

TRSDOS 1.3

REFERENCE

GUIDE



TRSDOS 1.3 Command Syntax

1. The general form of each command is given as the command itself, followed by the input/output field, followed by the parameters field. The parameter field and certain portions of the I/O field are optional and may be included at the discretion of the operator.
2. Capital letters and spaces in the command lines must be typed exactly as shown.
3. Brackets in the command line indicate that the instruction contained within the brackets is optional and may or may not be entered, depending on the situation and the user's desire for clarity.
4. Parentheses indicate the parameter field. This field is composed of those parameters that will modify the action of the command to suit the user's needs.
5. Braces indicate the default values of a parameter or a prompt. If <ENTER> is typed instead of the the value or switch required, the default is used.
6. The parameter values are indicated by val (value), exp (expression), or sw (switch). Sample numeric values, string expressions, or switch indicators are usually given.

7. File specifications take the following format:

filespec/ext.password:d

 filespec - an alphabetic character A-Z followed by up to seven optional characters or numbers

 /ext - optional file specification extension, consisting of an alphabetic character and up to two optional characters or numbers

 .password - optional file password consisting of an alphabetic character followed by up to seven optional characters or numbers

 :d - optional drive specification, which indicates the drive on which the file is located

TRSDOS 1.3 Hardware Features:

1. Upper case lock (all upper or upper & lower case) is toggled by <SHIFT><0>.
2. Control characters are entered by pressing <LEFT SHIFT><DOWN ARROW> (listed on this here as <CTRL>).
3. Listing functions (DIR, LIST, etc.) are halted by pressing <SHIFT><@>.
4. Convert to 32 character line with <SHIFT><RIGHT ARROW>.
5. Activate print screen function with <SHIFT><DOWN ARROW><*>.
6. Interrupt program execution with <BREAK>.
7. Start over at beginning of line with <SHIFT><LEFT ARROW>.

TRSDOS 1.3 Library (Internal) Commands

Append file/device data to another file

APPEND filespec1 filespec2

filespec - any valid TRSDOS file specification

filespec1 - file to be append

filespec1 - file to which filespec1 is appended

ATTRIB - change protection status of file or disk

ATTRIB filespec.password:d (ACC=,UPD=,PROT=,I/N)

:d - drive containing disk to be attributed

filespec - any valid TRSDOS file specification

password - any valid password

ACC= - access password

UPD= - update password

PROT= - protection

EXEC - execute only

READ - read, execute

WRITE - write, read, execute

NAME - rename, write, read, execute

KILL - all access, except re-attrib

FULL - total access

N = file visible (non-invisible) in directory

I = file invisible in directory

AUTO - execute command at boot

AUTO dos-command

dos-command - any executable TRSDOS command

Note: Holding <ENTER> while pressing RESET will

override AUTO; typing AUTO disables command

BUILD - build a DO file

BUILD filespec

filespec - any valid TRSDOS file specification {BLD}

TRSDOS 1.3 Library (Internal) Commands (continued)

CLEAR - clear user memory

CLEAR (START=aaaa,END=bbbb,MEM=cccc)

 START - where to start clearing memory

 END - where to end clearing memory

 MEM - set memory protect address

 aaaa - four-digit hex number

 bbbb - four-digit hex number

 cccc - four-digit hex number

CLEAR Clear all available RAM

CLOCK - toggle clock display

CLOCK (ON/OFF)

 ON - turn clock display on

 OFF - turn clock display off

CLS - clear the screen

CLS

COPY - copy data from file to file

COPY filespec1 filespec2

COPY filespec :d

COPY /ext :d

 filespec - any valid TRSDOS file specification

 :d - any valid drive

 /ext - wildcard file copy by extension

CREATE - preallocate space in a file

CREATE filespec (LRL=aaa,REC=bbb)

 filespec - any valid filespec

 LRL= - logical record length (1-256) {256}

 REC= - number of records to allocate

TRSDOS 1.3 Library (Internal) Commands (continued)

DATE - set or display date

DATE mm/dd/yy - set date

mm - 2 digit month

dd - 2 digit day

yy - 2 digit year

DATE - with no parameter, returns current date

DEBUG - system debugging utility

DEBUG

C - call single-step

D - display contents of memory

F - file patch utility

I - instruction single-step

J - jump

M - modify RAM

Q - quit

R - change register contents

S - full-screen display

U - update

X - half-screen display

; - increment display address

- - decrement display address

DIR - display disk directory

DIR :d (INV,SYS,PRT)

:d - valid drive in system

INV - display invisible files {no}

SYS - display system files {no}

PRT - output to printer {no}

DO - execute a /BLD file

DO filespec

filespec{/BLD} - filespec for a BLD file

TRSDOS 1.3 Library (Internal) Commands (continued)

