QUICKFIGURE PRO

Version 4.0

USER'S MANUAL

PELICANWARE, INC.

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QuickFigure Pro Version 4.0

Manual Release: October 1998

Registration Number

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Introduction

What is QuickFigure Pro?

QuickFigure Pro allows you to create and edit spreadsheets on your Newton device. A spreadsheet is a document you can use to store, analyze, manipulate, and calculate data such as numbers, formulas, or text. See the section below for more information about spreadsheets.

QuickFigure Pro also has tools that support the basic spreadsheet application. These include a matrix solver, a graphing and charting tool, a sorting tool, and an import/export tool called QF Exchange. See the chapters on QuickFigure Tools or QuickFigure Exchange for details on using these utilities.

An overview of spreadsheets

Some users of QuickFigure Pro will find the program easy to use because of their familiarity with spreadsheets. However, you do not have to be a spread-sheet expert to understand and use QuickFigure Pro. QuickFigure Pro is great for storing, calculating, managing, and communicating personal information, as well as business and academic data. Examples of possible uses include balancing a checkbook, keeping track of work hours, creating invoices, or recording and calculating the results from a science experiment. QuickFigure Pro will carry out all arithmetic functions, so there is no need to worry about math errors! All you have to do is enter the numbers and then tell QuickFigure Pro how you want them to be calculated.

The following is a description of the basic functions of a spreadsheet.

A spreadsheet consists of cells that can contain labels or values. Labels are text entries and values are numbers and formulas.

A formula is a sequence of values, cell addresses, functions, or operators that produces a new value from existing values. Formulas always begin with an equals (=) sign. See Chapter 4 for more information on formulas.

A function is a pre-written formula. See Chapter 4 for more information on functions.

Operators are used to specify the operation (e.g., addition, subtraction, multiplication, or division) that will be performed on the values in the formula. See Chapter 4 for a table of operators that can be used with QuickFigure Pro.

A cell's address corresponds to its column and the row location. For instance, the address for the cell in the first column of the second row is A2.

To perform calculations, you can enter a formula into a cell that refers to the contents of another cell or cells. To reference a cell, use its cell address. For example, you can tell QuickFigure Pro to add A1, A2, A3, and A4 and put the sum in A5 by typing = sum(A1:A4) in cell A5.

Complex spreadsheets can compare many different scenarios that are all dependent on a cell that contains a value such as an interest rate. Changing the value of the interest rate will affect all the cells that are dependent on it.

For example, suppose you deposit \$500 for twelve months into a savings account with an annual interest rate of 6%. The following spreadsheet calculates the monthly balance on the account and the interest earned every month. Cell A1 contains the monthly interest rate of 0.5%. Cells B1 through B12 calculate the monthly balance on the savings account by adding \$500 plus the interest earned to the previous month's balance. Cell B2 contains the following formula:

=B1+500+(B1*\$A1). Cells C1 through C12 calculate the amount of interest earned every month. The formula in cell C2 is: =B2*\$A1. Finally, cell C14 totals the interest earned that year. Its formula is: =Sum(C1:C12).

Savi	ngs Examp	le 🚺 🌢 U	nfiled Wo	rksheets	٦
A	Α	В	C	D	
1	0.50%	\$500.00	\$2.50		
2		\$1,002.	\$5.01		
3		\$1,507.	\$7.54		
4		\$2,015.	\$10.08		
5		\$2,525.	\$12.63		
6		\$3,037.	\$15.19		
7		\$3,552.	\$17.76		
8		\$4,070.	\$20.35		
9		\$4,591.	\$22.96		
10		\$5,114.	\$25.57		
11		\$5,639.	\$28.20		
12		\$6,167.	\$30.84		
13					
14	Total		\$198.62		
15					
16					
17					
1	+New)(+E	dit) (55	2-00		3

The above is a simple example, and QuickFigure Pro can do much more. As you begin using the program for basic tasks like the one described above, you will become more familiar with the way a spreadsheet works and soon will carry out complex operations with ease! If you would like to become more familiar with spreadsheets, we suggest reading a book on spreadsheets or a user's manual for a desktop spreadsheet application.

About this manual

The following is a list of some of the terms that are important to understand when using this manual.

- The list that appears when you tap a button is a menu.
- The word "select" is used interchangeably with the word "tap." When the manual instructs you to select a menu item from a pop-up list, you can tap it with the Newton pen.
- When the manual instructs you to tap the diamond, you can tap the diamond or the word next to the diamond to get a list of choices. Diamonds always signify that multiple options are available if the diamond is tapped.
- A slip is a window that allows the you to enter data or set options when it appears.
- Routing is setting up a document to be printed, faxed, e-mailed or beamed.

Installing QuickFigure Pro

To install QuickFigure packages onto the Newton, use the Newton Connection Utilities or similar utility to transfer the packages from the QuickFigure diskette or file you received.

If you have old or lite versions of QuickFigure on your Newton, you must remove the older version of QuickFigure before installing the new. To remove a package from the Newton, find it in the Extras drawer, then make the scrub gesture over it's icon.

QuickFigure Pro 4.0 is provided in a modular format. To install the basic package, download the "QuickFigure Pro 4.0" package (qfpro.pkg for Windows users) to your Newton. Additional packages, such as import/export, are installed separately. Following is a list of the packages and their sizes once installed:

Macintosh Filename	Windows Filename	Function	Size
QuickFigure 4.0.pkg	qfpro3.pkg	Application	
QF Stationery.pkg Online help.pkg	qfstat.pkg help.pkg	Stationery Online Help	
Sample Sheet.pkg Tools QChart.pkg	sample.pkg \tools Directory qchart.pkg	Sample workbook Charting Tool	
QSort.pkg	qsort.pkg	Sorting Tool	
Matrix Solver.pkg	solver.pkg	Linear Equation Solv	er
QF Exchange QF Exchange.pkg	\qfexch Directory qfexch.pkg	Import/Export	

All of the packages in the list above except the QuickFigure Pro package are auto-parts, and do not need to be installed for QuickFigure to run. They appear in the Extensions folder of the Extras drawer. They should be installed with the Newton Connection Utilities, or the Newton Package Installer. They can be deleted normally.

If you wish to use QuickFigure as a stationery item in the Notepad, you need to install the QF Stationery package. QF Stationery must be installed internally and must be installed before any of the other packages. It does not require the main QuickFigure 4.0 package to operate.

Notes for previous users of QuickFigure Pro

The following features have been added or changed in this version of QuickFigure Pro:

- All worksheets are now contained in workbooks. New workbooks contain only one sheet, but sheets can be added with the New button. To switch between worksheet pages, use the Info i button menu. See Chapter 3 for more information about working with workbooks.
- The Tools button menu now includes a Set Row Heights option.
- Text Styles now includes Vertical alignment options.
- To set default text styles, choose Text Styles from the Tools menu without selecting any cells first.
- Word wrap in cells where vertical alignment on text is at top.
- Area or cell borders can be drawn by selecting the desired cells and choosing Cell Borders from the Tools menu.
- Improved printing including adjustable print margins. Margins can be set by choosing **Print Options** from the **Tools** menu.
- Ability to resize multiple columns and rows at once.
- QuickFigure Exchange now allows workbook import/export with versions of Excel later than 5.0. Exchange will still transfer worksheets with Excel 5.0, but not workbooks. Also supports transferring cell borders and linked cells.

Upgrading from version 3.0 or previous

Users who have QuickFigure Pro version 3.0 or earlier will find the following changes in addition to the list above:

The buttons in QuickFigure Pro have been remodeled. A "New" button has been added from which you can start new workbooks, templates, or add worksheets.

-----QuickFigure 12 The options button no longer exists, and it's former menu items are available by tapping the **Tools** button. Rename has been moved to the **Routing** button, and Selection and Jump to Cell have been moved to the Info i button.

