

Belkin USB Direct Connect Manual



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1. Introduction

The USB Direct Connect provides a convenient way to connect stand-alone PCs and gain the benefits of networking without having to install network cards. Two or more USB computers can share programs, files, peripheral equipment and more. The USB Direct Connect is ideal for small offices, home users, multiplayer gaming, and taking work on the road.

2. Device Specifications

2.1. Environmental Conditions

0 to 70°C (32 to 158°F)
Humidity 10% to 90%, non-condensing

2.2. Data Rate

12 Megabytes/second

2.3. Operating Systems

Windows 98

2.4. Power Consumption

Powered from USB Bus
Normal Operation: ~70mA
Suspend: ~300µA

2.5. Dimensions

0.87" H x 2.6" W x 4.25" L

2.6. LEDs

Left: Status
Center and Right: Activity

2.7. Compliance

FCC Class B, USB specification v 1.0

3. Network Topology

The USB Direct Connect can be used to connect two or more computers. There is a maximum distance limit between computers, or hosts, of 10 meters. This limit is due to the USB cable length maximum of 5 meters. Therefore each host can be up to 5 meters away from the USB Direct Connect. Figure 1 below shows the different ways that the USB Direct Connect(s) can be connected to host computers.

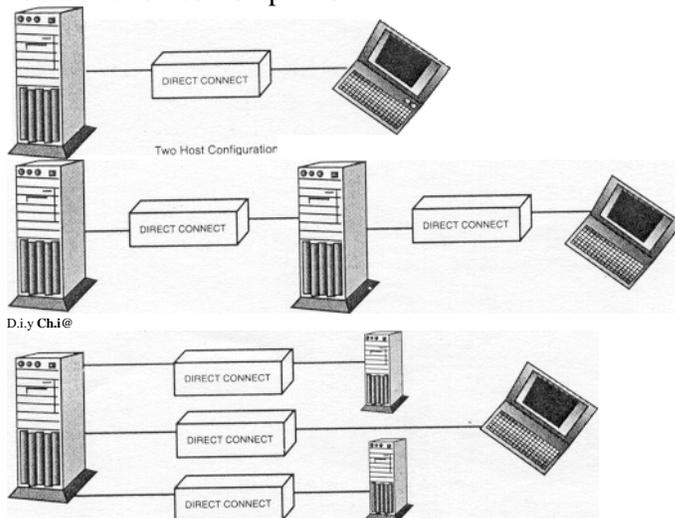
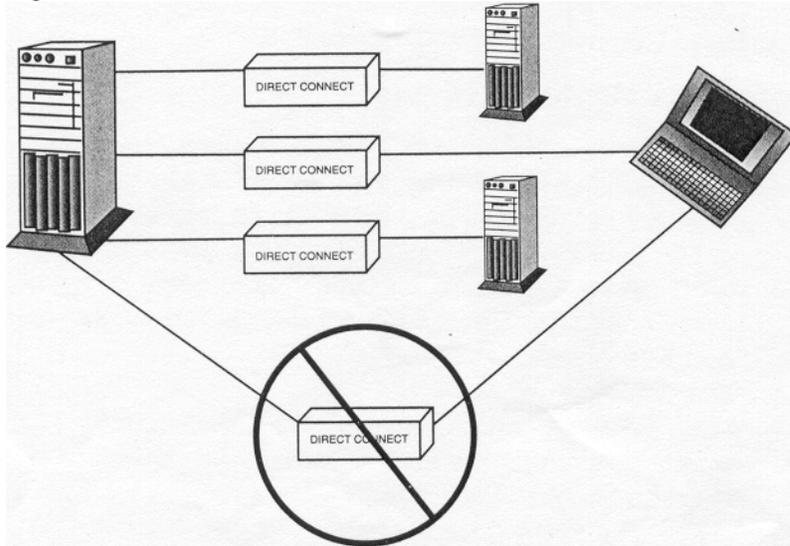


Figure 1. Network Topology

Note from the “Tree” Configuration in the previous section that it is possible to connect more than two **USB Direct Connects** to a host, however, only eight **USB Direct Connects** may be connected per host.

Another restriction is the following: the hosts must **NEVER** be connected in such a way that any two hosts in the network have more than one USB Direct Connect connecting them. Doing this will form a “ring” which will crash the network. Figure 2 below illustrates what not to do.

