

HP OMNIGO 100

Quick Start And User's Reference Guide

HP OmniGo 100 Quick Start And User's Reference Guide

Dear HP OmniGo 100 Customer,

Thank you for purchasing the HP OmniGo 100 organizer plus. We, the OmniGo team, would like to extend a warm welcome to you for joining our OmniGo family!

We have a vision for a product to change the way we manage our business productivity today and have worked hard to deliver the vision with the HP OmniGo 100. This is the first of a series of revolutionary products we envisioned.

We have focused all our energy on making this organizer easy to use and flexible. A new user interface makes it easy for you to navigate through the product and the innovative rotating hinge adapts to your work style. The OmniGo 100 helps you to be productive in your business and personal life.

We have arranged for a whole new set of products to enhance your organizer. This is only a beginning. We will continue to develop add-on products to enhance your OmniGo 100. There is literally no end to the capabilities of your organizer.

We will be grateful to hear from you with any comments or suggestions about your OmniGo 100, and how we can make it better for you.

Thank you again for purchasing the HP OmniGo 100.

Sincerely,

The HP OmniGo 100 Team

HP OmniGo 100 Quick Start and User's Reference

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Setting Up



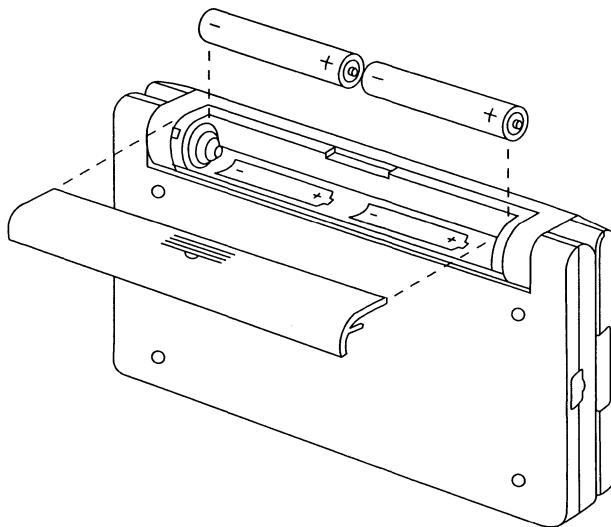
This book is divided into two parts: a Quick Start and a User's Reference. Read the first three chapters to get started. Refer to the other chapters for more detailed information.

Before you start using your OmniGo 100, you'll need to install the batteries, calibrate the pen, set the time and date, and enter owner information. These tasks are described below.

Step 1: Install the Main Batteries

You should find two AA Lithium batteries and a backup battery in the OmniGo 100 box.

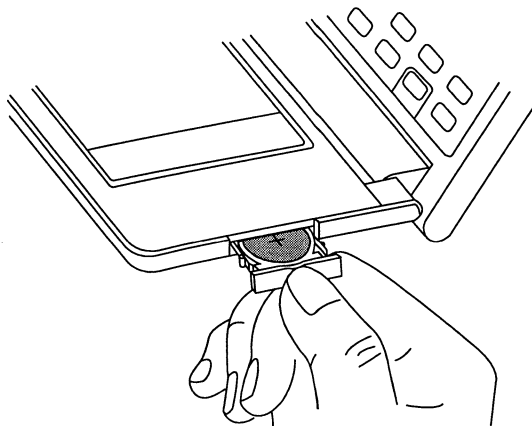
Install the AA batteries first. Remove the battery cover on the hinge of the OmniGo 100 and install the batteries as shown.

**Note**

Close the OmniGo 100 when installing the batteries.

Step 2: Install the Backup Batteries

1. Slide out the backup battery compartment as shown.



2. Insert the 3-volt CR2032 backup battery. *Be sure the + on the battery is facing up in the tray, and the tray is seated properly.*

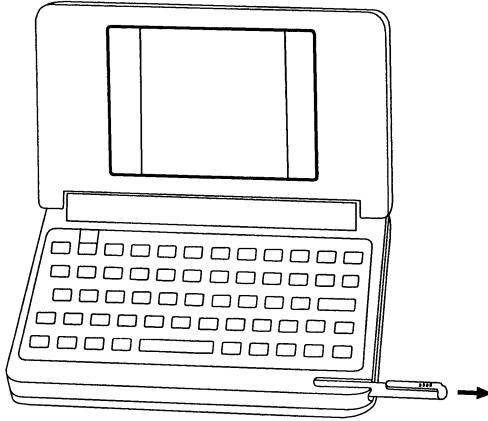
If you installed the batteries correctly, you'll see the start up screen and then the Pen Calibration screen.

If the screen is blank, hold down **[ON]** and press **[+]** several times to darken the display. If the screen is black, hold down **[ON]** and press **[-]** several times to lighten the display. If it remains blank (or black), make sure you installed the batteries correctly.

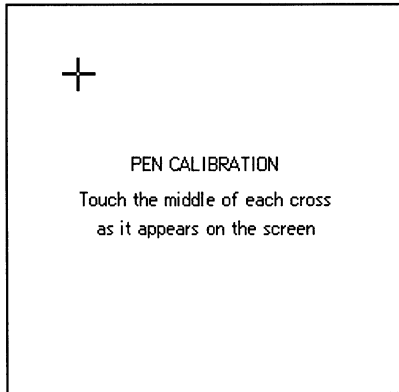
You can reverse the screen display colors by holding down **[ON]** and pressing **[Z]**.

Step 3: Remove the Pen and Calibrate the Touch Screen

Remove the pen as shown.



Before you can use the touch screen, you have to calibrate it with the pen. After you turn on the OmniGo 100, the following screen appears:



Follow the instructions on each of the three calibration screens.

Step 4: Specify the Date, Time, and Owner Information

After the pen is calibrated, enter the date, time and owner information in the following screen:

1. Enter your name.

2. Enter today's date and time.

Welcome! Please enter the following information. When you have finished tap 'Done' or press 'Alt-n' to continue.

This unit belongs to:



Date today is (mm/dd/yy):

1/1/95

Time now is (hh:mm):

12:00pm

3. Select **Done** and the Home Screen appears.

To adjust the display contrast, tap the icons at the bottom of the display:  lightens the display and  darkens it.

ON turns the OmniGo 100 on or off.

Ask for Help

Your OmniGo 100 comes with context-sensitive online help. If you need help with any application screen, tap the online help icon:



See the online help for information on how to use the online help

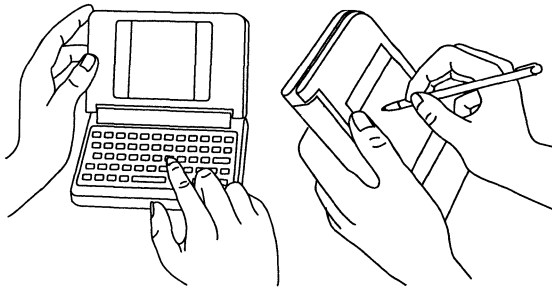
You can also press for help.

Getting Started

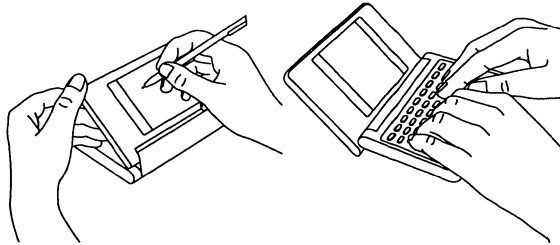


Read this chapter!
It describes
features that are
common to all
applications, use of
the pen, and setting
up your operating
environment.

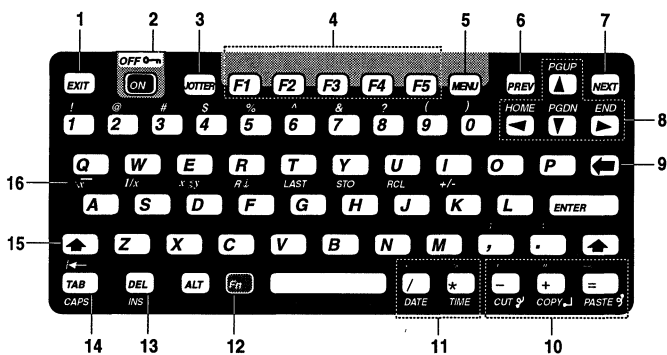
Your OmniGo 100 is designed to be versatile and easy to use. You can operate it with the pen or the keyboard. You can use it like a palmtop. You can fold it all the way open, rotate the screen, and use it like a notepad.



Or, experiment and use it any way you want.





The Keyboard



- | | |
|-------------------------------------|-----------------------------|
| 1 Exit an application or item | 9 Backspace |
| 2 On/Off and [Fn] -Lock key | 10 Clipboard keys |
| 3 Opens the Jotter application | 11 Date and time stamp keys |
| 4 Function keys | 12 [Fn] -shift key |
| 5 Opens the utility menu | 13 Delete and insert |
| 6 Moves to the previous item | 14 Tab and Backtab |
| 7 Moves to the next item | 15 Shift key |
| 8 Arrow and [Fn] -arrow keys | 16 Calculator keys |

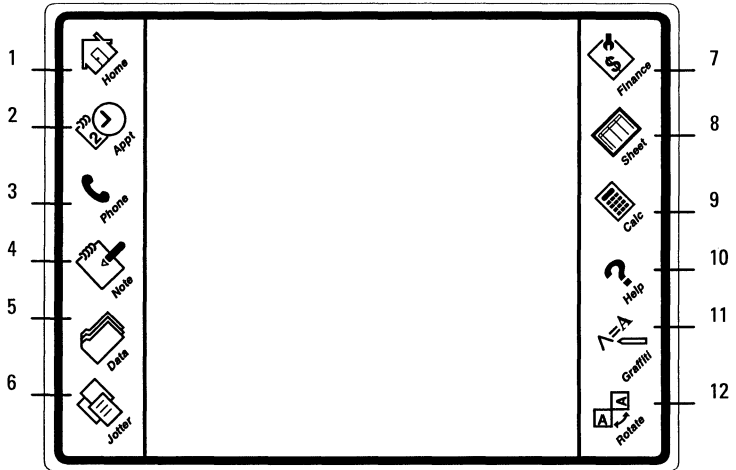
Some of the keyboard's keys are 'sticky' keys; after they've been pressed, they remain active until another key is pressed. The following keys are sticky keys:

-  Enter capital letters by pressing  and then the letter.
- [ALT]** Access buttons and fields on the screen by pressing **[ALT]** and the corresponding keyboard shortcut. Keyboard shortcuts are underlined. For example, to access the Name field, press **[ALT]** **[N]**.
- [Fn]** Access special editing and movement keys by pressing **[Fn]** and a special **[Fn]** key. See *Using [Fn] keys* on page 2-6.

These keys can also be used in their normal manner, that is, by holding them down while pressing the desired key.

The Screen

The OmniGo 100 touch screen is your gateway to its applications. Use the pen to tap an icon on the side of the display and its application opens.



- | | |
|--------------------|-----------------------|
| 1 Home screen | 7 Financial Tools |
| 2 Appointment Book | 8 Spreadsheet |
| 3 Phonebook | 9 Calculator |
| 4 Notepad | 10 Online help |
| 5 Database | 11 Graffiti |
| 6 Jotter | 12 Rotates the screen |

Application icons that are not on the side of the screen are in the Home screen. The Home screen displays all of the application icons, and lets you change the display contrast, lock your OmniGo 100, and interact with PCMCIA SRAM cards.

The Applications

The OmniGo 100 comes with the following built-in applications:



Appointment Book: *Keeps track of appointments, and to-do tasks.*



Phonebook: *Stores phone numbers and other contact information.*



Notepad: *Keeps your notes organized.*



Jotter: *Lets you quickly jot notes, and then store them away for safekeeping.*



World Time: *Shows you the time around the world, and displays city locations on a world map.*



Database: *Lets you create your own databases.*



Stopwatch: *Keeps you on time with an alarm clock, a countdown timer, and a stopwatch all in one.*



Calculator: *Performs everyday calculations.*



Financial Tools: *Performs financial calculations with easy-to-use forms and includes an HP-12C calculator emulation.*



Spreadsheet: *Lets you create sophisticated spreadsheets.*



Book Reader: *Lets you read electronic books or travel guides.*

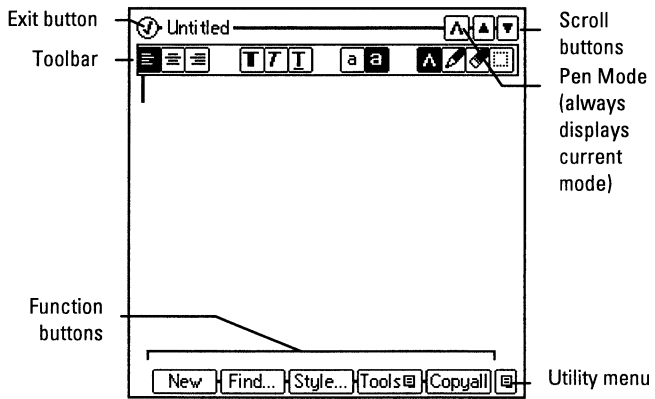
In addition, your OmniGo 100 includes a transfer application and setup application that let you control how you transfer, store, and display data. All these applications are described in Chapter 3.









Using Your OmniGo 100


Take full advantage of your OmniGo 100 by learning about the common features of the different applications.

Common features

All OmniGo 100 applications have common controls:



-  Exit button Closes the current application or dialog box (same as pressing **EXIT**).
-  Scroll buttons Move the selection bar up or down one item (same as pressing the up or down arrow keys).
-  Page buttons Move you to the previous or next page or screen of information.
(not shown)
-  Pen Mode Lets you select one of four ways you can use the pen:
 -  **Write text**—Recognize Graffiti handwriting
 -  **Draw ink**—Draw objects
 -  **Erase ink**—Erase drawn objects
 -  **Select ink**—Select drawn objects so you can cut or copy them

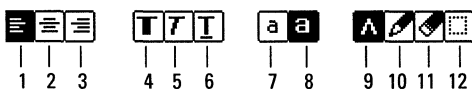
-  Utility menu button Opens a menu of additional application functions (same as pressing **MENU**).