This version also made some changes to the way certain formulas are written. Many of the financial formulas used to contain colons (:), but they have been removed for this version. If you had a previous version of QuickFigure Pro installed on the same device that you are using for version 3.1, the functions pop-up in the input window will not update with the new syntax for formulas. Any functions that you use from the pop-up that have a colon will produce a VALUE statement, so you'll need to edit the function to remove the colon.

Other major changes are listed below:

- New Fill options including Fill All, Fill Down and Fill Series.
- Selecting cells is now done by holding the stylus down on the screen until a heavy mark appears, and then dragging the mark through the cells you wish to select.
- A floating tool palette has been added for quickly formatting cells into bold, italic, currency, percentage, or to give left or right justification. The palette appears when the button in the top left hand corner of the screen is tapped.
- The input window now has an expansion button 🔁 that expands the input line to five lines.
- QuickFigure Pro now supports drag and drop of selected cells.
- If the input window is open and empty, you can Sum a range by drawing a line through the cells you wish to include, and the formula =Sum(Range) will appear on the input line. Also, tapping on several cells in succession will enter their addresses with a "+" sign between them if the input window is open and empty.

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- A "Use small font in input window" preference has been added to allow for longer formulas.
- Added date format options, accessible through the **Tools** button.
- A Set Column Width option has been added to the Tools menu.

Using QuickFigure Pro with X-Port®

The QuickFigure Exchange system is designed for direct data transfers with Microsoft Excel® on the desktop. QuickFigure Pro also supports exporting or importing tab-delimited text files via X-Port® (by LandWare). To include formulas for tab-delimited export from QuickFigure Pro, open QuickFigure's general preferences and check "Include formulas in text export".

For more information about X-Port, you can visit LandWare's Website at <u>http://</u>www.landware.com.

Creating, opening, and managing workbooks

Creating a new workbook

To create a new workbook, tap **New** and select **Workbook**. If you want the new workbook to be a template, select **Template** instead. If you would like to create a workbook based on an existing template, tap **New** and then select the template's name.

Opening workbooks

To see a list of the workbooks you've created, tap the **Overview** button. The **Overview** button is the round dot next to (or between) the up and down arrows on the built-in button bar. This will display a list of workbooks by name. To open a specific workbook, tap the name of the desired workbook and it will appear.

Workbooks that have been filed will appear in the appropriate folder. If the list exceeds the screen size, it may be scrolled using the built-in up and down arrows.

Creating and using workbook templates

Any workbook can be made into a template. To mark the current workbook as a template, tap the **Routing** button and select **Make Template**.

When a template is opened, QuickFigure presents a dialog asking if you would like to create a new workbook based on the specified template, or edit the template itself. To edit the template, tap **Cancel** in the dialog box. If you want to create a new workbook based on the template, tap **OK**, and QuickFigure duplicates the template and opens the copy.

To see a list of the templates you have created, Tap **New**. To open a new workbook based one of the templates listed in the menu, tap it's name. Templates show up in the Overview with regular workbooks, and can be opened from there.

Saving work and closing workbooks

If you wish to close the current workbook in order switch to another workbook, simply tap **Overview.** The workbook will close and save all data automatically.

In addition to saving when a workbook is closed, QuickFigure automatically saves the current workbook approximately every five seconds. Each workbook is stored in its own soup. If you have a problem and are forced to reset the Newton, you should at most lose only the last item entered.

Duplicating workbooks

To create a duplicate of an existing workbook, select **Duplicate** from the **Routing** menu. QuickFigure will create an identical workbook. The duplicate workbook will have the same name with the word "copy" added to the end.

Deleting workbooks

To delete a workbook, open it and select **Delete Workbook** from the **Routing** menu. You can also delete it from the overview by checking it and selecting

Delete from the **Routing** button menu. When a workbook is deleted, a new, untitled workbook will appear.

If you use Clear to delete all of the cells in a workbook, it is important to note that the workbook is not completely deleted, and will still appear in the overview. Use **Delete** to completely eliminate a workbook.

Renaming a workbook

To rename a workbook, tap **Tools** and choose **Rename**. Enter the desired name and tap 'Enter' to close the slip and save your changes when finished. The name will appear in the top left-hand corner of the workbook, preceding any worksheet names.

Filing workbooks

Workbooks can be filed in folders stored internally or on a memory card. To file the current workbook, tap the File button at the button of the screen. Enter the location and folder where you want to locate the workbook, and tap **File** when finished. You can also create and edit folders from this menu.

To file a workbook or multiple workbooks in the overview mode, check the box next to the desired workbook(s) and tap the **File** button at the button of the screen. Enter the location and folder where you want to locate the workbook, and tap File when finished.

Setting and changing workbook password

This option allows the user to set a password for the workbook in use. To open the password entry slip, tap **Tools** and select **Set Password**. To change or remove the password, open the workbook and follow the same procedure.

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Working with workbooks and worksheets

About workbooks and worksheets

When a new workbook is created, it contains a single worksheet. Any number of worksheets can be added to a workbook. You can enter and edit data in the worksheets simultaneously and perform calculations based on data from multiple worksheets. When you create a chart, it is associated with the worksheet it's created from.

Inserting new worksheets into a workbook

There is no limit on the number of worksheets that can be added to a workbook. Each worksheet has it's own title, which appears in the top left corner of the screen following the workbook name. To insert a new worksheet in a workbook, tap **New** and select **Sheet** from the menu that appears. Enter a title or use the default name in the slip that appears and tap **Enter** when finished.

Switching between worksheets

To switch to another worksheet in the workbook, tap i and select the desired worksheet name from the list that appears.

Scrolling through the worksheet

QuickFigure's worksheet area is 255 columns wide by 9999 rows long. To scroll the worksheet up, down, left, or right, tap the appropriate arrow at the bottom of the screen.

To control how far the worksheet will scroll when an arrow button is tapped, use the scrolling preferences. Tap i and choose **Prefs**. Select Scrolling and use the menus to set the scroll amount in the slip that appears. The option can be set by columns for scrolling left to right, or rows for scrolling up and down.

Note: Tapping the arrows will not make the worksheet scroll when a single cell is selected for input. If the input slip is displayed, tap "x" to close it and the worksheet will scroll when the arrows are tapped. For instructions on moving from cell to cell with the input slip open, see the section "Moving the active cell" in Chapter 4.

Using label locking while scrolling

This option allows you to lock column A and row 1 of a worksheet while you scroll. To enable or disable this option, tap **Tools**, and select **Enable** or **Disable Label Locking**.

Note: Label locking is automatically disabled when the screen is rotated or QuickFigure is closed.

Deleting a worksheet from a workbook

To delete a worksheet from a workbook, open the desired worksheet and tap the **Routing** button. Select **Delete Sheet** from the menu that appears, and tap **OK** to confirm. This cannot be undone.

Renaming a worksheet

The name of the worksheet appears at the top left-hand corner of the screen. To rename the worksheet, tap the name and a naming slip will appear. Enter your changes, and tap **Enter** when finished or " \mathbf{x} " to cancel.

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Entering data

About entering data into a worksheet

You can enter data into the cells in your worksheet by directly writing it into the cell, by entering it into an expanded input window, or by dragging it from another application. The input window is ideal for entering long numbers, text, and formulas, while direct entry is most suitable for small numbers or labels.

Using input window to enter data into the active cell

To enter data in a cell, tap the cell and the Input window will appear:

			•		
АЗ	=A1+1	00			
A		#00	+Functions)Enter)	⊠
A	1el	#00	Functions	Enter	L

This cell is now selected for data entry, and is called the *active cell*. It's address appears at the beginning of the entry line. For instructions on changing the active cell while the input slip is open, see the section "Moving the active cell" in this chapter.

You can use the input window enter numbers, text labels, or formulas. To save the data you've entered in the window to the cell, tap the **Enter** button, or tap "**x**" to Cancel.

