

MORE ON WINDOWS

Overview

This file provides additional information for Windows environments. It should be used if you cannot find what you need in the M202Plus product manual.

Within this file, you will find information about:

- M202Plus configuration through a manual ARP method - *Using ARP* on page 2.
- M202Plus configuration using the Dynamic Host Configuration Protocol (DHCP) - *Using DHCP* on page 4.
- communicating between different subnets - *Communicating Across Routers* on page 5.
- altering the workgroup the M202Plus displays in - *Changing Workgroup Names* on page 6.
- changing the M202Plus destination names used in Windows print setups - *Changing Destination Names* on page 6.
- Microplex's proprietary print solution for Windows - *Microplex Printing System (MPS) Host Setup* on page 8.
- printing from Windows 3.1 stations - *Windows 3.1 Host Setup* on page 10.

M202Plus Configuration

As mentioned in the M202Plus product manual, there are mandatory TCP/IP settings (i.e. an IP address and subnet mask) needed before the print server can be detected on the network. There are also some additional settings that you may want to configure but these are optional. This section offers alternative methods for configuring your M202Plus within a Windows environment and mentions some of the more common optional settings available.

Using ARP

To configure the M202Plus with its IP settings using a manual “**arp**” command, you will need to:

- 1 Log on to a Windows station with TCP/IP loaded and located on the same subnet as the M202Plus.
- 2 Find the Ethernet address for the M202Plus on the bottom of the device. It must be entered as part of this procedure.
- 3 Use the “**arp**” command to add an entry into the Windows station’s ARP table for the M202Plus. This is the most common syntax for this command:

Syntax:

```
arp -s ipaddress ethernetaddress
```

Example for Microsoft TCP stacks:

```
arp -s 192.75.11.9 00-80-72-07-00-60
```

This example specifies an M202Plus using IP address **192.75.11.9** and Ethernet address **00:80:72:07:00:60**.

- 4 Check to see if the ARP entry took properly.

```
arp -a
```

You should see an entry in the listed ARP table with the IP address and Ethernet address specified in Step 3.

- 5 Try to “ping” this IP address to see if the M202Plus can be seen on your network.

At this point, you should be able to communicate with the M202Plus from your *local* Windows station. This means the print server knows about an IP address and subnet mask to abide by and has these settings in its *current* memory. However, if the M202Plus is power cycled, these settings will disappear unless you store them into Flash. To do this, you will need to:

- 1 Load a Web browser on your Windows station and direct it to the URL “`http://M202PlusIPaddress/networkConf.html`” (e.g. “`http://192.75.11.9/networkConf.html`”).

Note: If prompted for a “User ID” and password first, type in “root” for the ID and press ENTER at the password prompt since there’s no password by default.

- 2 At the “Network Configuration” HTML form that displays, click in the field below the “IP Address” heading and type in the IP address for the M202Plus.
- 3 Under the “Subnet Mask” heading, enter the M202Plus’s subnet mask.

Note: If you would like to communicate with the M202Plus from across routers, you will need to fill in an entry within the “Routing” section. Please see *Communicating Across Routers* on page 5 for further details.

- 4 Click on the SUBMIT button when done and physically repower the print server to make the new settings take effect.

Using DHCP

DHCP allows you to dynamically assign an IP address to the M202Plus upon bootup. To configure the print server with its IP settings using DHCP, you will need to:

- 1 On your DHCP server, ensure you have the DHCP service running.

Note: If the DHCP server is across a router from the M202Plus, ensure your router supports RFC 1542 (i.e. to act as a relay agent) or else have a DHCP server on the *same* subnet as the print server.

- 2 On your DHCP server, ensure you have your scope (i.e. pool of IP addresses) configured with at least one IP address available for the M202Plus to use upon bootup.
- 3 Turn the M202Plus on so that it immediately sends out a DHCP request. Wait one minute to allow the IP address assignment process to complete. You should see the STAT LED on the front of the M202Plus slow down indicating it knows about an IP address to use.
- 4 Try to “**ping**” the M202Plus’s IP address from a Windows station to see if it can be seen on your network.

