FULL CIRCLE TECHNOLOGIES

®

GE-SOFT
SAVEBACK PROGRAM

SAVEBACK

*THE SAFEST BACKUP PRO-
GRAM FOR THE ATARI ST*
CONTENTS

1. INTRODUCTION

This section of the book is inten-
ded to give you a general idea of
what the SAVEBACK program is
exactly, and what it does and how.
So we'll start by answering the
second most asked question:

What is SAVEBACK?

SAVEBACK is nothing other than a
program that makes a copy of all
the data and information on a
chosen Logical Drive of your Hard
Drive. It ensures that, should some
misfortune overtake your drive, or
should you accidentally erase all
your financial records for the last
week, month or year, that you will
have a copy on Floppy Disk await-
ing the RESTORE command, to be
placed upon your Hard Drive im-
mediately the problem has been
rectified. We truly hope that you
never need to use the restore
function, but even Hard Disks can
sometimes go wrong, and there-
fore we've supplied you with what
we consider to be the best and
most secure backup program in
existence at this moment, our GE-
Soft SAVEBACK program. So be
smart and make a backup at regu-
lar intervals.

How does SAVEBACK work?

SAVEBACK saves a the data and
information on your Hard Drive by
saving a whole Logical Drive each
time. This means that the data and
information that is saved to your
Floppy Disks is in exactly the same
order as it was on your Logical
Drive (Logical Drives are the parti-
tions such as C, D, E, F etc. That's
why SAVEBACK is also called the
IMAGE–BACKUP–PROGRAM.
This has the advantage that the
correct order of your data and
information will remain unchanged,
for the event that you ever have to
use the RESTORE command
(Some programs, and especially
things like desk accessories are
very sensitive to the order in which
they are placed on the disk!). For
this reason, SAVEBACK won't
upset the work done by a Disk
Optimizing program, which some

backup programs are renowned for doing.

Why use a Backup program in the first place.

Your argument will be, why should I use a Backup program at all, I can copy everything that's on a Hard Drive via the desktop. You've obviously never tried to copy FIVE OR TEN MEGABYTES of data and information, file for file from the Hard Drive to Floppy Disk via the desktop.

If you had, then you would appreciate just how boring and time consuming a task it is! Copying via the desktop takes much, much longer. Not only that, but you have to remember which data and information you've backed up, and which you haven't, as well as what goes where, and in which order. That's why you can rest easy when using SAVEBACK, sure in the knowledge that the complete Logical Drive (PARTITION) has been backed up, plus you'll save a lot of time that you would have otherwise wasted copying via the desktop.

2. INSTALLATION

Requirements

SAVEBACK will run on any ATARI ST computer series. The only major requirement is that you have a minimum of ? TWO HUNDRED KILOBYTES of free RAM for the program to run in. With a bit of

pushing and squeezing, it can even be made to run on an 520 STM with TOS loaded from disk, and the bare 512 kb RAM, although I wouldn't guarantee it.

If this is the case with your system, then I would recommend that you splash out a bit of money, and get TOS in ROM. After all, if you've just bought a Hard Drive, the cost of TOS in ROM is nothing in comparison. For more information regarding TOS in ROM, we advise you to contact your local ATARI ST dealer.

Apart from this, we would expect you to be reasonably competent in the everyday use of your ATARI ST computer and it's mouse. If this is not the case, then take your ATARI ST manual, and referring continuously to it, practice on your computer until you reach a reasonable level of competence.

We would also advise you to join your local ATARI ST Computer Club, where you can receive assistance and guidance for free, and also enjoy the use of your ATARI ST computer more than ever. When you've filled these requirements to your satisfaction, ensure that you have sufficient empty **FORMATTED** Floppy Disks.

Important

Directly after Installation, you should make a copy of the Utilities disk, and place the original Utilities

disk in a safe, dry place, away from magnets and dust etc.

NEVER USE THE ORIGINAL DISK AS YOUR WORK DISK AFTER INSTALLATION.

SAVEBACK is not copy protected, and therefore you will be able to make a copy without resorting to the use of such dubious methods as COPY PROGRAMS.

The only protection implanted is the use of your Installation program and the serial number embedded in the program. If you are not sure how to make a copy of your Floppy Disk, please refer to the manual you received with your ATARI ST computer.

Please ensure that you complete the Installation procedure correctly before attempting to copy the original disk, as failure to do so will result in the program corrupting during copying.

This will not be noticed in the illegal copy, until you try to RESTORE, whereupon the program will leave out vital sectors. THIS WILL ONLY HAPPEN IF YOU HAVE FAILED TO RUN THE IDENTIFICATION PROGRAM IDMAKER, AND HAVE NOT FILLED IN THE DIALOGUE BOX. Each UTILITIES disk has it's own unique ID code, and all copies will also contain this code. This code is registered to the original

buyer, and therefore if you fill in a false name and address in the dialogue box, then distribute copies of the original, you can still be traced and prosecuted. Of course,

if you decide not to send in your guarantee card, we cannot trace you, but then again, you loose all rights to guarantee and service if the guarantee card is not returned within TWENTY ONE DAYS after initial purchase by the customer. This is the only way we can protect our livelihood, so please DO NOT make pirate copies, you only harm yourself in the end. Please follow the instructions in the following section exactly, to avoid problems later.

