



NAVIGATOR

PLUG-IN MANUAL

SCREEN DT-R/PT-R

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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 imaging systems. In many cases they work in tandem with an interface card, while in others it is simply a conversion to a bitmap file in a compatible format.

When interface cards are involved, these plug-ins act as device drivers 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 specific directory for plug-ins. 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." Once the printer buffer is full, the plug-in will start 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 Reference Manual for specific configuration information.

CONFIGURING DEVICES

Xitron distributes a separate plug-in for each recorder family. This plug-in, in conjunction with firmware on specific Xitron interfaces (PCI, PCI-X, USB), has the capability to drive most of the devices in each recorder family. Users may install more than one plug-in within a single RIP. In addition, it is possible to configure more than one engine type within a single plug-in.

Xitron pre-configures most plug-ins to display all output devices currently supported. To view these devices, click the Device Manager icon shown in Figure 1.

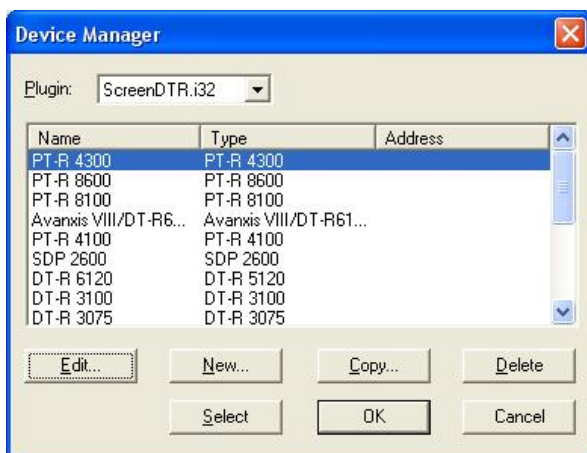
FIGURE 1: DEVICE MANAGER ICON



The Device Manager dialog box shown in Figure 2 will display. If the dialog displays the user's output device in the scrollable list, no further editing is necessary. The names of the available output devices will appear in the Output Device pull-down menu of the Page Set-up dialog box. However, in the rare circumstance that another device name is necessary; the user has the option of customizing the name field.

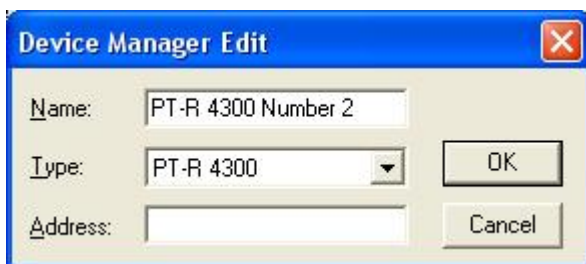
With the Device manager dialog window open, click **New** or select an existing device and click **Edit**.

FIGURE 2: DEVICE MANAGER DIALOG



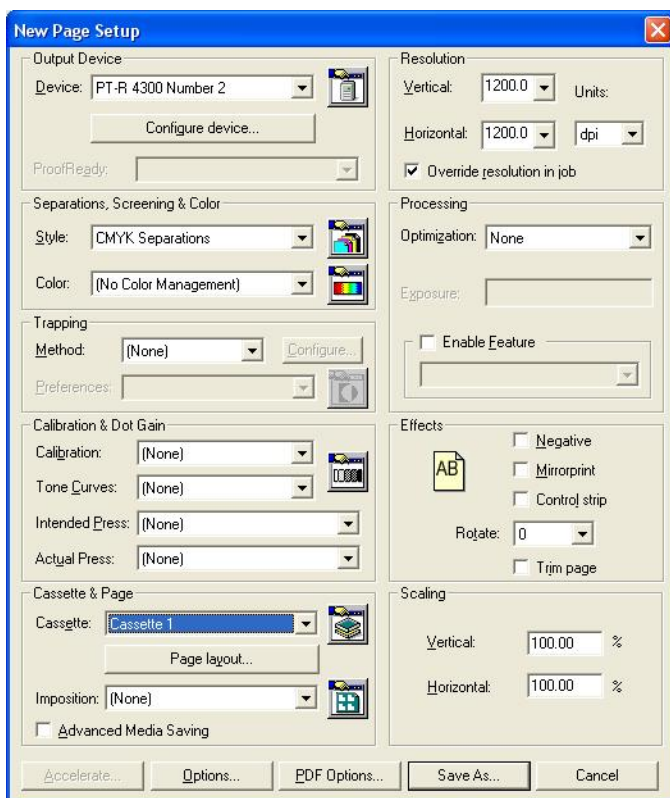
A dialog box similar to the one shown in Figure 3 will display. Enter a name for the device. This name will display in the Device pull-down menu as a selection in the Page Setup dialog. For example, if two Screen PT-R 4300 platesetters are being driven by the same RIP and differentiation between the two is important, edit this field to reflect PT-R 4300 Number 1 and PT-R 4300 Number 2.

