



# LSM 510 Frequently Asked Questions



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● **Q:** I cannot get the motorized functions of the microscope to operate or the laser to scan. What is wrong?

● **A:** The button for "Use Existing Images" is activated in the LSM Switchboard Menu. Exit the 510 software, and restart. Select "Scan New Images" button on the Switchboard Menu.

● **Q:** What are the requirements for turning on and off the lasers?

● **A:** There are varied lasers on 510 systems: Look at the guide below, for the lasers that match your system.

### **Enterprise Laser (351,364nm):**

Turning on: This laser has a separate power supply unit (large dark brown box) that must be turned on after the computer is booted, but before the 510 program is started. The power supply has a large

breaker style on/off switch. Turn this switch to on, then turn the key to the on position. Also make sure that the water chilling unit is on. Start the 510 software. From the "Acquire-Laser" menu, highlight the line that lists the Enterprise laser by clicking on it. Press the "standby" button. After about 1 minute, you will hear a high pitched sound. That means the laser is emitting light. Now click the "on" button. The power slider can be adjusted to 75%

Turning off: Once this laser is shut down, it should not be restarted for a period of approximately 2 hours. If another user will use the system within the next two hours, do not turn the laser off. Instead leave the laser running, and select the "standby" button. If the laser is ready to be shut down, click the "standby" button, then the "off" button. The key in the power supply can be turned to the off position and the power switch can be shut off. The laser chiller unit will turn off automatically when the laser has cooled.

### **Argon Krypton Laser (488,568nm)**

Turning on: From the "Acquire-Laser" menu, highlight the line that lists the Argon Krypton laser by clicking on it. Click on the "standby" button. After about 1 minute, you should see the menu reporting a tube current value of approximately 3 Amps. This means the laser is emitting light. Click on the "on" button and adjust the power

slider to 75%.

Turning off: Once this laser is shut down, it should not be restarted for a period of approximately 2 hours. If another user will use the system within the next two hours, do not turn the laser off. Instead leave the laser running, and select the "standby" button. If the laser is ready to be shut down, click the "standby" button, then the "off" button. The air cooling unit will continue to run for the next 5 minutes. It is important not to turn off the 510 system with the "Remote Control" on/off switch until the cooling fan has turned off.

### **Argon Laser (457,488,514nm)**

Turning on: From the "Acquire-Laser" menu, highlight the line that lists the Argon laser by clicking on it. Click on the "standby" button. After about 1 minute, you should see the menu reporting a tube current value of approximately 3 Amps. This means the laser is emitting light. Click on the "on" button and adjust the power slider to 75%.

Turning off: Once this laser is shut down, it should not be restarted for a period of approximately 2 hours. If another user will use the system within the next two hours, do not turn the laser off. Instead leave the laser running, and select the "standby" button. If the laser is ready to be shut down, click the "standby" button, then the

"off" button. The air cooling unit will continue to run for the next 5 minutes. It is important not to turn off the 510 system with the "Remote Control" on/off switch until the cooling fan has turned off.

543 and/or 633 HeNe (Helium Neon) Lasers:

These lasers are very simple devices with no specific requirements for turning on or off. Simply select "ON" from laser control menu to turn on, and "OFF" from laser control menu to turn off.

● **Q:** My field of view is partially occluded when I look in the Axiovert microscope, what is wrong?

● **A:** There are 4 components on the microscope that need to be checked to make sure that they are not blocking the light path.

Eyepiece Shutter - a silver plunger with a black rounded knob at the end located to the right of the eyepieces. This device must be pulled to the open position, all the way out to the right.

Analyzer - a black plastic flat stick located directly above and on the right side of the 4 position reflector slider that holds the fluorescent filter sets. This should be pulled all the way out and to the right.

The 4-position reflector slider is not clicked into position. It

is located directly below the objectives, and moves via a motor on a track. If moved by hand, it will not be positioned correctly. It should be positioned to the right. There is a distinctive click when it is set properly.

The shutter to block the fluorescent light source is not in position. This is a black slider, with silver knobs at the end, located behind the 4-position reflector slider. If not fully open, it will block some of the light from the arc lamp. It should be pushed to the left. There is a distinct click when it is in position.

● **Q:** How does the pinhole alignment work?

- **A:** The pinholes for each detector are positional: X (left/right), Y (up/down) and PMT1 pinhole can be positioned in Z (closer or farther from the PMT). The pinhole position needs to be movable because there are a series of filter wheels containing mirrors in the light path. Every time a different mirror on a filter wheel is selected, the light path moves slightly because it is impossible to mount these mirrors in the filter wheels at a precise 45-degree angle. If each mirror could be precisely mounted at 45 degrees, the pinholes would not need alignment because the image information would always travel in a perfect straight path through the pinhole. Since these filter wheels and mirrors are extremely small, this scenario is not possible. So when different combinations of mirrors are selected to create a beam path, the image forming light can end up at positions slightly above/below/left/right of the current pinhole position. If this happens, light is lost because it cannot fully pass through the pinhole. Fortunately, the software stores coordinates of pinhole locations for every combination of mirrors that can be combined to form a working light path. For example, if there is a 488/543 mirror, and an NFT 560 in the light path to PMT

1, then PH1 (pinhole 1) automatically moves to a preset position which places the pinhole in the proper position to allow the maximum amount of light to pass through it. Note that the emission filters have no effect on the pinhole position because they are placed after the pinhole in the light path. Pinhole positions can be set automatically using a Plan Neofluar 10X objective and a mirror. They can also be set manually.

● **Q:** My focus drive does not respond. User cannot seem to get the system to focus.

● **A:** If the user moves the motorized nosepiece manually then the microscope internally shuts off the focus motor. Solution is to open the stage window under ACQUIRE and click on the WORK button.

● **Q:** I can't seem to focus on my specimen.

● **A:** If you are working on an inverted microscope then check that the coverslip is face down toward the objective. If you still have problems then try a lens with greater working distance than the current lens selected. In many cases the cells have been mounted too far from the cover glass. Could you have mounted 2 or more coverslips

accidentally on your specimen? Either way a longer working distance lens should overcome this problem.

● **Q:** Why does the system occasionally misscan the region I have selected in z stack mode?

● **A:** If the user has selected the top and bottom of the stack using Mark First/Last mode, then they must not go into the z-sectioning menu after the selection is made. The z positioning is not preserved from the first/last mode if you move into the z-sectioning window. **DO** not exit first/last once you have selected your stack dimension. Begin the scan with the **START** button while you are still in the first/last mode.

● **Q:** How do I set up user accounts?

● **A:** One has to have Administrators Rights to set up new user accounts. Click: Start à Programs à Administrative Tools (Common) à User Manager.

**User Manager**

User Policies Options Help

Username	Full Name	Description
Administrator		Built-in account for administering the computer/domain
Guest		Built-in account for guest access to the computer/domain
IUSR_PHASER	Internet Guest Account	Internet Server Anonymous Access
IWAM_PHASER	Web Application Manager	Internet Server Web Application Manager identity
LSM		
user		
VUSR_PHASER	VSA Server Account	Account for the Visual Studio Analyzer server components
Zbigniew	Zbigniew Iwinski	
Zbyszek	Zbigniew Iwinski	
ziwins	Zbigniew Iwinski	

Groups	Description
Administrators	Members can fully administer the computer/domain
Backup Operators	Members can bypass file security to back up files
Guests	Users granted guest access to the computer/domain
MTS Impersonators	Microsoft Transaction Server trusted process identities.
Power Users	Members can share directories and printers
Replicator	Supports file replication in a domain
Users	Ordinary users

Select

Userà New User

**New User** [X]

Username:

Full Name:

Description:

Password:

Confirm Password:

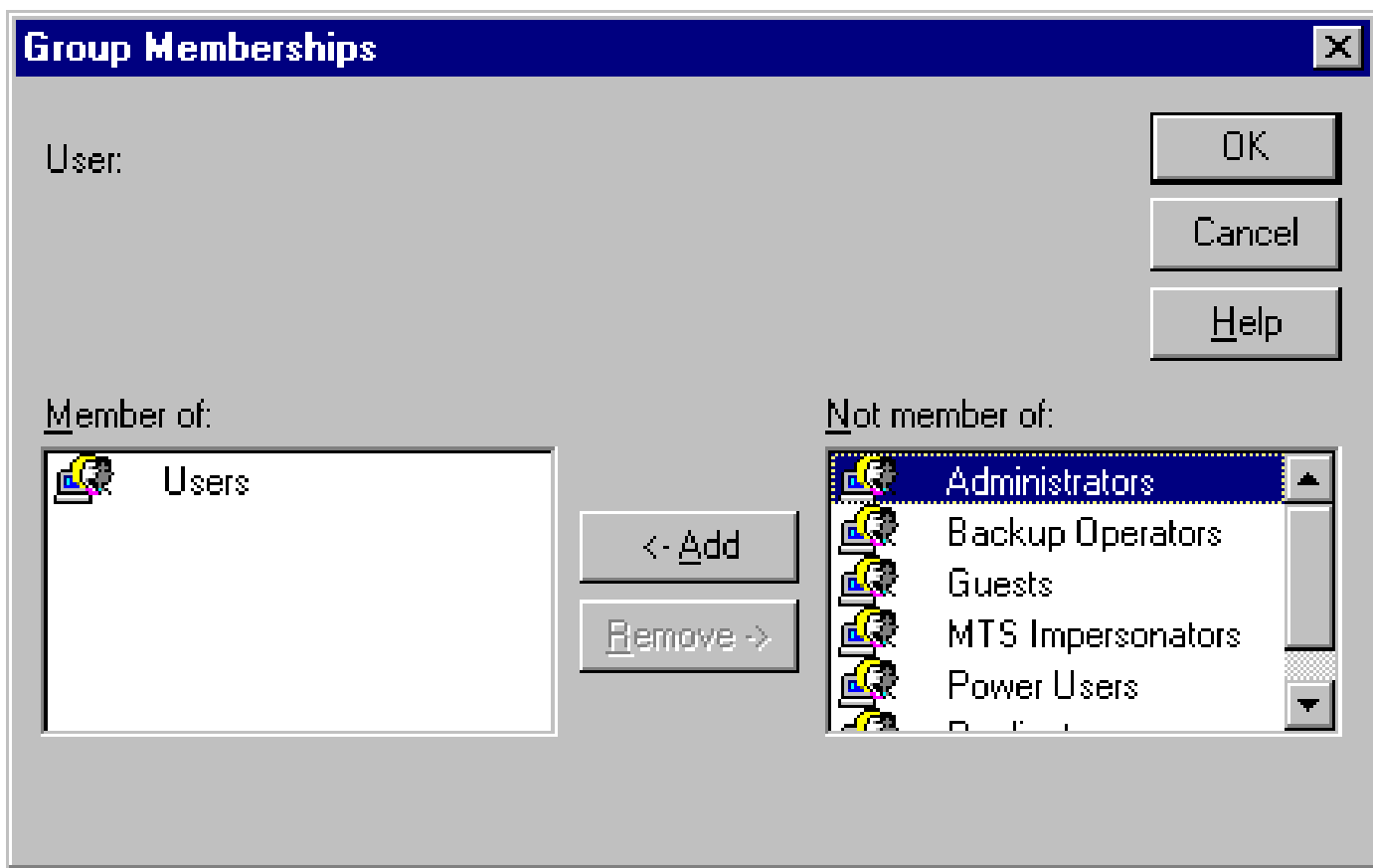
User Must Change Password at Next Logon

User Cannot Change Password

Password Never Expires

Account Disabled

Click Groups button:



Select the groups you want a new user to be a member of in the right window and click the Add button. The selected groups will show in the left window.

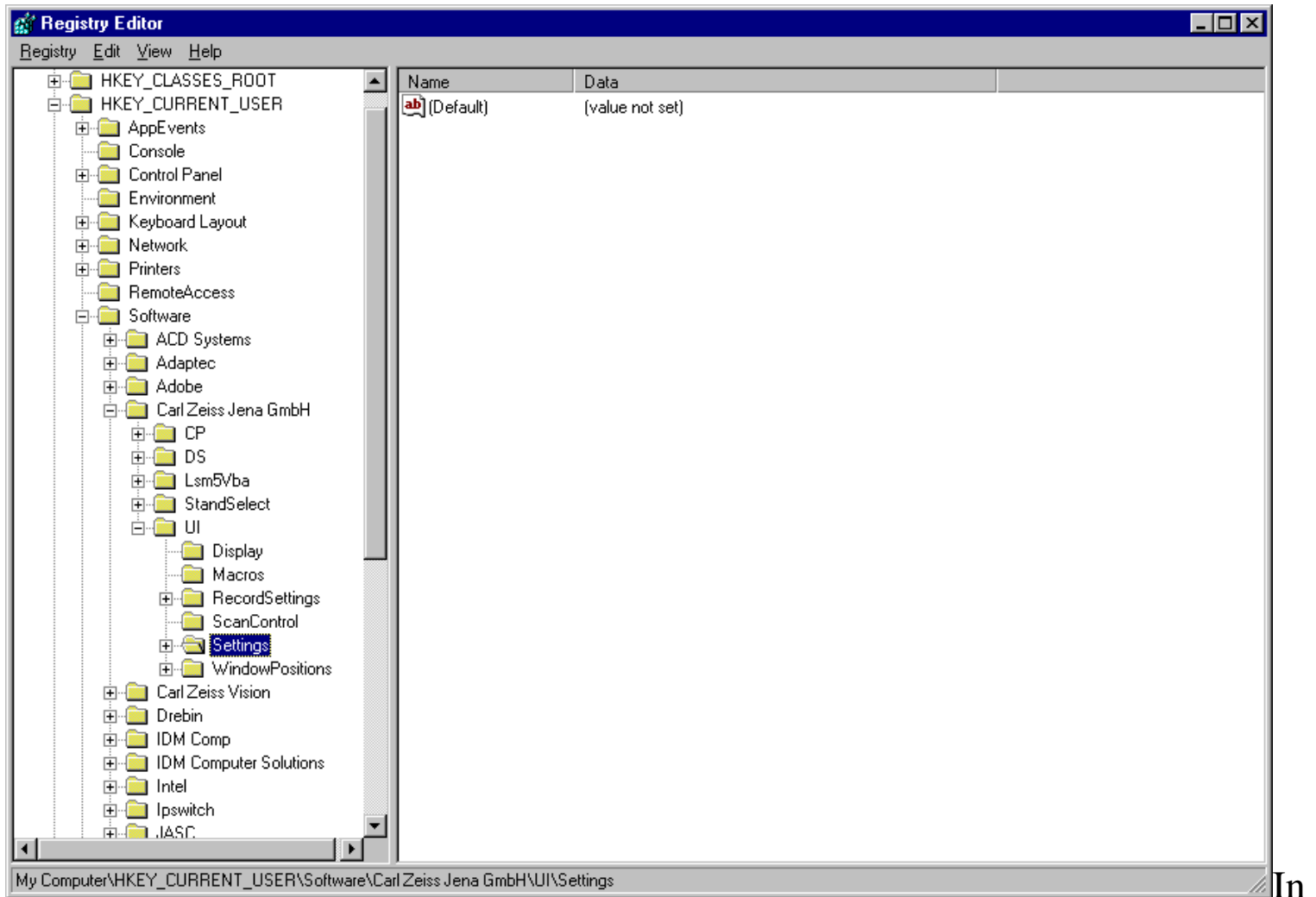
Remarks:

Do not add the Guests group.

Only users who are members of Administrators group can eject removable media using Eject menu selection in Windows Explorer. This is Windows NT feature (bug). Ejecting removable media using software Eject function ensures that the data will not be lost – write cache will be flushed before the disk is removed. Using mechanical Eject button may result in the data loss – write cache may not be properly flushed.

- **Q:** I created a new user login, but when they login and start the 510 software, they have not settings in the configuration menu. (Beam Path)

- **A:** The registry files, which contain the configuration information, have not been imported to the new user. The Tracks and Recordings are individual for every user but can be easily shared using Registry Export feature. When you Login as the user with the Administrator rights who has the proper configuration settings for tracks and recordings and want to share them with the others do the following: Click Start button à Run, type regedit and click OK button.



Registry Editor select:

To export Track Configurations select:

`HKEY_CURRENT_USER\Software\Carl Zeiss Jena GmbH\UI\Settings`

Click: Export Registry File, specify folder in which you want to save exported registry file (e.g. D:\LSM510\REGISTRY) and specify the file name (e.g. SETTINGS.REG)

To export Recordings select:

HKEY\_CURRENT\_USER\Software\Carl Zeiss Jena GmbH\UI\RecordSettings

Click: Export Registry File, specify folder in which you want to save exported registry file (e.g. D:\LSM510\REGISTRY) and specify the file name (e.g. RECORDINGS.REG)

To import the track and recording configurations to the new user, login as the new user open Windows Explorer, navigate to the folder where are the exported registry files (e.g. D:\LSM510\REGISTRY) and double click on each of the exported files: SETTINGS.REG and RECORDINGS.REG.

One will be notified that the information has been successfully entered into the Registry.

The other way to import configurations is to open the image from the database and click the reuse button. The Configuration from the image will be set in the Configuration Control window (to store it permanently one should click on Store/Apply button).

- **Q:** I cannot access my images after I backed up my image database. Either I get the message that the database is inaccessible or the image blocks are empty.

- **A:** The possible source of this problem may be incorrect removal of the removable disk or the turn off of the computer before the write cache has been flushed to disk. Windows NT uses "lazy" writing method writing to the write cache, which is flushed to the disk at the operating system convenience. When shutting down the Windows NT always wait for <Restart> message, and then switch off the computer. The safest way to remove removable media is to use software Eject function (in Windows Explorer). This method ensures that the write cache is flushed. This software option, however, is available only for users with Administrators rights (see "How do I set User Accounts"). Ejecting the disks using mechanical buttons do not guarantee the proper flush of the write buffer.
  
- **Q:** Sometimes when I select a Region of interest the system scans a completely different area then the one selected.
  
- **A:** If the user selects a region of interest on the image collected with FASTXY scan the coordinates will be calculated on a 512X512 basis. If your pixel resolution is other than 512 your coordinates will be incompatible. You must always create ROI's on images of the same resolution. You can avoid this if you collect a SINGLE scan image and ALWAYS create your ROI's on that image.
  
- **Q:** How do I set up a printer to print images?
  
- **A:** One can print images from LSM 510 program using any printer having the Windows NT driver installed in the Printers section of Windows NT.

**Driver Installation for the printer connected to the parallel port:**

1. Click **Start, Settings, and Printers**.
2. Select **Add Printer** from the printers' pop-up window, which will start the **Add Printer Wizard**.
3. Select **My Computer**, and click <next>.

4. Scroll through the list of ports, and check the LPT port you will be using.

5. The next screen begins the driver installation sequence.

Select the proper printer from the list of printers, or **Have Disk**, and give the full path to the driver files, including the drive letter. Click <next>.

8. Naming the printer: If this NT station is a print server, it is advisable to limit the name to 8 characters or less.

Click <next>.

9. If this station is to act as a print server, click **Shared** and give the printer a share name. It will still be necessary to install the print driver separately on the machines that will be printing through the print server. If this station will not be a print server, click **Unshared**.

10. Click <next>. We recommend that you do choose to print the test page.

● **Q:** How do I set up LPR (Line Printer Remote) printer?

● **A:**

This section refers to the network printers supporting LPR printing and having the Windows NT drivers – examples of such printers are **CODONICS NP1600** (with PostScript option) and **Tektronix Phaser440**. The TCP/IP protocol should be already installed in the Network section of Windows NT.