The actual installation

Using the ORIGINAL DISK, NOT WRITE PROTECTED, run the program IDMAKER.PRG which can be found in the folder SAVEBACK. Once the program is running, you will be presented with the following DIALOGUE box:

```
┌──────────────────────────────────────┐
│        SAVEBACK IdMaker 1.0          │
├──────────────────────────────────────┤
│ Aktion: Warte auf Ihre Eingaben ...  │
│                                      │
│ Bitte geben Sie Ihre persönlichen Daten ein! │
│                                      │
│ Name:     _____   │
│ Vorname:  _____   │
│ Firma:    _____   │
│ Anschrift:_____   │
│ Ort:      _____   │
│                                      │
│          ┌────────┐                  │
│          │   OK   │                  │
│          └────────┘                  │
└──────────────────────────────────────┘
```

DO NOT USE RETURN OR CLICK ON THE O.K. PAD UNTIL THE DIALOGUE BOX IS TOTALLY COMPLETED. FOLLOW THE INSTRUCTIONS CAREFULLY!

Name: Here you enter your Title and Surname

NOW USE THE CURSOR DOWN ARROW

Vorname: Here you enter your Forenames

NOW USE THE CURSOR DOWN ARROW

Firma: Here you enter your Company Name (Or n/a if not applicable

NOW USE THE CURSOR DOWN ARROW

Anschrift: Here you enter your address

NOW USE THE CURSOR DOWN ARROW

Ort: Here you enter your Town, County and Country

NOW CLICK ON O.K. OR PRESS RETURN / ENTER

The SAVEBACK program will now write itself to disk again while removing the copy protection. SAVEBACK program is now run-able, and IDMAKER.PRG will have vanished from the disk as you don't need it any more! From hereon it's a simple matter of double clicking on SAVEBACK.PRG or single clicking on it, and then clicking on OPEN in the FILE menu.

3. HOW TO USE SAVEBACK

3.1 General Usage

If you are competent in the use of your computer and mouse, then the use of SAVEBACK should provide no special problems for you. When you wish to make a backup of Logical Drive (PARTITION), first ensure that you have enough FORMATTED Floppy Disks to backup the entire Logical Drive (PARTITION) that you select. 10 Floppy Disks formatted to a standard capacity of 726 kb, will allow you to back up a total of 7.089 mb, or in plain English, SEVEN POINT ZERO EIGHT NINE MEGABYTES (10 * 726 = 7260 / 1024 = 7.089). Please ensure that the Floppy Disks are *FORMATTED* as SAVEBACK does not contain a formatting option.

Important

All the Floppy Disks must be formatted to exactly the same capacity. Apart from this one restriction you may please yourself how you format your Floppy Disks. SAVEBACK will even work with TWISTED or HYPER formatted Floppy Disks.

3.2 The Menu's

We apologise for the fact that SAVEBACK is still in it's German version, and will shortly

have an English version on the market. In the mean time here is a translation of what does what to what.
The Desk Menu:
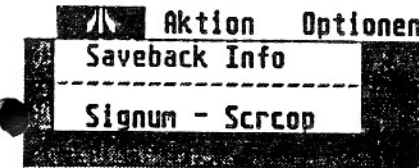
That's the standard Desk Info Menu. Click on this and our SAVE-BACK INFO file containing the copyright message will appear, along with the version number. This is what you'll see when you click there.

The Aktion Menu:
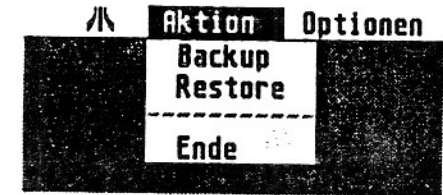
Using this Menu, you decide what action you wish to take, from the following options:

Backup : You start the BACKUP routine

Restore : You start the RESTORE routine

Ende : You exit the SAVEBACK program

Should you wish to leave the program, remember that **SAFE-BACK WILL NOT ASK FOR CONFIRMA-TION**, for the simple reason that no important information can be lost.

The Optionen Menu

```
┌──────────────────────────────────┐
│ /Λ  Aktion  │ Optionen │          │
│             │ Verify            │ │
│▓▓▓▓▓▓▓▓▓▓▓▓▓│ Dateiattribut setzen│
│▓▓▓▓▓▓▓▓▓▓▓▓▓│---------------------│
│▓▓▓▓▓▓▓▓▓▓▓▓▓│ ✓ Normal Backup    │
│             │ HD --> HD Copy     │
└──────────────────────────────────┘
```

The Optionen Menu is divided into two sections, the upper section is for the General Options, and the lower section is for the type of BACKUP.

