

# Using EZ-MARKUP

## OBJECTIVES

1. Overview of EZ-MARKUP.
2. Importing a BOM file.
3. Create an annotation.
4. Add a call out.
5. Move an annotation.
6. Change component colors.
7. Create a bitmap annotation.
8. Save your changes.

## 1 Overview

This document serves as a tutorial introduction to UNISOFT software modules EZ-MARKUP. EZ-MARKUP has all the features of EZ-VIEW with the ability to add text notes and graphics to create process documentation to aid assembly, repair, quality, and etc.

We will examine the unique features to EZ-MARKUP such as coloring components, creating process documents, and working instructions (e.g., attaching notes and graphics).

### NOTE:

After the sample board is run please substitute your own board. We support all major CAD formats including Mentor, PADS, Intergraph, ACCEL TANGO & PCAD, Orcad, etc.

Some familiarity with other UNISOFT software products is helpful but not necessary. Some familiarity with Microsoft Windows is assumed.

- To install EZ-MARKUP, follow the instructions in Using EZ-VIEW – *Installing EZ-VIEW*, page 2. Download file **markup4.exe** from UNISOFT's website.
- To import a CAD file, follow the instructions in Using EZ-VIEW – *Importing a CAD File*, page 3.

## 2 Importing a BOM File

1. On the **Edit** menu, click **Import BOM**. The Import BOM dialog box opens. See Figure 1.
2. In the list of **File names**, click **sample.bom**.
3. Click **OK**. As the program imports the BOM file, it will report any errors in the dialog box in Figure 2.
4. If you want to save the contents of the dialog box, click **Save** otherwise, click **Close**.

### NOTE:

Warnings such as these are typical. In this case, the BOM calls out for sockets to be installed, but the CAD file references only the parts to be placed on the sockets.

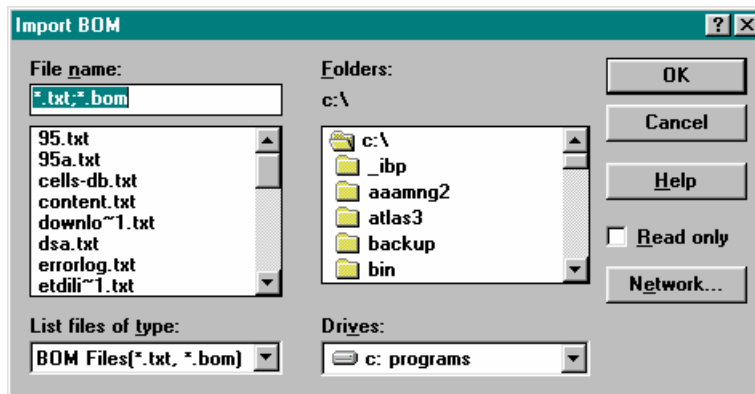


Figure 1 Import BOM dialog box

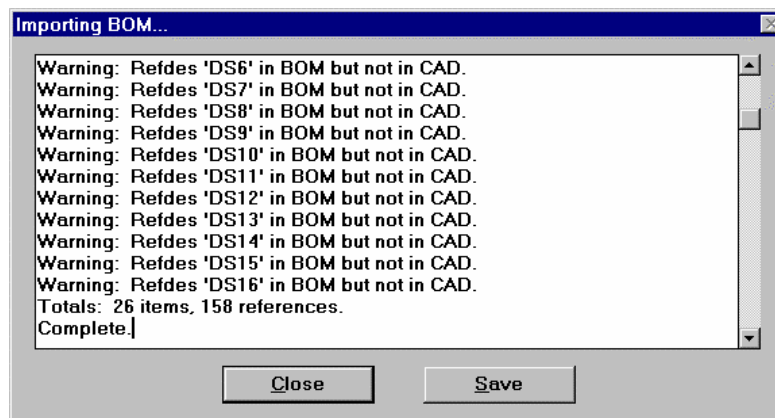




Figure 2 Error message dialog box

## 3 Create a Text Annotation

1. Click the Annotation Tool button . Your cursor will change to .
2. Drag a rectangle<sup>1</sup> within a top or bottom view window. See Figure 3.
3. Release the mouse button after dragging your rectangle. The tabbed Object Properties dialog opens. This is where you can specify properties for your annotation. See Figure 4.

