# DOS
# QUICK REFERENCE CARD

On this card, DOS commands are grouped into these 5 categories:

Housekeeping commands:

| | | | | |
|---|---|---|---|---|
| INIT | LOAD | DELETE | VERIFY | MAXFILES |
| CATALOG | RUN | LOCK | MON | |
| SAVE | RENAME | UNLOCK | NOMON | |

Access Commands:

| | | | | |
|---|---|---|---|---|
| FP | INT | PR# | IN# | CHAIN |

Sequential Text File Commands:

| | | | |
|---|---|---|---|
| OPEN | READ | APPEND | EXEC |
| CLOSE | WRITE | POSITION | |

Random-Access Text File Commands:

| | | | |
|---|---|---|---|
| OPEN | CLOSE | READ | WRITE |

Machine-Language File Commands:

| | | |
|---|---|---|
| BLOAD | BRUN | BSAVE |

## NOTATION AND SYNTAX

A "parameter" is a capital letter, usually followed by a number (shown here by a lower-case letter), which gives additional information for executing a command. Multiple parameters may appear in any order, but must be separated from each other by a comma. A parameter shown in square brackets [like this] is optional.

A file name (shown here by X ) must immediately follow its command word. File names must begin with a letter; only the first 3Ø characters are used. A comma separates a file name from a following parameter.

CTRL-D (type D while holding down CTRL key) is used in PRINT statements to indicate the start of a deferred-execution DOS command.
Integer BASIC example:
```
     1Ø  D$ = "" : REM  "CTRL-D"
     2Ø  PRINT D$; "CATALOG"
```
Applesoft BASIC example:
```
     1Ø  D$ = CHR$(4) : REM  CTRL-D
     2Ø  PRINT D$; "CATALOG"
```

The term "BASIC" alone is used to mean either Integer BASIC or Applesoft BASIC. The term "file" alone means any type of diskette file.

## COMMAND PARAMETERS

An error message is given if a DOS command quantity is too large or too small.

### ALL FILES

| Parameter | As shown | Min | Max |
|---|---|---|---|
| Slot | ,Ss | S1 | S7 |
| Drive | ,Dd | D1 | D2 |
| Volume | ,Vv | VØ * | V254 |

* Using VØ is like omitting the Vv parameter: the diskette's volume number is ignored. Smallest volume number INIT will actually assign to a diskette is 1.

### SEQUENTIAL TEXT FILES

| Parameter | As shown | Min | Max |
|---|---|---|---|
| Byte | ,Bb | BØ | B32767 |
| Relative Field * | ,Rp | RØ | R32767 |

* With EXEC, always relative to field Ø.

### RANDOM-ACCESS TEXT FILES

| Parameter | As shown | Min | Max |
|---|---|---|---|
| Record Length | ,Lj | L1 | L32767 |
| Record Number | ,Rr | RØ | R32767 |

### BINARY FILES

| Parameter | As shown | Min | Max |
|---|---|---|---|
| Starting Address | ,Aa | AØ | A65535 |
| Number of Bytes | ,Lj | L1 | A32767 |

### DOS COMMANDS

| Command | Quantity | As shown | Min | Max |
|---|---|---|---|---|
| PR# | slot | PR# s | PR#Ø | PR#7 |
| IN# | slot | IN# s | IN#Ø | IN#7 |
| MAXFILES | file buffers | MAXFILES n | n=1 | n=16 |

Commands use Slot or Drive parameters only when changing to a different Slot or Drive.

If a command omits the Volume parameter or uses VØ , the diskette's volume number is ignored. A command that uses the Volume parameter Vv will not be executed unless the diskette's volume number is v .

## HOUSEKEEPING COMMANDS

INIT X  [,Vv] [,Ss] [,Dd]
Initializes a blank diskette to form a slave diskette. Assigns greeting program name  X  and volume number  v  (if specified). SAVEs the BASIC program currently in memory, under file name  X .

CATALOG  [,Ss] [,Dd]
Displays volume number and all files on a diskette, with each file's type and sector length.   * indicates a LOCKed file.

| Type | Description | (How created) |
|---|---|---|
| I | Integer BASIC program file | (SAVE) |
| A | Applesoft BASIC program file | (SAVE) |
| T | Text File | (OPEN, then WRITE) |
| B | Binary memory-image file | (BSAVE) |

SAVE X  [,Ss] [,Dd] [,Vv]
Stores current BASIC program onto diskette, under file name  X . Overwrites any previous file of same type and name, without warning.

LOAD X  [,Ss] [,Dd] [,Vv]
Loads BASIC program file  X  into memory, after clearing memory and (if necessary) changing to the correct BASIC.

RUN X  [,Ss] [,Dd] [,Vv]
LOADs BASIC program file  X ,
then RUNs the program.

RENAME X, Y  [,Ss] [,Dd] [,Vv]
Changes a diskette file's name from  X  to  Y

DELETE X  [,Ss] [,Dd] [,Vv]
Erases file  X  from the diskette.

