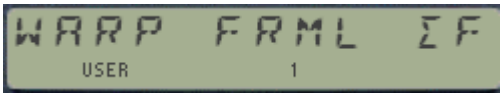
HP-41 Help System Module QRG

1. **HP-41 Flags** – Brief description of all 56 flags. Uses 79 X-Mem regs

2. **HELP** – includes:



   a. WARP_Core XEQ+ Hotkeys. Uses 33 X-Mem regs
   b. Formula Evaluation Syntax Cheat sheet. Uses 55 X-Mem regs
   c. Sub-Function Launchers across the board. Uses 42 X-Mem regs

3. **HELP-2,** includes:

   a. Buffers Allocation. Uses 36 X-Mem regs
   b. X-Mem File System. Uses 35 X-Mem regs
   c. System Catalogs. Uses 40 X-Mem regs

4. **HELP-3** includes:

   a. ASCII Editor. Uses 25 X-Mem regs
   b. HEX Editor. Uses 25 X-Mem regs
   c. Others (MFN, MSG). Uses 38 X-Mem rags

'#1, Flags Help

[0-4]	ANNUNCIATORS	23:	ALPHA INPUT	40,41:	DSP MODE
[5-8]	GENERAL-PURPOSE	24:	IGNORE RANGE	42,43:	ANG MODE
09:	MATRIX EOL	25:	IGNORE ALL	44:	CONTINUOUS ON
10:	MATRIX EOC	26:	AUDIO	45:	SYS DATA ENTRY
11:	AUTO XEQ	27:	USER	46:	PART. KEY SEQ
13:	PRT LWR CASE	28:	RADIX TYPE	47:	SHIFT
14:	CRDR OVERWRITE	29:	DIGIT GROUP	48:	ALPHA
15:	ILPRT MANUAL	30:	CATALOG SET	49:	LOW BAT
16:	ILPRT NORM	31:	DATE MODE	50:	MESSAGE
17:	INC0MPLETE REC	32:	IL MANIO	51:	SST MODE
18:	IL INTERRUPT	33:	IL CONTROL	52:	PRGM
19,20	GNRL-PURP	34:	IL AUTO ADR	53:	IL I/O
21:	PRT ENABLE	35:	NO AUTO	54:	PAUSE
22:	NUMERIC INPUT	36-39:	#DIGITS	55:	PRINTER EXISTENCE

2. warp Core Help

WARP_CORE
XEQ+ HOTKEYS

[+]	NXT PAGE
[-]	PRV PAGE
[^]	NXT CHAR
[ ]^	PRV CHAR
[/]	SPCL. CHR
[P]	TO PAGE#
[M]	FNC. INFO
[K]	EXECUTE
[]K	ASSIGN
[SST]	NXT FNC.
[BST]	PRV FNC.
[R/S]	LIST
[;]	LAST-5
[USER]	OS/XR
[PRGM]	XEQ__
[ALPH]	XEQ$

#3 Formula_Eval

FRMLA_EVAL
SYNTAX HELP

[+]	PLUS
[-]	MINUS
[*]	MULT
[/]	DIVIDE
[^]	POWER
[#]	CHS
[&]	MOD
[%]	PERCENT
[( ]	OPEN P.
[ )]	CLOSE P.
ABS()	ABS
AC()	ACOS
AHC()	HYP AC
AHS()	HYP AS
AHT()	HYP AT
AS()	ASIN
AT()	ATAN
C()	COSINE
E()	EXPONENTIAL
FP()	FRACTIONAL
FT()	FACTORIAL
G()	SIGN
HC()	HYP COS
HS()	HYP SIN
HT()	HYP TAN
IP()	INTEGER
LG()	LOGARITHM
LN()	NATURAL LOG
N()	TANGENT
Q()	SQUARE ROOT
R()	SQUARE
S()	SINE
U()	CUBE
{a-e,F}	BUFFER VARS
{X,Y,Z,T,L}	VARS
π	PI
{0-9}	CONSTANTS

#4,- Sub-Functions

SUB-FNC FAT LAUNCHERS	
[ΣZL]	41Z_DL ZF# ; ZF$
[ΣFL]	SANDMATH MF# ; MF$
[ΣML]	SANDMATRIX
[ ]ΣVL	VECTOR CALC
[ ]ΣPL	POLYNOMIALS VF# ; VF$
[ΣCL]	POWER_CL XFAT ; XQ1/2$
[YMEM]	CL_Y-RGS YF# ; YF$

[CAT"0]	AMC_OSX XQ# ; XQ$
[16C]	16C_SIML 16# ; 16$
[-STKT]	WARP1 WF# ; WF$
[ΣEVL]	FRML_EV SF# ; SF$
XEQ+:	WARP2
XEQ$:	WARP3
HEPAX_4H	HPX# ; HPX$ XF# ; XF$

#5.- Buffer Allocation

I/O BUFFERS ALLOCATION	
1,2:	DAVD ASSMBLR
3,4:	ERAMCO RSU
05:	WSZE, SEED
06:	FRMLA OPS
6,7:	SKWID IL
07:	SHADOW STACK
08:	41Z STACK
09:	LASTF/5
10:	TIMER ALARMS
11:	16C SIML STACKS
11:	PLOTTER
12:	IL-DEVEL
12:	CMT-200
13:	CMT-300
13:	FORTH 41
14:	SOLVE & INTEGRATE
15:	KEY ASSIGNMENTS

#6. X-Mem File Types

XM FILE SYS FILE TYPES	
01:	PROGRAM
02:	DATA
03:	ASCII
04:	MATRIX
05:	BUFFER
06:	KEYS
07:	STATUS
08:	Z-STACK
09:	LIFO
10:	FORTH
11:	16C STACK
12-15:	GENERAL

#7. System Catalogs.

