
----- HP71 System Assignments -----
----- 10/15/85 -----

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----- This is a listing of all current HP71 LEX file -----
----- assignments. 10/15/85 -----

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----- LEX FILES -----

Hex

no.	Description	Contact person
00	Mainframe	
01	Mainframe	
02	MATH ROM	HP.
03	Curve Fit	HP.
2F	FORTH/Assembler	HP.
39	Time Manager	HP employee software.
3A	Time Manager	ZenGrange
52	User's Lib #1 -- General Utilities	
53	User's Lib #2 -- Low level applications	
54	User's Lib #3 -- Games	
5C	Scratch LEX file	
5D	Scratch LEX file	
5E	Scratch LEX file	
5F	AMPI Statistics	American Micro Products, Inc.
60	AMPI Statistics	American Micro Products, Inc.
61	Third Party Applications	
A0	CHHU Interchange File (Contact: John Baker)	
E1	French User's Club (Contact: Wolfgang Baltes)	
E2	CHHU (User's Club) (Contact: John Baker)	
F0	Text Editor	HP.
	-- Data Editor	HP.
F5	Wand	ZenGrange
F6	Data Comm	Firmware Specialists (Steve Chou)
FE	Data Acquisition	HP.
	-- Plotter ROM	HP employee software.
FF	HPIL ROM	HP.

----- This is a listing of all current HP71 Device Code -----
----- assignments. 10/15/85 -----

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---- Device Codes -----

Hex no.	Description	Contact person
0	System RAM	(mainframe)
1	IRAM	(mainframe)
2	ROM	(mainframe)
3	EEPROM	(mainframe)
4		
5		
6		
7	CARD	(mainframe)
8	HPIL	(mainframe)
9	WAND	ZenGrange
A		
B		
C		
D		
E		
F	<reserved for "unspecified device" indicator in mainframe>	

----- This is a listing of all current HP71 File Type -----
----- assignments. 10/15/85 -----

- Note: Identifiers E204 through E27F are allowable, except
- for E210, E211, E212 and E213.
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---- File Type assignments -----

File		Identifiers:				
Type	Description	Security:	Normal	S	P	E
-----	-----	-----	-----	-----	-----	-----
BASIC	Tokenized BASIC		E214	E215	E216	E217
BIN	HP71 microcode		E204	E205	E206	E207
DATA	Fixed Data		E0F0	E0F1	n/a	n/a
KEY	Key assignments		E20C	E20D	n/a	n/a
LEX	Language Extension		E208	E209	E20A	E20B
SDATA	Stream Data		E0D0	n/a	n/a	n/a
TEXT	(LIF1) ASCII text		0001	E0D5	n/a	n/a
FORTH	FORTH vocabulary		E218	E219	E21A	E21B
ROM	ROMCOPY image (LEX#FF)		E21C	E21D	E21E	E21F
APPT	ZenGrange time manager (LEX#3A)		E220	E221	n/a	n/a
DEA	"Data Encryption Algorithm"		E224	E225	E226	E227

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----- This is a listing of all current HP71 IS-table -----  
----- assignments. 10/15/85 -----  
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---- IS-table assignments -----
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Hex	Description	Contact person
00	Serial IO	HP.
01		
02		
03		
FF	<reserved for "not assigned" indicator>	

----- This is a listing of all current HP71 Keycode -----
----- assignments. 10/15/85 -----

- Note: All keycodes above A8 (=168 dec) are allocatable.
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----- Keycodes -----

Hex

no. Description

Contact person

FF HPIL

HP.

FE WAND

ZenGrange

----- This is a listing of all current HP71 MMI/O Address -----
----- assignments. 10/15/85 -----

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----- MMI/O Addresses -----

Address	Description	Contact person
20000 -2BFFF	Soft-configured MMI/O devices	(mainframe)
2C000 -2C01F	Card Reader	(mainframe)
2C020 -?????	CMT application	Corvallis MicroTechnology, Inc.
2D000 -2E0FF	Reserved for HP use	

----- This is a listing of all current HP71 MMI/O device -----
----- assignments. 10/15/85 -----

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----- MMI/O Devices -----

Hex

no. Description Contact person

0 HPIL Mailbox HP.

1

2 Memory Controller HP.

3

4

5

6

7

8

9

A

B

C

D

E

F

----- This is a listing of all current HP71 poll number -----
----- assignments. 10/15/85 -----

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---- Poll numbers -----

Hex

no. Description Contact person

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See TI&EQU for mainframe poll numbers.

40	WAND	ZenGrange
41	PLOTTER ROM	HP employee software.
42	Non-BASIC LIST	HP.
43	LIST\$ on external device	HP.
44	SYSTEM/SYSTEM\$ execution	HP.
45	WAND ACTIVE	ZenGrange

----- This is a listing of all current HP71 Print Class -----
----- assignments. 10/15/85 -----

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---- Print Class -----

Hex

no.	Description	Contact person
0	DISP	(mainframe)
1	PRINT	(mainframe)
2	OUTPUT	(mainframe)
3	PLOT	(LEX#FF) HP employee software.
4	PRINT TO	(LEX#52,token#62) HP.
5		
6		
7		
8		
9		
A		
B		
C		
D		
E		
F		

----- This is a listing of all current HP71 Reserved RAM -----
----- assignments. 10/15/85 -----

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----- Reserved RAM -----
RAM

Address Bits Description; Contact

2F97C 3 ----CLOCK keyword (LEX52,#29). HP employee software.
2
1
0

2F986 3 ----"SHELL ON" (LEX3A). ZenGrange
2 ---"Inverse ON" " "
1 --"Charset ON" " "
0 -Complex IMAGE flag (MATH ROM). HP.

2F987 All ON KEY execution. HP.
2F988 All "
2F989 All "
2F98A All "
2F98B All "
2F98C All "
2F98D All "
2F98E All "
2F98F All "
2F990 All "

2F991
-- 2F9E5 Unallocated.

