Using
R&R
Report Designer
SQL
Version 10

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Using Report Designer

Chapter 1   Using Menus and Dialogs

Introduction (Using Menus and Dialogs)

R&R for SQL Report Designer is an information access and reporting tool that enables you to produce custom reports to select, analyze, summarize, and present data from your tables in a variety of ways. After you have developed a custom report, you can display it on screen or print it with any combination of fonts and print styles that your printer supports.

This chapter describes all components of the Report Designer window and explains commands and dialog boxes. This information is presented in the following sections:

- Understanding the Main Window
- Selecting from Menus
- Using Report Designer Dialog Boxes
- Using Command-Line Switches

Understanding the Main Window

Understanding the Main Window

When you run Report Designer, the startup dialog displays. After you have selected a report to edit or a starting point for creating a new report, the main window appears. This window contains the following components:

- A Title Bar;
- A Menu Bar containing File, Edit, View, Insert, Format, Options, Database, Calculations, and Help selections;
- A Standard Toolbar of buttons for running Report Designer commands;
- A Formatting Toolbar of buttons and edit boxes for formatting fields and specifying other layout settings;
- A Work Space with horizontal and vertical rulers;
- A Status Bar.

In addition, the window includes an *edit cursor*, a blinking vertical line that shows the insertion point for placing objects. Figure 1.1 illustrates a sample window.

You can access all commands from the Menu Bar; the Toolbars give you quick access to commonly used commands. When you position the cursor over each of the Toolbar buttons, a ToolTips help label appears explaining its purpose.

You can display Report Designer in a maximized window or re-size the window as necessary. To re-size the window, follow the procedures in your Windows documentation.

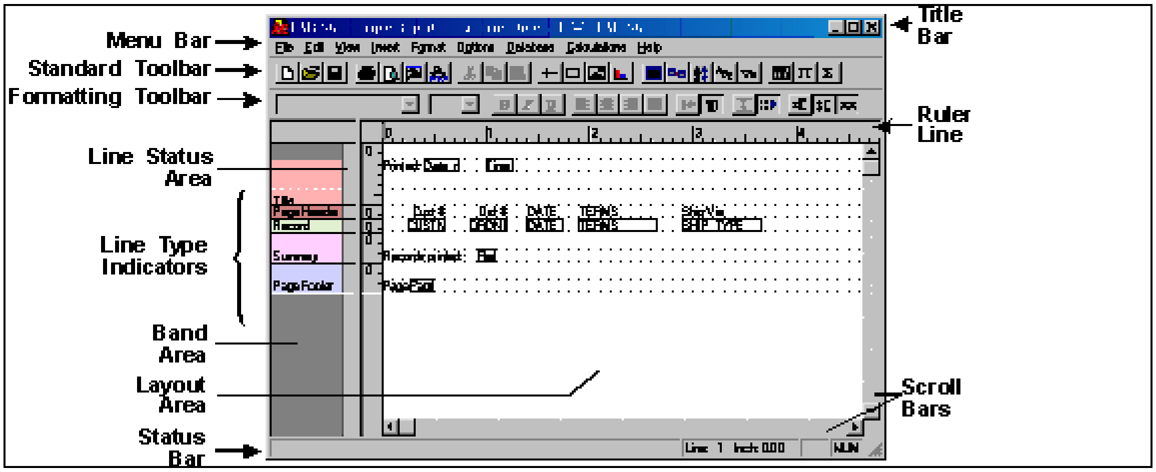


Figure 1.1 Main Window

Using the Menu Bar

The Menu Bar contains the "top-level" commands: File, Edit, View, Insert, Format, Options, Database, Calculations, and Help. You can select a command on this menu in any of the following ways:

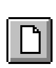
- ❑ Click on it;
- ❑ Type Alt plus the underlined letter in the command;
- ❑ Press F10, use the cursor keys to highlight the command, and press Enter.

Selecting any one of these commands displays a menu of additional commands that open dialog boxes or perform specific actions on selected objects or lines. See the **Selecting from Menus** section for a summary of each command menu.

Using the Standard Toolbar

For many commands, you can select a Standard Toolbar button instead of selecting from the Menu Bar (use View ⇒ Toolbars to turn the Standard Toolbar display on or off). Clicking on one of these buttons either executes a command or opens a dialog in which you can select or change various options.

Figure 1.2 identifies the Menu Bar command (and associated shortcut key if applicable) that corresponds to each Standard Toolbar button.

Toolbar Button	***Menu Bar Command***	***Shortcut Key***
	File ⇒ New	Ctrl+N
	File ⇒ Open	Ctrl+O

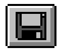
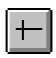
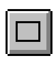
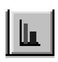
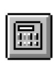
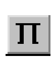
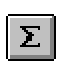
	File ⇒ Save	Ctrl+S
	File ⇒ Print	Ctrl+P
	File ⇒ Print Preview	
	Edit ⇒ Cut	Ctrl+X
	Database ⇒ View Result Set	
	File ⇒ Export	
	Edit ⇒ Copy	Ctrl+C
	Edit ⇒ Paste	Ctrl+V
	Insert ⇒ Line	
	Insert ⇒ Box	
	Insert ⇒ Picture	
	Insert ⇒ Chart	
	Database ⇒ Master Table	
	Database ⇒ Relations	
	Database ⇒ Sort Order	
	Database ⇒ Group Order	
	Database ⇒ Filter	
	Calculations ⇒ Calculated Field	
	Calculations ⇒ ParameteRR Field	
	Calculations ⇒ Total Field	

Figure 1.2 Toolbar Buttons and Corresponding Commands

Using the Formatting Toolbar

Using the Formatting Toolbar

The Formatting Toolbar (see Figure 1.3) that optionally displays below the Standard Toolbar provides a quick way of formatting fields and text in your report. After you select one or more items on the report layout, you can specify font, point size, style, and alignment by using the list boxes and buttons on this bar.

In some cases you may want to hide the Formatting Toolbar — for example, if you want to display more of the report layout without having to scroll. You use View ⇒ Toolbars to control display of the Formatting Toolbar. Click the check box next to "Formatting" to turn the bar on (checked) or off (empty).

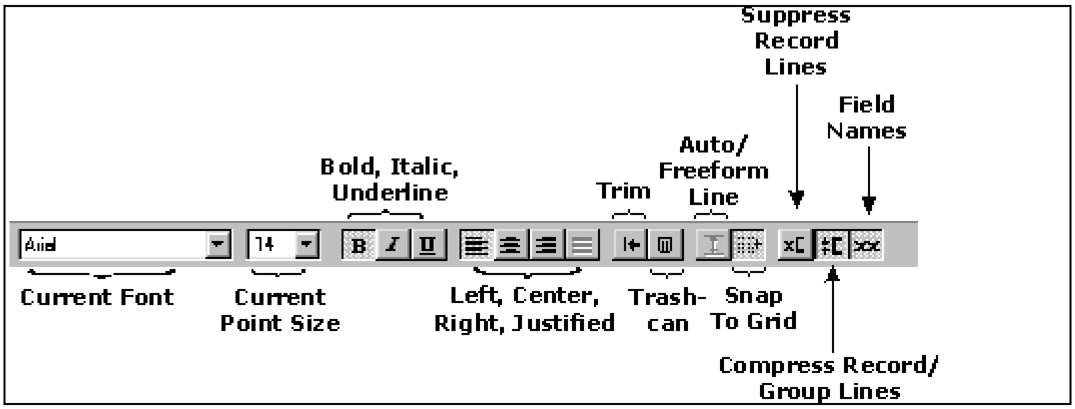


Figure 1.3 Formatting Toolbar

Figure 1.4 briefly explains each item on the Formatting Toolbar.

Toolbar Item	***Purpose***
Font	Apply a font to one or more selected fields
Size	Select or enter a size for the current font
Style Buttons	B for **Bold**, I for *Italic*, U for <u>Underline</u>
Alignment Buttons	Non-word-wrapped fields: Left, Center, Right; word-wrapped fields: Left, Right, Justified
Trim Button	Turns automatic trim on or off
Trashcan Button	Deletes currently selected item(s) or restores most recently "trashcanned" item(s)
Auto/Freeform Button	Toggles between Automatic/Freeform line height (see Chapter 3, "Working with Bands")
Snap-To-Grid Button	Turns snap-to-grid on or off

Toolbar Item	***Purpose***
Suppress Record Lines	Toggles between display/non-display of record band lines
Compress Record/Group Lines	Toggles between display/non-display of record lines that contain only empty fields
Field Names	Toggles between display of fields as field names or format symbols

Figure 1.4 Formatting Toolbar Items

Using the Bold, Italic, and Underline Buttons

The style and underline buttons (**B**, *I*, and U) serve as toggles that turn each style on or off. For example, to make a selected item bold, click the Bold button. To remove the bold style, click the same button. The item's representation on the layout changes to indicate the selected style. You can apply more than one style to the same item. (Bold or Italic will print only if available for the currently selected font.)

Using the Alignment Buttons

Report Designer assigns a default alignment to each field when it is inserted on the layout. The default alignment is based on the field's data type:

- Numeric fields are right-aligned;
- Memo fields are word-wrapped, left-aligned;
- All other fields are left-aligned.