HP41 SYSTEM
CATALOGS

0:	HP-IL LOOP
1:	RAM PRGMS
2:	ROM FUNCS
3:	O/S FUNCS
4:	XMEM FILES
5:	TIME ALMS
6:	USER KEYS
7:	DISK DIR
[B]	BUFFERS
[G]	PAGES
[H]	HEPX DIR
[K]	SYS CHK
[;]	XR# ID'S
7/8-F:	->PG#

#8. HEX EDITOR

HEX EDITOR
HEPAX ROM

[A-F]	A-F
[ENTER^]	000
[+]	BANK+
[-]	BANK-
[G]	CLEAR
[D]	DELETE
[I]	INSERT
[L]	CPU_L\H
[M]	COPY
[SST]	1+
[BST]	1-
[CLX]	EXIT.

#9, ASCII EDITOR

TEXT EDITOR
ENHANCED

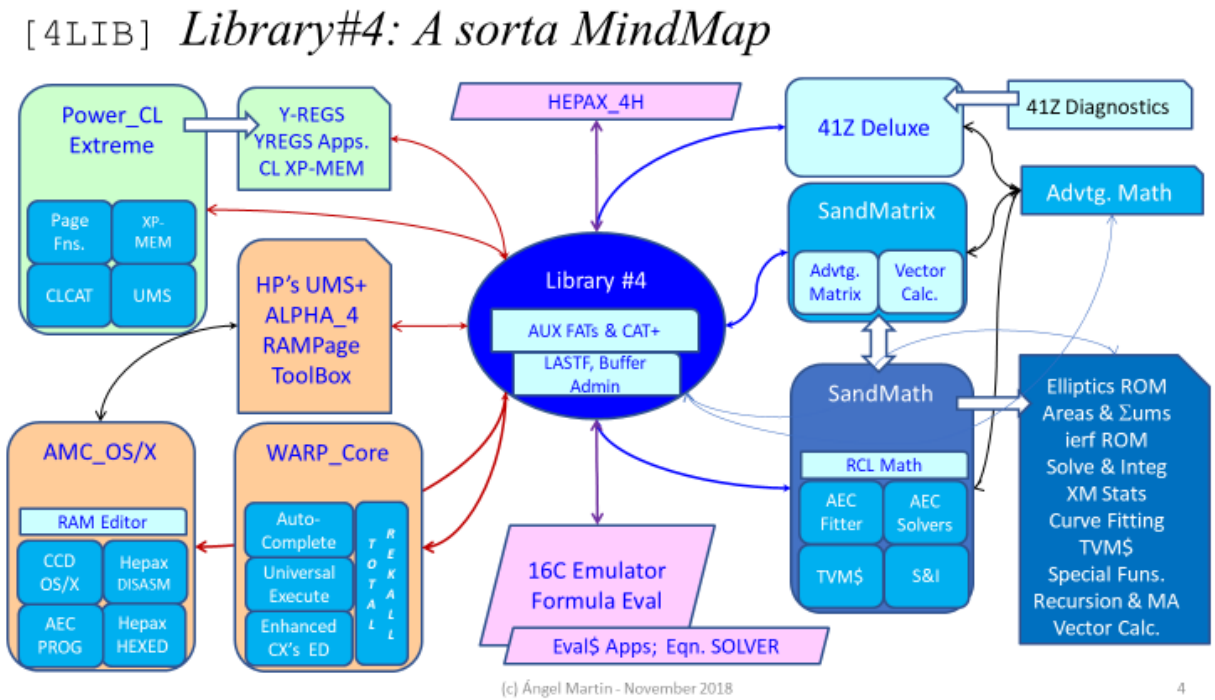
[ON]	EXIT
[USER]	1-
[ ]USER	12-
[PRGM]	1+
[ ]PRGM	12+
[ALPHA]	SPCL CHR$
[K]	APPEND
[L]	INSERT
[M]	GOTO
[BST]	REC-
[SST]	REC+
[R/S]	^REC+
[ ]R/S	^REC-

#10.- Others

OTHR UTILS
FROM OSX MODULE

MNFR ___
0: CAT
2: DEL
3: COPY
4: CLP
6: SIZE
10: PACK
12: ALPHA
14: SHIFT
15: ASN
666: ASTO

MSG ___
24: ALPHA DATA
34: DATA ERROR
45: MEMORY LOST
56: NONEXISTENT
59: NULL
67: PRIVATE
79: OUT OF RANGE
86: PACKING
95: TRY AGAIN
98: YES
100: NO
103: RAM
106: ROM