----- This is a listing of all current System Buffer -----
----- assignments. 10/15/85 -----

---- System Buffers -----

Hex no.	Description	Contact person
801	Statement Buffer	(mainframe)
802	Immediate Execute Key	(mainframe)
803	File Information	(mainframe)
804	ASSIGN# information	(mainframe)
805	Temp for file manipulation	(mainframe)
806	Statistics	(mainframe)
807	Card Reader	(mainframe)
808	STARTUP command	(mainframe)
809	External command	(mainframe)
80A	INLINE command	HP.
80B	Data Acquisiton	HP.
80C	SCOPE application	HP.
80D	PLOTTER ROM	HP employee software.
80E	KEYBOARD IS	HP.
80F	HPIL save area	HP.
810	ASSIGN IO names	HP.
811	HPIL statement exection	HP.
812	MATH ROM	HP.
813	SOLVE execution	HP.
814	INTEGRATE execution	HP.
815	Matrix IO	HP.
816	ON KEY execution	HP.
817	Curve Fit ROM	HP.
818	Chi Square (CFIT)	HP.
819	Gradient (CFIT)	HP.
81A	Wand Status/Cksum	ZenGrange
81B	Scope application	John R. Baker
81C	SHUTDN string	Zengrange
81D	Gen purpose BASIC extensn	Zengrange
81E	Time Manager	Zengrange
81F		
820	Time Manager appt/timers	HP employee software.
821	Time Manager appt info#1	"
822	Time Manager appt info#2	"
823	Time Manager appt info#3	"
824	Time Manager appt info#4	"
825	Time Manager appt info#5	"
826	Time Manager appt info#6	"
827	Time Manager appt info#7	"
BFA	Message Translator	HP.
BFB	Alternate Char set	(mainframe)
BFC	LEX file addresses	(mainframe)
BFE	ROM configuration table	(mainframe)

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----- This is a listing of all current keywords assigned -----
----- to HP71 LEX files.                               10/15/85 -----
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--- Keywords by LEX file

