

M202/M212 v5.6.3 Release Notes



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OVERVIEW

These release notes expand on the new features incorporated into firmware versions 5.6.1 to 5.6.3 for the M202/M212.

NEW FEATURES

Novell Configurations

Version 5.6.3 introduces a slight modification to the preferred server feature under Novell environments helping with file server connections in larger installations. With version 5.6.3., *if there's more than 32 file servers in total*, the desired file server should be set as a preferred server using these commands on the M202/M212:

```
store pserver novell pserver add fileservername  
reset
```

The M202/M212 will only acknowledge 32 file servers and there's no guarantee that the desired file server will be one of these 32 servers. Therefore, the preferred server setting will guarantee the right server is recognized. To view which file servers the M202/M212 does acknowledge at a given time, please use this command on the device:

```
debug novell fserver
```

Note If you have any version prior to 5.6.3, the preferred server feature should *not* be used for any reason. If you have more than 32 file servers though or would like improved file server connections, please upgrade to version 5.6.3. Microplex Technical Support can help you with this.

IPAssign Windows Configuration Tool

Prior to version 5.6.3 of the M202/M212, assigning an IP address to the print server is accomplished using Microplex's own NPWin Windows utility, ARP, RARP, or BOOTP. Most often NPWin or a manual ARP command is the preferred choices but there can be problems with NPWin's complexity or with some ARP implementations on Windows stations. Therefore, with version 5.6.3, Microplex has introduced a new simplified Windows utility, IPAssign, which helps identify all Microplex products on your network and temporarily assign IP addresses to them. IPAssign automatically recognizes BOOTP packets broadcasted on the network by a Microplex product allowing you to then assign a temporary IP address to it for initial communications over the network.

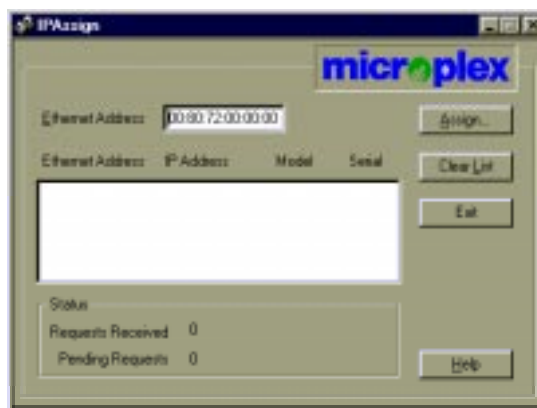


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To use IPAssign to recognize an M202/M212 on your network, you will need to:

- 1 Insert the Microplex diskette labeled "IPAssign" into the floppy drive on your Windows station. If you got IPAssign from Microplex's FTP or Web site, you can jump to Step 3.
- 2 Load the File Manager or WinFile and look under the floppy drive for an IPAssign self-extracting file.
- 3 Double click on the IPAssign file to launch the install program.
- 4 When prompted to install, click on YES to load the InstallShield Wizard.
- 5 Answer the prompts throughout the wizard.
- 6 Once the install process is complete, you will be prompted to view the "ReadMe" file. Select "Yes" to read this and when done, close the file.
- 7 Find the new IPAssign program group and double click on the "IPAssign" icon to load the program.
- 8 At the "IPAssign" main dialogue box that appears, you should see an entry for your M202/M212 appear in the list box. If not, give IPAssign a couple of minutes to find the device on the network or repower the device to speed the process. *Figure 1* shows an example screen.

Figure 1: IPAssign Main Screen



- 9 Once your M202/M212's Ethernet address appears in the list box, select it and press ASSIGN.
- 10 At the "Assign IP" dialogue box that displays next, fill in the IP address and subnet mask for this print server.

Note: You can also assign a default router/gateway entry within this dialogue box allowing your M202/M212 to communicate across subnets. This is optional though.



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- 11 Click SET when done to assign these TCP/IP settings to the print server. IPAssign will then display two dialogue boxes informing you of its progress.

Once you see the message about successfully assigning the settings, click OK. These TCP/IP settings are now in the M202/M212's *current* memory to be retained until the next power cycle.