LOCK X  [,Ss] [,Dd] [,Vv]
Locks file  X  against accidental change or deletion. LOCKed file shown in CATALOG by  *

UNLOCK X  [,Ss] [,Dd] [,Vv]
Unlocks previously LOCKed file  X
to allow change or deletion.

VERIFY X  [,Ss] [,Dd] [,Vv]
Checks file  X  for internal consistency.
If  X  was saved without error, no message
is given.


MON  [,C] [,I] [,O]
Causes display of disk Commands ( C ),
Input from the disk ( I ), and Output
to the disk ( O ).  With no parameters,
MON is ignored.


NOMON  [,C] [,I] [,O]
Cancels display of disk Commands ( C ),
Input from the disk ( I ), and Output
to the disk ( O ).  With no parameters,
NOMON is ignored.


MAXFILES n
Reserves  n  file buffers for disk input and
output (booting reserves 3 file buffers).
Use before LOADing or RUNning a program.


# ACCESS COMMANDS


FP  [,Ss] [,Dd] [,Vv]
Puts system into Applesoft BASIC,
erasing any program in memory.


INT
Puts system into Integer BASIC,
erasing any program in memory.


PR# s
Sends subsequent output to slot  s .  Boots
disk if slot  s  contains disk controller
card.  PR#0 sends output to TV screen again.


IN# s
Takes subsequent input from slot  s .  Boots
disk if slot  s  contains disk controller
card.  IN#0 takes input from keyboard again.


CHAIN Y  [,Ss] [,Dd] [,Vv]
RUNs Integer BASIC program file  Y , but does
not clear variables developed by previous
Integer BASIC program.


# SEQUENTIAL TEXT FILE COMMANDS

OPEN X  [,Ss] [,Dd] [,Vv]
Opens or creates sequential text file  X ,
allocates one file buffer and prepares to
WRITE or READ from beginning of file.


CLOSE  [X]
Completes WRITE X, if necessary, and de-
allocates file buffer assigned to text file
X .  Without file name, CLOSEs all OPEN files
(except an EXEC file).


WRITE X  [,Bb]
Subsequent PRINTs send characters to
sequential text file  X .  WRITEing begins
at current file position or (if specified)
at byte  b .  Cancelled by any DOS command.


READ X  [,Bb]
Subsequent INPUTs and GETs take response
characters from sequential text file  X .
READing begins at current file position or
(if specified) at byte  b .  INPUT response
is one field (all characters to next
RETURN).  Cancelled by any DOS command.


APPEND X  [,Ss] [,Dd] [,Vv]
Opens existing sequential text file  X ,
similar to OPEN, but prepares to WRITE
at the end of the file.


POSITION X, Rp
In OPEN sequential text file  X , subsequent
READ or WRITE will proceed from  p-th  field
following current file position.


EXEC X  [,Rp] [,Ss] [,Dd] [,Vv]
Executes successive fields in sequential
text file  X  as if typed at keyboard.
With Rp  parameter, execution begins with
p-th  field.  Fields may include numbered
BASIC program lines and direct-execution
BASIC or DOS commands to control the Apple.


# RANDOM-ACCESS TEXT FILE COMMANDS

OPEN X, Lj  [,Ss] [,Dd] [,Vv]
Opens or creates random-access text file  X ,
allocates one file buffer, and defines record
length as  j  bytes. Prepares to WRITE or READ
from beginning of Record 0.  Same Length param-
eter must be used each time file  X  is OPENed.


CLOSE  [X]  [,Ss] [,Dd] [,Vv]
Completes WRITE X, if necessary, and de-
allocates file buffer assigned to text file
X .  Without file name, CLOSEs all OPEN files.


WRITE X  [,Rr] [,Bb]
Subsequent PRINTs send characters to random-
access text file  X .  With no parameters,
WRITEing begins at current file position.
With Rr  parameter alone, WRITEing starts at
byte 0 of Record  r .  With Bb  parameter,
WRITE starts at byte  b  of current or spec-
ified Record.  Cancelled by any DOS command.


READ X  [,Rr] [,Bb]
Subsequent INPUTs and GETs take response
characters from random-access text file  X .
With no parameters, READing starts at cur-
rent file position.  With Rr  parameter
alone, READing starts at byte 0 of Record  r .
With Bb  parameter, READing starts at byte
b  of current or specified Record.  INPUT
response is one field (all characters to
next RETURN). Cancelled by any DOS command.

# MACHINE-LANGUAGE FILE COMMANDS

BSAVE X, Aa, Lj  [,Ss] [,Dd] [,Vv]
Stores on diskette, under file name  X ,
the contents of  j  memory bytes starting
at address  a .


BLOAD X  [,Aa] [,Ss] [,Dd] [,Vv]
Loads binary file  X  into same memory
locations from which file was BSAVEd or
(if specified) starting at address  a .


BRUN X  [,Aa] [,Ss] [,Dd] [,Vv]
BLOADs binary file  X , then jumps (JMP)
to loaded file's first memory address.