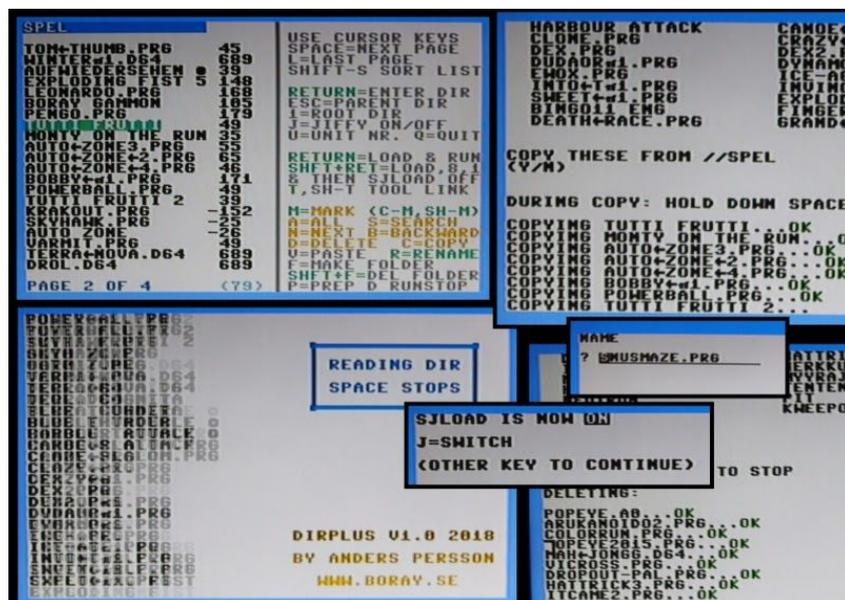


SD2IEC DIR PLUS V3.1

for Commodore 64 and Plus/4 - by Anders "Boray" Persson 2018-2020, www.boray.se



Introduction

DIR PLUS is a SD2IEC browser, program starter and file manager solution for your Commodore 64 and Plus/4. My goal with the file management functionality has been that you never should have to put your SD card in a modern computer for file managing. You can copy and paste files between folders, rename files etc. You can view some file formats and even extract files from disk images. You can also set 16 global tools that you can reach from any folder or disk image. For example, start an outside word processor inside of a disk image that only contains text files.

Note that only the Plus/4 version include soft jiffy turbo. The C64 version is meant to be used with a cartridge (or rom) disk turbo of your choice. Dir Plus for C64 was developed together with Final Cartridge III.

Dir Plus was first developed and released for the Plus/4 in 2018. C64 support came with V3.0 in 2020. The Plus/4 and C64 versions are part of the same installation and the correct program is loaded when starting the program "D". This way, you can use the same SD card for both computers.

There is a built in function that lets you put this "D" starter program as the first program of the current directory. This way you can easily restart Dir Plus from the current directory just by pressing Shift-Run/Stop on the Plus/4.

To start C64 Dir Plus with The Final Cartridge III, I find it simplest to first write a D and then press Shift+RunStop. Then you will get an auto starting DLOAD, exactly like on the Plus/4 or C128.

Plus/4/c16 Warning

(264 computers only) The datasette should be disconnected when using this software (because of SJLOAD). **Risk of damage** if you leave it connected! **But it should however be OK to take power from the cassette port to your SD2IEC.**

More information from the developer of SJLOAD here: <http://bsz.amigaspirit.hu/sjl264/>

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How to install - Step One

Alternative 1: On a C64 or a standard 264 computer with normal ROM (and you want to use the hyper-loading-speed of SJLOAD):

Extract the archive to the root dir of your SD card. Keep the file folder structure and names as they are. Don't add ".prg" or anything like that!

```
/D  
/DIRPLUS/
```

This is how it should look. The program "D" should be in the root dir. The directory "DIRPLUS" should also be in the root dir.

The program D is what you start. ("D" is short for "Dir").

NOTE: Don't put the DIRPLUS directory anywhere else on the SD card, because DIR PLUS uses it to locate the root dir for the copy command to work better.

Alternative 2: On a Plus/4 with JiffyDos ROM (or if you just don't want to use SJLOAD):

1. First do the same installation as in alternative 1
2. Then delete the file `/D`
3. Then copy the file `/DIRPLUS/D-JIFFY ROM` and save it as `/D`.

