Creo Products Inc.

Print Console 1.x
Using the Print Console Service Menu

1. INTRODUCTION

This document explains how to access and use the Print Console version 1.*x* software's Service menu. It is important to note that the configurations and features that are accessed via this password-protected menu are intended for Creo-trained service representatives and *not for customers* (the Service menu is not mentioned in any Print Console user documentation). Thus, this document is intended for Creo-trained service personnel only.

This document describes:

- what the Print Console Service menu is
- how to access the Service menu
- how to close the Service menu
- the various Service menu options and related dialog boxes

For more information about Print Console, refer to most current documentation available on the Print Console web site in the Customer Support Technical Library.

2. WHAT IS THE SERVICE MENU?

The Print Console Service menu is a password-protected menu that is used to:

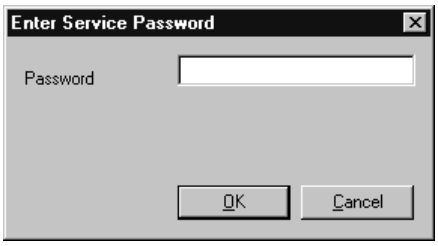
- change the location of where the software looks for the output device animation images
- control narrow-mode thermal head exposure for high line-frequency printing (for Staccato screening, for example)
- inform Print Console of device clippings (offset margins)
- define media margins for device media
- set up tinting (now known as "digital masking") schemes/capabilities for selected device media
- submit test plots directly to the output device (not yet fully implemented)
- reconfigure Print Console for use with a different output device (not yet completely functional: changing output devices should instead be done via the Print Console installation program's Select Device option)

Again, the Service menu is not meant for general customer use: Service menu configuration changes should be made by Creo-trained service representatives only.

3. HOW TO ACCESS THE SERVICE MENU

To access the Print Console Service menu, follow these steps:

1. Press **Ctrl+Alt+S**, which displays the Enter Service Password dialog box:



2. Enter the password (as supplied in your Print Console training course).

   Note: The password is case sensitive. If necessary, this password can be obtained by calling the Response Center.

3. Click **OK**.

   The Service menu appears on the menu bar, next to the Help menu.

4. HOW TO CLOSE/REMOVE THE SERVICE MENU

To close the Service menu and remove it from the menu bar, follow these steps:

1. Press **Ctrl+Alt+S**, which displays the following prompt:



2. Click **OK**.

   Print Console removes the Service menu from the menu bar.

5. SERVICE MENU DIALOG BOXES AND OPTIONS

The Service menu displays four options:

- **Configure System** – opens the Configure System dialog box (refer to the following section, "Configure System Dialog Box")
- **Test Plot** – opens the Test Plot Maintenance dialog box (refer to the "Test Plot Dialog Box" section on page 11)
- **Change Password** – opens the Enter Service Password dialog box (refer to the "Service Password Dialog Box" section on page 11)
- **Switch device** – opens the Select Device dialog box (refer to the "Select Device Dialog Box" section on page 12)

6. CONFIGURE SYSTEM DIALOG BOX

The Configure System dialog box is used to set the location of the output device animation images, to control narrow-mode thermal head exposure (for high line-frequency printing like Staccato screening, for example), to configure certain settings that Print Console uses when communicating with output devices, to let Print Console know the clipping settings (offset margins) that are set in the output device's firmware, to set media margins for selected device media, and to set up tinting (now referred to as "digital masking") schemes/capabilities for selected device media.

The Configure System dialog box includes 5 tabs:

- General (refer to the following section, "General Tab")
- Serial I/O (refer to the "Serial I/O Tab" on page 4)
- Device Clippings (refer to the "Device Clippings Tab" on page 5)
- Margins (refer to the "Margins Tab" on page 7)
- Tinting (refer to the "Tinting Tab" on page 10)

6.1 General Tab

The **General** tab contains 2 sections:

- Images Path
- Narrow Mode Usage

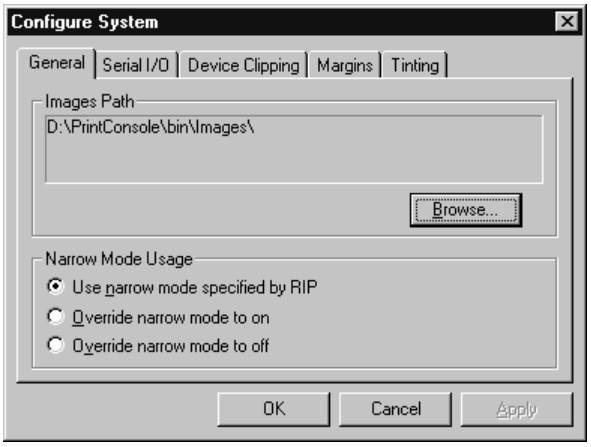


Figure 1 – General tab, Configure System dialog box

Use the **General** tab to change the directory path where the Print Console device images are stored and determine narrow-mode thermal head imaging settings.