To find out the alignment of any field on the layout, select it; on the Formatting Toolbar, the button for the current alignment will be "pressed in." (Note that for character and memo fields, the first character of the field symbol represents the field's alignment.)

To change field alignment, select the field and click one of the alignment buttons (Align Left, Center, Align Right, or Justify). You can also use the Alignment tab; to access the Alignment tab, select the field and press F9 (or right-click on the field and select Properties); then select the Alignment tab.

See Chapter 4, "Working with Fields," for more information about alignment and alignment symbols.

Using the Other Formatting Buttons

The remaining items on the Formatting Toolbar provide quick access to common formatting and editing tasks:

- ❑ The Trim button controls automatic trimming of blank space between fields on the same line. You can also control trim using the Alignment tab (select Format ⇒ Properties, then select the Alignment tab).
- ❑ The Trashcan button provides a quick way of clearing selected objects or restoring the most recently "trashcanned" item(s).
- ❑ The Auto/Freeform button toggles between Auto and Freeform line height type for a line or group of lines (see Chapter 3, "Working with Bands," for an explanation of Automatic and Freeform line height).
- ❑ The Snap-To-Grid button turns snap-to-grid on or off.
- ❑ The Suppress Record Lines button toggles between display/non-display of record band lines.
- ❑ The Compress Record/Group Lines button toggles between display/non-display of record band lines that contain only empty fields.
- ❑ The Field Names button toggles between display of fields as field names or format symbols.
- ❑

Changing Horizontal and Vertical Ruler Settings

Changing Horizontal and Vertical Ruler Settings

Calibrated horizontal and vertical rulers help you place fields, text, and objects at specific positions on the report layout. For example, if you type a left-justified column heading on the layout immediately under the 1 inch position on the horizontal ruler, this column heading will begin printing one inch from the left margin of your report.

The left, right, or center alignment point for a selected item is marked by a location indicator on the horizontal ruler. Vertical position is marked by a darkened band in the Band Area.

The default setting for both the Horizontal and the Vertical Ruler Spacing is 10; you can select a setting from 4 through 30. This setting controls the number of ruler increments per inch on each ruler. Note that the Ruler Spacing settings control only the spacing of the report layout rulers (since the fonts actually applied to fields in the report control the print spacing).

When the grid is turned on, the ruler settings determine the horizontal and vertical grid spacing for Freeform lines. For Automatic lines, the horizontal ruler setting determines the horizontal grid spacing; the vertical grid spacing is determined by the height of the largest font on each line. See Chapter 3, "Working with Bands," for an explanation of Automatic and Freeform line height.

To change the calibration of the rulers, right-click on either ruler or press F8 to display the Ruler Spacing dialog (see Figure 1.5).

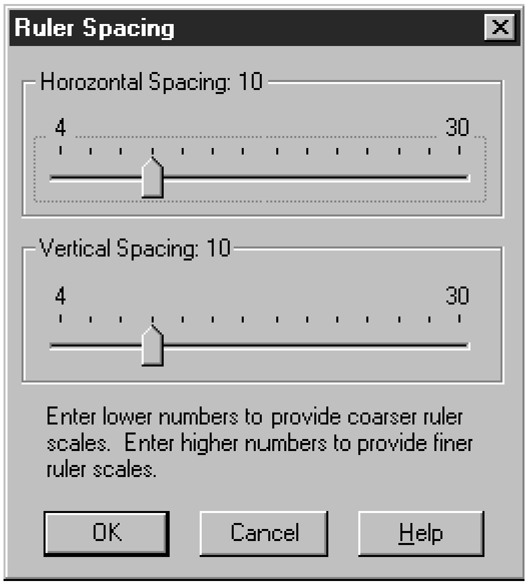


Figure 1.5 Ruler Spacing Dialog Box

Using the Horizontal or Vertical Spacing slider control, select a ruler spacing from 4 through 30 units per inch. Specify a lower number to display a coarser ruler scale; specify a higher number to display a finer ruler scale.

You can use either the mouse or the keyboard to change ruler settings:

- Click to the left or right of the slide pointer to decrease (left) or increase (right) the setting by 4 units at a time. Drag the slider to change the setting in 1-unit increments.

- Use the left or right cursor key to decrease (left) or increase (right) the setting by 2 units at a time. Use Page Up or Page Down to decrease (PgUp) or increase (PgDn) the setting by 4 units at a time.

Work Space

Work Space

The area below the horizontal ruler line is the Work Space in which you create report layouts. The Work Space is divided into two main areas:

- ❑ The Band Area — the area to the left of the screen, which identifies the type and status of every band line on the layout. This area can be optionally displayed using a color-coding schema as well as the standard text-based band-type indication.

- ❑ The Layout Area — the large area on the right in which you create a *report layout*, a schematic representation of your report that contains the fields, text, and other objects that will appear on your report.

You can adjust the relative sizes of the Band and Layout areas using the "splitter bar" between them. Click and drag the splitter bar to the right to increase the Band Area and decrease the Layout Area; drag the splitter bar to the left to decrease the Band Area and increase the Layout Area.

Band Area

The Layout Area consists of one or more bands, each with characteristics that define how the data in that band will be presented when the report is run. As Figure 1.1 on page 4 illustrates, the Band Area contains a band-type indicator for each band in the Layout Area. Band-type indicators, which Report Designer automatically displays when you create, insert, or move lines, identify whether a line is part of the report’s Title, Page Header, Group Header, Record band, Group Footer, Summary band, or Page Footer. The name of the band type will always be displayed (just once per band type) on the bottom-most band of that type. For example, if you have three Record band lines on the layout, the third one will contain the text "Record." To make it easier to visualize bands by type, you can enable the display of color-coded band lines using the Options ⇒ Preferences dialog. To select one or more lines, click or drag the mouse in the Band Area.

The narrow channel at the right edge of the Band Area is the Line Status Area. This area provides the following information:

❑ Up and down arrows in the Line Status Area indicate the top and bottom border of any Freeform line (for a full explanation of Freeform lines, see Chapter 3, "Working with Bands").

❑ A question mark indicates that a logical field has been assigned to control printing of that line. (See Chapter 3, "Working with Bands," for information about controlling line printing with logical fields.)

❑

Layout Area

The Layout Area typically contains text, which will appear in the report exactly as typed, and data fields, which are represented on the layout either by field symbols such as <xxxxxx (character data) and 99999 (numeric data) or by field names (if the Field Names setting has been enabled on the View menu). This area can also contain lines, boxes, bitmapped graphic images, and other objects.

The Layout Area can be scrolled both vertically and horizontally. You can create report layouts up to a maximum of 256 lines; the maximum layout width is determined by the page layout settings. You will see an **R** on the Horizontal Ruler that represents the position of the right margin. The area to the right of the margin indicator is shaded gray. You can place fields within the gray area; however, those fields might not display on a printed page depending on your printer settings. To set the right margin, select File ⇒ Page Setup.

See Chapter 4, "Working with Fields," for information about adding text and fields to a report layout. See Chapter 12, "Adding Lines, Boxes, and Shading," for information about drawing lines and boxes. For an explanation of inserting and sizing images, see Chapter 15, "Inserting Bitmapped Images."

Using the Status Bar and Scroll Bars

Using the Status Bar and Scroll Bars

Immediately below the Work Space is the Status Bar, which displays information about current operations and/or the position of a selected item. At the bottom and right of the main window are the horizontal and vertical scroll bars, which enable you to scroll the Work Space up and down, left and right.

Status Bar

When you are working in the Layout Area, the Status Bar identifies the position of the edit cursor on the layout and indicates whether the "Caps Lock" or "Num Lock" key on your keyboard is on. In addition, the Status Bar may contain descriptions of command options, prompts telling you what action to take, or information about the currently highlighted field.

Scroll Bars

Use the horizontal and vertical scroll bars to scroll the Work Space. Both the Band Area and the Layout Area can be scrolled vertically. However, only the Layout Area can be scrolled horizontally, since the information in the Band Area is relevant to the entire width of the report layout. For information about scrolling an application window, see your Windows documentation.

Selecting from Menus

Selecting from Menus

You execute commands by selecting from menus or clicking buttons and then using dialog boxes to provide additional information required by some commands. Operation of Report Designer menus and dialog boxes follows the Windows conventions explained in the following sections.

The Menu Bar is the main menu, from which you select the command menus you want to use. For example, selecting File in the Menu Bar will display the File menu. You can open a command menu from the Menu Bar in any of the following ways:

- Click on the command name;
- Press F10 (or Alt) and type the accelerator key for the command (the underlined letter in the command name — for example, F for File or E for Edit);
- Press F10, use the cursor keys to highlight a command name, then press Enter.

After opening a command menu, you can select a command from that menu in any of these ways:

- ❑ Click on the command name;
- ❑ Type the accelerator key for the command;
- ❑ Use the cursor keys to highlight a command; then press Enter.

For example, after opening the File menu, you can select "New" by clicking on it, by typing **N**, or by highlighting the command and pressing Enter. Cancel a command selection by clicking outside the menu box or by pressing Esc.