DUAL - duplicate output to video and printer

 DUAL (ON/OFF)

 ON - turn on DUAL process

 OFF - turn off DUAL process

DUMP - dump memory to a file

 DUMP filespec (START=,END=,TRA=,RELO=)

 filespec - any valid TRSDOS file specification

 START= - starting address

 END - ending address

 TRA= - transfer address

 aaaa - four-digit hex numbers

ERROR - display error message

 ERROR number

 number - decimal number for TRSDOS error code

FORMS (WIDTH=aaa,LINES=bbb) - sets printer parameters

 WIDTH - set printer width

 LINE - set number of lines per page

FREE - display disk free space

 FREE :d (PRT) - full granule allocation map {:0}

 PRT - output to printer

HELP - explanation of TRSDOS command

 HELP command

 command - specific TRSDOS command

 HELP - with no parameter, display all subjects

TRSDOS 1.3 Library (Internal) Commands (continued)

KILL - delete a file or group of files

KILL filespec:d - delete file

KILL /ext:d - wildcard file deletions

filespec - any valid TRSDOS file specification

:d - destination drive specification

/ext - extension for wildcard deletion

LIB - displays a list of the library commands

LIB

no parameters are required

LIST - list contents of a file

LIST filespec (PRT,SLOW,ASCII)

filespec - any valid TRSDOS file specification

PRT - list to printer

SLOW - pause briefly after each record

ASCII - list file in ASCII format, not hex format

LOAD - load a file without execution

LOAD filespec

filespec{/cmd} - file in load module format

MASTER - set master read/write drive

MASTER (DRIVE=a)

a - any valid drive specification

PATCH - change the contents of a disk file

PATCH filespec (ADD=aaa,FIND=bb,CHG=cc)

filespec - any valid TRSDOS file specification

ADD - address at which data is found

FIND - string to be found or compared

CHG - new contents of byte

aaaa - four-digit hex number

bb - hex sequence

cc - hex sequence

TRSDOS 1.3 Library (Internal) Commands (continued)

PAUSE - pause execution for operator action

PAUSE message

message - message to be displayed during PAUSE

PROT - use or change a disk's master password

PROT:d (PW,LOCK)

:d - any valid TRSDOS drive specification

PW - change master password

LOCK - assign master password to all unprotected files

PURGE - delete files

PURGE:d (SYS,INV,ALL)

:d - any valid TRSDOS drive specification

SYS - all system and user files (no invisible)

INV - all invisible and user files (no system)

ALL - all files on disk (user, system, invisible)

RELO - change where program loads into memory

RELO filespec (ADD=aaaa)

filespec - any valid TRSDOS file specification

ADD - new load address

aaaa - four-digit hex number

RENAME - change filename

RENAME filespec1 to filespec2

filespec - any valid TRSDOS file specification

TRSDOS 1.3 Library (Internal) Commands (continued)

ROUTE

ROUTE (SOURCE=aa,DESTIN=bb)
SOURCE - source I/O device
DESTIN - destination I/O device
aa or bb - any valid TRSDOS device
 KB - keyboard
 DO - video display
 PR - line printer
 RI - RS-232 input
 RO - RS-232 output

SETCOM - set up RS-232 communications

SETCOM (OFF,WORD=a,BAUD=b,STOP=c,PARTIY=d,mode)
OFF - turns off RS-232
WORD - number of bit/byte
 a - must be 5, 6, 7, or 8
BAUD - specifies baud rate
 b - decimal number between 50 and 9600
STOP - number of stop bits
 c - must be 1 or 2
PARITY - determines whether odd, even, or none
 d - 1 (odd), 2 (even), 3 (none)
mode - WAIT or NOWAIT

TAPE - tape/disk transfer

TAPE (S=source,D=destination)
source/destination
 T - tape
 D - disk
 R - random access memory

TRSDOS 1.3 Library (Internal) Commands (continued)

TIME - set real-time clock or get time

TIME hh:mm:ss - set system time

hh - hours 00-23

mm - minutes 00-59

ss - seconds 00-59

TIME - display time

WP - write-protect via software

WP (DRIVE=d)

d - any valid TRSDOS drive specification

TRSDOS 1.3 Utility Programs

BACKUP - create an exact copy of an orifinal disk

 BACKUP :s to :d - mirror image backup

 :s - source drive number

 :d - destination drive number

CONVERT - converts files from Model I to TRSDOS 1.3

 CONVERT :s :d

 :s - source drive number

 :d - destination drive number

FORMAT - format a diskette

 FORMAT :d

 :d - drive number containg blank diskette

HERZ50 - set up for 50 Hz power (non-USA users)