## Network Printer Installation

There are two parts to installing the printer on a network: first, to install LPR, and second, to add the printer.

# LPR Print Services

Windows NT does include LPR printing, but it is not part of the standard installation. To install LPR printing, please do the following. You will be asked to reboot your computer at the end of this process:

1. Start Windows NT.
2. Click on **Start, Settings, and Control Panel**.
3. Click on **Network**.

4. Click on the **Services** tab. If you see Microsoft TCP/IP Printing, click **Cancel**; LPR is installed. If you do not see Microsoft TCP/IP Printing, click **Add**.

5. Click on **Microsoft TCP/IP Printing**, and click **OK**.

6. Click **OK** again. You will be asked to reboot your computer.

Please do so. After rebooting, LPR printing will be installed.

Driver Installation, Network

1. Click **Start, Settings, and Printers**.

2. Select **Add Printer** from the printer's window, which will start the **Add Printer Wizard**.

3. Select **My Computer**, and click **<next>**.

4. Select **Add Port**. From the menu, select **LPR Port**, and click **New Port**.

5. In **Name or address of server providing lpd**, enter the IP address of the printer. In **Name of printer or print queue on that server**, enter the number **1** for Codonics NP1600 printer and **PS** for Tektronix Phaser440 printer. Do not try to give the print queue any other name.

6. Click **OK**, then **Close**, then **<Next>**. If an error is returned, check the IP address and queue name given to the printer and the network information from the printer's front panel.

7. The next screen begins the driver installation sequence.

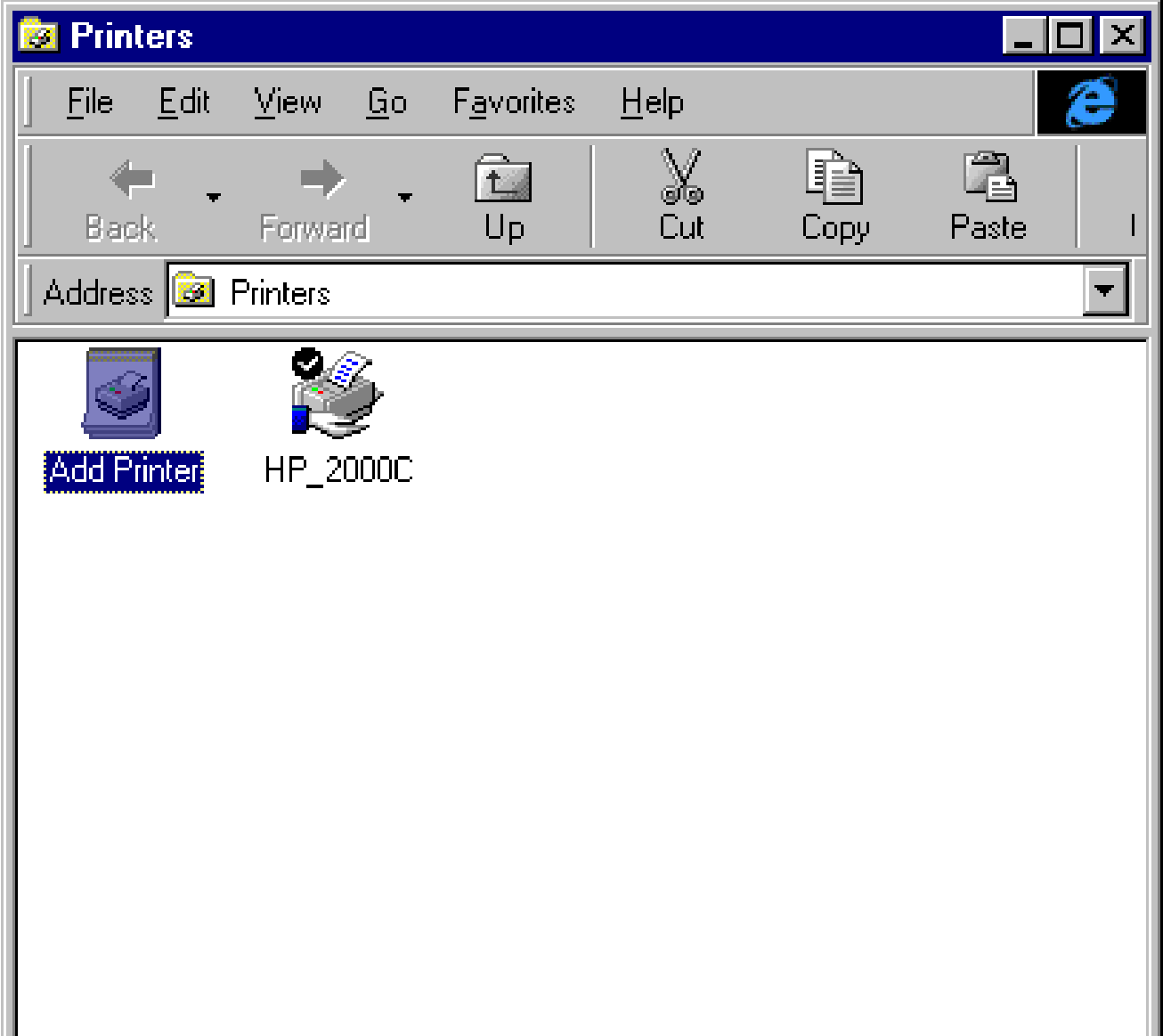
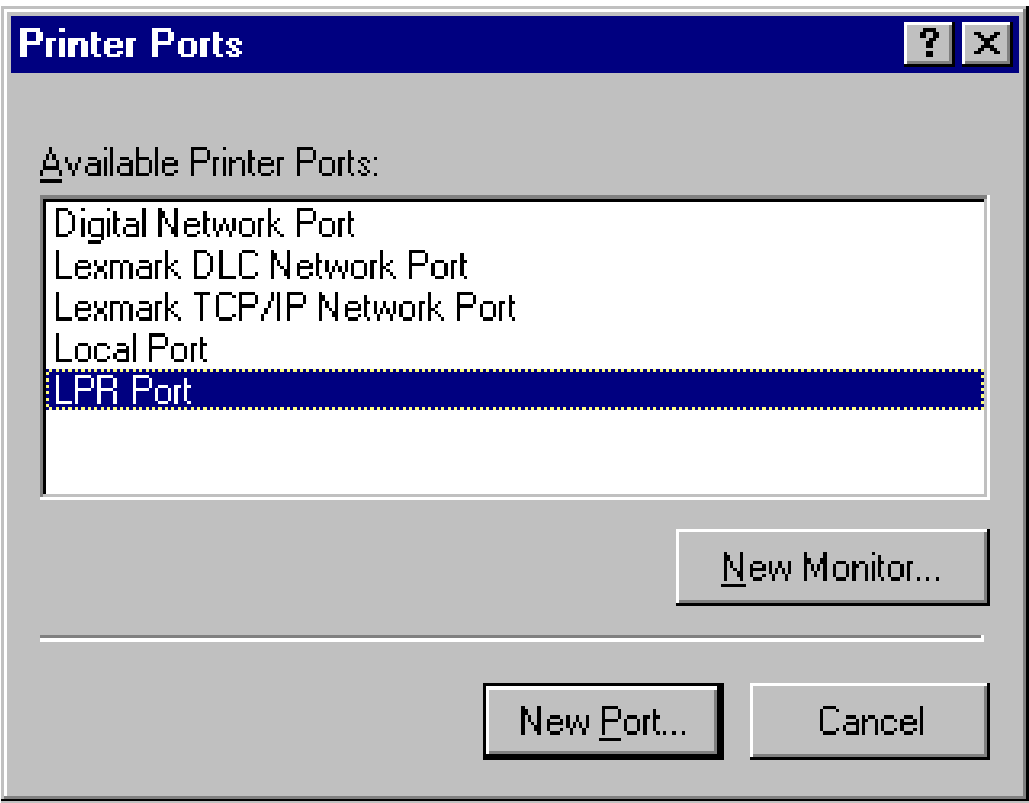
Select **Have Disk**, and give the full path to the driver files, including the drive letter. If the files were downloaded from the Codonics FTP site, they will have to be unzipped prior to installation. If using the driver floppy, the path should look something like A:\winnt40\ **Codonics NP-1600** should appear in the window. Click **<next>**.

8. Naming the printer: If this NT station is a print server, it is advisable to limit the name to 8 characters or less.

Click **<next>**.

9. If this station is to act as a print server, click **Shared** and give the printer a share name. It will still be necessary to install the print driver separately on the machines that will be printing through the print server. If this station will not be a print server, click **Unshared**.

10. Click **<next>**. We recommend you do choose to print the test page.



1 object(s) selected

**Add LPR compatible printer**

Name or address of server providing lpd:

165.254.161.78

OK

Name of printer or print queue on that server:

PS

Cancel

Help

**Add Printer Wizard**

Click the manufacturer and model of your printer. If your printer came with an installation disk, click Have Disk. If your printer is not listed, consult your printer documentation for a compatible printer.

Manufacturers:

Tebra  
Tektronix  
Texas Instruments  
Toshiba  
Unisys  
Varityper  
Wann

Printers:

Tektronix Phaser 300J  
Tektronix Phaser 340  
Tektronix Phaser 340 600 dpi  
Tektronix Phaser 440  
Tektronix Phaser 480  
Tektronix Phaser 4801

Have Disk...

&lt; Back

Next &gt;

Cancel

- **Q:** How do I set up a Codonics NP1600 network printer?

## ● A:

The Codonics NP-1600 uses TCP/IP (Transmission Control Protocol/Internet Protocol) to receive print requests from an Ethernet network. To use TCP/IP, the printer must be assigned an IP Address.

The TCP/IP address can be entered from the front panel of the printer.

