



Plug-in Manual

Linotype

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Overview

Xitron's Navigator PostScript RIP and Raster Blaster TIFF Catcher rely on software modules called plug-ins to communicate with imagesetters, platesetters, and proofers. These plug-ins are written and compiled to a format known as Dynamic Link Libraries, or DLLs. They act as device drivers for the software and control most actions of the output devices. Some of these actions include checking device status, device setup, and advancing and cutting material. In addition, the plug-in relays all the physical characteristics of an engine such as supported resolutions and imageable area.

During the launch sequence, both Navigator and Raster Blaster scan a directory called "devices" for plug-in files. The software loads each plug-in it finds, and then queries them for a description of the capabilities of the supported devices. In this manner the plug-in configures the RIP to output a bitmap to these devices.

Each plug-in controls a particular family of recorders and is able to understand most messages and errors communicated by the output device. Plug-ins for use with Windows-based platforms consist of three software modules. The first module is the core plug-in written specifically for a particular device. This DLL is 32-bit code and runs under Windows NT, Windows 2000 Server, Windows 2000 Professional, Windows 2003 Server and Windows XP. The second module is a kernel mode device driver. This module communicates with the Xitron interface boards and moves the bitmap data from the PC to the output device's interface. The third module is a 'helper' DLL that translates calls from the plug-in to the Windows device driver.

When a page is sent to an output device for imaging, the Xitron software loads the correct plug-in and begins a series of steps prior to output. The plug-in first initializes the engine and checks that it is ready. After receiving the proper signal, the plug-in will begin reading bitmap data from the platform's hard drive into a "printer buffer." When the printer buffer is full, the plug-in starts communicating the data to the output device. As the output device consumes the data, the plug-in relays this information to the software, which then refills the buffer. This continues until all of the data has been communicated to the output device. The plug-in tells the software the job is complete and waits for an indicator that the recorder has finished. This process is repeated for each page being output.

Raster Blaster

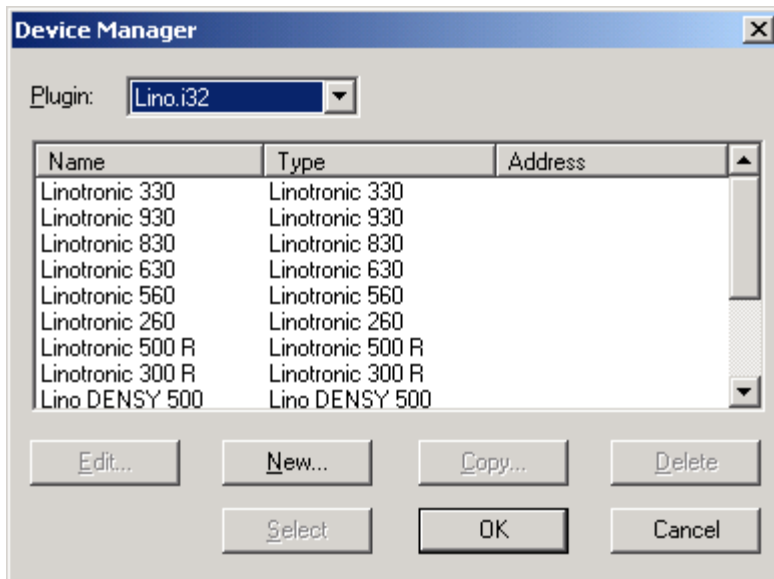
Plug-ins used by Xitron's Raster Blaster have the same functionality as those for the Navigator RIP and the same options are available for configuration. Therefore, unless otherwise specified, the information in this manual will apply to both products. See the Raster Blaster Manual for specific configuration information.

Configuring Devices

The following section applies only to Navigator RIPs.