Figure 2. How NOT to connect a USB Direct Connect



In this diagram the USB Direct Connect that connects the laptop back to the first computer will cause the network to crash.

4. Belkin USB Direct Connect Installation

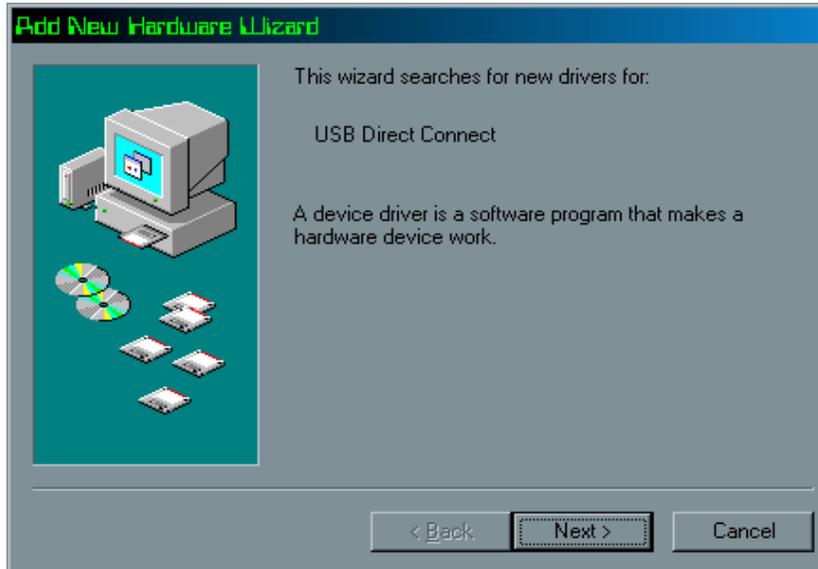
There are two stages to the installation of the USB Direct Connect. The first part installs the USB Direct Connect drivers. The second stage is Network installation and setup.

The procedure below should be followed on all the computers that will be connected on the network.

4.1.1. Installation of USB Driver for Win 98:

1. Insert the disk labeled “USB Direct Connect Installation Disk” into your floppy drive (typically drive A:).
2. Insert the flat (type A) connector into an available USB port on your PC or USB hub attached to your PC.
3. Insert the square connector (type B) into either of the two ports on the USB Direct Connect device. You will see an “Add New Hardware” Wizard.

