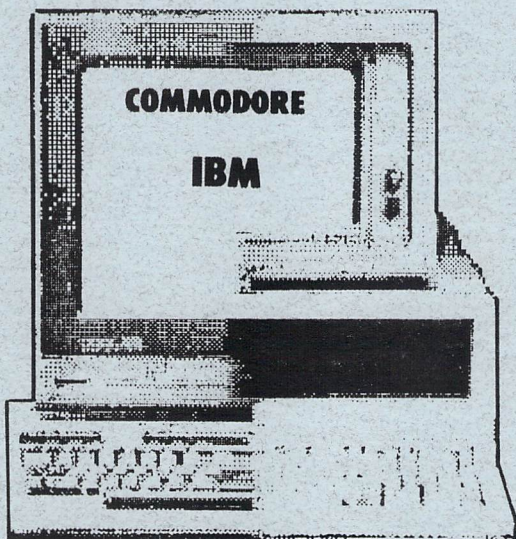# BIG BLUE READER®
128/64

Commodore® <=> IBM® PC
File Transfer Utility

For the Commodore 128 and 64
Requires the 1571/1581 Disk Drive

BIG BLUE READER 128/64
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BIG BLUE READER 128/64
Copyright 1986-90 by Michael R. Miller
SOGWAP Software

Thank you for your purchase of 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 a unique and powerful Commodore 1571 and 1581 disk utility designed to quickly and easily transfer word processing, 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: True Burst mode file transfers, 2MHz microprocessor speed, the extra RAM including 17xx RAM expansion, 40 and 80 column displays, reading MS-DOS subdirectories, 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 nicknamed, "Little Blue Reader"). Where BBR 128 and BBR 64 differ from one another the differences will be noted by two asterisks followed with text explaining the differences, like the following example:

** *BBR 64 users may safely ignore references to C128 CP/M. C128 CP/M formats are only valid while 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. It is the result of nearly five years of research and development by Michael Miller of SOGWAP Software. Big Blue Reader 128/64 is menu driven and easy to use. The program contains prompts to guide you through each procedure. This manual is meant to provide background and explain the various keys in implementing each procedure. If you experience trouble transferring files be sure to read the sections "Trouble-Shooting", "ASCII Files", and "Additional Notes" found in this manual.

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 (1541/1571/1581).
Commodore-compatible printer.

What Big Blue Reader 128/64 CAN DO!

1) 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 using Big Blue Reader 128.*

2) Transfer or print multiple files in just a few minutes.

3) Optional ASCII translation when transferring Commodore files to MS-DOS or C128 CP/M files, and vice versa.

4) Optional line feeds may be added after carriage returns when transferring Commodore files to MS-DOS or C128 CP/M files.

5) Fast loading of all files using the 1571 or 1581. Big Blue Reader 128 utilizes burst mode. Big Blue Reader 64 utilizes fast serial routines.

6) Big Blue Reader 128 and 64 can handle Binary files of any length, limited to available disk space.

7) Big Blue Reader 128 can use the Commodore 17xx RAM expansion module, giving you a large file buffer.

8) IBM MS-DOS disk formatting programs are included for both Commodore 1571 and 1581 Disk Drives. Big Blue Reader 128 allows you to format 360K IBM MS-DOS disks on the 1571 Disk Drive from within the main program.

9) Accurate transfer of Binary files is made by selecting no ASCII translation and no adding line feeds.

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

11) BBR 128/64 can copy IBM MS-DOS files between 360K 5.25 inch and 720K 3.5 inch disks by using both the 1571 and 1581 Disk Drives.

ADDITIONAL BONUS: Feel free to use Big Blue Reader 128/64 as a standard Commodore 64/128 file copier. BBR will copy PRG, SEQ, and USR files between 1541, 1571, and 1581 Disk Drives.

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What Big Blue Reader CAN NOT DO.

1) <u>Big Blue Reader IS NOT an IBM PC emulator or translator</u>, but rather it is a unique and easy to use file copy program, designed to transfer word processing, text, ASCII, and binary files between Commodore 64/128 and IBM MS-DOS disk formats.