Images Path Setting

The Images Path section displays the directory path where Print Console device images are stored. During installation, Print Console automatically installs the device images in the Print Console\bin\Images folder. If the Print Console device images are not stored in the \Print Console\bin\Images folder, click the **Browse** button—which opens the Locate the 'Images' directory dialog box—and search for the folder where the images are stored.

Narrow Mode Usage Settings

The Narrow Mode Usage section is used to turn on or off narrow-mode thermal head exposure for high line-frequency printing (for Staccato screening, for example). There are three options in the Narrow Mode Usage section:

- **Use narrow mode specified by RIP** – This option is the default. When selected, Print Console instructs the output device to use narrow-mode imaging when the RIP detects that the file is a high line-frequency print job.
- **Override narrow mode to on** – Select this radio button when you want Print Console to instruct the output device to use narrow mode thermal head imaging on all jobs, not just those that the RIP determines as high line-frequency print jobs.
- **Override narrow mode to off** – Select this radio button when you don't want Print Console to instruct the output device to use narrow-mode thermal head exposure during imaging. You might choose this option if the customer wants a fast plot despite the fact that the exposure may not be optimal.

For more information about narrow-mode imaging, refer to the available Staccato and/or Thermal Head technical documentation.

6.2 Serial I/O Tab

The **Serial I/O** tab contains 4 settings:

- Echo timeout
- Startup interval
- Running interval
- Running timeout

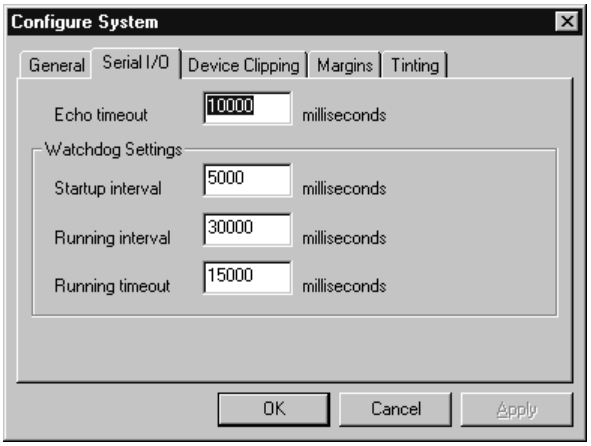


Figure 2 – Serial I/O tab, Configure System dialog box

The **Serial I/O** tab sets the default character echo timeout, watchdog timeout, and watchdog polling periods that Print Console uses to communicate with the output device.

IMPORTANT! The values displayed in the screenshot above are the default values: it is *strongly* recommended that you do not change these settings!

Echo Timeout Setting

Print Console sends commands to the output device one character at a time and waits for the output device to echo back each character as a confirmation that the device received the command. If the command line is not echoed back, then Print Console knows that there is something wrong with the device and prompts the user with a message.

The **Echo timeout** value is the amount of time (in milliseconds) that Print Console waits for the output device to echo back each character while sending a command. If the output device does not echo back a character by the defined time, Print Console displays a message—Waiting for Device, for example—in the status/message field (visible at the top of the Print Console main screen).

Watchdog Settings

Print Console sends special commands called watchdog commands to the device on a periodic basis to make sure that the output device is still available and to query the general status of the device (ready, active, suspended, etc.). The commands are sent more frequently during system startup when the device is intializing.

The Watchdog Settings section defines the timing used when prompting the output device to make sure that the output device is still available and to check its overall status:

- Print Console uses the **Startup interval** between watchdog commands when Print Console is initially started and is polling for the output device on the serial cable. Also, after detecting the output device, Print Console sends a flush command to it and continues to use this interval between watchdog commands until the output device is finished initializing. This interval is much shorter than the Running interval used during normal operation.
- Print Console uses the **Running interval** between watchdog commands after the output device has finished initializing to make sure that the output device is still available and to check its overall status.
- When checking to see if the device is still available, Print Console uses the **Running timeout**. The device must reply to the watchdog command within this timeout period, or else Print Console assumes the device is no longer available. The **Running timeout** time must always be less that than the **Running interval** time.

