MRBackup

COLLABORATORS

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Welcome to MRBackup Professional!

1.2   MRBackup.guide/Introduction

```
Introduction
************
```

MRBackup is a hard disk backup program for the Commodore Amiga family of
computers. It provides a wide range of services to support Amiga file
management and backup/restore of files to/from hard disk. Files can be
backed up to:

    * Floppy disk, in AmigaDOS format

    * Floppy disk, in a special "fast" format

    * Any sequential file or device (local or networked) in "fast" format

    * SCSI streaming tape

A saveset catalog file is created for each saveset, allowing quick
retrieval of individual files when necessary. Should the catalog file
become damaged or lost, MRBackup can recreate it by scanning the
saveset.

MRBackup is designed to behave well in your Amiga's multi-tasking
environment. It does not "take over the machine" and will allow you to
use your Amiga for other activities while backups are being performed.
MRBackup is controlled by a flexible set of user-configurable
parameters and offers a wide range of backup and restore options. Its
Intuition-based user interface is designed for a pleasing appearance
and ease of operation.

MRBackup uses the Amiga's speech capabilities to provide an effective
means for presenting prompts, error conditions and requests for floppy
disk insertions, etc. While DEVS:narrator.device and
LIBS:translator.library are no longer shipped with the Amiga operating
system, you can copy them from your older copies of the AmigaDOS
installation disks and they will work just fine.

MRBackup provides optional data compression which will reduce the
number of diskettes (or other media) required for a backup.

1.3 MRBackup.guide/Requirements

Requirements
****

The following minimum requirements should be met in order to assure
proper operation of MRBackup Professional:

    * any Amiga system with at least 1 MB memory and AmigaDOS 2.04 or
      higher

    * at least 1 floppy disk drive or SCSI streaming tape drive (Archive
      Viper, Wangtek 50XX, TEAC 36XX, Sony DAT, etc.)

    * MRBackup will work with any hard drive supported by the AmigaDOS
      operating system.

1.4 MRBackup.guide/Installation

```
Installation
************
```

Since MRBackup Professional is shareware, you most likely downloaded it
from a BBS or other information service in the form of an Lha archive.
If you received it directly from MRsoftware, you can skip over this
part and proceed to the permanent installation procedure. The MRBackup
Professional archive must first be unpacked to a disk or directory.
The archvie contains the necessary directory structures to unpack it to
your hard disk or a freshly formatted diskette without any other
preparation. Simply change the current directory (CD) to the target
area and use the following command to unpack the archive:

```
    lha -xa x archive_name
```

where "archive_name" is the name of the MRBackup Professional archive
(e.g. MRBK200.lha).

```
Permanent Installation Procedure
================================
```

Once the archive has been unpacked to the temporary installation
directory, you must run the Installer (tm) to install the software in
its permanent location. From the Workbench, you can simply
double-click on the icon labeled "Install-MRBackup". From the CLI, you
must enter the installation directory (e.g. CD MRBackup_200) and run
the Installer with the Install-MRBackup script as its parameter:

```
    Installer Install-MRBackup
```

IMPORTANT NOTE: this version of the software requires the definition
of an AmigaDOS logical name, MRBackup:. This name is equated to the
name of the partition or directory where MRBackup Professional is
installed. This logical name will be created during installation. You
will be requested for permission to make changes to your s:user-startup
sequence file such that this name is defined each time you boot your
Amiga. If you choose "Skip this part" in response to this request, you
must provide an alternate means for defining the MRBackup: logical name
prior to using MRBackup Professional.

```
The MRBackup: Directory
=======================
```

This section briefly describes the contents of the MRBackup directory.
The only required subdirectory is the Help directory. None of the
others are an absolute requirement but it is strongly suggested that
you adopt this configuration.

```
Files in the MRBackup: Directory
--------------------------------
```

The following files will be found at the top level of the MRBackup:
directory.

Compressor

This program file is MRBackup Professional's data compression "engine".
It is automatically started by MRBackup Professional when data
compression or decompression is requested.

MRBackup

This is the MRBackup Professional program file.

Subdirectories in the MRBackup: Directory

The MRBackup: directory contains several subdirectories. These
subdirectories provide a means for grouping files with a similar
purpose.

Rexx

This directory contains a number of example ARexx scripts for use with
MRBackup Professional. Use these as a guide for writing your own ARexx
scripts.

Catalogs

Use this directory as a repository for catalog files created by the
backup process.

Docs

This directory contains several document files providing additional
information and details not available in the user manual. The file
named Changes in this directory describes last-minute changes that
could not be included in the user manual.

Lists_and_Logs

Use this directory to store listing and log files created by MRBackup
Professional.

Prefs

This directory contains various MRBackup Professional "preferences"
files including the MRBackup.init file and the filter file templates.
You may also use this directory to save your custom preferences files.

Work

This is the default MRBackup working directory, used to store temporary
files created by MRBackup during backup and restore operations.

1.5 MRBackup.guide/Operation

Operation
****

This manual assumes that you already know the basic operating
principles of your Amiga and that you are familiar with its user
interface. If this manual refers to an Amiga-specific procedure or
feature with which you are not familiar, please refer to your Amiga
owner's manual.

MRBackup may be started from the WorkBench by double-clicking its
program icon or from the CLI by entering the appropriate command . The
startup procedures for each environment are presented below.

Working Directory
=================

MRBackup requires an area for storing certain temporary information
during the backup process. This area is called the "working
directory". The working directory defaults to MRBackup:Work, but you
may override this setting. The next two sections describe how this is
done.

  CLI Operation   The Command Line Interface
  WorkBench Operation   The Workbench Interface

1.6 MRBackup.guide/CLI Operation

CLI Operation
=============

To start MRBackup from the CLI (Command Line Interface, also called the
"Shell"), you can just type *MRBackup* at the command prompt. MRBackup
supports the AmigaDOS standard 'ReadArgs' command-line template
interface. To see MRBackup's command line template, simply invoke
MRBackup with a question mark as its only parameter:

        MRBackup ?
        I=INIT/K,PD=PREFSDIR/K,WD=WORKDIR/K
        :

The possible command line parameters are discussed below.

INIT=INIT_FILE
This option instructs MRBackup to initialize from INIT_FILE, rather
than MRBackup:Prefs/MRBackup.init or MRBackup.init in the local
directory. If INIT_FILE does not exist, MRBackup will terminate with an
error message.

PREFSDIR=DIRECTORY_NAME
This option sets the default search directory for preferences files to
DIRECTORY_NAME. If DIRECTORY_NAME does not exist, MRBackup will
terminate with an error message.

WORKDIR=WORK_DIRECTORY
This option instructs MRBackup to use WORK_DIRECTORY, rather than
MRBackup:Work, as the working directory. MRBackup must be able to write

```
to this directory.
```

1.7 MRBackup.guide/WorkBench Operation

```
WorkBench Operation
===================


To start MRBackup from the WorkBench, simply double-click its program
icon or an MRBackup project icon.  MRBackup supports several icon Tool
Types entries which can override its default behavior.  To add or
modify the Tool Types entries, you must use the Info command in the
WorkBench menu.  Refer to your Amiga owner's manual if you are
unfamiliar with this procedure.

MRBackup recognizes the following Tool Types entries:

DIR=DEFAULT_DIRECTORY
PREFS=DEFAULT_DIRECTORY
WINDOW=CONSOLE_SPEC

These Tool Types are identical and instruct MRBackup to search
DEFAULT_DIRECTORY when attempting to locate the preferences file.

WINDOW=CONSOLE_SPEC
This Tool Type entry instructs MRBackup to open its "background"
console window according to CONSOLE_SPEC which should be a valid 'CON:'
window specification (e.g. 'CON:0/0/640/200/MRBackup' ).

WORK=WORK_DIRECTORY
This Tool Type instructs MRBackup to use WORK_DIRECTORY, rather than
MRBackup:Work, as the default working directory.

If you really want to get clever, you can make copies of MRBackup's
project icon file (MRBackupDefault.info) and tune the Tool Types
entries for each hard disk partition.  How is this done?  Using the CLI
COPY command, make a copy of MRBackupDefaults.info for each partition.
Example:

        (CD to the directory where MRBackup resides)
        COPY MRBackupDefaults.info MRBackup-DH0.info
        COPY MRBackupDefaults.info MRBackup-DH1.info
        (etc.)

For each icon, make the appropriate changes to  the Tool Types entries.
```

1.8 MRBackup.guide/User Interface

```
User Interface
**************
```

General Description

Menus

Windows

1.9 MRBackup.guide/General Description

General Description
===================

MRBackup employs the Amiga's Intuition graphical user interface to
interact with the user. The result is consistent user interaction and
concise information presentation. MRBackup can run "on" the WorkBench
screen or on its own custom 4-color screen. MRBackup's various windows
are presented with a pleasing 3-D appearance using the Amiga's
"gadtools" support library. A pull-down menu provides access to
MRBackup's many operations.

MRBackup Gadget Types
=====================

A great deal of the user's interaction with MRBackup is accomplished via
Intuition gadgets. There are essentially four types of gadget employed
by MRBackup:

Cycle Gadget
Each time the gadget is clicked, a new value appears on its "face".
This value represents its current setting. The gadget's surface
appears to be raised with respect to the rest of the window.

Command Button
When a command button gadget is clicked, MRBackup will begin some
activity such as a backup or restore or the opening of another window.
The command button surface appears to be raised.

Text Display Gadget
The text display gadget is used to present textual information such as
status and error messages. The contents of the gadget cannot be
changed by the user. This gadget type has a recessed appearance with a
single border.

Text Edit Gadget
The text edit gadget is used to accept and present textual information
such as filenames. The gadget box appears to be flush with the surface
of the window but is surrounded by a raised double border. When you
click in a Text Edit gadget, a block cursor appears. You may perform
all of the functions defined for an Amiga string gadget. Note: when
changing the value of a Text Edit gadget, it is a good idea to hit the
RETURN key to complete your change. This sends a special signal to
MRBackup that the gadget's value has changed. If the value requires
verification, it will be done immediately. Failure to use the RETURN
key can delay this verification and be a potential cause for confusion.

1.10 MRBackup.guide/Menus

```
Menus
=====
```

MRBackup operations are invoked by menu selection, keyboard shortcuts or
command button clicks. MRBackup has three pull-down menus which are
accessible whenever the General Parameters window is active. These
menus are:

  Project Menu

  Preferences Menu

  Macros Menu

1.11 MRBackup.guide/Project Menu

```
Project Menu
------------
```

The Project menu provides commands which activate MRBackup's primary
operations. The commands in this menu are:

About
This command activates an information window which provides program
version information and a summary of available memory.

Backup
This command begins the backup process.

Resume Backup
This command resumes a backup (AmigaDOS mode only) which was previously
interrupted by user intervention, system crash or power failure.

Restore
This command begins a file restore process.

Rebuild Catalog
This command rebuilds a saveset catalog from an existing saveset.

Rewind Tape
This command attempts to rewind the tape drive specified in the Backup
Path gadget of the General Parameters window.

Scan Tape
This command provides a summary report of the savesets found on the
current tape cartridge. The tape drive is specified by the contents of

the Backup Path gadget.

Utilities
This command activates MRBackup's file management utilities Utilities.

Verify Backup
This command verifies the contents of a saveset against a specific hard
disk partition. A summary report is created which can be directed to a
console window, a file or both.

Quit
This command instructs MRBackup to release all resources and terminate
execution.

1.12 MRBackup.guide/Preferences Menu

Preferences Menu

The Preferences menu provides commands which allow the user to view,
modify, load and save various MRBackup operating parameters. The
commands available from the Preferences menu are:

Colors
This command is only available when a custom (non-Workbench) screen has
been selected. A color palette requester is activated and the user may
then make color changes to suit his/her preference. Colors should be
chosen with care such that the 3-D relief features of MRBackup's windows
are preserved.

Filters
This command activates the Filters window, allowing the user to view and
change MRBackup's filter file specifications Filter Files.

Options
This command activates the Options window and allows the user to view or
change MRBackup options related to backup and restore processing.

