



Picture Perfect Flash Utility

This download procedure can only be used with **Picture Perfect**TM Version 1.3 host systems or later. The flash download program to upgrade the EPROMs of a Micro/5 is accessed through the CMENU utility of **Picture Perfect** or through the flash utility using the command line.

Features

- Flashes Micro/5-PXN, Micro/5-PX, MicroProx, and Micro/5-P micros
- Flashes downstream micros

Limitations

- Cannot edit micro parameter settings such as phone numbers or a micro IP address
- Does not provide online help

Using the CMENU Utility

You must be logged on as **root** at the console in order to run this program. Press (F1) for onscreen *HELP*.

1. Log in as **root** at the console.
2. Type **cmenu** at the command-line prompt and press (Enter) to display the **Utilities** menu.
3. From the **Utilities** menu, select **Micros** to display the **Micro Utilities** menu.

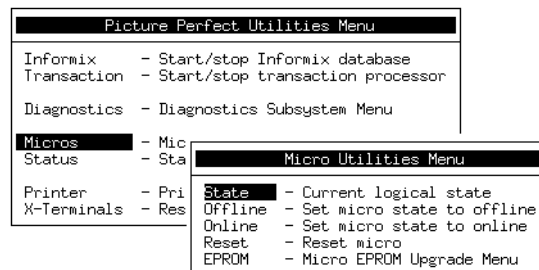


Figure 1: Utilities Menu and Micro Utilities Menu

4. From the **Micro Utilities** menu, select **EPROM** to display the **Micro Flash EPROM Upgrade** menu. Refer to “Micro Flash EPROM Upgrade” on page 2.

Using the FLASH Utility

You must be logged on as **root** at the console in order to run this program.
Press **F1** for onscreen *HELP*.

1. Log in as **root** at the console.
2. Type **flash** at the command-line prompt and press **Enter** to display the **Micro Flash EPROM Upgrade** menu. Refer to “Micro Flash EPROM Upgrade” below.

Micro Flash EPROM Upgrade

This menu enables flash downloading to Micro/5 EPROMs. The **Extract** option transfers new EPROM data from a floppy disk to the hard drive. The **Start** option allows the new EPROM files to be flash-downloaded to any or all of the Micro/5s on the system, regardless of whether the micros are dial-up, direct, or network.

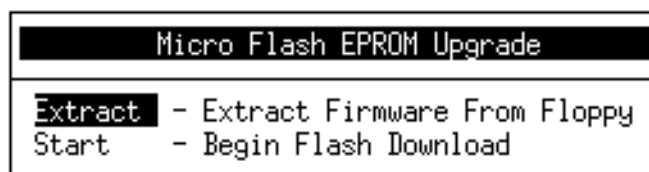


Figure 2: Micro Flash EPROM Upgrade Menu

Extract

Follow these steps to extract the upgrade data from the floppy disk:

1. Insert the firmware-upgrade floppy into the disk drive.
2. Select **Extract** from the **Micro Flash EPROM Upgrade** menu.
3. The floppy-drive device path will be displayed. Press **Enter** to start the extract. The new EPROM information will be transferred to the hard drive.
4. When the extract is complete, a summary of the information appears, similar to the following:

```
Floppy drive      /dev/fd0

Directory...../cas/flash/m5p140
Version Info.....M/5P Ver 1.40 Direct
Optimized.....454784 bytes
Non-Optimized.....620099 bytes
```

NOTE: In UnixWare, the Floppy drive field will display **A:**.

5. Press any key to return to the *MICRO FLASH EPROM UPGRADE* menu.

Start

Follow these steps to select and download to Micro/5 EPROMs:

1. Once the new EPROM information is transferred to the hard drive, select **Start** from the **Micro Flash EPROM Upgrade** menu. The **BEGIN FLASH DOWNLOAD** form appears.