When you tap on the input line or enter any data, a carat \bigstar appears where data will be inserted. To speed the entry of formulas, tap the carat to bring up a menu of math operators and editing controls. Tap one and it will appear to the left of the carat.

The Input Window has the following buttons:

Keyboard Icon	Brings up the standard Newton on-screen keyboard.
A Letter Icon	Brings up the standard recognition menu which lets you choose between regular recognition and ink text. Please note that ink text may not be visible in the worksheet if the letters are too large.
Equal Sign Icon	Places an "=" at the carat to denote a formula. The "=" sign may also be entered by hand or selected from either of the keyboards.
# Number Sign Icon	Brings up a choice of numeric formats for the current cell.
Expansion button	Expands the input area to 5 lines from one. If the input area is already expanded, this button shrinks it back to 1 line.

Functions Function button Displays a list of function shortcuts. To insert a shortcut from the list, tap the desired item. It will appear in the input window where the cursor is positioned. Items may be added or removed from this list using the edit option at the bottom of the menu. See the next section for more details. Enter Enter button Enters the value, formula, or label into the cell, and closes the input window. Close button Closes the input window without saving.

Tip: A scroll key may be used instead of the enter key to enter data and advance the active cell in the direction of the key.

Shortcuts for entering addresses and sum formulas

When you tap or enter data on the input line, the carat \land appears. To quickly enter another cell address in your formula, tap the desired cell and its address will appear at the carat. If you tap on several cells in succession, QuickFigure Pro will enter their addresses and insert pluses (+) between them. If you drag your pen through a range of cells, QuickFigure Pro will enter the addresses within a Sum formula.

Note: To remove the carat from the input line so that another cell can be made active without entering its address, you must tap Enter or " \mathbf{x} " to cancel.

Shortcuts for entering functions

The Functions menu gives you a way to quickly insert function names (or text) into the input window. To bring up the Functions pop-up menu, tap a cell to make the Input Window appear, then tap **Functions**. Tap to select the function or text you want, and it will appear at the location of the cursor in the Input Window.



To add or delete items from the Functions menu, select **Edit...** from the menu to get an editing slip. To add a new item to the menu, enter the desired function in the input area, and tap **Add**. This menu can contain any text item you wish.

If you want to edit or delete an item which is already on the list, tap the diamond and you will see a list of the items in the pop-up. To edit or delete any of them, select that item from the list. You may delete it by tapping **Delete**. If you'd like to replace it, make your changes and tap **Replace**. When you have made your changes, tap "**x**" to close the slip

Note: For items which end with a ")" QuickFigure will automatically position the cursor just before the ")" when the function is inserted into the input area.

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Changing the Input Window preferences

You can use the Input Window preferences to change the font size of the text that appears in the input window, or to make the soft keyboard appear automatically when the window is open. To set the preferences controlling the behavior of the Input Window, tap (i), choose **Prefs**, then General. Check the desired boxes and tap "x" to save your settings and close the slip.

Moving the Active Cell

When the input slip is open, tapping a scroll arrow moves the active (highlighted) cell one column or row in the appropriate direction. The address displayed in the input window will change as you move the active cell.

The keyboard can also be used to move the active cell. The keyboard commands that can be used are as follows:

Tab Shift -Tab Return Shift-Return Keyboard arrows Moves the active cell one cell to the right Moves the active cell one cell to the left Moves the active cell one cell down Moves the active cell one cell up Moves the active cell one cell in the direction of the arrow.

Jumping to a cell

To "jump" to any cell in the worksheet, tap the **()** button and select **Jump to Cell**. If a cell is already selected, it will be the default. The target cell can be entered by tapping a cell or by writing in a cell address. When the slip is closed, the worksheet is scrolled so that the target cell is the upper left visible. The **Home** button will always move you to cell A1.

Types of data

QuickFigure determines if data is a value, formula, or label based on the first character in the input string. Values (i.e., 48 or 0.50) can entered without any preceding notation. Formulas are preceded with an equal sign (=). The following section summarizes the procedures for entering data into cells.

VALUES

Whole Numbers	Enter directly.
Fractions	Enter 3/4 as 0.75 not as .75
Currency	Numbers may input directly with the currency format by preceding the number with the local currency sign (i.e., input of \$12 will display as \$12.00). In the U.K., the pound sign must be followed with a space. Numbers can also be formatted using the Format Window.
Percentage	Percentages may be entered using the "%" sign after. The result will be treated as a percentage. For example, the number 0.20 can be input as 20%. However, percentage notation cannot be used in a formula.
Scientific Notation	If you want to enter a number in scientific notation, the number must be entered as a formula. For example, "1.0 E10" should be entered as =1.0E10. Be careful not to put a space between the "E" and the exponent (1.0E10 will work fine, while 1.0 E10 or 1.0E 10 will not work).

FORMULAS	Start formulas with an equal sign (=). Formulas include arithmetic operators $(+, -, /, *)$ and functions such as sin and cos. For example, =A1+A2 will return the sum of A1 and A2.
	Formulas may include numbers, cell names, functions, and user defined functions. Formulas are not case sensitive; however, they are converted to upper case after they are entered (i.e. you can enter =a1*a2, but if you look at the formula later, it will read $=A1*A2$).
LABELS	Mixed numeric and text data.

LABELS

Linking worksheets within a workbook

You can share data stored on different worksheets and workbooks by linking with external references. In the following example, the SUM function calculates the sum value for the range A1:A10 on the worksheet named Mileage:



Worksheet linking can be used to create different views of your data. You can enter all of your data and formulas into one or more source workbooks and then create a report workbook that contains links only to the pertinent data in the source workbooks. It is also useful to streamline large, complex models. By breaking down a complicated model into a series of interdependent workbooks, you can work on the model without opening all of its related sheets. Smaller workbooks are easier to change, don't require as much memory, and are faster to open, save, and calculate.



Creating formulas using external references

To create a formula that calculates data from another worksheet, tap to select the cell where you wish to enter the formula. Linked formulas must be preceded by an equal sign. Enter any functions, operators or values you wish to include in the formula, and the name of the target worksheet followed immediately by the address for the target cell or range. The name of the worksheet and the cell references must be separated by an exclamation point (!).

Important note: If your worksheet title has more than one word and therefore includes spaces, you will need to add a single apostrophe on either side of the title for the formula to work (see example below). Linking formulas transferred by Excel that include spaces will automatically get the apostrophes when they are transferred via QF Exchange.

Here are some examples of external references being used:

Suppose you would like to carry a total from your "Cost of materials" sheet to your "Job budget" sheet for further calculation. To make the total that appears in cell C10 of your "Cost of materials" sheet appear in a cell in the "job budget" worksheet, tap the cell where you'd like it to appear and enter the following formula:

= 'Cost of materials' !C10

You can use such an external reference in a formula, too. To add the value in cell C10 of your Cost of Materials sheet to the value in cell A6 of your Job budget sheet, you could enter the following formula:

= 'Cost of materials' !C10+A6

Linking worksheets in different workbooks

Formulas can use cells and ranges from other workbooks through worksheet linking. To link a cell to another workbook, tap the **Functions** button in the cell's input window, and select **Insert Link**. Choose the workbook and worksheet you want to link to, enter the address of the cell you want to link to, and tap **Link**.



Several functions are provided for use with linked cells, including sum, average, vLookup, and hLookup. To use one of these functions, choose it from the Link menu in the **Insert Link** slip, and enter the first and last cells in the range. Tapping the **Link** button will insert the link into the current formula.

Note: Worksheet links are not updated until a worksheet is opened. Therefore, if several worksheets exchange information with each other, you will need to open the worksheets in the order the information needs to be exchanged. Suppose, for example, you have a worksheet called "Prices" which determines some of the values in a worksheet called "Sales." If you change the some of the values in "Prices," the values in "Sales" that are dependent on these will not change in "Sales" until the "Sales" worksheet is opened.

