

Xitron Plugin Manual



Screen DT-R / MT-R

Overview

A Xitron plugin is the sole method of outputting data to an imagesetter or printer from Xitron software. When the Xitron software is launched it scans a directory called "devices" for plugin files. For each plugin it finds, it loads that plugin and begins to query the plugin for a description of the capabilities of the recorders in the family it supports. This includes media widths, resolutions, density ranges, etc. In this manner the plugin configures the RIP to output a bitmap to a recorder in its family.

Plugins for the Xitron software are dynamic link libraries. They act as device drivers for the software and control all actions of an output device. This includes checking device status, device setup, the imaging of data, and advancing and cutting material. The plugin relays to the Xitron software all the physical characteristics of an engine such as supported resolutions and imageable area.

Plugins for use with Windows consist of three software modules. The first is the core plugin that is written specifically for each device. The plugin controls a particular family of recorders and understands the messages and errors. These DLLs consist of 32-bit code and can run under Windows NT and Windows 2000 Professional. The second module is a kernel mode device driver. This is the part of the software that communicates with the Xitron interface boards and moves the bitmap data from the PC to the PCI interface board. The third module is a 'helper' DLL that translates calls from the plugin to the Windows device driver.

When a page is sent to an output device to image, the Xitron software loads the correct plugin and begins a series of steps to begin output. First the plugin initializes the engine and checks that it is ready. Assuming it is, it begins to read bitmap data off the hard disk (or renders the data in "Single/If" mode) into the Printer Buffer and tells the plugin where the data is in memory. When the software has filled the printer buffer, the plugin starts the output device. As the output device consumes the data, the plugin relays this information to the software, which then refills the memory. This continues until all of the data has been output. The software then tells the plugin that the job is complete and waits for the plugin to indicate that the recorder has finished. This process is repeated for each page being output to an engine.

Raster Blaster

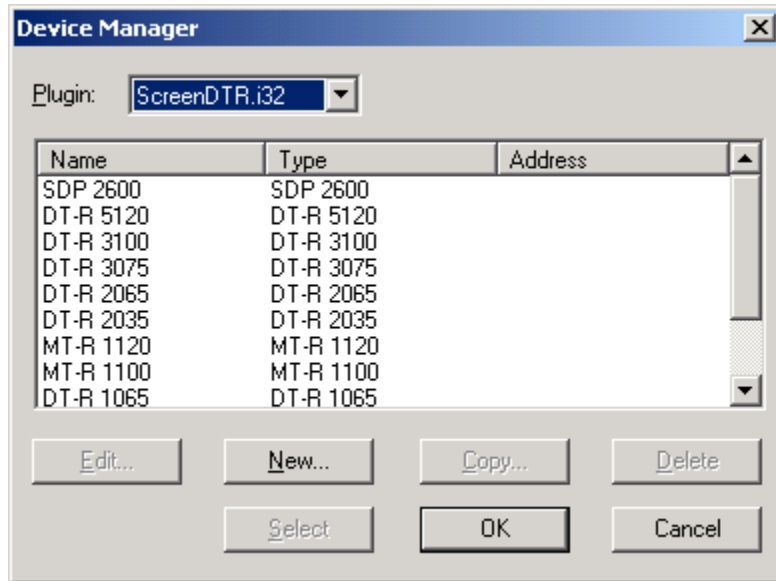
Plugins used by the Xitron Raster Blaster have the same functionality as those for the Xitron Navigator RIP and the same options will be available for configuration. Unless otherwise specified, all the information in this plugin manual will apply. See the Raster Blaster Manual for where to configure plugins in the Raster Blaster.

Configuring Devices

The following section applies only to Navigator RIPs.

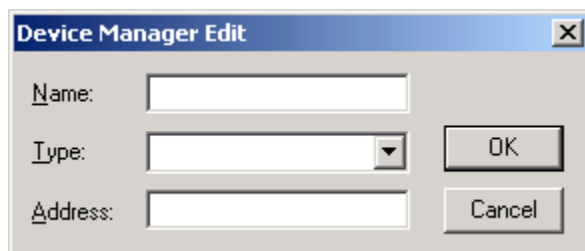
Xitron distributes a separate plugin for each recorder family. This plugin, in conjunction with firmware on the particular PCI board, has the capability to drive all devices in each recorder family. More than one plugin can be installed at once and within a single plugin more than one engine type can be configured. A plugin 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 plugin 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.



In the display above the available DT-R and MT-R devices are configured. The Name will appear in the Output device field in the PageSetup dialog box.

To configure a device for a plugin, select it from the listbox labeled “Plugin:”. Click on the “New” button. To edit an existing device highlight it and click on “Edit” or double click on it in the window. 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 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 listbox next “Type”. Ignore the address field as it is not used. When you have made your selections, click “OK” to keep them or click “Cancel” to ignore them.

