

Alpha
Micro
Uusers
Society

Newsletter

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ALPHA MICRO USERS SOCIETY
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AMUS office hours are from 8:00 AM to 5:00 PM Mountain time. Our overworked secretary is Sharon Greene who is happy to assist you with any question you might have about AMUS, the location of a piece of application software, getting help with a particularly nasty bug, or whatever. We're here to help.

AMUS has a library of programs that have been donated by members for distribution to other members. Programs are available either through the AMUS network, or via floppy discs. Discs may be ordered through Sharon Greene at a cost of \$10.00 each.

THE AMUS NEWSLETTER is available for \$25.00 per year which includes membership dues in AMUS. See the back inside cover for membership form. Additional copies of the newsletter are available to members at \$7.50 per year.

The newsletter welcomes any bugs, fixes, articles, reviews of software, opinions, advertisements, or program listings concerning the Alpha Micro computer. Dealers are asked not to submit advertisements for products available through other local Alpha Micro dealers. Hardware manufacturers and software authors are encouraged to provide AMUS with descriptions of their product for inclusion in the newsletter. Please submit material as high contrast, camera ready copy on 8 1/2 by 11 inch white paper.

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AMUS NEWS

FROM THE PRESIDENT

ELECTIONS OF OFFICERS

The elections for officers and the board of directors will culminate at the general members meeting of AMUS to be held during the National Computer Conference in Anaheim, California. The NCC will be held the week of May 19-23. The exact date and time for the general meeting will be announced in the next newsletter. Meanwhile, nominations may be submitted in writing to Sharon Greene at the AMUS offices, P.O. Box 1723, Boulder, Colorado 80306. Nominations must be postmarked no later than March 25, 1980 in order to be included in the ballot slate which will be published in the April Newsletter. Those members who will not be able to attend the NCC will be able to vote via mail. Ballots received by mail will be added to votes taken at the NCC, and New officers and board members will be announced at the general meeting. Nominations are now being accepted for President, Vice President Second Vice President, Secretary Treasurer, and five Board of directors positions. Current officers and board members may be elected to another term.

AMUS OPEN HOUSE

AMUS will be holding an open house Thursday evening, March 19th, from 5:30-10:00 PM at 1966 13th St. Room 75, Boulder, Colorado. In addition to showing off the AMUS network, we will be organizing the local chapter of AMUS. Everyone is invited, AMUS membership is not a requirement. refreshments will be served.

AMUS SEMINARS

AMUS is sponsoring two seminars during March for novice Alpha Micro Users, one in Boulder, and another in Houston Texas Please note the announcements in this issue for details. In May, we will be sponsoring two new seminars, one on telecommunications, and another for licensed users on the Alpha Micro Accounting Package. We are also considering a workshop in assembly language. If you would be interested in attending such a seminar, please let us know.

NETWORK DOINGS

Apologies for the Network being down for three days Feb 17-20. We purchased another 32K of memory and the bank switching gave us fits until all of the incantations were perfected. From now on, we plan to keep the system up 24 hours a day with two exceptions. Tuesday evenings we host a class in BASIC from 6-9:00 PM, and on Saturday afternoons the students from the class come in to practice. Naturally, we

shut down for backups once in a while, usually about three times a week. We should be in better shape now with more memory to share among our two terminals and the phone line.

The password for all of the Network PPn's (101,1-115,1) for the month of March is ZORRO. If you are going to pass along the Newsletter to a non-member, please cross out the password.

AMUS MEETINGS AT THE NCC

Two AMUS meetings are currently scheduled for the NCC. The board of directors meeting will be held on Monday morning May 19th, at 9:00 AM at the Registry Hotel in Newport Beach. Board members who will not be able to attend the Monday morning meeting should contact us. The General AMUS meeting will also be held at the Registry, Monday evening, May 19th, at 6:00 PM. All AMUS members are encouraged to attend the general meeting.

American Bookkeeping Company
1406 North Tustin Ave. Suite P
Orange, California 92667
(714) 639-6260

February 8, 1980

Subject: Southern California Users meeting

Just wanted to let you know that we had a successful first meeting of Los Angeles and Orange County Alpha Micro users. A lot of valuable information was exchanged:

1. Some inside scoop on Alpha Micro and commercial software
2. Info on local maintenance
3. Communications equipment/problems
4. programming techniques and command files

We planned a second meeting Sunday, March 9th at 1:00 PM, 514 4th Street in Santa Ana. We would greatly appreciate getting a plug in the newsletter for this one too.

thanks again for your help.

Sincerely,
James N. Freeman

DeMarco Shatz Corp
312 Maple Ave.
Torrance, CA 90503

OPEN LETTER TO ALL ALPHA MICRO USERS;

Warning - possible 90MB Design Problems

If you are now using or are planning to use Alpha's 90MB system, BEWARE of the fact that CDC currently allows up to 30 "BAD BLOCKS" per each surface media (i.e. DSKO, SMD1, etc). And that Alpha class these "BAD BLOCKS" as IN-USE blocks. Thus any attempt to create a continuous file (i.e. Random, ISAM, etc) in an area containing a media error will result in AMOS ERROR - "DISK DEVICE FULL"; assuming no other area is available.

Since many users are tending to larger and larger file requirements, it is easy to find many file structures needing whole or major parts of a disk surface for one file. Should you need several disk surfaces assigned to large files you greatly reduce your chances to use any given drive (remember - a good drive can have up to 240 (30x6 surfaces) RANDOM BAD BLOCKS... and all you need is to have just ONE media error in the continuous area to prevent the use of that surface for that size file!

Alpha has informed us that they do not view his limitation as a serious problem and point out that it is consistent with all other disk devices (they seem to forget that all other media is considered good only if no media errors are detected). They also informed us that no one else has objected to the present design and that until others do NO changes will be made.

BEWARE - this may not be your problem now, but when it does you may have just purchased a 90MB headache.

Jay Gourley
903 C Street, N.E.
Washington, D.C. 20002
January 26, 1980

After considerable shopping around, several members of the Washington/ Baltimore AMUS users group have bought Televideo 912/B CRTs. They are very intelligent with more than 80 different screen editing calls. The baud rates for the two ports (printer and host) are separately settable. It is lightweight, handsome, produces almost no heat, and has no noisy fan. Best of all, Televideo seems genuinely committed to honest support. We were prompted by Hazeltine's bloodthirsty attitude. One example of Televideo's approach is their decision to give, at no charge, the new "/B" ROMs to all earlier customers who bought "/A" terminals. General Electric is offering service contracts on all Televideo products for \$13/mo.

