

AM-640

MAGNETIC TAPE BACKUP SOFTWARE

FIRST EDITION

August 1986

REVISIONS INCORPORATED	
REVISION	DATE

©1986 ALPHA MICROSYSTEMS

THE INFORMATION CONTAINED IN THIS MANUAL IS BELIEVED TO BE ACCURATE AND RELIABLE. HOWEVER, NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS OR USE OF THIS INFORMATION IS ASSUMED BY ALPHA MICRO.

This document applies to AMOS/L version 1.3B and later, and AMOS/32 version 1.0 and later.

This document may contain references to products covered under the following U.S. Patent Number(s): 4,530,048

THE FOLLOWING ARE TRADEMARKS OF ALPHA MICROSYSTEMS, SANTA ANA, CA 92799

AMOS
AlphaCALC
AlphaRJE

AM-100
AlphaFORTRAN
AlphaSERVE

AlphaACCOUNTING
AlphaPASCAL
AlphaWRITE

AlphaBASIC
Alpha Micro

ALPHA MICROSYSTEMS
3501 Sunflower
P.O. Box 25059
Santa Ana, Ca 92799

Table of Contents

1.0 NEW BACKUP COMMANDS 1

2.0 INITIAL INSTALLATION 2

3.0 SETTING THE TAPE DENSITY 2

4.0 BOOTING FROM THE MAGNETIC TAPE DRIVE 3

 4.1 Preparing a Warm Boot Tape 3

5.0 INFORMATION FOR SYSTEM PROGRAMMERS 4

 5.1 The Device Driver 4

 5.2 New Monitor Calls 4

6.0 COMMAND REFERENCE SHEETS 5

MTUDIR

MTURES

MTUSAV

AM-640 MAGNETIC TAPE BACKUP SOFTWARE

The AM-640 Magnetic Tape Subsystem supports the Alpha Micro VMEbus family of computers, the AM-1500 Series and the AM-2000 Series. Nine track magnetic tape has become the backup media of choice for large computer installations since it offers the potential for high speed transfer of large amounts of data. The AM-640 Magnetic Tape Subsystem offers both increased speed and increased tape capacity over its AM-600/T counterpart while maintaining compatibility with existing software and installed hardware.

The AM-640 also provides "Warm Boot" capability, enabling the computer to boot from a file on Magnetic Tape instead of from the System Disk.

This document supplements the information in the Alpha Micro System Operator's Guide on "The AM-600/T Magnetic Tape Utility Programs." The software is intended for use with AM-1500 Series and AM-2000 Series systems and the new VMEbus controller.

1.0 NEW BACKUP COMMANDS

In addition to the existing AMOS commands for transferring files to and from magnetic tape (TAPE, FILTAP, TAPFIL, and TAPDIR), several new commands have been added to enhance the performance of magnetic tape backup on VMEbus computers.

The new commands, **MTUSAV**, **MTURES**, and **MTUDIR**, are described in system command reference sheets attached at the end of this document. The individual reference sheets are designed so you can remove them from this document and file them alphabetically in your Alpha Micro System Commands Reference Manual.

If you have existing command files that contain the TAPE, FILTAP, TAPFIL, and TAPDIR commands, you can still run them without modification. However, the MTU commands described in the reference sheets will provide significantly better performance, and much higher reel capacity.

The new commands are able to achieve a data transfer rate of 2 Mb per minute, and because the subsystem can support tape units capable of 6250 BPI (Bits Per Inch) data density, it's possible to backup more than 130 Mb on a standard 2400 foot reel.

2.0 INITIAL INSTALLATION

The AM-640 Magnetic Tape Subsystem is composed of two circuit boards and the software to operate them in conjunction with the tape unit itself. The installation instructions that come with these pieces of hardware, "Installation Instructions for the AM-640 Magnetic Tape Subsystem," PDI-00640-00, describe the steps you need to follow to install the AM-515-10 circuit board and the AM-640 Paddle board. It also tells how to copy the files from the transfer medium onto your System Disk and how to modify your system initialization command file to use the magnetic tape subsystem. Consult your Alpha Micro dealer if you need help.

You can also add more magnetic tape units to your computer system in the future if you wish. Instructions for daisy chaining additional tape units and modifying the initialization file to recognize them are also contained in "Installation Instructions for the AM-640 Magnetic Tape Subsystem," PDI-00640-00.