The utility menu contains items that are common to most applications:

- Cut** Removes an item, but saves it so it can be pasted.
- Copy** Copies an item so it can be pasted.
- Paste** Inserts a cut or copied item.
- Delete** Removes an item. Deleted items cannot be pasted.
- Print** Prints specific information.
- Print Screen** Prints the currently displayed screen.

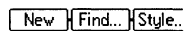
Toolbar

The Toolbar lets you quickly select formatting options and pen modes:



- 1 Left justified
- 2 Centered
- 3 Right justified
- 4 Bold
- 5 Italics
- 6 Underlined
- 7 Normal type
- 8 Large type
- 9 Write text with pen
- 10 Draw ink with pen
- 11 Erase ink with pen
- 12 Select ink with pen

Function buttons



All of the applications have function buttons near the bottom of the screen. The functions they perform depend on the application. Tap the buttons or use the 5 keyboard function keys (**F1** through **F5**) to access them. Items that are not available are grayed out.

The **Fn** keys

The **Fn** keys can move the cursor, edit selected text, or lock the OmniGo 100. You *must* press **Fn** to access these keys.

- PGUP** Moves up a page of text at a time.

PGDN	Moves down a page of text at a time.
HOME	Goes to the start of a line or file.
END	Goes to the end of a line or file.
DATE	Inserts the current date (if appropriate).
TIME	Inserts the current time (if appropriate).
CUT	Removes an item so it can be pasted later.
COPY	Copies an item so it can be pasted later.
PASTE	Inserts a cut or copied item.
CAPS	Activates Caps Lock.
Omni	Locks the OmniGo 100 (password must be set).

Searching Lists

Many OmniGo 100 applications display information in sorted lists. List items are always sorted by the information in the leftmost column. You can search through a list to find a particular item any of three ways:

- Tap the Alphabet Bar

AB CD EF GH IJ KL MN OP QR ST UV WX YZ

Tap letters to go to the first item that begins with that letter. The number of times you tap determines the letter you'll go to. For example, tapping **AB** twice, takes you to the beginning of the A's on the first tap and then the B's on the second tap. If there are no entries that begin with that letter, the OmniGo 100 beeps.

- Typing a Letter
Type the first letter or letters of an item to go to an item that begins with those letters. The alphabet bar vanishes and **Locate:** appears followed by the letters you type. If no item begins with the typed letters, the OmniGo 100 beeps.
- Find
Tap **Find** to search for an item, or text within an item.

Using the Pen



Rudimentary pens were invented nearly 4000 years ago.

Use the pen to enter information into any application. Use it as a pointing device (much like a mouse) and as an input device (like a keyboard). Write on the OmniGo 100 screen and your handwriting is recognized.

You must write using the *Graffiti* writing system: a simple-to-learn method that can provide 100% recognition accuracy.

Pen basics



Use the pen to select items, write, and draw pictures.

Use the pen to select icons, open applications, input text, and draw pictures. You can use your finger if you want, but the pen is more accurate. You need to know these terms to use the pen:

Tap To momentarily touch the pen against the screen. Tapping a field places the cursor in that field.

Double-tap To momentarily touch the screen twice. Double-tapping a word within a field selects that word.

Hold To press the pen against the screen until the OmniGo 100 clicks.

Drag To hold the pen against the screen and then move the pen across the screen.

Here are some important things to remember about using the pen:

- Highlight an item by tapping it. Open a highlighted item by tapping it again.
- Open an application on the Home screen by tapping its highlighted icon with the pen (or tapping an icon on the side of the screen).
- Drag to select an area on the screen.

Select **Draw ink** in the pen mode menu to write without having your handwriting interpreted.

Note

Letters drawn in **Draw** ink mode cannot be interpreted later.

Select **write text** mode in an application, and the OmniGo 100 recognizes Graffiti letters that you enter.

Using Graffiti

Graffiti is handwriting recognition software. It interprets strokes you make on the screen as letters. Graffiti uses simplified, distinct letter shapes that are easy to remember. All letters can be made with a one stroke.



You must write your letters using the Graffiti writing system if you want your handwriting interpreted.

To successfully use Graffiti with your OmniGo 100:

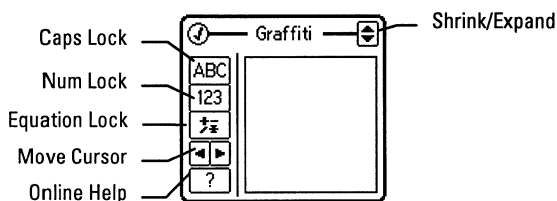
- Draw the character shapes exactly as shown (like those below), and you can achieve 100% accuracy.



- Always begin the stroke at the heavy dot. Certain characters are created with similar shapes, but have different beginning and end points.
- Lift the pen from the OmniGo 100 screen when you've finished the stroke. The character will be recognized and appear as typed text on the screen. You can start the next letter immediately. Unlike handwriting you do not have to write in a line, simply write the next character on top of the last.


The Graffiti window

The Graffiti window can be used for text entry, and contains buttons that activate various Graffiti features. You don't have to use the Graffiti window to enter text, but it has features that make text entry easier.





The Graffiti window always appears on top of any application.

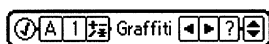
The Graffiti window controls

1. Select any application that can accept pen input.
2. Tap . The icon shows a stylized 'A' with a checkmark and the word 'Graffiti' written below it.
3. When using Notepad or Jotter, make sure **Write text** mode is selected.
4. Begin writing.



Drag the top of the Graffiti window to wherever it is most convenient on your screen.

The Graffiti icon opens the Graffiti window. Tap  to close the Graffiti window. Tap  to shrink the Graffiti window leaving a Graffiti toolbar:



The toolbar lets you access all of the Graffiti window input modes, yet takes up much less space.

Tips for text entry

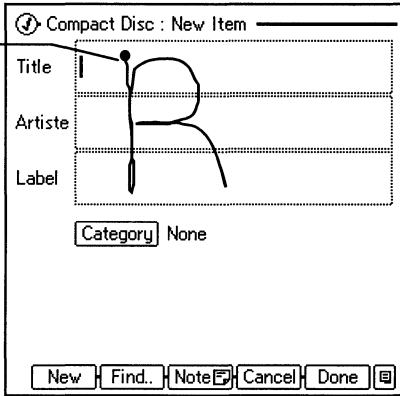
Writing outside of the Graffiti window

You do not have to use the Graffiti window to have your handwriting recognized. Strokes made anywhere on the OmniGo 100 screen can still be recognized.

Entering text in fields

You do not have to confine your writing to the height or width of a field, but you must start the character within the desired field. Use as much of the screen as you like:

Because you started here, the letter will appear in this field.



Selecting text

Select a field by tapping it. Dragging the pen across text selects that text. You can select a word by double-tapping on it. Triple-tapping selects an entire line. If you are editing notes or Jotter pages, tapping four times selects an entire paragraph, and tapping five times selects all text on the page.

Writing letters with Graffiti

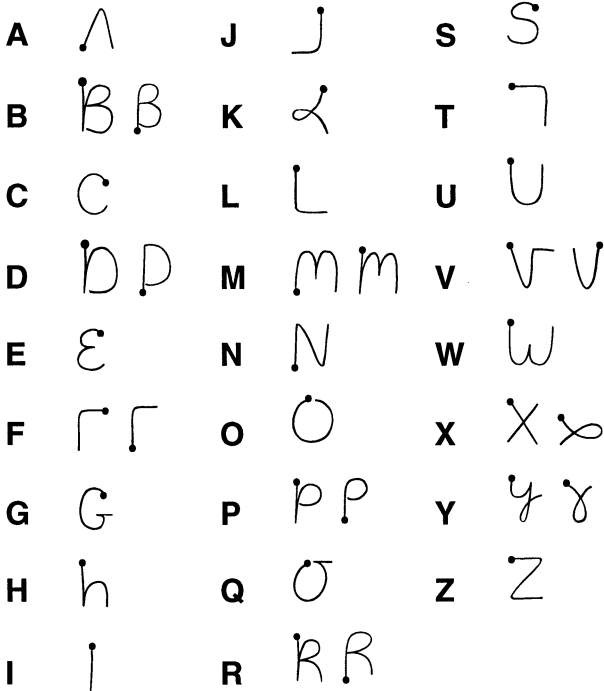
Any character that can be typed on a standard keyboard can be entered with Graffiti.

The strokes recognized by Graffiti are designed to closely resemble those of the regular alphabet. Most people can enter text quickly and accurately with only minutes of practice.

Use the following table to learn how to make the alphabet character you want. Use these shapes to create both upper- and lower-case letters.

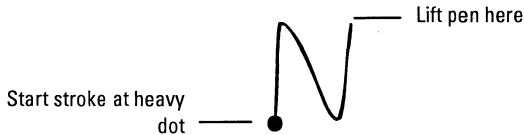


If you forget how to write a letter, look it up in the online help.



Accuracy improves when you draw larger characters. You should draw strokes that nearly fill the writing area of the Graffiti window.

For example, the letter "n" is created with the following stroke:



Use the following strokes for common text entry tasks:

- Space:
- Backspace:
- Return:


Note

Do not try to draw the dot shape itself. The heavy dot is only used to indicate the starting point of the stroke.

As soon as you lift your pen from the screen, you can immediately begin the stroke for the next character. Graffiti can recognize characters as fast as you can write them.

Some letters have two different stroke shapes. You can use either stroke for these letters.

Capital letters and numbers

You use the same stroke shapes for upper-case letters as you use for lower-case letters. However, to make upper-case letters, you must first shift to caps using special strokes—or press  on the keyboard.



Caps Shift



Use the Caps Shift stroke to capitalize the first letter of a word. When you make the Caps Shift stroke, a small arrow appears in the upper-left corner of the Graffiti window. As soon as you draw the character shape, the capital letter is recognized, and the arrow disappears to show that Graffiti has returned to lower case.

Caps Lock



Use the Caps Lock strokes or tap **ABC** in the Graffiti window or toolbar to activate Caps Lock. When Caps Lock is on, all alphabet strokes are recognized as upper case. Make the Caps Lock stroke a second time, or tap **ABC** again to return to lower case. You can also press   to turn Caps Lock on.

Note

Do not write on a slant. Vertical strokes must be parallel to the sides of the Graffiti window.

Number Lock



Write numbers with Graffiti by activating Number Lock. Activate Number Lock with the Number Lock stroke, or tap **123** in the Graffiti window or toolbar.

When Number Lock is on, all strokes are recognized as numbers.

Make the Number Lock stroke a second time (or tap **123**) to turn Number Lock off.

Graffiti numbers

0		5	
1		6	
2		7	
3		8	
4		9	

Equation Lock

Equation Lock lets you enter calculation data quickly. Activate Equation Lock with the Equation Lock stroke, or tap in the Graffiti window or toolbar. All of the number characters listed above are available plus the following:

() + - / * ^ % . =

The first stroke of = produces -, but the second stroke produces =.

Reset

The Reset stroke is used to reset the state of all Shifts including Number Lock. When you make the Reset stroke, you return to the lower case alphabet.

Edit strokes

You can edit selected text using , and . The Graffiti keystrokes for those commands are printed next to the key. The editing strokes are:

Cut Copy Paste Delete

Like all of the Graffiti strokes, you must be in **Write text** mode to use them.



When Number Lock or Caps Lock is on, you can still write punctuation.

Writing punctuation marks with Graffiti

All punctuation marks begin with a single tap in the Graffiti window. When you tap in the Graffiti window, a dot appears in the upper-left corner to show that Punctuation Shift is on.

When Punctuation Shift is on, *the next pen stroke you make* is recognized as a punctuation symbol. If you activate the Punctuation Shift by mistake, make a backspace stroke to deactivate it.

Note

When drawing your strokes outside the Graffiti window, tapping to make the Punctuation Shift does not work. Make a back-and-forth stroke to simulate a tap on the Graffiti window.



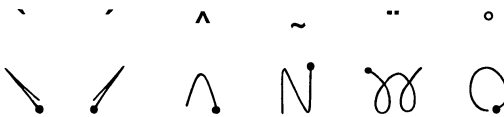
Common punctuation

Use the following table of punctuation strokes to enter punctuation.



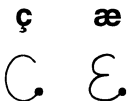
Special characters

You can create accented characters and other special characters by using the following strokes after writing the letter you want to accent:



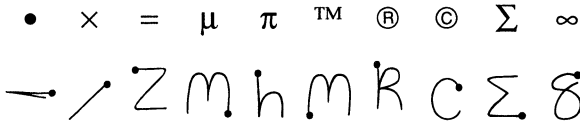
For example, to create â, write

Use the following strokes to create these characters:






Extended characters

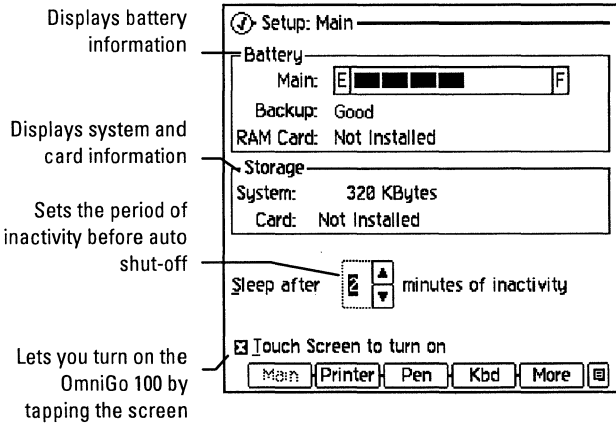
You can create special characters using the extended character stroke. When you make the extended character stroke a slash appears on the upper-right corner of the Graffiti window. When the extended character slash is on, *the next pen stroke you make* is recognized as an extended character.



