CONTENTS

Reports

Built-in Reports

Category List

To print a list of the Categories you have set up:

➢ At the main CatBase screen, choose Categories from the Data menu, or click on the **Categories** button in the CatBase Options palette.

➢ Click on **All Records** when the Search Dialogue window appears.

A window opens up, displaying a list of all your Level One categories. At the bottom of the window there's a button labelled **Print Hierarchy**.

➢ Click on the **Print Hierarchy** button.

The following dialogue box appears:

You can print the report or you can save it to disk as a text file. If you save it to a file, you'll be able to open it up with a word processor or page layout program and format it any way you like.

Printer

To print the Category list:

➢ Make sure the **Printer** radio button is selected

➢ Click on **OK.**

The report will be printed. The categories are sorted alphabetically, with the Level 2 categories listed under their related Level 1 category, and the Level 3 categories listed under their related Level 2 category. If you had categories entered at all three levels, your report might look something like this:

Category List 07/14/91

Apparel	**300**
Food	**100**
Cakes	103
Candies	101
Cookies	102
Chocolate Chip	120
Creme Filled	122
Mint	123
Peanut Butter	121
Gift Baskets	104
Fruits & Nuts	**600**
Holiday Specialties	**500**
Easter	501
Novelties	**200**
Gift Baskets, non-food	201
Services	**400**

If you don’t like this layout, print the report to an ASCII (plain text) file instead. Then you can open it up in a word processor or page layout program and modify it in any way you like.

Text File

To print the Category report to a text file:

➢ Click on the ASCII File radio button.

➢ Click on OK.

You will be prompted to enter a name for the disk file that will be created.

⇒ Enter a name.

➢ Click on Save.

CatBase creates the file and lets you know when it is finished.

Export Style Sheet Reference

You might find it useful to print out a reference to your Export Style Sheets. This shows how an Export Style Sheet is set up — the paragraphs that comprise it, how they are formatted, and what Elements they contain.

To print out an Export Style Sheet Reference:

➢ At the main CatBase screen, choose **Export Style Sheets ...** from the **Data** menu.

➢ Find the Export Style sheet or Sheets that you want to print out.

➢ Choose **Print Reference** from the **File** menu

The references are printed.

Quick Reports

In addition to CatBase's built-in report formats, the Quick Report editor makes it possible for you to quickly and easily produce columnar reports of your own design. In a columnar report, each column represents one item of data (usually a field from the database), and there is one row for each record, plus additional rows for headers, footers breaks, and totals. If you are accustomed to working with spreadsheets, the idea of rows and columns will be familiar to you. The intersection of a row and column is called a cell; a cell is where the data is actually displayed.

The Quick Report Editor enables you to:

- Create break areas
- Set column widths or let the program figure them for you based on the size of the data to be included
- Choose the fonts and styles to be used
- Compute summary calculations
- Sort on as many fields as you have break levels

You can create a Quick Report any time you have a list of records displayed on your screen, and Quick Reports that you design can be saved so that they can be used again.

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

To design a quick report:

➢ With a list of records on your screen, choose **Quick Report** from the **File** menu.

CatBase 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 depend-ing 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:

➢ Choose **Save** from the **File** menu.

CatBase displays a create-file dialogue box in which you can name the quick report design.

Note: Quick report files on Windows are denoted by the file extension .4QR.

➢ Enter a filename for the quick report and click **OK.**

CatBase 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:

➢ Choose **Open** from the **File** menu.

CatBase displays an open-file dialogue box displaying a list of available quick report designs.

➢ Double-click a filename or select a filename from the list and click **OK.**

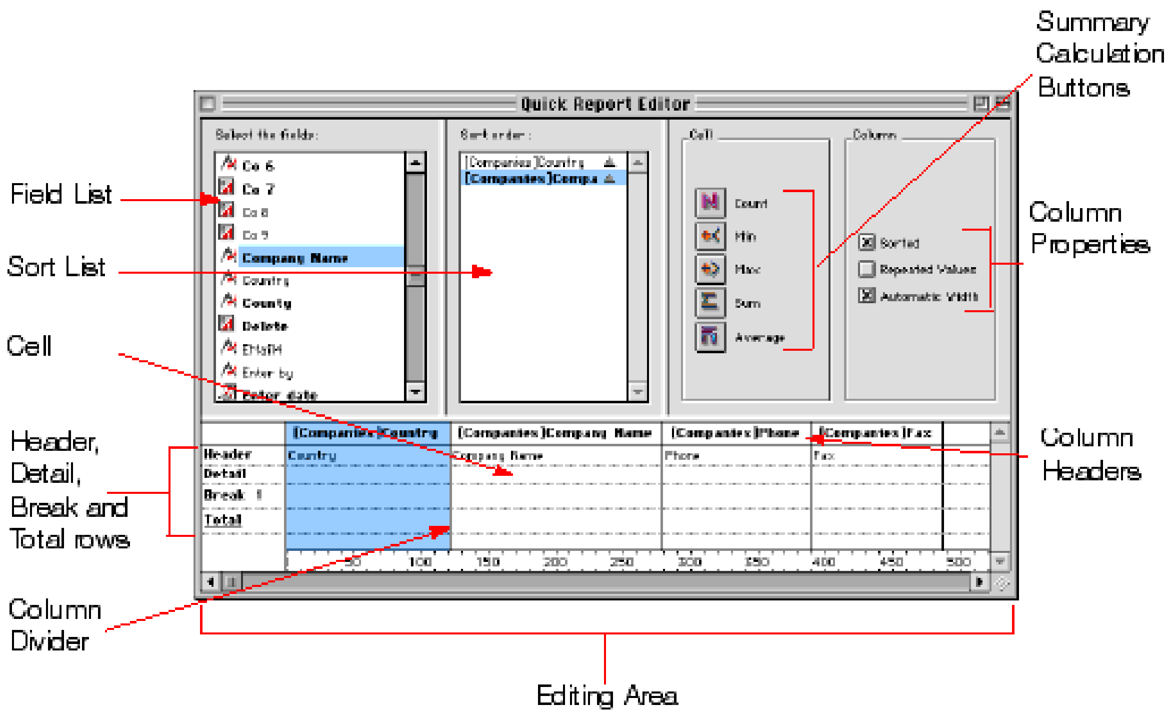
CatBase replaces the current report design with the design you opened.

The Quick Report Editor

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

• Columns that display fields or formulas
• 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.

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 labelling. 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.

Resizing Areas in the Editor

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  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 pop-up menu.

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

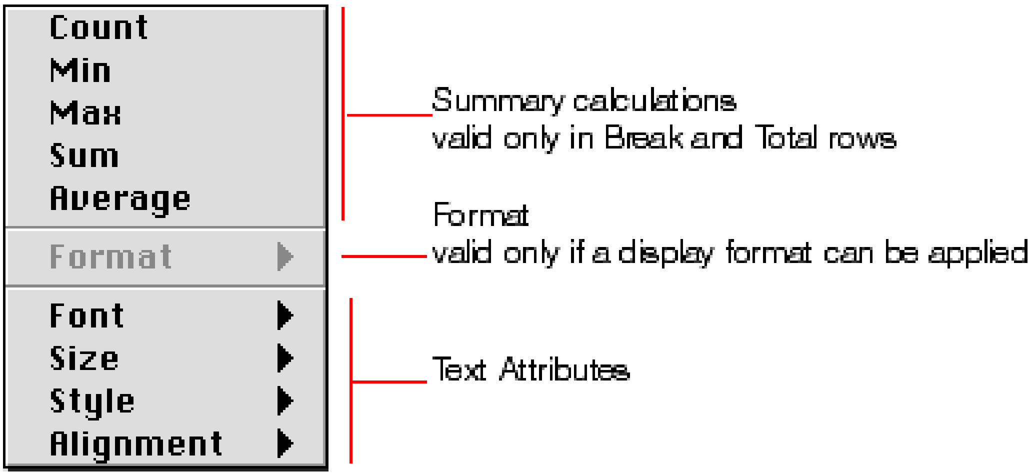
To use a pop-up menu:

1 Position the pointer in a cell, a row label, or a column heading and hold down the mouse button.

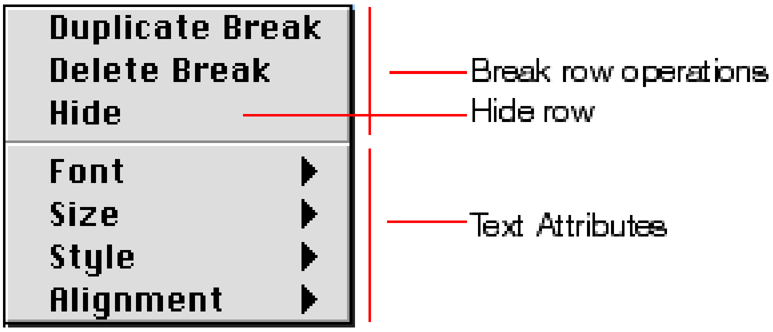
A pop-up menu appears. The commands in the pop-up menu depend on where your pointer is (i.e., a row label, column heading, or cell). Also, menu commands that are inappropriate for the particular row, column, or cell are disabled.

The following illustrations show the three Quick Report pop-up menus.

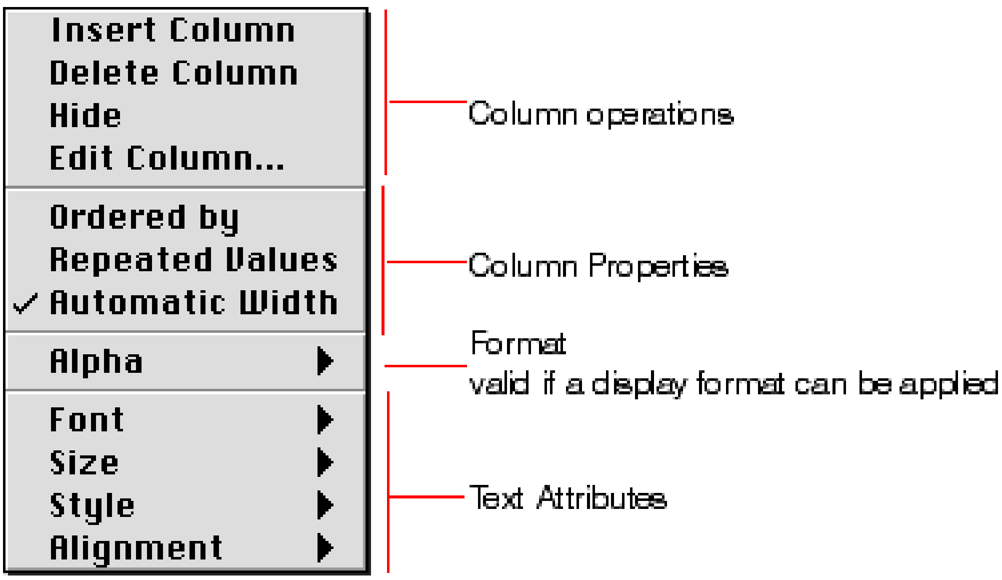
Cells



Rows



Columns



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:

Click on the Header, Detail, Break, or Total markers on the row label bar to the left of the Quick Report form.

OR

Click in a row to the right of all columns in the Quick Report form.

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:

- Edit the text that CatBase automatically adds to the Header row of the report
- Insert text in empty cells of the Break and Totals rows
- Insert the value of a Break field in the Break rows
- Specify the font, font size, justification, and style for any text that appears in the report

Adding Text

To add text in a report cell:

1 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:

1 Double-click in a cell to get an insertion point and drag across the text in the cell you want to modify.

CatBase highlights the selected text.

2 Type the new text in the cell.

Specifying Font Attributes

While designing your quick report, you can specify different fonts, font sizes, justification, and styles. You can then apply these specifications to text, data, and summary calculations within rows, columns, or 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.

CatBase 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.

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 to the quick report area.

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.

CatBase creates a column for the field and places the field name in both the column header and the cell in the Header row.

By default, CatBase prints the field names as column heads at the top of each page in the quick report.

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.

CatBase 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”.

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.

CatBase removes the selected column from the quick report form.

To delete a column using the Quick Report pop-up menu:

1 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, CatBase prints the results of the formula for each record that appears in the Detail row.

See the section “Adding Formulas to a Quick Report” 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” 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. (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.)
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.

CatBase 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 of records in the table on which the Quick Report is based. Changing the current selection will cause problems when you print the quick report since the report is based on the current selection.

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" later in this chapter.

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, CatBase displays an open-file dialogue box and asks you to select a file. When you load a file, it replaces 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.

CatBase 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 labelled 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:

1 To view records in a particular order,
2 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" for information about summary calculations.

Specifying a Sort Order

You can specify a sort order at any time. For example, if you wanted to sort the Product by the Product Name field, you would select the Product Name 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” 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.

<u>To specify the sort order by dragging:</u>

- Drag a field from the Fields list to the Sort order list.

If the field is not already in the quick report design, CatBase adds it as the last field in the design.

<u>To specify a sort order using the Quick Report pop-up menu:</u>

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.

CatBase 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 to sort the column in descending order.
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, CatBase 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.

<u>To change the level of a Sort field:</u>

- 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.

CatBase 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, CatBase 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 Country and create a Break row, CatBase inserts a break between each group of records that are in the same country.

After you add a Break row to the quick report, you can request summary calculations on each break. For example, you can insert a summary calculation in a Break row to display subtotals for sales from each county in a marketing region. Refer to the section “Adding Summary Calculations” for more information about adding summary calculations to Break and Total rows.

