DisplayMaker® Series XII

Print Server & Driver Setup Guide

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Revision Log

The following is a list of major changes and additions that have been made to this manual since it was first released.

See the accompanying *Release Notes* for specific changes to the software and hardware between manual updates.

Release Date	Description
Oct 1999	Manual first released.

About This Manual

Read this manual to set up print server and driver options for ColorSpan DisplayMaker Series XII digital color printers.

- **Chapter 1** shows you how to set server options and perform a ColorMark calibration.
- **Chapter 2** shows you how to set LaserWriter 8 driver options on the Apple Macintosh OS.
- **Chapter 3** shows you how to set PostScript Printer driver options under Microsoft Windows operating systems.

For further information, refer to the following ColorSpan documentation:

- *Quick Start Guide* - **START HERE** to set up and install a brand new ColorMark print server, and connect and configure printers to it.
- *DisplayMaker Series XII Site Preparation Guide* - explains how to prepare your site for the printer's arrival and installation.
- *DisplayMaker Series XII Installation and User Guide* - a multimedia "how-to" guide available on CD-ROM and videocassette.
- *System Control User Guide* - shows you how to print and RIP files through the ColorSpan print server.
- *Printing Tools User Guides* - shows you how to use the ColorSpan Downloader Utility (for Macintosh OS and Windows), the Custom Page Size Utility (for Windows).
- *Release Notes* and *Update Notes* - late-breaking information, update descriptions, and update instructions.

Further information about all ColorSpan products is also available over the Internet at the ColorSpan World Wide Web site at http://www.colorspan.com.

Conventions

This manual uses the following informational conventions:

Note	A special technique or information that may help you perform a task or understand a process.

Hinweis	Ein Hinweis beschreibt eine spezielle technik zur Lösung einer Aufgabe oder enthällt Informationen, die Ihnen eine Prozedur näher erläutert.

Caution	Alerts you to something that has the potential to cause damage to hardware, software, or data.

Vorsicht	Dieses Feld weist auf einen Umstand hin, der einen Hardware-oder Software-Schaden oder Datenverlust verursachen könnte.

CHAPTER 1

Print Server Setup

This chapter shows how to set up ColorSpan print server options for the DisplayMaker Series XII printer. It explains:

- Configuring the Printer (page 1-2)
- Viewing Printer Status (page 1-5)
- Configuring the Input Port (page 1-7)
- Attention Queue Jobs (page 1-14)
- Calibration (page 1-16)

Before you can perform the procedures in this chapter, you must add the DisplayMaker Series XII printer to the System Control interface. Refer to the *System Control User Guide* for instructions.

Configuring the Printer

Use the following procedure to configure a DisplayMaker Series XII printer. First make sure the printer is connected to the server, plugged in, turned on, and warmed up.

1. **Position the cursor on the printer icon.**
2. **Press and hold either mouse button to display the printer menu.**
3. **Select Configure from the printer menu.**

   The following **Configuration** dialog box appears.

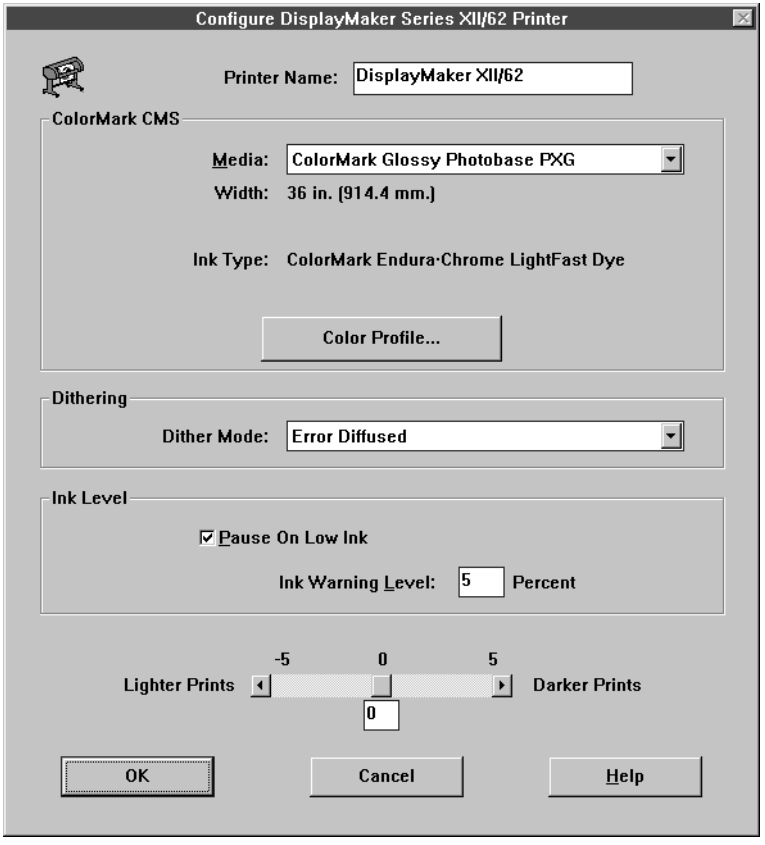

Fig. 1-1. DisplayMaker Series XII printer configuration dialog box

4. **Set or verify the printer configuration.**

   This dialog box is described on the following pages.