3.0 SETTING THE TAPE DENSITY

The SET command allows you to alter the density of data for each magnetic tape units. For example, if you want to change the data density on magnetic tape unit MTU0: from 1600 to 6250 BPI, type:

```
_SET BPI MTU0:6250
```

The SET BPI command accepts any value for density, but rather than merely validating the value it receives, it rounds an inappropriate density value to the next lower valid size for the tape unit being set. The current settings will automatically display on your terminal screen after you use the SET BPI command so you can verify that you selected the correct value.

Also, the display of tape unit settings that result from using the SET BPI command includes the tape unit type in addition to the density when used with the AM-640. Consult the documentation that accompanies your tape unit to determine its allowable densities.

Keep in mind that a magnetic tape recorded at a certain BPI density can only be read by a tape unit which has the same density setting.

4.0 BOOTING FROM THE MAGNETIC TAPE DRIVE

The AM-640 Magnetic Tape Subsystem enables you to boot your computer from a specially prepared magnetic tape if it's unable to boot from the System Disk. This process is known as a "Warm Boot" and the specially prepared tape is known as a "Warm Boot Tape."

For your computer to boot from the Warm Boot file on the magnetic tape drive you need to change the setting of the alternate boot ID switches on the back panel of your computer. Refer to Chapter One of the Owner's Manual for your computer for its location. Normally, the Alternate device switches (1 through 4) are set in the off position to prevent the computer from trying to boot from an alternate device.

To enable the computer to boot from the Magnetic tape drive, set switch two ON like this:

Switch				Device
1	2	3	4	
0	0	0	0	*No Alternate Device
0	1	0	0	1/2 Inch Magnetic Tape

* Standard Factory Setting

(In the diagram above, a zero (0) represents OFF, and a one (1) represents ON.)

After you've reset the alternate boot device switches, mount the warm boot magnetic tape on device MTU0: and press the RESET button. The computer will read the warm boot monitor and get itself up and running. Depending on the diagnostic programs you've included on the tape as part of the warm boot monitor, you can troubleshoot the System Disk and determine why it wouldn't boot in the first place.

When your computer is back to normal, remember to set the alternate boot switches back to their former positions (all OFF).

4.1 Preparing a Warm Boot Tape

To make a Warm Boot Tape, follow the instructions in the WRMGEN reference sheet in the System Commands Reference Manual for your system. The WRMGEN command enables you to build a special monitor file that contains the various programs you feel you might need to get your computer up and running if it's unable to boot from its System Disk.

Use the MTBOOT command, also described in the System Commands Reference Manual for your computer system, to transfer the Warm Boot file onto a blank magnetic tape.

Note that a magnetic tape cannot contain both a warm boot monitor and data files.

5.0 INFORMATION FOR SYSTEM PROGRAMMERS

In addition to the three new magnetic tape backup commands, there have been some changes and additions that are of special interest to system programmers.

5.1 The Device Driver

To maintain compatibility with the new software designed for the AM-640 subsystem, several changes were required to the AM-600 driver program, MTU.DVR. The first is the addition of support for the density setting monitor call described below. Previously, the density setting function was only available from the SET program. The addition of this call should have no effect on existing software.

The second change concerns the handling of the end of tape condition. Previously, upon detecting end of tape during a write operation, the driver would perform a backspace, write a filemark, and return a "device full" error code. This enforced a certain type of end of tape handling that was not compatible with the new backup software. The new version of the MTU.DVR program simply writes a single filemark, places the "device full" error code into the DDB, and returns to the calling program, leaving all other end of tape handling to the program. This should not have any impact on existing software.

5.2 New Monitor Calls

Three new tape oriented monitor calls are available to provide device-independent access to certain tape drive configuration functions. The calls TAPTYP, TAPDEN, and TAPSPD allow specification of drive type, recording density, and drive speed, respectively. These calls are only valid on 9-track magnetic tape units and will be ignored by other tape devices.

To use these new monitor calls you need to update your SYS.M68 file. Log into account DSK0:[7,7] and use the AlphaVUE text editor to edit SYS.M68. Locate this statement:

```
DEFINE DEVCHR DDB,BLK
```

Immediately above this line, add the following three statements:

```
DEFINE TAPDEN DDB=SVCA 127,DDB,#^034,D6
DEFINE TAPSPD DDB=SVCA 127,DDB,#^036,D6
DEFINE TAPTYP DDB=SVCA 127,DDB,#^040,D6
```


Finish out of AlphaVUE, and use the M68 assembler to regenerate the SYS.UNV file. You will now be able to use the new tape control monitor calls. An updated version of the SYS.M68 file will be supplied with the next AMOS operating system release.