Screen Type
This command allows the user to select the type of screen that MRBackup
will use. A sub-meu contains the choices Custom, Interlace and
Workbench. A custom screen allows the user to specify his/her own color
preferences but places additional memory demands on the system.
Interlace specifies a custom screen in interlace mode. MRBackup does
not attempt to scale its windows and gadgets in this mode, so they will
appear half-height. The Workbench screen is most economical in terms
of memory required but the user is confined to the colors selected for
the Workbench screen.

Load...
This command allows the user to load all of MRBackup's operating
parameters directly from a file. A file requester will solicit the
name of the file.

```
Save...
This command allows the user to save all of MRBackup's current operating
parameters to a file.  A file rquester will solicit the name of the
file.
```

1.13   MRBackup.guide/Macros Menu

```
Macros Menu
-----------
```

```
The Macros Menu provides a mechanism for launching ARexx scripts (see
Using ARexx with MRBackup) directly from MRBackup.  The first 10 items
in this menu are reserved for macro names (ARexx script names plus
parameters) which the user defines.  The other menu items are:
```

```
*Other...*
This command allows the user to select an ARexx script for one-shot
execution (its name is not remembered).  A file reqeuster will solicit
the name of the ARexx Script.
```

```
*Define...*
This command allows the user to define any of the 10 "permanent" Macro
menu items.  A special requester will pop up and allow the user to view
or change any of these entries.  Note that these entries may also
include command line parameters.  Thus, a single macro name might be
used with a different parameter (e.g.  each disk partition on your
system) to define the macro name entries in the menu.
```

1.14   MRBackup.guide/Windows

```
MRBackup Windows
================
```

```
MRBackup Professional organizes its different functional areas into
multiple windows, each with their own set of capabilities. These
windows are:
```

```
    * General Parameters Window (see General Parameters Window)

    * Options Window (see Options Window)

    * Filters Window (see Filters Window)

    * Status Display Window (see Status Display Window)
```

1.15   MRBackup.guide/General Parameters Window

General Parameters Window

The General Parameters Window contains parameters common to most
MRBackup operations. In addition to the usual text gadgets and command
buttons, you will also notice several square buttons, labeled with a
question mark (?). These are file requester gadgets. Each of these is
associated with another gadget which specifies a device, directory or
file name. When you click on a file requester gadget, a file requester
window appears. With it, you can navigate your file system and easily
select the appropriate name for the corresponding gadget.

The following paragraphs describe all of the gadgets in the General
Parameters window. Please take the time to read this information
carefully, as several important key concepts are presented here.

  Media Type Button

  Voice Button

  Buffer (K) Gadget

  Preferences Gadget

  Home Path Gadget

  Backup Path Gadget

  Floppy Disk Icons

  Listing Path Gadget

  Log Path Gadget

  Options Button

  Filters Button

  Backup Button

  Restore Button

  Utilities Button

1.16   MRBackup.guide/Media Type Button

Media Type Button

This gadget selects the type of backup or restore to be performed and
cycles through the following range of values:

```
    * AmigaDOS

    * Fast Disk

    * SCSI Tape
```

See The Backup Modes.

1.17 MRBackup.guide/Voice Button

```
Voice Button
------------
```

This is an ON/OFF button which enables or disables MRBackup's speech
capability.

1.18 MRBackup.guide/Buffer (K) Gadget

```
Buffer (K) Gadget
-----------------
```

When MRBackup performs input or output from/to a file, a certain amount
of memory is set aside as a buffer (work area). This is done to
minimize the number of physical disk accesses necessary to move data
from/to a file. The bigger the buffer, the fewer disk accesses that
are required to move a file. The default buffer size is 32K bytes (K =
1024, thus 32K = 32768 bytes). If your system has expanded memory, you
can take advantage of it by increasing your buffer size. The maximum
buffer size allowed is 512K. There is no practical benefit in
specifying a buffer which is more than two times larger than the
largest file on your system. This will simply waste memory which might
be needed by other applications (remember - we can multitask while
doing a backup or restore, so we don't want to overallocate resources
to any one program).

1.19 MRBackup.guide/Preferences Gadget

```
Preferences Gadget
------------------
```

This gadget names the file where MRBackup's operating parameters (user
preferences) are stored. If MRBackup is started without an explicit
"initial file" specification (-i option from CLI, INIT=<name> tool types
from WorkBench), the current directory is searched for "MRBackup.init".
 If the file is not found there, the working directory (default =
MRBackup:Prefs) is searched. You may change MRBackup's parameters
(including this one), then use Save Preferences to record your new

settings. You may also reinitialize MRBackup with another preferences
file by changing this specification.

1.20   MRBackup.guide/Home Path Gadget

```
Home Path Gadget
----------------
```

The Home Path describes the device or directory where your files
normally reside. During backup operations, files are copied from the
location specified by the Home Path. During restore operations, files
are copied to this location. You may type the Home Path value directly
into the gadget box or you may use the file requester to assist you.
The Home Path must specify a device, volume or directory name (not a
file name).

1.21   MRBackup.guide/Backup Path Gadget

```
Backup Path Gadget
------------------
```

The Backup Path describes the destination (TO path) for files during a
backup or the source (FROM path) for files during a restore. Normally,
the backup path is the name of one of your floppy disk drives or the
name of your tape drive. If one or more of the floppy disk icon
gadgets is selected, the Backup Path is ignored. See Backups.

1.22   MRBackup.guide/Floppy Disk Icons

```
Floppy Disk Icons
-----------------
```

MRBackup supports selection of up to four floppy disk devices (DF0:
through DF3:) for backup or restore. This allows you to preload your
disk drives, reducing the frequency with which you must insert
diskettes. MRBackup will cycle through the selected drives and prompt
you for more diskettes only when all have been used or an error is
detected. When you click on one of these icons, a check-mark will
appear, indicating that the drive is selected. *Whenever floppy drives
are selected in this fashion, the Backup Path specification is ignored.*

1.23   MRBackup.guide/Listing Path Gadget

```
Listing Path Gadget
-------------------
```

MRBackup normally generates a listing during backups. This gadget
specifies the file or device to receive the listing. You may type the
listing path directly into the gadget or you may use its requester
gadget to assist you. To send the listing directly to the printer, you
would select "PRT:". To save the listing to a file on the hard disk,
simply select the appropriate directory and file name. *If this gadget
is cleared, no listing will be created.*

1.24   MRBackup.guide/Log Path Gadget

```
Log Path Gadget
---------------
```

MRBackup will optionally generate a log of all of its activities if the
Log File gadget contains a valid pathname. This log will contain
time-stamped progress reports and error messages. When errors are
detected during a backup or restore, it is good practice to check the
contents of the log for the cause and severity of these errors. *If
this gadget is cleared, no log file will be created.*

1.25   MRBackup.guide/Options Button

```
Options Button
--------------
```

This command button activates the Options window and is provided as a
convenient alternative to the equivalent menu command.

1.26   MRBackup.guide/Filters Button

```
Filters Button
--------------
```

This command button activates the Filters window and is provided as a
convenient alternative to the equivalent menu command.

1.27   MRBackup.guide/Backup Button

```
Backup Button
-------------
```

This command button initiates a backup operation and is equivalent to
the Backup menu command.

1.28   MRBackup.guide/Restore Button

```
Restore Button
--------------
```

This command button initiates a restore operation and is equivalent to
the Restore menu command.

1.29   MRBackup.guide/Utilities Button

```
Utilities Button
----------------
```

This command button activates MRBackup's file utilities. It is
equivalent to the Utilities menu command.

1.30   MRBackup.guide/Options Window

```
Options Window
--------------
```

The Options window presents parameters specific to backup and restore
operations only. It can be activated directly via the
Preferences/Options menu command or the Options command button on the
General Parameters window. It is also activated whenever a backup or
restore is started. You will note that certain gadgets are enabled or
disabled depending upon the Media Type setting (see
General Parameters Window) and on how the window was activated.

   Test Date

   Prefix

   Compression

   Est.

   Decompression

Formatting

Filesystem

Force Copy

Split Big Files

Test Arc. Bits

Set Arc. Bits

Empty Dirs

Error Handling

Sort

Verify Writes

Saveset Comment

OK Button

Cancel Button

1.31 MRBackup.guide/Test Date

Test Date

The test date is used by backup operations only. If the test date is
set to January 1, 1978 (beginning of AmigaDOS time), it has no effect.
Otherwise, only files modified on or after the test date will be
selected for backup. To change the test date, just click on the gadget
box. A date requester will pop up, allowing you to easily change the
test date. You may select the new date value either by pointing and
clicking on the various date requester gadgets or by typing directly
into each of the date fields. For your convenience, MRBackup also
supports four (4) date formats (AmigaDOS, U.S., Canadian and
International).

1.32 MRBackup.guide/Prefix

Prefix

During a backup, MRBackup normally names each backup volume with the
word "Backup", combined with the current date and the disk sequence
number. You can customize the backup volume names by supplying your

own prefix. In this case, MRBackup will simply append the disk
sequence number to whatever prefix you supply.

Example:

            "DH0:Backup." Yields: "DH0:Backup.1", "DH0:Backup.2",etc.

1.33   MRBackup.guide/Compression

Compression

This gadget specifies the size of the compression codes, in bits, that
are to be used when performing a backup. The values range from 12 bits
through 16 bits or None (no compression performed). Smaller code sizes
allow faster compression and lower memory requirements while
compression with larger code sizes yields larger compression ratios but
requires more time and more memory.

1.34   MRBackup.guide/Est.

Est.

This value is a compression estimate, specified as a percentage. Its
range is 0 through 99 and it is only meaningful for AmigaDOS compatible
backups. See Data Compression.

1.35   MRBackup.guide/Decompression

Decompression

The setting of this gadget is only meaningful during a restore
operation. It specifies the maximum compression code size (in bits) to
be decompressed when restoring files. Files that were compressed with
larger compression codes will be restored in their compressed state.
Though you would typically choose this setting to match the Compression
setting, there may be reasons for setting it to a different value. See
Data Compression.

1.36   MRBackup.guide/Formatting

```
Formatting
----------
```

This gadget only has meaning when performing an AmigaDOS backup. It
selects the formatting method used to initialize each backup disk.
Clicking on this gadget causes it to cycle through its range of values
which are Normal, Quick and None, described below:

       Normal Use this setting for new disks which have never been formatted
               or when you simply want to completely reformat your backup disks.
               This method requires the most time.

       Quick   Use this method for disks which have been previously formatted for
               AmigaDOS use. Only the filesystem root blocks are initialized,
               requiring very little time.

       None   This is a special setting which should be used with care. You might
               wish to use this setting with diskettes which have been preformatted
               and are known to be empty or when "refreshing" a backup which is ←
                 known
               to require only one diskette.

1.37 MRBackup.guide/Filesystem

```
Filesystem
----------
```

This gadget is a companion to the Formatting gadget and is only
meaningful when performing AmigaDOS backups with Formatting set to
Normal or Quick. Its value toggles between FFS and Default. On Amiga
systems equipped with WorkBench 2.04, you can elect to format your
backup disks in Fast File System (FFS) format or the default filesystem
for the disk being formatted.

1.38 MRBackup.guide/Force Copy

```
Force Copy
----------
```

The Force Copy gadget is only relevant for restore operations. It is a
cycle gadget which can be set to "Never", "Prompt" or "Always". When
set to "Never" or "Prompt", MRBackup checks for the existence of each
file before restoring it. If the file does not exist, it is restored.
If the file does exist and its creation date is newer or the same date
as the file in the saveset, the file is not automatically copied. If
the "Never" option is selected, the file is skipped and a message is
output to the log file. If the "Prompt" option is selected, MRBackup
will ask for permission to restore the file.

```
** NOTE: **
```

When the "Always" option is selected, no check for existing files is
performed. Files are always restored. If you are restoring files to
an empty or newly-formatted partition, *use the "Always" option since
the "Never" and "Prompt" options impose a significant overhead and can
noticeably slow down restore operations*.

