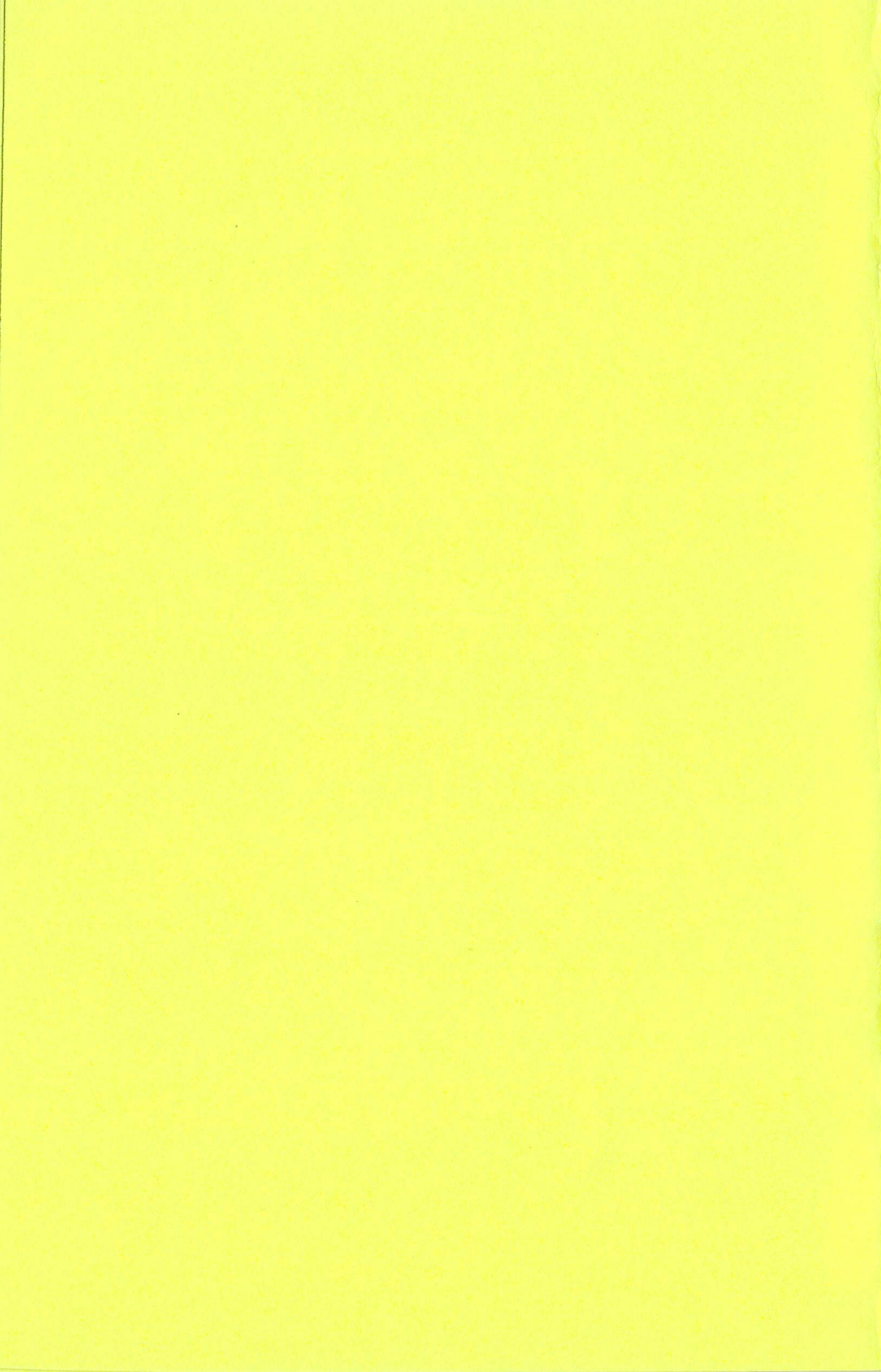SOGWAP Software

BIG BLUE READER
128/64 version 4.1

Commodore <<->> MS-DOS
File Transfer Utilities

For the Commodore 128 and 64
Requires 1571/1581 or CMD FD-2000
Disk Drive

BIG BLUE READER 128/64
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BIG BLUE READER 128/64
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SOGWAP Software

Thank you for purchasing Big Blue Reader 128/64. Your purchase of this software allows us to continue to develop and produce high quality software.

Big Blue Reader 128/64 is set of unique and powerful disk utilities for the Commodore 1571 and 1581 Disk Drive(s). These programs are designed to transfer word process-ing, text, ASCII, and binary files between standard Commodore 64/128 and IBM PC compatible MS-DOS disks. The enhanced Big Blue Reader 128 gives additional support for: Built-in MS-DOS disk formatting, true Burst Mode file transfers, 2MHz microprocessor speed, extra RAM, 40 and 80 column displays, C128 CP/M file transfers and much more.

Big Blue Reader, abbreviated "BBR" throughout this manual, may refer to either "Big Blue Reader 128" for the Commodore 128, or "Big Blue Reader 64" for the Commodore 64 (originally called, "Little Blue Reader.") Where BBR 128 and BBR 64 differ from one another the differences are noted by two asterisks followed with text explaining the differences, for example:

** *BBR 64 users may ignore references to C128 CP/M. C128 CP/M disk formats are only valid when using Big Blue Reader 128.*

Thousands of hours have gone into the research and development of Big Blue Reader 128/64 in order to make it easy for you to perform file transfers between Commodore and IBM MS-DOS disks. BBR is the result of seven years of on going development by Michael Miller of SOGWAP Software. Big Blue Reader 128/64 is menu driven and easy to use. The programs contain prompts to guide you through each procedure. This manual is meant to provide the background and explain the various keys in implement-ing each procedure.

If you experience trouble transferring files after using BBR and following the first half of this users guide (pages 2-11), then read the second half starting with Additional Notes (pages 12-20.)

