

IBM 4247 Printer Models 003 and V03 - Firmware Upgrade Instructions

IBM 4247 firmware (code) resides in flash memory. Throughout the printer's life cycle firmware changes may be made to address issues discovered in the lab, or by customers in the field. Normally it's not necessary to upgrade your printer, but if needed upgrading your printer's firmware is easy to do.

Code for the 4247 base printer and late level NIC (see fig 1) can be loaded through the printer Parallel or Ethernet ports. Base code can ONLY be loaded through the Ethernet port when the late level NIC is present. If an early level NIC is present (see fig 2) you'll need to power off the printer, remove the NIC, and load printer base code through the parallel port. Upgrading the early level NIC is not covered by this instruction. For early level NIC upgrade information visit the Axis Communications website at <http://www.axis.com>.

Fig.1 Late level NIC (no handle)



PN 75P0557:IPDS NIC and PN 75P0558:ASCII NIC

Fig.2 Early level NIC (with front plate handle)



PN 01P7579:Axis 5400plus Print Server

Loading Base Printer and/or late level NIC code through the Parallel Port. Follow these instructions to load base code and/or late level NIC code through the printer's parallel port using any computer supporting DOS or DOS Windows. Note: If loading both Base and NIC code the order of download is not important; that is either one can be loaded first.

- 1) For Windows computers install a 'Generic/Text Only' print driver.
In Windows click Start -> Control Panel -> Printer and Faxes -> Add printer and choose the following settings.
 - Local or Network = Local printer attached to this computer
 - Port = LPT1
 - Manufacturer = Generic Printer = Generic / Text Only
 - Name your printer =>Generic /Text Only
 - Default printer = Yes
 - Printer Sharing => Do not share
 - Test Page => No
- 2) Printout the Firmware Information of the code currently installed in your printer.
 - Load forms on tractors.
 - Press the printer STOP key.
 - Press the printer TEST key.
 - Press the DOWN ARROW key until **4247 OPERATOR PRINT TESTS Firmware Information** displays.
 - Press ENTER.
- 3) Loading new code won't change any of the printer's network interface settings (IP, subnet mask, gateway addresses), but other user defined configuration settings can be reset to factory default values. Printout the Printer Custom Sets to ensure original settings can be restored later.
 - Press the UP ARROW key until **4247 OPERATOR PRINT TESTS Print Custom Sets** displays.
 - Press ENTER to begin the printout. (****) prints next to settings changed from factory default values.

- Press LOAD/EJECT key and remove the printouts.
- 4) Power off the printer.
 - 5) Connect a standard parallel cable between your computer's LPT1 port and the printer.
 - 6) Press and hold the printer START and CANCEL PRINT keys and power on the printer.
 - 7) Release both keys after the printer displays **WAITING CODE DOWNLOAD USING PARALLEL PORT**
If this message doesn't display, power off the printer and try again.
 - 8) In a DOS window type: `copy drive:\directory\filename.bin lpt1: /b <enter>`
For example...`copy c:\temp\4247c707.bin lpt1 /b`
 - 9) While the file is loading the printer displays **WRITING BASE (or LAN) CODE PLEASE WAIT**
 - 10) After the file is written in a few minutes the printer momentarily displays **BASE (or LAN) CODE LOADED** for 3 seconds and then begins an automatic power-on restart.
 - 11) If **070 PRINTER BOARD CHANGED Verify configuration settings** displays this means configuration settings have been reset to the factory defaults values. Make note of this and press the STOP key to clear the message if it remains displayed.
 - 12) If a second printer code file will be loaded, return to step 4 above and repeat the steps.
 - 13) After all code files have been loaded make another Firmware Information printout as final verification.
 - Press the printer STOP key.
 - Press the printer TEST key.
 - Press the DOWN ARROW key until **4247 OPERATOR PRINT TESTS Firmware Information** displays.
 - Press ENTER to begin and save this printout.
 - 14) If **070 PRINTER BOARD CHANGED Verify configuration settings** displayed in step 11 above, make another Printer Custom Sets printout, compare this printout to the one made earlier, and restore your printer configuration as needed.

Loading Base Printer and/or NIC code though the Ethernet Port. Follow these instructions to FTP printer base code and/or late level NIC code through the Ethernet port.

