

# Newton Software Exchange

INDEPENDENT  
OSI USERS  
NEWSLETTER

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## OSI SUSPENDS DISTRIBUTION OF SMALL SYSTEMS JOURNAL TO USERS

Ohio Scientific has officially dropped publication of its Small Systems Journal as a separate publication. Instead, the company is taking out four page ads in Kilobaud MICROCOMPUTING. The first series started in the May, 1979 issue. Pointing out that "we have not been very successful in getting the journals out on time," they will use the space to announce new products, provide analysis of software and discuss "technical aspects and applications" of their products.

In their first series they announced an enhanced 540 video board which includes 16 colors including black and white, reverse video, a home control interface compatible with their new AC-12 remote control system. The color and sound option on the C2-4P and C2-8P is \$200; a color only 540B for system upgrades is \$225 and a 540B as well as a 542B sound keyboard is \$299. The remote control system, including a console, four remotes and software is \$175.

OS also described their new CD-23, a 23 million byte Winchester hard disk that is an expansion of the Challenger 3 series. It sells for \$4,250 or can be configured with a full Challenger 3 with 48K static RAM, dual floppies and OS-65U software for \$9,340.

Dealers should have details of these new products.

## ----- NEWTON SOFTWARE TO EXPAND INDEPENDENT USERS GROUP NEWSLETTER

Frankly, I am disappointed that OS has decided not to continue with their publication. The ads do contain a lot of information about new products, but, from the mail we receive, they will not provide you with some of the information you are looking for. We had always seen this newsletter as an adjunct to the OS Journal.

However, encouraged by the voluntary response of many of you to share your information through this newsletter, and reviewing our own commitments, we have decided to expand the number of pages of the newsletter starting with the July, 1979 issue. There will be NO extra charge this year to our current subscribers. The additional costs of printing and preparation will mean that we will have to raise the price to \$9 a year (\$US 13.00 overseas), to all NEW subscribers starting in July. As a courtesy to those who may have been thinking of subscribing we will retain the \$5 rate for all new subscribers who ask for it before the end of June.

In order to provide this expanded service we will really need your help. The programs, tips, comments that have been sent in thus far have been invaluable. We will need more of them. If you are having problems, please let us know, and we will try to provide answers through the newsletter.

Now some questions: How much detail shall we go into in describing new OS products? Do you want more than just the kind of listing that we provided above? It may be time to give this newsletter a more distinctive name - any suggestions? What kinds of articles would you like to see? Please let me know. We want this newsletter to be of real service to you.

## SIMPLE PRINTER INTERFACE

The following series of notes comes from Daniel B. Caton, 4151 NW 43rd ST., Apt. 507, Gainesville, FL 32601

Owners of systems that contain the 430B Super I/O Board have a simple way of attaching any kind of RS 232 printer. Despite the manual, you can implement the transmit (ONLY) portion of the RS-232 port in addition to the cassette interface.

Simply put the parts on the board that are part of the transmit circuit, as shown in Diagram 3 of the assembly manual. The only modification of the board that Daniel made was to cut the trace after resistor R23, and lead the output via wire to one of the extra (redundant) ground connections on the auxiliary connector. He isolated pin C36 on this connector and used it for output.

For printed output while in BASIC, type SAVE and all the output goes to both the video board and the printer. One advantage of this method is that it does not require any changes in monitor software.

The baud rate is set by the 300 baud interface clock.

## 440 VIDEO BOARD MODIFICATIONS

If you have a 440 board you can double the number of lines and characters per line with only a couple of hours of work making some simple alterations, says Daniel.

The basic change is to piggyback an additional 1K of 2120's on top of the existing memory. The clock speed is then doubled and a few traces are cut and replaced with wires to change which counter signals are used to pulse the horizontal and vertical syncs. Daniel will provide more information through the newsletter if you want it. This modification will impair the use of graphics, however.

The 440 board can also be modified to provide upper and lower case characters by adding a 2513 lower case character generator piggyback on top of the upper case one. The 7th 212 can be used for the up-

per/lower bit (as is standard). This will also impair the use of graphics.

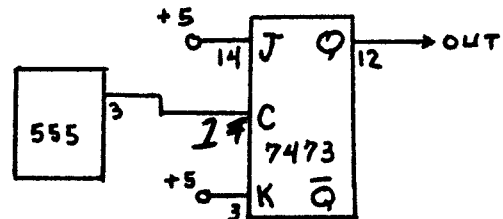
If you have both a 430B and 440 board, you can reduce the noise on the video screen by moving the keyboard to the parallel port on the 430B board. In fact, says Daniel, any location off the video board will be better. Note that this requires changing the monitor ROMS.

However, Daniel still is searching for the way to reduce video noise during scrolling. Any help out there?

## CLOCK MODIFICATIONS FOR 430B SUPER I/O

Ian Robinson's clock modification for the 430 board (Vol.1, No.2 FEB. 1979) can be made even more easily on the newer 430B SuperI/O Board, without adding any chips.

The clock speed is doubled to 9600 Hz, but the clock output is made square by using the unused half of the 7473 right near it (IC 'X'). The circuit to do this is shown below and is taken from Fig.4-17 of Don Lancaster's "TTL Cookbook".



## SAVINGS ON CHIPS

Daniel would like to know if there are any of you who would like to pool resources and buy memory chips in quantity. He has a 527 board that uses 2114 static RAM chips. These cost about \$6.50 in single quantities but \$4.75 a hundred. "I would like to hear from people who would want to order ten or more of these chips at around \$5.00 each, including postage." He will be glad to handle the ordering and re-mailing. Send him a SASE if you are interested.