BIG BLUE READER 128/64 SYSTEM REQUIREMENTS:

>Commodore 128 or 64.
>Commodore 1571 -or- Commodore 1581 Disk Drive.
>Suitable monitor. (40 or 80 column display using C128)

Optional equipment:

>Second Commodore Disk Drive (drive # 8-30).
>Commodore-compatible printer.

What Big Blue Reader 128/64 CAN DO!

(1) BBR can transfer files between the following disk formats:

> Standard Commodore 1541/1571/1581 disks
> MS-DOS double sided 320/360KB disks
> MS-DOS single sided 160/180KB disks
> MS-DOS double sided 720KB disks (Using the 1581 Disk Drive)
> C128 1571 CP/M disks (1571 GCR formats only)
> C128 1581 CP/M disks (Commodore's 1581 CP/M format only)
> * Note: CP/M file transfers are only available with Big Blue Reader 128.

(2) BBR can transfer or print multiple files.

(3) BBR can do an optional ASCII translation when transferring Commodore files to MS-DOS or C128 CP/M disks, and vice versa.

(4) BBR can add optional line feeds, after carriage returns, when transferring Commodore files to MS-DOS or C128 CP/M disks.

(5) BBR fast loads all files when using the 1571 or 1581 Disk Drive. Big Blue Reader 128 uses burst mode. Big Blue Reader 64 uses special fast serial routines.

(6) BBR can handle files of any length, limited to available disk space.
For Accurate transfer of binary files select no ASCII translation and no adding line feeds.

(7) BBR 64 and 128 can use the Commodore 17xx RAM expansion module as a large file buffer.

(8) BBR includes Commodore and IBM MS-DOS disk formatting programs, for both Commodore 1571 and 1581 Disk Drives.

(9) A number of BBR users have been successful at using the Big Blue Reader to transfer source code files between Commodore, MS-DOS and C128 CP/M disk formats and computers. Your particular application and experience will determine the success of such file transfers.

(10) BBR can copy MS-DOS files between 360K 5.25 inch and 720K 3.5 inch disk formats when using both 1571 and 1581 Disk Drives. BBR also can copy Commodore files between any Commodore disk drive(s).

(11) BBR 4.1 can read sub-directories from MS-DOS disks. (See page 13)
(12) BBR 4.1 can transfer most Screen Code files directly to MS-DOS without pre-conversion to ASCII. (See page 17)

What Big Blue Reader CANNOT DO

(1) <u>Big Blue Reader IS NOT an IBM MS-DOS emulator or translator</u>. There has never been any hardware and/or software combination that allows you to run IBM MS-DOS compatible programs on your Commodore 64, 128 or CP/M and vice versa. IBM MS-DOS programs require a 8088/80286/80386 type microprocessor. Commodore 64 and 128 programs require a 6502/6510 type microprocessor. Commodore 128 CP/M programs require a Z-80 microprocessor. Additionally; Commodore, MS-DOS, and CP/M computers use entirely different operating systems.

(2) Big Blue Reader does not "automatically" do file "translations" between programs. By using Commodore "PET" ASCII files on the Commodore 64/128 and Standard ASCII files on the MS-DOS computer your files should transfer fine. Some programs however, use files that contain unique character codes and/or unique embedded formatting commands. Some programs may use files that are compatible only with themselves. Check your software manual on the use of files to and from other software packages. (See ASCII FILES, page 18.)

GETTING STARTED

BEFORE YOU START, format any disks that you will need. You may format Commodore disks from the DISK CMDS menu. To format MS-DOS disks, you can use pre-formatted (360K or 720K) IBM MS-DOS disks, or the program, FORMAT. (See FORMAT, page 10 & 11.)

LOADING: BIG BLUE READER 128

Big Blue Reader 128 will Auto-boot on drive #8. First turn on your 1571 drive and insert the disk marked "Big Blue Reader 128" then reset your Commodore 128 Computer. BBR 128 should load with-in 30 seconds, using a 1571.

LOADING: BIG BLUE READER 64

Big Blue Reader 64 loads on any Commodore drive. Insert the disk marked "Big Blue Reader 64" into your drive and type:

```
LOAD "BOOT-64",8,1 : <RETURN>
RUN : <RETURN>
```

After the BBR boot program loads select: (1) for normal ASCII translations; (2) for Screen Code translations (see page 17); (3) to load and run FORMAT.

NOTE: To read and write MS-DOS disks, Big Blue Reader request individual sectors of data from the disk drive. As these sectors are located by the 1571/1581 Disk Drive, the

drive light will flash on and off. This is normal and does not indicate a disk error. Also, when using Big Blue Reader 64, the 1571 drive light flashes as it fast-loads Commodore files.

MAIN MENU and ALTERNATE Display

Once Big Blue Reader has loaded, the Main Menu is displayed. Notice the DRIVE I/O shown on the screen. The DRIVE I/O determines which drive is the source (input) drive, and which drive is the destination (output) drive. You may use drive numbers 8-30. Since Big Blue Reader uses different transfer routines for different drive(s), check that the drive types (1541/71/81) are shown correctly. (See DRIVE I/O, page 9.)

Once you have loaded a disk directory, a list of file names is displayed. Across the bottom of the screen are the Main Menu options. At the bottom left of the C128 screen is a clock display.

* If you are using the C128 80-column mode, you will see the equivalent of two 40-column screens. On the left side of the 80 column screen is the MAIN MENU display, on the right side is the Alternate display. When using the C128 40-column mode, pressing the <ALT> key, to show the Alt Display.

* BBR 64 does not have an Alternate Display nor a clock. BBR 64 also ignores the Time and Date on MS-DOS files. These are not essential to transferring files and would use valuable buffer space in the C64.

When the MAIN MENU or ALTERNATE Display first appears, there are no directory entries. Select one of the Main Menu options, shown at the bottom of the screen, by using either: <Cursor> and <Return> keys; a joystick in port 2, or one of the function keys. BBR 128 users may want to enter the correct DATE and TIME, which is used when copying Commodore files to MS-DOS disks.

Big Blue Reader 128/64 MAIN MENU options:

LOAD DIR = Loads a Commodore or MS-DOS (Root) disk directory.
(BBR 128 users may load C128 CP/M directories.)

