Command operation offers greater versatility than menu operation. It
allows you to perform all tape commands plus restore files from one
directory on tape to another on disk and to change the names or extensions
of files while restoring from a tape. In general, the command syntax para-
llels the format used in DOS commands.

Tape commands can be used in batch files and executed with the Batch mode of
the Unattended Backup feature or from DOS.

1.   All backup system commands consist of the word "TAPE" and the command
name; for example, TAPE BACKUP. These command sequences are called keywords
and must be entered exactly as shown. Keywords may be entered in either
upper or lower-case when used as part of a command, but are shown in UPPER-
CASE in this manual to distinguish them from other parts of a command.

NOTE: A space must separate the keywords from any variables and options
which follow them on the command line. A space must also separate the
source and destination portions of a Restore or Compare command. See the
examples in this chapter for the proper format of each command.

2.   Items shown in square brackets [] are optional. Do Not type the
brackets as part of the optional parameters.

3.   An ellipsis [...] indicates that a parameter may be repeated as many
times as necessary.

4.   All punctuation, just like keywords, must be entered where indicated
in the command. This includes periods, colons, equal signs, double quotes,
backslashes, forward slashes, and dashes.

COMMAND PARAMETERS

d: logical drive Enter a valid logical letter followed by a colon at this
position in the command line.

path   The directories the backup system software searches in to locate a
subdirectory, file, or group of files. The format for the path is:

     (\)(directory name\)(directory name\)(...)

An initial backslash indicates that the path begins at the root directory.
Otherwise the path begins in the currently logged directory.

NOTE: For the backup system software, the path must always END with a
backslash so the backup system can distinguish between references to
subdirectory names and file names.

files   file name. Composed of one to eight of the characters: A-Z 0-9
(See your DOS manual for a list of other valid characters).

As with DOS, global or "wildcard" characters may be used in file names to
specify a generalized description which selects a group of files that fit
the generalized form. The global characters ? and * are explained in your
DOS manual.

BACKUP SYSTEM COMMANDS

NOTE: We suggest you review the rest of this chapter to familiarize your-
self with command operation, then keep this manual handy to refer to oper-
ation details when you use command operation and/or create batch files.

Backup

Performs a Total or Selective backup of disk files in the directory
c:\spread written on or after January 1, 1990, executes a file-by-file
comparison, does not display the file names on the screen as they are backed
up and adds a volume title. Note that you must type a backslash after the
directory name spread to tell the backup system that you are referring to a
directory and not a file.

TAPE BACKUP c:*.*/A/M/P/S/T="Modified files backup of c:"

Performs a Modified Files Only Backup of drive C:, adds this volume to those
on the tape, displays the file names on the screen as they are backed up and
adds a volume title.

NOTE: After making a backup, use the Compare feature to ensure that all
files on tape are identical to those on disk.

Tape Linking

The backup software can link up to 255 tapes for backups that exceed the
capacity of an individual tape. The process is automatic. Simply insert
blank, formatted tapes when the software prompts you to do so.

Compare

Compares files on a tape to files on a disk. Only disk files that have been
modified or deleted are reported. Files that have been added to the disk
are not reported, because the comparison priority is tape-to-disk.

Syntax:

TAPE COMPARE [source path][files[.ext]][d:][destination path]
[files[.ext]][/B][/D][/H][/L][/P][/S][/V][/W]

Example COMPARE commands:

TAPE COMPARE*.*c:*.*/P/S
This command compares all files in the first tape volume to all files on
dive C: and displays the file names on the screen as they are compared.
Since no volume number is specified, the backup system defaults to tape
volume 1.

TAPE COMPARE\spread\ c:\spread\/D:1-1-90/P/-S/V=2
Compares all files only in the directory \spread that were created on or
after January 1, 1990, on volume 2 of the tape to those only in c:\spread
and displays the file names on the screen as they are compared.

CRT

Helps you position the external tape drive, CTR monitor, or other devices in a location which reduces electricity interference to the tape drive.

