

SERIAL DOOR



RELEASE 1.0 USER'S GUIDE

1.0 OVERVIEW

Serial Door is a program that allows to transfer files directly from one computer to another, using a serial connection. It has been designed to work with heterogeneous systems, both equipped with a RS-232 serial port. The mechanism works by launching Serial Door on both computers, connected to each other via serial port (e.g. with a null modem cable), and managing both ends of the communication with just a few settings (essentially, the port to be used and the transfer speed). The mechanism implemented has been designed to be as simple as possible, so is not reserved to advanced users.

Serial transmission is notoriously slow (maximum 14 Kb/s), but Serial Door helps to operate in some situations, where is needed or useful to:

- Exchange files with an old system who haven't a LAN connection, nor have USB ports, but only a serial port
- Exchange files between modern systems through USB ports, avoiding to use a LAN connection or USB data storage
- Exchange files between virtual machines, and them aren't sharing files through a real / virtual LAN, but emulating serial ports

1.1 RELEASE NOTES

Serial Door is released as freeware and can be distributed in every non-commercial form.

THIS SOFTWARE IS PROVIDED "AS IS", WITH NO EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES INCLUDING BUT NOT LIMITED TO THE LOSS OF DATA, OR PROFITS; USER USES IT AT HIS OWN RISK. ANY FORM OF REVERSE-ENGINEERING OF THE PROGRAM IS PROHIBITED.

1.2 SYSTEM REQUIREMENTS

Serial Door version contained in this archive is intended for the use on Windows operating system (XP or better), 32-bit or 64-bit.

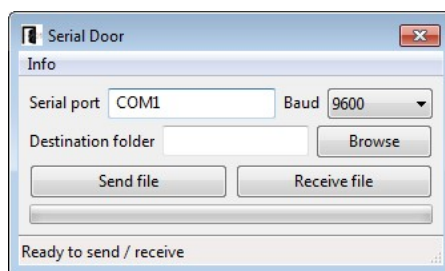
1.3 INSTALLATION AND EXECUTION

To install program, it's sufficient to unpack archive in any directory. To uninstall program, its folder must be deleted. Serial Door must be present on both systems involved in a file transfer, so is mandatory to install it on each of them, taking the correct version from the official page (see "Links" section later in the document).

2.1 FILE TRANSFER PROCEDURE

This section explains the procedure to transfer a file.

1) Launch Serial Door on both computers. This is the window that will appear, with a platform-specific GUI style that will vary depending on the platform:



2) Connect the serial ports of the two computers with a proper cable (see the technical notes later in the document for every doubt).

3) In the "Serial Port" field, enter the serial port to be used on each Serial Door instance, which will be the ones to which the cable was connected in previous step 2). If a system has only one native serial port (e.g. Amiga 500), program doesn't allow to choose the port and uses the built-in one directly.

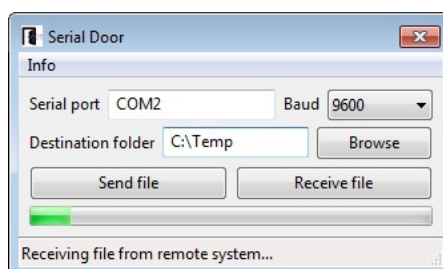
4) Decide the baud rate to be used and set it using the "Baud" dropdown box on both instances of Serial Door. **The baud rate must be the same on both systems. If erroneously different baud rates are chosen, the transmission may not work properly.**

5) On the receiving computer, select where to save the incoming file by pressing the "Browse" button and browsing through devices and folders.

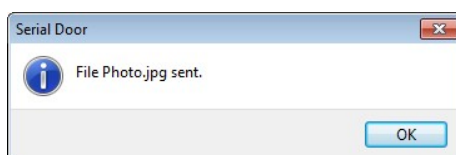
6) On the receiving computer, press the 'Receive file' button. The status bar will show the message "Waiting file from remote system...".

7) On the computer who sends the file, press the 'Send file' button. **Do not reverse this step with the previous step 6). The 'Receive file' button on the receiving system must be pressed before the 'Send file' button on the other system.** Browse through files and folders to select the file to be transferred. Once you have made your selection, the transfer will begin. The status bar on the sending computer will display the message 'Sending file to remote system...', while the status bar on the receiving computer will display the message 'Receiving file from remote system...'. A progress bar will indicate transfer's progress on both computers. Below is a sample screenshot of

program window on the receiving side, where COM2 has been selected for transmission at 9600 baud and 'C:\Temp' as destination folder:



Wait for the transfer to complete. When finished, a confirm message about successful transmission/reception will appear on both instances of Serial Door running ('File [...] sent' on the sending side, 'File [...] received' on the receiving side). The following picture shows a confirmation message on the sending side of the transmission of a file named 'Photo.jpg':



Return to point 6) to transmit other files in the same way, or to other points prior to 6) to modify one or more transmission parameters.