In other words, the "D" program in your root dir is now replaced with the program `/DIRPLUS/D-JIFFY ROM` but renamed "D".

Step Two:

Making DIR PLUS auto start when pressing shift+runstop

If you make sure the file "D" is the first file of your directory, then it will be loaded when pressing Shift+Run/Stop (Plus/4 only. C64+TFCIII: Write D followed by Shift+Run/Stop). Dir Plus has a built in function to make "D" the first file. When it's running, just press "P" (for "Prepare dir") in the directory you want to prepare. If the current directory doesn't contain a "D" then it will be copied there from the root.

Note that under some conditions, you need to repeat the procedure and press "P" more than once.

If the letter "P" flashes in the help section, then it means that the current dir isn't prepared. I would recommend you to "prep" at least the root dir and the sub dirs that you use the most. For example your games dir. Then after playing a game, you can just reset and then press shift-run/stop. Dir Plus will start in the games directory right away.

Also note that if you sort the file list (with Shift-S) then the prep function will be unavailable. To get it back, reload the unsorted dir by pressing "U".

You can't "prep" disk images.

Upgrading from a previous installation

Please read the [release notes](#).

Restarting DIR PLUS from any subdirectory after a reset

(except for disk images)

If you have prepared the dir (see above), then just press Shift-Run/Stop. If not, then do the following instead:

```
LOAD"/:/:D",8  
RUN
```

Now, DIR PLUS will be started and show the files of the sub directory you are in. Note that DLOAD doesn't work for this.

If you are inside a disk image, you can press the reset button of your SD2IEC and then press shift-run/stop-restore. Or if you are typing faster than the drive is resetting, you can do: `OPEN15,8,15,"CD:"+CHR$(95):CLOSE15` and then `LOAD"/:/:D",8`

Using Dir Plus: General information

Current dir (red if path isn't known)

Marked files

Names

Sizes

Help section

Current unit

```

//C64/SPEL
D
GIANA SISTERS 2
BGAMMONSAVED 153
ATU SIMULAT 1
BORAY GAMMON-RPL 131
HAT-TRICK -61
ANTIRIAD -81
MONTYOrr1.D64 -156
MONTYMr1.D64 689
CLUB BACKGAMMON 119
TASK 3+-F4 191
BUBBLErr1.D64 689
PITSTOP 2 125
MISSION IMP 153
BLITZ2K.D64 689
SPY HUNTER 78
BORGAMMON-64 95
IARBYE.D64 689
FALCON 125
HARD 'N 'HEAVY HI! 1
SHOWJUMPER 110
PAGE 1 OF 5 (91)
DIRPLUS UNIT 8
SPACE=NEXT PAGE
L=LAST PAGE
SHIFT-S=SORT LIST
RETURN=ENTER DIR
←=PARENT DIR
1=ROOTDIR Q=QUIT
W=MOUNT/MAKE LIST
U/8/9=UNIT/REFRSH
RETURN=LOAD & RUN
SHFT-RET=LOAD,8,1
& THEN KILL & RUN
SHIFT-L=LOAD&LIST
K,SH-K=TOOL LINK
T=READ TEXT
I=SHOW IMAGE
E=EXTRACT/TRANSFER
M=MARK (C-M,SH-M)
A=ALL S=SEARCH
N=NEXT B=BACKWARD
D=DELETE C=COPY
V=PASTE R=RENAME
F=MAKE FOLDER
SH-F=DEL DIR/EMPT
P=PREP D RUNSTOP
    
```

Page nr

File name cursor

Number of entries

P is marked if current dir isn't prepared for shift-run/stop start

Use the cursor keys to move the highlighted **file name** cursor.

On the right side of the screen is a help section listing all different keys you can use.

The keys that are marked **green** in the help section act upon the highlighted **file name** **cursor**. For example, **RETURN** will load and start the highlighted filename or enter it if it's a dir or disk image. (Dirs shows a file size of zero).

There are also **light red/pink keys** in the help section. These have to do with marking of many files and then acting upon them all in one go. You mostly mark files with **M**. Then you can delete or copy them all in one go.

