## **Quick Reports**

One of the most important tasks in data management is report generation. The Quick Report editor is one of two tools used to design reports. You use the Quick Report editor to create ad-hoc reports in the User environment. The other tool is the Form editor, which you can use to design reports in the Design environment. You should use an output form to design reports that require complex designs, programmatic processing, or graphics.

With the Quick Report editor, you can:

- Produce lists of records
- Create break areas
- Compute summary calculations
- Use fonts and styles in the report
- Save quick report designs to disk

The Quick Report editor produces reports from the current selection of records. Before you print a report, set the current selection to the records you want to include in your report, using one of the methods described in Chapter 4. The following is a typical quick report.

First Name	Last Name	Department Name	Salary
Biff	Davis	Accounting	43780
Smeldorf	Garbando		19610
Alan	Hull		41460
Bryan	Pfaff		26440
Shirley	Ransome		36040
Marlys	Wilson		36500
		Cure for Department : Resourting	000000
		Sum for Department . Accounting	203830
Kathy	Forbes	Engineering	203830
Kathy Dennis	Forbes Hanson	Engineering	203830 18840 40520
Kathy Dennis Mary	Forbes Hanson Smith	Engineering	203830 18840 40520 55000
Kathy Dennis Mary Andy	Forbes Hanson Smith Venable	Engineering	203830 18840 40520 55000 43520
Kathy Dennis Mary Andy Lance	Forbes Hanson Smith Venable Wolfram	Engineering	203830 18840 40520 55000 43520 27300

## **Quick Report Basics**

This section describes basic operations used when working with the Quick Report editor to design a report.

Creating a New Quick Report	The Quick Report editor lets you create reports in the User environment.
►	To design a quick report:
•	Choose Quick from the Report menu.
	4 <sup>th</sup> Dimension displays the Quick Report editor. If an existing report design is displayed, choose New from the File menu to begin a new Quick Report design.
Loading and Saving a Quick Report Design	You can save a quick report design as a file that you can open from the Quick Report editor. The quick report design includes all of your specifications for the report, but not the data. By saving report designs, you can maintain a library of quick report designs that you can use depending on your needs.
Note	If you do not save your design, it is displayed the next time you open the Quick Report editor in that worksession only.
►	To save a quick report design:
1	Choose Save from the File menu.
	$4^{\rm th}$ Dimension displays a create-file dialog box in which you can name the quick report design.
Note	Quick report files in 4 <sup>th</sup> Dimension for Windows are denoted by the file extension .4QR.
2	Enter a filename for the quick report and click OK.
	4 <sup>th</sup> Dimension saves the report as a file that you can open with the Quick Report editor. You can save the file on any available hard disk.
	Saving a previously saved or loaded report replaces the old report.
Loading a Quick Report Design	When the Quick Report editor is open, you can load a saved design and use it to print a new report. You can use the same quick report design repeatedly to print different selections of records.

- ► To load a report design:
- 1 Choose Open from the File menu.
  - 4<sup>th</sup> Dimension displays an open-file dialog box displaying a list of available quick report designs.
- 2 Double-click a filename or select a filename from the list and click OK. 4<sup>th</sup> Dimension replaces the current report design with the design you opened.

## The Quick Report Editor

When you create a quick report, you can specify the following:

- Columns that display fields or formulas, either from the current table or from related tables
- Sort levels and order
- Break levels
- Summary calculations
- Text for labels
- Formats for numeric and Boolean data
- Font, font size, style, and justification for labels, summary calculations, and data
- Page headers and footers

The following illustration shows the major elements of the Quick Report editor.



The Quick Report editor contains the following elements:

- Fields list This list displays fields in the current table. You can view the
  names of fields in related tables by expanding the foreign key fields. A
  foreign key field has a plus sign (on Windows) or an arrow (on
  Macintosh) to its left.
- *Note* Only tables and fields which are visible appear in the Quick Report editor. For information about making tables and fields invisible, refer to the  $4^{th}$  Dimension Design Reference.
  - Sort list This list displays the sort order assigned to the report and indicates whether each sort level is ascending or descending. If your report will contain summary calculations from groups of records, you must sort the current selection on one or more fields.
- *Note* You can change the order of fields in the Sort list by dragging the field name vertically to the desired position in the list.
  - Quick Report area You use this area to design the report by dragging fields, adding formulas, adjusting column widths, and adding or deleting breaks.
  - Summary calculation buttons You use these buttons to place summary calculations in the Break and Total areas of the report.

