

# MORE ON COMMANDS

## Overview

This file provides additional information about the command set built in to the M202Plus. It should be used if you cannot find what you need in the M202Plus product manual.

Within this file, you will find information about:

- different ways to access the M202Plus's built-in command shell, *npsh* - *npsh Access Methods* on page 2.
- different *npsh* command prefixes - *Main npsh Command Prefixes* on page 2.
- finding help for the commands online - *Getting Command Help* on page 3.
- listing of all commands beginning with “**store**” - *store Commands* on page 3.
- listing of all commands beginning with “**set**” - *set Commands* on page 10.
- listing of all commands beginning with “**list**” - *list Commands* on page 27.
- listing of all commands beginning with “**debug**” - *debug Commands* on page 30.
- listing of extra commands - *Miscellaneous Commands* on page 31.

## Command Shell Overview

As mentioned in the M202Plus product manual, the print server comes with an in-depth command shell called “**npsh**”. It allows you to manipulate objects like destinations, I/O ports, and models and provides monitoring and troubleshooting capabilities as well.

### npsh Access Methods

The manual also discusses the many ways this command shell can be accessed. This includes:

- built-in HTML forms,
- a Telnet session from a TCP/IP host to the M202Plus,
- a PC/laptop/terminal directly attached to one of the serial ports on the print server,
- a single remote shell command (i.e. rsh, rcmd, remsh) from a TCP/IP host.

### Main npsh Command Prefixes

Within the product manual, the most common command prefixes are covered as well. All configurable commands either start with “**store**” or “**set**”, troubleshooting commands usually start with “**debug**”, and view commands start with “**list**”.

**Note:** If the “**store**” prefix is used, the M202Plus must be repowered to make the changes take effect. Since “**store**” affects Flash settings only, the print server must reset and read the new settings now in Flash.

**Note:** If the “**set**” prefix is used, a “**save**” command must be executed as well so that the new settings are retained after power cycles. Since “**set**” only affects the settings in memory, they will be lost after a power cycle unless they are told to be saved to Flash.

## Getting Command Help

The M202Plus's command shell provides several online help tools. These include:

- “?” Command**      Typing “?” once logged in to the command shell will produce a full listing of all commands available.
- Command Prefixes**   Typing in the beginning of a command will produce an error message showing the correct syntax. For example, typing in “**store tcpip**” will produce a list of all commands that start with this prefix.

## Complete Command List

This section outlines the entire M202Plus command set including the command syntax, a description, and in most cases, an example for each command listed.

**Note:**      If you see the word “*ifnum*” in any npsd commands, you should substitute a “1” unless told otherwise. This “1” represents the one network interface (i.e. Ethernet) supported by the M202Plus.

### store Commands

These commands change the settings stored in Flash and do *not* affect the current or working settings in memory. A power cycle is needed before the stored settings become current.

```
store ifc ifnum utp [-]li [-]rx
```

```
store ifc 1 utp li
```

Modify the physical UTP interface properties where **li** enables link integrity and **rx** enables the increased receive threshold.

**store ifc from default**

Set all UTP settings back to factory defaults.

**store ifc from current**

Store all current UTP settings to Flash so they are retained after a power cycle. This ensures all current settings match what's stored in Flash.

**store pserver opts [[-]jobsecurity] [jobtime-out *seconds*]**

**store pserver opts jobsecurity jobtimeout 5**

If **jobsecurity** is disabled, any user can cancel queued jobs on the M202Plus including guest users. If **jobtime-out** is set to some value other than 0, the M202Plus will only wait this amount of *seconds* when getting printer feedback. This is only used if you have a log-path port and type set on a particular destination.

**store pserver tcpsocket *TCPportnumber* port *newTCPportnumber***

**store pserver tcpsocket 4000 port 5000**

Change a pre-defined *TCP port number* on the M202Plus to a *new TCP port number*. The default numbers are 4000 for COM1, 4200 for COM2, 4400 for PRN1, and 4600 for PRN2.