You can also execute some commands directly from the keyboard, without using the Menu Bar, by typing a shortcut key combination. For example, you can execute Format ⇒ Properties by pressing F9.

At some points, one or more commands on the Menu Bar or in the command menus will be dim, indicating that they are not available.

File Menu

Use the File menu to do the following:

- ❑ Create, open, close, save, print, or preview a report;
- ❑ Enter or edit comments for the current report;
- ❑ Define the page setup;
- ❑ Manage data source connections;
- ❑ Export a report to an Active X Viewer, HTML, plain text, database, result set database, worksheet, text data, Rich Text Format (RTF), or Word Merge file or to an Excel 5.0 PivotTable or Chart;
- ❑ Send a report via email;
- ❑ Exit Report Designer.

Selecting File displays a menu of choices; selecting a choice either opens a dialog or executes a command. Figure 1.6 summarizes the actions these menu choices perform.

Command	***Purpose***
New (Ctrl+N)	Create an Auto-SQL report (Report Designer will dynamically define the SELECT)
New User-SQL	Create a User-SQL report (the user directly enters the SELECT)
Open (Ctrl+O)	Open or delete report; copy report to another library; select a library
Close	Close Report
Data Source Connections	Connect and disconnect data sources

Command	***Purpose***
Save (Ctrl+S)	Save a report
Save As	Save a report with a different name or in a different library
Properties	Enter comments for current report
Page Setup	Specify paper size, margins, orientation
Print Preview	Display the current report on the screen
Print (Ctrl+P)	Print using the current printer, select a different printer, or change print options
Export	Output report data to a plain text, database, worksheet, text data, RTF, or Word merge file or to an Excel 5.0 PivotTable or Chart
Send	Send a report via email
Exit (Alt+F4)	Leave Report Designer and return to Windows

Figure 1.6 File Menu Choices

Note that the Page Setup settings for paper size, margins, and orientation apply only to the current report and are saved with it.

Edit Menu

The Edit menu provides choices for modifying reports — cutting and pasting, copying, deleting, moving, and so on. Figure 1.7 summarizes the purpose of each Edit menu choice.

Command	***Purpose***
Undo (Ctrl+Z)	Undo Last Clear (or Last Move)
Cut (Ctrl+X)	Remove selected item(s) and save to memory
Copy (Ctrl+C)	Copy selected item(s) to memory
Paste (Ctrl+V)	Paste item(s) saved to memory
Clear	Erase selected object(s)
Paste Clipboard Image	Paste graphic image from clipboard
Paste Special	Link or embed an object from the clipboard
Move Fields (F7)	Move selected field(s) or band line(s) using cursor keys
Duplicate Fields	Copy selected field(s) for movement

(Shift+F7)	using cursor keys
Links	Display and modify existing links in a report
Object	Modify the selected OLE object

Figure 1.7 Edit Menu Choices

View Menu

View Menu

Use the View menu to do the following:

- ❑ Turn Standard Toolbar display on or off;
- ❑ Turn Formatting Toolbar display on or off;
- ❑ Turn ToolTips display on or off;
- ❑ Turn horizontal or vertical ruler on or off;
- ❑ Turn grid display on or off;
- ❑ Display fields either as symbols or as field names.

By default, the Toolbars and rulers are displayed; fields are represented by symbols on the layout; and the grid is shown. To change these settings, select View; then select the item to change.

Command	***Purpose***
Toolbars	Hide or show the Standard and Formatting Toolbars; enable or disable ToolTips display
Horizontal Ruler	Hide or show the horizontal ruler
Vertical Ruler	Hide or show the vertical ruler
Grid	Hide or show the grid
Field Names	Display fields as symbols or as names

Figure 1.8 View Menu Choices

Toolbar and ToolTips Settings

A check mark next to either "Standard" or "Formatting" on the Toolbars dialog means that the item is currently displayed. To turn off display of either, select the appropriate item.

A check mark next to the "ToolTips" item on this dialog means that a help label will display when you position the cursor over one of the toolbar items. To turn off display of these labels, click the box to remove the check mark.

Horizontal and Vertical Rulers

To turn on or off the display of the horizontal or vertical ruler, select Horizontal Ruler or Vertical Ruler. A check mark next to either indicates the ruler is currently visible.

Grid

To help you align objects on the report layout, you can enable a grid consisting of a series of dots. The grid spacing is determined by the settings for the horizontal and vertical rulers. To control the grid display, select View ⇒ Grid; a check mark appears when this setting is on. When the Snap-To-Grid setting is on, items that you insert or move will "snap" to the nearest grid mark. See the **Format Menu** section of this chapter for information about turning the Snap-To-Grid setting on or off.

Field Names

Fields can be represented on the layout either by field names or by symbols (such as >xxxxx) that identify field type and alignment. By default, each field is represented by symbols. To display field names instead, turn on the View ⇒ Field Names setting. As a result, each field's name is shown at the field's location (depending on field width, the entire name may not appear).

Insert Menu

Insert Menu

Using the Insert menu choices, you can insert fields from the *composite record structure* (the set of fields available for use in a report, including master and related table fields and any Report Designer total or calculated fields), create and insert new band lines, attach a text file to provide memo fields for the report, and insert lines, boxes, or images. (See Chapter 17, "Creating Form Letter Reports," for information about preparing, attaching, and using a text memo file.) Figure 1.9 briefly explains the Insert menu commands.

Command	***Purpose***
Field (Ins, F11)	Insert field from composite record structure
Band Line (Shift+F11)	Insert line of same type above current line
Create Band Line (Ctrl+F11)	Insert one or more lines of any band type
Text File	Insert text memo file
Line	Draw horizontal or vertical line

Box	Draw box or add shading
Picture	Insert bitmapped graphic image
Chart	Insert chart
Object	Insert an OLE object

Figure 1.9 Insert Menu Commands

Format Menu

Format Menu

The Format menu choices enable you to control the format and alignment of fields and lines, specify record formatting options, change ruler settings, and turn snap-to-grid on or off. Figure 1.10 lists the commands and explains the purpose of each. See Chapter 4, "Working with Fields," for more information about these commands.

Command	***Purpose***
Font (F5)	Specify typeface, size, and style
Properties (F9)	For selected band line(s): Control line height and logical conditions; for selected field(s): Modify format (width, number of integers and decimals, numeric format, etc.), alignment, trim, field comment
Band Line Justify	Align all fields on selected lines
Record Layout	Specify various record formatting options
Rulers (F8)	Change horizontal/vertical ruler spacing
Snap To Grid (Shift+F8)	Turn snap-to-grid on and off

Figure 1.10 Format Menu Choices

The Record Layout dialog provides settings for formatting the Record and Summary bands of a report, including selections for multiple and "snaked" columns, Avery labels, and number of record copies.

Options Menu

Options Menu

The Options menu includes the following choices: Preferences, Default Settings, File Settings, and Data Source (see Figure 1.11).

Command	***Purpose***

Preferences	Turn scroll bars on and off; enable colors for band area/preview; enable colors for total and group field dialogs; control result of selecting File ⇒ New; specify memo editor; specify display of field names, report dictionary descriptions, or both in field lists; Display sorted field names
Default Settings	Set paper size, margins, font, spacing, logical strings
File Settings	Specify default report image and template folders; default text file extensions;
Chart Settings	Specify defaults for Font and Palette for charts
Data Source	Specify a default data source and control access to data sources from Report Designer

Figure 1.11 Options Menu Choices

You use the Preferences dialog box to control the display of horizontal and vertical scroll bars and to specify what action Report Designer will take when you select File ⇒ New. See Chapter 5, "Setting Defaults," for more information about the Preferences dialog.

The Default Settings dialog controls global settings for paper size, margins, font and point size, font color, ruler spacing, logical strings, and snap-to-grid. These settings apply to all new reports. The Default File Settings dialog enables you to set default data, library, and image directories; specify default file extensions for text memo and image files; and specify a default report dictionary and report dictionary index.

Select Options ⇒ Data Source to specify defaults to control access to your data sources. You can change the data source defaults at any time during a Report Designer session.

See Chapter 5, "Setting Defaults," for more information about changing defaults using these dialogs.

Database Menu

Database Menu

Use the Database menu choices to specify the tables from which data will be drawn for a report, to sort and group that data, to create filters that select specific records, to display the SQL SELECT statement for the current report, and to define a data governor to limit the number of rows retrieved from the database while you are designing a report. Figure 1.12 summarizes the Database choices for an Auto-SQL report.

Command	***Purpose***
Master Table	Select or change master table (Auto-SQL reports only)
Joins	Select, edit, and remove table joins
Sort Order	Select fields to control report sort order
Group Order	Select fields to group report data
Filter	Specify selection conditions to filter records
Show SQL	Display SQL SELECT statement; copy SELECT
Limit Result	Specify maximum number of rows to retrieve
View Result Set	View all fields used in the report in a database browser window.

Figure 1.12 Database Menu Choices

For User-SQL reports, the Database menu choices differ slightly. See Chapter 6, "Selecting Data," and Chapter 18, "Creating User-SQL Reports," for information about Auto-SQL and User-SQL reports.