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Forcing dates to recalculate automatically

To force QuickFigure to automatically recalculate all formulas containing "Now()", "Time()", and "Today()" whenever a workbook is opened, tap i, choose **Prefs**, then **General**. Check the desired boxes and tap "**x**" to save your settings and close the slip.

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Selecting cells and editing data

Selecting cells and ranges of cells

To select a single cell, place your pen on it until the Newton device makes a sound and a heavy mark appears. Drag the mark across the cell and lift the pen. The selected cell will appear with a dark gray border.

To select a range of cells, drag the mark through all of the cells you wish to select. Drag the mark diagonally to select a block of cells.

If the area you wish to select is off-screen, you can use the Selection option to enter the cell coordinates. To do so, tap i and choose Selection. Enter the desired cell addresses and tap Select or press Return. The area will appear with a dark gray border.

To deselect a cell or range, tap outside of the selected area.

Note: Cells cannot be selected if the input slip for the active cell is open.

Editing cells and ranges of cells

Cells can be moved and copied using either drag-and-drop or the Edit menu. The Edit button can also be used to clear cells, insert or delete columns or rows, protect a cell, or fill data.

Using the Edit button

QuickFigure provides an Edit button, located near the lower left corner of the screen, for copying, pasting, and deleting information. The Edit button can also be used to delete or insert columns or rows, perform fills, or protect cells. The commands on the Edit Button are directed towards selected cells in the work-sheet. For example, if a selected cell or cells has a formula, then that is copied when the copy command is selected. All of the Edit button's operations require either a single cell or a range to be selected.

Important Note: The Edit menu will not appear if a cell is active and the input window is displayed. A cell must be selected instead.

The table below describes the commands available on the edit menu.

Cut	Copies the data in the selected cell(s) to the clipboard, and then clears the cells.
Сору	Copies the data in the selected cell(s) to the clipboard.
Copy Value	Copies the value of the formulas in the selected cell(s) selected to the clipboard. The formulas are not copied.
Paste	Paste enters the entire contents of the clipboard into the selected area. For example, if you have a range of cells on the clipboard, say, A1, A2, B1, B2, and you select cell D4 to paste into, cells D4, D5, E4, and E5 will all be pasted into.
Clear	Deletes any data or formulas from the selected cell(s). Another way to delete the contents of a cell(s) is to make the scrubbing gesture over the cell(s) you wish to delete.

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Insert Column/Row	Inserts a column or row directly to the right of or below a selected range. The "Insert Column" option will display in the edit windows if there are more rows in the selected range than columns. The reverse is true for the "Insert Row" option. Undo will not reverse this action.
Delete Column/Row	Deletes the last column or row of a selected range. The orientation of the selected range determines whether the "Delete Column" or "Delete Row" option is displayed. Undo will not reverse this action.
Fill All	Takes the contents of the upper left cell of the selected range, and enters this into all of the cells in the range.
Fill Right	Takes the contents of the left-most column in a selection and fills each cell into the adjacent cells on the right.
Fill Down	Takes the contents of the top-most row in a selection and fills each cell into the lower cells in the selection.
Fill Series	Fill Series takes the number or date in a cell and adds to it in increasing increments determined by the user, then fills the series into the selected range.
Protect	Prevents changes to the selected range of cells from being made when protection mode is enabled. Protection mode can be enabled from the Tools button.

Using drag-and-drop for cutting, copying and pasting cells

For cutting, copying and moving cells, drag-and-drop can be used instead of the Edit menu. To use drag-and-drop, select the cell or area of cells you wish to move, then tap in the selected area and move the pen where you want it placed.

The cell where you lift your pen will be the starting point for the paste, filling to the right and down.

If you want the selection to be copied instead of cut when you drag it, tap it once before you drag.

Cells can also be dragged to the edge of the display to put them in the Newton's clipboard. If you have moved data to the Newton's clipboard, it may be dragged out into any Newton view which supports text, including the Notes and Dates applications.

When a formula is moved to a new location, all of the cells without absolute reference that make up the formula are offset by the same amount as the cell. For example, if the formula in cell A1 is =A2 +A3, and it is moved to cell B2, the formula will be changed to =B3+B4.

Dragging data into a worksheet

Data can be dragged into a worksheet from either the Newton's clipboard or from another application. If the data being dragged into QuickFigure is tabseparated text, it will appear in separate cells starting from the cell where you lifted your pen, and fill-in left to right.

Tip: You can drag outlines and checklists from the Notes application into QuickFigure, and the structure of the outline will be preserved.

Absolute references

Placing a dollar sign (\$) before a cell name in a formula marks the cell reference as absolute. This means that if the formula is copied to another cell, the reference remains the same. For example:

C1:=\$A1 + A2

If this cell is copied, and pasted into cell D2, the formula would become:

D2:=\$A1 + B3

Note: QuickFigure does not support making only the row or only the column absolute—the entire reference is either absolute or relative.

Protecting a cell

Cells that are protected cannot be modified in any way until the protection is removed from the cell, or cell protection for the whole worksheet is disabled. To enable or disable cell protection, tap **Tools** and select either option. To assign or remove protection for a cell or range of cells, select the cell(s) and tap **Edit**, then select **Protect** or **Unprotect**.

Using Find with QuickFigure

To find a value in a QuickFigure worksheet, tap the built-in **Find** button. Enter the value you wish to search for in the slip that appears, and tap **Find**. A window will appear displaying instances where the value appears in your Newton. If Find located the value you were looking for, you can tap it and QuickFigure will switch to that worksheet and highlight the appropriate cell.

If you want to search only in the current worksheet, you can change a preference before you perform the search. Tap**i** and choose **Prefs**, then General. Check the Search Current Worksheet Only box and tap "**x**" to close the slip.

Formatting worksheets

Changing justification, size, font and styles

Text Styles allows you to control the justification, size, font and style of characters used in a worksheet. To change the format of a range of cells, select the desired range and select **Text Styles** from the **Tools** menu. When the window is opened, the displayed settings will reflect the settings of the top left cells of the selected range. After selecting the desired changes, close the window. The settings at the time the window is closed will determine the format of all the cells in the range.

Changing the default text styles for a worksheet

QuickFigure Pro's default text format setting is bottom/left justification, Simple font, 10 point type. New worksheets always use the default text format, which can only be changed on a worksheet by worksheet basis. To change the default text format for your current worksheet, select **Text Styles** from the **Tools** menu *with no cells selected* and make your changes. When you close the window the changes you made will be used as the default settings for the worksheet. This change will only apply to the current worksheet.

Changing the number format or decimal places

To set the number format for a cell or range of cells, select the cell(s), tap **Tools**, then select Number Format. Select the format and number of decimal places you
wish, then close the slip. The Number Format option only appears in the **Tools** menu if cells are selected in the worksheet. The number format for a single cell can also be set by tapping the number button in the cell's input window. Below is a description of the numeric format options available.

General	Displays numbers in the format 123456.78. No thousands separator is used. This is the default format.
%0.00	Percentage format. The default number of decimal places for this format is two. Percentage format can also be activated by entering a percentage symbol after the number.
0,000	Displays numbers with a thousands separator.
\$0.00	Uses the currency symbol for the locale specified in the Newton's Preferences. The default number of decimal places for this format is two.
0.00e+00	Scientific notation. The default number of decimal places for this format is two.
0,000/(0,000)	Numbers are displayed with a thousands separator, and negative numbers are enclosed with parentheses.
\$0.00/(\$0.00)	Uses the currency symbol for the locale specified in the Newton's Preferences. Negative numbers are enclosed with parentheses, and the default number of decimal places for this format is two.

You can set the number of decimal places shown for any format.

QuickFigure does not allow you to set a default number format for a worksheet. However, you may select a range of cells and set the number formatting for that range prior to entering data.

Changing the date format

To set the date format for a cell or range of cells, select the cell(s), tap **Tools**, then select Date Format. Select your desired format in the slip that appears, then close the slip. Check the "Use as Default Date Format" check box if you want to make your setting the default date format for the worksheet.

