



## **jBASE tape operations**



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## Documentation Conventions

This manual uses the following conventions:

Convention	Usage
BOLD	In syntax, bold indicates commands, function names, and options. In text, bold indicates keys to press, function names, menu selections, and MS-DOS commands.
UPPERCASE	In syntax, uppercase indicates JBASE commands, keywords, and options; BASIC statements and functions; and SQL statements and keywords. In text, uppercase also indicates JBASE identifiers such as filenames, account names, schema names, and Windows NT filenames and pathnames.
UPPERCASE <i>Italic</i>	In syntax, italic indicates information that you supply. In text, italic also indicates UNIX commands and options, filenames, and pathnames.
Courier	Courier indicates examples of source code and system output.
Courier Bold	<b>Courier Bold</b> In examples, courier bold indicates characters that the user types or keys (for example, <Return>).
[]	Brackets enclose optional items. Do not type the brackets unless indicated.
{ }	Braces enclose nonoptional items from which you must select at least one. Do not type the braces.
ItemA   itemB	A vertical bar separating items indicates that you can choose only one item. Do not type the vertical bar.
...	Three periods indicate that more of the same type of item can optionally follow.
⇒	A right arrow between menu options indicates you should choose each option in sequence. For example, “Choose <b>File</b> ⇒ <b>Exit</b> ” means you should choose <b>File</b> from the menu bar, and then choose <b>Exit</b> from the File pull-down menu.

Syntax definitions and examples are indented for ease in reading.

All punctuation marks included in the syntax—for example, commas, parentheses, or quotation marks—are required unless otherwise indicated.

Syntax lines that do not fit on one line in this manual are continued on subsequent lines. The continuation lines are indented. When entering syntax, type the entire syntax entry, including the continuation lines, on the same input line.

# TAPE OPERATIONS

This chapter describes the jBASE commands used for operating tape devices. It provides a summary of all available commands, grouped by category and describes attaching, detaching, positioning, reading and writing tape devices, together with the use of tape labels. Detailed descriptions of each command are provided in alphabetical order.

## Restoring Data from Other Systems

### Summary of Commands

ACCOUNT-RESTORE	Restore from account save.
ACCOUNT-SAVE	Creates an SMA compatible account save.
M-A-R	Restore from a multiple account save (M-A-S).
MAGRES	Restore from a MAGSAVE.
RESTOREADDS	Restore from an ADDS account save.
SEL-RESTORE	Restore specific files and records from account save and file save.
SYSRESTORE	Restore from a file save.
Troubleshooting	Common tape problems.

# Tape Commands

## TAPE

jBASE provides support for the following tape devices. The device control records are located in the “dev” subdirectory of the jBASE release directory.

Device	Description
FLOPPY	Floppy disc. Usually blocked at 500 bytes with 12-byte header.
SCT	Streaming cartridge tape. Usually blocked at 8192. 512 fixed byte blocks.
DAT	4mm cartridge tapes. Usually blocked at 16384. Variable length.
HALF	Half-inch tape. Usually blocked at 16384. Variable length.
FILE	UNIX or NT file requires additional path parameter.

The actual tape device files on UNIX reside in the “/dev/rmt” directory, however naming conventions differ between the various different platforms.

The actual tape devices on NT are named by convention TAPE, etc. Where as the floppy disc is named as A:

Compression and formats can vary between different manufacturers of the same device. When reading or writing a tape ensure that the target system device is compatible with your format of written media.

QIC 150 and QIC 525 appear to be readable by most Stream cartridge tape drives. In general higher specification, drives tend to be able to read, but not necessarily write, lower specification media tapes.

NOTE: Some DAT devices must be enabled for variable length blocks before they can be read else they produce no data status. This can also happen when the requested block size is lower than the actual block size on tape.

To enable variable length tape on SVR4 systems use the following command.

```
tapectl -v /dev/rmt/devicename
```

On AIX use “smitty” to set tape device for variable length.

Device Flags	Description
-D DeviceName	Device to open in no rewind mode
-I LockId	Lock name for T-ATT to show device attached.
-M MediaType	Media name. SCT, DAT, HALF, FLOPPY, FILE.
-L Type,Size	Label Type and expected size e.g. R83,8192 or ROS,80
-T TTYName	Alternative device for next reel Prompt or errors etc.
-S SizeKb	Max size of device. Floppy only
-H HeaderSize	Specifies bytes to skip for each block.

