# Chapter 11: Printing

## Introduction

TOPS Pro provides a lot of flexibility in the way you design and print analysis output. When you've completed an analysis and decided on a solution, TOPS Pro allows you to print a hard copy of the information that went into the analysis. For a package profile, TOPS Pro allows you to print a pre-defined report.

This chapter walks you through the following print features and functions:

- Print Preview for an analysis, including how to define print parameters
- Print Preview for a package profile
- Add text to Print Preview
- Add a graphic image to Print Preview
- Edit a graphic image in Print Preview
- The Quick Print feature
- The Combined Report feature
- Printer width

## Print Preview – Analysis

After you've selected a solution for an analysis, you're ready to print the output of that analysis. This section explains how to design the layout of the printout, then define the type of information to be included and how present that information (different graphical views, text and numbers, etc.).

In this example, we'll design the printed output to have the following characteristics:

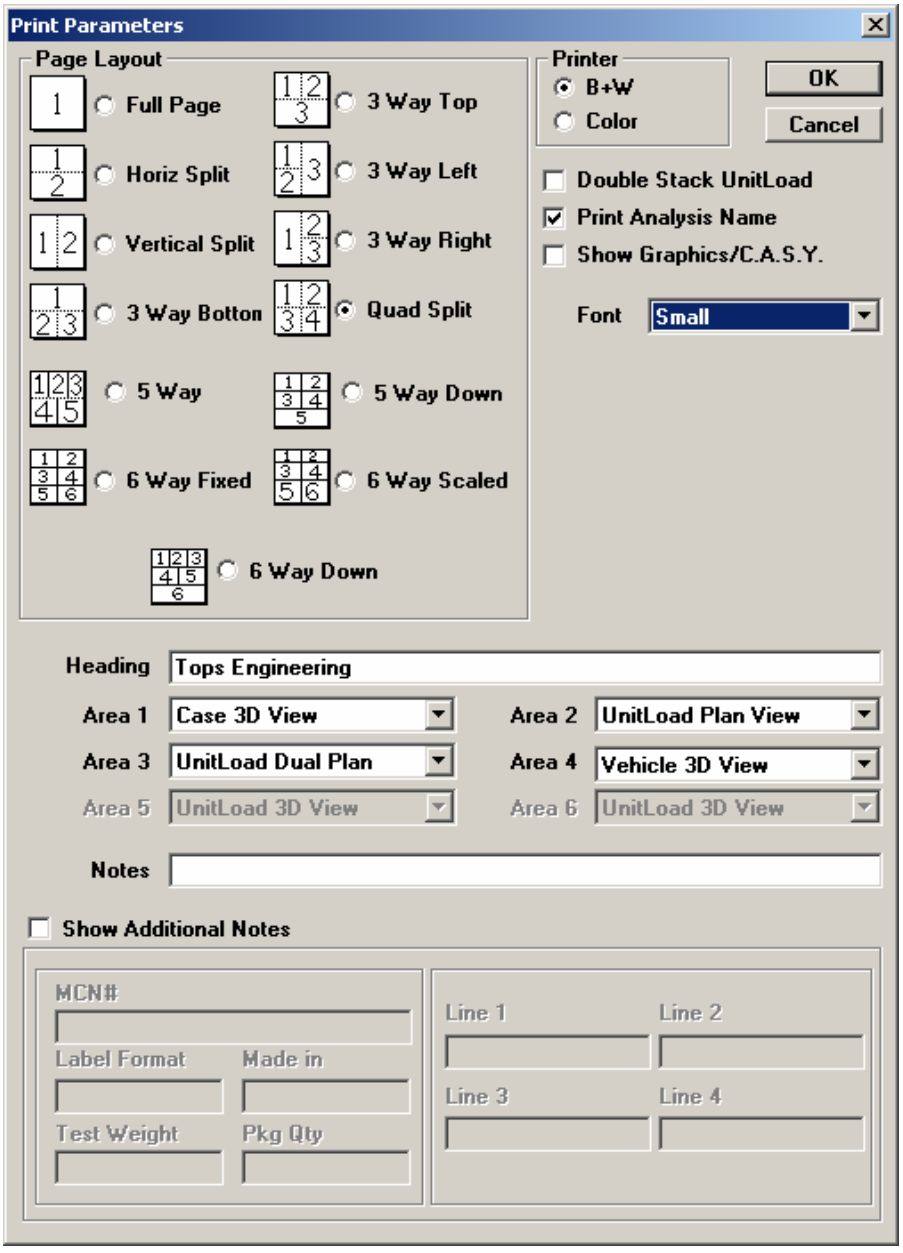
- The output will have a Quad Split page layout.
- The heading will read "TOPS Engineering".
- The four areas of the printout will show graphics of the Case 3D View, the Unitload Plan View, the UnitLoad Dual Plan and the Vehicle 3D View.
- The bottom of the printout will show sample text.

To print the output from an analysis, start from the Control Panel and follow these instructions:

1. Go to the Menu Bar and open the File menu.
2. Select Print Preview, then select Analysis. The Print Parameters dialog box appears.

## Define Print Parameters

The Print Parameters dialog box, pictured below, allows you to design the layout of the output, what type of information will be included, etc.



The Print Parameters dialog box is organized into the following sections:

- **Page Layout: A**llows you to select one of 11 possible page layouts:
  - The **Full Page layout** allows you to select only one area of the analysis to print.
  - The **Horizontal Split and Vertical Split layouts** allow you to select two areas of the analysis to print.
  - The **3 Way Bottom, 3 Way Top, 3 Way Left** and **3 Way Right layouts** allow you to select three areas of the analysis to print.
  - The **Quad Split layout** allows you to select four areas of the analysis to print.
  - The **5 Way layout** allows you to select five areas of the analysis
  - The **6 Way Fixed layout** has all six areas of the analysis fixed to the same size.
  - The **6 Way Scaled layout** has 3 different sized areas. Area 1 and 2 are the smallest all the way up to 5 and 6 which are the largest.
  - The **6 Way Down layout** has 3 small areas, 2 medium areas and 1 long area.

- **Heading:** Allows you to enter the text of the heading that will appear at the top of the printout.

