HP 75
Quick Reference Guide

Image Format Specifiers

A	letter	R	comma radix
C	comma	S	sign
D	digit | blank	X	blank
E	exponent	Z	digit, 0 fill
K	compact form	*	digit, * fill
M	sign | blank	()	field brackets
P	period	/	line separator

Syntax Guide

%	not after THEN	fn	file name
&	TIME mode commands	ln	line number
<>	repeatable [,]	ne	numeric expression
[]	optional	se	string expression
|	select one	vn	variable name
dn	device name ':dn'	stmt	statement

```
fd [fn][dn][[:]CARD[/pw]|:PCRD[/pw]|KEYS|APPT]
```

HPILCMDS LEX File

```
SENDIO dn,se<[,se]>,se<[,se]>
ENTIO$(dn,se<[,se]>)
SEND?
```

High Level Frame Format

```
AADn, AAU, AEPn, AESn, AMPn, CL+, DCL, DDLn, DDTn,
EDN, GET, GTL, IAA, IEP, IMP, IFC, LLO, LDP, LADn,
LAD#, NRD, NRE, NOP, PPD, PPEn, PPU, REN, SADn, SDC,
SAI, SDA, SDI, SST, TADn, TAD#, TCT, TL+, UNL, UNT, ZES
```

Low Level Frame Data Format

```
CD:hh, RD:hh, DA:hh, EN:hh, ID:hh, DS:hh, ES:hh, IS:hh, TR:hh
```

CommanD, **Rea**D**y**, **DA**ta, **EN**d, **ID**entify, **D**ata w/**S**rq, **E**nd w/**S**rq, **I**dentify w/**S**rq, **T**erminato**R**

Statements A-M

```
&  ADJUST
   ALARM ON|OFF                                  AL.
   ASSIGN# file TO fn,[BASIC|TEXT]|*             AS.#
   ASSIGN IO [<dn>]                              AS. .
   AUTO [from[,increment]]                         A.
   BEEP [ON|OFF|hertz[,seconds]]                 BE.
   BYE                                             B.
   CALL fn
   CAT [ALL|fd]                                  C. .
   CLEAR LOOP|VARS|<dn>                    CL. | CL..
   CONT [ln]
   COPY [fd] to fd                               CO.
%  DATA <ne|se>                                  DA.
   DEFAULT ON|OFF                               DEFA.
%  DEF FNvn[$][(<vn[$]>)][=ne|se]
   DEF KEY key,keydefinition[;]                  D..
   DELAY seconds                                 DE.
   DELETE [start[,end]]                        DELE.
%  DIM <vn([dim1[,dim2]])|vn$[[size]]>
   DISP [USING fmt|ln ;] [<ne|se [,|;]>]         DI.
   DISPLAY IS <dn>|*                             DI..
   EDIT [fn|KEYS][[,]TEXT|BASIC]      E.|E.BA.|E.T.
   END
%  END DEF                                     END D.
   ENDLINE [enddefinition]                       EN.
&  EXACT
&  EXTD
   FETCH [pattern][[,]ln]                          F.
   FETCH KEY key
%  FOR vn=first TO last [STEP inc]
   GOSUB ln                                      GOS.
   GOTO ln                                         G.
%  IF cond THEN ln|stmt ELSE ln|stmt
%  IMAGE fmt                                     IM.
   INITIALIZE dn[,directorysize]                 INI.
   INPUT ['prompt'[,initial];] <vn[$]>             I.
%  INTEGER <vn[(dim1[,dim2])]>                   INT.
   [LET] [FN]vn[$]]=ne|se
   LIST [fn|KEYS][,start[,end]]                    L.
   LIST IO                                         L..
   LOCK password
   MARGIN column                                 MA.
   MERGE fn[,start[,end]]                          M.
```

This Quick Reference Guide was partially modeled after Raan Young's label as printed in Computer Journal of PPC V2N4, 1983

