

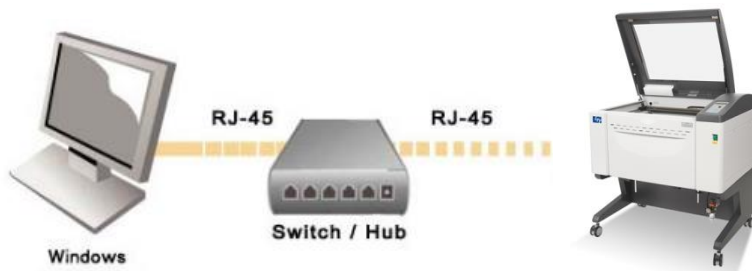
Title : Network function description

Contents :

1. Structure

- 1.1 This function works for Windows XP/ 7 / 8.1 / 10.
- 1.2 **The network function only supports WORKGROUP network, it does not support Domain network.**
- 1.3 Here is the structure relation of a computer and a laser machine.

Solution #1

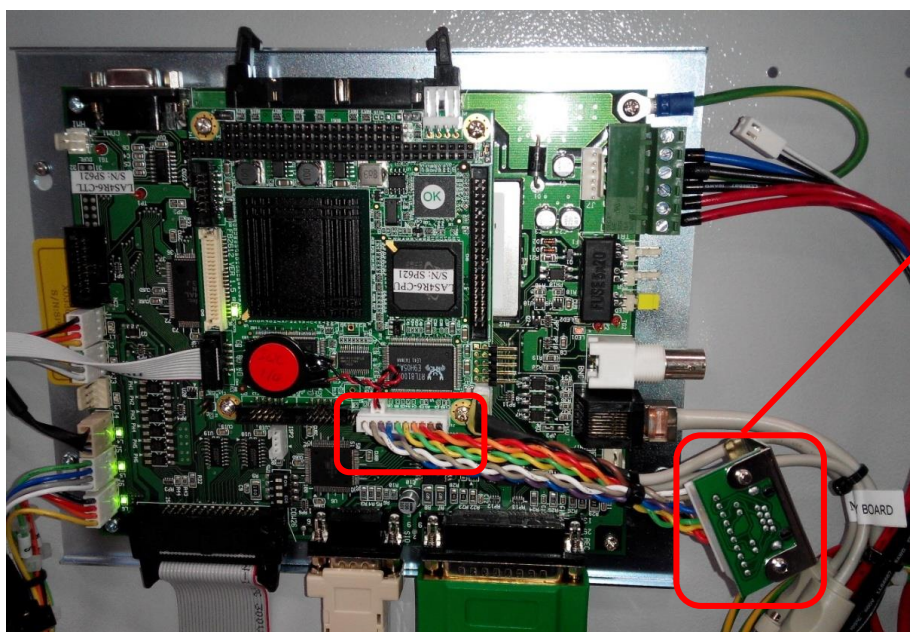


Solution #2



PS. The RJ45 cable in solution #2 may need to be a crossover type. It depends on your computer.

- 1.4 RJ45 connector is at the main-control board. If you don't find it, you can contact with LTT.



RJ45 for network



2. Function description.

- 2.1. We use TCP/IP to communicate between a computer and a laser machine.
- 2.2. The computer works like a server, and laser machine is a client end.
- 2.3. The computer have to share a folder.
- 2.4. User can use any application software (i.e CorelDraw or AutoCAD or others) to print out drawing to a file and save these files to the shared folder. The extension name of these files are prn or plt.
- 2.5. Laser machine will read these files in the shared folder. User can select the file in the machine and run it.
- 2.6. Laser machine only has the right to read the files in the shared folder. Files can't be deleted from machine.
- 2.7. Laser machine can write a log file to the shared folder. The name of log file is <lttlog.txt>. The log file will records real working parameters after file is finished. If the file is not finished, it will not be recorded.(Some firmware version does not support this log function, you can contact with LTT for further help)

3. Available firmware version

Machine Model	Firmware Version
ILS-3NM	7.09 or later
V2000, V3000, ILS-3V	8.14 or later
i.Laser servo 3000, 4000	8.17 or later
SLC series	8.33 or later

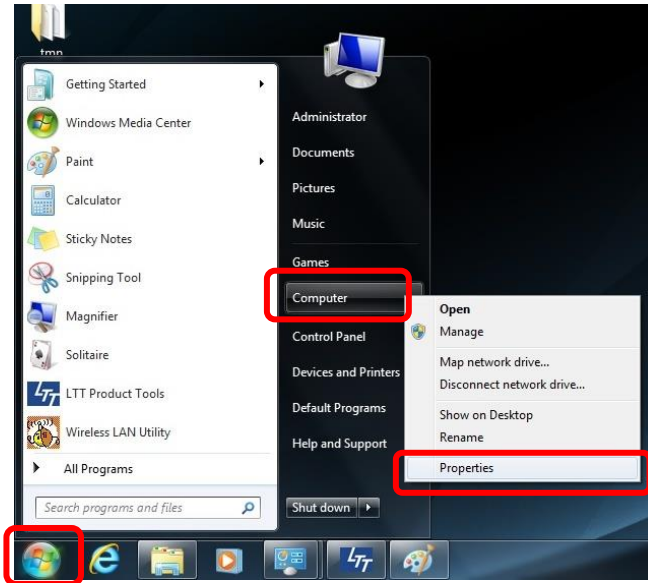
If your laser machine firmware version is older, you can check with LTT to learn the version can be upgraded or not.