TTY	MICRO MAP	STATUS	FRAMES	%
tty3				
tty8				
tty4	0001	Idle	0	0
tty2	0031	Idle	0	0
tty7	0075-0000-0100-0101	Idle	0	0
tty5	0128	Idle	0	0
tty9				
tty6	0200-0201-0202	Idle	0	0
micro152				
micro999	0999	Idle	0	0

Screen 1 of 2

Press <F1> for HELP

Figure 3: Begin Flash Download Form

All system micros (Micro/4 and Micro/5) are displayed under the **Micro Map** column and all micro types can be selected, however, the flash download will only execute on the Micro/5s. Selecting Micro/4s will not affect the downloading process to the selected Micro/5s.

2. Use the arrow keys to move to the desired micros for flash download. Press **(F2)** or **(T)** to select or deselect a micro. All micros in a micro line must be selected individually (use the left and right arrows to reach them).

When a micro is selected, it appears in boldface. The system determines whether the micro is direct, dial-up or network, so no communication specification needs to be made.

- When all desired micros have been selected, press **(Esc)** to display a listing of hex files available for download.

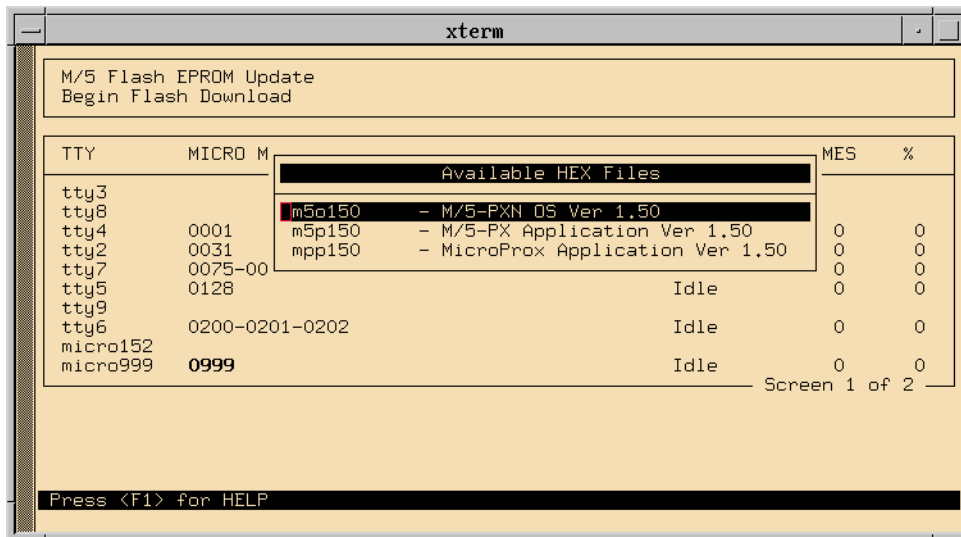


Figure 4: List of HEX Files

- Cursor to the desired hex file, then press **(Enter)** to select it and start the download. If you need to manually enter the hex file and path name, do not select a file from the list. Instead, press **(Esc)** again, type the path name, then press **(Enter)** to start the download.

The **Status** column indicates the action taking place on the highlighted micro of each micro line selected. The status messages include *maint*, *polling*, *erase*, *sending*, *connecting*, *connect*, *restore*, and *ignoring*. An asterisk (*) beside the *sending* status message indicates that the file being downloaded is the optimized version of the hex file (determined by the micro's boot prom), and will complete its download more quickly (in approximately 10 minutes).

The **Frames** column indicates the number of data blocks downloaded to the highlighted micro. The **%** column indicates the percentage of the download completed to the highlighted micro.

When the download for a micro is complete, that micro will no longer appear in boldface. If the download for a micro is unsuccessful, that micro will remain in boldface. At this point, it takes about 60 seconds for the flash program to terminate. If the micros were defined as online in the database, the micros will reset and receive their database and come online.

HEX Files

There is a separate directory for each type of micro's hex file. For example, the directory **m5p150o** contains the hex file for the Direct-Connect Micro/5-PX.