- Column properties You use these check boxes to set the following characteristics for each column in the report:
  - Sorted Click this check box if you want the records to be sorted on the selected column.
  - Repeated Values You use this check box to tell the Quick Report editor to repeat the values in a Break column. If you do not select the Repeated Values check box, each Break value is displayed only once.
  - Automatic Width Click this check box to request that the Quick Report editor compute the width of the selected column based on the maximum length of the contents of the column. The sizing is done only at the time the report is printed. You can check this option for each column individually. The check box does not refer to the entire report. If the Automatic Width check box is not checked for a column, you can modify that column's width by dragging column dividers.
- Column dividers These lines indicate the boundaries between columns of the report.
- Right margin marker This marker indicates the right margin of the report. The right margin marker is meaningful only when no columns have the Automatic Width check box selected. You may have to scroll horizontally to view the right margin marker.
- Column header The column header displays the names of fields or formulas added to the report.
- Row label bar This bar shows the different areas of the report: the Header, Detail, Break, and Total rows.
- Header row This row contains information that appears in the printed report above the records. The Quick Report editor automatically places field names in the Header row, but you can modify its contents.
- Detail row This row prints information from individual records and will be repeated in the printed report for each break.
- Break and Totals rows These rows display summary calculations and any associated labeling. The Break row displays summary calculations for each subgroup in the report and the Totals row displays summary calculations obtained from all records in the current selection.
- Cells A cell is the intersection of a row and a column.

• Scroll bars You use the scroll bars to view parts of the quick report design that extend beyond the area of the quick report form.

The following figure shows a completed quick report design and the relationship between the specifications in the design and the printed output.



**Resizing Areas in the** You can resize the various list and display areas in the Quick Report editor. Areas that can be resized are bordered by a raised line.

- ► To resize an area in the editor:
- 1 Move the pointer over the area border to change the pointer into a resizing pointer + I → or ‡.
- 2 Drag the border up or down, or left or right to resize the area.

### The Quick Report Pop-up Menus

The Quick Report editor has "hidden" pop-up menus that make it easy to access certain row, column, and cell operations. Instead of making menu selections or working with the Cell or Column properties areas, you can perform certain operations by displaying a Quick Report popup menu.

There are separate pop-up menus for row, column, and cell operations.

- ► To use a pop-up menu:
- 1 Position the pointer in a cell, a row label, or a column heading and hold down the mouse button.

A pop-up menu appears. The commands in the pop-up menu depend on where your pointer is (i.e., a row label, column heading, or cell). Also, menu commands that are inappropriate for the particular row, column, or cell are disabled.

The following illustration shows the three Quick Report pop-up menus.



2 Choose the desired menu command.

## Working with the Quick Report Editor

This section describes the basic operations that you can perform in the Quick Report editor.

Selecting Rows, Columns, and Cells	When designing a quick report, you need to select rows, columns, and cells in the quick report form. A cell is the intersection of a row and a column.
•	• To select a row:
•	<ul> <li>Click on the Header, Detail, Break, or Total markers on the row label bar to the left of the Quick Report form.</li> <li>OR</li> <li>Click in a row to the right of all columns in the Quick Report form.</li> </ul>
•	• To select a column:
	Click above the Header row of a column.
•	• To select a cell:
•	Click the cell.
Adding and Modifying Text	You can add or modify text in the quick report form to label parts of the report. For example, if you requested summary calculations, you can label them by adding text to other cells in the Break and Total rows.
	You can add and modify text as follows:
•	<ul> <li>Edit the text that 4<sup>th</sup> Dimension automatically adds to the Header row of the report</li> </ul>
	<ul> <li>Insert text in empty cells of the Break and Totals rows</li> </ul>
	Insert the value of a Break field in the Break rows
	<ul> <li>Specify the font, font size, justification, and style for any text that appears in the report</li> </ul>
Adding Text	To add text in a report cell:
-	Click twice on an empty cell in the quick report form. A text insertion point appears in the cell.
	If you are entering a label for a summary calculation, select a cell in the same row as the cell containing the calculation icons. You cannot enter text into the same cell that contains summary calculations.

2 Type the text in the cell.

Modifying Text To modify text in a cell:

- Double-click in a cell to get an insertion point and drag across the text in the cell you want to modify.
   4<sup>th</sup> Dimension highlights the selected text.
- 2 Type the new text in the cell.

Specifying Font<br/>AttributesWhile designing your quick report, you can specify different fonts,<br/>font sizes, justification, and styles. You can then apply these specifica-<br/>tions to text, data, and summary calculations within rows, columns, or<br/>cells in the quick report.

If you assign specifications to the Detail row of the report, you will not see the results until you preview or print the report.

You can specify font attributes using either the Quick Report menu commands or the Quick Report pop-up menu.