In early versions of the SAVEBACK program, the HD --> HD Copy option is not present, although it is shown in the Menu Bar. As soon as this option has been finished, it will be made available to REGISTERED USERS only. Due to this, there is only the possibility of Backing-Up to Floppy disk at this moment. Please keep in touch with your dealer for information regarding upgrades.

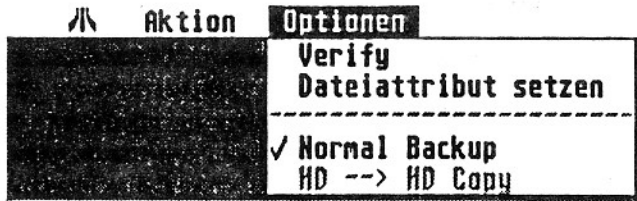As these become available, REGISTERED USER's will be entitled to upgrades for a small post, packing and administration fee upon return of their ORIGINAL Floppy Disk with a COPY of their guarantee card.

MENU POINTS:

Verify

Activating this option will mean that after every write operation to the Floppy Disk, the Floppy disk and Hard Drive will be read and compared to each other, to ensure that an EXACT copy has been placed on the Floppy Disk. Due to the fact that this slows the BACKUP process down tremendously, it is normally in the deactivated stand.

If you use extremely high quality Floppy Disks for your backups, this verification is not normally required. However, if you use "UNBRANDED" makes of Floppy Disks, or your data and information is of extreme value, Company accounts, medical records etc., then it is our policy to recommend that you activate this option!

Dateiattribut Setzen

Activating this option causes the so called "ARCHIVE BIT" to be set on all data and information that is backed up. A lot of different types and makes of backup program use this bit to assess which files have changed since the last backup.

If the file has been altered in any way, then the "ARCHIVE BIT" will have been removed (Automatically), and the backup program will then only copy those files which have been altered since the last backup. For this system to work, you must of course ensure that you have a "MASTER COPY" of the original data and information that was contained on the Hard Drive.

3.3 THE BACKUP PROCEDURE

You start the backup procedure by clicking on BACKUP in the AKTIONEN Menu. BEFORE THAT YOU DO THIS, ENSURE YOU HAVE ALREADY SELECTED YOUR OPTIONS.

After you've clicked on BACKUP, the following dialogue box will appear:

```
┌──────────────────────────────┐
│       Ziel-Laufwerk :        │
│  ┌────────────────────────┐  │
│  │        Drive A         │  │
│  └────────────────────────┘  │
│  ┌────────────────────────┐  │
│  │        Drive B         │  │
│  └────────────────────────┘  │
└──────────────────────────────┘
```

table, but, of all things, this INCLUDES RAM DISKS. So, first you must decide which your SOURCE DRIVE is going to be, and once you've clicked on it, the following dialogue box will appear:

```
┌────────────────────────────────────────┐
│          Quell-Laufwerk :              │
│  ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐          │
│  │C│ │D│ │E│ │F│ │G│ │H│ │I│          │
│  └─┘ └─┘ └─┘ └─┘ └─┘ └─┘ └─┘          │
│  ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐          │
│  │J│ │K│ │L│ │M│ │N│ │O│ │P│          │
│  └─┘ └─┘ └─┘ └─┘ └─┘ └─┘ └─┘          │
└────────────────────────────────────────┘
```
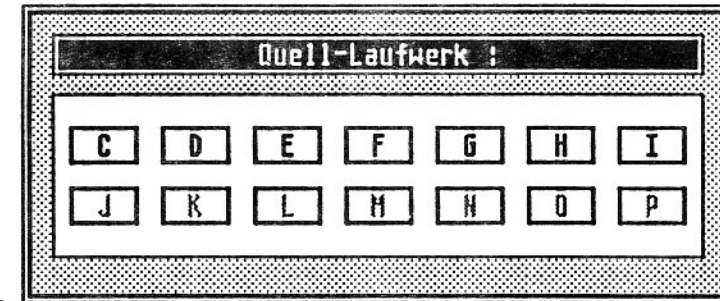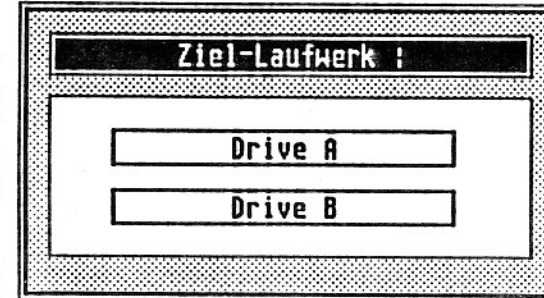
From this dialogue box,. you may select your SOURCE DRIVE, which means the Hard Drive PARTITION you wish to BACKUP! This may be chosen by simply clicking on the relevant PAD. Only the drives that are actually available will be selec-