Martin Hepperle, April 2017

Statements N-W

```
   NAME fn                                         N.
%  NEXT vn                                        NE.
   OFF ERROR                                    OF.E.
   OFF IO
   OFF TIMER# timernumber                      OF.T.#
%  ON ERROR statement                              O..
   ON index GOSUB|GOTO <ln>
%  ON TIMER# timernumber,seconds stmt           O.T.
   OPTION ANGLE DEGREES|RADIANS     OP.A.D.|OP.A.R.
%  OPTION BASE 0|1                                OP..
   PACK dn                                       PA.
   PLIST [fn|KEYS][,start[,end]]                 PL.
   POP                                             P.
   PRINT [USING se|ln ;] [<ne|se[,|;]>]          PRI.
   PRINT# file [,ln]; [<ne|se>]                PRI.#
   PRINTER IS <dn>|*                             PRI..
   PROTECT                                       PR.
   PURGE fd                                      PU.
   PUT key
   PWIDTH numchars                               PW.
   RANDOMIZE [seed]                              RA.
   READ[# file[,ln];] <vn>                       R.#
%  REAL <vn[(dim1[,dim2])]>                      RE.
   REM|! remark
   RENAME [fd] TO fd                            REN.
   RENUMBER [from[,increment[,start[,end]]]]   RENU.
&  RESET
   RESTORE [# file][[,]ln]|IO      RES.|RES.#|RES..
   RETURN                                       RET.
   RUN [fn][[,]ln]
%  SHORT <vn[(dim1[,dim2])]>                     SH.
&  SET
   STANDBY ON|OFF                                  S.
&  STATS
   STOP
   TRACE FLOW|OFF|VARS              T..|TR.O.|TR.V.
   TRANSFORM [fn] INTO BASIC|TEXT|LIF1           TR.
   UNPROTECT                                       U.
   WAIT seconds                                  WA.
   WIDTH characters                                W.
```

Some Special Keys

CTL FET	recall last command
SHIFT I/R	prepare display of next key (unassigned)
SHIFT CTL CLR	system reset
CTL LOCK	activate numeric keyboard

Functions

ABS(ne)	LOG(ne)
ACOS(ne)	LOG10(ne)
ANGLE(ne,ne)	MAX(ne,ne)
ASIN(ne)	MEM
ATN(ne)	MIN(ne,ne)
CAT$(ne)	MOD(ne,ne)
CEIL(ne)	NUM(se)
CHR$(ne)	PI
COS(ne)	POS(se,se)
COT(ne)	RAD(ne)
CSC(ne)	RES
DATE	RMD(ne,ne)
DATE$	RND
DEG(ne)	SEC(ne)
EPS	SGN(ne)
ERRL	SIN(ne)
ERRN	SQR(ne)
EXP(ne)	STR$(ne)
FLOOR(ne)	TAB(ne)
FP(ne)	TAN(ne)
INF	TIME
INT(ne)	TIME$
IP(ne)	UPRC$(se)
KEY$	VAL(se)
LEN(se)	VER$

Operators (from high to low precedence)

```
        ()      FNvn      ^      NOT
           *      /      \    DIV
                  +      -
=      <      >      #    <>      >=      <=
           AND      OR      EXOR
```

Escape Codes

ESC C	cursor right	*
ESC D	cursor left	*
ESC E	clear all	*
ESC G	cursor return	
ESC H	cursor home	*
ESC J	clear from cursor	*
ESC K	clear to end of line	
ESC O	delete character with carry	
ESC P	delete character	
ESC <	cursor OFF	*
ESC >	cursor ON	*
ESC %cr	cursor to column c and row r	*

* also applicable to video interface HP 82163

Character Codes and Keys

code	character	keys	code	character	keys
0	▵	CTL spc	64	@	SHIFT +
1	▫	CTL A	65	A	SHIFT A
2	▫̄	CTL B	66	B	SHIFT B
3	←	CTL C	67	C	SHIFT C
4	α	CTL D	68	D	SHIFT D
5	β	CTL E	69	E	SHIFT E
6	Γ	CTL F	70	F	SHIFT F
7	♣	CTL G	71	G	SHIFT G
8	BS	CTL H	72	H	SHIFT H
9	σ	CTL I	73	I	SHIFT I
10	LF	CTL J	74	J	SHIFT J
11	ϰ	CTL K	75	K	SHIFT K
12	μ	CTL L	76	L	SHIFT L
13	CR	CTL M	77	M	SHIFT M
14	↾	CTL N	78	N	SHIFT N
15	‡	CTL O	79	O	SHIFT O
16	θ	CTL P	80	P	SHIFT P
17	Ω	CTL Q	81	Q	SHIFT Q
18	δ	CTL R	82	R	SHIFT R
19	ε	CTL S	83	S	SHIFT S
20	π	CTL T	84	T	SHIFT T
21	Ä	CTL U	85	U	SHIFT U
22	ä	CTL V	86	V	SHIFT V
23	ö	CTL W	87	W	SHIFT W
24	ö	CTL X	88	X	SHIFT X
25	Ü	CTL Y	89	Y	SHIFT Y
26	ü	CTL Z	90	Z	SHIFT Z
27	ESC	CTL BACK	91	[	SHIFT 0
28	Σ	CTL +	92	\	CTL /
29	≠	CTL =	93	]	SHIFT -
30	£	CTL ;	94	^	SHIFT *
31	▒	CTL 8	95	_	CTL -
32		space bar	96	`	CTL 7
33	!	SHIFT 1	97	a	A
34	"	SHIFT 2	98	b	B
35	#	SHIFT 3	99	c	C
36	$	SHIFT 4	100	d	D
37	%	SHIFT 5	101	e	E
38	&	SHIFT 6	102	f	F
39	'	SHIFT 7	103	g	G
40	(	SHIFT 8	104	h	H
41	)	SHIFT 9	105	i	I
42	*	*	106	j	J
43	+	+	107	k	K
44	,	,	108	l	L
45	-	-	109	m	M
46	.	.	110	n	N
47	/	/	111	o	O
48	0	0	112	p	P
49	1	1	113	q	Q
50	2	2	114	r	R
51	3	3	115	s	S
52	4	4	116	t	T
53	5	5	117	u	U
54	6	6	118	v	V
55	7	7	119	w	W
56	8	8	120	x	X
57	9	9	121	y	Y
58	:	SHIFT ;	122	z	Z
59	;	;	123	{	CTL ,
60	<	SHIFT ,	124	|	SHIFT =
61	=	0	125	}	CTL .
62	>	SHIFT :	126	~	CTL *
63	?	SHIFT /	127	⊢	CTL 9