4. Advantage

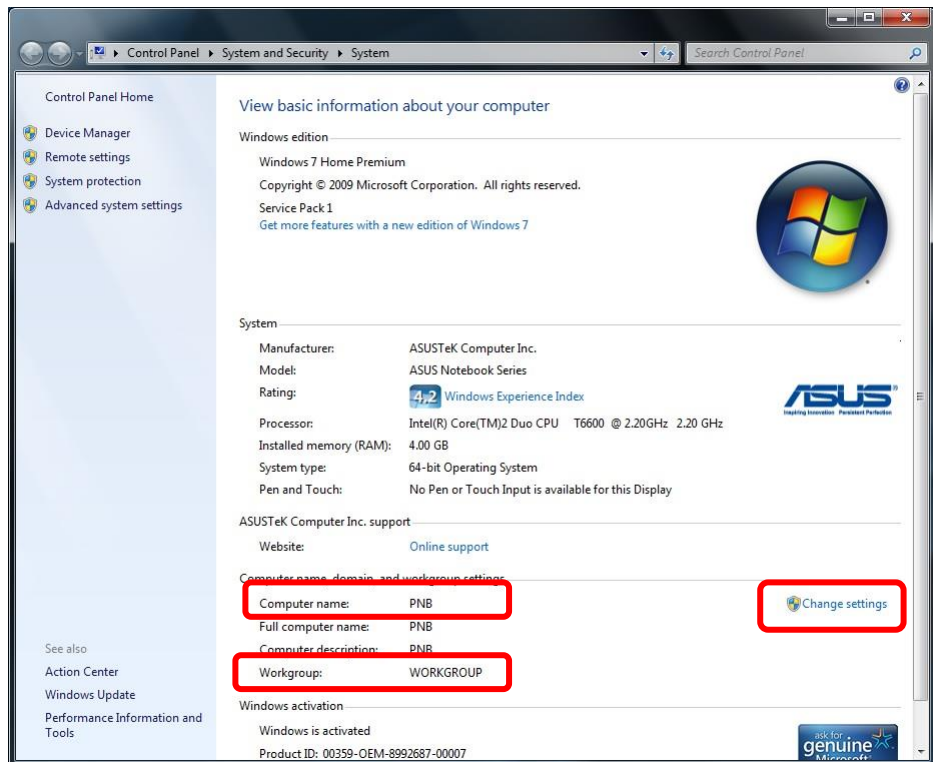
- 4.1. This network function can replace the LPT to USB cable.
- 4.2. User can use one computer works as a server computer to share a folder to a machine. Other computers can send files to the shared folder in the server computer.
- 4.3. User can share the same folder in one computer to more than one laser machine.
- 4.4. User can save time to transfer the file to machine, especially for some big drawings.
- 4.5. User can save all prn or plt files in the computer, even the laser machine is power off.

5. How to setup the network function

- 5.1. Setup a shared folder in the computer.
 - A. Find the name of your computer. (Here is for Windows 7, you can find other Windows setup differences at section 6)
 Go to <Start> and right click <Computer> , and click <Properties>.



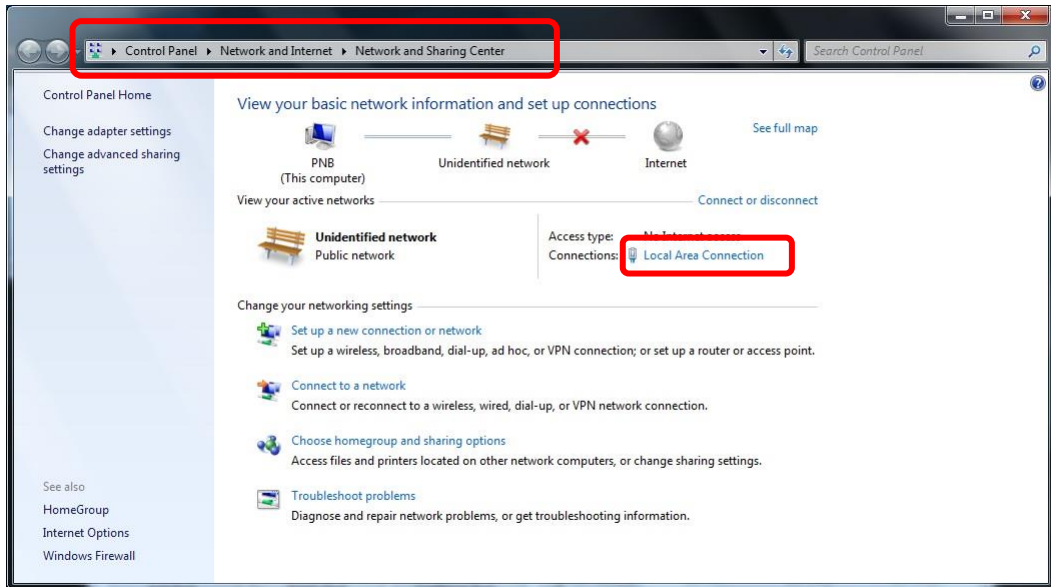
It will show a window and you can see the name of your computer. If you want to change it, you can click <Change settings> and follow the steps to change the name.