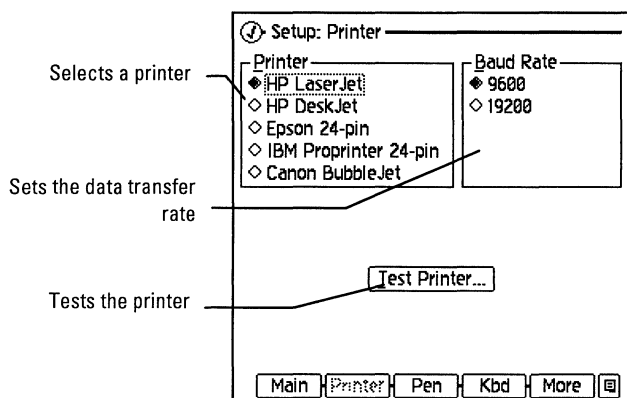
Configuring Your OmniGo 100

Tap  and then  to configure your OmniGo 100.

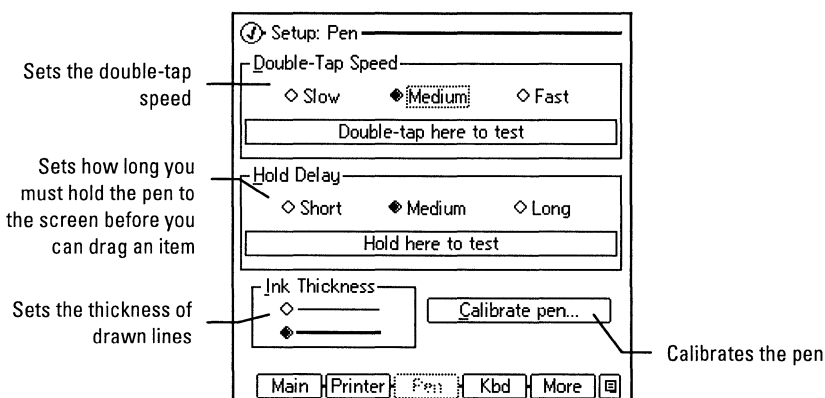
The OmniGo 100 has two sets of setup options. Use **More**  to switch between the two sets. All configuration items are optional.



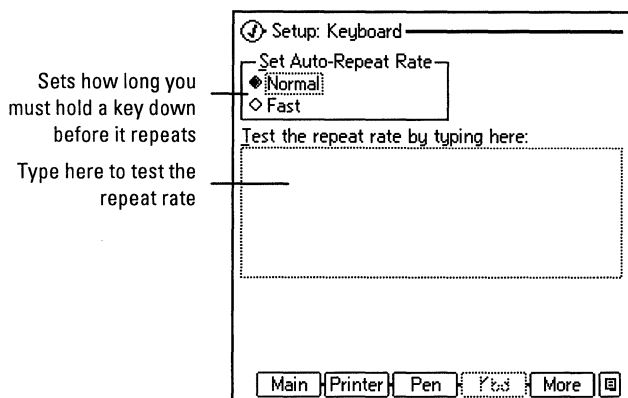
Press **F2** or select **Printer** with the pen to configure a connected serial printer. See your printer's documentation for serial port settings.



Press **F3** or select **Pen** with the pen to set pen options.

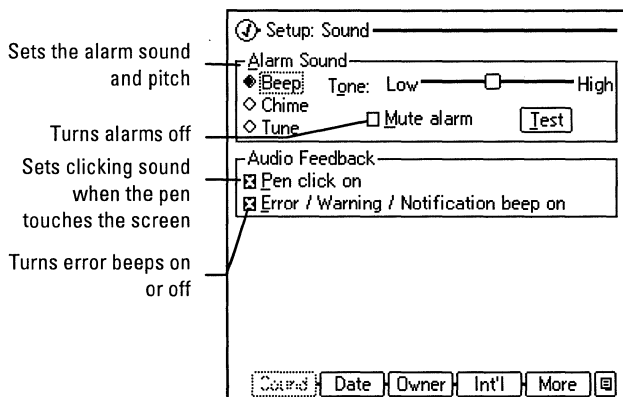


Press **F4** or select **Kbd** with the pen to set keyboard options.

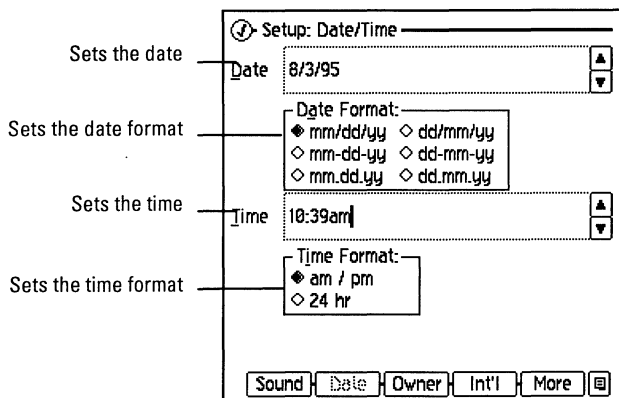


Press **F5** or select **More** with the pen to see the next set of setup options.

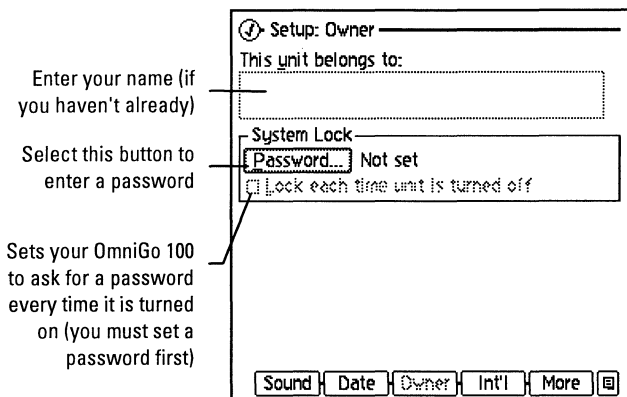
Press **F1** or select **Sound** with the pen to set sound options.



Press **F2** or select Date with the pen to set the date and time.



Press **F3** or select Owner with the pen to set owner options.

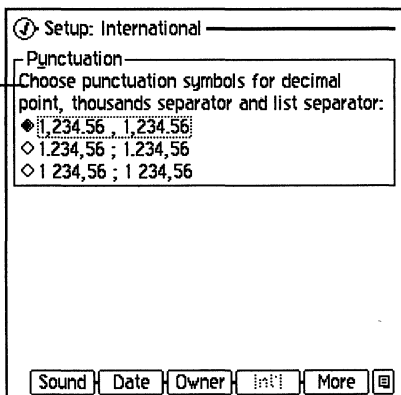


Note

If you lock your OmniGo 100 while the screen is rotated, you must use the pen to enter your password.

Press **F4** or select **Int'l** with the pen to open the international options.

Selects your country's decimal and thousands separators



If Your OmniGo 100 Won't Run

If your OmniGo 100 fails to respond to keystrokes or otherwise behaves unusually, check these conditions before calling Customer Support or sending it in for service:

1. Make sure the batteries are not misaligned or the backup battery is not upside down. See chapter 1 for more information.
2. Make sure that the batteries have been installed in the correct order, main batteries first then the backup battery.
3. If the keyboard stops responding or the communications port doesn't seem to work, perform a soft reset.

Resetting the OmniGo 100

If your OmniGo 100 behaves unusually, you can do a soft reset (also called rebooting the computer).

Caution

A soft reset erases any data that has not already been saved (such as, open notes or appointments).

Perform a soft reset by pressing **▲**+**ON**+**NEXT** (that is, holding down **▲** and **ON** and then pressing **NEXT**).

If a soft reset doesn't work, you can attempt a *hard reset* by straightening a metal paper clip, and inserting it into the reset hole that is located at the back of the OmniGo 100, until it reaches the bottom. Hold it there for 1 second, then remove it. This procedure should reset your organizer without you losing your data.

You can also do a hard reset if your organizer doesn't turn on after inserting new main batteries. This occurs occasionally if you had inserted the backup battery before the main ones.

Initializing the OmniGo 100

To initialize your OmniGo 100 to its factory condition, you can attempt a *system reset* by holding down **C** immediately after doing a soft reset.

You will be asked whether you wish to initialize the memory, which erases its contents. If you type Y (for yes) and press **ENTER** a system reset will occur and *all data is lost*; if you type N (for no) and press **ENTER** a soft reset is attempted.

Caution

A system reset erases all of your data, and restores your OmniGo 100 to its factory default condition. If your data is not backed up, it will be lost forever. See chapter 3 for information about transferring your data to a PC or PCMCIA SRAM card.

The Applications




If you want more detailed information about a particular application, refer to the User's Reference section of this manual.

Your OmniGo 100 comes with over a dozen built-in applications. This chapter introduces their key features so you can start using your OmniGo 100 right away.

The Appointment Book

The Appointment Book lets you keep track of your appointments and ToDo items, using five different views: Appointment, ToDo, Week, Month, and Four Month.

To start the Appointment Book tap  .

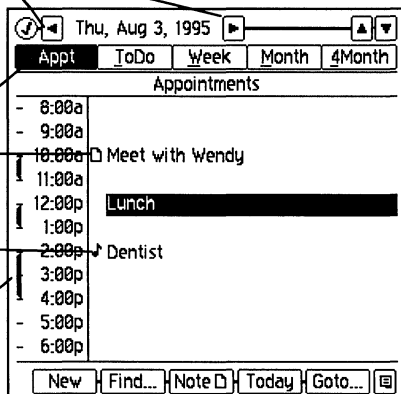
Move to the previous or next day

Currently active view

Note included

Alarm set

Length of appointment




Move appointments by dragging them to new times, or by cutting and pasting to new days.

Highlight different appointments with the cursor keys or the pen. Tap a highlighted appointment to open the appointment record, which lets you edit appointment information.

To add a new appointment, double-tap an empty time slot, or select **New**.


Scheduling appointments

To schedule an appointment:

1. Tap  to start the Appointment Book.
2. Tap **New** (or press **[F1]**) to open a new appointment record. Or simply double-tap the desired time slot.
3. Type or write in the appointment description, and select the next field. (You can use the keyboard shortcut to move to a field. For example, pressing **[ALT] [T]** moves directly to the **Start Date** field.)
4. Fill in the rest of the fields. The only required field is **Desc.**
5. If you want to set an appointment *with* an alarm, make sure the **Alarm On** field is checked.
6. Press **[F5]** (or tap **Done**).

Schedule an Appointment

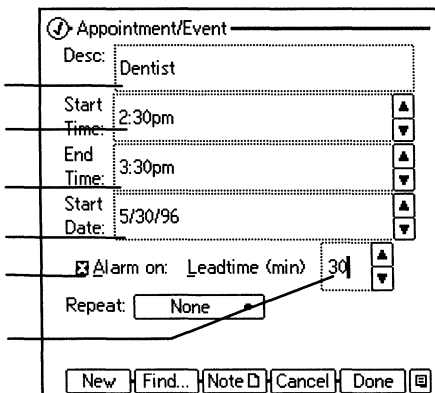
As an example, schedule a dental appointment for 2:30 pm on May 30, 1996. Set the alarm to go off 30 minutes before the appointment.

1. Start the appointment book by tapping .
2. Press **[F1]** to create a new appointment.



Examples using the repeat feature are in the online help.

3. Enter **Dentist**.
4. Enter **2:30**.
5. Enter **3:30**.
6. Enter **5/30/96**.
7. Tap here.
8. Enter **30**.



Appointment/Event	
Desc:	Dentist
Start Time:	2:30pm
End Time:	3:30pm
Start Date:	5/30/96
<input checked="" type="checkbox"/> Alarm on:	Leadtime (min) 30
Repeat:	None

Buttons: New Find... Note D Cancel Done

8. Press **F5** (or tap **Done**) to save the appointment.

On May 30, 1996, an alarm will sound at 2:00 pm to remind you of your 2:30 dental appointment.

To delete an appointment, an event, or a ToDo item, highlight it and press **DEL**, **CUT** or **Delete** from the utility menu.

You can add a note to an appointment by selecting **Note** (**F3**).

ToDo view

A ToDo item is a task that does not have a specific time associated with it, but requires action by you.

What the symbols mean:

! : Task due today

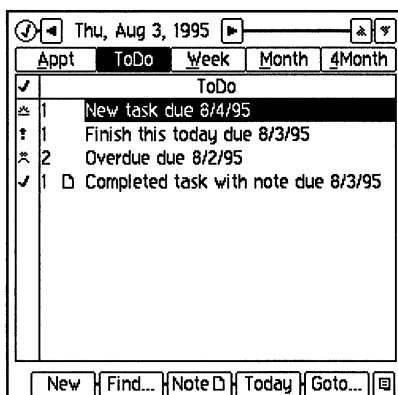
⚡ : Task overdue

📅 : New today

✓ : Completed

📄 : Note included

Use the pen to select **ToDo** to view ToDo items.



Create a ToDo item

To Create a ToDo item, do the following:

1. Select **ToDo**.
2. Select **New** or press **F1**.



ToDo items are sorted by priority. Rearrange ToDo items by dragging them. A dragged item's priority changes automatically.

3. Enter the task description.
4. Enter a Start and Due Date.
5. Enter its priority.
6. When checked, unfinished items are carried over to the next day.

7. Tap **Done** to save changes, or **Cancel** to discard your changes.

When you complete a ToDo item, check it off by tapping the ✓ column. Completed items are moved to the bottom of the list.

Week view

Week view displays appointments for an entire week.

Tap here to go to month view

Tap here to go to appointment view for this day

Tap an appointment to open its record

Month view

Month view displays appointments for an entire month.