You will now need to store these settings into the device's EEPROM to ensure the settings are not lost after a power cycle. To do this, you will need to:

- 1 Begin a Telnet session with the print server using the IP address you have just assigned to it.
- 2 Log in as "root" when prompted for a login name and at the password prompt, just press ENTER since there is no password by default.
- 3 Once successfully logged in, enter these commands to store the IP address and subnet mask into EEPROM:

```
store net 1 addr IPaddress
```

```
store net 1 mask netmask
```

- 4 If you want to store a default router entry allowing for communications across subnets, you will need to enter this command specifying the IP address of your subnet's default router in the *routerIPaddress* variable:

```
store net route add default routerIPaddress 1
```

- 5 Repower the M202/M212 to make these settings take effect:

```
reset
```

At this point, your Telnet session will be closed and the M202/M212 will reboot. This ensures that the new TCP/IP settings are stored in EEPROM and they are in fact being used. Now you will not lose these settings unless they are changed using similar commands.

Unix Host Software

Microplex's Unix host software, which comes with each Microplex product, has been improved making it easier to use. This new software has been available for approximately 6 months, however, so you may have used this already.

Overview The Unix host software provided with Microplex products comes compressed and tarred using standard Unix utilities. The file will always be called "**npdist.tar.1.Z**" so once copied onto your Unix system, you will need to uncompress and untar it for use in a temporary directory.

Once undone, you will have a configuration script like "**ezsetup**" and a directory called "**npdist**". The directory contains extra files such as processing binaries, source code, and interface scripts which are *not* always mandatory in a Microplex print setup.

Prior to the latest version 5.7 software release, Microplex products could be configured for TCP/IP environments using either "npconfig" or



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“ezsetup”, Microplex’s two configuration software programs written for several flavours of Unix. “npconfig” was for more detailed configurations and “ezsetup” was the program to run if you needed a simple, quick configuration of the print server or a print setup on your host.

With the version 5.7 release of the Unix host software, *“ezsetup” is now the only Unix installation program provided.* Therefore, to configure a print server with TCP/IP settings (i.e. IP address, subnet mask) and to configure a print setup on your Unix host, you just need to run “ezsetup” from your Unix command line once you’ve logged on as root or superuser. The syntax is:

```
./ezsetup
```

Note If you have HP/UX, you must run “ezsetup” like this to ensure the proper menus appear:

```
ksh ./ezsetup
```

You will be prompted about your type of Unix system and then a Main Menu will appear providing these choices:

- 1 Configure New Unit
- 2 Configure Host Setup

If you’d like to configure the Microplex print server with an IP address and subnet mask, select “1”. If you can already communicate with the print server over TCP/IP, then you can select “2” to create a print setup on this Unix host which can send print jobs to the print server. Simply follow the prompts until “ezsetup” tells you it has completed its steps.

New “ezsetup” Advantages The key advantages to this new “ezsetup” besides its ease of use are:

- It will work with all Microplex print server models including the M200/M201, M202/M212, M204, M205/M206, and M208. You do not need different versions of the software for each model.
- It will work with all firmware versions going back as early as version 4.0. You do not need to worry about firmware compatibility issues any longer.
- If doing a print setup on a System V Unix host, a very simplistic Microplex interface script, “rawsysv.if”, will now be used eliminating the need for any extra host binaries or compilation. This also holds true if you have a BSD-type Unix system but you want to use an interface script within the printcap file rather than the standard LPD (or “remote printer”) print method.

As for the rest of the Unix host software (i.e. the files contained within the “npdist” directory), the only difference from earlier software versions is the interface scripts provided. If interface scripts are needed for a Unix print setup, the concentration is now on short, simplistic scripts which do not require any additional host binaries or compilation. The scripts simply capture the spooled data, send it to standard out, and then redirect this data over the network to the print server. Any extra processing like carriage return insertion can then be done on the print server.

Note All other binaries and source code are the same as before.



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Microplex Printing System (MPS) for Windows

Prior to version 5.6.3 of the M202/M212, the only Windows print methods available were those provided with the operating system. Now with this new firmware version, Microplex has introduced “MPS” as an alternative direct socket print method for Windows NT and Windows 95 environments.

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. If you got MPS from Microplex’s FTP or Web site, you can jump to Step 3.
- 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:Printer 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, 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 on 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 M202/M212 in the first field.
- 14 Fill in a valid TCP port number on the M202/M212 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.