Alpha Micro's 4.3a had a Televideo driver that doesn't work. The biggest, but not the only, problem was its speed. It's so slow, it's useless. With the help of another member, Rich Rubenstein, I've written a driver that makes use of all available TCRT calls (numbering up to 103 octal) in about 70% of the memory and with no nulls, sleeps or waits. It drives the terminal more than 10 times faster than the Alpha Micro driver.

Sincerely,

Jay Gourley

Datamasters
Danny E.S. Webb
5922 Red Bank Road
Cincinnati, OH 45213
Home: 513-984-8972
January 14, 1980

I have recently been informed by the dealer in my area that Wangco's are no longer being made. This is unfortunate because I have discovered that one set of drives will no longer suit my needs. Therefore, if you know of anyone interested in trading their Wangco for a Dec-Writer LA 36, please let me know. If not, please put me in touch with anyone interested in a cash offer. I may be reached at the following address:

Thank you for your time. I will await your reply.

Danny E.S. Webb

Virginia Wesleyan College
Wesleyan Drive
Norfolk, Virginia 23502

While I am in the mood for writing, I thought I would introduce myself and our system. We are currently running a 160K machine with 32K sharable and four banks of 32K. We are using the Persci disk drive, but plan to purchase a hard disk in the future.

Virginia Wesleyan College is a small liberal arts college in an area known as "Tidewater" Virginia. As such, we use our Alpha in a multi-purpose kind of environment where we are teaching students programming (BASIC and PASCAL) as well as doing some administrative things such as label making. Currently I am starting a project of writing CAI (primarily in Bilolgy) for use on the Alpha. Those users who are educationally oriented may be interested in what I am developing. Primarily they will be programs that diagnose when a student is making incorrect responses, and will also provide help upon request. This sort of approach might better be termed GENERATIVE CAI since the programs I develop start out with a set of premises that the program can work with and then a heuristic approach is applied. In this way a student can approach a solution to a problem from more than one perspective (within the heuristic guidelines set up in the program), and not have to be "strapped-in" by the frame-oriented approach found in some CAI.

I have had considerable success on large scale systems (DEC10 in particular) but the challenge is to provide this same kind of "service" on a small system.

4.3A BUGS

I'm sure you may be aware of some 4.3A problems already, but if not, here are a few I have found:

I have been getting system crashes occassionally, when the LPTSPL has finished printing a file. So far it has occurred 3 times; twice with large files (40 and 67 blocks) and once when 12 files (27 blocks total) were in the queue.

When I queued 32 files to the printer and then "KILLED" some in the queue, the line printer had a complete nervous breakdown and started printing garbage with terminal (no pun intended) results.

SOME REFLECTIONS ON CHANGES TO AMOS

EDIT.PRG

I wish Alpha would do the following two things to EDIT:

Provide a P(age) command to "UNYANK" the buffer and then do an implied "YANK" or provide a Y(ank) command.

Stop dissecting lines when the entire file can't fit in. Certainly EDIT should be able to include the entire line.

BASIC

I agree with the Shatz letter on providing some way to EXIT from a FOR loop. Most other languages provide for this neat way to leave a loop before completing its upper boundary. I find this a pain when writing lexical scanners that work character by character in a line.

I do wish that they would implement the DEF function. Passing arguments to a function (or for that matter procedures) is very valuable.

SYSTEM.INI AND MEMORY "CLASHES"

Some users who have bank-switched memory may be interested in this part (unless they already know).

As everyone knows, on boot-up a temporary job is allocated in the upper 8K of bank zero. If you load a lot of stuff into system memory and as well the lineprinter spooler, you might get memory over-lap errors if you JOBMEM job1 and then try to do something like logging in job1 automatically to some other account besides 1,4. What we have done is shown below. The important thing to note is that JOB4 is FORCED to run a job called FINLOG which is actually FINLOG.CMD in area 2,2. The first line in FINLOG.CMD is important since the command file is not processed until JOB1 is finished and JOB1's memory is zeroed. Then FINLOG takes over and inserts the SPOOLer into system memory and then calls SYSTEM to end system memory insertion. Then, of course, this job allocates JOB1's memory (all it can of bank zero) and then LOGs JOB1 in. We never get the error of JOB1 overlaps JOB SPOOL like we used to.

Sincerely,
Dr. Dennis Govoni

SYSTEM.INI and FINLOG.CMD for a 160K system with 4 banks

```
JOB5 JOB1, JOB2, JOB3, JOB4, SPOOL
TRMDEF TRM1, AM300=1:16, SDROC, 100, 100, 80
TRMDEF TRM2, AM300=2:16, INFO, 100, 100, 80
TRMDEF TRM3, AM300=3:16, ADM3, 100, 100, 80
TRMDEF TRM4, AM300=4:6, TELTYP, 100, 100, 30
TRMDEF TRM6, AM300=6:7, SIL700, 100, 100, 30
TRMDEF DUMMY, PSEUDO, NULL, 25, 25, 2
MEMDEF 100, 1, 0/101, 1, 0
MEMDEF 102, 1, 0/103, 1, 0
MEMDEF 104, 1, 0/105, 1, 0
MEMDEF 106, 1, 0/107, 1, 0
DEVTBL DSK1, TRM, MEM, RES, STD0, STD1
BITMAP DSK, 39, 0, 1
BITMAP STD, 32, 0, 1
QUEUE 15
SYSTEM TRM, DVRC1, 63
SYSTEM JOBTIM.SYS ;USED FOR A DYNAMIC STATUS REPORT PROGRAM
CLKFRQ 60
; ENTER SYSTEM TIME AS "TIME HH:MM:SS"
.
INIT ;SPECIAL PROGRAM FOR OUR DYNAMIC STATUS PROGRAM
SYSTEM RUN
SYSTEM FLTCNV
HELDLOD 1800
ATTACH TRM2, JOB2
ATTACH TRM3, JOB3
ATTACH TRM4, JOB4
ATTACH DUMMY, SPOOL
JOBMEM JOB2 1:100000-177376
KILL JOB2 ;IMPORTANT AFTER JOBMEM OR SOMETIMES GARBAGE IN BUFFER
FORCE JOB2 LOG 10, 2
JOBMEM JOB3 2:100000-177376
KILL JOB3
FORCE JOB3 LOG 10, 3
JOBMEM JOB4 3:100000-177376
KILL JOB4
FORCE JOB4
LOG 10, 4
FINLOG ;HERE WE SET UP FOR COMMAND FILE RUN

LOGOFF ;GET JOB1 OUT OF HERE
MEMORY 0 ;RLOW JOB1'S MEMORY
```

FINLOG.CMD

WAIT JOB1 ;THIS IS A MUST!!!!!!!
FORCE SPOOL
MEMORY 4K
LOG 10,10 ;DUMMY ACCOUNT WHICH LPTINI WILL CATCH!
LPTINI PRINTR.INI ;LPTSFL WILL ACTUALLY RUN OUT OF 1,2

WAIT SPOOL
SYSTEM
FORCE JOB1 ;NOW WE BRING BACK JOB1
MEMORY 35K ;GET WHAT'S LEFT OF BANK 0
LOG 10,1

Pacific Data Company
5530 Ackerfield #101
Long Beach, California 90805

January 23, 1980

First of all, I would like to take the time to comment you and the other working people in pulling together AMUS. In working with prior micro clubs, I know how much of your time it takes in addition to your regular job. I, and many others out here are especially pleased with the AMUS network idea. Hip, hip, hooray.