2) Big Blue Reader will not allow you to run IBM PC programs on your Commodore 64, 128 or CP/M and vice versa. IBM PC programs are designed to run on a 16 bit 8088/80286/80386 type microprocessor, while the Commodore 64 and 128 use a 6502 type microprocessor, and the Commodore 128 CP/M system uses a Z-80 microprocessor. Additionally; Commodore, MS-DOS, and CP/M computers employ entirely different operating systems.

3) Big Blue Reader will not *automatically* do file translations between some programs. By using Commodore SEQuential 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 which contain unique character codes or unique embedded formatting commands. *Such programs may use files which are only compatible with themselves.* Check your software manual on the use of files to and from other software packages. (Also see "ASCII FILES" in this manual.)

HOW TO GET STARTED USING BIG BLUE READER 128/64

BEFORE YOU START, you should format any disks that you may need. Big Blue Reader 128 allows you to format MS-DOS disks on the 1571 Disk Drive. Big Blue Reader 64 uses a separate program to format MS-DOS disks. (See "BIG BLUE FORMAT" for more information.)

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 in about 20 seconds.

LOADING BIG BLUE READER 64

Big Blue Reader 64 now loads on any drive. Insert the disk marked "Big Blue Reader 64" into the 1571/1581 drive and type:

LOAD "BBR 64",8,1 : <RETURN>
RUN : <RETURN>

Note: If you are using BBR 64 with JiffyDos, you may need to switch it off to Load Big Blue Reader 64 or to use the BBR 64 "CHANGE DRIVE I/O" option.

NOTE: In order to read and write MS-DOS disks, the Big Blue Reader will request individual sectors of data from the disk. As these sectors are located and read by the Controller in the 1571/1581 Disk Drive, the drive light will flash on and off. This is quite normal and it does not indicate that a disk error has occurred. Also the 1571 drive light will flash then Big Blue Reader 64 fast-loads Commodore files.

The MAIN MENU and the ALTERNATE Display

Once Big Blue Reader has loaded, the Main Menu will be displayed. The first thing you should notice is the DRIVE I/O shown on the screen. This will determine which drive is used as the source (input) drive and which drive is used as the destination (output) drive. (See "CHANGE DRIVE I/O" for more information.) Also check that the drive types (1541/71/81) are shown correctly, since Big Blue Reader uses different routines depending on which drive is used.

The Main Menu display was designed to be as informative as possible. Once you have loaded a directory it will give you a list of file names. At the very left-hand bottom of the screen is a clock display. Across the bottom of the screen is the list of the Main Menu options.

*** 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; which is accessed by pressing the <ALT> key when using the C128 40-column mode.*

*** BBR 64 does not have an ALTERNATE Display nor a clock. The BBR 64 also ignores the Time and Date on MS-DOS files. These are not really necessary and use up valuable buffer space in the C64.*

When the MAIN MENU or ALTERNATE display first appear, there are no directory entries. Using the <CRSR LEFT>, <CRSR RIGHT> and <RETURN> keys, you may choose one of the Main Menu options shown at the bottom of the screen. If you are using BBR 128 you may at this time enter and set the TIME and DATE, which are used in stamping MS-DOS disks.

Big Blue Reader 128 and 64 MAIN MENU options:

LOAD DIR = Load Commodore or MS-DOS (Root) disk directories.
          (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.

DISK CMDS = Execute various disk commands.

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*** *Additional Big Blue Reader 128 MAIN MENU options:*

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

DATE = Set or change Date.

TIME = Set or change Time.

UTILITIES = 1) CHANGE DRIVE I/O
 2) FORMAT MS-DOS DISKETTE
 3) 1571 SPEED-UP

The Main Menu options may be selected with either the <CRSR> and <RETURN> keys, or one of the function keys.