1.39   MRBackup.guide/Split Big Files

```
Split Big Files
---------------
```

This button is only meaningful for the AmigaDOS backup mode. It is a
Yes/No switch which enables or disables MRBackup's splitting of big
files. A big file is one which is larger than the capacity of an empty
diskette. If this gadget indicates Yes, MRBackup will split big files
across multiple diskettes. Each diskette will have a special file,
MRBackup.bigfile, in addition to its segment of the big file. This
special file contains information describing the file segment on each
diskette.

1.40   MRBackup.guide/Test Arc. Bits

```
Test Arc. Bits
--------------
```

When this button indicates Yes, MRBackup will only backup files whose
archive bits are not set. AmigaDOS clears a file's archive bit
whenever the file is modified. Using this option allows you to backup
only files which have changed since the last time you did a backup with
the Set Archive Bits option (below) enabled. This filtering is done in
addition to any other filtering options you may be using. Please note
that the AmigaDOS interpretation of the archive bit is reversed from
that of the MS-DOS environment where a set bit indicates that the file
has not been archived.

1.41   MRBackup.guide/Set Arc. Bits

```
Set Arc. Bits
-------------
```

If this button is enabled, MRBackup will set the archive bit on every
file that it backs up. Note that the setting of archive bits is
deferred until the backup is successfully completed. This guards
against leaving the archive bits in a false state, should the backup
fail.

1.42 MRBackup.guide/Empty Dirs

```
Empty Dirs
----------
```

This gadget cycles between Keep and Omit and governs the disposition of
empty directories when a backup is performed. When the Keep state is
set, empty directories (directories containing no files or
subdirectories) are preserved. When the Omit state is selected, empty
directories are "pruned" from the backup. If you're not sure which
setting is appropriate, choose Keep.

1.43 MRBackup.guide/Error Handling

```
Error Handling
--------------
```

MRBackup provides for interactive error recovery or automatic
termination upon detection of an error.The range of values for error
handling are:

```
     Interactive     MRBackup asks how the error is to be handled

     Abort           MRBackup will immediately abort a backup or restore upon
                     detecting any error.
```

Normally, you will use the Interactive setting.

1.44 MRBackup.guide/Sort

```
Sort
----
```

This gadget governs the order in which files are copied during a backup.
If Yes is chosen, files and directories are backed up in alphabetical
order, perhaps at a slight penalty in speed but with the advantage of a
well-ordered catalog and saveset. If No is chosen, files are backed up
in the order that they are delivered to MRBackup by the filesystem.

1.45 MRBackup.guide/Verify Writes

```
Verify Writes
-------------
```

This setting is only meaningful for Fast Disk backups to floppy
diskettes. When set to Yes, each track is read back after it is
written and compared to the data that was written. The user is
informed of errors immediately. There is an approximate 50% increase
in the time required to fill a diskette when write verification is
enabled, but *it is highly recommended*.

1.46   MRBackup.guide/Saveset Comment

```
Saveset Comment
---------------
```

This is a comment which you can store with your Fast Disk or SCSI Tape
saveset to clearly identify the nature of the backup. As an example,
you might enter the following comment:

        Special backup of partition XYZ: for Harry Herring.

1.47   MRBackup.guide/OK Button

```
OK Button
---------
```

This button indicates that you are through setting options. If the
options window was presented as the result of initiating a backup or
restore, the operation will proceed.

1.48   MRBackup.guide/Cancel Button

```
Cancel Button
-------------
```

The Cancel button is only active when a backup or restore has been
initiated. Clicking it will terminate the process and return you to
the General Parameters window.

1.49   MRBackup.guide/Filters Window

```
Filters Window
--------------
```

The Filters window is activated by selecting Filters... from the
Preferences menu or by clicking the Filters button on the General
Parameters window. This window presents your current filter file
settings and allows you to change them. *To disable a particular
filter, simply clear its respective gadget*. Also, note that each
filter name gadget has an accompanying file requester gadget (raised
button with a ?) to assist you with your selections. See Filter Files,
for more details on the format and purpose of filter files.

   Backup Filter Gadget

   Restore Filter Gadget

   Compression Filter Gadget

   Decompression Filter Gadget

   OK Button

1.50   MRBackup.guide/Backup Filter Gadget

```
Backup Filter Gadget
--------------------
```

This gadget specifies a file to be used to assist in selecting (or
rejecting) files for a backup. If you don't want to use a backup
filter, just clear this gadget (click in the gadget box and press the
Right-Amiga and X keys simultaneously, then press return). The default
backup filter file is MRBackup:Prefs/MRBackup.bflt. The file is self
documenting.

1.51   MRBackup.guide/Restore Filter Gadget

```
Restore Filter Gadget
---------------------
```

This gadget specifies a filter file to be used during a restore
operation. The default restore filter name is
MRBackup:Prefs/MRBackup.rflt.

1.52   MRBackup.guide/Compression Filter Gadget

```
Compression Filter Gadget
-------------------------
```

The compression filter is used during backups to inhibit the
compression of certain files when compression is enabled. The
compression filter file delivered with MRBackup, MRBackup.cflt , is
self documenting. There are several built-in compression filter
patterns in MRBackup. They are:

```
        #?.arc      - ARC archives
        #?.lzh      - LHARC archives
        #?.Z        - compressed files
        #?.ZIP      - PKAZIP archives
        #?.ZOO      - Zoo archives
```

Files of these types almost always expand when subjected to additional
compression.

1.53 MRBackup.guide/Decompression Filter Gadget

```
Decompression Filter Gadget
---------------------------
```

The decompression filter is used during restore operations to inhibit
the decompression of certain compressed files when decompression is
enabled. Files specified with this filter will be restored in their
compressed state. The decompression filter file delivered with
MRBackup, MRBackup.dflt, is self documenting. If you prefer not to use
a decompression filter, simply clear this gadget.

1.54 MRBackup.guide/Filters OK Button

```
OK Button
---------
```

Click this button when you are finished viewing or changing your filter
settings.

1.55 MRBackup.guide/Status Display Window

```
Status Display Window
---------------------
```

The Status Display window informs you of MRBackup's progress during
certain operations, such as backup and restore. The meanings of the
various indicator gadgets are defined here.

Backup Volume Name Gadget

This gadget reports the name of the backup volume currently being used
for a backup or restore operation.

Volume Number Gadget

This gadget indicates the sequence number of the backup media which is
currently being accessed for backup or restore. It will increment by
one for each successive floppy diskette but will remain at 1 for tape
or file media.

Errors Gadget

This gadget displays the total number of errors detected during a
backup or restore operation.

Progress Indicator Bar

This indicator displays the relative progress of the backup as a
percentage of files and directories processed vs. the number of files
and directories selected. (Note: this will probably change soon to
reflect disk blocks processed vs. selected which is a much more
accurate indicator of time remaining).

KB In Gadget

This gadget displays the total number of bytes, in K (1024 byte
increments), which have been read into MRBackup.

KB Out Gadget

This gadget displays the total number of bytes, in K, which MRBackup has
written to the destination media.

Ratio Gadget

This gadget displays, as a percentage of change, the effective
compression ratio for backups and decompression ratio for restores.
For example, when a value of 35% is displayed during a backup
operation, then the cumulative size for all files backed up has been
reduced by 35 per cent. When compression/decompression are disabled,
N/A is displayed.

Rate (KBPS) Gadget

This indicator displays the relative data transfer rate as a measure of
kilobytes per second. It is intended to provide you with a relative

measure of backup performance. By changing various parameters (buffer
size, tape driver buffering, etc.) and then observing changes in this
indicator, you can tune your backup parameters to a combination which is
optimal for your environment.

Elapsed Time Gadget

This indicator displays the amount of time which has elapsed since you
started a backup or restore operation.

Transfer Time Gadget

This indicator displays the total time during which MRBackup has been
actively transferring data during a backup or restore. This timer is
suspended and resumed whenever user interaction occurs. Like the
Throughput indicator, this indicator can also provide you with a
relative measure of performance.

Current File or Directory Gadget

At the start of a backup, this gadget reports the name of each directory
being scanned for files. During a backup or restore operation, this
gadget reports the name of the directory being accessed (note: it was
felt that reporting individual files here would adversely affect backup
performance).

Status Gadget

This is a one-line text message which reports the current state of
MRBackup or the last significant event or error.

STOP Button

This button allows you to terminate a backup or restore operation. As a
safety measure, a requester will ask you to confirm this action before
it takes effect.

Please note that when using a large buffer size, there may be a very
noticeable delay when clicking the STOP or PAUSE gadgets. Just be
patient- MRBackup will recognize the request as soon as the current
buffer operation completes.

PAUSE / PROCEED Button

This gadget temporarily suspends all backup or restore activity. If you
are closely monitoring the progress of a backup or restore and the phone
rings, you can click PAUSE and be confident that things won't "get away
from you". When you click the PAUSE gadget, its label changes to
PROCEED. MRBackup will be suspended until this gadget is clicked again.

1.56   MRBackup.guide/File Selector

File Selector
****

The file selector is presented to you during backup and restore
operations to enable you to "fine tune" the list of selected files.
Before we discuss its operation, let's take a quick look at the
graphical objects that make up the file selector. In the discussion
that follows the term entry refers to both files and directories.

   Level

   Include

   Exclude

   Current Directory (unlabeled)

   Entries

   Selected

   Disks

   All

   + Here and down

   + Here

   Up

   None

   – Here and Down

   – Here

   OK

   CANCEL

The files available for selection/deselection are presented in the
large box at the left of the file selector. Just to the right of this
box, you will see a scroller gadget. When there are more files at a
given level than can be viewed in the selection box, the drag bar
(rectangle within the scroller) will be sized in proportion to the
number of visible vs. total entries. You may click and drag this bar
to reveal other entries at the current level. You may also scroll the
list one item at a time by clicking on either of the small buttons at
the bottom which have arrow indicators on them.

Each time you click on an entry in the list, it will toggle between
selected and deselected. An entry in the selected state is preceded

with a plus (+) sign. Unselected entries are preceded by a blank.
Directory entries are indicated by a trailing forward slash (/)
character.

Just to the right of the selection indicator, there is a number
followed by the letter 'k'. For file entries, this represents the
size, in kilobytes (1 k = 1024 bytes), of the file. For directory
entries, it represents the sum of the file sizes for selected files in
that directory and lower level subdirectories.

To view the contents of directories (and their subdirectories),
position the mouse pointer over a directory entry and double-click (two
clicks, in rapid succession) on the entry. The display box will be
redrawn with the contents of that directory and the Level indicator
will be incremented. To return to the previous level, simply click on
the Up button.

1.57 MRBackup.guide/Level

Level

This gadget reports the nesting level of the directory you are currently
viewing. The top level is zero.

1.58 MRBackup.guide/Up

Up
--

When you click the Up gadget, the next higher directory level is
displayed and the Level gadget is updated accordingly.

1.59 MRBackup.guide/Include

Include

This is a string gadget which works in conjunction with any of the
Select buttons (later). The Include is a filename matching pattern (as
used in the MRBackup filters) which is applied to each filename when
one of the Select buttons is clicked. Only those names matching the
pattern will be selected. If the Include is blank, no include matching
is performed.

1.60   MRBackup.guide/Exclude

```
Exclude
-------
```

This is a string gadget which works in conjunction with any of the
Select buttons (later). The Exclude is very similar to the Include
Pattern, except that filenames matching the pattern will be excluded
from selection when a Select button is clicked. If both Include and
Exclude patterns are specified, the Include pattern is applied first.

1.61   MRBackup.guide/All

```
All
---
```

When the All button is clicked, all entries in the selector file list
are selected.

1.62   MRBackup.guide/+ Here and down

```
Select all, this level and below
--------------------------------
```

This button causes all entries at the current level and lower (higher
level numbers) to be selected.

1.63   MRBackup.guide/+ Here

```
Select all, this level only
---------------------------
```

This button causes all entries at the current level to be selected.

1.64   MRBackup.guide/None

```
None
----
```

This button has slightly different behavior, depending upon the Current
Level setting. When the Level is zero (top level), all entries are
deselected. When the Level is non-zero, all file and directory entries
except the parent directories for the current level are deselected.

1.65 MRBackup.guide/- Here and Down

```
None, this level and below
--------------------------
```

This button causes all entries at and below the current directory level
to be deselected.

