

Xitron Raster Blaster Screen FT-R Device Driver Manual

*For use in configuring and using the Xitron Screen
FT-R Device Driver for the Xitron Raster Blaster*

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Overview

Xitron's implementation of the Raster Blaster Device Driver for the Dainippon Screen FT-R series family of imagesetters uses standard SCSI interface cards. As shipped from Xitron, the kit consists of an Adaptec 2940-UW SCSI adapter and either a wide to narrow or wide to wide SCSI cable depending on the target recorder. An optional differential SCSI kit is available for the Katana (FT-R 5040 and 5055) series.

Device Drivers

Device Drivers for the Xitron Raster Blaster are Win32 dynamic link libraries. Device Drivers completely control all actions of an output device connected to the Raster Blaster. This includes checking status's, device setup, imaging of data and advancing and cutting material. The Device Driver relays to the Raster Blaster all the physical characteristics of an engine such as supported resolutions and imageable area.

When the Raster Blaster has a page to image on an output device it loads the Screen Device Driver and begins a series of steps to begin output. The Raster Blaster first gives the Device Driver a chance to initialize the engine and check that it is ready. Assuming it is, it begins to read bitmap data off disk. When the Raster Blaster has filled the printer buffer, the Device Driver starts the output device. As the output device consumes the data, the Device Driver relays this information to the Raster Blaster, which then refills the memory. This continues until all of the data has been output. The Raster Blaster then tells the Device Driver that the job is over and waits for the Device Driver to indicate that the recorder has finished. This process happens for each page output to an engine.

Configuring Devices

Xitron distributes the Screen FT-R Device Driver with a set of pre-configured devices, FT-R 3035, 3050, 3035 Mark2, 3050 Mark2, 5040 and 5055.

Additional configuration available through “Driver Config”

The push button labeled “Driver Config” in the Device Configuration dialog is used to access parameters that are specific to the Screen Device Driver. Clicking on this button will produce the following dialog:

The screenshot shows the 'Configure Screen FTR Plugin' dialog box. It is divided into several sections for configuring different parameters:

- Punch Parameters:**
 - Mode:
 - Punch margin length (mm):
 - Image margin length (mm):
- Cut-line Parameters:**
 - Mode:
 - Cut-line length (mm):
- Burn-out Parameters:**
 - Mode:
 - Burn-out leading edge length (mm):
 - Burn-out trailing edge length (mm):
- Positioning and Driver Settings:**
 - Positioning mode:
 - Driver name:
 - Discharge mode:
 - Space between images (mm):

At the bottom of the dialog are 'OK' and 'Cancel' buttons.

From this dialog box you may configure the following options:

- **Punch Parameters.** Using this option you may disable or enable punches from the Raster Blaster. If punches are enabled, you may also set the distance from the top of the media to the punch (punch margin) and the distance from the punches to the image (image margin) by using the setting “Enable with Raster Blaster margins”. If “Enable with Recorder Margins” is selected, punches will be enabled, but the recorder margins values will be used. The range for punch margin is 50 to 999 mm. The range for image margin is 0 to 99.9mm.
- **Burnout Parameters.** This option allows you to control burnout from the Raster Blaster. There are also two enable modes: “Enable with Recorder Lengths” and “Enable with Raster Blaster Lengths” where the Raster Blaster sends down the lengths that you configure. The range for both parameters is 0 to 999mm.
- **Cutline Parameters.** This option allows you to enable and disable the cutline at the end of the page. The Cutline length describes the distance between the end of the image and the cutline. The range is 0 to 99mm.

[A note on the first three options. The default value is “Use Recorder Setting”, which means that the Device Driver will not attempt to control that parameter. The value as set on the imagesetter will be honored.]

- **Positioning Mode.** This mode determines whether the image position on the media.
- **Driver Name.** This points to the Xitron SCSI driver. With a single SCSI interface card, this should always read “XitronScsiPrinter0”.
- **Discharge Mode.** This controls how and when media is discharged from the recorder. There are three modes:
 1. “Don’t unload”: pages are not ejected until a page is started that will exceed the capacity of the online processor. In this case the current media is discharged *before* the new image is placed on the media.
 2. “Unload”: where pages are ejected immediately after they are imaged.
 3. “Pre-unload”: where the media is ejected after an image, if the next image to come were to be the same size and it would cause a discharge.
- **Space between images.** This allows you to configure the inter-image spacing. The range for this parameter is 10 to 99mm.