MAIN MENU FUNCTION KEY DESIGNATIONS

F1=LOAD DIR   F3=COPY   F5=PRINT   F7=DISK CMDS
F2=VIEW DIR   F4=TIME   F6=DATE   F8=UTILITIES

*** *VIEW DIR, TIME, DATE and UTILITIES options available only w/BBR 128.*

HOW TO USE MAIN MENU OPTIONS

NOTE: The <ESC> key is programmed to return you to the Main Menu with many of the prompts that appear when executing these options.

*** *BBR 64 uses the back arrow key "<--" as an <ESC> key.*

LOAD DIR

Purpose: To load the (root) directory of a disk into memory.

Note: You must use the LOAD DIR option before copying or printing any files. LOAD DIR always functions with the source drive (see "CHANGE DRIVE I/O").

After selecting the LOAD DIR option use the <CRSR> and <RETURN> keys to choose the disk type to be loaded; Commodore, MS-DOS, or C128 CP/M. Then insert the disk and press the <SPACE BAR>. The disk drive will spin, read the directory and then display file information on the screen. Commodore disks show: filename, file type and number of blocks for each file. MS-DOS disks show: filename, file extension, file size, Time, and Date for each file. C128 CP/M disks show: filename, file extension and file size for each file.

*** *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: Total 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: The Date (if set), the Buffer size, Copyright notice, and Big Blue Reader 128 version number.

Using the CURSOR Keys and Viewing Long Directories

The <CRSR LEFT> and <CRSR RIGHT> keys are used to select a main menu option, while the <CRSR UP>, <CRSR DOWN> and <RETURN> keys are used to select file names with the COPY and PRINT options.
If a directory is particularly long you can view the extra file entries by using the <CRSR UP> and <CRSR DOWN> keys with BBR 128, or if you are using BBR 64 then use the <+> and <-> keys to page through the file names. The maximum number of directory entries read with BBR 128 is 200 and 144 with BBR 64.

COPY

Purpose: To transfer files from disk-to-disk.

There are two designations for disks when using Big Blue Reader. One is the source, which is the disk on which the file you wish to copy resides. The other is the destination, which is the disk to which you wish to copy a file to. The source and destination drives can be changed by using the "CHANGE DRIVE I/O" option of Big Blue Reader.

After selecting the COPY option, you may choose any number of files to be transferred by using the <CRSR> and <RETURN> keys. Files selected for transfer are marked with an asterisk "*" to the left of the filename. Pressing the <F1> key will mark all of the files in a directory, while pressing the <F3> key will un-mark all of the files. Press the up-arrow key <^>, (next to the restore key), to begin copying. Although the source disk should already be inserted in the drive, you will be prompted to insert the source disk and press the <SPACE BAR> to start the transfer process. Press the <ESC> key to abort to the Main Menu.

After pressing the <SPACE BAR>, BBR will start the disk drive and read the selected files into the RAM buffer of the computer. After all of the files are loaded or the buffer becomes full, you will then need to choose the destination disk type; Commodore, MS-DOS, or C128 CP/M disk. All files are saved to the destination drive. (See "CHANGE DRIVE I/O")

If you are copying files from a Commodore disk to a MS-DOS disk or vice versa, you will first be asked if you would like to do an ASCII translation (See "ASCII FILES"), then you will be asked if you would like to retain the same filenames. Filenames of MS-DOS and C128 CP/M files are stripped of illegal filename characters. Optional line feeds may be added when transferring Commodore files to either MS-DOS or C128 CP/M disks.

PRINT

Purpose: To view files on screen or print them on a printer.

After selecting the PRINT option use the <CRSR> and <RETURN> keys to select files. Files selected for printing are marked with an asterisk "*" to the left of the filename. Pressing the <F1> key will mark all of the files, while pressing the <F3> key will un-mark all of the files. Press the up-arrow key <^>, (next to the restore key) to begin loading files. Select output either to the screen or to a printer, with the optional ASCII translation as needed.

If you select the "Standard ASCII to Commodore ASCII" translation, Big Blue Reader will translate the proper characters. You would choose this option for most MS-DOS, CP/M and/or other standard ASCII text files.