Note: You will only be able to communicate with the M202Plus from a network station on the *same* subnet as the print server. The M202Plus needs to be told about a default router/gateway so any packets that come in from a different subnet can be returned via this gateway. Please see *Communicating Across Routers* on page 5 to set this up.

Communicating Across Routers

Since Windows environments rely on TCP/IP to communicate with the M202Plus, crossing routers becomes an issue.

After following one of the M202Plus configuration methods mentioned within the product manual and within this file, you will most likely only be able to communicate with the print server from the *same* subnet. This means any hosts across a router will *not* be able to see your M202Plus. For this to happen, it's best to store a default router/gateway within the print server so that any packets destined for another subnet get forwarded to this router automatically. The router (or series of routers) can then take over ensuring the packets get to their final destination on another subnet on your network.

To configure a default router/gateway within the M202Plus, you will need to:

- 1 Load a Web browser on your Windows station and direct it to the URL "**http://M202PlusIPaddress/networkConf.html**" (e.g. "**http://192.75.11.9/networkConf.html**").

Note: If prompted for a "User ID" and password first, type in "**root**" for the ID and press ENTER at the password prompt since there's no password by default.

- 2 At the "Network Configuration" HTML form that displays, click in the first field below the "Gateway" heading and type in the IP address of the default router/gateway for the M202Plus's subnet.
- 3 Click on the SUBMIT button when done and physically repower the print server to make the new setting take effect.

Changing Workgroup Names

Windows environments define groups of related computers as “workgroups”. By default, the M202Plus belongs to the workgroup called “WORKGROUP”. However, you may want to change this to suit your network better. To do this, you will need to:

- 1 Load a Web browser on your Windows station and direct it to the URL “**http://M202PlusIPAddress/networkConf.html**” (e.g. “**http://192.75.11.9/networkConf.html**”).

Note: If prompted for a “User ID” and password first, type in “**root**” for the ID and press ENTER at the password prompt since there’s no password by default.

- 1 At the “Network Configuration” HTML form that displays, search for the “Windows (NetBIOS TCP/IP)” section and highlight the “Workgroup Name” field.
- 2 Type in the new workgroup name for the M202Plus.
- 3 Click on the SUBMIT button when done and physically repower the print server to make the new setting take effect.

Changing Destination Names

When defining some printers within Windows environments, the M202Plus requires that you specify a pre-defined destination rather than any name you’d like. For example, when creating a new printer under Windows NT, you are faced with a screen similar to *Figure 1*.

Figure 1: Windows NT Print Setup Dialogue Box



The first field requires the IP address for the M202Plus and the second field must be filled in with an existing destination from the print server (e.g. d1prn1). Otherwise, the M202Plus won't accept this as a valid network printer.

Table 1 outlines the default destinations to choose from.

Table 1: M202Plus Default Destinations

Destination	Mapped I/O Port
d1prn1 and d5prn1	PRN1
d2prn2 and d6prn2	PRN2
d3com1 and d7com1	COM1
d4com2 and d8com2	COM2

Each of these names can be changed to something more meaningful using the built-in HTML forms. To do this, you will need to:

- 1 Load a Web browser on your Windows station and direct it to the URL "**http://M202PlusIPaddress/destConf.html**" (e.g. "**http://192.75.11.9/destConf.html**").

Note: If prompted for a "User ID" and password first, type in "**root**" for the ID and press ENTER at the password prompt since there's no password by default.

- 2 At the "Print Path Configuration" HTML form that displays, select a destination link from the top of the page to bring up the appropriate destination's form. By default, you should see a line near the top of the form showing all of the eight destinations listed in *Table 1*.
- 3 Once the desired destination's HTML form displays,

highlight the “Name” field and type in the new name for this destination.