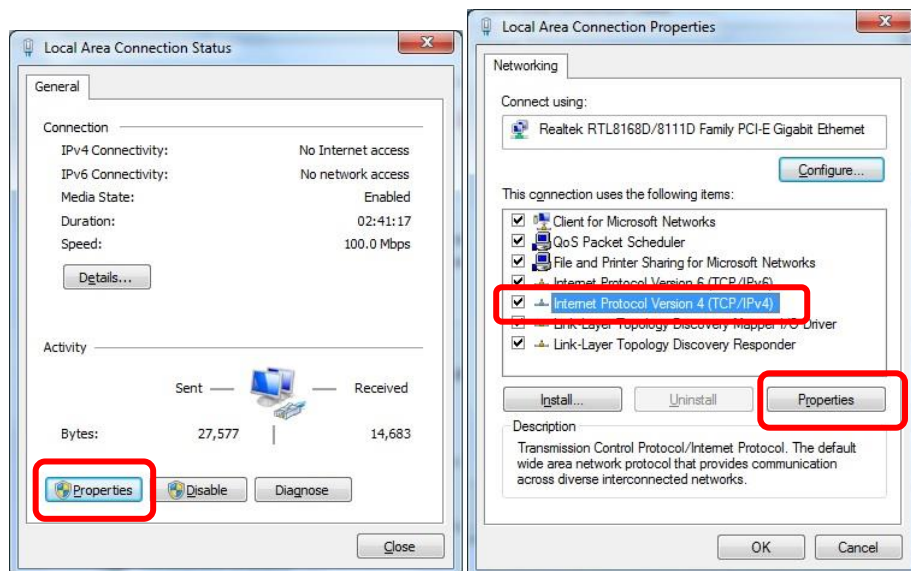
This network only supports WORKGROUP network, it does not support Domain network.

B. Setup the IP address for your computer.

Go to <Control Panel>, click <Network and Internet>, then click <Network and Sharing Center>.

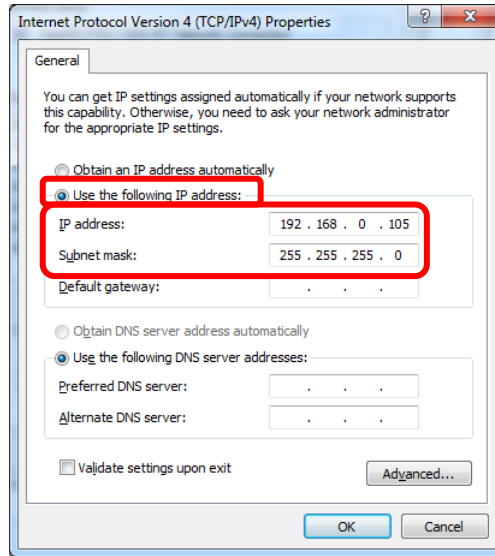


Click <Local Area Connection>, then click <Properties>.
Go to <Internet Protocol Version 4 (TCP/IPv4)>, click <Properties>.