COPY = Transfer files from disk-to-disk.

PRINT = Print files on screen or to a printer.
(Also, selects sub-directories)

DISK CMDS = Execute various disk commands.

Note: To page file-names, use the <+> and <-> keys.

** Additional Big Blue Reader 128 MAIN MENU options:

DRIVE I/O   = CHANGE DRIVE I/O (C64 & 128)

VIEW DIR   = View Commodore, MS-DOS or C128 CP/M directories.

TIME/DATE   = Set or change Time and Date.

UTILITY   = FORMAT MS-DOS DISK (using 1571 or 1581)
                        1571 SPEED-UP
                        PRINT DIRECTORY
                        LOAD ALT ASCII TABLE

MAIN MENU FUNCTION KEY DESIGNATIONS

F1=LOAD DIR   F3=COPY   F5=PRINT   F7=DISK CMDS
F2=DRIVE I/O · F4=VIEW DIR   F6=TIME/DATE F8=UTILITY

HOW TO USE MAIN MENU OPTIONS

To select a Main Menu option use either: <Cursor> and <Return> keys; joystick in port 2, or one of the function keys.
Note: The <ESC> key is programmed to return you to the Main Menu with most of the prompts that appear when executing BBR options.

** BBR 64 uses the back arrow key "<—" as an Escape key.

LOAD DIR

Purpose: Load a disk directory (of file names) into memory.

After selecting LOAD DIR use the <Cursor> and <Return> keys, to choose the disk type: Commodore, MS-DOS, or C128 CP/M. You may use pattern matching with Commodore disks. The disk drive will spin, read the directory, and then display file information for that disk on the screen. Commodore disks show: file name, file type and number of blocks for each file. MS-DOS disks show: file name, file extension, file size, Time, and Date for each file. C128 CP/M disks show: file name and extension, and file size, and user number for each file.
Load Dir Notes: You must use LOAD DIR before using COPY or PRINT.
LOAD DIR always functions with the source drive. (See DRIVE I/O, page 9.)
BBR-128 can read 200 directory entries, BBR-64 can read 144 directory entries.

** BBR 64 ignores the Time and Date on MS-DOS files.

** *BBR 128 ALTERNATE DISPLAY shows the following additional information.*

The disk format: Commodore, MS-DOS or C128 CP/M
If the disk is single or double sided.

MS-DOS and C128 CP/M disks show: Number of files, number of bytes free, number of bytes used, and total number of bytes on the disk. MS-DOS disks show if the disk is 8 or 9 sectors.
Commodore disks show: Number of program files, number of sequential files, number of other files, total number of files, number of blocks free, number of blocks used, total number of blocks on the disk, number of bytes free.

The bottom of the ALTERNATE DISPLAY shows: Date, Buffer size, Copyright notice, and Big Blue Reader 128 version number.

COPY

Purpose: Transfer files between Commodore and MS-DOS, or CP/M disks.

There are two designations for disks when using Big Blue Reader. One is the source disk, on which the file you wish to copy resides. The other is the destination disk, to which you wish to copy a file to. To change the source and destination drives use the "DRIVE I/O" menu option.

After selecting COPY, choose files for transfer by using the <Cursor> and <Return> keys (use the <+> and <-> keys to page filenames.) Files selected for transfer are marked with an asterisk "*" to the left of the file name. Press <F1> to mark all files in a directory. Pressing <F3> to un-mark all files.
After choosing files, press the up-arrow key <^>, (next to the <Restore> key.) Next choose the destination disk type; Commodore, MS-DOS, or C128 CP/M. All files are saved to the destination drive. (See DRIVE I/O, page 9.)

If you are copying files from Commodore to MS-DOS or vice versa, you are first asked if want an ASCII translation. Also, when transferring Commodore files to either MS-DOS or C128 CP/M, optional line feeds may be added. (See pages 17-19.) Next you are asked if you would like to retain the same file names. Commodore files saved to MS-DOS or C128 CP/M disks are stripped of illegal file name characters and the file names are converted to the proper case.
To start the transfer process, insert the disk(s) and press the <SPACE BAR>. Press the <ESC> key to abort to the Main Menu.

Note: For "Binary" file transfers choose NO ASCII translation and NO Line Feeds. Binary file transfers are automatic when transferring files between similar disk formats: Commodore to Commodore, MS-Dos to MS-Dos or CP/M to CP/M.

PRINT

Purpose: View text files on screen or print them on a printer (device 4 or 5.) Also, selects MS-DOS sub-directories. (See page 13)
Note: Use the PRINT option to preview text and ASCII files.
The PRINT option can show when an ASCII translation is needed. (See page 18)

After selecting PRINT use the <Cursor> and <Return> keys to choose files. Files selected for printing are marked with an asterisk "*" to the left of the file name. Press the <F1> key to mark all files. Press the <F3> key to un-mark all files. After choosing files, press the up-arrow key <^>, (next to the <Restore> key.) Select output, either to the screen or to a printer, with the optional ASCII translation as needed:

Select: "Special/None" to print your files with all control and non-printable characters stripped from the file but with no other ASCII translation. **Note:** This option is available if have loaded the Normal ASCII translation table.

Select: "Translate: Screen Codes" to print your files with Screen Code characters converted for normal Commodore ASCII output. **Note:** This option is available if have loaded the Screen Code translation table.

Select: "Standard ASCII to Commodore ASCII" to print your files with ASCII characters converted for normal Commodore ASCII output. You should choose this option for MS-DOS, CP/M and other standard ASCII text files.

DISK CMDS

Purpose: To execute various disk commands.

NOTE: The following C128 disk commands work only with Commodore disks.
The FORMAT DISK command will format or erase ANY disk.
To select another drive for disk commands press <SPACE BAR>.