<SASE=self addressed stamped envelope!>

## CHANGING CHARACTER AND LINE DELETE KEYS

Kenneth Cates, 30 Andrew Circle, N. Andover, MA 01845, sends us the following two notes.

He has a Challenger 3-OEM with 48K, an Intertec "Intertube" terminal and a Centronics 702 printer.

He notes that the default character delete key is the underline or back-arrow key. "This is unacceptable for someone using an ASCII terminal which has backspace." The use of the underline for delete "plays havoc with any formatting you are trying to do on the screen. The use of the backspace allows you to backspace over the incorrect characters and then enter the corrections directly over the previous entry."

You can change the character delete default - but there is a catch. OSI considers only decimal code 32-125 as valid input and the backspace is code 8. It is necessary, therefore, to go a level lower and change the value which the input routine is comparing against a valid input. The first POKE below changes that value and the second defines the backspace as the delete character.

POKE 1382,0

POKE 1394,8

A similar situation comes about if you want to change the default line delete character (@). Ken prefers to use the DELETE key ("@ requires two key strokes, shift and @"). This time the constraint is on the high end, since the highest valid character is defined as 125 decimal and the delete code is 127. The first POKE below changes the input range, and the second defines the line delete character as the DELETE key.

POKE 1386,128

POKE 1390,127

## USING AUTO LINE FEED ON THE CENTRONICS

The automatic line feed on a Centronics printer causes double spacing, as the computer outputs a CR-LF sequence, to which the Centronics adds its own LF. This automatic feature can be software controlled by dis-

abling the additional LF. This can be done by

POKE 2683,0

to disable the additional LF, and

POKE 2383,10

to enable it.

The first POKE must be done only immediately before a print operation, because I/O to the terminal with LF disabled will result in all lines printing on the same line.

Keneth is interested in OS-65U listings, PROM listing, etc.

<Note: we talked with Ken to find out his experience with the Intertube and he reports that he has seen several in action with no problems.>

## LOW COST SOFTWARE

A micro version of the famous IBM 370 "Adventure" game that retains all of the excitement and frustration of the original is available from Technical Products Co., P.O. Box 12983, Gainesville, FL 32604. It is in BASIC and runs in 8K; available on cassette for \$7.95.

The player explores a deep and mysterious cave, watching out for the dragon and taking care not to spill lamp oil. Score is kept as you gather the treasure before your lamp goes out.

No two trips into the cave are exactly alike.

MICROCHESS is now available with up to three levels of play. Auto-load cassette and documentation is \$15.95 from Joseph Endre, 3336 Avondale Court, Windsor, Ont. N9E 1X6 <? who ever thought up that ZIP??> CANADA. Phone 1-519-969-2500. Specify 600, 540, 440 board.

Other programs in BASIC: Dive-Bomber, a fast real time arcade type game full of action, on tape \$5.95. Address list & editor will keep an up to date file on tape; limited only by memory capacity. Tape for \$15.95. A catalogue of games is \$1.

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5 REM      A BOMBING RUN
6 REM Developed by : Avery Shores, 6950 Damascas St.
7 REM Savannah, GA 31406 "to become more familiar with PEEK
8 REM POKE and GOSUB statements. Superboard + ??
9 REM Hitting #1 causes the bomb to fall.
10 GOSUB 3000 / instructions
20 FOR T=0 TO 35: PRINT: NEXT / clear screen
30 FOR M=54083 TO 54107 / pokes in
40 POKE M,14: NEXT M / small buildings
50 K=57088
60 POKE 530,1 / set up for
70 POKE K,127 / peek control
80 FOR P=54088 TO 54107 STEP 5 / pokes large
90 POKE P,15 : NEXT P / buildings
100 H=0 / sets number of bombs to zero
110 FOR Q=1 TO 10 / sets number of times plane flies
120 FOR X=53539 TO 53563 / pokes airplane
130 POKE X,237 / in first space
135 IF PEEK(K)=127 THEN GOSUB 1000
140 FOR T=0 TO S: NEXT T / speed of plane - set in line 3070 instructions
150 POKE X,32 / clears space after plane
155 IF X=53563 THEN 2040 / restarts plane faster
160 NEXT X

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1000 Y=X+32 / sets location for bomb
1005 H=H+1 / count for
1006 IF H=20 THEN GOSUB 25000: GOTO 2050 / 20 bombs
1010 FOR T=1 TO 24 /
1020 POKE Y+32,46 /
1021 FOR N=0 TO 5: NEXT N / drops bomb
1022 POKE Y,32 /
1030 Y=Y+32 /
1035 IF Y>54083 THEN GOSUB 2000 /
1040 NEXT T /
1050 RETURN / to line 135

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2000 T=Y / start of
2001 FOR B=0 TO 50 / explosion
2010 A=(255-1)*RND(1)+1 /
2030 POKE T,A / EXPLOSION !
2035 NEXT B
2036 POKE T,32 /
2037 RETURN / to line 1040
2040 NEXT Q
2050 INPUT "If you would like to play again, type Y"; A$
2060 IF A$="Y" THEN 0
2070 END

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3000 INPUT "If you need instructions Type Y. If Not type N";B$
3005 PRINT:PRINT
3010 IF B$="N" THEN 3170
3020 PRINT "Push Key #1 to drop a bomb": PRINT:PRINT
3030 PRINT "The plane will fly across the targets 10 times": PRINT:PRINT
3050 PRINT "Hit only the large buildings": PRINT:PRINT
3060 PRINT "You will have 20 bombs"
3065 PRINT "Enter a random # between 0 and 200"
3070 INPUT "To select the speed of the plane";S / the lower the number the
3100 RETURN / faster the speed.
25000 PRINT "You are out of bombs": RETURN

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