Some like cranberry sauce....

CLOAD
MAGAZINE, Inc.
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We would like to take this space to offer a bit of thanks, ourselves, to all of you - you who have endured all of our inconsistencies, you who have sent us helpful criticisms and/or suggestions, you who have had problems and screamed out your dissatifaction - but still gave us another shot, you who have spread a kind word about us (sometimes even to us), and you who have simply enjoyed the programs month after month. Happy Thanksgiving....

Side	Title	Turns Count CTR-41	Turns Count CTR-80
****	Snake Cover	12 & 260	7 & 152
** **	Time Teller	54 & 289	31 & 169
** **	Monster	182 & 388	107 & 229
****			
**	Audio (Memory Size - 32650)	11 & 257	7 & 151
***	Fox'n'Hounds (Mem. 32650)	102 & 324	59 & 191
**	Ledger	168 & 375	99 & 221
****	Find (System Find)	235 & 429	138 & 253

This month's cover is an unusual one. Follow the word 'CLOAD' along as it tries to wend its way around a bunch of obstacles, only to find itself in the middle of more obstacles. Kinda reminiscent of a certain monthly publication....

Your digital watch is fading fast, and your TRS-80 will kick the oven off at 5:30. Will you get home in time to eat a warm meal? How can you tell? With this program and the Sun (or a few stars), you can learn to tell time without liquid-crystal displays or Mickey Mouse arms. Then you will be able to tell that it is already 6:00 and you should just eat out.

In Monster, it is you and oxygen against him/her/it. Or is it just daisy picking?

Hey, TRS-80's! Now you can bleep, trill, squeal, and generally create a disturbance (with the cooperation of that key popper sittin' in front of you). Audio pokes a little machine language routine into the top of 16K RAM for the production of sounds through an amplifier connected by the auxiliary plug (the large grey plug that comes out of your back). Your programmer just has to feed certain parameters to this routine and you become truly audible.

Ok, you carbon-datable types, here is some more info on Audio. You can add sound to other programs just by interfacing them with this

program. Audio also has many examples of various sounds that you can create, a routine that allows you to create your own sounds, and instructions on how to use this program to add sound to other programs. If you don't have an auxiliary amplifier, you can use your recorder as an amp by pushing the play, record, and record-protect button (at the back of the cassette holder) at the same time. Remember to set Memory size to 32650 before loading in the program (room is needed for that machine language routine). A note to disk users - sorry...this program and Fox'n'Hounds only work in Level II.

Fox'n'Hounds - a checkerboard affair where your hounds try to trap the fox. This program uses the sound routine from Audio for the various rude noises you will hear. So, once again, set the memory size to 32650 before loading in the program.

Find is a powerful machine language utility. With it you can locate the lines in a BASIC program containing a certain string. For instance, you can find out what lines contain the variable Q, what lines reference line 120, or all of the lines that contain PRINT statements. To load Find, type 'System' and answer the *? with 'Find'. Find will load in and auto execute. The memory size will automatically be set to 32000, so you don't have to worry about setting memory size on power-up. Find can be loaded before or after a BASIC program is loaded. To find a string, just hold down the <shift>, down-arrow, and 'F' keys simultaneously. A prompt will appear that asks you for the string to search for in the program. Technical info - Find uses memory locations 7D02 to 7FFF. It also patches into the keyboard driver, uses a few ROM subroutines, and contains a keyboard debounce routine located at 4050H. The entry point is 7D02 (32002 decimal) in case you want to access it through System. Newdos' LMOFFSET has violent reactions against this program!

Ledger is a well done, tape-based (!) applications program. Before the cards and letters roll in, let me just say that this program is sent out on an as-is basis. We can't modify it to suit your particular needs. Neither are we responsible for any data loss due to the use of this program. The program will work with DOS BASIC, but my efforts to have the data saved and loaded from disk instead of from tape failed. And a phone call to the author was preempted by a small (7.1) earthquake in his area. Any new info on the program that I hear will be passed on to you through these pages. Now - on to the program...

Ledger allows you to open accounts, add transactions to the account, delete transactions, delete accounts, search for particular accounts, list accounts to the screen or a printer, print a trial balance, and load or save the data to tape. Helpful tidbits:

1) Hitting <break> at any time exits from the current option and returns to the menu. Option '9' on the menu exits from the program.

2) When deleting accounts or transactions, you have the option of deleting all of the accounts or transactions. As a safeguard, if you decide to delete all of something, you will be asked "Are you sure?".

3) Whenever the cursor is flashing on the left side of the screen, hit <enter> to continue or <break> to return to the menu.

4) Account numbers can be in the range 1 to 99999.9. Account names can be up to 25 characters in length (no commas or colons are allowed).