Using the floating tool palette for quick formatting

For easy editing, QuickFigure Pro has a floating (movable) palette that controls some frequently used cell formatting Tools. To use the palette, select the cell or cells you wish to modify, then tap the palette 🗐 button pictured above in the top left corner of the screen. An expanded palette appears with the following functions:



Changing column widths

To re-size one or more columns, select cells in the column(s) you wish to change, and choose **Set Column Width** from the **Tools** menu. The cell width slip will appear which allows you to set a numeric value (in pixels) for the column width.

Tip: Resize the column widths before filling many cells—the speed of the resize process is dramatically affected by the number of cells filled.

Quickly changing a column width with the column resize tool

To quickly resize the width of a single column, tap a cell in the column you wish to resize. When the input slip appears for the cell, the column resize tool 41 will also appear at the top right edge of the column. Move the tool to position the right boundary of the column.

Note: A short cut for setting the column width numerically is to tap twice on the column resize tool.

Changing row heights

To re-size one or more rows, select cells in the row(s) you wish to change, and choose Set Row Height from the Tools menu. The row height slip will appear which allows you to set a numeric value (in pixels) for the row height.

Setting a default column width or row height for new workbooks

This option allows you to set the default column width (in pixels) for new workbooks, or new columns in existing workbooks. Changes to this setting do not affect the existing column widths in existing workbooks. To set a default, tap i and choose Prefs, then Display. Enter the numbers you wish to use and tap "x" to close the slip.

Hiding the grid

To hide the grid around the cells, tap **i** and choose **Prefs**, then Display. Uncheck the Show Grid box and tap "x" to close the slip.

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Chapter 7

Function Reference

Math operators and evaluation order

QuickFigure supports the following math operators, in order of precedence:

*	Multiply
/	Divide
div	Integer Division
mod	Remainder
+	Addition
-	Subtraction

Math statements are evaluated from left to right. QuickFigure also supports the following logical comparisons:

<	Less than
<=	Less than or equal
>	Greater than
>=	Greater than or equal
=	Equal
\diamond	Not equal
not	Logical not
and	Logical and
or	Logical or

Integer math functions

Max(a, b)	Returns the maximum value of integers a and b.
Min(a, b)	Returns the minimum value of the two integers a and b.
Ceiling(x)	Returns the smallest integer not less than the specified real number. (Rounds up the real number to
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	an integer.)
Floor(x)	Returns the largest integer not greater than the
	specified real number. (Rounds down the real
	number to an integer.)
Real(x)	Converts the specified integer to a real number.
Random (low, high)	Returns a random integer in the range between the
	two integers low and high. The range is inclusive of
	the numbers low and high. For example:
	Random(0,100) will return a number between "0"
	and "100".
SetRandomSeed (seedNumber)	Seeds the random number generator with the
	specified number. Without reseeding, the "Random"
	function will generate the same series of random
	numbers every time. The time function "ticks" can
	be added in the following manner to create nearly
	random numbers: SetRandomSeed(Ticks())

Floating point math functions

Absolute value of x.
Arc cosine of angle x.
Arc-hyperbolic-cosine of angle x.
Arc sine of angle x.
Arc-hyperbolic-sine of angle x.
Arc tangent of angle x.
Arc tangent of x/y with result being between - and
Arc-hyperbolic-tangent of angle x.
Value with the magnitude of x and sign of y.
Cosine of angle x.
Hyperbolic cosine of angle x.
Floating-point modulus of x and y.
Error function of x.
Complementary error function of x.
Value e (2.718282) raised to the xth power.
Base e exponential of x-1.
Floating point absolute value of x.
Positive difference between x and y.
Maximum of x and y.
Minimum of x and y.
Gamma function of x.

Hypot(x,y)	Square root of the sum of the squares of x and y.
IsFinite(x)	Returns "true" if x is finite and "nil" if x is infinite.
LGamma(x)	Base-e logarithm of the absolute value of the gamma
	of x, for $x>0>Logb(x)$.
Log(x)	Natural logarithm (base e) of x.
Logb(x)	Binary exponent of x as a signed integral value.
	Input is treated as normalized.
Log1P(x)	Base e logarithm of 1+x.
Log10(x)	Logarithm (base 10) of x
Pi	Returns the value of pi (3.1415927)
Pow(x,y)	Value of x to the yth power.
Remainder (x,y)	Remainder when x is divided by y.
Round(x)	Rounds x to the nearest integer.
Sin(x)	Sine of angle x.
Signum(x)	Returns -1 if x<0, 0 if x=0, and 1 if x>0.
Sinh(x)	Hyperbolic sine of angle x.
Sqrt(x)	Square root of x.
Tan(x)	Tangent of angle x.
Tanh(x)	Hyperbolic tangent of angle x.
Trunc(x)	Returns the integer portion of x.

Notes:

1. Angles must be expressed in radians.

2. Unless otherwise noted, the parameters for floating point functions can be integers or real numbers.

Financial functions

For financial functions the following variable names are used:

rate	The interest rate is the rate per period (e.g. 6% per year would be specified as a monthly rate of 0.005).
periods	The number of periods in the payment cycle
nper	Same as periods
pmt	Periodic payment amount
pv	Present value

fv	Future value
range	Expressed as a range of cells (e.g., B5:B8)
period	A specified period within the payment cycle
Following is a list of financial f	unctions available:
Annuity(rate, periods)	Calculates the present value factor of an annuity at a given interest rate over the specified number of periods.
Compound(rate, periods)	Calculates the compounded interest factor over the specified number of periods.
FV(rate, nper, pmt, pv)	Calculates the future value of an investment based on a series of equal payments. Rate is the periodic interest rate, nper is the number of periods, pmt is the periodic payment amount, and pv is the future value. Payment at end of period is assumed (ordinary annuity).
NPV(range, rate)	Calculates the net present value of an investment based on a series of periodic cash flows (range) and the discount rate (rate).
PMT(rate, nper, pv, fv)	Calculates the periodic payment required for a given interest rate (rate), over a specified number of periods (nper), given a present value (pv), and a future value (fv). Payment at end of period is assumed (ordinary annuity). Use the following formula to calculate the payment required for an annuity due (payment at beginning of period): :PMT(rate, nper, pv, fv)/(1 + rate)
PPMT(rate, period, nyears, prir	ncipal) Returns the payment on the principal for an investment of a given period.
IPMT(rate, period, nyears, prin-	cipal) Returns the interest payment for an investment for a

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PV(rate, nper, pmt, fv)	Calculates the present value of an investment based on a series of equal payments (pmt), discounted at the periodic interest rate (rate) over a specified number of periods (nper), given a future value (fv). Payment at end of period is assumed (ordinary annuity).
DDB(cost, salvage, life, period, t	factor) Returns the depreciation of an asset for a specified period using the double-declining balance method.
SLN(cost, salvage, life)	Calculates the straight-line depreciation of an asset for a single period.
SYD(cost, salvage, life, period)	Calculates the sum-of-the-years'-digits depreciation for specified period. The period must be stated in the same units as the life.

Example: You plan to deposit \$ 500.00 each month for the next 10 years into a savings account. The interest rate on the account is 0.5% monthly (6% annually). To calculate the value of the account at the end of 10 years, use the FV function:

=FV(0.005,120,-500,0) = \$81,939.67

Note: Positive cash flows are represented with positive numbers and negative cash flows with negative numbers. In the above example, the payment amount was -500 because the result of this function represented an outflow of cash.

Statistical functions

Average(FirstCell:LastCell)	Calculates the average of a range of values.
NUM(FirstCell:LastCell)	Determines how many cells within range have a non- zero numeric value.