Printer Name

This name identifies the printer. It appears under the Printer icon in System Control and in various dialog boxes.

ColorMark CMS

- **Media** - for accurate color matching, specify the media type loaded in the printer. If a print job specifies a different media, the job is routed to the Output Attention queue with a disposition of Media Mismatch.
- **Color Profile** - click the Reset button to delete any calibration data from the selected profile. This resets the calibration data to its default values.

  You can also select the default color profile for the port connected to this printer. A color profile is a data file that allows the RIP to convert the colors in a file sent to the RIP into colors that can be printed on the printer. There is a specific profile for each ink set and media combination. You can sort the list by any of the following criteria:

  - Color Set - a graphical representation of the color and ordinal number of each ink in the set.
  - Media Name - name of the media in the profile.
  - Ink Name - name of the ink in the profile.
  - Last Calibrated - when the profile was last color calibrated by the ColorMark Color Management System software.
  - File Name

Screening Method

The **Threshold Dithering** screening method produces photographic-quality results. When printing with this screening method in four colors (CMYK), however, a pattern may be noticeable. Select **Error Diffusion** screening for the smoothest output when printing with four colors.

Ink Level

When you enable **Pause on Low Ink**, and the amount of ink for a given color reaches the level you set in the **Ink Warning Level** field, the printer pauses between pages so that you can replace the ink supply. A warning will be given and the printer will pause after every page until the ink is replenished. If Pause on Low Ink is disabled, the printer does not pause and the low ink warning does not appear. This could result in one or more colors running out in the middle of a print.

Note This ink level checking is performed only when **Pause on Low Ink** is selected.

Ink Saturation

To adjust the ink saturation for all prints sent to this printer, move the slider control or enter a number between -5 and +5.

Viewing Printer Status

To view the DisplayMaker Series XII printer's status:

1. **Position the cursor on the printer icon.**
2. **Press and hold either mouse button to display the printer menu.**
3. **Select Status from the printer menu.**

   The following dialog box appears:

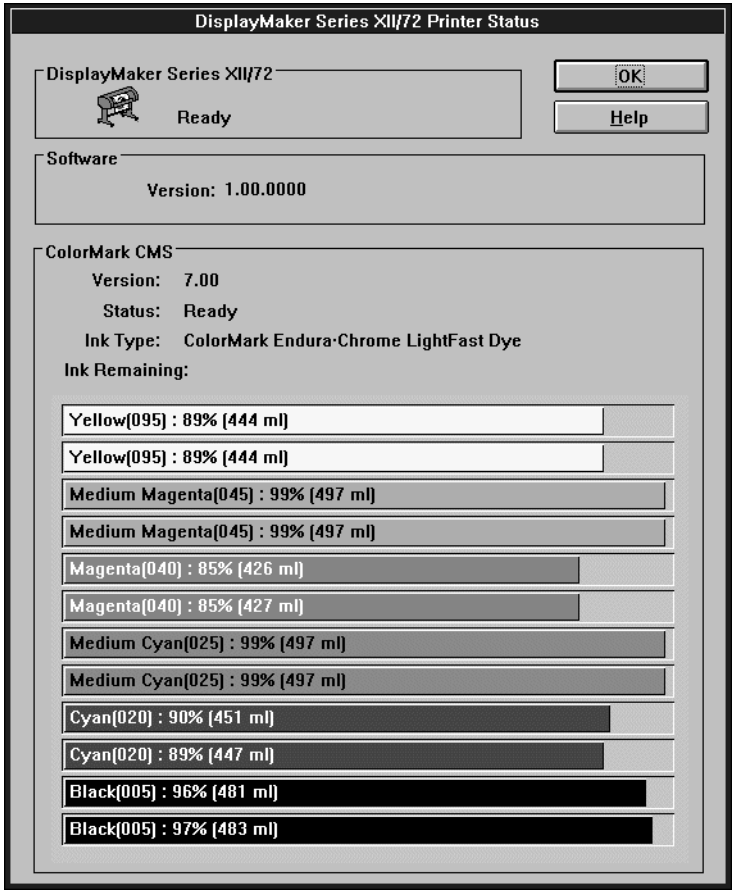

Fig. 1-2. Printer Status dialog box

Printer Status This is the printer's current state, such as Ready or Printing.

Software Version This is the version of the printer's embedded software.

