NIRVANA

To load NIRVANA type RUN"DISC or RUN"NIRVANA

The main menu offers seven options:

OPTION "1" - FILE MANAGEMENT

Select File Management and after a short delay the Nirvana's opening screen will appear accompanied by an audible beep. Nirvana has now checked your hardware to see how many drives are connected and this is indicated at the top right-hand corner of the screen. If two drives are present Nirvana will switch automatically to the "A" to "B" configuration (option "S", setting "2" on the working screen). A scrolling message invites you to insert your * SOURCE disc into drive "A" and press any key.

* The SOURCE disc is the one you wish to back-up, copy files from, change file attributes etc. etc.

Nirvana's working screen now appears and is divided into two sections:

(A) The upper section displays information concerning the files contained on the source disc.

(B) The lower section displays:

(1) The number of Kbytes free disc space (2) The number of Kbytes of selected files (3) The type of disc format (4) Present Source and Destination drive selection.

The remainder of the lower section shows the commands available within Nirvana.

UPPER SECTION - File Information

Information concerning each file on the source disc is displayed in five columns. Each column contains the following information about the files:

USER NUMBER	FILENAME & EXTENSION	READ/WRITE STATUS	"S" IF SYSTEM	"E" IF ERASED
Eg: 10	NIRVANA.BIN	*	S	

In this example the file is USER-10, it is READ ONLY and it is SYSTEM.

A catalogue of the average disc will usually only show the Filename and File Extension

LOWER SECTION - Command Keys

The commands are selected using a single keypress and are as follows:

CURSOR KEYS ... Move Highlight Bar   R ... Rename a File

COPY KEY ..... Select/De-select a File   D ... Copy a Disc

C ... Copy a File   A ... File Attributes   F ... Format a Disc

E ... Erase a File   L ... Log in a Disc   S ... Select a Drive

ESC .... Exit Nirvana

COPY KEY - Use the Copy Key to select or de-select file(s).

PLEASE NOTE - Files must first be selected before you are able to Copy, Erase, Rename or Change File Attributes.

COPY A FILE

Source and destination drives together with files to be copied must be selected before choosing this option. Whilst file in file copy mode NIRVANA will make full Use of the rear bank on 6128's or any additional (DK'tronics) memory packs on all three CPC's (up to 256K). For single drive users with a 256K pack only one disc change will be required during file copying regardless of the number of files selected. This option gives full on-screen reporting showing how file transfer is progressing.

COPY A DISC

This option can be used to copy individual tracks from one disc to another. It can also be used to back-up whole discs. As NIRVANA is capable of backing up many commercial discs it

is important that the user is fully aware that:

IT IS AN OFFENCE, UNDER THE 1988 PATENTS, DESIGN & COPYRIGHT ACT, TO MAKE COPIES OF COMMERCIAL SOFTWARE (EVEN FOR YOUR OWN USE) WITHOUT THE CONSENT OF THE COPYRIGHT HOLDER. IT IS IMPORTANT, THEREFORE, THAT AUTHORITY FIRST BE OBTAINED FROM THE COPYRIGHT HOLDER BEFORE ATTEMPTING TO MAKE A BACK-UP COPY OF ANY COMMERCIAL DISC.
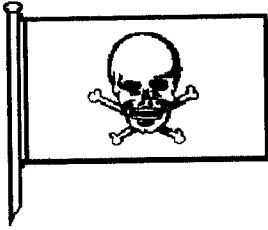
We recommend that you make a back-up copy of the Nirvana disc and use this as your "everyday" working copy, keeping the original in a safe place. Use the "copy a disc" option "D" to make the back-up copy. remember - the copy you make is for your use only and is not to be passed to friends etc.

Source and destination drives should first be selected. This option also gives full on-screen reporting showing how copying is progressing.