4. A window saying: 'This wizard searches for new drivers for: USB Direct Connect 'appears.



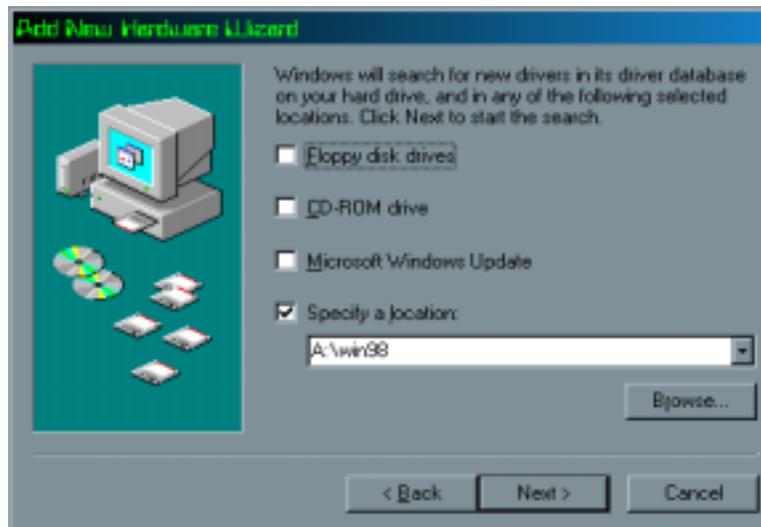
5. Click Next

6. A window saying: 'What do you want to do?' appears.

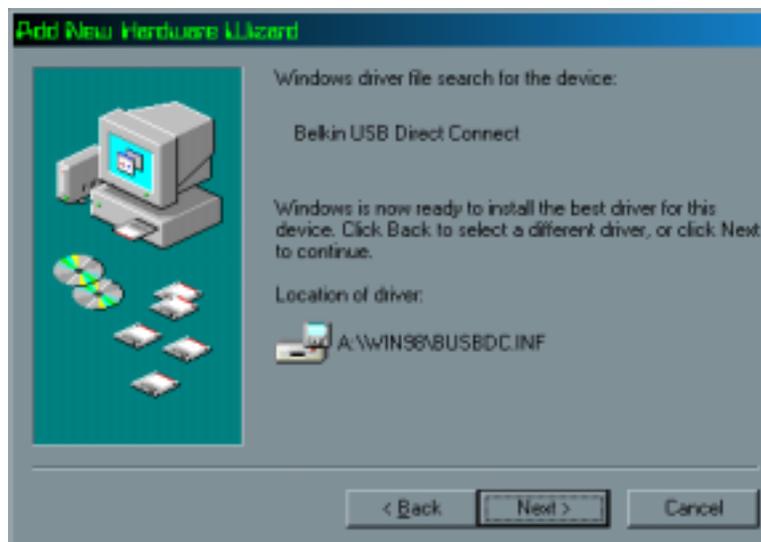


7. Make sure 'Search for the best driver...' is selected and click Next.

8. On the next window that appears, check the box marked: 'Specify a Location' and uncheck the other boxes. Type A:\win98 on the big rectangular box right below 'Specify a Location'. Click Next.



9. A Window saying 'Belkin USB Direct Connect' and 'Location of driver: A:\WIN98\BUSDC.INF' will appear. Click Next.



10. A window might appear titled: Copying Files... If this window does appear, type A:\WIN98 at the bottom of the window and click OK.

11. Click 'Finish' on the next window that appears. You may be asked to put in the win 98 CD-ROM. After the files have been copied, you can go now to section 4.2.0 of the manual (Installation of Network drivers).



4.1.2 Installation of USB Driver for Win 95:

1. Insert the disk labeled "USB Direct Connect Installation Disk" into your floppy drive (typically drive A:).
2. Insert the flat (type A) connector into an available USB port on your PC or USB hub attached to your PC.
3. Insert the square connector (type B) into either of the two ports on the USB Direct Connect device.
4. A window titled 'Update Device Driver Wizard' appears.



5. Click Next

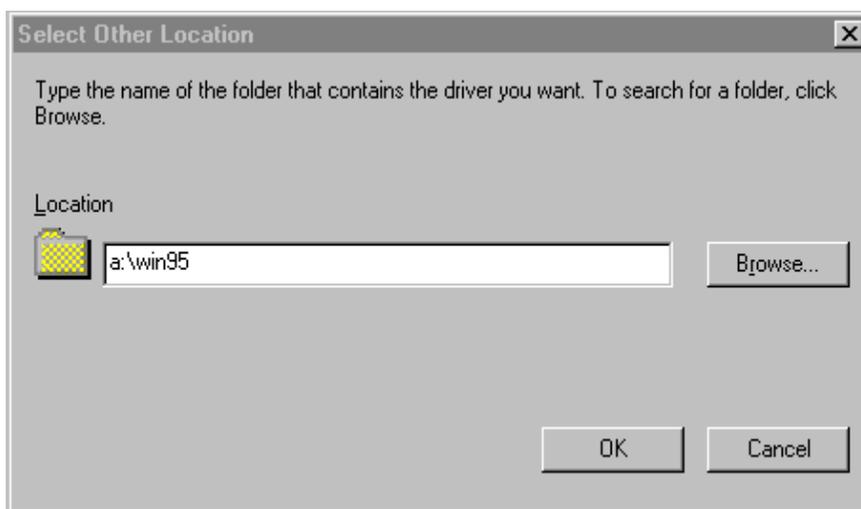
6. A windows saying: 'Please wait while Windows searches...' appears. DO NOT click 'Next' on this window, wait until the next window is displayed.