Device Flags	Description
-R DeviceName	Device for rewind mode
-P PadChar	Value of -1 No pad on WRITET, -P0xff pads with 0xff.
-B Blocksize	Default block size to read and write.

The Label and block size parameters can be overridden from the T-ATT command line. For instance to attach and read a tape blocked at 5120, i.e. a tar, use the following command.

**T-ATT SCT0 SIZE=5120 LABEL=0**

To read a tape produced by R83 use the following command.

**T-ATT DAT0 SIZE=16384 LABEL=R83,-2**

The -2 means the label is expected to be the same block size as the other tape blocks. To read a tape produced by a ROS system use the following command.

**T-ATT DAT0 SIZE=16384 LABEL=ROS,80**

NOTE: Streaming cartridge drives automatically pad to 512-byte boundary on write.

## Attach/Detach Commands

### T-ATT

The T-ATT command is used to attach or open a tape device. The device is exclusively associated to the process by the jBASE allocated port number. There are two formats to the T-ATT command. If attaching to a file or pipe device then the path name of the file or the program must be supplied.

#### COMMAND SYNTAX

To attach a hardware device:

```
T-ATT deviceid {SIZE=size} {LABEL=label-type|label-name{,label-size{,U}}}  
{CHANNEL=channel} {TTY=ttyName}
```

To attach a file or pipe:

```
T-ATT deviceid DEVICE=devicepathname {SIZE=size} {LABEL=label-type|label-  
name{,label-size{,U}} {CHANNEL=channel} {TTY=ttyName}
```

#### SYNTAX ELEMENTS

**deviceid** is the device identifier, specified as a file in the device release directory **/usr/jbc/dev**. Typically the deviceid would be SCT0, Streaming Cartridge Tape, or FILE0, UNIX file device. The deviceid file defines the media type, e.g. floppy disk or 8mm, and default device information, e.g. blocksize.

**devicepathname** is the path name of the file or pipe to use for I/O. The devicepathname mandatory if the deviceid defines a device type of file or pipe.

**size** is the required block size in bytes. The block size can be any value between 512 and 65535; the usual default is 8192. The block size will be resized if the tape label defines a size different to the current attachment, when reading from the tape device. Care should be taken when reading unlabelled tapes to ensure that the correct block size is specified at attachment otherwise blocks can be truncated or filemarks detected prematurely. On some tape, devices I/O errors can be reported if the block size is incorrect.

**label-type** is the type of tape label to be used when writing to the tape. **Label-type** can be one of the following:

**0 = no label (not recommended)**

**1 = 50-byte label**

**2 = SMA standard 80-byte label (default)**

**label-name** can be used in place of label-type. Valid values are ap, ros, ros70, r83, ult, uni, none. The default is r83.

**label-size** can optionally be specified with label-name.

U is an optional parameter, which indicates that the first block of the tape contains both the label and the start of the data.

**channel** identifies to which logical channel to attach the tape device. This can be any numeric character from 0 to 9. If you do not specify a channel, all existing attachments are cancelled, and the specified parameters are applied to the default channel. If you do specify a channel, any existing attachment of the default channel is cancelled.

**ttyName** nominates a terminal device (devices file entry) to be used to display output - to inform the user of tape errors or end-of-media for example. Useful for background jobs Default is to output to the current terminal.

### **NOTE:**

Some tape device drivers require the media to be actually mounted before the tape device can be opened and attached, with a successful T-ATT command.

Once attached, the tape device will remain open and attached to the users port until the user logs off or the device is detached with a T- DET command.

If the tape device is already open and attached to another UNIX process then the T-ATT command will fail with a device busy message.

## **T-DET**

The T-DET command detaches one or more previously attached tape devices.

### **COMMAND SYNTAX**

T-DET {CHANNEL=channel} {(Uportno)}

### **SYNTAX ELEMENTS**

**channel** is the specific channel attachment (0-9) to be detached. If the channel is not specified then all tape device attachments for the port are detached.

