

EXTRA FEATURES

Overview

This file provides information about additional features available with the M202Plus.

Within this file, you will find information about:

- print server security options - *M202Plus Security* on page 2.
- I/O port monitoring - *Printer and Print Job Monitoring* on page 5.
- printer logging - *Printer Logging Through Logpaths* on page 6.
- alternatives for the M202Plus serial ports - *Serial Port Options* on page 8.

M202Plus Security

The M202Plus product manual touches upon the most popular built-in security feature - permission levels and passwords. However, there are also TCP access lists available to restrict host connections with the device.

Users and Passwords

The M202Plus supports two user types:

- root** Access to everything within the print server including all configurable settings.
- guest** Ability to list settings only rather than configure them.

For each user type, passwords can be set. However, most often you would just set a password for the root user to protect the M202Plus's configuration. Guest users cannot alter the print server's configuration in any way.

To configure a root password on your M202Plus, you will need to:

- 1 Load a Web browser on a network station that can communicate with the print server over TCP/IP. If this can't be done, you will need to attach a PC/laptop/terminal off of one of the device's serial ports and log in directly to the M202Plus's command shell. The commands to set a root password are:

Syntax:

```
set user passwd username password  
save
```

Example:

```
set user passwd root mplex1  
save
```

- 2 Direct your Web browser to URL “`http://M202PlusIPaddress/adminConf.html`” (e.g. “`http://192.75.11.9/adminConf.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.

- 3 At the “Administration Configuration” HTML form that displays, scroll down to the “Passwords” section.
- 4 Click within the “Old” field beside the “Root Password” heading and enter the existing root password. By default, there is no root password so you can go to the next step without typing anything in this field.
- 5 Within the “Root Password” section, click within the “New” field and enter the new root password.
- 6 Within the “Root Password” section, click within the “Confirm” field and enter the new root password again. Remember this is case sensitive.
- 7 Click on the SUBMIT button when done and physically repower the print server to make the new setting take effect.

From this point on, anytime you log in to the M202Plus as “`root`”, you will need to specify this password or else your login attempt will fail.

Note: To clear this password or change it, use the same “Administration Configuration” HTML form. Just enter the appropriate “Old” password and put in the new one (or nothing if you don’t want a root password any longer). The commands directly on the M202Plus are:

```
set user from default
```

```
save
```

TCP Access Lists

Within TCP/IP environments, the M202Plus can restrict host access to destinations/queues and remote command (i.e. rsh, rcmd, remsh and telnet) execution services. This is done using an access list similar in function to the Unix .rhosts file.

To view the current access list on the print server, you will need to:

Note: Access list settings are not configurable through the HTML forms provided with the M202Plus.

- 1 Start a Telnet session with the M202Plus.

Syntax:

```
telnet M202PlusIPaddress
```

- 2 Log in as “root” and press ENTER at the password prompt since there is no password by default.
- 3 List the current access list.

Syntax:

```
list tcpip
```

If the list is empty, all hosts have access to the M202Plus’s services. If there are entries in the list, only those hosts specified have access to printing and remote command execution.

To add and delete access list entries, the commands are:

Syntax:

```
store tcpip tcp access add|del hostIPaddress|networkaddress
```

```
reset
```

where *hostIPaddress* is the IP address of a TCP/IP host on your network and *networkaddress* is the address of a subnet on your network.

Example:

```
store tcpip tcp access add 192.75.11.25
store tcpip tcp access add 192.75.12.0
store tcpip tcp access del 192.75.11.25
reset
```

Note: Although the maximum number of entries in the access list is 10, each entry can refer to a network rather than a specific host. This allows all hosts on that specified network to have access plus any individual hosts specified in the list.

Printer Monitoring and Logging

One of the key aspects of maintaining a computing environment is monitoring printer status and logging this information to useful places. The M202Plus allows just this through its built-in HTML forms, command set, and logpaths.

Printer and Print Job Monitoring

To view the current status of an I/O port on the M202Plus, two methods are available:

- 1 Selecting the desired I/O port on the “Status” HTML form (i.e. “`http://M202PlusIPaddress/indexStatus.html`”; e.g. “`http://192.75.11.9/indexStatus.html`”) that comes with the M202Plus.
- 2 “`lpstat`” command directly on the print server once logged in as “`guest`” or “`root`”.

In each case, you are given a description of each I/O port’s status and a list of queued jobs. *Table 1* describes some of the common terms you may come across when viewing this status.

Table 1: Key Printer Logging Terms

Term	Description
“idle”	There is no job queued for the M202Plus’s I/O port.
“blocked”	The printer is not allowing the M202Plus to send data to it. Check that there isn’t a printer error and it’s online and ready to go.
“waiting”	The M202Plus knows about a print job but is waiting for the host to send more data or to send an expected packet.

Printer Logging Through Logpaths

Within the M202Plus product manual, destinations are described as logical queues with associated models and logpaths. Models determine if any extra processing is needed with the print jobs passing through and logpaths determine whether any logging is needed for each job.