** *Big Blue Reader 128 disk Commands:*

GOTO MAIN MENU	= Return to Main Menu.
DISK DIRECTORY	= Display Commodore disk directory.
VALIDATE DISK	= To clean up disk (recalculates BAM.)
SCRATCH FILE	= Erase file(s) from disk.
RENAME FILE	= Change the name of a file.
FORMAT DISK	= Format a Commodore disk.
CHANGE DRIVE #	= Use another drive for DISK CMDS.
OTHER CMDS	= Enter your own disk commands. (see below)

** Big Blue Reader 64 Disk Commands:

GOTO MAIN MENU = Return to Main Menu.
CHANGE DRIVE I/O = Change source and destination drives.
COMMODORE DIR = Display Commodore disk directory.
IBM, MS-DOS DIR = Display MS-DOS disk directory.
FORMAT MS-DOS DISK = Loads FORMAT program. (see page 11)
CHANGE DRIVE # = Use another drive for DISK CMDS.
OTHER CMDS = Enter your own disk commands. (see below)

Use OTHER CMDS for the following:

Format Commodore disk = "N:DISKNAME,ID"
Validate Commodore disk = "V"
Scratch Commodore file = "S:FILENAME"
Disk verify OFF = "U0>V1" (1581 and new 1571 ROM drives only)
Disk verify ON = "U0>V0" (1581 and new 1571 ROM drives only)
NOTE: See your 1541/1571/1581 User's Guide for more information on these and other disk commands, including the CHGUTIL UTILITY commands.

BIG BLUE READER 128 OPTIONS

DRIVE I/O (both C64 and C128)

Purpose: To change the SOURCE and/or DESTINATION Disk Drive.

All files are loaded from the source drive and saved to the destination drive. Valid drive numbers are 8-30. Drive types show as either a 1500, 1541, 1571 or 1581 Disk Drive. Since different routines are used for 1541, 1571 and 1581 Disk Drives, be sure the correct drive types are shown.
After selecting DRIVE I/O, press the <F1> and <F3> keys to choose drives.
Note: Each drive must have its own unique drive number. Drives with the same device number WILL NOT work. All 1571 and 1581 drives have switches on the back to select drive numbers from 8-11. Software changing of drive numbers is NOT recommended. Do NOT turn off an unused drive or printer, but rather to eliminate potential problems disconnect them from the last drive in use!

** BBR 64 includes DRIVE I/O under the "DISK CMDS" option.

VIEW DIR

Purpose: To view Commodore, MS-DOS, or C128 CP/M disk directories. If you are using more than one drive press <SPACE BAR> to change drives.

** BBR 64 includes VIEW DIR under the "DISK CMDS" option.

TIME & DATE

Purpose: Set the Date and Time. Used when copying Commodore files to MS-DOS disks. Time uses the C128 time-of-day clock (+56328 to +56331).
CMD drive users may set the C128 clock with the program, SET CLOCK.

To set or to change the current Date and Time use: <+> <-> and <Return> keys; joystick in port 2, <Cursor> keys, or simply type in the numbers.

UTILITY MENU

The C128 UTILITY Menu has four options:

>   FORMAT MS-DOS DISK
>   1571 SPEED-UP
>   PRINT DIRECTORY
>   LOAD ALT ASCII TABLE

FORMAT (C128 built-in option)

BBR-128 has built-in MS-DOS disk format routines for 1571 and 1581 Disk Drives. Disks formatted with BBR can be read from and written to using most IBM PC compatible MS-DOS computers. BBR-64 loads the program, FORMAT, from the BBR-64 disk. (See FORMAT, page 11.)
Note: To format C128 CP/M disks, BOOT CP/M on your C128 and use the CP/M "FORMAT" command. Later versions of CP/M include formatting for both C128 1571 and 1581 disk formats.

1571 SPEED-UP

Every time a Commodore drive writes to a sector on a disk, it automatically verifies that the data was written correctly. The 1571 Speed-up function disables the automatic write/verify action and speeds up writing to Commodore disks by about 30-50%. To use, press <Control>+<D>. The active drive is reset by the disk command "UJ"   Then a short program is executed within "stand alone" 1571 drives that bypasses the normal write/verify action. C128D/1571 and 1571 drives with Version 5 ROM upgrades are sent the command "U0>V1", disk verify off; this speeds up writing to Commodore GCR and IBM MS-DOS disks when using the built-in C128D/1571.
Note: Resetting your drive (by turning the drive off and then back on) returns it to normal, with the automatic write/verify enabled.

PRINT DIRECTORY

This BBR-128 option prints the directory of a disk loaded in memory with the LOAD DIR option. Output is to a Commodore printer, device 4 or 5.

LOAD ALT ASCII TABLE

This BBR-128 option allows you to load an alternate ASCII translation table without re-booting BBR. By default, BBR-128 loads the translation table, NORMAL ASCII. The LOAD ALT ASCII TABLE option will load any PRG file with a starting address of $D00, $E00, or $F00. (For more information PRINT the file, ABOUT TABLES found on your BBR-128 disk.)

To translate Commodore Screen Code files directly to MS-DOS, load the translation table, SCREEN CODES. This table transfers: Word Writer 64, Speed Script 64 or 128, Write Stuff 64/128, Omni Writer, and most other programs that use Screen Code files. Previously, BBR required pre-conversion of Screen Code files to ASCII or Pet-ASCII.

UTILITY PROGRAMS

FORMAT (for both C64 and C128)

This program formats both Commodore and MS-DOS disks, using the 1571 or 1581 Disk Drive. MS-DOS disks formatted with BBR can be read from and written to using most IBM PC compatible MS-DOS computers.

To use, LOAD and RUN the program, "FORMAT". Use the <Cursor> and <Return> keys to select a disk format. If you have more than one drive, press <SPACE BAR> to change drives. When exiting this program, it attempts to boot Big Blue Reader. (Note: The C128 format program does NOT use burst mode.)

Note: The most popular 5.25 inch MS-DOS disk format is 360K DS-9.

** To load the following Commodore 128 programs, turn your C128 on without inserting the Big Blue Reader 128 disk into the disk drive.

DISKCOPY (for C128 with 1571/1581)

This C128 program copies (track by track) Commodore (GCR) or MS-DOS (MFM); 5.25 or 3.5 inch disks, using 1571 or 1581 Disk Drive(s). **You may use one or two drives. Supports 17xx REU, and uses Burst mode for speed.** When finished the backup disk will be exactly like the original, with the same format.