U this option used from another process will override the attachment and detach the device without regard for the process, which performed the initial, attach. This option may fail if the executing user is a different user group than the attached jBASE process.

**portno** is the port which has the tape attached. This can be obtained from the T-STATUS command.

### **EXAMPLE**

T DET - Detach all tape devices attached to this port  
. Read/Write Commands



## T READ

The T READ command will read and display data from the tape device one block at a time.

### COMMAND SYNTAX

T-READ {CHANNEL=channel} {(options)}

### SYNTAX ELEMENTS

Channel is the specific channel attachment (0-9).

Option	Description
N	Inhibits automatic paging of output to the terminal.
P	Directs output to the spooler.
X	Displays the output in hexadecimal format as well as character format.
n{-m}	Dumps blocks n to m from the current media position. If m is omitted, n blocks are output starting from the current media position. If the entire n-m option is omitted, all blocks are displayed until an end of filemark, (EOF), is encountered.

### NOTES:

Entering <ctrl E> can terminate the paged display instead of RETURN at the end of a page.

### EXAMPLE

T-READ 2 (X

Reads and displays two blocks in hexadecimal and character format.

## T-LOAD

The T-LOAD command selectively loads records from a tape device formatted in dump format by the T-DUMP command.

### COMMAND SYNTAX

T-LOAD file-specifier {record-list} {selection-criteria} {USING file-specifier} {(options)}

### SYNTAX ELEMENTS

Option	Description
I	Suppress or display the record ids, as they are loaded.
O	Overwrite existing records of the same id.
P	Direct output to the spooler.

Refer to the jQL documentation for explanation of the remaining SYNTAX ELEMENTS.

### NOTE:

T-LOAD can only be used on the default channel.

Records ids are displayed on suppressed depending upon the emulation mode.

### EXAMPLE

#### T-LOAD SALES WITH S.CODE EQ "DEF]"

Loads all records with first three characters of attribute, defined by S.CODE, equal to string "DEF" into file SALES. Do not overwrite any existing record ids.

## **T-CHK**

The T-CHK command reads the label and data blocks from the tape device, thus checking for tape parity errors. The T-CHK command will continue reading until an end of filemark, (EOF), or end of media, (EOM), is encountered.

### **COMMAND SYNTAX**

T-CHK {CHANNEL=channel}

### **SYNTAX ELEMENTS**

channel is the specific channel attachment (0-9).

### **EXAMPLE**

TCHK            The tape device is read up to the next end of file mark.

## **TRDLBL**

The T RDLBL command will read the first block from the tape device, determine if the block is a recognized label and either display the label information or inform the user that the media is not labelled.

### **COMMAND SYNTAX**

T-RDLBL {CHANNEL=channel}

### **SYNTAX ELEMENTS**

channel is the specific channel attachment (0-9).

## **SP-TAPEOUT**

Reads spooled print jobs from a tape device and requeues them to the current formqueue assignment.

### **COMMAND SYNTAX**

SP-TAPEOUT (n

### **SYNTAX ELEMENTS**

**n** is the number of print jobs to read and requeue.

### **EXAMPLE**

Attach the tape device using the T-ATT command and use T-FWD, if required, to position the tape media to the required print job record.

Assign the required formqueue by using the SP-ASSIGN command.

Execute the SP-TAPEOUT command;

```
SP-TAPEOUT (4
```

This command will read the next four print job files and spool them to the currently assigned formqueue.

## TDUMP

Dumps selected file records to the tape device.

### COMMAND SYNTAX

T-DUMP file-specifier {record-list} {selection-criteria} {sort-criteria} {USING file-specifier}  
{HEADING “label-text”} {(options)}

### SYNTAX ELEMENTS

**label-text** specifies up to 44 characters of text for the tape label. If you do not use HEADING with label-text, the file-name will be written to the label.

Option	Description
I	Display or suppress record ids as they are dumped
P	Directs output to the spooler

Refer to the jQL documentation for explanation of the remaining SYNTAX ELEMENTS.

### NOTES:

- T-DUMP can only be used on the default channel.
- T-DUMP will fail if the media has not been made write enabled.
- The records will not be sorted unless you specify a sort criteria clause.
- Records ids are displayed or suppressed depending upon the emulation mode.
- T-DUMP will write an end of filemark, (EOF), on the media after dumping all selected records.