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15 Click OK when done to return to the “Details” window. You should now see something about “MPS Port” within the “Print to 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 M202/M212

COMMAND CHANGES

Changed Commands

The M202/M212 print server has a command shell called “**npsh**” built in to its firmware. This command shell can be accessed through telnet or remote command sessions (i.e. rsh, rcmd, remsh) to the unit, through the “npsh” Novell executable, or through one of the serial ports with a dumb terminal, PC, or laptop directly attached.

Within the parallel port command structure of this shell, this command is used to alter the speed and flow control used on the port:

Old `set portname [-]ackmode [-]bbmode [-]fastmode [-]slowmode [-]vslowmode`

where:

portname	“prn1” or “prn2” depending on which parallel port the printer is attached to.
ackmode	Flow control. Use the $\overline{\text{ACK}}$ signal to trigger next data transfer. Busy mode is used as the default flow control method.
bbmode	Bit Bucket mode. Simulate an attached printer even if one isn’t attached.
fastmode	Speed. Increase the data transfer rate.
slowmode	Speed. Slow the data transfer rate.
vslowmode	Speed. Slow the data transfer rate even further to accomodate slower or older printer models.

With version 5.6.2 and higher, this command has been changed to:

New `set portname mode slow|cen|pc|fast|bb`

where:

portname	“prn1” or “prn2” depending on which parallel port the printer is attached to.
slow	Slow the data transfer rate.
cen	Centronics mode. Use with <i>older</i> impact printers (i.e. dot matrix, line printers).
pc	Default mode. Will work with most printers.
fast	Increase the data transfer rate. Used with some newer, faster printers like the HP 4 and 5 series.



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bb Bit Bucket mode. Simulate an attached printer even if one isn't attached.

Note There is *no* longer a setting to adjust the flow control method of the parallel port from busy mode to ACK mode. This is no longer necessary.

Note Using the *old* command syntax for the parallel ports *will* continue to work with version 5.6.2 but this will eventually be phased out in future firmware releases.

New Commands

The following commands have been added to the “**npsh**” command shell:

```
set sysinfo module [-]novell [-]appletalk [-]netbios
```

Prior to version 5.6.3, only the Novell and AppleTalk stack could be enabled or disabled within the M202/M212 allowing for easier memory allocation or network broadcast control. However, with version 5.6.3 and higher, the NetBIOS over TCP/IP protocol can now be controlled as well.

```
store tcpip tcp opts [-]disbufmgmt
```

Use this command to enable or disable receive buffer management on the M202/M212. The receive buffer controls how many simultaneous TCP connections can be allowed with the unit at one time. The only time you may need to have receive buffer management turned off is if you notice short pauses between the end of one print job and the start of the next job usually with LPR printing.

```
store pserver opts [jobtimeout seconds]
```

This command only applies if a logpath setting is used for printer feedback (e.g. logpath type equals “printer” and “pgcnt” for printer errors and pagecounting responses). Adjusting this *seconds* value will tell the print server how long to wait for printer feedback at the end of a print job before it continues on to the next print job in the queue. The default value is 0 meaning it will hold indefinitely. Most printers should respond quite quickly so you won't need to adjust this value but if you have time-critical printing happening (e.g. one job every 7 seconds) with certain logging requirements, this may come into play.

Note Anytime you execute a “**store**” command, you must reboot the print server with a “**reset**” command or physically unplug and plug it back in. Otherwise, the setting will not become a current or working setting in memory.

CE Mark

The M202/M212 conforms with EU ENC Directive 93/68/EEC providing that certain requirements are met by the end user. The requirements for CE Mark conformity are:

- 1 Shielded cables must be used on all parallel and serial ports.
- 2 The included pink plastic caps must be placed securely over any unused I/O ports.



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Declaration of Conformity Standards to which conformity is declared: ENC Directive 93/68/EEC

Manufacturer's Name: Microplex Systems Ltd.
Manufacturer's Address: 8525 Commerce Court
Burnaby, B.C., Canada, V5A 4N3
Type of Equipment: Ethernet Print Server
Model #: M202/M212
Year of Manufacture: 1995

I hereby declare that the equipment specified above conforms to the above Directive.

Place: Vancouver, B.C.
Date: October 31, 1995
Name: Fred Fierling
Position: President