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-          Types: F=function
-                  S=statement
-                  p=legal in program
-                  i=legal after IF
-                  k=legal from Keyboard
-          W=word
-          U=funny function
-          ?=unspecified
-          All keywords are permanently allocated except those
-          with a "!" preceding the keyword type.
```

Name	LEX Token			Comments
	#	#	Type	
IP	00	6A	F	
FP	00	6B	F	
MAXREAL	00	6C	F	
RMD	00	6D	F	
RAD	00	6E	F	
DEG	00	6F	F	
INF	00	70	F	
EPS	00	71	F	
CEIL	00	72	F	
KEY\$	00	73	F	
MOD	00	74	F	
ERRL	00	75	F	
ERRN	00	76	F	
DATE	00	77	F	
DATE\$	00	78	F	
PI	00	79	F	
TIME	00	7B	F	
RES	00	7F	F	
NOT	00	81	W	
DIV	00	86	W	
AND	00	8B	W	
EXOR	00	8C	W	
OR	00	8D	W	
LOG	00	90	F	
LN	00	91	F	
SQR	00	92	F	
LOG10	00	93	F	
EXP	00	94	F	
TIME\$	00	95	F	
SIN	00	96	F	
COS	00	97	F	
TAN	00	98	F	
ASIN	00	99	F	
ACOS	00	9A	F	
ATAN	00	9B	F	
INT	00	9C	F	
MEAN	00	9D	F	
SDEV	00	9E	F	
PREDV	00	9F	F	
RND	00	A0	F	
SGN	00	A1	F	

ABS	00	A2	F
NUM	00	A3	F
CHR\$	00	A4	F
VAL	00	A5	F
STR\$	00	A6	F
FACT	00	A8	F
LEN	00	A9	F
UPRC\$	00	AB	F
MIN	00	AC	F
MAX	00	AD	F
IVL	00	AE	F
OVF	00	AF	F
UNF	00	B0	F
DVZ	00	B1	F
INX	00	B2	F
COPY	00	B5	Spik
LR	00	B6	Spik
DELETE	00	B7	Sik
EDIT	00	B8	Sik
DEF	00	B9	Spik
LIST	00	BB	Spik
REAL	00	BC	Spik
NAME	00	BD	Spik
DESTROY	00	BE	Spik
LINPUT	00	BF	Spik
LET	00	C0	Spik
SUB	00	C1	Sp
FOR	00	C3	Spk
NEXT	00	C4	Spk
DISP	00	C5	Spik
DATA	00	C6	Sp
READ	00	C7	Spik
FETCH	00	C8	Sik
INPUT	00	C9	Spik
INTEGER	00	CA	Spik
SHORT	00	CB	Spik
DIM	00	CC	Spik
PRINT	00	CD	Spik
STAT	00	CE	Spik
KEYS	00	CF	W
CARD	00	D0	W
PORT	00	D1	W
MAIN	00	D2	W
DEGREES	00	D3	Spik
RADIANS	00	D4	Spik
ADD	00	D5	Spik
DELAY	00	D6	Spik
PAUSE	00	D7	Sp
WAIT	00	D8	Spik
STOP	00	D9	Spik
END	00	DA	Spik
RETURN	00	DB	Spik
GOSUB	00	DC	Spik
GOTO	00	DD	Spik
RESTORE	00	DE	Spik
IF	00	DF	Spik
ON	00	E0	Spik
OFF	00	E1	Spik
USER	00	E2	Spik
ERROR	00	E3	W
TIMER	00	E4	W

KEY	00	E5	Spik
REM	00	E6	Spik
IS	00	E7	W
BEEP	00	E8	Spik
BASE	00	E9	W
TRACE	00	EA	Spik
PURGE	00	EB	Spik
CAT	00	EC	Spik
OPTION	00	ED	Spik
AUTO	00	EE	Sik
TO	00	F3	W
THEN	00	F4	W
ELSE	00	F5	W
STEP	00	F6	W
TAB	00	F7	W
ALL	00	F8	W
CALL	00	F9	Spik
CFLAG	00	FA	Spik
SFLAG	00	FB	Spik
USING	00	FD	W
RUN	00	FE	Spik
IMAGE	00	FF	Sp
GO	00	--	Special word
FN	00	--	Special word

ACS	01	01	F
ADDR\$	01	02	F
ADJABS	01	03	Spik
ADJUST	01	04	Spik
AF	01	05	F
ANGLE	01	06	F
ASN	01	07	F
ASSIGN	01	08	Spik
ATN	01	09	F
BYE	01	0A	Spik
CAT\$	01	0B	F
STD	01	0C	Spik
FIX	01	0D	Spik
SCI	01	0E	Spik
ENG	01	0F	Spik
CHARSET	01	10	Spik
CHAIN	01	11	Spik
CHARSET\$	01	12	F
CLAIM	01	13	Sik
CLASS	01	14	F
CLOCK	01	15	W
CLSTAT	01	16	Spik
CONTRAST	01	17	Spik
CONT	01	18	Sik
CORR	01	19	F
PLIST	01	1A	Spik
CREATE	01	1B	Spik
ZERO	01	1C	W
DEFAULT	01	1D	Spik
DROP	01	1E	Spik
DTH\$	01	1F	F
ENDLINE	01	20	Spik
ERRM\$	01	21	F
VER\$	01	22	F
EXACT	01	23	Spik
EXPM1	01	24	F

EXPONENT	01	25	F
EXTEND	01	26	W
FLAG	01	27	F
FLOOR	01	28	F
FLOW	01	29	W
FREE	01	2A	Sik
GDISP	01	2B	Spik
GDISP\$	01	2C	F
HTD	01	2D	F
INTO	01	2E	W
KEYDEF\$	01	2F	F
KEYDOWN	01	30	F
LC	01	31	Spik
LGT	01	32	F
LOCK	01	33	Spik
LOGP1	01	34	F
WIDTH	01	35	Spik
MATH	01	36	W
MEAN	01	37	F
MEM	01	38	F
MERGE	01	39	Spik
MINREAL	01	3A	F
NAN	01	3B	F
NEAR	01	3C	W
NEG	01	3D	W
PCRD	01	3E	W
PEEK\$	01	3F	F
POKE	01	40	Spik
POP	01	41	Spik
POS	01	42	F
PRIVATE	01	43	Spik
PROTECT	01	44	Spik
PUT	01	45	Spik
PWIDTH	01	46	Spik
RANDOMIZ	01	47	Spik
RED	01	48	F
RENAME	01	49	Spik
RENUMBER	01	4A	Spik
RESET	01	4B	Spik
ROUND	01	4C	W
SDEV	01	4D	F
WINDOW	01	4E	Spik
SECURE	01	4F	Spik
DISP\$	01	50	F
SETDATE	01	51	Spik