ColorMark CMS

- **Version** — the version of ColorMark Color Management System (CMS) software currently installed for this printer.
- **ColorMark CMS status** — indicates whether the profilers are properly installed in the printer.
- **Ink Type** — the ink type(s) currently installed in the printer.
- **Ink Remaining** — the percentage and volume (in milliliters) of ink remaining. The appearance of this bar graph will vary, depending on the ink set(s) installed in the printer.

Configuring the Input Port

When you first add a port to System Control, you need to configure it for use with a specific output device. This section describes options for DisplayMaker Series XII. Refer to the *System Control User Guide* for additional input port information. You can also specify most of these options for individual print jobs from the Document Details dialog box.

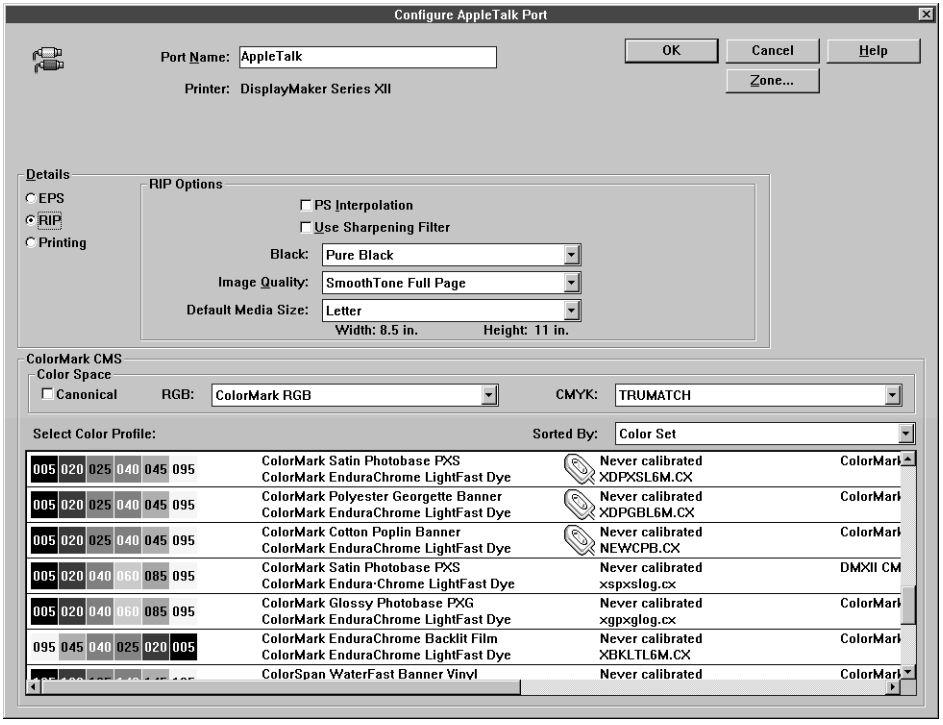

Fig. 1-3. Input Port Options for DisplayMaker Series XII

Port Name

The name that appears under the port icon in System Control and in the Chooser or print queue of the client computer.

- **AppleTalk Network -** On an AppleTalk network, the port name appears in the Chooser preceded by the **print server**'s name.

  Port name changes take effect only when the port becomes idle. To avoid confusion over different names appearing in the Chooser, change this name only when all ports are idle.

- **Microsoft Windows Network -** On a Microsoft Windows Network, the WinLink port name appears as a network printer connected to the server.
- **Novell Network -** On a Novell NetWare network, the system defaults to the print queue selected through the Windows Control Panel.

  To change the NetWare File Server and Print Server names, click Settings on the port configuration dialog box.

EPS Options

Default Print Mode

Specifies how EPS files sent to the printer with the ColorSpan Downloader Utility are printed. For details, refer to the *System Control User Guide.*

You can see how the image will look before printing by checking its Preview in the Output queue.

RIP Options

PS Interpolation

Causes scaled images to print with fewer "jaggies" and less "pixelization." It corrects images scanned at a resolution too low for the intended size and which would otherwise produce a "pixelized" appearance.

Use Sharpening Filter

Causes the server to correct softened edges in images printed with SmoothTone.

Note Selecting **PS Interpolation** or **Use Sharpening Filter** adds some processing time to the print job, depending on the nature and complexity of the job. However, be aware that checking both **Use Sharpening Filter** *and* **PS Interpolation** will likely slow RIP times considerably.

Black

Allows you to specify **Rich Black,** which creates black by combining all process ink colors; or **Pure Black,** which uses only black ink to reproduce black. Choose Rich Black when creating backlit output or when an extra-dark black is desired.

Image Quality

Select the image quality based on how fast you want the job to RIP and print, and the distance at which the printed output will be viewed. You can choose from:

- *SmoothTone Full Page* – highest quality, applies SmoothTone error diffusion to all elements on the page. Yields the best spot color matching.
- *Mural Better* - Image quality with Mural Better is very close to SmoothTone Full Page, but RIP times are much faster. Print with Mural Better quality level first, but switch to Smooth-Tone Full Page if there are "jaggies" in text or line art
- *Mural Bigger* - Mural Bigger mode is designed for murals and banners that will be viewed at great distances. Mural Bigger prints faster, which produces lower quality at close viewing range. The RIP time is less for this mode than for any other mode.