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SDV(FirstCell:LastCell)	Calculates the sample standard deviation of a range of values.
SUM(FirstCell:LastCell)	Calculates the total of all the cells within the specified range.
VAR(FirstCell:LastCell)	Calculates sample variance of a range of values.
Time and date functions	
DateAdd(date, days)	Adds days to date and returns the result (a date).
DaysDiff(date1, date2)	Returns the number of days between date1 and date2.
HoursDiff(time1, time2)	Returns the number of hours between time1 and time2.
MinutesDiff(time1, time2)	Returns the number of minutes between time1 and time2.
today()	Returns today's date in the format ("1/19/95").
now()	Returns the present time (" $8:03 \text{ PM}''$).
In addition, the following Newto	nScript functions may be used:
time()	Returns the time in number of minutes since midnight, January 1, 1904.
ShortDate(time)	Returns a date ("Tue 5/3") from an integer, based on the number of minutes since midnight, January 1, 1904.
HourMinute(time)	Returns the time from an integer, similar to ShortDate.
StringToDate(dateString)	Returns the equivalent time in minutes since midnight, January 1, 1904.

StringToTime(timeString)

Functions like StringToDate, except it uses time.

Date literals must be enclosed in quotation marks, if they are to be used in a formula. For example, =DateAdd(B1, "8/24/96") will add B1 and 8/24/96. If dates are entered directly into a cell, no quotation marks are necessary. Thus, you can enter 9/24/96 into a cell B2, and then use =DateAdd(B1,B2).

All of the date functions accept dates in the following formats:

"Jan 2, 1992" "12:05 1/2/92" "1/2/92" "12:05mon, 1/2" "1/2"

If the year is omitted, it is assumed to be the current year.

Tip: You can use Fill Series to fill a range with dates.

Advanced QuickFigure Operations

If Statements

QuickFigure allows you to use conditional statements within cells. The primary conditional statement is the "If" statement, which has the following syntax:

IF logical_test THEN action <ELSE action>

"logical_test" means any conditional expression which evaluates to a true or false. Examples of expressions include A1=3, A1>2, and so on. "Action" generally refers to any math expression or number, the value of which will appear in the cell with the "If" statement. Examples of actions include 34, and A1+2. The "ELSE" portion of the statement is optional.

Examples of "If" statements:

=IF A3 > 5 THEN 3 ELSE 7

When this statement is entered, if the value of A3 is greater than 5 then A1 will have a value of 3. Otherwise, A1 will have a value of 7.

=IF A2 = 3 THEN A5*2

When this statement is entered, if the value of A2 is equal to 3, then A1 will have a value of the value of A5 multiplied by two.

=IF A3 < 10 THEN A3/3 ELSE A7*2

When this statement is entered, if the value of A3 is less than 10, then A1 will have a value of the value of A3 divided by 3. If the value of A3 is 10 or greater, than A1 will have a value of the value of A7 multiplied by 2.

Long functions can be viewed for up to five lines of text by tapping the expansion button in the input window.

Message Function

QuickFigure features a message function that allows you to create a pop-up window displaying a message of your choice. This is most useful when used with conditional statements, so that a certain condition will trigger the display of a message. An example of the function follows:

```
=if A1 > 70 then :msg("W&B","Over Max Takeoff Weight")
```

If the contents of cell A1 from the above example were to exceed 70, then the following message would appear:

	~
🛈 W&B	
Over Max Takeoff Weight.	
(
<i>t</i>	
1	
)	
5	_ (C)
[

vLookup and hLookup Functions

QuickFigure Pro supports vLookup and hLookup functions. These functions allow you to search a specified range for a matching value or string, and then look down or across a specified number of rows or columns to return a value. This syntax for these functions is as follows:

vLookup	vLookup(lookup_value,range,offset)
hLookup	hLookup(lookup_value,range,offset)

Lookup_value is the value or string which is the object of the search.

Range is the range (A1:B3, for example) in which the search is done, and where the lookup value is found. It is important to ensure that the range includes all the values in the lookup table.

Offset is how many rows or columns to move to find the returned value. For vLookup, the offset represents the number of columns over that the function looks, starting with the column in which the lookup_value is found. For hLookup, the offset represents the number of rows down that the function looks, starting with the row in which the lookup_value is found. An offset of 1 will always return the lookup_value.

For example:

3 4 5 6 7		First 1 2 3 4	Second 11 12 13	Third 21 22 23 24	
8 9		12		<u> </u>	
B9: = hlookup("Second",B3:D7, 3) A 					

The formula "=hLookup("Second", B3:D7,2)" would return 11. The formula "=hLookup("Third", B3:D7,4)" would return 23.

Note: If the cell reference returned by the lookup function is outside of the specified range, the value of the cell reference will be returned, but this value will not be updated if the cell subsequently changes. In the example above, if the formula were "=hLookup("Second", B3:D3, 3)" the value 12 (from cell C5) would be returned to cell B9. However, since C5 is not contained in the range "B3:D3," if cell C5 were then changed, the value of cell B9 would not be updated.

User Defined Functions

You may define your own custom functions for use in QuickFigure workbooks. To do this, you must have a blank cell to store the function. The format of custom functions is:

FUNC(Argument) expression

Argument refers to any information you wish to pass to the function. It may be a list, separated by commas.

The expression uses information from argument(s) to generate the solution. For example:

A1: =FUNC(X) X*2

creates a function which multiplies whatever is passed to it by 2. To call this function from another cell, you would use:

B1: = A1(2)

The value of B1 will now be 4.

Functions may also use lists of arguments. For example,

A1: =FUNC(A,B,C) (A+B)/C

When this function is called,

B1: = A1(3, 4, 5)

The result, 1.4, is displayed in cell B1.

Note: When you store a function in a cell (such as cell A1 above), there is no value displayed for that cell. This can be good from a presentation point of view, but it requires that you keep careful track of where your custom functions are located.

Using the QuickFigure Tools

QuickFigure Tools are extensions which add functionality to the program. Some of the tools available with QuickFigure 3.1 are QF Exchange, QChart and QSort. All of the Tools are optional, and do not need to be installed for Quick-Figure Pro to operate.

To use one of the Tools installed on your Newton, tap the **Tool** button, and select from the Tools that appear at the bottom of the menu.

QChart

QChart is the graphing and charting extension for QuickFigure Pro. It lets you display and print data from QuickFigure Works using x-y plots or line, bar, or pie charts. Charts may be printed or faxed, and are automatically saved with the associated worksheet. Below is an example of a chart that appears when QChart is selected from the **Tools** menu.



Creating Graphs and Charts

To create a graph or chart, select some cells in QuickFigure Pro and select QChart from the **Tools** menu. QChart will open, and a chart of your data will appear. Each time you create a chart, it is saved with the worksheet. Any number of charts can be created from the data in a single worksheet.

To see a list of the charts associated with a worksheet, select QChart from the **Tools** menu when one or no cells are selected.

The title of the worksheet is used as the default title of the chart.

To change the chart type or other chart formatting, tap the Setup button. This will bring up the Chart Setup slip.

The size of the chart displayed on the screen can be controlled by tapping the Show button. Full size, large size, medium size and small size are available. Full size represents a full 8 1/2 by 11 inch (or A4 if set for a European locale) page when printed.

Using the Chart Setup slip

Chart Setup		
Chart Title	Lab Results	
X-Axis Legend	Time	
Y-Axis Legend	Temp	
♦Chart Typ	e Line	
◆Data Series in columns		
◆Vertical Scale automatic		
•	\boxtimes	

The Chart Setup slip lets you control the appearance of a chart. You can modify the chart type, title, axis legends, scaling, and whether the data series are organized by rows or columns.

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Chart Title controls the large text which appears at the top of the chart.

X-Axis Legend controls the small text which appears below the X-Axis border.

Y-Axis Legend controls the small text which appears to the left of the Y-Axis border. Please note that the Y-Axis legend can display no more than 15 characters.

Chart Type allows you to choose from Bar, Line, Pie, or X-Y Plot.