### EXAMPLE

#### **T-DUMP SALES WITH S.CODE = “DEF”**

Dumps all records with attribute, defined by S.CODE, equal to string “DEF” from file SALES.

## TWEOF

WEOF command writes an end of filemark, (EOF), on the tape device media.

### COMMAND SYNTAX

T-WEOF {CHANNEL=channel}

### SYNTAX ELEMENTS

**channel** is the specific channel attachment (0-9).

#### NOTE:

Two consecutive EOFs without a tape label or any data blocks in between signify an empty tape file. Most device drivers and utilities determine this occurrence as end of media, (EOM), and will stop any further processing.

Most utilities which write to tape devices, e.g. T-DUMP, will automatically write an EOF after the data blocks of the tape file. Therefore executing a T-WEOF command after a T-DUMP will produce two consecutive EOFs, which can then be used to indicate end of recorded media to a reading utility program.

### EXAMPLE

## T-WEOF

Write an end of filemark, (EOF), at the current media position.

Positioning Commands

## T-FWD

The T-FWD command will forward space the tape device one block at a time by the number of blocks specified. If the block specification is omitted then the T-FWD command will execute a forward file search command for the next end of filemark, (EOF).

### COMMAND SYNTAX

T-FWD {CHANNEL=channel} {n}

### SYNTAX ELEMENTS

Channel is the specific channel attachment (0-9).

**n** is the number of blocks to move the tape forward.

### NOTE:

Some tape devices, cannot reliably perform forward spacing individual blocks and therefore specifying the number of blocks to forward space should be avoided for those devices other than half inch units as possible I/O errors can result.

If the end of filemark, (EOF), or end of media, (EOM), is detected while forward spacing or forward file searching then the block specification, if any, is overridden and the tape device positioned after the EOF.

### EXAMPLE

TFWD	FWD 10	the tape device is requested to forward space 10 blocks.
TFWD	FWD	The tape device is requested to forward search to the next end of filemark, (EOF).

## TBCK

This command will backspace the tape device one block at a time by the number of blocks specified. If the block specification is omitted then the T BCK command will execute a backward file search command for the previous end of filemark, (EOF).

### COMMAND SYNTAX

T-BCK {CHANNEL=channel} {n}

### SYNTAX ELEMENTS

- channel - is the specific channel attachment (0-9).
- n - is the number of blocks the tape is to backspace.

### NOTE

Some tape devices, e.g. streaming cartridge tapes, do not support any backspace commands. Other devices, e.g. 8MM devices, cannot reliably perform backspacing and therefore this command should be avoided for tape devices other than half-inch units as possible I/O errors can result.

If the beginning of tape, (BOT), is encountered while backspacing the tape device then the operation is aborted and the tape device repositioned to BOT. If an end of filemark, (EOF), is encountered while backspacing the tape device then the block specification, if any, is overridden and the tape device positioned before the EOF.

### EXAMPLE

T BCK 10	The tape device is requested to back space ten blocks.
T BCK	The tape device is requested to backward search to the previous end of filemark, (EOF).
T REW	The TREW command rewinds a tape device to beginning of tape, (BOT).

### COMMAND SYNTAX

T-REW {CHANNEL=channel}

## **SYNTAX ELEMENTS**

**channel** is the specific channel attachment (0-9).

## **EXAMPLE**

**T-REW**

**Request the tape device be rewound to BOT.**

## T UNLOAD

The TUNLOAD command requests the tape device to rewind and unload the media.

### COMMAND SYNTAX

```
T-UNLOAD {CHANNEL=channel}
```

### SYNTAX ELEMENTS

**channel** is the specific channel attachment (0-9).

#### NOTE:

Some tape devices do not support the unload command. In these cases, the usual action is to rewind the tape device.

### EXAMPLE

```
T UNLOAD          The tape device is requested to rewind and unload.
```

## **T ERASE**

The TERASE command erases a cartridge tape and repositions it at the beginning of tape, (BOT). The use of TERASE is recommended before writing data to a cartridge tape.