**store pserver tcpsocket *TCPportnumber* dest *destination***

**store pserver tcpsocket 5000 dest dlprn1**

Assign a pre-defined *TCP port number* to a particular *destination* on the M202Plus. Therefore, if you are using a print method that sends jobs directly to a TCP port number, you still have the option to process the job data through this destination's settings.

```
store pserver novell passwd password
```

```
store pserver novell passwd mplex
```

Store the *password* for the M202Plus to use when logging in to a Novell file server. This *password* would have to match one set on the file server.

```
store pserver novell context NDScontext
```

```
store pserver novell context eng.mplex
```

Tell the M202Plus which *NDS context* it falls within on your NetWare 4.x file server.

```
store pserver novell mode [bindery|nds]
```

```
store pserver novell mode nds
```

Define which Novell mode the M202Plus should act under. For NetWare 3.x environments, this should be **bindery**. For NetWare 4.x environments, this should be **nds**.

```
store pserver novell user name username
```

```
store pserver novell user name microl
```

Define a *username* on the M202Plus to be used when it logs into a Novell file server to find information. This *username* must match a user pre-defined on the Novell file server.

```
store pserver novell user passwd password
```

```
store pserver novell user passwd mplex2
```

Define a *password* on the M202Plus for the Novell user already defined. This *password* must match the one stored on the Novell file server. Passwords are optional as long as there isn't one defined on the file server for the user.

```
store pserver novell fserver add|del
fileservername
```

```
store pserver novell fserver add fs1
```

Add or remove a server entry on the M202Plus for the Novell file server it will be servicing.

```
store pserver apple zone newzonename
```

```
store pserver apple zone sales
```

Store a particular AppleTalk zone on the M202Plus defined by *newzonename*. By default, the print server will come up in your network's default zone.

```
store pserver applepap papname name
newpapname
```

```
store pserver applepap prn1 name laser
```

Change the current AppleTalk printer specified by *papname* to something new as defined by *newpapname*. The default PAP names are prn1, prn2, com1, and com2 for easy I/O port referencing.

```
store pserver applepap papname dest
destination
```

```
store pserver applepap prn2 dest d6prn2
```

Alter the AppleTalk printer specified by *papname* to print to the *destination* specified. This mapping does not appear in the Chooser on the Apple station. It can only be seen under "list pserver" on the M202Plus.

```
store pserver applepap papname driver
newdrivername
```

```
store pserver applepap prn1 driver Deskjet
```

Change the AppleTalk printer specified by *papname* to use the printer driver specified by *newdrivername*. By default, the M202Plus supports the LaserWriter driver.

Drivers are selected within the Chooser on the Apple station.

```
store pserver smb workgrp newworkgroupname
```

```
store pserver smb workgrp eng
```

Define a different Windows workgroup as defined by *newworkgroupname* for the M202Plus to be visible within. By default, the print server only comes up within the group called "WORKGROUP".

```
store pserver from default
```

Set all general print server settings back to factory defaults.

```
store pserver from current
```

Store all current general print server settings to Flash so they are retained after a power cycle. This ensures all current settings match what's stored in Flash.

```
store rprinter add|del printservername  
printrnumber destination
```

```
store rprinter add pserver1 0 dlprn1
```

Add or delete the RPRINTER settings on the M202Plus for a Novell environment. The *printservername* must be the name of an existing PSERVER.NLM on your Novell file server. The *printrnumber* is the printer's number within this PSERVER.NLM. The *destination* is the queue on the M202Plus where the print jobs will be sent to.

```
store tcpip ifnum addr IPaddress
```

```
store tcpip 1 addr 192.75.11.9
```

Store the IP address for the M202Plus.

```
store tcpip ifnum mask netmask
```

```
store tcpip 1 mask 255.255.255.0
```

Store the subnet mask for the M202Plus.

```
store tcpip ifnum opts [[-]rarp] [[-]bootp]
[[-]dhcp]
```

```
store tcpip 1 opts -rarp -bootp dhcp
```

Enable or disable the automatic RARP, BOOTP, and DHCP requests for IP addresses upon bootup. If you are storing the M202Plus's TCP/IP network settings within the device, you won't need to rely on RARP, BOOTP, or DHCP for new settings.

```
store tcpip ifnum frametype [[-]ethernet2]
[[-]802.2snap]
```

```
store tcpip 1 frametype ethernet2 802.2snap
```

Control which frame type(s) is supported with the TCP/IP protocol. By default, both **Ethernet II** and **802.2snap** are enabled but normal TCP/IP communications rely on Ethernet II. This setting has *no* affect on other supported network protocols (e.g. Novell).

```
store tcpip route add|del host|net IPaddress
ifnum
```

```
store tcpip route add net 192.75.12.0 1
```

```
store tcpip route del net 192.75.12.9 1
```

Add or delete a static route to a particular TCP/IP host or subnet specified by *IPaddress* so the M202Plus knows how to communicate with it. Normally one entry for a default router/gateway is all that is needed for communications between different subnets. Please see the next command for details.



```
store tcpip route add|del default
routerIPaddress ifnum
```

```
store tcpip route add default 192.75.11.1 1
```

Store a default router/gateway defined by *routerIPaddress* so the M202Plus knows where to direct packets destined for another subnet. It is easier to store one default entry rather than an entry per remote host or network as in the previous command.

```
store tcpip tcp rxwin packets
```

```
store tcpip tcp rxwin 2
```

Determine the receive window size for the M202Plus. Usually the *packets* value ranges from 2-8 with the lower number allowing for more simultaneous TCP connections with the print server.