FORMAT

Both Data and Vendor formats are catered for. Care should be taken when using this option because formatting will erase beyond recovery any files present on the disc. Before formatting a disc ensure the write-protect tab is closed. Once either data or vendor format has been selected you will be requested to insert the disc in the appropriate drive. Adequate opportunity is given to escape from this option should you so desire.

LOG IN A DISC

Is used to change the source disc.

ERASE A FILE

Both single and multiple erasure of files is supported. Files for erasure should first be selected.

RENAME A FILE

Both single and multiple renaming of files is supported. Files should first be selected.

FILE ATTRIBUTES

Five options are available. Single or multiple files should be selected before using any of these options:

(1) RW/DIR - file is both Read & Write and can be erased. It is a Directory file and can be catalogued.

(2) RW/SYS - file is both Read & Write and can be erased. It is a System file and cannot be catalogued.

(3) RO/DIR - file is Read Only and cannot be erased. It is a Directory file and can be catalogued.

(4) RO/SYS - file is Read Only and cannot be erased. It is a System file and cannot be catalogued.

(5) UN-ERASE - allows erased files to be recovered.

UN-ERASE

When a file is erased the first byte of the directory entry of that file is changed to &E5. The disc operating system (AMDOS) ignores any directory entries starting with an &E5 so consequently the name of that file no longer appears in a catalogue.

However the complete file is still on disc and accessible, providing NO FURTHER SAVES have been made to the disc. All one has to do to recover the file is change the &E5 to &00 and this is what the un-erase option does. If further saves have been made after accidental erasure then file recovery may not be possible.

Before attempting to recover any erased file you should first ensure that no file exists of the same name and extension as the erased file. If such a file does exist that file must first be re-named either by changing its name or its extension. Only then should you un-erase the erased file.

SELECT DRIVES

This option will allow any disc drive combination to be selected. Nirvana will also Read/Write to 3.5" and 5.25" drives running under AMSDOS. Nirvana does not support any other disc operating system (DOS).

OPTION "2" - DIRECTORY EDITOR

After selecting the appropriate drive "page one" of the disc's directory will be displayed on screen, pressing ''N'' will display ''page two''. NOTE: there are insufficient lines available on screen for us to show all 64 directory entries at once.

The disc's directory is displayed in five columns:

Column 1 shows the file's position in the directory. Column 2 shows the files name and extension. Column 3 shows the file's user number. Column 4 shows whether the file is Read Only or Read Write (R/W or R/O). Column 5 shows whether the file is Directory or System (DIR or SYS).

Twelve further options are also listed at the foot of the screen and their description follows:

PLEASE NOTE - If any file on the disc is larger than 16K in length there will be a directory entry for every 16K or part of 16K. Each entry for the file may not appear sequentially but may be fragmented throughout the disc's directory. It is important that every directory entry of the file you are altering is amended when using the "R" "E" "U" "Y" "D" "O" "W" "C" options.

RENAME - on pressing ''R'' you are prompted to enter the new filename (including extension) then press enter. Now enter the number of the file you wish to change and press enter.

ERASE - on pressing ''E'' you are prompted to enter the number of the file you wish to erase (press enter).

UN-ERASE - on pressing ''U'' you are prompted to enter the number of the file you wish to un-erase (press enter).

SET TO SYS - on pressing "Y" you are prompted to enter the number of the file you wish to set to SYSTEM (press enter).

SET TO DIR - on pressing "D" you are prompted to enter the number of the file you wish to set to DIRECTORY (press enter).

SET TO R/O - on pressing "O" you are prompted to enter the number of the file you wish to set to READ ONLY (press enter).

SET TO R/W - on pressing "W" you are prompted to enter the number of the file you wish to set to READ WRITE (press enter).

CHANGE USER - on pressing "C" you are prompted to enter the new user number (0 to 15) (press enter). Now enter the number of the file you wish to change and press enter.

NEXT PAGE - because all 64 directory entries cannot be shown on one "page" pressing "N" will toggle between the first and second "page" - each of 32 entries.