Default Media Size

Select a media size from the popup menu that the server can use if no media size is specified in the print job.

Printing Options

Copies

Type in the number of copies you want to print. This number applies to each print job sent through this port.

N-UP

To conserve media for smaller-sized jobs, you can print the copies side-by-side. When you select the N-UP checkbox, specify the width of the gutter (space between copies).

Step-and-Repeat

Step-and-Repeat prints copies of an image across the width of a page, offsets the image horizontally, then prints another row of the image, and so on until the end of the page is reached. This is useful for applications such as wallpaper, textile prints, set backgrounds, and gift wrap mock-ups.

To specify step-and-repeat settings for an image:

1. **In the System Control interface, route a port to the Output Hold queue, or pause the Standard port.**
2. **Print an image to the port that is routed to the Output Hold queue or paused Standard port.**

   After the job has RIPed, it appears in the queue.

3. **Open the queue, then open its Document Details dialog box.**

   The Document Details dialog box appears.

4. **In the Details section, click the "Printing" radio button to display the Step-and-Repeat properties.**

The Step-and-Repeat properties appear similar to this example (if they do not appear, then Step-and-Repeat is not supported on the selected printer):

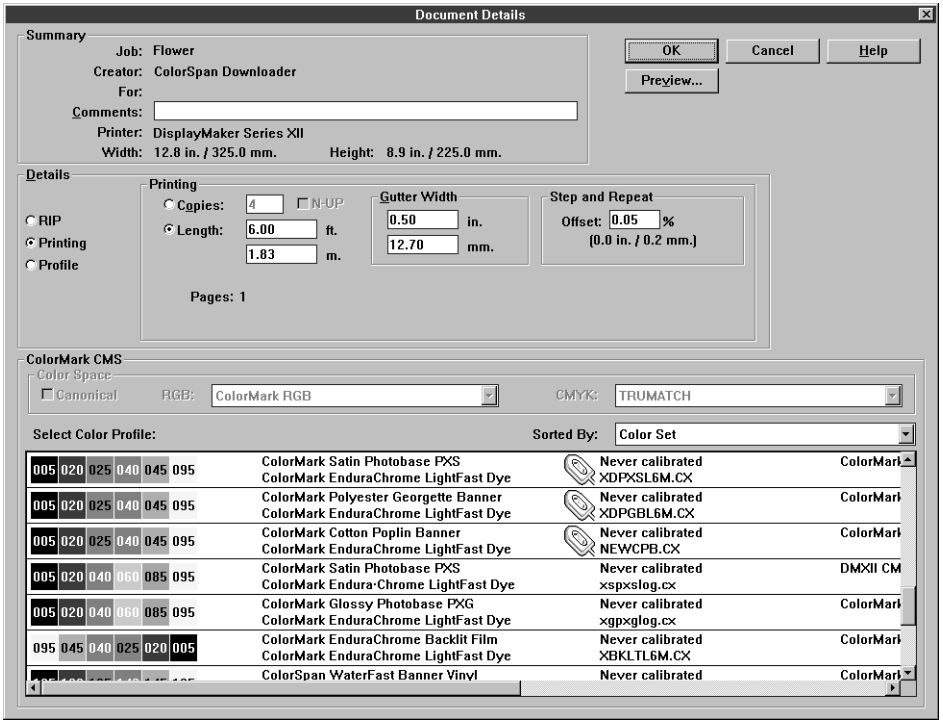

Fig. 1-4. Printing Options

- **Length** - when you click the Length radio button, the Step-and-Repeat properties become visible. In the length field, enter the length you want the step-and-repeat pattern to be printed.
- **Gutter Width** - enter the blank space you wish between each repeated image.
- **Step and Repeat Offset** - enter the distance you want each repeated image, as a percentage of the image's width.

5. **Click OK to save the settings.**

The job appears in the queue with a Step-and-Repeat icon, as shown below.

1. **To print the job, unpause the queue, or move the job to an active Output port.**

ColorMark CMS Color Space

The Input Color Space option you select determines how image colors are converted from one device to another, which establishes the method of color correction that will be performed by the print server.

RGB - Used for print jobs created in the RGB color space; best for most images.

- **COLORMARK RGB** - Applies best color matching data to the entire image, particularly in blues and reds.

CMYK - Used for print jobs created in CMYK color space.

- **TRUMATCH** - with TRUMATCH selected, you can be assured of accurate matching of TRUMATCH spot colors and true reproduction of full-color images.
- **SWOP (Coated) Emulation** - emulates the Standard for Web Offset Production color space used for color offset printing onto coated paper stock. Best for proofing applications.
- **SWOP (Coated) Emulation YA** - "yellow adjusted," provides visually warmer yellow tones, compared to the "SWOP (Coated) Emulation" color space.
- **Eurostandard (Coated) Emulation** - emulates the Eurostandard color space used for color offset printing onto coated paper stock. Best for proofing applications.
- **Eurostandard (Coated) Emulation YA** - "yellow adjusted," provides visually warmer yellow tones, compared to the "Eurostandard (Coated) Emulation" color space.