Calculations Menu

Calculations Menu

The Calculations menu choices enable you to create and edit calculated fields, total fields, ParameteRR fields, and User-Defined Functions (UDFs), as well as purge a report of any unused total and/or calculated fields.

Command	***Purpose***
Calculated Field	Create and edit calculated fields
Total Field	Create and edit total fields
ParameteRR Field	Create a field whose final value will be determined at report execution time
User Function	Create and edit User-Defined functions
Auto Total	Create totals for all selected fields
Purge Calculations	Remove all unused fields

Figure 1.13 Calculations Menu Choices

You use the Calculated Fields dialog box to create fields whose values are computed as a report is generated, rather than being retrieved from the database. You use the Total Fields dialog to create fields that contain summary information such as a subtotal or grand total figure; Report Designer calculates the value of such a field according to the total options you select. You can create total and calculated fields, insert them in reports, and manipulate them just as you do data and text fields.

You use the ParameteRR Fields dialog to create fields whose values can be modified via a ParameteRR Value Entry screen when the report is executed.

To edit a total, calculated, or ParameteRR field that has been inserted on the layout, simply select the field and press F2 to display the Edit Total, Edit Calculation, or Edit ParameteRR dialog box.

You use the User Function dialog to create UDFs to process data according to an expression or formula that you define. You can create UDFs to perform complex operations and then use those UDFs in calculated field expressions in any report.

The Auto Total dialog enables you to select multiple fields on the layout and have Report Designer automatically create totals for those fields and insert the totals on a new band line.

Use the Purge Calculations command to remove any unused total, calculated fields, or ParameteRR fields from the report definition. Removing unused fields can speed up report generation and reduce the amount of memory required.

Using Report Designer Dialog Boxes

Using Report Designer Dialog Boxes

Like other Windows applications, Report Designer uses dialog boxes to request and display information related to a specific command.

Many of the dialog boxes in Report Designer are standard Windows dialog boxes. For example, the File ⇒ New dialog box is like the File New dialog in many Windows applications.

Other dialog boxes are unique to Report Designer, since they request information specific to report generation. For example, the Database ⇒ Filter dialog box requests information that enables Report Designer to construct a filter selecting specified records for a report.

You can move around in a dialog box using either the mouse or the keyboard. Using a mouse, simply click on any option to make it active. Using the keyboard, tab from option to option or press Alt plus the underlined letter in the option you want to select. When an option is active, it is marked by a highlight or dotted rectangle.

List and Edit Boxes

List and Edit Boxes

A *list box* is any vertical list from which you select a setting, file, or other item. Many dialog boxes contain *edit boxes* in which you can enter text such as paths, file names, field names, or numeric values. In some cases, an edit box and list box are combined so that you can either select from the list or type your choice in the edit box (such boxes are sometimes referred to as "combo boxes").

List Boxes

Some list boxes open automatically when you select a command or item; on some dialog boxes, you must first click the scroll arrow next to an item to open a list box containing choices for that item. To select a choice from a list box, either click on the choice or use the cursor keys to highlight it. From the keyboard, you can select a field from a field list box by typing the first letter of the field name until the field is highlighted on the list.

Note that the complete field name (or the report dictionary comment for that field, if there is one) is displayed in the Status Bar when a field is highlighted in the field list box.

Edit Boxes

To enter or modify text in an edit box, move the edit cursor (the vertical bar) to the box either by clicking in the box or tabbing to it. Any characters you type will be inserted at the position of the edit cursor. If the text in a box is currently selected, characters you type will replace that text.

For more information on Windows text editing operations, see your Windows documentation.

Buttons and Check Boxes

Buttons and Check Boxes

Most dialog boxes have *command buttons*: rectangular, labeled boxes that look like three-dimensional buttons on many displays. The most common command buttons are the OK and Cancel buttons you see in dialog boxes to indicate whether the application should accept the information in the dialog box.

Some dialog boxes have *option buttons*: small circles with an option name beside them. These buttons (also referred to in some Windows applications as "radio buttons") represent mutually exclusive options, only one of which can be selected at a time. When an option is selected, its circle is black.

Check boxes function as toggles to turn a setting on or off. When there is an X in the box next to an item, that setting is on.

Selecting a Command Button

Using a mouse, select a command button by clicking on it. From the keyboard, tab to the button and press the spacebar. For those commands with an underlined letter, you can type Alt plus the underlined letter. If a command button is dim, it is currently unavailable.

Selecting an Option Button

Using a mouse, select an option button by clicking on it. Using the keyboard, tab to the button that is currently on and press ↑ or ↓ to select a different button. For those options with an underlined letter, you can type Alt plus the underlined letter to turn an option button on or off. If an option button is dim, it is currently unavailable.

Check Boxes

Using a mouse, click on a check box item to turn it on or off. Using the keyboard, tab to a check box and press Spacebar to turn it on or off. For those options with an underlined letter, you can type Alt plus the underlined letter to turn a check box on or off.

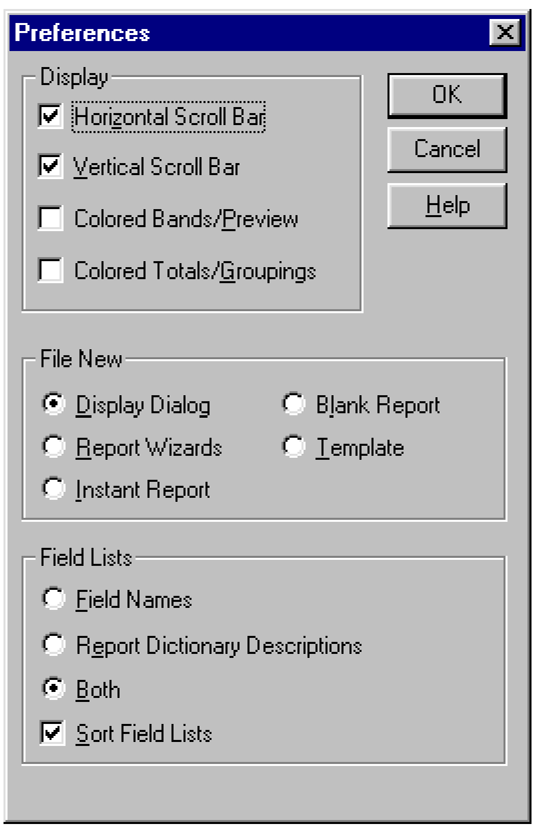


Figure 1.14 Dialog Box with Option Buttons and Check Boxes

Using Command-Line Switches

Using Command-Line Switches

You can include one or more switches in the command line you use to execute Report Desinger. Using command-line switches provides a quick way of opening a specific report, specifying a master table for creation of a blank or instant report, or loading a Dynamic Link Library (DLL) at startup. Figure 1.15 explains the command switches.

Switch	***Purpose***
/L<library file>	Applies only to reports that have been saved in a report library file. Specifies the report library containing the report identified with the /R switch. Substitute the name of the library file for <library file>.
/R<report name>	Specifies the report to be opened. Substitute the name of the report you want to open for <report name>. Can be used in conjunction with /L to open a report from a library.
/T<table name>	Specifies that Report Designer create a blank report using <table name> as the master table. Substitute the full path and name of the table you want to use for <table name>.
/I<table name>	Specifies that Report Designer create an Instant Report using <table name> as the master table. Substitute the full path and name of the table you want to use for <table name>.
/G	Prints the report specified with /R to the saved printer or to a disk file (if the report was saved with a "Print to File" destination).
/D<DLL name>	Causes Report Designer to load the Dynamic Link Library (DLL) substituted for <DLL name>. You can use this switch to improve performance of reports containing calculated fields that use the CDLL() function.
/S<script file>	Causes Report Designer to open and process the specified ReportScript file. Note that use of this switch overrides the /L, /R, /T, and /I switches.

Figure 1.15 Command-Line Switches

Chapter 2 Managing Reports

Introduction (Managing Reports)

This chapter explains t**he basic procedures for creating and managing reports, report templates, and report libraries and** for documenting reports. This information is presented in the following sections:

- Creating and Modifying Reports
- Using Report Wizards
- Documenting Reports and Templates

Report Definitions

When you create a report, you develop a *report definition* that tells Report Designer how to select, analyze, summarize, and present data from the database files you select. After you create and save a report definition, you can open it, modify it, and run it at any time.

By default, Report Designer saves a report definition as a *compound document file*. Reports saved as compound document files can have names of up to 250 characters and are given a default extension of **.RSW**. The compound document file has the advantage of being able to store multiple "documents" or object types in a single file — for example, you can embed one or more OLE objects in a report, and they become part of the compound document file when you save the report.

To allow compatibility with reports created using earlier versions of R&R for SQL, Report Designer also allows you to open reports in existing report libraries (the Open Report dialog lists both compound file reports and R&R report library files).

Templates

A *template* is simply a report definition with a specialized purpose: to serve as the common starting point for a series of reports. You can create and modify templates the same way you do reports. Templates have a default extension of **.RSW**, and you can save your templates in a specific template folder to keep them separate from your reports. As a result, you can easily save, retrieve, manage, and distribute templates. In this chapter, explanations of procedures for managing reports apply also to templates, except as noted.