- **Areas 1 through 6:** Allow you to select the area(s) of the analysis from which you want to print information.

  **Note:** Be aware that the number of areas available to select from depends on the page layout you selected. For example, if you selected the Horizontal Split layout, which contains two sections, you'll be able to select from only two areas.

- **Notes:** Allows you to enter the text of any notes that will appear at the bottom of the printout.

  **Tip:** To force the text to wrap to the next line, type a left apostrophe (`) at the end of the line of text. In a normal word processor application, you'd use the Enter or Return key to do this.

- **Show Additional Notes:** Allows you to enter information about such as Label Format, Test Weight and Package Quantity.

- **Printer:** Allows you to select either Black and White (B+W) or Color printing.

  **Note:** Black-and-white printing is basically a line drawing, while color printing is a 3-D shaded halftone.

- **Double Stack Unitload:** Allows you to print output as a double-stacked unitload.

- **Print Analysis Name:** Allows you to print the analysis name on the printout.

- **Show Graphics/C.A.S.Y.:** Allows you to show graphics or CASY design in the printout.

  **Note:** If the analysis includes both graphics and a CASY design, the system will display the CASY design, not both.

- **Font:** Here you can select the font on the preview screen. The text can be displayed in the following 3 sizes.

  - Regular: Helvetica 10 pt.
  - Small: Helvetica 8 pt.
  - Very Small: Helvetica 6 pt.

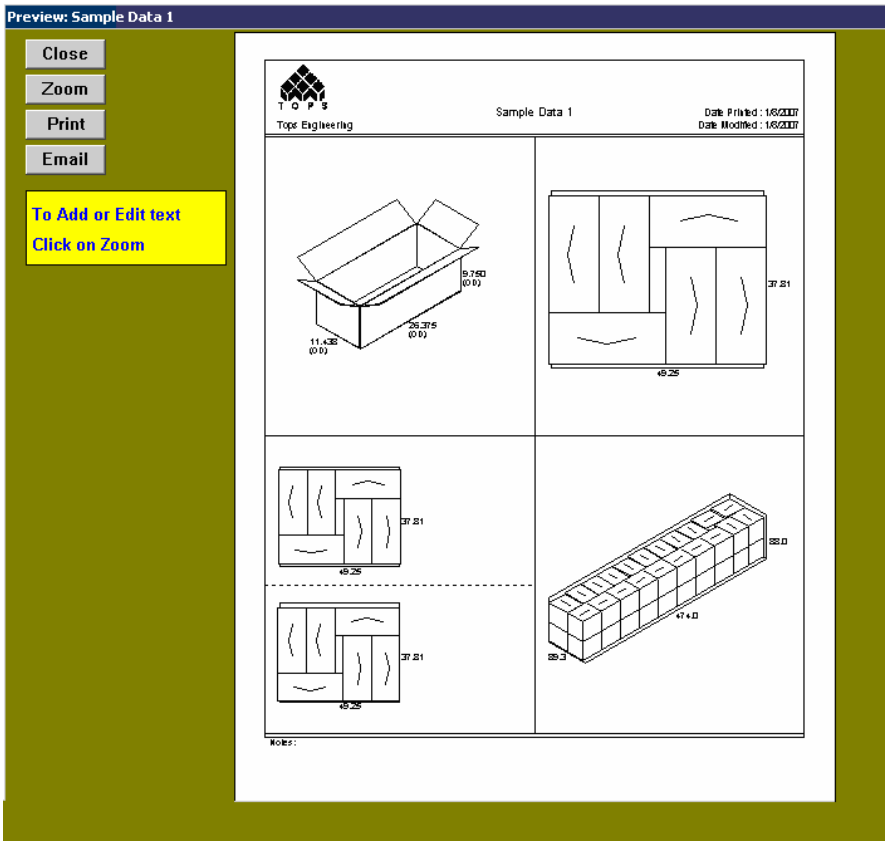
## Print Report Example

To define print parameters for your analysis output, start from the Print Parameters dialog box and follow these instructions:

1. Use the following fields to enter print parameters. Use the Tab key to move from field to field. For the purpose of this example, we'll enter the following parameters

   - **Page Layout:** Select Quad Split.
   - **Heading:** Enter "TOPS Engineering"
   - **Area 1:** Select Case 3D View.
   - **Area 2:** Select UnitLoad Plan View.
   - **Area 3:** Select UnitLoad Dual Plan.
   - **Area 4:** Select Vehicle 3D View

2. After completing the print parameters, click on OK.



Notice the following things about the Print Preview panel:

- This zoom-out state is a rough approximation of the actual printout. For a more accurate view, zoom in.
- The **analysis name** appears in the top, center of the printout and reads "Sample Data 1."
- The **heading** appears in the top, left of the printout and reads "TOPS Engineering".
- The **date** appears in the top, right of the printout. TOPS Pro automatically inserts both the date printed and the date modified.

  **Note:** At this time, there is no way to exclude the date, user name or page number from the printout.
- **Area 1** displays a graphic of the Case 3D View.
- **Area 2** displays a graphic of the UnitLoad Plan View.
- **Area 3** displays a graphic of the UnitLoad Dual Plan.
- **Area 4** displays a graphic of the Vehicle 3D View.
- The **Zoom button** allows you to magnify the panel and get a closer, more detailed look at the output. Zoom also allows you to annotate your printout. For more information, please refer to page 11.9.
- The **Print button** sends the output to the printer.
- The **Email button** opens your mail application and attaches a standard printout as a (.jpg) to be Emailed directly to another person.

