

Star SJ-144 Printer Driver

There are several tasks that you can perform when setting printer options by using the printer setup and Options dialog boxes. Some tasks, such as specifying the paper size and source, are common to all printers. Other options, such as specifying the print quality and turning on color, are not. The following help topics are designed to assist setup and operation of the SJ-144 Printer Driver.

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Paper source

This controls the source of the media to be printed. The Star SJ-144 has four media source options:

1. **Manual feed** - This source should be selected when paper is inserted, by hand, into either the rear feed path or the front paper feed path.
2. **Paper Tray** - This source should be selected when paper is loaded in the tray at the rear of the printer. Paper is drawn into the printer as required.
3. **Label Sheet** - This source should be selected when printing optional label sheets. The rear paper path should be used to avoid bending the labels.
4. **Strip Label Cassette** - This option should be selected when the special ½ in. (12.7mm) high, strip label cassette is installed. Ensure that paper is not in the manual feed positions and the paper tray is in the folded position.

To select a particular paper source :

1. Choose from the **Paper Source:** list in the main printer set-up dialog
2. Click the **OK** button to activate the new selection.
3. Use the orientation buttons to set the print orientation.

Paper size

The SJ-144 is able to handle five standard sizes of paper:

Letter (default in US)

DIN A4 (default elsewhere)

DIN B5

Legal

Executive

The paper size is set by choosing from the **Paper Size:** list. The new paper size takes effect only after the **OK** button in the dialog box is clicked.

In addition to these paper sizes, there is a custom paper size option. If this option is selected, then a **Custom Paper Size** dialog appears. The paper dimensions can be entered in either inches or millimeters.

Note: Paper size is not selectable when using the strip label cassette.

Orientation

This option determines how the image is placed on the paper. There are two options, portrait and landscape. The orientation choices are selected by clicking the appropriate button. The icon to the left of these buttons reflects the current choice.



In the portrait orientation the image is placed taller than it is wide on the page.



In landscape orientation the image is wider than it is tall.

Printer Options

Zoom Control

Resolution

Data

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Resolution

The SJ-144 supports two printer resolutions, low resolution (180x360 **dots per inch**) and high resolution (360x360dpi).

Selecting 180x360dpi causes text and images to be printed at 180 dots per inch horizontally and 360 dpi vertically. When using 360x360 dpi, there are 360 dots per inch in both directions of the printed text and images.

360x360dpi produces a finer image, but results in twice as much data transferred to the printer as compared to 180x360dpi. If you require faster or draft print, select the 180x360dpi mode to increase printing speed at the cost of some detail.

Data

This option allows for the selection of the data transfer method to use when printing. There are three data transmission modes available: two CDM (Compressed Data Mode) modes and a single ESC P compatible mode.

CDM Raster mode causes the data to be sent in compressed raster form. Each raster line is compressed before it is sent. The printer then de-compresses the data before printing the line. There are no printer fonts available when using CDM Raster mode. The purpose of data compression is to reduce the time taken to carry out a print job. It does this by reducing the amount of data that needs to be transferred to the printer.

CDM Column mode transfers data as a sequence of columns one dot wide and 144 dots high. This data can also be compressed to improve printing speed. There are no printer fonts available when using CDM Column mode.

48 Dot bit image mode is a ESC P compatible. This does not incorporate any form of data compression, but it does permit the use of printer fonts when printing portrait orientation. Printer fonts are not supported in landscape orientation. However, Windows and TrueType fonts can be printed in landscape.

Color Ribbon

The SJ-144 can be equipped with several ribbon options that fall into one of four categories: printing on plain paper; **OHP** (Over Head Projection) film; self-stick label sheets; or strip labels.

The SJ-144 can print in either monochrome or color on plain paper, OHP and Label Sheets,. When printing in color, it is necessary to install a color ribbon cassette and make sure that the **Color Ribbon** check box has been checked. To print in monochrome, install a black ribbon cassette and un-check the **Color Ribbon** check box. Since color printing results in the transfer of more data, color printing will take longer than monochrome printing.

The SJ-144 can also use the Strip Label Cassette to produce labels 1/2 inch high by up to 7.2 inches long (12.4mm x 18.29mm). When using this feature, install the Strip Label cassette and un-check the **Color Ribbon** check box.