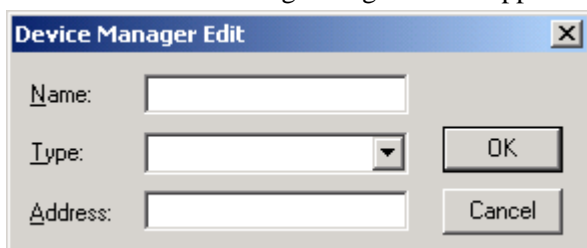
Xitron distributes a separate plug-in for each recorder family. This plug-in, in conjunction with firmware on specific Xitron interface cards (PCI & PCI-X), has the capability to drive most of the devices in each recorder family. More than one plug-in can be installed in a single RIP and within a single plug-in more than one engine type can be configured. A plug-in must have one device configured before it can be used. Devices are configured using the “Device Manager” which is shown below.

Generally, these devices are already configured when the plug-in is loaded. In most cases the user will not have to add or configure the devices. The following information about Device Manager is provided for the rare occasion where adding a device becomes necessary.



The display above lists all pre-configured Linotype devices. The Name will appear in the Output device field in the Page Setup dialog box.

To configure a different device for the plug-in, select it from the list box labeled “Plug-in.” Click the “New” button. To edit an existing device, highlight it and click on “Edit,” or double-click the listing. In either case the following dialog box will appear.



Enter the name of the device in the field next to "Name" as you wish to have it appear in the Page Setup. This name is for the users' benefit so as to remember which device is configured. It can be any string of up to 32 characters. Select the specific recorder from the list box next to "Type." Ignore the address field, as it is not used. When you have made your selections, click "OK" to keep them or "Cancel" to ignore them.

For Raster Blaster, see the Raster Blaster manual section on *Creating New Devices*.

Linotronic Specific Settings

Xitron supports the following Linotronic recorders:

- *200p, *200SQ, *230, 300D, 500D, 300, 330, 500, 530, 560
- 630 (See additional document, "DLDBuild")
- 830, 930

*** Note: These devices may require different interface cards and drivers than those covered in this Plug-in Manual.**

After installing the Linotronic plug-in, you will be able to create Page Setups based on the plug-in. Select the appropriate resolution, density, and page orientation from the main window of Page Setup. You should also configure the options specific to the ECRM devices. Click on "Configure Device" under the Device Type list. The following dialog box will appear:

Configure Linotronic

Max Page Width (points)

Max Page Depth (points)

Mux String

PB2 Interface Card

Punches

Punch Control Value

Additional Film Feed (mm)

Linotronic 630 Exposure Control

Filter (0-5)

Focus (0-700)

Bias (0-255)

NOTE: Values not used unless "exposure" is non-zero

From this dialog box you can configure the following options:

- **Max Page Width:** This value is used to override the built-in width-clipping feature of the plug-in. When this value is set to 0, the plug-in will always clip images at the maximum width built into the plug-in. Non-zero values will cause the plug-in to allow images of the set value. Enter values in points.
- **Max Page Depth:** Use this value to set the maximum length of an imaged job. This feature is helpful if a film device is imaging plate material and the plate must be a consistent length. Setting this value to 0 disables the feature. If this value is set to 0 on a drum or cut sheet type imager, images will be clipped at the maximum length allowed by the plug-in. Non-zero values will cause the plug-in to allow images of the set value. Enter values in points.
- **Mux String:** This is used in an environment with a multiplexer to select one or more input devices to scan for a connection. This should be left blank.
- **PB2 Interface Card:** If more than one interface (ArborSB) card is in the PC, you must select the appropriate interface here. The default for this box is blank, signifying that the first configured card will be used.
- **Punch Control Value (Linotronic 630 ONLY):** This option allows the user to enable and disable punches on the Linotronic 630. Normally, a value of “7” will enable the punch and a value of “0” will disable the punch. In order to determine the values specific to the attached imager, input jobs from an existing Linotronic RIP first with the punches ON and then with the punches OFF. Examine the image placement after each exposure to determine the correct value.
- **Additional Film Feed (mm) (Linotronic 630 ONLY):** This value is added to the normal film feed (width of the job) after exposure to make sure the punched holes are flushed off the drum.
- **Linotronic 630 Exposure Control:** This group of 3 settings supplements the exposure setting on the Page Setup dialog, providing all necessary laser control of the Linotronic 630 recorder. Please refer to the Linotronic 630 documentation for more information.
 - ♦ **Filter:** This setting selects which filter to engage at this resolution.
 - ♦ **Focus:** This setting selects the focus lens position.
 - ♦ **Bias:** This setting sets the current supplied to the laser when in the “off” state (dark). It is sometimes referred to as “Bias light current” on Linotype equipment and software.