CANONICAL - When checked (enabled) this mode overrides the previous two settings. Use this mode to output pure solid colors, such as for presentation graphics. This option uses no color correction, but instead uses a default RGB-to-CMYK conversion.

Color Profile

The table lists the color profiles available for the printer. A color profile is a data file that converts the colors in a file sent to the RIP into colors that can be printed on the printer. There is a specific profile for each ink set and media combination.

- Select Color Profile - for accurate color matching, select the profile that contains the color set, media, and ink you want to use for jobs sent to this port, or for a specific job. If a different media and ink combination is specified by the application program, the job is routed to the Output Attention queue with a disposition of Media Mismatch.
- Sorted By - sort the list by any of the following criteria:
  - Color Set - a graphical representation of the color and ordinal number of each ink in the set.
  - Media Name - name of the media in the profile.
  - Ink Name - name of the ink in the profile.
  - Last Calibrated - when the profile was last color calibrated by the ColorMark Color Management System software.
  - Profile File Name

Most of the new profiles in Versions 8.3 and later of the ColorMark CMS Software are in a “density-linearized” format. This format has two advantages over the former format:

- Greater accuracy
- The ability to calibrate using any of three supported devices: ColorMark Calibrator, X-Rite DTP-41 Autoscanning Spectrophotometer, and the DisplayMaker Series XII on-board camera

If you are upgrading from a previous release of the ColorMark CMS, any existing profiles in the previous format will not be overwritten by the new format profiles. You can continue to use either version to print. The new version profiles are indicated with an icon (a ColorMark Calibrator) when displaying them in a profile listing.

Attention Queue Jobs

There are two special Attention Queue dispositions that apply to DisplayMaker Series XII. For other Attention Queue dispositions and how to resolve them, refer to "Job Dispositions" in Appendix A of the *System Control User Guide*.

- Media Size Mismatch Override
- Uncalibrated Printer

Media Size Mismatch Override

You can print a job that System Control sends to the Attention Queue with a Media Size Mismatch error by overridng the error. When you override the error, the excess image width is clipped (not printed) from the right edge of the image. This allows you to print a file with a custom page size slightly over the maximum print width, without revising and reprinting the application file or loading wider media in the printer.

For example, a print job may be set with a custom page width of 40 inches, with an image that is 37 inches wide. If 36-inch wide media is loaded, the print job would be sent to the Attention Queue with a disposition of "Media Size Mismatch." The maximum imageable width on 36-inch wide media is 35.5 inches. When you override the error to print the job, 1.5 inches of the image would be clipped on the right edge of the page.

You can avoid Media Size Mismatch errors by using standard page sizes instead of custom page sizes when possible, and by ensuring that the width of the media loaded is sufficient to print the job.

To override the Media Size Mismatch error and print a job:

1. **Open the Attention Queue and double-click the listing of the job you want to print.**
2. **Click the checkbox marked "Override Media Size Mismatch."**
3. **Close the Document Details dialog box.**

   This displays the Attention Queue listing again.

4. **Drag the job to an Output queue.**

   This queues the job for printing. The job will be printed as wide as possible, with the excess image area clipped on the right side.

Uncalibrated Printer

A job can have disposition Uncalibrated Printer when the printer is in unattended mode, and AutoSet calibration (initiated by AutoTune) failed due to an excessive number of missing or misfiring ink jets on one or more cartridges.

To print the job, run an AutoSet calibration to display the problem cartridge data on the control panel, correct the error conditions indicated, and click the Retry button to verify that the error was corrected. Then move the job from the Attention Queue to the Output Standard or Priority Queue.

Calibration

ColorMark calibration is one of the most significant things you can do to ensure accurate and consistent color output. The calibration procedures store information about specific inks, media, and printers in the ColorMark software which then tailors the processing of the job to optimize the inks, media and printer used.

Calibrating the DisplayMaker Series XII consists of two steps: Calibrating the print engine itself, and calibrating the ColorMark Color Management System software.

Calibrating the Print Engine

Make sure that the printer is calibrated. The print engine calibration, called AutoSet™, consists of jet coverage and head alignment procedures. This calibration ensures precisely rendered images. See the *DisplayMaker Series XII User Manual* for instructions on how to calibrate the printer.