The procedure is described in the NP-1600 User's Manual.

The TCP/IP protocol has to be installed also on Windows NT computer and the computer has to have unique TCP/IP address. To test the TCP/IP configuration one can create the local network composed only of computer and the Codonics NP-1600 printer. Computer and the printer have to be connected by twisted pair crossed network cable provided with Codonics printer. The TCP/IP addresses of computer and the printer on such network should differ only in the last group of 4 groups of numbers of TCP/IP address.

Once the TCP/IP protocols are installed and configured on computer and the printer one can start printing images using FTP method (no Windows NT driver is required).

The following section is copied from Codonics Technical Brief:

# **CODONICS**

## **Technical Brief**

# *FTP*

### **Overview**

FTP is one of several methods available for sending images and commands to the printer. FTP utilizes the TCP/IP networking protocol and is available for most computer platforms including UNIX, MS-DOS/Windows and Apple Macintosh. FTP has the advantage of allowing files to be transferred to the printer with minimal changes to system files on the host computer system.

### **Description**

FTP requires three pieces of information to successfully connect with the printer:

1. Hostname or IP address.
2. Username for login.

### 3. Logical Printer Device for password.

Windows NT FTP implementations use graphical interfaces.

Many versions of FTP exist for the PC environment. Some common commercial packages include PC/TCP by FTP Software, Chameleon by Netmanage and SuperTCP by Frontier Technology. There are also shareware packages like WS\_FTP95. These packages offer Windows based FTP clients with graphical interfaces.

Most Windows based FTP clients provide two lists of files.

One list shows the directory of files on the local system. The other list is a directory of files on the remote system (the printer). Users will connect to the printer using the login procedure described below in this document and select files from the local system to send (or copy) to the remote printer.

Make sure to select binary (or image) mode for transfers.

Even though the user interface appearance may vary between implementations of FTP, the information required to connect to the printer is the same. In the following example, the required information is defined as:

1. Hostname: **myprinter**
2. Username: **john**
3. Password: **2**

The above example demonstrates the FTP login procedure.

### **Logical Printer Devices**

The printer side of the FTP connection expects the Logical Printer Device to be specified for the password. The Logical Printer Device is usually specified as a number. Logical Printer Devices control how the printer processes images.

Processing options include scaling an image to fit the printable area of the paper, placing multiple images on a single page and controlling various printer color adjustment parameters. While Logical Printer Devices offer a large number of images processing options, there is a rule for getting the desired output in most cases. If you wish to print a single image per page, you should send all raster (or bitmap) image files (TIFF, TGA, BMP, PCX, RGB, Sun Raster, PPM, etc.) to the scaled device (use "2" for the password). For PostScript files, you should send them to the unscaled device (use "1" for the password).

See NP-1600 Series Printers User's Manual for a complete description of the Logical Printer Devices.

Codonics NP-1600 printers with PostScript option installed can be installed as Windows NT printers to print directly from Windows applications, in particular from LSM 510 program.

The following section is copied from Codonics Technical Brief:

# CODONICS

Technical Brief

# Windows NT 4.0 Driver Installation

## Overview

The Codonics PostScript Driver for Windows NT 4.0 allows users to print directly from Windows applications to Codonics printers. These instructions include installing LPR print services for machines printing over a TCP-IP network. LPR print services installation requires the NT distribution files. The system administrator should perform installation.

## Printing Options

Files generated using the Windows NT 4.0 PostScript Driver may be sent to the printer using LPR, FTP, ImageWeb, or the parallel port. Machines using a central print server need to have the proper driver installed separately on each machine.

## Network Printer Installation

There are two parts to installing the printer on a network: first, to install LPR, and second, to add the printer. If the printer will be used over the parallel port, please skip to the section entitled Parallel Port Installation. Both the parallel port and the network may be used simultaneously.

# LPR Print Services

Windows NT does include LPR printing, but it is not part of the standard installation. To install LPR printing, please do the following. You will be asked to reboot your computer at the end of this process:

1. Start Windows NT.
2. Click on **Start, Settings, and Control Panel**.
3. Click on **Network**.
4. Click on the **Services** tab. If you see Microsoft TCP/IP Printing, click **Cancel**; LPR is installed. If you do not see

Microsoft TCP/IP Printing, click **Add**.

5. Click on **Microsoft TCP/IP Printing**, and click **OK**.
6. Click **OK** again. You will be asked to reboot your computer.

Please do so. After rebooting, LPR printing will be installed.

Driver Installation, Network

1. Click **Start, Settings, and Printers**.
2. Select **Add Printer** from the printer's window, which will start the **Add Printer Wizard**.
3. Select **My Computer**, and click **<next>**.
4. Select **Add Port**. From the menu, select **LPR Port**, and click **New Port**.
5. In **Name or address of server providing lpd**, enter the IP address of the printer. In **Name of printer or print queue on that server**, enter the number **1**. Do not try to give the print queue any other name.
6. Click **OK**, then **Close**, then **<Next>**. If an error is returned, check the IP address and queue name given to the printer, and the network information from the printer's front panel.
7. The next screen begins the driver installation sequence.

Select **Have Disk**, and give the full path to the driver files, including the drive letter. If the files were downloaded from the Codonics FTP site, they will have to be unzipped prior to installation. If using the driver floppy, the path should look something like A:\winnt40\ **Codonics NP-1600** should appear in the window. Click **<next>**.

8. Naming the printer: If this NT station is a print server, it is advisable to limit the name to 8 characters or less.

Click **<next>**.

9. If this station is to act as a print server, click **Shared** and give the printer a share name. It will still be necessary to install the print driver separately on the machines that will be printing through the print server. If this station will not be a print server, click **Unshared**.

10. Click **<next>**. We recommend you do choose to print the test page.

## Parallel Port Installation

When printing to the parallel port from Windows it is necessary to change some printer settings.

Setting the Parallel Port Mode

Use the following front panel key sequences to select the parallel port operating mode. When an **<Up-arrow>** or

**<Down-arrow>** is indicated, press the key repeatedly until the correct response is showing on the

LCD. Start from the

READY display.

Use Key until LCD Displays

<Setup> SETUP: NETWORK

<Down-arrow> SETUP: PARALLEL

<Setup> PAR: MODE

<Setup> the LCD will display the current active mode with an asterisk (\*) in front of the mode name.

<Up-arrow> or Until DATA shows

<Down-arrow> on the LCD.

<Setup> PAR: MODE

The last mode displayed on the LCD is now the active mode. If the <Setup> key is pressed again, the active mode will be displayed with an asterisk (\*) in front of the mode name. Press the <Setup> key to return to the PAR: MODE menu.

<Down-arrow> PAR: DEVICE

<Setup> DEVICE: 2

<Down-arrow> DEVICE: 1

<Setup> PAR: DEVICE

To exit the setup mode and return the printer to the READY state, use the following sequence:

<Up-arrow> PAR: EXIT

<Setup> READY

## Driver Installation

1. Click **Start, Settings, and Printers**.
2. Select **Add Printer** from the printers' pop-up window, which will start the **Add Printer Wizard**.
3. Select **My Computer**, and click <next>.
4. Scroll through the list of ports, and check the lpt port you will be using.
5. The next screen begins the driver installation sequence.

Select **Have Disk**, and give the full path to the driver files, including the drive letter. If the files were downloaded from the Codonics FTP site, they will have to be unzipped prior to installation. If using the driver floppy, the path should look something like A:\winnt40\ **Codonics NP-1600** should appear

in the window. Click <**next**>.

8. Naming the printer: If this NT station is a print server, it is advisable to limit the name to 8 characters or less.

Click <**next**>.

9. If this station is to act as a print server, click **Shared** and give the printer a share name. It will still be necessary to install the print driver separately on the machines that will be printing through the print server. If this station will not be a print server, click **Unshared**.

10. Click <**next**>. We recommend that you do choose to print the test page.

For more information contact:

## CODONICS

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[www.codonics.com](http://www.codonics.com)

Get it all with just one call

1-800-444-1198

● **Q:** How to format Magneto-Optical Fujitsu Drive?

- **A:** Insert unformatted MO disk into the disk drive. Click: Startà Programsà Administrative Tools (Common)à Disk Administrator. In the Disk Administrator program select: Viewà Disk Configuration. Fujitsu MO disk should be displayed as a gray area of 604 MB of Free Space . Click: Partitionà Create and accept the defaults: Create Partition of size: 604 MB. Click OK. The gray area will change to white and it will display: Unformatted 604 MB. Click: Partitionà Commit Changes Now, and say "Yes" in "Confirm" dialog box. Ignore the next message. Click Toolsà Format. In the "Format" dialog box (make sure that it refers to removable media and displays proper drive letter) one can select either FAT file system or NTFS file system. If the disk is only used on NT operating system it is preferable to select NTFS file system. Select "Start", click OK and wait until the formatting is finished. After the message "Format Complete", close the "Format" dialog box and exit Disk Administrator. The disk is ready to be used.

- **Q:** How to create AVI files out of LSM stacks?

- **A:**

AVI files (unlike animated GIF's, which can be created in Animation Shop from Paint Shop Pro) can be inserted into Power Point presentations.

One can find quite a few shareware AVI creator programs on the web.

Look at <http://davecetril.com/1587.html>. On this page one will find AVI Constructor (easy to use), Personal AVI Editor and QuickEditor. With those tools you can easily create AVI files of different sizes (depending on resolution, color depth, number of frames etc) out of stacks of BMP or JPEG frames. Exports to BMP or JPEG formats work fine in LSM program. In version 2.3 there will be three levels of compression while exporting to JPEG format.

Some of those programs are on FTP server

<ftp://zeiss:zeiss@lsm.zeiss.com/> in folder \various\AVI\_Edit (you will find there also three sample movies created from LSM 510 stack as well as PPT presentation) and in folder \various\QT\_Edit.