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

```
store tcpip tcp opts keepalive -disbufmgmt
```

Control whether the M202Plus maintains a connection with a host when data cannot be accepted into its buffer. Normally the **keepalive** feature is enabled so when the printer cannot accept data, the print job connection is maintained and continued with once the situation clears. If **disbufmgmt** is disabled (i.e. "-"), the M202Plus will not buffer any data when there's a blocked situation with the printer. Normally it's best to have both **keepalive** and **disbufmgmt** enabled.

```
store tcpip tcp access [root] add|del
IPaddress
```

```
store tcpip tcp access add 192.75.11.25
```

Add or remove an entry from the M202Plus's TCP access list defined by *IPaddress*. If the list has an entry, only this host can print to and remotely interact with the print server.

```
store tcpip proxy add|del targetIPAddress
```

```
store tcpip proxy add 192.75.11.26
```

Enable or disable the M202Plus from answering ARP requests for a remote host defined by *targetIPAddress* off of a SLIP connection. If this is disabled and one of the serial ports is being used for SLIP, packets destined for the remote or target host will not get forwarded to it.

```
store tcpip from default
```

Set all TCP/IP network settings back to factory defaults.

```
store tcpip from current
```

Store all current TCP/IP network settings to Flash so they are retained after a power cycle. This ensures all current settings match what's stored in Flash.

## set Commands

These settings alter the current or working settings in memory only. Therefore, they will be lost if the M202Plus is power cycled. To ensure this doesn't happen, be sure to issue a "save" command so the current settings get written to Flash.

```
set com1|com2 cs5|cs6|cs7|cs8
```

```
set com1 cs8
```

Select the character size ranging from five to eight bits. The default is eight.

```
set com1|com2 50|110|134|300|600|1200|2400  
|4800|9600|19200|38400
```

```
set com2 19200
```

Select the serial port baud rate ranging from 50 bps to 38400 bps. The default is 9600 bps.

```
set com1|com2 [-]parenb
```

```
set com1 -parenb
```

Enable or disable parity generation and detection.

```
set com1|com2 [-]parodd
```

```
set com2 -parodd
```

Select odd or even parity.

```
set com1|com2 [-]parity
```

```
set com1 -parity
```

With “-”, disable parity generation and set the character size to 8 bits. If enabled, select even parity and set the character size to 7.

```
set com1|com2 [-]ctsopb
```

```
set com2 ctsopb
```

Use two stop bits per character. With “-”, use one.

```
set com1|com2 [-]istrip
```

```
set com1 -istrip
```

With “-”, do not strip input characters to seven bits.

```
set com1|com2 [-]ixon [-]ixany
```

```
set com2 ixon
```

Enable or disable software flow control (i.e. **ixon**). If **ixany** is set, any character can restart output. Otherwise, the START character is used to restart. The default flow control method is **ixon**.

```
set com1|com2 [-]ctsflow
```

```
set com1 -ctsflow
```

Enable or disable hardware flow control (i.e. **ctsflow**) using the CTS signal to determine the flow of data.

```
set com1|com2 [-]ixoff [-]rtsflow
```

```
set com2 -ixoff
```

Use **ixoff** to send or don't send START/STOP characters when the input queue is nearly empty/full. Use **rtsflow** if the RTS signal is to be used in the flow control process.

```
set com1|com2 [-]ignbrk
```

```
set com1 ignbrk
```

Enable or disable break detection on the serial port. If printing off the serial port, ignoring the BREAK signal from the printer may be needed. However, if **ignbrk** is set, serial port login sessions will not be allowed on this port.

```
set com1|com2 [-]igndcd
```

```
set com2 igndcd
```

Enable or disable DCD detection. If using a modem connected to the serial port to establish terminal sessions, disable this feature.

```
set com1|com2 [-]slip
```

```
set com1 slip
```

Set the designated serial port as a dedicated SLIP connection. This will fail if the serial port has a destination/queue already pointing to it for printing purposes. Therefore, you will need to look at "**list dest**" to make sure no destinations are mapped to this port first.

```
set com1|com2 flush
```

```
set com2 flush
```

Flush the data in the serial port input and output buffers.

```
set com1|com2 unlock
```

```
set com1 unlock
```

Release the access lock on the serial port.

```
set com1|com2 timeout minutes|none
```

```
set com2 timeout 1
```

Terminate the print job sent to the serial port if it is not printed after the timeout period in *minutes* expires.