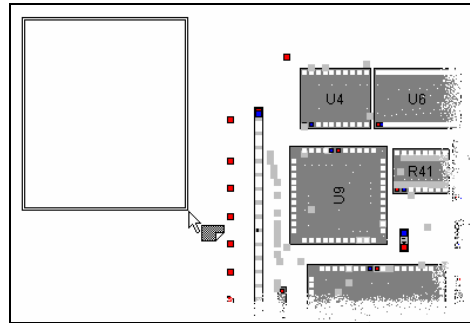


Figure 3 Dragging to form a rectangle.

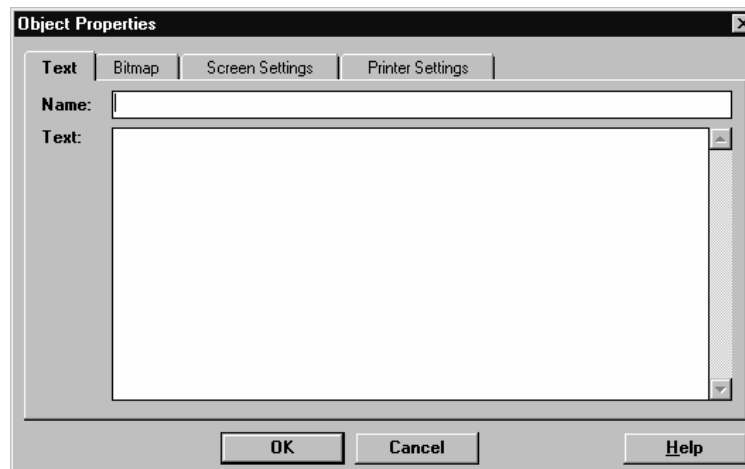


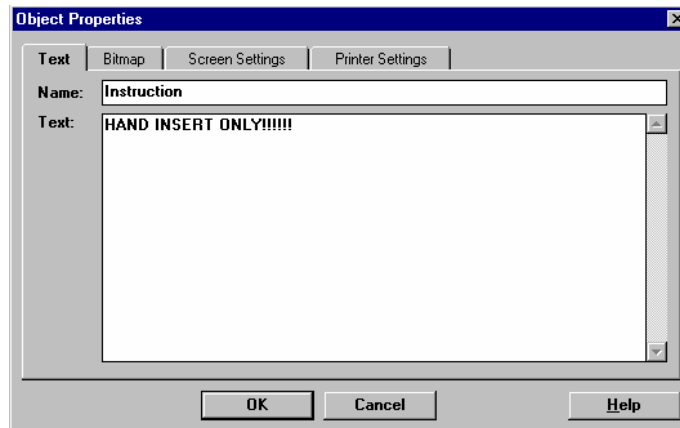
Figure 4 Object Properties Dialog Box

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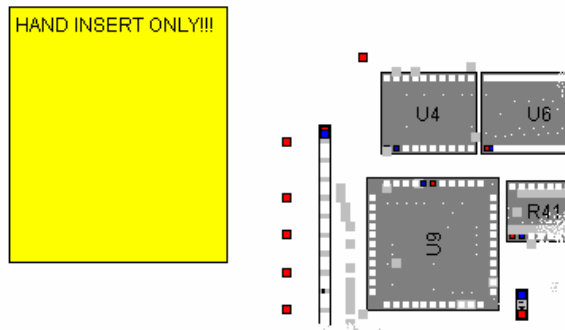
<sup>1</sup> Dragging a rectangle is a common operation for experienced Windows users. The act of dragging a rectangle is comprised of positioning your mouse pointer at one corner of your desired rectangle, press and hold the left mouse button while dragging the mouse down and to the right to the desired size of the rectangle.