Double-tap a day to open its appointment view

June 1995						
Appt	ToDo	Week	Month	4Month		
Sun	Mon	Tue	Wed	Thu	Fri	Sat
28	29	30	31	1	Staff	3
4	5 Staff	6	7	8	9 Staff	10
11	12 Staff	13	14	15	16 Staff	17
18 Overdue	19 Meeting Lunch	20 Meeting Lunch	21	22 Meeting	23 Staff	24
25	26 Staff	27	28	29	30 Staff	1

New Find... Today Goto...

Four-Month view

Four-Month view displays four months of the year.

Double tap here to go to month view

Double tap a day to open its appointment view

1996																						
Appt	ToDo	Week	Month	4Month																		
May 1996							June 1996															
S	M	T	W	T	F	S	S	M	T	W	T	F	S									
				1	2	3	4	30														
5	6	7	8	9	10	11	2	3	4	5	6	7	8									
12	13	14	15	16	17	18	9	10	11	12	13	14	15									
19	20	21	22	23	24	25	16	17	18	19	20	21	22									
26	27	28	29	30	31		23	24	25	26	27	28	29									
July 1996							August 1996															
S	M	T	W	T	F	S	S	M	T	W	T	F	S									
				1	2	3	4	5	6				1	2	3							
7	8	9	10	11	12	13		4	5	6	7	8	9	10								
14	15	16	17	18	19	20		11	12	13	14	15	16	17								
21	22	23	24	25	26	27		18	19	20	21	22	23	24								
28	29	30	31					25	26	27	28	29	30	31								

New Find... Today Goto...

The Phonebook

The Phonebook stores your phone numbers and contact information.



To use a different application, tap its icon. You don't have to exit one application to use another.

To start the Phonebook tap



Tap here to quickly go to a range of letters

Double tap here to open this record

	Name	Home	Office
☐	About Phoneboo...	*See Notes	
☐	HP Automated In...		800-443-1254
☐	HP Customer Su...	*See Notes	541-715-2004
☐	HP Electronic In...	*See Notes	

Create a new Phonebook item

To create a new Phonebook item:

1. Select **New**, or press **F1**.

2. Enter a name.


3. Enter a home or business phone number.

4. Enter any other useful phone numbers.

Phone Book : New Item — Pg 1 of 2	
Name	
Home	
Office	
Fax	
Other	

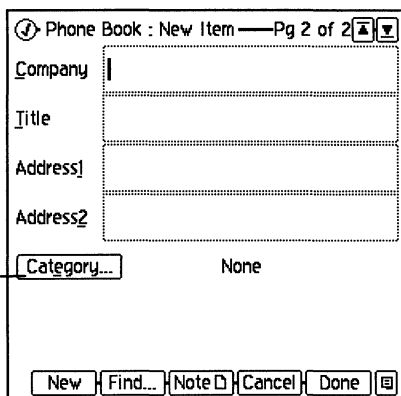


You can assign categories to Phonebook entries, and then display different categories at different times. See the online help for more information.

5. Tap  to move to the next page.

6. Enter any useful business information.

7. Tap this button to select a category.



Phone Book : New Item — Pg 2 of 2

Company

Title

Address1

Address2

Category... None

New Find... Note Cancel Done

8. Tap **Done** to save the item, or **Cancel** to discard it.

To delete an item, highlight it and press **DEL**. You can also use pen editing strokes or **Cut** from the utility menu.

The Notepad

The Notepad lets you make and keep track of notes. You give each Notepad item a title, and the Notepad keeps them in alphabetical order.



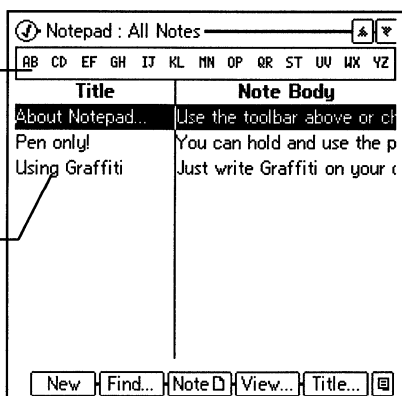
Notes can contain text and pictures.

To start the Notepad, tap



Tap here to quickly go to a range of letters

Double-tap here to open this note



To delete a note, highlight it and press **[DEL]**.

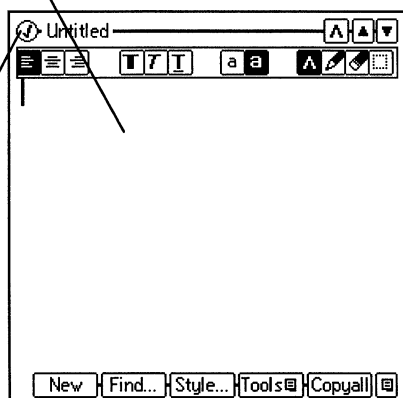
Create a Notepad item



See the online help for information on notepad categories.

To create a new Notepad item:

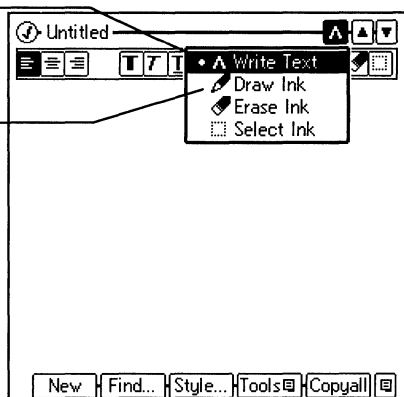
1. Select **New**, or press **[F1]**.
2. Enter a text or graphics.
3. Tap here when you're finished.



4. When the New Title dialog appears, enter a title and tap **Save**.

To write text, use Text Mode

To draw pictures, use Ink Mode



The Jotter

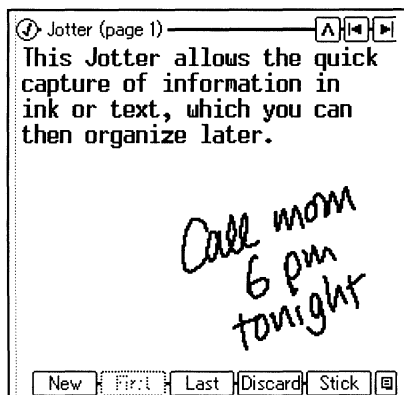
The Jotter is a 20-page electronic notepad. Each page can contain text or pictures. You can save Jotter information in any application that can have a note.



Use the Jotter to enter a page of data quickly, and then "stick" the page in any application that can have notes. Use the Notepad to edit multi-page notes or categorize information.

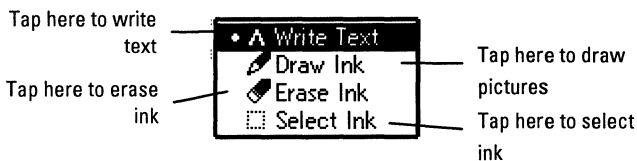


To start the Jotter tap , or press **JOTTER**.



Use **PREV** **NEXT** to navigate through the pages, or press **PREV** or **NEXT**.

Tap **Pen Mode** to change the Pen Mode.



Tap **New** to open a blank page.

Tap **First** or **Last** to go to the first or last page that contains data.

Tap **Discard** to delete the contents of a page.

If you want to copy the displayed Jotter page into an item, tap **Stick**.

Using Stick

To copy a Jotter page to an item:

1. Tap **Stick**. The Jotter application closes and the Stick icon appears (📌) in the title bar. If the icon is gray, you cannot copy the Jotter page to the selected application.
2. Open the application where you want to copy the Jotter page. For example, open the Phonebook if you want to copy a Jotter page to an item in your Phonebook.
3. Hold the pen on the Stick icon until you hear a beep then drag the icon from the title bar onto an item in the application. For example, drag it onto a name in the Phonebook. Or, open a note in any application and drag the Stick icon into the body of the note.



Dragging the Stick icon to an item adds the Jotter page to the end of the item's note.

Note

Stick is not available if a previously stuck Jotter page has not been dragged to an item.

World Time

World Time displays the local time and date for cities around the world. You can also display a city's location on the world map.

To start World Time tap  and then  World Time.

What the symbols mean:

- ◆: City is marked
- : Note included
- *: Daylight savings
- +: Day ahead
- : Day behind

World Time: All cities	
Local city: Corvallis, OR, U... 4:57pm 6/19/95	
AB CD EF GH IJ KL MN OP QR ST UV WX YZ	
City	Time
◆ Aarhus, Denmark	** 1:57am
Abadan, Iran	** 4:27am
Abidjan, Ivory Coast, R. of	11:57pm
Abu Dhabi, United Arab Emirates	+ 3:57am
□ Acapulco, Mexico	5:57pm
Accra, Ghana	11:57pm
Addis Ababa, Ethiopia	+ 2:57am
Adelaide, Australia	+ 9:27am
Aden, Yemen A.R.	+ 2:57am

New Find... Note □ View... Local... □

Setting your local city

The local city is the reference point for the World Time application. All of the other cities display their time relative to the time set for your local city.

To set your local city:

1. Search for your city by typing the first few letters of your city or by scrolling through the list of cities.
2. If your city isn't there, add it, or select a city in the same time zone.

To add your city, see the online help or *Adding a city* on page 8-2.

3. Tap **Local**. The Set New Local City dialog appears:

— Set New Local City —

City: Aarhus, Denmark
 City Clock: 1:57am, 6/20/95
 System Clock: 4:57pm, 6/19/95

◇ Set System clock to City clock
 ◆ Set City clock to System clock

OK Cancel



If you purchased your OmniGo 100 in the USA, the local city was set to New York.

- Decide whether you want to change the system's time, or change the city's time. Select the first option if the city's time is already correct. Select the second option if the city's time is not correct. (If it is still not correct after you tap **OK**, use **Setup** to set the time.)

Viewing cities and the world map

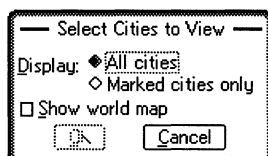
You can display a list of all cities or marked cities only. You can also view cities on the world map.



To mark a city, tap it and press the spacebar.

To select view options:

Tap **View**. The following dialog appears:

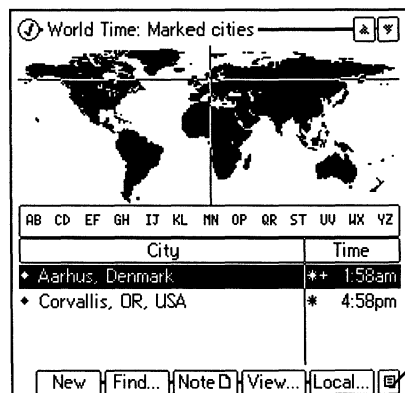


Select the options you want.

If you select **Marked cities only**, and **Show world map**, a screen like the following appears:



Tap the map to locate the nearest listed city.



The utility menu

Converting times

The **Convert** function in the utility menu lets you temporarily change the time to find out what time it would be in other cities. See chapter 8, *World Time*, for more information.



You can create extensive and varied database templates. For more information, see chapter 9.


The Database

The Database lets you create your own database. A database is a way to store information in fields so you can find and display the information easily. The Phonebook application is an example of a database. To create a database, you first create a *template* with the database fields you want, and then you enter the data into the template to form data *records*. Examples of databases you could create would be a list of your compact discs or a list of business clients.

To design a template:

1. Think about the type of information you want to collect and how you want to organize it.
2. Start the Database and select **New**.
3. Add the fields you want. In general, all fields are the same size and are added vertically one after the next.
4. Save the template.



To start the Database, tap .

When you start the Database, a list of existing databases appear. To create a new database template, tap **New**. You must enter a title for the database.

Templates start out blank, but you can add new fields by selecting **+Field**. The following dialog appears:

Add Field

Name :

<input checked="" type="radio"/> Text	<input type="radio"/> Label
<input type="radio"/> Number	<input type="radio"/> Category
<input type="radio"/> Number +/-	<input type="radio"/> Choice List
<input type="radio"/> Date	<input type="radio"/> Check Button
<input type="radio"/> Time	

There are nine different field types.

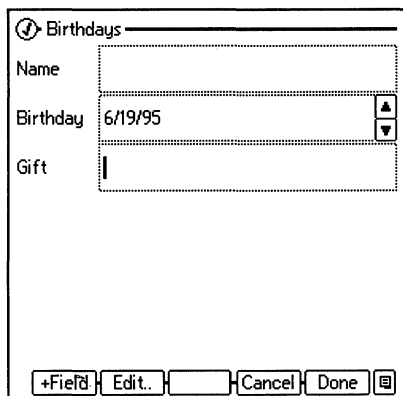
Field	Description
Text	Accepts any text.
Number	Accepts numbers only.
Number +/-	Accepts numbers, and lets you increment or decrement the numbers with arrow buttons.
Date	Accepts dates only (format is specified in Setup).
Time	Accepts times only (format is specified in Setup).
Label	Does not accept any input, instead it lets you enter text that appears in each record.
Category	Accepts category selections from a list of user-defined categories.
Choice list	Lets you create a group of user-defined choices from which only one selection can be made.
Check button	Lets you create check boxes that may be on or off. More than one check box may be selected at a time.

Database templates

After deciding what kind of information you want to organize, decide how you want to present it.


Creating a Database for a list of birthdays

As an example, create a template that looks like this:



The screenshot shows a database template titled "Birthdays". It contains three fields: "Name" (a text field), "Birthday" (a date field with "6/19/95" entered and up/down arrows), and "Gift" (a text field). At the bottom, there are buttons for "+Field", "Edit.", "Cancel", "Done", and a small square icon.



1. Start the Database, tap  .
2. Tap **New** to create a new template.
3. Enter Birthdays.
4. Tap **+Field** or press **[F1]** to add a field.
5. Select **Text** and enter Name as the text field name. Tap **OK**.
6. Tap **+Field** or press **[F1]** to add a field.
7. Select **Date** and enter Birthday as the date field name. Tap **OK**.
8. Tap **+Field** or press **[F1]** to add a field.
9. Select **Text** and enter Gift as the text field name. Tap **OK**.
10. Tap **Done**.