### **COMMAND SYNTAX**

T-ERASE {CHANNEL=channel}

### **SYNTAX ELEMENTS**

**channel** is the specific channel attachment (0-9).

### **NOTE:**

T-ERASE should only be used with streaming cartridge tapes or other tape devices capable of erasing the device.

T-ERASE will fail if the media has not been made write enabled.

### **EXAMPLE**

T-ERASE           Erases a streaming cartridge tape of all data.

## **TRETENSION**

This command retensions a cartridge tape by fast-forwarding to end of tape, (EOT), and then rewinding back to beginning of tape, (BOT). The use of TRETENSION is recommended before reading a cartridge tape.

### **COMMAND SYNTAX**

T-RETENSION {CHANNEL=channel}

### **SYNTAX ELEMENTS**

- channel is the specific channel attachment (0-9).

### **NOTE:**

T-RETENSION should only be used with streaming cartridge tapes or other tape devices capable of retensioning the device.

### **EXAMPLE**

T RETENSION - Retensions a streaming cartridge tape.

## T-STATUS

The T-STATUS command displays the status of attached tape devices.

### COMMAND SYNTAX

#### T-STATUS

T-STATUS reports, for each attachment, the following information:

- The port number to which the tape device is attached
- The port related process number, (PID).
- The attached channel specification.
- The tty output destination
- The user name
- The device type
- The block size
- The date and time of attachment

## Tape Labels

Some jBASE utilities such as T-DUMP generate a tape label as the first block on the tape file. Tape labels are used to identify the tape block size and the content of the tape file. Tape labels are required by some utilities for them to successfully extract data blocks from the tape device. The tape label, if present, is always the first block on the tape file. Use the TRDLBL command to register and display the label information. The T-READ command can also be used to view the tape label.

The label also contains date, time and reel information and may contain some user specified text for comments. The precise amount of text allowed depends upon the chosen type of tape label format.

The jBASE tape device driver supports two types of label:

SMA standard 80-byte label this is the default label type and allows 44 characters of user text.

50-byte label, which allows 16 characters of user text

Some interchange applications require that the tape label be suppressed. In this case, you should set the label type to zero or NONE.

## Troubleshooting Tape Problems

### Alternatives to T-READ

If you are experiencing trouble accessing the tape device using the T-READ command ensure that the device is correctly configured by using either the UNIX dd utility or the NT backup facility.

To read with the dd commands try the following command

- `dd if=/dev/rmt/devicename of=dummyfile`

To write with the dd commands try the following command.

- `dd of=/dev/rmt/devicename if=dummyfile`

To write an NT backup tape from the console as administrator select the following from the menus and select any directory for backup. NOTE:: that some tapes may need to be erased before the backup otherwise the backup program will not recognize the tape correctly.

### Admin Tools->Backup

If the device does not function as expected then contact your hardware representative, having first checked trouble scenario two.

If the device responds correctly then ensure that the device name is configured in the jBASE release device subdirectory, 'dev' for the device you are attempting to attach, also ensure that the device entry has read and write permissions for all users.

```
ls -l /usr/jbc3.0/dev/DAT1
```

```
rw-rw-rw 1 jBASEadm other 433 Sep 17 01:48 DAT1
```

```
DAT1
```

```
JBC__EDI -D/dev/rmt/DevName -R/dev/rmt/RewindDevName -B16384 -I DAT1 -M DAT -  
LR83,-2
```

### Variable Block Size

Some tape devices e.g. DAT and 8MM EXABYTE need to be configured for variable length.

To configure the device on some of the System V Release 4 UNIX systems try the following command, NOTE:: that a tape must be in the device and may need to be write enabled.

```
tapecntl -v /dev/rmt/devicename
```

On AIX, use the smit utility to configure the tape variable to zero.

NOTE: This command may need to be re executed when either the tape media is changed or the system rebooted depending upon platform.

Some variable length devices can return an error when an attempt to read the tape at a block size LOWER than the actual block size has been made. The result of the error is either translated as error '234' on NT or a zero byte transfer on UNIX, thus returning EOF status.

This can happen when the tape has been attached with the default settings. I.e. T-ATT DAT0 The problem is that the tape driver expects to read an 80-byte label as per the default configuration and so only requests 80 bytes from the device. However the label could be blocked at 16384 as per the data block and thus as the 80 byte request is less than the label block size then the above error situation occurs. This problem has been addressed in later versions of jBASE by changing the default device assignment.