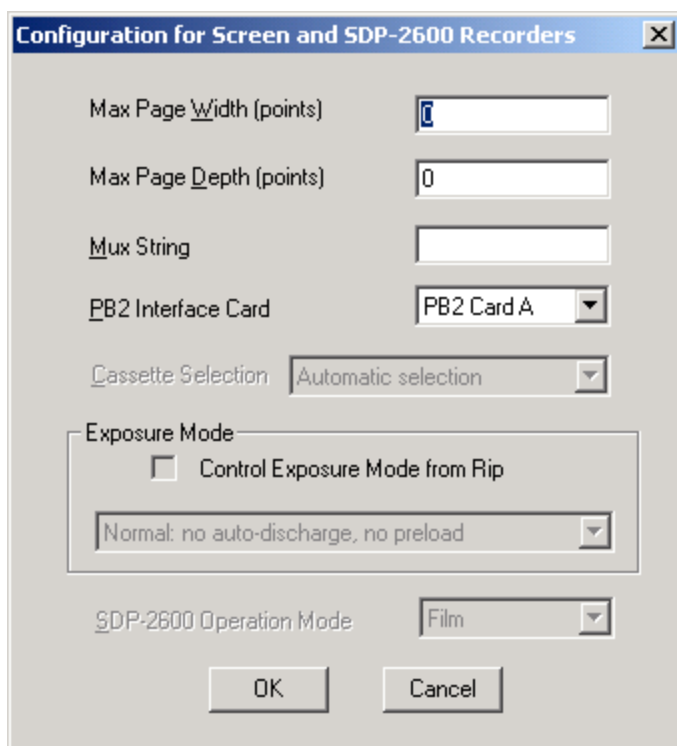
Screen MT-R / DT-R

Xitron supports the following list of Screen MT-R and DT-R recorders:

- DT-R1065,2035,2065,3075,3100
- Tanto5120 (DT-R5120)
- MT-R1100,1120
- PlateRite4000/8000 (PT-R4000,8000)

After installing the Screen MT-R / DT-R plugin, you will be able to create Page Setups using the plugin. Select the appropriate resolution density, and page orientation from the main window of the Page Setup. You should also configure the options specific to the Screen MT-R / DT-R plugin. Click on “Configure Device” under the Device Type list box. The following dialog box will appear:

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



From this dialog box you can configure the following options:

- **Max Page Width:** This value is used to override the built in width clipping in the plugin. When this value is set to 0, the plugin will always clip images at the maximum width built into the plugin. Non-zero values will cause the plugin to allow images of the set value. Note that values are entered as points.
- **Max Page: Depth:** This value is used to set the maximum length of an imaged job. If this value is set to 0 on a capstan-type imager, the length clipping feature is essentially disabled. If this value is set to 0 on a drum or cutsheet type imager, images will be clipped at the maximum length allowed by the plugin. Non-zero values will cause the plugin to allow images of the set value. Note that values are entered as points.
- **Mux String:** This is used in an environment with a multiplexor to select one or more output devices to scan for a connection.
- **PB2 Interface Card:** If more than one interface (PB2 or ArborSB) is in the PC, you may select from this box which interface to use. The default for this box is blank, signifying that the first configured card will be used.
- **Cassette Selection:** On the DT-R 3100 there are two supply cassette. Which cassette is supplying media to the drum can be determined from the Xitron software or from the DT-R 3100 itself. Use this setting to force the recorder to use one cassette or the other or set it to “Automatic selection” to allow the recorder to determine which cassette to use.

Screen “Exposure” values

The Screen DT-R and MT-R family of recorders don’t support controlling laser beam intensity (exposure) from the Xitron software. In the Page Setup dialog, this option is grayed out.

Screen Drum Packing

The Screen DT-R and MT-R family of recorders support the automatic arranging of small images on the drum, packing them, so as to get maximum usage out of the film. The plugin and firmware will query the recorder and use it if available. If the recorder should use the drum packing feature and doesn’t, verify that the “Ignore Bottom “Margin option is checked in PB2 Diag. Launch PB2Diag and go to Utilities/Edit INI settings. This must be checked for the drum packing option to work.

Discharge Media: Unloading media from the drum

The Screen DT-R and MT-R family of recorders are external drum, meaning they load a cut sheet of media onto the outside surface of a rotating drum before imaging. Once the media has been loaded, the recorder will only unload the media if it cannot fit a new image on the existing sheet. If the user wishes to discharge the media on the drum, there is an option on the pull down menu of the Xitron software to cause the recorder to discharge.

This option is implemented using the Xitron software’s “cut” facility, allowing the user to set the software to discharge the drum after every page or job by selecting the desired option in the media manager. If the user wants unload the drum after every job, simply check the “Cut after job” option. Similarly, discharging after a selected number of pages have been output can be configured by selecting “Cut after page”.

Attaching the Screen recorder

The Xitron interface for the Screen DT-R / MT-R family of recorders uses two cables, one attached to the recorder’s PIF port (parallel video data) and a second attached to a command/status link (serial, RS-232).

Use the Xitron supplied video interface cable (part no. 20-448-035) to connect the 50-pin SCSI-2 type connector on the PCI card to the 50-pin old-style SCSI type connector on the back of the recorder (**NOTE: the interface uses SCSI-type connectors but the interface IS NOT SCSI**). Use the Xitron supplied serial control cable (part no. 20-0449-035) to attach the 9-pin serial port on the back of the PCI card to the 25_pin D-Shell connector on the back of the Screen recorder.

Plugin Messages

From the time a plugin 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 also convey warnings and report errors from an engine. The quantity of these messages can be controlled by a setting called the "debug level". This can range from 0 (almost no messages) to 4 (very high message traffic). This is described in the Xitron TechNote *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 a plugin encounters an error on an output device, an appropriate error message will be generated. The short form of this message will appear in the Throughput Controller. The long form will appear in the software's Monitor window. If the error encountered is one that can be easily remedied, i.e. an empty paper tray, then the plugin 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 plugin will automatically request that the software disable output and the page will be placed back in the Active Queue.