Calibrate the print engine when:

- You see color misalignment errors
- You remove and replace ink cartridges
- The printer has been idle for an extended period of time
- You are directed to do so by ColorSpan Technical Support

Calibrating ColorMark

Calibrating the ColorMark software ensures color consistency between prints by compensating for variations in ink drop size that normally occur. It is not necessary to calibrate after printing any specific number of jobs. Calibrate ColorMark CMS under these circumstances:

- When you first install the printer.
- When you switch inks or print modes. Calibration is unnecessary when switching to a different number of passes without changing ink, unless you notice a color shift.
- When you change media (only if the last calibration was performed over 24 hours ago; check the printer configuration dialog for last calibration date and time).
- When you notice a change in the color consistency of the printer output.

Calibrating ColorMark Software

To Color Calibrate a DisplayMaker Series XII printer:

1. **Make sure the printer is connected to the server, plugged in, turned on, and displays the "Ready" message on the control panel.**

   If you will be using the ColorMark Calibrator or an X-Rite DTP41 device rather than the printer's camera to take the readings, make sure the device is connected to the server and powered on. Calibrate the DTP41 according to the instructions in its *Operator's Manual*.

2. **Make sure the ink installed is the type you want to calibrate.**

   The ink type that is loaded and displayed in the printer configuration dialog box determines which profile will be calibrated. To calibrate for a different ink type, load it into the printer before you continue this procedure.

3. **Position the cursor on the printer icon.**
4. **Press and hold either mouse button to display the printer menu.**
5. **Select Calibrate from the printer menu.**

   The Color Profile selection dialog box appears. Be sure to select a profile that is valid for the media and ink set currently loaded in the printer. Only density-linearized color profiles, identified with the following icon, can be calibrated with the ColorMark Calibrator or DTP41 device:

Note If the printer is currently printing or if the ColorMark CMS software is not installed, the Calibrate option is grayed out.

6. **Select a profile to calibrate.**
7. **Click the OK button.**

   If you selected a density-linearized profile, a dialog box appears, giving you the option of using the printer's onboard camera or manual reader (ColorMark Calibrator or DTP41 device).

8. **Click the button marked Printer's Camera or the one marked Manual Swatch Reader.**

   A dialog box appears that gives you the option of printing the Calibration Page or taking calibration readings.

9. **Click the button marked Print Calibration Page.**

   The printer prints a series of color swatches.

   - **To use the DTP41 device,** wait until printing is complete, then cut the swatches into strips as indicated on the print. Then select Calibrate again from the printer icon menu, repeating steps 6 through 9, but this time clicking the button marked Take Calibration Readings. Follow the prompts to feed the color swatch strips through the reader, according to the instructions in the *Operator's Manual.* When you have read all of the strips, go to step 14.
   - **If you chose the camera,** the printer reads each swatch with the onboard camera. The progress of this process is displayed on the printer control panel. When all of the strips have been read, go to step 14.
   - **If you are using the ColorMark Calibrator,** place the Calibrator in its stand, press and hold the base until the reading is taken. The server beeps when the reading is complete. Additionally, the Calibrator vibrates as it reads and stops vibrating when the reading is taken.

10. **Take a white point reading before taking any color readings. You can either take the white point reading or cancel and restart the procedure.**
11. **Place a sheet of unprinted Coated Gloss or Satin Photobase media underneath the Calibration Page before you take any readings.**
12. **Position the Calibrator's eye on a clean white spot on the calibration page.**
13. **Press and hold the Calibrator base until the white point reading is taken.**

    After the white point reading is taken, the screen displays the ColorMark Calibrator Window. For your information, the Media Type, Print Mode, and Ink Type you selected when you printed the Calibration Page appear near the top of the dialog box.

    a. Position the Calibrator's eye over the center of the first colored square.

Be sure to place the eye of the calibrator on an area of the color swatch that has uniform pattern reproduction. Avoid placing the eye over any defects, blemishes, or ink inconsistencies on the color swatch.

b. Press and hold the Calibrator base down until the print server beeps, indicating that the reading has been taken.

The box moves to the next swatch on the screen as a beep signals that you can take the next reading.

c. Repeat these readings with the next swatch until you have measured all of the swatches.

To start over at any time during the calibration process, click Cancel in the dialog box. The previous profiling information is preserved and the calibration process is terminated.

If you take a white point reading after reading some or all color values, all color values are removed from the screen, and you must restart the reading of color values.

Be sure to take a reading for each color. If you make a mistake, click Cancel and start over.

d. When the values of all swatches are displayed and correct, the Save switch is enabled.

When all of the swatches have been read, a dialog box appears that shows the calibration data for each swatch.

14. Accept or cancel the calibration data.

- If you accept the data, color calibration is complete.
- If you cancel the data, the calibration data is discarded.

CHAPTER 2

Macintosh Setup

This chapter provides specific information about printing from your Macintosh to the DisplayMaker Series XII printer. This chapter explains:

- Page Setup options from your application (page 2-2)
- Print options from your application (page 2-3)

If you haven't yet configured your Macintosh environment to print to the print server, refer to the *ColorSpan Printing Tools User Guide* for instructions.