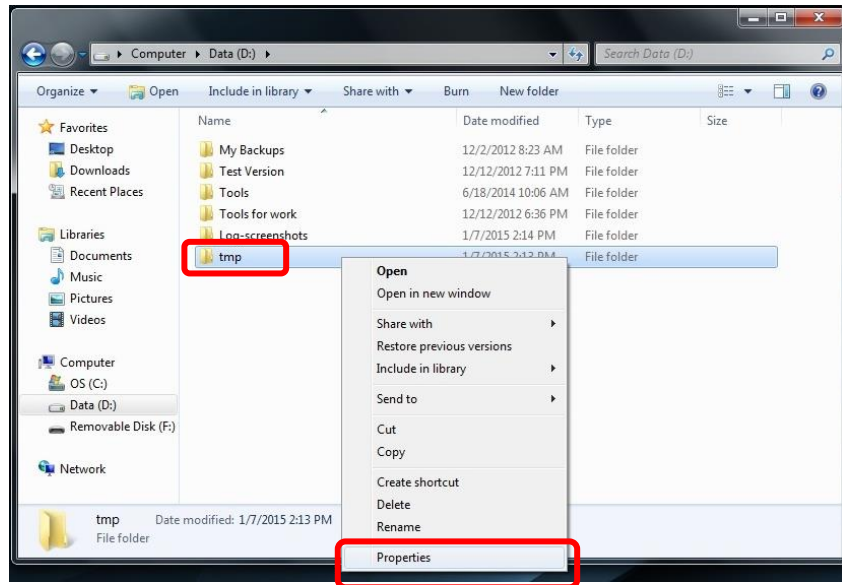
Choose <Use the following IP address:>, and setup the IP as following. You can define your own IP for your computer, just make sure the last code is different for computer and laser machine.

Please pay attention, the <Subnet mask> must be 255.255.255.0.

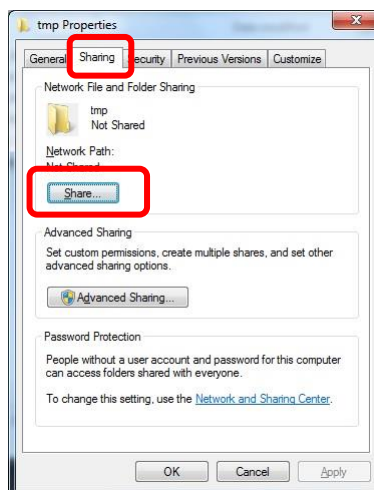


C. Setup a shared folder.

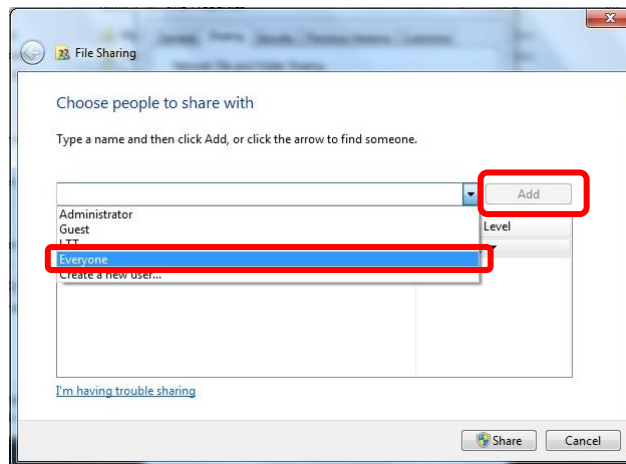
Create a new folder <tmp>, right click the folder, click<Properties>.



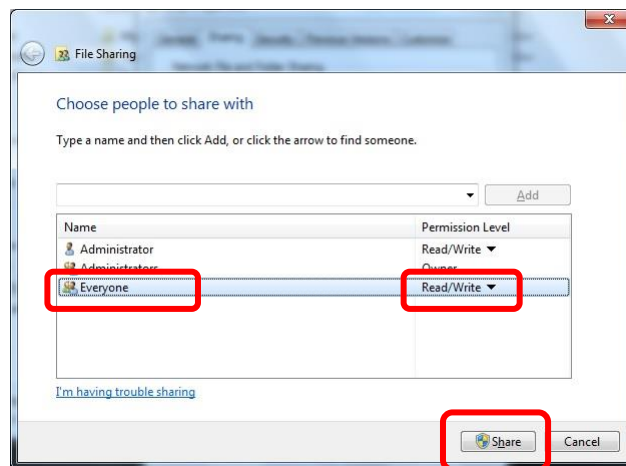
Go to <Sharing> tab, click <Share...>



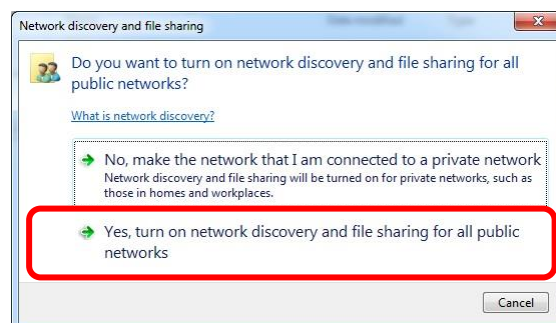
Click the drop box and choose <Everyone> and click <Add>.