Note: DISKCOPY does not copy, copy protected disks.

To use, RUN "DISKCOPY" For safety write protect the source disk. Follow the prompts, exchanging the source and destination disks. The source disk is your original. The destination disk is your backup. While the program is working, the screen displays the track and side being read from or written to.

For more information PRINT the file, "DISKCOPY.README" found on your BBR-128 disk.

EXAMINE FILE   (*for advanced C128 users*)

The program, EXAMINE FILE, loads any Commodore file into memory. Then by using the C128 MONITOR, you can examine the file. This program loads a file into the C128 memory, Bank 0 starting at HEX $2000. Program files are relocated to this address, with the first two memory locations holding the load address of the file. Files larger than 224 blocks fill all of bank 0 from $2000 to $FF00 with the first part of the file.

ADDITIONAL NOTES

READ.ME files

The BIG BLUE READER disk has several "READ.ME" files containing important information not in this manual. Use the Big Blue Reader PRINT option to read these files. Note: "Basic" programmers will want to read about transferring "BASIC" program files.

Commodore File Size Capacity

Most programs have a limited file size capacity. Typically C64 programs can handle files from 5,000 to 30,000 bytes (20 to 130 blocks.) If you intend to use a larger MS-DOS text file on your Commodore you must split it into smaller usable files, <u>before</u> using BBR to transfer it from MS-DOS to Commodore.

To find a program's file size capacity look through your manual or users guide. You may try loading a large file into your program and see if you get some kind of memory or overflow error; then re-save the file and check its size. (If your program crashes, this method won't work.)
Note: Ten (10) blocks on a Commodore disk is equal to about 2,500 bytes, thirty-two (32) blocks is equal to about 8,000 bytes, etc.

Cursor Keys and Scrolling Directory Filenames

The <Cursor Left> and <Cursor Right> keys are used to select main menu options. The <Cursor Up>, <Cursor Down> and <Return> keys are used to choose files with the COPY and PRINT options.
If a directory has more than 15 files, you may page file-names by using the <+> and <-> keys. Note: BBR-64 users also can use the number keys 1-9.

CP/M Disk Formats

Big Blue Reader 128 can read and write three C128 CP/M disk formats: C128 single sided (1571 GCR), C128 double sided (1571 GCR) and Commodore 1581. Foreign CP/M disk formats must be copied to one of the three C128 CP/M formats using the CP/M

"PIP" command. This includes MFM CP/M disks formatted for the following computers: Epson QX10, IBM-8 (CP/M-86 on the IBM PC), KayPro II, KayPro IV, Osborne (double density), and any other CP/M disks readable by your C128 CP/M+ system.

Fast Serial vs. Burst Mode

Big Blue Reader 128 requires "Burst mode" to transfer files to and from CP/M and MS-DOS disks. Burst mode requires special hardware lines on C128 the serial bus. (Burst mode is NOT possible on a standard C64.)
Big Blue Reader 64 uses special fast serial routines to transfer data. The BBR 64 fast serial routines are among the fastest written for the C64.
Note: BBR 128 is about twice as fast as the BBR 64. If you have a C128 and lots of data to transfer, I recommend that you use BBR 128.

File Types

Big Blue Reader can transfer all standard files. Note: "program" and "binary" files will only run on the computer designed for them. See pages 3-4.
When transferring text and ASCII (with the appropriate ASCII translation) between formats, the resulting files end up as either: ASCII files on MS-DOS disks, or Pet ASCII (sequential) files on Commodore disks.
Commodore REL files will load only on 1571 or 1581 Disk Drives and are treated like SEQuential files, side sector information is ignored.

Loading Selective Commodore Directory

When loading a Commodore directory, BBR asks for the Directory Pattern. Press <Return> to read all directory entries. Enter: "*=S" for all Sequential files, "*=P" for all Program files, "*=U" for all User files, etc. You can use pattern matching to load files starting with one or more letters. Enter: "P*" for all directory entries starting with the letter `P' or "my*" for all directory entries starting with `my'.

Loading MS-DOS Sub-Directory

Big Blue Reader 4.1 can read files from sub-directories. After loading a directory, select the PRINT option. Then cursor to the desired sub-directory and press <Return>. BBR will read that sub-directory, allowing you to COPY or PRINT files from it.
Note: BBR always writes files to the MS-DOS root directory. LOAD DIR always reads the MS-Dos root directory.
BBR selects CMD sub-directories the same way. To return to the root directory use the OTHER DISK CMDS menu option and send the disk command: "CD//"
To change partitions, send the command: "CPx" (x=partition number.)

Big Blue Reader indirectly supports Commodore 1581 sub-directories features. You

must send the proper disk commands using the DISK CMDS option. For example send the disk command "/0:xyz" to go to the sub-directory named "xyz". While "/" brings you back to the ROOT directory. NOTE: Physically changing a disk in the 1581 Disk Drive returns the 1581 root directory of a Commodore disk. (See the 1581 User's Guide for more information.)

Quitting BBR

To Quit BBR press the <Commodore>+<Q> keys while at the Main Menu.

C128 - 80 Column Display

When printing non-text files to the 80-column screen its possible to corrupt the display so badly that you need to reset your C128. By the way, BBR-128 runs in 128 mode.

Using Other Commodore Compatible Drives with BBR

BBR 128/64 can use the 1541 (and other Commodore compatible drives, including CMD drives) to read and write Commodore files only. Normal system routines are used. The Commodore 1541 CANNOT read nor write MS-DOS disks. The 1541 GCR disk controller deems it impossible. Even if the Commodore 1541 could read or write MS-DOS disks, the 1541 is only a single sided drive, while most MS-DOS disks are double sided (360K DS-9).

1571 ROM Upgrade (for stand alone 1571's)

We highly recommend that you upgrade the ROM in "external" 1571 Disk Drives. The upgrade ROM (version 5, available from Commodore, and built into JiffyDos®) corrects most problems with Commodore 1571 stand alone drives and increases the performance of the 1571 drive noticeably.