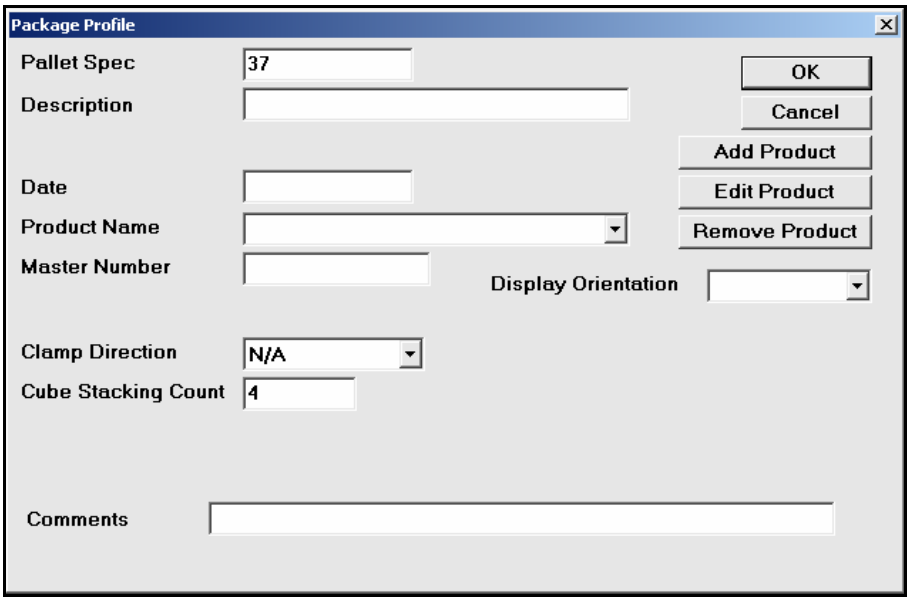
  **Note:** For more information, please refer to Chapter 2, The Basics.

# Print Preview – Package Profile

For a package profile, TOPS Pro allows you to print a pre-defined report. To display the Print Preview for a package profile, start from the Control Panel and follow these instructions:

1. Go to the Menu Bar and open the File menu.

2. Select Print Preview, then select Package Profile. The Package Profile dialog box appears, as pictured below.




3. Use the following fields to enter package profile parameters. Use the Tab key to move from field to field. For the purpose of this example, we'll enter the following parameters:

   - **Pallet Spec:** Enter the specification number for the pallet style. By default, TOPS Pro suggests a unique spec ID.

   - **Description:** Enter a description of the package profile being created.

   - **Date:** Enter the current date to specify when the package profile was created.

   - **Product Name:** Use the drop-down list to select a product name associated with the package profile or type in the first few letters of the product.

     **Note:** The drop-down list displays products that have been added to this profile. You'll use this field to edit or delete a product.

- **Master Number:** Enter the master number associated with the package profile.

  **Note:** You can use this field for any numeric value. To rename the field, use the Text Modification dialog box. Please refer to Appendix B, Dialog Boxes.

- **Clamp Direction:** Use the drop-down list to select the clamp direction associated with the package profile.

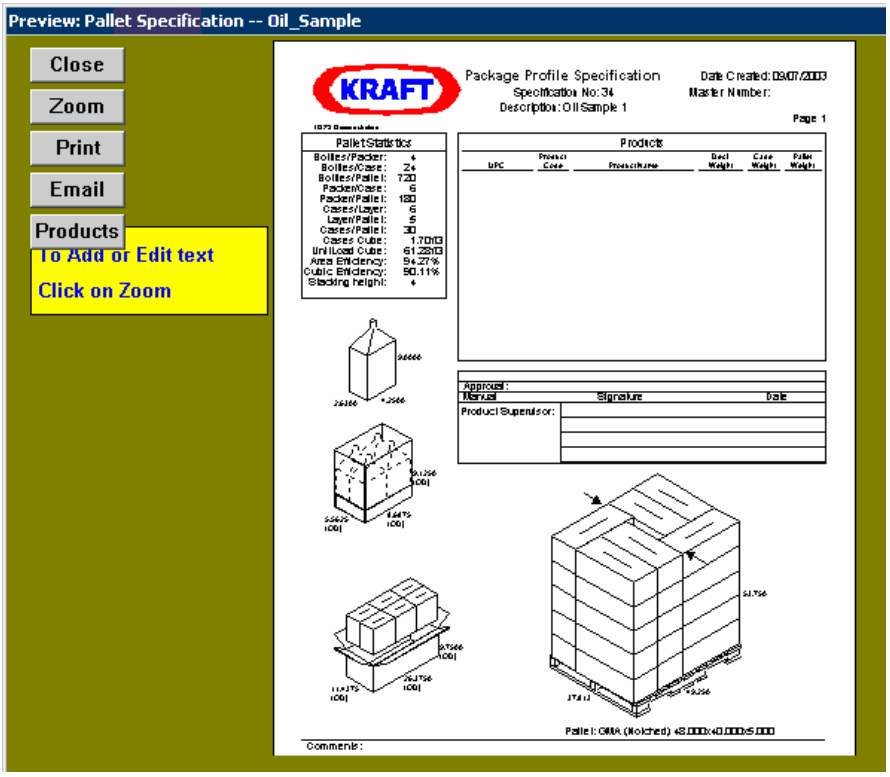
  **Note:** The printout will show clampability arrows on the unitload according to your input here. Unlike the clampable option on the UnitLoad Options dialog box, the clamp direction does not affect the calculations.

- **Cube Stacking Count:** Enter the maximum stacking height for your warehouse.

  **Note:** Like the Master Number field, you can use this field for any numeric value.

- **Comments:** Enter the text of any comments that are relevant to the package profile.

4. After completing the package profile parameters, click on OK. The Print Preview panel appears, as pictured below.



Notice the following things about the Print Preview panel:

- The **pallet specification number, description, date created** and **master number** appear in the top of the printout. These items match the information you entered on the Package Profile dialog box.
- A series of **pallet statistics** appears in the top, left of the printout.
- The **Products section** displays a variety of information about the products included in the package profile.
- A number of **graphic views** appear in the bottom and left portions of the panel.
- The **Comments area** displays any comments you entered on the Package Profile dialog box.
- The **Zoom button** allows you to magnify the panel and get a closer, more detailed look at the output.
- The **Print button** sends the output to the printer.

5. To print the output, click on the Print button. The system sends the print preview output to the printer.

# Annotate a Printout with Text

After you've designed and generated your analysis output, the system allows you to annotate a printout with text before you print it. This allows you to customize and enhance the output's presentation.

To add text to the output, start from the Print Preview panel and follow these instructions:

1. Click on the Zoom button. The system magnifies the Print Preview panel.
2. Click on the area of the output where you want to enter text. The system displays a four-cornered entry field with the cursor positioned inside the field. Notice that you can "drag" the entry field to any position on the screen.