- ► To specify font attributes using the Quick Report menus:
- 1 Select the column, row, or cell where you want to apply the font.
- 2 Choose a font from the Font menu or choose a font size, style, or justification from the Style menu.

4<sup>th</sup> Dimension applies the font to any text, data, or summary calculations that appear in the selected area.

- ► To specify font attributes using the Quick Report pop-up menu:
- 1 Hold down the mouse button on the row label, column header, or cell to which you want to apply the font attributes.

A pop-up menu appears.

🗐 Quicl	k Report Editor			
	the fields: FirstName  LastName  HireDate  Salary  Department  C DeptName  Manager  Budget  V	Sort order: [Employees]LastN ▲ □ [Employees]FirstN ▲	Cell Count Min Max Sum Average	Column Sorted Repeated Automatic Width
	[Employees]FirstName	[Employees]] astName	[Employees]Salary	A
Header	FirstName	LastName	Salary	
Detail			\$ <i>###</i> ,###	
Break1		Total For#	🖺 Sum	
Total	D50 100	Count Min Max Sum Average Formet Font → Size → Style → Alignment →	E Sum	. 450 500 55

2 Use the Font, Size, Style, or Alignment hierarchical menus to change the font attributes as desired.

Adding Columns to the Report You create columns by dragging field names from the Fields list in the to the quick report area. If you want to add a field from a related table, expand the foreign key field in the hierarchical list of fields to display the fields in the related table. You can add fields from related tables, provided that the relationship is automatic.

- ► To add a field:
- Drag the name of a field to the right of existing columns in the Quick Report area and release the mouse button.

4<sup>th</sup> Dimension creates a column for the field and places the field name in both the column header and the cell in the Header row.

The following figure shows the Last Name field being added as a column to the Quick Report area.

Select Select	k Report Editor the fields: FirstName astName Jalary Department	Sort order:	Cell Count Min Max Sum Average	Column
Header Detail	FirstName			
<u>Total</u>				
T	D	150 200 250 3	800 350 400 .	. 450 500 55

By default, 4<sup>th</sup> Dimension prints the field names as column heads at the top of each page in the quick report.

*Note* If you use a subfield in a quick report design, the report will list all values of the subfield for each parent record. You cannot sort on a subfield.

#### **Inserting Columns**

You can insert an empty column in a quick report. After you insert the column you can assign a field or a formula to the column.

- ► To insert a column:
- 1 Select a column.
- 2 Choose Insert Column from the Edit menu. OR

Hold down the mouse button to display the Quick Report pop-up menu and choose Insert Column.





4<sup>th</sup> Dimension inserts a blank column to the left of the column you selected. To assign a field to the empty column, drag a field name to it. To assign a formula to the column, see the section "Adding Formulas to a Quick Report" on page 128.

# **Deleting Columns** As you specify fields for your quick report, you may want to remove some columns to place them elsewhere. Or, you might want to delete the column from the report.

- ▶ To delete a column using the Quick Report menu bar:
- 1 Select the column you want to delete.



- 2 Choose Delete Column from the Edit menu.
   4<sup>th</sup> Dimension removes the selected column from the quick report form.
- ► To delete a column using the Quick Report pop-up menu:
- Hold down the mouse button on the column header. The Quick Report pop-up menu appears.
- 2 Choose Delete Column from the pop-up menu.

**Replacing Columns** You can replace a column in the quick report by dragging another field over it. You can also replace a field with a formula.

- ► To replace a column:
- 1 Drag a field from the Fields list to the column you want to replace. OR

Select the column you want to replace and choose Edit Column from the Edit menu.

OR

Hold down the mouse button on the column header to display the Quick Report pop-up menu and choose Edit Column.

The Formula editor appears.

2 If you displayed the Formula editor, enter a formula for the column. If you want to assign a field to the column, you can simply use the field name as the formula.

When you print the quick report,  $4^{\text{th}}$  Dimension prints the results of the formula for each record that appears in the Detail row.

See the section "Adding Formulas to a Quick Report" on page 128 for information about adding a formula to a quick report.

Sizing Columns By default, the Quick Report editor sizes columns automatically (as reflected in the Automatic Width check box). It sizes each column based on the maximum length of data displayed in the column and any labels typed into the column. The Quick Report editor sizes columns at the time the report is printed.

To view the widths of each column, preview the report to the screen. See "Printing a Quick Report" on page 142 for more information about previewing the report.

Because selecting the Automatic Width check box changes the width of a column based on the maximum width of data in the records being printed, selecting different records can change the size of the columns.