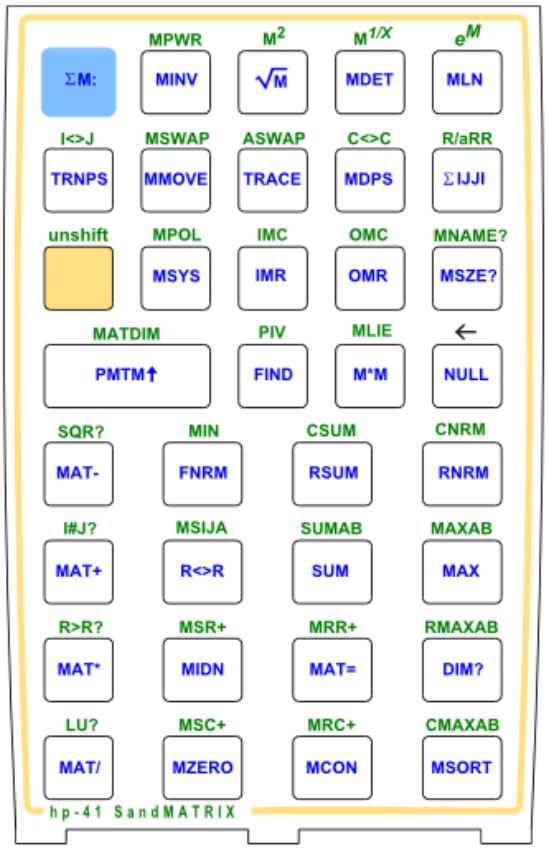
SandMatrix Mass Key Assignments

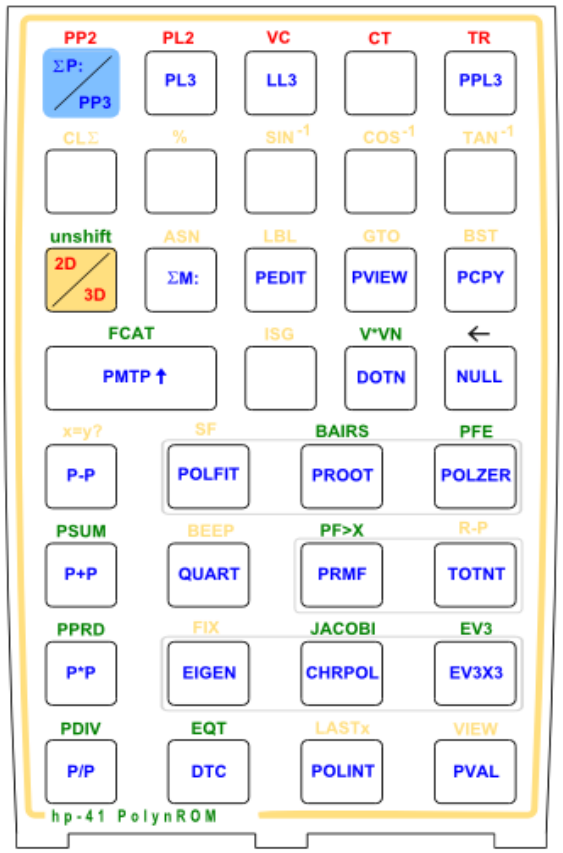
301	key 11	
181	ΣML	*A5:81*
109	key -11	
0E0	Σ^123	*A0:E0*
311	key 12	
1A2	MINV	*A5:A2*
319	key -12	
212	MPWR	*A6:12*
321	key 13	
216	MSQRT	*A6:16*
329	key -13	
206	M^2	*A6:06*
331	key 14	
1A0	MDET	*A5:A0*
339	key -14	
205	M^1/N	*A6:05*
341	key 15	
20F	MLN	*A6:0F*
349	key -15	
20B	MEXP	*A6:0B*
302	key 21	
1BB	TRNP$	*A5:BB*
30A	key -21	
201	I<>J	*A6:01*
312	key 22	
1A3	MMOVE	*A5:A3*
31A	key -22	
1B1	MSWAP	*A5:B1*
322	key 23	
218	MTRACE	*A6:18*
32A	key -23	
1A9	MRIJA	*A5:A9*
332	key 24	
20A	MDPS	*A6:0A*
33A	key -24	
18E	C<>C	*A5:8E*
342	key 25	
221	SIJJI	*A6:21*
34A	key -25	
21F	CMTRC	*A6:1F*
313	key 32	
1B2	MSYS	*A5:B2*
31b	key -32	
211	MPOL	*A6:11*
323	key 33	
203	IMR	*A6:03*
32B	key -33	

202	IMC	*A6:02*
333	key 34	
21C	OMR	*A6:1C*
33B	key -34	
21B	OMC	*A6:1B*
343	key 35	
217	MSZE?	*A6:17*
34B	key -35	
1A4	MNAME?	*A5:A4*
304	key 41	
21D	PMTM^	*A6:1D*
30C	key -41	
19D	MATDIM	*A5:9D*
324	KEY 42	
20C	MFIND	*A6:0C*
32C	key -42	
1B3	PIV	*A5:B3*
334	KEY 43	
198	M*M	*A5:98*
33C	key -43	
20E	MLIE	*A6:0E*
305	key 51	
19B	MAT-	*A5:9B*
30D	key -51	
220	SQR?	*A6:20*
315	key 52	
193	FNMR	*A5:93*
31D	key -52	
1A2	MINV	*A5:A2*
325	key 53	
1B8	RSUM	*A5:B8*
32D	key -53	
191	CSUM	*A5:91*
335	key 54	
1B7	RNRM	*A5:B7*
33D	key -54	
190	CNRM	*A5:90*
306	key 61	
19A	MAT+	*A5:9A*
30E	key: -61	
0BF	TVM$	*A0:BF*
316	key 62	
1B4	R<>R	*A5:B4*
31E	key -62	
14F	MSIJA	*A5:AF*
326	key 63	
1B9	SUM	*A5:B9*
32E	key -63	