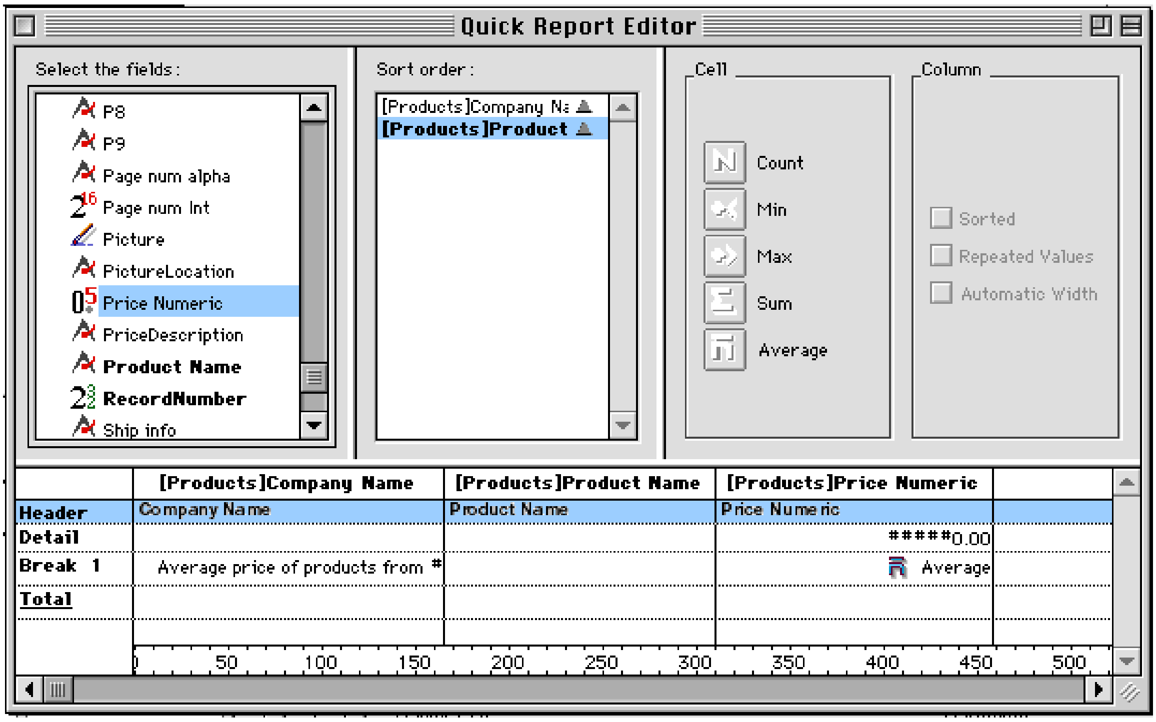
To insert a Break row:

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.

CatBase adds a Break row. The following figure shows a Break row in a quick report design.



2 If desired, add additional Break rows by repeating step 1.

There should be at least as many sort levels as break levels.

CatBase adds a sequential number to each new break label in the row label bar, for example, Break1, Break2, Break3, and so forth.

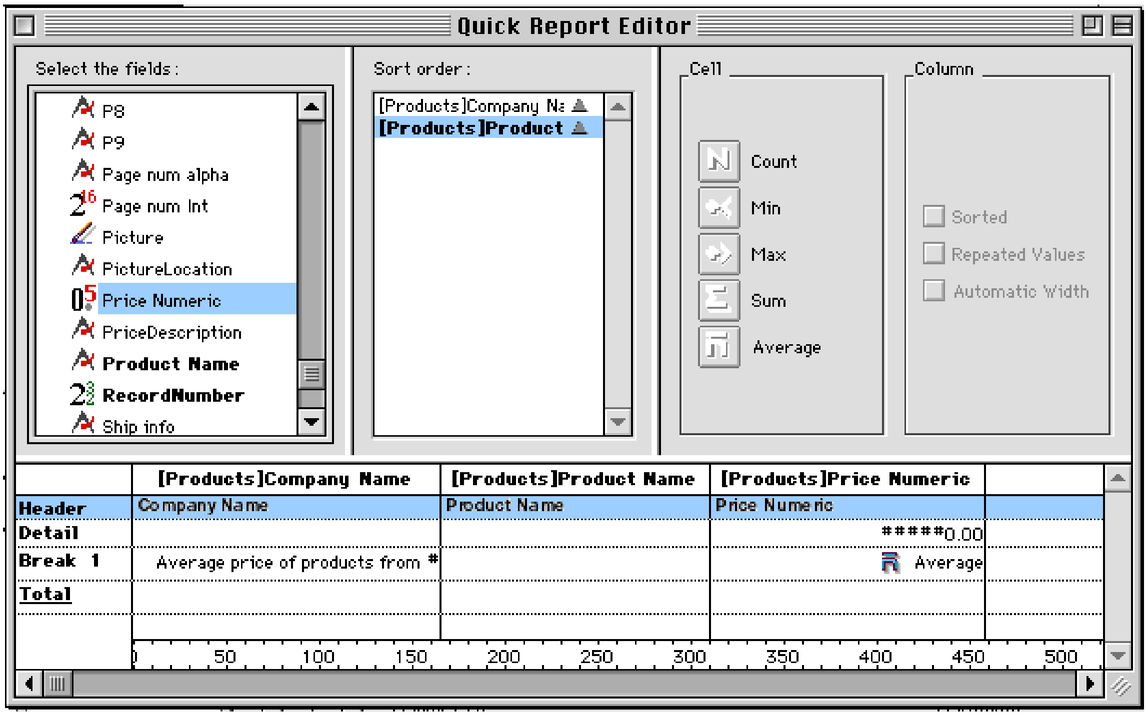
Using the Values of Break Fields in Labels

You can improve the appearance and comprehensibility of your reports by labelling 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 “Average cost for products sold by #” will insert the company name (in this case, the value of the Company Name 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:



This will produce a report sorted by Company, with each company’s products listed alphabetically, and a summary showing the average price of each company’s products, something like this:

Company Name	Product Name	Price Numeric
Apple Computer UK	Apple 20" Colorsync Display	1215.00
	Apple Multiple Scan 720 Display (17")	528.00
	Apple Powerbook	1645.00
	LaserWriter 8500	1316.00
	Macintosh Server G3	2080.00
	Power Macintosh G3 Desktop	1185.00
Average price of products from Apple Computer UK		1328.16
CatBase Software Ltd.	CatBase	895.00
Average price of products from CatBase Software Ltd.		895.00
Connectix	QuickCam	89.95
	SpeedDoubler	124.99
	Surf Express	59.95
	VirtualPC	124.99
Average price of products from Connectix		99.97
Dell Computers	Dimension XPS R Series	2199.00
	Inspiron 3000	2199.00
Average price of products from Dell Computers		2199.00

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.

CatBase 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:

	[Products]Company Name	[Products]Product Name	[Products]Price Numeric
Header	Company Name	Product Name	Price Numeric
Detail			#####0.00
Break 1	Average price of products from #		Average
Total			Average

If you add more than one summary calculation to a cell, CatBase stacks the calculation icons on top of each other.

Displaying Repeated Values for Break Columns

In a report with breaks, the columns which are used to group records so that summary calculations can be done are called Break columns. In the report shown above, the Company Name field is a Break column since the records in the report are grouped by company.

When a report like this is printed, the values for the Break column are printed only once per break. In other words, a company name is printed only for the first record in the group and is not repeated until the company 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:

1 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.

Setting Display Formats

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

Alpha Formats

You can use an Alpha format for fields that contain string information.

For example, telephone number fields can be formatted with an Alpha format like this:

(####) ### ####

Numeric Formats

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

£###,###

This format can display amounts up to £999,999.
Following is detailed information about formatting numbers.

Numeric formats

By default, numeric data are printed just as formatted in the database. Sometimes you will want to change the number format. For example, you'll probably want to display a monetary amount like this: £123.45. You have complete control over numeric formats in the Quick Report Editor by using the formatting symbols and rules explained here.

Numeric Formatting Symbols

Placeholders

Placeholders tell the Quick Report Editor how many digits to expect. There are four numeric placeholders, each one with its own job to do. Table 1 shows each placeholder and what it displays.

Placeholder	Displays	Displays for leading or trailing zero
#	One digit	Nothing
0	One digit	A 0
^	One digit	A space (see note below)
*	One digit	An asterisk

Table 1

Note: The caret (^) displays a non-breaking (hard) space character (ASCII 202) rather than a true space character (ASCII 20). This is because a non-breaking space is the same width as a digit. It is created by typing Option-spacebar (Mac) or Alt-spacebar (Windows).

You use one placeholder for each character that you expect to print.

If you do not allocate sufficient placeholders, a number that is too big to fit into your format will be printed as <<<. Remember to allow for negative numbers: If a number is negative, the leftmost character displays as a minus sign (unless a negative display format has been specified, as described below). So if you had specified a format of #0 and the number was -44, there would not be enough room for the number and it would be printed as <<<.

Decimal Point

One decimal point can be used in the format. If you want the decimal point to be printed regardless of whether there is actually a decimal value, the decimal point must be between zeros. For example, if the number to be printed is 44, it will be printed as 44 if the format had been specified as ##.##, or as 44.00 if the format had been specified as #0.00.

Other Characters

You can use any characters other than placeholders and the decimal point in the format. If they are used alone, or placed either before or after placeholders, they always appear. If they are placed between placeholders, they appear only if digits are printed on both sides. For example, if the format were £##0, a pound sign would always appear because it is placed before all placeholders.

If the format were ###,##0, the comma would appear only if the number was greater than 999.

Formats for Positive, Negative, and Zero

A number format can have three parts. The three parts allow you to specify formats for positive, negative, and zero values. The three parts are separated by semicolons:

Positive;Negative;Zero

If you use just one part, the format will be used for all numbers and a minus sign will be placed in front of negative numbers. If you use two parts, the first part is used for positive numbers and zero, and the second part is used for negative numbers. If you use three parts, the first part is used for positive numbers, the second part is used for negative numbers, and the third for zero.

The following example prints pound signs and commas, places negative values in parentheses, and displays nothing for zero:

£###,##0.00;(£###,##0.00);

The presence of the second semicolon indicates that you want to use nothing to print zero. If the second semicolon were missing, the positive number format would be used to print zero.

Scientific Notation

To display numbers in scientific notation, use the ampersand (&) followed by a number to specify the number of digits you want to display. For example, the format &3 would display 759.62 as 7.60e2.

The scientific notation format is the only format that will automatically round the displayed number.

Number Style Examples

Table 2 shows some examples of how different formats affect the printing of numbers. The Positive column shows how 1234.50 would be printed; the Negative column shows how -1234.50 would be printed. The Zero column shows how a value of zero would be printed.

The tilde character (~) has been used to indicate an Option-space (also called a hard space), and the <<< characters represent numbers too large for a given format to display.

Format	Positive	Negative	Zero
###	<<<	<<<	
####	1234	<<<<	
######	1234	-1234	
#####.##	1234.5	-1234.5	
####0.00	1234.50	-1234.50	0.00
#####0	1234	-1234	0
+#####0;-#####0;0	+1234	-1234	0
#####0DB;#####0CR;0~	1234DB	1234CR	0~
#####0~;(#####0)	1234~	(1234)	0~
###,##0	1,234	-1,234	0
##,##0.00	1,234.50	-1,234.50	0.00
^^^^^^^	~~~1234	~~-1234	~~~~~~~
^^^^^^0	~~~1234	~~-1234	~~~~~~0
^^^,^^0	~~1,234	~-1,234	~~~~~~0
^^,^^0.00	~1,234.50	-1,234.50	~~~~~0.00
*******	***1234	**-1234	*******
******0	***1234	**-1234	******0
***,**0	**1,234	*-1,234	******0
,0.00	*1,234.50	-1,234.50	*****0.00
£*,**0.00;-£*,**0.00	£1,234.50	-£1,234.50	£****0.00
£^^^^0	£~1234	£-1234	£~~~~0
~£^^^0;-£^^^0	~£1234	-£1234	~£~~~0
~£^^^0~;(£^^^0)	~£1234~	(£1234)	~£~~~0~
~£^,^^0.00~;(£^,^^0.00)	~£1,234.50	(£1,234.50)	~£~~~~0.00
&2	1.2e+3	-1.2e+3	0.0e+0
&5	1.23450e+3	-1.23450e+3	0.00000

Table 2

Entering the Display Format for a Field

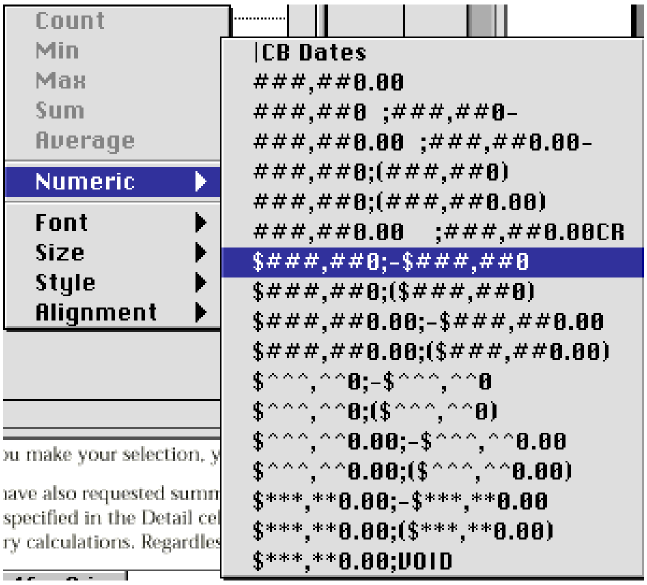
You enter a display format or custom format by choosing it from the Quick Report pop-up menu for the cell or by typing it into a cell.

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

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. For example:



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

CatBase 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.

2 Choose **Hide** from the pop-up menu.

CatBase displays the column in grey to remind you that the row will not appear when you print or preview the quick report.

You can also use a menu command or the Quick Report 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 Report 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.

CatBase displays the column in grey to remind you that it will not appear in the printed report.

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 dialogue box. Use this dialogue box to do the following:

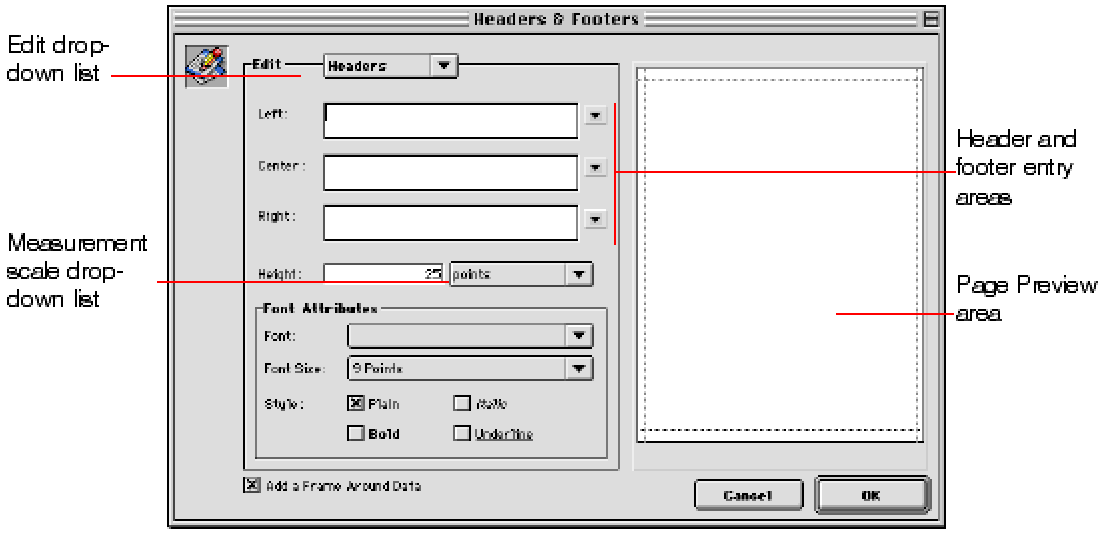
- Add page header and footer text,
- Specify the size of the page header and footer areas,
- Specify fonts, font sizes, and font styles for page header and footer text,
- Insert codes that add page numbers and the date and time to your reports.