You've created a birthday template. Now you can add birthday records to your new database.


Adding Records to a database



The allowed date format depends on which format you selected in Setup.

To add a new record to a database:



1. To start the Database, tap .
2. Tap on **Birthdays**. The OmniGo 100 displays a list of existing records.
3. Tap **New** to add a new record.
4. Enter a name in the **Name** field.
5. Enter a date in the **BirthDay** field.
6. Enter a gift idea in the **Gift** field.
7. Tap **Done**.

All existing records are displayed:

Birthdays : All Items												
AB	CD	EF	GH	IJ	KL	MN	OP	QR	ST	UV	WX	YZ
Name			Birthday				Gift					
Charlotte			8/10/90				Teddy bear					

New Find.. Note D View [icon]

Stopwatch



Use the Setup Sound screen to set the alarm and timer sounds.

The Stopwatch application is actually three applications in one. You can set a daily alarm, set a countdown timer, or use a stopwatch. After any of these are started, they continue to run, even when closed or hidden behind other applications, or when the OmniGo 100 is off.

The screenshot shows the application interface with three sections: Alarm, Timer, and Stopwatch. The Alarm section has a 'Time' field set to '7:00am' and an 'Alarm On' checkbox. The Timer section has a 'Timer' field set to '0' and a display showing '00:00:00.0s', with a 'Message' field below it. The Stopwatch section has a large display showing '00:00:00.0s'. At the bottom, there are control buttons: 'On/Off' for Alarm, 'Start' and 'Reset' for Timer, and 'Start' and 'Reset' for Stopwatch, along with a small square icon.



Pressing or adds or subtracts 5 minutes.

To set the Alarm, enter the time you want the alarm to go off in the **Time** field, and tap **Alarm on**. The alarm sounds when the time arrives.

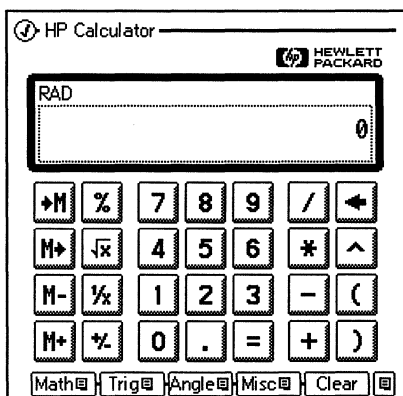
To set the Timer, enter the number of minutes you want to count down, and tap **Start** (**F2**). If you enter text in the message field, the text is displayed when time is up. To stop the Timer, tap **Stop** (**F2**).

To start the Stopwatch, tap **Start** (**F4**). To stop the Stopwatch, tap **Stop** (**F4**). **Reset** sets the Stopwatch to zero.

The Calculator

The Calculator can be used as you would use any standard calculator.

To start the calculator, tap



See the online help or the User's Reference section for more information on the Calculator

Making corrections

Type to backspace.

Tap **Clear** or press **F5** to clear the Calc Line.

Setting the angle mode

1. Tap utility menu button or press **MENU**.
2. Tap the angle mode you want. If you choose **Degree**, no annunciator shows in the Calc Line. **RAD** or **GRAD** displays if you select radians or grads.

Long Calculations

As an example, calculate $\frac{(256-2\sqrt{5041})}{6}$.

1. Tap **(**
2. Enter 256
3. Tap **-**

4. Enter $2 * 5041$ tap \sqrt{x} .
5. Tap $)$
6. Tap $'$ and enter 6
7. Tap $=$

The result is 19.

Financial Tools

The Financial Tools application is a powerful financial calculator that lets you perform the following types of calculations:

TVM	Calculate interest over time.
Cash Flows	Calculate interest on accounts with variable payments or deposits.
Business%	Calculate markup, margin, and percent change.
Compound	Calculate interest compounded at various intervals.
Solver	Solve multi-variable equations, and plot them.
List Stat	Calculate and forecast statistical results.
Conversions	Convert currency, length, area, volume, mass, and temperature.
Date Calcs	Determine a future or past day of the week, or calculate number of days between dates.
HP 12C	Emulates the HP 12C financial calculator.

Not all of these functions are described here. For more information on the Financial Tools calculator, see the User's Reference section of this manual.

To start the Financial Tools, tap



Time Value of Money

Time value of money (TVM) calculations involve money earning interest over a period of time.

As an example, calculate the payment on a 30-year, \$200,000 mortgage at 9.25% annual interest. Then find out how much of the first year's payments is applied toward the principal.

Calculate a Home Mortgage



This example is already in your OmniGo 100. To see it, press **MENU**, tap **Case List**, and tap **TVM sample**.

1. Start the Financial Tools, tap



2. Enter the number of periods: 360.

3. Enter the interest: 9.25.

4. Enter the loan amount: 200,000.

5. Enter the future value of the loan: 0.

6. Enter the number of payments per year: 12.

TVM(1): TVM sample	
No. of Periods N	360.00
Interest/year I/YR	9.25
Present Value PV	200,000.00
Payments PMT	0.00
Future Value FV	0.00
Payments/year P/YR	12 <input type="checkbox"/> Begin <input checked="" type="checkbox"/> End
New Amort Iconv TVM1-2 Apps	

7. Tap **PMT** and the monthly payment is calculated: -1,645.35. A *negative number indicates that money is paid out*.



On a 30-year mortgage, 22 years pass before the principal paid each month surpasses the interest paid each month.

Now calculate how much of the first year's payment goes towards reducing the principal.

1. Tap **Amort** or press **(F2)**.

TVM(1): Amortization

Group:	1	Payments	12
Payments:	1 - 12 per Group		
Amort interest	1%YR		9.25
Amort payment	PMT		-1,645.35
Remaining balance			198,701.68
Interest			-18,445.88
Accum. Interest			-18,445.88
Principal			-1,298.32

Go
Adjust
Apps

2. Tap **Go** (**(F2)**).

Although you paid out nearly 20,000 dollars, only 1,298.32 goes towards the principal in the first year.

List Stat

The List Stat application lets you calculate one- and two-variable statistics.

As an example, determine how fast a 43 year old is likely to run 100 meters given the following information:

Entering Statistics



This example is on your OmniGo 100, to see it press **(MENU)**, tap **Case List**, and tap **Statistics** sample.

Age	Average Time (in seconds)
20	13.1
30	14.2
40	15.7
50	17.4
60	20.2



The current world record for the 100 meter dash is held by Carl Lewis: 9.86 seconds.



Select Stats to display the mean and standard deviation.



1. Start the Financial Tools, tap .
2. Tap **Apps** or press **[F5]**, and select **List Stats**. If you see only 1 column, tap **[F4]** and select **n-Variable**.

3. Enter the age in the X column.
4. Enter the time in the Y column.
5. Press **FrCast**.

Statistics: Edit X

Item#	Variable-X	Variable-Y
1)	20.00	13.10
2)	30.00	14.20
3)	40.00	15.70
4)	50.00	17.40
5)	60.00	20.20
Sum	200	80.6

New Stats FrCast Vars Apps

6. Enter 43 in the XVALUE cell.
7. Tap YVALUE.

Forecast

X VALUE	43.00
Y VALUE	0.00
Correlation	0.98
Slope	0.17
Intercept	9.16

Data Model

- Linear
- Exponential
- Logarithmic
- Power

Plot Sum... Apps

The result time of 16.64 appears.

Plot the curve from the previous example.

Continuing from the above example, do the following:

8. Select **Plot**.

Plotting Statistical Results

Use this screen to set the plot axes limits and resolution.

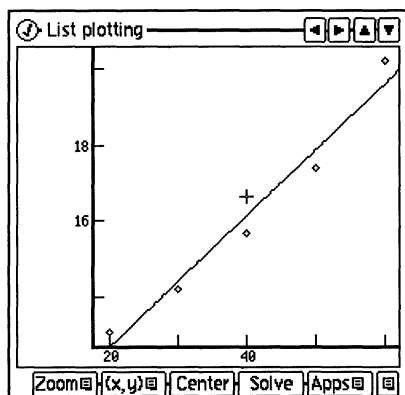
⌂ List plotting

X-minimum	18.00
X-maximum	62.00
Y-minimum	12.75
Y-maximum	20.56
Resolution	112.00
Plot variable	X

Auto Draw Apps

9. Select Auto.

Your OmniGo 100 graphs the result:



Solver

Use the Solver to create your own equations, solve for unknown variables, and plot the results.

As an example, enter the equation for the volume of a box:
 $V=L*W*H$.

Entering Equations



This example is on your OmniGo 100, to see it press **MENU**, tap **Case List**, and tap **Statistics** sample.




You can use the Math menu to insert mathematical functions into your equations.

Solving Equations

The equation name appears in an alphabetical list.

As an example, use the equation you just entered to solve the following problem: You know that a rectangular tank's volume is 30 cubic meters. It is 3 m long by 4 m wide, but some of it is below ground so you cannot measure its height. How high is it?

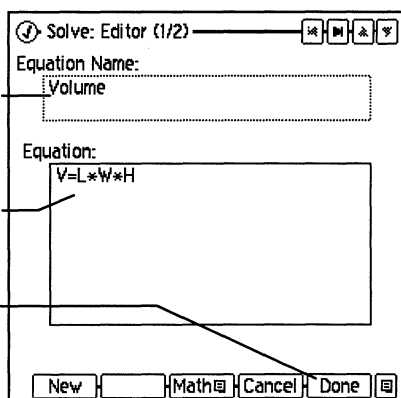
Follow these steps using the equation that you entered from the last example:

1. Start the Financial Tools, tap .
2. Tap **Apps** or press **F5**, and select **Solver**.
3. Select **New** or press **F1**.

4. Enter Volume.

5. Enter $V=L*W*H$.

6. Select Done.



2. Enter 30 here.

3. Enter 3 here.

4. Enter 4 here

5. Tap H to solve the equation.
The result is 2.5 m high.

Solve: Calculation

Volume: $V=L \times W \times H$

V	30.00
L	3.00
W	4.00
H	0.00

Guess... Apps

Conversions

The Conversion applications let you perform fast conversions for currency, length, mass, area, volume, and temperature.

Converting Currency

To convert currency, follow these steps:

1. To start the Financial Tools, tap



2. Tap Apps or press [F5], and select Conversions.

3. Tap Conv ([F4]) and select Currency.

This is the amount of local currency that is converted

This is a conversion result

Exchange rates can be changed ap here to make the selected currency the new local currency

Currency Conversions

Local Currency	Local Amount	Foreign Amount
US\$	100	
Yen	100	100.00
Mark	1.58	1.58
Franc	5.33	5.33
Lira	1,450	1,450.00

1 US\$ =

Name Local Conv Apps


Tap here to see more.

4. Select your local currency.
5. Enter an amount for conversion.

Results are displayed for each of the currencies.

Converting Lengths

As an example, convert 9 miles to kilometers.

1. To start the Financial Tools, tap .
2. Tap **Apps** or press **(F5)**, and select **Conversions**.
3. Tap **Conv** (**F4**) and select **Length**.


4. Enter 9.

The result appears here, 14.48 kilometers.

Length Conversions	
Unit & Desc.	Conversions
miles	9.00
yards	15,840.00
feet	47,520.00
inches	570,240.00
kilometers	14.48

Converting Temperature

As an example, convert 89.6° F to Celsius.

1. To start the Financial Tools, tap .
2. Tap **Apps** or press **(F5)**, and select **Conversions**.
3. Tap **Conv** (**F4**) and select **Temperature**.

- Enter 89.60.
- The result appears here, 32° C.


Temperature Conversions	
Unit & Desc.	Conversions
Degree Fahrenheit	89.60
Degree Celsius	32.00
Degree Rankine	549.29
Kelvins	305.15

Date Calcs

Use the Date calculator to find out the number of days between two dates.

Calculating Number of Days Between Two Dates

As an example, calculate the number of days between May 12th, 1995 and August 10th, 1996.

- To start the Financial Tools, tap .
- Tap **Apps** or press , and select **Date Calcs**.

- Enter 5.121995.
- Enter 8.101996.
- Tap here to see the number of days between the dates.

Date Arithmetic	
First Date	<input type="text" value="DATE1"/> 5.121995
Second Date	<input type="text" value="DATE2"/> 8.101996
Actual Days	<input type="text" value="DDAYS"/> 456
	360/Yr days 448
	365/Yr days 455

HP 12C

The HP 12C is one of Hewlett-Packard's most popular calculators. It is emulated on the OmniGo 100 for users who are familiar with its operation. If you are unfamiliar with the HP 12C, don't worry, many of its functions can be performed with the other financial tools already introduced.

Chapter 12 lists ways to obtain more information about the HP 12C.

The Spreadsheet

Spreadsheets are collections of pieces of information (called cells) that have mathematical or logical relationships. Before you start using the spreadsheet, think about the types of information you want to keep track of, and how they are related.

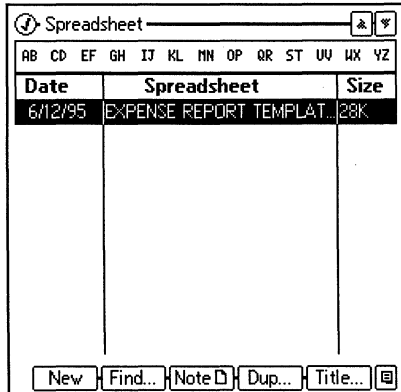
To start the Spreadsheet, tap



A list of the existing spreadsheets is displayed:




Open an existing spreadsheet by tapping it.