If at any time the device fails to respond by the allotted time, Print Console displays a message (again, in the status/message field at the top of the main screen).

6.3 Device Clippings Tab

The **Device Clippings** tab contains 2 settings:

- Clip for leading edge clamps
- Clip for trailing edge clamps

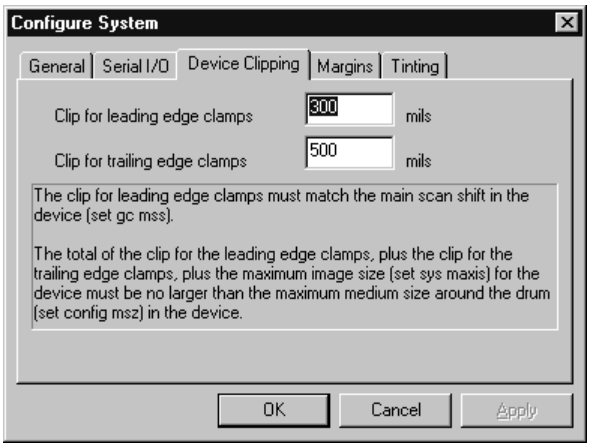


Figure 3 – Device Clipping tab in Configure System dialog box

Use the **Device Clippings** tab to let Print Console know the clipping settings (offset margins) that are set in the output device's firmware, since these values vary for different output device models, and because Print Console cannot query these values from a device. Basically, these settings tell Print Console where (on the media) the device will start imaging in relation to the leading edge clamps, and where it will stop imaging in relation to the trailing edge clamps. (These offsets margins prevent the output device from imaging too close to the clamps.)

Print Console uses the Device Clipping parameters to allow the RIP (TIFF Downloader) to determine the length of the image to be processed on the plate, thus the in-device offsets have a direct impact on raster clipping. Print Console uses the leading edge clipping to instruct TIFF Downloader to clip the correct amount of image off of the leading edge of the raster: when this amount is equal to the device offset, the image is placed in the correct relative position on the media.

For example, if you have a 32" by 44" plate with clipping margins defined as 300 mils (a mil is one thousandth of an inch) for the leading edge clamps and 500 mils for the trailing edge clamps, and an image that is 32" by 44", then the RIPed file length will have to be 31.2" in order to be properly imaged on the plate.

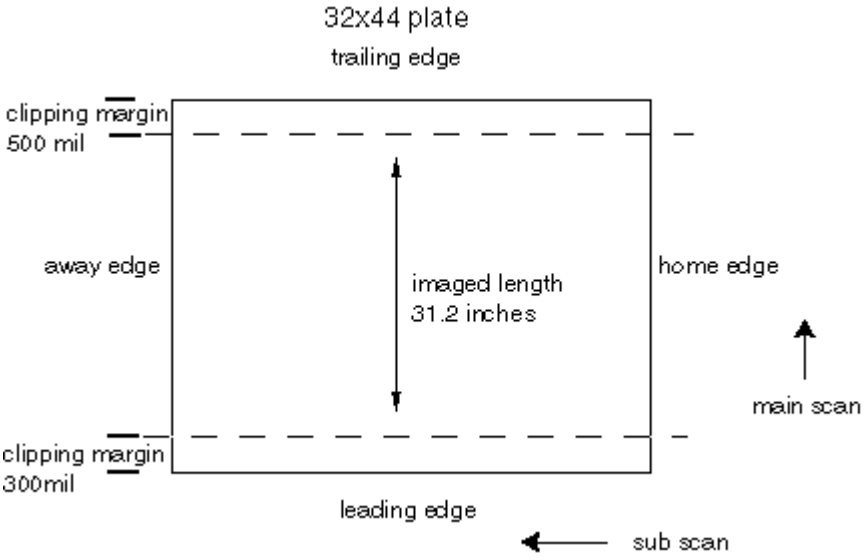


Figure 4 – Clipping margins on a 32" by 44" plate

Output devices currently have some standard clipping margins. For the Trendsetter 3244 and 3230, the default leading and trailing edge clipping values are 300 and 500 mils, respectively. For the ThermoFlex, these values are 500 mils and 500 mils. For all other output devices (for now), they are 240 mils and 300 mils.