SETTIME	01	52	Spik
SHOW	01	53	Sik
SQRT	01	54	F
STARTUP	01	55	Spik
TOTAL	01	56	F
TRANSFOR	01	57	Spik
TRAP	01	58	F
UNPROTEC	01	59	Spik
UNSECURE	01	5A	Spik
VARS	01	5B	W
ACOSH	02	01	F
ASINH	02	02	F
ATANH	02	03	F
BSTR\$	02	04	F
BVAL	02	05	F

CNORM	02	06	F
COMPLEX	02	07	Spik
COSH	02	08	F
DETL	02	09	F
DET	02	0A	F
DOT	02	0B	F
FGUESS	02	0C	F
FNORM	02	0D	F
FVALUE	02	0F	F
GAMMA	02	10	F
IBOUND	02	11	F
IMPT	02	12	F
IROUND	02	14	F
IVALUE	02	15	F
LBND	02	16	F
LBOUND	02	17	F
LOG2	02	18	F
MAT	02	19	Spik
NAN\$	02	1A	F
NEIGHBOR	02	1B	F
REPT	02	1C	F
RNORM	02	1D	F
SCALE10	02	1E	F
SINH	02	1F	F
TANH	02	20	F
UBND	02	21	F
UBOUND	02	22	F
CON	02	23	W
IDN	02	24	W
ZERO	02	25	W
ZER	02	26	W
INV	02	27	W
TRN	02	28	W
SYS	02	29	W
FOUR	02	2B	W
PROOT	02	2C	W
FVAR	02	2D	F
IVAR	02	2E	F
CONJ	02	2F	F
TYPE	02	30	F
ARG	02	31	F
PROJ	02	32	F
RECT	02	33	F
POLAR	02	34	F
FNROOT	02	--	U
INTEGRAL	02	--	U

KILLBUF 03 01 Spik

FORTH	2F	01	Sk
FORTHX	2F	02	Spik
FORTHI	2F	03	F
FORTHF	2F	04	F
FORTH\$	2F	05	F
FORTH	2F	06	Sk
FORTHX	2F	07	Spik
FORTHI	2F	08	F
FORTHF	2F	09	F
FORTH\$	2F	0A	F
HP41	2F	0B	Sk
SFTFORTH	2F	0C	Sk

Dup of #01, since they are mutually exclusv.
 Dup of #02, since they are mutually exclusv.
 Dup of #03, since they are mutually exclusv.
 Dup of #04, since they are mutually exclusv.
 Dup of #05, since they are mutually exclusv.

DATEPLUS	39	01	!F	
DAY\$	39	02	!F	
DAY	39	03	!F	
DDAYS	39	04	!F	
DOW	39	05	!F	
FDATE\$	39	06	!F	
FDATE	39	07	!F	
HMS	39	08	!F	
HOUR	39	09	!F	
KEYWAIT\$	52	01	F	
SCROLL	52	02	Spik	
MSG\$	52	03	F	
INLINE	52	04	Spik	
KEYNAM\$	52	05	F	
KEYNUM	52	06	F	
STD\$	52	07	F	
LTRIM\$	52	08	F	
RTRIM\$	52	09	F	
TRIM\$	52	0A	F	
RPT\$	52	0B	F	
REV\$	52	0C	F	
LWRC\$	52	0D	F	
LWC\$	52	0E	F	
ROT\$	52	0F	F	
SPAN	52	10	F	
MEMBER	52	11	F	
SBIT\$	52	12	F	
SBIT	52	13	F	
SAR\$	52	14	!F	
AND\$	52	18	!F	
OR\$	52	19	!F	
EXOR\$	52	1A	!F	
COMP\$	52	1B	!F	
REVBIT\$	52	1C	!F	
RPTBIT\$	52	1D	!F	
EXTRBIT	52	1E	!?	
STUFFBIT	52	1F	!?	
BREAK	52	20	Spik	
UNBREAK	52	21	Spik	
BLIST	52	22	Spik	
MODIFY	52	23	Sk	
LIST\$	52	24	F	
ON	52	25	Spi	ON KEY
OFF	52	26	Spik	OFF KEY
ROWCOL\$	52	27	F	
BANNER\$	52	28	F	
CLOCK	52	29	S?	
ROMAN8\$	52	2A	F	
KEYSLP\$	52	2B	F	
PATTERN\$	52	5E	F	
SYSTEM	52	5F	F	
SYSTEM\$	52	60	F	
IMAGE\$	52	61	F	
PRINT	52	62	Spik	PRINT TO
CMDSTK	52	63	S?	
LINKLEX	52	64	S?	
TCNV	52	65	F	
TCNV\$	52	66	F	
DCNV	52	67	F	

DCNV\$	52	68	F	
STKX	52	69	F	Return X register in RPN stack
STKY	52	6A	F	Return Y register in RPN stack
STKZ	52	6B	F	Return Z register in RPN stack
STKT	52	6C	F	Return T register in RPN stack
DEBUG	53	01	Spik	
EXEC	53	02	Spik	
SYSBUFC	53	03	Spik	
SYSBUFD	53	04	Spik	
SYSBUF\$	53	05	F	
SIO	53	06	S?	
SERIO\$	53	07	F	
FATENT	53	0F	F	
FATMOD\$	53	10	F	
FATNULL	53	11	F	
NUM2	53	12	F	
MSDNAME\$	53	13	F	
CNTBITS	53	14	F	
DIRSRCH	53	15	F	
RASTER\$	53	16	F	
MAXRC	53	55	F	
LIFE\$	54	01	F	
CLRCURS	61	01	Spik	
CLRLINE	61	02	Spik	
CLRSCRN	61	03	Spik	
CUR\$	61	04	F	
CR\$	61	05	F	
DSP40	61	06	?	
DSP80	61	07	?	
DSPCLR	61	08	?	
EC\$	61	09	F	
FF\$	61	0A	F	
INV\$	61	0B	F	
LF\$	61	0C	F	
REVR\$	61	0D	F	
WKEY\$	61	0E	F	
DLIST	61	0F	?	
KBDSCOPE	61	10	Spik	
SCOPEPTQ	61	11	F	
SCOPEPTS	61	12	S?	
BUFSIZEQ	61	13	F	
DELSCOPE	61	14	Spik	
DISPFRMS	61	15	S?	
READBYTE	61	16	F	
READFRM\$	61	17	F	
MIMA	61	18	?	
SARF	61	19	?	
GEDU	61	1A	?	
JUL2DATE	61	1B	F	
DATE2JUL	61	1C	F	
DIFDAYS	61	1D	F	
DAYOFWK	61	1E	F	
CELVAL	61	3D	!F	
CUE\$	61	3E	!F	
CLFLS	61	3F	!S?	
ECP\$	61	40	!F	
HI\$	61	41	!F	
FMTCEL\$	61	42	!F	

NVAL	61	43	!F	
PAK\$	61	44	!F	
<resrvd>	61	45	!?	
UNPAK	61	46	!S?	
<resrvd>	61	47	!?	
WORK\$	61	48	!F	
DELETE	F0	01	Spik	DELETE#
EDTEXT	F0	02	Spik	