A screenshot of the Spreadsheet application interface. At the top, there is a title bar with a back arrow, the word "Spreadsheet", and a search icon. Below the title bar is a grid of columns labeled AB, CD, EF, GH, IJ, KL, MN, OP, QR, ST, UV, WX, YZ. The first row is a header with three columns: "Date", "Spreadsheet", and "Size". The second row contains the text "6/12/95", "EXPENSE REPORT TEMPLAT.", and "28K". Below the grid is a menu bar with buttons for "New", "Find...", "Note", "Dup...", "Title...", and a small square icon.

Spreadsheet											
Date	Spreadsheet									Size	
6/12/95	EXPENSE REPORT TEMPLAT.									28K	

Creating a spreadsheet

To create a spreadsheet:

1. Start the spreadsheet application by tapping  .


2. Tap **New** or press **[F1]**.

3. Enter values and functions into the cells of the spreadsheet.

4. Enter a title for the spreadsheet.

Creating a Travel Expense Spreadsheet

As an example, create a simple spreadsheet to keep track of one day's travel expenses:

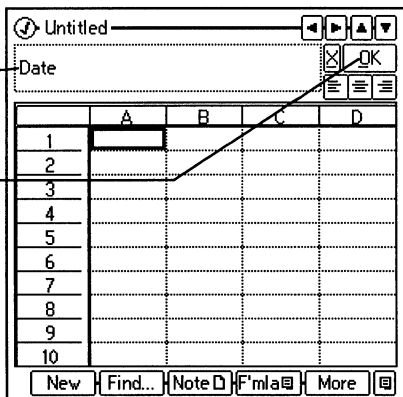
1. To start the spreadsheet application, tap  .

2. Tap **New**.

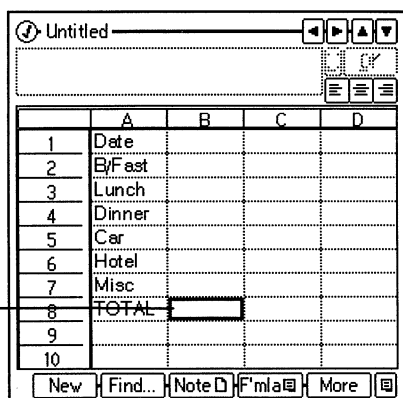
3. Tap cell A1 (near the top left corner of the grid).

4. Enter the word "Date" here.

5. Tap **OK**, or press **[ENTER]**.

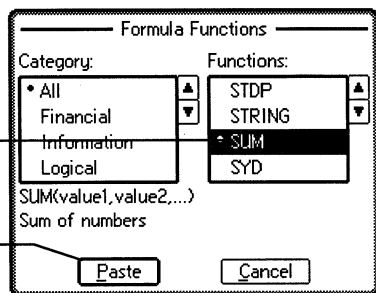


6. Continue entering text until your spreadsheet looks like this:



7. Select cell B8.

8. Tap F'mla and select Insert Formula. The Formula Functions dialog box appears:



9. Use the arrow keys to select SUM.

10. Tap Paste.

11. Replace the arguments so the function looks like this =SUM(B2:B7). This defines cell B8 to be the total of cells B2 through B7.

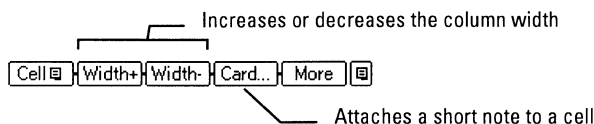
12. Enter appropriate numbers in cells B2 through B7. The total appears in cell B8:

	A	B	C	D
1	Date	11/1/96		
2	Breakfast	4.00		
3	Lunch	6.00		
4	Dinner	16.00		
5	Car	57.00		
6	Hotel	109.00		
7	Misc	4.00		
8	TOTAL	196.00		
9				
10				

You can expand on this spreadsheet so it keeps track of your travel expenses every day.

More features

If you tap **More**, advanced functions appear:



Tapping **Cell** displays the Cell Menu:



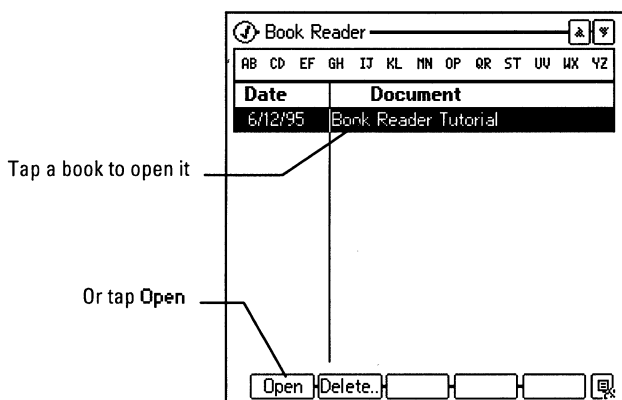
For more information on the Spreadsheet, see the online help or the User's Reference section of this manual.

	A	B	C	D
1	Date	11/1/96		
2	Breakfast	4.00		
3	Lunch	6.00		
4	Dinner	16.00		
5	Car	57.00		
6	Hotel	109.00		
7	Misc	4.00		
8	TOTAL	196.00		
9				
10				

The Book Reader

The Book Reader lets you read electronic books.

To start the Book Reader, tap  Book Reader.



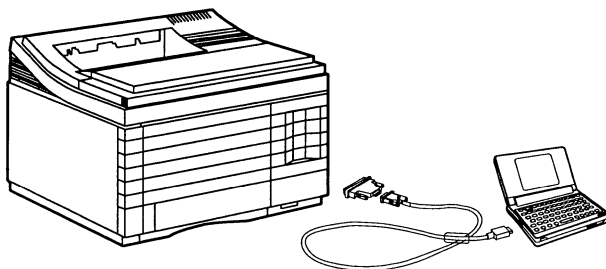
Your OmniGo 100 comes with one sample book, to purchase others check the OmniGo 100 Accessories Catalog.

Most electronic books have automatic links to relevant information. Links are words that are often underlined or circled that open pages of related information. Tap a link to go to a new page.

To scroll through pages of text tap on the scroll bars near the side of the screen, or use **[PGUP]** or **[PGDN]**.

Printing

You can print from your OmniGo 100 by connecting a serial cable from your OmniGo 100 to a printer.



You need the HP F1015A serial cable to connect to a printer. You may also need the HP F1023 Connector/Adapter kit, if your printer does not have a standard 9-pin serial connector. If your printer does not have a serial port at all, you'll need a serial to parallel converter. The OmniGo 100 supports the following printers:

- HP LaserJet
- HP DeskJet
- Epson 24-pin
- IBM Proprinter 24-pin
- Canon BubbleJet



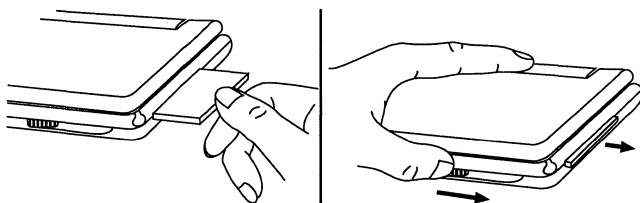
If the printer prints unexpected characters or omits information, the batteries may need to be replaced.

If you don't have one of the above printers, check your printer's manual to see if it can emulate one of them. Use Setup to select a printer and configure the serial connection. See your printer's manual for the correct serial communication settings. Before turning your printer on make sure the serial cable is connected to the printer. You can print from any application using the **Print Screen** command in the utility menu.

PCMCIA SRAM Cards and Connecting to a Computer




Turn off the OmniGo 100 before you insert or remove a PCMCIA SRAM card.




Inserting and removing a PCMCIA SRAM card.

Caution

If you insert or remove a PCMCIA SRAM card while the OmniGo 100 is on, a system error may occur and you may lose data.

To eject a PCMCIA SRAM card, tap  and follow the instructions on the screen.

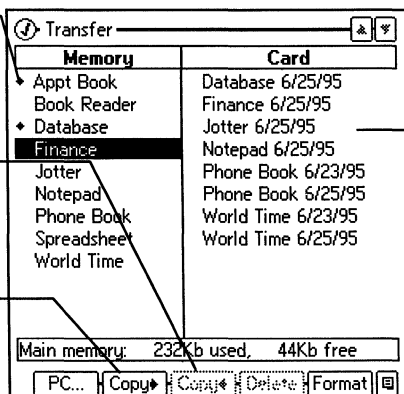
To start Transfer, tap  Transfer.

Select a file and press space, or use **Mark** in the utility menu, to mark it for copying.

Copies marked files from the card or PC to memory. OmniGo 100 files are overwritten.

Copies marked files from memory to the card or the PC.

The Transfer screen appears.



Backup files are given names based on the date.



Use Transfer to keep track of how much memory is used by each application. If you get a low memory warning, delete unused notes or data from within an application and then use Transfer to check how much memory you saved.

Delete deletes the marked files.

The OmniGo 100 supports most PCMCIA SRAM cards, but flash memory cards are not supported.

When you insert an unformatted card, the OmniGo 100 asks you if you want to format and initialize the card. You can reformat a card with **Format** (F5). Formatting erases all information stored on the card. All cards must be initialized. Initialization does not damage any existing card data.

Note

You cannot specify names for your files. The file name is based on the application and the date. If you copy a file twice on the same day, the second copy is the only one that is kept.

If you have the PC connectivity software, you can connect to a PC by tapping **PC** (F1). For more information, see the connectivity manual.

Note

After you load an Appointment Book file from a backup, you must open the Appointment Book to activate any existing appointment alarms.

The Appointment Book

Contents

Views	4-1
Viewing	
Appointments ...	4-2
Viewing ToDo	
Items	4-5
Viewing Weeks	4-7
Viewing Months	4-8
Viewing	
4 Months.....	4-9
The Utility	
Menu.....	4-10

The Appointment Book application is an easy and efficient way to organize your busy schedule. Appointments and ToDo lists, for today or in 3 months, are all at your fingertips.

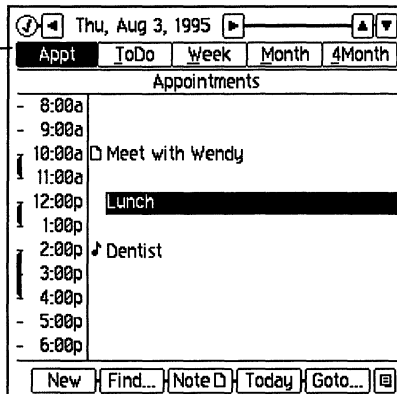
Before you start using the Appointment book, make sure you have set the date correctly using Setup.

To start the Appointment Book, tap



When you start the Appointment book, it displays the Appointment view for the current date. Any appointments you've entered for this day are displayed.

View
buttons



Views

The Appointment Book gives you five different ways to view your schedule. Each of the five views has unique features that help you manage your schedule. The Appointment and ToDo views help you plan each day, while the Week, Month, and 4 Month views provide you with the big picture.

The Appointment view, and the ToDo view both focus on the details for a single day. The Week, Month, and 4 Month views display a week, a month, or four months of your calendar at a time. All of these views share common screen elements, including the View buttons near the top of the screen.

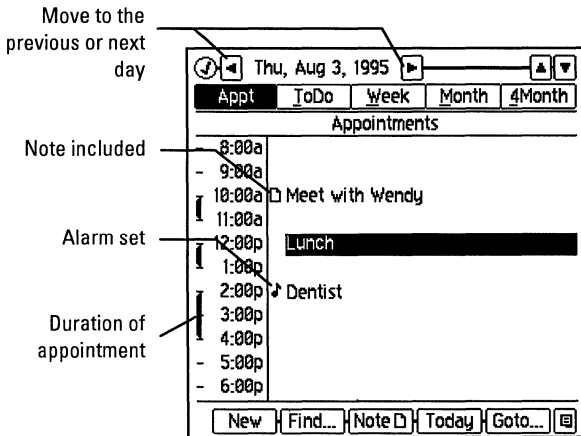
The highlighted button, reflects the currently active view.



Tap a View button to open that view

Viewing Appointments



In Appointment view you can enter appointments for the selected day.



Tap the appointment description area next to a time slot to select a time slot. Tap the selected time slot, or press **[ENTER]** to create a new appointment or edit an existing one. An appointment edit screen appears allowing you to enter the information about the appointment.

Working with appointments

The function buttons near the bottom of the screen are common to most of the different views. Unless otherwise noted, they function the same in each view.


New  Tap **New** (or press ) to create a new appointment. The Appointment/Event dialog box appears.

If you are creating a new appointment, enter the starting and ending times, and decide if you want an alarm to go off before the appointment time arrives.

Fill in the blanks with the pen or the keyboard and tap **Done**. If you decide not to create the appointment, tap **Cancel**.

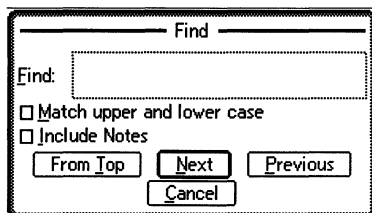
If you want the appointment to be repeated regularly, tap **Repeat**. The following are repeat options:



The repeat symbol  appears before repeating appointments.

Frequency	Notes	Examples
None	Cancels the existing repeat option, if any.	
Daily	Interval can be any number of days.	Every 5th day; every 30th day
Weekly	Interval can be any number of weeks.	Every Wednesday; Every other Friday
Month-Date	Interval can be any number of months based on date.	The 15th of every month; the 22nd of every other month
Month-Day	Interval can be any number of months based on day.	The third Friday of every other month; the second Tuesday of every month
Year-Date	Interval can be any number of years based on date.	Every April 3rd; Every four years on February 29th
Year-Day	Interval can be any number of years based on day.	Every year on the last Sunday in October
Custom	Interval can be day or date in specified months.	The 12th of January, April, and May; the first Wednesday in June, and August

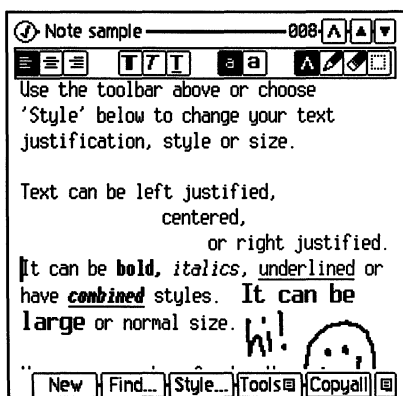
Find **F2** Tap **Find** in any of the views and the Find dialog box appears:



Enter the text you want to find in the text box and select the search options to use. **Match upper and lower case** searches for words exactly as they are typed in (matching upper and lowercase). **Include Notes** also searches through the notes.

