Peeks and Pokes 4/26/1985

If you have any additions, let me know and I'll update this periodically.
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24K OF DATA STORAGE

If you need to work with quite a bit of data or would like to change programs, but save the data after you press CALL QUIT then you can set up the 24K of High-Memory in the PEB as a single data file called "EXPMEM2", you open this file just as you would a disk file with one exception - you must PRECEDE the OPEN statement with a CALL LOAD to the location -24574 as follows:

For	INT/VAR	files	- 24
For	DIS/VAR	files	- 16
For	INIT/FIX	files	- 8
For	DIS/FIX	files	- 0

Here's and example:
If you want to open up the Expansion Memory for Display,Variable 80 files this is what you'd do:

```
100 CALL INIT
110 CALL LOAD(-24574,16)
120 OPEN #1:"EXPMEM2",RELATIVE,UPDATE,DISPLAY,VARIABLE 80
```

Then continue on as you normally would.

If you want to store both data and assembly language routines at the same time do this:

```
100 CALL INIT
110 CALL LOAD(-24574,-16)
120 OPEN #1:"EXPMEM2"
130 CALL LOAD("DSK1.ASSM1")
140 CALL LOAD("DSK2.ASSM2")
150 CALL LINK("START")
160 REM CONTINUE REST OF PROGRAM
```

In the above example the 24 K of high-memory was saved for use as a DATA file (DIS/VAR 80 format) then the assembly routines were loaded. The computer will look for the best place to put the routines and will adjust the pointer accordingly. After the routines are loaded, a LINK statement starts the first routine and off we go.

If that's not enough for you, you can also use the MINI-MEMORY for 4K more of storage of assembly routines! Now that's 16K of program space, 12K of assembly routine space!

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THESE ARE ALL OF THE PEEKS & POKES THAT I HAVE COME ACROSS FOR USE WITH X-BASIC AND 32K MEMORY EXPANSION (BE SURE TO DO A "CALL INIT"). THE P & Q VARIABLES ARE USED FOR "PEEK" - THE NUMBERS ARE FOR "POKE" OR "LOAD". IF YOU KNOW OF ANY OTHERS PLEASE LET ME KNOW AND I WILL ADD THEM IN.

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Address	Value	Explanation
8192,	P	USE (PEEK,P) IF P<>70 OR P<>121 TO A CALL INIT
8194,	P	FIRST FREE ADDRESS IN MEMORY
8196,	P	LAST FREE ADDRESS IN MEMORY
-28672,	P	P=0 SPEECH NOT ATTACHED P=96 OR P=255 SPEECH IS ATTACHED
-31572,	0 TO 255	VARY KEYBOARD RESPONSE
-31740,	P,Q	PUT IN DIFFERENT TO CHANGE BEEPS,WARNINGS, ETC
-31744,	0 TO 15	CONTINUATION OF LAST SOUND (0=LOUD AND 15=SOFT)
-31748,	0 TO 255	CHANGE THE CURSOR FLASHING AND RESPONSE TONE RATES
-31788,	160	BLANK OUT THE SCREEN (MUST PUSH A KEY TO ACTIVATE)
-31788,	192	NO AUTOMATIC SPRITE MOTION OR SOUND
-31788,	224	NORMAL OPERATION
-31788,	225	MAGNIFIED SPRITES
-31788,	226	DOUBLE SIZE SPRITES
-31788,	227	MAGNIFIED & DOUBLE SIZED SPRITES
-31788,	232	MULTICOLOR MODE (48 BY 64 SQUARES)
-31794,	P	TIMER FOR CALL SOUND (COUNTS FROM 255 TO 0)
-31804,	A,B	RETURN TO THE TITLE SCREEN - USE WITH CALL PEEK (2,X,Y)") CALL INIT :: CALL PEEK(2,A,B) :: CALL LOAD(-31804,A,B)
-31804,	P	CHANGE THE CURSOR FLASH RATE (0 TO 255)
-31806,	0	NORMAL OPERATION
-31806,	16	DISABLE QUIT KEY (FCTN =)
-31806,	32	DISABLE SOUND (USE NEG DUR FOR CONTINOUS SOUND)
-31806,	48	DISABLE SOUND & QUIT KEY
-31806,	64	DISABLE AUTO SPRITE MOTION
-31806,	80	DISABLE SPRITES & QUIT KEY
-31806,	96	DISABLE SPRITES AND SOUND
-31806,	128	DISABLE ALL THREE
-31808	P,Q	DOUBLE RANDOM NUMBERS (0 TO 255) NEED "RANDOMIZE"
-31860,	4	GO FROM EX-BASIC TO CONSOLE BASIC (NEED "NEW")
-31860,	8	AUTO RUN OF DSK1.LOAD
-31866,	P,Q	END OF CPU PROGRAM ADDRESS (P*256+Q
-31868,	0	NO "RUN" OR "LIST" AFTER "BREAK" IS USED
-31868,	0,0	TURNS OFF THE 32K MEMORY EXPANSION
-31868,	255,231	TURNS ON THE 32K MEMORY EXPANSION
-31873,	3 TO 30	SCREEN COLUMN TO START AT WITH A "PRINT"
-31877,	P	P&32 = SPRITE COINCIDENCE - P&64 = 5 SPRITES ON A LINE
-31878,	P	HIGHEST NUMBER SPRITE IN MOTION - (0 STOPS ALL)
-31879,	P	TIMER FOR VDP INTERRUPTS EVERY 1/60 OF A SEC (0 TOP 255)
-31880,	P	RANDOM NUMBER (0 TO 99) NEED "RANDOMIZE"
-31884,	0 TO 5	CHANGE KEYBOARD MODE (LIKE CALL KEY(K,...)")
-31888,	63,255	DISABLE ALL DISK DRIVES (USE "NEW" TO FREE MEMORY)
-31888,	55,215	ENABLE ALL DISK DRIVES (USE "NEW" TO FREE DRIVES)
-31931,	0	UNPROTECT X-B PROTECTION
-31931,	2	SET "ON WARNING NEXT" COMMAND
-31931,	4	SET "ON WARNING STOP" COMMAND
-31931,	14	SET "UNTRACE" COMMAND
-31931,	15	SET "UNTRACE" COMMAND & "NUM" COMMAND
-31931,	16	SET "TRACE" COMMAND
-31931,	64	SET "ON BREAK NEXT" COMMAND
-31931,	128	PROTECT X/B PROGRAM
-31952,	P	PEEK P=55 THEN 32K EXPANSION MEMORY IS OFF <>55 MEANS ON
-31962,	32	RETURN TO THE TITLE SCREEN
-31962,	255	RESTART X/B W/DSK1.LOAD
-31974,	P,Q	END OF VDP STACK ADDRESS (P*256+Q)