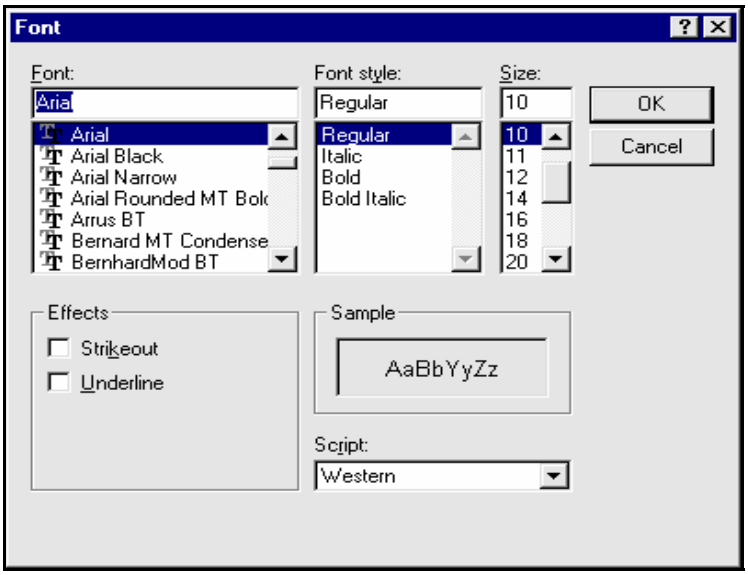
   **Note:** To make copies, hold down the Control key (Ctrl) while dragging.

3. Enter the text that you want to appear in the selected area. In this exercise, enter text as follows:

- ❖ In Area 1 (top left), click above the graphic and enter this text: "UnitLoad 3D View."
- ❖ In Area 2 (bottom left), click above the graphic and enter this text: "UnitLoad Plan View."
- ❖ In Area 3 (bottom right), click above the graphic and enter this text: "UnitLoad Statistics."

4. To change the font and/or font size, open the Text menu and select Font. The Font dialog box appears, as pictured below.

   **Note:** At this time, you cannot mix fonts within a single annotation.

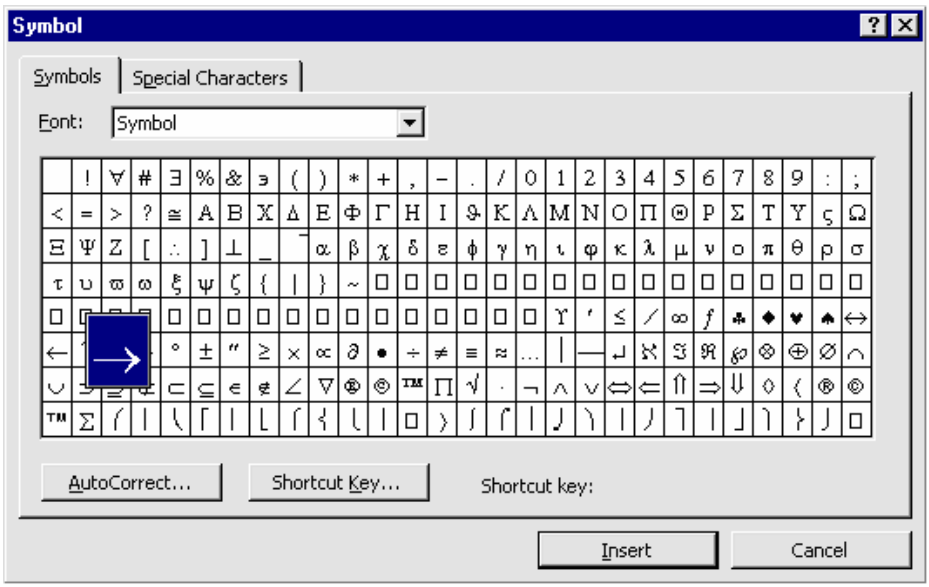



5. Use the Font dialog box to select the font, font style and/or size and click on OK. TOPS Pro returns you to the Print Preview panel.
6. Drag the text fields so they're positioned where you want them.
7. After adding the text, click on the Print button. The system sends the analysis output to the printer.

# Insert Arrows on a Printout

From time to time, you might want to enhance a printout with some well-placed arrows. In TOPS Pro, inserting an arrow on a printout involves a little-known keyboard trick – using the Alt key and the numeric keypad to insert keystrokes that are not usually available. This method offers an advantage over using bitmaps – these arrows have transparent backgrounds and won't obliterate the area on the printout where they're placed.

Most fonts have more symbols than the normal 26 letters, 10 numbers and punctuation symbols. A font often includes arrows, trademark symbols, accented characters, etc. In Microsoft Word, if you open the Insert menu and select Symbol, the Symbol dialog box appears, as pictured below. You can also use the Windows Character Map feature, located in the Accessories folder.




If you highlight a symbol – such as the right arrow (→) – a number appears on the status bar; for example, 174. This number represents the ASCII code for the selected symbol and the selected font.

The following steps allow you to insert these characters into most programs, even if they don't have an Insert Symbol feature. To insert characters into a TOPS Pro printout, follow these instructions:

1. Go to the Print Preview Screen and zoom in.

2. Click on the screen to insert text.

3. Make sure the keyboard's Num Lock light is on.

4. Open the Text menu and select Font to display the Font dialog box.

5. Select the font you want to use.

   **Note:** To insert arrows onto the printout, use the Symbol or Wingdings font. To simply bold or italicize the text, use the active font should be sufficient.

6. Hold down the Alt key on your keyboard.

7. While holding down the Alt key, type the ASCII number for the symbol you want to insert with a zero (0) in front; for example, type 0172. Use the table below as a guide.

8. Release the Alt key. TOPS Pro inserts the selected symbol onto the printout. You may need to adjust the font size to make it more legible.