FILESZR	F0	03	F	
INSERT	F0	04	Spik	INSERT#
REPLACE	F0	05	Spik	REPLACE#
SEARCH	F0	06	F	
EDPARSE\$	F0	07	F	
FILETYPE	F0	10	F	
RECLLEN	F0	11	F	
DRECORDS	F0	12	F	
EXPAND	F0	13	Spik	EXPAND#
SWAP	F0	14	Spik	SWAP#
DINSERT	F0	15	Spik	DINSERT#
DDELETE	F0	16	Spik	DDELETE#
ACTIVE\$	F5	01	F	Read label of active barcode type
BARCODE\$	F5	02	F	Read any label auto-discrimination
CODABAR\$	F5	03	F	Read codabar label
CODE11\$	F5	04	F	Read code 11 label
CODE39\$	F5	05	F	Read code 3 of 9 label
IANCODE\$	F5	06	F	Read intern'tl article number label
IND25\$	F5	07	F	Read industrial 2 of 5 label
INT25\$	F5	08	F	Read interleaved 2 of 5 label
WAND\$	F5	09	F	Read any barcode, return blk/wht times
BARTYPE	F5	0A	F	Return number of last barcode read
CDV11	F5	0B	F	Verify code 11 with one check digit
CDV11K	F5	0C	F	Verify code 11 with two check digits
CDV25D	F5	0D	F	Verify industrial 2 of 5 label
CDV25I	F5	0E	F	Verify interleaved 2 of 5 label
CDV39	F5	0F	F	Verify code 3 of 9 label
CTRL39\$	F5	10	F	Convert code 3 of 9 to full ASCII
IANEXP\$	F5	11	F	Expand zero-suppressed IAN label
IAN SUP\$	F5	12	F	Zero-suppress IAN label
NORM39\$	F5	13	F	Convert full ASCII to code 3 of 9
WANDSTAT	F5	14	F	Return 1 byte of wand status
ACTIVE	F5	15	Spik	Set active barcode type for livewand
CDIGIT	F5	16	Spik	CDIGIT ON/OFF Set auto check digit
ENDSCAN	F5	17	Spik	Select;T key for terminating a scan
EXPAND	F5	18	Spik	EXPAND ON/OFF Set auto expansion
LIVEWAND	F5	19	Spik	LIVEWAND ON/OFF Set livewand mode
OFF	F5	1A	Spik	OFF WAND Disable branch on interrupt
ON	F5	1B	Spik	ON WAND GOSUB/GOTO Enable interrupt
WAND	F5	1C	W	ON/OFF WAND
WANDTIME	F5	1D	Spik	Specify wand scan timeout period
FTYPE\$	F6	01	F	
ADR3421\$	FE	01	F	
CMD3421	FE	02	F	
GET3421	FE	03	F	
INIT3421	FE	04	Spik	
SEND3421	FE	05	Spik	
USE3421	FE	06	Spik	
AUTORANG	FE	07	Spik	

AUTOZERO	FE	08	Spik	
DIGITS	FE	09	Spik	
GATE	FE	0A	Spik	
OPTION	FE	0B	Spik	OPTION DEGREES [F/C/K/R]
RANGE	FE	0C	Spik	
ACVOLTS	FE	0D	F	
BYTEREAD	FE	0E	F	
BYTE	FE	0F	Spik	
CHANTYPE	FE	10	F	
DCVOLTS	FE	11	F	
FREQ	FE	12	F	
OHMS2	FE	13	F	
OHMS4	FE	14	F	
READBIT	FE	15	F	
REFTEMP	FE	16	F	
CLOSE	FE	17	Spik	
OPEN	FE	18	Spik	
SETSRQ	FE	19	Spik	
RTD	FE	1A	F	
TCOUPLE	FE	1B	F	
THMST2	FE	1C	F	
THMST5	FE	1D	F	
AUTOIDY	FE	1E	Spik	
HGL\$	FE	1F	F	
MONITOR	FE	20	Spik	
HIGH	FE	21	W	
LOW	FE	22	W	
SLOT	FE	23	W	
WRITE	FE	24	W	
PAIR	FE	25	W	
BUF3421\$	FE	26	F	
SET3421	FE	27	Spik	
RTNERR	FE	28	Spik	
BINAND	FF	01	F	
BINCMP	FF	02	F	
BINEOR	FF	03	F	
BINIOR	FF	04	F	
BIT	FF	05	F	
DEVADDR	FF	06	F	
DEVID\$	FF	07	F	
DEVAID	FF	08	F	
SPOLL	FF	09	F	
READINTR	FF	0A	F	
READDDC	FF	0B	F	
STATUS	FF	0C	F	
INITIAL	FF	0D	Spik	
CLEAR	FF	0E	Spik	
ASSIGN	FF	0F	Spik	
OFF	FF	10	Spik	
RESTORE	FF	11	Spik	
LIST	FF	12	Spik	
OUTPUT	FF	13	Spik	
ENTER	FF	14	Spik	
ON	FF	15	Spik	
SEND	FF	16	Spik	
RESET	FF	17	Spik	
PRINTER	FF	18	Spik	
DISPLAY	FF	19	Spik	
PACK	FF	1A	Spik	
PACKDIR	FF	1B	Spik	

REQUEST	FF	1C	Spik	
LOCAL	FF	1D	Spik	
REMOTE	FF	1E	Spik	
TRIGGER	FF	1F	Spik	
PASS	FF	20	Spik	
ENABLE	FF	21	Spik	
STANDBY	FF	22	Spik	
CONTROL	FF	23	Spik	
IO	FF	24	W	
LOCKOUT	FF	25	W	
INTR	FF	26	W	
KEYBOARD	FF	27	Spik	
RESET	FF	28	Spik	RESET ESCAPE
ESCAPE	FF	29	Spik	
MNEM\$	FF	30	F	
FRAME	FF	31	F	
PPIL	FF	32	Spik	
GPIL	FF	33	F	
CPIL	FF	34	F	
PFRAME	FF	35	Spik	
GFRAME	FF	36	F	
CFRAME	FF	37	F	
SCOPE	FF	38	Spik	
TRIGSCO	FF	39	Spik	
READBUF\$	FF	3A	F	
READPTR	FF	3B	F	
SETPTR	FF	3C	Spik	
SETBUF	FF	3D	Spik	
ROMCOPY	FF	FA	Spik	
CHECKSUM	FF	FB	W	
ROMSIZE	FF	FC	W	
CODESIZE	FF	FD	W	

----- This is a listing of all current HP71 IMAGE token -----
----- assignments. 10/15/85 -----