Character Codes and Keys

† = prepend SHIFT I/R

code	character	keys	code	character	keys
128	▵	† ATTN	192	@	† CTL ATTN
129	▫	† TIME	193	A	† CTL TIME
130	▫̄	† APPT	194	B	† CTL APPT
131	←	† EDIT	195	C	† CTL EDIT
132	α	† ↑	196	D	† CTL ↑
133	β	† ↓	197	E	† CTL ↓
134	Γ	† ←	198	F	† CTL ←
135	♣	† →	199	G	† CTL →
136	BS	† I/R	200	H	† CTL I/R
137	σ	† FET	201	I	† CTL FET
138	LF	† DEL	202	J	† CTL DEL
139	ϰ	† CLR	203	K	† CTL CLR
140	μ	† LOCK	204	L	† CTL LOCK
141	CR	† RUN	205	M	† CTL RUN
142	↾	† TAB	206	N	† CTL TAB
143	‡		207	O	
144	θ		208	P	
145	Ω		209	Q	
146	δ		210	R	
147	ε		211	S	
148	π		212	T	
149	Ä		213	U	
150	ä		214	V	
151	ö		215	W	
152	ö		216	X	
153	Ü		217	Y	
154	ü		218	Z	
155	ESC		219	[	
156	Σ		220	\	
157	≠		221	]	
158	£		222	^	
159	▒		223	_	
160	_	† SHIFT ATTN	224	`	† SHIFT CTL ATTN
161	!	† SHIFT TIME	225	a	† SHIFT CTL TIME
162	"	† SHIFT APPT	226	b	† SHIFT CTL APPT
163	#	† SHIFT EDIT	227	c	† SHIFT CTL EDIT
164	$	† SHIFT ↑	228	d	† SHIFT CTL ↑
165	%	† SHIFT ↓	229	e	† SHIFT CTL ↓
166	&	† SHIFT ←	230	f	† SHIFT CTL ←
167	'	† SHIFT →	231	g	† SHIFT CTL →
168	(	† SHIFT I/R	232	h	† SHIFT CTL I/R
169	)	† SHIFT FET	233	i	† SHIFT CTL FET
170	*	† SHIFT DEL	234	j	† SHIFT CTL DEL
171	+	† SHIFT CLR	235	k	
172	,	† SHIFT LOCK	236	l	† SHIFT CTL LOCK
173	-	† SHIFT RUN	237	m	† SHIFT CTL RUN
174	.	† SHIFT TAB	238	n	† SHIFT CTL TAB
175	/		239	o	
176	0	† CTL 0	240	p	
177	1	† CTL 1	241	q	
178	2	† CTL 2	242	r	
179	3	† CTL 3	243	s	
180	4	† CTL 4	244	t	
181	5	† CTL 5	245	u	
182	6	† CTL 6	246	v	
183	7		247	w	
184	8		248	x	
185	9		249	y	
186	:		250	z	
187	;		251	{	
188	<		252	|	
189	=		253	}	
190	>		254	~	BYE (when assigned to a key)
191	?		255	⊢	† SHIFT CTL CLR