If you select the "Special/None" translation table your file will be printed with all control and non-printable characters stripped from the file but with no other ASCII translation.

Note: The BBR PRINT option is an excellent way to preview text and ASCII files; it can also show if an ASCII translation is needed.

DISK CMDS

Purpose: To execute various disk commands.

PLEASE NOTE: Most of these disk commands will only work with Commodore-formatted disks. The FORMAT DISK command however, will format or erase ANY disk.

*** Big Blue Reader 128 disk Commands:**

GOTO MAIN MENU	=	To return to Main Menu.
DISK DIRECTORY	=	Display Commodore disk directory.
VALIDATE DISK	=	To clean up disk (recalculates BAM).
SCRATCH FILE	=	Erase files from disk.
RENAME FILE	=	Change the name of a file.
FORMAT DISK	=	Format a Commodore disk.
OTHER CMDS	=	To enter your own disk commands.
CHANGE DRIVE #	=	Use this if you are using more than one drive.

*** Big Blue Reader 64 Disk Commands:**

GOTO MAIN MENU	=	To return to Main Menu.
VIEW CBM DIR	=	Display Commodore disk directory.
VIEW MS-DOS DIR	=	Display MS-DOS disk directory.
CHANGE DRIVE #	=	Use this if you are using more than one drive.
OTHER CMDS	=	To enter your own disk commands (see below).
CHANGE DRIVE I/O	=	Change source and destination drives.

Use the "OTHER CMDS" to do the following:

Format Commodore disk	=	"N:DISKNAME,ID"
Validate disk	=	"V"
Scratch a file	=	"S:FILENAME"
Force 1571 to 1571 mode	=	"U0>M1"
Force 1571 to 1541 mode	=	"U0>M0"
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 1571/1581 User's Guide for more information on these and other disk commands.

ADDITIONAL BIG BLUE READER 128 OPTIONS

VIEW DIR

Purpose: View a Commodore, MS-DOS, or C128 CP/M disk directory on the current destination drive (See "CHANGE DRIVE I/O"). If you are using more than one disk drive you may press <SPACE BAR> to select another drive.

TIME & DATE

Purpose: To set or to change the current Time or Date (used when writing MS-Dos disk files).

To set or to change the current Time or Date; use the <+> <-> and <RETURN> keys, or simply type in the numbers.

The UTILITIES function has three options you may choose:

1) CHANGE DRIVE I/O
2) FORMAT MS-DOS DISK
3) 1571 SPEED-UP

CHANGE DRIVE I/O

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 8-11. Valid drive types show as either a 1541, 1571 or 1581 Disk Drive. Use the <F1> and <F3> keys to select drives.

*** BBR 64 includes this function under the "DISK CMDS" option.*

FORMAT MS-DOS DISKETTE

WARNING: Formatting any disk will completely erase it.
This BBR 128 option will format a MS-DOS 5.25 inch 360K double sided disk using a 1571 on the current destination drive. Once formatted, the disk can be read from and written to using the Big Blue Reader 128/64 and most IBM PC compatible MS-DOS computers.
Note: Disks formatted with BBR can not BOOT MS-DOS with system files.

Note: If you need to format C128 CP/M disks, please BOOT CP/M on your C128 and use the CP/M "FORMAT" command. Choose either the C128 1571 or Commodore 1581 disk formats.

1571 SPEED-UP

Every time a Commodore disk drive writes a sector on a disk, it automatically verifies that the data was written correctly. The 1571 Speed-up function disables this automatic write/verify action (with a slight risk of data loss). This will speed up writing to Commodore disks by about 30-50%. This function first resets the drive by issuing a "UJ" command, it then executes a short program within stand alone 1571 drives that bypasses the normal write/verify action. The C128D/1571 drives and 1571 drives with Version 5 ROM upgrades are sent the command "U0>V1" to activate the disk verify off; this will speed up writing to Commodore GCR and IBM MS-Dos disks when using the built in C128D/1571.