5) To change the maximum number of allowable accounts, make the variable 'MA' equal to the maximum number of accounts you want (line 5). It is presently set at 60.

6) When posting transactions, enter the word 'BALANCE' as reference for your beginning-of-month balance.

7) When posting, the date of transactions must be entered in the six digit numeric form - MMDDYY.

8) If you have a printer attached to your system, you will be asked if you want reports going to the screen or to the printer. Otherwise, reports go automatically to the screen.

9) If you exit from the program by mistake, typing in the following line will put you back into the program without losing your data:

```
POKE 16396,207 : ON ERROR GOTO 4055 : GOTO 10
```

The above line causes the 'Break' key to generate a 'Syntax Error' error. Control then passes to line 4055 whenever the 'Break' key is pressed. Neat, huh? Of course, things should be put back to normal when the program is exited. There is one small problem, though. The value to poke in DOS BASIC to restore <break> to its original function is different for Level II. Willie Burk used another neat technique in Ledger to tell the difference:

```
4060 ON ERROR GOTO 4062: A=INSTR("A","A"): POKE 16396,195: RETURN
4062 RESUME 4063
4063 POKE 16396,201: RETURN
```

Line 4060 uses a DOS BASIC command. If an error occurs (no DOS), control passes to line 4062 and then to 4063 where 201 is poked for Level II <break> reenable. If no error occurs in line 4060, then a 195 is poked for DOS BASIC <break> reenable.

"Play it again, but this time right, Sam", department....

Remember when you unclogged a stopped up drain and it worked for two days, then you called the plumber? In this case, the 'drain' was the 'Shopping Spree' program. I tried last month to fix a FOR-NEXT loop problem where the NEXT was embedded in an IF statement. It worked fine here, but soon I got a call from the 'plumber', Victor Vernon. He informed me that the problem was not fixed, and that the embedding of the NEXT in an IF statement wasn't the real source of the problem. The original lines 460 and 470 are below:

```
460 FOR Z=1 TO 100: X=PEEK(15100): R#=R#+1: IF X=0 THEN NEXT
    ELSE IF X=1 THEN 800 ELSE GOTO 480
470 RETURN
```

As he explained it, the real source of the problem concerns breaking out of the FOR Z=1 TO 100 loop before the loop is completed (before Z=100). In BASIC, you can jump out of a loop, then back into it, and the loop will still be 'alive' until the upper limit of the loop is reached or exceeded. Type in and run the following routine to see a loop operate this way:

```
10 FOR I = 1 TO 20
20 GOTO 100          : REM GO OUT OF THE LOOP
30 PRINT"IN LOOP"
40 NEXT I
50 END
100 PRINT I;"OUT OF LOOP"
110 GOTO 30          : REM GO BACK IN LOOP
```

The NEXT doesn't care where the program came from. Matter of fact, the FOR doesn't care where the NEXT is or which NEXT it is if there is more than one (bad, bad technique). To see this, change line 110 in the above routine to:

```
110 NEXT I
```

and run it. The print statement inside the loop is never hit. The FOR just used the NEXT in line 110 (it's not choosy). One other thing about loops, and this is important - you can change the value of the loop variable while the loop is running and the loop will be affected accordingly. Add the following line to your routine and run it again:

```
105 I = 20           : REM SET I TO THE UPPER LIMIT OF THE LOOP
```

The loop only runs through once! The loop is now 'dead'. Now, back to 'Shopping Spree'. In line 460, the Z loop does not finish if X does not equal 0. This 'live' loop later creates problems in line 980 (with the NEXT J). The solution is to make sure that the loop is 'dead' whenever the loop is exited abnormally. The fix (hopefully):

```
460 FOR Z=1 TO 100: X=PEEK(15100): R#=R#+1: IF X=0 THEN NEXT:
    RETURN
470 Z=100: NEXT: IF X=1 THEN 800: REM FINISH LOOP ON ABNORMAL EXIT
```

This patch seemed to work for a while. Then the ol' NF IN 980 error appeared again, but this time it was a different loop causing the problem. So pretty much the same technique was used on the offending line (690):

```
690 FOR ZZ=0 TO 19: IF B(Q1,1)<>C(ZZ) THEN NEXT: B(Q1,1)=40:
    GOTO 720
700 ZZ=19: NEXT ZZ:  REM FINISH LOOP ON ABNORMAL EXIT
```

Eureka! No more NF errors! And I'm hiding from the 'plumbers'...

A few subscribers have asked for the beginning, ending, and entry points of our past System loading programs. I got the info using Newdos' LMOFFSET utility, so some of the fancier programs have funny addresses (and FIND just won't work) if more than one program is chained to another.