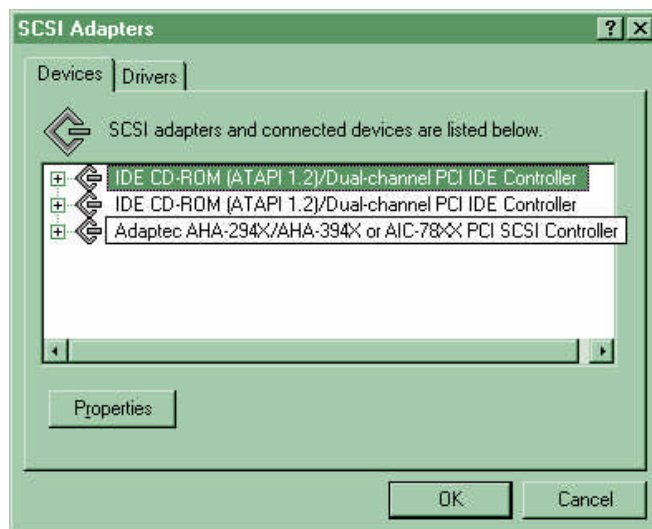
Attaching the Screen FT-R recorder to the Raster Blaster

In order for the Raster Blaster to find the Screen FT-R on the SCSI bus, it should be powered on before the Raster Blaster PC is powered on. Both the PC and the imagesetter should be powered off when connecting the SCSI cable. In the BIOS scan for the SCSI adapter, you should see the Screen device. When NT boots, the Xitron SCSI class driver, XiScsiClass.sys, also needs to find the Screen device on the SCSI bus. If the Xitron SCSI class driver finds the device, it outputs a message to the system which can be viewed using "Event Viewer".

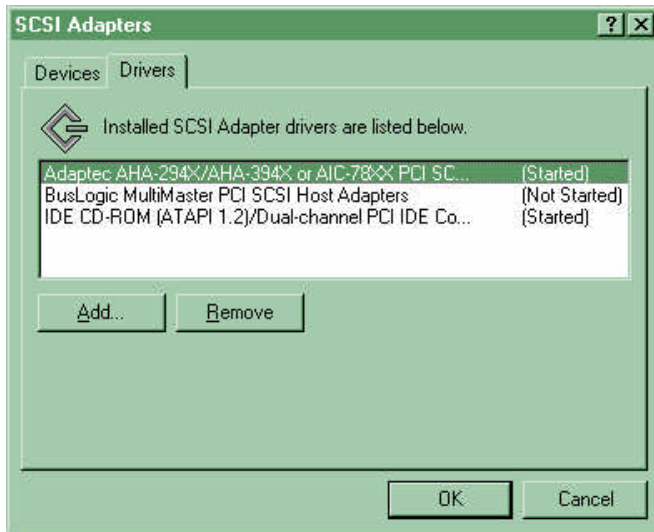
SCSI Drivers

Xitron's SCSI class driver, XiScsiClass.sys, depends on the native NT SCSI port driver. This needs to be installed for the particular adapter you have installed in your machine. Drivers for most major cards, including the Adaptec 2940-UW that Xitron ships, can be found on the Windows NT CD. You can also download the latest drivers from the manufacturers' web site. The Adaptec web site can be found at: <http://www.adaptec.com/>.

To check on or install the drivers go to the "SCSI Adapter" applet in Control Panel. From this you can tell if a driver is already loaded. The following is a screen shot of the applet which displays the Adaptec interface card that NT has identified. This does not necessarily mean that a driver is installed.



To check the driver, click on the "drivers" property tab. The applet will now display:



The first line here shows that the Adaptec driver is installed and started. If a driver is not installed, click on the “Add...” button. From the “Install Driver” dialog you can select the manufacturers board and the driver for that board. The following screen shot shows the selection for the Adaptec 2940 that Xitron ships with the Screen Raster Blaster kits.