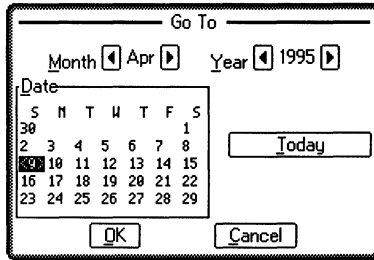
To start the search from the first entry, tap **From Top**. To search forward from the current day or item tap **Next**, and to search backward from the current day or item tap **Previous**. If you decide not to search for text, tap **Cancel**.

Note **F3** Tap this button when you want to attach a note to an appointment (in Appointment view) or a ToDo item (in ToDo view). **Note** is not available in Week, Month, and 4 Month views.



When the note screen appears, enter a note. For more information on notes, see Chapter 6, *The Notepad*.

Goto **F5** Goto lets you quickly go to a specific day—tap it to display the Go To dialog box.



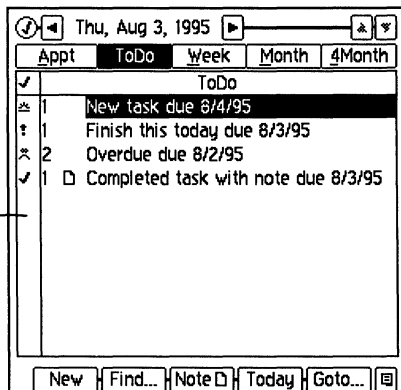
To change the month or year, tap the scroll arrows next to **Month** or **Year**.

To choose the day you want to view, tap a date and press **ENTER**. If you want to go to the current date, tap **Today**. To leave the Go To dialog box without making changes, tap **Cancel**.

Viewing ToDo Items

The ToDo view displays a list of ToDo items for the currently selected day. Tap the left or right arrows to view the ToDo list for the previous or next day. If your ToDo list has more items than fit on one page, tap the up or down arrows to scroll one item at a time. Pressing **PGUP** or **PGDN** scrolls a page at a time.

Tap in this column to mark a ToDo item as done.



The highest priority items appear at the top of the ToDo list in the order that they were created. The number to the left of the ToDo item, ranging from 1 to 10, is the priority. 1 is the highest priority. Completed items appear at the bottom of the list. To change an item's priority, tap the ToDo item and tap the up or down arrows next to Priority. For information on how to change the default priority, see page 4-10.

Each ToDo item is sorted into one of four status categories:

- ☐ New item
- ☒ Past due item
- ! Item is due today
- ✓ Completed item

Tap the status symbol for a ToDo item to mark it completed. Tap it again to change it back to what it was originally. If a ToDo item is not completed, it can be carried forward to the next day; completed items are not carried forward.

Working with ToDo items

New F1 Tap **New** to create a new ToDo item. The ToDo item dialog box appears.

The dialog box is titled "Todo" and contains the following fields and controls:

- Desc:** A text input field for the item description.
- Start Date:** A date field set to "8/3/95" with up and down arrow buttons.
- Due Date:** A date field set to "8/3/95" with up and down arrow buttons.
- Priority:** A field set to "1" with up and down arrow buttons.
- Carry Forward:** A checked checkbox.
- Buttons:** A row of buttons at the bottom: "New", "Find...", "Note D", "Cancel", "Done", and a close button.

Enter a description and a due date, and decide if you want it to carry over to the next day until it is done. Tap **Done** when you're finished, or **Cancel** if you change your mind.

- Find** **[F2]** **Find** searches for text in ToDo items. Functions the same as **Find** in Appointment view.
- Note** **[F3]** **Note** adds a note to a ToDo item. See Chapter 6 for more information on notes.
- Today** **[F4]** **Today** shows today's ToDo items.
- Goto** **[F5]** **Goto** takes you to a specific day. Functions the same as **Goto** in Appointment view.

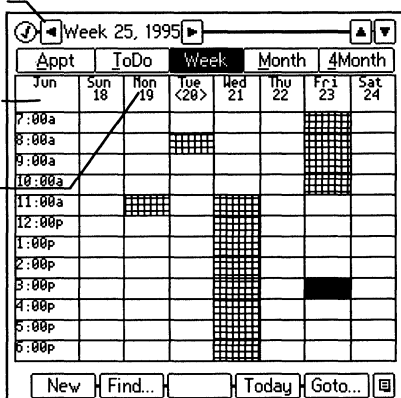
Viewing Weeks

To see your daily schedule for this week or any week, tap **Week**.

Tap here to view the previous week.

Tap here to view the entire month.

Tap here to go to appointment view for this day.



[PREV] takes you to the last day of the previous week.

[NEXT] takes you to the first day of the next week.

When you are in Week view, you can create and edit new appointments. Appointments are displayed as shaded boxes in this view—double-tap any time slot to view its appointment information. To scroll the timeline one time slot at a time, tap the up or down arrows.

Working in Week view

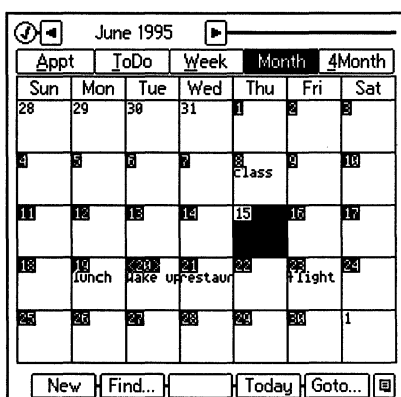
To create or edit an appointment, double-tap a time slot. The Appointment/Event dialog appears.

- New** **[F1]** **New** adds a new appointment for the currently selected day. Functions the same as **New** in Appointment view.

- Find **[F2]** Find searches for text in appointments. Functions the same as Find in Appointment view.
- Today **[F4]** Today displays the current week.
- Goto **[F5]** Goto takes you to a specific week based on the day you select. Functions similarly to Goto in Appointment view.

Viewing Months

The Month view displays your schedule a month at a time. The first three appointments for each day are shown. To select month view, tap **Month**.



You can highlight a day by tapping it with the pen or by selecting it with the keyboard. To select it with the keyboard, use the arrow keys. To scroll from one month to the previous or next month, tap the left or right arrows at the top of the screen or use **[PREV]** or **[NEXT]**.

Working in Month view

To open a day's Appointment view, double-tap a day or highlight the day using the keyboard, then press **[ENTER]**.

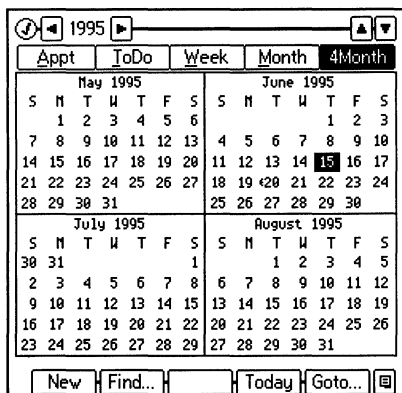
- New **[F1]** New adds a new appointment for the currently selected day. Functions the same as New in Appointment view.
- Find **[F2]** Find searches for text in appointments. Functions the same as Find in Appointment view.

Today (F4) Today displays the current month.

Goto (F5) Goto takes you to a specific month based on the day you select. Functions similar to Goto in Appointment view.

Viewing 4 Months

The 4 Month view lets you look at four months of the year. Tap 4Month to see the 4 Month view.



Tap the right or left arrows (or press (PREV) or (NEXT)) to move one year back or forward. The up and down arrows (or the (PGUP) and (PGDN) keys) allow you to scroll forward or back two months at a time.

Working in 4 Month view

To highlight a day, tap once on that day. Tap it again to open its Appointment view. You can also use the keyboard to select a day: (TAB) changes the active month, the arrow keys let you highlight a day. Press (ENTER) to go to the Appointment view of the highlighted day.

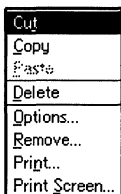
New (F1) New adds a new appointment for the currently selected day. Functions the same as New in Appointment view.

Find (F2) Find searches for text in appointments. Functions the same as Find in Appointment view.

Today (F4) **Today** displays the current 4 months starting with the current month.

Goto (F5) **Goto** takes you to a specific 4 month period based on the month you select. Functions similarly to **Goto** in Appointment view.

The Utility menu



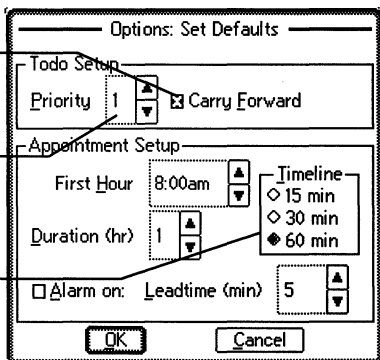
The utility menu contains the OmniGo 100 editing commands, and lets you set appointment book preferences. The first two items on the menu, **Cut** and **Copy**, act on any selected text, or an entire appointment or ToDo item. **Paste** inserts either cut, or copied text wherever the insertion point is located, or pastes an entire appointment or ToDo item.

Select **Options** to display the Options dialog box. Use this dialog box to set defaults for new Appointment and ToDo items.

Check here to set new ToDo items to carry forward

To set the default priority for new ToDo items, enter 1 to 10

Set the timeline interval (how detailed each day is divided up)



Tap **OK** when you are done, or tap **Cancel** if you want to close the Options dialog box without making changes.

Tap **Print** and the Print dialog box appears, which allows you to choose what parts of your appointment database to print.

Print

Items To Print

ToDos Events Appts

Include notes

Date Range

From 6/15/95 To 6/15/95

Print Cancel

Select **Items To Print** and select a date range. Tap **Print** to print, or tap **Cancel** to close the Print dialog box without printing.

Tap **Remove** and the following dialog lets you clean up your appointment book by purging old or unnecessary entries.

Remove

Items To Remove

ToDos Events Appts

Date Range

◆ From 6/20/95 To 6/20/95

◇ Older than 0 days?

Remove Cancel

Select **Items To Remove** by tapping their checkboxes. Specify a **Date Range**, or select **Older than** and enter a number of days. Tap **Remove** to remove the items, or tap **Cancel** to close the dialog box without deleting anything.

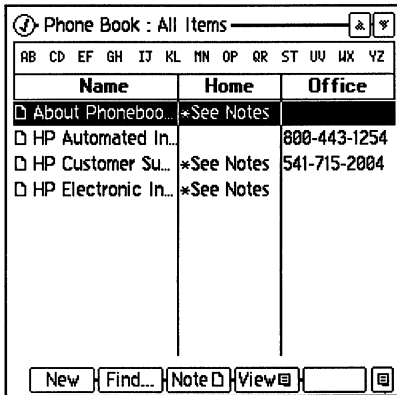
The Phonebook

Contents

Working with Phonebook Entries.....	5-2
The Utility Menu.....	5-6

The Phonebook is a database for your phone numbers. It lets you easily manage your contact data.

To start the Phonebook tap



The Phonebook displays all of the current entries. If you have more entries than fit on a single screen, tap ▲ ▼ to scroll through the list. The entries are displayed alphabetically based on the text in the leftmost column.

You can navigate through your Phonebook two ways:

- Tap a letter index once to go to entries beginning with the first letter, or twice for the second letter.
- Type one or more letters to go to the first entry that begins with those letters.

Working With Phonebook Entries

Phonebook entries are called items. The individual pieces of information in an item, like the person's name and phone number, are stored in boxes called fields. Each Phonebook item contains nine fields—only the **Name** field is required to create and save a new entry.

New [F1] To create a new Phonebook entry:

1. Tap **New**, or press [F1].

2. Enter a name.

3. Enter any other useful information.

Phone Book : New Item — Pg 1 of 2

Name

Home

Office

Fax

Other

New Find... Note Cancel Done

4. Tap [Next] [Previous] to move to the next page.

5. Tap here to select a category, then tap **OK**.

Phone Book : New Item — Pg 2 of 2

Company

Title

Address1

Address2

Category... None

New Find... Note Cancel Done

6. Tap **Done** to save the entry, or **Cancel** to discard the entry.

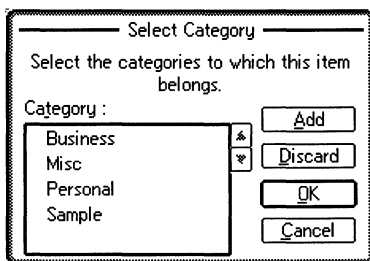


To discard a new entry or any changes you make to an existing entry, tap **Cancel**.

Use the category field to group items; for information on how to display entries from selected categories, see page 5-4.

To add categories to the Phonebook's category list:

1. Tap **Category**.



2. Tap **Add**. The new category dialog box appears.
3. Enter the new category name.
4. Tap **OK** to add the category, or **Cancel** to discard it.

To delete categories:

1. Tap **Category**.
2. Select the categories you want to delete, by tapping them once, or pressing the spacebar while they are selected.
3. Tap **Discard**.
4. Tap **OK**.

Remove a category from the category list by deleting that category from every item.

To edit an existing entry:

1. Double-tap the entry.
2. Make the desired changes.
3. Tap **Done** to save your changes.

To save an entry, tap **Done**, or tap . You must enter a name in the **Name** field. If you try to save an entry without a name, you are asked to enter a name or discard the entry.

To delete an entry, select the entry and press **[DEL]**. The Delete Confirmation dialog box appears; tap **Delete** to confirm the deletion.

