

CLASSIC COMPUTE

PE

by Faye B. Deere

While playing around with Smart BASIC peeks and pokes recently, I learned a lot of things, but I wasted a lot of time learning them. I thought I might save you some time, if I passed on what I had learned.

When you want to look at the data stored in a certain memory location, first BOOT SmartBASIC. Now type `PRINT PEEK(MEMORY LOCATION)`. (MEMORY LOCATION) is the address (location) of the information in RAM (read/write memory). The address is stored by number, so (MEMORY LOCATION) would be a number.

You can PEEK from 0-65535. `PRINT PEEK(64000)` causes Adam to print the contents of that address on your screen. In this case, 203 would appear on your screen as this is the default (assigned) value of this location.

To temporarily change the contents of a memory location, you can POKE a new number into the location of the address. This tells Adam to do something different than normal until you POKE the default number back into the address, or turn Adam off. When you BOOT SmartBASIC the next time, the default number will again be there because POKE 64000,204 enters the new number for as long as you want to use it, but is not permanently written in the SmartBASIC program.

At this point, I should tell you not to go POKEing numbers into Adam unless you know what you are doing. You can cause some strange things to happen, and you may crash the program you are working on, and not know what happened! You also should know that only values from 0-255 can be used, and the memory location range is -32767 through 65535 inclusive.

If you want to change the value of an address permanently, for some reason, there is a program in the Public Domain library called "basicmodif" that can be used to make your changes. It is a very easy program to use, but be sure of your changes before you make them!

It has come to our attention that some

As you can tell, my feelings are still quite mixed about SmartBASIC.

As a bonus for running

copies of BasicModir are defective. Line 320 in some programs is incorrect. The correct line should read:

```
320 b=INT((2048+a-256)/1024)
```

To check your program, load it, and type LIST 320. Line 320 will appear on your screen. If it reads differently than what we printed, make the needed corrections, and re-SAVE the program. If the correction is not made, when you LOAD a program, some of the lines will be omitted and your program will not work!

While working with PEEKs and POKEs, I ran across a series of POKEs that can be used to eliminate the bug that causes SmartBASIC to add spaces to REM and DATA statements when they are loaded into memory and re-SAVED. Make all of the following

RS CLASSIC COMPUTERS CLASSIC COMPUTERS CLASSIC EKS, POKES AND OTHER THINGS

POKES to the addresses given, and extra
paces will no longer be a problem.

15824,216
15830.8
15831.55
15832.19

While I had made all the changes

I thought I needed for now, I decided
to change the name of my disk. FIRST
DIRECTORY just didn't seem to fit,
somehow. I loaded a program from our
Public Domain library called DIREDDIT
into SmartBASIC, and followed the
directions to change the name of my

disk. I typed in MY BASIC as the new
name, pressed the proper button, and—
nothing happened!

I pushed every button I could think
of, and got nowhere. I rebooted
everything several times, re-read the
directions, and re-tried the whole pro-



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cedure. It locked up every time. I finally tried another program, followed the directions exactly, and then lost the whole directory. After losing it the third time, I tried another program (the third), locking up that program as well. I then sat down to read everything I could get my hands on!

I finally ran across a statement in the directions by Jim Young on how to use DIREDDIT, that made me stop and think. It said—"A 'beep' when you press a function key to select a menu item usually means that the shift lock is on." As I can't stand the noise, I turn the sound off when I'm working. I would

not have heard a "beep," but if it was important enough to mention in the reminders, it must mean something.

I re-BOOTed SmartBASIC, made my changes, re-loaded DIREDDIT, and renamed my disk. But this time, I made sure that I un-locked the shift lock after typing MY BASIC. Sure enough, it

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worked! Such little things that cause so much work and frustration, and consume so much time!

Have you ever looked at the directory of your SmartBASIC program, and noticed a program called HELLO? Did you wonder what it does? It took me a long time before I found out that it is a turnkey system for Adam. This is a system that runs the same program every time SmartBASIC is BOOTed, and gives Adam additional information that is not included in the BASIC program. It is installed automatically, along with BASIC, before your prompt appears.

The HELLO program can contain anything you want it to. Mine is a combination of programs that allows me to toggle between my husband's Adam printer and my dot matrix printer without running a separate printer patch program before I BOOT SmartBASIC. This program was modified from one done by Digital Express, and was in an article written by Greg Daro which appeared in the Sprite Chaser #10 newsletter:

```
10 DATA 245,219,64,203,71,40,250,
241,211,64,201
20 DATA 205,11,47,205,180,45,254,13
192,62,10,24,2
30 DATA 62,0,195,180,45
40 FOR x=0 TO 28:READ m1:POKE x+
11700,m1:NEXT
50 POKE 16217,191:POKE 16218,45
```

Use PR#1 for the Adam and PR#2 for the dot matrix printer. If you do not have an Adam printer, and only want to patch for your dot matrix printer, the program is as follows:

```
10 DATA 245,219,64,203,71,40,250,
241,211,64,201
20 DATA 205,11,47,205,180,45,254,13
192,62,10,24,2
30 DATA 62,0,195,180,45
40 FOR x=0 TO 28:READ m1:POKE x+
11700,m1:NEXT
50 POKE 16215,191:POKE 16216,45
```

This program was also in Sprite Chaser #10, along with a couple of other printer patches.