1.66 MRBackup.guide/- Here

```
- Here
------
```

This button causes all entries at the Level to be deselected.

1.67 MRBackup.guide/Entries

```
Entries
-------
```

This gadget reports the total number of entries (files and directories)
contained in the file selector list.

1.68 MRBackup.guide/Selected

```
Selected
--------
```

This gadget reports the total number of entries currently selected.

1.69 MRBackup.guide/Disks

```
Disks
-----
```

For backup operations, this gadget provides a rough estimate of the
number of disks required to hold the files currently selected. If file
compression is enabled, the Compression Estimate value (entered by you)
is factored into the disk estimate. The disk estimate value is
meaningless for restore operations.

1.70 MRBackup.guide/OK

```
OK
--
```

Click this button when your file selection is complete and you wish to
proceed with the current operation (backup or restore).

1.71 MRBackup.guide/CANCEL

```
CANCEL
------
```

Click this button when you wish to terminate the current operation
(backup or restore).

1.72 MRBackup.guide/Current Directory (unlabeled)

```
Current Directory (unlabeled)
-----------------------------
```

The long gadget above the file display box shows the full name of the
current directory. It is empty when the Level is zero.

1.73 MRBackup.guide/Backups

```
Backups
*******
```

The data and programs on your Amiga might well be worth more to you (in
terms of cost to replace) than the machine itself. Hard disks fail.
Systems "crash", causing irrecoverable damage to hard disk partitions.
Backups are insurance against such probabilities. However, they often
don't get done. The excuses are many and varied. "I'm too busy", "I
meant to, but...", "I don't have enough floppy disks", etc. We are all
guilty to varying degrees. Even the author of this backup program has
been caught "with his pants down" on a couple of occaisions (excuse
#1). Needless to say, backups are not a fun way to use your Amiga and
they require discipline to be done on a regular and effective basis.
MRBackup goes a long way toward making this chore more pleasant.

MRBackup preserves all file attributes when backing up and restoring
files. The file protection word (SPARWED), comment and modification
date are all maintained. This is true for all backup modes.

The Backup Modes

Backup Schemes

The Backup Process

1.74 MRBackup.guide/The Backup Modes

```
The Backup Modes
================
```

MRBackup Professional supports three backup modes: AmigaDOS, Fast Disk
and SCSI Tape. MRBackup provides you the flexibility to choose the
mode that is best suited to your needs (or budget!).

   AmigaDOS Backup Mode

   Fast Disk Backup Mode

   SCSI Tape Backup Mode

1.75 MRBackup.guide/AmigaDOS Backup Mode

```
AmigaDOS Backup Mode
--------------------
```

The AmigaDOS backup mode provides full compatibility with AmigaDOS and
its tool set. That is, you can manipulate the files in an AmigaDOS
saveset with the standard Amiga tools such as DIR, LIST, COPY, TYPE,
etc. When backing up to diskette, MRBackup creates disk volumes which
are accessible to the AmigaDOS filesystem. MRBackup also employs no
hardware-specific "tricks" in this mode. If the disk hardware is
supported by standard Amiga software, MRBackup will handle it (if you
find an exception to this, please let us know!).

One important item to note is that you are not required to backup files
to floppy diskettes. If you are fortunate enough to have a "spare"
hard disk, a hard disk with removable media, lots of extra space or if
you are connected to a network file server, you can use any of these
for your backup destination. You can also perform backups from one
directory to another.

1.76 MRBackup.guide/Fast Disk Backup Mode

```
Fast Disk Backup Mode
---------------------
```

The Amiga's original filesystem (OFS), while providing a great deal of
recoverability, suffers from poor performance. This is especially
notable when accessing floppy disks. This can be overcome somewhat by
adding more disk buffers via the AddBuffers command. Floppy disks can
also be formatted with the FFS option (Fast File System). This
enhances performance significantly, though floppy disks accessed in
AmigaDOS mode are still slow.

MRBackup addresses this problem by providing a new diskette format.
This format is called MRBackup Fast Disk Format (real catchy name,
eh?). In a sense, this format is analagous to a streaming tape drive.
Floppy disk head movement is minimized. The diskette is formatted as
data is written to it and slightly more data can be written to the
diskette (without using any compression techniques). Also, files are
automatically split across volumes in Fast Disk mode, meaning that
there is no unused space on your backup diskettes. At the same time, a
high degree of integrity and recoverability has been designed in.
Though this format cannot be read by the AmigaDOS filesystem(s), you
will most likely prefer to use it for most general-purpose backups
because it is so fast.

Another interesting feature of Fast Disk mode is that you can BACKUP TO
A FILE OR ANY STREAM-ORIENTED DEVICE! This capability, in essense,
simulates a very large capacity floppy diskette. You can then manage
this backup file as a single entity. If you're fortunate enough to be
connected to a networked file server with lots of available disk space,
the advantages are tremendous! You can perform a full backup without
changing disks, saving your backups in remote files while fully
preserving the AmigaDOS attributes of the original files.

1.77 MRBackup.guide/SCSI Tape Backup Mode

```
SCSI Tape Backup Mode
---------------------
```

The SCSI Tape backup mode supports a streaming tape drive with a SCSI
(Small Computer Systems Interface) interface. It is essentially the
same as Fast Disk mode, except that additional support and modified
error-handling behavior are invoked for the tape drive. See
SCSI Tape Support, for specific information.

1.78 MRBackup.guide/Backup Schemes

```
Backup Schemes
==============
```

There are many ways to backup your system. Each has its advantages and
disadvantages. You may use one or more of them, depending upon your
use of the Amiga. MRBackup is so flexible that you may come up with
several other approaches not detailed here.

  The Full Backup

  The Incremental Backup

  The Project Backup

1.79 MRBackup.guide/The Full Backup

The Full Backup

A full backup is the most desirable method if time and available backup
media are not limiting factors. A complete "snapshot" of your hard
disk partition(s) is taken, fully reflecting the state of your machine
at that point in time. If you are using floppy disks to backup a large
partition, however, you may find this approach quite burdensome. Given
MRBackup's flexibility, however, you will quite likely find a mix of
backup techniques that satisfy your needs.

Another thing to remember is that much of your commercial software
already has a backup – the original disk (or the backup you made of the
original disk if you followed typical vendor's instructions). If you
have lots of commercial software installed on your hard disk, you
should probably consider excluding the files which don't change
(programs, examples, etc.) via the backup filter. This will
dramatically cut down on the time and media required for a "full"
backup.

1.80 MRBackup.guide/The Incremental Backup

The Incremental Backup

Incremental backups provide a reasonable alternative to the full backup
if the proper procedures are followed. The incremental backup consists
of a full system backup followed by one or more partial backups. The
partial backups record only the files that have changed since the full
backup was performed.

  Incremental Backup Based On File Modification Date

  Incremental Backup Based on Archive Bit Setting

1.81   MRBackup.guide/Incremental Backup Based On File Modification Date

```
Incremental Backup Based on File Modification Date
..................................................
```

Each time a file is written (modified), the AmigaDOS filesystem sets
the file's modification date to the current date and time, as set in
the Amiga's built-in clock. MRBackup can take advantage of this fact
by comparing file modification dates against the Test Date setting in
the Options window. Only files changed on or after the Test Date are
selected for backup (see Test Date).

A typical backup scenario for a date-sensitive backup might be:
   * Perform a full system backup to backup media set 1.

   * Perform incremental backup to backup media set 2.

   * Perform incremental backup to backup media set "n".

   * Repeat the sequence starting with step 1.

In the sequence above, there is an implied delay between steps.
Depending upon your requirements and confidence level (degree of
self-discipline?), the delay may range from several hours to a week or
more (not much more!). You might choose a one month cycle (i.e. step
1 is repeated on the first Saturday of each month). Notice that
multiple media sets (tapes, floppies, files, etc.) are required. When
performing incremental backups, you must not destroy your previous
saveset(s).

There is some room for variation here, however. You might want to
maintain just two sets of backup media. The first set would contain
the full backup, while the second set would contain all files which
changed since the full backup was done. In this case, each time you
perform the incremental backup, more backup media will be required to
hold the additional files, assuming a dynamic system where files are
being changed on a daily basis.

1.82   MRBackup.guide/Incremental Backup Based on Archive Bit Setting

```
Incremental Backup Based on Archive Bit Setting
...............................................
```

In addition to maintaining the file modification date, AmigaDOS also
maintains an archive indicator bit in each file protection word.
Specifically, AmigaDOS clears the archive bit whenever a file is
modified. Backup software, such as MRBackup, can set this bit when a
file has been successfully backed up. When the Test Archive Bits
gadget is set to ON, only files with cleared archive bits will be
backed up. If the Set Archive Bits gadget is also on, MRBackup will
set the archive bits of all files which have been backed up.

The sequence to observe when performing the archive bit backup is

similar to that used for the date sensitive backup. However, you MUST
use a different set of backup media for each unique step.

As an aside, MRBackup does not prevent you from doing a backup which
combines date testing with archive bit testing. However, it is advised
that you choose one method or the other for desirable results.

1.83 MRBackup.guide/The Project Backup

```
The Project Backup
------------------
```

If you're a software developer, you may be concentrating all of your
work in a specific directory hierarchy. Likewise, if you're a graphics
artist, you may have a specific area in which you work. In these
instances, it is recommended that you do daily "full" backups of these
selected areas. This can be accomplished by setting the Home Path to
the name of the topmost directory for the project area and setting the
Test Date gadget to January 1, 1978 and setting the Test Archive Bits
gadget to "No".

Also, you may wish to define specific backup and compression filters
for each special project area.

1.84 MRBackup.guide/The Backup Process

```
The Backup Process
==================
```

Once you're sure that all settings are correct, you may begin the
backup process. This is done by selecting the Backup command from the
Project menu, by typing the keyboard shortcut, Right-Amiga + B, or by
clicking the Backup button in the General Parameters window. MRBackup's
main window will disappear and a smaller Status Display window will
appear. This window informs you of the progress of the backup. As the
backup proceeds, pop-up requesters will instruct you to insert/remove
media as necessary as well as alert you to other bits of information,
error conditions, etc.

The first backup step performed is a scan of all files specified by the
Home Path. While MRBackup is scanning, the Current File or Directory
gadget in the Status Display window will display the name of the
directory being scanned. Once the scan is complete, MRBackup will
present its file selector (see File Selector). The file selector
displays the list of files that were considered eligible for backup,
according to the backup parameters you have chosen. It then gives you
the option to omit certain files (or groups of files) from this list.

Assuming that you completed the file selection process by clicking the
OK button in the file selector window, MRBackup will proceed to backup

your files. If you have selected either AmigaDOS or Fast Disk backup
mode, you will be prompted to insert/remove diskettes as MRBackup
requires your assistance.

When the backup is complete, make a quick check of the Errors gadget in
the Status Display window. If it is non-zero, it would be a good idea
to review the backup log to determine the nature of the errors before
assuming that the saveset is acceptible.

1.85 MRBackup.guide/Restores

Restores
****

The file restoration process is the inverse of a backup. You would most
likely do a full restore when rebuilding a disk partition. A partial
restore might be done to recover files which were deleted accidentally.

    Options Affecting a Restore

    Restore Concepts

1.86 MRBackup.guide/Options Affecting a Restore

Options Affecting a Restore
===========================

The following MRBackup settings take effect when performing a restore
operation:

    * Backup Path - the source for the restore ("from" location).

    * Buffer - specifies the amount of memory to be used for file I/O
      buffering (same as backup).

    * Decompression - sets the upper code size limit for file
      decompression. Files compressed with code sizes larger than this
      limit will be restored in their compressed state.

    * Decompression Filter - compressed files whose names match one or
      more of the patterns in this file will not be decompressed during
      a restore.

    * Disk Selection Icons - optional selection of backup path (overrides
      Backup Path).

    * Error Handling - establishes the type of error handling employed
      during the restore.

   * Force Copy - determines behavior when restoring files that already
     exist.

   * Home Path - the target for the restore ("to" location).

   * Log File - records errors and progress messages during the
     restore.