The *minutes* value ranges from 0 to 255 with 0 indicating no timing out to take place. This is the default setting and should be fine for most print setups.

```
set com1|com2 [-]opost
```

```
set com1 -opost
```

Allow or disallow output processing on the serial port such as carriage return insertion (i.e. onlcr).

```
set com1|com2 [-]onlcr
```

```
set com2 -onlcr
```

Enable or disable carriage return insertion on the serial port. This may be needed for Unix text jobs coming through with solitary linefeeds. This feature is almost always set at the model level rather than the I/O port level though.

```
set com1|com2 xtab tablength|none
```

```
set com1 xtab 16
```

Set the tabstop width as indicated by *tablength*. The range is 1 to 16 spaces.

```
set com1|com2 from default
```

Set all serial port settings back to factory defaults.

```
set com1|com2 from stored
```

Set all current serial port settings to the stored values in Flash.

```
set date year month day
```

```
set date 1997 02 10
```

Set the current date noting the four-digit *year*, the two-digit *month* from 1 to 12, and the *day* being the number in the month. If the M202Plus is reset, this value will be lost so you will need to reset the date again.

```
set dest destination name newname
```

```
set dest d1prn1 name laser
```

Change the current name of the *destination* to a new name as indicated by *newname*. This *newname* must be nine characters or less or else it will be truncated and these names are case sensitive.

```
set dest destination ioport
prn1|prn2|com1|com2
```

```
set dest laser ioport prn2
```

Associate a *destination* with one of the M202Plus's four I/O ports as defined by *ioport* so that jobs sent to this *destination* will get forwarded to the specified port.

```
set dest destination backchannel
[prn1|prn2|com1|com2]
```

```
set dest d2prn2 backchannel prn2
```

Establish a return path for printer feedback for a given *destination*. Since all M202Plus I/O ports are bi-directional, however, you will most likely use the same I/O port that the *destination* is currently sending jobs to.

```
set dest destination alternate
seconddestination
```

```
set dest d1prn1 alternate d5prn1
```

Establish an alternate destination defined by *seconddestination* for receiving print jobs if the first *destination*'s mapped I/O port is busy. There are certain test conditions to be met before jobs are redirected including an existing printer error on the first I/O port, the job isn't the first one in the I/O port's queue, the first queue is full, and the alternate destination's mapped I/O port isn't busy or in an error state.

```
set dest destination model modelname
```

```
set dest d3com1 model m7
```

Associate a model with a destination. Jobs sent to the named *destination* are processed according to the options defined in the named model.

```
set dest destination logpath logpathname
```

```
set dest d1prn1 logpath 15
```

Associate a logpath with a destination. Jobs sent to the named *destination* are logged according to the settings defined in the named logpath.

```
set dest destination service [[-]socket]
[[-]lpd] [[-]lpsched] [[-]rprinter]
[[-]pserver] [[-]appletalk] [[-]netbios]
[[-]ftpd]
```

```
set dest d2prn2 service -appletalk
```

Set the *destination* to handle only certain print services. To add a service, specify the service name. To disable a service, use "-" before the name. The available services are:

**socket**                      Direct socket printing via TCP/IP.

<b>lpd</b>	LPR printing with TCP/IP including LPR clients on any platform.
<b>lpsched</b>	LP or System V printing with TCP/IP.
<b>rprinter</b>	Novell RPRINTER support.
<b>pserver</b>	Novell PSERVER support.
<b>appletalk</b>	AppleTalk printing. Disabling this service will guarantee this <i>destination</i> doesn't appear in the Chooser on the Apple station.
<b>netbios</b>	Windows 95 and Windows for Workgroups printing.
<b>ftpd</b>	Printing using the File Transfer Protocol (FTP) via TCP/IP.

**set dest from default**

Set all destination settings back to factory defaults.

**set dest from stored**

Set all current destination settings to the stored values in Flash.