Clicking on a PAD in this box will select the DESTINATION DRIVE, or, in other words, the Floppy Drive that you wish to use for the backing up procedure. ENSURE THAT YOU'VE NUMBERED THE BACKUP FLOPPY DISKS FROM 1 TO 10

etc., and also make a note of which PARTITION they belong to. After you've clicked on the chosen PAD, the following dialogue box will appear:

```
┌─────────────────────────────────┐
│ ◇!  Bitte legen Sie die erste   │
│     Backup-Diskette in das      │
│     Ziel-Laufwerk ein.          │
│                                 │
│           ┌──────────┐          │
│           │    OK    │          │
│           └──────────┘          │
└─────────────────────────────────┘
```

When you've placed the first BACKUP Floppy Disk in the chosen Floppy Drive, click on OK, or press RETURN/ENTER. Following this, SAVEBACK will read the boot sector of the destination Floppy Disk, and an ALERT BOX will appear to tell you how many Floppy Disks (PRE-FORMATTED), that you are going to need. This is shown in the following alert box:

```
┌─────────────────────────────────────┐
│  Sie benötigen für ein BACKUP genau  │
│   5 Disketten des gleichen Formats.  │
│                                      │
│  Haben Sie genug Disketten formatiert ? │
│                                      │
│ ┌───────────────┐  ┌───────────────┐ │
│ │ Nein, Abbruch │  │  Ja, weiter   │ │
│ └───────────────┘  └───────────────┘ │
└─────────────────────────────────────┘
```

If you now find you don't have enough FORMATTED Floppy Disks available, click on the PAD "Nein, Abbruch", and you will exit the program, whereupon you may FORMAT the required amount of Floppy Disks.

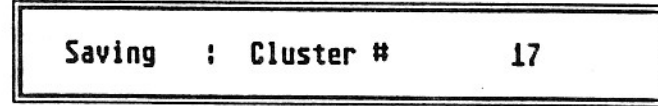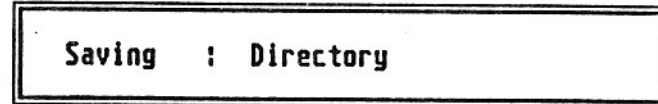However, if you have enough FOR-MATTED Floppy Disks (REMEMBER, they must all be formatted exactly the same!), then click on the PAD "Ja, Weiter" and the BACKUP program will be started immediately.

During this backup procedure, you will be kept informed of progress via the following boxes:
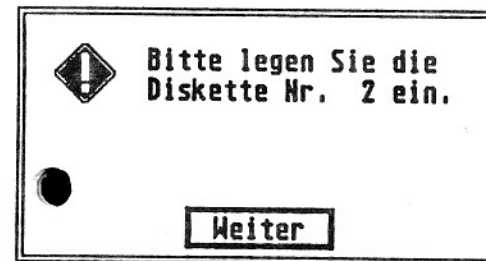
(Please turn to next page)

```
┌─────────────────────────────────┐
│  Saving   :   FAT               │
└─────────────────────────────────┘
```

```
┌─────────────────────────────────┐
│  Saving   :   Directory         │
└─────────────────────────────────┘
```

```
┌─────────────────────────────────┐
│  Saving   :   Cluster #    17   │
└─────────────────────────────────┘
```

Via these boxes, you receive what might be termed a running commentary of the events as they happen. When the present Floppy Disk is FULL, you will be informed of this fact, and asked to place the next Floppy Disk in the drive via the following ALERT BOX:

```
┌─────────────────────────────────┐
│ ◇!  Bitte legen Sie die         │
│     Diskette Nr. 2 ein.         │
│                                 │
│         ┌──────────┐            │
│         │  Weiter  │            │
│         └──────────┘            │
└─────────────────────────────────┘
```

After having exchanged numerous Floppy Disks, and having used a not inconsiderable amount of time, the BACKUP will be ready, and this will be brought to your attention by the following ALERT BOX:

```
┌─────────────────────────────────┐
│  Backup erfolgreich beendet.    │
│                                 │
│        ┌──────────┐             │
│        │ Klasse ! │             │
│        └──────────┘             │
└─────────────────────────────────┘
```

Now once again check to see if the Floppy Disks are all correctly numbered and in the correct sequence, and also check that they are all marked with the relevant PARTI-TION. Now you may WRITE PRO-TECT the Floppy Disks and store them in a SAFE place, away from MAGNETS, STRONG ELECTRICAL FIELDS, SUNLIGHT or HEAT, DAMP and MOISTURE, and DUST.
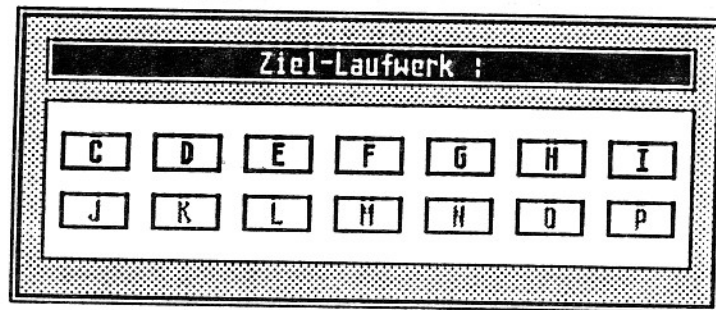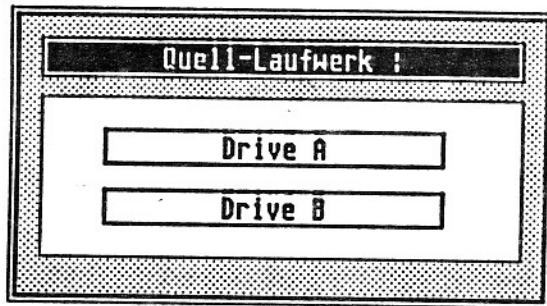
3.4 THE RESTORE PRO-CEDURE