   * Media Type - indicates the type of saveset we are restoring from
     (also referred to as "Backup Mode").

   * Voice On/Off - enables/disables MRBackup's speech capability.

1.87 MRBackup.guide/Restore Concepts

```
Restore Concepts
================
```

There are some interesting and important items to be aware of when
performing a restore. During a backup, MRBackup preserves the complete
directory hierarchy for the files which are backed up. This may be
cause for some confusion. Consider the following example. You perform
a backup with the Home Path set to "DH0:" (your first hard disk
partition). A portion of the files selected might look like

```
        ARexx
        ARexx/Docs
        ARexx/Examples
        ARexx/Tools
        Docs
        Docs/Amiga
        Docs/Graphics
        Docs/Utilities
        ... etc.
```

If you later restore the saveset with the Home Path again set to
"DH0:", your files will be restored to the same level in the hierarchy,
as you would expect. However, when you do a backup and specify a
directory as the Home Path (e.g. DH0:Docs/Utilities), the full
directory hierarchy from the "top" of the partition through all levels
included by the Home Path is preserved. For levels higher than the
Home Path, only the directories are preserved (files are ignored).
When you restore such a backup, the Home Path must be changed to the
name of the partition (e.g. DH0:) to which you want the files
recovered. Of course, if you wish to restore your saveset to a
lower-level hierarchy, you are free to select any valid Home Path.

It is important to note that MRBackup will not overwrite an existing
file with a file which has the same or earlier modification date unless
you enable the Force Copy option (see Force Copy). During the restore,
a message will be displayed to the screen and written to the log file
for each file that is skipped because of this condition.

1.88   MRBackup.guide/Utilities

```
Utilities
*********
```

MRBackup's Utilities perform a variety of AmigaDOS file management
operations. The top portion of the window contains gadgets for
specifying file selection criteria and reporting status. The middle
portion is a combined information display and file requester for
interactively selecting individual files. The bottom portion of the
window primarily contains "command buttons" which select the operation
to be performed on the selected file(s).

When performing a Utilities operation, the affected files have a source
(From) and, where appropriate, a destination (To). The file information
display box in the center of this window multiplexes (switches) between
the From and To modes, depending upon whether the From or To radio
button is highlighted (selected). You will normally be interested in
the From list, since that is the list of files which are acted upon.
The To list is provided simply to let you preview the area to which
files will be copied, compressed, etc.

   From and To Buttons

   From Gadget

   To Gadget

   Parent Directory Buttons

   Drive Button

   FileSpec Gadget

   Info Gadget

   All Button

   None Button

   Utility State Gadget

   Utility Command Buttons

1.89   MRBackup.guide/From and To Buttons

```
From and To Buttons
-------------------
```

The From and To buttons determine whether the source (From) or
destination (To) directory is displayed in the file display area. These
buttons are mutually exclusive and only one can be ON at a time.

Clicking on either will cause the display box to be filled with
information relevant to the appropriate path specification.

1.90 MRBackup.guide/From Gadget

```
From Gadget
-----------
```

The From gadget holds the source device or directory name. Upon
activation of the Utilities window, this value defaults to the Backup
Path setting in the General Parameters window. You may alter this
value by typing directly into the gadget. It will also track your
interactions with the file information display box or parent directory
gadgets.

1.91 MRBackup.guide/To Gadget

```
To Gadget
---------
```

The To gadget holds the destination device or directory name. Upon
activation of the Utilities window, this value defaults to the Backup
Path setting in the General Parameters window. You may alter this
value by typing directly into the gadget. It will also track your
interactions with the file information display box or parent directory
gadgets.

1.92 MRBackup.guide/Parent Directory Buttons

```
Parent Directory Buttons
------------------------
```

The From and To gadgets each have an arrow button to the right of their
respective text boxes. Clicking on the arrow causes the selection to
move up one level in the file hierarchy (the immediate parent). For
instance, if the From selection is currently "DH0:Src/Lib/Amiga",
clicking its associated arrow button will change the From selection to
"DH0:Src/Lib".

1.93 MRBackup.guide/Drive Button

```
Drive Button
------------
```

Clicking on the Drive button will cause the currently active selection
(From or To, as determined by the From/To button settings) to cycle to
the next disk drive (including RAM:, RAD:).

1.94 MRBackup.guide/FileSpec Gadget

```
Filespec Gadget
---------------
```

The FileSpec gadget (file specification) is applied to the From
selection to restrict the files visible in the file information box.
Typically, an AmigaDOS file name pattern is entered here. For
instance, "#?" or "*" (default) allows all filenames to be seen.
"#?.Doc" would allow only filenames ending in ".Doc" to be seen. The
FileSpec does not apply to directory names, which are always visible.

1.95 MRBackup.guide/Info Gadget

```
Info Gadget
-----------
```

The Info gadget provides status information related to the current
utility operation being performed.

1.96 MRBackup.guide/All Button

```
All Button
----------
```

Clicking on the All button (beneath the lower right-hand corner of the
file information display box) will select everything in the file
information box, including entries which are out of view. Selected
entries are displayed in reverse video.

1.97 MRBackup.guide/None Button

```
None Button
-----------
```

Clicking on the None button will cause all files in the file display

area to be deselected.

1.98   MRBackup.guide/Utility State Gadget

```
Utility State Gadget
--------------------
```

There is an unlabeled box in the upper right hand corner of the
Utilities window. This gadget is used to display the current state of
the Utilities "engine".

1.99   MRBackup.guide/Utility Command Buttons

```
Utility Command Buttons
-----------------------
```

At the bottom of the Utilities window is a set of gadgets (command
buttons) which are labeled with the names of the Utilities processing
options. Each one will be discussed separately below. One thing that
they all have in common is that the From selection must be active
before they may be used. Clicking any command button before the current
process has completed will terminate the current process.

Compress Button

Compression Code Size Button

Decompress Button

Delete Button

Move Button

Copy Button

Set Bits Button

Clear Bits Button

SetDate Button

1.100   MRBackup.guide/Compress Button

```
Compress Button
---------------
```

This command button causes the selected files to be compressed, using
the current Compression bit code setting and compression filter file in
the MRBackup Parameters window. The From and To path specifications may
indicate the same or different pathnames. If they are the same, the
original file will be deleted and replaced with its compressed version
(having a ".Z" suffix).

1.101 MRBackup.guide/Compression Code Size Button

```
Compression Code Size Button
----------------------------
```

This gadget, wedged between the Compress and Decompress gadgets,
selects the maximum code size to be used when compressing or
decompressing files. It steps through the range of compression code
sizes each time it is clicked.

1.102 MRBackup.guide/Decompress Button

```
Decompress Button
-----------------
```

This command button causes the selected files to be decompressed, using
the current Decompression bit code setting and decompression filter
file, as specified in the MRBackup main window. The From and To path
specifications may indicate the same or different paths. If they are
the same, the compressed file (having the ".Z" suffix) will be replaced
by its decompressed version (".Z" suffix removed).

1.103 MRBackup.guide/Delete Button

```
Delete Button
-------------
```

Only the From specification is required for Delete. All selected files
will be deleted from your system. Be careful!

1.104 MRBackup.guide/Move Button

```
Move Button
-----------
```

This button causes the currently selected files to be moved (renamed)

to a new location. Move requires that the From and To specifications
name different directories on the same device (renaming across devices
is not allowed). All selected files will be moved from their current
location to the To directory.

1.105 MRBackup.guide/Copy Button

Copy Button

The Copy command button requires different From and To specifications.
The selected files are copied to the To path.

1.106 MRBackup.guide/Set Bits Button

Set Bits Button

The Set Bits command button provides the capabilities of the AmigaDOS
"Protect" command. Below the Set Bits and Clear Bits command buttons,
you will see eight gadgets with the letters "H,S,P,A,R,W,E,D". These
letters are defined as follows:

          S - Script Bit
          P - Pure Bit
          A - Archived Bit
          R - Read Protection Bit
          W - Write Protection Bit
          E - Execute Protection Bit
          D - Delete Protection Bit

Set the appropriate buttons for the bits you wish to set, then click
the Set Bits command button. The bit pattern you have selected will be
logically OR-ed with the current bit settings for the selected files.

The R, W, E and D indicators are somewhat confusing, as their meaning is
inverted. A set bit actually means that the related operation is
inhibited. For instance, when "W" is displayed, it actually means that
the "W" bit is clear, allowing file write operations. To prevent a user
from writing (changing) a file, you must SET its "W" bit.

1.107 MRBackup.guide/Clear Bits Button

Clear Bits Button

Clear Bits works in much the same fashion as Set Bits except that the

selected bits are turned off. Only the selected bits will be affected -
all others retain their current setting.

1.108 MRBackup.guide/SetDate Button

```
SetDate Button
--------------
```

The SetDate command button changes the file modification date for all
selected files (only the "from" selection has meaning here). Upon
selecting the SetDate command button, you will be presented with
MRBackup's date requester. Simply select the date you wish to apply.

1.109 MRBackup.guide/ARexx Interface

```
MRBackup's ARexx Interface
**************************
```

The Amiga's multitasking operating system is one of its distinguishing
features. The typical Amiga user is apt to be running several programs
at any given time. With the addition of ARexx (the Amiga
implementation of the Rexx language), programs equipped with an ARexx
"software port" can communicate, share resources with one another or be
operated under the control of an ARexx program.

   The MRBackup ARexx Port

   Using ARexx with MRBackup

   MRBackup ARexx Commands

1.110 MRBackup.guide/The MRBackup ARexx Port

```
The MRBackup ARexx Port
=======================
```

MRBackup provides an ARexx interface which allows many of its operating
parameters and features to be accessed this way. It is possible to run
multiple"copies" of MRBackup. Thus, MRBackup creates a unique ARexx
port name for each instance of MRBackup that is run. You can determine
the ARexx port name by selecting the About item from MRBackup's Project
menu.

The ARexx port name will always be of the form:

        MRBackup_#<number>

where <number> is the number assigned to a given instance of MRBackup.
Typically, with one copy of MRBackup running, the ARexx port name will
be MRBackup_#1.

1.111   MRBackup.guide/Using ARexx with MRBackup

Using ARexx with MRBackup
=========================

This is not an ARexx tutorial. If you are unfamiliar with ARexx, you
will have to obtain appropriate documentation. ARexx is bundled with
AmigaDOS version 2.04 and beyond. It can also be purchased from

             William S. Hawes
             P.O. Box 308
             Maynard, MA 01754
             (617) 568-8695

MRBackup's ARexx implementation requires that the 'results' option be
enabled, since many commands return a value. Include the following
statement in all of your MRBackup ARexx scripts:

        options results

Commands which don't have a specific return value will set the result
variable to either "OK" or "FAIL" to indicate success or failure.

Each MRBackup ARexx script must have a filename extension of ".mrbk"
(e.g. DailyBackup.mrbk). Here is an example script which manipulates
MRBackup's voice setting (on or off) and demonstrates its effects:

```
    /* voice.mrbk */
        /* MRBackup: turn voice on and off. */

        signal on ERROR
        signal on BREAK_C

        /* Enable command results. */
        options results

        /* Make sure that MRBackup is running. */
        if ~(Show('P', 'MRBackup_#1')) then do
                say "You must run MRBackup first."
                exit 1
        end

        /* Select MRBackup's ARexx port. */
        address "MRBackup_#1"

        /* Bring MRBackup's screen to the front. */
        poptofront

        /* Tell the user what is going to happen. */
```

```
        'notealert "This test turns the voice option off and on."'

        /* Turn the voice capability off. */
        'setvoice "no"'
        /* Check the result of the previous command. */
        if result ~= "OK" then do
                say "I could not turn the voice option off!"
                exit 1
        end

        /* The following message should be suppressed. */
        'speak "You should not hear this message."'
        if result ~= "OK" then do
                say "Attempt to speak failed."
                exit 1
        end

        call Delay(50)

        /* Enable MRBackup's voice capability. */
        'setvoice "yes"'
        if result ~= "OK" then do
                say "I could not turn the voice option on!"
                exit 1
        end

        /* This time, the user should hear the message. */
        'speak "This message is being brought to you by Ay Rexx."'
        if result ~= "OK" then do
                say "Attempt to speak failed."
                exit 1
        end

        exit 0

        /*--- Control-C interrupts come here. ---*/

        break_c:

        say "*** Control-C recieved.  Stopped by user. ***"
        exit 5


        /*--- ARexx-detected errors come here. ---*/
        error:

        say "Error"
        exit 6

        /*--- End of script. ---*/
```

You will find a set of example ARexx scripts in the Rexx directory on
your MRBackup program diskette. Please refer to them when you need
help in creating your own MRBackup ARexx applications. Specifically,
examine the script named "template.mrbk". It provides an example of
every MRBackup ARexx command.