- 1) Printout Firmware Information for the code currently installed and save the printout.
 - 1) Load forms on tractors.
 - 2) Press the printer STOP key.
 - 3) Press the printer TEST key.
 - 4) Press the DOWN ARROW key until **4247 OPERATOR PRINT TESTS Firmware Information** displays.
 - 5) Press ENTER.
- 2) Loading new code won't change any of the printer's network interface settings (IP, subnet mask, gateway addresses), but other user defined configuration settings can be reset to factory default values. Printout the Printer Custom Sets to ensure original settings can be restored later.
 - Press the UP ARROW key until **4247 OPERATOR PRINT TESTS Print Custom Sets** displays.
 - Press ENTER to begin the printout. (****) prints next to settings changed from factory default values.
 - Press LOAD/EJECT key and remove the printouts.

- 3) Make sure the binary file is in the same directory that you will launch the FTP service from. The printer must be online 'Ready' and without buffered data present.
- 4) Open the FTP connection to the printer. In a DOS window type **ftp xxx.xxx.xxx.xxx** <enter> where xxx.xxx.xxx.xxx is the printer IP address.
- 5) Type **root** for the login, insert the password (default password=**root**) and type the commands:
ha <enter> **bin** <enter> **cd firmware** <enter>
- 6) Start the file transfer by typing: **put filename.bin** where filename.bin is the name of the code file.
For example: put 4247c707.bin
- 7) When the file is successfully transferred the following host message appears: .File has been submitted.
- 8) Close the FTP connection by typing the command: **bye** <enter>. After the session is closed the file update will start and the printer displays **WRITING BASE (or LAN) CODE PLEASE WAIT**
- 9) After the file is written in a few minutes the printer momentarily displays **BASE (or LAN) CODE LOADED** for 3 seconds and then begins an automatic power-on restart.
- 10) If **070 PRINTER BOARD CHANGED Verify configuration settings** displays this means configuration settings have been reset to the factory defaults values. Make note of this and press the STOP key to clear the message if it remains displayed.
- 11) If a second printer code file will be loaded, return to step 4 above and repeat the steps.
- 12) After all code files have been loaded make another Firmware Information printout as final verification.
 - Load forms on tractors.
 - Press the printer STOP key.
 - Press the printer TEST key.
 - Press the DOWN ARROW key until **PRINTER OPERATOR TESTS Firmware Information** displays.
 - Press ENTER to begin the printout. Save this printout.
- 13) If **070 PRINTER BOARD CHANGED Verify configuration settings** displayed in step 11 above, make another Printer Custom Sets printout, compare this printout to the one made earlier, and restore your printer configuration as needed.

Error Messages

Parallel Port :

If you try to load the LAN code binary file without the presence of a late level NIC card, the following error is displayed: 201 NO ATTACHMENT CARD FOUND.

While the file is copied into the flash memory, some error messages may appear on the printer LCD. The error messages follow. FOUND ERROR XX where XX is the error number identifier as follows:

- 1 Binary code file is not a correct one.
- 2 Base code error found during the checksum verification of the flash BIOS sector.
- 3 Base code error found during the CRC-32 verification of the base code loaded. .
- 4 Base code error found during the execution of Base board flash erase/write algorithms. .
- 10 LAN code binary file has not the correct size.
- 11 LAN code binary file checksum is not correct
- 12 Error found during the execution of NIC flash erase/write algorithms.

Error recovery action: Cancel (purge) all Windows Print Driver queued print documents and try again. If the error repeats the file may be the wrong or corrupted. Contact IBM for help.

Ethernet Port :

If the FTP connection cannot be opened this might mean the printer is not 'Ready' or has buffered print data. Error Recovery Action: Power off the printer and try again. If the error repeats contact IBM for help.

While the file is copied into the flash memory, some error messages may appear on the printer LCD. The error messages follow. FOUND ERROR XX where XX is the error number identifier as follows:

- 1 Binary code file is not a correct one.
- 2 Base code error found during the checksum verification of the flash BIOS sector.
- 3 Base code error found during the CRC-32 verification of the base code loaded. .
- 4 Base code error found during the execution of Base board flash erase/write algorithms. .
- 10 LAN code binary file has not the correct size.
- 11 LAN code binary file checksum is not correct
- 12 Error found during the execution of NIC flash erase/write algorithms.

Error recovery action: Power off the printer and try again. If the error repeats contact IBM for help.