SAVE CHANGES - having used the "R" "E" "U" "Y" "D" "O" "W" "C" options any changes made to the directory must now be SAVED to update the disc's directory.

ANOTHER DISC - on pressing "A" the screen will clear and you will be prompted to select either drive "A" or "B". Insert the new disc in the drive and on pressing the appropriate letter the new disc's catalogue will appear on screen.

EXIT - on pressing "X" the computer will perform a full reset.

OPTION "3" - DISC MAP

This option should always be used if you intend editing a file as it will save you a considerable amount of time searching the disc for each part of the file.

When the appropriate drive has been selected this option will read all 40 tracks of the disc in the selected drive. You are then prompted to select either "P" to send the map to your

printer or "ENTER" to display the map on screen.

The map sent to the printer or the screen is displayed in two columns. The first column shows the filename and extension and the second shows the Track(s) and Sector(s) the file occupies.

Not all files will have sequential entries. When files are written to the disc the Disc Operating System (DOS) will automatically use any sector/track that is available depending on what sectors/tracks are available or free from files that have been previously erased.

Once the map is completed you are invited to map another disc and pressing "Y" will offer drives "A" or "B" again. On pressing "N" the computer will perform a full reset.

OPTION "4" - SECTOR EDITOR

We recommend this option only be used on a back-up copy of your master disc until you become experienced in its use. Use "Copy a Disc" in Option "1" for this.

When the appropriate drive letter has been selected you are prompted to enter a track number (0 - 39 and press enter) followed by a sector number (enter sector number and press enter) - refer the disc map made with option "3" above.

The first page of the selected sector is now displayed on screen and (f2) will toggle between "Page 1" and "Page 2" of this sector. A record should be made of the sector prior to modification. Using option (f4) will echo the displayed page of the sector to your printer.

The screen is split into three areas. The sector is displayed on the left in the Hex notation and on the right in ASCII code. The command keys are shown in the lower portion. A flashing cursor can now be seen on the left character of the first byte in the "Hex" area of the display. Hitting (f1) will toggle the cursor between the Hex and ASCII areas.

The cursor can be moved around either area using the cursor keys and the displayed sector can be modified in either Hex or ASCII simply by typing in the required information. Don't worry - the original information on disc is not modified until the (COPY) key is pressed. If incorrect information has been

entered simply re-enter the correct information before pressing (COPY) to update the disc.

Using (f3) will allow you to change to another sector - enter its number and press (ENTER) or if you press (ENTER) again you will be invited to enter another track number. If you do enter a track number and press (ENTER) you will again be prompted for a sector number.

However, should you wish to change to another disc or another drive you should not enter a track number but press (f3) followed by (ENTER)(ENTER). You will now be prompted to enter another drive letter - place the disc in the drive and select the appropriate drive.

Pressing (f0) will cause the computer to perform a full reset.

FURTHER INFORMATION

A DATA format sector map can be found at the rear of this instruction book. It has been included to help guide you round a DATA formatted disc.

The directory tracks on a DATA formatted disc start at track 0 sector C1. Every file on disc will be recorded in the directory and is written to track(s) and sector(s) and its position on disc is recorded in BLOCK numbers under its file name. Files over 16K in length will have a directory entry for every 16K (or part of).

When the directory is viewed with the Sector Editor, as in our example on the next page, each directory entry occupies two lines. The first line contains information concerning the filename and the second line records where the file is stored on disc in BLOCK numbers. The BLOCK numbers will be recorded in ascending, but not necessarily sequential alphanumeric order. With very long files the sixteen BLOCK numbers allocated for each entry may not be sufficient to record the location of all of the file so there will be a second or subsequent entry followed by further BLOCK numbers.