I have included a software bug list and what I call a "Wish List" for software enhancements I would like to see in future releases. I would appreciate any comments, criticisms, or whatever from other users.

In reference to the terminal driver bugs (or deficiencies) I have been asked why I want to copy from a terminal to a file. This feature becomes very useful for easily interfacing input devices such as serial paper tape readers, digitizers, lab equipment, modems, and even other micros. With a minor change in the driver to echo a control T (X-off or DC4) when the AMOS input buffer becomes full, and then a control R (X-on or DC2) when the buffer empties, you now have full handshaking. This protocol is compatible with a great majority of RS-232 input devices. It would then be as simple to interface to another micro or lab equipment as it is to interface to a CRT now, without having to write a driver.

When Alpha Micro was at the last West Coast Computer Faire, they talked about a processor to processor communications board. With this configuration it would have been possible to share peripheral resources between two or more machines. What happened to it? No one at Alpha Micro seems to know anything about it.

I am in the process of setting up a multi-processor configuration with my system. In the process I discovered that it was not possible to do high speed communications between machines with the current hardware. The high character interrupt rate kills doing anything else on the system. I now have a prototype dual port DMA interface. The interface is general purpose and can DMA from memory to an external device in excess of 1M byte/second. The interface is a standard S-100 size board and uses the Zilog DMA chip. The user only has to set up the mode, the starting memory address, and the block size of data to transmit. That's it. the DMA chip does all the rest transparent to the processor. My problem now is it will not work with AMOS bank swapping the memory. The DAM chip does not know AMOS switched banks on it. Are there any suggestions out there?

Well, that's about it. Keep up the good work.

Sincerely,
Craig Hjorth

Ed. Note: We saw the LINK boards running at Alpha Micro last fall. At that time they had four machines LINKed together accessing four HAWK disk drives. Rumor has it that Alpha Micro intends to have four machines at the NCC in May, Two LINKed together on the show floor, two others in hospitality suites, and all connected to each other and Alpha Micro in Irvine via the 310 communication boards. The software for the LINK boards is pretty tricky, and Alpha Micro won't sell you the hardware until you complete a training course that is given in Irvine, California. We suspect that complete specs and other pertinent information will be made public by the time of the NCC in May.

CRAIG'S WISH LIST

Put system memory in a memory bank of its own. This will allow many programs to be included in the system without penalizing users by robbing user memory space. As an example

When issuing a new release, list all programs as was done in release 4.2 but include hash totals. Then there would be a way for the user to determine if they have the correct version or a bad copy. (Remember bad 4.2 system copy on floppy?)

Change the Mount command to look for the correct volume name on a removable device. (Disk, tape, floppy, etc.). Example: Mount DSK1:VOL123

Record in a log the date and time a user logs on and off. This should be a selectable option in the SYSTEM.INI file.

Add a third file parameter called MOD within BASIC. A sequential file may only be opened for INPUT or OUTPUT as it exists now. Adding the MOD parameter would allow the user to add to the end of a file without copying the whole file over. A very useful function when the application is keeping multiple parameter log files of indeterminate length.

Add dynamic arrays to BASIC. If the array is too large to fit within memory, swap it out to a temporary disk file.

Change the MEMDEF program to display the job defined in each bank. This could be done by assigning a number or letter to each defined job in the job table. example:

.MEMDEF

	0	8	16	32	40	48	56	64
BANK 0	MMMMMMMMMMMMMMMMMMMM							
BANK 1	MMMMMMMMMMMMMMMMMMMM							
BANK 2	MMMMMMMMMMMMMMMMMMMM							

Tell someone how to use the software hooks in the system for power fail interrupt and restart. I and many others have the detect and battery backup hardware.

Auto incrementing of the date. Someone always forgets to bump the date the next day and has reports with the wrong date on them.

Set up a system error log. All system errors would be written to the log. (Device, ERROR, ETC.) If all soft errors were reported the system operator could take action before it was too late. As it is now, when a user gets a AM-500 error it is usually too late to do anything about it as soft errors are not reported to anyone.

it would be possible to include the main monitor, all drivers, BASIC.PRG, RUN.PRG, PASCAL.PRG, and so on, with 64K of memory allocated to each user.

Associate a security word (access code) to each directory record (not MFD) to allow protection in individual files. The protection scheme could be the same as that implemented with RSX 11/M, four categories of protection with four levels of protection within each category.

The four levels of protection would be:

R	Read
W	Write
E	Extend (not possible with AMOS now. Maybe in the future?)
D	Delete

The four categories of protection indicate which PPn's the levels of protection apply to:

SYSTEM	All project numbers of 10 or less may access the file with the above levels of protection. Example: (1,2); (1,4); (2,2); (7,6); etc.
OWNER	The four levels of protection would apply only to the PPn the file was created under.
GROUP	The levels of protection would apply to all PPn's with the same project number. Example: (123,1); (123,2); (123,3); etc.
WORLD	All others not specified above.

Show the date that a file was last updated or created in the directory listing along with its access or protection level. The listing of the protection level could be enabled with a file switch, /P. The categories of protection are in the same order as above. (SYSTEM,OWNER,GROUP,WORLD) Please note date, time, and right justified block sizes. Example:

```
.DIR/P
DSK1:(123,4)
November 12, 1979   13:42

FILENO BAS    12 10-16-79 (RWED,RW,RW,)
START  CMD     1  3-09-79 (RD,,,)
PAYROL DAT   167 10-30-79 (RWED,RWED,RWED,RWED)
TESTFL BAS    18  9-13-79 (RWED,,RWED,R)
ALPHA  DAT   123  8-12-79 (RWED,R,R,R)
Total of 5 files in 321 blocks
```

CRAIG'S BUG LIST FOR AMOS VER. 4.3A

BASIC - loading a binary file or compiled BASIC program while in BASIC may crash the system or cause a reserved-op trap. All of the jobs are affected and the system must be reset.

Jumping out of a FOR NEXT loop will not reset the stack and will cause a stack overflow error if done repeatedly. After a stack overflow error within BASIC, a program can not be saved on disk, rerun, or modified without typing NEW and reloading the program.