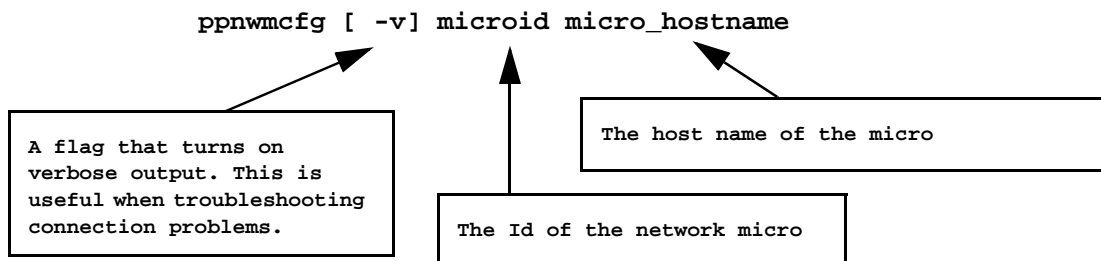
The following is a list of all hex file directories and what type of hex file each contains.

total 336									
drwxr-xr-x	8	root	sys	512	Mar	31	16:34	./	
drwxr-xr-x	16	root	sys	512	Mar	27	09:14	../	
-rw-r--r--	1	root	system	133276	Mar	31	16:33	flash.dat	Micro/5-PX Network Operating System (OS)
drwxr-xr-x	2	root	system	512	Mar	13	16:43	m5o150s/	Micro/5-PX Direct
drwxr-xr-x	2	root	system	512	Mar	14	11:02	m5p150o/	Micro/5-PX Dial-Up
drwxr-xr-x	2	root	system	512	Mar	14	18:32	m5p150p/	
drwxr-xr-x	2	root	system	512	Mar	19	15:44	m5p150s/	Micro/5-PX Network Application
drwxr-xr-x	2	root	system	512	Mar	28	16:28	mpp150q/	
drwxr-xr-x	2	root	system	512	Mar	28	16:28	mpp150r/	MicroProx Direct
-rw-r--r--	1	root	system	556	Mar	28	17:33	tty7.log	MicroProx Dial-Up

Network Micro Parameter Block Configuration

The **ppnwmcfg** command allows the root user to configure a network micro's parameter block from the host by connecting to the network micro. Once connected, the **ppnwmcfg** utility will put the network micro in maintenance mode and display the current settings.

To display the **ppnwmcfg** utility, log in to **Picture Perfect** as root and type:



Menu Options

The **ppnwmcfg** utility displays the following menu options:

S...Show parameter block

Displays the contents of the network micro's parameter block

C...Clear parameter

Clears a specific value

U...Update parameter block

Writes the current values to the parameter block

1 - n...Modify parameter

Selecting a number will prompt you for a new value

E...Edit all

Prompts you for each parameter block value

Q...Quit

Exits out of `ppnwmcfg`. Once you have quit the `ppnwmcfg` utility, the network micro will require about 30 seconds of idle communication before it resets.

Parameters

The fields shown below may vary depending on your firmware version.

address

The micro ID which is not necessary unless you are configuring a network dialup micro

phone1

Primary host number for a network dial-up micro to call

phone2

Secondary host number for a network dial-up micro to call

mmdmm_init

Modem initialization string

mdmm_dinit

Modem de-initialization string

rx_idle_time

The minimum number of characters (20 - 254) to process a buffer

hop_count

The number of hops (network boards that must be crossed) between the network micro and host

ring_speed

Specifies ring speed for token ring networks only

source_ip

The network micro's IP address

destination_ip

The **Picture Perfect** host's IP address

NOTE: The network micro will accept connections only from the host defined in this field. If this field is updated incorrectly, the network micro can only be configured from a laptop computer.

alternate_ip

The backup machine's IP address in a **Picture Perfect** redundant system

gateway_ip

The network micro's gateway IP address to reach the destination_ip

subnet_ip_mask

The network micro's subnet mask

alt_gateway_ip

The network micro's gateway IP address to reach the alternate_ip

NOTES

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