1BA	SUMAB	*A5:BA*
336	key 64	
19E	MAX	*A5:9E*
33E	key -64	
19F	MAXAB	*A5:9F*
307	key 71	
199	MAT*	*A5:99*
30F	key: -71	
1B5	R>R?	*A5:B5*
317	key 72	
20D	MIDN	*A6:0D*
31F	key -72	
1B0	MSR+	*A5:B0*
327	key 73	
207	MAT=	*A6:07*
32F	key -73	
1AA	MRR+	*A5:AA*
337	key 74	
192	DIM?	*A5:92*

33F	key -74	
1B6	RMAXAB	*A5:B6*
308	key 81	
19C	MAT/	*A5:9C*
310	key: -81	
204	LU?	*A6:04*
318	key 82	
21A	MZERO	*A6:1A*
320	key -82	
1AD	MSC+	*A5:AD*
328	key 83	
209	MCON	*A6:09*
330	key -83	
1A6	MRC+	*A5:A6*
338	key 84	
215	MSORT	*A6:15*
340	key -84	
18F	CMAXAB	*A5:8F*
000	*End of Table*	





Polynomials / Vectors Mass Key Assignments

301	key 11	
181	ΣML _	*A5:81*
309	key -11	
183	ΣV# _ _ _	*A5:83*
311	key 12	
229	XROM "PL3"	*A6:29*
319	key -12	
184	ΣV$ _	*A5:84*
321	key 13	
223	ΣPIJ	*A6:23*
329	key -13	
187	XROM "VC"	*A5:87*
331	key 14	
228	XROM "LL3"	*A6:28*
341	key 15	
22A	XRPM "PPL3"	*A6:2A*
349	key -15	
186	XROM "TR"	*A5:86*
102	key 21	
0E0	Σ^123	*A0:E0*
10A	key -21	
08A	ELIPK	*A0:8A*
112	key 22	
0C4	AGM	*A0:C4*
11A	key -22	
0D2	GHM	*A0:D2*
122	key 23	
0C9	CF2V	*A0:C9*
132	key 24	
0CE	DERV	*A0:CE*
313	key 32	
182	ΣDST	*A5:82*
323	key 33	
232	PEDIT	*A6:32*
32B	key -33	
18A	VSTO _ _	*A5:8A*
333	key 34	
23D	PVIEW	*A6:3D*
33B	key -34	
189	VRCL _ _	*A5:89*
343	key 35	
230	PCPY	*A6:30*
34B	key -35	
188	V<> _ _	A5:88
304	key 41	
234	PMTP	*A6:34*
10C	key -41	
0E9	PRGM	*A0:E9*

124	KEY 42	
0BF	TVM$	*A0:BF*
12C	key -42	
0D3	GMSLVR	*A0:D3*
33C	key -43	
18C	V*VN	*A5:8C*
305	key 51	
22D	P-P	*A6:2D*
315	key 52	
23A	PROOT	*A6:3A*
325	key 53	
235	POLFIT	*A6:35*
335	key 54	
236	POLINT	*A6:36*
306	key 61	
22C	P+P	*A6;2C*
30E	key: -61	
23B	PSUM	*A6:3B*
316	key 62	
23E	QUART	*A6:3E*
31E	key -62	
224	BAIRS	*A6:24*
326	key 63	
239	PRMF	*A6:39*
307	key 71	
22E	P*P	*A6;2E*
30F	key: -71	
238	PPRD	*A6:38*
317	key 72	
226	EIGEN	*A6:26*
31F	key -72	
23F	XROM #EV	*A6:3F*
327	key 73	
225	CHRPOL	*A6:25*
337	key 74	
227	EV3X3	*A6:27*
308	key 81	
22F	P/P	*A6:2F*
310	key: -81	
231	PDIV	*A6:31*
318	key 82	
237	XROM "POLZR"	*A6:37*
320	key -82	
233	XROM "PFE"	*A6:33*
338	key 84	
23C	PVAL	*A6:3C*
340	key -84	
18B	VVIEW _ _	*A5:8B*
000	*End of Table*	