----- IMAGE tokens -----

Hex

no. Description Contact person

FF
FE
FD uNUMEs: Numeric, w/Exponent, w/sign
FC uNUMEn: Numeric, w/Exponent, no sign
FB uNUMFs: Numeric, w/float chars, w/sign
FA uNUMFn: Numeric, w/float chars, no sign
F9 uNUMNs: Numeric, w/no float chars, w/sign
F8 uNUMNn: Numeric, w/no float chars, no sign
F7 uALit : "A" literal field
F6 uHKB^ : H,K,B or ^ field
F5
F4 uDELIM: Delimiter
F3
F2
F1 uRESTOP: Restart parse
F0 uIMend: IMAGE string end
EF uLOOP : Loop on parentheses
EE uCPLXC: Complex field closed
ED
EC
EB
EA
E9
E8
E7
E6 (EndNum -- reference value, may be allocated)
E5
E4
E3
E2
E1
E0 uOPNWM: Open loop with multiplier
DF uOPNM-: Open loop with multiplier, decremented
DE uIMsta: IMAGE string start
DD
DC uIMbck: Poll for backward search handler
DB uJMPdl: Jump over unfilled delimiter
DA uJMPst: Jump over string pointer
D9 uJMP{}: Jump over parentheses loop pointer
D8 uOPNNM: Open loop with multiplier
D7
D6
D5
D4 uIMXCH: Poll for strnage execution character
D3 uLOOPS: Loop on string
D2 uLOOPB: Loop on byte
D1 uMULT : Multiplier
D0 uSTRPT: String pointer
CF uIM\$: IMAGE\$ execution (LEX#52,token#61). HP.
CE

----- This is a listing of all current HP71 standard -----
----- message assignments. Standard messages are tabled -----
----- messages found in LEX files. Only those supported -----
----- in the message range are included (local building -----
----- blocks are not included). 10/15/85 -----

-
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---- Messages in LEX files (hex numbers) -----

LEX Msg

no. no. Message

00 01 Underflow
00 02 Overflow
00 03 EXPONENT(0)
00 04 TAN=Inf
00 05 0^neg
00 06 0^0
00 07 0/0
00 08 /Zero
00 09 Neg^Non-int
00 0A SQR(neg)
00 0B Invalid Arg
00 0C LOG(0)
00 0D LOG(neg)
00 0E Inf/Inf
00 0F Inf-Inf
00 10 Inf*0
00 11 1^Inf
00 12 Inf^0
00 13 Signaled Op
00 14 Unordered
00 15 Inexact
00 16 Low Battery
00 17 System Error
00 18 Insufficient Memory
00 19 Module Pulled
00 1A Configuration
00 1B Invalid AF
00 1C Subscript
00 1D Record Ovfl
00 1E Stmt Not Found
00 1F Data Type
00 20 No Data
00 21 FN Not Found
00 22 XFN Not Found
00 23 XWORD Not Found
00 24 Parameter Mismatch
00 25 String Ovfl
00 26 Numeric Input
00 27 Too Many Inputs
00 28 Too Few Inputs
00 29 Chnl# Not Found
00 2A FOR w/o NEXT
00 2B NEXT w/o FOR
00 2C RTN w/o GOSUB
00 2D Invalid IMAGE
00 2E Invalid USING

00 2F IMAGE Ovfl
00 30 Invalid TAB
00 31 Sub Not Found
00 32 Var Context
00 33 Invalid Stat Array
00 34 Invalid Statistic
00 35 Invalid Stat Op
00 36 End of File
00 37 Invalid Transform
00 38 Transform Failed
00 39 File Not Found
00 3A Invalid Filespec
00 3B File Exists
00 3C Illegal Access
00 3D File Protect
00 3E File Open
00 3F Invalid File Type
00 40 Device Not Found
00 41 Line Too Long
00 42 Write Protected
00 43 Not This File
00 44 Verify Fail
00 45 Unknown Card
00 46 R/W Error
00 47 Too Fast
00 48 Too Slow
00 49 Wrong Name
00 4A File Too Big
00 4B Syntax
00 4C) Expected
00 4D Quote Expected
00 4E Excess Chars
00 4F Illegal Context
00 50 Invalid Expr
00 51 Invalid Parm
00 52 Missing Parm
00 53 Invalid Var
00 54 Precedence
00 55 Invalid Key
00 56 Operand Expected
00 57 Operator Expected
00 58 TFM WRN L:
00 59 Pull of
00 5A Pull Card
00 5B Wrt: Align then ENDLN
00 5C Vfy: Align then ENDLN
00 5D Read: Align then ENDLN
00 5E Prot: Align then ENDLN
00 5F Unpr: Align then ENDLN
00 60 Cat: Align then ENDLN
00 61 Trk Done
00 E5 (trk of)
00 E6 Illegal
00 E7 Expected
00 E8 Not Found
00 E9 Context
00 EA File
00 EB w/o
00 EC Invalid
00 ED Invalid Stat
00 EF Too