You can resize a column manually after deselecting the Automatic Width check box. When a column is set manually, text in the column wraps within the specified area.

- ► To manually resize a column:
- 1 Select the column you want to resize.



- 2 Deselect Automatic Width<sup>1</sup>.
- 3 Move the pointer over the column divider in the quick report to change the pointer into a column width cursor **\***].
- 4 Drag the column divider to the left or right to resize the column.

#### Adding Formulas to a Quick Report

You can add a formula to a column in a quick report. For example, you can add a formula that computes employees' monthly salaries from an Annual Salary field.

- ► To add a formula:
- 1 Insert an empty column or click an existing column and choose Edit Column from the Edit menu.

OR

Double-click an existing column.

OR

Hold down the mouse button on an existing column header to display the Quick Report pop-up menu and choose Edit Column.

4<sup>th</sup> Dimension displays the Formula editor, in which you can build a formula. If you selected an existing column, the formula you create will replace the previous contents of the column.

*Note* Make sure that the formula you create does not change the current selection. Changing the current selection will cause problems when you print the quick report since the report is based on the current selection. For information about commands and functions that change the current selection, refer to the  $4^{th}$  Dimension Language Reference.

2 Build the formula.

#### OR

Click the Load button to retrieve an existing formula from disk.

For information about using the Formula editor, refer to "The Formula Editor" on page 93.

To save the formula as a file that you can retrieve and use in another column or in another report, click the Save button and enter a filename in the dialog box.

If you click the Load button,  $4^{th}$  Dimension displays an open-file dialog box and asks you to select a file. When you load a file, it replaces



<sup>1.</sup> You can deselect Automatic Width using either the check box in the Column Properties area or the Quick Report pop-up menu for that column.

any formula that currently appears in the Formula editor. After you load a formula, you can modify it in the editing area.

3 Click OK to assign the formula to the column.

4<sup>th</sup> Dimension adds a new label to the column that identifies it as a formula. You can relabel the column by typing a label into the header cell for that column.

Formulas are labeled *C1* through *Cn*. The labels are the names of variables that contain the column's value. You can use these variables in other formulas.

Click the Cancel button to close the editor and return to the Quick Report editor without adding the formula.

## Sorting Records and Creating Breaks

An important feature of the Quick Report editor is the ability to sort the records in your report. You sort records for two reasons:

- To view records in a particular order,
- To create groups of records and Break areas in the report for the purpose of reporting summary calculations for groups.

See the section "Setting Break Levels" on page 131 for information about summary calculations.

# Specifying a Sort<br/>OrderYou can specify a sort order at any time. For example, if you wanted to<br/>sort the records of salespeople by the Sales Region field, you would<br/>select the Sales Region column, and then set the Sorted property.

You can also sort on a formula by selecting the column that contains the formula and then clicking the **Sorted** check box or choosing **Sorted** from the Quick Report pop-up menu for that column. See the section "Adding Formulas to a Quick Report" on page 128 for more information about adding formulas to quick reports.

- ► To specify the sort order using the Sorted check box:
- 1 Select the column that contains the field or formula you want to specify as the first sort level.
- 2 Click the Sorted check box.

- ► To specify the sort order by dragging:
- Drag a field from the Fields list to the Sort order list.
   If the field is not already in the quick report design, 4<sup>th</sup> Dimension adds it as the last field in the design.
- ► To specify a sort order using the Quick Report pop-up menu:
- 1 Hold down the mouse button on the column header belonging to the column you want to sort.

The Quick Report pop-up menu appears.

2 Choose Sorted from the pop-up menu.

4<sup>th</sup> Dimension displays the name of the field in the Sort list. To the right of the name is an arrow, indicating an ascending sort order. By default, all sorts are performed in ascending sort order.

3 If necessary, click the sort direction arrow **a** to sort the column in descending order.

	🔲 Quick I	Report Editor			×
Sort direction arrow Sorted check box	Select the	ields: Name A Pate Name Date V Title artment Je dstus ge dren pany mePhone ▼		Column Sorted Repeated Values Automatic Width	
		[People]First Name	[People]Last Name	[People]Department	[People]Salary
	Header	First Name	Last Name	Department	Salary
	Detail				\$ <del>###</del> , <del>###</del>
	Break 1			Total for #	존 Sum R Average
	<u>Total</u>				
	<u>ৰ</u>	0	150 200	250 300 350	. 400 . 450 . 500 . E

4 If desired, select additional fields or formula columns and add the Sorted property using either the Sorted check box or pop-up menu command.

You can specify ascending or descending sort order for any additional fields or formulas you specify.