So to avoid this problem use the following tape assignment.

**T-ATT LABEL=R83, 16384 SIZE=16384**

## Tape Labels

If you are having trouble reading a tape with the T-READ command or READT, it could be because the tape does not contain an expected label. The jBASE jbackup tape for example contains a 1000 byte label and a UNIX tar is usually blocked at 5120 bytes. Therefore, set the assignment label parameter to none and increase the requested block size.

```
T-ATT DAT0 LABEL=NONE SIZE=32256
```

### T-READ

#### Trouble reading a tape without a label.

If the tape you are trying to read does not contain a label then the block size can usually be determined from variable length tape devices by assigning the label to NONE and then reading a large block size. However, this method does not work with fixed length devices, as effectively there is not inter block gap. If the device is a QIC device then the tape can be read correctly by setting the label parameter to none and the block size to 512.

The above QIC method will fail if the tape was written at a block size not divisible by 512 due to the 512-byte padding that occurs. In this case, the original block size must be used however a good guess would be a block size of 8000, as this is the default used by some legacy systems.

## Reading from a 'dd' copy of a tape file

Sometimes it is necessary to transfer the tape file from the tape device to a disk file and then attempt to restore from the disk file. This can be because the tape device is not available on the target system or the tape copy needs to be delivered quickly over the network.

Care should be taken when transferring QIC tapes to tape files. If the block size of the QIC tape as specified in the label is NOT a multiple of 512 then each block will contain padding at the end of the block from the specified block size to a 512 multiple, this padding is usually performed by the QIC device. In this case, it is best to obtain a 512 multiple tape copy if possible. If not then a program is required to convert the disk image of the tape file to remove the padding.

Another common problem with transferring DAT tape files to disk is that the inter block gap that is available on the physical tape is no longer available on the disk image. This means that when you request a 16k block for a label from the disk image it will return a 16k block if enough data is available. This is unlike the physical tape file where the request would be truncated to only an 80 byte block due to the inter block gap. Therefore, always use a label size when reading from a disk image tape file.

```
dd if=/dev/rmt/ctape1 of=MyDatImage bs=16384
```

```
T-ATT FILE0 DEVICE=MyDatImage LABEL=ROS70,80 SIZE=16384
```

Or

```
T-ATT FILE0 DEVICE=MyDatImage LABEL=R83, 16384 SIZE=16384
```

NOTE: When using 'dd' to copy from physical tape to a disk image the 'dd' command will only copy ONE tape file at a time so for tapes with multiple tape files multiple 'dd' commands will be required, each to a unique file name.

## Restoring multiple tape volumes

Handling of end of tape is extremely unpredictable, as legacy vendors have tended to implement different schema, for handling the end of physical tape on different legacy devices. In addition, UNIX platforms do not tend to be consistent when returning an end of tape status, most return an end of file condition, which cannot be differentiated from a real end of file. Attempting to restore from multiple tape volumes should be avoided. NOTE: also that the 'dd' command cannot detect end of tape as such and so you should not attempt to 'dd' tape files across multiple tape volumes.

## Trouble reading from floppy

Floppy disks tend to be blocked at 512 bytes where the first 12 bytes of each disk block contain some header information. The jBASE floppy driver is by default configured to ignore the first 12 bytes of each block, NOTE: the -H12 option in the FLOPPY0 'dev' file. If all 512 bytes of the disk block is required then a new device file should be created and the -H12 option removed. NOTE: that all tape label options that apply to physical tape also apply to the floppy device.

## Trouble restoring an ACCOUNT-SAVE

Attempting to restore an ACCOUNT-SAVE can become very frustrating, this is due mainly to the variation of vendor save implementations, which can not only vary from platform to platform but also from device to device. There are three main types of ACCOUNT-SAVE format.

