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Quick
Reference
Guide

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For CP/M-80

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Quick Reference Guide

for CP/M®-80 Operating System

This book is a syntax guide to the CP/M-80 operating system (version 2.2) for the SoftCard. Detailed explanations of the individual items can be found in the *SoftCard Installation and Operation Manual* and the *Osborne CP/M User Guide*.

Syntax Conventions

The following notation is used in descriptions of command and statement syntax:

[]	Square brackets indicate that the enclosed entry is optional.
< >	Angle brackets indicate user-supplied data. When the angle brackets enclose lowercase text, the user must type in an entry defined by the text; for example, <filename>. When the angle brackets enclose uppercase text, the user must press the key named by the text; for example, <RETURN>.
{ }	Braces indicate that the user has a choice between two or more entries. At least one of the entries enclosed in braces must be chosen, unless the entries are also enclosed in square brackets.
...	Ellipses indicate that an entry may be repeated as many times as needed or desired.
CAPS	Capital letters indicate portions of statements or commands that must be entered exactly as shown.

All other punctuation, such as commas, colons, slash marks, and equal signs, must be entered exactly as shown.

CP/M-80 Built-In Commands

DIR Command Lines

DIR [d:] Displays directory on drive d:

DIR <d>:[filename.ext][*.*]

Displays directory of all files on drive <d:> whose names match the <filename.ext> or ambiguous reference *.*.

ERA Command Lines

ERA [d:]<filename.ext>

Erases the file <filename.ext> on drive d:

ERA [d:]*.*

Erases all files on drive d:

Line Editing Commands

Control-C Restarts CP/M (warm start)

Control-E Moves to beginning of next line

Control-H Deletes one character

Control-J Same as carriage return

Control-M Same as carriage return ()

Control-P Turns on/off the list device echo (usually your printer)

Control-R Repeats current command line

Control-S Temporarily stops display of data on the screen or printer

Control-U Cancels current command line

Control-X Cancels current command line

Delete (DEL) Deletes one character and echoes (repeats) it

REN Command Line

REN [d:]<new filename.ext>=<old filename.ext>

Finds the file <old filename.ext> and renames it <new filename.ext>

SAVE Command Line

SAVE <nnn> [d:]<filename.ext>

Saves a portion of the TPA in file <filename.ext> on drive [d:] <nnn> is the number of 256 byte pages of memory

TYPE Command Line

TYPE [d:]<filename.ext>

Displays the contents of file <filename.ext> from drive d: on the screen

USER Command Line

USER <n> Sets the user number to <n>

<d>: Command Line

<d>: Changes the currently logged disk drive to drive <d>:

Transient Commands

DUMP Command Line

DUMP [d:]<filename.ext>

Displays each byte (in hex) stored in the file <filename.ext> on drive [d:]

LOAD Command Line

LOAD <d:filename> Reads the file <filename.HEX> on drive d: and creates the executable program file <filename.COM> on drive [d:]

PIP Command Lines

PIP Loads PIP into memory

PIP <pipcommandline>

Loads PIP into memory; PIP executes the command <pipcommandline>, then exits to CP/M

PIP Command Summary

[d:]<new filename.ext> = [d:]<old filename.ext>[par]

Copies old file to new file

[d:]<new filename.ext> = [d:]<filename1.ext>[p],[d:]<old filename2.ext>[p],...

Merges files together and creates <filename.ext>

[d:]<filename.ext> = <dev:>[p]

Copies data from device <dev:> to file <filename.ext> on drive d:

<dev:> = [d:]<filename.ext>[p]

Copies data from <filename.ext> on drive d: to device <dev:>

<dev1:> = <dev2:>[p]

Copies data to device <dev1:> from device <dev2:>

PIP Parameter Summary

B Specifies block mode transfer

D<n> Deletes all characters after the <n>th column

E Echoes the copying to the console as it is being performed

F Removes form feed characters during transfer

G<n> Directs PIP to copy a file from user area <n>

H Checks for proper Intel Hex File format

I Ignores any :00 records in Intel Hex File transfers

L Translates uppercase letters to lowercase

N Adds a line number to each line transferred

O Object file transfer (ignores end-of-file markers)

P<n> Issues page feed after every <n>th line; default value is 60 lines

Q<s>^Z Specifies end (quit) of copying after the string <s> is encountered

R Directs PIP to copy from a System file

S<s>^Z Specifies start of copying after the string <s> is encountered

T<n> Sets tab stops to every <n>th column

U Translates lowercase letters to uppercase

V Verifies copy by comparison after copy finished (disk copies only)

W Directs PIP to copy onto a R/O file

Z Zeros the "parity" bit on ASCII characters

PIP Destination Devices

CON:	PUN:	LST:	Logical devices
TTY:	PTP:	LPT:	
CRT:	UP1:	UL1:	Physical devices
UC1:	UP2:		
	OUT:	PRN:	Special PIP devices

PIP Source Devices

CON:	RDR:	Logical devices	
TTY:	PTR:		
CRT:	UR1:	Physical devices	
UC1:	UR2:		
NUL:	EOF:	INP:	Special PIP devices

STAT Command Lines

STAT	Displays attributes and amount of free space for all disk drives accessed since last warm or cold start
STAT <d:>	Displays amount of free space on disk in drive d:
STAT [d:]<filename1.ext>	Displays size and attributes of file(s) <filename.ext> on drive d:
STAT [d:]<filename.ext> \$<atr>	Assigns the attribute <atr> to the file <filename.ext> on drive d:
STAT DEV:	Reports which physical devices are currently assigned to the four logical devices
STAT VAL:	Reports the possible device assignments and partial STAT command line summary
STAT <log:>=<phy:>	Assigns the physical device <phy:> to the logical device <log:>
STAT USR:	Reports the current user number, as well as all user numbers for which there are files on currently-logged drive
STAT <d:>DSK:	Reports the characteristics of disk drive <d:>
STAT <d:>= R/O	Assigns a temporary write-protect status to drive <d:>