When you specify multiple sort levels, 4<sup>th</sup> Dimension sorts the records on the first field in the Sort field list, then on other fields in the order that they appear in the list. For example, if you specify the Department Name field as the first sort level and Last Name as the second sort level, your design might look like the quick report design shown in step 3.

- ► To change the level of a Sort field:
- Drag the name of a field or formula up or down within the Sort list to the desired sort level.

Deleting a Field or Formula from the Sort List	You can delete the any field or formula from the Sort list.
►	To delete a field or formula from the sort order:
-	Select the column and deselect the Sorted check box. OR
	Hold down the mouse button on the column header to display the Quick Report pop-up menu and deselect the Sorted menu command.
	4 <sup>th</sup> Dimension removes the field or formula in the Sort field list. It does not delete the column itself from the report. When you print the report, 4 <sup>th</sup> Dimension will no longer use that field or formula to sort the records.
Setting Break Levels	In a quick report, you set break levels to separate or "break" records into groups according to values in one or more sort fields. A Break area is printed at each break level. You can print summary calculations in the Break area. The summary calculations — sum, average, minimum, maximum, and count — are calculated for each group of records.
	Break levels are determined by the sort levels and Break rows. For example, if you sort records by Sales Region and create a Break row, $4^{\rm th}$ Dimension inserts a break between each group of records that have the same sales region.
	After you add a Break row to the quick report, you can request sum- mary calculations on each break. For example, you can insert a sum- mary calculation in a Break row to display subtotals for sales from each state in a marketing region. Refer to the section "Adding Summary Cal- culations" on page 133 for more information about adding summary calculations to Break and Total rows.



► To insert a Break row:

1 Choose Add Break from the Edit menu.

OR

Hold down the mouse button on the Total row label in the Row label bar and choose the Duplicate Break menu command.

4<sup>th</sup> Dimension adds a Break row. The figure shows a Break row in a quick report design.



2 If desired, add additional Break rows by repeating step 1<sup>1</sup>.
 There should be at least as many sort levels as break levels.

4<sup>th</sup> Dimension adds a sequential number to each new break label in the row label bar, for example, Break1, Break2, Break3, and so forth.

#### Using the Values of Break Fields in Labels

You can improve the appearance and comprehensibility of your reports by labeling each Break row using the value of the Break field.

To request that the value of a Break field be printed in a label placed in the Break area, use the number sign (#) in the label. For example, the text "Total salaries for department #" will insert the department name (in this case, the value of the Department field) in place of the number sign when the report is printed.

The number sign does not need to be placed in the same column as the Break field. It will display the value of the Break field in any cell in the Break row.

The following figure illustrates the use of the number sign in a label in the Break row.

<sup>1.</sup> After you have created a Break row, you can also display the Quick Report pop-up menu by holding down the mouse button on the new Break row label.

	📃 Quick	Report Editor			X
	Select th	e fields: S	ort order:	Cell	Column
	🗆 🖄 Fir	st Name 📕 🚺	People]Department 🔺	<u>A</u>	
	🗆 🖄 La	st Name	People]Salary		
	🗆 🖉 Hir	re Date			
		lary		Min 📥	Sorted
		nartment		🔹 🛃 Max	🗖 Repeated Values
	🗆 🔀 Ma	arital Status		Sum	🔽 Automatic Width
	🗆 🖉 Im	age			
	🗉 📄 Ch	nildren		Average	3
	E 🕂 Co	mpany			
		[People]First Name	[People]Last Name	[People]Department	[People]Salary
	Header	First Name	Last Name	Department	Salary
	Detail				\$ <del>###</del> , <del>###</del>
	Break 1			Total for #	∑ Sum
Number sign	T-4-1				R Average
used in label	Iotal				
			1		
	I.	D	150 200	250 300 350	400450500£

## **Adding Summary Calculations**

You can add summary calculations on the contents of fields and formulas to each Break row and to the Totals row.

The check boxes in the Cell area of the Quick Report editor identify the summary calculation options available for quick reports. The following summary calculations are available.

- Sum totals the values in the report or break.
- Minimum displays the lowest value in the report or break.
- Maximum displays the highest value in the report or break.
- Average calculates the average of the values in the report or break.
- Count calculates the number of records in the report or break.

These options also appear in the Quick Report pop-up menu for cells in the Break and Total rows.

When you place a summary calculation in the Totals row, the calculation is done for all records in the report. If you place the summary calculation in a Break row, separate calculations are done for the records in each break.

- ► To add a summary calculation:
- 1 Select a cell in a Break row or in the Totals row where you want to insert the summary calculation.

The Sum, Minimum, Maximum, and Average calculations work only on a numeric field or formula.