Note: Resetting your 1571 Disk Drive (by turning it off and then back on) will return your drive to normal, with the automatic write/verify enabled.

UTILITY PROGRAMS

BIG BLUE FORMAT (** *for the C64*)

This program is for the Commodore 64. BIG BLUE FORMAT will allow you to format various 5.25 inch MS-DOS disk formats using a 1571 Disk Drive. (The most popular MS-DOS disk format is 360K DS-9.) Disks formatted with Big Blue Format can be read from or written to using Big Blue Reader and most IBM PC compatible MS-DOS computers. To use, LOAD and RUN "BIG BLUE FORMAT" and follow the prompts. The <SPACE BAR> may be used to change drives should you have more than one 1571. Note: You can format 5.25 inch 360K MS-DOS disks from within the BBR 128 program.

1581 MS-DOS FORMAT (*Available for both C128 and C64*)

This program will format 720K MS-DOS disks using the 3.5 inch 1581 Disk Drive. There are two versions of this program one for the C128 and one for the C64, each is found on the appropriate side of the BBR disk. To use, LOAD and RUN the program named, "1581 MS-DOS FRMT". The program will seek out the 1581 Disk Drive and then ask you to press <CTRL> <F> to start formatting the disk. The <SPACE BAR> may be used to change drives should you have more than one 1581.

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

BIG BLUE BACKUP (** *for the C128*)

Big Blue Backup will back-up standard 5.25 inch MS-DOS disks using the 1571 Disk Drive. Single-sided disks take about four minutes, with only two disk swaps. Double-sided disks take about eight minutes, with only four disk swaps. If you are using two 1571's you will not need to swap disks. The backup copy will be exactly like the original. This program can also make backup copies of standard Commodore 1581 disks. For more information use the BBR PRINT option and read the file "BBB-READ.ME".

To use, LOAD and RUN "BIG BLUE BACKUP". Follow the prompts, and exchange the source and destination disks as prompted. Be sure to write protect the original. The source disk is your original. The destination disk will be your backup. The destination disk is formatted automatically. While the program is working, the screen will display which side and which track is being read from or written to at that time.

If a disk error occurs, you will be prompted to <I>gnore, <R>etry or, <A>bort reading or writing that particular track. If you choose <I>gnore, the program will

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continue ignoring the error, and thus corrupting data on that particular track. If you choose <R>etry, the program will try again to read or write that particular track. If you choose <A>bort, the program will abort the backup process, leaving you a corrupted disk. Once the backup is complete, you may then back up another disk.

EXAMINE FILE   (** *for the C128*)

The EXAMINE FILE program will load any Commodore file into memory. Then by using the built-in C128 MONITOR you can examine that file for its content, structure, etc. This program BLOAD's files into 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 will fill all of bank 0 from $2000 to $FF00 with the first part of the file.

ADDITIONAL NOTES:

QUITTING BBR

To Quit BBR press the Commodore and "Q" keys while at the Main Menu.

READ.ME FILES

The "READ.ME" files on the BIG BLUE READER 128 or 64 disk contains important update information not contained in this manual. Use the PRINT option of the Big Blue Reader to read these files.

FILE TYPES

Big Blue Reader will easily transfer most files. This includes Commodore PRG, SEQ, REL, and USR files. Also most MS-DOS and CP/M files can be transferred. NOTE: Commodore RELative files (which will only load on a 1571 or 1581) are treated like SEQuential files, with the side sector information is ignored.

FOREIGN MFM 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. CP/M disks in other formats will need to be copied to one of these three formats using the CP/M "PIP" command. This includes MFM CP/M formatted disks 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.

Note: Big Blue Reader 128 operates in the C128 mode.

1700/1750 RAM EXPANSION MODULES

Big Blue Reader 128 will utilize the 17xx RAM expansion module as a large file buffer. BBR does NOT use RAMDOS software, (which may crash the system).