Name	Begin	End	Entry	Name	Begin	End	Entry
Save	7ED0	BFFC	7EE4	Lprint	4016	7FFF	7F04
Ramtest	4300	4696	4C6A	Tapetest	4060	4F00	1A19
Stars	5F00	76A0	5F00	Level3	7100	7FFF	7900
Organ	7000	770D	7000	Maze	5200	5AFF	5200
Voiceprint	4400	454E	0000	Level2	BC09	BFFD	BC09

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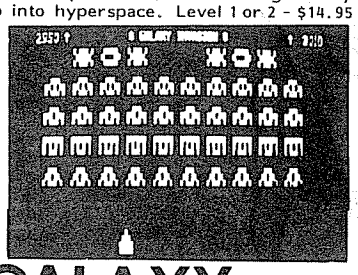

GALAXY INVASION

by Bill Hague from Big Five

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(P.S. This ad almost did not get finished due to Galaxy Invasion addiction.)

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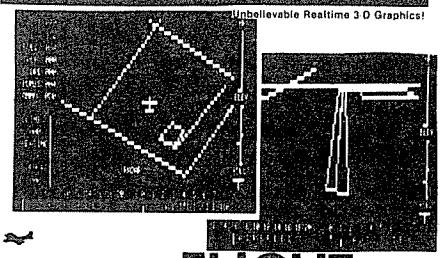

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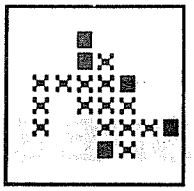

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from Instant

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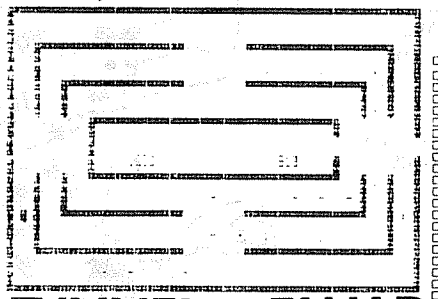

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by K. Pfeiffer from Adventure

Patterned after the popular arcade game "Crash", this is an action game with sound. You attempt to recover the silver and tanner leaves while avoiding the Mummy. $9.95

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by Charles Asper from Acorn

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This utility is the perfect tool for creating and debugging BASIC programs. It allows single stepping through a BASIC program, setting up to five break points in the program, and tracing of program logic using only a small portion of the screen. You can also review selected variables during program execution and return to your program with the display restored. If you like, you can store one or more programs in high memory for later retrieval.

Known to work with Level 2, TRSDOS, NEWDOS 2.1, NEWDOS/80, and VTOS. $29.95

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by Roy Soltoff from Misosys

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Lastly, I'd like to pass on a couple of nifty tidbits that I read in n excellent bi-monthly magazine for the more advanced programmer - 'The Alternate Source' (1806 Ada, Lansing, MI 48910). For those of you with disks, power up your system, type:

```
BOOT/SYS.WHO
```

hit <enter> and immediately press down the '2' and the '6' keys simultaneously. I'm not going to spoil your fun by telling you what happens (nothing dangerous). And for all of you with TRS-80s (all of you, I hope), to commemorate the recent shakeup in northern California, type and run the following line:

```
10 FOR X=1 TO 1000: OUT 255,8: OUT 255,0: NEXT X
```

We are off to over-feast on the traditional, non-aerodynamic bird.

Gobble, gobble,

Dave

Ed.

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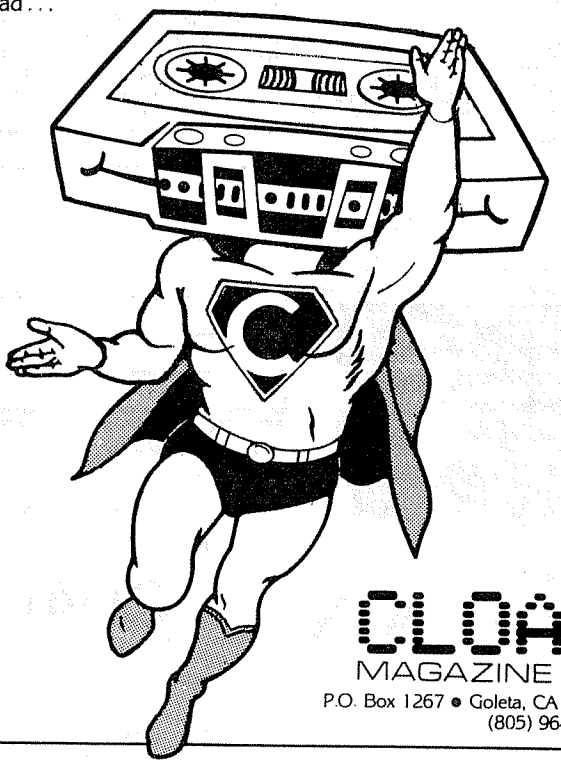

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