**set logpath *logpath* name *newname***

**set logpath *l1* name *pagecount***

Change the current name of the *logpath* to a new name as indicated by *newname*. This *newname* must be nine characters or less or else it will be truncated and these names are case sensitive.



```
set logpath logpath type [[-]job] [[-]user]
[[-]pgcnt] [[-]cksum] [[-]printer]
[[-]ioport]
```

```
set logpath 12 type job user printer pgcnt
```

Establish the type of printer and print job logging to be done within this *logpath*. The options are:

<b>job</b>	Job ID, username, etc.
<b>user</b>	User ID along with three messages per job about start and finish.
<b>pgcnt</b>	Number of pages printed per job. This depends on whether the attached PostScript printer supports this query properly though.
<b>cksum</b>	16-bit checksum value to confirm integrity of data printed.
<b>printer</b>	Special printer messages if supported.
<b>ioport</b>	Printer error messages determined through the parallel port pins. This is not applicable for serial port printing.

```
set logpath logpath port TCPportnumber|
email|syslog
```

```
set logpath 13 port 2000
```

Determine where the log information should be sent for a print job or attached printer. The choices are:

<b><i>TCPportnumber</i></b>	TCP port number ranging from 1024 to 65000.
<b>email</b>	Particular user's email address. This address is set using the " <b>set sysinfo email <i>email-name@IPaddress</i></b> " command.

**syslog**                    A central TCP/IP host running the SYSLOG daemon. This host is set using the “**set sysinfo syslog IPaddress**” command.

**set logpath from default**

Set all logpath settings back to factory defaults.

**set logpath from stored**

Set all current logpath settings to the stored values in Flash.

**set model *model* name *newname***

**set model m1 name landscape**

Change the current name of the *model* to a new name as indicated by *newname*. This *newname* must be nine characters or less or else it will be truncated and these names are case sensitive.

**set model *model* type raw**

**set model m2 type raw**

Set the model **type** to **raw** so that it does not process the data passing through it in any way.

**set model *model* type a2ps [*pageorientation* [*pagesize* [*rows* *columns*]]] [*cont*]**

**set model type a2ps**

Set the model **type** to **a2ps**. If text or ASCII data passes through, the model will convert this to PostScript data to be accepted by the attached PostScript printer. The a2ps default settings are portrait, letter, 60 rows, and 80 columns. These can be altered using these options:

*pageorientation*        Direction of page (i.e. **portrait** or **landscape**).

<i>pagesize</i>	Size of page (i.e. <b>letter</b> , <b>legal</b> , <b>exec</b> , or <b>a4</b> ).
<i>rows</i>	Number of rows in page.
<i>columns</i>	Number of columns per line.
<b>cont</b>	Continuously senses print job for data format. For example, if a PostScript banner page comes before an ASCII job, the M202Plus senses both parts of the job separately. This way, the banner page gets left alone but the ASCII data still gets converted to PostScript.

```
set model model type pcl-ps [PCLswitchstring
PostScriptswitchstring]
```

```
set model m5 type pcl-ps
```

Switch printer emulation modes (e.g. PCL or PostScript) depending on the type of data passing through the M202Plus. To do this, the model prepends a header string telling the printer which mode to enter for the job. It then appends a string to switch the printer back at the end of the job. The default switch strings are compatible with HP III printers and higher. These can be changed by defining a new *PCLswitchstring* and a new *PostScriptswitchstring*.

```
set model model banner [ps|text|auto [after]]
```

```
set model m8 banner text
```

Determine whether a banner page should be added for print jobs passing through the *model*'s mapped destination/queue. **ps** will produce a PostScript banner page. **text** will produce a text banner page. **auto** will determine which type is needed depending on the type of print job data passing through. By default, banner pages are added to the front of the job. However, if

**after** is set, the banner page will come at the end.

```
set model model stty [[-]onlcr]
[[-]descramble] [xtab tablength|none]
```

```
set model m3 stty onlcr
```

Control extra job processing done by the *model*. The processing options are:

**onlcr** Carriage return insertion for Unix text jobs. Adds carriage returns to text jobs with solitary linefeeds. This will prevent stair-stepped output or output running off the right side of the page.

**descramble** Automatic descrambling of print jobs passing through which have been scrambled using Microplex's proprietary scramble Unix utility, **npstramble**.