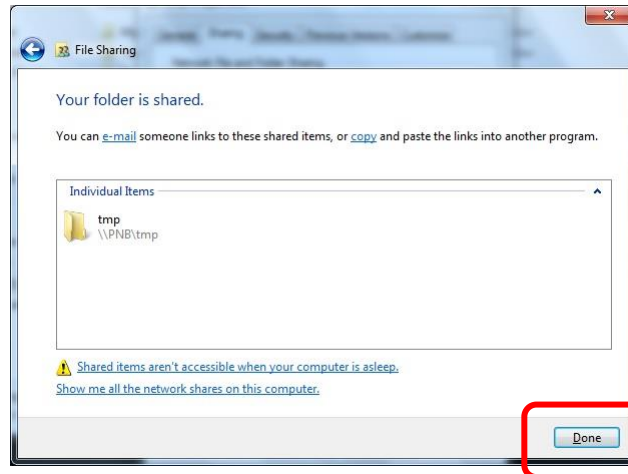


Choose <Everyone>, click the <Permission Level> drop box and change <Read> to <Read/Write>. Then you can click <Share>.

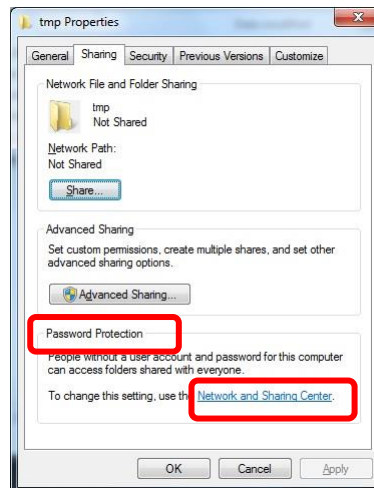


It will show another window like following. Please choose <Yes, turn on network discovery and file sharing for all public networks>. When you are back to <File Sharing> window, you can click <Done>. It will go back to <tmp Properties> window.

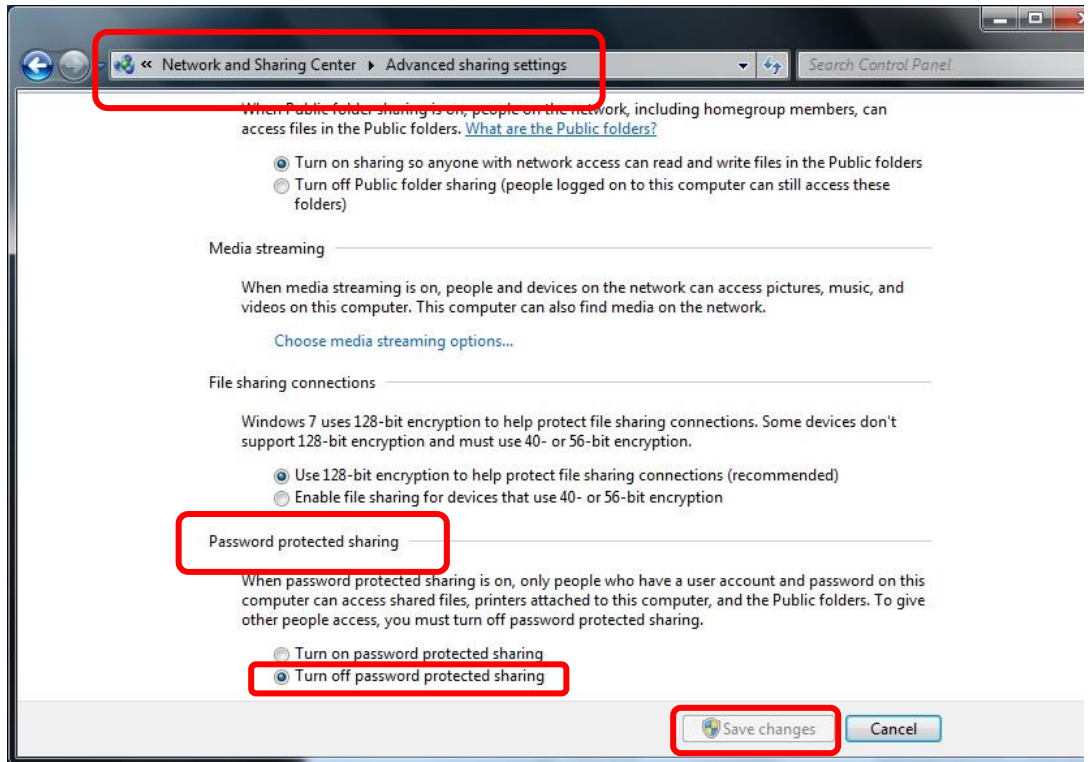




You will be back to folder properties window. We have to turn off the <Password Protection>, click <Internet and Sharing Center>.



It will show <Network and Sharing Center / Advanced sharing settings> window, navigate to the last line to find <Password protected sharing> section, choose <Turn off password protected sharing>. Then you can click <Save changes>.



5.2. Setup the parameters in the main-controller.

You have to edit two cfg files in main-controller. Power off the laser machine and un-plug the CF card in the main-controller. Put it on a CF card reader to edit cfg files on your computer. You can use Notepad to edit it. Just be careful not to change the extension file name.

When you finish edition, put the CF card back to main-controller.

