BEFORE YOU START:

              SOLIDISK ADVANCED DISK FILING SYSTEM RELEASE 2.1A

1 - IF YOU ARE USING THE ADFS FOR THE FIRST TIME:

You should start by formatting a blank disk.
Switch on the computer without pressing any key.
The Solidisk DFS 2.1 (1770) will show up on the screen as the
currently selected filing system by default.
Now HOLD the F key down, press and release the BREAK key. Hold
still the F key for a couple of seconds:
You should see on the screen ADFS 2.1 as the currently selected
filing system (CFS).
The disc drives are still inactive, this is because you are in
F_ADFS (refer to ADFS manual).
Place a BLANK disc in drive 0 then enter:

If you have a double sided 80 track (such as the Mitsubishi Disc
Offer):

*FORM160 0 <RETURN>

If you have a 40 track single sided:

*FORM40 0 <RETURN>

The formatting process will commence immediately.
Then automatic verification follows:
Now enter:

*. <RETURN>

You should see the normal directory with no file in it.

Now enter:

*MAP <RETURN>

ADDRESS: SIZE:

000007   0009F6

Now create a directory for your first exercise:

*CDIR :0.VOLUME1 <RETURN>

Now take a DFS (old system) disc, place it in drive 1 and start
transfering some programs using *MVDFS, for example:

1

Place volume 1 Sideways RAM diskette in drive 1 and enter:

*MVDFS :1.MENU :0.VOLUME1.SWRMENU
*MVDFS :1.PRINTER :0.VOLUME1.PRINTER

etc..
If you have Volume 9 disk, place it in drive 1 and enter:

*:1.MOVEDFS <RETURN>

Remove the volume 9 disk.

Place the Sideways RAM volume 1 disk in drive 1, then answer to
the question:

'Source Drive, Directory: ' -

type in:

:1 <RETURN>

Then to the question:

'Destination Drive, Directory: ' -

type in:

:0.SWR1 <RETURN>

The MOVEDFS program will copy the entire volume 1 diskette in
drive 1 to the ADFS disc in drive 0 for you, including the !BOOT
Option.
Otherwise, *MVDFS can be used repetitively to transfer your old
software to the new disc. Start with games and Basic programs as
they are generally self contained and will run immediately most of
the time.

If you have volume 9, enter now:

*CDIR :O.LIBTOOL <RETURN>

*:1.ARCHIVE :l.$:0.LIBTOOL <RETURN>

This will copy (using the ARCHIVE program in drive 1) volume 9
disc (in drive 1) into a directory called LIBTOOL on your own ADFS
disc (in drive 0).
If you have sideways RAM, it is time to give your system a new '
Road test.
Leave your ADFS disc in drive 0, do a hard reset (ie CONTROL and
BREAK) on your machine.
Now enter:

*TOOLKIT <RETURN>

You should see on the screen:

```
BBC Computer
STL TOOLKIT
ADFS 2.1
BASIC
>
Now enter:

*MENU <RETURN>
```

You should see the 'Sideways Firmware Installed' panel.
Press the 'TAB' key. The Root directory will be displayed.
Press the letter in front of LIBTOOL, you should see the
directory containing everything in volume 9.
Press the '/' key. This will bring you back to the root again. The
/ switches the present directory (CSD) with the previous directory
(PSD).
Press the letter in front of the SWR1. You can load now some
Sideways ROM images into the computer the same way you used to do
with the old MENU program. See below for more about *MENU.

<div align="center">IMPROVEMENTS.</div>

The Solidisk ADFS release 2.1A (August 85) has the following
improvements on the previous issue:

1 - Autoselect the number of channels available:

Although you can still use *OPEN to select the number of channels
you want for database applications (such as with Solidisk database
or Viewstore), there is now a quicker way to achieve the same
result.

On BREAK or on power on, the ADFS 2.1A will now check for keys A,
F, K, 0, Right Cursor and Left Cursor.

A- If key A is held down, this will enter the ADFS, reload the CSD
from the previous setting or the root directory of drive 0 by
default. This will not affect the number of channels available.