## *Adding Text to the Annotation*

1. Click the **Text** tab (if necessary).
2. In the **Name** box, type a name for the annotation.
3. In the **Text** box, type the text you want to appear in the annotation. See Figure 5.
4. Click **OK**. The display contains the annotation, see Figure 6.



*Figure 5 Object Properties – Text Tab*



*Figure 6 Adding Text to an Annotation*

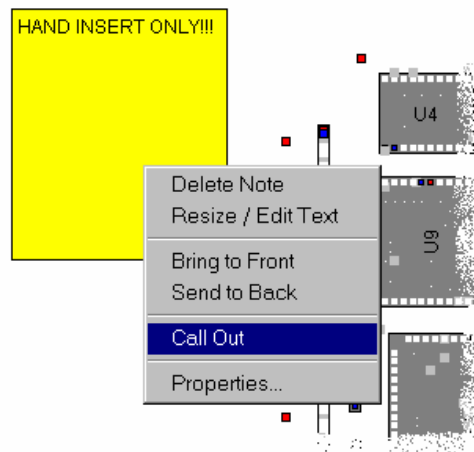
## 4 Adding a Callout

1. With the Annotation Tool selected, click the annotation you just added. A shortcut menu appears. See Figure 7.
2. Click **Call Out**. A callout line appears to the right of the annotation. See Figure 8.
3. With the annotation cursor, click and hold the tip of the callout. Drag the callout to the desired location. While you drag, a thick line will stretch from the center of the annotation to tip of your cursor. See Figure 9.

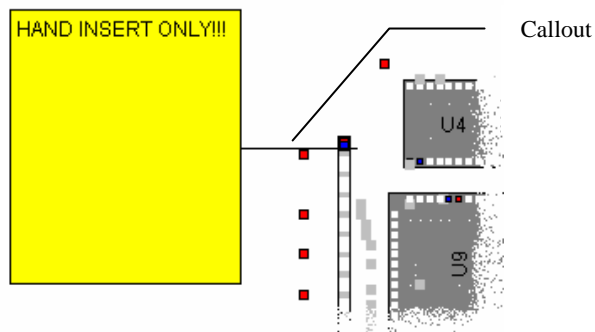
 **NOTE:**

If the tip of the callout is not in view, you may have to use the panning tool (See Using EZ-VIEW, page 5) to move it into view.

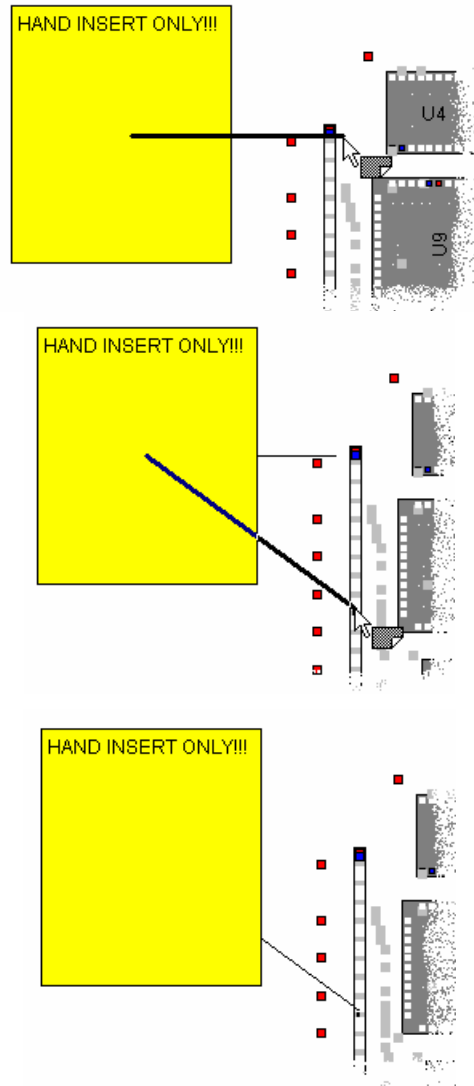
4. Release the mouse button. The callout line will move to the desired location.