Using a reserved word in a MAP statement will not give a syntax error but the line will be deleted. Example: 100 MAP1 LINE,S,12

With release 4.3A it is no longer possible to CHAIN to a MACRO or system program as documented in the BASIC manual (page 68). For example; CHAIN "DSKO:SYSTAT.PRG(1,4)" Doesn't work.

COMPIL - A comma after a MAP statement is missed by the syntax checker. If the program is run one of three things happens: 1) nothing, 2) strange results, 3) system crashes all jobs. The error is caught in the BASIC program, but the program is still allowed to run, again with unpredictable results. Example: 100 MAP1,K\$,S,15

DIAG3 - Typing a control C when DIAG3 asks for the starting or ending address will cause the program to type an error message continuously until the machine is reset. It only affects the job issuing the command, the other jobs are still able to function.

DUMP - Dumping a file or record from a device with other than 512 bytes per record will still dump 512 bytes with confusing results. As an example, DUMP from a STD disk which has 128 byte records.

If the "to" address is greater than the "from" address (by mistake) the program will bomb and can not be stopped with a control C. Example: DUMP 1 0.

EDIT - Edit will not function correctly with less than 7K allocated to the job. It bombs the job issuing the command and the system must be reset.

SORT - Sort does not sort records in decending order correctly.

SPOOLER - The spooler outputs one line less than that defined in the PRINTR.INI file. (LPP=60 outputs 59 lines).

TRM: - The terminal deiver still does not work when copying from a terminal into a file. All jobs are affected and the system must be reset. Example: FILE.DAT=TRM:PORT1

Using TRM: to copy from one terminal to another will give continuous carriage return/line feeds to the receiving terminal and lock out the job issuing the command and put it into a RUN state. Other terminals and jobs continue to function, but to clear the problem, the system must be reset.

Transmitting characters faster than 4800 baud into the terminal driver will crash the system. This affects all jobs and the system must be reset.

Software bugs reported by Dr. Sydney Z. Spiesel

Sisyphus Iterations, 77 Everrit Street, New Haven, Ct. 06511
(203) 787-3952. All of his problems refer to AMOS version
4.3A

XCALL BASORT

XCALL BASORT,3,4,72,10,61,1,30,1,0,30,31,0 does not work
properly if key 1 (which begins at character 61) contains 9
spaces followed by a single digit (eg; " 4").

The problem appears to reside in the version of AMSORT.PRG
released with ver. 4.3A of the operating system. If AMSORT
from ver. 4.2 is substituted for the newer release (all other
things being held constant), this sort works just fine.

Other sorts run with the new AMSORT module seem to have been
okay, even when the same record size was used and when one of
the keys (key 3) was looking at almost the same last 10
characters (except that the last 2 or 3 bytes were digits,
preceded by 7 or 8 leading spaces).

ED Note: We have also noted that the decending order doesn't
work at all on the SORT.PRG program in 4.3A.

DIRSEQ From MEMORY

If DIRSEQ.PRG is LOAded into (and run from) MEM:, it
sometimes works and sometimes doesn't. Try LOADING it into
memory, sequencing a directory, COPIing a file or two onto
the disk, and resequencing the directory. The same bug has
been present in all past releases of DIRSEQ.

PRINT USING

PRINT USING uses the first period (".") it comes to in the
formatting variable as the formatting mask, even when the
period does not abut a "#" symbol.

```
1 ! Program to demonstarte flaw in PRINT USING
10 X=7
20 PRINT USING "HI THERE. THE TEST NUMBER IS #", X
30 END
```

SET VERIFY

Forgive my scepticism, but I don't think SET VERIFY works; in
fact, I doubt that it ever worked. It requires unusual and
rarely reproducible circumstances to check it, but every so
often I've copied a file with VERIFY set (and generally with
DSKERR set, besides) and gotten no error messages, but then
discovered (with DSKANA and REDALL) that the copy was bum.
The problem is not special to the current release, but has
been noticed since VERIFY was introduced.

TEXTFMT Suggestions

1. Allow negative arguments for indentation with AUTOPARAGRAPH (eg; /AP -5 1). Nice for some kinds of special reports, like bibliographies.
2. Allow zero arguments for blank lines with AUTOPARAGRAPH (eg; /AP 5 0). Useful for double spaced manuscripts.
3. Haven't checked the current release (4.3A), but 4.2 didn't allow abbreviation for disabling AUTOPARAGRAPH (maybe /NAP). Although it works, disabling AUTOPARAGRAPH (/NO AUTOPARAGRAPH) is omitted from the documentation.
4. Don't strip leading spaces from arguments for /TTL. Paper feed constraints sometimes make it pleasant to print text with a constant margin not equal to zero, but the /TTL argument will wind up printed in upper-left field someplace. An alternate solution would be to use the margin command as a reference for the /TTL position.
5. Underline capability would be a major enhancement.

AMUS Novice Seminar

Eugene Platt, AMUS vice president will be conducting a novice seminar on the use of the Alpha Micro on March 21st and 22nd. The seminar will include:

Disk and file formats

How to tell if you have a healthy system

How to tell when you have to reboot

Building a file with VUE

Building a file with BASIC

Creating and using command files

A review of the system documentation

How to find what you need in the documentation

The seminar will be held at the North American Title offices. Systems will be available for hands on practice. Cost is \$100.00 for the two days. Discounts will be given if several people from the same firm attend. Contact Eugene at (713) 681-6949 Tuesdays and Thursdays. or (713) 666-3088 evenings.

A M U S S E M I N A R
For Novice Alpha Microsystems Users
March 27-28, 1980
Boulder, Colorado

The Alpha Micro Users Society will be conducting a two-day "novice only" seminar on March 27th and 28th, focusing on hands on use of the Alpha Micro computer for new users. Participants will receive two days of nuts and bolts experience on the AMUS system, and be introduced to the programs available on the AMUS library.

There will be four half-day sessions consisting of:

1. How to bring up your system:
 - SYSTEM.INI
 - Initialization programs
 - Memory management
 - Disk formats
2. BASIC:
 - File formats
 - Use of XCALL subroutines
 - MAPs
 - How to get from an idea to a finished program
3. EDIT, VUE, Text formatting
4. The AMOS programs you will need to know
5. Creating and using command files
6. Miscellaneous items:
 - Utility software
 - Communications

The \$150.00 charge will include the two days of seminars, materials, machine time, and lunch. Sessions start at 9:00 AM both mornings.

The class will be limited to 12 prepaid participants. Additional classes will be scheduled as interest demands. For registration, contact Sharon Greene, AMUS, P.O. Box 1723, Boulder, Colorado 80306. (303) 449-6917.