**xtab** Tab expansion from 1 to 16 spaces.

```
set model model header headerstring
```

```
set model m4 header $PCL-RST
```

Set a header string to be sent to the printer ahead of any print jobs passing through this *model*. *headerstring* can consist of up to nine elements. An example element is a hexadecimal code (e.g. 0x04) or a pre-defined variable on the print server (e.g. \$PCL-RST for a printer reset). Use “**list var**” to see all available variables.

```
set model model trailer trailerstring
```

```
set model m7 trailer $FF
```

Set a trailer string to be sent to the printer at the end of any print jobs passing through this *model*. *trailerstring*

can consist of up to nine elements. An example element is a hexadecimal code (e.g. 0x04) or a pre-defined variable on the print server (e.g. \$FF for a formfeed). Use “**list var**” to see all available variables.

**set model from default**

Set all model settings back to factory defaults.

**set model from stored**

Set all current model settings to the stored values in Flash.

**set prn1|prn2 mode slow|cen|pc|fast|bb**

**set prn1 slow**

Set the parallel port mode. The choices are:

- |             |  |
|-------------|--|
| <b>slow</b> | Slow the data transfer rate to be compatible with the most printer models. |
| <b>cen</b>  | Centronics mode. Use with older impact printers.                           |
| <b>pc</b>   | Default mode. Will work with most printer models.                          |
| <b>fast</b> | Increase the data transfer rate. Used with some newer, faster printers.    |
| <b>bb</b>   | Bit bucket mode. Simulate an attached printer even if one isn't attached.  |

```
set prn1|prn2 [-]autofd
```

```
set prn2 -autofd
```

Assert or don't assert the AUTOFD line for carriage return insertion. This only affects printers that support this function such as impact printers.

```
set prn1|prn2 flush
```

```
set prn1 flush
```

Flush the data in the parallel port's input and output buffers.

```
set prn1|prn2 unlock
```

```
set prn2 unlock
```

Release the access lock on the parallel port.

```
set prn1|prn2 timeout minutes|none
```

```
set prn1 timeout none
```

Terminate the print job sent to the parallel port if it is not printed after the timeout period in *minutes* expires. The *minutes* value ranges from 0 to 255 with 0 indicating no timing out to take place. This is the default setting and should be fine for most print setups.

```
set prn1|prn2 [-]opost
```

```
set prn2 -opost
```

Allow or disallow output processing on the parallel port such as carriage return insertion (i.e. onlcr).

```
set prn1|prn2 [-]onlcr
```

```
set prn1 -onlcr
```

Enable or disable carriage return insertion on the parallel port. This may be needed for Unix text jobs coming through with solitary linefeeds. This feature is almost always set at the model level rather than the I/O port level though.

```
set prn1|prn2 xtab tablength|none
```

```
set prn2 xtab none
```

Set the tabstop width as indicated by *tablength*. The range is 1 to 16 spaces.

```
set prn1|prn2 from default
```

Set all parallel port settings back to factory defaults.

```
set prn1|prn2 from stored
```

Set all current parallel port settings to the stored values in Flash.

```
set sysinfo name newname
```

```
set sysinfo name salesprinter
```

Set a descriptive name defined by *newname* for the M202Plus for identification purposes. This is not used in the operation of the print server in any way.

```
set sysinfo location description
```

```
set sysinfo location salesdept
```

Set the physical location of the M202Plus. This is for identification purposes and is not used in the operation of the print server in any way.

```
set sysinfo contact contactname
```

```
set sysinfo contact Paul_Harris
```

Set a person or department to contact in case of print server trouble.

```
set sysinfo loginfo [-]sys | [-]tcp |
[-]ipx | [-]spx
```

```
set sysinfo loginfo -sys ipx
```

Set the M202Plus debugging information type. Usually this information includes unexpected errors or exceptions from the print server divided into these groups:

**sys**                    General system messages.

**tcp**                    TCP stack messages.

**ipx**                    IPX stack messages.

**spx**                    SPX stack messages.

**Note:**                This is not printer or job logging information.

```
set sysinfo logport
null | prn1 | prn2 | com1 | com2 | syslog
```

```
set sysinfo logport null
```

Define where the debugging information should be sent to. This can be sent to an output device off of one of the M202Plus's I/O ports or to a central TCP/IP host running a SYSLOG daemon. To set this host, use the command "**set sysinfo syslog *hostIPaddress***".

```
set sysinfo email emailname@IPaddress
```

```
set sysinfo email joe@192.75.11.5
```

Define the user's email address to receive printer and job logging information from a particular logpath on the M202Plus. *emailname* is the host or IP name of the



user and *IPaddress* is the IP address where the mail is stored on your network.

```
set sysinfo syslog hostIPaddress
```

```
set sysinfo syslog 192.75.11.30
```

Set the IP address of the host running the SYSLOG daemon. M202Plus debugging or print job and printer logging information can be sent there.

```
set sysinfo dns DNSserverIPaddress
```

```
set sysinfo dns 192.75.11.2
```

Set your DNS server's IP address so the M202Plus can resolve host names when used with its built-in Telnet and Ping clients.

```
set sysinfo descramblekey hexvalue
```

```
set sysinfo descramblekey 1234
```

Set the key value used for descrambling print jobs that have passed through Microplex's **npscramble** utility on a TCP/IP host. This key is a four-digit hexadecimal value obtained from the host software, npscramble.