HP-41Z Deluxe

101	key 11	
105	ΣZL	A1:05
109	key -11	
126	ZBSSL _	A1:26
111	key 12	
062	ZINV	
119	key -12	
042	W^Z	
112	Key 22	
079	ZRDN	
11A	Key-22	
07C	ZRUP	
121	key 13	
06B	ZSQRT	
129	key -13	
04A	Z^2	
131	key 14	
064	ZLOG	A0,64
139	key -14	
054	ZALOG	A0,54
141	key 15	
063	ZLN	A0,63
149	key -15	
058	ZEXP	A0,58
102	key 21	
076	Z<>W	
10A	key -21	
075	Z<>ST _	A0:75
122	key 23	
06A	ZSIN	
12A	key -23	
055	ZASIN	
132	key 24	
057	ZCOS	
13A	key -24	
053	ZACOS	
142	key 25	
06C	ZTAN	
14A	key -25	
056	ZATAN	
123	key -33	
07D	ZSTO _ _	
133	key -34	
078	ZRCL _ _	
10C	key 41	
073	ZENTER^	
104	Key 41	
100	^IM/AG	
12C	key -42	
065	ZNEG	
13C	Key 43	
074	Z<> _ _	
14C	key -44	
06F	CLZ	
105	key 51	
045	Z-	
10D	key -51	
050	Z=W?	
106	key-61	
045	Z+	
10E	key -61	
051	Z=WR?	
12E	key -63	
11C	ZREC	
13E	key -64	
11B	ZPOL	
107	key 71	
046	Z*	
10F	key -71	
04F	Z=I?	
108	key -81	
048	Z/	
110	key -81	
04D	Z=0?	
130	key -83	
071	LASTZ	
138	key 84	
072	ZAVIEW	
140	key -84	
07E	ZVIEW	
000	*End of Table*	

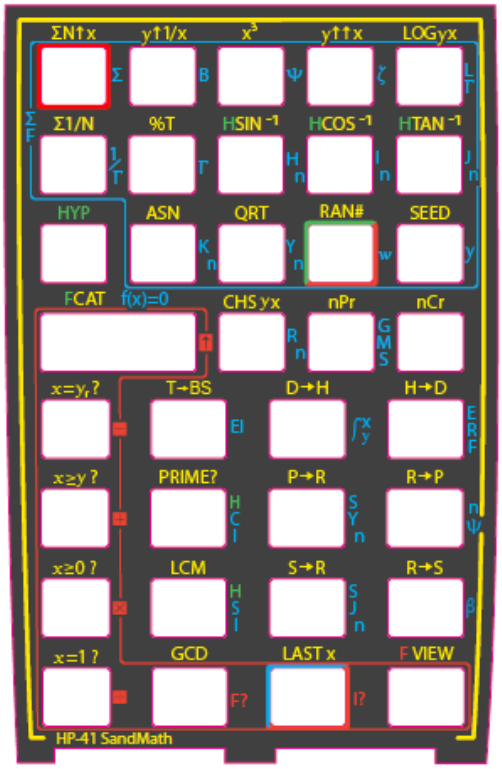
SandMath

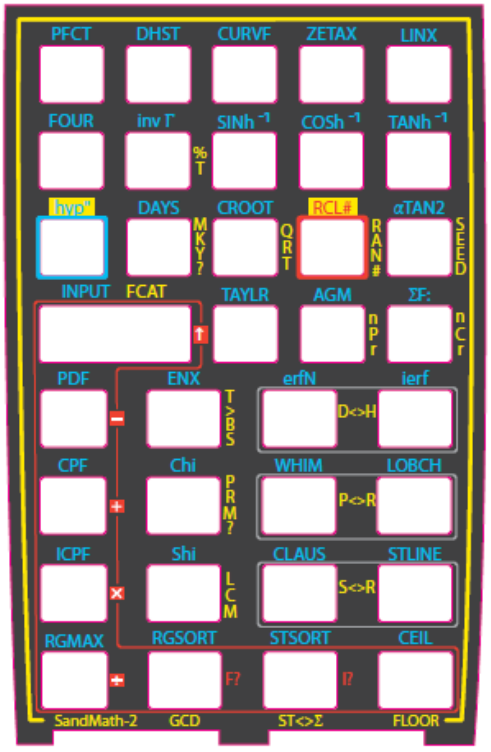
101	key 11	
082	**ΣFL**	*A0:84*
109	key -11	
0C4	**ΣN^X**	*A0:C4*
119	key -12	
0E7	**Y^1/X**	
129	key -13	
0E2	**X^3**	
139	key -14	
0E8	**Y^^X**	
149	key -15	
0D6	**LOGYX**	*A0:D6*
10A	key -21	
0C3	**Σ1/N**	
11A	key -22	
0A9	**%T**	*A0:A9*
121	key 13	
0C7	**CBRT**	*A0:C8*
10B	**Key-31**	
0F2	**-HYP**	
133	key 34	
0F9	**-RCL#**	
13B	key -34	
0B8	**RAND**	*A0:B8*
14B	key -35	
0BC	**SEEDT**	*A0:BC*
12B	key -33	
0DA	**QROOT**	*A0:DA*
12C	key -42	
0CA	**CHSYX**	*A0:CA*
13C	key -43	

0B3	**NPR**	*A0:B3*
14C	key -44	
0B2	**NCR**	*A0:B2*
10D	key -51	
0E4	**X=YR?**	
12D	key -53	
0CE	**D>H**	*A0:CE*
13D	key -54	
0D3	**H>D**	*A0:D3*
11D	key -52	
0CD	**T>BS**	*A0:CD*
10E	key: -61	
0E6	**X>=Y?**	
11E	key -62	
0B7	**PRIME?**	*A0:B7*
12E	key -63	
0D8	**SI-**	*A0:D8*
13E	key -64	
0DC	**R>P**	*A0:DC*
10F	key: -71	
0E5	**X>=0?**	
11F	key -72	
0AF	**LCM**	*A0:AF*
12F	key -73	
0DE	**S>R**	*A0:DE*
13F	key -74	
0DD	**R>S**	*A0:DD*
110	key: -81	
0E3	**X=1?**	
120	key -82	
0AE	**GCD**	*A0:AE*
000	***End of Table***	