New in V3.0: The current dir name is blue if the current path is known and red if it's not. The current path must be known to dir plus if you want to copy files or set user tools. Once you visit the root dir, the path will be known.

How to...

Here follows a “how-to” section describing different tasks and functions. This is the opposite to the help screen which lists keys and then their action. Here is the other way around.

Cursor movement

Go one step up or down

Press cursor up or down

Go to the next page

Press cursor right or space. Space differs as it loops back to page one after the last page.

Go to the previous page

Press cursor left.

Go to the last page

Press L

Go to the last file

Press L followed by cursor right.

Go to the first file

Press L followed by space.

Go to the next marked file

Press N

Go to the previous marked file

Press B (for “Backwards”)

Go to the next folder

Press Shift-N

Go to the previous folder

Press Shift-B

Go to a random position in the list

Press X

Sort the file list

Press Shift-S. If you want to break the sorting of a huge list, then press any key.

Disk navigation

Enter a dir or disk image

In the file list, directories shows a file size of 0. Move the highlighted **file name** cursor to the directory in question and press RETURN.

Go to the parent dir

Press ESC

Go to the root dir

Press 1. Does not work if you are inside a disk image. Then press ESC first.

Change device number

Press 8, 9 or U (for unit). Plus/4 note: SJLOAD doesn't work with non-jiffydos drives, so before going to (for example) an unmodded 1541 drive with the U command, first turn off SJLOAD with the J key.

Reload the current dir

Press 8,9 or U (for unit).

Navigate using a link

Read the section [Global tools / Tool Links / Folder and disk image links](#)

Loading/Starting programs

Load and run a program

Move the highlighted **file name** cursor to the file in question and press RETURN. You can also use this to display some text files and images. See below.

Load a program ,8,1 instead of ,8 and then turn SJLoad OFF (C64 kill) and then run.

Move the highlighted **file name** cursor to the file in question and press Shift-RETURN.

Load and list a program

Move the highlighted **file name** cursor to the file in question and press Shift+L.

Load a program that is located in another directory while staying in the current directory.

Read the section [Global tools / Tool Links / Folder and disk image links](#)

Turn SJLOAD ON or OFF (Plus/4 only)

Press J (J stands for Jiffy). Note: Don't use this function if you used the non-sjload install alternative. Then, the 3+1 software will be started instead.

Quit to Basic in the current directory

Press Q. You can restart DIRPLUS with RUN.

Restart DIR PLUS from anywhere on the SD card (except for disk images)

LOAD"//:D",8

RUN

(also see separate section above)

Change your SD2IEC device to unit 9 (temporarily)

By default, one of the global tools is set to the "9" starter. So press "K" and then choose 9.

View a text file

Press T. You can view ASCII, PETSCII and SpeedScript files. Filenames ending with ".txt" are viewed automatically if you press return. In the text viewer, you can also convert files between formats.

View an image

Press "I". On the Plus/4, you can view Botticelli and Multi Botticelli pictures. On the C64 you can view Doodle, Koala Painter and Wigmore Artist 64. These are all autodetected when pressing return as well.

Marking files

Mark the file under the cursor and go one step down.

Press M.

Mark all files.

Press A.

Mark no files.

Press A again.

Mark all files above the cursor

Press Commodore+M

Mark no files above the cursor

Press Commodore+M again

Mark all files below the cursor

Press Shift+M

Mark no files below the cursor

Press Shift+M again

Mark a continuous subsection of the list

Make sure no files are marked (by pressing A twice). Then go to the first file you want to mark. Press Shift-M. Then go to the file below the last file you want to mark and press Shift-M again. An alternative method would be to just press M for a while.

Search for files / Mark all files containing a specified word or letters

Press S and enter your search word. When the matches have been marked, press N and B to jump between them.

File management

Copy files within the same unit

First make sure that the path is known to dir plus. The folder name / path is blue if it is. If it's red, you have to make the path known, which can be done by 1) Visiting the root dir, 2) Using a link to a dir or 3) Using the "Guess" key. (See more under [Global tools / Tool Links / Folder and disk image links](#)).

Then go and mark all the files that you want to copy (all in the same directory) for example by pressing M.

Then press C to reserve the names for copying.

Go to the target directory and press V. The files will be copied.