**Common ASCII Codes for Symbols**

| Symbol Font | | | | Wingdings Font | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0171 | ↔ | 0219 | ⇔ | 0223 | ← | 0231 | 🡐 | 0239 | ⇦ |
| 0172 | ← | 0220 | ⇐ | 0224 | → | 0232 | 🡒 | 0240 | ⇨ |
| 0173 | ↑ | 0221 | ⇑ | 0225 | ↑ | 0233 | 🡑 | 0241 | ⇧ |
| 0174 | → | 0222 | ⇒ | 0226 | ↓ | 0234 | 🡓 | 0242 | ⇩ |
| 0175 | ↓ | 0223 | ⇓ | 0227 | ↖ | 0235 | 🡔 | 0245 | ⇖ |
| 1076 | ° | 0226 | ® | 0228 | ↗ | 0236 | 🡕 | 0246 | ⇗ |
| | | 0227 | © | 0229 | ↙ | 0237 | 🡗 | 0247 | ⇙ |
| | | 0228 | ™ | 0230 | ↘ | 0238 | 🡖 | 0248 | ⇘ |

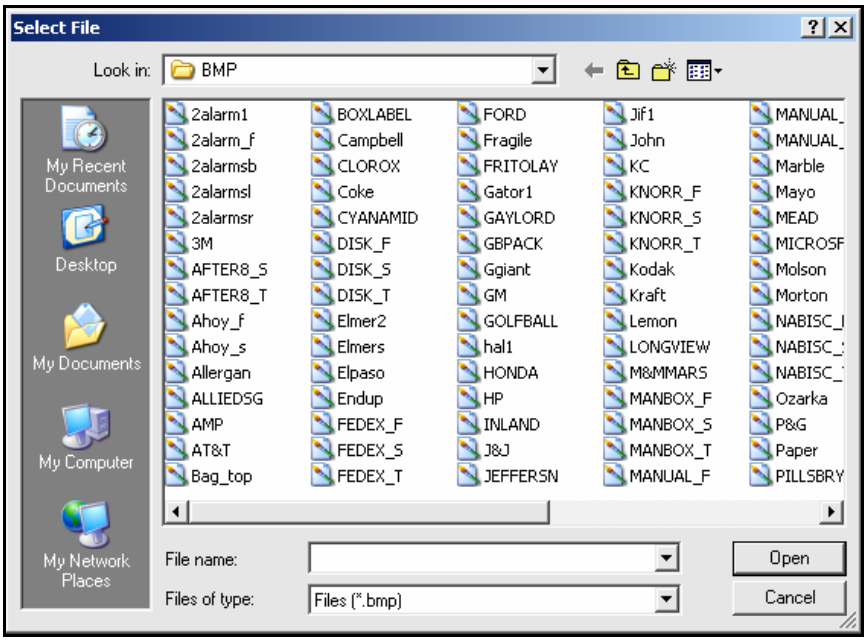
# Annotate a Printout with Graphics

After you've designed and generated your analysis output, the system allows you to add text to the output before you print it. This allows you to customize and enhance the output's presentation.

To add a graphic image to the output, start from the Print Preview panel and follow these instructions:

1. Go to the Menu Bar and open the Edit Menu.

2. Select Paste Pic From File. The Select File dialog box appears, as pictured below.




   Notice that this dialog box displays a list of bitmap files.

3. Select the tops.bmp file and click on OK. The Print Preview panel redisplays with the selected TOPS Pro bitmap file inserted into the output.

4. Drag the image to the area where you want it to appear.

5. Open the Edit menu and select Paste.

6. System Response: Windows copies the image from the clipboard and pastes it to the output.

7. After adding the graphic, click on the Print button. The system sends the analysis output to the printer.

## Tips for Working with Graphics

When you're using graphics to annotate a printout, keep these tips in mind:

- Graphics are resizable. To resize a graphic image, press the Control key and use the corner tabs to drag and resize the graphic. The Control key allows you to resize the graphic – wider, thinner, shorter, taller – without distorting the image proportions.
- To make copies of a graphic image, hold down the Ctrl key and move the image from one point to another.
- To restore a graphic image to its original size, follow these instructions:

    1. Click on the image.
    2. Open the Picture menu and select Restore Size.

- To edit bitmap images, follow these instructions:

    1. Double-click on the image. The Windows Paintbrush application opens with the selected image ready to be edited.
    2. Use Paintbrush to make any necessary edits to the graphic image.
    3. Save your work in Paintbrush and close the Paintbrush application. TOPS Pro returns you to the Print Preview panel in Zoom mode. The edited graphic has been inserted in its original area of the panel. The graphic has a tab on each corner that allows you to resize the image, if necessary.
    4. Open the Edit menu and select Refresh.
    5. If the edited graphic is correct, click on the Print button.

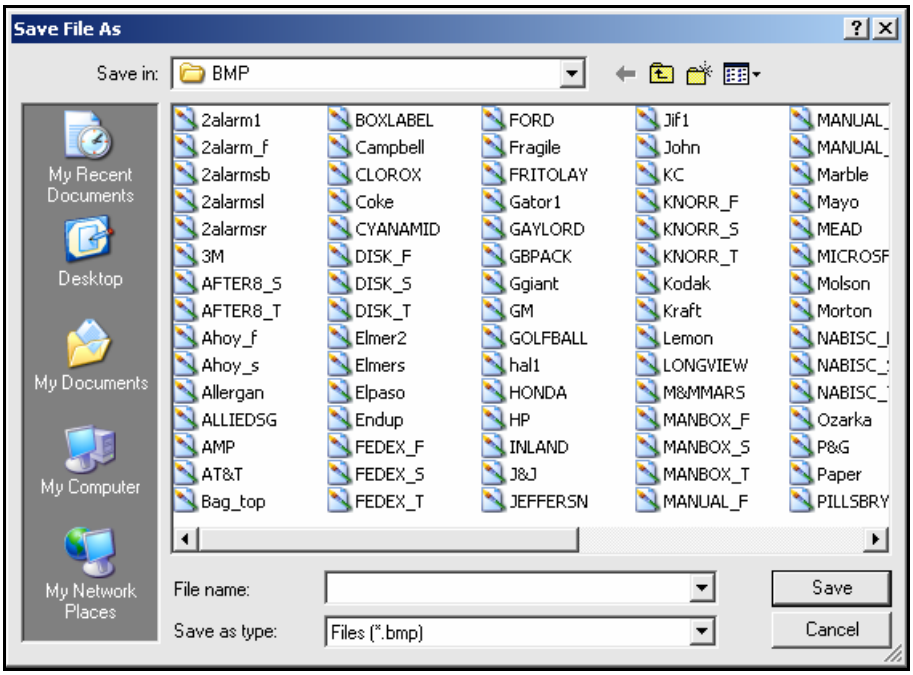
# Edit a Graphic Image in Print Preview

You might decide to edit a graphic image before you print the output. To edit a graphic image in Print Preview, start from the Print Preview panel and follow these instructions:

1. Click on the Zoom button.

2. Right-click on the graphic you want to edit. A dialog box appears and asks if you want to convert the graphic to a bitmap.