Syntax:

        TAPE CRT

ERASE

Erases all data from a tape. The default option is /Q.

Syntax:

        TAPE ERASE [/H][/N][Q]

FORMAT

Formats a tape for use with the backup system.

Syntax:

        TAPE FORMAT [/H][/N]

RESTORE

Performs a Total or Selective Restore of files from a tape volume to a disk.

Syntax:

TAPE RESTORE [source path][files[.ext]] [d:][destination path][files[.ext]]
             [/B][/D][/H][/L][/O][/P][/S][/W]

Example RESTORE commands:

TAPE RESTORE*.*c:*.*/-O/P/S

Restores all files and subdirectories form the tape to drive C:. Note that a space is necessary between the source and destination portions of the command. Since no tape volume number is specified, the backup system defaults to tape volume 1.

TAPE RESTORE \spread\c:\oldwork\/O/P/V=2

Restores all files from the tape directory spread in volume 2 to c:\oldwork, overwrites files on the disk with those on tape of the same names and displays the file names on the screen as they are restored.

TAPE RESTORE *.* c:*.*/-O/P/S/V=3

Restores all files form tape volume 3 that do not exist on drive C: and prints the file names on the screen as they are restored.

RETENSION

Winds the tape from end-to-end applying even tension to the entire tape. New tapes and tapes that have been stored or used heavily should be retensioned before use.

Syntax:

        TAPE RETENSION [/H]

SEARCH

Provides a directory of a tape, any portion of a tape, or any group of files
on a tape. Enter a filename or global in the [files[.ext]] portion of the
command line. If you do not specify the /S option, you must also enter a
specific path name under which to search for the desired file(s). Output
can be directed to a printer by pressing ctrl-p at the DOS prompt before
entering the TAPE SEARCH command. Turn off output to the printer by
pressing

 ctrl-p again.

Syntax:

TAPE SEARCH[path][files[.ext]][/D][/H][/L][/P][/S][/V][/W]

Example SEARCH command:

TAPE SEARCH \spread*.wkt/P/-S/V=2

Searches for and displays files with the extension .wkt in the directory
spread, but not in its subdirectories, in tape volume 2.

SETUPS

Allows you to view or change the backup system default options in TAPE.CFG
without performing a tape operation. To change any default options, you
must include /W on the TAPE SETUPS command line. To view the current
defaults, type TAPE SETUPS at the DOS prompt and press enter.

Syntax:

TAPE SETUPS [/A][/C][/H][/J][/K][/M][/O][/P][/R][/S][/W]

VERIFY

Verifies that the tape is readable and that the data blocks are intact.
Verify does not compare files on tape to those on disk. Use Tape Compare to
ensure that your data was properly backed up. Verify only checks the tape
for damage.

Syntax:

TAPE VERIFY [/B][/H][/P][/V][/W]

OPTIONS

See the command syntax listings for the options available with a given
command. Some options have a corresponding negate form, /-A,/-C, etc.,
which reverses the operation of an option.

/A,/-A

/A adds the current backup after any volumes already on the tape allowing a
tape to contain multiple backup volumes. /-A causes the tape to be erased
before the current backup is written. The tape will then contain only one
volume.

Valid commands: TAPE BACKUP, TAPE SETUPS
Example command: TAPE BACKUP C:*.*/A

/B="filename"

/B="filename" makes an error log file to contain all errors created during
an operation, and gives it the name you have typed in the quotes. For
example, /B-"BADLIST.LOG," creates the error log file BADLIST.LOG.

If the file name you have given is invalid, errors will be listed in the
file ERROR.LOG.

Valid commands: TAPE BACKUP, TAPE RESTORE, TAPE COMPARE, TAPE VERIFY

Example command: TAPE BACKUP C:*.*/B="BADLIST.LOG"

/C,/-C

Automatic Comparison. /C executes a second pass over the tape immediately
after backup to compare the files recorded on the tape to those on the
source disk. /-C turns off the automatic comparison feature.