You can only specify page headers when printing to a printer. See the section "Printing a Quick Report" 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 dialogue box appears:



The Headers and Footers dialogue 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.

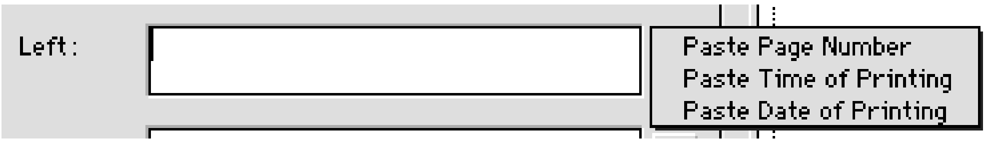
3 Enter the header or footer height in the Height area.

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 centimetres.

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. CatBase inserts the variable in the entry area at the insertion point. You can combine variables with text.

Specifying Font Attributes

You can specify different fonts, font sizes, justification, and styles for 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

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 procedure for previewing and printing your report.
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 spreadsheets.

This option exports the records in the quick report to a text file.

When you use this option, CatBase 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.
2 Choose Print from the File menu.

CatBase displays a standard create-file dialogue box and asks you to enter a filename.

3 Enter a filename and click the **OK** button.

CatBase displays a dialogue box that keeps you informed of the progress of the operation. Click the **Stop Printing** button to cancel the operation.

After the report is printed to a file, CatBase 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.

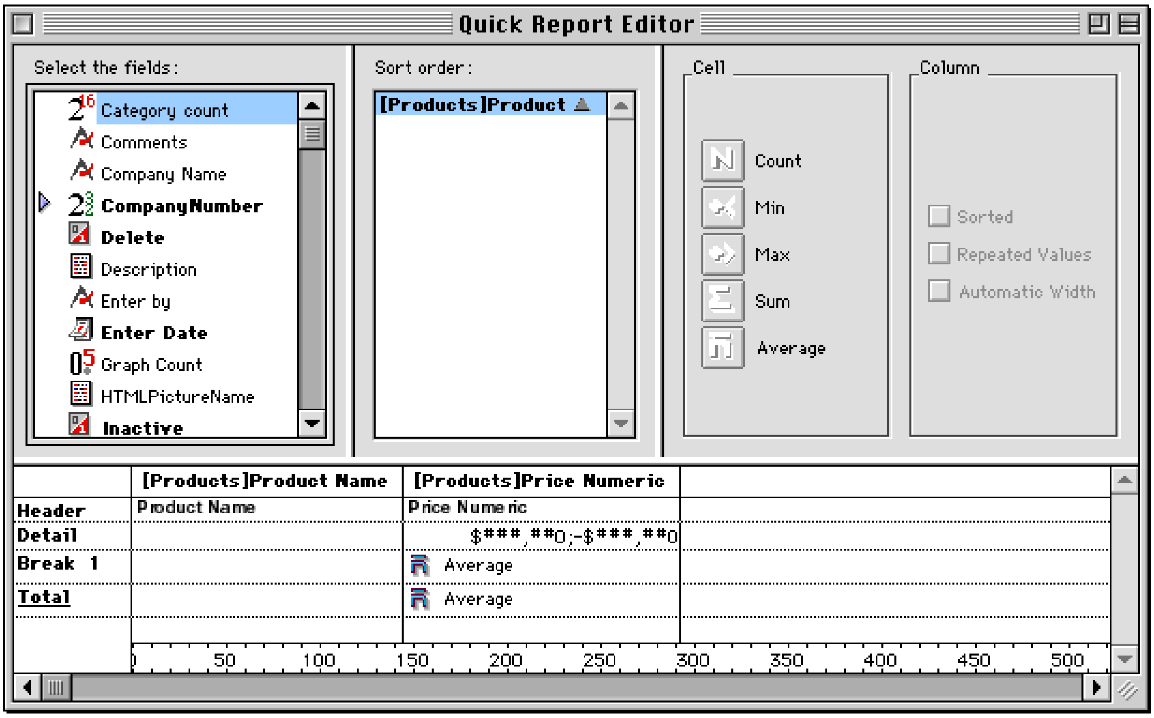
Print to Graph

This option directs the report to 4D Chart, CatBase’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 product prices, you should create a quick report with two columns, Product Name and Price. Use the Average summary calculation for Price. For example:



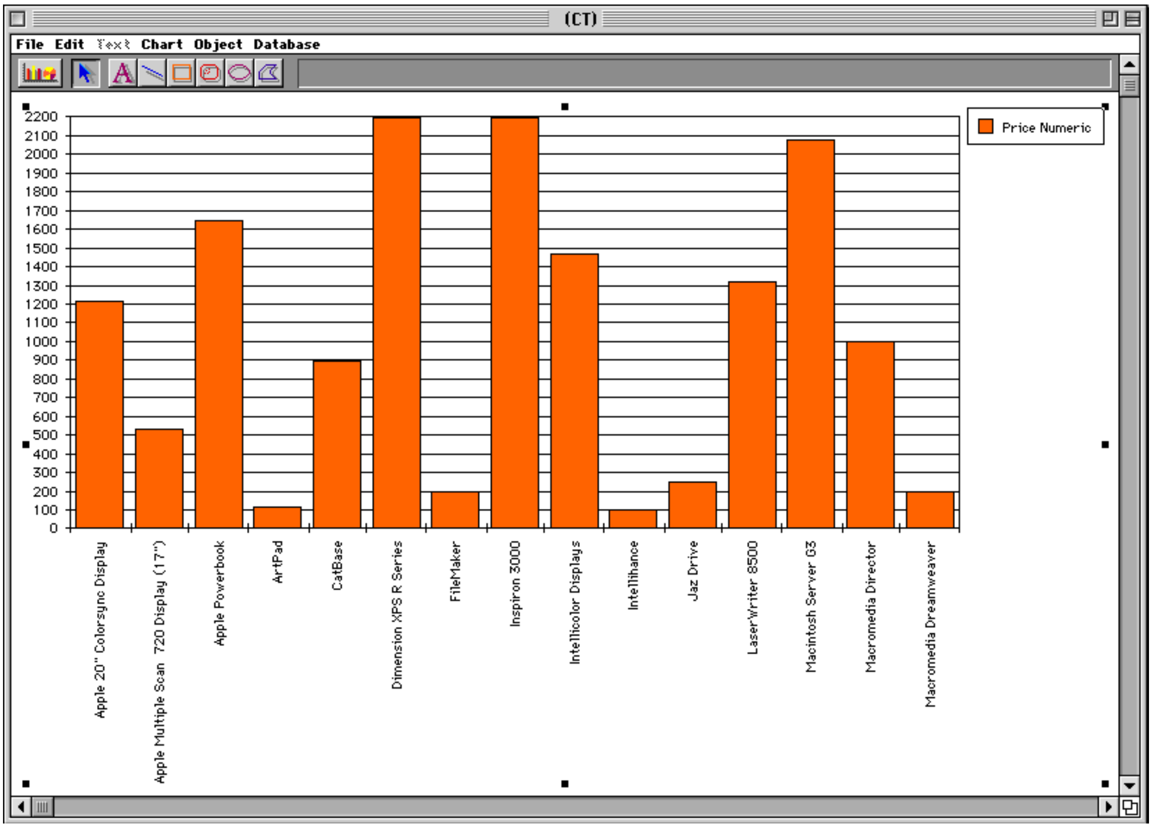
To print to a graph:

1 Choose **Graph** from the **Print Destination** hierarchical menu.

2 Choose **Print** from the **File** menu.

CatBase 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.

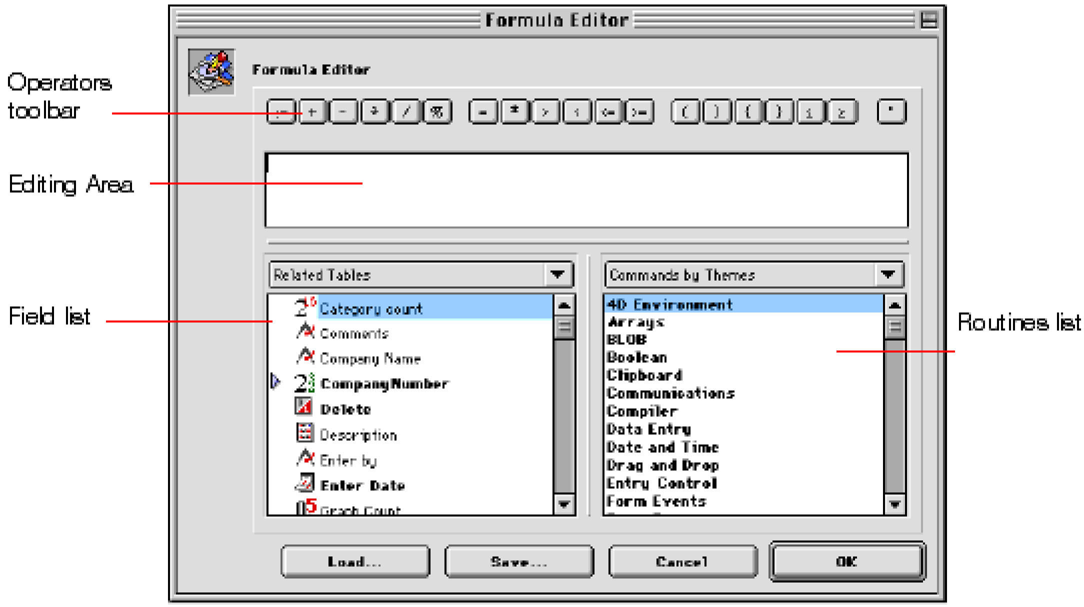
For more information about the options available in 4D Chart, see the section on Graphs later in this chapter.

Using Formulas in a Quick Report

Formulas can be added to Quick Reports; these can make it possible for you to include data from other tables or perform various kinds of calculations on data in the file on which the Quick Report is based.

The Formula Editor

The Formula editor provides many shortcuts for writing formulas. You can click field names, operators, and routines to add them to the formula.

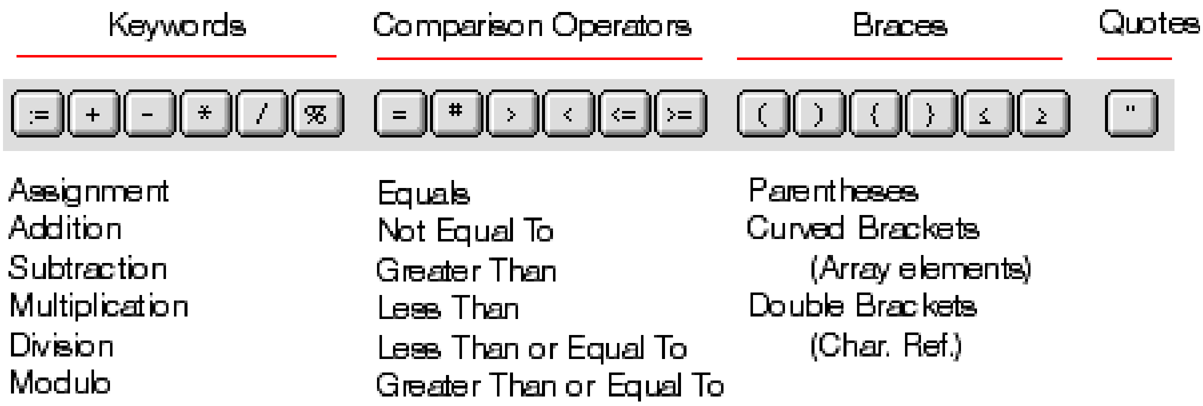


The Formula editor contains the following areas:

- **Editing area** This area displays the formula as you build and edit it.

You create the formula in this area by either typing your function or selecting operators, fields, and functions from the toolbar or panels at the bottom of the editor. You can add a field to the Editing area by double-clicking or using drag and drop.

- **Operators toolbar** The toolbar contains a row of buttons that you can use to insert operators into a formula. The operators are shown in the following illustration.



- **Fields list:** This area displays the names of fields in the selected table.
- **Routines list:** This area contains a list of drop-down menus or an alphabetical list of commands and user-written methods. Each drop-down menu lists a group of 4th Dimension functions and commands. The Routines list also displays the names of project methods and plug-in commands. These methods appear at the end of the list of drop-down menus.

The pop-up menu above the Routines list controls whether the commands are grouped by theme or listed alphabetically. Use this menu to control the display in the Routines area. You will need to be familiar with the 4Th Dimension programming language in order to know how to use the Routines. We have included some commonly used routines in the examples below. If you are using CatBase Multiuser, you would have received a complete set of 4th Dimension documentation with your 4D Server; this includes the Language Reference manual, which describes all the Routines. Please contact CatBase Software if you need help with this feature (send an email to support@catbase.com).

- **Buttons area:** This area contains buttons for saving your formula, loading a saved formula from disk, cancelling an editing session, and applying the formula.

You can build a formula by clicking operators and commands. You double-click field names or add them to the editing area using drag and drop. When you click an item, it automatically appears in the Editing area, where you can modify it with standard cut, copy, and paste techniques. You can also type directly into the Editing area.

A formula can be only one logical line long. You cannot press Enter and type another line.

As you write the formula, the Formula editor performs basic syntax checking. If it finds an error, it displays the error message above the Editing area.

Following are some example showing how you might use formulas.

Formula Example One: Converting Text to Uppercase

Suppose you want to display all the product names in uppercase, although they are not stored in the database that way.

➢ Add a Product Name column to your Quick Report.

➢ Click in the Product Name column heading and choose **Edit Column ...** from the pop-up.

The Formula Editor opens up.

➢ Click in the Product Name column heading and choose **Edit Column ...** from the pop-up. [Products]Product name is already set in the editing area.

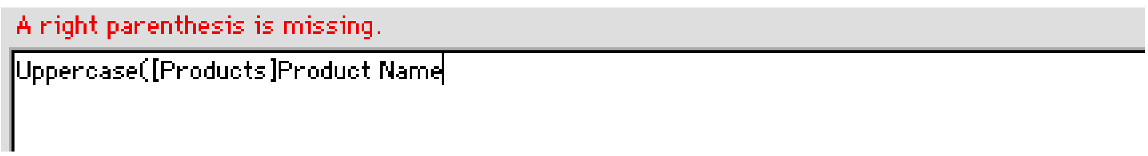
➢ Click in front of the [Products]Products name text in the editing area, and type the text “uppercase(“ (without the quote marks!). Note the opening parenthesis.

➢ Click at the end of the text and type in a closing parenthesis.

The text should look like this:

Uppercase([Products]Product name)

If you press the Tab key on your keyboard, CatBase will check your formula to make sure you’ve set it up correctly, and will alert you if anything is wrong. For example, if you forgot to add the closing parenthesis, you would see a message like this:



- Click on **OK**.