LaserWriter 8 Driver Setup

Before you print, install the Printing Tools software and fonts as described in the *ColorSpan Printing Tools User Guide*. The installer does not install a LaserWriter driver automatically. You should obtain the latest driver that is appropriate for your operating system version. This driver is available on your operating system disks or from the Apple Computer World Wide Web site at http://www.apple.com/. The LaserWriter version 8.2.2 driver is included on the Printing Tools disk if you wish to use it.

To print a document on the DisplayMaker Series XII printer, follow these steps:

- Choose **Page Setup** options
- Choose **Print** options and print the document.

Choose Page Setup Options

1. **Select Page Setup... from your application's File menu.**
2. **Select Page Setup options.**
   - **Paper:** Select a paper size. DisplayMaker Series XII paper sizes appear in the drop-down list.

Note Many applications do not allow you to create documents larger than E-size. Other applications allow you to create documents larger than E-size only if you use LaserWriter driver 8.1 or later. Refer to your application documentation for details.

   - **Orientation**: Portrait (tall) or Landscape (wide).
   - **Scale:** Reduce or enlarge the size of the document from 25% to 400%.

   When you click the picture in this dialog box, the paper size and margins appear.

3. **If desired, set Application Options or PostScript Options.**

   Most of the PostScript Options do not apply to DisplayMaker Series XII output; the default settings work well in most cases.

4. **Click OK.**

Choose Print Options

1. **Select Print from your application's File menu.**

   The **Print** dialog box appears.

2. **Select General options:**

   - **Copies** – The number of copies to be printed.
   - **Pages** – Click **All to print all pages**. Type the number of the first page to be printed in the left box and the last page to be printed in the right box to print a range.
   - **Paper Source** – **RollFeeder** is the default and should be used.
   - **Destination** – Select **Printer** to print the file. Select **File** to create a PostScript file of the document to your hard disk.

3. **Select Background Printing options.**

   Click the **Foreground (no spool file)** button, since the file will be spooled on the print server.

4. **Click Printer Specific Options.**

   The Printer Specific Options dialog box appears.

5. **Select Printer Specific Options.**

   If you select **Printer's Default,** the settings that are in effect on the Port configuration in System Control are used. See the print server's online Help for information about configuring ports.

   - **Output Quality** – Select Image Quality options for the document, depending on your needs. ColorSpan's SmoothTone software overrides your application's halftone screens and corrects for tone transitions using an error diffusion technology that creates smooth, blended colors between adjacent tones. SmoothTone makes continuous-tone images such as photographs look more realistic.

     SmoothTone Full Page – highest quality, applies SmoothTone error diffusion to all elements on the page. Yields the best spot color matching.

     Mural Better – for large-size prints, rasterizes the page at 300 dpi, and prints images, text, and line art at 600 dpi. Yields better quality prints for viewing from four-to-five feet or more.

Mural Bigger – for super-large prints, rasterizes the page at 300 dpi, and prints images, text, and line art at 600 dpi. Yields good quality prints for viewing from ten feet or more, enables the maximum print length due to smaller server memory requirements.

- **Interpolation** – Selecting **Interpolate** causes the printer to print scaled images with fewer "jaggies" and less "pixelization." It corrects images scanned at an inadequate resolution for the scaling factor and which may produce a patchwork or "pixelized" appearance. This setting does not affect images with fewer than 8 bits per pixel.
- **Sharpening** – Causes the printer to correct softened edges in images printed with SmoothTone. It does not affect images with fewer than 8 bits per pixel or less than 512 pixels wide.

Note Interpolation and Sharpening can improve the appearance of some images, but use them only when the original file is unavailable. When possible, adjust images *before printing*. Interpolation and Sharpening will add a significant amount of time to the RIP process.

- **CMYK Color Space** – specifies the color correction to be used for print jobs created in CMYK color space.

  TRUMATCH – accurately matches TRUMATCH spot colors and reproduces full-color images.

  SWOP (Coated) – emulates the Standard for Web Offset Production color space used for color offset printing onto coated paper stock. Best for proofing applications.

  Eurostandard (Coated) – emulates the Eurostandard color space used for color offset printing onto coated paper stock. Best for proofing applications.

- **Canonical Color –** Determines how image colors are converted from one device to another, which establishes the method of color correction that will be performed by the print server. The Color Space option is only available when ColorMark Color Management System software is installed.

  Off (TRUMATCH) – This mode provides the best possible color correction. With TRUMATCH selected, you can be assured of accurate matching of TRUMATCH spot colors and true reproduction of full-color images.

  On (Canonical) – Use this mode to output pure solid colors, such as for presentation overheads. This option uses no color correction, but instead uses a default CMYK-to-RGB conversion.

- **Black** – Allows you to specify Rich Black, which creates black by combining all eight ink colors. When disabled, Pure Black (black ink only) is used to reproduce black. Choose Rich Black when creating backlit output or when an extra-dark black is desired.