## LSM 510 Frequently Asked Questions



you to the top of this

Click on the question below to view the answer - CTRL HOME will bring page!

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● **Q:** I cannot get the motorized functions of the microscope to operate or the laser to scan. What is wrong?

● **A:** The button for "Use Existing Images" is activated in the LSM Switchboard Menu. Exit the 510 software, and restart. Select "Scan New Images" button on the Switchboard Menu.

● **Q:** What are the requirements for turning on and off the lasers?

● **A:** There are varied lasers on 510 systems: Look at the guide below, for the lasers that match your system.

**Enterprise Laser (351,364nm):**

Turning on: This laser has a separate power supply unit (large dark brown box) that must be turned on after the computer is booted, but before the 510 program is started. The power supply has a large breaker style on/off switch. Turn this switch to on, then turn the key to the on position. Also make sure that the water chilling unit is on. Start the 510 software. From the "Acquire-Laser" menu, highlight the line that lists the Enterprise laser by clicking on it. Press the "standby" button. After about 1 minute, you will hear a high pitched sound. That means the laser is emitting light. Now click the "on" button. The power slider can be adjusted to 75%

Turning off: Once this laser is shut down, it should not be restarted for a period of approximately 2 hours. If another user will use the system within the next two hours, do not turn the laser off. Instead leave the laser running, and select the "standby" button. If the laser is ready to be shut down, click the "standby" button, then the "off" button. The key in the power supply can be turned to the off position and the power switch can be shut off. The laser chiller unit will turn off automatically when the laser has cooled.

### **Argon Krypton Laser (488,568nm)**

Turning on: From the "Acquire-Laser" menu, highlight the line that lists the Argon Krypton laser by clicking on it. Click on the

"standby" button. After about 1 minute, you should see the menu reporting a tube current value of approximately 3 Amps. This means the laser is emitting light. Click on the "on" button and adjust the power slider to 75%.

Turning off: Once this laser is shut down, it should not be restarted for a period of approximately 2 hours. If another user will use the system within the next two hours, do not turn the laser off. Instead

leave the laser running, and select the "standby" button. If the laser is ready to be shut down, click the "standby" button, then the "off" button. The air cooling unit will continue to run for the next 5 minutes. It is important not to turn off the 510 system with the "Remote Control" on/off switch until the cooling fan has turned off.

### **Argon Laser (457,488,514nm)**

Turning on: From the "Acquire-Laser" menu, highlight the line that lists the Argon laser by clicking on it. Click on the "standby" button. After about 1 minute, you should see the menu reporting a tube current value of approximately 3 Amps. This means the laser is emitting light. Click on the "on" button and adjust the power slider to 75%.

Turning off: Once this laser is shut down, it should not be restarted

for a period of approximately 2 hours. If another user will use the system within the next two hours, do not turn the laser off. Instead

leave the laser running, and select the "standby" button. If the laser is ready to be shut down, click the "standby" button, then the "off" button. The air cooling unit will continue to run for the next 5 minutes. It is important not to turn off the 510 system with the "Remote Control" on/off switch until the cooling fan has turned off.

543 and/or 633 HeNe (Helium Neon) Lasers:

These lasers are very simple devices with no specific requirements for turning on or off. Simply select "ON" from laser control menu to turn on, and "OFF" from laser control menu to turn off.

● **Q:** My field of view is partially occluded when I look in the Axiovert microscope, what is wrong?

● **A:** There are 4 components on the microscope that need to be checked to make sure that they are not blocking the light path.

Eyepiece Shutter - a silver plunger with a black rounded knob at the end located to the right of the eyepieces. This device must be pulled to the open position, all the way out to the right.

Analyzer - a black plastic flat stick located directly above and on the right side of the 4 position reflector slider that holds the

fluorescent filter sets. This should be pulled all the way out and to the right.

The 4-position reflector slider is not clicked into position. It is located directly below the objectives, and moves via a motor on a track. If moved by hand, it will not be positioned correctly. It should be positioned to the right. There is a distinctive click when it is set properly.

The shutter to block the fluorescent light source is not in position. This is a black slider, with silver knobs at the end, located behind the 4-position reflector slider. If not fully open, it will block some of the light from the arc lamp. It should be pushed to the left. There is a distinct click when it is in position.

### ● **Q:** How does the pinhole alignment work?

- **A:** The pinholes for each detector are positional: X (left/right), Y (up/down) and PMT1 pinhole can be positioned in Z (closer or farther from the PMT). The pinhole position needs to be movable because there are a series of filter wheels containing mirrors in the light path. Every time a different mirror on a filter wheel is selected, the light path moves slightly because it is impossible to mount these mirrors in the filter wheels at a precise 45-degree angle. If each mirror could be precisely mounted at 45 degrees, the pinholes would not need alignment because the image information would always travel in a perfect straight path through the pinhole. Since these filter wheels and mirrors are extremely small, this scenario is not possible. So when different combinations of mirrors are selected to create a beam path, the image forming light can end

up at positions slightly above/below/left/right of the current pinhole position. If this happens, light is lost because it cannot fully pass through the pinhole. Fortunately, the software stores coordinates of pinhole locations for every combination of mirrors that can be combined to form a working light path. For example, if there is a 488/543 mirror, and an NFT 560 in the light path to PMT 1, then PH1 (pinhole 1) automatically moves to a preset position which places the pinhole in the proper position to allow the maximum amount of light to pass through it. Note that the emission filters have no effect on the pinhole position because they are placed after the pinhole in the light path. Pinhole positions can be set automatically using a Plan Neofluar 10X objective and a mirror. They can also be set manually.

● **Q:** My focus drive does not respond. User cannot seem to get the system to focus.

● **A:** If the user moves the motorized nosepiece manually then the microscope internally shuts off the focus motor. Solution is to open the stage window under ACQUIRE and click on the WORK button.

● **Q:** I can't seem to focus on my specimen.

● **A:** If you are working on an inverted microscope then check that the coverslip is face down toward the objective. If you still have

problems then try a lens with greater working distance than the current lens selected. In many cases the cells have been mounted too far from the cover glass. Could you have mounted 2 or more coverslips accidentally on your specimen? Either way a longer working distance lens should overcome this problem.

● **Q:** Why does the system occasionally misscan the region I have selected in z stack mode?

● **A:** If the user has selected the top and bottom of the stack using Mark First/Last mode, then they must not go into the z-sectioning menu after the selection is made. The z positioning is not preserved from the first/last mode if you move into the z-sectioning window. **DO** not exit first/last once you have selected your stack dimension. Begin the scan with the **START** button while you are still in the first/last mode.

● **Q:** How do I set up user accounts?

● **A:** One has to have Administrators Rights to set up new user accounts. Click: Start → Programs → Administrative Tools (Common) → User Manager.

**User Manager**

User Policies Options Help

Username	Full Name	Description
Administrator		Built-in account for administering the computer/domain
Guest		Built-in account for guest access to the computer/domain
IUSR_PHASER	Internet Guest Account	Internet Server Anonymous Access
IWAM_PHASER	Web Application Manager	Internet Server Web Application Manager identity
LSM		
user		
VUSR_PHASER	VSA Server Account	Account for the Visual Studio Analyzer server components
Zbigniew	Zbigniew Iwinski	
Zbyszek	Zbigniew Iwinski	
ziwins	Zbigniew Iwinski	

Groups	Description
Administrators	Members can fully administer the computer/domain
Backup Operators	Members can bypass file security to back up files
Guests	Users granted guest access to the computer/domain
MTS Impersonators	Microsoft Transaction Server trusted process identities.
Power Users	Members can share directories and printers
Replicator	Supports file replication in a domain
Users	Ordinary users

Select

Userà New User

**New User** [X]

Username:

Full Name:

Description:

Password:

Confirm Password:

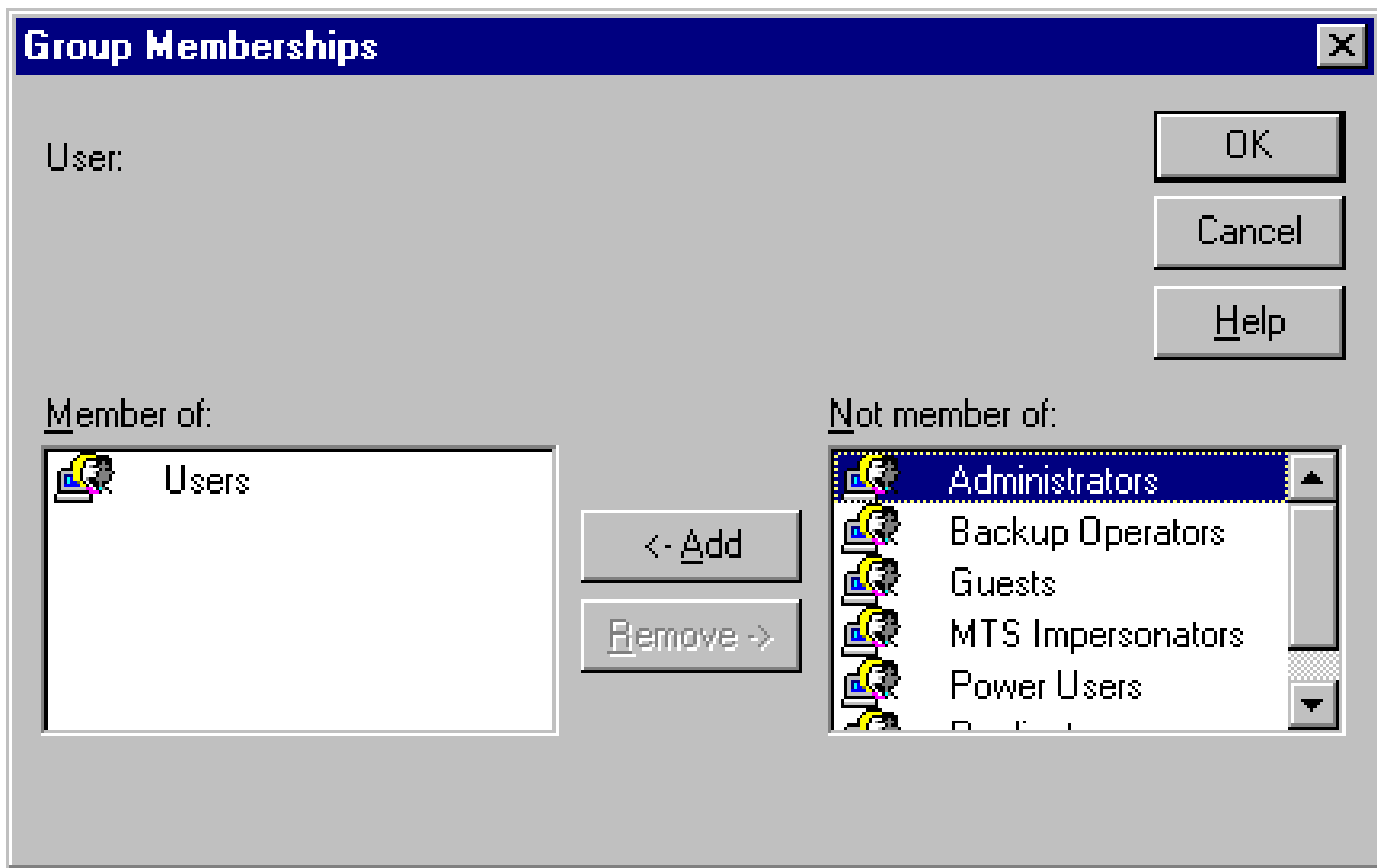
User Must Change Password at Next Logon

User Cannot Change Password

Password Never Expires

Account Disabled

Click Groups button:



Select the groups you want a new user to be a member of in the right window and click the Add button. The selected groups will show in the left window.

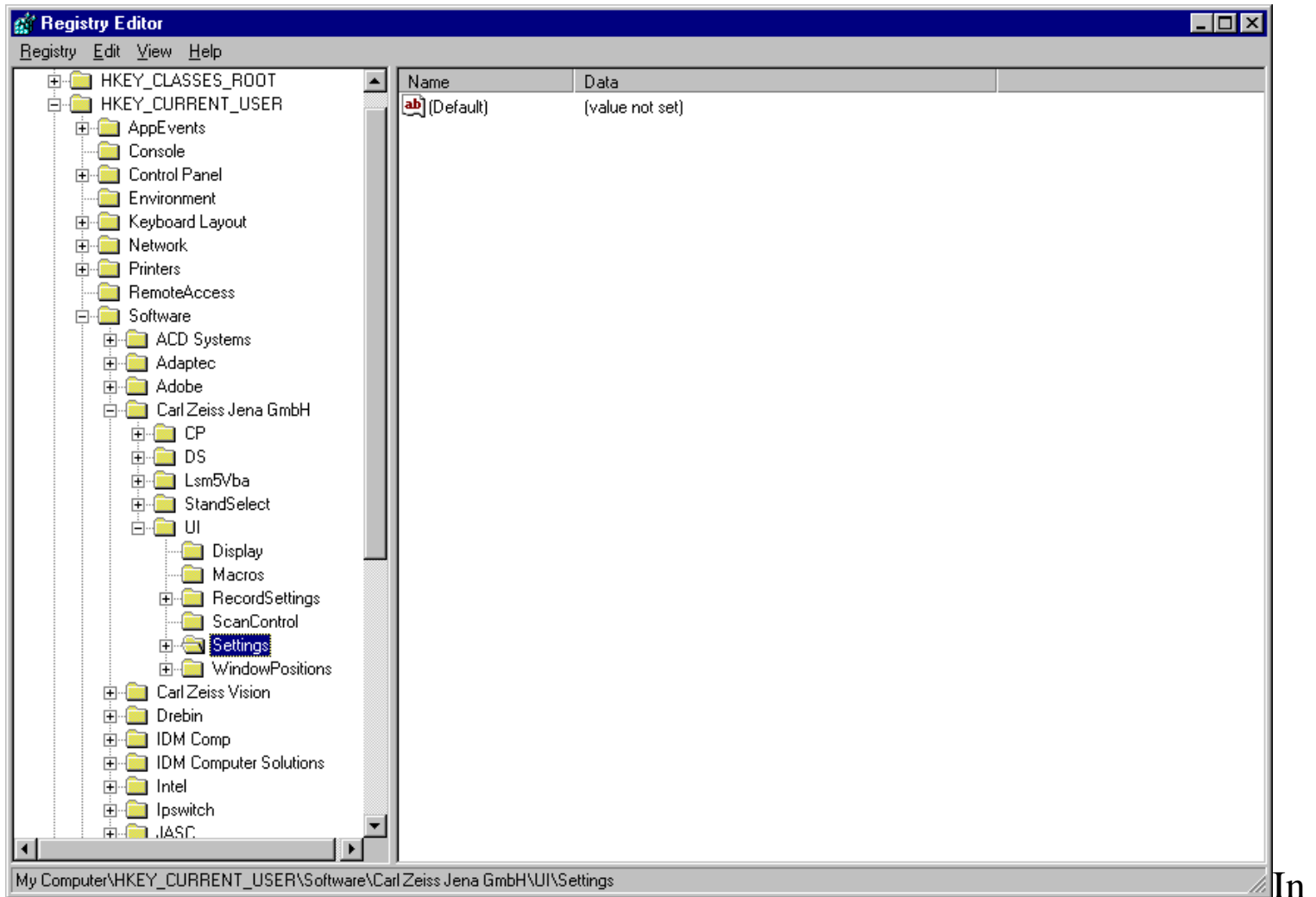
Remarks:

Do not add the Guests group.

Only users who are members of Administrators group can eject removable media using Eject menu selection in Windows Explorer. This is Windows NT feature (bug). Ejecting removable media using software Eject function ensures that the data will not be lost – write cache will be flushed before the disk is removed. Using mechanical Eject button may result in the data loss – write cache may not be properly flushed.

- **Q:** I created a new user login, but when they login and start the 510 software, they have not settings in the configuration menu. (Beam Path)

- **A:** The registry files, which contain the configuration information, have not been imported to the new user. The Tracks and Recordings are individual for every user but can be easily shared using Registry Export feature. When you Login as the user with the Administrator rights who has the proper configuration settings for tracks and recordings and want to share them with the others do the following: Click Start button à Run, type regedit and click OK button.



Registry Editor select:

To export Track Configurations select:

`HKEY_CURRENT_USER\Software\Carl Zeiss Jena GmbH\UI\Settings`

Click: Export Registry File, specify folder in which you want to save exported registry file (e.g. D:\LSM510\REGISTRY) and specify the file name (e.g. SETTINGS.REG)

To export Recordings select:

HKEY\_CURRENT\_USER\Software\Carl Zeiss Jena GmbH\UI\RecordSettings

Click: Export Registry File, specify folder in which you want to save exported registry file (e.g. D:\LSM510\REGISTRY) and specify the file name (e.g. RECORDINGS.REG)

To import the track and recording configurations to the new user, login as the new user open Windows Explorer, navigate to the folder where are the exported registry files (e.g. D:\LSM510\REGISTRY) and double click on each of the exported files: SETTINGS.REG and RECORDINGS.REG.

One will be notified that the information has been successfully entered into the Registry.

The other way to import configurations is to open the image from the database and click the reuse button. The Configuration from the image will be set in the Configuration Control window (to store it permanently one should click on Store/Apply button).

- **Q:** I cannot access my images after I backed up my image database. Either I get the message that the database is inaccessible or the image blocks are empty.

- **A:** The possible source of this problem may be incorrect removal of the removable disk or the turn off of the computer before the write cache has been flushed to disk. Windows NT uses "lazy" writing method writing to the write cache, which is flushed to the disk at the operating system convenience. When shutting down the Windows NT always wait for <Restart> message, and then switch off the computer. The safest way to remove removable media is to use software Eject function (in Windows Explorer). This method ensures that the write cache is flushed. This software option, however, is available only for users with Administrators rights (see "How do I set User Accounts"). Ejecting the disks using mechanical buttons do not guarantee the proper flush of the write buffer.
  
- **Q:** Sometimes when I select a Region of interest the system scans a completely different area then the one selected.
  
- **A:** If the user selects a region of interest on the image collected with FASTXY scan the coordinates will be calculated on a 512X512 basis. If your pixel resolution is other than 512 your coordinates will be incompatible. You must always create ROI's on images of the same resolution. You can avoid this if you collect a SINGLE scan image and ALWAYS create your ROI's on that image.
  
- **Q:** How do I set up a printer to print images?
  
- **A:** One can print images from LSM 510 program using any printer having the Windows NT driver installed in the Printers section of Windows NT.

**Driver Installation for the printer connected to the parallel port:**

1. Click **Start, Settings, and Printers**.
2. Select **Add Printer** from the printers' pop-up window, which will start the **Add Printer Wizard**.
3. Select **My Computer**, and click <next>.

4. Scroll through the list of ports, and check the LPT port you will be using.

5. The next screen begins the driver installation sequence.

Select the proper printer from the list of printers, or **Have Disk**, and give the full path to the driver files, including the drive letter. Click <next>.

8. Naming the printer: If this NT station is a print server, it is advisable to limit the name to 8 characters or less.

Click <next>.

9. If this station is to act as a print server, click **Shared** and give the printer a share name. It will still be necessary to install the print driver separately on the machines that will be printing through the print server. If this station will not be a print server, click **Unshared**.

10. Click <next>. We recommend that you do choose to print the test page.

● **Q:** How do I set up LPR (Line Printer Remote) printer?