FIGURE 3: DEVICE MANAGER EDIT



The name can be any string of up to 32 characters. Select the specific recorder from the pull-down menu labeled, *Type*. Ignore the address field, as it is not used. After making the selections, click *OK* to make the device available in the Page Setup menu as seen in Figure 4.

FIGURE 4: PAGE SETUP



For information regarding the choice of screening, resolution, calibration, separations and other settings, consult the Navigator Reference Manual. For settings specific to the Screen DT-R/PT-R plug-in, click the button labeled **Configure Device** in the **Output Device** section of the Page Setup. The dialog box shown in Figure 5 will appear.

SCREEN SPECIFIC SETTINGS

Xitron's Screen DT-R/PT-R/MT-R plug-in supports the following recorders:

DT-R: 1065 2035 2065 3075 3100 5120
6120

PT-R: 4000 4100 4300 8000 8100 8600

MT-R: 1100 1120

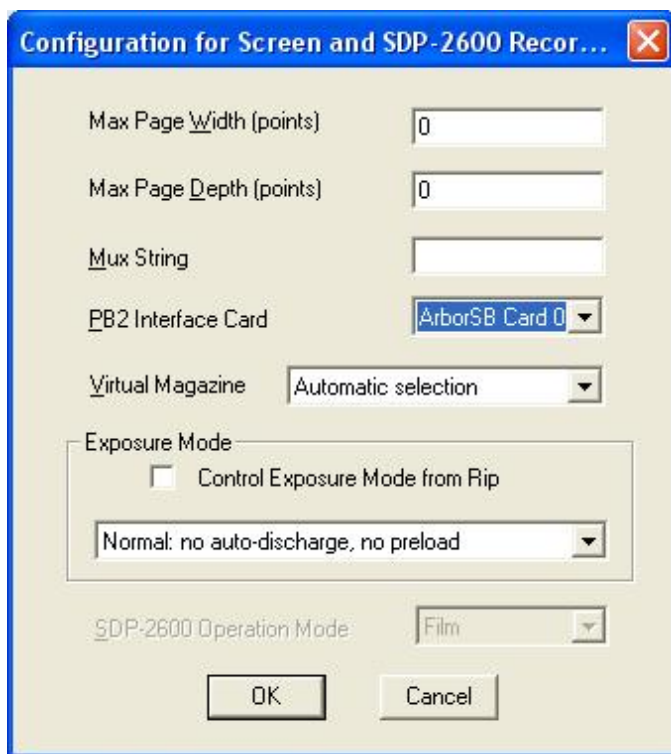
Based on the device selected in the pull-down menu of the Page Setup, various capabilities regarding resolution, exposure settings, page orientations and film dimensions will automatically populate the available menu options. For example, choosing PT-R 4300 provides nine resolution options, which match the capability of the 4300 device. Selecting the DT-R 1065 will yield only six resolutions, which match the capability of the DT-R imagesetter.

Choose the appropriate resolution, exposure, and page orientation from the main window of Page Setup as shown in Figure 4. Click the button labeled, ***Configure device...*** to change settings that are more specific to the output device such as virtual magazine selection.

Some configuration options will be grayed out and non-editable. This occurs when the device chosen does not offer that particular functionality. An example can be seen in Figure