Please pay attention, when you put CF card back to main-controller. Make sure it is the same side up as default.

You can find a machine main configure file. This file name is different for each model of laser machine.

Machine Model	Main parameter extension CFG file
ILS-3NM	ILS-3NM.CFG
V2000	V2000.CFG
V3000	V3000.CFG
ILS-3V	ILS-3V.CFG
i3000adv	I3000ADV.CFG
i4000adv	I4000ADV.CFG
SLC-M	ILS-SLC.CFG
SLC-M+	SLC-MP.CFG
SLC-D2+	SLC-D2.CFG



Open the cfg file by Notepad and find a parameter named network=0, change it to network=1 and save the file. It will activate the network function. If you need the log function, you can add a line lttlog=1 to open the log function.

The second cfg file (LTTNET.cfg) which defines the name and IP for main-controller and the computer. Here is an example of <LTTNET.cfg> in the main-controller ..

```
LOCALcomputername=ILS-0001  
LOCALIPAddress0=192.168.0.115  
SERVERcomputername=PNB  
SERVERIPAddress=192.168.0.105  
SERVERShareDir=tmp
```

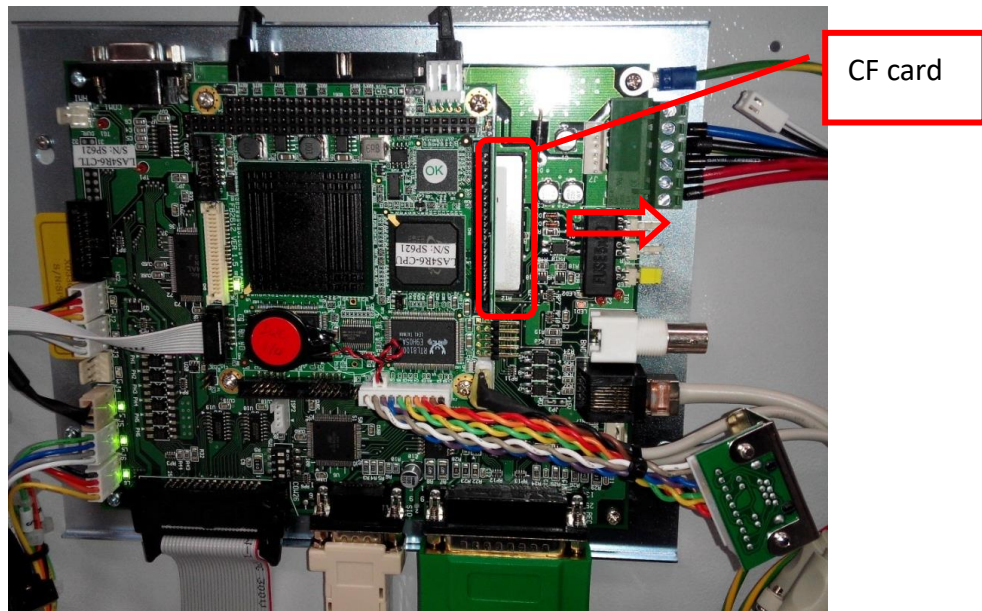
Local computer means the main-controller.

Server computer means the computer you will share folder to store prn/plt files and log file.

According to the above information, it means the computer name is <PNB>, and its IP is <192.168.0.105>, and the shared folder is <tmp>.

These settings will show at LCD menu <2.FILE MANAGER> / <Net Status>.

Please pay attention, the computer name, IP address and shared folder must be the same as your settings on the computer.



5.3. Connect and test

You can follow 1.3 and 1.4 to connect the laser machine and the computer.

Before you boots the machine, please make sure all RJ45 cables are connected correctly.

You can put some prn/plt files in the shared folder.



Keep your computer is on and then boot the machine.

You can go to laser machine LCD menu <1. WORK DISPLAY>, left result is ok, right result is failed.



Sometime it will need more time to build the first time connection.

You can re-boot laser machine again.

Connect with a switch (solution #1) seems works easily.

