

T-Desk and Network Troubleshooting Tips

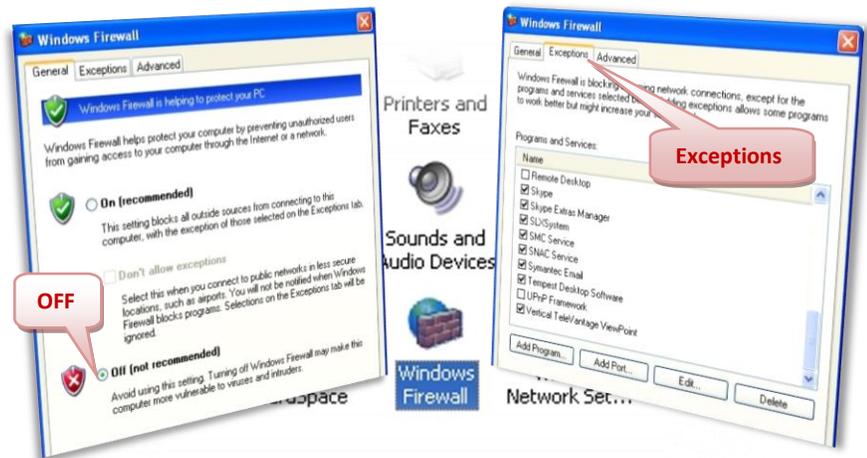


The Top 5 List

1. Firewall – Be sure to disable your PC’s Firewall or allow an exception for Tempest Desktop Software (T-Desk).
2. PC Wireless/Wi-Fi Cards –Turn off the PC’s internal wireless device before attempting to connect with T-Desk. Once T-Desk has found the BaseStations present on the network you may turn the wireless device back on.
3. IP/TCP Modes – the BaseStation(s) must be in the proper IP/TCP mode that corresponds with your type of Local Area Network (LAN) connection.
4. IP Address – the IP addresses on your BaseStation and computer must be within the same range with one another. An example: Computer = 192.168.001.001, BaseStation A = 192.168.001.002, BaseStation B = 192.168.001.003...
5. Physical Connections – Be sure that your LAN connections are seated properly (in the correct port) and your cables are in good working order.

Firewalls

In order for T-Desk to communicate with a Tempest BaseStation you must disable the Windows Firewall or create an exception to allow T-Desk to accept an incoming network connection (from the BaseStation). To disable or allow exceptions, go to your PC’s *Control Panel* and <double-click> **Windows Firewall**. Turn the firewall OFF or go to the *Exceptions* tab and <click> **Add Program**. Add the program *Tempest Desktop Software*. <Click> **OK** until the windows close.



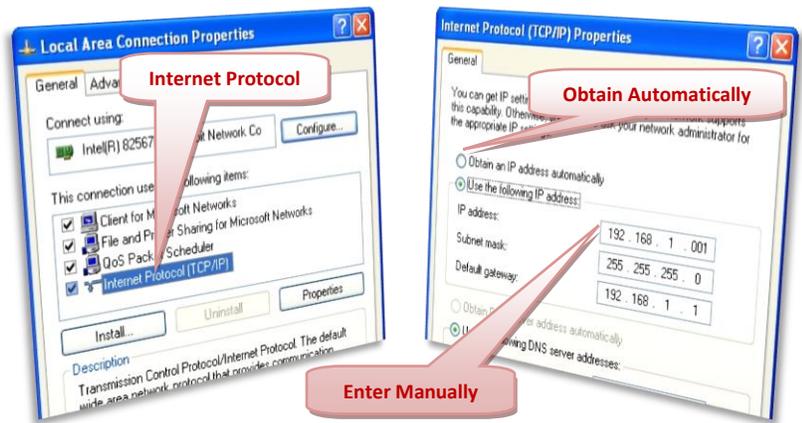
PC Wireless/Wi-Fi Cards

Internal PC Wireless or Wi-Fi cards have been known to conflict with T-Desk recognizing any Tempest BaseStations on the given network. Therefore, before opening T-Desk, turn the internal wireless device on your computer OFF. The method of disabling this device can vary with the model and brand of PC. Most laptops are equipped with an external switch on the right or left side that will turn off the wireless card. If you don’t have a switch, open your PC’s *Control Panel* and <double-click> the **Network Connections** icon. <Right-click> on the **Wireless Network Connection**, and then <select> *Disable*. If neither of these methods works to turn off your wireless (radio) card consult the computer’s help manual for further assistance. Once T-Desk has established a connection with the Tempest BaseStations you can re-enable the internal wireless device. (Note: If T-Desk should ever be closed, the wireless will have to be disabled before attempting to re-initialize T-Desk connections again).

