

Xitron Plugin Manual



Ultre/Schooner

December 20, 2001

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, Windows 2000 Server, 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

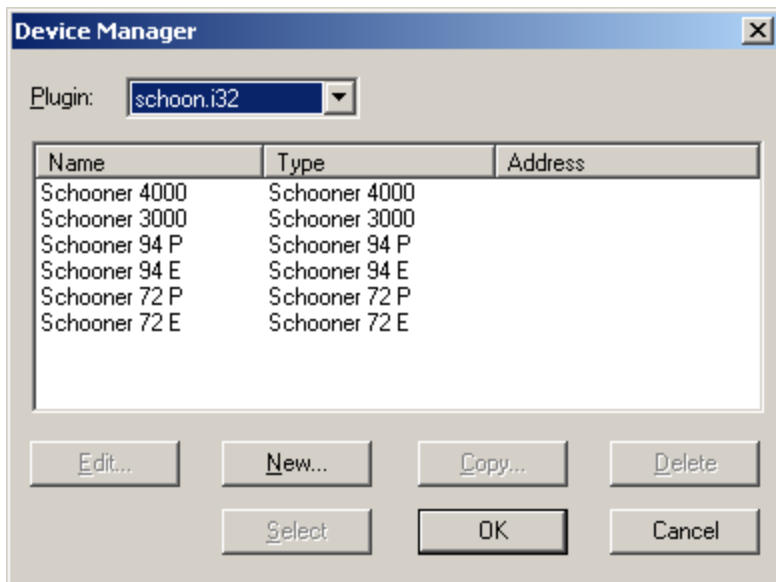
Plugins used by the Xitron Raster Blaster have the same functionality as those for the Xitron Navigator RIP and the same options will be available for configuration. Unless otherwise specified, all the information in this plugin manual will apply. See the Raster Blaster Manual for where to configure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

Configuring Devices

The following section applies only to Navigator RIPs.

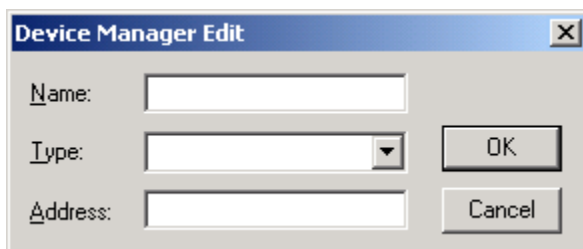
Xitron distributes a separate plugin for each recorder family. This plugin, in conjunction with firmware on the particular PCI board, has the capability to drive all the devices in each recorder family. More than one plugin can be installed at once and within a single plugin more than one engine type 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. The Ultra family of recorders is driven with Xitron’s Schooner plugin.

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 devices are configured. The Name will appear in the Output Device field in the Page Setup Dialog box.

To configure a device for a plugin, select it from the box labeled Plugin. Click on the ‘New ‘ button. To edit an existing device, highlight it and click on ‘Edit’ or bdouble 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 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.