When the report is printed, all product names will appear in uppercase.

Example 2: Getting data from another table

Using the Formula Editor you can find related information in another table and use it in a report. Suppose, for example, we want to include the phone number for the supplier of each product. We would need to locate the appropriate Company record and then display its phone number. To do this:

- Make a list of the Product records you want to include in the report.
- Create a new Quick Report.
- Drag the Product Name field into the Quick Report editing area.
- Drag the Company Name field into the editing area.
- Click in the column heading of the Company Name column and choose Insert Column from the pop-up.

The Formula editor appears.

- Create a formula like this:

QUERY([companies];[Companies]recordnumber=[Products]CompanyNumber)

- Click on OK.

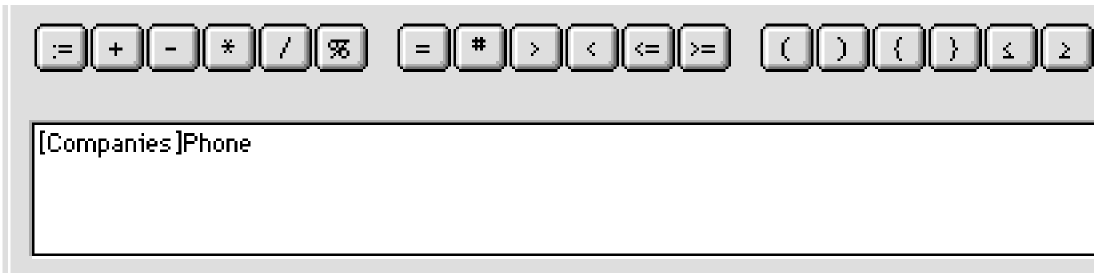
The new column is called C1.

- Click in the column header for C1 and choose Hide.
- Click to the right of the new column and insert another column.
- when the Formula editor appears, click in the pop-up menu above the list of fields and choose All Tables.

The field list changes to a list of tables.

- Scroll down a little in the list of tables until you find Companies. Click on the arrow (the plus sign on Windows) next to Companies. The list expands to display all the fields in the Companies table.
- Double-click on the Phone field.

The editing area should look like this:



Note: The names of the tables and fields might be different in your copy of CatBase.

- Click on OK.
- Click twice in the cell that is at the intersection of Column C2 and row H.
- Type in “Company Phone”

When you print the report, it will find each company’s phone number and print it.

Labels

CatBase's Label editor provides a convenient way to print a wide variety of labels.

With the Label editor, you can do the following:

- Design labels for mailings, file folders and file cards, and for many other needs
- Specify the font, font size, and style to be used for the labels
- Specify the number of labels across and down on each page
- Specify the label page margins
- Load and save label designs
- Print labels

The Label Wizard

You use the Label Wizard to create, format, and print labels. The Label Wizard contains settings for designing labels and positioning the labels on label paper. For example, when producing mailing labels, you might want a label design that includes the company's name on the first line, the street address on the second line, and so on.

As part of the design, the Label Wizard enables you to specify the number of labels on the page and the margins of the label paper so that the label text is centred within the labels.

The Label Wizard consists of two pages: the Label page and the Layout page, each identified by a tab at the top of the dialogue box. You use the Label page to specify the content of the label and the Layout page to define the size and position of the labels on the page. When you create a satisfactory label design, you can save it to disk so that you can reuse it.

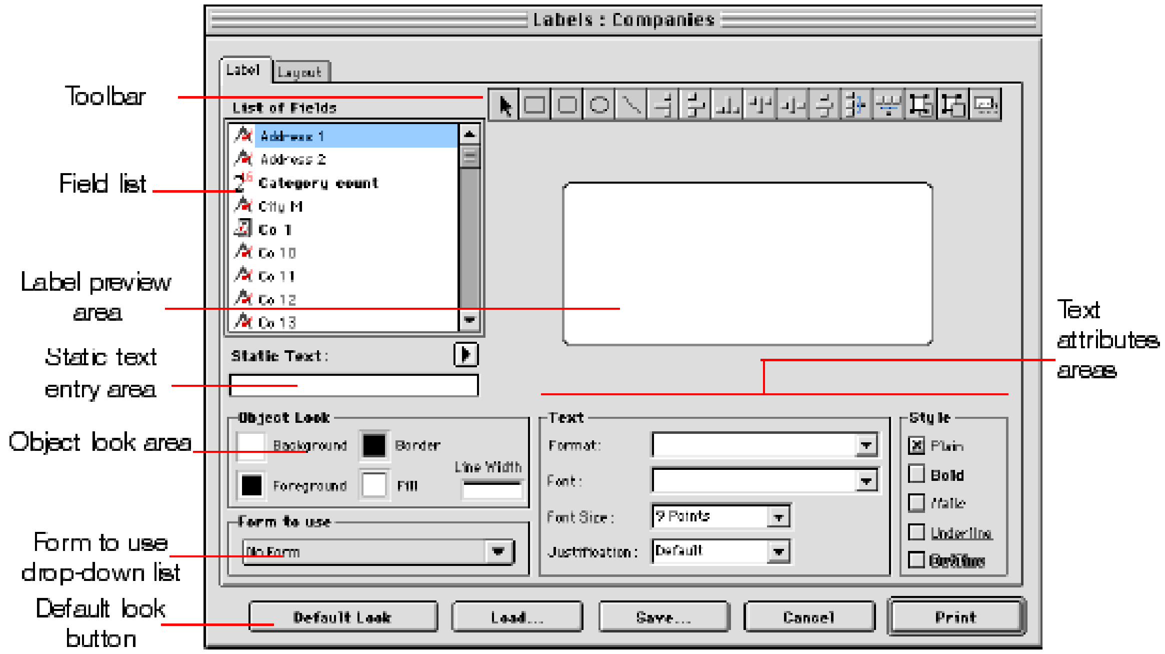
Opening the Label Wizard

To open the Label Wizard:

1. Find the records for which you want to create labels.
2. Choose **Labels** from the **File** menu.

CatBase displays the Sort editor. Sort the records in the order you want them printed.

CatBase then displays the Label page of the Label Wizard.



Label Page

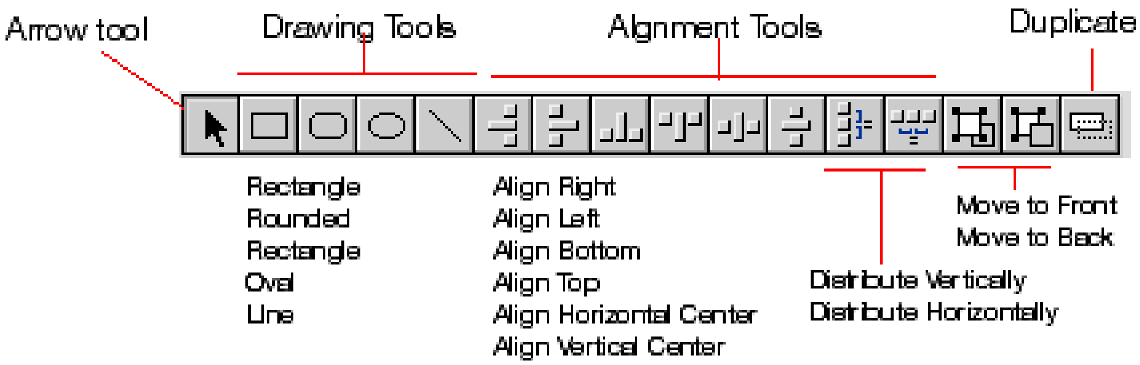
The Label page contains settings for designing and formatting labels.

The Label page contains the following elements:

- **Fields list:** This area displays the names of the fields in the current table in a hierarchical list.
- **Label preview area:** You use this area to design your label.
- **Toolbar:** The Label Wizard toolbar contains tools for drawing, selecting, aligning, distributing, layering, and duplicating objects. For complete information on the toolbar, see the section “The Label Wizard Toolbar”.
- **Object Look area:** These controls let you specify foreground and back-ground colours, fill patterns, and borders for individual objects on the label.
- **Default Look button:** This button applies the default set of Object Look attributes to the selected object.
- **Static Text entry area:** This area allows you to add static text objects to the label.
- **Text attributes areas:** These controls allow you to specify the font, font size, display format, and style of the text.
- **Form to Use drop-down list:** This drop-down list lets you bypass the Label Wizard and use a form to print the labels. If you are using the Label Wizard to create the label, choose No Form (the default) from this list. If you want to use a form, choose it from this list.
  Note: This list displays all the forms that have been set up for the selected table. Forms that have been designed specifically for printing labels have names beginning with “Label”. You should not try to use any other forms for printing labels -- you’ll get unpredictable and sometimes very bizarre results. CatBase will then ignore any other label specifications in the Label Wizard and print the labels according to the design or the specified form.

The Label Wizard Toolbar

The Label Wizard toolbar contains the following tools:



Creating a Label Design

You create a label by dragging field names to the Label Preview area, adding static text, drawing graphic objects using the graphics tools in the toolbar, and pasting graphics from the Clipboard. You can edit the label by distributing, moving, resizing, layering, and aligning objects.

With the Object Look and Text attribute areas, you can control the font attributes, foreground and background colours, fill patterns, and borders of individual objects.

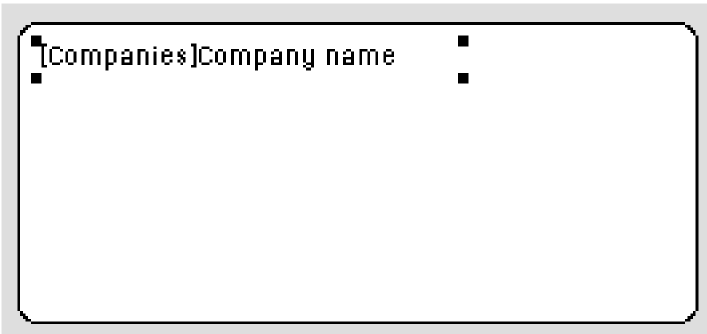
The Label Preview area shows the approximate size and shape of the selected label. Before adding elements to the label, you may want to specify your label paper and label dimensions using the Layout page.

For information, see the section “Specifying the Label Layout”.

To create a label:

1 Drag the first field you want to display in the label from the Fields list to the Label Preview area.

Your field is added to the Label Preview area. Selection handles indicate that it is selected:



2 If you want to concatenate a field to this field, drag the new field from the Field list onto the existing field.

Otherwise, continue dragging fields to the Label Preview area.

A “+” between field names in a field object indicates that the fields are concatenated on a single line. When CatBase prints the label, it will insert a space between the fields on the same line. The following illustration shows the concatenation of the City and County fields:

As you add fields, you can reposition them by dragging or using the alignment tools in the toolbar.

3 To add a text element to the label, enter the text in the Static Text area and click the arrow.

The static text object is added to the Label Preview area.

After you add the element to the label, you can reposition it by dragging and aligning it with other objects.

4 (Optional) Using a drawing tool, draw any graphic objects that you want to add to the label.

For example, you could add different backgrounds to the “TO:” and “FROM:” sections of the label.

5 (Optional) Paste a graphic from the Clipboard into the Label Preview area.

For information on adding a graphic to the label, see the section “Adding a Graphic to the Label”.

After you add all required elements to the Label Preview area, you can use any of the editing tools to modify the label design.

How the Label Wizard Handles Blank Fields

Some records in your database may not contain entries for every field. When printing labels, the Label Wizard handles blank fields intelligently.

Instead of leaving gaps where the data should be, the Label Wizard concatenates the data.

If a field in a line contains no data for a particular record, the Label Wizard concatenates the remaining fields in the line without leaving a blank space for the missing data.

If an entire line contains no data for a particular record, the Label Wizard can vertically concatenate the remaining lines in the label without leaving a blank line. In order for this feature to work, you should add the fields in the following way:

As you click on a field in the field list, hold down the Shift key and keep holding it as you drop the field on top of the previous field.

Holding the Shift key down tells the Label Wizard that you want to concatenate the field to the existing fields, but that it should go onto a new line.

In other words, if you concatenate a field onto an existing field without holding down the Shift key as you do so, the field will be added to the same line as the existing field, whereas if you hold the Shift key down as you drag the field, it will start a new line if that field contains data.

The Label Wizard automatically centres the text of the label inside the label area.

Clearing Fields

If you make a mistake, you can remove one or more fields from the label.

To remove an object:

- Select the object and press Backspace (on Windows) or Delete (on Macintosh).

The selected object is removed. If the object is a row of concatenated fields, pressing Backspace removes only the last field in the row. Continue pressing Backspace to remove more fields from the row.

Working with Label Wizard Objects

This section discusses the techniques for editing objects placed on the label. It includes:

- Creating graphic objects,
- Aligning objects,
- Distributing objects,
- Layering objects,
- Duplicating objects,
- Moving objects,
- Resizing objects,
- Adding a border to an object,
- Adding foreground or background fill colours, patterns, and borders,
- Pasting a graphic into the label,
- Deleting objects.

Creating Graphic Objects

You can create a graphic object by drawing.

To create an object:

1 Select the type of object you want to draw by clicking its tool in the toolbar.

The pointer becomes a crosshair when it is over the Label Preview area.

2 Drag to create an area for the object.

For two-dimensional objects (ovals, rectangles, and rounded rectangles), drag diagonally.

Note: Hold down the Shift key as you draw to constrain the object to a regular shape. Lines are constrained to horizontal or vertical, rectangles are constrained to squares, and ovals are constrained to circles.

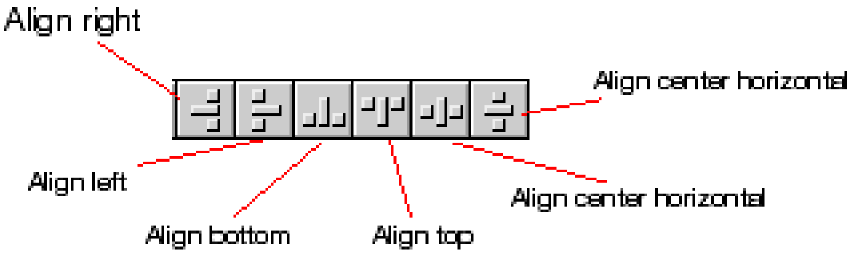
3 When you have finished drawing the object, release the mouse button.

The Label Wizard creates the object and makes it the currently selected object. The Arrow tool is automatically selected and the pointer becomes an arrow.

Aligning Objects

The alignment tools let you align objects to each other. When you align one object to another, you can align it to the top, bottom, side, or horizontal or vertical centre of the other object.

The following illustration shows the Label Wizard’s alignment tools:



The arrangement of lines represents the function of each tool. For example, the Align Right icon shows the lines aligned vertically on the right side of the box. The Align Centre Vertical icon shows the lines aligned vertically in the middle.