IP/TCP Modes (on BaseStation)

Tempest BaseStations are equipped with IP/TCP modes that adapt it to the LAN settings in use. If you are having trouble connecting T-Desk to any BaseStation, be sure the BaseStation is set to the correct mode. Go to: **BaseStation Settings>Tech Menu>LAN Settings>IP/TCP Mode**. (Note: Power cycle the BaseStation after changing a mode.)

- *Manual* – If you have specific IP addresses that you want to use or if you don't have a network device that automatically assigns IP addresses, then you can use *Manual* mode and set the addresses yourself. Be sure to set PC and BaseStation IP addresses within same range.
- *DHCP Server* – the BaseStation acts as a “server” to one PC. Use this mode if you are connecting a BaseStation directly to a computer.
- *DHCP Client* – the BaseStation becomes a “client” capable of being assigned an IP address. The Client mode should be used when a router that auto-assigns an IP address is in use. **IP Address Conflicts**

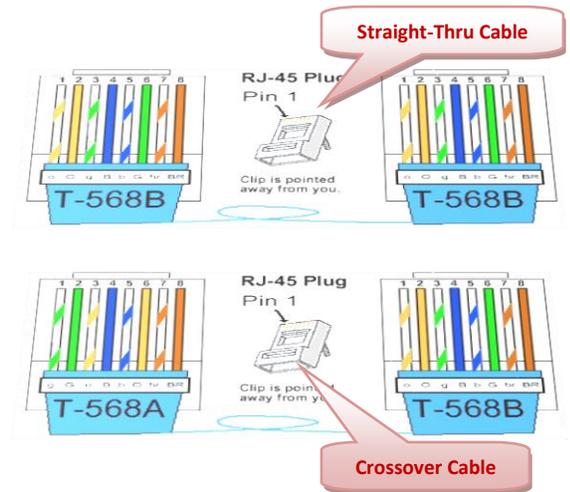


A computer's IP address or setting may be conflicting with the Tempest BaseStation's IP address. If you are not using a router or server network that automatically assigns an IP address, then you may need to set your PC's IP address manually. Go to the PC's *Control Panel* and <double-click> **Network Connections icon**. Locate and <right-click> the **Local Area Connections** icon; <select> *Properties*. In the *Properties* window, select *Internet Protocol (TCP/IP)* and <click> the **Properties** button. (Note: Be sure to set your PC's IP address within the same range of the BaseStation's IP addresses).

It is good practice to always reboot the computer system or power cycle your Tempest BaseStation after entering new IP addresses in either; especially if a connection is still not able to be established.

Physical Connections

Many times a problem is related to the physical devices, cables, or ports being used. Here are some common items to look for when troubleshooting that may save some time:



- *Power* – Surely, I didn't forget to power it up? Believe it or not many times a device (such as a router) may not be plugged in or possibly the cable isn't seated properly or the outlet is bad.
- *RJ Cables* – Over time, cables that are used often can go bad through wear and tear. If you have extra cables always substitute another cable in to see if a connection is established. Another possibility if it's a new cable is that the connectors are on wrong or it is the wrong type of cable. Older computer systems require a “crossover” cable. It looks just like a normal cable, but with a different pin out. If you have one, give it a try and see if a connection is established. Newer computer systems will ignore the crossover distinction and go with either type of cable.
 - A Straight-thru cable has identical ends, and is used as a patch cord in Ethernet connections.
 - A Crossover cable has different ends, and is used to connect two Ethernet devices without a hub or to connect two hubs; has one end with the orange set of wires is switched with the green set of wires.

- *LAN Connections* - The BaseStation screen will show LAN configuration addresses upon making a good connection is established and will display 'LAN' in the top-right corner.
 - Limited or No Connectivity – you may get this pop-up warning on your PC; if so it is only telling you that there is a LAN connection, but with no internet connection.
 - Multiple LAN Ports - New desktop computers can sometimes have more than one LAN port or even a second LAN card installed on an older computer. Be sure that only one LAN port is enabled, otherwise, they could conflict with one another when establishing a connection.
 - Remote Transceiver Port – the Tempest BaseStation has two Ethernet ports in close proximity of one another; be sure that the RJ-45 cable is NOT plugged into the Transceiver's port by mistake.
- *Routers, Switches, etc.* – If you have another device try it. If not, try connecting Tempest directly to the PC in DHCP Server (on the BaseStation). If T-Desk works then it could be an issue with your hardware.

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