1.112 MRBackup.guide/MRBackup ARexx Commands

MRBackup ARexx Commands
=======================

This section details each of the ARexx commands supported by MRBackup.
In the following discussion, certain notation conventions are adopted:

  * Command parameters (arguments) are often specified with enclosing
    angle brackets <>. The enclosed word or phrase connotes the type
    of value which should be substituted. For instance, a parameter
    denoted as <path> could take a value such as "DH0:Devs/Printers".

  * Optional parameters are enclosed in square brackets []. In these
    cases, the command's behavior with the optional parameter
    specified is contrasted with its behavior when the optional
    parameter is given.

  * Literal text values (e.g. "OK", "FAIL", etc.) are specified as
    quoted strings.

    COMMAND: backup

    RESULT: "OK"or "FAIL"

    DESCRIPTION: This command starts a backup operation. Prior to issuing the
    backup command, all backup parameters (filter specifications, compression
    settings, etc.) should be set to their desired values.

    COMMAND: dateformat <format_code>

    RESULT: The current date format code (0-3).

    DESCRIPTION: This command sets the format to be used when expressing
    date values as text. The dateformat setting not only affects the way
    that dates appear in printed output (e.g. MRBackup logs and listings)
    but it also determines the format of the date parameter expected by
    the 'settestdate' command. The <format_code> can be a value from 0
    (zero) to 3 (three) and has these meanings:

        0   -   DD-MMM-YY   (AmigaDOS)
        1   -   YY-MM-DD   (International)
        2   -   MM-DD-YY   (USA)
        3   -   DD-MM-YY   (Candian)

    COMMAND: getbackpath

    RESULT: MRBackup's current Backup Path specification.

    DESCRIPTION: This command obtains the current Backup Path specification
    and returns it via the result variable.

COMMAND: getbfilterpath

RESULT: MRBackup's current Backup Filter specification.

DESCRIPTION: This command obtains the current Backup Filter specification
and returns it via the result variable.

COMMAND: getbufsize

RESULT: The current Buffer Size value.

DESCRIPTION: The getbufsize command obtains the current Buffer Size value
(expressed as a multiple of "K", where "K" = 1024) and returns it via the
result variable.

COMMAND: getcfilterpath

RESULT: The current Compression Filter specification.

DESCRIPTION: The getcfilterpath command obtains the current Compression
Filter specification and returns it via the result variable.

COMMAND: getchoice <prompt> <choice_1> [... <choice_n>]

RESULT: user's choice selection

DESCRIPTION: getchoice provides a means for an ARexx script to present
a requester to the user with a set of choices (up to 8), each appearing in a
button. The result will be the choice string for the button selected
by the user. Example:

    'getchoice "Select an option" "A" "B" "C" "D"'

The above example presents four choices to the user. If the user were
to click on the button labeled "B", then "B" would be returned as
the result.

COMMAND: getcompression

RESULT: "None", "12-Bit", "13-Bit", "14-Bit", "15-Bit", "16-Bit"

DESCRIPTION: The getcompression command obtains the current Compression
code size setting and returns it via the result variable.

COMMAND: getdecompression

RESULT: "None", "12-Bit", "13-Bit", "14-Bit", "15-Bit", "16-Bit"

DESCRIPTION: The getcompression command obtains the current Deompression
code size setting and returns it via the result variable.

COMMAND: getdfilterpath

RESULT: The current Decompression Filter specification.

DESCRIPTION: The getdfilterpath command obtains the current Decompression
Filter specification and returns it via the result variable.

COMMAND: getfilemode

RESULT: "ASK", "APPEND" or "REPLACE"

DESCRIPTION: 'getfilemode' returns the current setting of the switch
which controls MRBackup's behavior with regard to opening existing
listing and log files. See 'setfilemode' for more details.

COMMAND: getforcedcopy

RESULT: "Never", "Always" or "Prompt"

DESCRIPTION: 'getforcedcopy' returns the current setting of the
forced copy option which governs the behavior of MRBackup during
a file restore process. For more info, see 'setforcedcopy'.

COMMAND: getformatting

RESULT: "None", "Quick", "Normal"

DESCRIPTION: The getformatting command obtains MRBackup's current
Formatting setting and returns it in the result variable.

COMMAND: gethomepath

RESULT: MRBackup's Home Path specification.

DESCRIPTION: The gethomepath command obtains MRBackup's Home Path
specification and returns it via the result variable.

COMMAND: getlistpath

RESULT: MRBackup's Listing Path specification.

DESCRIPTION: The getlistpath command obtains MRBackup's Listing Path
specification and returns it via the result variable.

COMMAND: getlogpath

RESULT: MRBackup's Log Path specification.

DESCRIPTION: The getlogpath command obtains MRBackup's Log Path

specification and returns it via the result variable.

COMMAND: getresult

RESULT: value of the last MRBackup ARexx 'result' code

DESCRIPTION: the 'getresult' command returns the internal result code
for the previous ARexx command executed by MRBackup. The internal
result code is reset to zero as a side-effect of this command.

COMMAND: getrfilterpath

RESULT: the current Restore Filter filename

DESCRIPTION: This command retrieves the current Restore Filter filename
and returns it via the result variable

COMMAND: gettestdate

RESULT: the current Test Date value

DESCRIPTION: The gettestdate command fetches the current Test Date value
(used for backup operations) and returns it in the ARexx result variable.
The date is formatted according to the current date format.

COMMAND: ignorecatalog <yes_or_no>

RESULT: none

DESCRIPTION: The ignorecatalog command, with the "YES" parameter,
instructs MRBackup to perform the next restore operation without reference
to a backup catalog. This implies that the full saveset will be restored
unless a restore filter is specified. This setting is "non-sticky". That
is, as soon as a restore is started and this value is used, ignorecatalog
reverts to the "NO" (require catalog) setting.

COMMAND: keepemptydirs <yes_or_no>

RESULT: none

DESCRIPTION: The keepemptydirs command instructs MRBackup to preserve
empty directories when performing a backup. The default state is "YES".

COMMAND: listing <yes_or_no>

RESULT: "OK" or "FAIL"

DESCRIPTION: The listing command enables or disables MRBackup's listing
output, depending upon the <yes_or_no> parameter which must be either "YES"
or "NO". Example:

        listing "YES"

    COMMAND: loadprefs <filename>

    RESULT: the current preferences filename

    DESCRIPTION: The loadprefs command causes some or all of MRBackup's
    operating parameters to be loaded from the specified <filename>. This file
    must conform to the format of the MRBackup.init file delievered with
    MRBackup Professional. The file may have been previously created with the
    Preferences/Save... menu command or it may be created by an editor,
    application or ARexx script. This method of setting MRBackup parameters is
    much more convenient than using the individual "set" ARexx commands.

    COMMAND: notealert <message>

    RESULT: "OK" or "FAIL"

    DESCRIPTION: The notealert command provides access to MRBackup's
    informational requester. The text of <message> will be presented in a
    requester. The user must click the requester's OK button before program
    execution will proceed. The <message> string may contain embedded newline
    (line feed) characters.

    COMMAND: poptofront

    RESULT: "OK" or "FAIL"

    DESCRIPTION: The poptofront insures that MRBackup's screen is the
    frontmost screen.

    COMMAND: quit

    RESULT: "OK" or "FAIL"

    DESCRIPTION: The quit command instructs MRBackup to terminate. When used,
    this must be the last command issued to MRBackup.

    COMMAND: releasecontrol

    RESULT: "OK"

    DESCRIPTION: the 'releasecontrol' command releases MRBackup from full
    ARexx control. It must be issued before exiting a script in which
    'takecontrol' was invoked.

    COMMAND: restore

    RESULT: "OK" or "FAIL"

    DESCRIPTION: The restore command instructs MRBackup to perform a file

restore operation according to MRBackup's current settings.

COMMAND: setarcbits <yes_or_no>

RESULT: "OK" or "FAIL"

DESCRIPTION: The setarcbits command instructs MRBackup to enable/disable
the setting of file archive bits during a backup operation. If the
<yes_or_no> value is "YES", archive bits will be set upon successful
completion of a backup.

COMMAND: setbackpath [<path>]

RESULT: "OK" or "FAIL"

DESCRIPTION: The setbackpath command instructs MRBackup to adopt a new
Backup Path specification. The <path> parameter, if supplied, must be the
name of a valid device, directory or filename (depending upon the current
backup mode). If <path> is not given, the user will be presented with
MRBackup's file requester.

COMMAND: setbackupmode <mode>

RESULT: the new backup mode setting

DESCRIPTION: The setbackupmode command sets the backup mode (media type)
to one of "AmigaDOS", "FastDisk" or "SCSITape".

COMMAND: setbfilterpath [<path>]

RESULT: new backup filter file name

DESCRIPTION: The setbfilterpath command instructs MRBackup to adopt a new
Backup Filter specification. The <path> parameter, if given, must be the
name of a valid text file containing MRBackup backup filter specifications.
If <path> is not given, the user will be presented with MRBackup's file
requester so that a file may be selected. Note that this command always
returns the backup filter file name in effect upon its return. To test for
failure, test the ARexx rc variable for a non-zero result.

COMMAND: setbufsize <value>

RESULT: new buffer size value

DESCRIPTION: The setbufsize command instructs MRBackup to use a new buffer
size for backup/restore operations. The <value> parameter is expected to
be a number expressed as a multiple of "K" (K = 1024). For example, a
<value> of 64 would result in 65536 bytes being allocated for MRBackup
buffering operations. The return value is always the buffer size (again,
in K) in effect upon return from this command. If an error is detected,
the ARexx rc variable will contain a non-zero error code.

COMMAND: setcatalogname <path>

RESULT: "OK" or "FAIL"

DESCRIPTION: The setcatalogname command allows the name of the saveset
catalog file name to be set under program control. The <path> specified
for the catalog file name is not verified.

COMMAND: setcfilterpath <path>

RESULT: new compression filter file name

DESCRIPTION: The setdfilterpath command instructs MRBackup to adopt a new
Compression Filter file name specification. If <path> is given, it must be
the name of an existing text file containing valid MRBackup filter
patterns. If <path> is omitted, the user will be presented with MRBackup's
file requester so that a file may be selected.

This command always returns the name of the Compression Filter file in
effect upon its return. To check for command failure, test the ARexx rc
variable for a non-zero value.

COMMAND: setcomment<comment_string>

RESULT: "OK"

DESCRIPTION: The setcomment command sets the saveset comment for the next
backup to the value specified by the <comment_string> parameter. This
value should be 80 characters or less.

COMMAND: setcompression <code_size>

RESULT: "OK" or "FAIL"

DESCRIPTION: The setcompression command instructs MRBackup to use a new
compression code size for subsequent backups. The valid values for
<code_size> are:

    None, 12-Bit, 13-Bit, 14-Bit, 15-Bit, 16-Bit

COMMAND: setdecompression <code_size>

RESULT: "OK" or "FAIL"

DESCRIPTION: The setdecompression command instructs MRBackup to use a new
decompression code size limit for subsequent backups. The valid values for
<code_size> are the same as those for the setcompression command.

COMMAND: setdfilterpath [<path>]

RESULT: new decompression filter file name

DESCRIPTION: The setdfilterpath command instructs MRBackup to adopt a new
Decompression Filter file name specification. If <path> is given, it must
be the name of an existing text file containing valid MRBackup filter
patterns. If <path> is omitted, the user will be presented with MRBackup's
file requester so that a file may be selected.