 DO HERZ50

LPC - line printer control to ignore multiple CR's

 LPC

MEMTEST - test memory

 MEMTEST

XFERSYS - transfer system files to TRSDOS 1.1 and 1.2

 XFERSYS

TRSDOS 1.3 Disk BASIC Extensions

BASIC - extended disk BASIC and DOS commands

BASIC filespec -F:nn -M:nnnn

 filespec - optional file specification

 -F:nn - number of files (0-15) to be open at one time

 -M:nnnn - highest memory address BASIC will use

BASIC * - re-enter BASIC with program intact

 &Hddd - directly use hexadecimal numbers

 ddd - one to four digit hexadecimal value

 &Oddd - directly use octal numbers

 ddd - one to four-digit octal number

CLOSE filnum, filnum, filnum... - close open disk files

 filnum - optional file number (1-15) to be closed;

 if omitted; all files are closed

CMD"A" - return to TRSDOS with error message

CMD"B" - enable/disable <BREAK> key

CMD"C",R/S - delete spaces and REMs from program

 R - delete remarks

 S - delete spaces

CMD"D:d" - display directory for specified drive

 :d - any valid TRSDOS drive specification

CMD"E" - returns last TRSDOS error message

CMD"I",command - return a command to TRSDOS

 command - TRSDOS command or valid file specification

CMD"J",s,d - convert calendar date to Julian

 s - source with date to be converted

 d - string variable to contain converted date

 mm/dd/yy - month-day-year sequence

 -yy/dd - day of the year

CMD"L",routine - load Z-80 subroutine or file into RAM

 routine - string containing file specification

CMD"O",exp,array(start)

 exp - expression to indicate number of elements

 array - primary key array with starting element no.

 start- subscript of first element to be sorted

TRSDOS 1.3 Disk BASIC Extensions (continued)

CMD"P",status - check printer status
status - string variable

CMD"R" - turn on the clock display

CMD"S" - normal return to TRSDOS

CMD"T" - turn off the clock display

CMD"X",target - cross reference

CMD"Z","switch" - duplicate output to video and printer
switch - string expression (ON or OFF)

CVD(var\$) - restore string to number
var\$ - inverses MKD\$ with 8 byte string

CVI(var\$) - restore string to number
var\$ - inverses MKI\$ with 2 byte string

CVS(var\$) - restore string to number
var\$ - inverses MKD\$ with 4 byte string

DEF FN name(var)=exp - define function
name - variable used to name function
var - variable(s) to be passed to function
exp - function desired

DEFUSRn = address - define entry address for machine-language subroutine
n - USR routine number (0-9)
address - machine language entry point

EOF(filnum) - determine if end of file is reached
filnum - file buffer being interrogated

FIELD filnum,num AS var\$,num AS var... - partition the buffer used with a random file
filnum - file buffer number specified in OPEN
num - length of that field
var\$ - variable name for the field

GET filnum, recnum - read record from random file
filnum - file buffer number
recnum - logical record number

TRSDOS 1.3 Disk BASIC Extensions (continued)

INPUT# filnum,var,var,var... - sequential file input
filnum - file buffer number of file
var - variable containing information read in
INSTR (pos,targ\$,sub\$ - string search function
pos - optional position; 1 is assumed
targ\$ - name of string to be searched
sub\$ - sub-string to be searched for
KILL "filespec" - delete program or data from disk
filespec - standard TRSDOS file specification
LINE INPUT"prompt";var\$ - keyboard line input
prompt - optional prompt to be displayed
var\$ - name of string to return information
LINE INPUT# filnum,var\$ - input line from disk file
filnum - file buffer number of sequential file
var - variable name to store the string
LOAD "filespec",option - load program from disk
filespec - standard TRSDOS file specification
option - one or more special options to engage
 R - runs program after loading; open file will
 not be closed
 V - preserves current set variables and FIELD
 line number - begins execution at line number
 specified when R option is used
LOC(filnum) - determine last record accessed
filnum - file buffer number being interrogated
LOF(filnum) - determine number of record in a file
filnum - file buffer number being interrogated
LSET (or RSET)var\$=exp\$ - fill output buffer
var\$ - variable defined via FIELD statement
exp\$ - string expression to be placed in buffer
MERGE "filespec" - merge ASCII file with resident program
filespec - standard TRSDOS file in ASCII format
option - optional switch R to not interrupt program
execution after new file is loaded

TRSDOS 1.3 Disk BASIC Extensions (continued)

MID\$ (var\$,pos,len=rep\$ - replace portion of a string
 var\$ - name of string to be edited
 pos - starting position of replacement
 len - specifies number of character to be replaced
 rep\$ - string to be replaced with var\$

MKD\$(exp) - convert numbers to strings
 exp - returns 8 byte string; double precision