All three of the new calls (TAPDEN, TAPSPD, and TAPTYP) share a common calling format. The first argument is a DDB referencing the magnetic tape drive in question. Each also takes an argument contained in the D.ARG field within the DDB. If the specified argument is a -1, the call simply returns the current setting. Any other value attempts to set the appropriate parameter to the specified value. If the specified value is not supported by the particular drive, the drive will adjust the value to the nearest supported value and return the actual value used in D.ARG. Thus by checking the contents of D.ARG after the monitor call, a program can determine the exact value in use by the tape drive.

For example, to set a tape drive (referenced by "DDB") to 6250 BPI, you could use the following code:

```

MOV      #6250.,DDB+D.ARG(A5)      ; try for 6250
TAPDEN   DDB(A5)                   ; set the density
MOV      DDB+D.ARG(A5),D6          ; get density actually used
CMP      D6,#6250.                 ; did we get what we wanted?
BNE      NOGO                      ; no --

```

6.0 COMMAND REFERENCE SHEETS

The following pages are composed of System Command Reference Sheets for the MTUDIR, MTURES, and MTUSAV commands. After you've read them and are familiar with the new magnetic tape backup commands, you can remove them and file them alphabetically in your Alpha Micro System Commands Reference Manual.

mtudir

FUNCTION:

Displays a list of the files on a magnetic tape backup created by MTUSAV. Can also create a disk file containing the magnetic tape directory.

HINTS/RESTRICTIONS:

MTUDIR can only read magnetic tapes created by the MTUSAV command.

Used in combination with MTUSAV (to back up disk files onto magnetic tape) and MTURES (to restore the files from the magnetic tape to the disk). For additional information, see the command reference sheets for MTUSAV, MTURES, WRMGEN, REWIND, SET, SKIP, TAPFIL, TAPDIR, FILTAP, and MTBOOT.

A group of files that is backed up onto magnetic tape at the same time by the same MTUSAV command is known as a "save set." A save set can extend to more than one reel of tape.

MTUDIR accepts full wildcard specifications which select the files to be listed in the directory. (The account and device portions of the specification refer to the disk account and device from which the files were originally backed up.)

See the AMOS User's Guide for information on wildcard file specifications. MTUDIR is similar in use to VCRDIR and DIR. (See the VCRDIR and DIR reference sheets.)

FORMAT:

```
._MTUDIR {listfilespec=}inspec1{,inspec2...}{/switches} (RET)
```

where the optional listfilespec specifies a disk file to contain the tape directory display. The inspecs are the files on the tape whose directory listing you want to see. If you want to see a list of all the files on a tape, enter:

```
._MTUDIR ALL:[] (RET)
```

DEFAULTS:

The default listfilespec is DIRECT.LST in the account and device you are logged into. The default inspec is *.* and the account and device you are logged into.

OPTIONS:

The only switch for use with MTUDIR is:

`/KILL` or `/K` Causes MTUDIR to delete any existing listfile that matches the specified listfilespec before creating the new listfile. `/KILL` is an operation switch; it may appear anywhere in the command line.

OPERATION:

1. Type MTUDIR followed by an optional listfilespec and equal sign. Then type any input file specifications, and press RETURN. The listfilespec specifies a disk file that will contain the directory display.

If you omit the listfilespec and the equal sign, MTUDIR sends the display to your terminal. If you omit the listfilespec and include the equal sign, MTUDIR uses the default listfilespec `DIRECT.LST` and the account and device you are logged into.

For example, to send a directory display of all the `.DAT` and `.BAS` files on a magnetic tape to your terminal, type:

```
._MTUDIR ALL:[]*.DAT,*.BAS (RET)
```

2. MTUDIR begins by asking you for the unit number of the magnetic tape:

Enter tape unit number:

Enter a single digit from 0 to 7 corresponding to the unit number of the tape drive you wish to use.

3. MTUDIR displays the reel label for the reel mounted on the selected unit.

Note that beginning a directory display with a tape from the middle of a multi-reel save set may result in error messages being displayed while MTUDIR tries to synchronize itself with the tape's directory structure.