Instant Reports

If you create a report by selecting Instant Report on the File ⇒ New dialog, Report Designer generates an Instant Report layout for you automatically. The Instant Report layout includes the following items:

- ❑ All fields in the master table (or as many as will fit horizontally on the layout);
- ❑ Calculated fields for master table name, date, time, page number, and number of records printed;
- ❑ Calculated fields for query expression and report name are created but not placed on the layout;
- ❑ Grand totals of all numeric fields that have decimal places.

In many cases, you can use the Instant Report layout as a starting point for creating your own layouts.

Auto-SQL and User-SQL Reports

You can create a report in any of the following ways:

- ♦ Build the report definition interactively using Report Designer menus and dialogs to select a master table, specify table joins, specify sorting and grouping, define filters, and so on. These reports, referred to as *Auto-SQL* reports, are explained in Chapter 6, "Selecting Report Data."
- ♦ Directly enter and modify a SELECT statement that Report Designer then sends to your SQL database software. These reports, referred to as *User-SQL* reports, are explained in Chapter 18, "Creating User-SQL Reports."

Creating and Modifying Reports

Creating and Modifying Reports

You develop a report by specifying the arrangement and analysis of data from your database. The following sections explain how to create and manage Auto-SQL reports. For instructions on creating and managing User-SQL reports, see Chapter 16, "Creating User-SQL Reports."

Creating and Saving a Report

The general procedures for creating a saving a report are as follows:

1. Start Report Designer. By default, a dialog appears (see Figure 2.1) offering the following options: Report Wizards, Instant Report, Blank Report, and Template. (Note that you can use Options ⇒ Preferences to specify that Report Designer bypass this dialog and go directly to the option that you

choose. See Chapter 5, "Setting Defaults," for more information.)

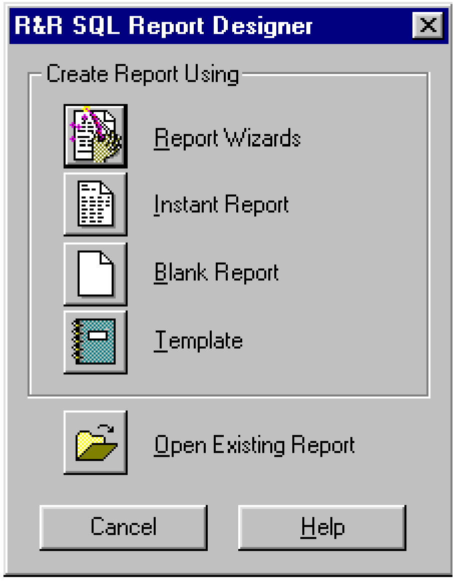


Figure 2.1 Report Designer Startup Dialog

2. To create a report, select Report Wizards, Instant Report, Blank Report, or Template; then select OK. If you select Report Wizards, Report Designer will assist in the step-by-step creation of a Label, Basic Columnar, or Grouped Columnar report.

Selecting Instant Report will display the Master Table dialog.

If you select Blank Report, you can create a report either with or without a master table by turning the "Create Report Without Master Table" setting off (unchecked) or on (checked).

Selecting Report Template enables selection of a Template to use as the starting point for your report.

3. The Data Source Connections dialog appears. Select the appropriate data source; then enter the required log-on information for your database platform and select OK.

4. If prompted to do so, select a master table (a table that will serve as the initial source of data for your report) from a list of tables in the default Data directory (or the startup directory, if no default has been set).

5. Develop the report by specifying table joins, inserting and formatting fields, sorting and grouping, specifying filter conditions, and so on as necessary. Refer to the relevant sections of this documentation for detailed information about developing a report.

6. To save the report, select File ⇒ Save. Enter a name for the report. A report file name can have up to 250 characters, and the default file name extension is .RSW.

Using a Template to Create a Report

After you have created and saved a template, you can retrieve it to use as the basis for one or more reports.

To use a template to create a report, do the following:

1. Select File ⇒ New. On the startup dialog, select Template.
2. Report Designer lists the templates in the default template folder, if one has been defined (see Chapter 5, "Setting Defaults," for information about setting a default template folder). If the template file you want to use is in another location, first select the appropriate folder.
3. Select the template that you want to use as the starting point for your report and select OK.
4. Modify the report definition as necessary. When you are done, select File ⇒ Save to save the report.
5. Enter a name for the report. A report name can have up to 250 characters, and the default extension is **.RSW**.

   If you save the report into a report library, the report name can have up to 30 characters. Note that you cannot have duplicate report names in a given library.

Modifying Reports

Modifying Reports

After you have created and saved a report, you can open it, modify it, and run it at any time.

To open an existing report, do the following:

1. If a layout is currently displayed, save it if necessary. Select File ⇒ Open (or press Ctrl+O). The names of the compound files (default extension RSW) and library files (extension RP6 for report libraries, RT6 for template libraries), if any, in the current location are listed.
2. If necessary, select another folder to display report files in a different location.
3. To open a report file, simply highlight the report name in the displayed list and select Open.

To open a report from a library, highlight the library name and select Open. Then highlight the report name and select OK.

The report you selected is opened and displayed. After modifying a report, you can re-save it in the current location or select/open another location in which to save it. Note that Version 9 does not support saving reports into .RP6 report libraries.

Using Report Wizards

Using Report Wizards

Report Wizards provide the capability of creating three common types of instant reports (Labels, Basic Columnar, or Grouped Columnar) without having to navigate through Report Designer's menus and dialog boxes. The Wizard dialogs lead you through several simple steps in the preparation of each report type, giving you the opportunity to preview the report output.

To use the Report Wizards, select File ⇒ New and select "Report Wizards" on the New dialog. After you select a data source and a master table, the initial Report Wizard dialog appears (see Figure 2.2). To see sample output for each of the report types, right-click on the appropriate illustration.

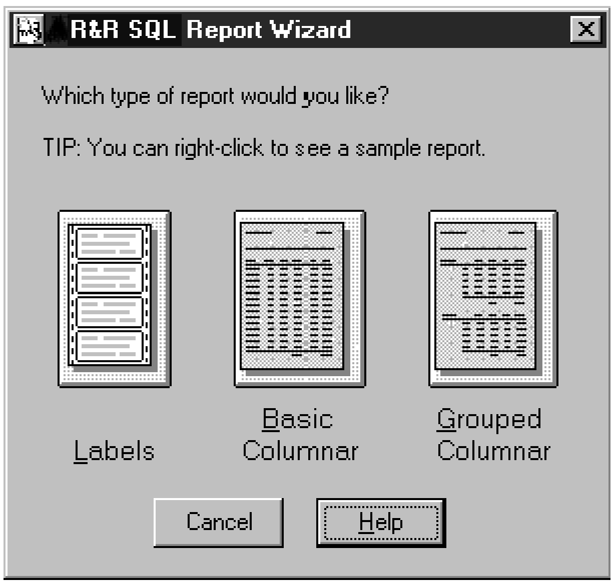


Figure 2.2 Initial Report Wizard Dialog

To create a report using Report Wizards, do the following:

1. Click on the illustration of the report type you want to create (or tab to the report type and press Enter).

2. Follow the instructions on the dialog box (or in the on-line help) for each step of developing the report.

   To move from one dialog to the next, select the Next button at the bottom; to change selections in a previous dialog, select the Back button.

3. When you are done, select Finish.

4. If you left the "Preview the report when finished" setting on (the default), the report preview window appears; if you turned that setting off, the Report Designer layout window appears. If necessary, you can make additional changes to the report before printing.

5. Save the report.

The Report Wizards make use of the ReportScript mechanism (explained in Chapter 6 of the Developing Applications documentation) to pass a user-specified report specification to the main Report Designer executable. Visual Basic source code for the Report Wizards is available on request from Liveware Publishing Inc..; you can use this code to modify the Report Wizards or to create your own Wizards.

Documenting Reports and Templates

Documenting Reports and Templates

To document the content and layout of a report or template, you can add unique identifying information using the File Properties dialog, as well as display or print a *report specification*, which provides a complete description of the report or template.

Adding File Properties Information

Using File ⇒ Properties, you can add identifying information to a report such as author name, keywords, title, subject, and explanatory comments. This information is saved with the report.

To add or edit File Properties entries, do the following:

1. Open the report or template and select File ⇒ Properties. The report name is shown at the top of the File Properties dialog (see Figure 2.3), originator of the current report is shown in the Author box, and the Title entry defaults to the full path and name of the report.