This command always returns the name of the Decompression Filter file in
effect upon its return. To check for command failure, test the ARexx rc
variable for a non-zero value.

COMMAND: setfilemode <mode_option>

RESULT: "OK" or "FAIL"

DESCRIPTION: 'setfilemode' sets a switch which governs MRBackup's
behavior when opening an listing or log file. The <mode_option> can
be one of the following:

    "Ask" – MRBackup will ask whether to replace or append to the
            contents of an existing file.

    "Append" – MRBackup will automatically append to the end of an
            existing file.

    "Replace" – MRBackup will replace (erase) the contents of an
                existing file.

COMMAND: setforcedcopy <force_option>

RESULT: "OK" or "FAIL"

DESCRIPTION: 'setforcedcopy' sets a switch which governs the behavior
of MRBackup during a file restore option. The <force_option> can be
one of the following:

    "Always" – MRBackup will unconditionally overwrite any existing
               file during the restore process.

    "Never" – MRBackup will not overwrite any file which is newer
               than the file being restored.

    "Prompt" – MRBackup will ask for permission before overwriting
               a file with an older file. Older files will be
               overwritten with newer files, as usual.

This command has a significant impact on the overall performance of a
restore operation. If "Always" or "Prompt" are used, MRBackup must
first check for the existence of each file to be restored, comparing
its modification date (if it exists) against the modification date of
the file in the saveset. If you are restoring to an empty partition,
it's a good idea to set the forced copy switch to "Always".

COMMAND: setformatting <format_option>

RESULT: same as getformatting

DESCRIPTION: The setformatting command tells MRBackup what type of floppy
disk formatting to employ when doing a backup to floppy disk (AmigaDOS mode
only). The <format_option> must be one of "None", "Quick" or "Normal".
The result will always be the formatting option in effect upon return from
this command. If a bad <format_option> is specified, the ARexx rc variable
will be set to a non-zero value.

COMMAND: sethomepath [<path>]

RESULT: new Home Path specification

DESCRIPTION: The sethomepath command instructs MRBackup to adopt a new
Home Path specification. If <path> is given, it must be a valid pathname
that satisfies the requirements for the Home Path. If <path> is not given,
the user is presented with MRBackup's file requester so that a new Home
Path may be selected.

This command always returns the name of the Home Path in effect upon its
return. To check for command failure, test the ARexx rc variable for a
non-zero value.

COMMAND: setinfogadget <message>

RESULT: "OK"

DESCRIPTION: This command provides a means for an ARexx script to place a
text <message> in MRBackup's Info gadget. Example:

    setinfogadget 'I am about to start the backup.'

COMMAND: setlistpath [<path>]

RESULT: new listing pathname

DESCRIPTION: The setlistpath command instructs MRBackup to adopt a new
Listing Path specification. If <path> is given, it must be a valid device
name (e.g. PRT:, PAR:, etc.) or file name. If <path> is not given, the
user will be presented with MRBackup's file requester to allow a selection.

The setlistpath command always returns the Listing Path specification in
effect upon its return. To test for an error, check the ARexx rc variable
for a non-zero value.

COMMAND: setlogpath [<path>]

RESULT: new log file name

DESCRIPTION: The setlogpath command instructs MRBackup to adopt a new Log
Path specification. If <path> is given, it must be a suitable device,
console or file specification for MRBackup's log messages. If <path> is
not given, the user will be presented with MRBackup's file requester to

allow a new selection.

The setlogpath command always returns the Log Path specification in effect
upon its return. To test for an error, check the ARexx rc variable for a
non-zero value.

COMMAND: setprefix <prefix_string>

RESULT: accepted prefix string

DESCRIPTION: The setprefix command allows an ARexx script to set the
Prefix string used to create backup volume names. The result is the actual
prefix string accepted, which may differ from <prefix_string> slightly if
illegal characters exist in <prefix_string> or if it is too long (maximum
of 20 characters).

COMMAND: setrfilterpath <pathname>

RESULT: the Restore Filter pathname

DESCRIPTION: This command sets the Restore Filter specification to
<pathname>. This allows for selective file restores under ARexx control.

COMMAND: settestdate [<date_string> >]

RESULT: new Test Date specification

DESCRIPTION: The settestdate command instructs MRBackup to adopt a new
Test Date specification. If <date_string> is given, MRBackup attempts to
convert it to an AmigaDOS date value (DateStamp). If <date_string> is not
given, MRBackup's date requester is activated to allow the user to enter
the new test date.

The result will always be the Test Date in effect upon return from this
command. If a <date_string> conversion error occurs, the ARexx rc variable
will be set to a non-zero result.

COMMAND: setvoice <yes_or_no>

RESULT: "OK" or "FAIL"

DESCRIPTION: The setvoice command enables or disables MRBackup's voice
capability, depending upon the value of the <yes_or_no> parameter. A "YES"
value enables voice, while a "NO" value disables it. Example:

    setvoice "NO"

COMMAND: speak <message>

RESULT: "OK" or "FAIL"

DESCRIPTION: The speak command requests MRBackup to utter the text

contained in the <message> parameter. The <message> is only spoken if
MRBackup's voice is enabled (see getvoice/setvoice). Since MRBackup uses
the Amiga's translator, you might want to experiment with certain sentences
and phrases which aren't handled correctly. For instance, "MRBackup"
sounds like "merbackup" while "M R backup" produces more desirable results.

COMMAND: splitfiles <yes_or_no>

RESULT: "OK" or "FAIL"

DESCRIPTION: The splitfiles command enables or disables MRBackup's
splitting of "big files", depending upon the setting of the <yes_or_no>
flag. A "YES" value enables file splitting while a "NO" value disables it.
Note that this setting is only relevant to the AmigaDOS backup mode.

COMMAND: takecontrol

RESULT: "OK"

DESCRIPTION: the 'takecontrol' command places MRBackup under full
ARexx control. Essentially, this inhibits many of MRBackup's error
and information requesters to enable automated backup and restore.
Certain requesters, such as those which require floppy disk insertions
and removals, will still appear.

COMMAND: testarcbits <yes_or_no>

RESULT: "OK" or "FAIL"

DESCRIPTION: The testarcbits instructs MRBackup to test or ignore file
archive bits during backup operations, depending upon the value of the
<yes_or_no> parameter. If <yes_or_no> is "YES", only files whose archive
bit is clear will be candidates for backup.

COMMAND: utilities

RESULT: "OK" or "FAIL"

DESCRIPTION: The utilities command activates MRBackup's utilities window.
Script execution will be suspended until the user closes the Utilities
window.

COMMAND: yesno <question>

RESULT: "YES" or "NO"

DESCRIPTION: The yesno command provides access to MRBackup's YES/NO
requester. The <question> parameter should be a string containing a
question. Script execution will be suspended until the user responds by
clicking either the YES or NO buttons in MRBackup's requester. Upon
return, the result variable will contain the user's response.

1.113 MRBackup.guide/Data Compression

```
Data Compression
****************
```

MRBackup provides you with the ability to compress your files as they
are written to a saveset and to decompress them when they are restored.
 The primary motivation for doing this is to save space on the backup
media and thus reduce the amount of media required to hold the saveset.
 There is a performance penalty exacted for this, however. You must
determine if the savings in space are worth the extra time required to
perform the backup or restore of compressed files. The use of data
compression also places extra demands on system memory which may be a
consideration if you are running other programs (multitasking) while
MRBackup is running.

  Data Compression Method

  The Compressor

  Compression Estimating

1.114 MRBackup.guide/Data Compression Method

```
Data Compression Method
=======================
```

MRBackup employs Lempel-Ziv compression. While this method does not
yield the highest compression ratios, it is one of the faster software
compression algorithms available. Its ability to be adjusted through
the use of user-specified code size limits allows you to make certain
performance trade-offs. Larger code sizes will make greater temporary
demands on system memory but will result in higher compression ratios.

When a file is compressed, special codes are written at the beginning
of the compressed file to indicate that it is compressed and to record
the size of the codes used for compression. Thus, you need not
remember what code size was used to compress a particular file when you
later decompress it.

1.115 MRBackup.guide/The Compressor

```
The Compressor
==============
```

MRBackup performs data compression with a separate program named
Compressor. Whenever you start a backup with compression enabled or a
restore with decompression enabled or if you compress/decompress
individual files using the Utilities, MRBackup will check to see if the
Compressor is running. If not, you will be asked for permission to
start it. MRBackup will then enter into a "conversation" with the
Compressor, requesting data to be processed and retrieving the results.

There are several advantages to this approach. Some of them are too
technical to be discussed here. Of most importance to the user is that
as a result, the MRBackup program is smaller. If data compression is
not being used, less memory is being used by MRBackup. The Compressor
program is designed to employ "overlays". When it is idle, it uses
almost no Amiga resources since it releases the data compression code
and buffer memory and waits for the next request to do something.

Starting and Stopping the Compressor Manually
===

You may elect to start and stop the Compressor "manually" if you so
desire. To start the Compressor, simply enter

        RUN MRBackup:Compressor <nil: >nil:

from the Shell command prompt or double-click the Compressor icon. To
stop the Compressor, enter

        MRBackup:Compressor quit

from the Shell command prompt.

1.116 MRBackup.guide/Compression Estimating

Compression Estimating
======================

Compression estimating is useful when creating AmigaDOS savesets. It
allows MRBackup to better determine if a file will fit on the current
backup diskette when performing an AmigaDOS backup with compression
enabled (it is irrelevant to Fast Disk and SCSI Tape backups). MRBackup
does not know in advance what a file's size will be after it is
compressed. Therefore, when determining if a file will fit on the
current backup diskette, the file's full size is used. This can result
in a significant amount of wasted space on each diskette. If you set
the compression estimate to a non-zero value, MRBackup will apply this
estimate when determining space available. A reasonable value to start
with is 35 (%). This means that you expect most files to be 65% of
their original size (100%-35%) when compressed. Please note that this
may lead to occaisional "disk full" errors, depending on how aggressive
your estimate is. In this case, MRBackup will delete the partially
copied file and force a new diskette. This is a feature you'll have to
develop a "feel" for. Of course, you can always play "safe" and leave
this value at zero.

1.117 MRBackup.guide/Filter Files

```
Filter Files
************
```

The term "filter" may sound strange to you, but you've probably heard
and even used it many times without giving it a second thought. Surely
you've heard of the coffee filter, which keeps the coffee grounds out
of your freshly brewed pot of java. Air filters keep dust and dirt out
of your electronic equipment and your environment. Oil filters keep
your auto's engine clean.

MRBackup employs filename filters to accomplish something quite
analogous. A set of filenames is "fed into" a filter and a subset of
those filenames is allowed to "pass through" it. Each filter is simply
a text file containing zero or more filename patterns. Each filter
(backup, compression, decompression) has a specific purpose and
operates on a particular set of filenames.

   Filter File Format

   Backup Filter

   Compression Filter

   Decompression Filter

1.118 MRBackup.guide/Filter File Format

Each filter file is simply a text file which can be created with any
plain text editor or a word processor which can save plain ASCII text.
They can also be created by some other program or ARexx script (hint!).
 The filter file may contain any number of patterns, one per line. You
may place comments in the file by placing a semi-colon (;) in the first
character position. Empty lines are also ignored.

```
Filter Patterns
---------------
```

Filter patterns are expressed "relative" to a device or volume. That
is, they must not include a volume or device name (the part preceding
and including the colon in a full AmigaDOS filename). What they are
relative to is implicit in their use. For instance, the backup filter
patterns are relative to the "home" device, as are the compression
filter patterns. Since decompression is performed during a restore,
decompression filter patterns are implicitly relative to the "backup"
device.

Filter patterns may be simple filenames, such as

        Trashcan
        Trashcan.info

or they may be quite exotic and complex patterns with "wildcard"
notation, character class specifications, etc. Here is the definition
of special characters which can be used in a filter pattern:

        Character   Meaning

            ?   Match any single character.

            %   Match the null string.

          #<p>   Match zero or more occurrences of pattern <p>.

            *   Match any pattern (same as #?).

        <p1><p2>   Match pattern <p1> followed by pattern <p2>.

            ( )   Parentheses group patterns together.