C128 80-COLUMN DISPLAY

When printing non-text files to the 80-column screen it is possible to corrupt the 80-column display so badly that you may need to reset your C128.

OTHER DISK COMMANDS

You may send any of the "CHGUTL UTILITY COMMANDS" to your 1571/1581 using the OTHER CMDS. (See your 1571/1581 User's guide.)

COMMODORE 64 File Limits

Most Commodore 64 programs have only limited amount of storage available for data. Generally C64 programs can handle files of 20 to 100 blocks (5,000 - 25,000 bytes). If your MS-DOS file is larger than what will fit into your C64 application you will need to split the file (on your IBM PC compatible before using BBR).

First look through your program manual or users guide for memory limits. You may try loading a large data file into your Commodore program and see if you get some kind of memory or overflow error, then simply re-save the file and check the size of the re-saved file. (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.

FAST SERIAL and BURST MODE TRANSFER RATES

Big Blue Reader 64 utilizes fast serial routines to transfer data. The BBR 64 fast serial routine are among the fastest written for the C64.

Big Blue Reader 128 uses "Burst Mode" to transfer data to and from MS-DOS disks. Burst Mode is achieved on the C128 by special hardware lines at the serial bus. When the Commodore 128 is in C64 mode, burst mode is disabled by the C128 circuitry. Note: BBR 128 is about twice as fast as the BBR 64. If you have a large number of files or data to transfer you should definitely use BBR 128.

COMMODORE 1571 ROM UPGRADE

We highly recommended that you upgrade the ROM in stand alone 1571 Disk Drives. The new ROM (which available from Commodore, and is built into Jiffy Dos) corrects most of the bugs that the Commodore 1571 had and increases the performance of the 1571 drive noticeably. Big Blue Reader 128, for example, can read and write MS-DOS files faster using the new ROM.

The easiest way to tell if a 1571 has the ROM upgrade is to insert a few 1541 flippy disks 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. The Big Blue Reader 128/64 disk is a flippy disk.

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

COMMODORE 1581 DISK DRIVE

The Commodore 1581 is a 3.5 inch Disk Drive, with a storage capacity of over 800K. 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.*

READING MS-DOS SUB-DIRECTORIES

Big Blue Reader 128 V3.x can read MS-DOS subdirectories. After loading the MS-DOS Root directory, select the COPY or PRINT option, then cursor to the desired MS-DOS subdirectory and press <RETURN>. BBR 128 will then read that subdirectory, allowing you to COPY or PRINT files from it.
Note: Writing MS-DOS files is always to the Root directory. BBR 128 selects Commodore 1581 subdirectories the same way. However, once selected DO NOT remove the 1581 disk from the drive or it will go back to the Root directory.

Big Blue Reader 64 supports some Commodore 1581 sub-directories features. This is done by issuing direct commands through the OTHER CMDS in the DISK CMDS option. For example "/0:xyz" will bring up the sub-directory named "xyz". While "/" will bring you back to the ROOT directory. Also physically changing disk in the 1581 Disk Drive will return the root directory of a Commodore disk. See the 1581 User's Guide for more information.

*** Commodore 1541 users PLEASE NOTE ***

The Commodore 1541 Disk Drive CAN NOT read nor write MS-DOS disks. The 1541's hardware 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).

USING TWO DISK DRIVES WITH BIG BLUE READER

In order to use Big Blue Reader with more than one disk drive, each drive must have its own unique device number, which means that you may need to change the device number of one of the drives. It is best to do this with the hardware switches on the rear of the 1541 II, 1571 or 1581 Disk Drives. (See your Disk Drive User's Guide).

Also when using more than one drive with Big Blue Reader you may need to change the source and destination drive, (See "CHANGE DRIVE I/O"). Keep in mind however, that Big Blue Reader 128/64 has its own fast-load for both 1571 and 1581 drives.

HELP AND TROUBLE-SHOOTING

1) Big Blue Reader 128/64 can work wonders, but not perform miracles, only GOD can do those.