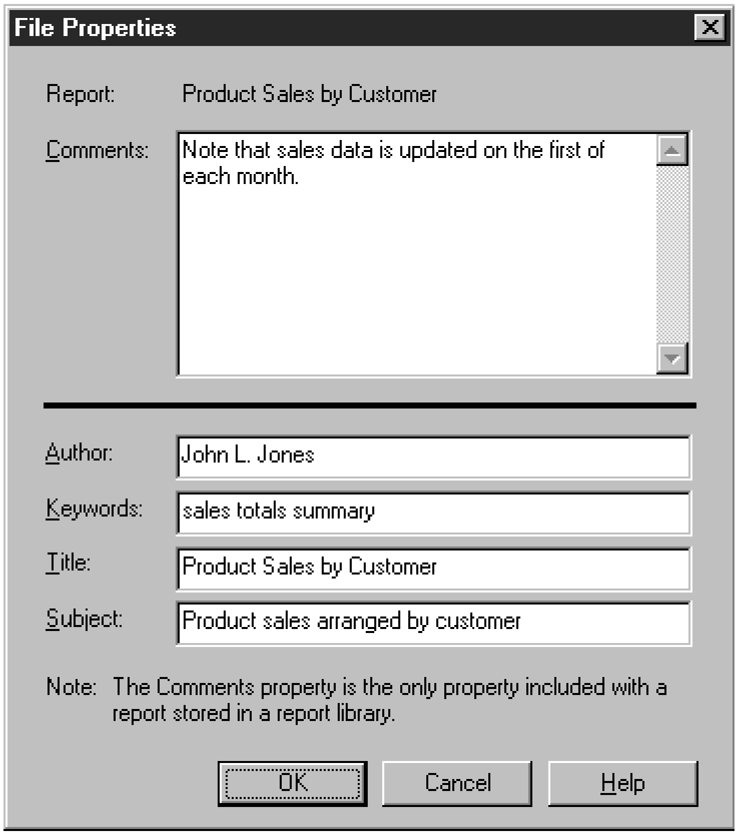


Figure 2.3 File Properties Dialog

2. In the Comments box, enter a text explanation (up to 255 characters) to be attached to the report or template.

3. The Author box shows the name of the current report's author (if you are creating a new report, this defaults to your log-on name). Edit this entry as necessary.

4. In the Keywords box, enter one or more words that could be used with a file browser to locate this report file. Separate multiple keyword entries with spaces.

5. The Title entry defaults to the full path and name of the report; edit this entry as necessary.

6. In the Subject box, enter a subject line identifying report content.

7. Select OK. When you save the report or template, the File Properties information is saved with it.

Printing a Report Specification

To document the content and layout of the current report, you can display or print a complete description of it.

This report specification includes information about:

- ❑ Report name and date/time last accessed;
- ❑ Name and location of the report library (if applicable);
- ❑ Report comment (if any);
- ❑ The SQL SELECT statement;
- ❑ Print, page setup, and record layout settings;
- ❑ Names and locations of tables, text memo files, and image files used by the report;
- ❑ Filter (if any);
- ❑ All fields in the composite record structure;
- ❑ Position, width, data type, format, font, trim setting, and color of all fields on the layout;
- ❑ Names and sizes of all fonts used in the report;
- ❑ Names, locations, sizes, and scaling settings of bitmapped images;
- ❑ For vertical and horizontal lines: size, thickness, and color;
- ❑ For boxes: size, border thickness and color, foreground and background color, number of included sides, and pattern;
- ❑ Names and expressions of all calculated, total, and ParameteRR fields;
- ❑ Any conditional line printing settings;
- ❑ Sort/group field selections and settings;
- ❑ Windows Regional settings in effect for the current report;
- ❑ Database memo editor and default file extensions.

To print or display a detailed report specification:

1. Select File ⇒ Print. The Print dialog box appears.
2. In the "Print What" list box, select Report Specification.
3. Select Preview to display the report specification; select Print to send it to the currently selected printer (for printed output, Report Designer uses a fixed-pitch font on the current printer).

Chapter 3   Working with Bands

Introduction (Working with Bands)

Introduction (Working with Bands)

This chapter explains how to create band areas; insert, move, and copy band lines; and specify and modify band line properties. This information is presented in the following sections:

- ❑ Creating Bands and Inserting Band Lines
- ❑ Manipulating Band Lines
- ❑ Modifying Band Line Characteristics
- ❑ Specifying Conditional Line Printing

Selecting Band Lines

To work with one or more band lines, you must first select the line or lines you want to operate on. For example, to apply a particular font to all the fields on several lines, you select the lines and then apply the appropriate font to them as a group. When a line is selected, the line type indicator in the Band Area is highlighted.

With the mouse: Click on the appropriate line in the Band Area. To select multiple lines, Ctrl-click on each line. If the lines are contiguous, drag the mouse up or down in the Band Area until all lines are highlighted.

From the keyboard: Position the cursor on a line and press Shift+Spacebar to select it. To extend the selection to other lines, press ↑ or ↓. After marking the line(s), press Enter. When you are finished working with the selected lines, press Esc to unmark them.

Displaying the Band Line Properties Dialog

You access most band line settings through the Band Line Properties dialog box. To display this dialog to format a single line, either select the line you want to modify and select Format ⇒ Properties (or press F9) or right-click on the line in the Band Area and select "Properties" from the menu.

If you select multiple lines to modify, you must select Format ⇒ Properties (or press F9), since right-clicking and then selecting "Properties" displays the Band Line Properties dialog for a single line only.

Creating Bands and Inserting Band Lines

Creating Bands and Inserting Band Lines

Every report has one or more of the following bands that control where data appears on the report:

- Title
- Page Header
- Group Header
- Record
- Group Footer
- Page Footer
- Summary

Each band contains one or more lines. You can include as few or as many bands as your report requires. The bands you create determine where the text and fields you place in those areas will appear in your report output. Figure 3.1 explains where data placed in each band will appear in the report.

Band	***Location in Report Output***
Title	Prints once per report at beginning of first page or on separate title page
Page Header	At top of each page
Group Header	Before each group of records (see Chapter 10, "Sorting and Grouping Data," for more information about grouping)
Record	Once per composite record
Group Footer	After each group of records (see Chapter 10, "Sorting and Grouping Data")
Page Footer	At the bottom of each page
Summary	Once per report at end of last report page or on separate summary page

Figure 3.1 Band Types

Figure 3.2 shows a sample layout with the bands labeled. Figure 3.3 shows where the data from each band will appear in the report output.