Valid commands: TAPE BACKUP, TAPE SETUPS

Example command: TAPE BACKUP C:*.*/C

/D:mm-dd-[yy]yy

Enter a month, day and year as indicated following the colon. The date must
by January 1, 1980 or later. Tape operations apply only to those files
written on or after the specified date.

Valid commands: TAPE BACKUP, TAPE COMPARE, TAPE RESTORE, TAPE SEARCH

Example command: TAPE BACKUP C:*.*/D:01-01-88

/F="filename"

Allows you to perform a Selective Backup from a command line. Enter the
name of the file containing the desired Selective Backup information in
the "filename" portion of this option. Two types of files are valid. The
first is the file TEMPLIST.TAG which is created during every Selective
Backup made with the menu software. The second is the tag list created when
you schedule a Selective Backup for unattended operation. The tag list files
follow this format: TAGLIST_X.TAG, where X is the line number on the Schedule
screen to which the tag list is linked. Both are standard ASCII files and
may be edited or created with any ASCII text editor. The /F option also
allows you to use more than the eight tag lists and one TEMPLIST.TAG available
with menu operation. Use DOS to rename these files to any other valid name
and enter that name in the "filename" portion of this option.

```
Valid commands:    TAPE BACKUP
Example command:    TAPE BACKUP /F="TAGLIST_3.TAG"


/H


Displays help information.  Enter /H as the only option with any command to
list the options valid with that command.  No tape operation is executed
with /H.

Valid Commands:  TAPE BACKUP, TAPE COMPARE, TAPE ERASE, TAPE FORMAT, TAPE
RESTORE, TAPE RETENSION, TAPE SEARCH, TAPE SETUPS, TAPE VERIFY
Example command:  TAPE BACKUP /H


/I


Turns off the tape linking question.  With data compression on (/J), this
option allows a backup to begin immediately that, if uncompressed, would
exceed the capacity of a single tape.  The backup process is not interrupted
to ask you if tape linking is desired.  Most useful when used with Unattended
Backup.

Valid Commands:  TAPE BACKUP
Example command: TAPE BACKUP C:\*.*/I/J


/J,/-J


/J turns on data compression for the current backup.  Compressed files are
automatically detected during Compare and Restore operations.  /-J turns off
data compression for the current backup.

valid commands:    TAPE BACKUP, TAPE SETUPS
example command:   TAPE BACKUP C:\*.*/J


/K,/-K


Selects the type of data compression.  Must be used with the /J option which
turns on data compression.  /K selects Optimize Time, the high-speed software
data compression (not available if you are using a tape controller with
hardware data compression).  The average compression rate is 1.8:1 and backup
speed averages more than 40% faster than standard data compression.  /K is
the default for this option.  /-K selects Optimize Space, the standard data
compression.  The average compression rate for standard data compression
is 2:1.

Valid commands:    TAPE BACKUP, TAPE SETUPS
Example command:   TAPE BACKUP C:\*.*/J/K


/L="password"


Allows you to password protect a backup or to restore a password-protected
tape volume.  Enter up to eight characters.  Passwords are case sensitive.
This means that passwords mybackup, MYbackup, and MYBACKUP are all
different.

Valid commands:    TAPE BACKUP, TAPE COMPARE, TAPE RESTORE, TAPE SEARCH
Example command:   TAPE BACKUP C:\*.*/L="MYBACKUP"
```

/M,/-M

/M Modified Files Only Backup. Backs up only files modified since the last
backup. /-M causes all files, modified or not, to be backed up.

Valid commands: TAPE BACKUP, TAPE SETUPS
Example command: TAPE BACKUPC:*.*/M

/N="tape name"

Writes a tape name of up to 11 characters on the tape.

Valid commands: TAPE ERASE, TAPE FORMAT
Example command: TAPE ERASE /n="DAILY"

/O,/-O

/O allows the backup system to overwrite files that exist on disk during a
restore. If a file exists on disk and on tape when restoring from tape with
this option specified, the file on tape overwrites the file on disk. /-O
turns the overwrite feature off. Files from tape then do not overwrite files
of the same names on disk.

