

NP-1660 Software Installation, to rel. 2.2.6

Technical Brief

Overview

These instructions are a guide to installing NP1660 software, applying printhead compensation, and installing update diskettes. Please note that a complete installation reformats the printer's hard drive; any files, including the accounting log, will be deleted.

Full software installation

1. Check current software release to determine whether to perform a full install or an update. Updates do not require reinstallation of printhead profile calibration, user settings, security or accounting.
2. Make a backup of network and user settings, option activation keys, and security and accounting entries. Accounting logs and imageweb security information will be deleted when performing a complete software installation. Single-diskette updates will not affect these files.
3. Install software.
4. Install printhead profile calibration. This requires the **Printhead Profile Calibration Diskette** which shipped with your printer. Do not proceed with a full installation without this diskette.
5. Install any update diskettes (i.e. 2.2.6).
6. Install user settings, IP address, and security and accounting information.

Update Installation

1. Make a T1 test print as a record of root settings, IP address and keys.
2. Install update diskette. This procedure takes approximately 25 minutes.
3. Check IP address, keys, image settings.

Upgrade Path

Check the current software release.

<u>Use Key</u>	<u>Until LCD Displays</u>
<Setup>	SETUP: ADMIN
<Down-arrow>	SETUP: SYS INFO
<Setup>	RELEASE # ... <i>make note...</i>
<Setup>	SETUP: SYS INFO
<Down-arrow>	EXIT
<Setup>	READY

The printer must have **at least 2.2.0** software installed before the 2.2.6 update can be performed. If a printer has 2.2.0 software, perform only the update procedure (see *Installing Additional Update Diskettes* in this document), and not a full install or printhead compensation.

Software Release	Upgrade Requirements
2.2.0 and higher	Update to 2.2.6 only.
2.1.11 and 2.1.10:	Full install to 2.2.0 plus update to 2.2.6
2.1.4 - 2.1.9	Full install to 2.2.0 plus update to 2.2.6
Older than 2.1.4	Please contact Codonics. Printer may require hardware modifications.

Making Backups

When performing a full system installation, it is necessary to back up security and accounting information. They will not be deleted during a software update. If recovering from a system crash, it may not be possible to perform these backups.

1. Do a T1 test print. This will serve as a record of root user settings, option activation keys, and the IP address. See page 12-8 of the *User's Manual* for instructions.
2. If subnet, gateway, or nets is installed on the printer, information, record these numbers in the TCP/IP worksheet of the user's manual. These numbers can be found in the NETWORK menu on the front panel.
3. If this printer has security and accounting enabled, stored user settings, please refer to the *Advanced Backup* section at the end of this document. Accounting logs and ImageWeb security information will be deleted during a full software installation.

Installing Software

This procedure takes approx. 1-1/2 hours to complete. However, only the first 20 minutes require human intervention.

1. Power down the printer.
2. Insert the boot diskette into the floppy drive.
3. Power on the printer.
4. The printer should read WORKING, and the green light on the floppy drive should stay on. If it does not, skip to the floppy troubleshooting at the end of this document.

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5. After a minute or two the printer will start to beep repeatedly. This is the signal to install the next diskette.
6. When the printer senses that the proper diskette is loaded it will make a higher pitched ("happy") beep.
7. Continue through the remaining diskettes. After the printer finishes the last diskette it will flash up various numbers. For approximately the next hour, the printer will reformat the hard drive and rebuild its OS. No further user intervention is required until the printer returns to READY. For detailed information on software installation, please refer to *Appendix C* of the User's Manual.
8. If the printer errors during the floppy installation, please see the *Floppy Troubleshooting* section of this document.

Printhead Profile Calibration

Printhead profile calibration is necessary for producing good DV prints. Uncalibrated printers will insert the message, "Image Compensation Failed!" on every DV print.

Printhead Profile Calibration Key

The Printhead Profile Calibration Key enables Printhead Profile Calibration. Without calibration, DirectVista™ prints will not be good quality.

- ◆ The key *must* be installed before the diskette.
- ◆ If the diskette is installed before the key, there will be no warning that the install failed, but "Image Compensation Failed!" will appear on all DV prints.
- ◆ The key is entered into the KEYS menu, like any other activation key.
- ◆ The key takes the form:

99printhead_serial_number00

Where the printhead_serial_number is the 6-digit alphanumeric found on the print head or on the profile diskette.