A M U S S E M I N A R
Office Systems Management
May 1-2, 1980
Boulder, Colorado

The office of the future will incorporate many new technologies ranging from word processors, and electronic mail, to global communications. More importantly the workers in these environments will have different goals and aspirations. This new technology and management, including merging of data processing and telecommunications demands new approaches to marketing corporate operations.

This series of courses is aimed at business and office managers, marketing and sales personnel, and system engineers. This program is divided into a pair of educational units, It is recommended, but not mandatory to enroll in both.

May 1: Office Information Systems

This session is designed to give a comprehensive overview of new technologies affecting office systems management, and an overview of organizational planning. Topics discussed will include tele/information management, computer/communications integration, voice/data/image storage and transmission, organizational management, product and service planning, and resource development.

May 2: Office/Information Systems Design

This session is designed to put to use the information presented in Office Information Systems. The specific topics presented are: office and telecommunications management, office information design factors, telecommunications and information systems specification and procurement, job functions, and future office/information systems - office/home of the future/

The course instructors will be Thomas B. Cross, Director of Communications for the Boulder Communications Company, and Dale G. Mullen, Manager of Telecommunications Service for Johns-Manville.

Cost for the seminars is \$95.00 per day, or \$175.00 for both. For more information and registration, please contact Thomas B. Cross at CIB 303-444-7740.

Consultronics Inc.
605 E. Algonquin Road
Arlington Heights, IL 60005
312-640-1080
January 3, 1980

Using an Alpha Micro System with a CDC Hawk Disk Drive for an accountant's service bureau probably makes us somewhat unique. Please note that we are not performing certain accounting functions for a handful of companies - but are sustaining the records for over 450 (more by the time you read this) companies that are clients of 22 accountants.

We have put over three thousand hours into developing our software to give us a true multi-user, multi-company operation that is beyond any doubt one of the finest software packages that is in use today. We have purchased or seen most of the accounting software that is available to the Alpha Micro end user today and we are very unhappy with it. Before we go any further, we would like you to know that we are not selling our software.

The purpose of our letter is only to open a line of communications between us and others who may be doing something similar - or those that may want to. It is unfortunate that certain individuals sell their software and do not have to answer for it. We have seen software that has so many bugs and is so poorly documented that it is impossible to run unless the seller will run it for you. Unfortunately, even if there was acceptable accounting software on the market, the problems for our type of business are truly unique.

To be very truthful, we do not want to sell our product because we are in the Chicagoland area competing against companies that are using million dollar systems. We cannot give someone the opportunity of competing with us for \$30,000.00. However, we would be very happy to help some of our co- members avoid some of the problems we have encountered.

We also do a lot of custom work for accountants and we would be very interested in exchanging ideas or information with someone who has similar interests.

Please tell our co-members to call or write us anytime for more information. Thank you for the excellent job you are doing.

Yours truly,
Bruce Carlson

Farm Computers Inc.
RR 2 Box 150
Cambridge City, IN 47327
January 13, 1980

Please renew our subscription to AMUS for an additional year. We have enjoyed receiving the newsletter and found quite a bit of helpful information in it.

We at FCI pride ourselves on our training effort through seminars. We have found that centering three to five people around a terminal or monitor seems to work very effectively. The small group centered around a close monitor seems to interact better than a large group looking at a large remote monitor. The problem is that we normally work with twenty to thirty people at each seminar. We have not found an easy way to put the same display on all of the terminals for group examples, but still being able to have each terminal connected to the computer when it is time for each small group to be able to enter their own sample data. Currently, we use INFOTON I-100 terminals daisy chained to make each terminal a monitor for group examples. When it is time for the individual groups to work with the computer, we take a break and run around and connect each terminal to the computer. This obviously breaks up what may have been a smooth flowing presentation.

We have discussed the possibility of building a device that would take the output from four ports on the computer and send it to all terminals if a control switch was set to do that, or by flipping the switch the other way, have each of the four ports connected to its own terminal. This would require some hardware to step up the signals coming from a port to the point that it could drive four terminals, and while we don't want to develop the device ourselves, we would purchase one from someone else who did want to develop it.

In the December newsletter, another individual wrote about this problem and asked for a software command to route the output from one job to any number of other jobs. We think that this would be an excellent solution to the problem and would strongly encourage anyone to develop this command. I am sure that other individuals trying to give good seminars would gladly purchase such a piece of software. How about publishing this request in your next newsletter and seeing what kind of response we get.

Incidentally, you may add FCI to your list of software suppliers. We deal in agricultural software, and we have also developed an LP solver for those people who might be dealing with least cost routing or any other linear programming type of problem.

Thanks, and keep up the good work.

Sincerely,
Ted Macy, President

ON-TRAK
961 N. Azusa Ave. #8
Covina, California 91722
January 7, 1980

I want to inform all AMUS members of the availability of our new assembly language subroutine for formatted data input. XENTER displays a field of prompts at the desired location on your CRT screen, and then allows data entry only within the displayed field.

XENTER was written exclusively for ON-TRAK by Larry White of Khalse Research Corp., and is available from us by mail for only \$50.00.

Usage: XCALL XENTER,Y,X"...", RES
 Y = X location on screen (row)
 X = X location on screen (column)
 "..." prompt and functions
 RES user response

Functions: °NC numeric entry
 °RJ right justify
 °RB ring bell
 °UC upper case
 °LC lower case
 °LZ leading zeros
 °NE no echo
 °CR auto carriage return
 °BT bright (normal intensity)

Example: PRINT TAB (14,01); "ENTER AMOUNT \$ ---.---";
 XCALL XENTER, 14,16, "----.---°NC°BT", RES\$

We have been using a version of this subroutine in BASIC for over a year, and now that its written in assembler we hope that others will find it as indispensable as we do.

Sincerely,
Duane W. Cowgill

ATTENTION RJE USERS

Are you tired of having to drive to the office and reboot after a power fluctuation or software failure?

Yes!!! I thought so, then sit back and let AUTO-BOOT save you time and money.

AUTO-BOOT is a self contained electronic device which monitors your modem activity and with the proper code will automatically reboot you system, without you leaving your chair.

AUTO-BOOT comes with everything you need. The AUTO-BOOT box plugs in-line between your modem and RS-232 port. Plug in the AUTO-BOOT to the modem and then plug the cable from the computer to the AUTO-BOOT box. AUTO-BOOT works with either 1200 or 300 baud modems and has its own power supply.

When AUTO-BOOT detects the Boot code it will:

1. Flash a panel mounted L.E.D.
2. Generate a 4.8 KHz pulsating audible alarm which will warn anyone working at the site that a boot will take place in approximately 1 minute.
3. After approximately 1 minute your system will be reset and boot.