7. On the next window that appears, click the 'Other Locations' button.

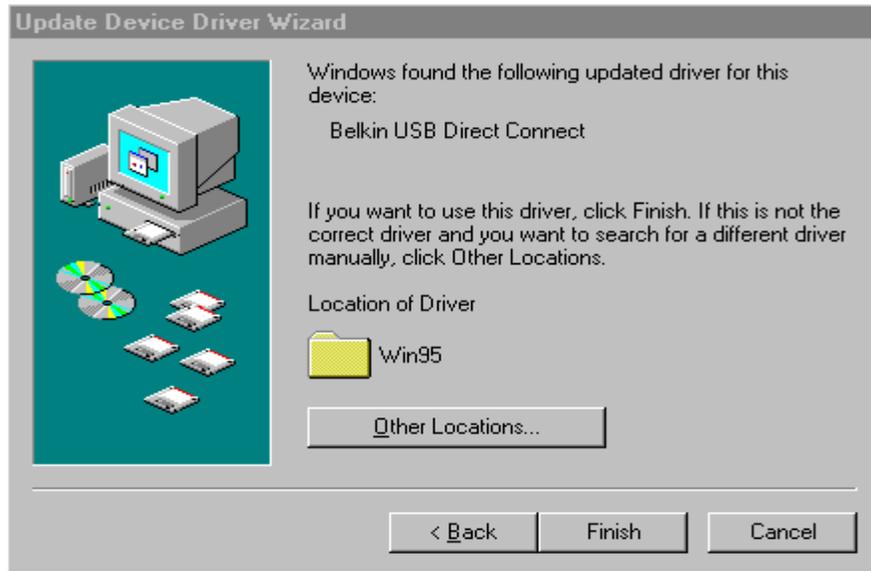


8. A Window titled: 'Select Other Location' will appear.

9. Type 'A:\win95 '. Click OK.



10. Click 'Finish' on the next window that appears.



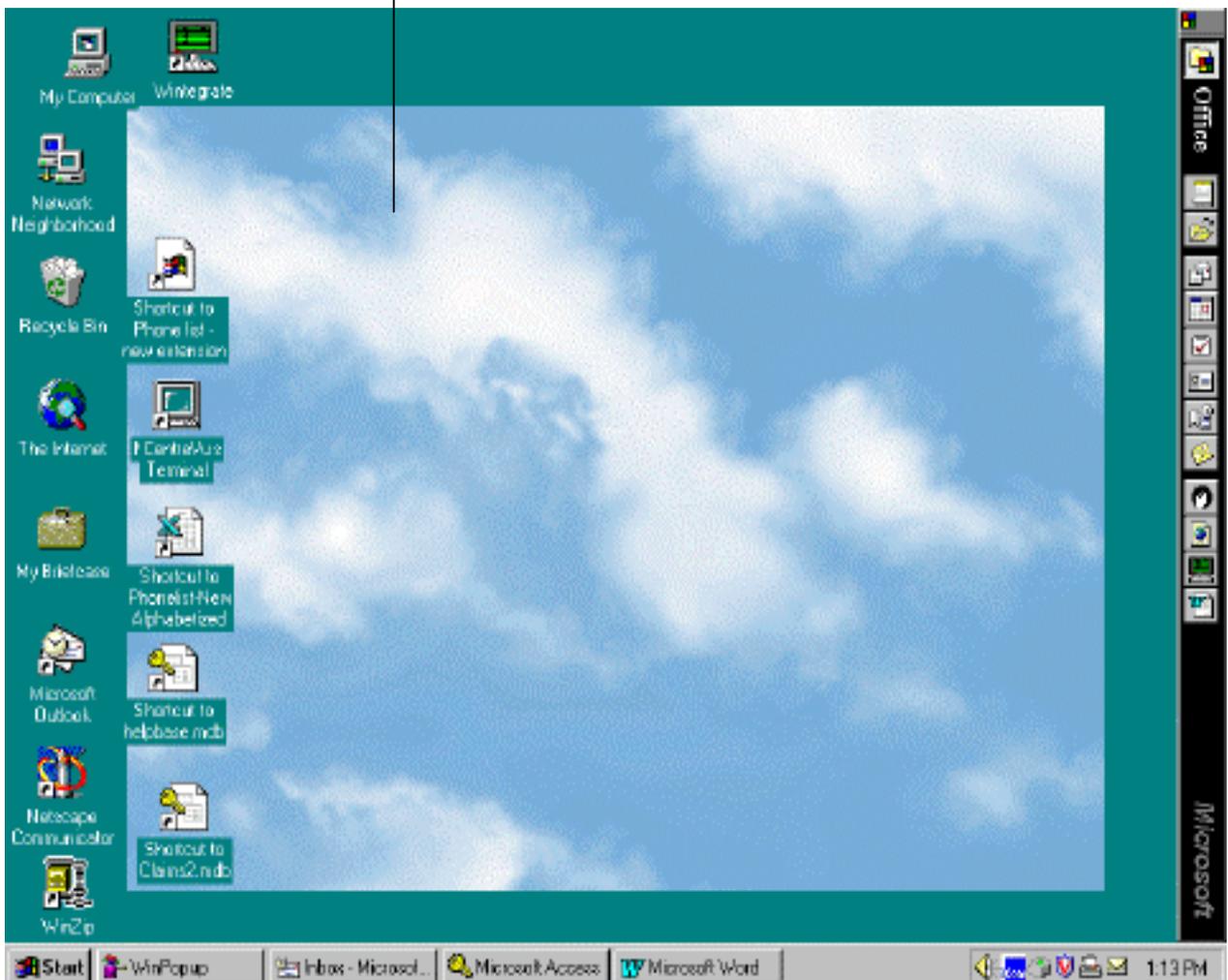
11. A window titled 'Copying Files...' may appear asking for the location of 'KLNETSET.EXE', type 'A:\win95' and click OK.