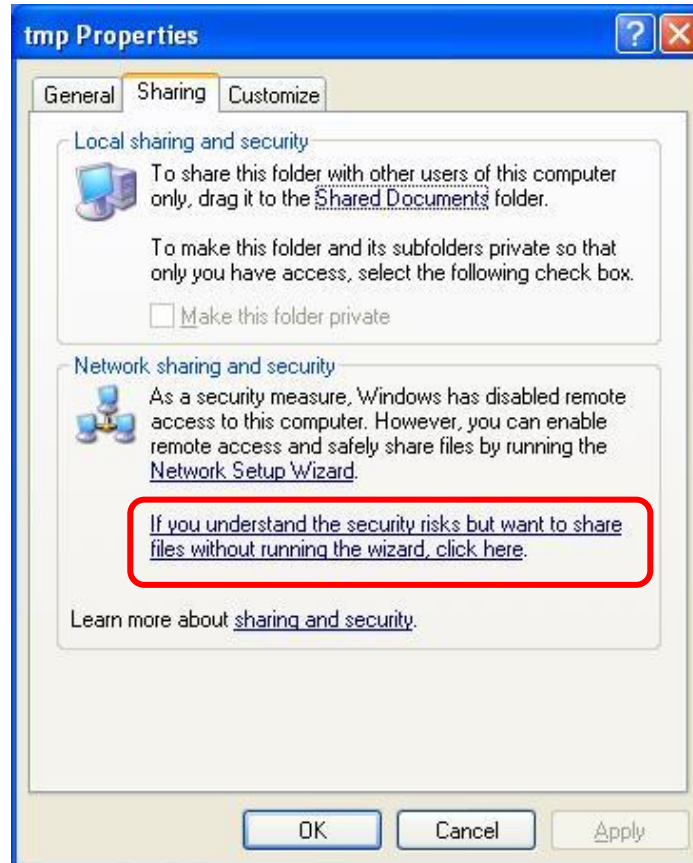
This network only supports WORKGROUP network, it does not support Domain network.

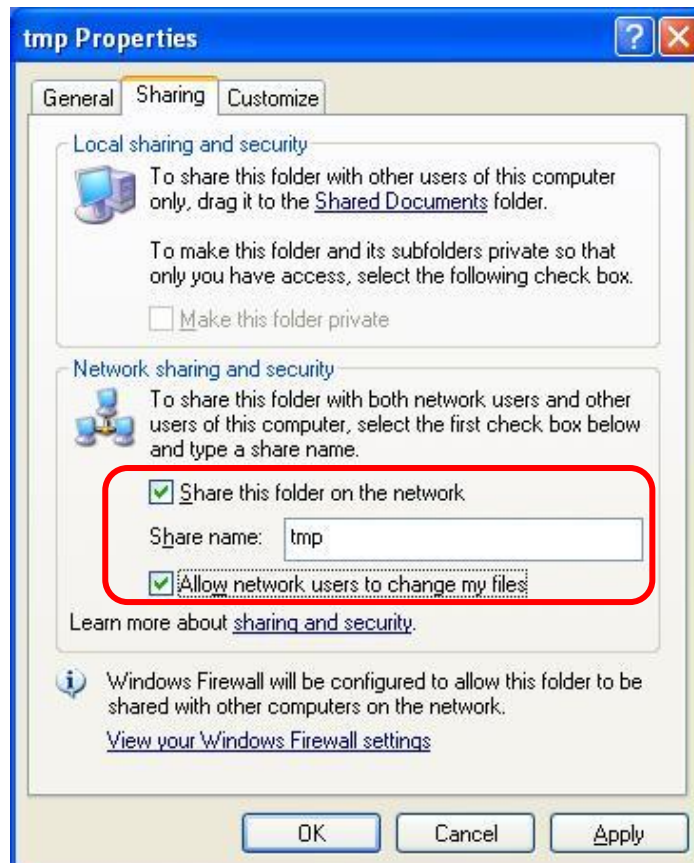
6. Different settings in other Windows

6.1. Windows XP

There is a little different on change shared folder properties.

Click the following item.