Clip for Leading Edge Clamps Setting

Use the **Clip for leading edge clamps** field to set the leading edge clipping margin to match the **gc mss** (geometric correction main scan shift) setting in the device's firmware, which is set during manufacturing.

Again, this value is currently 300 mils for the Trendsetter 3244 and 3230, 500 mils for the ThermoFlex, and 240 mils for the all other output devices, however this *may* change for future devices, so it is wise to check the gc mss value of your device to ensure that the leading edge clip matches it. (You can view the output device's gc mss value by looking at the diagnostic port of the workstation attached to the device, and typing "set gc mss".)

Note: Print Console does not actually read the gc mss value from the output device, so if you change the default clipping values in the **Device Clippings** tab, be aware that you may also have to change the gc mss value in the output device: if the leading edge clipping does not match the gc mss value from the device, images will be shifted on the media. (For a more detailed explanation, refer to the *Configuring Print Console for a Default Negative Mainscan Direction Image Shift* document, available through the Print Console web pages in the Customer Support Technical Library.)

Clip for Trailing Edge Clamps Setting

Use the **Clip for trailing edge clamps** field to set the trailing edge clipping margin.

This value is currently 500 mils for the Trendsetter 3244 and 3230, 500 mils for the ThermoFlex, and 300 mils for the all other output devices, but again this may be subject to change at a later date.

Note: If you want to image more closely to the trailing edge clamps, you *can* change this value; however, the imaging quality may be effected at the edge of the plate near the clamps.

6.4 Margins Tab

The **Margins** tab contains a list box and 4 settings:

- Medium material list
- Leading edge margin
- Trailing edge margin
- Home edge margin – not yet functional. This setting is actually interpreted incorrectly, and results in an image shift and no raster removal: what should happen is the raster should be removed from the home edge, while the overall image should stay in the same location. This feature will be fixed in a later release of Print Console.
- Away edge margin – not yet functional: this setting is ignored. This feature will be included in a later release of Print Console.

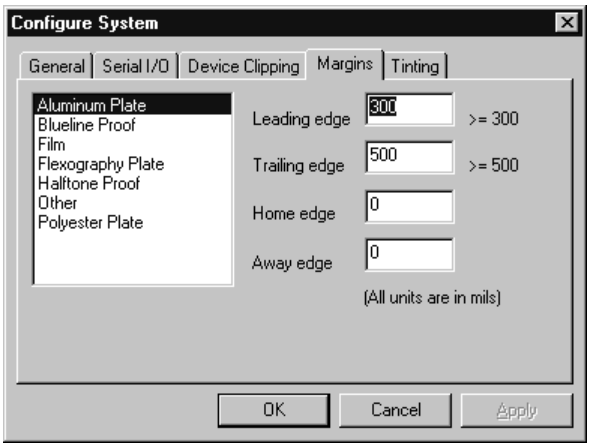


Figure 5 – Margins tab in Configure System dialog box

Through Print Console, TIFF Downloader 2.0 supports the use of margins on all four sides of the output media: use the **Margins** tab to enter margins for output medium material.

IMPORTANT! Bear in mind that the Home edge and Away edge margin settings do not work as expected: the following paragraphs explain how all of the margin settings *should* work.

The margin settings define areas of the media that cannot be imaged. The output device will not allow imaging in these areas, therefore the TIFF Downloader removes these areas from the image file before it is output. The exact handling of the margins depends on the sizes of the image and the media. The TIFF Downloader always removes the leading and home edge margins from the image. The trailing and away edge margins are removed from the image only if the image extends into these regions on the plate.