3. Click on Yes. The Save File As dialog box appears, as pictured below, and prompts you to enter a file name for the graphic.




4. Enter a file name for the graphic and click on OK.

5. Edit and resize the graphic image using the instructions outlined on page 11-14 in the previous section, Tips for Working with Graphics.

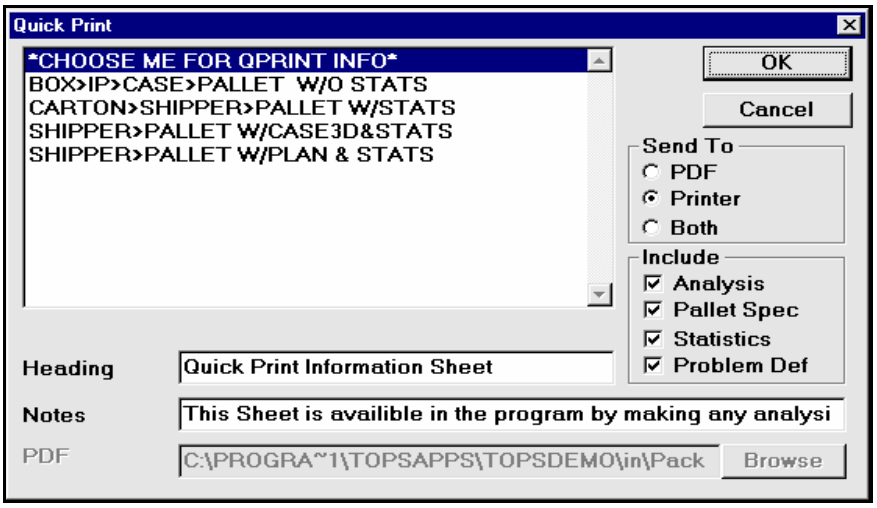
6. When the edited graphic is the way you want it, click on the Print button.

# Quick Print

The Quick Print feature allows you to create and use a standardized printing template and print output for an analysis, based on the selected template. This feature allows you to print output for an analysis without manually defining parameters on the Print Parameters dialog box.

To print output using the Quick Print feature, start from the Analysis View and follow these instructions:

1. Click on the QPrint button. The Quick Print dialog box appears, as pictured below.




2. Select the template you want to use to print the analysis.

   **Note:** The window contains a list of standardized printing templates. Each template has a standard print output coded for it. This feature allows you to print output for an analysis without manually defining parameters on the Print Parameters dialog box. For information about creating Quick Print templates, please refer to Chapter 15, Supervisor Functions.

3. Use the following fields to enter Quick Print parameters. Use the Tab key to move from field to field.

   - **Send To:** Select an option – PDF, Printer or Both – to specify a print destination.
   - **Include:** Select one or more options – Analysis, Pallet Spec, Statistics, Problem Def – to specify what will be included in the printout.

- ❖ **Heading:** Enter the text of the heading that will appear at the top of the printout.
- ❖ **Notes:** Enter the text of any notes that will appear at the bottom of the printout.
- ❖ **PDF:** If you select PDF or Both in the Send To field, use the Browse button to select a PDF file to print to.

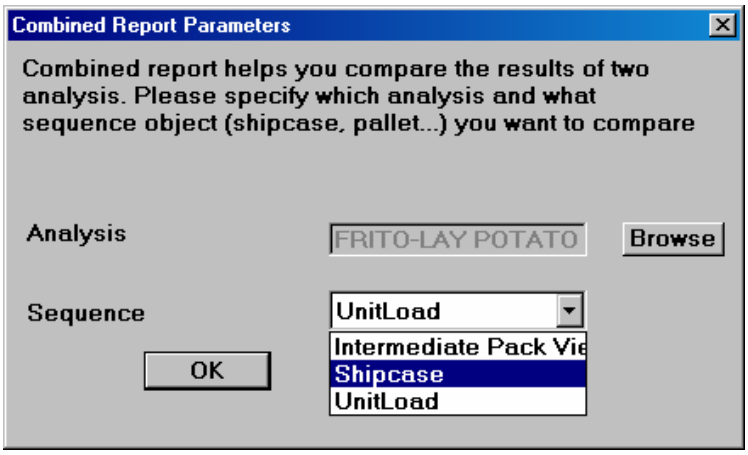
  **Note:** This option is integrated with and requires the Adobe Acrobat software product. Without Acrobat, the PDF option will not work.

4. After completing the Quick Print parameters, click on OK.

# Combined Report: Compare Analysis

The combined report function places any two analyses side-by-side for comparison. Users can specify which sequence of the analysis (intermediate pack, shipcase or unitload) to appear in the report. To create a combined report:

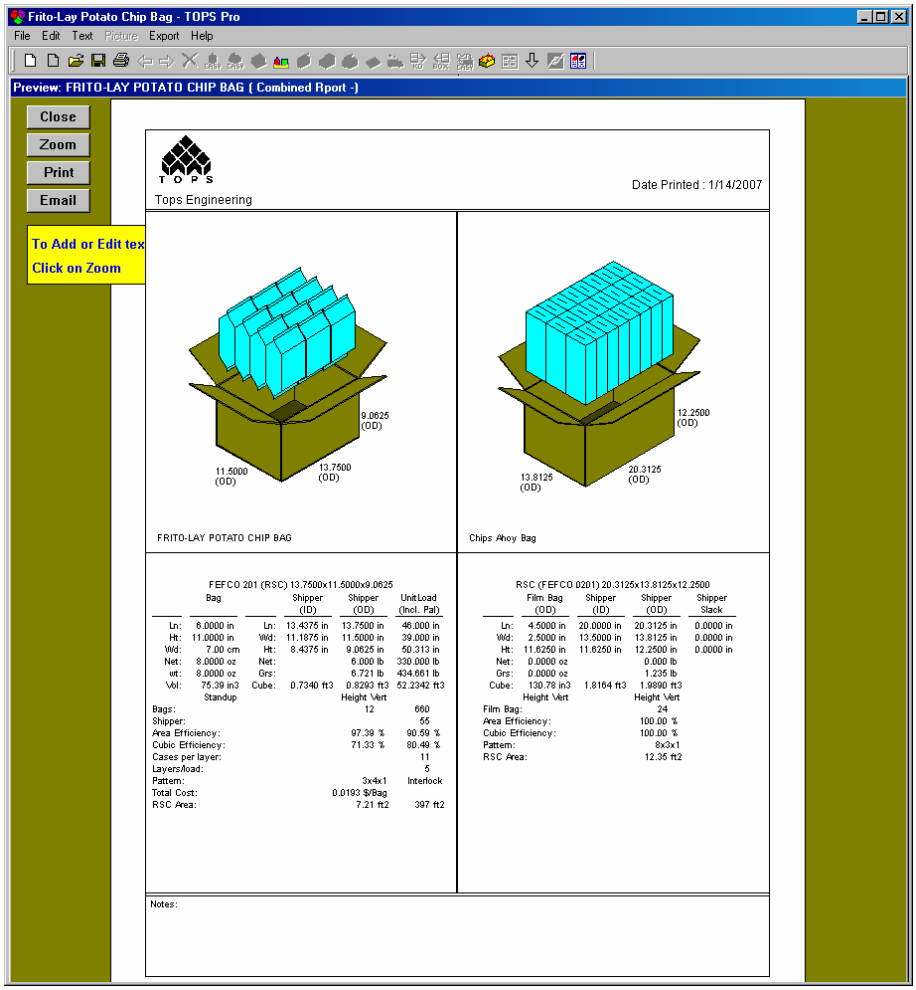
1. Open the first analysis you'd like to use.
2. Click the Combined Report button  on the tool bar or go to the File Menu on the Tool Bar, select Print Preview and then Combined Report to specify the second analysis.




- ❖ **Analysis:** Click the Browse button to select a second analysis to compare.
- ❖ **Sequence:** Select from the drop down list box the sequence to appear in the report.

3. Upon selection of the above parameters, click OK and the combined report will appear in the preview screen as shown below.

4. Users can choose to edit, zoom, print or email from the analysis preview.




**Note**: The Combined Report offers a convenient way to compare analyses of the same items being loaded onto different pallets.

## Combined Report for Knocked-Down and Erected Boxes

Users can use the combined report to include both knocked-down and erected palletizations of a shipcase.

To use the Combined Report feature for this purpose, both analyses must have the same name – with one exception. At the end of the erected

analyses name, put "{Box}" and at the end of the knocked-down analyses name, put "{KD}"; for example, Sample{Box} and Sample{KD}.

**Note:** If the analysis has been saved with one of those two tags in the name, a button (Knockdown/Box) appears on the Control Panel button bar to facilitate switching/creating the two analyses. (Note that this feature is not available to Loadstack licensees.)

To access this special Combined Report feature, follow these instructions:

1. Correctly name the analyses, using the guidelines above.

2. Use one of two options:

   - Open the File menu, select Print, then select Combined Report.
   - Open the File menu, select Print Preview, then select Combined Report.

   The Combined Report Print Preview panel appears.

3. Annotate or add graphics as necessary.

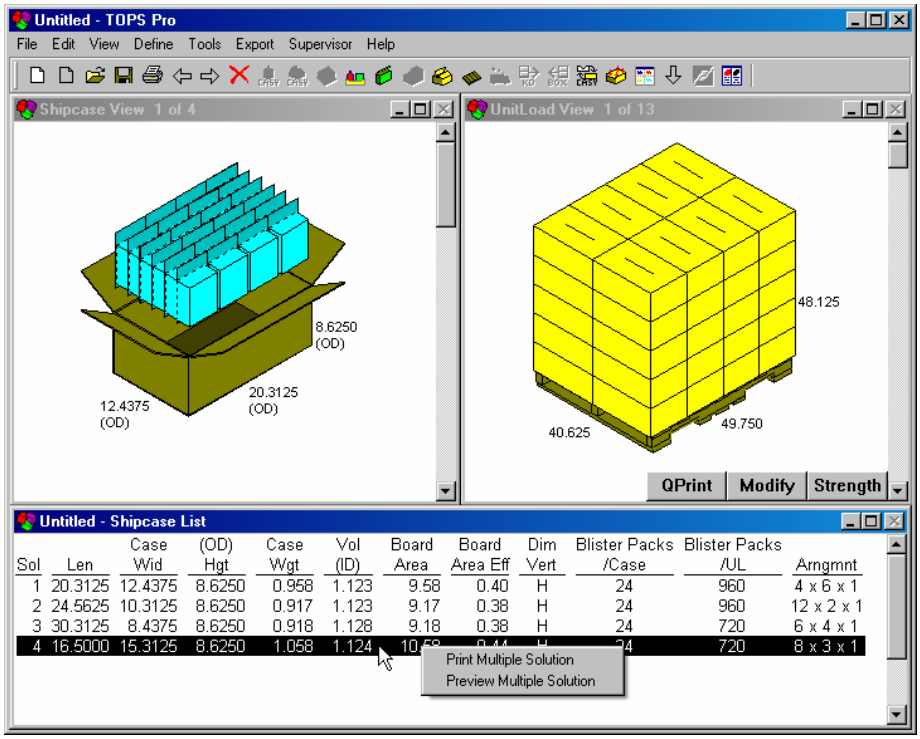
4. After completing the annotations or graphics, click on Print. TOPS Pro sends the Combined Report to the printer.

If you need assistance, contact TOPS Technical Support.