● **A:**

This section refers to the network printers supporting LPR printing and having the Windows NT drivers – examples of such printers are **CODONICS NP1600** (with PostScript option) and **Tektronix Phaser440**. The TCP/IP protocol should be already installed in the Network section of Windows NT.

## Network Printer Installation

There are two parts to installing the printer on a network: first, to install LPR, and second, to add the printer.

# LPR Print Services

Windows NT does include LPR printing, but it is not part of the standard installation. To install LPR printing, please do the following. You will be asked to reboot your computer at the end of this process:

1. Start Windows NT.
2. Click on **Start, Settings, and Control Panel**.
3. Click on **Network**.

4. Click on the **Services** tab. If you see Microsoft TCP/IP Printing, click **Cancel**; LPR is installed. If you do not see Microsoft TCP/IP Printing, click **Add**.

5. Click on **Microsoft TCP/IP Printing**, and click **OK**.

6. Click **OK** again. You will be asked to reboot your computer.

Please do so. After rebooting, LPR printing will be installed.

Driver Installation, Network

1. Click **Start, Settings, and Printers**.

2. Select **Add Printer** from the printer's window, which will start the **Add Printer Wizard**.

3. Select **My Computer**, and click **<next>**.

4. Select **Add Port**. From the menu, select **LPR Port**, and click **New Port**.

5. In **Name or address of server providing lpd**, enter the IP address of the printer. In **Name of printer or print queue on that server**, enter the number **1** for Codonics NP1600 printer and **PS** for Tektronix Phaser440 printer. Do not try to give the print queue any other name.

6. Click **OK**, then **Close**, then **<Next>**. If an error is returned, check the IP address and queue name given to the printer and the network information from the printer's front panel.

7. The next screen begins the driver installation sequence.

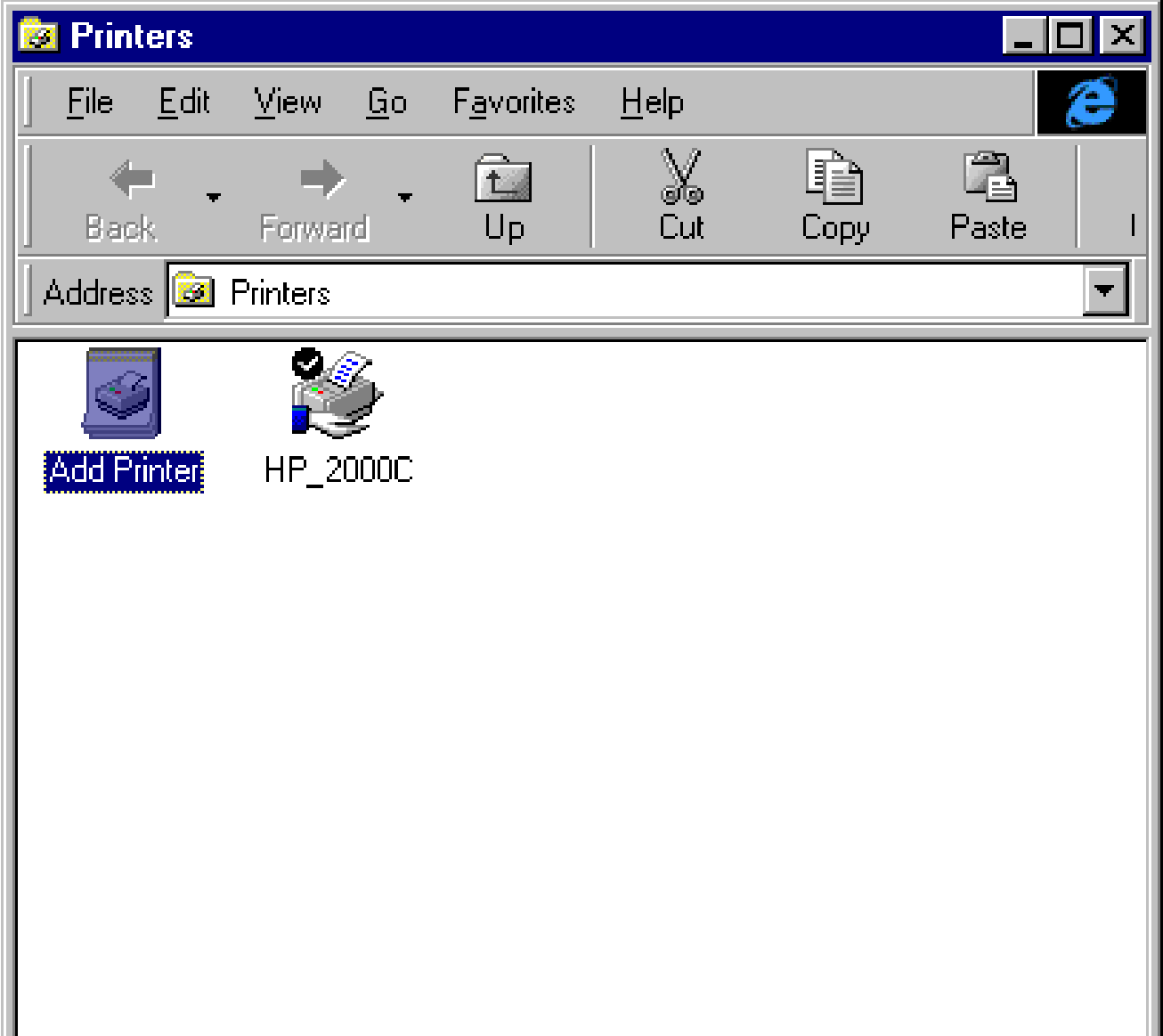
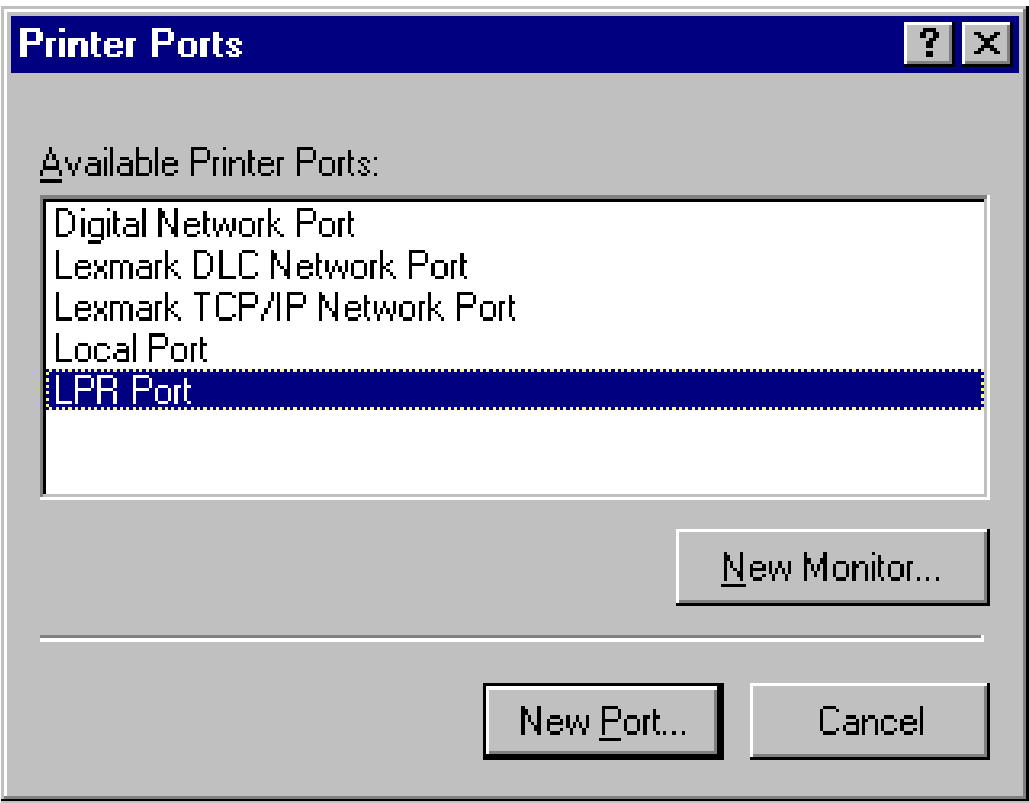
Select **Have Disk**, and give the full path to the driver files, including the drive letter. If the files were downloaded from the Codonics FTP site, they will have to be unzipped prior to installation. If using the driver floppy, the path should look something like A:\winnt40\ **Codonics NP-1600** should appear in the window. Click **<next>**.

8. Naming the printer: If this NT station is a print server, it is advisable to limit the name to 8 characters or less.

Click **<next>**.

9. If this station is to act as a print server, click **Shared** and give the printer a share name. It will still be necessary to install the print driver separately on the machines that will be printing through the print server. If this station will not be a print server, click **Unshared**.

10. Click **<next>**. We recommend you do choose to print the test page.



1 object(s) selected

**Add LPR compatible printer**

Name or address of server providing lpd:

165.254.161.78

OK

Name of printer or print queue on that server:

PS

Cancel

Help

**Add Printer Wizard**

Click the manufacturer and model of your printer. If your printer came with an installation disk, click Have Disk. If your printer is not listed, consult your printer documentation for a compatible printer.

Manufacturers:

Tegra  
Tektronix  
Texas Instruments  
Toshiba  
Unisys  
Varityper  
Wann

Printers:

Tektronix Phaser 300J  
Tektronix Phaser 340  
Tektronix Phaser 340 600 dpi  
Tektronix Phaser 440  
Tektronix Phaser 480  
Tektronix Phaser 4801

Have Disk...

&lt; Back

Next &gt;

Cancel

- **Q:** How do I set up a Codonics NP1600 network printer?

## ● A:

The Codonics NP-1600 uses TCP/IP (Transmission Control Protocol/Internet Protocol) to receive print requests from an Ethernet network. To use TCP/IP, the printer must be assigned an IP Address.

The TCP/IP address can be entered from the front panel of the printer.