<u>To align a set of objects:</u>

1 Select the objects that you want to align.

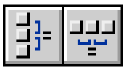
Shift-click to select several objects.

2 Click the alignment tool that corresponds to the alignment you want.

The Label Wizard aligns the selected objects according to the alignment you selected.

<u>Distributing Objects</u>

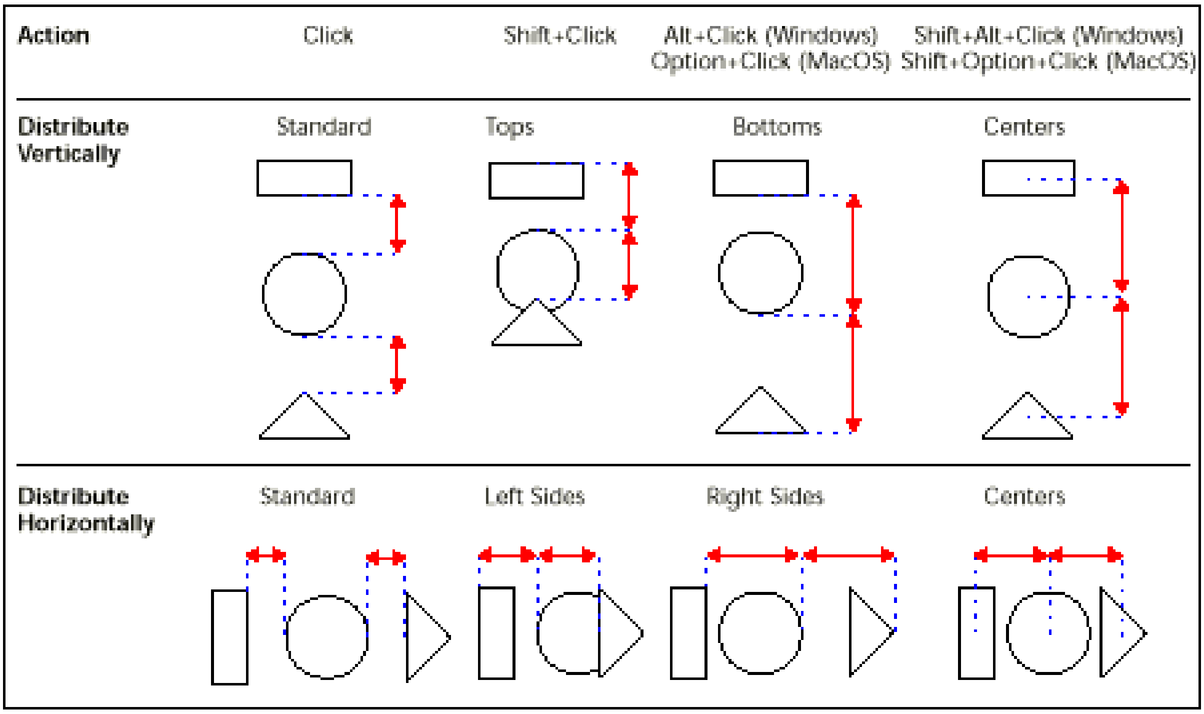
The toolbar includes two tools that let you distribute three or more objects evenly.

Distribute vertically  Distribute horizontally

When you use either tool, you can modify its action by holding down the Shift or Alt keys when you click either tool.

- Clicking: Distributes the objects from their adjacent sides,
- Shift+Clicking: Distributes the objects from their left sides (horizontal) or tops (vertical),
- Alt+Clicking: Distributes the objects from their right sides (horizontal) or bottoms (vertical),
- Shift+Alt Clicking: Distributes the objects from their centres.

These rules are illustrated in the following diagram.



To distribute a set of objects:

1 Select the objects that you want to distribute.

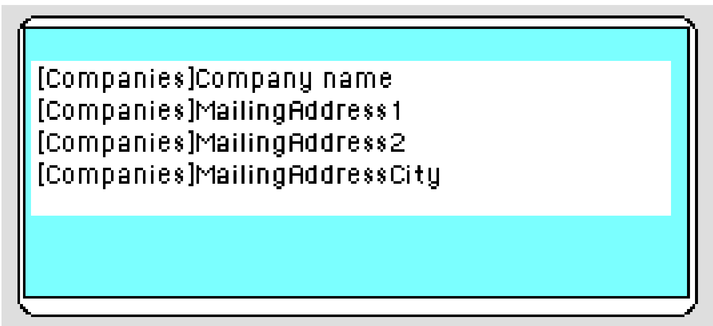
You must select at least three objects. Hold down Shift and click to select several objects.

2 If desired, hold down a modification key or key combination and click the Distribute Horizontally or Distribute Vertically tool.

The Label Wizard distributes the selected objects according to the rules you selected.

Layering Objects

You may want to create a design that uses objects in different layers. For example, you may want to place a shaded rectangle behind the fields on a label. The Label Wizard provides the Move to Back and Move to Front, tools that let you layer objects on the label. The following illustration shows objects in front of other objects.



Clicking the Move to Front or Move to Back tools moves the selected objects to the top or bottom layer. If you want to move the object only one layer toward the front or back, hold down the Shift key when you click Move to Front or Move to Back.

To move an object to the front or back:

1 Select the object or objects that you want to move to the back.

Hold down Shift and click to select several objects.

2 Click the Move to Front or Move to Back tool in the toolbar.

The Label Wizard moves the selected object or objects to the front of or behind all the other objects.

Note: When you move an object to the back, it may be hidden by objects in front of it. To see the object, select the object in front and send it to the back.

Duplicating Objects

You can duplicate any object in the label. Copies of active objects retain all the properties of the original, including foreground and background colours and fill patterns, text attributes, and display format.

To duplicate an object:

1 Select one or more objects.

Hold down Shift and click to select several objects.

2 Click the Duplicate tool in the toolbar.

The Label Wizard duplicates the selected object or objects.

Moving Objects

You can move objects by selecting them and dragging with the mouse.

You can also use the arrow keys to move the object one or ten pixels at a time.

- To move an object one pixel at a time, select the object and press an arrow key.
- To move an object ten pixels at a time, select the object, hold down the Ctrl key (on Windows) or Command key (on Macintosh), and press an arrow key.

Resizing Objects

You can resize any object on the label by selecting it and dragging a selection handle.

To resize an object by dragging:

1 Select the object you want to resize.

2 Move the pointer over one of the four handles that appear on the selected object.

The pointer changes into a multi-directional arrow and the handles disappear.

3 Drag the handle toward the centre of the object to shrink it.

OR

Drag the handle away from the object’s centre to enlarge it.

The Label Wizard resizes the object.

Adding a Border to an Object

You can add a one-pixel border to an object. The border can be from one to nine pixels from the object.

To add a border:
1 Select the object.
The selected object is indicated by selection handles.
2 Hold down the Ctrl key (Command key on Macintosh) and press a number from 1 to 9.

A border is added to the object. The distance from the object (in pixels) is controlled by the number you pressed.

Adding Foreground or Background Colours

The Label Wizard lets you add colours to objects for display on a colour monitor or (if your printer supports colour) for colour printing. By combining selected colours with fill patterns, you can display thousands of different colour shadings.

Note: Colours appear black and white on a black and white monitor. They appear as shades of gray on a gray-scale monitor. The colour palettes display shades on a gray scale monitor.

You can specify different colours for foreground pixels (pixels that appear black on a black-and-white monitor) and background pixels (pixels that appear white on a black-and-white monitor). If the object is a field or static text, the foreground colour controls the colour of the text and the background colour controls the colour of the object's rectangle.

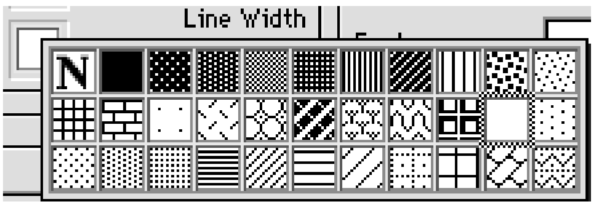
You set foreground and background colours using the Background and Foreground picture menus in the Object Look area of the Label Wizard.

If your monitor supports 16 colours, choose the colours from the first 16 colours on each palette. If your monitor supports 256 colours (or more), any colours you choose will display properly.

Setting Fill Patterns

You can apply a fill pattern to any two-dimensional graphic object in the form such as an oval, a rectangle, a line, the enclosed area of a field or static text object, and a two-dimensional object's border.

The Fill picture menu controls the fill pattern for the selected object:



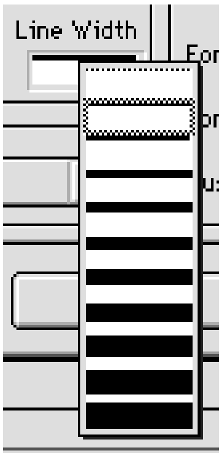
The Border picture menu controls the fill pattern for the border.

Setting Border Patterns

You can set patterns for the borders of any object in the form that has a border such as an oval, a rectangle, and a grid object. The border patterns available are the same as the fill patterns. The appearance of the border also depends on the line width you have specified for the border.

Setting Line Width

The Line Width pop-up menu controls the width of a line or the width of the border of a two-dimensional object:



To set a line width, select the object and choose a line width from the Line Width pop-up menu.

Restoring the Default Look

When you add an object to the label, it takes on the Object Look attributes of the most recently created object. If you want to assign the default Object Look attributes to this object (or any object), select the object and click Default Look. The foreground and background colours, fill patterns, and border width are reset to the default settings.

Adding a Graphic to the Label

In addition to the drawing tools in the toolbar, you can paste a graphic from the Clipboard into the label.

To paste a graphic into the label:

1. Place the graphic on the Clipboard by copying it from somewhere else (your graphics program, for example).
2. Choose **Paste** from the **Edit** menu or press Ctrl+V (Command–V on Macintosh).

The graphic appears in the Label Preview area with selection handles.

You can then move, align, distribute, or resize the object like any other object.

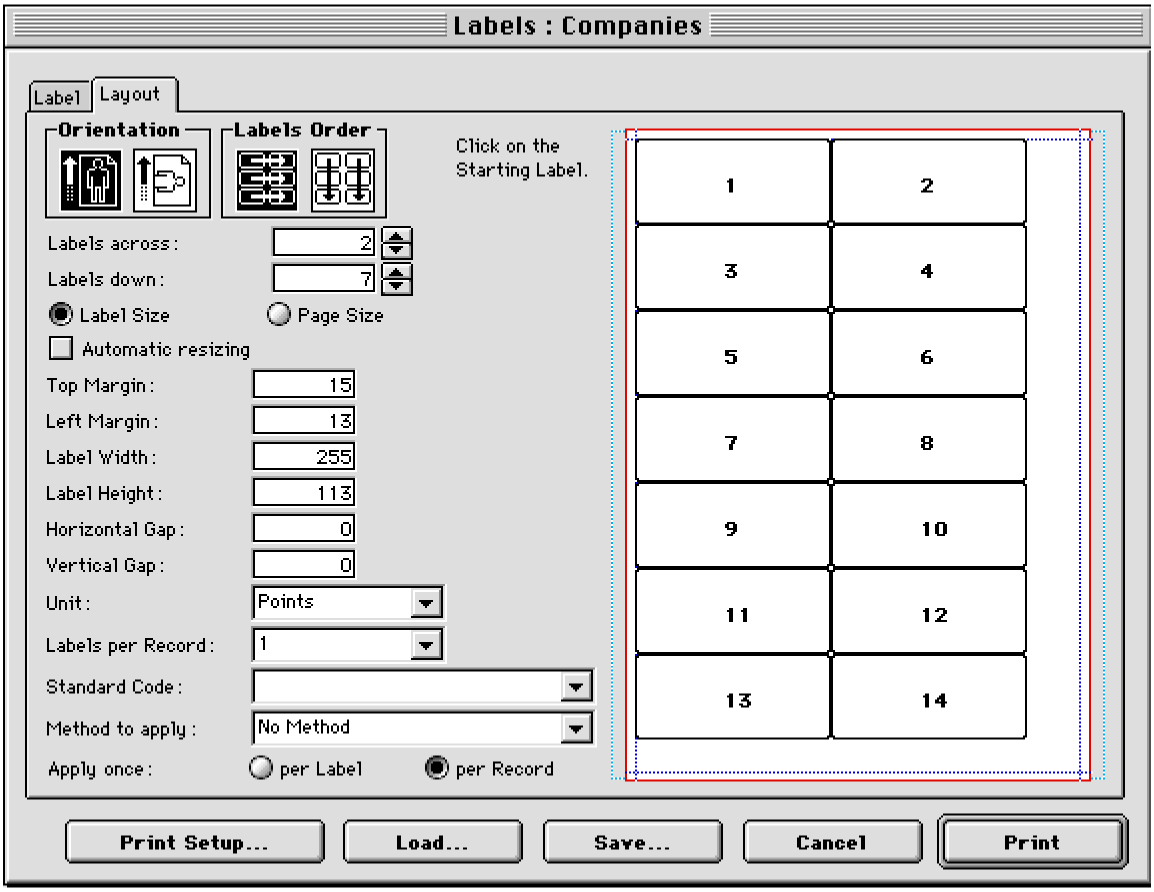
Deleting Objects

You can delete the selected object by pressing the Backspace key (Delete key on Macintosh). If the selected object contains concatenated fields, the last field is removed from the object. If you want to delete the entire object, continue pressing the Backspace or Delete key.

Specifying the Label Layout

You specify the label layout with the Layout page of the Label Wizard.

You can display the Layout page at any time by clicking its tab.



The Layout page contains the following elements:

Orientation and Labels Order buttons

These buttons enable you to specify the page orientation and the order in which information is assigned to labels.

Labels across and down boxes

These boxes are used to control the size of labels by specifying the number of labels that appear on your label paper.

Layout preview area

This area provides a reduced view of how an entire page of labels will look, based on the dimensions you enter in the Label Wizard. The page preview also reflects the paper size selected in the Print Setup dialog box. You can also select the first label on the page to be printed. The red border indicates the size of the physical page, and the blue border indicates the printable area.

Label Size and Page Size radio buttons

These buttons are used to select the label or the page for setting label and page dimensions. If you click Label Size, you can enter the label width and label height in the appropriate areas. If you click Page Size, you can enter values for right margin and bottom margin.

Margin boxes

These boxes are used to specify the dimensions of the label and the page size, depending on the radio button you select. After you have entered the margins of your label paper, you may need to make some additional adjustments so that the label text is centred in the labels. You can use both positive and negative numbers in the Margin boxes to increase and decrease the margins.

Automatic Resizing

If Automatic Resizing is checked, the values in the Label Width and Label Height entry areas are set automatically.

Horizontal Gap

This area controls the amount of space between label columns.

Vertical Gap

This area controls the amount of space between label rows.