Within the npscramble source code, there is a variable called SR\_KEY which contains the default key value. This can be changed to any four-digit value you'd like.

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

```
set sysinfo module -novell
```

Enable and disable certain network protocol stacks within the M202Plus. Sometimes it helps to disable any protocols you are not using on your network.

```
set time hours [minutes [seconds]]
```

```
set time 10 30
```

Set the current time noting the *hours* based on the 24-hour system and the *minutes* and *seconds* ranging from 0 to 59. If the M202Plus is reset, this value will be lost so you will need to reset the time again.

```
set user add|del username
```

```
set user add eng
```

Add or remove a user on the M202Plus defined by *username*. Be careful not to delete the **root** user, however, or you will be unable to configure any further settings on the print server. You will have to go back to factory defaults to fix this situation if it occurs.

```
set user passwd username password
```

```
set user passwd eng mplex1
```

Assign a *password* to a defined user on the M202Plus. This *password* must be less than eleven characters.

```
set user type username root|guest
```

```
set user type eng root
```

Assign root or guest privileges to a particular user defined by *username*. Guest permissions allow viewing of settings only whereas root permissions allow complete control of the M202Plus.

```
set user from default
```

Set all user settings back to factory defaults.

```
set user from stored
```

Set all current user settings to the stored values in Flash.

```
set var variablename variablestring
```

```
set var LANDSCAPE 0x1b 0x26 0x6c 0x31 0x4f
```

```
set var FINISH $FF $PCL-RST
```

Define a new variable to be used in header, trailer, or switch strings on the M202Plus and call it *variable-name*. *variablestring* can be a space-separated list of words, hexadecimal numbers (e.g. 0x04), or references to other pre-defined variables. It's easiest to make up the *variablestring* with hexadecimal values as shown in the example, however. Most printer codes in hexadecimal format can be retrieved from the printer's own manual.

**Note:** One variable counts as one element within header and trailer strings.

**Note:** Defined variables are referenced in strings by placing a "\$" before the variable name (e.g. "set model m1 trailer \$FF").

```
set var from default
```

Set all variable settings back to factory defaults.

```
set var from stored
```

Set all current variable settings to the stored values in Flash.

## list Commands

These commands list the *current* or *working* settings for a particular section within the command shell. To view stored settings in Flash, you'll need to add in "stored" within the beginning of any of the following commands. For example, "list prn1" shows you the current PRN1 settings but "list stored prn1" shows you the settings sitting in Flash. Normally these should match.

**list tcpip**

List all current TCP/IP network settings (e.g. IP address and subnet mask).

**list pserver**

List the current general print server settings (e.g. print server name and Novell mode).

**list dest**

List the current destination settings (e.g. names and mapped I/O ports, models, and logpaths).

**list model**

List the current model settings (e.g. names and mapped destinations).

**list logpath**

List the current logpath settings (e.g. names and mapped destinations).

**list com1|com2**

List the current serial port settings (e.g. baud rate).

**list prn1|prn2**

List the current parallel port settings (e.g. mode).

**list sysinfo**

List the current M202Plus system information (e.g. contact name and protocol stacks enabled).

**list ifc**

List the current UTP interface settings (e.g. link integrity).

**list user**

List the current user definitions (e.g. user names and types).

**list logins**

List any active user logins on the M202Plus.

**list arp**

List the current ARP table that the M202Plus adheres to in a TCP/IP network.

**list var**

List all pre-defined variables including any newly created ones. Any of these defined variables can be referenced in a string by placing a “\$” before the variable name (e.g. “**set model m1 trailer \$FF**”).

**list rprinter**

List any current RPRINTER definitions.

**list time**

List the current time on the M202Plus.

**list date**

List the current date on the M202Plus.

**list test**

List the status of output tests on the I/O ports.

**list key**

List the license details and license key number.

**list diff**

List the differences between the current settings and the stored settings in Flash. Normally, you want these values to match so issue a “**save**” command followed by a “**reset**”.

