



MICROWAVES

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Health-giving Epson sorts

HX20 owners may have found the FILES command useful for identifying files on cassettes, but have been frustrated by not knowing the date a file was saved. Such a feature would be advantageous when more than one version of a program has been saved. Program 1 accesses this information, automatically saved in the header of each file stored on a cassette. This program will work for files stored on either of the devices 'CAS0:' or 'CAS1:'.

```
100 CLS:PRINT "Enter dev
ice no.:";:PRINT "CAS(0):
CAS(1):";:CHR$(30);:D$
=INPUT$(1);:ENTER 0 OR
1
110 IF D$<"0" AND D$<"
1" THEN 100 ELSE D$="CAS
"+D$+":"
120 IF D$="CAS0:" THEN H
%=&H032C ELSE H%=&H020B;
' H% POINTS TO START OF
HEADER
130 CLS:LOCATE 2,1:PRINT
"Searching "+D$
140 ON ERROR GOTO 240:'
HANDLES ERROR FOR BASIC
PROGRAM FILES
150 OPEN "I",I$,D$+"*,*
": GETS FILE HEADER
160 F$="":FOR I%=0 TO 7:
F$=F$+CHR$(PEEK(H%+I%)):
NEXT I%: GET FILENAME
170 E$="":FOR I%=8 TO 10:
E$=E$+CHR$(PEEK(H%+I%)):
NEXT I%: GET EXTENSION
180 D$="":FOR I%=28 TO
33:D$=D$+CHR$(PEEK(H%+
I%)):NEXT I%: GET DATE
190 T$="":FOR I%=34 TO
39:T$=T$+CHR$(PEEK(H%+
I%)):NEXT I%: GET TIME
200 CLS:PRINT "File: "I$
": "E$
210 PRINT "Date: "LEFT$(
D$,2);"/":MID$(D$,3,2
);"/":RIGHT$(D$,2)
220 PRINT "Time: "LEFT$(
T$,2);"/":MID$(T$,3,2
);"/":RIGHT$(T$,2)
230 CLOSE:GOTO 150
240 RESUME 160:' IGNORES
ERROR
```

Program 1

The program reads in a file header by opening a file for input. As basic program files cannot be OPENed, error trapping in line 140 is needed. H% points to the area in memory used by the HX20 to store the header, accessed by PEEK statements. The area used varies depending on the device being used.

Elizabeth Wald,
Linton NW3

Colour Genie keyboard mapped

Table 1 shows the way the Colour Genie's keyboard is mapped into memory. Using this, you can read the keyboard directly and so avoid problems caused by INKEY\$.

For example, to read the X key, you could use IF PEEK (&HF808) AND 1 THEN... instead of IF INKEY\$="X" THEN... This is based on PEKK (address of key group) AND bit value for that key.

This works for any key on the keyboard except Break. However, you can read Break if you first disable it with POKE 16396,23. POKE 16396,201 to re-enable it.

John Constable,
Broadstairs, Kent

The 64 waits on you

A 'press any key to continue' style pause on a Commodore 64 can be a bit fiddly because you ought to make sure that the keyboard buffer is empty before using a GET test.

One simple alternative is WAIT 197,191. This looks at the keyboard location (197) and waits until a key is pressed — that is, its value changes from 64.

David Gristwood,
Sunderland, Tyne and Wear

Atari down in dumps

This short two liner lists a cassette file to the screen on an Atari. Beside being useful for dumping cassette data files onto the screen or looking at unindexed tapes, it can be used to verify programs that have been saved using LIST "C:".

The routine dumps to the screen and so won't affect any program in memory. If all goes well, you'll get an EOF error at

Colour Genie Keyboard Map

BR	7	6	5	4	3	2	1	0
Value	128	64	32	16	8	4	2	1
Address								
&HF801	G	F	E	D	C	B	A	@
&HF802	O	N	M	L	K	J	I	H
&HF804	W	V	U	T	S	R	Q	P
&HF808	F4	F3	F2	F1		Z	Y	X
&HF810	7	6	5	4	3	2	1	0
&HF820	/						9	8
&HF840	SPACE						BREAK	CLEAR
&HF880							MODE	SHIFT
					CONTROL	REPEAT		

Table 1 Colour Genie keyboard map

the end of the file.
10000 CLOSE #1: OPEN
#1,4,0,"C:"
10010 GET #1,C: PRINT
CHR\$(C):GOTO 10010
F M O'Dwyer,
Dublin, Ireland

Positive aspect to negatives

A ZX81 or Spectrum will produce an error if you attempt to raise a negative number to a power. To avoid this, use a short routine like this:

```
10 REM A=B**P ZX81
20 LET S=1
30 IF B<0 AND P=INT(P/2)+2)
THEN LET S=-1
40 LET A=S*ABS B**P
Obviously, on a Spectrum ↑
is used instead of ** and lines 20
and 30 can be written as one
line.
```

Ken Chua,
Birmingham

Vic clock goes faster

The TI clock on the Vic 20 can be set to update at intervals other than its usual 60 times a second. To do this, use a routine like this:

```
N=1109404.5/R
HI=INT(N/256)
LO=INT(N-HI*256)
POKE 37156,LO
POKE 37157,HI
R is the number of updates
per second. The slowest speed
is about 17 times a second.
Theoretically, the fastest speed
is about 1.1 million times a
second, but the more time the
Vic spends dealing with the
clock, the less time it has for
everything else. Set the speed to
10000 and see how slowly it
LISTS!
```

This trick could be useful to speed up programs — just set the clock at 17Hz. One unfortunate side effect is that auto

repeat and cursor flashing are affected. Both use the TI clock for timing.

David Walker,
Ellesmere Port, Wirral

Light on Lynx listings

Long Lynx listings can get awkward because it is difficult to tell where particular sub-routines and procedures start and finish. One solution is to add a little colour to the program.

At the start of a new section, include a REM such as REM **. Then DPOKE LCTN(line number),1+256*ink colour or DPOKE LCTN(line number),2+256*paper colour. When you LIST the program, the colours will change as you have set them.

To change both INK and PAPER colours at a single REM, make the REM four characters long and use a second poke such as DPOKE LCTN(line number)+2,2+256*paper colour.

Peter Bach,
Randers, Denmark

Putting a stop to Orics

To stop a program from auto-running on an Oric 1, you could try the following commands:

```
POKE 49120,72
POKE 49121,169
POKE 49122,00
POKE 49123,133
POKE 49124,99
POKE 49125,104
POKE 49126,76
POKE 49127,03
POKE 49128,236
DOKE 553,49120
```

Now load the program in the usual way. The routine re-directs the keyboard interrupt program.
David Barr,
Preston, Lancs.