```

00 F0 : Align then ENDLN
00 F1 Transform
00 F3 Inf
00 F4 Input
00 F5 Ovfl
00 F6 Pull
00 F7 of
00 F8 Protect

02 00 MATH
02 01 #Dims
02 02 Not Square
02 03 Conformability
02 04 Parameter Redim
02 05 Nesting Error
02 06 Kybd FN in FNROOT/INTEGRAL
02 07 Function Interrupted
02 08 Bad Array Size
02 09 PROOT Failure
02 0A GAMMA=Inf
02 0B ATANH(+ -1)

03 00 FIT
03 01 Aborted
03 02 Pass By Value
03 03 Mat Not Sqr
03 04 Too Many Vars
03 05 Bad Dimension
03 06 No Room
03 07 Complex MAT
03 08 Complex Var
03 09 No Buffer
03 0A Tries > Limit
03 0B Grad Delta=0
03 0C Int Type Var
03 0D Int Type Mat
03 0E Gradient=0
03 0F CC-Int Type Var
03 10 CC-Pass By Value
03 11 CC-Complex Var
03 12 NaN or Inf
03 13 Grad P+dP=P
03 14 User
03 FB Grad
03 FC Var
03 FD Pass By Value
03 FE Int Type
03 FF Complex

2F 01 no ending
2F 02 Not Found
2F 03 no ending ;
2F 04 no ending )
2F 05 no ending "
2F 06 argument < 1
2F 07 definition not finished
2F 08 dictionary full
2F 09 compile only
2F 0A HPIL error
2F 0B attempted to redefine null
2F 0C bad dictionary entry

```

2F 0D in protected dictionary
2F 0E empty stack
2F 0F full stack
2F 10 not recognized
2F 11 conditionals not paired
2F 12 FORTH RAM file not in place
2F 13 Invalid Filespec
2F 14 unknown opcode
2F 15 GOYES or RTNYES required
2F 16 missing/illegal label
2F 17 invalid listing argument
2F 18 invalid quoted string
2F 19 warning: word not unique
2F 1A invalid filename specifier
2F 1B illegal word select
2F 1C jump or value too large
2F 1D needs previous test instruction
2F 1E illegal pointer position
2F 1F illegal status bit
2F 20 illegal dp arithmetic value
2F 21 illegal transfer value
2F 22 non-hexadecimal digit present
2F 23 too many hex digits present
2F 24 too many ascii chars present
2F 25 unrecognized label
2F 26 mismatched parentheses
2F 27 illegal expression
2F 28 excess characters in expression
2F 29 duplicate label
2F 2A symbol table full
2F 2B address not inside a file
2F 2C listing file full
2F 2D File Exists
2F 2E bad parameters
2F 2F not enough memory for assembler
2F 30 listing file not TEXT
2F 31 invalid listing file
2F 32 cannot open source file
2F 33 missing/multiple file type
2F 34 Configuration
2F 35 string won't fit
2F 36 not in current vocabulary
2F 37 cannot load
2F 38 assembler aborted
2F 39 cannot resolve equate
2F 3A pagesize too small
2F 3B no DO before LEAVE
2F 3C illegal CASE structure
2F 3D restricted label FiLeNd exists
2F 3E not re-entrant
2F 3F BASIC not re-entrant
2F 40 FORTH not re-entrant
2F 41 No Ending
2F 42 Not Found
2F 43 No Ending ;
2F 44 No Ending)
2F 45 No Ending "
2F 46 Argument < 1
2F 47 Definition Not Finished
2F 48 Dictionary Full
2F 49 Compile Only

2F 4A HPIL Error
2F 4B Attempted To Redefine Null
2F 4C Bad Dictionary Entry
2F 4D In Protected Dictionary
2F 4E Empty Stack
2F 4F Full Stack
2F 50 Not Recognized
2F 51 Conditionals Not Paired
2F 52 FTH41RAM File Not In Place
2F 53 Invalid Filespec
2F 54 Address Not Inside A File
2F 55 File Exists
2F 56 Bad Parameters
2F 57 Configuration
2F 58 String Won't Fit
2F 59 Not In Current Vocabulary
2F 5A Cannot Load
2F 5B No DO Before LEAVE
2F 5C Illegal CASE Structure
2F 5D Not Re-entrant
2F 5E BASIC Not Re-entrant
2F 5F FORTH Not Re-entrant
2F 60 Alpha Data
2F 61 Insufficient Memory
2F 62 Nonexistent
2F 63 Data Error
2F 64 No Printer
2F 65 Not Programmable
2F 66 Too Many ASCII Chars Present

53 01 Debugger Not Found

5F 01 -INF+INF0t
5F 02 000102001df
5F 03 P(t)
5F 04 Q(t)
5F 05 000102001df1
5F 06 000102001df2
5F 07 0000+INF0F
5F 08 P(F)
5F 09 Q(F)
5F 0A 000102001df
5F 0B 0000+INF0Chi^2
5F 0C P(Chi^2)
5F 0D Q(Chi^2)
5F 0E 0000+INF0u
5F 0F +EPS+INF0Scale
5F 10 +EPS+INF0Shape
5F 11 f(u)
5F 12 P(u)
5F 13 Q(u)
5F 14 000000010Q(u)
5F 15 +EPS+INF0Scale
5F 16 +EPS+INF0Shape
5F 17 f(u)
5F 18 P(u)
5F 19 u
5F 1A 000002001n
5F 1B 000000010p
5F 1C 000002001k
5F 1D Mean

5F 1E Std Dev
5F 1F f(k)
5F 20 P(k)
5F 21 Q(k)
5F 22 0000+INF0Mean
5F 23 000002001k
5F 24 -INF+INF0Hyp. Diff
5F 25 0001+INF1X Var. #
5F 26 0001+INF1Y Var. #
5F 27 X# Data
5F 28 XMean
5F 29 XStd Dev
5F 2A Y# Data
5F 2B YMean
5F 2C YStd Dev
5F 2D df
5F 2E t
5F 2F Pool Var.
5F 30 SE
5F 31 0001+INF1Diff. Var. #
5F 32 # Data
5F 33 Mean
5F 34 Std Dev
5F 35 df
5F 36 t
5F 37 SE
5F 38 0001+INF1Var. #
5F 39 # Data
5F 3A A Mean
5F 3B G Mean
5F 3C H Mean
5F 3D Moment 2
5F 3E Moment 3
5F 3F Moment 4
5F 40 Kurtosis
5F 41 Skewness
5F 42 0001+INF1# of Variables
5F 43 SST
5F 44 dfT
5F 45 SSW
5F 46 dfW
5F 47 MSW
5F 48 SSE
5F 49 dfE
5F 4A MSE
5F 4B F
5F 4C 0001+INF1No. of Var.
5F 4D 0001+INF1No. of Obs.
5F 4E df
5F 4F Chi^2
5F 50 SST
5F 51 dfT
5F 52 SSE
5F 53 dfE
5F 54 MSE
5F 55 SSW
5F 56 dfW
5F 57 MSW
5F 58 Fw
5F 59 SSC
5F 5A dfC

5F 5B MSC
5F 5C Fc
5F 5D SSI
5F 5E dfI
5F 5F MSI
5F 60 Fi
5F 61 R Sum X
5F 62 W(X)
5F 63 Z(X)
5F 64 R Sum Y
5F 65 W(Y)
5F 66 Z(Y)
5F 67 R Mean
5F 68 Rank Var
5F 69 H
5F 6A D
5F 6B R^2
5F 6C SST
5F 6D df/SST
5F 6E SSRg
5F 6F df/SSRg
5F 70 SSE
5F 71 df/SSE
5F 72 SE
5F 73 F
5F 74 B(0)
5F 75 0001+INF1Var. #
5F 76 0002+INF1# of Cells
5F 77 +EPS+INF0Width
5F 78 -INF+INF0Minimum
5F 79 df
5F 7A Chi^2
5F 7B Q(Chi^2)
5F 7C 0002+INF1# of Rows
5F 7D -INF+INF0u
5F 7E -INF+INF0Mean
5F 7F +EPS+INF0Std Dev

60 01 Means and Moments
60 02 Histogram
60 03 Multiple Linear Reg.
60 04 Paired t-Test
60 05 Unpaired t-Test
60 06 One-way ANOVA
60 07 Two-way ANOVA
60 08 Contingency Table
60 09 Mann-Whitney U Test
60 0A Kruskal-Wallis Test
60 0B Student's t-Dist.
60 0C F-Distribution
60 0D Chi-square Dist.
60 0E Normal Distribution
60 0F Weibull Distribution
60 10 Exponential Dist.
60 11 Binomial Distribution
60 12 Poisson Distribution
60 13 Uniform Distribution
60 14 Done
60 15 Printing...
60 16 Working...
60 17 Saving...

60 18 Loading...
60 19 Data Edit Menu Quit?
60 1A DEMQ
60 1B Kbd Load Save Print?
60 1C KLSPQ
60 1D Grouped Ungrouped?
60 1E GUQ
60 1F DEF:Sequence Compute?
60 20 SCQ
60 21 DELETE:Var. or Obs.?
60 22 VOQ
60 23 DIRECTION:S,X,D or Q?
60 24 SDXQ
60 25 ADD:Var. or Obs.?
60 26 VOQ
60 27 <GOTO:Var.,Obs.? >
60 28 Var.,Start,Step?
60 29 <Var. Number? >
60 2A <Delete Obs. Number? >
60 2B <Delete <Var. Number? >
60 2C <Starting Obs.? >
60 2D <Var. Number? >
60 2E <Add Obs. at? >
60 2F <Add Var. at? >
60 30 <SAVE:Filename? >
60 31 <LOAD:Filename? >
60 32 <Label= >NEW
60 33 NY
60 34 Edit Parameters
60 35 Repeat Results
60 36 Compute Q(u)
60 37 Edit Labels
60 38 Delete X
60 39 Obs.
60 3A Delete Var.
60 3B Save as Ungrouped
60 3C Overwrite File
60 3D Clear Data
60 3E Data Format
60 3F Grouped
60 40 Ungrouped
60 41 Variable Labels
60 42 <Compute
60 43 Invalid Input
60 44 Array Too Large
60 45 No Data
60 46 Invalid Label
60 47 Illegal Entry
60 48 Invalid Address
60 49 Nonexistent Var.
60 4A Invalid Compute
60 4B You Need 1 Obs.
60 4C Nonexistent Obs.
60 4D You Need 1 Var.
60 4E Invalid Filespec
60 4F Not Enough Mem
60 50 File Not Found
60 51 Not HPAF File
60 52 Invalid # of Var.
60 53 Invalid Data Format
60 54 Use n-1 for df