Zoom

The Zoom option allows the printed image to be reduced from full size. The options are:

100% - full size
80%
67%
50%

In addition, there is the **2-Page** mode where two images reduced to 50% size can be printed on a single page.

Print Control

Controlling print intensity

Dithering

Gamma control

Dithering

This is the method by which solid colors or gray levels are printed when only a limited set of colors (or black) is available to the printer. The printer driver converts a solid color to a pattern of dots on the page. A denser color will be represented by a more densely packed pattern of dots. No one dither pattern is appropriate for all images, so choices are provided to allow for the best pattern for any given image.

Dithering is based upon a small square of dots known as a dither pattern. The dots within the dither pattern are activated when the color density exceeds a pre-defined value. It forms a pattern of dots dependent upon the color density.

The first option is **None**. No dithering is done. The output is either a solid color or no color.

The **Coarse** option results in the image consisting of a relatively small number of large dots.

The **Fine** option uses a larger number of smaller, evenly spaced dots to create the image.

The **Line Art** option uses a fine pattern but the dots are more randomly spaced. This helps prevent the dither pattern from obscuring lines drawn on the page.

Intensity

The intensity control adjusts the brightness of the printed image. When the intensity setting is a positive value, less ink deposited on the paper resulting in a lighter print. When the intensity setting is less than zero, more ink deposited on the paper resulting in a darker print.

When the **Color ribbon** box has been clicked, it is possible to adjust the intensity of each color separately. This can be done by clicking the **Control color components separately** check box and then adjusting the color scroll bars.

Use the **Reset** button to set the value of the intensity controls to the default settings.

Gamma Correction

Gamma correction is similar to intensity control in that it controls the density of the ink on the printed page. However, it varies the rate at which the density increases, instead of being a simple linear control.

When the gamma value is low (~ 0.2), light objects remain light. Dark objects retain some brightness but, only the darkest objects appear fully dark.

With large values of gamma (> 1.0), light objects in the original image are darkened. Dark objects remain much the same.

By adjusting the gamma values, it is possible to dramatically alter the appearance of the printed image.

There are two forms of the gamma control. The first control is for monochrome printing and consists of one gamma curve. The monochrome gamma control is altered using the horizontal scroll bar. The second control appears when the option to control the color components separately has been selected. In this case a gamma curve controls appear for each color.

Adjusting the gamma values for each color can cause a substantial change of colors, on the printed image, to suit your personal taste.

Use the **Reset** button to set all the gamma curves to their default.

Color Palette

The color palette drop down list contains the name of the current color control settings. The color control settings refer to the intensity gamma and dithering settings.

New settings may be saved by entering the name in the edit box and clicking on the **Save** button. The related values are modified using the intensity and gamma control dialogs.

If ever an entry in the **Color Palette** list is no longer required it may be removed from the list by first selecting it from the list and clicking the **Delete** button.

Zoom Position

When the zoom control is set to either 80%, 67% or 50% it is possible to set the position where the shrunken image will appear on the page.

Click the **Zoom Position...** button in the Options dialog to enter the **Zoom Image Position**. This dialog displays one rectangle that represents the full page and a smaller rectangle to represent the zoomed image. The **X Offset** and **Y Offset** show as a percentage of the maximum possible movement the current position of the zoomed image.

The position of the print may be altered by either clicking on the smaller rectangle and dragging it to the required position while the mouse button is being held down the required. As an alternative the X and Y positions may be entered in the appropriate edit boxes.

Click the **Center** button to place the image in the center of the page

Horizontal Flip

The horizontal flip option causes the a 'mirror image' to be printed. This function is intended to be used when preparing images for 'iron on' printing as not all applications have the ability to laterally invert the image.

The SJ-144 is capable of printing on a wide variety of media including;

Plain Xerographic paper

OHP Overhead Projector Transparency film

Full sheet adhesive labels

Strip Labels - ½" high by up to 7.2 inches long using the Strip Label Cassette

Letter size, dimensions: 8.50"x10.98" (216x279mm)

DIN A4 size, dimensions: 210x296mm (8.27"x11.65")

DIN B5 size, dimensions: 182x257mm (7.17"x10.12")

Legal size, dimensions: 8.50"x14.02" (216x356mm)

Executive size, dimensions: 184x267mm (7.24x10.51")

A raster line is a single line of dots equal to the width of the image being printed. Together with the other raster lines, it builds the complete image on the page