Unit drop-down list

This drop-down list allows you to change the units in which you specify your label and label page measurements. You can use pixels, millimetres, centimetres, or inches.

Labels per record drop-down list

This control lets you print more than one copy of each label. If you print more than one copy, the Label Wizard prints the copies consecutively rather than making copies of the label pages.

Standard Code drop-down list

This feature is not currently implemented.

Method to apply

This feature is not implemented.

Apply Once radio buttons

This feature is not implemented.

File buttons

These buttons provide options for page setup, printing, saving, and loading label designs.

To specify the layout of the label paper you are using:

1. Click the **Layout** page tab.
2. Click the **Print Setup** button.

The Print Setup dialogue box for your operating system appears.

3. Choose the desired printer and click OK.

If necessary, the Label Preview area changes to reflect your selection.

The remaining entry areas on the page change to reflect the selected label paper's characteristics. If necessary, you can modify these specifications.

4. Click the appropriate Orientation and Labels Order pictures.

You can choose between portrait and landscape orientation and horizontal or vertical order.

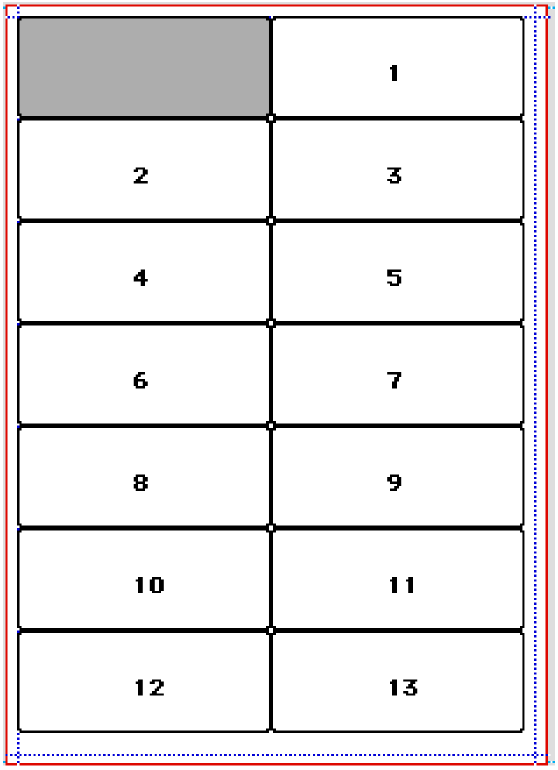
5. Enter the number of labels in each row of your label sheet in the Labels Across box and the number of labels in each column in the Labels Down box.

The Label Preview area adjusts to display the appearance of the labels on a printed page.

6 If the first sheet of label paper is partially used, click on the first blank label in the Label Preview area.

The Label Wizard will begin printing labels on the label you indicated.

The following illustration shows the Preview area after clicking on the second label area.



7 If desired, choose a unit of measurement from the Unit drop-down list to use for entering margin sizes.

8 Enter values to reflect the margins on your label paper.

Use the Label Size and Page Size radio buttons to control whether you use the entry area for the size of the label or the size of the page.

The size of the individual labels in the label page preview will adjust to accommodate the margins. For example, if you increase the size of your margins to two inches, top and bottom, the size of the individual labels will shrink to maintain the same number of labels that you specified earlier.

Because some printers use portions of the margin to hold the label sheet in place, the printer may not take the full margins into account when printing your labels. In this case, you may need to adjust the margin settings so the label text is properly centred in each label.

Since the printer uses part of the margins, the printer begins measuring the margins from a point that is not precisely at the edge of the label paper. When the labels are printed, the label text may appear skewed to the right or to the bottom of the label paper.

To compensate for this lost margin space, you can use negative numbers in some of the margin boxes. When placed in the Right margin box, negative numbers pull the label text to the right. When entered in the Top margin box, negative numbers pull the label text toward the top of the page.

Note: As a rule, using a negative number in a margin box moves the label text toward the margin you are setting.

9 (Optional) If you want to print more than one copy of each label, use the Labels per Record drop-down list to choose the number of copies to print.

The copies are printed consecutively on the label paper. The Label Wizard does not duplicate the entire label page.

Saving and Loading Label Designs

CatBase lets you save each label design as a file that you can open from the Label Wizard. By saving label designs, you can maintain a library of labels that you can use according to your needs.

Saving a Label Design

To save a label design:

1 Click the **Save** button.

CatBase displays a dialogue box where you can enter a file name for the label design.

Note: Label files on Windows are denoted by the file extension .4LB.

2 Enter a filename for the label design and click **OK** (on Macintosh, click the **Save** button).

Loading a Label Design

You can load the label design whenever the Label Wizard is active.

To load a label design:

- Click the **Load** button.

CatBase displays an open-file dialogue box where you can select the filename of a label design. Double-click the filename or select the filename and click **OK**. (On Macintosh, choose a filename and click **Open**).

CatBase replaces the current label design with the design you selected.

Printing Labels

After you have completed your label design, you can preview or print the labels. You may want to print first on regular paper so that you can check the placement of text before you use the more expensive label paper.

To print your labels:

1 Click the **Print** button.

The Print dialog box appears for the printer you selected in the Print Manager (or the Chooser, on Macintosh). If you check the Print Preview check box before clicking OK, the labels are previewed to screen.

After the labels are printed, CatBase closes the Label Wizard and returns you to your list of records.

Quick Graph

CatBase allows you to create a wide variety of two- and three-dimensional plots without having to export the data to a graphics package. You can create graphs from the data in your database or from data that has been copied to the Clipboard from another application.

You can graph data directly from fields or you can graph the results of calculations on data.

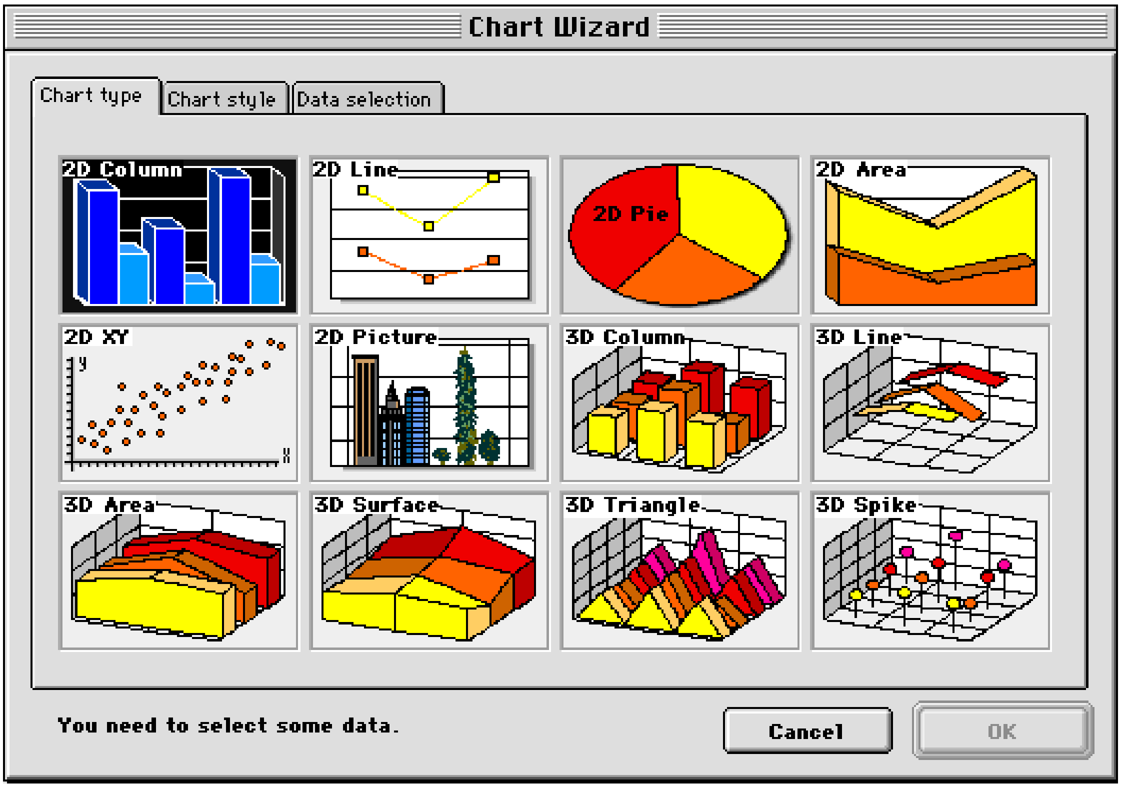
You can print your graphs or copy them to the Clipboard and paste them into another application.

The Chart Wizard

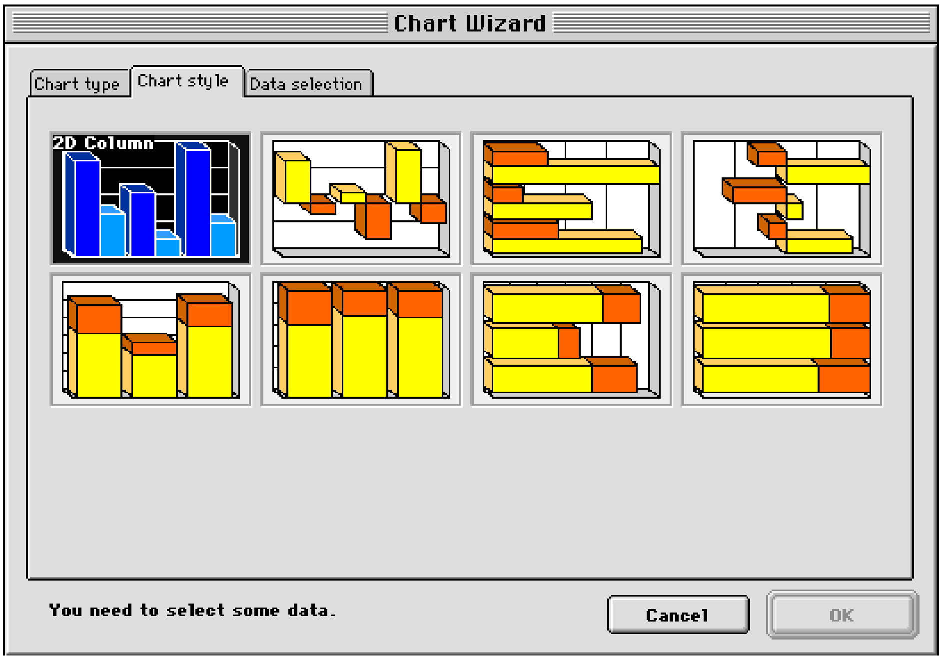
The Chart Wizard is the dialogue box in which you create graphs. You choose the graph type and specify the data to be graphed.

The Chart Wizard has three pages:

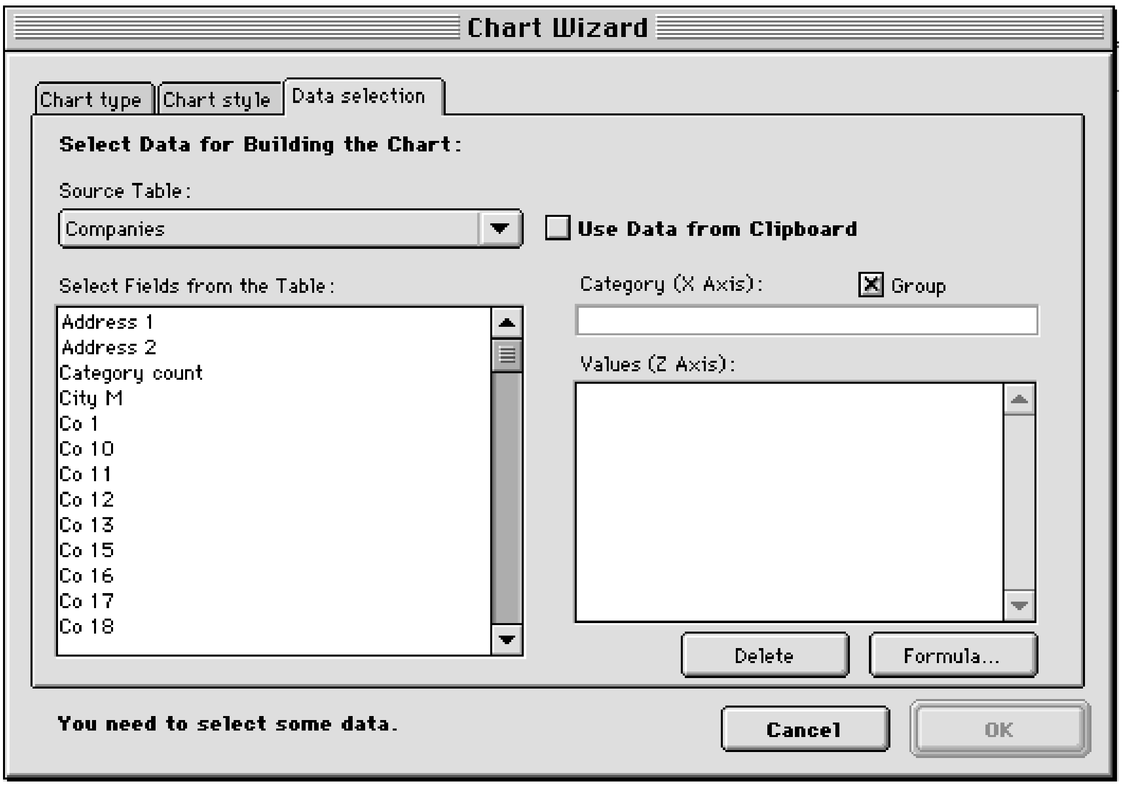
- **Chart Type:** Displays the types of charts supported by the Chart Wizard:



- **Chart Styles:** Displays the variations on the chart type selected in the Chart Type page. The following illustration shows the styles available for the 2D Column type:



- **Data Selection:** Allows you to assign data to the chart axes. It displays the appropriate options for the selected chart type. The following illustration shows the Data Selection page for 2D Column charts.



You create a chart by choosing a chart type in the Chart Type page and assigning data to the axes with the Data Selection page. Optionally, you may choose a chart style. If you do not make a selection from the Chart Style page, a default style for the selected chart type will be used.

Quick Graph Terminology

Quick Graph can create either two-dimensional or three-dimensional plots. For either type of plot, it refers to the horizontal (category) axis in the plot as the X-axis and the vertical (values) axis as the Z-Axis. If a third dimension is included in the plot, it is a second category axis and is referred to as the Y-axis. The second category axis is sometimes called the series axis.

If you specify a two-dimensional chart type, the Data Selection page will have two entry areas — for the X- and Z-axis fields. If you specify a three-dimensional chart type, the Data Selection page will also have a Y-axis entry area in which you specify the series.

Creating a Graph

To create a graph, first find the records that you want to include.

1. Then choose **Chart ...** from the **FIle** menu.

The Chart Type page of the Chart Wizard appears. Complete descriptions of each chart type are included later in this chapter.