- ◆ The printhead serial number on the diskette **MUST** match the number on the printer.

Printhead Profile Calibration Diskette

Install the diskette using the standard Update procedure:

1. Insert the Printhead Profile Calibration Diskette into the floppy drive of the printer. **Note:** This diskette is unique to each printhead. Substituting another printer's diskette will either fail (if it doesn't match the profile key) or produce streaky prints (if the matching key is installed).
2. Press **Online/Setup**.
3. Press the **<Down-arrow>** until UPDATE displays.
4. Press **Online/Setup**, and press it again to confirm the update. The printer will not reboot upon completing this update.

Installing Update Diskettes

Update diskettes include Release 2.2.6 of the printer OS, or DICOM functionality. Fortunately, these updates are not

printer-specific, however, most of them will reboot the printer upon installation. Note that the 2.2.6 update takes approximately 25 minutes, during which time the front panel displays DOWNLOADING. Use the standard update procedure (see the previous instructions for loading the printhead profile calibration diskette.)

Reinstalling Settings

1. Reinstall the IP address of the printer and the root user settings from the T1 test print.
2. Reinstall the various log files from the *Advanced Backup* section.

Troubleshooting the Floppy Installation

If the printer did not recognize the floppy, or if it played the death dirge:

1. Take the failed disk out of the drive, and drop it from a height of about 4 inches flat onto a hard surface and try the install again.
2. It is possible that a power cable which is pulsing to the print head has interfered with your floppy installation. With a Philips-head screwdriver, unscrew the back of the printer and slide out the processor drawer. There are 5 screws that hold the back of the printer in: 3 across the top, and 2 that are lateral with the black thumb pulls toward the bottom of the printer.
3. Pull the processor drawer out about 5-6 inches (10 - 15 cm) and try the install again. If it still fails, contact Codonics Technical Support to get a new set of diskettes.
4. If the printer is not reading the boot diskette -- it either boots up normally, or it goes to a WAIT state -- and pulling out the processing tray did not work, get a laplink cable and laptop, or a serial cable and dumb terminal.
5. Attach to the serial port next to the left of the SCSI port on the back of the printer using 9600 baud and 8-N-1 settings with VT-100 emulation.
6. Log into the printer as root.
7. Make sure the floppy is in the drive and type:

```
# sync <enter>
# sync <enter>
# reboot
```

If the printer still does not boot from the floppy, there is a hardware issue. Contact Codonics Support to get it resolved.

Advanced Backup

A working knowledge of UNIX is very helpful for performing these backups.

Before reinstalling software some important files should be backed up. These files are deleted during the software

installation. To make a backup pc disk on an NP, put an empty DOS disk into the floppy drive and type the following commands in a telnet or serial session with the printer.

If necessary, format it as a DOS disk:

```
# fdformat -fd
```

Mount the disk:

```
# mount -F pcfs /dev/diskette /mnt
```

Warning: Do not remove the disk until you unmount it.

To back up Accounting information:

```
# cp /var/adm/log/accounting.log /mnt
```

To back up User settings files:

```
# mkdir /mnt/system  
# cp /data/tmp/system/* /mnt/system
```

To backup ImageWeb print security information:

```
# cp /etc/hosts.equiv /mnt
```

When backups are complete, unmount the floppy diskette:

```
# sync  
# umount /mnt
```

and remove the diskette from the drive.

After the OS software has been reinstalled, restore the files. To restore data from a pc disk to an NP Series printer, put a backup DOS disk into the floppy drive and type the following. (DOS filenames are reduced to 88888888.333)

Mount the disk:

```
# mount -F pcfs /dev/diskette /mnt
```

Warning: Do not remove the disk until you unmount it.

To restore Accounting information, turn on accounting in Imageweb from the Administration menu, then type:

```
# cp /mnt/accounti.log /var/adm/log/accounting.log
```

To restore User settings files:

```
# cp /mnt/system/* /data/tmp/system/
```

To restore security information:

```
# cp /mnt/hosts.equ /etc/hosts.equiv
```

When done with the disk unmount it:

```
# umount /mnt
```

and remove the disk from the drive.



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