MRBackup

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Chapter 1

MRBackup

1.1 MRBackup SCSI Tape Support

If you are regularly backing up more than 20MB of data, you really should
consider the purchase of a streaming SCSI tape drive. Chances are, you
already have the requisite SCSI interface controller (to interface and
control your hard disk drive) so you will only need to aquire a tape drive.
SCSI tape drives are becoming more and more affordable, with several good
quality units available in the under $300 price range. Tape cartridges
cost about $20 each. The time and aggravation you'll save are inestimable
in their value. Also, since you'll be much more likely to perform regular
backups with such a painless medium, your system will be much more secure.
Do yourself a favor!

A SCSI tape handler is provided with MRBackup and is installed as a part of
the standard MRBackup installation procedure. To use it, you must perform
the following steps:

·   If it isn't already present, copy the MRBackup tape handler,
    MRTape-Handler to the L: directory:

    COPY MRBackup:L/mrtape-handler to L:

·   Add the supplied device mountlist entry to your DEVS:Mountlist file,
    using a text editor or, if you are running WorkBench 2.04 or above,
    just copy the mountlist entry file to the DEVS: directory. The
    mountlist entry provided with MRBackup is named "mountlist.mrtape".
    It contains the following:

```
    MRTAPE: Handler = l:mrtape-handler
        StartUp = "128/scsi.device/4/0/3"
        Stacksize = 4000
        Priority = 5
        GlobVec = -1
    #
```

You may need to change the "Startup" line. The expression to the right of
the equal sign (=) has the following format:

    "<buffer_size>/<device_driver>/<device_number>/<luno>/<flags>"

The beginning and ending double quotes are required if you are using the standard AmigaDOS Mount command.

The <buffer_size> parameter is specified in multiples of K (K=1024). The example value of 128, above, provides double-buffering for the WangTek model 5XXX-ES tape drives, which have an internal 64K buffer.

The <device_driver> parameter specifies the device driver to be used to talk to the device. Use "scsi.device" with the CBM A2091 SCSI controller. Consult your owner's manual if you are using a non-Commodore SCSI controller. Also, note that this field is case-sensitive. If your device driver's name has upper case or mixed-case letters in its name, be sure you specify this field exactly as the driver is named.

The <device_number> parameter specifies the SCSI device number, usually established by jumpers or DIP switches or jumpers on your tape drive.

The <luno> (logical unit number) field is not currently supported and must be zero.

The <flags> parameter is a specially encoded value which selects certain features of the tape drive. Each bit position in the <flags> parameter has a unique value (1, 2, 4, etc.). Various feature selections can be made by adding these values together. The current feature values are:

1 - asynchronous mode
2 - use on-board hardware buffering

Thus, to select both asynchronous mode and on-board buffering, you would add these values together for a <flags> value of 3.

Once the above steps have been performed, you must mount the MRTAPE: device. This is done with the following command:

    MOUNT MRTAPE: or

    MOUNT MRTAPE: FROM DEVS:mountlist.mrtape (AmigaDOS 2.04)

You may then specify MRTAPE: as your Backup Path. You may also automate the device mounting process by placing the above command in your S:Startup-Sequence (or S:StartupII) file.

Special Features of MRTape-Handler
The tape handler provided with MRBackup, MRTape-Handler, is designed to work with a wide array of tape devices from many different vendors. Though you many not redistribute this handler, you are welcome to use it with other Amiga applications. When used with MRBackup, MRTape-Handler can communicate certain information to MRBackup which will allow dynamic tuning of the buffers used to transfer data between the two processes.

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1.2   asynchronous vs. synchronous mode

MRTape-Handler supports both synchronous and asynchronous tape access. In
synchronous mode, the program requesting a tape operation must wait until
that operation completes before it can continue. In asynchronous mode,
MRTape-Handler will attempt to complete the operation "on its own time", in
parallel with the requesting program's activity. Thus, asynchronous mode
generally yields better performance. However, we do not live in a perfect
world.   Certain combinations of tape drive and SCSI controller can lock up
(hang) the Amiga when run in asynchronous mode. We have yet to see a
definitive solution to the problem though many hardware "hacks" have been
offered. Synchronous mode seems to fare better in these situations.

1.3   multiple save sets on one tape

MRTape-Handler has the ability to "stack" multiple savesets on a single
tape cartridge.   This is achieved by a slight modification to the device
naming conventions used by the MRTape-Handler. Normally, when you specify
the tape device name as "MRTape:", the tape is rewound prior to the start
of the backup and any information previously written to the tape is
overwritten.   To append a new saveset to the end of a tape cartridge which
already contains one or more savesets, simply append an "A" to the tape
device name (e.g. "MRTape:A"). Prior to writing the new saveset, the tape
is positioned past the end of the last saveset on the tape.

To restore from a saveset which is not the first saveset on the tape, you
must append the saveset number to the tape device name. Saveset numbers
begin with zero. Therefore, to retrieve the third saveset, you must append
a "2" to the tape device name. Example: "MRTape:2". The only "trick" to
all of this is to remember the order of your savesets. MRBackup currently
doesn't provide any means to record this information. Thus, you should
keep this information in a notebook or in a text file on your system.
Should you forget, however, this information is very easily retrieved with
MRBackup's Scan Tape command. Improvements on this capability are planned
for a future release of MRBackup Professional. You should also be aware
that this capability only exists for "sequential access" tape drives such
as the Tandberg, WangTek, Sony, etc. This is because MRBackup depends upon
tape marks to separate its savesets. Drives which employ "direct access",
such as the 3M drive, will not support this feature.

1.4   using mrbackup with other handlers

The decision to use a tape handler, rather than embedding tape-specific
code in MRBackup was an important one. Though there may be a minor penalty
in performance, the net result is that MRBackup is adaptable to other
third-party handlers (public domain, shareware or commercial) which may be

developed for specific devices suitable for backups. If the tape handler
supplied with MRBackup Professional doesn't appear to be performing
optimally with your particular device, don't hesitate to try another
handler which you suspect might work better. Of course, we would be very
grateful for any information you pass back to us with regard to any
problems you might encounter. We are constantly striving to improve the
quality of MRBackup Professional.