The display looks something like this:

Backup media is labeled as:

MAGTAPE-01 07/14/86 (17:59)

Created on 14 July 1986 at ALPHA MICRO on AM1545 by O.HARDY

Reel Number 1

1	DSKO: PGM	BAS	200,0	24	L
2	DSKO: NBSORT	BAS	200,0	17	L
3	DSKO: DIAGRM	BAS	200,0	36	L
4	DSKO: JEDI	DAT	200,0	11	C

Total of 4 files in 88 blocks

After displaying the label information, MTUDIR displays a line of data for each selected file in the directory. The first number on the line tells you the file's relative position on the tape. Next you see the device specification of the file as it appeared on the disk it was backed up from. The next number tells you the number of disk blocks the file takes up. The letter following the block count tells you whether the file is a sequential, or linked file ("L"), or a random, or contiguous file ("C").

At the end of the directory display, MTUDIR tells you how many files were listed in the display.

4. To create a disk file containing the directory display, specify a listfile (or just include an equal sign ahead of the inspecs). For example:

```
_MTUDIR =ALL:[]*.DAT 
```

ERRORS:

?More than one output specification.

Only a single output specification is allowed.

?Cannot read MTUn: - explanation

MTUDIR is not able to read from the tape unit for the reason given as explanation. Make sure you specified the correct tape drive, and that it has the correct tape mounted on it.

%Bypassing bad directory block.

While looking for a tape directory block, MTUDIR did not find one when expected. The bad block is bypassed and MTUDIR continues to look for a directory block.

%End of reel, please mount next tape in save set and press

% RETURN to continue, or press control-C to cancel directory.

MTUDIR is finished with the current reel of tape. Remove it and mount the next reel in the save set and press RETURN. To cancel the directory listing at this point, press control-C.

%Drive is not on-line and at load point.

% Please correct, then press RETURN when ready.

The tape drive you specified in either not on line or the tape is not positioned at load point. Make sure you specified the correct tape unit number.

%Tape is not file structured.

% Please correct, then press RETURN when ready.

The tape you have mounted is not in MTUSAV format. Make sure the correct reel of tape is mounted on the correct tape unit.

CHARACTERISTICS:

A file-oriented magnetic tape directory program that displays a directory of a magnetic backup tape that was created by MTUSAV. Allows you to specify wildcard file specifications. Sends the display to your terminal, a disk file, or a printer.

The default listfilespec is DIRECT.LST in the account and device you are logged into. The default input file specification is *.* and the account and device you are logged into. The device and account portions of the input file specification specify the disk account and device from which the files were originally backed up by MTUSAV.

mtures

FUNCTION:

Writes files from magnetic tape to disk. Allows you to restore file-oriented disk backup from magnetic tape to disk.

HINTS/RESTRICTIONS:

Used in combination with MTUSAV (to write disk files onto the magnetic tape) and MTUDIR (to display a list of files contained on a particular magnetic tape). Only reads tapes that were created with the MTUSAV command. Not for transferring data between Alpha Micro and non-Alpha Micro computers. For more information, see the command reference sheets for MTUSAV, MTUDIR, WRMGEN, REWIND, SET, SKIP, TAPFIL, TAPDIR, FILTAP, and MTBOOT.

You may not restore files to a disk account unless you are logged into that account or the system operator's account, [1,2]. If you are logged into [1,2], the default output account specification is [], and if the account you are copying to does not exist, MTURES creates it. You may copy files into the account you are logged into from any other account, regardless of project number.

MTURES is a wildcard command. (See the AMOS User's Guide for information on using wildcard commands.)

The input specification must give the full specification of the files you want to transfer from the magnetic tape, including device and account specifications of the files as they were written to the tape.

The output specification allows you to specify the device and account the files are to be written to on the disk, and to rename the files as they are written out to the disk. A group of files that is backed up at the same time onto magnetic tape by the same MTUSAV command is known as a "save set." A save set can extend to one or more reels of tape.

It is a good idea to run DSKANA after you have finished running MTURES, to insure that no errors were introduced into the bitmap. This is especially true if you used Control-C to interrupt the restore process, since the bitmap might be disorganized.

FORMAT:

```
._MTURES {outspec}=inspec1{,inspec2...}{/switches} (RET)
```

where outspec specifies the files to be created on the disk, inspec specifies the files to be transferred from the magnetic tape (including the disk device and account specifications originally

associated with the files when they were backed up on the tape by MTUSAV), and /switches specifies MTURES options.