F- If key F is held down, this will enter ADFS and deset the CSD;
this is for example before you format a blank diskette. This will
not affect the number of channels available.

K- If key K is held down, this will kill the two ADFS 2.1 ROMs
altogether; this is to allow Solidisk DFDC users to use their 8271
floppy disk controller with Solidisk 2.0 ROM or with Acorn DNFS 1.
2. Not available on the BBC Plus or the Electron as they cannot
have the 8271 controller chip.

0- If key '0' is held down, this will make ONE channel available
then enter ADFS, then reload the CSD or the default directory :0.
$.

<- - If the Left cursor key is held down, this will make FIVE channels available then enter ADFS, reload the CSD or the default directory if necessary.

-> - If the Right cursor key is held down, this will make TEN channels available then enter ADFS, reload the CSD or the default directory.

- If none of these key is pressed, the previous setting will be automatically reselected, ie ADFS, FADFS, DFS or whatever filing system you were using. The number of channels will also remain the same.

REMEMBER:

The normal setting for Solidisk ADFS is ONE channel available for files thus leaving PAGE at &1900.
Each additional channel will cost your computer 256 bytes, leaving less memory for your programs. Thus with 5 channels, PAGE will be at &2200, with 10 channels, at &2700.

ON THE SUBJECT OF DATABASES:

Most programs will run with the normal setting; only database applications will require additional channels for Form file, Index file(s) and Data file(s).

Solidisk Database will run with the normal setting except when you intend to do Sorting. FIVE channels will be then needed. If you can do some programming yourself, it is best to customise the Solidisk Database for your application.

Viewstore as it is at present, although fantastic for larger applications will put a lot of strain on your hardware. This is because the Viewstore Indexing mechanism is very inefficient, requiring 3 disk accesses to index ONE field of EACH record. An average application consisting of 2000 records, 5 indexed fields will require 3 x 5 x 2000 disc accesses (30,000) to be completely updated, this is OK with the Winchester drive but will be too much for the mini floppies. Solidisk Database would do a similar job with less than 100 disc accesses.
Still on the subject of Database applications, Solidisk ADFS 2.1A has a new command called *SLOWSTEP.
This new command will reduce the flying speed of the stepper motor on the Winchester drive from 5000 steps per second to 500 steps per second, a factor of ten.
Normal stepping time for the Solidisk Winchester is 200 microseconds per step with an average - self correcting - seek error rate of around 3% whereas at reduced speed, 2 ms per step self correcting - the seek error rate will be less than 1 per 10, 000.

Slowstepping can be selected by *SLOWSTEP or by setting the keyboard link in position 1.

Or by *FX255:

FAST= *FX255,255 fast, normal 5000 steps per second.
SLOW= *FX255,127 reduced speed, 500 steps per second.

Even at a reduced speed, the stepping speed of the Solidisk
Winchester is still faster than that of the Acorn Winchester (333
steps per second for the 10MB at present time).

2 - The 'z' PREFIX:

If you have non Solidisk or non Acorn ROMs in your BBC computer,
there may be a clash beween the names given to commands offered by
these ROMs.
For example: *FREE in Beebug Toolkit or *FORM in Computer Concepts
Disc Doctor.
In this case, you may use the prefix to address the command
exclusively to Solidisk ROMs. Thus, if you have Beebug Toolkit,
*FREE will return BASIC free space, *zFREE will return the free
space of your diskette.

3 - HIGH ORDER ADDRESS IN *SAVE:

This facility, not available when the Winchester drive is selected
and on the Electron, allows Sideways programs to be ' saved to disc
selectively; for example - to save ROM image in socket 'D' to floppy
disc:

*SAVE ROM1 D8000 +4000 D9CD
On the Electron, it will always save the image of the ADFS ROM. On
the BBC Plus, there is more: the Shadow RAM is selected by setting
the high order address FE, for example:

*SAVE SHADOWCODE FE4000 +500

The normal default for high order address is:

- Load address= 00000000, exec address= FFFFFFFF for spooled
files, which will be exec-ed on *RUN (or Osfsc 6).
- Load address= FFFF for normal BBC computer (I/O processor),
0000 for 6502 second processor.