The *easiest* way to tell if a 1571 has the ROM upgrade is to insert a 1541 "flippy" disk into the drive while it is in the 1571 mode and see if it reads the directory immediately. With the old ROM, the drive light flashes and takes about ten seconds to start reading the directory.
Note: A flippy disk is a disk formatted as a single sided disk (1541 mode) on both sides by flipping it over.

To force the 1571 drive into 1571 mode from Basic, type:
        OPEN 15,8,15,"U0>M1": CLOSE 15
To force the 1571 drive into 1541 mode from Basic, type:
        OPEN 15,8,15,"U0>M0": CLOSE 15

NOTE: BBR switches the 1571 into 1571 mode to read all files.

Using the 1581 Disk Drive

The Commodore 1581 is a 3.5 inch Disk Drive, with a storage capacity of over 800,000 bytes. Big Blue Reader can use the 1581 drive to read and write 3.5 inch 720K MS-DOS disks as well as standard Commodore-DOS disks.

** *BBR 128 can read and write Commodore 1581 CP/M files as well.*

Using the 1700/1750/1764 REU

Big Blue Reader 64 and 128 use the 17xx REU RAM expansion module as a large file buffer. BBR does NOT use RAMDOS.

Using Multiple Drives with BBR

Big Blue Reader works with any drive number, between 8-30.
To use more than one disk drive with Big Blue Reader, each drive must have its own unique device number. To change the device number, use the switches on the rear of 1541 II, 1571 or 1581 Disk Drives. (See your Disk Drive User's Guide.) Software changing of drive numbers is NOT recommended.
When using more than one drive, you may need to change the source and destination drive numbers. (See "DRIVE I/O".) Keep in mind, that Big Blue Reader 128/64 fast-loads all files with 1571 and 1581 drives.

HELP AND TROUBLE-SHOOTING

(1) Big Blue Reader 128/64 can work wonders; only GOD can perform miracles.

(2) To transfer most text and ASCII files between Commodore and IBM MS-DOS disks you should use Commodore Pet ASCII files and/or IBM MS-DOS standard ASCII files. Most of the better word processing, database and spreadsheet programs have such file input/output options.
Note: You may need to try various input/output options to find a compatible combination to transfer files between certain programs.

(3) If Big Blue Reader 128/64 fails to load or operate properly, try disconnecting everything (and I mean everything) except your monitor and a 1571 or 1581 Disk Drive. Don't simply turn off an unused printer or drive (it will cause problems); but unplug it from the computer or drive.   (C128 users may try using BBR-64.)

(4) Big Blue Reader sends a lot of information between the Commodore 128/64 and 1571/1581 Disk Drives. Occasionally, a drive may get confused and fail to operate. You may have inserted the wrong disk, removed the disk at the wrong time, or possibly your

drive is "tired" and reports a disk error.

If BBR does not respond, first press the <RUN/STOP> key. Next reset the disk drive (turning it off/on). Next try pressing <RUN/STOP>+<RESTORE>.

To re-start BBR-128 type: BANK 0:SYS 56139

As a last resort re-boot BBR. To re-start the Commodore 128 turn it off/on.

(5) Big Blue Reader 64 should load within 10 seconds using a 1571 or 1581 Disk Drive (with BBR-64 fast-load.) Big Blue Reader 128 should load within 30 seconds using a 1571 or 1581 Disk Drive.

If Big Blue Reader 128 takes longer than 30 seconds to load with a 1571 or 1581, your C128 is NOT using burst mode and BBR will NOT work. (See #3 above)

(6) If a disk has important data which is non- replaceable, back it up! Also a write protect tab covers a multitude of mistakes. For archival backup of Commodore disks we recommend (as of April 1992) "Maverick V5" for the C64/128, produced by Software Support International. For IBM MS-DOS disks we recommend "PC TOOLS".

(7) Write MS-DOS files to freshly formatted MS-DOS disks. Remember, you are dealing with two different disk drives on two different computers; a Commodore 1571/1581 Disk Drive and an IBM compatible MS-DOS disk drive.

(8) Some programs produce files which are not compatible with any other program. In such cases, you should consider using a different program that has file compatibility with Commodore Pet ASCII or Standard ASCII options.

(9) Big Blue Reader does full error checking, even when using fast serial routines. If Big Blue Reader encounters a disk error you are prompted to <R>etry, <I>gnore, or <A>bort reading or writing. If you choose <R>etry, the program retries to read or write the data. If you choose <I>gnore, the program continues, possibly with bad data. If you choose <A>bort, the program aborts the copy process., possibly leaving a corrupt disk.

(10) Commodore 1571 and 1581 Disk Drives CAN NOT read IBM MS-DOS compatible high density (1.2 or 1.4 Megabyte) disks. If you try to read a high density disk, with a 1571 or 1581, BBR will report a disk error.

(11) BBR 64 and BBR 128, can read all standard Commodore files, regardless if you used a C64 or a C128 to create the file. The main difference between BBR 64 and BBR 128 is that BBR 128 is faster and has more options due to its extra memory.

(12) MS-DOS files copied to Commodore disks are normally saved as SEQ files. To copy a file to a Commodore disk with a PRG file type, you must enter a file name and end it with: ",P"   Note: BBR does NOT add a two byte load address.

Note: Some C64/128 programs may require an additional conversion after using BBR, to your particular program, to use SEQ or ASCII files.

Transferring Commodore Word Processing Files

Pocket Writer uses Screen Code (PRG) files which BBR transfers un-formatted. For clean output use the Pocket Writer <Control>+<A> option to switch from text to SEQ file mode before using BBR.
Note: Before switching from text to SEQ file mode, remove all margins and then set the right margin to 9999. Pocket Writer can output: text, sequential, or printer files. Pocket Writer also can handle Commodore ASCII and Standard ASCII files.

Paper Clip uses Screen Code (PRG) files which BBR transfers un-formatted. For clean output use the Paper Clip <Control>+<Z> save option to output Sequential files. Then use BBR with the Normal ASCII translation table.