My HELLO program also contains a program that gives me a 2 column catalog instead of the single column catalog SmartBASIC gives you. This keeps all of my catalog on the screen instead of scrolling it off the top onto outer space. Now, I can see the catalog to decide what I want to use and how to type it correctly.

```
10 REM Double column CATALOG patch
20 REM A freeware contribution by
DIGITAL EXPRESS
30 REM presented in Nibbles & Bits
August 1988
40 REM Do NOT remove these four
REMARKs!
```

```

10 DATA 245,219,64,203,71,40,250,
241,211,64,201
20 DATA 205,11,47,205,180,45,254,13
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```

10 REM Double column CATALOG patch
20 REM A freeware contribution by
DIGITAL EXPRESS
30 REM presented in Nibbles & Bits
August 1988
40 REM Do NOT remove these four
REMARKS!
50 REM ADAM PROGRAM LIBRARY
VOLUME 11E
100 POKE 16149,255:POKE 16150,255
200 DATA 205,152,83,33,245,65,205,
165,83,235,43,126,205,218,46,
210 DATA 62,32,119,205,218,46,33,16,
66,6,11,126,35,205,218,46,16,249
220 DATA 58,15,66,183,40,14,6,2,62,
32,205,218,46,16,249,33,15, 66,52,201
230 DATA 62,13,205,218,46,33,15,66,
53,201,-1
300 st=65420:tt=0

```

continued to page 552

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ppp

► PEEKS, POKES

from page 549

```
310 READ mc:IF mc=-1 THEN 330
320 POKE st,mc:st=st+1:tt=tt+mc:
GOTO 310
330 ON st=65483 AND tt=6309 GOTO
500
340 PRINT:PRINT "Data entry error!!"
":END
400 REM To return to the standard
BASIC catalog:
410 REM POKE 21259,104:POKE 21260,
83
500 DATA 205,140,255
510 FOR x=21258 TO 21260:READ mc:
POKE x,mc:NEXT
```

I found this terrific little program in the September 1988 issue of the gHAAUG newsletter, put out by the Greater Houston Adam User Group.

I have found the 2 column catalog quite useful, but if you want to know how many K your file has used, this catalog will not show it. To find out how much space your file is taking up, type: POKE 21259,104:POKE 21260,83. This will take you back to the standard BASIC one column catalog, which shows the number of blocks the program occupies.

While we're at it, let's take a look at the SmartBASIC catalog. When you type INIT to initialize your tape or disk, BASIC writes a new Directory block, and incorrectly initializes a tape to 253 blocks, for some reason. You can correct this by POKEing the correct number into the correct address in a copy of your SmartBASIC. You can POKE in the number for your tape, or you can POKE in the correct number for a single sided (160K) or double sided (320K) disk.

The POKES are as follows:

For a standard DDP

```
POKE 25305,0
POKE 25306,1
```

For a floppy DDP

```
POKE 25305,128
POKE 25306,0
```

For a standard disk

```
POKE 25305,160
POKE 25306,0
```

For a double sided disk

```
POKE 25305,64
POKE 25306,1
```

These POKES were made available to us by Greg Daro in Sprite Chaser #10.

The default value listed in address 25308 is 1. This means that BASIC reserves 1 block for the catalog, which holds 38 file names and their location on your tape. You may have noticed that when you have used up your allotted 38 file names, you still have a lot of empty blocks left that you can't use. If you use a block modifier, you can permanently POKE a 2 or 3 in address 25308, which will give you a 2 or 3 block catalog, and will allow you to store up to 127 files. You will then be able to use up all, or most of your blocks. This is especially helpful if you are using a double sided disk drive, which gives you 320K of storage space on your disk.

If you have made a copy of SmartBASIC using BACKUP 3+, these POKES will not work. BACKUP rewrites the INIT routine to properly initialize a disk or DDP. The POKES for a BACKUP 3+ copy of BASIC follow:

For a standard DDP

```
POKE 58,0
POKE 59,1
```

For a floppy DDP

```
POKE 58,128
POKE 59,0
```

For a standard disk

```
POKE 64,160
POKE 65,0
```

For a double sided disk

```
POKE 64,64
POKE 65,1
```

To change the number of directory blocks on a BACKUP 3+ copy SmartBASIC, use POKE 25311,2 or whichever you prefer.

I hope these little tidbits help computing with Adam even more a pleasure than it already is computing!