DEFAULTS:

You may give an input specification for the files you wish to restore, or you may let the input specification default to the device and account you are logged into by typing:

```
._MTURES {outspec}=*.TXT (RET)
```

(The command above will restore only the files on the magnetic tape that were originally copied from the device and account you are logged into. Where they will go to on the disk will depend on the output specification.)

The output specification defines which device and account the magnetic tape files are to be written onto the disk. It also allows you to rename the files as they are written onto the disk, if you choose.

The output specification defaults to the input specification in the case of the filename and extension, and to the account and device you are currently logged into.

Therefore, if you do not specify a device (such as DSK0:), everything on the tape will be written to the device you are logged into. For example, if you are logged into DSK0:, everything on the tape will be written onto DSK0: even if the files were originally backed up from other disks.

Be careful to specify an output specification if the files on the tape came from more than one disk. Unless, of course, you do intend to transfer them all onto one disk.

If you are logged into the System Operator's account, [1,2], the default output specification is [] (all accounts). This means that files will be restored to their original account numbers (from which they were backed up onto the tape).

The input specification defines which files on the magnetic tape are going to be restored to the disk. If you enter an input specification, give the full specification of the files you want to transfer from the tape, including the device and account specifications of the files as they were backed up onto the tape.

If you do not specify an input specification, MTURES defaults to the account and device you are currently logged into. This is useful if all the files you wish to restore came from the same device and account. For instance, if you wish to restore only the files on the tape that come from account [100,0] on the disk device you are logged into, you can do this by logging into [100,0] and typing:

._MTURES =*.* (RET)

To restore all the files on the tape to the disks and accounts they were originally backed up from, log into account DSK0:[1,2], and type:

._MTURES =ALL:[] (RET)

OPTIONS:

Use the switches below to select MTURES options. Each switch must begin with a slash. Remember that the placement of the switch in the command line modifies its effect. The default switches are /NOQUERY and /DELETE.

/QUERY	or /Q	Ask user for confirmation before selecting files (file switch).
/NOQUERY	or /NOQ	Don't ask for confirmation before selecting files (default, file switch).
/DELETE	or /D	Copy over to an existing file, thus deleting it (default, file switch).
/NODELETE	or /NOD	Don't copy over to an existing file (file switch).

OPERATION:

1. Type MTURES followed by an optional output specification, an equal sign, and the input specification(s). Press RETURN. The output specification determines where the files are to be placed on the disk; the input specification selects the files to be copied from the tape. For example, to copy from a magnetic tape all .BAS files that were originally backed up from account [110,2] on DSK2: over to your current account, type:

._MTURES =DSK2:*.BAS[110,2] (RET)

You may specify wildcard file specifications to MTURES (as in the input specification *.BAS above). Here's another example which also includes an option switch:

._MTURES *.OLD[]=DSK3:*.BAS[10,*]/QUERY (RET)

2. After you press RETURN, MTURES begins by asking you for a Magnetic Tape Unit number:

Enter tape unit number:

Type a digit from 0 to 7 corresponding to the tape unit you wish to use, and press RETURN.

3. MTURES scans the directory on the tape and displays a list of the files that fit the specification you entered earlier. If you used the /QUERY switch, MTURES waits after the appropriate statement for you to respond Y for yes or N for no. You don't need to press RETURN. For example:

```

MTU0:DSK3:NEW.BAS[10,3] to DSK2:NEW.OLD[10,3] ? Y
MTU0:DSK3:B32.BAS[10,4] to DSK2:B32.OLD[10,4] ? Y
MTU0:DSK3:SCRTCH.BAS[10,6] to DSK2:SCRTCH.OLD[10,6] ? N
Total of 2 files in 78 blocks transferred.

```

4. MTURES requires that the first reel mounted be the first reel of a save set, and that each subsequent reel be from the same save set, and be in the correct order. If MTURES detects an out-of-sequence reel, it displays a message on your terminal and gives you a chance to mount the correct one. MTURES prompts you each time a new reel is required.
5. When the restore is finished, you can rewind the tape and return it to its storage location.

ERRORS:

?More than one output specification.

Only one output file specification is allowed before the equal sign. Retype the command line and try again.

?Missing output specification.

MTURES requires at least an equal sign to separate the outspec from the inspecs. If you do not place a specific outspec ahead of the equal sign, MTURES uses the default value.