HP-41Z KEYS


HP-41 SandMath


HP-41 SandMath


SandMath-2

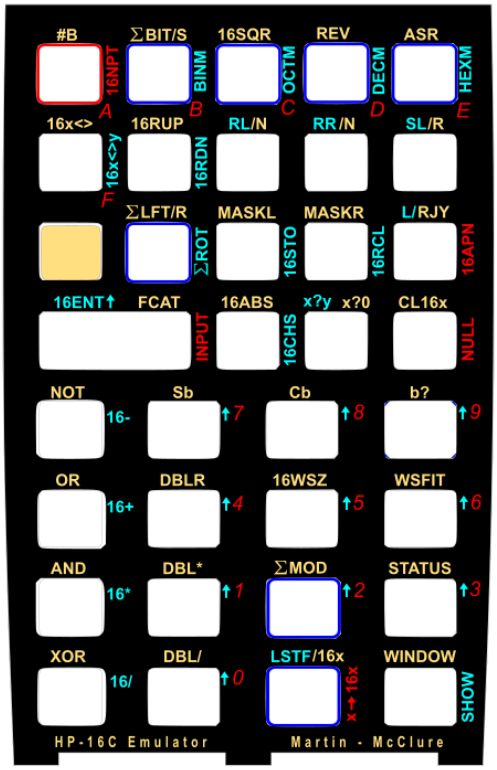
16C Simulator

301	key 11	
035	**16NPT**	*A4:35*
309	key -11	
001	**16C _**	**#BITS**
311	key 12	
00F	**BINM**	*A4:0F*
319	key -12	
001	**16C _**	**ΣBIT**
321	key 13	
01B	**OCTM**	*A4:1B*
329	key -13	
008	**16SQRT**	*A4:08*
331	key 14	
014	**DECM**	*A4:14*
339	key -14	
001	**16C _**	**REV**
341	key 15	
016	**HEXM**	*A4:16*
349	key -15	
00D	**ASR**	*A4:0D*
302	key 21	
03B	**16X<>Y**	*A4:3B*
30A	key -21	
03A	**16X<>**	*A4:3A*
312	key 22	
037	**16RDN**	*A4:37*
31A	key -22	
038	**16RUP**	*A4:38*
322	key 23	
01D	**RL**	*A4:1D*
32A	key -23	
020	**RLN**	*A4:20*
332	key 24	
022	**RR**	*A4:22*
33A	key -24	
025	**RRN**	*A4:25*
342	key 25	
028	**SLN**	*A4:28*
34A	key -25	
029	**SRN**	*A4:29*
30B	Key-31	
002	***16# _ _ _***	*A4:02*
313	key 32	
030	**ΣROT**	*A4:30*
31b	key -32	
02E	**ΣLEFT**	*A4:2E*
323	key 33	
039	**16STO**	*A4:39*

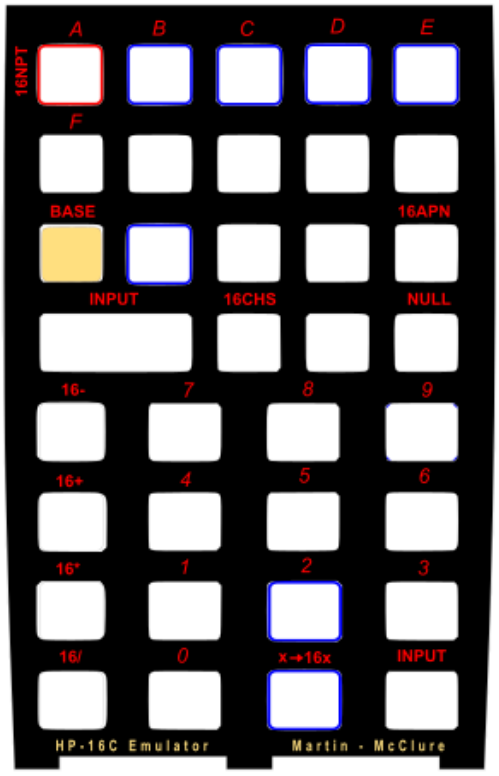
32B	key -33	
018	**MASKL**	*A4:18*
333	key 34	
036	**16RCL**	*A4:36*
33B	key -34	
019	**MASKR**	*A4:19*
343	key 35	
017	**LJY**	*A4:17*
34B	key -35	
001	**16C _**	**RJY**
304	key 41	
034	**16ENT^**	*A4:34*
30C	key -41	
001	**16C _**	**CAT+**
324	KEY 42	
033	**16CHS**	*A4:33*
32C	key -42	
032	**16ABS**	*A4:32*
334	KEY 43	
03F	**X?Y**	*A4:3F*
33C	key -43	
001	**16C _**	**X?0**
344	key 44	
03C	***CL16X***	A4:3C
34C	key -44	
03D	**CL16ST**	*A4:3D*
305	key 51	
004	**16-**	*A4:05*
30D	key -51	
01A	**NOT**	*A4:1A*
31D	key -52	
026	**Sb**	*A4:26*
32D	key -53	
010	**Cb**	*A4:10*
33D	key -54	
00E	**b?**	*A4:0E*
306	key 61	
005	**"16+"**	*A4:04*
30E	key: -61	
01C	**OR**	*A4:1C*
31E	key -62	
013	**DBLR**	*A4:13*
32E	key -63	
009	**16WSZ**	*A4:09*
33E	key -64	
001	**16C _**	**WSFIT**
307	key 71	
006	**16***	*A4:06*
30F	key: -71	