*Figure 7 Shortcut Menu Appears*



*Figure 8 Callout Line Appears*



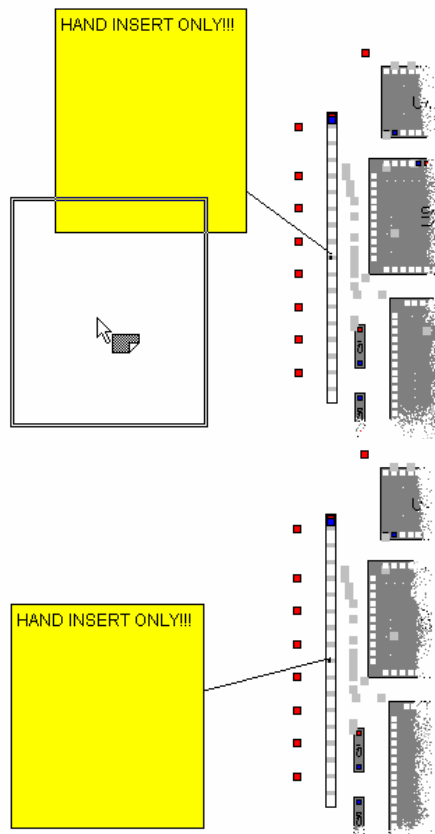
*Figure 9 Moving a Callout*

## 5 Reposition an Annotation

- Click and drag the annotation to the desired location. See Figure 10.



 **NOTE:**

If the annotation has a callout, the callout will stay anchored to the PCB.



*Figure 10 Repositioning an Annotation*

## ⑥ Change Component Colors

1. Click the Selection Tool button . Your cursor changes to the selection cursor .
2. Click a component. The component changes. See Table 1 for selecting components.
3. On the **Edit** menu, click **Properties**. The Object Properties dialog opens. See Figure 11.
4. Click to clear the **Use Defaults** check box.
5. Click the **Pattern Color** button. A Color Palette opens. See Figure 12.
6. Click one of the **Basic colors**, or you can click the **Define Custom Colors** to select a custom color.

 **NOTE:**

Many people find it useful to coordinate the component colors with the annotation colors.

7. Click the yellow color in the second column of the second row
8. Click **OK**.
9. Click **OK** again. Click anywhere on another part of the screen. Your components are now yellow. See Figure 13.

**Table 1** *Selecting Components*

<i>To select:</i>	<i>Do this:</i>
<i>Component</i>	<ul style="list-style-type: none"> <li>• Click the component.</li> </ul>
<i>Component by part number</i>	<ul style="list-style-type: none"> <li>• Use the find features. See Using EZ-VIEW , page 8.</li> </ul>
<i>Multiple components</i>	<ul style="list-style-type: none"> <li>• Hold the [CTRL] key and click each component.</li> </ul>