AUTO-BOOT has a reset button which will reset the device and terminate the reboot sequence.

PRICE: \$150.00 for each or \$110.00 when ordered in quantities of 3 or more, all orders must be prepaid.

For more information or to order contact:

Eugene Platt, V. P. AMUS
10333 Northwest Freeway #526
Houston, Texas 77092
713/681-6949

or Mike Ivey, after 5:00 p.m.
(713) 479-6845

NEED TO EXCHANGE DATA BETWEEN THE OUTSIDE WORLD AND YOUR ALPHA MICRO?

We have a package that allows you to exchange data via the IBM 3747 series machines and the Alpha Micro.

Capabilities:

1. Go from 9-track 800 BPI tape to floppy disks via the IBM 3747 (or equivalent) then to your Alpha Micro.
2. Dump data or program files from your AMS structured devices to an IBM 3747 compatible floppy disk and then to tape.

How it works:

Three assembly language routines called from a user Alpha Basic program from the heart of the system. These allow you to open an IBM compatible floppy for input/output, read off a file to an AMOS file, or write a file of your choice onto the floppy. ASCII to EBCDIC conversions are performed automatically for you. These subroutines can be used in conjunction with a custom AlphaBasic program to fit almost any need.

Other programs in the package:

OUT.BAS Sample general utility program for writing files from AMOS to IBM format.

INPUT.BAS Sample general utility program for reading files from IBM 3747 format to an AMOS file.

IGMDMP.BAS Utility program to examine data on an IBM 3747 floppy.

IMGHEX.BAS Utility program used to examine data on an IBM 3747 floppy in Hex without EDCDIC to ASCII conversion.

DUMP.BAS Utility program to examine a random AMOS file.

?????.CMD Sample command files to use the above programs and by which you may model your own.

COST: \$400.00

TO ORDER, OR REQUEST INFORMATION CONTACT;
EUGENE PLATT
V.P. AMUS
10333 NORTHWEST FREEWAY
#526
HOUSTON, TX 77092
713/681-6949

DSC Sage, Inc.
5161 River Road
Bethesda, Maryland 20016
(301) 652-8390

February 5, 1980

Thanks for your help the other day and I appreciate the trouble you took to send me the assembly code to access job numbers.

Here's some information on the AM based system we developed for a local university library. The system maintains records of all journals and periodicals at the issue level, including receipt, payment, claim, location, and vendor data. The system has the capability to provide a listing of journals based upon subject, language, country or publication, and geographic region using Boolean search parameters. It automatically claims missing issues and knows when a group of issues needs to be bound. We have developed an algorithm by which we can relate journals as to their need or desirability based upon cost, use, relevancy to the university's curriculum, reputation of the publisher, and number of places indexed.

This is merely a general description of the system -- I can provide more information if desired. As I mentioned, we are about to begin a development effort to automate the operations of a university bookstore, including eventual point of sale functions.

Thanks again for your help.

Sincerely,
Leon Viands
President

Victorex, Inc.
1529 Cypress Street
Walnut Creek, CA 94596
January 29, 1980

Victorex is pleased to announce that FWRITE.SBR and FREAD.SBR are here, for all those who want to flush and reflush file buffers in BASIC/Run far more efficiently than can be done presently. We are making them available to other users, with full documentation including an annotated listing of the MACRO source code, along with a few other routines we have written in MACRO for use in BASIC programs.

It took a lot of work, but we have figured out the essential elements of what we have dubbed the BASIC Control Block (BCB), a 304 (decimal) byte memory module which contains all the pointers and linkages necessary to run a BASIC program. (Ever wondered about the unexplained 300 to 350 bytes BASIC programs require?) We don't know it all yet, but will pass along what we do know to anyone who buys our routines, as this will give them protection against changes Alpha Microsystems might make in future releases.

The routines we are offering are as follows:

FWRITE.SBR Forces write to disk of file buffer. File number passed as argument. Uses current value of the record number variable for that file. Only for random files.

FREAD.SBR Forces read from the disk. Similar to FWRITE.

IADDER.SBR Performs integer arithmetic (plus or minus 32,767) on two-byte binary variables. Any number of variables can be added or subtracted from the first variable in a single call. Also return floating point variable containing result. For those applications which require disk storage of a large number of small-valued signed variables.

FPBNRY.PRG Converts floating point to two-byte signed integer, using two-byte binary variables as destination. (IN the range from zero to plus 32767, a two-byte integer and a two-byte binary variable are the same.)

BNRYFP.PRG Converts two-byte signed integer (using two-byte binary variable) to floating point.

HOWLNG.SBR Tests input buffer and returns when complete line (LF) has been input or when times out. Useful for prompting or branching when there is no response to a program prompt.

We are making these copyrighted programs available on a

license agreement to all Alpha Micro users. Dealers and software houses can incorporate them into their application packages and resell them that way, but they cannot be resold as stand-alone programs. Prices are as follows, including shipping charges, within the United States, but not including sales taxes. California buyers please add 6 or 6.5%, depending on your location.

Documentation and listings only:	\$48.00
Floppy diskette (AMS/STD) :	\$63.00
Hawk disk cartridge:	\$163.00

We would also like to mention that we are just finishing a sophisticated property management system for vacation and seminar rentals of vacation property. The key element is a reservation file which contains all the pertinent data for current and future rentals, and is used to print monthly calendars. It features a built-in help function at every prompt and all the associated accounting routines. If anybody needs such a system, they should contact us for further information.

It might be of interest that we purchased the Payne, Jackson & Associates general ledger system, and have it fully installed at one location. We found we had to put more effort into the package to make it run acceptable to our needs than we expected, but it is a good system. For small nonmanufacturing businesses, we think it is more appropriate than the Alpha Accounting Package. Certainly it is much less demanding of disk space. We haven't made any arrangements with PJA, but depending on what their future releases look like, we might try to make some kind of arrangement to market our version to other dealers. At this point we do feel we have something that people can get up and running easier than what came out of PJA last summer.

We bought Peter Jacobson's disassembler and can report it works great.

Very Truly Yours,
John V. Kjellman
President

Byte Shop of Reno
Crossroads Center
4104 Kietzke Lane
Reno, Nevada 89502
(702) 826-8080

January 21, 1980

The byte Shop of Reno has a series of five software packages available to dealers and end users. The following pages briefly describe each package. All software includes documentation, source and object code. We periodically update our software in order to keep it as bug free and up-to-date as possible. Update notices are sent free to all our customers as needed.

If you have any questions about any of our software, contact John Waycott.