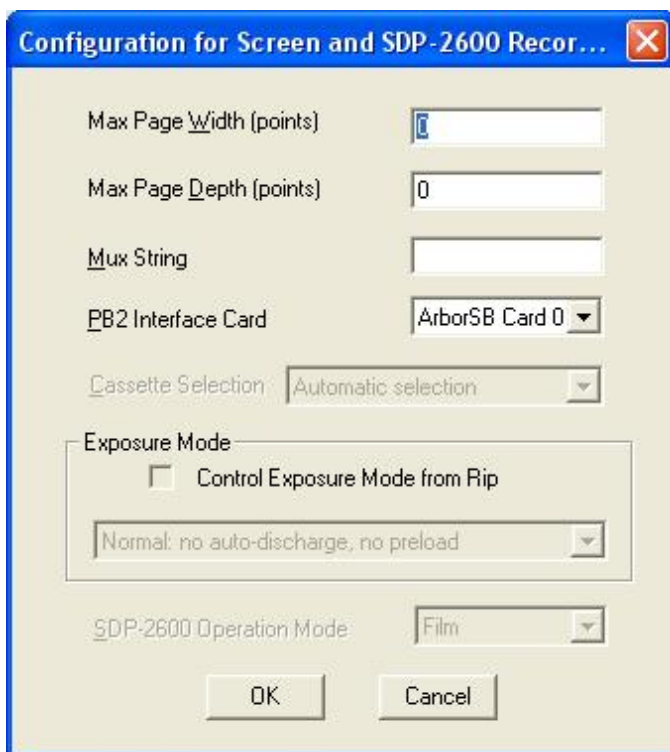
5, which shows the Configure Device window as it pertains to the PT-R. In this example the operator can choose options related to virtual magazine and plate pre-loading.

FIGURE 5: CONFIGURE DEVICE



When the DT-R 1065 is chosen, these options are unavailable as the DT-R is a film device. Figure 6 shows the DT-R Configure Device window.

FIGURE 6: DT-R CONFIGURATION WINDOW



Again, depending on the device's capabilities, the following options may be configurable from this dialog box:

- **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.

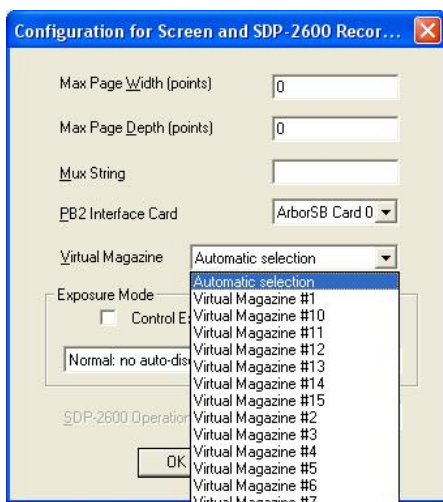
- **Max Page Depth:** Use this value to set the maximum length of an imaged job. This feature is helpful if a film device is imaging plate material and the plate must be a consistent length. Setting this value to 0 disables the feature. If this value is set to 0 on a drum or cut sheet type imager, images 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 output devices to scan for a connection.
- **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. Alternatively, if the interface is USB, the selection will appear as *Sedona*.

Cassette Selection:

- **DT-R 3100:** There are two supply cassettes on the 3100. 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.

- **PT-R:** The Screen PT-R is set up using a function called “Printing Machines” which control feature sets such as gripper, punch location, and plate size. In the Device Configuration dialog there is a drop down menu for Virtual Magazines, as shown in Figure 7. The number of each Magazine corresponds to a Printing Machine on the PT-R, i.e., Virtual Magazine 1 corresponds to Printing Machine 1.

FIGURE 7: VIRTUAL MAGAZINES



Note: The data entered for the cassette values on the RIP must match those entered for media dimensions in the PT-R Printing Machine entered on the front panel of the imager.

With Raster Blaster, it will be necessary to set up a different device for each media size, which makes it necessary to configure a device for each Printing Machine on the imager.

DRUM PACKING

Screen's DT-R and MT-R recorders support a function called Drum Packing. This involves the automatic arrangement of smaller images (or jobs) on the drum, reducing film waste. Xitron's plug-in and firmware will query the recorder and use drum packing if available.

If the recorder is capable of using the drum packing feature but doesn't, verify the ***Ignore Bottom Margin*** option is checked in PB2 Diag. (Launch PB2Diag and go to Utilities/Edit INI settings.) This must be enabled before the drum packing option will work.

EXPOSURE VALUES

The Screen DT-R and MT-R family of recorders don't support controlling laser beam intensity (exposure) through Navigator. Therefore, the exposure value in the Page Set-up is not selectable.

DISCHARGE MEDIA

The Screen DT-R and MT-R recorders are external drum devices, meaning they load a sheet of cut media onto the outside surface of a rotating drum prior to 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. To discharge the media manually, use Navigator's pull down menu (under the device name) and select ***Discharge Media***.

Other cut options are available in the Media Manager menu (Output>Media Manager). Using the ***Cut*** command, discharge the drum after every job, page, or after a specified amount of film as been exposed.

CONNECTING THE INTERFACE

Xitron's Screen DT-R/PT-R/MT-R interface uses two cables. Attach one to the recorder's PIF port (parallel video data) and the second to the 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 PCI card to the 25-pin D-Shell connector on the back of the Screen recorder.