00C	**AND**	*A4:0C*
31F	key -72	
011	**DBL***	*A4:11*
32F	key -73	
02F	**ΣMOD**	*A4:2F*
33F	key -74	
02A	**STATUS**	*A4:2A*
308	key 81	
007	**16/**	*A4:07*
310	key: -81	
02D	**XOR**	*A4:2D*

320	key -82	
012	**DBL/**	*A4:12*
328	key 83	
031	***-16C STCK (LASTF)***	*A4:31*
330	key -83	
03E	**LST16X**	*A4:3E*
338	key 84	
027	**SHOW**	*A4:27*
340	key -84	
02C	**WINDOW**	*A4:2C*
000	***End of Table***	



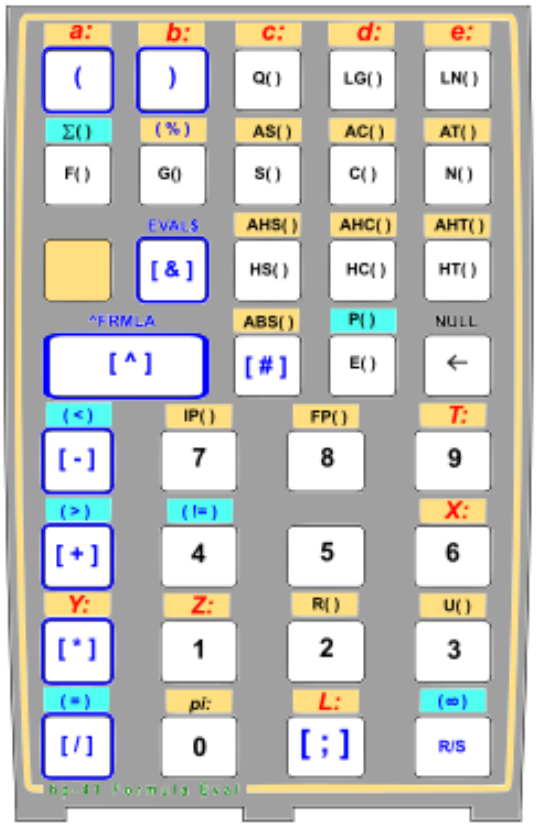
HP-16C Emulator



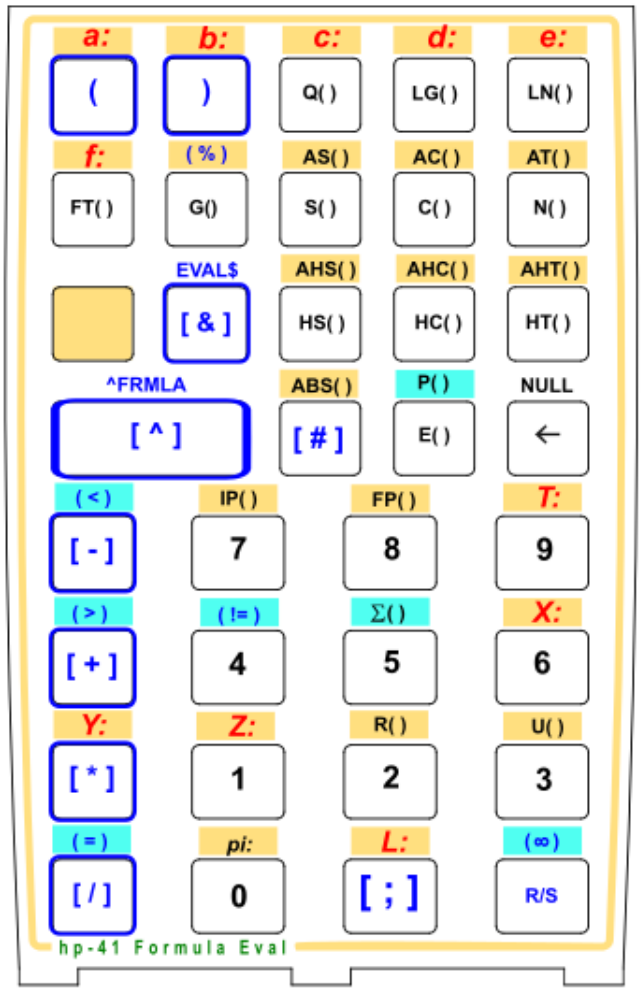
16NPT Hot keys

Formula Evaluation

301	key 11	
38E	***ΣEVL***	*A7:8E*
309	key -11	
381	***^FRMLA***	*A7:81*
339	key -14	
38B	***SF# _ _ _***	*A7:8B*
349	key -15	
38C	***SF$ _***	*A7:8C*
30A	-21 key	
397	***EVALΣ***	*A7:97*
31A	key -22	
392	***SHFL _ _ _ _ _***	*A7:92*
30B	-31 key	
38D	***$KY/N?***	*A7:8D*
32B	key -33	
394	***STO$ _ _***	*A7:94*
323	key 33	
388	***LET= _ _***	*A7:88*
333	key 34	
387	***GET= _ _***	*A7:87*
33B	key -34	
390	***RCL$ _ _***	*A7:90*
343	key 35	
38A	***SWAP= _ _***	*A7:8A*
33F	key -74	
395	***EVAL?***	*A7:95*
340	key -84	
389	***SHOW=***	*A7:89*
000	*<End of Table>*	