%Bypassing bad directory block.

While looking for a tape directory block, the software did not find one when expected. The bad block is bypassed and MTURES continues to look for a directory block.

%Tape is not first reel of save set

% Please correct, then press RETURN when ready,
% or press control-C to abort.

The first reel of a save set must be the first one mounted. (It contains the directory of all the files backed up in a particular save set.)

%Not Copied - Destination file already exists.

You specified the /NODELETE switch and the destination file already exists.

%End of reel, please mount next tape in save set and press
% RETURN to continue, or press control-C to abort restore.

MTURES has finished the current reel. Remove it and mount the next.

%Drive is not on-line and at load point.
% Please correct, then press RETURN when ready,
% or press control-c to abort.

The tape drive is either not on-line or the tape is not positioned at load point. Correct the situation and continue.

%Tape is not file structured.
% Please correct, then press RETURN when ready.

The tape on the drive you specified was not created in MTUSAV format. Make sure you have the correct reel of tape, and that you specified the correct tape unit number.

%Tape is not from the same save set or is out of sequence.

You can only restore files from one save set at a time. And all the tapes in a single save set must be read in the correct order.

?Unit number must be between 0 and 7.

Alpha Micro computers support a maximum of eight magnetic tape units. All tape unit numbers must be in the range of 0 to 7.

?Device Full

There is no more room on the disk to restore files. You can make more space by erasing unwanted files, or you can select a different output device.

?You are not logged in under [1,2], you can't create [p,pn].

MTURES can only create accounts if you are logged into account [1,2] on your disk. Otherwise, files restored from the tape must be copied into accounts that already exist.

CHARACTERISTICS:

A file-oriented program that transfers files from magnetic tape to the disk. You must specify the account and device that the files were originally backed up from. Allows you to rename files.

Not for transferring data between Alpha Micro and non-Alpha Micro computers.

Accepts wildcard specifications. The output specification defaults to the input specification for the filename and account number. The input specification defaults to *.* and the account and device you are logged into. Default switches are /NOQUERY and /DELETE.

mtusav

FUNCTION:

Writes copies of disk files to magnetic tape. A file-oriented disk backup program.

HINTS/RESTRICTIONS:

Used for file oriented disk backup. Writes files to magnetic tape along with their disk device and account specifications. Also writes date and reel number of backup. Used in combination with MTURES (to transfer files from magnetic tape back to the disk) and MTUDIR (to list a directory of files on a tape). For additional information, see the reference sheets for MTUDIR, MTURES, WRMGEN, REWIND, SET, SKIP, TAPFIL, TAPDIR, FILTAP, and MTBOOT.

Spawns a slave job during the backup process. Therefore, requires that the JOBS statement in the system initialization command file be incremented by at least one job more than the number of jobs allocated in the JOBALC statements.

IMPORTANT NOTE: Before using MTUSAV, you should always use the DSKANA program to check the device for errors. If there is a problem on the disk that you copy from, you may not be able to restore from the tape later.

MTUSAV is a wildcard command. See the AMOS User's Guide for information on using wildcard specifications.

You may back up files from any disk account onto tape whether or not the account is within the project you are logged into. A group of files that is backed up at the same time by the same MTUSAV command is known as a "save set." A save set can extend to more than one reel of tape.

Although MTUSAV records the disk file specification on the tape along with the file, it does not transfer any password that might be associated with that disk account.

MTUSAV is for file backup only; not for transfer of data between Alpha Micro and non-Alpha Micro computer systems. Because MTUSAV writes the date of backup to the tape, you should remember to use the DATE command to make sure the system date is correct before you use MTUSAV.

FORMAT:

_MTUSAV filespec{,filespec...}{/switches} **(RET)**

where filespec specifies the files you want to back up onto magnetic tape, and /switch specifies an MTUSAV option.

DEFAULTS:

The default file specification is *.* and the account and device you are logged into. The default switches are /NOQUERY and /NOSUPPRESS.

OPTIONS:

Valid switches for use with MTUSAV are:

/QUERY	or /Q	Ask user for confirmation before selecting file (file switch).
/NOQUERY	or /NOQ	Don't ask for confirmation before selecting file (default, file switch).
/SUPPRESS	or /S	Do not list files on the terminal as they are backed up (file switch).
/NOSUPPRESS	or /NOS	List files on the terminal as they are backed up (default, file switch).