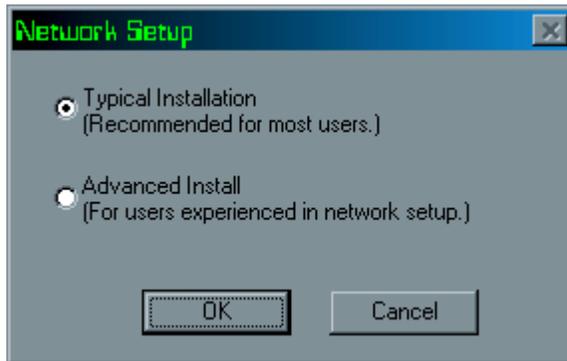
12. On some systems, you may be asked to insert your Windows 95 CD-ROM. After the files have been copied, you can go now to section 4.2.0 of the manual (Installation of Network drivers).

4.2.0 Installation of Network Drivers

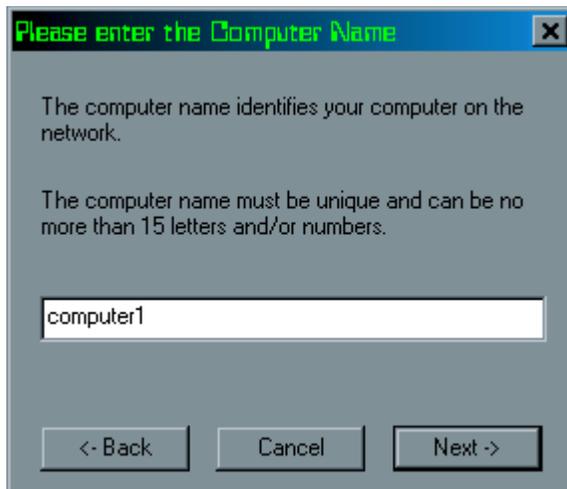
1. During the USB install, a shortcut was placed on the desktop called: **Netsetup**, double-click this Short Cut.



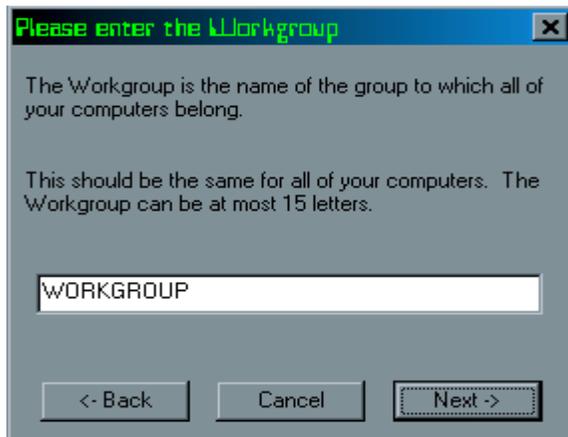
2. A window will appear asking for 'Typical Installation' or 'Advanced Installation'. It is recommended that you select 'Typical Installation'. If you select 'Typical Installation' proceed with the following steps below. If you select 'Advanced installation', the Windows 98/95 Network Control Panel will be launched and you will need to install the Belkin Direct Connect Network Adapter drivers manually. To install the Network adapters manually see **Section 5**. Click OK.



