

Newton Software Exchange

INDEPENDENT
OSI USERS
NEWSLETTER

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OHIO SCIENTIFIC AT THE NCC

The National Computer Conference in New York was worth at least two pairs of shoes this year. In addition to an overflowing show they filled floors of two other hotels. While dramatic new developments were rare, the basic impression was one of a dynamic microcomputer industry full of imagination and individual achievement. As anticipated there was an indication of a softening of prices for disk memories, with more companies showing double density drives at prices which are increasingly competitive with single density floppies. New software houses are continuing to proliferate, and I would not be surprised if the constantly lamented shortage of microcomputer software turns into a complaint of too much software within the next year. OS exhibited in two locations showing business oriented packages in one and personal systems at another. I was able to make personal contact with OS representatives there, and am happy to report that we can expect greater cooperation of OS through this newsletter in the future. So, if you are having problems 1) check with your dealer -- dealers are beginning to receive more technical data from OS, and, if you are still stumped, 2) let us know, and we will try to obtain the information for you -- but please, try your dealer first. A note to the office of the president at OS, at 1333 S. Chillicothe Road, Aurora, OH 44202, encouraging OS's continuing cooperation with our newsletter is bound to produce positive results.

A NEW NAME FOR AN EXPANDED NEWSLETTER

The headline says it all. Starting with the July 1979 issue we will be renaming the newsletter - Challenger Times. The expanded newsletter will be page numbered sequentially on an annual basis and we will provide a semiannual index. The first index will be included with the July issue.

NEW USERS GROUPS - THE COMING TREND

The only users group that we have come across thus far is in the Washington D.C.- Rockville - Northern Virginia area. Ted McCartney and Wallace Kendall started the group earlier this year and now report attendance at monthly meetings are averaging over 40. Their next meeting is scheduled for the first week in September. Ted is Chairman pro Tem, if you are in the area contact him at (703) 527-9296. Ted and Wally are interested in forming a national OS users group - what do you think of the idea? Let us know. Another group will be forming this fall in Boston - an outgrowth of the Boston Computer Society's efforts to encourage a variety of users groups in the area. Contact me if you are interested (617)924-2124. It seems there may also be a nucleus of users in the Philadelphia area. More on that in the next issue. If any of you are willing to take on the task of local organization, let me know and we will pass the word.

C2-4P MUSIC PROGRAM

MEMORY BOARDS

The following was provided by Randy Huckins of The Computershop in Cambridge, MA who credits it to Kevin Beam and Byron Salzsieder.

```
5 INPUT X
10 POKE 57089,X
20 POKE 56832,02
30 GOTO 5

100 POKE 56832,2
200 FOR I= 1 TO 255
300 POKE 57089,I
400 FOR J= 1 TO 10
500 NEXT J
600 NEXT I
700 GOTO 200
```

Lines 5 & 10 put out the number from the keyboard, says Randy. While the loop from 100 to 600 runs 100 sweeps of the available tones.

BACKSPACE CAPABILITY IN OS-65U V1.1

This program was passed along by David Morganstein, an active member of the Washington, D.C. area users group. It allows the use of a Control H as a destructive backspace. This is certainly a very important time saver, not only in typing in BASIC code, but also to allow on screen corrections following INPUT statements.

These modifications are made in BASIC EXECUTIVE. First, load BEXEC, including the password. Then LIST the program. Make the changes listed below—I've included a few lines in the original program for reference.

```
220 REM
230 REM UNLOCK SYSTEM
240 POKE 21340,8: POKE 1373,76: POKE 1374,0:
    POKE 1375,92
245 FOR PT=23552 TO 23571:READ MA:POKE PT,MA
    : NEXT PT
247 DATA 201,8,208,13,32,8,40,72,169,32,32,8,
    40,104,76,76,5,76,97,5
250 FLAG 22: REM INPUT ESCAPE
```

Earl Morris, 3200 Washington, Midland MI, 48640 advises us that an 8K memory board that is directly compatible with the OSI 48 pin Bus is available from D.H.Krauskopf of D&N Micro Products (3932 Oakhurst Dr., Fort Wayne, IN 46815). It provides two independent blocks of 4K each using 21L02 RAMs. It is available as a bare board, kit of parts, or assembled. The board address is set by jumpering DC levels to +5 or ground. Thus the board address could be changed under software control. A prototype board is available from the same source.

CALLING ALL HAMS

(You'll pardon me if that is the wrong way to call you - I've never been bitten by the radio bug myself. My addiction to miros is all that I can handle.)

However.....

WA4NNJ Barry W. Bird, 6003 Wonderland Ln., Mechanicsville, VA 23111 has a very useful suggestion: Why not form an OSI net for Amateur Radio operators.

He suggests you all tune in at 2 p.m. EDT (1800 UTC) Sundays on 14.325 MHz.

Sounds like a great idea. Please let us know how it turns out, and please, please, pass along any information that might be of use to other users. (You might also mention the availability of this newsletter to hams who are not subscribers.)

SUPERBOARD II/1P QUESTIONS AND ANSWERS

Barry Bird (see above) also sent us the following:

Zeno Meier in Switzerland wrote and asked if my display got the "shivers" after asking ?FRE(0). Well, it did several times on a program that I hadn't finished debugging. It worked after the bugs were cleared up. When this problem occurs a loop is formed and the only way out is by hitting the BREAK key. I wasn't using any PEEK or POKE statements, so we can rule those out. Any suggestions??