Formula Evaluation



Driver Programs.

```
01*LBL "HELP"
02*LBL A
03 -HELP SYSTM
04 "WARP FRML ΣF"
05 PROMPT
06*LBL A
07 "^WH"
08 ASTO T
09 "H:WARP"
10 GTO 00
11*LBL C
12 "^FH"
13 ASTO T
14 "H:FRML"
15 GTO 00
16*LBL E
17 "^sH"
18 ASTO T
19 "H:sSYS"
20*LBL 00
21 XROM "<"
22 GTO A
23*LBL "<"
24 SF 25
25 FLSIZE
26 FS?C 25
27 GTO 00
28 "LOADING..."
29 AVIEW
30 XEQ IND T
31*LBL 00
32*LBL ">"
33 -HLP FILES
34 .
35 SEEKPT
36*LBL 05
37 GETREC
38 AVIEW
39 PSE
40*LBL 10
41 CLST
42 GETKEYX
43 X#0?
44 GTO 10
45 RCLPT
46 INT
47  E
48 +
49 SF 25
50 SEEKPT
51 FS?C 25
52 GTO 05
53 END
```

HELP2.

```
01*LBL "HLP2"
02*LBL A
03 -HELP SYSTM
04 "BUFF XMS CAT"
05 PROMPT
06*LBL A
07 "^BH"
08 ASTO T
09 "H:BUFF"
10 GTO 00
11*LBL C
12 "^XH"
13 ASTO T
14 "H:XMFS"
15 GTO 00
16*LBL E
17 "^CH"
18 ASTO T
19 "H:CATS"
20*LBL 00
21 XROM "<"
22 GTO A
23 END
```

HELP3.

```
01*LBL "HLP3"
02*LBL A
03 -HELP SYSTM
04 "OTHR HEX ED+"
05 PROMPT
06*LBL A
07 "^OH"
08 ASTO T
09 "H:OTHR"
10 GTO 00
11*LBL C
12 "^HH"
13 ASTO T
14 "H:HEXD"
15 GTO 00
16*LBL E
17 "^EH"
18 ASTO T
19 "H:EDIT"
20*LBL 00
21 XROM "<"
22 GTO A
23 END
```

FLAGS.

```
01*LBL "FLAGS"
02 "^F"
03 ASTO T
04 "H:FLAG"
05 SF 25
06 FLSIZE
07 FS?C 25
08 GTO A
09 "LOADING..."
10 AVIEW
11 XEQ IND T
12*LBL A
13 CLX
14 "REC#=?"
15 PROMPT
16 XROM ">"
17 GTO A
18*LBL "^F"
19 "H:FLAG"
20 79
21 SF 25
22 PURFL
23 CF 25
24 CRFLAS
25 "[0-4] ANNUNC"
26 APPREC
27 "[5-8] GENPRP"
28 APPREC
29 "09: MTRX_EOL"
30 APPREC
31 "10: MTRX_EOC"
32 APPREC
33 "11: AUTOXEQ"
34 APPREC
35 "12: PRT_DBLW"
36 APPREC
37 "13: PRT_LWRC"
38 APPREC
39 "14: CRDR_OVW"
40 APPREC
41 "15: ILP_MAN"
42 APPREC
43 "16: ILP_NORM"
44 APPREC
45 "17: INCP_REC"
46 APPREC
47 "18: IL_INTRP"
48 APPREC
49 "19,20: GNRL"
50 APPREC
51 "21: PRT_ENBL"
52 APPREC
53 "22: NUM_INPT"
54 APPREC
55 "23: ALPH_INPT"
56 APPREC
57 "24: IGNR_RNG"
58 APPREC
59 "25: IGNR_ALL"
60 APPREC
61 "26: AUDIO"
62 APPREC
63 "27: USER"
64 APPREC
65 "28: RADIX"
66 APPREC
67 "29: DGT_GRP"
68 APPREC
69 "30: CAT_SET"
70 APPREC
71 "31: DATE_MOD"
72 APPREC
73 "32: IL_MANIO"
74 APPREC
75 "33: IL_CNTL"
76 APPREC
77 "34: IL_AADR"
78 APPREC
79 "35: NO_AUTO"
80 APPREC
81 "36-39: #DGTS"
82 APPREC
83 "40,41: DSP_MOD"
84 APPREC
85 "42,43: ANG_MOD"
86 APPREC
87 "44: CNST_ON"
88 APPREC
89 "45: SYS_DENTR"
90 APPREC
91 "46: PT._KEYSEQ"
92 APPREC
93 "47: SHIFT"
94 APPREC
95 "48: ALPHA"
96 APPREC
97 "49: LOW_BAT"
98 APPREC
99 "50: MESSAGE"
100 APPREC
101 "51: SST_MOD"
102 APPREC
103 "52: PRGM"
104 APPREC
105 "53: IL_I/O"
106 APPREC
107 "54: PAUSE"
108 APPREC
109 "55: PRINTER"
110 APPREC
111 END
```