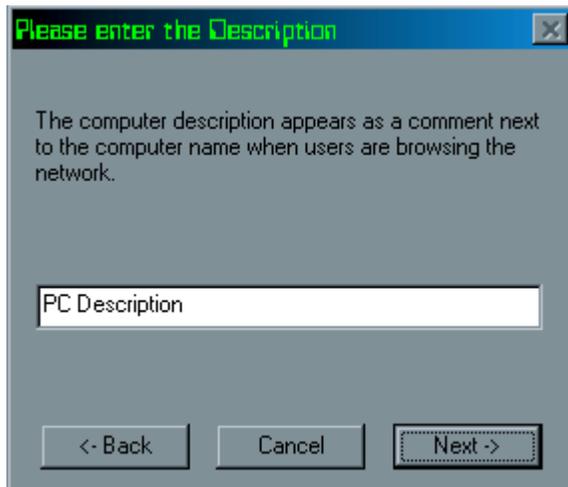
3. A window will appear asking for a Computer Name. The Computer Name is user defined. The Computer Name that you assign should be unique for each computer (e.g. Computer 1, Computer 2, PC1, PC2, PC3, Jonathan, Winston, Majid, Chris, Melody, Justin, Derek or Ferdi). Type one in and click next.



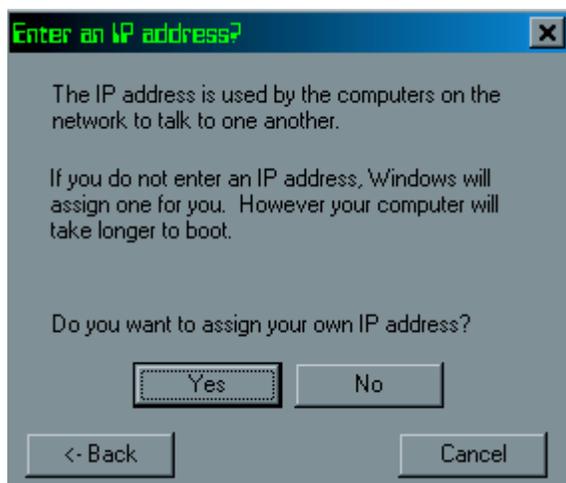
4. A window will appear asking for a Workgroup name. The Workgroup Name is user defined. Use only one Workgroup name for all computers (e.g. Home Computers, Office Computers or Tech Support). That is, the Workgroup name on all the computers should be exactly the same. Type one in and click Next.



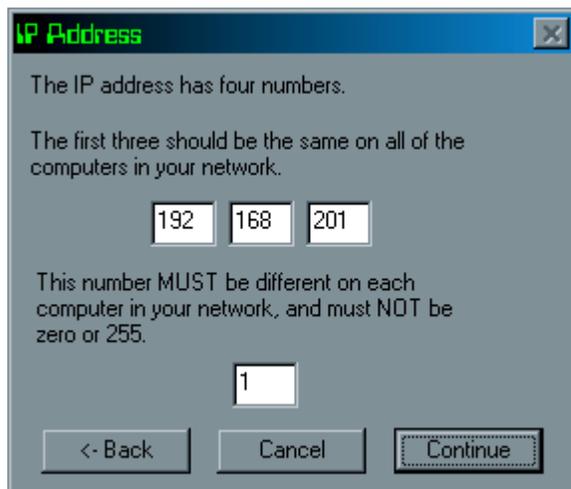
5. A window will appear asking for a PC description. Type one in and click next. You can type anything on the computer description or you can just leave it blank .



6. A window will appear asking if you want to assign your own IP address. It is recommended that you choose 'Yes'. If you choose 'Yes', proceed to the next step. You can choose to let Windows pick an IP address but this will lengthen the time it takes for your computer to boot.



7. Enter the IP address for this computer on in the four entry boxes. The first three should be the same for all computers. The one at the bottom should be unique. Click 'Continue'.



8. The network drivers for your computer will now be installed. There may be periods of inactivity up to ten seconds. You may be asked to insert your Windows 95/98 CD or for the location of your Windows 95/98 CAB files. When the driver installation is finished, you will be asked to reboot. Eject the driver diskette on Drive A then click 'Yes'.