Program	Description
AUTO .RUN.....	Allows automatic line numbering for BASIC programs.
CMPALL.RUN.....	Allows "wild card" compilation of BASIC programs.
IF .RUN.....	A conditional statement processor which allows the user to control the flow of procedure files.
RENUM .RUN.....	A program which will renumber a BASIC program. Specific sections of the program may be renumbered.
RESEQ .RUN.....	A BASIC program resequencer. Same as RENUM but allows imbedded line numbers.
CHAIN .SBR.....	Allows the user to chain to a command file directly by passing it a string of commands. This allows the user to pass arguments.
CLINE .SBR.....	CLINE will fetch the command line into a string. Allows you to type things like: RUN PROG ARG1,ARG2
COMBLK.SBR.....	COMBLK is a general common block routine which allows common blocks to be stored in memory when chaining to other programs. It is similar to the AlphaMicro COMMON subroutine, but it allows any number and size common blocks. Common blocks may be stored in the system area also.
DATCNV.SBR.....	A generalized date conversion routine. It allows dates to be stored in just two bytes. DATCNV will check for date legality and is valid from 1/1/1900 through 6/7/2079.
DSKRW .SBR.....	Allows you to read and write physical blocks on a block-structured device.
EKOSET.SBR.....	Turns terminal echo on or off.
GETCH .SBR.....	Gets a character from the keyboard without having to wait for a carriage return.
NXRPAR.SBR.....	Allows easy extraction of parameters from a string.
PAUSE .SBR.....	Allows the job to delay for a specified amount of time.

PRIERR.SBR.....Prints an error message and waits for return from keyboard.
PUTIN .SBR.....Forces characters into a job's own input buffer.
RENAME.SBR.....Allows a file to be renamed from within BASIC.
RGETCH.SBR.....Allows real-time entry of characters from keyboard. Returns a null until a key is pressed.
TRIM .SBR.....Removes trailing blanks from a string. Similar to the Alpha Accounting STRIP routine, but is smaller.

Assembly language programs:

ABBREV.PRG.....Allows the user to create abbreviations for commands.
ALLOC .PRG.....Allocates a random file of a specified size.
BASCVN.PRG.....Converts numbers between octal, decimal and hex.
CRICOM.PRG.....Creates common blocks for COMBLK routine.
EXIT .PRG.....Terminates a command file and prints a message. Generally used with the IF program.
GOTO .PRG.....Allows forward jumping in a command file. Very useful with the DO and IF.
WAITC .PRG.....Same as WAIT, but waits for the job to return to command level.
XFORCE.PRG.....Similar to FORCE, but allows a job to force to itself.

Changes to existing programs:

DING .PRG.....Ring the bell on the terminal. Replaces the DING program provided by Alpha Micro.
LOGOFF.PRG.....Will now delete any modules left in memory.
XY .PRG.....Same as the Alpha Micro XY, but allows a comma between the coordinates.

The price of this diskette is only \$35.00. The diskette includes object and source code, plus documentation in the form of HELP files.

Byte Shop of Reno Software disk #2 contains the following programs and routines:

Program	Description
XREF .PRG.....	A BASIC variable cross reference generator. XREF will produce a sorted file containing references to all variables and symbolic labels in the program. XREF will cross reference a BASIC program at a rate of over 90 blocks per minute on a floppy disk.
LPAD .SBR,	
RPAD .SBR.....	LPAD and RPAD will pad a string with a specified character until it is a specified width. They are used for output formatting operations.
FF .PRG.....	A floating point/binary conversion routine used from assembly language. Converts a binary number to floating point, or vice versa. The binary number may be from 1 to 5 bytes in length.
VUER .PRG.....	Restores a file which was VUEd if the edited version was stored as MEM:IMAGE.VUE. This is very handy for us dummies who leave the disk write protected.
PURCEF.PRG.....	Fills a random file with zero bytes.
BINWRT.PRG.....	Allows you to easily send escape codes to devices to set certain features. For example, many printers send an escape sequence to set form length or lines per page. Included are two example command files for setting page length and line width for the TI-810 printer.

a disk containing all of these programs with source code and documentation is available for \$35.00.

NEED A HARD COPY TERMINAL?

If you ever had the need to send the screen output of your CRT to the printer for hardcopy, the Byte Shop of Reno has a program which will solve your problem.

HARDCOPY allows a user to direct the output to his terminal to the printer. When the operator presses the control-P key, any output to his screen will also be sent to the printer. Another control-P switches the printer output off.

HARDCOPY was originally designed for use by teachers who wanted to see student's results without teaching them how to send output to the printer or disk. HARDCOPY is handy for doing things like getting a listing of a DSKANA run, or getting a directory listing quickly.

HARDCOPY operates with any TRM: device as printer, which may run at a slower baud rate than the CRT.

HARDCOPY prevents more than one user from sending output to the printer at the same time. (The current version will intermix output with the spooler, however).

Terminal drivers for most terminals are included, along with instructions for modifying your particular terminal driver. HARDCOPY also comes with source code and documentation.

Get HARDCOPY now for only \$49.95.

LOG ACCOUNTING

A system which keeps track of elapsed and CPU time is now available from the Byte Shop of Reno.

Log accounting keeps track of the total elapsed and CPU times spent in each PPN. The accumulated times are periodically written to a file on the system disk for billing purposes.

The user may inquire how much time he or another has used since logging in. This function is available to BASIC programs also.

The LOG and LOGOFF system programs we modified to display the accumulated times during the session.

The log accumulations system requires very little overhead and only 300 bytes of system memory, and 2200 bytes of user memory.

Log accounting is available on floppy disk for \$49.95 and comes with source listings, documentation, and initialization procedures.

A subsequent version will provide automatic timeout. This means that a user will automatically be logged out if his job has been sitting idle for a specified amount of time.

GMS - A GENERALIZED MENU SYSTEM

The Generalized Menu System (GMS) is a simple but powerful package of BASIC programs and AMCRO subroutines which allow a programmer to integrate a collections of programs into a complete system through the use of a hierarchial set of menus. A list of applications is displayed on the console, and the user selects the particular application he/she desires by number. The menu system will at that time invoke a procedure or display another menu.

Each selection may be assigned a priority from 1 to 255. Any user who has a priority equal to higher than the selection's priority may invoke that particular selection. This feature allows certain programs and menus to have restricted access. For example, in an accounting system, only people with a high priority would be allowed to access file initialization procedures.

GMS provides the user with the ability to add, delete, and change menus dynamically while he is running the system. Effects of modification of the menu tree can be seen instantly.

The GMS system is available for \$85.00 which includes all of the programs in our utility package #1. If you have already purchased the utilities package, you may get GMS for \$50.00. The package includes documentation and source code.



AMERICAN MEDICAL SOFTWARE, INC.