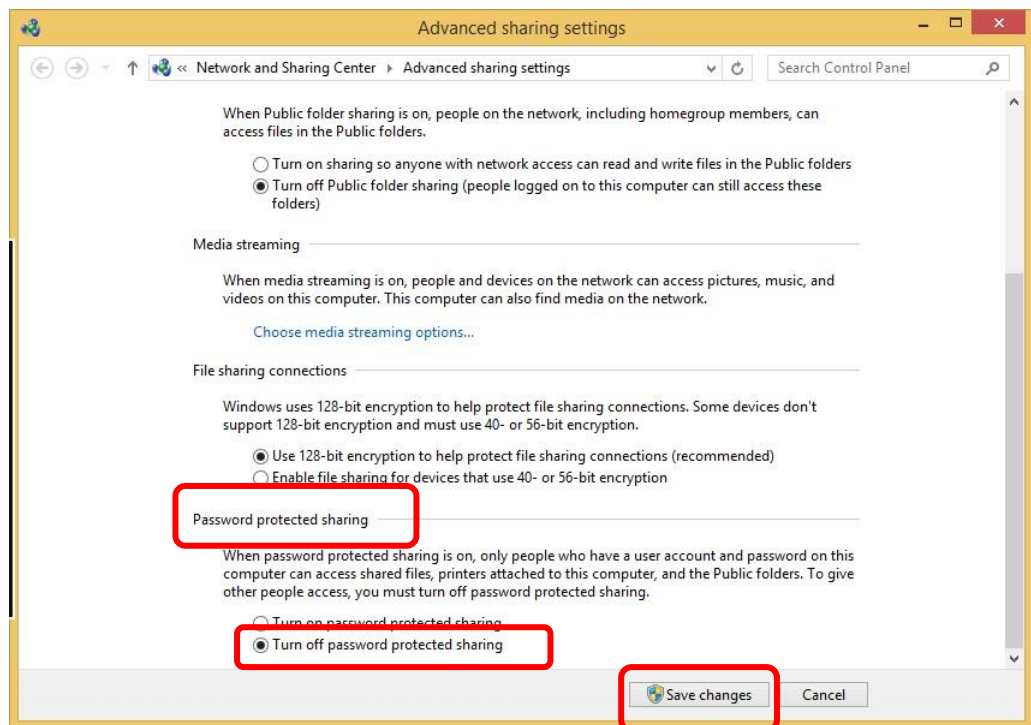
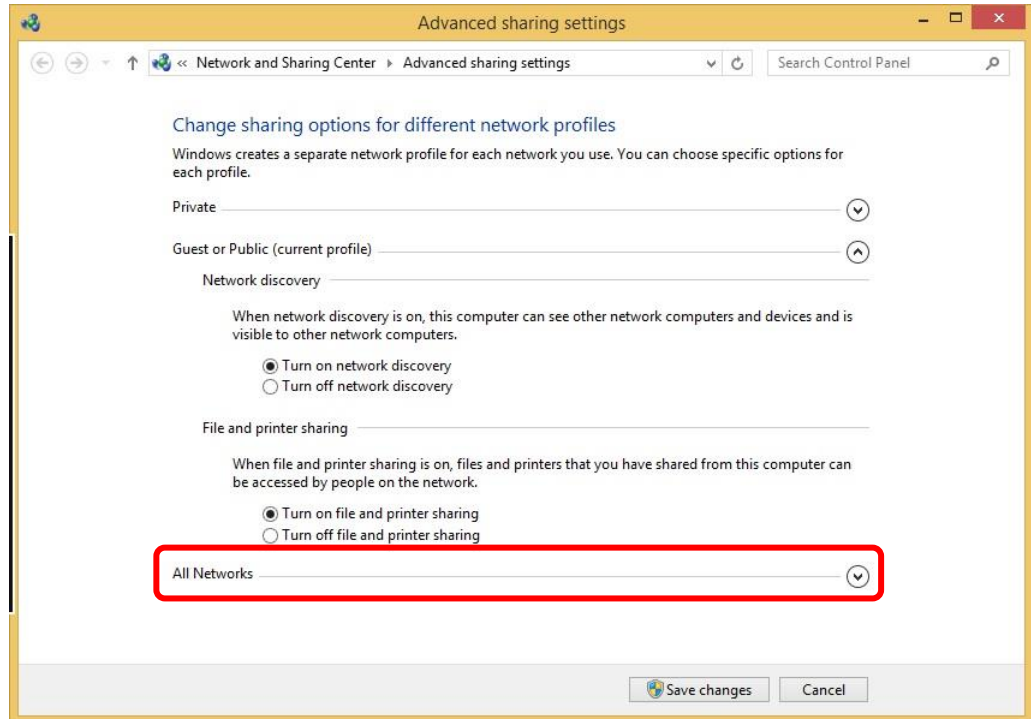
There is no password protection for Windows XP.

6.2. Windows 8.1/10

The setting process is very similar. The only difference is <Password protected sharing> setting.

When you go to <Network and Sharing Center / Advanced sharing settings>.

Pull down <All Networks>, navigate to the last line to find <Password protected sharing> section, choose <Turn off password protected sharing>. Then you can click <Save changes>.



7. FAQ

7.1. Connection failure

- A. Check all your cables connect properly.
- B. Go to laser machine and navigate LCD menu to <2.FILE MANAGER> / <Net status>. Check the setting of network is mapping with laser machine and computer.



- C. Close your anti-Virus software of your computer, sometime it will stop the sharing.
 - D. Make sure your computer is a WORKGROUP network, not Domain network.
 - E. If you use a RJ45 cable to connect directly laser machine and computer (solution #2), please check the RJ45 cable is a crossover type. Or you can try solution #1.
 - F. For some older laser machine firmware, you may need to change your subnet mask to 255.255.0.0 in your computer.
- 7.2. If the connection is failed during working, what will happen?
When the connection is failed during working, the main-controller will hang without any action. You have to reconnect them again, and reboots machine again.
- 7.3. Can I use USB port to transfer file to laser machine again?
When your laser machine is setup for network function, you still can use USB port to transfer file to machine. But you have to unplug the network connection, and then you can use USB port to transfer file to machine again.
- 7.4. I can run file successfully on network, but there is no log file showed in shared folder.
Please check there is a line `littlog=1` in the machine `cfg` file. If you already add the line in it, and it still not work. The firmware version may not support this function, you can contact with LTT for further help.

[CAYIN Tech | Connect a SMBv1Device via Windows 10 System](#)