9. After reboot your computer should be ready to go .

4.3.0 Sharing resources between computers

After installing the services necessary for networking, you can share your resources between each computer e.g. Hard Drives and CD-ROMs, so the user can do file transfer.

The following procedure outlines the steps on how to share Hard Drives (also applicable to CD-ROMs):

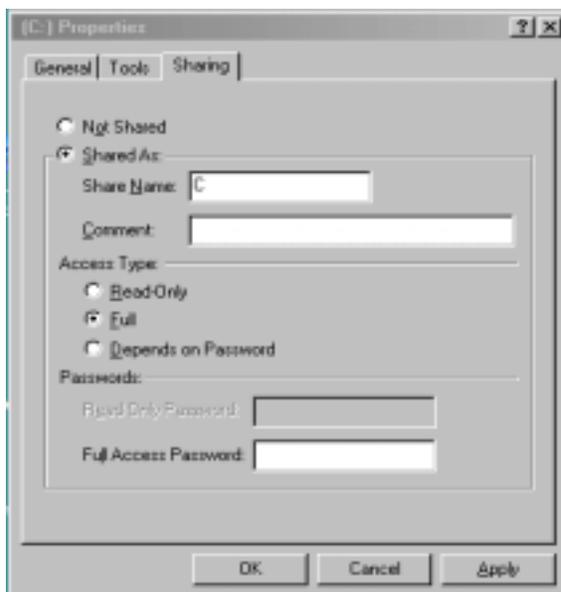
- 1) Double click on the MY COMPUTER Icon on your Desktop.



- 2) Left click on the hard drive available on your computer (e.g. C drive), to highlight it. From the menu bar click on **File**. On the pull down menu that appears, select **Sharing**.



- 3) A window like the one below will appear. Select 'Shared As', Share name is 'C', set the Access Type to 'Full' then click Apply. Click OK .



4. When you go back to My Computer, you will see a 'small hand' underneath the C drive signifying that the drive is now shared.

The Installation is now complete on the first computer. Go back to section 4.0 and commence installation on the rest of the computers connected to the network.

Once the installation is done on all the computers, on your Desktop (main screen) you can double click on the Network Neighborhood Icon. Once it is open, you should see all the computers connected to the network. If you get an error saying " Not able to browse the network ", wait for a minute or two then press the **F5 key** on your keyboard to refresh the network connections.

5. Setting Up Network Support Manually

If you choose '**Advanced Installation**' on Netsetup under section 4.2.0, you will need to setup the network manually. Setting up the network manually will also enable you to troubleshoot the network if it does not work right after running Netsetup using 'Typical Installation'. This section gives instructions for installing various network components that you will need depending on how you intend to use the Belkin USB Direct Connect. You will need to determine how your network is currently set up and what you will need to add to your configuration for proper functionality.

5.1. Determining Your Existing Configuration

1. Click the "Start" button, select "Settings", and then click "Control Panel".
2. Double-click "Network".
3. Click the "Configuration" tab.

You will see the words: "The following network components are installed:" with a list box underneath. Inside the list box are adapters, protocols, clients and services that have already been added. Read the next section to determine the proper configuration for your intended use(s).

5.2. Determining Your New Configuration

The USB Direct Connect requires certain components in order to function. These components are:

- USB Direct Connect Network Adapter - Adapter
- Client for Microsoft Networks – Client
- TCP/IP -> USB Direct Connect Network Adapter - Protocol
- File and Printer Sharing for Microsoft Networks - Service

If any of the above components are not listed in your existing configuration, add the missing components in the order listed above. See Section 5.3 for details on installing the missing components.

In addition, you may need other components depending on how you intend to use the USB Direct Connect. Below is a list of common activities you may want to use your USB Direct Connect for. Each activity has an additional component you will need to have for proper functionality.

- Sharing your files/printers with another –computer
File and printer sharing for Microsoft Networks
- Playing multi-player games which support IPX/SPX- compatible Protocol -> USB Direct Connect Adapter

Check your current configuration (see section 5.1) for existing components. If there are components missing from your configuration, follow the instructions in the next sections to add the proper components for your intended use.

5.3. Installing Network Components

Once you have determined what components you need to add, use the instructions below for help with installing each component.

