
3 ½ Floppy to USB Flash Reader

Manual

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About this document

About this document

This document is to be used as a reference user's manual for the 3 ½ Floppy to USB Flash Reader system.


We highly encourage you to completely review the entire contents of this manual before installing or using your USB device.

To download a copy of this manual at anytime, please go to:

<http://www.PLRElectronics.com/3-and-A-Half-USB-Reader-Manual.pdf>

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Chapter 1

Product introduction

Undoubtedly, the floppy drive will soon be eliminated due to its small storage space, short lifetime and fragility along with the fast development and popularization of USB Flash drives. For most industrial computerized devices which are still equipped with floppy drives as the only or main data inputting device, the most effective method to continue its life span is to convert it to a USB Flash drive reader or use network data transferring. PLRElectronics brings you a USB Simulating Floppy Drive which offers a solution to companies with equipment needing the floppy drive upgrade. Just Install a SFDR to replace the original floppy drive in its existing location using the systems original hardware. You will then be able to store and transfer data using a USB Flash drive or directly by network.

1.1 About the SFDR

PLRElectronics SFDR is designed for replacing original floppy drives in computers and most all kinds of all devices which use floppies, while still using the original wires and space. The device is easy to install and does not require any modifications or changes on your existing device. While using USB flash drive as the data transfer device and storage media, you can take advantage of mass storage, easy reading and writing operations, permanent data storage, and avoiding using easily damageable floppy drives and floppy disks.

There are 3 generations of SFDR: SFDR-I, SFDR-II, and SFDR-III.

The advantage of the SFDR-II is that it is adaptable to a file chooser while will allow more files to be stored onto the USB flash drive. It will also allow files to be saved into multiple directories which can be selected with the file chooser device

The SFDR-III is a half dimension height for some special model machine.

1.2 Function & Features

1.) Powerful: It is designed to replace traditional floppy drive equipped on all types of device, enabling the transfer of data from a USB flash drive or via a network system to ensure a more convenient and efficient data storage and transferring drive

2.) Application: Suitable for all kinds of devices which are equipped with floppy drives. For example: computers, digital machinery tools, CNC, embroidery machine, computerized knitting machines, quilting machines, test equipment, sound equipment and instruments, copiers, etc.

3.) Simple installation: Install the SFDR in the existing location of the original floppy drive. It's simple, easy, and fast.

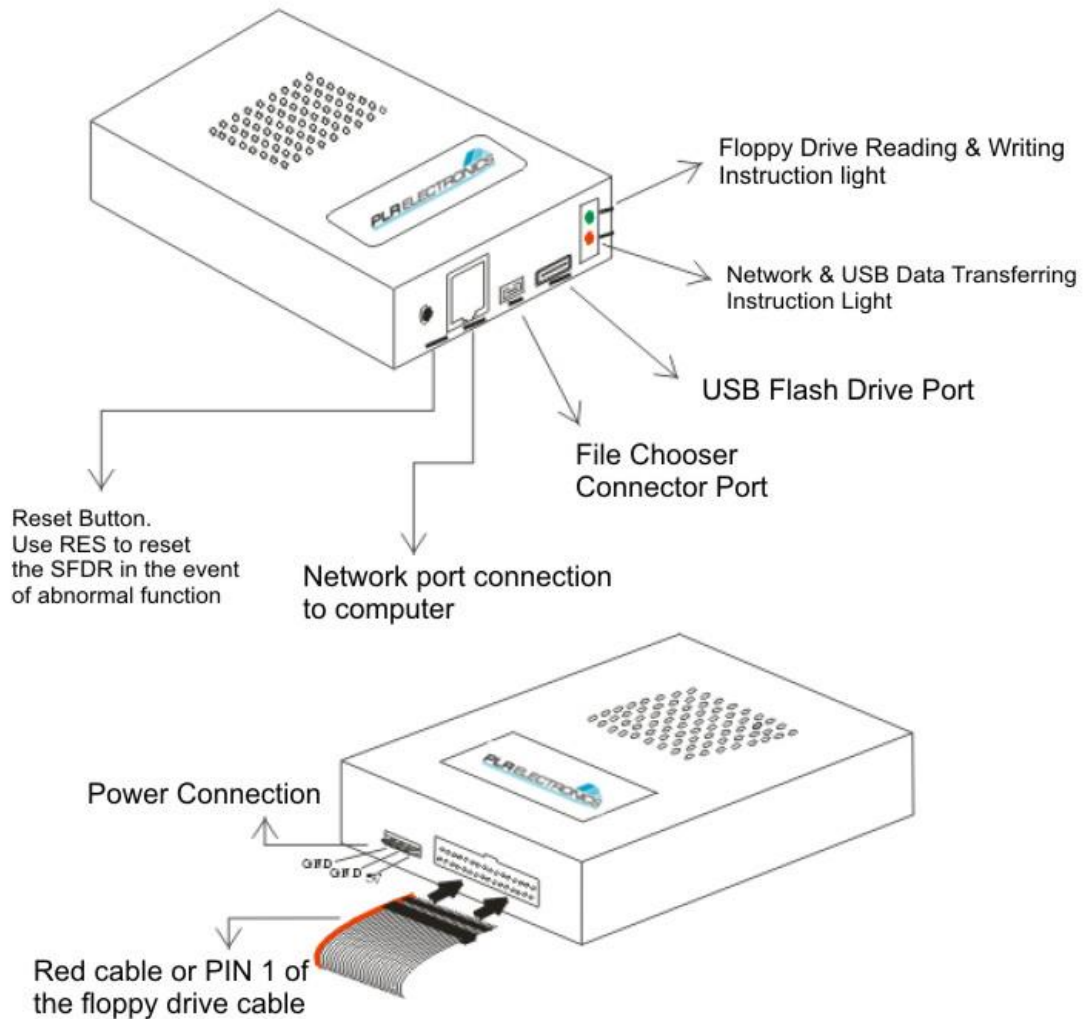
4.) Convenience: Insert the USB flash drive into the SFDR to read data to the device through the original floppy drive connection cable.