2. Click a chart type.

When you click on Chart Type, the Chart Style and Data Selection pages change to match the requirements of the select type.

3. (Optional) Click the Chart Style tab.

The styles for the selected chart type appear.

4. (Optional) Click the desired chart style.
5. Click the Data Selection tab.

The Data Selection page appears, displaying the appropriate options for the selected chart type.

6. Make sure that the appropriate table is selected in the Source Table menu.
7. Drag the field that you want to assign to the Category axis to the Category box or double-click it.
8. (Optional) Drag the Series field to the Y-axis (Series) box or double-click it.

The name of the field appears in the Y-axis (Series) box.

Note: If you make a mistake when choosing the X-axis or Y-axis fields, replace the field by dragging the desired to field to Category or Series box.

9. Drag one or more fields or formulas to the Z-axis area or double-click it.

For instructions on creating a formula, see the section “The Formula Editor”.

Note: If you make a mistake when choosing a Z-axis field, click Delete to remove it.

10. If you want to have the Z-axis values summed for each X-axis category, click the Group check box.

This option is used when the X-axis categories are not unique and you want each category to appear only once, with the values for each instance summed. For more information about this option, see the section “Grouping Non-unique Categories and Series”.

11 When you have finished designing your graph, click OK.

The Chart Wizard creates the graph and displays it in a window. The window includes the standard Chart menus and tool palette. With these menu commands and tools, you can modify the chart.

Modifying the Graph

After you have created a graph, you can change its type or attributes.

Changing the Graph Type

After you have created a graph, you can plot the selected data using a different chart type. Of course, you can only choose among the chart types that are valid for the type of data that you are plotting. For example, if you are plotting two-dimensional data, you cannot choose a three-dimensional graph type.

To change graph types:

Choose another graph type from the Graph drop-down list in the Chart Tool palette.

OR

Choose another graph type from Chart Type item in the Chart menu.

OR

On Macintosh only, hold down the Control key and press the mouse button to display a pop-up menu of graph types.

The graph is redrawn using the new graph type.

If you switch to a pie chart from a type of graph that displays more than one Z-axis field, the Chart WIzard graphs only the first field assigned to the Z-axis.

Changing the Graph's Attributes

You can modify a graph using any of the tools available in the Chart Wizard.

For example, you can:

- Resize a graph,
- Customise graph axes,
- Show and hide grid lines,
- Display the series values,
- Customise legends,
- Modify or remove depth in a two-dimensional graph,
- Change the perspective of a three-dimensional graph,
- Change the graphic attributes of chart objects,
- "Explode" a wedge from a pie chart,
- Add a picture to a picture chart.

Printing a Graph

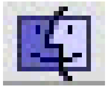
After you are satisfied with your graph, you can print it by choosing **Print ...** from the Chart Wizard's **File** menu.

Copying a Graph

You can copy a graph to the Clipboard and paste it into a Picture field in CatBase or into another application. To do this, choose **Copy** from the **Edit** menu.

The graph is placed onto the Clipboard, and can then be pasted into another application.

Quick Letter

Quick Letter is an optional plug-in called 4DWrite which makes it possible for you to send letters, emails, and faxes to companies or individuals in your database. ( Note: Currently, the faxing feature is available only for Macintosh).

With Quick Letter you can:

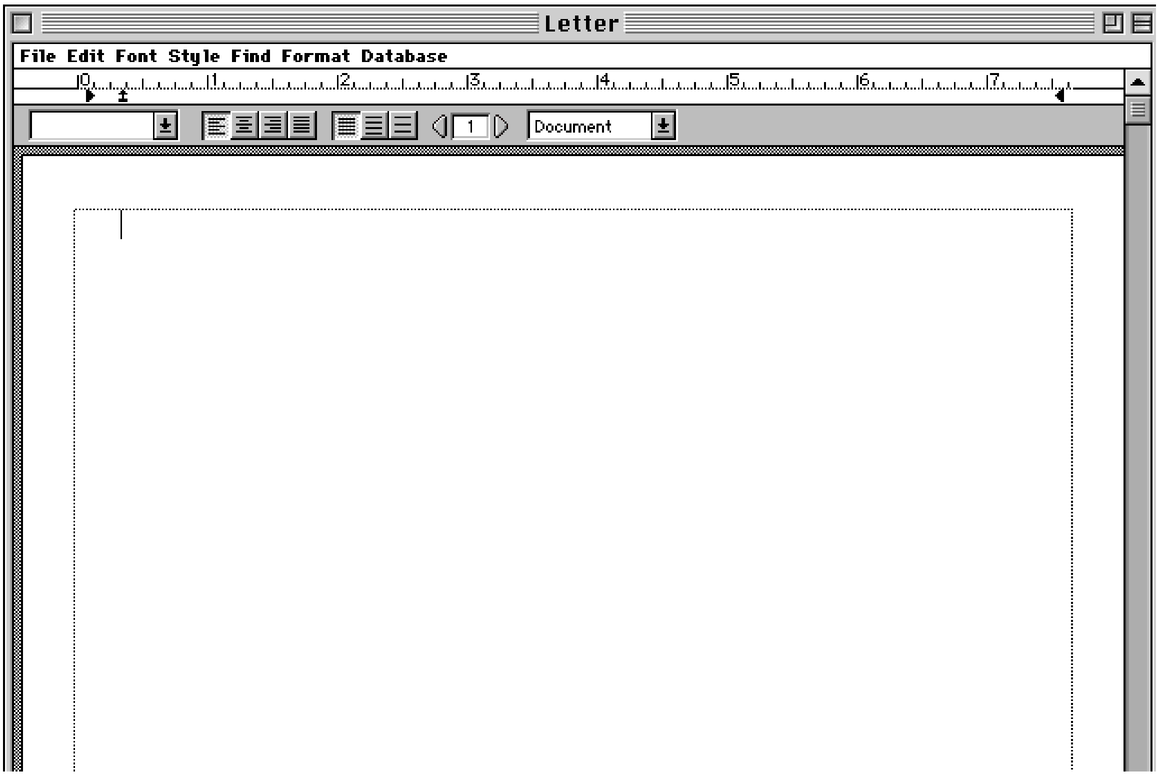
- Merge data from the Companies, Contacts or Products tables
- Add pictures
- Use the usual formatting options that you would expect to find in a word processor

If you have purchased the 4DWrite plug-in, you will have received complete documentation with it, so in this section we will just go over the basics.

To create a letter:

1. Create a list of the Companies, Contacts or Products to whom you want to send a letter.
2. Choose **Quick Letter ...** from the **File** menu.

A new Letter screen opens:



This window has its own menu bar:

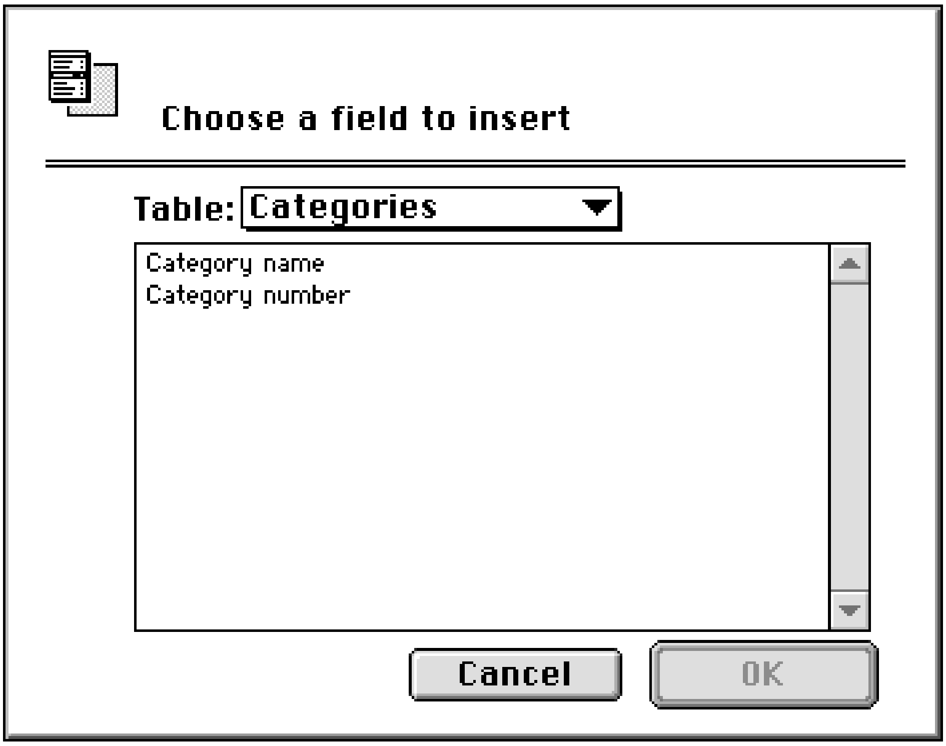
You create your letter just as you would write a letter using your usual word processor. The big difference though, is that with Quick Letter you can merge data from the database into your letters. Let's suppose, for example, that you want to send a letter to some companies that you have recently added to the database to inform them of the information you've added so that they can check it for accuracy.

3. Type the text of the letter, using the formatting options in the menu bar to select the font, style, etc.

Inserting Data

4. To merge data from the database:

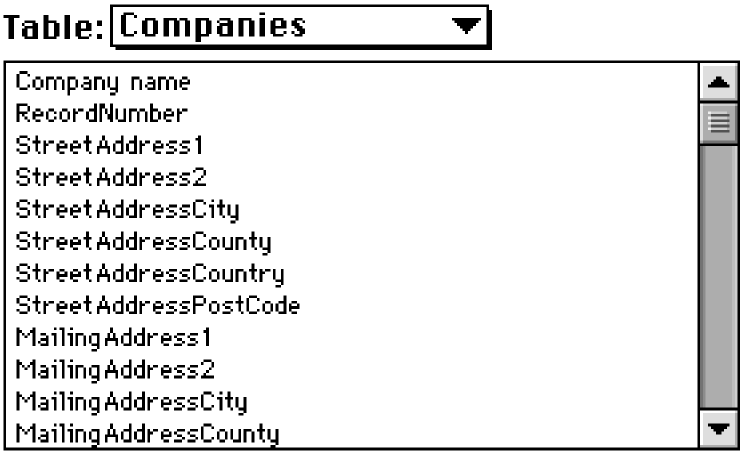
i. Choose **Insert Field ...** from the Quick Letter **Database** menu. You'll see a dialogue like this:



ii. Select the appropriate table from the list of tables. The correct table to choose is the one that your list of records comes from -- i.e., Companies, Contacts, or Products (or whatever other names you may have assigned to those tables).

Choosing any other table will only give you bizarre results!

The list of fields will then change to show the fields from the selected table. For example, if you chose Companies in the list of tables, your field list will then look something like this:



Note: In the current version of 4DWrite (6.0.5), the field names that are shown are the original database field names, not the names that you may have selected. Sorry about that. You may find it useful to have the Table and Field Setup window open so that you can compare your field names against the original field names (choose **Table and Field Setup ...** from the **Admin** menu).

iii. Double-click on the field name you want to insert.

The field name is inserted into your letter, surrounded by special characters, like this:

«[Companies]Company name»

(If yours doesn't show the field name, choose **Show References** from the **Database** menu in the Quick Letter menu bar.)

Inserting the Current Date

To automatically print the current date in your letters, choose **Insert Current Date** from the **Database** menu.

Inserting the Current Time

To automatically print the time that each letter is printed, choose **Insert Current Time** from the **Database** menu.

Inserting Pictures

To add a picture to your letter, copy it from your graphics program and paste it into the letter.

You will find an example of a Quick letter in the Examples folder. (If you do not have the Examples folder in your CatBase folder, you will find it on your original CatBase CD). To open it, choose **Open** from the Quick Letter **File** menu, navigate into the Examples folder, and double-click on Example Letter.

Special Quick Letter Procedures

We have created some special procedures that you can include in your letters. Each of these special "QL" procedures has a purpose, as described below:

Procedure Name	Description
QLAddressM	Builds up a company address based on the Mailing Address. If a field is empty, no blank lines or spaces are included. **Example:** 50 The Maltings Stanstead Abbotts, Herts SG12 8HG UK
QLAddressS	Builds up a company address based on the Street address. The format is the same as the example shown above for QL Address M.
QLPrimecontact	Finds the Primary contact for each Company. If you have designated more than one Primary contact, which one it finds will be quite random! So you should make sure that you always have only one Primary contact selected for each Company. **Example:** Ms. Pat Bensky, Managing Director
QLProductList	Creates a list of the company's products and sorts them alphabetically. Example: Apple 20" Colorsync Display Apple Multiple Scan 720 Display (17") Apple Powerbook LaserWriter 8500 Macintosh Server G3 Power Macintosh G3 Desktop

Note that all of these procedures work only with the Companies table (i.e., your letter must be based on the Companies table).

This list is current as of CatBase Version 4.17. From time to time we may add more procedures, so please contact us if you need something that isn't already available – we may have already added it, or we may be able to add it for you.

To use a QL Procedure:

i. In your Quick Letter, choose **Insert 4D Expression** from the **Database** menu. You will see a dialogue like this:

ii. Type in the QL procedure name and click on OK.

Notes:
1. QL procedure names do not contain any spaces.
2. You must make sure that you type in the QL procedure name exactly as shown in this document -- no extra spaces or other punctuation! Case is not important, however.

4th Dimension Commands

If you are familiar with the 4th Dimension programming language, you can use certain commands and functions in the same way as the QL procedures. Following is a list of some that you may find useful:

4D Command	Description
Uppercase	Converts data to all uppercase. The format is: Uppercase([table]fieldname) **Examples:** Uppercase([Companies]company name) Uppercase(QLAddressM) -- creates the mailing address and converts it all to uppercase
Lowercase	Converts data to all lower case. The format is: Lowercase([table]fieldname) **Example:** Lowercase([Companies]company name)
Round	Rounds a number to the specified number of decimal places. The format is: Round([table]fieldname;n) **Example:** Round([Products]price numeric;0) Rounds the price to no decimal places.

Int	Returns the integer part of a real number. The format is: Int([table]fieldname) **Example:** Int([Products]price numeric) The result is not rounded. If the price is 12.90, or if the price is 12.25, the result is 12.

Dec	Returns the decimal part of a real number. The format is: Dec([table]fieldname) **Example:** Dec([Products]price numeric) If the price is 12.90, the result is 90.

You can also do mathematical calculations on numeric fields. For example, you can mark up or discount prices. Here are some examples:

Mark up	**Example:** [Products]price numeric*1.2 Marks the price up by 20%
Discount	**Example:** [Products]price numeric*.9 Discounts the price by 10%
Calculate a total	**Example:** [Products]price numeric*[Products]p4 (where the field P4 has been used to enter the quantity ordered) Calculates the total order price

Notes:

1. The table and field names you must use are the ORIGINAL database names. If you have changed the table or field names in your database, you may find it helpful to have the Table and Field Setup window open (**Admin** menu-> **Table and Field Setup**) so that you can see exactly what the original field names are.