SUPERBOARD ...

Barry also asks: "How do the 1P cassette based sequential files work? I've read and reread page 5 of "The 8K Basc-in-Rom reference manual" and still either don't understand the instructions or can't make it work.

"Has anyone bought the Extended Monitor routine from OSI. I am considering purchasing the expander board (610) but want more info before purchasing.

"I am interested in interfacing a baudot printer. Has anyone done this?"

(I am sure many of you can supply Barry with some of these answers. Could you drop the newsletter a copy of your letter so we can include the information in future issues?)

CLEARNING UP SOME C2-4P PROBLEMS

William L. Taylor, 246 Flora Rd., Leavittsburg, OH 44430 sends us two valueable notes:

Re: problems with the USR vector in the OSI Basic Users Manual supplied with the C2-4P, ClP and Basic ROM chip sets. The USR vector for Basic in Rom was changed. The locations in the Manual are for the cassette version of Basic that was sold before the ROM version was available. For all users of the OSI ROM version, the USR vector is located at OB hex or 11 decimal, and OC hex or 12 decimal.

Re: Auto-Load Cassette patch which appeared in the July 1977 issue of the OSI Journal. "I have a patch that I use with the ClP that should work on the C2-4P. To have the program run on the ClP, or C2-4P, the UART routine at Hex OEDF must be deleted. The patch in the listing must then be entered into memory.

"My procedure for loading the cassettes into memory is: start the Auto-load tapes. Load in the OSI 65V which contains the Check-sum loader. When the OSI 65V format loader has loaded in the Check-sum loader a jump to OF24 will be executed. At this point the program will bomb.

.....

.....

Stop the tape and enter the patch at OEDF. Then rewind the tape back past the start of the check-sum formatted program. Goto the monitor mode enter OF24. Start the cassette on play. Hit go. The program of interest will now load with the Auto-Load program. Enter the following beginning at hex OEDF: AD 00 F0 4A 90 FA AD 01 F0 29 7F.

RELOCATABLE SCROLLING SUBROUTINE

The following program comes from E.H. Carlson, 3872 Raleigh Dr. , Okemus MI 48864

All numbers are in hex.
Staring address OB 20

```

A9 00    LDA=00          in      is
85 20    STA 20          00 20    00
A9 40    LDA=40          00 21    D0
85 22    STA 22          00 22    40
A9 D0    LDA=D0          00 23    D0
85 21    STA 21
85 23    STA 23

AD 00    LDY=00

B1 22    LDA 22,Y       move display up
91 20    STA 20,Y       1 line

E6 20    INC 20
D0 02    BNE            to
E6 21    INC 21

E6 22    INC 22
D0 02    BNE            from
E6 23    INC 23

A5 23    LDA 23
C9 D8    CMP=D8         done?
D0 EA    BNE

60      RTS

```

GETTING THE 440 GLITCHES

Earl Morris (see above) also writes to tell us how he eliminates glitches on the 440 video board during scrolling. "I use the board enable to trigger a one-shot of about 2 us duration. This blanks the video and every CPU access will produce a black glitch on the screen. Since most of the screen is black anyway, it is far less noticeable."

DISK DIRECTORY FORMAT MODIFICATIONS

The following information comes from Kenneth Cates, 30 Andrew Circle, North Andover, MA 01845. Ken has an OSI-C3 with 48K memory.

If you have ever wanted to get a listing of an OSI program with the intention of making improvements, etc. you may be frustrated with the fact that they usually read-protect the program so you cannot just load and list it. However, the access rights are set with bits in the directory entry of each program or file. Using the CHANGE program, you can alter the access rights, password, etc. to be whatever you choose. Follow the directions for using the Change program. The Directory starts at disk address 6200 hex. Common sense says that you should make a copy of the diskette you want to change and not work with the only copy you have. The format of the directory entry is:



1. FILENAME. 6 characters in ASCII.
2. PASSWORD. Four character passwords are compressed (packed) into two bytes of the directory. Change each byte to 00 (zero) if you want no password.
3. TYPE & STATUS FLAGS. One byte with the following format:

bits 7 6 5 4 3 2 1 0

0 1 - Access: 0=none, 1=read, 2=write, 3=read/wite
2 3 4 - Type: 0=data, 1=basic, 2=other, others undefined
5 6 7 - Undefined except that bit 7 is referred to as DIR bit (?)
4. DISK ADDRESS of program or file.
5. SIZE of program or file.
6. Undetermined.

After making any changes to the Directory, run the Directory list program ("DIR") to verify the changes. If the directory list program does not list the file with the new attributes, you've obviously done something wrong. {Small consolation - ed.}

INTERFACING A TTY

Ear Morris (who is a frequent contributor to this newsletter) is running a model 15 Baudot teletype and suggests the following to those who want to interface a TTY. "The first problem is to take control away from basic. This can be done (on the C2-4P) by jumpering a wire from Pin 5 of the 74154 on the 430 board to Bus Line 2 (NMI). You may want a switch to disable this circuit. This will cause an interrupt whenever a character is sent to the tape output. The computer will jump to \$0130 and execute whatever instruction is found there. The character just sent to the tape is still in the A register. A machine language program can then be written to send the contents of the A register to an output port in whatever form or speed is required. An "RTI" returns control to Basic. A program run or listed in SAVE mode will also be sent to the TTY or other terminal.