Valid commands: TAPE RESTORE, TAPE SETUPS
Example command: TAPE RESTORE *.*/O

/P,/-P

/P displays file names on the screen as they ar backed up, restored, compared,
or verified. To direct output to a printer, press ctrl-p at the DOS prompt
before using this command. To turn off output to the printer, press ctrl-p
again. Use the standard DOS redirection facilities to direct output to a
disk file. /-P turns off file name display.

NOTE: If your computer is an IBM Personal System/2, the factory default
setting for the print option is /-P. To have the file names printed, you
must specify /P on the command line. If you specify /P, the PS/2 is
automatically switched to non-concurrent DMA mode, even if the backup system
is configured to default to concurrent DMA mode.

Valid commands: TAPE BACKUP, TAPE COMPARE, TAPE RESTORE, TAPE SEARCH, TAPE
SETUPS, TAPE VERIFY
Example command: TAPE BACKUP C:*.*/P

/Q,/-Q

/Q is the Quick Erase feature which erases the tape directory making tape
data inaccessible. This is the default setting if no option is selected.
/-Q is the Security Erase feature which erases the tape directory an all
other data on the tape to eliminate any possibility of recovering the
information.

Valid commands: TAPE ERASE
Example command: TAPE ERASE /-Q

/R,/-R

/R performs backups in read-only mode. Any number of backups can then be
made without resetting the archive bit on files backed up. Allows you to
make daily incremental backups of all files modified since the last total
backup not run in read-only mode. This is a very useful feature on a
network where backups are likely to be made from workstations restricted
from writing to the disk. /-R causes the archive bit to be reset each time
a file is backed up.

Valid command: TAPE BACKUP, TAPE SETUPS
Example command: TAPE BACKUP C:*.* /R

/S,/-S

/S causes the tape operation to apply to any subdirectories of the specified
path and their contents. The backup system searches for matching files in
subdirectories at all levels below the selected directory. All matching
files in subdirectories are subject to the tape operation specified. Only
directories containing matching files are backed up. /-S causes tape
operations to apply only to the specified path or to the currently logged
directory.

Valid commands: TAPE BACKUP, TAPE COMPARE, TAPE RESTORE, TAPE SEARCH, TAPE
SETUPS
Example command: TAPE BACKUP C:*.* /S

/T="comment"

Allows you to add a comment or volume title that is displayed on the volume
title of the backup. The comment length is limited to 44 characters and
will be truncated if it exceeds this limit.

Valid commands: TAPE BACKUP
Example command: TAPE BACKUP C:*.* /T="DAILY TOTAL BACKUP OF C:"

/V=n

Replace "n" with the number of the desired tape volume, from 1 to 256
inclusive. If you do not know the number of the desired volume, use the
TAPE SEARCH command with option /V to list the volumes on the tape in
numerical order.

Valid commands: TAPE COMPARE, TAPE RESTORE, TAPE SEARCH, TAPE VERIFY
Example command: TAPE SEARCH *.* /V=2

/W

Provides access to the default settings contained in the TAPE.CFG file.
If you include /W on a command line, the options specified on that line
become the default settings for the backup system. The default settings
are not changed unless /W is included on the command line. A command with
/W as the only option displays the defaults currently set. The factory
defaults in the TAPE.CFG file are:

Back up only modified files:	N	/-M
Overwrite on restore:	N	/-O

```
Read only mode on backup:          N        /-R

Print file names:                  Y        /P

Automatic compare after backup:    N        /-C

Use subdirectories:                Y        /S

Multi-volume backup:               Y        /A

Compress file data:                N        /-J

Optimize Time data compression:    Y        /K
```

Valid commands: TAPE BACKUP, TAPE COMPARE, TAPE RESTORE, TAPE SEARCH, TAPE
SETUPS, TAPE VERIFY
Example command: TAPE BACKUP C:*.* /A/W

(smm 08/05/93)