If you copy to a different directory, the files will keep their original names. If your source and destination is the same directory though, you will be asked to edit every copy name.

Move files within the same unit

First copy (as above). When the copy is complete and it asks you if you want to go back and mark the source files, press Y for yes. When it has loaded the dir and marked the files, press D to delete (as below).

Copy a file from one unit to another

Place the cursor on the file you want to copy. Then press "E". (*See the note below*).

Extract a file from a disk image

Place the cursor on the file you want to extract. Then press "E".

Note: For "E" to work, the file must be able to fit into memory. The loading address of the file can't be lower than about half of the screen memory either. ("E" even works for big programs that would cause "out of memory" if you try to LOAD and SAVE them manually on a C64). PLEASE NOTE that the destination filename may change when using E. This is to prevent possible problems with the SD2IEC file system. So if you attempt to extract a multi file program from a D64, then please check the names afterwards.

Delete files

Mark all of the files you want to delete (for example with the M key). Then Press D.

Rename a file

Press R to rename the file under the cursor. You can only rename one file at a time.

Create a new folder / directory

Press F.

Delete an empty folder or a 0 blocks file

Place the cursor on the directory or file you want to remove. Then press Shift-F.

(You can actually delete a normal file with this function as well, but it's slower than the normal delete function because the directory is re-loaded afterwards).

Prepare this directory for shift-runstop start of Dir Plus

Press P. Read more on page 3.

Global tools / Tool Links / Folder and disk image links

You can set up to 16 links that either can be tools/programs or folders/disk images (indicated by a "@").

If the link points to a tool, you can run that program from any directory or disk image regardless of where the tools reside on the SD card. To run one of the tools, press K and then select the tool to start from the list that will be shown. The program will be loaded and you will remain in the current directory! If the link is to a folder or a disk image, you will instead be taken to that folder and the directory will be loaded.

To set one of the 16 links, place the cursor on the entry you want to include in the list and then press Shift-K.

However, if you start DirPlus in a folder that is not the root dir, the full path will not be known (indicated by red title). Before using copy or "set link", the path must be known. Pressing "G" (for guess/get) looks through your links and sees if you have a matching link there, and then uses that link, and the path will then be known.

Other actions that makes the path known is to visit the root dir (pressing "1") or to use any other folder link.

Disk Swap Lists

You (probably) have a disk swap button on your SD2IEC device. This button swaps between disk images defined in a disk swap list. To create (and mount) a swap list, first mark the disk images you want included in the list (use "M" for example), then press "W". If no files are marked, then pressing "W" will mount the file marked by the cursor as a swap list. Files ending with ".lst" will be auto mounted if pressing "return".

Automatic adaption

Dir Plus automatically adapts to the system it's running on:

Commodore 64 with disk turbo cartridge or jiffy rom, or Commodore Plus/4 (or 64K upgraded 16/C116): This is the ultimate .

Unexpanded C16: A basic half-breed V2.99 with some V3.0 functionality is started.

C128: The C128 has a very limited support included. It doesn't actually start Dir Plus, but Jiffy Soft 128 (by hydradix) and CBM file browser 128 (by nbla000).

Tip: Note that some C16 games cripples a Plus/4 into a 16K system after a reset. If you start DirPlus, you will then notice that DirPlus is slow and looks more like DirPlus V2). To get your 64K back without having to turn your computer off and on you can just start the 3+1 software and then reset again.

Credits and Background

SD2IEC DirPlus was created by Anders Persson in 2018 and it was developed from the "Vic-20 Disk Menu" which was developed in between 2004 and 2015 by the same Anders Persson. (Very first version by Leif "Schema" Bloomquist). Versions of Vic-20 Disk Menu has been included on a couple of Vic-20 cartridges, for example the legendary "Mega Cart".

Dir Plus V1.0 was heavily expanded from the Vic-20 version. The size of the source code increased by 300%. And even so, much of the original code was removed because it was Vic-20 specific.

The included and utilized SJLOAD (SJL264 Light V0.3) is used by permission and was made by Balazs Szabo (BSZ) in 2018, developed from the C64 version of SJLOAD.

With V3.0 the C64 was also embraced in the Dir Plus experience. This version was also the biggest upgrade ever.

Version History

V1.0 was released on Feb 17 2018.