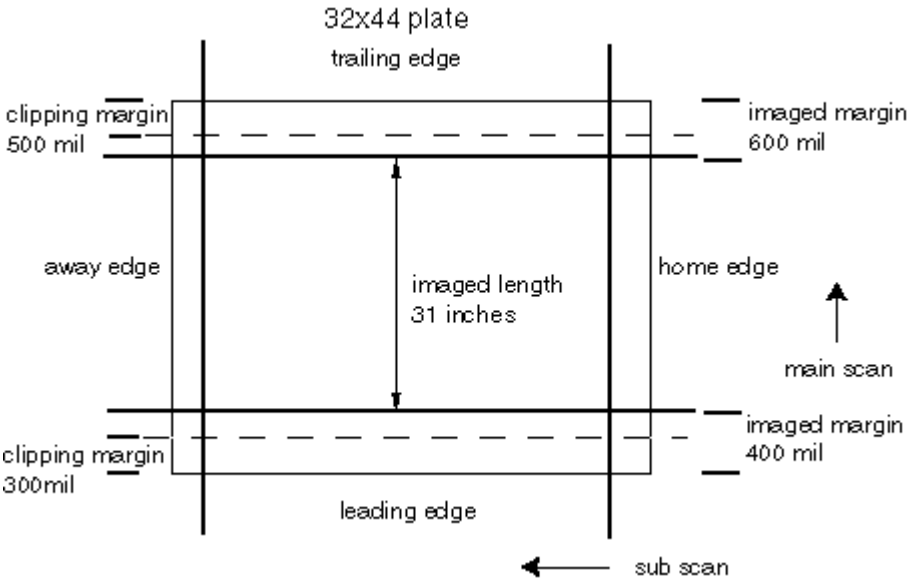


Figure 6 – Clippings and margins for a 32" by 44" plate

For example, assume the following margins are set:

Leading edge: 300 mils
Trailing edge: 200 mils
Home edge: 100 mils
Away edge: 100 mils

If the 32" by 44" version of a file is to be imaged on a 32" by 44" plate, all margins would be applied and the TIFF Downloader would output an image that is 31.5" by 43.8". If this same file was to be imaged on a 22" by 33" plate, the TIFF Downloader would produce a 21.5" by 32.8" image. Imaging this file on a 40" by 50" plate, though, would produce a 31.7" by 43.9" image.

Note that there is a minor limitation in the way the TIFF Downloader handles the leading edge clip (for the normal case where there is no transformation). For more information about this problem, refer to the "Image Clipping/Margins" section 8 in the *TIFF Downloader 2.0 Reference Guide*.

For halftone proofing material, the margins can all be set to "0", as the proof carrier is clamped to the drum and the halftone proofing material is attached by vacuum, which allows for the maximum use of the proofing media. Also, Spectrum digital halftone proofing devices are by default configured (in the device firmware) with 0.5" margins for proofing material.

Medium Material List

The **Medium material** list box (which does not have a label) displays the available medium material. Use this list to select the medium material that you want to assign margins to.

Margin Settings

The **Leading edge** field defaults to the value defined in the **Clip for leading edge clamps** field in the **Device Clipping** tab. The value in this field cannot be less than the **Clip for leading edge clamps** value in the **Device Clipping** tab, as the output device cannot image the plate below the leading edge offset margin.

The **Trailing edge** field defaults to the value defined in the **Clip for trailing edge clamps** field in the Device Clipping tab. The value in this field cannot be less than the **Clip for trailing edge clamps** field in the **Device Clipping** tab, as the output device cannot image the plate above the trailing edge offset margin.

Use the **Home edge** field to set the margin for the home edge of the plate. (The **Home edge** functionality has not yet been implemented: this functionality will be implemented in a later release of Print Console.)

Use the **Away edge** field to set the margin for the away edge of the plate. (The **Away edge** functionality has not yet been implemented: this functionality will be implemented in a later release of Print Console.)

Notes:

- It is recommended that for Blueline proofing material, the Home and Away margins have values defined.
- Again, the **Home edge** and **Away edge** functionality have not yet been implemented, but will supported in a later release of Print Console.

6.5 Tinting Tab

Use the **Tinting** tab to configure the available device media for tinting.

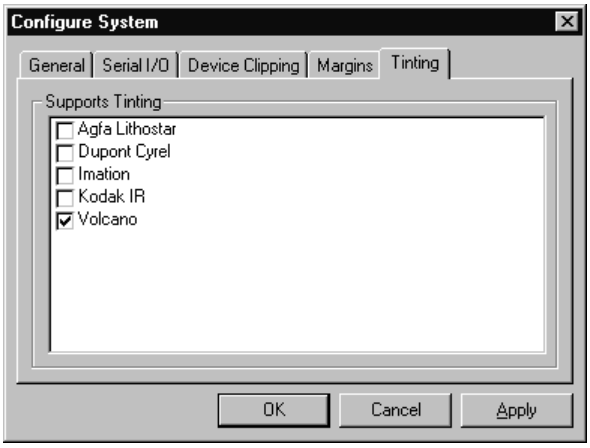


Figure 7 – Tinting tab in Configure System dialog box

ThermoFlex "tinting" mode (which is now known as "digital masking") in Print Console is supported by TIFF Downloader. Digital masking is the process of applying a digital mask to thermal film. Digital masking has been developed for the packaging industry, more specifically for the liquid photopolymer flexography industry. In the liquid flexo business, tonal ranges in the 1%–4% and 97% to 100% are almost impossible to achieve at the same time. The limiting factor is that the liquid is hardened by exposure to UV light; if a flexo plate is exposed long enough to develop the tones in the 1%–4% range so they will last and print on press, then the 97%–100% tones will overexpose and all become 100% (and vice versa). Digital masking provides a process by which the amount of light reaching the liquid can be controlled, thereby providing the wider overall tonal range needed.