Data Series determines whether a separate data series will be created for each row or for each column of cells.

Series Legends controls the positioning of the series legends box.

Vertical Scale controls how much of the Y-Axis is visible. This option only appears for line, bar, and X-Y Plot chart types.

Horizontal Scale controls how much of the X-Axis is visible. This option only appears for the X-Y Plot chart type.

Note: An x-y plot will appear only if two columns of data are selected. If more than two are selected, the x-y plot option will not appear in the Setup slip's chart type options.

Working with saved charts

Each chart you create is automatically saved with the associated worksheet. If you tap the **Overview** button (located between or next to the global scrolling arrows) while QChart is visible, the "Select Chart" slip will appear, and will list the charts associated with the current worksheet. If you open QChart with one or fewer cells selected, the Select Chart slip will appear automatically. If there are no saved charts, the **Open** and **Delete** buttons will not be visible.

Tapping a chart name in the list of saved charts will display the type of chart and the range of cells it displays beneath the list of charts. To open the currently selected chart, tap the **Open** button. To delete the currently selected chart, tap the **Delete** button.

When a chart is opened, the chart will update to display the data currently in the QuickFigure worksheet.

Using graphs and charts with other Newton applications

You can integrate graphs and charts with other applications by copying the chart to the Newton device's clipboard. To do this, use the pen to drag the chart to the edge of the display. If you are using a MP 2000/2100, you can tap Copy. We suggest reducing a chart to large size or smaller when copying to another application, as the full size chart may not fit in the application's page.

When the chart is on the clipboard, it may be dragged into other applications which support graphics, such as the Notepad.

Printing and faxing charts

To print or fax a chart, simply tap the **Routing** button and select either **Print** or **Fax**. Each chart is formatted to fit a complete 8.5 x 11 page, or A4 size if set for a European locale.

Sorting data with QSort

QSort is a sorting tool for QuickFigure that appears in the **Tools** menu when installed. You can sort ranges of cells based on Numeric, Text, or Date sorts, and in Ascending or Descending order.

To sort a range, select the range in QuickFigure. Tap the **Tools** button, then tap QSort and the QSort window will appear. Select the type of sort (Numeric, Text, or Date), and the sort order (Ascending or Descending). For a simple sort, you should then tap the **Sort** button.

Text sorts should be used if the information you are sorting contains both numbers and text.

Note: If you try to sort a range containing formulas, the formulas will be overwritten with the values. QSort will ask you to verify that this is in fact what you want to do.

Sorting by Date

QSort has the ability to sort by date. If you are doing a date sort, you must ensure that all the cells in the range or key column are valid dates. Blank cells are treated as if they were "January 1, 1904."

QSort can accept dates in a variety of formats, but they will always be returned in the format "month/day/year." For example, you may have a column of dates starting with "January 3, 1994." When the column is sorted, QSort will reformat the date to "1/3/94."

Key Column Sorts

If you wish to sort a range based on a key column, you should use the "Key Column" selector to choose the column to be used as a key. If you use a key column, that column will be sorted, and the rest of the row will be moved along with the column.

Note: Only the cells in the selected range will be moved by QSort. Cells which are in the same row as a cell sorted by QSort will not be moved if they are outside the selected range .

QuickFigure Exchange

QuickFigure Exchange is a system for transferring worksheet information between QuickFigure Pro and Microsoft Excel. It consists of a QuickFigure Tool and a Microsoft Excel add-in.

You can transfer entire workbooks, single worksheets, or selections from within a worksheet. Most data is preserved, including numeric and text formatting, cell borders, text alignment, column widths, formulas, and values.

Note: QuickFigure Exchange requires Microsoft Excel 5.0 or later version. Workbook transfers require Excel 97 or later versions.

Installing QuickFigure Exchange on your desktop

To install QuickFigure Exchange, insert the supplied disk and launch the QF Exchange Installer application (click on "Install.xla" for Windows or "Installer" for Mac). This application will open Microsoft Excel and install QuickFigure Exchange.

Choosing the port for use with QuickFigure Exchange

To configure QuickFigure Exchange, open Microsoft Excel and select Settings from the QuickFigure menu. You can then choose the connection type and port used. Transfers can be made using either serial or Macintosh AppleTalk connections.

Note: QuickFigure Exchange cannot use the communications ports when other similar applications are running. This includes Newton Connection Utilities, Classroom Connection, and Hot Sync Manager.

Transferring data from QuickFigure Pro to the Desktop Computer

To transfer a workbook or worksheet to the desktop, use the following steps:

1. Connect a cable from your Newton device to the desktop computer.

2. Open the workbook you wish to transfer in QuickFigure.

3. Open Microsoft Excel.

4. Choose **Receive Workbook** or **Receive Worksheet** from the QuickFigure menu.

5. Select QuickFigure Exchange from the **Tools** menu.

6. Tap **Send** in the QuickFigure Exchange application, choose **Worksheet** or **Workbook**.

Transferring data from the Desktop Computer to QuickFigure Pro

1. Connect a cable from your Newton device to the desktop computer.

2. In Excel, open the workbook or worksheet you wish to transfer.

3. If you want to download data to a specific worksheet in QuickFigure, open it.

4. Select QuickFigure Exchange from the **Tools** menu.

5. Choose **Send Workbook**, **Send Worksheet**, or **Send Selection** from the QuickFigure menu in Excel.

6. Tap **Receive** in the QuickFigure Exchange application, choose **Worksheet** or **Workbook.** If you download a selection, you must choose Worksheet.

Troubleshooting Exchange difficulties

First, make sure that you are using Version 5 or later of Microsoft Excel.

Here are solutions to common problems:

Problem: No QuickFigure menu appears in the Excel menu bar.

Solution: Make sure that QuickFigure Exchange has been installed using the QuickFigure Exchange Installer application. If it has been installed properly, select Add-Ins from Excel's Tools menu, and make sure that the QuickFigure Exchange Add-In is checked.

Problem: The Newton device fails to connect to the desktop.

Solutions: Check that you are plugged into the same port you have chosen in the QuickFigure Exchange settings on the Desktop. For Macintosh, check that the connection types are the same on both the Newton device and the desktop computer (serial, or AppleTalk). Quit out of any open applications that may also use the communications ports, i.e.: Newton Connection Utilities, Classroom Connection, and Hot Sync Manager.

AppleTalk Connections: If you are using AppleTalk, make sure that the correct computer is displayed in the Connect To slip in QuickFigure Exchange. If this is not correct, tap on it and choose Other Computer from the pop-up. The chooser dialog should appear.

Problem: When you click send or receive on the QuickFigure menu in Excel, you hear an immediate "bonk" notifier sound and see a message saying it can't connect to Newton.

Solution: Make sure a cell in your Excel worksheet is not selected for data entry (Press Return or Enter).

Also, quit out of any open applications that may also use the communications ports, i.e.: Newton Connection Utilities, Classroom Connection, and Hot Sync Manager.

Printing, Faxing, Beaming, and E-mailing

Printing

QuickFigure allows you to print your workbooks on all printers supported by the Newton operating system. To print a worksheet, open it or select it in the overview and tap the **Routing** button, then select **Print**. The print dialog window appears.

First, choose to print the whole workbook or only a worksheet. If an area is selected the worksheet, you can choose to print the selected area. An option for portrait or landscape printing is also available. To select the printing orientation, tap the diamond next to **Format**.

QuickFigure will only print pages with something on them. To see a preview of the worksheet, tap **Preview**.

Printing or faxing can require a great deal of your Newton's available memory. If you encounter an out of memory message while printing or faxing, select the **Print Later** option and close QuickFigure before printing the worksheet.

Printing options

To control the look of your printed worksheet, you can tap **Tools** and select **Print Options...**. Here you can set the print margins, or choose from the

QuickFigure

following printing options: grid lines, row and column labels, the worksheet title, page numbers, or the current date and time.