V1.1 was released on Feb 25 2018: While the directory is loading, the file names are now displayed in pages instead of continuously scrolling. There are two benefits with this:

- It's up to 30% faster.
- It's easier to spot a file name and know which page it's on even before the whole directory is loaded.

V1.2 was released April 15 2018 and includes a couple of speed-ups and a minor fix.

V1.3 is a bug fix version released July 22 2018. Previous versions didn't work properly with SD2IECs with device numbers other than 8. Thanks to André Fedorow for the bug report.

V1.4 December 2018:

- In all previous versions, a wild card was inserted in the filename before loading if the filename was 16 characters or longer (for compatibility with 64HDD etc). So if two filenames were 16 characters long and only the last letter differed, the wrong program could be started. This behaviour was now removed for better compatibility with SD2IEC and normal disk drives.
- The rename function now checks if the name contains a slash (/) because if it does, you can accidentally delete a whole folder when trying to rename it.
- The border color is now set to the default.

V2.0 April 2019:

- DirPlus will now display Botticelli and Multi Botticelli pictures automatically. The viewer is external (DIRPLUS/BV) and therefore you can't display pictures inside of D64 files (on your boot SD2IEC). After viewing the picture, you are returned to DirPlus. If you want to bypass the automatic picture viewing, press Shift-Return instead of Return and the file in question will be loaded as a program. (The picture viewer is based on an [example code by MMS/gerliczer/George.](#))
- When renaming files, the directory is no longer reloaded after every file operation, (unless there was an error or the filename given was longer than 16 characters). So renaming files in big directories will now be A LOT quicker.
- The same thing with deleting files. If there was no errors, the directory doesn't need to be reloaded. The file list in memory is adjusted accordingly instead, speeding it up a lot.
- You can now press Shift-L to just load a program and then list it instead of running it.
- The starter program "D" is now resetting the basic memory to the default address, which is good if you have run a basic program with graphics commands and then want to reload DIRPLUS.
- The "/" naming protection from previous version now also includes other naming routines, such as paste and new folder.
- A bug fix regarding page numbers.
- Some other speed-ups.

V2.1 October 2019:

- You can now display text files of three different formats: PETSCII, ASCII and SpeedScript. To show a text file, press T in the file browser. Files ending with .txt are shown automatically. Just as with the Multi/Botticelli viewer, the text viewer is an external program and launched when needed. Because of this, it won't work inside d64 files.
- You can also convert text files between ASCII and SpeedScript, and between PETSCII and SpeedScript. The converter is built into the viewer.
- The swedish extra letters (åäöÅÄÖ) are supported in the viewer (if your Plus/4 is a swedish one) and in the conversions.

- The text viewer seems to work with just 16K of ram. This Dir Plus version was also tested with both PAL and NTSC machines.
- The shortcuts for "Tool Link" were changed to K and Shift K (instead of T and Shift T) because I think the text viewer will be used more frequently, and I didn't have many keys left to choose from.
- There is now an extra starter program beside "D" that's called "9". It's just like "D" except for that it sets your SD2IEC drive to become unit 9 first. I find this useful because I have a SD2IEC and a 1541-II both connected as unit 8 and power switches on both.
- This Dir Plus version was entirely developed and compiled on the Plus/4. This version info was written in SpeedScript on the Plus/4.

V3.0 March 2020:

There is now a C64 version! The Plus/4 and C64 versions are part of the same installation and the correct program is loaded when starting "D".

The unexpanded C16 is no longer fully supported. A special version (V2.99) is started on the C16. It contains just a few of the new features of V3.0. The full V3.0 version simply won't fit in 16K.

The C128 has a very limited support included. It doesn't actually start Dir Plus, but Jiffy Soft 128 (by hydradix) and CBM file browser 128 (by nbla000). I haven't managed to get in contact with the authors to get their permissions, so if you don't want your program included here, please let me know.

The C64 version does NOT include any soft disk turbo. Please use something like The Final Cartridge III, JiffyDos ROM, or whatever you are using. Dir Plus for C64 was developed together with Final Cartridge III. To start Dir Plus with this cartridge, I find it simplest to first write a D and then press Shift+RunStop. Then you will get an autostarting DLOAD, exactly like on the Plus/4 or C128.