2 Click as many summary calculation check boxes as you like. Or

Hold down the mouse button and choose the desired summary calculations from the Quick Report pop-up menu for cells.

4<sup>th</sup> Dimension displays a calculation icon in the selected cell for each type of summary calculation you request. The following figure shows calculation icons in the Break and Total rows.

	🔳 Quick	Report Editor			×
	Select th	ne fields: S	ort order:	Cell	Column
		rst Name ist Name ire Date alary abDitite epartment arital Status hildren ompany omePhone V	People]Department ▲ People]Salary ▼	Count Count Min Max Sum Average	I Sorted I Repeated Values I Automatic Width
		[People]First Name	[People]Last Name	[People]Department	[People]Salary
	Header	First Name	Last Name	Department	Salary
Calculation icons in	Detail		Ì		\$###,###
Break and Totals	Break 1			Total for #	∑ Sum R Average
	<u>Total</u>			Grand Total	도 Sum 국 Average
	र	050100	. 150 . 200	250 300 350	. 400 . 450 . 500 . E

If you add more than one summary calculation to a cell,  $4^{t\check{h}}$  Dimension stacks the calculation icons on top of each other, as shown above.

**Displaying Repeated** In a report with breaks, the columns which are used to group records Values for Break so that summary calculations can be done are called Break columns. In Columns the report shown above, the Department field is a Break column since the records in the report are grouped by department.

> When a report like this is printed, the values for the Break column are printed only once per break. In other words, a department name is

First Name	Last Name	Department Name	Salary	
Biff	Davis	Accounting	43780	
Smeldorf	Garbando		19610	
Alan	Hull		41460	Nonreneating
Bryan	Pfaff		26440	brook voluos
Shirley	Ransome		36040	
Marlys	Wilson		36500	
		Sum for Department : Accounting	203830	
Kathy	Forbes	Engineering	18840	
Dennis	Hanson		40520	
Mary	Smith		55000	
Andy	Venable		43520	
Lance	Wolfram		27300	
		Sum for Department : Engineering	185180	

printed only for the first record in the group and is not repeated until the department changes.

In some cases, you may want to repeat the values for the Break columns so that they appear for every record in the Break area. You do so by selecting the Repeated Values column property. You can do so either by clicking the Repeated Values check box in the Column Properties area or by choosing the Repeated Values menu command in the Quick Reports pop-up menu for that column.

- ► To display repeated values for fields in Break columns:
- Select the Break column by clicking above the Header row for that column and click the Repeated Values check box.
   OR

Hold down the mouse button on the Header row of the Break column and choose Repeated Values from the Quick Reports pop-up menu.

The following figure shows the report at the top of this page after the Repeated Values check box has been checked for the Department Name column.

First Name	Last Name	Department Name	Salary
Biff	Davis	Accounting	43780
Smeldorf	Garbando	Accounting	19610
Alan	Hull	Accounting	41460
Bryan	Pfaff	Accounting	26440
Shirley	Ransome	Accounting	36040
Marlys	Wilson	Accounting	36500
		Sum for Department : Accounting	203830
Kathy	Forbes	Engineering	18840
Dennis	Hanson	Engineering	40520
Mary	Smith	Engineering	55000
Andy	Venable	Engineering	43520
Lance	Wolfram	Engineering	27300
		Sum for Department : Engineering	185180

## **Setting Display Formats**

You can specify display formats for columns that contain numeric or alphanumeric (Alpha) data. For example, if you are displaying salaries in a column, you can add a numeric format to the Detail cell for the Salary field. If your report includes Alpha fields such as a telephone number or Social Security number, you can use an Alpha format.

Numeric Formats The following format places a dollar sign to the left of the number and allows up to 6 digits:

```
$###,###
```

This format can display dollar amounts up to \$999,999.



You can also create custom display formats in the Database Properties dialog box and use them in Quick Report designs. For more information about creating custom formats, refer to the 4<sup>th</sup> Dimension Design Reference.

Alpha FormatsYou can use an Alpha format for fields that contain string information.For example, Social Security number or telephone number fields can be<br/>formatted with an Alpha format.

For example, the following format would be used to format Social Security numbers:

###-##-####

#### Entering the Display Format for a Field

You enter a display format or custom format by choosing it from the Quick Report pop-up menu for the cell or by typing it into a cell.

- ► To enter a display format for a numeric or Alpha field:
- 1 Click twice in the Detail cell for a numeric or Alpha column.
- 2 Type a display format or the name of a style that you want to use as the display format.

The names of styles are preceded by a vertical bar (|).