6. **Set other options.**
   - **Cover –** Select **None** to turn this option off.
   - **Color Matching –** Select either **Color/Grayscale** or **Calibrated Color/Grayscale**. Both give the same printed results. Do *not* select **Black and White**.
   - **Error Handling –** Provides options for reporting PostScript errors that may occur during printing.
7. **Click Print.**

   The document is sent to the printer.

CHAPTER 3

Windows Setup

This chapter provides specific information about printing from your PC to a DisplayMaker XII printer connected to the print server. It explains how to specify printing options using the PostScript driver for Microsoft Windows operating systems.

If you haven't yet configured your Windows environment to print to the print server, refer to the *ColorSpan Printing Tools User Guide* for instructions.

PostScript Driver Setup

To configure DisplayMaker XII printing options:

1. **Click the Windows Start button.**
2. **Select Settings - Printers.**
3. **In the Printer folder, highlight the DisplayMaker XII icon, then display the printing options.**
   - **In Windows 95/98,** right-click the printer icon. The Properties dialog box appears.
   - **In Windows NT 4.0,** open the Printers folder's File menu and click on Document Defaults. The Document Defaults dialog box appears.

General

(Windows 95/98 only)

- **Comment** — the optional comment you enter appears in the Printers listing to other Windows users.

Details

(Windows 95/98 only)

- **Spool Settings** — specify "Print directly to printer." Since the print jobs can be up to 100 megabytes or more in size, you can save considerable time by not spooling them on your computer before sending them to the server.

Color Management

(Windows 98 only)

- **Profiles** — not needed, since the ColorMark Color Management System provides color correction.

Paper

- **Layout** — alternatively, you can use the ColorSpan print server's options for N-UP and arbitrarily arranging jobs on the page (MediaSaver).
- **Unprintable Area** — you can reduce the unprintable area (increase the margins) from their defaults.

Graphics

To access these settings under Windows NT 4.0, open the File - Document Defaults dialog box and click the Advanced tab.

Resolution

- **SmoothTone Full Page** — this setting prints all components of a document (including images, text, and line art) using SmoothTone. Jobs printed with this setting take longer to print than those printed using SmoothTone Images Only, but when viewed from the optimal viewing distance of 10 to 15 feet, give a look and feel approaching photorealism. Text, line art and EPS graphics take on a softer appearance than if printed using SmoothTone Images Only. This is ideal for output that requires high image quality.
- **Mural Better** — this setting is designed for murals and banners that will be viewed at a distance of at least 8 to 15 feet (3 to 5 m). Image quality is very close to SmoothTone Full Page, but print times are faster.
- **Mural Bigger** — this setting is designed for murals and banners that will be viewed at a distance greater than 15 feet (5 m). Image quality is not as good as for Mural Better, but print times are faster.
- **Scaling** — if your application software does not support large enough paper sizes, you can specify a scaling percentage.

Fonts

- **Send Fonts As...** — if the appearance of TrueType fonts is unsatisfactory, click this button and select "Send True Type Fonts as Type 42."

Device Options

To access these settings from the Windows NT 4.0 Printers folder, open the File - Document Defaults dialog box and click the Advanced tab.

- **Media Type** — always "Printer's Default;" specify the media and ink type from the ColorSpan print server's Port Configuration dialog box.
- **Interpolation** — corrects images scanned at a resolution that is too low for the intended scaling and which otherwise would produce a patchwork or "pixelized" appearance. This setting does not affect images printed using Traditional Halftone, non-images in SmoothTone Images Only mode, or images that are less than 8 bits per pixel.

  Note: Using image interpolation adds some processing time to the print job, depending on the nature and complexity of

the job. However, be aware that if you enable both Image Interpolation and Image Sharpening, RIP time is greatly increased.

- **Sharpening** — causes the printer to correct softened edges in images printed using SmoothTone dithering. It does not affect images with less than 8 bits per pixel or less than 512 pixels wide.

  Note: Using image sharpening adds some processing time to the print job, depending on the nature and complexity of the job. However, be aware that if you enable both Image Sharpening and Image Interpolation, RIP time is greatly increased.

- **CMYK Color Space** — specifies the color correction to be used for print jobs created in CMYK color space.

  TRUMATCH — accurately matches TRUMATCH spot colors and reproduces full-color images.

  SWOP (Coated) — emulates the Standard for Web Offset Production color space used for color offset printing onto coated paper stock. Best for proofing applications.

  Eurostandard (Coated) — emulates the Eurostandard color space used for color offset printing onto coated paper stock. Best for proofing applications.

- **Canonical Color** — determines how image colors are converted from one device to another, which establishes the method of color correction that will be performed by the print server. The Color Space option is only available when ColorMark Color Management System Software is installed.

  No — provides the best possible color correction.

  Yes — applies no color correction, but instead uses a default CMYK-to-RGB conversion. Use this mode to output pure solid colors, such as for presentation graphics.

PostScript Leave these settings at their default values.