5.) Advanced management: Both USB and network port are available for stand alone or multi-device network data transferring. The choice of USB or Network provides the best quality price product for your future upgrades.

6.) Higher efficiency and Reliability: The SFDR works stable with higher efficiency and it's safer and more reliable than a floppy drive. It also helps avoid lost data due to damaged floppy disks, reduces production cost and increase production efficiency.

Chapter 2

Installation Instructions



To install your 3 ½ floppy to USB Flash Reader, with the device powered off and unplugged, simply remove the existing drive from its existing cradle. Disconnect existing ribbon cable and power cable from existing drive. Reattach existing power cable and ribbon cable to the USB Flash Reader. Insert USB Flash Reader into existing 3 ½ floppy cradle and reattach all hardware. You device is now ready to use. If any existing configuration is required on your system, please use all standard settings for a 3 ½ floppy drive as detailed in your devices user manual.

Chapter 3

Usage Instructions

Description

- 1.) SFDR-I: Uses the USB flash drive storage capacity as per the equipment's identifiable floppy drive capacity: 1.44M/1.2M/720KB. Capability of being used as the system startup disk. USB flash drive plug-and-play. Uses the same functions of reading floppy disks from devices standard control system to read the USB flash drive.
- 2.) SFDR-II (SFDR-I + File Chooser) Using the file chooser device in conjunction with the SFDR-I will give the ability to choose any file folder inside the USB flash drive, the maximum size of each file folder is equal to the original floppy disks storage capacity. The capacity of each file folder cannot exceed the original storage size of the floppy drive which is identified by the equipment's computer system (1.44MB / 1.2MB / 720KB). Files beyond this size cannot be identified by the SFDR. The function of the chooser is to be able to choose any file folders inside the USB flash drive without limitation on the total file size.
- 3.) The letter on SFDR type label represents the different floppy drive model. We request that you inform us on the original floppy drive type when placing an order to avoid mismatching the drive type. For example:

SFDR-I-I-----Universal IBM type
 SFDR-I-A-----YD-6639D, TEAC235FG
 SFDR-I-B-----NEC 1137C
 SFDR-I-C-----YD-6037D

3.1 Reading, Writing, and Formatting functions of the SFDR

Reading Function of SFDR:

- 1.) FAT (FAT, FAT32, OR FAT16) format is recommended for use with the USB flash drive. If there are any errors when using the USB flash drive on the SFDR for the first time, it is suggested to format it on a separate computer system and set file system parameter into FAT (FAT, FAT32, AND FAT16).
- 2.) Insert the USB flash drive into the SFDR's USB port. Files inside the USB stick are loaded into the SFDR automatically when read light of the SFDR is on. Do not remove the USB flash drive during the loading process.
- 3.) You may remove the USB flash drive once the read light is off. The SFDR will retain the loaded files inside its memory even once the drive is removed.