EXAMPLE DIRECTORY - DATA DISC

Drive B Track 0 Sector C2 Page 0

```
00 4A 41 43 4B 4C 45 31 20 42 49 4E 01 00 00 01   .JACKLE1 BIN....
85 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00   ................
00 4A 41 43 4B 4C 45 32 20 42 49 4E 00 00 00 80   .JACKLE2 BIN....
86 87 88 89 8A 8B 8C 8D 8E 8F 90 91 92 93 94 95   ................
00 4A 41 43 4B 4C 45 32 20 42 49 4E 00 00 00 26   .JACKLE2 BIN....
96 97 98 99 9A 00 00 00 00 00 00 00 00 00 00 00   ................
00 4A 41 43 4B 4C 45 33 20 42 49 4E 00 00 00 80   .JACKLE3 BIN....
9B 9C 9D 9E 9F A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 AA   ................
00 4A 41 43 4B 4C 45 33 20 42 49 4E 00 00 00 29   .JACKLE3 BIN....
AB AC AD AE AF B0 00 00 00 00 00 00 00 00 00 00   ................
E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5   ................
E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5   ................
E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5   ................
E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5   ................
E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5   ................
E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5 E5   ................
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In this example the file JACKLE1.BIN is stored at BLOCK number 85 which equates to track 29 sectors C6 and C7. However if we look at the file JACKLE2.BIN we will see that is has two directory entries. This is because the file is 21K in length and cannot be stored under a single entry.

DISC ARCHIVE/RESTORE - NOT 6128 PLUS

This option is very much akin to "tape streamers" on IBM PC's used to back-up the machine's hard disc.

It will automatically save to a cassette tape, in DATA format, the entire contents of a disc extremely quickly. A DATA formatted disc will archive to tape in about 15 minutes without any attention from the operator. Restoration of an archived tape takes about 15 minutes.

This program also includes an option which will allow an identifying header, of up to 80 characters, to be written to the tape so that any archive tape can be quickly and easily

identified at a later date.

A verification option is also included allowing an archived tape to be checked against the source disc.

Disc Archive can be used to back-up important discs so that, should the original program be lost, the disc can be re-written from the archive tape. It can also be used to archive seldom used programs which may be needed at some future date thus allowing recovery of valuable (and expensive) disc space.

To archive a disc proceed as follows: Place your Nirvana disc in the drive and type RUN''DISC'' (ENTER). When the opening screen appears press any key. A menu is now offered from which you should choose option (5). A further menu offers EXIT, BACKUP, RESTORE, VERIFY. Select BACKUP (B) and you will be requested to place the disc you wish to back-up into drive ''A'' (press any key).

You may now enter an identifying header of up to 80 characters which can be unique to this tape. Once the header has been entered press (ENTER). At this point the blank cassette tape should be placed in the datacorder and the REC and PLAY keys pressed. When you have done this press (ENTER) again.

The 80 character header will be immediately written to tape and the Archive program will then copy the disc to the tape in 8-track sections, displaying on screen the tracks being copied, until all 39 tracks have been transferred - make the coffee!

The archived tape can now be checked with the VERIFY option by rewinding it to the beginning and selecting (V) from the menu and following the prompts - drink your coffee!

To RESTORE a disc select (R) and follow the prompts bearing in mind that the receiving disc must be the same format as the original - the tape header carries this information.