SAVEBACK is (Of course!), cap-able of placing your data and

information back on the Hard Drive from where it came (Or on another for that matter!). Most other so called BACKUP programs can save your data and information, but YOU must place it back in the correct sequence, FILE FOR FILE, PROGRAM FOR PROGRAM.
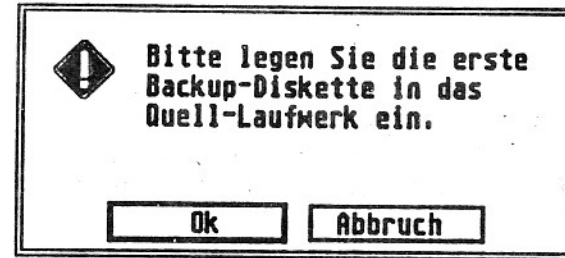
With SAVEBACK we've taken care of this by building in a RESTORE command, and using this you may be secure in the knowledge that your data and info information is placed back on the PARTITION of your Hard Drive, EXACTLY as it was when it was backed-up, sector for sector, and track for track. After using S A V E B A C K, you'll never want to go back to an old fashioned BACKUP program.

To use this command, you must

click in RESTORE, which is to be found in the AKTIONEN Menu. After clicking on RESTORE the restoration of the information onto your Hard Drive PARTITION will begin. In principle this will be almost identical to the BACKUP procedure, with the only difference being, that the SOURCE DRIVE will be the chosen Floppy Drive, and the DESTINATION DRIVE will be a chosen Hard Drive PARTITION.

The choice of SOURCE and DESTINATION DRIVES will once again be via the following dialogue boxes:

```
╔══════════════════════════════╗
║       Quell-Laufwerk !       ║
║ ┌──────────────────────────┐ ║
║ │         Drive A          │ ║
║ └──────────────────────────┘ ║
║ ┌──────────────────────────┐ ║
║ │         Drive B          │ ║
║ └──────────────────────────┘ ║
╚══════════════════════════════╝
```

```
╔══════════════════════════════════╗
║         Ziel-Laufwerk !          ║
║ ┌──┐┌──┐┌──┐┌──┐┌──┐┌──┐┌──┐     ║
║ │ C││ D││ E││ F││ G││ H││ I │    ║
║ └──┘└──┘└──┘└──┘└──┘└──┘└──┘     ║
║ ┌──┐┌──┐┌──┐┌──┐┌──┐┌──┐┌──┐     ║
║ │ J││ K││ L││ M││ N││ O││ P │    ║
║ └──┘└──┘└──┘└──┘└──┘└──┘└──┘     ║
╚══════════════════════════════════╝
```

After having chosen which is to be the SOURCE DRIVE, and which is to be the DESTINATION DRIVE, you will be presented with a dialogue box asking you top place the first BACK-UP DISK in the SOURCE DRIVE. If you haven't already retrieved these from their place of safety, then I would suggest that it is high time you do so, as we cannot proceed without them:

```
╔════════════════════════════════════╗
║ ⚠  Bitte legen Sie die erste       ║
║    Backup-Diskette in das          ║
║    Quell-Laufwerk ein.             ║
║                                    ║
║  ┌──────────┐   ┌──────────┐       ║
║  │    Ok    │   │ Abbruch  │       ║
║  └──────────┘   └──────────┘       ║
╚════════════════════════════════════╝
```

After having placed the FIRST BACKUP DISK in the Floppy Drive, SAVEBACK will read the Boot sector and inform you of the amount of BACK-UP DISKS you should have for this PARTITION!
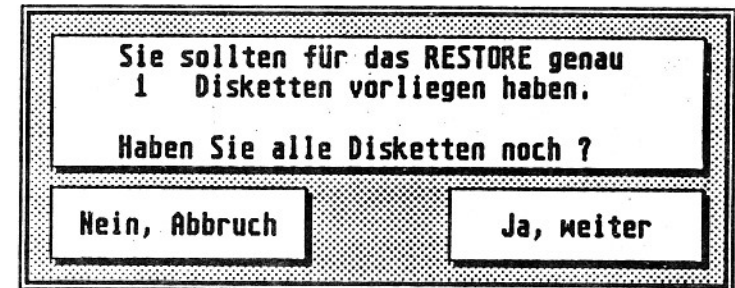
Now check how many Floppy Disks you actually have, and if you don't have the required amount, then click on "Nein, Abbruch" and you will exit the program, whereupon you may search for the missing BACK-UP DISKS!