```

60 55 Invalid Number of Obs.
60 56 Invalid Negative Data
60 57 Invalid Data Format
60 58 Cell #=
60 59 Freq =
60 5A Mean =
60 5B Std Regression Coeff
60 5C b(
60 5D SE b(
60 5E B(
60 5F SE B(
60 60 H:
60 61 X(
60 62 Rank
60 63 Y(
60 64 Rank
60 65 X
60 66 Rank
60 67 R Sum
60 68 Output Ranks
60 69 r
60 6A Output Groups
60 6B Output Statistics
60 6C Theo Histogram
60 6D Use Calc Param
60 6E Ex-F(
60 6F DEF:Sort Auto?
60 70 SAQ
60 71 Output Corr Matrix
60 72 Output Exp-Freq
60 73 Expected Freq=0
60 74 Insolvable Matrix
60 75 No Printer
60 76 df=n
60 77 df=n-1

F0 01 Eof
F0 02 CDEFHILMPRST
F0 03 ? Cmd:
F0 04 Filename:
F0 05 Line
F0 06 Cmd:
F0 07 OK to Delete? Y/N:
F0 08 YNQ
F0 09 Invalid Cmd Strg
F0 0A Working...
F0 0B Done
F0 0C ESPNPASPADFICOCEJUMASKTADLPLME
F0 0D Merge > 5 Files
F0 0E Mult Distr Lists:
F0 0F Insert Page...
F0 10 [b[e]] C [<file>]
F0 11 [b[e]] D [<file>[+]]
F0 12 E
F0 13 F [n][G$]
F0 14 H
F0 15 [l] I
F0 16 [b[e]] L [n][N]
F0 17 [b[e]] M [<file>]
F0 18 [b[e]] P [n][N]
F0 19 [b[e]][?] R/str1/str2[/]

```


F0 1A [b[e]]{?} S/str{}/
F0 1B [l] T
F0 32 [b[e]]
F0 33 [<file>
F0 34 [b[e]]{?}
F0 35 [n]{N}

FE 01 HP-IL Not Found
FE 02 Configuration
FE 03 Need INIT3421
FE 04 Calibration Enabled
FE 05 Can't Send Data
FE 06 Null Data
FE 07 Low Battery
FE 0A ROM 0 Checksum
FE 0B ROM 1 Checksum
FE 0C uP RAM Failed
FE 0D RAM U503 Failed
FE 0E RAM U504 Failed
FE 0F A/D Slope
FE 10 Calibration RAM Checksum
FE 11 10 Mohm Test Failed
FE 12 Calibration RAM Bad
FE 13 A/D
FE 14 Calibration Not Enabled
FE 15 Invalid Calibration Zero
FE 16 Invalid Calibration Signal
FE 17 Invalid Calibration Number
FE 18 Invalid Calibration Range
FE 19 No Function Enabled
FE 1A No Data Available
FE 1B Syntax
FE 1C Invalid Option
FE 1D No Channel List
FE 1E Invalid Channel List
FE 32 Calibration
FE 33 Checksum
FE 34 RAM
FE 35 Failed
FE 36 Enabled
FE 37 Channel List

FF 01 ASSIGN IO Needed
FF 03 Excess Chars
FF 04 Missing Parm
FF 05 Invalid Prrm
FF 06 Invalid Expr
FF 07 Syntax
FF 10 File Protect
FF 11 End Of Medium
FF 12 Invalid Medium
FF 13 Invalid Medium
FF 14 No Medium
FF 16 File Not Found
FF 17 Invalid Medium
FF 18 Invalid Medium
FF 19 Invalid Medium
FF 1A Invalid Medium
FF 1C Size of File
FF 1E File Exists
FF 1F Directory Full

FF	20	Device Not Found
FF	22	Device Not Ready
FF	23	Loop Broken
FF	24	Message Error
FF	25	Message Error
FF	26	Message Error
FF	27	Unexpected Message
FF	28	Message Error
FF	29	Invalid Mode
FF	2A	Loop Broken
FF	2B	Loop Broken
FF	2C	System Error
FF	2D	Self-test failed
FF	2F	Device Type
FF	34	Aborted
FF	35	Invalid Device Spec
FF	36	Data Type
FF	38	Invalid Arg
FF	39	No Loop
FF	3B	Insufficient Memory
FF	3C	RESTORE IO Needed
FF	40	Message
FF	41	Device
FF	42	Medium
FF	43	IO Needed