2) In order to transfer most text and ASCII files between Commodore and IBM MS-DOS disks you must use Commodore SEQuential files and/or IBM MS-DOS standard ASCII files. Most of your better word processing, database and spreadsheet programs have these file input/output options.

You may have to try various input/output options to find a compatible combination in order to transfer some files using the Big Blue Reader.

3) If Big Blue Reader 128/64 fails to load or operate properly, try disconnecting _everything_ except your monitor and a 1571 or 1581 Disk Drive. Don't just turn an unused printer or disk drive off (it will cause problems), but unplug it from the computer.

4) Big Blue Reader sends a lot of information between your Commodore 128/64 and the 1571/1581 Disk Drive. Occasionally, the 1571/1581 Disk Drive may get confused and fail to operate. Most often, this is because you may have inserted the wrong disk, removed the disk at the wrong time, or possibly a disk error has occurred.

First try pressing the <RUN/STOP> key. Next try resetting your disk drive (turning it off and then back on). If your computer is still locked up then you may need to reset your Commodore 128/64 and re-boot BBR. Reset the Commodore 128, by turning it off at the power switch.

5) Big Blue Reader 64 should take less than 10 seconds to load (with its fast-load). Big Blue Reader 128 should take about 20 seconds to load with a 1571/1581 drive. If it takes longer than 30 seconds to load the Big Blue Reader 128 program, the C128 is not using burst mode and you will encounter other problems (Also, see #3 above). NOTE: MSD Disk Drives have a non-standard serial bus and will not allow Burst mode communication to pass through.

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6) BACKUP important disks! If a disk has important data which is non-replaceable, BACK IT UP! Also use write protect tabs. Don't wait until it's too late! For archival backup of Commodore disks we currently (11/90) recommend "Maverick V5" for the C64, and "FasTrac/128" for the C128, both are produced by Software Support International. For the IBM PC we recommend "PC TOOLS".

7) It is suggested that you write MS-DOS files to newly 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 may produce files which simply are incompatible with any other program other than itself, in this case you may then need to use a different Commodore or a MS-DOS program to handle the job!

9) Big Blue Reader handles most disk errors in a similar way that MS-DOS or Commodore-DOS would. When a disk error is encountered with Big Blue Reader you are prompted to Retry, Ignore, or Abort reading or writing.

10) Big Blue Reader 128 will print the directory of the disk in memory by pressing the <CONTROL> <P> keys simultaneously at the Main Menu.

11) The Commodore 1571 and 1581 Disk Drives CAN NOT read IBM PC high density 1.2 or 1.4 Meg disks. If you attempt to read one of these 1.2 or 1.4 meg high density disks, BBR will report a disk error.

12) Pocket Writer 2 for the Commodore, is one of the most versatile word processors for file input/output options. This WP can output file as text, sequential, or printer files. Also this WP can handle both Commodore ASCII and Standard ASCII files.

13) Both "PaperClip" and "Pocket Writer" word processing programs normally use screen code files ("PRG" file type). Both can easily output SEQuential files for conversion to MS-DOS.

14) To transfer MultiPlan files between Commodore 64/128 and IBM MS-DOS program change the files to "SYLK" files.

15) Use WordStar in non-document mode to import and export files to Commodore 128/64 disks.

16) IMPORTANT: When transferring Commodore files to IBM MS-DOS, DO NOT use the BBR ASCII translation and DO NOT add line feeds for files over 50K with BBR 128 or files over 32K with BBR 64. You may however, transfer Commodore files of ANY size to IBM MS-DOS if you DO NOT use the ASCII translation and DO NOT add line feeds.

FILE CONVERSION TIPS:

Converting Word Processing files: Use Commodore Sequential 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.

Converting Database files: Commodore database files normally need to be converted to SEQuential files before converting to MS-DOS. Like wise MS-DOS database files normally need to be converted to Standard ASCII files.
NOTE: Database programs use various field and record delimiters, which separate fields and records. Commas, quotation mark, and the carriage return are common.