New features in V3.0:

- You can now view files (pictures and text files) EVEN INSIDE of disk images! The C64 will auto detect and display Koala Painter, Wigmore Artist 64, Doodle and also play Sound Monitor and Future Composer tunes. Speedscript, ascii and petscii text files are displayed (and you can also convert). The Plus/4 displays (as before) Botticelli and Multi Botticelli (and the text files).
- You can now extract files from disk images (one at a time) with the "E" key. You can also use "E" to copy files between units (which wasn't possible before). For "E" to work, the file must be able to fit into memory. The loading address of the file can't be lower than about half of the screen memory either. "E" even works for big C64 programs that would cause "out of memory" if you try to LOAD and SAVE them manually. PLEASE NOTE that the destination filename may change when using E.

This is to prevent possible problems with the SD2IEC file system. So if you attempt to extract a multi file program from a D64, then please check the names afterwards.

- You can now generate and mount SD2IEC swap lists. To create (and mount) a swap list, first mark the disk images you want included in the list, then press "W". If no files are marked, then pressing "W" will mount the file marked by the cursor as a swap list. Files ending with ".lst" will be auto mounted if pressing "return".
- You can now set up to 16 tools/programs that can be started at any time from within any folder or disk image. This replaces the old tool link function. These 16 tools are stored in a prefs file and you don't need to visit the root dir to be able to start them, only to set them.
- You can now more easily move files. It works like this: After you have performed a copy-paste and there were no errors, you will be asked if you want to return and mark the source files. If you press "Y" for yes, you are taken back to the source dir and the files you just copied are marked. Now just press "D" to delete them.
- Shift-F was extended from just deleting empty folders to also deleting empty files (which wasn't possible before). (Well, it can actually be used to delete any single file).
- You can now press 8 or 9 to immediately change unit and/or read dir.
- Current unit number is now visible on the main screen.
- It's now easier to know if you need to visit the root dir before performing copy-paste. If you need to, the dir title is red. If you don't need to, the dir title is blue and also contains the path.
- When navigating around, the whole screen isn't cleared and rewritten while loading the dir, so this is a speed-up.
- The extra "9" starter was moved into the DIRPLUS dir. You can start it from the tool link command "K" to (temporarily) change unit number of your device.
- Various bug fixes.
- New colors.

V3.1 April 2020:

- The global link list (K and Shift-K) is now not only limited to programs. You can now set links to folders and disk images as well. These are marked with an "at"-sign. There is a distinct difference between these and programs. With folders and disk image links, you are just taken to that folder and Dir Plus continues. With programs, the program is started and you will remain in the current directory (or disk image) regardless of where the program is located. The link list is now also loaded just once instead of being reloaded every time if you use it.
- G=guess: This is also related to the new folder links. If you start DirPlus in a folder that is not the root dir, the full path will not be known (indicated by red title). Before using copy or "set link", the path must be known. "G" (for guess/get) looks through your links and sees if you have a matching link there, and then uses that link, and the path will then be known.
- You can now press X to move the file cursor to a random position in the list. So if you want to play a game but you don't know which to play, you can press X to let Dir Plus make a suggestion.
- You can now press Shift-N to jump to the next folder in the file list and Shift-B for the previous folder. It works just like N and B for going to the next or previous marked file, which now also is faster than before because this whole routine was optimized.
- The move files function (copy and then return and mark source files) now also jumps to the first marked file when finished, just like the search function does.
- In the C64 version, the P now flashes if the current directory isn't prepared for D Shift-Run/Stop start. This has always been the case in the Plus/4 version, but there the hardware blink feature of the TED chip is used instead of color flashing.
- The C64 version of the text viewer is now radically faster!
- Some other small adjustments.

V3.1c May 2020

This release only affects the C64:

- Main program: Compatibility fix.
- Text viewer: You can now display one page at a time by pressing return when the text is paused. This is also the default, so only one page is shown at start.

To update from V3.0, just copy everything from the downloaded DIRPLUS folder to your DIRPLUS folder.

To upgrade from DIRPLUS 2.x, also replace "D" in the root dir. If you have some folders that you know will be used on both C64 and Plus/4, then "D" has to be replaced in those too. The "9" in the root dir can be deleted.

Anders Persson, May 2020
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