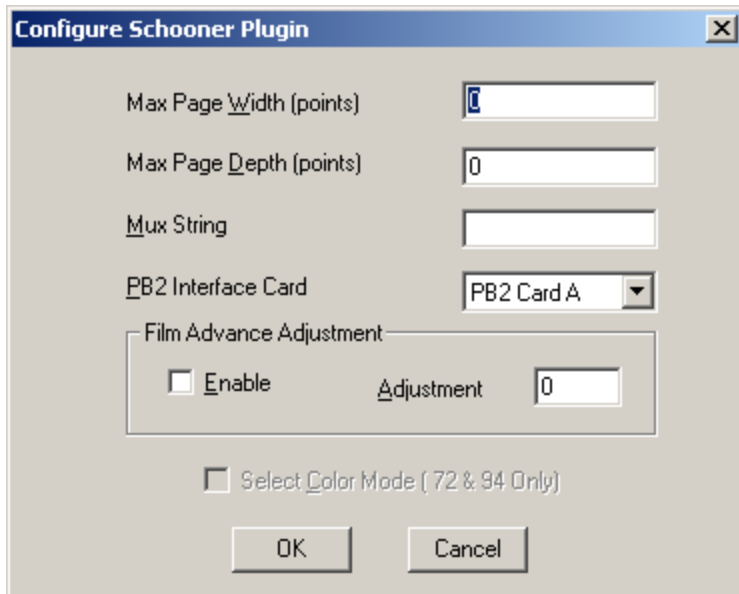
Ultre

Xitron supports the following Ultrre recorders.

- 72P, 72E, 94P, 94E
- 300, 400, 3000, 4000

After installing the Schooner plugin, you will be able to create Page Setups using the Ultrre plugin. Select the appropriate resolution, density, and page orientation from the main window of Page Setup. You should also configure the options specific to the Ultrre devices. Click on 'Configure Device' under the Device Type list box. The following dialog box will appear:

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



From this dialog box you can configure the following options:

- **Max Page Width (points):** 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 of the recorder. If this value is non-zero, it will be used as the clip width. This value is entered in points.
- **Max Page Depth (points):** This value is used to set the maximum length of an imaged job. If this value is set to 0 on a Schooner recorder, the length clipping feature is essentially disabled. Non-zero values will cause the plugin to clip, or cut off, images over the set length. This value is entered in points.
- **Mux String:** This is used in an environment with a multiplexor to select one or more output devices to scan for a connection. This should be left blank.
- **PB2 Interface Card:** If a second PB2 Card or an ArborSB card is in the PC, you may select from this box which card to use.
- **Film Advance Adjustment:** This pair of parameters is used to control the Schooner's Film Advance Correction feature. It is possible to add or subtract up to 79/1000 of an inch of every eight inches of film imaged. The 'Enable' check box controls whether or not the value is sent to the recorder. The 'Adjustment' field is the actual value sent a decimal number between -79 and 79, inclusive.
- **Select Color Mode (72 & 94 Only):** Applies only to the Schooner 72E and 94E. When 'Color Mode' is selected, the accuracy of the imager can be enhanced through pre-positioning the media rollers before each job. Checking this box will enable this feature. It will be grayed out if the selected device is not a Schooner 72E or 94E.

Schooner Exposure Values

It is possible to control the recorder's laser intensity from the Xitron software in order to make adjustments to density. On the Schooner, the exposure value can be set from 1 to 63. Values outside this range will cause the default of 16 to be used. The 63 possible values for exposure actually correspond to 6.25% increments from 6.25% to 393.7% , inclusive. The default of 16 corresponds to 100%.

Film Advance while in "Color Mode"

When 'Color Mode' is selected on the Schooner 72E and the 94E, the amount of film advanced when feeding is greater than desired. This is because the Schooner always attempts to position the media transport rollers in the same position when starting each image to enhance repeatability. This causes a one inch film feed to output about three inches of media. As larger feeds are selected (three and six inch), the problem will be proportional.

Attaching the Schooner to the Xitron Software

The Xitron interface for the Schooner recorders uses the Ultrasetter Interface Specification. The Schooner interface requires a cable from the interface card to the Ultrasetter Interface port on the Schooner recorder. This cable should be a 50-pin SCSI-type connector on one end and a 37-pin D shell male connector on the other end (Xitron part number 020-0435-010). All data and command information is sent on this cable.

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 Xitron plugin encounters an error on an output device it will generate an appropriate error message. The short form of this message will appear in the Output Controller/Monitor. The long form will appear in the Monitor window. If the error is one that can be easily remedied, then the plugin will continue to periodically test the engine until the error has been cleared. During this time the user may be able to disable output by checking the "Disable Output" check box in the Controller/Monitor and dragging the page to either the Active or Held queues. If the error is serious, the plugin will request that the software disable output and the page will be placed back in the Active Queue automatically.