## **debug Commands**

The “**debug**” set of commands help troubleshoot problems that may occur on the M202Plus. Some of the output may be cryptic but it helps when troubleshooting with Microplex Technical Support.

### **debug tcp**

List TCP stack statistics.

### **debug ip**

List IP stack statistics.

### **debug nest**

List Novell Directory Services (NDS) statistics.

### **debug netbios**

List NetBIOS (i.e. Windows 95 and WfW) statistics.

### **debug mem**

List statistics from the M202Plus’s memory module.

### **debug lpq**

List statistics from the queue module.

### **debug io**

List statistics from the I/O port module.

### **debug eeprom**

List ROM contents.

### **debug nif**

List network interface statistics.

## Miscellaneous Commands

These commands don't fall under any specific section of the command shell but they are used quite frequently.

### **save** [**default**]

Save the current settings to Flash so they are remembered after power cycles. Sysinfo, destination, model, logpath, variable, user, and I/O port settings will be saved. If **default** is specified as well, factory settings will be saved to Flash overwriting any new settings you have configured.

### **reset**

Perform a warm boot or hardware reset simulating a power-on reset. Restores current settings to those stored in Flash since the Flash settings will be read and loaded into memory upon bootup.

### **load** [**default**]

Load the settings stored in Flash and use them as the current or working settings. If **default** is specified as well, factory settings will be loaded.

### **lpstat** [*ioport*] [*jobID*]

#### **lpstat prn1**

Display active and queued jobs and I/O port status for a given *ioport* or *jobID*. Specifying one of these parameters will shorten the output focusing on the particular I/O port or print job specified.

#### **cancel** *jobID*

#### **cancel dlprn1-10**

Remove a job from an I/O port's queue. Use "**lpstat**" to find a particular job's ID first.

```
start fox|tts|loopb prn1|prn2|com1|com2
```

```
start fox prn1
```

Begin a debugging test on one of the I/O ports on the M202Plus. The tests available are:

**fox**                    A continuous stream of text sent to the attached printer. Good test for troubleshooting hardware as long as the attached printer supports text output.

**tts**                    A continuous stream of Gandalf 400C TTS-compatible text sent to the attached printer.

**loopb**                Loopback test. Any input characters from the device attached to the I/O port is echoed back.

```
stop prn1|prn2|com1|com2
```

```
stop prn1
```

Stop an output test on an I/O port.

```
disable ioport|destination
```

```
disable prn1
```

Disable an *I/O port* so queued jobs aren't printed or disable a *destination* so jobs cannot be queued to it.

```
enable ioport|destination
```

```
enable prn1
```

Enable an *I/O port* so queued jobs are printed or enable a *destination* so jobs can be queued to it.



```
close tcp TCPindexnumber
```

```
close tcp 3
```

Force a TCP/IP connection between a TCP/IP host and the M202Plus to close. The *TCPindexnumber* can be retrieved from “`debug tcp`” output.

```
slip
```

Configure a serial port as a SLIP connection from a terminal or PC connected the serial port. This command cancels the normal npsd command shell for this port and starts SLIP. Once the connection is broken, SLIP is automatically stopped and the serial port returns to normal npsd mode.

```
ping [-s] hostIPAddress [datasize  
[packetnumber]]
```

```
ping 192.75.11.30
```

“ping” another TCP/IP host specified by *hostIPAddress* on the M202Plus network. *datasize* is the datagram packet size which defaults to 64 bytes if no size is included in the syntax and *packetnumber* is the number of requests to be sent.

**Note:** To use a host or IP name instead of the address, you must have set the DNS server on the M202Plus. Use the command “`set sysinfo dns...`” to do this.

```
telnet hostIPAddress [escapecharacter]
```

```
telnet 192.75.11.35
```

Start a Telnet session with another TCP/IP host specified by *hostIPAddress* on the M202Plus’s network. If *escapecharacter* is used, it resets the key sequence used to exit the Telnet session. It will return you to the telnet> prompt where you can execute “quit”. Use the “`keycode`” command to find out exact escape

characters if needed. The default character is CTRL-].

**Note:** To use a host or IP name instead of the address, you must have set the DNS server on the M202Plus. Use the command “**set sysinfo dns...**” to do this.

**chr *string***

Echo *string* or redirect *string* to an I/O port using “**chr *string* > *ioport***”.

**keycode**

Determine the hexadecimal value for a key to be used as the escape character with the M202Plus’s built-in “**telnet**” command.