4 - SOLIDISK SOFTWARE SUPPORT FOR ADFS 2.1A:

Solidisk will provide software support for the ADFS system as it
is the most valuable, powerful improvement to the BBC computer.
In its present form, it does not cater sufficiently to the Single
Drive users, ie you cannot backup from drive 0 to drive 0, copy
from one diskette to another diskette on the same drive.
To resolve this situation, Solidisk will provide Single Drive
users with extra software at nominal cost utilities to perform

these operations.

Please send your order for:

VOLUME 9 - ADFS disk.

Cost: £3.50 including post and packing.

Here is the description for some programs:

- SOLIDISK TOOLKIT for Sideways RAM user. This program is also available on a 16k Eprom for non Sideways RAM users (cost £10.00). It contains more than 24 star commands, including *MENU:

  *MENU <drive number>

Sideways RAM users are already familiar with the MENU program; essentially, it displays the entire directory in less than ONE second, with either DFS or ADFS diskette.
In ADFS, sub directories are shown in MAGENTA, other files are shown in YELLOW. They are all preceded by a letter, in upper case or in lower case.
Selecting a directory or a file is by pressing the corresponding letter, if the selected object is a directory, the screen will then show the latter and you can carry on the selection.
If you made a mistake, pressing '/' (stroke) key will return you to   selected directory), whereas the Circumflex will show the PARENT directory.
You can load and save Sideways ROMs effortlessly by hitting a few keys.
If a file is selected, it will be CHAINED if it is a BASIC program, *LOAD if it is a Sideways ROM image, *DUMP if it is data or *RUN in other cases.

- THE SOLIDISK ARCHIVE PROGRAM:
This short machine code program is capable of copying an entire directory with all its branches to another directory regardless of the size of your directory requirements.

*ARCHIVE <source directory> <destination directory>

Good habits should be the rule - you MUST specify the source and object in full, although it is possible to make short cuts.

Example 1 : Copying from Winchester to floppy:

*ARCHIVE :0.DATABASE :4.JULY85

Example 2 : Copying from Winchester to Winchester:

*ARCHIVE :0.CURRENT.VERSION1   :0.SAFEKEEP.VERSION1

etc..
ARCHIVE is also very useful to transfer the whole floppy disc to

another disc or to your Winchester or vice versa:

*ARCHIVE :1.$:O.VOLUME5
will copy everything from the new floppy in drive 1 to directory
VOLUMES in drive 0.

- THE SOLIDISK SAFEKEEP PROGRAM:

The SAFE program is for those who happen to have corrupted
floppies or Winchesters.
Although Solidisk ADFS 2.1A is very robust - you can for example
open the door of your disk drives or even remove the disc and
replace it, or drill your disc drive case with a Black and Decker
electric drill while it is doing a backup copy - we guarantee that
it will not muck up your discs - accidental corruption can happen
afterwards. Do not despair !
You can use the SAFE program to recover your disk.
The program will scan the corrupted disc to pick up all the good
directories then rebuild the root directory for you.
Solidisk Winchester has more safety nets than any other system:
every time you do a *BYE, the ADFS 2.1 will keep a safe copy of
the free space map (FS MAP) and the root directory at the end of
the Winchester drive before parking the head.
If you happen to lose your Root directory because of some -field
tried - software, use the SAFE program (option 8) to rewrite it
rather than Reload-the Winchester from floppy backups. -

Here are some simple safety rules:

- Try new software on floppies before copying them over to the
Winchester (use ARCHIVE for this).
- Do not store any file in the root directory as SAFE will not be
able to recover them, not even !BOOT. Solidisk ADFS 2.1 will let
you set up appropriate !BOOT for any directory, with appropriate
Option for each !BOOT file.
- Archive each important directory on floppy discs.
- Do *BYE before leaving the computer unattended.