NOTE: Using the /SUPPRESS switch can speed up the backup process on very fast disk drives as it eliminates any possibility of limiting the backup speed to the output speed of the terminal.

OPERATION:

1. Before mounting a reel of magnetic tape on your tape drive, make sure it has a write-enable ring installed. MTUSAV won't be able to transfer any files onto the tape without it.
2. Type MTUSAV followed by the specifications selecting the files you want to back up onto magnetic tape, and press RETURN. For example:

```
._MTUSAV MEMO.TXT,SCHDLE.TXT[310,2] (RET)
```

3. MTUSAV begins by asking you for the unit number of the magnetic tape drive:

Enter tape unit number:

Enter a digit from 0 to 7 corresponding to the tape drive you wish to use. MTUSAV then prompts you for information it will store in the save set label. The label information consists of the Volume name (maximum of 40 characters); Volume ID (maximum of 10 characters); Installation (maximum of 30 characters); System (maximum of 30 characters); and Creator (maximum of 30 characters).

4. Now MTUSAV begins copying the files onto the tape. If all the specified files won't fit on a single reel, MTUSAV prompts you to mount a new reel of tape.

As you remove each reel of tape, be sure to label the outside of each one with a general description of its contents so you can tell at a glance which reel is which. Also remove the write-enable ring to prevent the backup files from being accidentally overwritten. Put the write-enable ring in a new reel of tape, mount it on the drive, and press RETURN to continue the backup.

This process will continue until all the specified files have been backed up.

ERRORS:%Field size exceeded, please reenter.

You have tried to enter more characters than the current label field can handle. Shorten the caption and try again.

?Unable to spawn slave task.

MTUSAV is not able to spawn its required slave task. Check your system initialization command file and make sure the number of jobs in the JOBS statements is two or three more than the number of job names listed in the JOBALC statement(s).

?Unit number must be between 0 and 7.

All tape unit numbers must be in the range 0 to 7.

?Insufficient memory to run MTUSAV - at least 64K is needed.

Be sure you have at least 64K in your job partition before attempting to run MTUSAV.

%Tape is full, please mount another tape then press RETURN to % continue, or press control-C to abort backup.

The current reel of tape is full. Remove it, label it, and mount another reel to continue the backup process.

%Drive is not on-line and at load point.% Please correct, then press RETURN when ready.

The tape drive is either not on-line or the tape is not positioned at load point. Also, make sure you specified the correct tape unit number.

%Tape is file protected - please insert a write ring or % mount a different tape, then press RETURN when ready.

The tape must be write-enabled for MTUSAV to use it. Check to make sure you have mounted the correct tape; and if so, install a write ring to continue.

?Unable to continue writing to tape - (explanation).

MTUSAV is not able to write to the tape drive for the reason given as (explanation).

CHARACTERISTICS:

MTUSAV is a file-oriented disk backup that allows you to copy disk file to magnetic tape. Not for transferring data between Alpha Micro and non-Alpha Micro computer systems.

Accepts wildcard file specifications. Default specification is *.* and the device and account you are logged into. The default switches are /NOQUERY and /NOSUPRESS.

TECHNICAL PUBLICATIONS READERS COMMENTS

We appreciate your help in evaluating our documentation efforts. Please feel free to attach additional comments.
If you require a written response, check here:

NOTE: This form is for comments on documentation only. To submit reports on software problems, use Software Performance Reports (SPRs), available from Alpha Micro.

Please comment on the usefulness, organization, and clarity of this manual:

Did you find errors in this manual? If so, please specify the error and the number of the page on which it occurred.

What kinds of manuals would you like to see in the future?

Please indicate the type of reader that you represent (check all that apply):

- Alpha Micro Dealer or OEM
- Non-programmer, using Alpha Micro computer for:
 - Business applications
 - Education applications
 - Scientific applications
 - Other (please specify):

- Programmer:
 - Assembly language
 - Higher-level language
 - Experienced programmer
 - Little programming experience
 - Student
 - Other (please specify):

NAME: _____ DATE: _____

TITLE: _____ PHONE NUMBER: _____

ORGANIZATION: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP OR COUNTRY: _____

FOLD

PLACE
STAMP
HERE

CUT ALONG LINE

alpha micro

3501 Sunflower
P.O. Box 25059
Santa Ana, CA 92799

I: TECHNICAL PUBLICATIONS

FOLD