Writing Function of SFDR:

- 1.) To write any files from the device to the SFDR's memory, you may use the standard copy, remove, edit, save, delete, etc functions as supported by your device's operating system.
- 2.) After the data is written to the SFDR, the green light of the SFDR will go off. The read light will also turn off in the case that the USB flash drive is not inserted into SFDR. Otherwise, the read light will remain on until the writing process is completed.
- 3.) The SFDR distinguishes files which have been written into its memory as per the defined memory capacity of the floppy drive setting on the device. When more files are needed be sure the size of each file combined isn't bigger than the total memory capacity of floppy drive setting. In the event that the total size of those files is bigger than the floppy drive's set size, memory space should be released by deleting existing files.

Note:

- 1.) When writing files to the USB flash drive, file with the same name will replace the previous one.

- 2.) The SFDR will start writing files to USB flash drive 5 seconds after the green light is off. During the writing process errors such as “Floppy drive is not ready” may appear. In this event just wait until the read light of the SFDR is off and continue operating the device once the error disappears.
- 3.) Do not remove the USB flash drive during the writing process in order to avoid damaging the USB file system or the USB flash drive.

Formatting Function:

- 1.) Formatting the SFDR on the device will set the file system parameter to the FAT format, all other parameter are set default by the system.
- 2.) When formatting the SFDR, all files inside the USB flash drive will be deleted.

3.2 Making a DOS startup disk with the SFDR

Application:

DOS startup disk can be made when it is required to startup or boot the computer controlled equipment, with a disk. The process is as follows:

- 1.) Format the USB flash drive to the FAT format.
- 2.) Connect the SFDR to a computer which is able to format a startup floppy disk.
- 3.) Insert the USB flash drive into the SFDR, and format the SFDR as a startup disk.
- 4.) After formatting, wait until the files of the SFDR are written onto USB flash drive.
- 5.) Once the Read light of the SFDR is off, the files have been written into USB disk which is now able to work as a startup disk.
- 6.) You may now install the SFDR in to the device

Note:

- 1.) The startup USB flash disk can only be used for startup with the SFDR.
- 2.) If here are any other files to be attached with the startup disk, copy them to the USB flash drive directly. The total size of the file shouldn't be any bigger than the specified size of a floppy disk.
- 3.) Insert the startup USB flash drive into SFDR as a startup disk when booting the device.

3.3 Installing programs by a SFDR

- 1.) Format the USB flash drive and set the file system parameter to FAT (FAT, FAT32, FAT16).
- 2.) Copy all of the files from the floppy disk onto the root of the USB flash drive. If there is only one disk of the installation, insert the USB flash drive into SFDR and start the installation process.
- 3.) The SFDR file chooser is required in the event that there are more than one installation dis. The process is as follows:
 - a.) Create folders under the root of USB flash drive as per the number of installation floppy disk. It is suggested to use the same folder names as per the original installation disks.
 - b.) Copy all files of the installation disks into the USB flash drive's folder accordingly; hidden files should also be copied if applicable.
 - c.) Insert the USB flash drive into the SFDR and choose the first installation disk folder using the chooser device. Copy all of files onto the SFDR.
 - d.) When prompted for the next disk of the installation, use the chooser to select the next directory corresponding to the next disk.
 - e.) Repeat the process until installation is done.

Note:

- 1.) Do not copy any other folders or files onto the USB flash driver if they are not necessary for the installation process.
- 2.) Be sure to check if there are any hidden files and copy them onto USB flash drive as well.