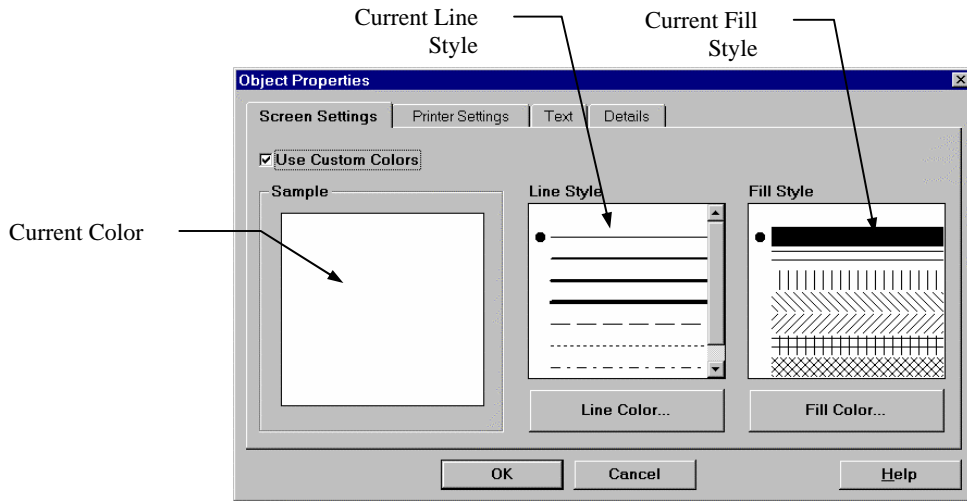


Figure 11 Object Properties Dialog Box

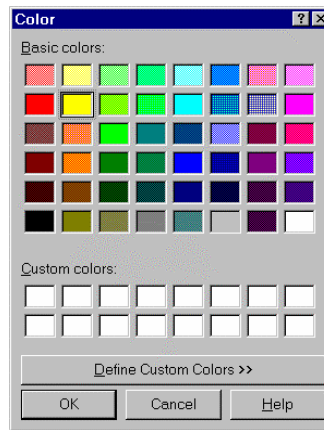


Figure 12 Color Palette

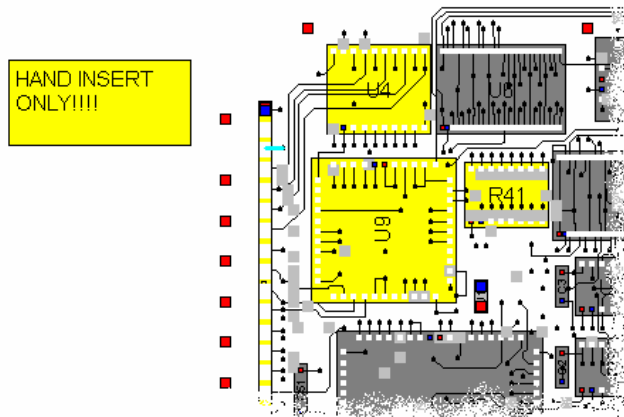



Figure 13 Components are now in color.

## 7 Create a Bitmap Annotation

1. Click the Annotation Tool button .
2. Drag a rectangle and release the mouse. The Object Properties dialog opens.
3. Click the **Bitmap** tab. A dialog box opens giving you the following options (See Figure 14):
  - **From File** - Select a bitmap from a file.
  - **From Clipboard** - Copy a bitmap from the clipboard.
  - **Erase** - Remove the bitmap from the display.
4. Click **From File**. The Import Bitmap dialog box opens. See Figure 15.
5. Enter the path to the bitmap file, in this example the file is located in Windows Directory.
6. Click the bitmap file you want to add.
7. Click **OK**.
8. Click **OK** again. A new bitmap annotation appears on your display. See Figure 16.

 **NOTE:**

Just as for text annotations, you can add a callout to a bitmap annotation.

9. To stretch the graphic, click the graphic. A shortcut menu appears. See Figure 17.
10. Click **Stretch Graphic**. The border around the graphic changes to a sizing border. See Figure 18.
11. To stretch (resize) the graphic, drag the border of the graphic until it is the desired size and shape.
12. When finished sizing, click on another part of the screen, or press [ENTER]. Your changes will become permanent.

 **NOTE:**

If you are not satisfied with the changes, press [ESC] before pressing [ENTER]. The annotation will return to its previous size and shape.