Address	Value	Explanation
-32112,	8	SEARCHES DISK FOR ?
-32114,	2	RANDOM GARBAGE
-32114,	13	SCREEN GOES WILD
-32114,	119	PRODUCE LINES
-32116,	2	RANDOM CHARACTERS ON SCREEN
-32116,	4	GO FROM X/BASIC TO BASIC
-32187,	0	UNPROTECT XB PROGRAM
-32187,	2	SET "ON WARNING NEXT" COMMAND
-32187,	4	SET "ON WARNING STOP" COMMAND
-32187,	9	SET 0 LINE NUMBER
-32187,	14	SET "UNTRACE" COMMAND
-32187,	15	SET "UNTRACE" COMMAND & "NUM" COMMAND
-32187,	16	SET "TRACE" COMMAND
-32187,	64	SET "ON BREAK NEXT" COMMAND
-32187,	128	PROTECT XB PROGRAM
-32188,	1	CHANGE COLOR AND RECEIVE SYNTAX ERROR
-32188,	127	CHANGE COLOR AND RECEIVE BREAKPOINT
-32630,	128	RESET TO TITLE SCREEN
-32699,	0	UNPROTECT XB PROGRAM
-32699,	2	SET "ON WARNING NEXT" COMMAND
-32699,	4	SET "ON WARNING STOP" COMMAND
-32699,	14	SET "UNTRACE" COMMAND
-32699,	15	SET "UNTRACE" & "NUM" COMMAND
-32699,	16	SET "TRACE" COMMAND
-32699,	64	SET "ON BREAK NEXT"
-32699,	128	PROTECT XB PROGRAM
-32700,	0	CLEARS SCREEN FOR AN INSTANT
-32729,	0	RUN "DSK1.LOAD"
-32730,	32	RESET TO TITLE SCREEN
-32961,	51	RESET TO TITLE SCREEN
-32961,	149	SETS "ON BREAK GOTO" LOCKS SYSTEM
		THE FOLLOWING LOADS REQUIRE E/A OR MM
784,	P	CHANGES BACKGROUND COLOR OF CURSOR USE POKEV(784,P) (WHERE P IS 16 TO 31)
-24574,	8	I THINK THIS ALLOWS MINI-MEM TO USE THE 24K FOR STORAGE
-30945,	0	WHITE EDGES
-32272,		0,"",-30945,0) WILL PUT YOU IN TEXT MODE
-32766,	0	BIT MAP MODE
-32768,	0	GRAPHICS (NORMAL MODE)
-32280,	0	MULTI-COLOR MODE
-32352,	107	WILL BLANK THE SCREEN, ANY KEY PRESS WILL RESTORE
		PASCAL LOADS
14586,	0,0	THIS ALLOWS YOU TO DO A "RUN-TIME WARM START" FROM PASCAL TO BASIC