Converting Spreadsheet files: Although file compatibility is often limited, many spreadsheet programs can convert their files to "DIF", "SYLK", "Sequential" or "Standard ASCII" format; allowing these files to be interchanged between Commodore and MS-DOS.

Almost always you can interchange data files for any program running under MS-DOS with an analogous Commodore 64/128 or 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 referred to as "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 when it is in its text mode (upper/lower case, with limited graphics), the character set diverges noticeably from the ASCII standard. Numeric characters and much of the punctuation corresponds, but ASCII uppercase alphabetic codes match the Commodore's lowercase codes. Commodore's uppercase alphabetics are now completely out of the ASCII range, since ASCII is a seven-bit code.

Because of the differences in ASCII codes, Commodore ASCII codes require conversion before they can be used with standard ASCII, and vice-versa.

A few C128 word processors, such as "Superscript 128" and "Wordwriter 128" use "Standard ASCII" files. Such files do not require an ASCII translation to and from MS-DOS. Also some programs such as "PaperClip III" and "Pocket Writer" can optionally input/output Standard ASCII files directly.

Many Commodore 64 programs use "Screen Code" files (Screen Code files usually have a PRG file type). Commodore Screen Code files must be converted to Commodore Sequential files before transferring to MS-DOS. Normally programs which use Screen Code files provide a convert utility.

Some word processing, database and spreadsheet programs may use unique character codes or embedded formatting commands, which make it difficult for conversion to any another program. Most programs that utilize such files usually have a way to output Sequential or ASCII files, or a conversion program is often available.

NOTE: Some Commodore programs can optionally use standard ASCII files. Such files do not require an ASCII translation to and from MS-DOS.

Regarding Line Feeds: MS-DOS programs normally divide a text file 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. Therefore when an ASCII translation is made to MS-DOS you normally will also add line feeds.

Use the Big Blue Reader PRINT option to read questionable text files. If you can read a file with the PRINT option you more than likely can transfer that file to another format with no problems, keeping in mind that you may need to do an ASCII translation.

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

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

Big Blue Reader 128/64 is a unique and powerful disk utility for use with the Commodore 1571 and 1581 Disk Drives. The program takes advantage of the advanced hardware and software designs of the 1571/1581 Disk Drives.

Copying between two entirely different disk formats such as the IBM PC compatible MS-DOS and standard Commodore disks is no easy task. The Commodore 1571 and 1581 Disk Drives can however handle multiple disk formats and data transfer rates. Disk formats range from single sided, single density to double sided, double density.

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. Basically; all Commodore 64/128 software uses the 1541/1571 GCR format. The Commodore 1571 can also 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 Disk Operating System 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 that the files won't overlap.

The reason the Commodore 1571 was designed to read and write double-density MFM formats, is so that 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 formatting of CP/M disks is entirely different than 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 and ROM 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.

In order 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 host 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.

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Big Blue Reader 128/64 is one of the most versatile and unique file transfer programs on the market, feel free to experiment with transferring different files. If you feel you have found a new trick or method in transferring otherwise incompatible files, please drop us a note and let us know so that we may be able to pass it on to other users.

Big Blue Reader 128 SET-UP Program

For "Advanced Users" we have included the Commodore 128, "SET-UP" program, which is a special BBR 128 boot program that will allow you to change certain BBR 128 program defaults. To use this program, DLOAD "SET-UP". Then change and/or remove the "REM" statements as needed. The BBR 128 "SET-UP" program allows for the following:

1) Choosing or changing background screen colors.

2) Disable the use of the 17xx RAM Expansion Unit while using BBR 128. This may be useful if you have information in the 17xx REU that you do not want disturbed, such as a C128 CP/M RAM disk, Bible Search REU files, or other information/files, etc.

3) Load an Alternate Translation Table. One use of this option is to read and/or write certain Screen Code files directly to MS-DOS disks. For more information about the ASCII Translation Tables that are used with BBR 128, use the BBR "PRINT" option and read the file, "ABOUT TABLES".

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