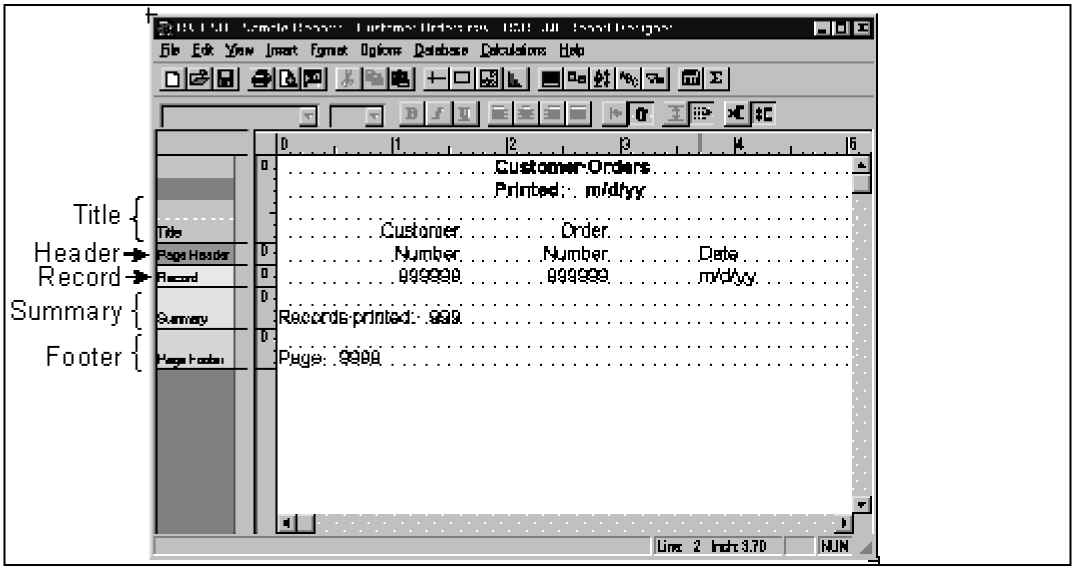


Figure 3.2 Report Layout Showing Bands

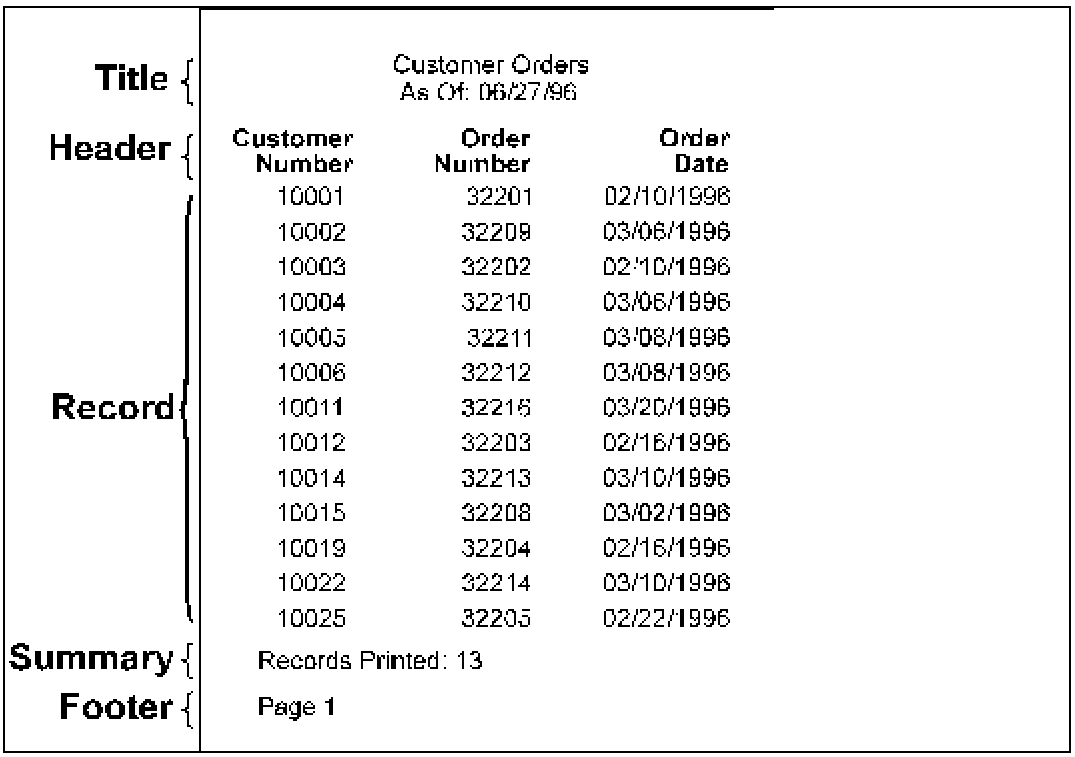


Figure 3.3 Corresponding Location of Data in Output

Creating a Band

To create a band, select Insert ⇒ Create Band Line, press Ctrl+F11, or double-click in the Band Area to display the Create Band Line dialog (see Figure 3.4). Then do the following:

1. In the "Number to Create" box, enter the number of lines you want to

insert in the band area you are creating.

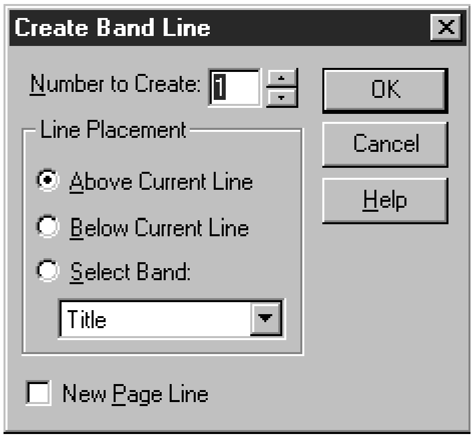


Figure 3.4 Create Band Line Dialog Box

2. Choose the "Select Band" option in the Line Placement group box. A list box opens displaying the available band types.

The numbers preceding the GrpHead (Group Header) and GrpFoot (Group Footer) types correspond to the 8 levels of grouping available when you select group fields (see Chapter 10, "Sorting and Grouping Data," for an explanation of group fields).

3. Select a band type. To determine the appropriate band type based on where you want the data to appear in the report, refer to Figure 3.1.

4. Select OK. Report Designer inserts the line or lines of the specified type in the appropriate place on the layout.

5. If you have enabled Colored Bands on the Preferences dialog, the Band Area of the report layout will display color-coding as well as the name of the band type. Note that the name of the band type will display only once and will be on the bottom-most band line of that type. Color-coding, however, extends to all of the band lines of that type.

Band Type	***Color***
Title	Pink
Page Header	Dark pink
Group 1 Header	Peach
Group 2 Header	Chartreuse
Group 3–8 Header	Yellow
Record	Light gray
Group 3–8 Footer	Light green
Group 2 Footer	Green
Group 1 Footer	Dark green
Summary	Light pink
Page Footer	Light blue

Inserting Single Band Lines

To insert lines one at a time in the current band:

1. Position the edit cursor in the band where you want to add the line(s).
2. Select Insert ⇒ Band Line (or press Shift+F11).

   Report Designer inserts a new line of the same band type above the current line. Repeat this procedure to add additional lines to the current band.

Inserting Multiple Band Lines

To insert multiple lines in any band on the layout:

1. To insert the new lines above or below an existing line, position the edit cursor on that line.
2. Select Insert ⇒ Create Band Line (or press Ctrl+F11) to display the Create Band Line dialog (see Figure 3.4).
3. In the "Number to Create" edit box, enter or select the number of new lines you want to insert in a single location.
4. In the "Line Placement" group box, select one of the option buttons to indicate where you want to insert the new lines:

   Above Current Line inserts the new line(s) above the current line.

   Below Current Line inserts the new line(s) below the current line.

   Select Band allows you to select a specific band in which to insert the new line(s), regardless of the current line. Select a band type from the drop-down list.

If you select a band type that currently exists on the layout, Report Designer inserts the new line(s) below the last line in that band.

If you select a band type that does not exist on the layout, Report Designer adds the band to the report and inserts the specified number of lines.

5. Select OK to insert the new line(s).

Report Designer inserts the new line(s) in the location you indicated.

Inserting Page Breaks

To insert page breaks in your report, you use the Create Band Line dialog to place a new-page line where you want the break to occur. You can place a new-page line anywhere on the layout; note, however, that Report Designer ignores new-page lines in certain bands, such as a Page Header/Footer or a swapped Group Header/Footer (see Chapter 10, "Sorting and Grouping Data," for information on swapped Headers and Footers).

Figure 3.5 explains where you should insert new-page lines to produce page breaks in the appropriate places.

Position of New-Page Line on Report Layout	***Resulting Page Break in Report***
Last line in Title band	After title
Last line in Group Footer band	After group
Last line in Record band	After each record
First line in Summary band	Before summary

Figure 3.5 Common Locations for New-Page Lines

To insert a page break, do the following:

1. Select Insert ⇒ Create Band Line (or press Ctrl+F11).
2. In the Line Placement group box, specify where you want to insert the new-page line (Above Current Line, Below Current Line, or in a selected band area).
3. Turn on the "New Page Line" setting at the bottom of the dialog; an X appears in the box indicating that the line you are inserting is a new-page line.
4. Select OK. Report Designer inserts a dashed line in the specified area of your report layout, indicating a page break.

You can move, copy, or delete a new-page line like any other line on a report layout.

You can also produce conditional page breaks by assigning a logical control field to a new-page line. For example, if some of your purchase orders require an additional page for footnotes and others do not, you can specify that the inserted new-page line will cause a page break only when the control field contains a specified value. For more information on how to use logical control fields, see the section **Specifying Conditional Line Printing** in this chapter.

Manipulating Band Lines

Manipulating Band Lines

After you have created bands and inserted additional lines as needed, you can copy or move one or more lines (and all fields on those lines) to other locations on the layout; you can also delete band lines.

Copying or Moving Band Lines

To copy or move one or more lines (and all fields currently on those lines), do the following:

1. Select the line or lines to be copied or moved. To copy the lines, select Edit ⇒ Copy or the Copy button (or press Ctrl+C). To move the lines, select Edit ⇒ Cut or the Cut button (or press Ctrl+X).

2. Position the edit cursor where you want to copy or move the lines. Select Edit ⇒ Paste Lines or the Paste button (or press Ctrl+V).

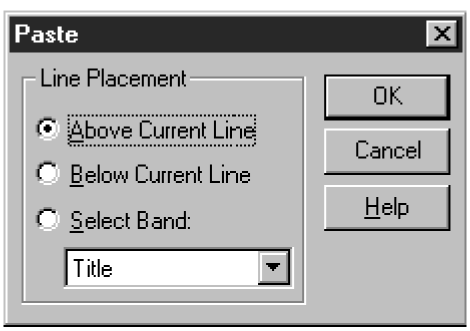


Figure 3.6 Paste Lines Dialog

3. The Paste dialog (see Figure 3.6) presents the following options: Above Current Line, Below Current Line, and Select Band. Selecting Above or Below pastes the line(s) either above or below the current line. The band type of the pasted lines will be the same as that of the current line.

Choosing Select Band lists all available band types. If you select a band type that currently exists on the layout, the pasted lines will be appended to that band. If the band type does not exist, Report Designer will create the band and paste the lines there.

Deleting Band Lines

Deleting differs from cutting in that you cannot then Paste the line or lines elsewhere on the report. If you delete lines by mistake, however, you can select Edit ⇒ Undo Last Clear (Ctrl+Z) or select the Trashcan button again to re-insert the lines in their original position.

Use any one of the following methods to delete one or more lines (and all fields on the line or lines):

- ❑ Select the lines and select Edit ⇒ Clear;
- ❑ Select the lines and select the Trashcan button ( );
- ❑ Select the lines and press the Delete key.

Modifying Band Line Characteristics

Modifying Band Line Characteristics

After you have created and inserted band lines, you can modify the following characteristics of those lines:

- ❑ Justify all fields on selected line(s);
- ❑ Trim blank space between fields;
- ❑ Specify Automatic or Freeform line height.

The following sections explain how to perform these procedures.

Justifying All Fields on One or More Lines

You can position (or *justify*) all the fields on one or more lines as a unit, without changing the spacing between the fields.