Liquid photopolymer is exposed with UV light until it hardens. The UV light is transmitted through a film (Kodak DITF–a.k.a. Volcano film–in the case of ThermoFlex) allowing an image to be imposed on the hardening liquid. If we half expose the film in the 97%–100% range, and fully expose it in the 1%–4% range, we can, in effect, regulate how much light is allowed to reach the liquid photopolymer.

We can go one step further and vary the amount of exposure based on the target tonal percentage and get a nice, smooth curve customized for maximal tonal range on the finished plate. This functionality resides in the Creo TIFF Downloader 2.0, which is part of Print Console. The final result coming out of the TIFF Downloader is 2 full images –the original TIFF file and the masking image–interlaced together scan line by scan line. We image the entire original TIFF file at half exposure, and the masking image fully exposes the areas required for proper exposure levels, all in one pass of the head.

For more detailed information about digital masking, refer to the *TIFF Downloader 2.0 Reference Guide*.

Tinting Support Setting

To configure a device media for tinting support:

1. In the **Service** menu, select the **Configure System** option.

   The Configure System dialog box is displayed.

2. Select the **Tinting** tab.
3. Enable tinting for a particular device media by selecting the appropriate check box.

4. Click **OK**.

   Once tinting has been enabled for a device media, Print Console displays the **Tinting Scheme** drop-down box when that device media is selected in the Configure Device Media dialog box. (See the *Print Console Reference Guid*e for more information on the Configure Device Media dialog box and the **Tinting Scheme** drop-down box.)

7. TEST PLOT DIALOG BOX

The Test Plot dialog box features have not yet been implemented. This functionality will be included in a later release of Print Console.

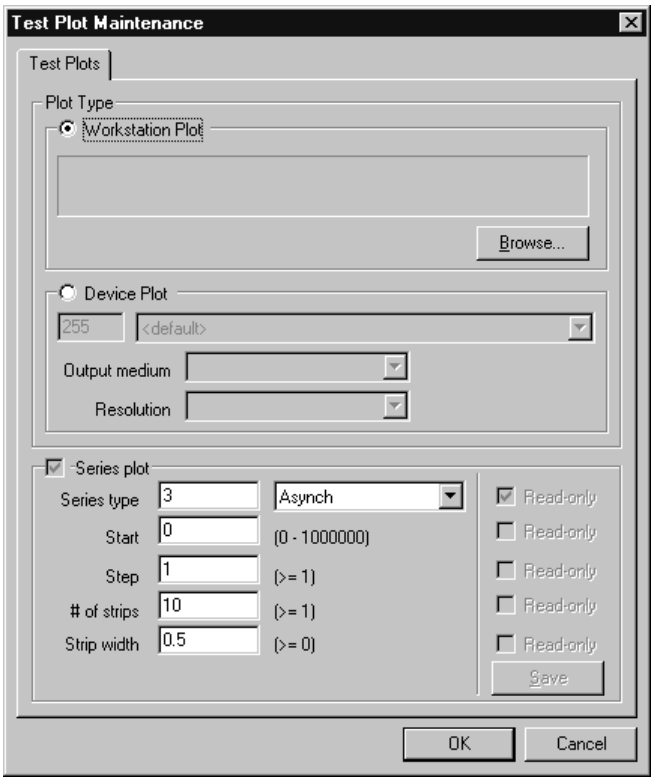


Figure 8 – Test Plot dialog box

8. SERVICE PASSWORD DIALOG BOX

Use the Enter Service Password dialog box to change the **Service** menu access password from the default (as supplied in the Print Console training course) to your own unique password.