MKI\$(exp) - convert numbers to strings
 exp - returns 2 byte string; integer precision

MKS\$(exp) - convert numbers to strings
 exp - returns 4 byte string; single precision

NAME,new,start,inc - renumber the current program
 new - new number of first line to be renumbered {10}
 start - line number to start renumbering {0}
 inc - increment between successive lines {10}

OPEN "mode",filenum,"filespec",lrl - open disk file
 mode - I/O mode intended for file
 R - random access mode
 I - sequential input mode
 E - sequential output extension mode
 O - sequential output mode
 filespec - any valid TRSDOS file specification
 lrl - logical record length for "R" files

PRINT# filnum,USING format\$,var,del,var... - output
 data to a sequential file
 filnum - file buffer number of sequential file
 USING format\$ - optional format string to define
 data format for the print
 var - variable containing data to be written
 del - delimiter that must be placed between each
 variable to be written; may be semi-colon

PUT filnum,recnum - write random access file
 filnum - file buffer number
 recnum - logical record number to be written

TRSDOS 1.3 Disk BASIC Extensions (continued)

RESTORE nnnn - set data pointer to line nnnn
RUN "filespec",option - load and run a program
 filespec - standard TRSDOS file specification
 option - one of three special options
 R - any open files will not be closed
 V - preserves currently set variables and FIELD
 line number - runs program beginning at line no.
SAVE "filespec",A - save program
 filespec - standard TRSDOS file specification
 A - optional switch to save file in ASCII format
SET EOFn - set EOF to last record accessed+1
USRn (var) - call user external subroutine
 n - USR routine number
 var - variable to be passed to USR routine
SHORTHAND - command abbreviations
 <DOWN ARROW> - list next line of program
 <UP ARROW> - list preceding line of program
 <SHIFT><UP ARROW> - list first line of program
 <SHIFT><DOWN ARROW><Z> - list last line of program
Lxx - list line xx
Dxx - delete line xx
Exx - edit line xx
Axx,yy - automatic line numbering
 xx - beginning at line xx
 yy - incrementing by yy
<. > - list current line of program
<, > - edit current line of program

TRSDOS 1.3 DOS Error Messages

Dec	Hex	Error Message
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0	00	No error found
1	01	CRC error during disk I/O
2	02	Disk drive not in system
3	03	Lost data during disk I/O
4	04	CRC error during disk I/O
5	05	Disk sector not found
6	06	Disk drive hardware fault
7	07	** Undefined error code **
8	08	Disk drive not ready
9	09	Illegal I/O attempt
10	0A	Required command parameter not found
11	0B	Illegal command parameter
12	0C	Time out on disk drive
13	0D	I/O attempt to non-system disk
14	0E	Write fault on disk I/O
15	0F	Write protected disk
16	10	Illegal logical file number
17	11	Directory read error
18	12	Directory write error
19	13	Invalid file name
20	14	GAT read error
21	15	GAT write error
22	16	HIT read error
23	17	HIT write error
24	18	File not found
25	19	File access denied due to password protection
26	1A	Directory space full
27	1B	Disk space full
28	1C	Attempted to read past EOF
29	1D	Attempted to read outside of file limits

TRSDOS 1.3 DOS Error Messages (continued)

30	1E	No more extents available
31	1F	Program not found
32	20	Improper drive number
33	21	** Undefined error code **
34	22	Attempted to use non-program file as program
35	23	Memory fault during program load
36	24	** Undefined error code **
37	25	File access denied due to password protection
38	26	I/O attempted to unopen file
39	27	Invalid command parameter
40	28	File already in directory
41	29	Attempt to open file already open

TRSDOS 1.3 BASIC Error Codes

Error Code	ERR Value	Error Message
1	0	NEXT without FOR
2	2	Syntax error
3	4	RETURN without GOSUB
4	6	Out of DATA
5	8	Illegal function call
6	10	Overflow
7	12	Out of memory
8	14	Undefined line number
9	16	Subscript out of range
10	18	Redimensioned array
11	20	Division by zero
12	22	Illegal direct
13	24	Type mismatch
14	26	Out of string space
15	28	String too long
16	30	String formula too complex
17	32	Can't continue
18	34	No RESUME
19	36	RESUME without error
20	38	Unprintable error
21	40	Missing operand
22	42	Bad file data
23	44	Disk BASIC feature
24	46	Undefined user function
51	100	Field overflow
52	102	Internal error
53	104	Bad file number
54	106	File not found
55	108	Bad file mode
58	114	Disk I/O error

TRSDOS 1.3 BASIC Error Codes (continued)

62	122	Disk full
63	124	Input past end
64	126	Bad record number
65	128	Bad file name
67	132	Direct statement in file
68	134	Too many files
69	136	Disk write protected
70	138	File access denied