Faxing

Faxing is very similar to printing. Open the worksheet or select it in the overview, tap the **Routing** button, and select **Fax**. Choose workbook or worksheet, the recipient, and the orientation, then tap **Fax**.

Note: Apple MessagePad 120 units may occasionally run out of system memory while faxing. Freezing other packages and disabling all of the printing options (grid lines, etc.) may free up enough memory to allow the fax to go through. It may also be a good idea to reset before you fax, and to use the fax later option.

Beaming

QuickFigure allows you to beam a worksheet between two Newtons that have QuickFigure Pro installed. Simply point your Newton at the other Newton, and select Beam from the **Routing** menu. Sending a worksheet is identical to beaming a Notepad item or a Names card.

When you have received a worksheet, you must put it away to work with it. When you put it away, you can access it by opening QuickFigure, and opening the Overview. The worksheet will appear in the Overview.

E-mailing

You may send a worksheet by electronic mail to other QuickFigure users. When you do this, the worksheet is sent as both a binary attachment (containing the complete worksheet) and as tab-delimited text, without formulas. To include the formulas with the tab-delimited text, turn on the "Include formulas with text export" preference.

Receiving a worksheet by mail is similar to receiving a worksheet by beam. Tap the worksheet name in the In Box, and then tap Put Away. The worksheet will appear in the overview when you open QuickFigure.

Note: In order to beam or mail a worksheet from one Newton to another, both Newtons must have QuickFigure Pro 3.0 or greater.

Troubleshooting

Using Online help

To access Help if you have it installed, tap i button and select **Help**. The first screen on online help contains the general topics. Tap the topic of interest and a list of the subtopics will appear. Tap the subtopic and specific information will appear. You can exit by tapping the close box, or go back to topics by tapping **Topic**.

Memory issues

Many problems that can arise are memory-related. The Newton divides memory into many different categories. There is user memory, which is what you see if you select "Memory Info" from the i menu in the Extras Drawer. This kind of memory is analogous to a disk drive on a Macintosh or a PC.

The kind of memory which causes problems, however, is "frames heap memory." This memory is more analogous to RAM on a PC or Macintosh. Frames heap memory is not increased by a RAM card. This memory is what QuickFigure and all other Newton applications need to function correctly.

Symptoms

Memory problems are indicated by either an error message ("Newton does not have enough memory. . .", followed by "Cancel" and "Restart" buttons), or by strange behavior on the part of QuickFigure—the grid disappearing, or Quick-Figure seeming to run very slow, for example.

Solutions

Try resetting the Newton (by depressing the reset button- a regular soft reset). This will free up a great deal of frames heap memory, and things should be fine again.

If you are still having problems, especially with the worksheet you were using when you ran out of memory, then it is possible that some of the data for that worksheet may have been corrupted. To repair this, first make sure that you have recently reset your Newton. Then, select all of the cells you are working with, copy them, create a new worksheet, and paste the cells into the new worksheet. You may then delete the old worksheet, and this should resolve any problems you may be having.

Display problems

If any portion of your worksheet data is not being displayed (though if you tap it the data appears in the input slip), you can force QuickFigure Pro to rebuild it's display, possibly correcting the problem. To do so, tap **i** and choose **Prefs**. Choose **Display**, and tap the **Rebuild Display Cache** button.

Common causes for VALUE! and how to eliminate them

QuickFigure Pro will return the statement "VALUE!" when an invalid formula is entered. If you keep running into the VALUE! message in a cell, there are several likely causes:

1. If you are using the financial functions, each of the arguments must have a value of some sort.

2. If you are using external references (formulas that link to other worksheets in a workbook), check the following:

• Does the worksheet title have spaces? If so, you must use apostrophe quotes before and after the title in the formula, like so:

='April Mileage'!a1

• Make sure you used an exclamation point (!) to separate the sheet name from the cell reference.

• Make sure there are no spaces between the worksheet title and exclamation point, or between the exclamation point and the cell reference(s).

Technical support

You can view our Web site for a list of solutions to common problems at http://www.pelicanware.com.

If you have a question and are unable to answer it using the manual or Website, or if you see a Newton error message, please let us know. We are available at the following E-Mail addresses and phone numbers:

Internet: support@pelicanware.com VOX: (503) 221-1148 Fax: (503) 221-8709

Our US Mail address is:

PelicanWare, Inc. 506 S.W. 6th Avenue, Suite 1100 Portland, OR 97204

The QuickFigure Math Assistant

QuickFigure adds some of its functionality to the Newton's Intelligent Assistant. Anywhere in the Newton, you can access QuickFigure's math interpreter by simply writing Calculate or Figure, whatever you would like to evaluate, and tapping Assist.

f	igure 37 * 1.48
	QuickFigure
	54.76
·····	

For example, you might enter "Figure 37*1.48" and QuickFigure will return the answer "54.76".

You may then copy the answer onto the Newton clipboard, or into any other Newton document. This feature will work with any NewtonScript expression or function.

Appendix 2

Keyboard support

On MessagePad 2000 and eMate models, QuickFigure Pro supports the Newton external keyboard for data entry, worksheet navigation, and editing shortcuts. The navigation and shortcut keys are listed below.

Cut	Command-X
Сору	Command-C
Paste	Command-V
Clear	Command-B
Fill All	Command-L
Fill Right	Command-Option-R
Fill Down	Command-D
Print	Command-P
Tab	Enters any data on the input line into the cell, then moves active cell one column right.
Shift-Tab	Enters any data on the input line into the cell, then moves active cell one column left
Return	Enters any data on the input line into the cell, then moves active cell one row down.
Shift-Return	Enters any data on the input line into the cell, then moves active cell one row up.

QuickFigure

QuickFigure Stationery

QuickFigure Stationery allows you to create and work with QuickFigure worksheets from within the Newton's built-in Notes application, or from other stationery-enabled applications.

The QuickFigure Stationery module must be installed separately from the QuickFigure Pro application. It can be used with or without the full QuickFigure Pro application installed, and should be installed on internal storage only.

Creating a QuickFigure Stationery Worksheet

To create a new worksheet in the Notes application, simply tap on the **New** button, and select **Worksheet.** An empty QuickFigure worksheet will appear. You can access these worksheets through either the Notepad's overview, or through the normal QuickFigure Pro overview.

If you have an existing worksheet which you would like to use in Notes, you can designate it as a Stationery worksheet with the following steps:

- 1. Make sure that QuickFigure Stationery is installed and active;
- 2. Open the worksheet in QuickFigure Pro;
- 3. Tap the **Routing** button;
- 4. Select Add to Notes.

Using QuickFigure Stationery works in much the same way as QuickFigure Pro. Data entry, formulas, and cell editing are all identical. However, QuickFigure Stationery uses a button called "Options" to perform most of the functions

QuickFigure

available in the QuickFigure Pro Tool menu. The Tool menu in Stationery only includes the Tool QChart if it's installed. In addition, Stationery does not support the following features:

- Stationery doesn't support worksheet linking, label locking, or manual recalculation.
- Cells cannot be moved or copied using drag-and-drop.
- The Newton's "Find" feature will not search inside of QuickFigure worksheets stored in the Notepad, unless QuickFigure Pro is also installed.
- Stationery does not support templates.
- QuickFigure worksheets may only be beamed or e-mailed from within the QuickFigure Pro application.
- Most QuickFigure Tools are not compatible with Stationery. The only exception is QChart.
- There is no fill series option.
- There are no printing options.

You may also find that large worksheets in QuickFigure Stationery can cause the Newton device to run out of heap memory.

Editing QuickFigure Stationery Worksheets in QuickFigure Pro

You can edit QuickFigure Stationery worksheets in QuickFigure Pro just like any other worksheet. They will appear in QuickFigure Pro's overview. We recommend that you do not attempt to edit the same worksheet in QuickFigure Pro and QuickFigure Stationery simultaneously.

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