2.2 OTHER FUNCTIONALITIES

To quit program when finished, user can select "Quit" option under "Info" menu (or, alternatively click on close gadget).

To read main info about the program, user can select "About Serial Door..." option under "Info" menu.

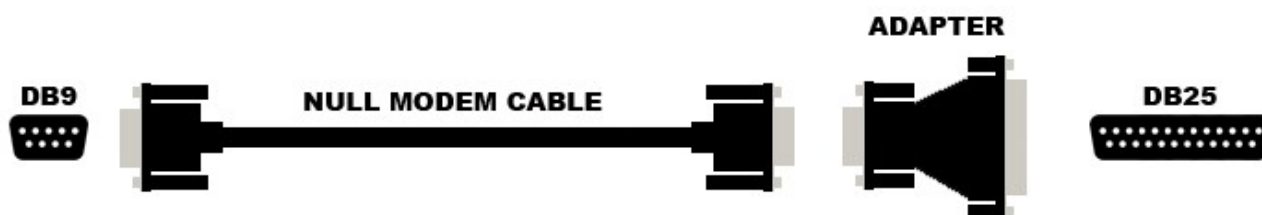
2.3 CABLING CONNECTIONS

Serial connection between two systems can be made physically in the following ways:

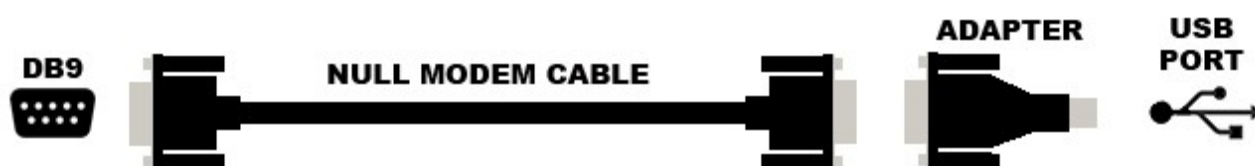
Connection on RS-232 ports: communication who make use of old ports DB9 and DB25, widely adopted to interconnect directly two systems. The maximum speed who can be reached with this connection is 115200 bauds. Is mandatory to use a null-modem cable, who is basically a cable where the transmit and receive lines are crosslinked. This is its topology:



In previous example, both sides have a DB9 connector (9 pins). Every cable end must have a suitable connector for the socket, so an adapter DB9-DB25 is needed if one side (or both) has a DB25 connector:



Connection on USB ports: USB (Universal Serial Bus) ports are serial ports, so they can be used by Serial Door. The maximum speed who can be reached with this connection is 460800 bauds. In order to use the serial cable to connect to a system who don't have a serial port, an USB to serial adapter is needed:



With USB to serial adapters on both ends of a null-modem cable, is possible to transfer files between systems who don't have serial ports, but only USB ports. **Serial Door can be useful on modern systems, because can exchange file directly without using USB mass disk storage, but only using a null-modem cable with serial to USB adapters.** The schematics became this:



2.4 ESTIMATED TIME REQUIRED FOR FILE TRANSFERS

The following table is provided to give an idea of the required time to transfer a file at different speeds.

SPEED \ SIZE	50 Kb	2 Mb	10 Mb
9600 baud	42 sec	29 min	2 hours 25 min
115200 baud	3,5 sec	2 min 25 sec	12 min 8 sec
460800 baud	< 1 sec	36 sec	3 min

2.5 TROUBLESHOOTING

The following tips are provided if can be helpful after some problem arised during a file transfer.

- Double-check that the serial ports typed are correct; on modern systems, is possible to check which ports are installed on the system in use and identify where USB-serial adapters have been connected
- If an high baud rate has been selected, try again with a slower speed
- In some cases, the transfer fails because user logged haven't write permissions for the destination folder, then is impossible to write file
- USB-serial adapters require drivers; if you are using them, check that they are correctly recognised by the system

3.1 GET INVOLVED

Users who wish to help the project can test Serial Door on platforms where hasn't been released and has not yet successfully tested under emulated systems. Contact program's author at the email address indicated in the "ABOUT THE AUTHOR" section further on in this document, explaining the platform(s) where is possible to work.

3.2 LINKS

Serial Door official page:

<https://www.dl-corner.it/software.aspx?quale=8>

The RS-232 standard:

<https://en.wikipedia.org/wiki/RS-232>

Null modem communications:

https://en.wikipedia.org/wiki/Null_modem

3.3 ABOUT THE AUTHOR

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