- ► To choose a display format from the Quick Report pop-up menu:
- 1 Position the pointer over the Detail cell for a column and hold down the mouse button and choose a display format from the hierarchical menu.



The hierarchical menu will show display formats that are appropriate for the data type of the column. For example, if the field was a numeric format, the menu command would be "Numeric" instead of "Alpha" and the submenu would list only numeric formats.

After you make your selection, you can edit the format normally.

If you have also requested summary calculations for that column, the format specified in the Detail cell will automatically be applied to the summary calculations. Regardless of the display format, the count is always displayed as an integer without formatting symbols such as the dollar sign.

Different formats can be applied to different columns in the report.

### Hiding and Showing Rows and Columns

4<sup>th</sup> Dimension lets you hide rows or columns when printing a quick report. If desired, you can show a hidden column or row.

Hiding rows is useful when you want the report to include only summary calculations. For example, hide the Detail row if you want to display only the summary calculations that appear in the Totals and Break rows. You can also use this feature to hide a Break row or the Totals row.

You can hide a column if you need to use the column as a sort column, but do not want the report to display the column.

You can hide a row using either a Quick Report menu command or the Quick Reports pop-up menu.

- ▶ To hide a row using the menu command:
- 1 Select the row you want to hide.
- 2 Choose Hide from the Edit menu.
- ▶ To hide a row using the pop-up menu:
- 1 Hold down the mouse button over the row label in the Row label bar. The Quick Reports pop-up menu appears.

Select	k Report Editor the fields: FirstName	Sort order:		Column	_ O ×
	LastName HireDate Salary Department		N Count ≪ Min ≫ Max ≦ Sum N Average	Gorted     Repeated V     Automatic V	alues Vidin
	[Employees]FirstNan	ie [Employees]LastName	[Employees]Salary	[Employees]Department	A
Header	FirstName	LastName	Salary	Department	
Detail			\$###,###	ŧ	
Break1		Total For Department #	🕿 Sum	1	
Total	Duplicate Break		🖺 Sum		
	D GIOLO DIOGN				
	Hide 📐				
	Hide Foot				
	Hide Font Font				
	Hide Font Font Size Style				

2 Choose Hide from the pop-up menu.

4<sup>th</sup> Dimension displays the column in gray to remind you that the row will not appear when you print or preview the quick report.

Selectit Selectit A C A C C A C C A C C A C C A C C A C C C A C C C C	: Report Editor he fields: IrstName IrstDate irstDate ialary epartment	Sort order: [Employees]LastN ▲ [Employees]FirstN ▲	Cell Count Min Max Sum Average	Column	
Hoador	[Employees]FirstName	[Employees]LastName	[Employees]Salary	[Employees]Department	<u> </u>
Detail	i ii Suvaine	Lasuvaine	Salaiy \$######	Department	
Breakt		Total For Department #	E Sum		Hidden row
Total			🖺 Sum		
T	D	150 200 250	300 350 44	00 450 500	<u>z</u>

You can also use a menu command or the Quick Reports pop-up menu to hide a column.

- ▶ To hide a column using the menu command:
- 1 Select the column you want to hide.
- 2 Choose Hide from the Edit menu.
- ▶ To hide a column using the Quick Reports pop-up menu:
- 1 Hold down the mouse button over the column header. The Quick Reports pop-up menu appears.
- 2 Choose Hide from the pop-up menu.

4<sup>th</sup> Dimension displays the column in gray to remind you that it will not appear in the printed report.

Select	R Heport Editor the fields: InterName Salary Pepartment	Sort order: [Employees]LastN ▲ I [Employees]FirstN ▲	Cell Count	Column	
	[Employees]FirstName	[Employees]LastName	[Employees]Salary [Employe	esjDepartment	
Header	FirstName	LastName	Salary	712020000000000000000000000000000000000	
D-4-11					
Detail Break1		Total For Donatmont #	\$###,###		Hidden column
Detail Break1 Total		Total For Department #	\$###,### E Sum		—— Hidden column

#### Showing a Hidden Row or Column

When a row or column is hidden, the Hide menu command in the Edit menu and Quick Report pop-up menu becomes Show. You can display a hidden row or column choosing Show from either the Edit or pop-up menu. When you do so, the row or column is displayed normally in the Quick Report area.

## **Adding Page Headers and Footers**

Before printing a quick report, you can add page headers and footers. You specify page headers and footers in the Headers and Footers dialog box. Use this dialog box to do the following:

- Add page header and footer text,
- Specify the size of the page header and footer areas,
- Specify fonts, font sizes, and font styles for page header and footer text,
- Insert codes that add page numbers and the date and time to your reports.