However, if everything has gone to plan, and you have the required amount and wish to continue, then click on "Ja, Weiter", and the RESTORE procedure will begin.

SAVEBACK can only perform a RESTORE on a PARTITION that is FORMATTED EXACTLY THE SAME AS THE P A R T I T I O N THAT IS BACKED-UP! If this is not the case, then SAVEBACK will warn you of this via an ALERT BOX. This alert box can consist of

```
╔══════════════════════════════════════════╗
║  Sie sollten für das RESTORE genau        ║
║   1    Disketten vorliegen haben.         ║
║                                           ║
║  Haben Sie alle Disketten noch ?          ║
║                                           ║
║ ┌──────────────┐      ┌──────────────┐    ║
║ │ Nein, Abbruch│      │  Ja, weiter  │    ║
║ └──────────────┘      └──────────────┘    ║
╚══════════════════════════════════════════╝
```

ONE, or TWO messages.

```
┌─────────────────────────────────────┐
│  ◆  Die Bootsektoren der            │
│     Ziel-Partition und der          │
│     gesicherten Partition           │
│     stimmen nicht überein.          │
│                                      │
│   ┌──────────┐  ┌──────────┐        │
│   │  Weiter  │  │  Abbruch │        │
│   └──────────┘  └──────────┘        │
└─────────────────────────────────────┘
```

This message informs you of the fact that the contents of the !Boot sector is not IDENTICAL. This message can appear even if the FORMAT of the PARTITION IS IDENTICAL!
It may be just that you have a !Boot program INSTALLED OR DELETED since the last BACK-UP was made. Should you now click on "Weiter", then the RESTORE procedure will continue as normally, or the following message will appear.

```
┌─────────────────────────────────────┐
│  STOP  Die gesicherte Partition hat │
│        ein anderes Format als die   │
│        Ziel-Partition. Ein Restore  │
│        ist nicht möglich.           │
│                                      │
│          ┌──────────┐               │
│          │  Abbruch │               │
│          └──────────┘               │
└─────────────────────────────────────┘
```
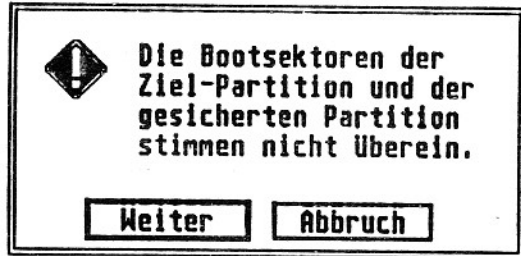
When this message appears, you cannot RESTORE your Floppy Disks onto the chosen PARTITION, but instead must choose a PARTITION that is IDENTICAL in FORMAT to the one BACKED-UP on Floppy Disk.
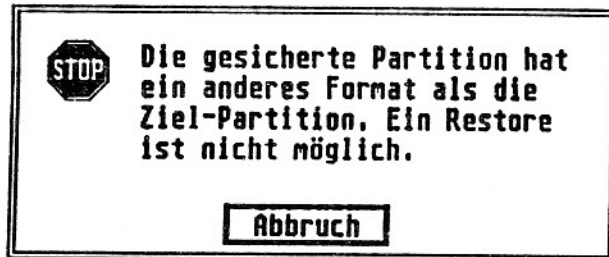When the FORMAT of the BACKED-UP PARTITION on the Floppy Disks, and the FORMAT of the DESTINATION PARTITION are IDENTICAL, then you may proceed with the RESTORE procedure. In this case, you will be presented with an INFO-BOX the same as that which was used when BACKING-UP, but instead of the word "SAVING", you will see the word "RESTORING". Again, you will, after the first Floppy Disk has been read, be asked for the second Floppy Disk and so on, just click on "Weiter" every time, as in this box:

```
┌─────────────────────────────────────┐
│  ◆  Bitte legen Sie die             │
│     Diskette Nr. 2 ein.             │
│                                      │
│          ┌──────────┐               │
│          │  Weiter  │               │
│          └──────────┘               │
└─────────────────────────────────────┘
```

When there have been no faults, and you have finished "RESTORING" the PARTITION, you will be presented with the following dialogue box, informing you that the RESTORE procedure is at an end:

```
┌─────────────────────────────────────┐
│                                      │
│   Restore erfolgreich beendet.      │
│                                      │
│          ┌──────────┐               │
│          │  Klasse ! │              │
│          └──────────┘               │
│                                      │
└─────────────────────────────────────┘
```

Click on "Klasse!", and you may now place your BACK-UP Floppy Disks back in their place of safety.