A subsidiary of Colwell Systems, Inc

205 Kenyon Road • Champaign, Illinois 61820 • Telephone: 217/351-5415

The AMS Medical Office System includes four integrated packages:

- A - Accounts Receivable
- M - Management Reports
- S - Scheduling Appts.
- INC - Insurance Claims

ACCOUNTS RECEIVABLE

- B Billing
- CB Change Billing
- PR Print Receipt
- DL Daily Log

- NA New Account
- CA Change Account Information
- AI Account Inquiry
- NP Name and Phone Inquiry

- PS Print Statements
- MA Monthly Account Ageing
- AR Accounts Receivable Report
- SN Security Number Change

- DI Doctor Information
- CL Code List
- C Codes
- D Date

MANAGEMENT REPORTS

- PA Practice Analysis
- DA Delinquent Accounts
- PL Print Ledgers
- AT Audit Trail

- MS Monthly Summary
- HR Hospital Register
- WP Word Processing Directory
- SM System Management Functions

- SP System Parameters Management
- SI System Installation Values
- FN File Names Management
- FP File Pointers Management

- LF List Functions
- DM Dunning Messages
- ML Mailing Labels
- ME Mailing Exclusions

SCHEDULING APPOINTMENTS

- SA Schedule Appointments
- WA Walk-in Appointment
- AC Appointment Cancellation
- LA Look-up Appointments

- DS Day Sheets
- CS Charge Slips
- AB Appointment Book
- AD Appointments Deletion

INSURANCE CLAIMS

- IF Insurance Forms
- IL Insurance Log
- PI Print Insurance Forms
- CI Clear Insurance Forms

- ME Medicare
- UC Uniform Claim (AMA)
- BS Blue Shield
- MC Medicaid (Illinois)

AMERICAN MEDICAL SOFTWARE, INC.

CUSTOMER-ORIENTED FEATURES

AMOS/MOS

Alpha Micro Operating System/Medical Office Software

1. The software has been designed over several years from both the practitioner's point of view and from a medical record-keeping point of view. It is not a program developed for a unique practice designed to solve practice-peculiar problems.
2. It is designed to track the service provided to all members of a family account from the moment an appointment is made until that service is logged as paid and placed in an historical file. The program allows many flexibilities in the practice-unique approach to patient and account filing and invoicing.
3. The day's appointments can be printed out prior to the beginning of the doctor's workday. At this time each appointment is also provided with an appointment (or charge) slip which provides the doctor with patient data, responsible party data and account status. It also provides space for the doctor to enter post examination diagnosis and charge codes, next appointment, special instructions, etc. to the receptionist.
4. As the patient prepares to leave, the receptionist can enter the doctor designated charge codes and present the patient with a receipt slip which shows account balance and can show optional information such as account terms or other payment-encouraging notices.
5. Appointments are simple to enter, either on line or at the end of a day. Account numbers need not be known as the system can be searched by patient name as well.
6. There is no real limit to the number of accounts or even the number of patients in an account or number of insurance coverages per patient or account.
7. Authorized access to account data is limited to persons who know the security code. This code can be selected to be different for each operation so protected.
8. There is no need to change paper during the main part of the work day. A single preprinted form (which can be custom printed for the practice) is used as appointment (charge) slip, receipt and statement. These forms are available through your dealer. Insurance forms, patient correspondence, mailing labels, appointment list, practice analysis reports and the like, are designed to be printed in "batches" to minimize paper changing time. Printing of reports does not change any file information so printing can be interrupted without harming any file. Printing a batch of statements, reports, etc. is done on a time-shared basis with the terminal, thus other activities need not be terminated while printing is being accomplished.

9. The filling out of insurance forms by both patient and doctor has become very complex. AMOS/MOS maintains an insurance log which shows the billing and history of each insurance account for each patient. The system can handle individual insurance claims or monthly insurance billings. New insurance form printings may be arranged by your dealer at a nominal charge.

10. Account management is as simple as we can make it. Statements can be printed on any cycle - monthly, bi-weekly, weekly or even daily. Statements can be printed for a segment of the accounts receivable file by specifying a starting and ending account number. The practice can smooth out cash flow by billing at the optimum cycle for its accounts. Accounts are automatically aged by comparison of the billing date and the current date. Account age data are also shown at the bottom of the statement so that the responsible party can identify overdue amounts easily. An accounts receivable report which specifies a particular "age" (say 90 days past due) can be prepared at any time. Specific three-line messages can also be printed on the statement based upon account age. A single-line message can be printed on all statements. These messages can be changed at will by the operator so that responsible parties do not ignore them out of habit. At any time (especially around income tax time) a patient ledger may be prepared which will print out all of the charges and payments on an account for the calendar year. Patients on public assistance (to whom a statement cannot be mailed) are identified within the program so that no errors on billing can be made.

11. AMOS/MOS contains a "Word Processing" function and directory where up to 400 separate items of correspondence can be prepared and stored. These items may be called up and discreetly addressed to a patient (appointment reminder?), responsible party (pay up or else?), supplier (please send me?). These can be used to reduce the time necessary for efficient practice management.

12. The AMOS/MOS program also contains a hospital register which will provide the doctor with a listing of his "rounds." When he returns this to the receptionist with charge-coded notations, charges can be entered in the account.

13. The date entered for service provided to a patient need not be the same as the date that the information was entered.

14. Custom features can be developed for your program as required. Your dealer can arrange for that service.

Radio Station Management System

RadioFBA

Solve these costly problems for Radio Station Owners and Managers!

- * Sloppy broadcast logs
- * Missing commercial spots
- * Inaccurate or late billing
- * Uncertain sales goals

And save the two or three extra salaries these problems cost you!

RadioFBA puts computerized traffic control and complete accounting within the reach of small radio station management at LESS THAN HALF the cost of comparable systems.

Each *RadioFBA* package includes:

- * On-site installation
- * Personnel training
- * Custom-tailored reports

RadioFBA "Computerized Ledger Card" data entry format reduces training time and streamlines daily use of the system. A series of "Function Menus" moves the operator quickly from task to task.

RadioFBA runs on the Alpha Micro computer which provides dependable, low-cost, high-volume data processing, as well as optional multiple task capability.

EA Flander, Beyer and Associates, Inc.
1000 Maxwell Avenue, #10
Boulder, Colorado 80302
(303) 449-2892

ALPHA MICRO USERS SOCIETY Membership form

Please fill out as much information as possible.

Name _____ Company _____

Address _____ City _____ State _____ Zip _____

Business Phone _____ Home phone _____

Circle one: Own Lease Thinking

Check all applicable: Dealer ___ OEM ___ User: Corporate ___ Individual ___

Describe equipment: _____

AMUS may use my name for mailing lists ___ Make checks payable to AMUS

Annual dues are \$25.00 per member.

80/3/20

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