You can only specify page headers when printing to a printer. See the section "Printing a Quick Report" on page 142 for more information about alternate output devices.

- ► To add page headers and footers:
- 1 Choose Headers and Footers from the File menu. The Headers and Footers dialog box appears.

	Headers & Footers	
Edit drop-down list	Edit Headers	Header and Footer
Measurement scale drop-down list	Right T	entry areas
Height	Font       Font Size       Style:       Plain       Add a Frame Around Data	Page preview area
	Cancel UK	

The Header and Footers dialog box lets you specify both headers and footers from the same screen. You use the Edit drop-down list to specify either the header or footer.

- 2 Choose Header or Footer from the Edit menu.
- 3 Enter the header or footer height in the Height area. When you first enter the dialog box, the header and footer heights are set to 25 points each. You can change values for the height and can change measurement scale to enter values in inches or centimeters.

As you enter the header and footer height, the dotted lines on the page preview area change to indicate the size of the header and footer as they will appear on the printed report.

4 Select an entry area and type the header or footer text.

To the right of each entry area is a pop-up menu that lets you insert variables into the entry area.



You can insert the current page number, time of printing, or date of printing.

To insert a variable, choose it from the pop-up menu. 4<sup>th</sup> Dimension inserts the variable in the entry area at the insertion point. You can combine variables with text.

## Specifying Font,<br/>AttributesYou can specify different fonts, font sizes, justification, and styles for<br/>page headers and footers.

- ► To specify font attributes:
- Choose a font and font size from the drop-down lists and click one or more Style check boxes.

Your specifications are applied to all three entry areas. You cannot apply different font attributes to different areas of the header or footer. Some Style combinations are not valid. For example, you can choose Bold and Italic, but you cannot choose both Plain and Bold.

## Printing a Quick Report

After you have completed your report design, you can print the quick report. You can print a quick report to a variety of output devices:

- On the standard printer selected in the Print Manager (the Chooser on Macintosh)
- To disk
- To a graph
- ► To select an output device:
- Choose Print Destination from the File menu.

The Print Destination hierarchical menu contains three items.

~	Printer
	<u>D</u> isk File
	<u>G</u> raph

#### Printer

This option uses the printer you have chosen in the Print Manager (Chooser on Macintosh). You can print to a printer without using the Print Destination item by choosing Print from the File menu. If you are printing to a printer, you can preview the report before printing it.

		To print to a printer:
	1	Choose Print from the File menu.
	2	Click the OK button and follow the standard 4 <sup>th</sup> Dimension procedure for previewing and printing your report.
		For more information about printing, see the section "Printing Standard Reports" on page 110.
	3	Choose the settings that are appropriate for your report and click the OK button.
Disk File		This option sends your quick report to a disk file that you can open and modify with other applications, including text editors and spread- sheets. This option exports the records in the quick report to a text file.
		When you use this option, 4 <sup>th</sup> Dimension automatically uses the column headings as the first "record" that is exported.
		To print to a disk file:
	1	Choose Disk File from the Print Destination hierarchical menu.
	1	Choose Print from the File menu.
		4 <sup>th</sup> Dimension displays a standard create-file dialog box and asks you to enter a filename.
	2	Enter a filename and click the OK button.
		4 <sup>th</sup> Dimension displays a dialog box that keeps you informed of the progress of the operation. Click the <b>Stop Printing</b> button to cancel the operation.
		After the report is printed to a file, 4 <sup>th</sup> Dimension returns you to the Quick Report editor. Remember to change the output device if you want to resume sending a quick report to a standard printer.
Print to Graph		This option directs the report to 4D Chart, 4 <sup>th</sup> Dimension's plug-in for plotting data. When you choose the Graph item in the Print Destination hierarchical menu, your report is presented as a graph rather than in tabular form. 4D Chart uses only the summary calculations and labels in the Break row. It uses the leftmost non- numeric column for the Values axis (the horizontal axis).
		To use the Graph feature, your report should:
		Include from one to five numeric fields or formulas. These columns will be assigned to the values axis in the graph.

■ Use one type of summary calculation per numeric field.

For example, if you want to graph average salary by department, you should create a quick report with two columns, Department Name and Salary. Use the Average summary calculation for Salary.



- ► To print to a graph:
- 1 Choose Graph from the Print Destination hierarchical menu.
- 2 Choose Print from the File menu.
  - 4<sup>th</sup> Dimension graphs your data as a column graph.

The following figure shows the graph produced from the quick report design shown above.



You can use 4D Chart to select another graph type or print the graph. For more information about the options available in 4D Chart, see the section "Creating a Graph" on page 172.