4. WHAT TO DO WITH A FAULT?

This section is just in case you are unlucky enough to have a problem during the BACK-UP or RESTORE procedures. Belonging to this section, is of course, the answer to the question, WHAT TYPE OF FAULTS CAN HAPPEN.
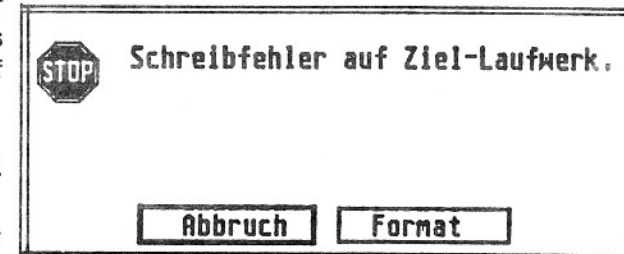
To be generalistic about the subject, you can occasionally expect (Due to the extreme complexity of Drives!), that an occasional read or write fault will appear on the Hard or Floppy Drives.
Most faults will immediately be seen by SAVEBACK, and a variety of ALERT BOXES will appear to inform you of the problem(s) encountered. Incorporated into almost all of the ALERT-BOXES, is the ability to STOP or EXIT (Abbruch) the program. Now for a few of these ALERT-BOXES:
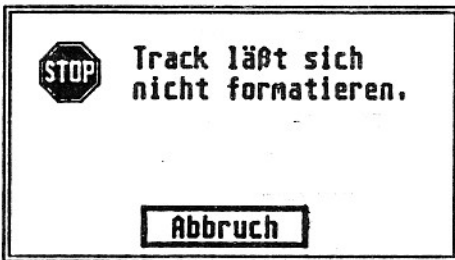
4.1 Failure during BACK-UP
1. Write failure on a BACK-UP Floppy Disk:

```
┌─────────────────────────────────────┐
│  STOP  Schreibfehler auf Ziel-Laufwerk. │
│                                      │
│   ┌──────────┐  ┌──────────┐        │
│   │  Abbruch │  │  Format  │        │
│   └──────────┘  └──────────┘        │
└─────────────────────────────────────┘
```
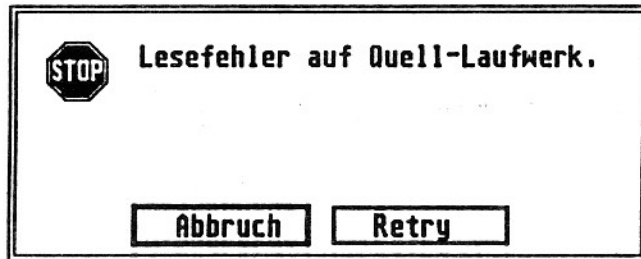
In this case you are offered the possibility to either EXIT the program (Abbruch), or to FORMAT the failed Floppy Disk TRACK! The fault

on Floppy Disks is mostly caused by bad FORMATTING, or using VERY CHEAP Floppy Disks! Take care however, if you've been using one of the SUPER FORMATTERS, as this option is not possible with Floppy Disks FORMATTED to 11 sectors. Should this be the case, then "RETRY" will be offered instead of "FORMAT".

RETRY means exactly what it says, the program will attempt to WRITE to the Floppy Disk once again. If the program fails to WRITE after this, the BACK–UP program will be EXITED.With Floppy disks of 9 or 10 sectors, should the FORTMAT option not be successful, then the following ALERT–BOX will appear:

```
┌─────────────────────────────────┐
│ ╔════╗  Track läßt sich          │
│ ║STOP║  nicht formatieren.       │
│ ╚════╝                           │
│                                  │
│        ┌──────────┐              │
│        │ Abbruch  │              │
│        └──────────┘              │
└─────────────────────────────────┘
```

and the BACK–UP program will be EXITED!

2. READ FAILURE on the Hard Drive during BACK–UP:

```
┌─────────────────────────────────────────┐
│ ╔════╗  Lesefehler auf Quell-Laufwerk.   │
│ ║STOP║                                   │
│ ╚════╝                                   │
│                                          │
│     ┌──────────┐   ┌──────────┐          │
│     │ Abbruch  │   │  Retry   │          │
│     └──────────┘   └──────────┘          │
└─────────────────────────────────────────┘
```
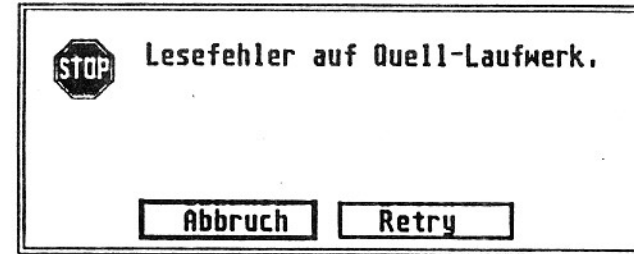
In this case, the possibility to RETRY the READ procedure is allowed, and once again by a second FAILURE, the BACK–UP program will be EXITED!
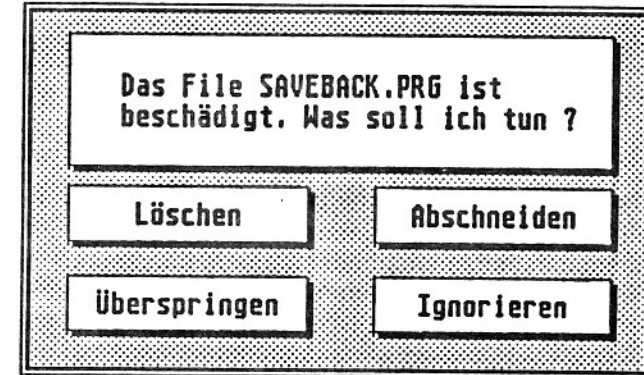
4.2 RESTORE FAILURE

There is a possibility of FAILURE during the RESTORE procedure, exactly the same as by the BACK–UP program. these can be READ failures from Floppy Disk, or WRITE failures to Hard Drive.