5.3.1. Installing the USB Direct Connect Network Adapter

If USB Direct Connect Network Adapter is already in the installed component list from section 5.1 (Determining Your Existing Configuration), go on to the next section.

1. Display the “Configuration” tab in the Network dialog from the Control Panel (see directions in section 5.1).
2. Click “Add”.
3. Double-click “Adapter”.
4. Click “Have Disk...”
5. Insert the USB Direct Connect installation disk.
6. Make sure the edit box contains the name of your Floppy drive (typically A:). A:\Win 95 or A:\Win98
7. Click “OK”.
8. Click “OK” again in the last dialog box.
9. After exiting the Network Configuration, Windows may also ask for the location of ‘KLNETSET.EXT’, just type the path A:\win95 or A:\win98 then click OK.

5.3.2. Installing Client for Microsoft Networks

If Client for Microsoft Networks is already in the installed component list from section 5.1 (Determining Your Existing Configuration), go on to the next section.

1. Display the “Configuration” tab in the Network dialog from the Control Panel (see directions in section 5.1).
2. Click “Add”.
3. Double-click “Client”.
4. On the left side, in the “Manufacturers” box, click “Microsoft”.
5. On the right side, in the “Network Clients” box, click “Client for Microsoft Networks”.
6. Click on “OK”.

5.3.3. Installing TCP/IP

If TCP/IP -> USB Direct Connect Network Adapter is already in the installed component list from section 5.1 (Determining Your Existing Configuration), skip to step number 7.

1. Display the “Configuration” tab in the Network dialog from the Control Panel (see directions in section 5.1).
2. Click “Add”.
3. Double-click on “Protocol”.
4. On the left side, in the “Manufacturers” box, click “Microsoft”.
5. On the right side, in the “Network Protocols” box, click “TCP/IP”.
6. Click “OK”.
7. Click “TCP/IP -> USB Direct Connect Network Adapter”.
8. Click “Properties”.
9. Click on the circle next to “Specify IP Address:”
10. Change the “IP Address:” edit box to read:
“**192.168.201.X**”, with X as a number between **0** and **225**. X should be unique on between each computer. Also, change the Subnet Mask to “**255.255.255.0**”.
11. Click “OK”.

5.3.4. Installing File and Print Sharing (optional)

If File and Print Sharing are already in the installed component list from section 5.1 (Determining Your Existing Configuration), you do not need to follow these instructions.

1. Display the “Configuration” tab in the Network dialog from the “Control Panel” (see directions in section 5.1).
2. Click “File and Print Sharing”.
3. Click in either or both boxes, and click on “OK”.

5.3.5. Installing IPX/SPX-compatible Protocol (optional)

If IPX/SPX-compatible Protocol -> USB Direct Connect Network Adapter is already in the installed component list from section 5.2 (Determining Your Existing Configuration), you do not need to follow these instructions.

1. Display the “Configuration” tab in the Network dialog from the “Control Panel” (see directions in section 5.1).
2. Click “Add”.
3. Double-click “Protocol”
4. On the left side, in the “Manufacturers” box, click “Microsoft”.
5. On the right side, in the “Network Protocols” box, click IPX/SPX- compatible Protocol.
6. Click “OK”.
7. Click “IPX/SPX-compatible Protocol -> Dial-Up Adapter”.
8. Click “Remove”.

5.4. Setting up Communications

In order to share files or printers between computers, you will need to set up a workgroup to which these computers belong. Follow the instructions below to set up a workgroup and identification for each computer.

1. Display the “Configuration” tab in the Network dialog from the Control Panel (see directions in section 5.1).
2. Click the “Identification” tab at the top of the dialog.
3. In the Computer name: edit box, type in a unique name for the computer.
4. In the Workgroup edit box, type in the workgroup name that you would like to use for all of the computers.
5. Click “OK”.

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6. Un-installtion of Belkin USB Direct Connect

1. Make sure the Belkin Direct Connect Adapter (s) is disconnected. Click the 'Start' button.
2. Select 'Settings...'
3. Select 'Control Panel'
4. Double-click on 'Add/Remove Programs'
5. Select 'Belkin USB Direct Connect' from the list.
6. Click the "Add/Remove" button.
7. A windows will appear asking to reboot. Click 'Yes'.
8. After reboot, the Belkin USB Direct Connect Adapter is completely un-installed.



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