To justify all the fields on one or more lines:

1. Select the lines you want to justify. The lines need not be contiguous — for example, you can click on Line 1 and then Control-click Lines 2, 4, and 7 to select them.
2. Select Format ⇒ Band Line Justify to display the Band Line Justify dialog.
3. Select Left, Center, or Right justification and then select OK. Report Designer justifies the fields within the margins of your report.

If any line you justify contains only a single field or a single series of trimmed fields, the format of that field or series of fields will also be set to the specified alignment, so that the data will be appropriately aligned within the field width.

For example, if you select Center to center a line containing a single field, the format of that field will be changed to centered. If you center a line that contains a series of trimmed fields, the format of the first field in this series will be changed to centered. Since the format of the first field controls the behavior of the entire series of fields, the trimmed data from all the fields will be centered within the fields' collective width.

Note that if more than one record is being printed horizontally across the page, justification of Record lines is based on the record width rather than the right margin. See Chapter 14, "Printing Reports," for information about printing multiple records across the page.

Controlling Automatic Trim

Controlling Automatic Trim

To control whether Report Designer removes or retains blank space between fields on selected lines in your report, select one of the Trim settings on the Alignment tab. To access the Trim settings, select the field and press F9 to display the Properties tabbed dialog; then select the Alignment tab.

When you specify "Print at End of Previous Field," Report Designer removes blank space (other than space inserted in text fields by means of pressing the spacebar) between the beginning of a field and the end of the previous field on that line. When you specify "Print at Field Position," Report Designer retains blank space between the fields. The default value is "Print at Field Position."

To apply automatic trim to one or more fields on a line or to remove it from a field or fields:

1. Select the fields whose trim you want to control.
2. Press F9 (or select Format ⇒ Properties). Select the Alignment tab.
3. In the Trim box, select "Print at Field Position" to retain blank spaces between adjacent fields (the default); select "Print at End of Previous Field" to remove blank spaces between adjacent fields.
4. Select OK.

Auto-Trim Examples

The ability to trim blank space allows you to place fields on the report layout so that they will not be separated by spaces. For example, if you have specified "Print at End of Previous Field" as the trim setting, **PAGE·999** on a report layout will print as **PAGE 2** instead of **PAGE   2**. Also, when the trim setting is "Print at End of Previous Field," first- and last-name fields on a line will print without space between them. For example, **<xxxxxxxxxxxx·<xxxxxxxxxx** will print as **William Hickock** instead of **William   Hickock**.

Auto-Trim and Field Alignment

When you place a series of fields so that they will trim, these fields become a single field for the purposes of field alignment. The entire series of fields takes on the alignment (that is, left-aligned, centered, or right-aligned) of the first field in the group.

For example, if you have a series of fields on a Title line, the alignment of these fields within their collective field width depends on the alignment of the first field. If it is centered, the trimmed data from all the fields will be centered within the fields' collective width. You can then use the Format ⇒ Band Line Justify "Center" setting to center this series of fields between the margins of the page. The result will be a title that is centered on the report page, no matter what fonts are applied to the fields.

Specifying Band Line Height

Specifying Band Line Height

Report Designer provides two line height types: Automatic (the default) and Freeform. For any line with an Automatic height setting, Report Designer adjusts line height to accommodate the largest font on the line. For a Freeform line, you can either specify a height on the Band Line Properties dialog or adjust line height as necessary on the layout.

To specify the height of any line(s) in your report, select the line or lines and open the Band Line Properties dialog (see Figure 3.7). Select the appropriate item (Automatic or Freeform) in the Height group box.

Automatic Line Height

When you set line height to Automatic, Report Designer automatically adjusts line height to accommodate the largest font on the line. This choice is the default, since it provides appropriate line spacing in most cases.

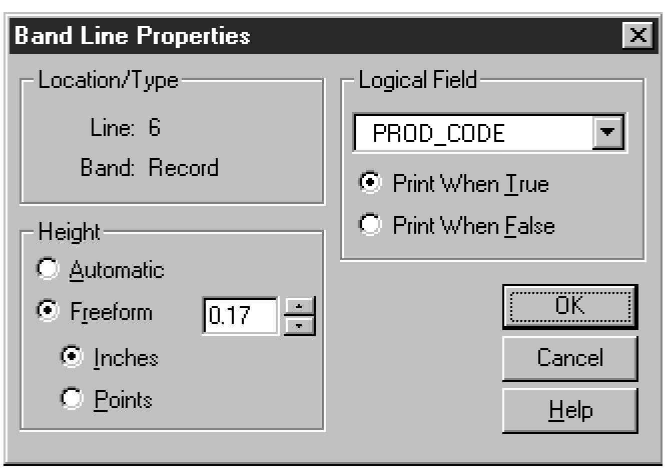


Figure 3.7 Band Line Properties Dialog Box

Freeform Line Height

For any line with a Freeform height setting, you can specify a line height in inches or points on the Band Line Properties dialog. On the layout, a Freeform line is indicated by up and down arrows in the Line Status Area (the narrow channel at the right edge of the Band Area).

Freeform lines are useful for areas of a report where you plan to insert images, since you can adjust the height of the line to accommodate any image you insert on it. (Note that a Freeform line will *not* expand to accommodate an image or a word-wrapped field placed on it; you must specify a Height for the Freeform line that is sufficient for the maximum number of lines that the image or word-wrapped field will occupy in the report output.)

Switching Between Freeform and Automatic

You can change a line's type from Automatic to Freeform or from Freeform to Automatic using either of the following methods.

❑ Select one or more lines and select Format ⇒ Properties (or press F9). On the Band Line Properties dialog, select Freeform in the Height group box and enter or select the appropriate line height. Then select OK.

❑ Select one or more lines and select the Auto/Freeform Line button on the Formatting Toolbar ( ). For a single selected line, this button acts as a toggle — a Freeform line becomes Automatic, and an Automatic line becomes Freeform.

If you selected multiple lines, selecting the Auto/Freeform Line button will have one of the following results:

♦ If all selected lines are Automatic, they become Freeform.

♦ If all selected lines are Freeform, they become Automatic.

♦ If the selected lines are a mixture of Automatic and Freeform, they all become Automatic.

Adjusting the Height of a Freeform Line

You can adjust the height of a Freeform line in either of two ways:

❑ To size a Freeform line on the layout, click and hold on the top or bottom arrow in the Line Status area; the cursor changes to an arrow (either or depending on whether you clicked on the top or bottom of the line). Drag the cursor up or down as necessary to increase or decrease the line height; when the line is the desired height, release the mouse.

❑ To size a Freeform line to an exact measurement in inches or points, open the Band Line Properties dialog (either right-click on the line and select Properties or select multiple lines and press F9). In the Band Line Properties dialog, select Inches or Points in the Height box; then select a measurement. Note that if Format ⇒ Snap to Grid has been enabled, Freeform line heights can be set only to the current grid increments. For finer control, turn off Snap to Grid before adjusting line height.

Specifying Conditional Line Printing

Specifying Conditional Line Printing

To print a line or lines only under certain conditions, select a control field from the Logical Field list box on the Band Line Properties dialog. This setting enables you to use any field in the composite record structure (except a page total) as a control field to trigger line printing. Report Designer places a question mark in the Line Status area to indicate that a logical field has been assigned to control printing.

After selecting a control field, you can turn on either "Print When True" or "Print When False." If you specify "Print When True," the line or lines will print only when the control field contains a "true" value (see Figure 3.8). If you specify "Print When False," the line or lines print only when the control field contains a "false" value.

Data Type	***True Value***	***False Value***
Logical	True	False
Character	Not empty	Empty
Numeric	Not empty, Non-zero	Empty or zero
Date	Not empty	Empty
Memo	Not empty	Empty

Figure 3.8 Print Values for Control Fields

For example, in invoices that subtotal line item amounts before calculating tax, you might not want a subtotal to print if there is only one line item. In this case, you could suppress printing of the Group Footer line containing the SUBTOTAL field by proceeding as follows. First, create a total field called ITEMS, which counts the number of line items for each order. Next, create a logical calculated field called PRINT that controls printing of the subtotal Group Footer line. If the value in this field is true, the line will print. If the value is false, the line will be suppressed. The expression for this field is:

```
ITEMS>1
```

To assign the control field to the Group Footer line, select the line and open the Band Line Properties dialog. Open the Logical Field list box to display the names of all fields that can be used to control printing. Select PRINT; then select OK. When the report prints, the Group Footer line will print only when the value in the PRINT field is true, in other words only when the invoice contains more than one line item. (To specify that the line print only when the control field value is *false*, select "Print When False" on the Band Line Properties dialog.)

Although logical fields are typically used as control fields, you can use character, numeric, date, or memo fields as well. The value that triggers line printing varies depending on the data type of the control field you use, as Figure 3.8 illustrates.

To remove a logical condition, first select the line or lines. Select Format ⇒ Properties (or press F9); the name of the field assigned to control printing of the selected line(s) appears in the Logical Field box. Open the Logical Field list and select "None"; then select OK.

Note that you can create a logical field directly from the Line Properties dialog by clicking on the Calc. Field button below the Logical field control buttons.