Word Writer 128 use "Standard ASCII" files and **does not** require an ASCII translation (or line feeds) to and from MS-DOS.

Word Writer 64, Speed Script 64 and 128, Write Stuff 64/128, Omni Writer, and others use "Screen Code" files. To transfer Screen Code files directly to MS-DOS, you must choose the Screen Code translation table when loading BBR.
Note: After transferring some Screen Code files to MS-DOS you -may- need to use a MS-DOS word processor to remove any header information or embedded ASCII format codes. Most programs that use Screen Code files also provide a convert utility program, to convert between Screen Code, Commodore Pet ASCII and Standard ASCII files.

Easy Script use Commodore Pet ASCII files with embedded Commodore ASCII format codes. Easy Script files can be transferred directly to MS-DOS using BBR and the "Normal ASCII" translation table.

GEOS uses its own file system. To import text into GEOS, use the GEOS "Text Grabber." To export text, you must use the GEOS "Convert" program to convert from GEOS to Commodore SEQ file format. Then use BBR with the Normal ASCII translation table.

NOTE: Some Commodore programs can save/load Standard ASCII files. Such files DO NOT require an ASCII translation to and from MS-DOS.
A few word processing, database and most spreadsheet programs use unique character codes or embedded formatting commands, making it difficult for conversion to any another program. Most programs that use such files can output Sequential or ASCII files, or a conversion program is often available.
Line Feeds Note: MS-DOS programs divide ASCII text files into lines by marking the end of each line with a carriage return and a line feed. Most Commodore programs however, use only a carriage return (the line feed is assumed.) **As a general rule, when an ASCII translation is made from Commodore to MS-DOS you should also, add Line Feeds.**

OTHER FILE CONVERSION TIPS

Word Processing files: If possible use Commodore Pet ASCII files with Commodore 128/64 programs and Standard ASCII files with IBM MS-DOS programs. If your word processing program cannot handle these generic files, you should get one that does. **NOTE:** Big Blue Reader can transfer Commodore "Screen Code" files directly to MS-DOS. When BBR loads, press: (1) for Normal ASCII (Commodore Pet ASCII) translation, or press (2) for "Screen Code" translation.

Database files: Commodore database files should be converted to Sequential files before converting to MS-DOS. Likewise MS-DOS database files should be converted to Standard ASCII files.
NOTE: Database programs use various delimiters to separate fields and records. <u>Your receiving Database MUST recognize the correct delimiters.</u> Commas, quotation mark, and the carriage return are common.

Spreadsheet files: Spreadsheet file compatibility is often limited. Spreadsheet programs can often output "DIF" "SYLK" "Sequential" or "Standard ASCII" files; allowing files to be interchanged between different programs.

To transfer **MultiPlan** files between Commodore and MS-DOS programs, convert MultiPlan files to "SYLK" files.

Use **WordStar** in non-document mode to import and export files to Commodore.

Almost always you can interchange data files for any program running under MS-DOS with a similar C128 CP/M version of the same program.

ASCII FILES

ASCII stands for "American Standard Code for Information Interchange". It is the standard for computer communications. True ASCII which uses the ASCII standard is called "Standard ASCII".

IBM MS-DOS compatible computers use Standard ASCII characters for the first 128 characters, CHR$(0) through CHR$(127). The last 128 characters, CHR$(128) through CHR$(255), are special characters that make up an extended ASCII character set. The extended ASCII character set is used for either, special formatting of text, or IBM's own special graphic character set. Big Blue Reader when asked to translate "Standard ASCII to Commodore ASCII", translates CHR$(128) to CHR$(255) as the equivalent CHR$(0) to CHR$(127), thus stripping the high bit.

The Commodore 128/64 character set, when it is in its text mode (upper/lower case, with limited graphics), differs noticeably from the ASCII standard. Numeric characters

and much of the punctuation corresponds, however Commodore's lowercase character codes match ASCII's upper case codes. Commodore's upper case character codes are completely out of the ASCII range, since ASCII is a seven-bit code.

Because of the differences in ASCII codes, Commodore Pet ASCII and Standard ASCII requires a character translation.

IMPORTANT NOTE: **Use the Big Blue Reader PRINT option to read questionable text files.**
If you CAN read a file using the PRINT option you more than likely CAN transfer that file to another disk format (computer) with no problems, keeping in mind that you may need to do an ASCII translation.
If you CANNOT read a file using the PRINT option you most likely CANNOT use that file with another program on another machine.

The Basic Rule for transferring most word processing and text files with Big Blue Reader is to use Commodore SEQuential Pet ASCII and MS-DOS Standard ASCII files.

Big Blue Reader, MS-DOS, and Commodore 1541/71/81 Disk Formats

Copying between two entirely different disk formats such as the IBM PC compatible MS-DOS disks and standard Commodore disks is no easy task.

Big Blue Reader 128/64 however, is a unique and powerful disk utility for use with the Commodore 1571 and 1581 Disk Drives. BBR uses the advanced hardware and software designs of the 1571/1581 Disk Drives.

The Commodore 1571 Disk Drive supports two disk formats: GCR and MFM. The 1571 GCR format is identical to the single sided Commodore 1541, except that the 1571 is a double sided drive. Almost all Commodore 64/128 software uses the 1541/ 1571 GCR format. The Commodore 1571 also can read and write industry standard MFM disk formats. The MFM format is used by MS-DOS and most CP/M computers. (The Commodore 1581 uses only MFM format.)

Besides the different disk formats involved (GCR & MFM), both Commodore and the MS-DOS Disk Operating Systems (DOS) are "radically" different. The DOS is the software that provides an interface between the host computer and the drive's internal mass storage devices and disks. The DOS keeps track of the file management details necessary to create, modify, and delete files. It also monitors the amount of free space on a disk, keeps track of the file names in a directory, and remembers where each file is so the files won't overlap.

The reason the Commodore 1571 was designed to read and write double-density MFM formats, is so it can access CP/M disks from such computers as Kaypro, Osborne, Epson, etc. Although the physical format (MFM) of these disks is the same as used by MS-DOS, the logical format of CP/M disks is different from MS-DOS. NOTE: The C128 1571 CP/M disk format use standard Commodore GCR format, and not MFM.