SUBMIT Command Line

SUBMIT <filename>[parameters]	Creates a file \$\$\$SUB which contains the commands listed in <filename.SUB>
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XSUBMIT Command Line

XSUB	Loads instructions specified by SUBMIT into memory
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Utility Programs

ASM Command Lines

ASM [d:]<filename.ext>	Assembles <filename.ext>
ASM <filename.ext>[par]	Assembles <filename.ext> with parameters ([par])

DDT Command Lines

DDT	Loads DDT and waits for DDT commands
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DDT Command Summary

A<ssss>	Enters assembly language statements starting at address <ssss>
D	Displays the contents of the next 192 bytes of memory
D<ssss>,<ffff>	Displays memory contents starting at address <ssss> to address <ffff>
F<ssss>,<ffff>,<cc>	Fills memory with constant <cc> from address <ssss> to address <ffff>
G	Begins execution at the address contained in the program counter
G<ssss>	Begins execution at address <ssss>
G<ssss>,<bbbb>	Sets a breakpoint at address <bbbb>, begins execution at address <ssss>
G,<bbbb>	Sets a breakpoint at address <bbbb>, begins execution at the address contained in the program counter
G,<bbbb>,<cccc>	Sets breakpoints at addresses <bbbb> and <cccc>, begins execution at the address contained in the program counter
I<filename.ext>	Sets up the default file control block using the name <filename.ext>

L	Lists the next eleven lines of assembly language program
L<ssss>	Lists eleven lines of assembly language program starting at address <ssss>
L<ssss>,<ffff>	Lists the assembly language program starting at address <ssss> and finishing at address <ffff>
M<ssss>,<ffff>,<dddd>	Moves memory block (address <ssss> to <ffff>) to address <dddd>
R	Reads a file from disk (use I command first)
R<nnnn>	Reads a file from disk beginning at address <nnnn> higher than normal (use I command first)
S<ssss>	Displays memory at address <ssss> and optionally changes the contents
T<nnnn>	Traces the execution of <nnnn> program instructions
U<nnnn>	Executes <nnnn> program instructions, then stops and displays the CPU registers' contents
X	Displays the CPU registers' contents
X<r>	Displays contents of CPU register or flag <r> and optionally changes it

ED Command Line

ED:[d:]<filename.ext>

Invokes the editor and searches for <filename.ext> on drive d:

ED Command Summary

Note: Non-alphabetic commands follow the Z command.

<n>A	Appends lines
B	Moves CP to beginning of edit buffer
-B	Moves CP to end of edit buffer

<n>C	Moves <n> characters forward
<-n>C	Moves <n> characters backward
<n>D	Deletes <n> characters after the CP
<-n>D	Deletes <n> characters before the CP
E	Ends edit, closes files, and returns to CP/M
<n>F<string>^Z	Finds the <n>th occurrence of <string>
H	Moves to head of edited file
I	Enters insert mode
I<string>^Z	Inserts string
I<string>	Inserts line
<n>J<findstring>'Z<insertstring>'Z<endstring>'Z	Juxtaposition—beginning after the CP, finds <findstring>, inserts <insertstring> after it; then deletes all following characters up to but not including <endstring>; repeats until performed <n> times
<n>K	Deletes <n> lines after the CP
<-n>K	Deletes <n> lines before the CP
/-nL	Moves by lines—moves the CP to the beginning of the line, then moves the CP <n> lines forward or backward
<n>L	Moves forward by <n> lines
<-n>L	Moves backward by <n> lines
<n>M<commandstring>^Z	Macro command—repeats execution of the ED commands in <commandstring> <n> times
<n>N<string>^Z	Finds <string> with autoscan
O	Returns to original file
<n>P	Moves CP forward and prints <n> pages

< -n>P	Moves CP backward and prints <n> pages
Q	Quits edit
R	Reads block move file
R<filename>	Reads library file
<n>S<findstring>^Z<replacestring>^Z	Substitutes string
<n>T	Displays <n> lines before the CP
< -n>T	Displays <n> lines after the CP
If the CP is not at the beginning of a line:	
OT	Displays from the beginning of the line to the CP
T	Displays from the CP to the end of the line
OTT	Displays the entire line without moving the CP
U	Uppercase translation
OV	Edits buffer; frees space (size)
V	Verifies line numbers
<n>W	Writes lines to disk
<n>X	Block transfer
<n>Z	Delays execution of the command which follows it
<n:>	Moves CP to line number <n>
<.:m>	Continues through line number <m>
[-]<n>	Moves forward (or backward) and displays one line

CP/M PROMPTS

d:>	CP/M waiting for command; drive d: is currently logged drive
*	PIP waiting for command
*	ED waiting for command
nnnn:*	ED waiting for command; character pointer is at line number nnnn
	DDT waiting for command

Error Messages

BDOS ERR ON x: BAD SECTOR
BDOS ERR ON x: R/O
BDOS ERR ON x: SELECT
BDOS ERR ON x: FILE R/O

Shift.

O = underline —

K = [

L = \

W =]

To compile gBasic

- 1) Insert ws into A and create file on gBasic
Libre editor
 - 2) Boot with gBasic ^{in A} Editor/Compiler &:
 - 3) B: Basicom file, file = file
 - 4) Ldo , file, file /w/e
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