Chapter 4

How to use the File Chooser (when applicable)

1.) How to connect the SFDR-II File Chooser:

- A.) Connect the File Chooser to the LK port of the SFDR and turn on the power of the device. The connection is as shown below:

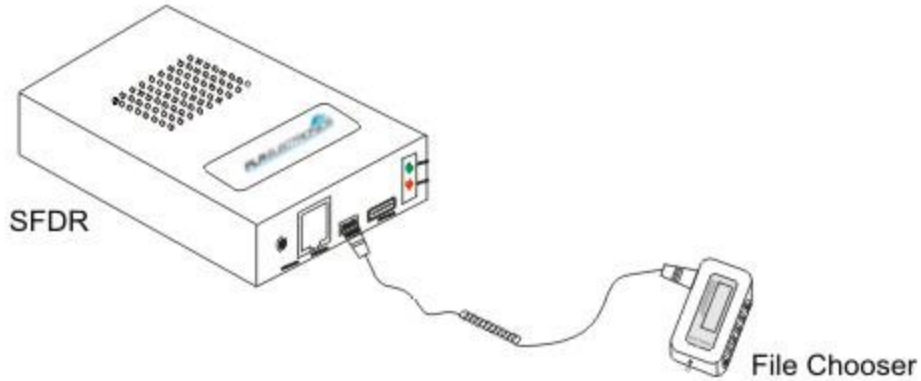
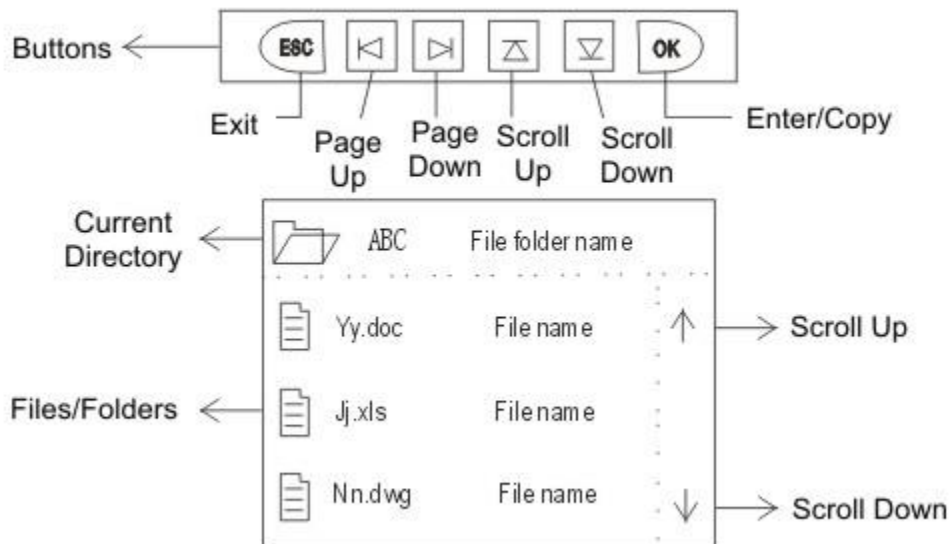