Note: When renaming a destination, you should keep the name similar to the I/O port or printer it points to on the M202Plus. For example, if you have an HP LaserJet IV off of the PRN1 port, you may want to use a name like “**lsr4prn1**” for identification purposes.

- 4 Click on the SUBMIT button when done and physically repower the print server to make the new setting take effect.

Host Configuration

The M202Plus product manual covers Windows NT and Windows 95 new printer setups. However, there are other Windows setups worth covering including one using a print utility from Microplex called “MPS”. This section covers these additional setups for you.

Microplex Printing System (MPS) Host Setup

To configure a new MPS printer on a Windows station, you will need to:

- 1 Insert the Microplex diskette labeled “MPS” into the floppy drive.
- 2 Load up the File Manager or WinFile and look under the floppy drive for an MPS ZIP file.
- 3 Double click on the MPS ZIP file to extract all files within it to a directory on the Windows station.
- 4 Once extracted to a directory, find the “Setup” file and double click on this to load the InstallShield Wizard.
- 5 Answer the prompts throughout the wizard and select “Yes” to restart your computer at the end.

- 6 Once your computer is rebooted, open the Settings:Printers folder to view your existing printers.

Note: MPS will only work with an existing printer. Therefore, if you don't have an existing printer that you can alter, please create one now using any port settings you'd like. These will be changed in the following steps anyways.

- 7 Select the printer that you want to use with MPS and click the right mouse button to bring up a sub-menu.
- 8 Select "Properties" from this menu to display the current settings for this printer.
- 9 Click on the "Details" tab to display the printer's port settings.
- 10 Click on the ADD PORT button.
- 11 At the "Add Port" dialogue box that displays, click on the radio button labeled "Other".
- 12 Click on "Microplex TCP/IP Printer Port" from within this "Other" list.
- 13 At the next dialogue box that displays, fill in the host name or IP address of the M202Plus in the first field.
- 14 Fill in a valid TCP port number on the M202Plus in the second field. The choices are **4000** for COM1, **4200** for COM2, **4400** for PRN1, and **4600** for PRN2 depending upon which port your printer is attached to.
- 15 Click OK when done to return to the "Details" window. You should now see something about "MPS Port" within the "Print to the following port:" field.
- 16 Click OK to close this printer's properties window.

You now have a new network printer which relies on MPS to print remotely to a printer off of the M202Plus.

Windows 3.1 Host Setup

If you are running Windows 3.1 stations on your network, you will need to rely on either TCP/IP or IPX to print to the M202Plus. If IPX is used, you will have a print queue defined on a Novell file server which your Windows 3.1 stations will send their print jobs to. The M202Plus will then service this print queue as either a PSERVER or an RPRINTER. Please see the Novell Configuration chapter within the M202Plus product manual for further details.

If you want to rely on TCP/IP though, you will need a third party TCP stack loaded onto your Windows station since TCP/IP support did not automatically come with Windows until the introduction of Windows NT and Windows 95. You may also be running a third party stack if you decided not to use Microsoft's.

Some common TCP stacks today are FTP Software's OnNet, NetManage's Chameleon, and Frontier Technologies' SuperTCP. In each case, they allow your Windows 3.1 station to communicate with other TCP/IP devices. This means you can send print jobs to the M202Plus as well.

The most common print method offered with Windows TCP stacks is LPR/LPD, a multi-platform remote printing protocol used on everything from PCs to mainframes. The LPR print setup is very simplistic involving only two parameters:

- 1 **M202Plus IP address** - the IP address or host name of the print server you want to print to.
- 2 **M202Plus destination/queue** - a pre-defined name on the print server telling the device which I/O port to send the jobs to. You will most likely use "d1prn1" for the PRN1 port, "d2prn2" for the PRN2 port, "d3com1" for the COM1 port, and "d4com2" for the COM2 port.

Note: This destination name is case sensitive and by default, all names are lowercase.