### **Type1: R83 jBASEd**

Usually preceded by two dummy tape files, the label block size is the same size as the data block size, of which only 80 bytes is valid. Therefore, try to attach the tape as follows for the various devices and then skip two blocks before attempting to restore.

```
SCT - T-ATT SCT0 LABEL=R83,8192 SIZE=8192
```

```
DAT - T-ATT DAT0 LABEL=R83,16384 SIZE=16384
```

```
FLOPPY - T-ATT FLOPPY0 LABEL=R83
```

```
8MM - T-ATT 8MM LABEL=R83,16384 SIZE=16384
```

## FILE-SAVE

Two preceding dummy tape files, then multiple tape files containing each account, then an empty tape file to signify end of save.

T-FWD

T-FWD

SYSRESTORE -b8

### ACCOUNT-SAVE

Two preceding dummy tape files, then a single tape file containing the account, then an empty tape file to signify end of save.

T-FWD

T-FWD

ACCOUNT-RESTORE -b8

### Type2: D3

Some D3 tapes contain a combination of six label and \_EOF sections before the data begins.

FLOPPY - T-ATT FLOPPY0 LABEL=NONE SIZE=500

FILE - T-ATT FILE0 DEVICE=... LABEL=NONE SIZE=512

## T-FWD 6

The (L option should then be used with ACCOUNT-RESTORE.

### Type3: ROS

Zero or two preceding dummy tape files and the label size is either 50 bytes if from an older REALITY system or 80 bytes from 6.0/3.0 systems onwards. NOTE: on QIC the label is always contained within the first 512-byte record. Therefore, try to attach the tape as follows for the various devices.

SCT - T-ATT SCT0 LABEL=ROS70,512 SIZE=8192

DAT - T-ATT DAT LABEL=ROS70,80 SIZE=16384

FLOPPY - N/A

8MM - T-ATT 8MM LABEL=ROS70,80 SIZE=16384

## FILE-SAVE

Two preceding dummy tape files followed by one continuous tape file containing all accounts on save, then an empty tape file to signify end of save.

T-FWD

T-FWD

SYSRESTORE -b4

ACCOUNT-SAVE

One tape file containing the account, then an empty tape file to signify end of save

**ACCOUNT-RESTORE -b4**

### **Type4: SEQ**

One or more preceding dummy tape blocks before the account data. The label size is usually sized at 80 bytes. Therefore, try to attach the tape as follows for the various devices.

SCT - T-ATT SCT0 LABEL=R83,512 SIZE=8192

DAT - T-ATT DAT LABEL=R83,80 SIZE=16384

FLOPPY - T-ATT FLOPPY0 LABEL=R83

8MM - T-ATT 8MM LABEL=R83,80 SIZE=16384

FILE-SAVE

Two preceding dummy tape files, then multiple tape files containing each account, then an empty tape file to signify end of save.

T-FWD

T-FWD

SYSRESTORE

ACCOUNT-SAVE

One dummy tape file then one tape file containing account data, then an empty tape to signify end of save.

T-FWD

ACCOUNT-RESTORE

NOTE: Later SEQUOIA save formats may only work with the ACCOUNT-RESTORE command.

## Manual Examination

If none of the above attachments resolves your problem then you need to investigate further. To do this set the label parameter to none and the block size parameter to 32256, then use the T-READ command to examine the tape.

**T-ATT DEV LABEL=NONE SIZE=32256  
T-READ**

If the T-READ returns EOF then the tape file is probably empty, so at least one T-FWD will be required.

If the T-READ returns a label block, 'i.e. \_L xxxx' where xxxx is a hexadecimal representation of the block size, e.g. 4000 is specifying this tape is blocked at 16384, and then this is either the start of the account data proper or a dummy label block. Continuing reading the subsequent blocks to determine if this real or garbage data. If this tape file stops after one or two blocks then it is most likely a dummy tape file and should be skipped. If no recognizable start of account data pattern is detectable at the first character position of subsequent blocks, i.e. '\_D' or '\_F' or '\_vr', then this is a dummy tape file, which should be skipped using a T-FWD.

When reading variable length tapes the T-READ command the actual block size of each record will be displayed. For example if the tape is assigned with LABEL=NONE and SIZE=32256 and the blocks returned from the DAT device are 80 bytes then 16384 then the following attachment should be tried.

**T-ATT DAT0 LABEL=R83,80 SIZE=16384**

If however the blocks returned are all 16384 then the following attachment should be used.

**T-ATT DAT0 LABEL=R83,16384 SIZE=16384**

# COMMENT SHEET

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