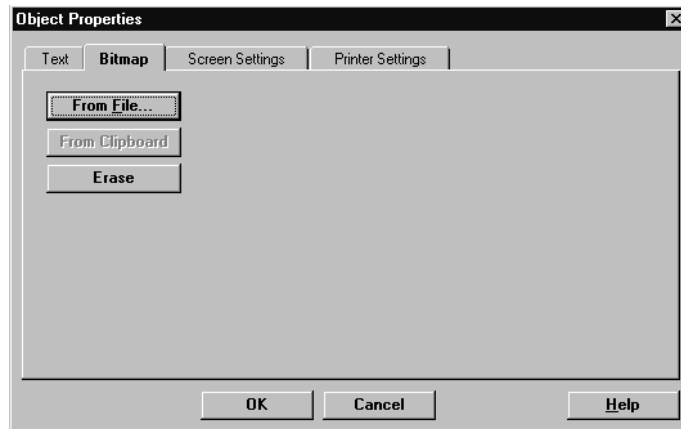


Figure 14 Object Properties – Bitmap tab

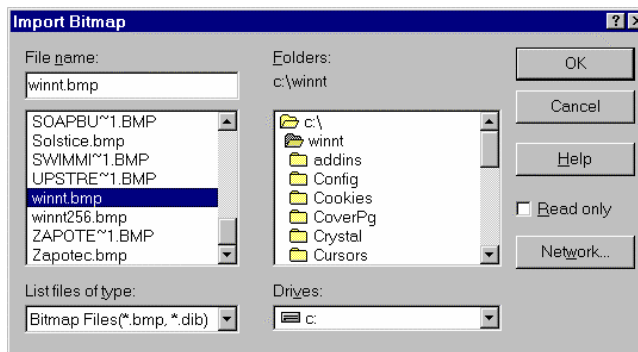


Figure 15 Import Bitmap dialog box

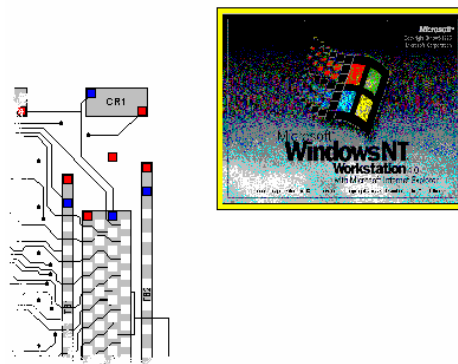


Figure 16 Bitmap Annotation



Figure 17 Shortcut menu appears

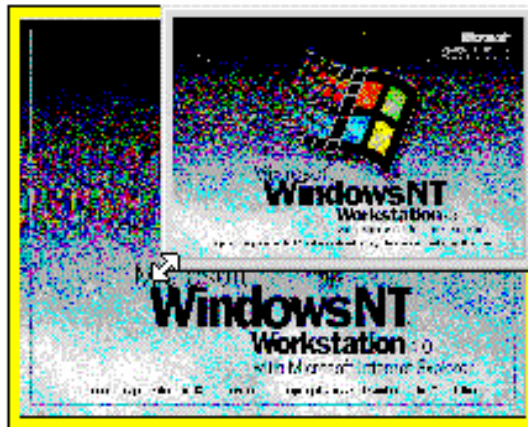


Figure 18 Resizing a Bitmap

## 8 Saving Your Work

After adding annotations to your file, you will want to save your work. You can save your work as a **F2B** file or as a **F2P** file.

- On the **File** menu, click **Save**.

 **NOTE:**

If you want to save the file with a different name, on the **File** menu, click **Save As**. The Save dialog box appears. Type a name in the **File Name** box. Click **OK**

- An **F2B** file contains all of the board information, plus the annotations. The board file is loaded first and then the annotation file is loaded on top of the board file. When you save the file, the system defaults to the original file name with a different extension. This file can be viewed by anybody using the EZ-VIEW free viewing program. If you plan to send your annotated board along with the EZ-VIEW program to another person, the F2B file is more convenient.
- An **F2P** file contains just the annotations, and can be viewed in conjunction with an F2B or CAD files at a later time. If you want to develop multiple visual aids based on the same CAD file, or if you receive updated CAD files in the future, it is better to save F2P files. These files can be viewed individually or in combination and will overlay updated CAD files.