In the case of a READ failure from Floppy Disk, whereby Data and Information may be lost, SAVE-BACK contains a function which allows lost CLUSTERS to be found! This function operates automatically at the end of a RESTORE procedure in which a FAILURE has occurred. Failures are brought to your attention via the following ALERT–BOX:

Please turn to next page

```
┌─────────────────────────────────────────┐
│ ╔════╗  Lesefehler auf Quell-Laufwerk.   │
│ ║STOP║                                   │
│ ╚════╝                                   │
│                                          │
│     ┌──────────┐   ┌──────────┐          │
│     │ Abbruch  │   │  Retry   │          │
│     └──────────┘   └──────────┘          │
└─────────────────────────────────────────┘
```

Clicking on "RETRY" allows the Floppy disk to be READ normally one again, and SAVEBACK takes note of those sectors that can't be READ. The EXIT pad (Abbruch) is only then really necessary when you get continual mistakes almost constantly, because even the best (Our's we think!) File–Restoration program cannot be successful in these conditions. A WRITE FAILURE will be brought to your attention once again, via the customary ALERT–BOX, where you may choose (Once again), between RETRY and EXIT (Abbruch). If another WRITE FAILURE should occur, then

SAVEBACK will EXIT, and an ALERT–BOX will appear with a suitable message.

4.3 The Automatic File-Restore Procedure

If FAILURES should appear during the RESTORE procedure, then immediately after the END, SAVE-BACK will note which files were damaged, and will offer you diverse possibilities of RECOVERING them:

```
┌─────────────────────────────────────────────┐
│                                              │
│   ┌──────────────────────────────────────┐   │
│   │  Das File SAVEBACK.PRG ist           │   │
│   │  beschädigt. Was soll ich tun ?      │   │
│   └──────────────────────────────────────┘   │
│                                              │
│   ┌──────────────┐      ┌──────────────┐     │
│   │   Löschen    │      │  Abschneiden │     │
│   └──────────────┘      └──────────────┘     │
│                                              │
│   ┌──────────────┐      ┌──────────────┐     │
│   │ Überspringen │      │  Ignorieren  │     │
│   └──────────────┘      └──────────────┘     │
│                                              │
└─────────────────────────────────────────────┘
```

Loschen:
The damaged file is DELETED, and the allocated CLUSTERS are freed for use.

Abschneiden:
The damaged file gets CUT–OFF, which means that the last un-damaged CLUSTER is given the END OF FILE mark, and all data and information pertaining to this file after this EOF mark, will be lost.

Uberspringen:
The damaged CLUSTER is given free, and DELETED from the file.

Ignorieren:
SAVEBACK doesn't do anything special, just simply ignores the FAILURE.
This choice of possible actions is available for every file that SAVE–BACK decides is damaged. If a file is damaged in more than one place, then it will be reported as being damaged more than once! When Data and Information are lost, and SAVEBACK can't find the file it belongs to (Maybe it's been DELETED), then SAVEBACK will report the CLUSTER number, and at the end will carry out a CHECK–DISK procedure.
This means that all the lost CLUS–TERS are placed in new files. Because of this, there is not much risk even if a FOLDER is damaged, because also in this event, a CHECK–DISK procedure is carried out.

Attention:
Please don't be alarmed when SAVEBACK takes a time accessing the Hard Drive after a RESTORE procedure has fin-ished, that had encountered FAILURES. Both of the above mentioned FILE–RESTO-RATION procedures take a substantial amount of time, sometimes several minutes!
The FAILURE messages shown here don't cover all the possible FAILURES that can be found by SAVEBACK. However, most other FAILURES are self explanatory in nature, or are explained elsewhere in the text, so that further explana-tion is unnecessary.
The last FAILURE message we will deal with concerns an internal FAILURE: Should you at some time or another, come across the mes-sage "INTERNAL FAILURE Nr.XX", then PLEASE,PLEASE, PLEASE, note the FAILURE number, also make a note of the precise con-ditions under which the FAILURE took place, and send a complete description to us!
Should an INTERNAL–FAILURE occur, then the program will im-mediately STOP and EXIT, with an appropriate message.
Unfortunately, this cannot be avoi-ded. Up till now, WE HAVEN'T BEEN ABLE TO CRASH THE PRO-GRAM OURSELVES. Due to this, we are unable to give you an example of the appropriate ALERT–BOX.

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