Diagram of the File Chooser Connection

B. File Chooser Buttons and Display:



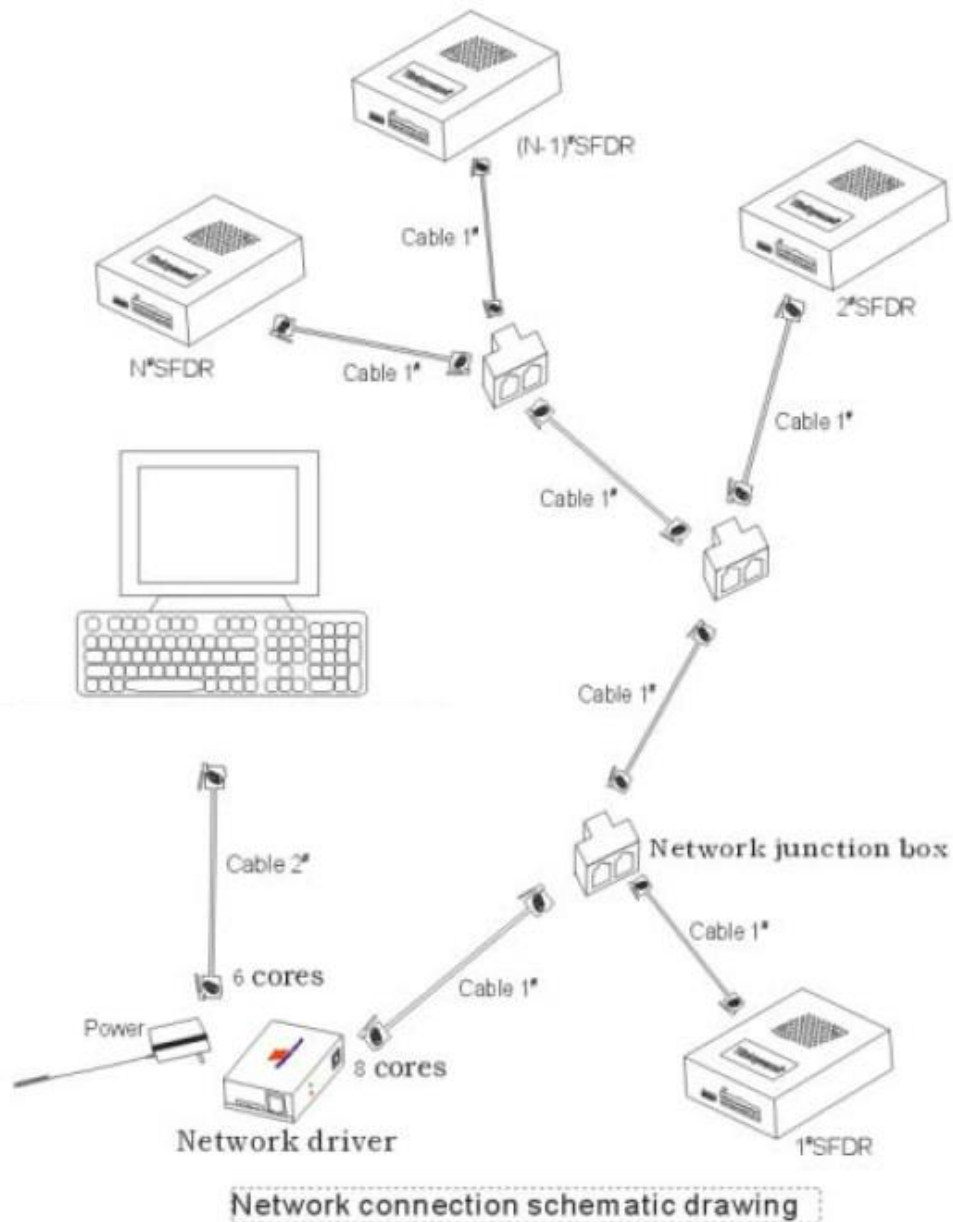
2) How to use the File Chooser:

- A.) The system will default to the root directory on the SFDR after the USB flash drive is inserted.
- B.) Press OK to enter the folder when the cursor is on top of the folder you would like to enter. Press and hold the OK button for a moment to copy the files inside the folder to the SFDR.
- C.) Be sure the combined file size isn't larger than the floppy disk memory size which can be distinguished by the device's system settings, otherwise files larger than the floppy disk memory capacity will be copied to the SFDR.
- D.) Press and hold the ESC button to exit and return to the root directory at any time.
- E.) The file chooser doesn't include protection against damage if removed while the device is still on. When removing the file chooser, ensure that your device is completely powered off.

Chapter 5

Network System (optional)

The SFDR system included a RS485 industry equipment network port. It is very simple to install and convenient to use in all kinds of settings. Directly connect all SFDR's network port by parallel connection, or use three union network plugs to use parallel connection. See the network cable connection figure below:



Frequently Asked Questions

FAQs

- Q - Will this device work with a Windows NT operating system?
A – YES. This device should work with any OS assuming it is capable of working with IBM type floppies.

- Q - Will the 3 1/2 floppy to USB drive work in a XXXXXXXX that can only read 720k 3 1/2 floppies?
A - Yes

- Q - We have XXXXXXXX machines here and the floppy disk is 720K. IF we put a 1.44k in the machine the floppy drive does not work. Do you have a 720K mode on your device? T
A – Yes

- Q - Hi I am presently using a XXXXXXXX keyboard which uses floppy disks on which I play my music files. Can this flash drive reader be used in my case?
A – Yes it will.

- Q – Hi, I currently have a floppy disk drive that is half the height of a standard drive. How can I modify this to work?
A – You do not need to modify anything. We offer a laptop height version. Please ask for this version when placing your order.

- Q – Is it USB 2.0?
A – No, its standard USB. However, USB 2.0 is used primarily for high speed data transfer. In this instance, the files you are using are very small so, there will be no noticeable difference.