# Combined Report: Compare Solution

At any stage of an analysis (shipcase, pallet load or container), you can create a side-by-side comparison report between any two solutions. To create a combined report for solution comparison, follow these steps:

1. Open the analysis you'd like to use.

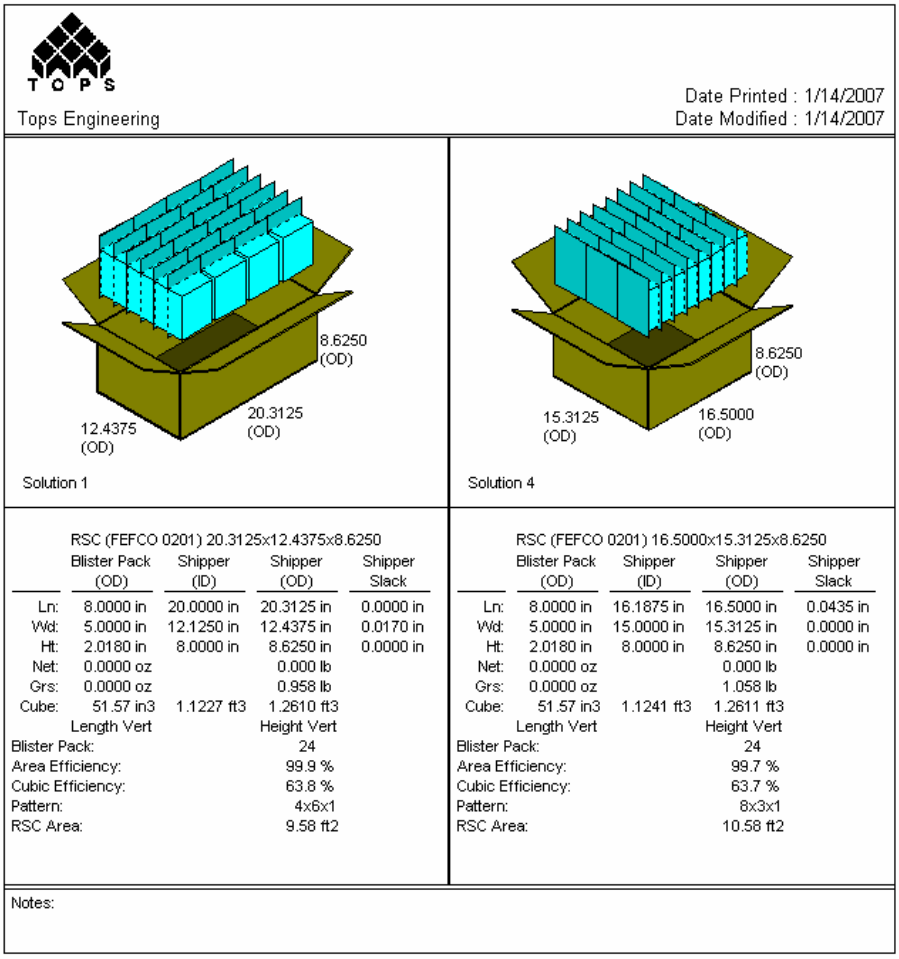



   In the analysis illustrated above, solution 4 is the current shipcase solution (Shipcase View 1 of 4). We will create a combined report of this solution to say, solution 4.

2. Bring the mouse cursor to solution 4 in the Solution List Pane and click the right mouse button.

3. At the pop up dialog, select " Preview Multiple Solution ".

4. The report preview screen, as shown on the next page, will open.



Tops Engineering

Date Printed : 1/14/2007
Date Modified : 1/14/2007



Solution 1

RSC (FEFCO 0201) 20.3125x12.4375x8.6250

| | Blister Pack (OD) | Shipper (ID) | Shipper (OD) | Shipper Slack |
|---|---|---|---|---|
| Ln: | 8.0000 in | 20.0000 in | 20.3125 in | 0.0000 in |
| Wd: | 5.0000 in | 12.1250 in | 12.4375 in | 0.0170 in |
| Ht: | 2.0180 in | 8.0000 in | 8.6250 in | 0.0000 in |
| Net: | 0.0000 oz | | 0.000 lb | |
| Grs: | 0.0000 oz | | 0.958 lb | |
| Cube: | 51.57 in3 | 1.1227 ft3 | 1.2610 ft3 | |
| | Length Vert | | Height Vert | |
| Blister Pack: | | | 24 | |
| Area Efficiency: | | | 99.9 % | |
| Cubic Efficiency: | | | 63.8 % | |
| Pattern: | | | 4x6x1 | |
| RSC Area: | | | 9.58 ft2 | |



Solution 4

RSC (FEFCO 0201) 16.5000x15.3125x8.6250

| | Blister Pack (OD) | Shipper (ID) | Shipper (OD) | Shipper Slack |
|---|---|---|---|---|
| Ln: | 8.0000 in | 16.1875 in | 16.5000 in | 0.0435 in |
| Wd: | 5.0000 in | 15.0000 in | 15.3125 in | 0.0000 in |
| Ht: | 2.0180 in | 8.0000 in | 8.6250 in | 0.0000 in |
| Net: | 0.0000 oz | | 0.000 lb | |
| Grs: | 0.0000 oz | | 1.058 lb | |
| Cube: | 51.57 in3 | 1.1241 ft3 | 1.2611 ft3 | |
| | Length Vert | | Height Vert | |
| Blister Pack: | | | 24 | |
| Area Efficiency: | | | 99.7 % | |
| Cubic Efficiency: | | | 63.7 % | |
| Pattern: | | | 8x3x1 | |
| RSC Area: | | | 10.58 ft2 | |

Notes:

You can choose to edit, zoom, print and email from the preview.

**Note:** Users can perform comparisons for the unitload or vehicle solutions in a similar fashion.

# Printer Width

The printer width refers to the thickness of the lines in a graphic or text when you print an analysis. The default for printer width is zero, which is a hairline width. You might want to make the printed lines thicker; for example, to improve fax documents. If so, TOPS Pro allows you to change the printer width in Configuration.

**Note:** If the Show Graphics feature is turned on, the printer width will have no effect.

To change the printer width, follow these instructions:

1. From the Menu Bar, open the Tools menu.

2. Select Configuration.

3. In the Printer Width field, enter a value to specify the line thickness with which you want to print. A line thickness of 4-7 is usually a good width.

4. If you're satisfied with the printer width, click on OK. The system saves the updated configuration to the database and returns you to the previous screen.