Each logpath on the M202Plus consists of two parts:

Type The type of log information to be captured. The choices are “**job**” for job ID and username, “**user**” for user ID (and three messages per job), “**pgcnt**” for total pages printed in a job, “**cksum**” for file checksums, “**printer**” for special printer feedback, and “**ioport**” for parallel printer status messages.

Port Where this log information will be sent to. The choices are a **TCP port number** (e.g. 2000), an **email address** (including an alias), a central host running a **SYSLOG daemon**, or another **I/O port**

on the M202Plus with a printer or terminal attached to display the information.

To view the current logpath settings on the print server, you will need to:

- 1 Load a Web browser on a network station that can communicate with the print server over TCP/IP. If this can't be done, you will need to attach a PC/laptop/terminal off of one of the device's serial ports and log in directly to the M202Plus's command shell. The command to view the logpath settings is:

Syntax:

```
list logpath
```

- 2 Direct your Web browser to 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.

- 3 At the "Print Path Configuration" HTML form that displays, select a destination link (e.g. `d1prn1`) from the top of the page to bring up the appropriate destination's form.
- 4 Once the desired destination's HTML form displays, scroll down to the "Logpath Type" and "Logpath Port" sections to view the current logpath settings for this particular destination.

At this point, you can alter any of these settings and then click on the SUBMIT button to store them into the M202Plus. Remember to repower the M202Plus to make the settings take effect.

Serial Port Options

Since most printing environments today rely on parallel printing, the M202Plus may have one or both serial ports unused. This is okay though since the serial ports can be used for other tasks besides printing.

Network Connections for Terminals

Rather than buying a separate terminal server, terminals needing to attach to the network can use the M202Plus's serial ports. Once attached, these terminals can "telnet" to other network stations using the print server's built-in Telnet client. Please see the Microplex PDF file, "command.pdf", for further details on the "telnet" command.

Display Devices and Special Equipment

From terminals to industrial equipment (e.g. scales), the M202Plus can provide a bi-directional link between network hosts and the serially attached device.

If a display device is attached, data can be sent over the network directly to the M202Plus's serial port for displaying. For example, terminals in airports can show flight information and terminals in pharmacies can display prescription information.

Other pieces of equipment with serial interfaces can be attached to the network through the print server's serial ports. Commands can be sent over the network to the serial device and feedback can be returned back to the host as if the device were attached directly to the network. The M202Plus becomes transparent.

Remote Access

Currently the M202Plus supports Serial Line IP (SLIP) on its serial ports. This allows remote hosts to dial up and connect to the print server's local network via a modem off one of the serial ports.

The ideal setup with SLIP is a temporary connection for one remote station. To do this, you will need to:

Note: This assumes you can already communicate with the M202Plus over your local TCP/IP network and you are able to start a Telnet session with this M202Plus to configure the proper settings. The HTML forms do not support the total SLIP configuration.

- 1 Attach a modem to one of the M202Plus serial ports.
- 2 Configure the M202Plus's serial port's settings to match the attached modem. The commands through a Telnet session to the print server are:

Syntax:

```
set portname ignbrk ctsflow rtsflow -ixon
-ixoff baudrate
```

```
save
```

Example:

```
set com1 ignbrk ctsflow rtsflow -ixon
-ixoff 19200
```

```
save
```

- 3 Add a route to the M202Plus's TCP/IP routing table for the remote host.

Syntax:

```
store tcpip route add host remotehostI-
Paddress remotehostIPaddress ifnum
```

where *remotehostIPaddress* is the IP address given to the remote host using the SLIP link and *ifnum* is "2" for the COM1 port and "3" for the COM2 port on the M202Plus.

Example:

```
store tcpip route add host 192.75.11.15  
192.75.11.15 2
```

- 4 Tell the M202Plus to answer ARP requests for this remote host so that anything destined for the remote station will go through the print server.

Syntax:

```
store tcpip proxy add host remotehostI-  
Address
```

Example:

```
store tcpip proxy add host 192.75.11.15
```

- 5 Enable the IP gateway option on the M202Plus so that data packets will be sent from the print server's local network to the remote station.

Syntax:

```
store tcpip opts gateway
```

- 6 Create logins for the user who will be dialing-in from a remote location.

Syntax:

```
set user add username  
set user passwd username password
```

Example:

```
set user add remotel  
set user passwd remotel microl
```

- 7 Repower the M202Plus so these new settings take effect.

Syntax:

```
reset
```

At this point, the remote host can dial in to the modem. Once the connection is made with the M202Plus, the user will be prompted with a standard login screen where the new user ID and password must be typed. Once the npsd command prompt appears, type “**slip**” to initiate the SLIP session. This tells the serial port to be used for SLIP for as long as the connection is maintained. When the connection is dropped, the serial port will revert back to normal command shell mode.

Note: The M202Plus detects if the connection is dropped through the DCD signal on the serial port interface. When connecting via a modem, this is usually handled by the modem itself. If you are connecting to the serial port via a null modem cable, make sure that the cable carries the DCD signal from the remote host so that the print server can revert back to its normal mode when the connection gets dropped.

Note: If the serial port is configured for SLIP, any destination (e.g. d3com1 or d4com2) pointing to this port will be invalid for printing. Normal printing mode and SLIP mode cannot run simultaneously.