With Commodore DOS, the DOS software is inside the drive. Every Commodore disk drive has its CPU, ROM and RAM which allows it to function, in part without the aid of the host computer. In both CP/M and MS-DOS, the DOS resides within the host computer; and only the controller portion of the drive is used.

For the Commodore 1571/1581 to read or write MS-DOS (or any CP/M disks for that matter), the drive must be under control of the C64/128 computer. Big Blue Reader 128/64 emulates the MS-DOS and CP/M disk structures, "faithfully" controlling the Commodore 1571/1581 Disk Drive, reading and writing Commodore, MS-DOS, and C128 CP/M files.

Big Blue Reader 128 SET-UP Program

For "Advanced Users" we have included the Commodore 128, "SET-UP" program. To use this program, Load "SET-UP". Then change and/or remove the "REM" statements as needed. The BBR 128 "SET-UP" program allows for the following: Choosing background screen colors. Disable the use of the 17xx RAM Expansion Unit while using BBR 128. You may be using a 1750/1764 REU with information that you do not want disturbed, such as a C128 CP/M RAM disk, or Bible Search REU files.

# # #

Last but not least, I thank God the father of the Lord Jesus Christ for my faithful, supportive and understanding wife, Shari, without her you would not be using Big Blue Reader. Thanks!

BIG BLUE READER 128/64 Copyright Notice

Acknowledgements

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Dedicated to my wonderful sons Michael and David;
in honor of BBR users everywhere.

SOGWAP = Son of God with All Power.

Big Blue Reader 128/64 version 4.1
c 1986-1993 Michael R. Miller, SOGWAP Software
Special Printing, Feburary 1998

Printed in the USA

Big Blue Reader 128/64 - Version 4.1

MS-DOS files transferred to Commodore disks are saved (by default) as Commodore SEQ files.
A menu option has been added to allow you to change the Commodore default file type to either
SEQ, PRG, or USR (when transferring MS-DOS files to Commodore disks.) BBR-128 includes this option
under the UTILITY menu. BBR-64 includes this option under the DISK CMDS menu.

When reading or writing MS-DOS disks the current track and sector number is shown on screen.
BBR-128 shows the current MS-DOS track and sector number in the lower left corner. BBR-128
also has a read/write (R/W) indicator, and shows the drive number. BBR-128 may show R 8 15 3 (reading
MS-DOS disk from drive #8, track 15, sector 3) BBR-64 shows the current MS-DOS track and sector
number in the upper left corner.

BBR-128 has a file and byte counter when using the COPY & PRINT menu options.

BBR-128 shows the month (shown on ALT screen) as a 3-character abbreviation.
    Ex. JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC

BBR Version 4.1 can use the CMD FD-2000 Disk Drive to read/write specially formatted 1.44 Meg disks.
You MUST note the following to use MS-DOS high-density disks:
1. You must use a CMD FD-2060 or FD-4000 Disk Drive.
2. You must use the Big Blue Format program to format 1.44 Meg HD-18 disks.
   Note: high-density disks formatted on an IBM PC compatible WILL NOT work.
3. You must use high-density disks that have the extra hole in them.
   Note: IBM PC 3.5-inch floppy drives require high Density disks with the extra hole.

Big Blue Reader 128/64 Version 4.1, upgrade features

Big Blue Reader 128/64 Version 4.1 represents a major upgrade for C64 and C128 programs from previous BBR versions. BBR Version 4.1 can use specially formatted 1.44-megabyte MS-DOS disks using CMD's FD-2000 & FD-4000 high capacity drives. Standard 1.44-megabyte MS-DOS disks will NOT work with BBR.

NEW FEATURES, both BBR-64 & BBR-128:

Transfer "Screen Code" files directly to MS-DOS. Screen Code files include:
     Word Writer-64, Speed Script, Write Stuff, Omni Writer, and others.
     Note: Pocket Writer and Paper Clip (PRG, Screen Code files) transfer un-formatted.
2. Transfer ASCII or binary files of any length, between any format.
3. Read files from MS-DOS and CMD sub-directories.
4. Load selective Commodore directories. i.e. "*=S" will load all Sequential filenames.
5. Multiple files are transferred in original order.
6. PRINT option (output to screen) shows name of file.
7. Supports drive numbers 8-30. (BBR still requires a 1571, 1581, or FD-2000/4000 Disk Drive.) Big
     Blue Reader installs on 3.5-inch disk drive or Hard Disk Drive.
8. Joystick as well as keyboard can be used for cursor and return input.
9. NEW, MS-DOS disk formatting programs for 1571, 1581, and FD-2000/FD-4000 Disk Drives.
10. NEW and improved 17xx REU support.
11. Displays drive type and drive number when asked to insert disks.
12. Transfers MS-DOS files to Commodore disks with SEQ, PRG, or USR file type.
13. Page directory file names using cursor or <+>/<-> keys.

NEW BBR-128 Features:

1. NEW, built-in MS-DOS disk formatting for 1571, 1581, and FD-2000/FD-4000 Disk Drives.
2. Load an ASCII Translation Table without re-booting BBR.
3. Set BBR- 128 clock and date from CMD drive.
4. DISKCOPY bonus program for Commodore (GCR) and IBM MS-DOS (MFM) disks.
   (Supports 1571 or 1581 Disk Drive(s), multiple drives, 17xx REU, and multi-copy feature.)

NEW BBR-64 Features:

1. NEW 1581/MS-DOS routines for faster and improved reading/writing 3.5" MS-DOS disks.
2. Error Retry, and directory bugs fixed (from version 3.x).
3. Exit to BASIC; start up menu, or FORMAT program.

Big Blue Reader 128/64 Version 4.1 is available for $44.95. Current Big Blue Reader users may upgrade to Version 4.1 by sending their original BBR disk and $18 (postpaid in US.) Upgrade includes new BBR 128/64 Version 4.1 disk and users guide. To order send check or money order to:

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