        (<p1>|<p2>) Match if either <p1> or <p2> match (parentheses are
                     required.).

            [ ]   Character class (ex: [a-z] or [0-9]).

          ~<p>   Negation: match anything BUT pattern <p> Example: "~*.info"
                     means all files except those ending in ".info" (quotes for
                     illustration only)

            '   Escape next special character. Useful for filenames which
                     contain any special characters above.

The most common mistake that you are likely to make when creating your
filter patterns is to omit the "leading context" from your patterns.
For instance, if you want to omit all files named "junk.txt" from an
operation, you must remember that the simple filename is actually part
of a larger specification which includes all higher level directory
names. Thus, to omit all files named "junk.txt", we might use the
following pattern:

        (junk.txt|#?/junk.txt)

This is a pattern grouping which recognizes "junk.txt" at the top level
of a volume or (you can equate the vertical bar | to the word "or") at
any level in the directory hierarchy. The pattern

        #?junk.txt

is not "safe" since it will match ANY sequence of characters preceding
"junk.txt" (somejunk.txt, myjunk.txt, morejunk.txt, etc.) which may not
be what we wanted.

1.119 MRBackup.guide/Backup Filter

The Backup Filter is used to assist in the selection of files that are
to be copied during a backup operation. When MRBackup performs its
initial scan, the backup filter is applied to each file or directory
name as it is encountered.

The Backup Filter has a dual personality. By default, its patterns are
used to exclude selected files from a backup. However, there are two
special patterns which change the meaning of the Backup Filter patterns.
These patterns are

        :INCLUDE: and
        :EXCLUDE:

If the :INCLUDE: pattern appears in the Backup Filter file, subsequent
patterns will be used to include files in the backup. Only files which
match these patterns will be included in the backup. This can be a
useful mechanism for backing up "disjoint" directory hierarchies
without having to provide many exclude patterns.

If the :EXCLUDE: pattern appears in the Backup Filter file, subsequent
patterns will be used to exclude files from the backup. If the
:INCLUDE: pattern is also present in the filter file, the exclude
patterns will be applied only to the files which satisfied the include
patterns. That is, the include patterns take precedence, regardless of
the appearance order of :INCLUDE: or :EXCLUDE:.

1.120 MRBackup.guide/Compression Filter

The Compression Filter is employed during a backup operation to inhibit
file compression on certain files. It has no effect if the Compression
gadget has been set to None.

Over time, you will notice that certain files have a tendency to expand,
rather than compress, when subjected to MRBackup's compression
algorithm. Such strange behavior! The compression algorithm takes
advantage of the fact that most files contain data whose values are not
evenly distributed. There tend to be many redundant data patterns which
can be represented by fewer bits. However, certain files, such as
programs, animations, graphics images, etc., do not compress well since
they already contain very random data patterns.

MRBackup helps you alleviate this situation by providing you with a
compression filter. When you detect files for which compression is a
problem, enter the appropriate patterns into your compression filter
file and MRBackup will cease trying to compress them. If you use a
reasonable naming convention for certain classes of files (e.g.
<file>.ilbm for IFF bitmap files), you can easily omit whole classes of
files from compression.

1.121   MRBackup.guide/Decompression Filter

While file compression is a nice backup feature, you may also want to
maintain certain files on your hard drive in a compressed state. If you
perform a restore operation with decompression enabled, however, files
that you wish to remain compressed will be decompressed. The
decompression filter allows you to specify the files which you would
like to restore in their compressed state. That is, patterns in the
decompression filter inhibit file decompression.

1.122   MRBackup.guide/SCSI Tape Support

```
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:

   * Copy the mountlist entry file to the DEVS: directory. The
     mountlist entry provided with MRBackup is named
     Devs/DosDrivers/MRTape. There is also a synchronous version named
     Devs/DosDrivers/MRTapeS. The MRTape mountlist entry contains the
     following:

   /* This is a mountlist entry for the SCSI tape handler provided with */
   /* MRBackup. Pay particular attention to the StartUp message. Its   */
   /* format is: */
   /*   "<buffer_size>/<device_name>/<unit>/<luno>/<flags>"   */
   /*   */
   /* where   */
   /*   <buffer_size> is the total amount of buffer memory, specified   */
   /*   in K (K = 1024);   */
   /*   */
   /*   <device_name> is the SCSI device driver name;   */
   /*   */

```
/*        <unit> is the SCSI unit number;                               */
/*                                                                      */
/*        <luno> is the SCSI logical unit number (not currently used but */
/*        must be set to zero);                                         */
/*                                                                      */
/*        <flags> is a set of bits controlling certain tape drive options */
/*        The bit values, which may be added together are:              */
/*                                                                      */
/*            1   asynchronous mode, 0 = synchronous mode               */
/*            2   use on-board buffer, 0 = don't use on-board buffer    */
/*            4   Introduce 2 ms delay before each read/write. This may */
/*                help prevent bus lockup in async mode.                */
/*            8   Introduce 4 ms delay (additive).                      */
/*                                                                      */
/*            Example: to enable async mode and the on-board buffer, the */
/*            <flags> value would be 3 (1 + 2).                         */
/*                                                                      */
/*            Other flag bits will be provided as new features are added. */

/* Default version of MRTape handler. */

Handler = l:mrtape-handler
StartUp = "60/scsi.device/4/0/3"
Stacksize = 6000
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:

You may then specify MRTAPE: as your Backup Path.

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.

  Asynchronous vs. Synchronous Mode

  Multiple Savesets on One Tape

  Using MRBackup with Other Handlers

1.123 **MRBackup.guide/Asynchronous vs. Synchronous Mode**

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. I 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.

1.124   MRBackup.guide/Multiple Savesets on One Tape

Multiple Savesets 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.
 You should also be aware that this capability only exists for
"sequential access" tape drives such as the Archive, 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.

See the file named MRBackup:Docs/MRTape.DOC for the most recent list of
MRTape-Handler capabilities.

1.125   MRBackup.guide/Using MRBackup with Other Handlers

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, I would be very grateful
 for any information you pass on with regard to any problems you

might encounter. I am constantly striving to improve the quality of
MRBackup Professional.

1.126 MRBackup.guide/Tips

Tips
****

This section contains bits of information which will help you achieve
maximum satisfaction and performance from MRBackup Professional. If
you have a useful tip, please submit it and we'll incorporate it here.

   Improving Throughput

1.127 MRBackup.guide/Improving Throughput

One important factor in the performance of the AmigaDOS filesystems is
the number of disk buffers allocated to each partition. For hard disk
drives, this value can be set when you partition the drive. The value
can also be modified for any drive with the AmigaDOS 'AddBuffers'
command. There is no set value that works well for all drives, but I
recommend that you use a value of at least 30 buffers. Bear in mind
that using too many buffers can waste memory and perhaps even slow down
filesystem performance.

The number of buffers assigned to a floppy disk drive has no effect on
Fast Disk performance but will have an impact on AmigaDOS backups to
floppy disks.

The 'Buffer' parameter in the General Parameters window now has a
minimal effect on overall performance since most buffers used by
MRBackup are automatically tuned to the best match between input and
output devices.

If you are backing up to SCSI tape, the buffer size that you specify in
the mountlist entry is very important. Most tape hardware has internal
buffer memory. Data is held in this buffer until it fills, then is
written to tape. If you specify a mountlist entry buffer size exactly
matched to the capacity of the tape drive's internal buffer, you will
achieve maximum parallel execution of the tape handler and MRBackup and
thus maximum throughput. This is a case where more isn't necessarily
better.

1.128 MRBackup.guide/Technical Support

```
Technical Support
*****************
```

If you have a problem with MRBackup, think you've discovered an
"undocumented feature" or just need help, please call! I'll do my best
to help you get the most out of MRBackup Professional. If you don't
have telecommunications software or a modem, you can write to

```
        MRsoftware
        348 Indian Avenue
        Portsmouth, RI   02871

        (401) 846-7639
```

MRsoftware maintains an email account on BIX (markr) and a vendor
support forum, amiga.vendors/mrsoftware

Users on either Usenet or Internet can send e-mail to
mrr@mrsoft.network23.com.

MRsoftware has a customer support BBS where product updates and user
support are provided. The BBS phone number is (401) 841-5844. The BBS
is supported by a SupraFAXModem and will answer at 1200, 2400 or 9600
baud (8N1). The BBS software is AXsh which is a bit different than the
typical BBS system (it's user interface is very much like the Unix
operating system). Presently, two Login prompts must be satisfied to
gain access to the BBS (this will probably change in the near future).

At the first Login prompt, always enter 'bbs' (without the quotes).

At the second Login prompt, do one of the following:

    *   First-time callers must enter 'new' to register as a new BBS
      user,   then follow instructions as they appear.

    *   On subsequent calls, enter your BBS user name and password, as
      you   chose them during your initial registration.

Do not forget your password! If you lose it, the only way you will be
able to regain access to the BBS is to request a new one (it's
encrypted, so even I don't know what it is.).

A special 'guest' account (password = guest) is also provided on the
BBS. This account can be used to test-drive the BBS or to make special
requests such as assigning a new password :-).

The latest shareware distribution archive of MRBackup Professional will
always be available on the BBS in the public download directory. Other
MRsoftware shareware and PD offerings are also available here.

Limited voice support is available by calling (401) 846-7639 on weekdays
from 6:00 p.m. to 9:00 p.m. (EST). PLEASE DO NOT CALL AFTER 9:00 p.m.!!!
Voice support is also available on weekends from 9:00 a.m. to 6:00 p.m.
if you're lucky enough to catch me. In addition to MRBackup Professional
development, I also have a 'life' which keeps me on the run.

1.129 MRBackup.guide/About the Author

```
About the Author
****************

     Full Name:      Mark Richard Rinfret
     Born:           Exeter, NH  12/27/49
     Hair Color:     Brown
     Eyes:           Two! (Hazel)
     Height:         6' 0"
     Weight:         Sufficient to withstand high winds or,
                     "Where did my shoes go?"
     Marital Status: TRUE


Professional Status

I'm currently employed as a senior systems analyst with Stanley
Bostitch (manufacturer of office products, construction tools and
materials, etc.).  I have over 19 years of software design/development
and systems administration experience on a wide variety of military and
commercial computer platforms and operating systems, including:

        Amiga
        AN/UYK-7, AN/UYK-44, AN/UYK-20
        DEC/5000 (Ultrix)
        DEC VAX, PDP-15, PDP-8
        IBM RS/6000 (AIX)
        Texas Instruments micros and minis
        Macintosh
        PC (DOS, Windows, OS/2)
        Sun workstations
        Silicon Graphics workstations


My computer language experience includes:

        C, C++, Ada, Pascal, Rexx, CMS-2, SPL-I, FORTRAN, BASIC, FORTH,
        and various assembly languages

I've also had much experience with the Oracle database manager (V6,
VAX) and SQL at both the scripting and API levels.

Amiga!

I bought my first Amiga in 1987.  I currently own an A2500/030 and an
A2000 (my son's machine, also used for testing).  For the curious, my
system configuration includes:

        A2500/030, 5MB RAM
        A2091 SCSI Controller
        Quantum LPS-240S (internal)
        Quantum P105S (external)
        Sony SMO-E501 5 1/4" magneto-optical drive (281 MB per side, removable)
        Tandberg 3600 series 150MB tape drive
        SupraFAX modem
        Panasonic KXP-4455 laser printer
```

My system is a registered Usenet node (mrsoft@network23.com) and I am on
BIX frequently as "markr".

Other Details

I'm married to Penny (a.k.a. Clotilde), my wife of 19 years (no –
that's not her age, that's how long we've been married!) and I'm a
happy (young!) grandfather of five little thumpers, an active member of
my church (former parish council chairman, former school board vice
chairman) and currently the Grand Knight of the Middletown, RI Knights
of Columbus, Council #4201. I love music and can play the saxophone
(fairly well), the guitar (so-so) and can stumble around a keyboard. I
have a somewhat offbeat sense of humor and love a good chuckle, even at
my own expense (good thing, since there's apparently an ample supply of
material :-).

1.130 MRBackup.guide/Concept Index

Concept Index
****

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