and special orders. We can produce almost any type of report sorted in almost any order that we want, including mailing labels and letters based on a customer type. To find a customer, part or all of the customer's last name is entered.

Our programmer has written a report program generator that will read a format file created by VUE and then produce an Alpha Basic program to write the report. With simple commands, we can select, sort, do page breaks, sub-totals, totals, etc. This report program generator can be made to work with any part of Alpha Accounting or other systems.

We are soon to add a Spin Writer and are in need of a driver for it.

I know of an AM100 Alpha with 128k of memory, 10mb driver, and built into a desk with very little use for a good price (\$16k). This was bought by someone else who went with an Intertec later on.

If any of you are doing anything along the same lines, please give my programmer a call. His number is (205) 933-2798 or beeper number (205) 320-9503. Ask for Jeff Lyons.

Bill Trotter

M. T. Siu
General Knits
AIK San*Factory Bldg. #7/F
14 Westlands Road
Quarry Bay, Hong Kong

Our system configuration is:

AM-100 CPU
CDC Phoenix 90 Megabyte disk drive
128k memory
3 Soroc Terminals
1 Texas Instrument 150 cps printer

Our company is one of the largest garment manufacturers in Hong Kong. We are facing with data capturing problem - thousands of transactions have to be captured daily. Anyone who has any informaton on any OPTICAL CHARACTER READER than can be interfaced with our existing system please write immediately to the above address with relevant information and prices.

M. T. Siu

Roy Ehman
P. O. Box 49181
Atlanta, GA 30359
(404) 633-2723

Here's a wrinkle I'd like to pass on.

I have a couple of programmes such as this one which heads up this letter and gets your address from the file and I often need to be able to see the correspondence directly to recall what filename to use for a given letter. I can now call a nice compact directory without leaving the program as follows:

LOG BAS:

COPY DIR.SBR=DIR.FXO[7,0]

You now have a viable assembler subroutine you can call from basic using XCALL DIR and you will get the directory of the account that you are in and be returned to your basic program. I find that a real convenience. Hope you do too.

If you want to put in the missing CRLF rename the .FXO to .PRG, disassemble it and place the CRLF just above the first RTN. The label at this point will then need to be moved up one place to include the CRLF. Now Macro the .PRG and rename to .SBR etc.

Roy Ehman

Larry Manulak
Grouse Mountain Resorts, LTD.
6400 Nancy Greene Way
North Vancouver, B.C.
Canada V7R 4N4

We've been a member of AMUS since September 1980 (date of first newsletter) and I think it is a very good investment.

The regular list of bugs and queries I have seen prompt me to include some of my own observations and questions.

1. Floating point instructions. They have two addressing modes: A direct mode where the register points to a location that contains the address of the instruction. I have not had any success in getting the assembler to set the indirect flag.

Code WORD ^HOF0B0
; this is the floating point add instruction
; with source = indirect register 3 and
; destination = direct register 0. If this
; is included in a program it works as
; expected. Fix disassembles it into:

FADD CR3,RO

; but if you code it like this the assembler
; sets both addresses as direct.



THE COMPUTER IS OUT OF ORDER



YES - We have called the service man

YES - He will be in today

NO - We cannot fix it

NO - We do not know how long it will take

NO - We do not know what caused it

NO - We do not know who broke it

YES - We are keeping it



NO - We do not know what **YOU** are going to do now

If you would like your name to appear in the AMUS Member Directory, please fill out this form and return to Sharon Greene, AMUS, 934 Pearl Suite B, Boulder, CO 80302. Regardless of whether you want your name to appear, please be sure and fill out the information about your dealer and send it to Sharon.

NAME _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

COUNTRY _____

PHONE _____ DATE _____

COMMENTS:

MAJOR INTERESTS _____

AREAS OF EXPERTISE _____

ADDITIONAL COMMENTS _____

WHO IS YOUR DEALER?

COMPANY _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

COUNTRY _____ PHONE _____

CONTACT PERSON _____

COMMENTS: _____

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AMUS
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Boulder, CO 80302

APPLICATION TO MAIL AT SECOND-CLASS
POSTAGE RATES IS PENDING AT
BOULDER, COLORADO 80302