If you are a 6128 (NOT 6128 PLUS) owner it is IMPORTANT that the correct leads are used with the data recorder which will allow the computer to start and stop the tape as it requires.

To check that you do have it connected correctly do the

following:

When the recorder is connected to the computer and its PLAY button pressed IT SHOULD NOT START. Now type the following: |TAPE (ENTER) - the "|" is obtained by shifting the "@" key - CAT (ENTER) (ENTER) - on pressing the ENTER key for the second time the tape should start up. Now press ESC and the tape should stop.

FILE ARCHIVE - NOT 6128 PLUS

This option is similar in operation to disc archive but differs in its method of storing the data on tape. It also archives the files in standard form by name and in alpha-numeric order. Any number of files can be archived as follows: Format a disc DATA format and proceed to transfer all required files to this disc. Once all the files are present select the file archive option and follow the prompts. No further attention is then required by the operator.

Verification of a "file archived" tape done simply by using the computer's inbuilt tape CATaloguing facility ensuring that each block checks out OK.

As with disc archive, file archive can be used to back-up important or seldom used programs. Should data be lost from a "file archived" disc it is a simple matter to replace the offending file using the File Restore option.

FILE RESTORE - NOT 6128 PLUS

This option is used to restore a file (or files) from tape that has been archived with the file archive option. A freshly formatted DATA format disc should to be used to restore the file(s) to.

Having selected this option you are prompted to enter the number of files you wish to restore. If you do not know the number of files you want to restore or if you do not know the position of the file on the tape enter "0" (zero).

You are then asked if you wish to restore automatically or manually. Normally you would select "A" for auto which restores files automatically using their original filenames. If you chose to restore 4 files this option would restore the first

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4 files on the tape. However, if you only wish to restore one or some of the files or should you require to rename a file during the restore operation then "M" for manual should be selected.

As each file is retrieved from tape the program will wait for you to enter a save name. Pressing the Enter key will restore the file under its original name. If you do not wish to restore a particular file, pressing the CLR key will cause the program to skip to the next file. Full information on each file is given either on screen or to your printer as it is restored.

DATA FORMAT SECTOR MAP

	SECTOR		NUMBER						
TRACK	C1	C2	C3	C4	C5	C6	C7	C8	C9
00	00	00	01	01	02	02	03	03	04
01	04	05	05	06	06	07	07	08	08
02	09	09	0A	0A	0B	0B	0C	0C	0D
03	0D	0E	0E	0F	0F	10	10	11	11
04	12	12	13	13	14	14	15	15	16
05	16	17	17	18	18	19	19	1A	1A
06	1B	1B	1C	1C	1D	1D	1E	1E	1F
07	1F	20	20	21	21	22	22	23	23
08	24	24	25	25	26	26	27	27	28
09	28	29	29	2A	2A	2B	2B	2C	2C
10	2D	2D	2E	2E	2F	2F	30	30	31
11	31	32	32	33	33	34	34	35	35
12	36	36	37	37	38	38	39	39	3A
13	3A	3B	3B	3C	3C	3D	3D	3E	3E
14	3F	3F	40	40	41	41	42	42	43
15	43	44	44	45	45	46	46	47	47
16	48	48	49	49	4A	4A	4B	4B	4C
17	4C	4D	4D	4E	4E	4F	4F	50	50
18	51	51	52	52	53	53	54	54	55
19	55	56	56	57	57	58	58	59	59
20	5A	5A	5B	5B	5C	5C	5D	5D	5E
21	5E	5F	5F	60	60	61	61	62	62
22	63	63	64	64	65	65	66	66	67
23	67	68	68	69	69	6A	6A	6B	6B
24	6C	6C	6D	6D	6E	6E	6F	6F	70
25	70	71	71	72	72	73	73	74	74
26	75	75	76	76	77	77	78	78	79
27	79	7A	7A	7B	7B	7C	7C	7D	7D
28	7E	7E	7F	7F	80	80	81	81	82
29	82	83	83	84	84	85	85	86	86
30	87	87	88	88	89	89	8A	8A	8B
31	8B	8C	8C	8D	8D	8E	8E	8F	8F
32	90	90	91	91	92	92	93	93	94
33	94	95	95	96	96	97	97	98	98
34	99	99	9A	9A	9B	9B	9C	9C	9D
35	9D	9E	9E	9F	9F	A0	A0	A1	A1
36	A2	A2	A3	A3	A4	A4	A5	A5	A6
37	A6	A7	A7	A8	A8	A9	A9	AA	AA
38	AB	AB	AC	AC	AD	AD	AE	AE	AF
39	AF	B0	B0	B1	B1	B2	B2	B3	B3