2. Table names are always surrounded by square brackets, as in: [Companies].

If you want to do some other type of processing and can't figure out how to do it, please contact our Technical Support Department and describe what you want to do – we'll be pleased to help.

Printing a Quick Letter

To print your Quick Letter, choose **Print Merge ...** from the Quick Letter **File** menu.

Emails

You can easily send emails to companies or contacts in your database. To do this you need to have:

1. A modem attached to your computer
2. An email account set up with a service provider

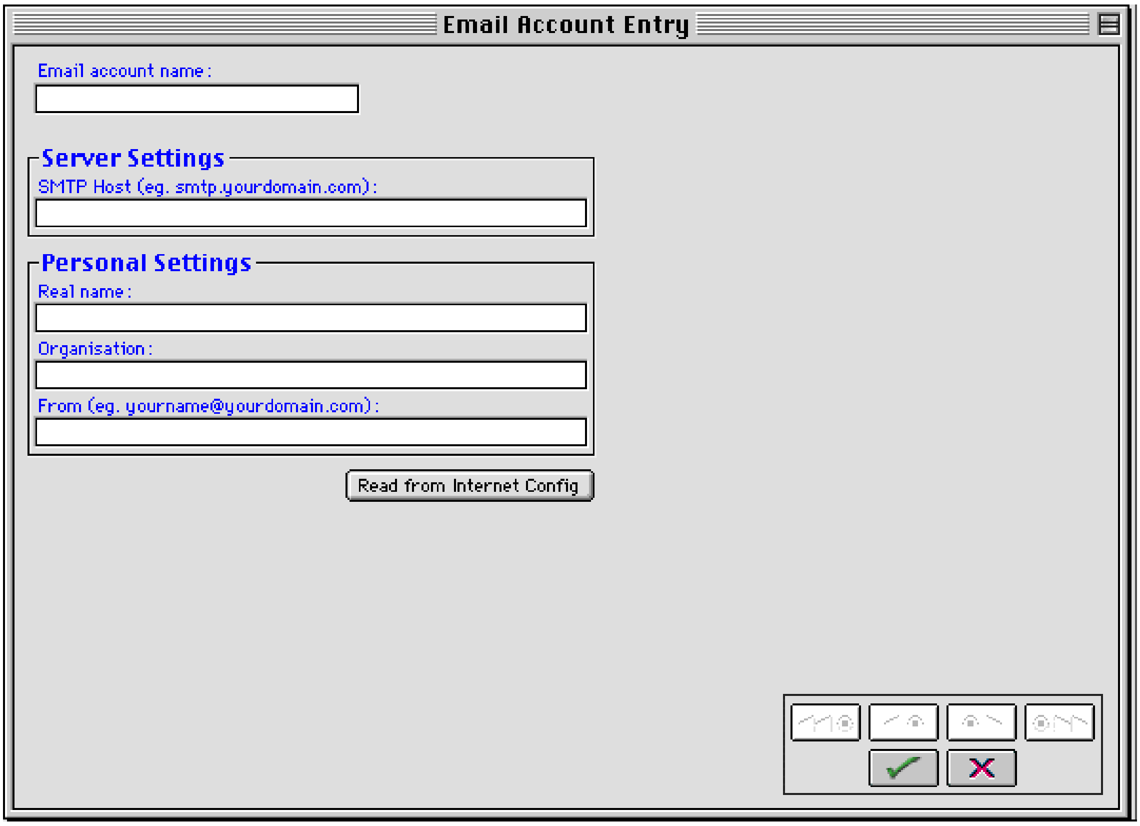
When you send emails, you can either use email addresses that have been entered into the database for Companies or Contacts, or you can send an email directly to an email address that you provide.

Setting up an Email Account

Before you can send any emails, you must set up at least one email account record in your database. This contains the information that CatBase needs in order to send the emails via your service provider. To do this:

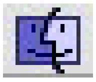
1. Choose **Email Accounts ...** from the **Data** menu and click on **New Record** when the Search Dialogue window appears.

A new Email Account record opens:



Email account name

This is the name by which you want this email account to be known in the database.



Macintosh users: If you have set up your Internet Config extension, you can click on the Read from **Internet Config** button. CatBase will complete the rest of the fields using your Internet Config data.

SMTP Host

Type in the name of your mail server. It usually looks something like: smtpmail.ispname.com.

Real Name

Type in your name as you want it to appear on your emails.

Organisation

Your company name.

From

Your actual email address.

When you have completed these fields, save the record.

Sending emails to Companies or Contacts

The first thing you must do, of course, is make sure that every Company or contact to whom you want to send an email has a valid email address.

In the Companies table, there are four Internet fields. You can use any of these fields for email addresses; just make sure that you use the same field in all records. In the Contacts table, there is just one field designated as the Email address field.

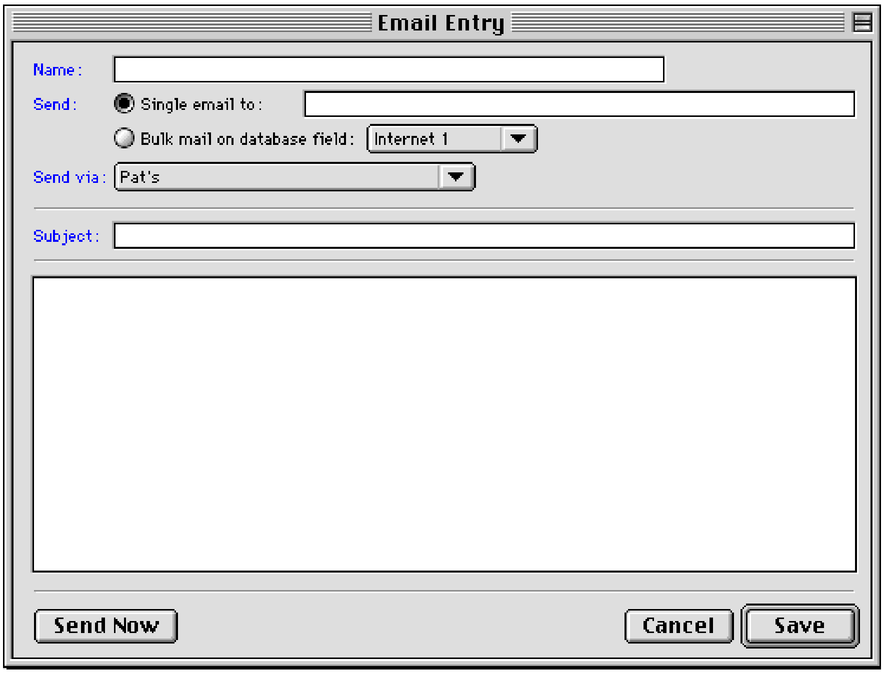
To send the emails:

1. Find the Company or Contact records that you want to send emails to.
2. With the list of records displayed, choose **Send Email** from the **File** menu.

You will see a window listing all emails that have already been created.

3. Double-click on an email to open it, or click on the **New** button to create a new one.

The email composition screen looks like this:



Name
This can be any descriptive name for your email.

Send
You can send an email directly to an address that you type in, or you can send the email to all of the selected records.

Single email
To send an email directly to one specific person, select the **Single email** radio button and then type in the email address.

Bulk mail on database field
Select this radio button to send the email to all the selected records.
If you select this option, make sure that the appropriate field is selected in the pop-up list of fields – i.e., make sure you've selected the field that contains the email addresses!

Send via
This pop-up lists all the email accounts that have been set up in the database. Select the one you want to use.

Subject
Type in a brief subject heading.

Now all that remains is for you to enter the text of the email into the text editing area.

When you are ready to send the emails:
1. Save it by clicking on the **Save** button.
2. To send the emails, click on the **Send Now** button.

Sending Faxes

You can send bulk faxes to companies in your database. In order to do this, you need:

1. A suitable modem attached to your Macintosh. It must be a Type 2 modem as that's the only type that works with the fax software. (Please contact CatBase Software if you are unsure about your modem.)
2. A copy of the FaxExpress software.
3. The 4DWrite word processing module installed.

Please contact us if you need to order any of these items!

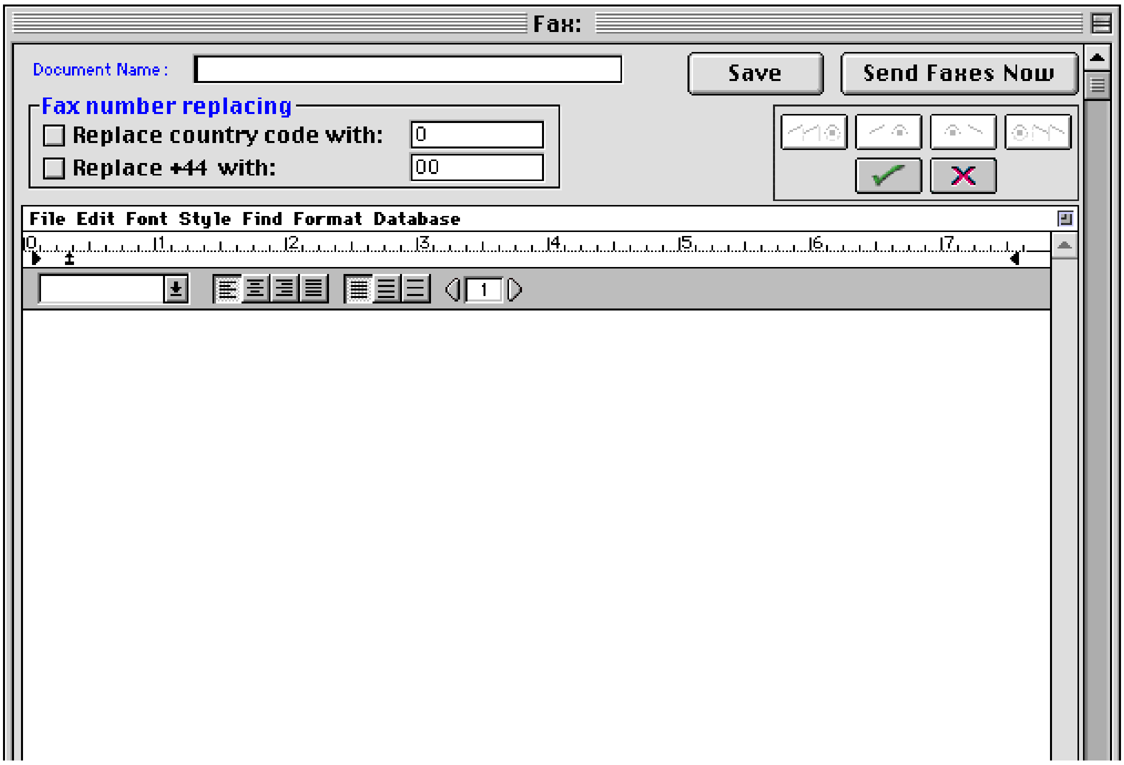
Note: If you are using CatBase Multi-User on a mixed network, it doesn't matter whether the server is a Mac or PC as long as the workstation that you want to use for sending the faxes is a Mac.

To set up and send faxes:

1. Make sure that all the Company records that you want to send a fax to have a valid fax number entered into the Fax field.
2. Find the Companies to which you want to send a fax.
3. With a list of Company records displayed, choose **Edit and Send Faxes** from the **File** menu.

You will see the normal Search Dialogue window. Either find the fax you want to send, or create a new one.

The fax editing window looks like this:



Note: If the text editing area on your screen doesn't look like this, it is probably because you do not have the 4DWrite plug-in installed.

Document Name
Type in a descriptive name for this fax.

Fax Number Replacing

In this area you can tell CatBase to change certain parts of a fax number. Whether you use either or both of these options depends upon the format in which you have entered the fax numbers in your database.

For example, in your database you may have set up the fax numbers in the international format, like this:

+44 (0) 1920 877917

This is fine for publication, but when you actually send faxes to those fax numbers, you need to make certain changes to the format of the numbers in order for them to work.

There are two ways that you can change fax numbers:

1. Remove your own country code, and/or
2. Replace the "+" part of the dialling code

Remove your national dialling code :
The national dialling code is the code for your own country, as specified in the System Preferences window:

(Choose **Setup** from the **Admin** menu if you need to check or change this setting.)

If you select the Remove option, each occurrence of your own country code will be removed from the fax number. For example:

If you have entered fax numbers in your database in this format:

+44 (0)1920 877917

you can select the Remove option, and when faxes are sent, the fax number will be converted to:

(0)1920 877917

(The brackets around the 0 won't be removed but that doesn't matter, as they will be ignored).

Replace + with:

However, for faxes that are going to other countries, the number needs to be changed in a different way. For example:

+ 33 (0) 123 4567

The "+" should be replaced with "00". If the replacement string is different for your country, you can change the default "00" to whatever is appropriate.
If this option is selected, any occurrence of "(0)" will also be removed form the number.

For example:

+ 33 (0) 123 4567

will be changed to:

0033 123 4567

Messages

If you are using the Multi-User version of CatBase, you can send messages to other CatBase users.

To send a message:

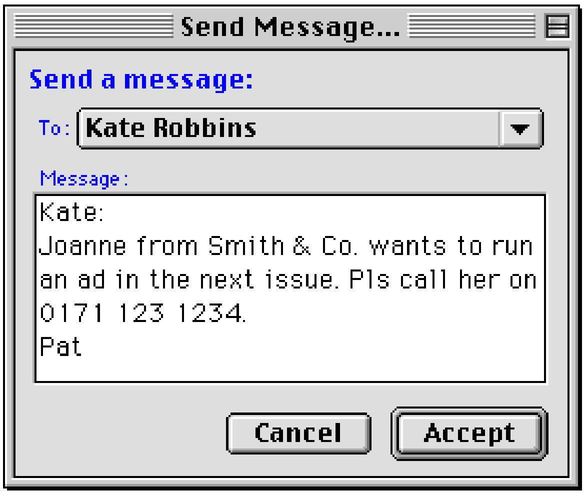
1. Choose **Send Message ...** from the **File** menu (Note: This choice is not available if you are using CatBase Single-User).

You'll see this dialogue window:

2. Select a User from the pop-up list. All Users except yourself are listed.
3. Type your message in the Message area.
4. Click the **Accept** button to send the message.

An example:

You have been speaking to the representative from one of the companies listed in your database. She said that her company would be interested in placing a display advertisement in your next edition, and you want to let the person who handles advertising sales (Kate) know about this. You could quickly send a message to Kate about this. Your message might look something like this:



If Kate is currently logged on to CatBase, she will immediately receive the message. If the recipient is not currently logged on to CatBase, he/she will receive the message as soon as they log on.