Connecting the Interface

The Xitron interface for Linotronic recorders uses the LI2 and LI5 ports on the back of the recorder. For almost all installations, both the LI2 and LI5 ports are connected. (For exceptions see **LI2-Only** under **Additional Set-Up**.) One Xitron cable (020-0423-020) attaches to the 50-pin mini-SCSI connector of the Xitron PCI card and the LI2 port on the back of the recorder. Command and status information to control the recorder is carried on the LI5 interface via the second Xitron cable (020-0422-010), which attaches

to the 9-pin D-shell type connector on the card and the LI5 port (25-pin D-shell) on the back of the recorder.

Additional Set-up

After attaching the LI2 and LI5 cables between the Xitron interface board and the imager, use the Linotronic's front panel to select the LI5 interface. An indication that the imager is in LI5 mode is an "L" in the upper left corner of the Lino's front panel LCD. At this point, the system should be ready for initial testing.

The **LI2-Only** device type is provided for Linotronic machines that do not have an LI5 interface. Since the setting of all imager parameters like resolution and density is handled through LI5, the LI2-Only device type will not take advantage of all the plug-in's features. LI2 mode will allow proper imaging only if the RIP and recorder parameters match.

Set the Linotronic for "panel" interface and place it in imaging mode by pressing the "Start" button on the front panel. When the Lino is in imaging mode, a reverse "P" will appear on the left side of the imager's LCD. To feed and cut the film, press the "Stop" button (shift-stop) on the front panel, followed by the cut button. Always take the Linotronic out of imaging mode before shutting down Navigator.

The error message "**LI5 OVRUN**" will occasionally appear on the Linotronic's console during imaging. This is normal. In order to receive up-to-date status and error information from the imaging engine, it is necessary to poll the engine periodically while it is imaging. At certain points during the startup of the imaging process, the engine will stop responding momentarily to perform time-critical adjustments. These "LI5 OVRUN" messages occur during those periods. The Xitron software will timeout and retry the status request two seconds later without any indication that the overrun has occurred.

The Linotronic recorder has some features that may interfere with the operation of Xitron software. Specifically, a group of settings in the front panel control the width of the imageable area and provide a hardware left margin setting. These options are available under the key labeled "X/Y" on the recorder's front panel. Make sure that the setting labeled "X-Measure" correctly reflects the width of the imager: 12-inch for the 300 series and 18-inch for the 500 series. Make sure "X-LeftMargin" is set to 0. This will enable the recorder's maximum imaging area and allow margins and image width to be controlled from the Xitron plug-in.

Plug-in Messages

From the time a plug-in is loaded for the purpose of setting up and outputting to one of its devices, it begins to send messages to the software's Monitor window. These messages are typically informational but can convey warnings and report errors from the engine. There is a user changeable setting called

“debug level” that controls the verbosity of these messages. This can range from 0 (almost no messages) to 4 (very high message traffic). This is described in the Xitron Tech Note *CreatingLogfile.pdf*.

Examples of informational messages are:

- PostScript job name
- Commands being sent to the PCI card to set up the engine
- Output start and stop time

Examples of warning messages are:

- A job being clipped to fit a recorder
- Data being left at the end of the job.
- Certain settings in the .ini file overriding defaults

When the plug-in encounters an error from the output device, it will generate an appropriate error message. The short form of this message will appear in the Throughput Controller. The long form will appear in Navigator’s Monitor window. If the error encountered is easily remedied, i.e. an empty paper tray, then the plug-in will continue to periodically test the engine until the error has been cleared. During this time the user may disable output by checking the “Disable output” check box in the Throughput Controller and dragging the page to either the Active or Held queue. If the error is serious, the plug-in will automatically request that the software disable output and the page will be placed back in the Active Queue automatically.