The procedure is described in the NP-1600 User's Manual.

The TCP/IP protocol has to be installed also on Windows NT computer and the computer has to have unique TCP/IP address. To test the TCP/IP configuration one can create the local network composed only of computer and the Codonics NP-1600 printer. Computer and the printer have to be connected by twisted pair crossed network cable provided with Codonics printer. The TCP/IP addresses of computer and the printer on such network should differ only in the last group of 4 groups of numbers of TCP/IP address.

Once the TCP/IP protocols are installed and configured on computer and the printer one can start printing images using FTP method (no Windows NT driver is required).

The following section is copied from Codonics Technical Brief:

## **CODONICS**

### **Technical Brief**

# *FTP*

#### **Overview**

FTP is one of several methods available for sending images and commands to the printer. FTP utilizes the TCP/IP networking protocol and is available for most computer platforms including UNIX, MS-DOS/Windows and Apple Macintosh. FTP has the advantage of allowing files to be transferred to the printer with minimal changes to system files on the host computer system.

#### **Description**

FTP requires three pieces of information to successfully connect with the printer:

1. Hostname or IP address.
2. Username for login.

### 3. Logical Printer Device for password.

Windows NT FTP implementations use graphical interfaces.

Many versions of FTP exist for the PC environment. Some common commercial packages include PC/TCP by FTP Software, Chameleon by Netmanage and SuperTCP by Frontier Technology. There are also shareware packages like WS\_FTP95. These packages offer Windows based FTP clients with graphical interfaces.

Most Windows based FTP clients provide two lists of files.

One list shows the directory of files on the local system. The other list is a directory of files on the remote system (the printer). Users will connect to the printer using the login procedure described below in this document and select files from the local system to send (or copy) to the remote printer.

Make sure to select binary (or image) mode for transfers.

Even though the user interface appearance may vary between implementations of FTP, the information required to connect to the printer is the same. In the following example, the required information is defined as:

1. Hostname: **myprinter**
2. Username: **john**
3. Password: **2**

The above example demonstrates the FTP login procedure.

### **Logical Printer Devices**

The printer side of the FTP connection expects the Logical Printer Device to be specified for the password. The Logical Printer Device is usually specified as a number. Logical Printer Devices control how the printer processes images.

Processing options include scaling an image to fit the printable area of the paper, placing multiple images on a single page and controlling various printer color adjustment parameters. While Logical Printer Devices offer a large number of images processing options, there is a rule for getting the desired output in most cases. If you wish to print a single image per page, you should send all raster (or bitmap) image files (TIFF, TGA, BMP, PCX, RGB, Sun Raster, PPM, etc.) to the scaled device (use "2" for the password). For PostScript files, you should send them to the unscaled device (use "1" for the password).

See NP-1600 Series Printers User's Manual for a complete description of the Logical Printer Devices.

Codonics NP-1600 printers with PostScript option installed can be installed as Windows NT printers to print directly from Windows applications, in particular from LSM 510 program.

The following section is copied from Codonics Technical Brief:

# CODONICS

Technical Brief

# Windows NT 4.0 Driver Installation

## Overview

The Codonics PostScript Driver for Windows NT 4.0 allows users to print directly from Windows applications to Codonics printers. These instructions include installing LPR print services for machines printing over a TCP-IP network. LPR print services installation requires the NT distribution files. The system administrator should perform installation.

## Printing Options

Files generated using the Windows NT 4.0 PostScript Driver may be sent to the printer using LPR, FTP, ImageWeb, or the parallel port. Machines using a central print server need to have the proper driver installed separately on each machine.

## Network Printer Installation

There are two parts to installing the printer on a network: first, to install LPR, and second, to add the printer. If the printer will be used over the parallel port, please skip to the section entitled Parallel Port Installation. Both the parallel port and the network may be used simultaneously.

# LPR Print Services

Windows NT does include LPR printing, but it is not part of the standard installation. To install LPR printing, please do the following. You will be asked to reboot your computer at the end of this process:

1. Start Windows NT.
2. Click on **Start, Settings, and Control Panel**.
3. Click on **Network**.
4. Click on the **Services** tab. If you see Microsoft TCP/IP Printing, click **Cancel**; LPR is installed. If you do not see

Microsoft TCP/IP Printing, click **Add**.

5. Click on **Microsoft TCP/IP Printing**, and click **OK**.

6. Click **OK** again. You will be asked to reboot your computer.

Please do so. After rebooting, LPR printing will be installed.

Driver Installation, Network

1. Click **Start, Settings, and Printers**.

2. Select **Add Printer** from the printer's window, which will start the **Add Printer Wizard**.

3. Select **My Computer**, and click **<next>**.

4. Select **Add Port**. From the menu, select **LPR Port**, and click **New Port**.

5. In **Name or address of server providing lpd**, enter the IP address of the printer. In **Name of printer or print queue on that server**, enter the number **1**. Do not try to give the print queue any other name.

6. Click **OK**, then **Close**, then **<Next>**. If an error is returned, check the IP address and queue name given to the printer, and the network information from the printer's front panel.

7. The next screen begins the driver installation sequence.

Select **Have Disk**, and give the full path to the driver files, including the drive letter. If the files were downloaded from the Codonics FTP site, they will have to be unzipped prior to installation. If using the driver floppy, the path should look something like A:\winnt40\ **Codonics NP-1600** should appear in the window. Click **<next>**.

8. Naming the printer: If this NT station is a print server, it is advisable to limit the name to 8 characters or less.

Click **<next>**.

9. If this station is to act as a print server, click **Shared** and give the printer a share name. It will still be necessary to install the print driver separately on the machines that will be printing through the print server. If this station will not be a print server, click **Unshared**.

10. Click **<next>**. We recommend you do choose to print the test page.

## Parallel Port Installation

When printing to the parallel port from Windows it is necessary to change some printer settings.

### Setting the Parallel Port Mode

Use the following front panel key sequences to select the parallel port operating mode. When an **<Up-arrow>** or

**<Down-arrow>** is indicated, press the key repeatedly until the correct response is showing on the

LCD. Start from the

READY display.

Use Key until LCD Displays

<Setup> SETUP: NETWORK

<Down-arrow> SETUP: PARALLEL

<Setup> PAR: MODE

<Setup> the LCD will display the current active mode with an asterisk (\*) in front of the mode name.

<Up-arrow> or Until DATA shows

<Down-arrow> on the LCD.

<Setup> PAR: MODE

The last mode displayed on the LCD is now the active mode. If the <Setup> key is pressed again, the active mode will be displayed with an asterisk (\*) in front of the mode name. Press the <Setup> key to return to the PAR: MODE menu.

<Down-arrow> PAR: DEVICE

<Setup> DEVICE: 2

<Down-arrow> DEVICE: 1

<Setup> PAR: DEVICE

To exit the setup mode and return the printer to the READY state, use the following sequence:

<Up-arrow> PAR: EXIT

<Setup> READY

## Driver Installation

1. Click **Start, Settings, and Printers**.
2. Select **Add Printer** from the printers' pop-up window, which will start the **Add Printer Wizard**.
3. Select **My Computer**, and click <next>.
4. Scroll through the list of ports, and check the lpt port you will be using.
5. The next screen begins the driver installation sequence.

Select **Have Disk**, and give the full path to the driver files, including the drive letter. If the files were downloaded from the Codonics FTP site, they will have to be unzipped prior to installation. If using the driver floppy, the path should look something like A:\winnt40\. **Codonics NP-1600** should appear

in the window. Click <**next**>.

8. Naming the printer: If this NT station is a print server, it is advisable to limit the name to 8 characters or less.

Click <**next**>.

9. If this station is to act as a print server, click **Shared** and give the printer a share name. It will still be necessary to install the print driver separately on the machines that will be printing through the print server. If this station will not be a print server, click **Unshared**.

10. Click <**next**>. We recommend that you do choose to print the test page.

For more information contact:

## CODONICS

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[www.codonics.com](http://www.codonics.com)

Get it all with just one call

1-800-444-1198

● **Q:** How to format Magneto-Optical Fujitsu Drive?

- **A:** Insert unformatted MO disk into the disk drive. Click: Startà Programsà Administrative Tools (Common)à Disk Administrator. In the Disk Administrator program select: Viewà Disk Configuration. Fujitsu MO disk should be displayed as a gray area of 604 MB of Free Space . Click: Partitionà Create and accept the defaults: Create Partition of size: 604 MB. Click OK. The gray area will change to white and it will display: Unformatted 604 MB. Click: Partitionà Commit Changes Now, and say "Yes" in "Confirm" dialog box. Ignore the next message. Click Toolsà Format. In the "Format" dialog box (make sure that it refers to removable media and displays proper drive letter) one can select either FAT file system or NTFS file system. If the disk is only used on NT operating system it is preferable to select NTFS file system. Select "Start", click OK and wait until the formatting is finished. After the message "Format Complete", close the "Format" dialog box and exit Disk Administrator. The disk is ready to be used.

- **Q:** How to create AVI files out of LSM stacks?

- **A:**

AVI files (unlike animated GIF's, which can be created in Animation Shop from Paint Shop Pro) can be inserted into Power Point presentations.

One can find quite a few shareware AVI creator programs on the web.

Look at <http://davecetril.com/1587.html>. On this page one will find AVI Constructor (easy to use), Personal AVI Editor and QuickEditor. With those tools you can easily create AVI files of different sizes (depending on resolution, color depth, number of frames etc) out of stacks of BMP or JPEG frames. Exports to BMP or JPEG formats work fine in LSM program. In version 2.3 there will be three levels of compression while exporting to JPEG format.

Some of those programs are on FTP server

<ftp://zeiss:zeiss@lsm.zeiss.com/> in folder \various\AVI\_Edit (you will find there also three sample movies created from LSM 510 stack as well as PPT presentation) and in folder \various\QT\_Edit.