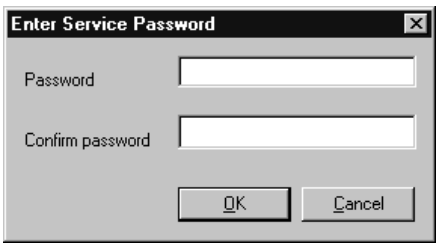


Figure 9 – Enter Service Password dialog box

Service Password Setting

To change the Service menu password:

1. In the **Service** menu, select the **Change Password** option.

   The Enter Service Password dialog box is displayed.

2. In the **Password** field, type the new password.

3. In the **Confirm password** field, re-type the new password.

4. Click **OK**, which saves the new password.

   IMPORTANT! Don't forget the new password! Also, other Creo service representatives may need access to the Print Console Service menu, so please ensure that the password change is made known to those who may require it. (If necessary, however, a member of the Print Console development team can be contacted for assistance in resetting the password to the default value.)

9. SELECT DEVICE DIALOG BOX

The Select Device dialog box tabs display all of the output devices that Print Console supports. The foremost tab (for example, the Trendsetter Spectrum tab shown in the next screen shot) is the output device to which Print Console is currently connected. Use the Select Device dialog box to change the output device that Print Console is configured to control.

Note: Each time that you switch to another output device for the first time, you will need a copy of the Print Console install CD (in order to load the necessary device animation image files).

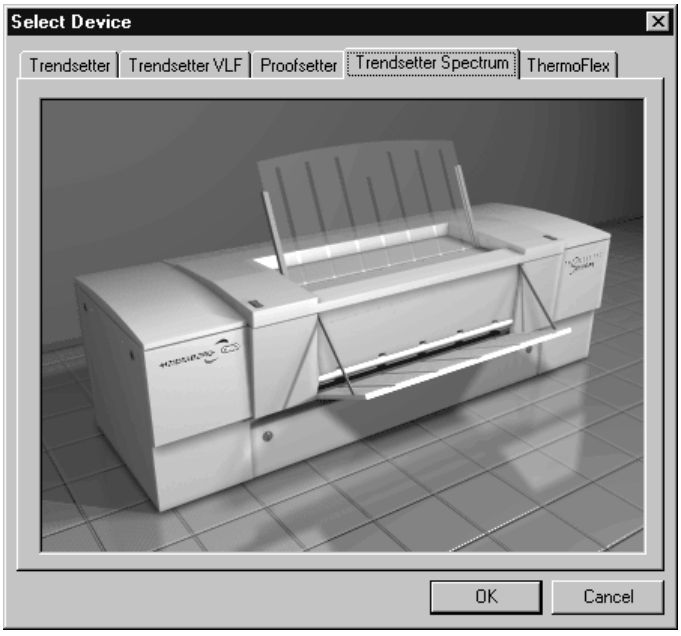


Figure 10 – Select Device dialog box

Output Device Setting

Note: Using the Service menu to configure Print Console for use with a different output device is not yet *completely* functional: changing output devices should instead be done via the Print Console installation program.

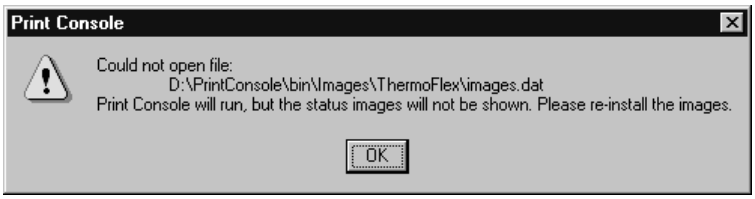
However, the procedure for switching output devices via the Service menu is as follows:

1. Select the **Service** menu's **Switch Device** option.

   The Select Device dialog box is displayed.

2. Click on the tab of the output device to which you want Print Console to be connected.
3. Click **OK**
4. Print Console displays a prompt asking if you want to change the output device types. Click **Yes**.
5. If you are prompted for the Print Console installation CD (i.e. if you have *not* previously switched devices and had to install the additional device animation images), insert the CD in the workstation's CD drive, click **OK**, and follow the on-screen prompts.
6. If the device images *are* found (on the workstation's harddrive), a message will appear prompting you to shut the Print Console software down: click **Yes**.

   If the device images *are not* found (i.e. the install CD was not used when switching devices, and the images are not available on the workstation's harddrive), you will have to manually shut down and restart the Print Console software. When the software is restarted, a message will appear, similar to:



Again, the install CD is required to completely and correctly switch output devices via the Service menu. This can also be accomplished by re-running the Print Console installation program and choosing the **Select Device** option.