Find **[F2]** To search for text in an item or note use **Find**. For information on using Find, see page 9-6 of *The Database*.

Note **[F3]** To attach a note to a selected Phonebook entry, tap **Note**. Any entries with notes attached are marked in the Phonebook with a **[]**. The Note edit screen is the same throughout all the OmniGo 100 applications. For more information on using **Note**, see page 6-5 of *The Notepad*.

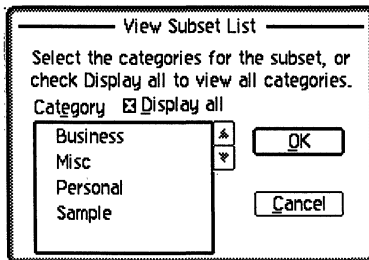
View **[F4]** There are three options in the View menu: **View Subset list**, **Change Field Order**, and **Adjust Column**.

Viewing subsets

Sometimes you don't want to see all the items in your phone list. The Phonebook makes it easy to specify groups within your phone list, and then view only the groups you want. To use this feature, you must assign each Phonebook item to a category. Items without categories are only displayed when **Display all items** is selected.

To select which categories to display:

1. Tap **View**.
2. Tap **View Subset**.



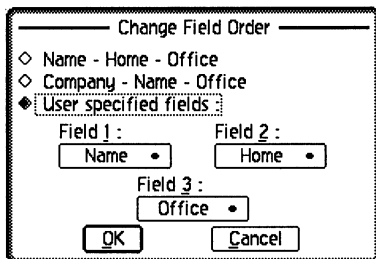
3. Tap, or use the spacebar, to select or deselect categories. To display all Phonebook entries, tap **Display all items**. If you select more than one category, items can match any selected category. For example, if you select **Business** and **Misc**, items that have either category assigned to them appear.
4. Tap **OK** to save your changes or **Cancel** to discard them.

Changing field order

Although each Phonebook item has nine fields, only three at a time are displayed in the Phonebook list. It is easy to switch between different views of your Phonebook list or even create your own views.

To change the three fields you see on your Phonebook screen:

1. Tap **View**
2. Tap **Change Field Order**. The following dialog appears:



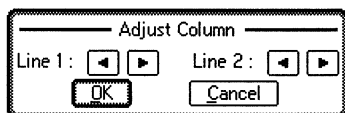
3. Select the arrangement you want from the list. If you select **User specified fields**, you can choose the fields you want to display.
4. Tap **OK** to save your changes or **Cancel** to discard them.

Resizing columns

If you are changing the field order of your Phonebook, you may need to resize the columns.

To resize the columns:

1. Tap **View**.
2. Tap **Adjust Columns**.

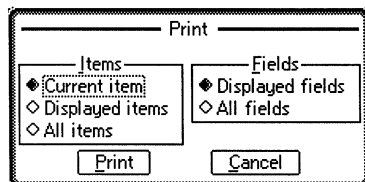


3. Tap the left and right arrow buttons on the screen to move the column dividing line to the left or the right.
4. Tap **OK** to save your changes, tap **Cancel** to discard them.

The Utility menu

The utility menu provides the standard OmniGo 100 editing commands, and lets you print some or all of your Phonebook.

Select **Print** and the Print dialog appears:



The **Print** command allows you to print Phonebook items singly (**Current item**), just the currently displayed items (**Displayed items**), or all items (**All items**). You can also choose to print only fields displayed in the current view (**Displayed fields**), or all fields (**All fields**).

The Notepad

Contents

Using the Notepad..... 6-1

The Utility Menu..... 6-4

Editing Notes 6-4

Use the Notepad to enter, store, and organize notes. The Notepad displays a list of the notes you have entered.

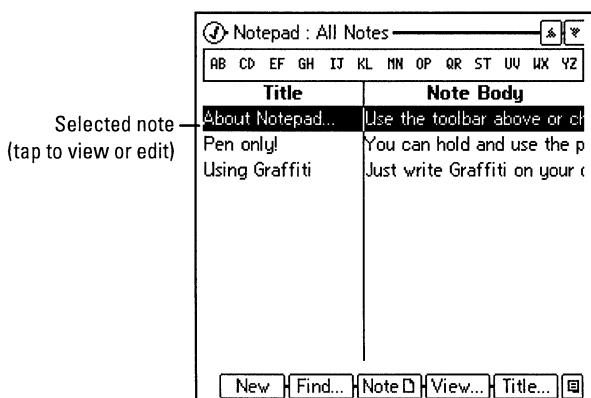
To start the Notepad, tap



Many applications let you create notes. Although these notes don't have a title or category, you can edit them just like notes created with the Notepad. For more information on editing notes, see *Editing Notes* on page 6-4.


Using the Notepad

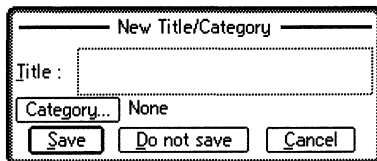
When you start the Notepad, it displays a list of stored notes. From this list, you can search, categorize, print, and create notes.



The Notepad shows a note's title on the left side of the screen, and the first line of text in the note on the right. If there isn't any text contained in a note, the words **No Text Content** appear. **Untitled** notes appear at the top of the list.

New  Opens a new note.

Enter text or graphics. When you exit a note by tapping , the following dialog appears:



Enter a title. If you leave the **Title** field blank, the new note appears at the top of the list as **Untitled**. Tap **Save** to save the new note. Tap **Do not save** to discard the note. Press **Cancel** to go back to the new note.



Use the **View** function button to display selected categories.

Category lets you group related notes by assigning them to different categories. Tap **Category**, and select the category you want to use by tapping it. If you are using the keyboard to navigate, highlight the category you want, and press the spacebar.

To add categories to the category list:

1. Tap **Category**.
2. Tap **Add**. The Add dialog box appears.
3. Enter a new category name.
4. Tap **OK** to add the category, or **Cancel** to discard it.

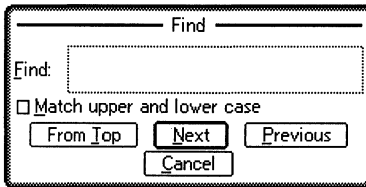
To delete categories:

1. Tap **Category**.
2. Select the categories you want to delete, by tapping them once, or pressing the spacebar.
3. Tap **Discard**. If you are sure you want to discard the categories, tap **Discard** in the confirmation dialog.
4. Tap **OK**.

Note

Changes you make to the category list show up the next time you create a new entry or edit an existing one. To completely delete a category, you must discard all occurrences of that category.

- Find** (F2) Opens the Find dialog. Use this dialog box to search for text in a note or note title. Only text can be found, not letters drawn with the pen and stored as graphics.



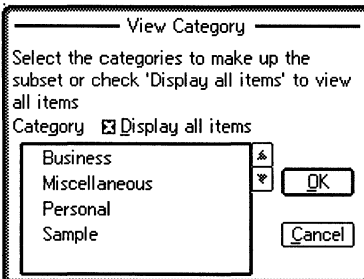
Enter the text you want to search for into the Find field.

Check the **Match upper and lower case** box if you want to match upper and lowercase letters exactly as they were entered in the Find field.

From Top searches for a match starting from the first note in the list. **Next** searches forward through the list starting from the next item in the list. **Previous** searches backwards through the list starting from the previous item in the list. Tap **Cancel** when you are done searching.

- Note** (F3) Opens an existing note. (Same as tapping an existing note.)

- View** (F4) Opens the View Category dialog. Use this dialog box to display some or all of the note categories.



Find only searches the displayed notes. Hidden categories are not searched.



Notes without assigned categories are only displayed when **Display all items** is selected.

Tap the categories you want to display, or check the **Display all items** box if you want to view all of the notes. If you use the arrow keys to move through the category list, press the spacebar to select a category. You can also type the first letter of the category and it is highlighted.

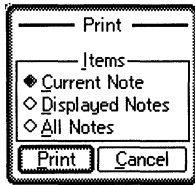
Tap **OK** to display the selected categories or **Cancel** if you change your mind.

Title **[F5]** Opens the **Change Title/Category** dialog. You can use it to change the selected note's title or category.

The Utility menu

The utility menu provides the standard OmniGo 100 editing commands, and lets you print some or all of your Notepad.

Select **Print** and the Print dialog appears:



The **Print** command allows you to print the highlighted note (**Current Note**), the notes currently displayed on the screen (**Displayed Notes**), or all of the notes (**All Notes**).

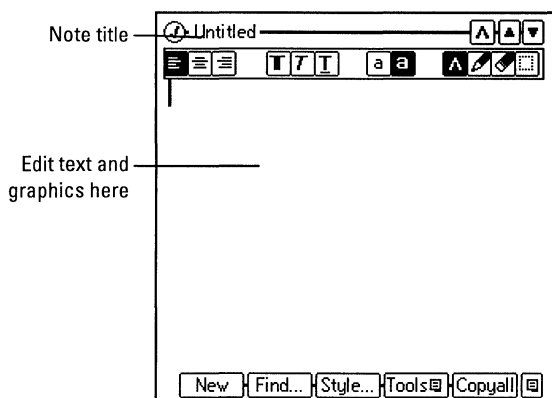
Editing Notes


Notes may contain text entered with the keyboard or the pen, or pen drawings (**Ink**), and can be more than one page long.

You can edit notes by tapping **Note**. In the Notepad, you can edit an existing note by tapping it.






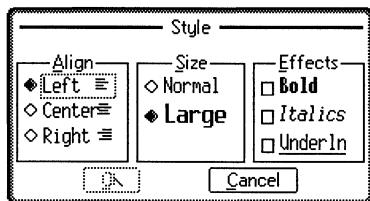
This section applies to all OmniGo 100 applications that can have notes.



When you're finished editing or viewing the note, tap  to save it and return to the previous screen.

Edit function buttons

- New**  This editing function is available only in the Notepad. If you are editing an existing note, a new note appears. If you are editing a new note, the Notepad asks you for a title for the current note, closes it, and opens a new note.
- Find**  Opens the Find dialog. Functions similarly to Find on page 6-3, but searches from the cursor's position within the note.
- Style**  Opens the Style dialog:



Use this dialog to select type size, paragraph alignment, and type effects like **Bold** and *Italic*. All of these styles are on the Toolbar.

Tools **F4** Displays a menu of tools:

Revert Restores a note to its original state. All changes are lost. This command is not available for new notes.

Clear Note Data Clears all text or graphics, or both.

Toolbar On/Off Turns the Toolbar on or off. Use the Toolbar to change the paragraph style, type size, type effects, and the current pen mode. See page 2-6, for more information.

Copyall **F5** Copies the entire note (including both text and ink) to the clipboard. You can use the **Paste** command from the utility menu to insert text and ink at the end of a note.

If you don't want everything, select what you want, and use the **Copy** command in the utility menu.

The Jotter

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Creating Jotter Pages.....	7-1
Using Jotter Pages.....	7-2
Moving Jotter Pages to Other Applications.....	7-2

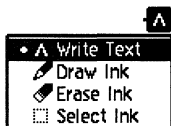
Use the Jotter to create notes quickly. Then, you can move your notes to other applications.

To start the Jotter, tap  or press **[JOTTER]**.

Creating Jotter Pages

You can enter text into a Jotter page with the keyboard or the pen. You can also use the pen to draw, erase, or select ink.

Using the pen



Remember, the pen can only be in one mode at a time. For instance, if your pen is in **Write text** mode, you can draw Graffiti letters, but you can't draw, erase, or select ink.

Tap the pen mode menu (shown at left) and select the pen mode you wish to use. See chapter 2 for information about using the pen.

If you select text with the keyboard or pen, or if you select graphics with the pen in **Select ink** mode, you can use **Cut** and **Copy** from the utility menu to move the selected data to the clipboard.

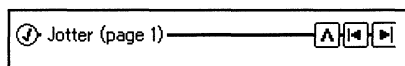
Select **Paste** from the utility menu to insert text or graphics from the clipboard into the Jotter page.

To copy an entire page, including both text and ink, use **Stick** (**[F5]**).

You can print a Jotter page by selecting **Print Screen** from the utility menu.

Using Jotter Pages

The Jotter can hold up to 20 pages of text and ink. These pages are always arranged in order from the oldest page (page 1) to the newest page. The current page number appears at the top of the screen:



Creating and discarding pages

- New** **[F1]** Tap **New** to create a blank Jotter page. The new page gets the next available number.
- Discard** **[F4]** Tap **Discard** to erase the current page. If you have 4 Jotter pages (numbered 1 through 4) and you discard the second, the other pages are renumbered (1 through 3).

Moving between pages

To move to the previous or next Jotter page, press **[PREV]** or **[NEXT]** on the keyboard. You can also tap **[◀]** or **[▶]** on the top of the OmniGo 100 screen.


- First** **[F2]** The **First** and **Last** buttons move to the first and last Jotter pages. Jotter pages wrap, for example, pressing **[NEXT]** while on the last page, moves you to the first page.
- Last** **[F3]**

Moving Jotter Pages to Other Applications

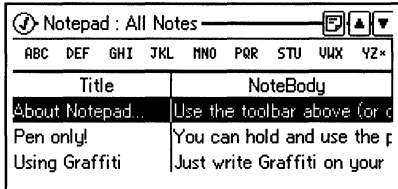
Use **Stick** (**[F5]**) to move an entire Jotter page to another OmniGo 100 application that uses notes. Follow this procedure to stick a Jotter page:

1. In the Jotter, go to the page you want to move.
2. Tap **Stick** or press **[F5]**. As the Jotter closes, the page moves out of the Jotter and the **Stick** icon (**[F5]**) appears at the top of the screen.
3. Open an application that uses notes.



Only applications that use notes can accept pages from the Jotter. When you are using an application that cannot insert a Jotter page, the  icon is grayed out.

4. Hold the pen against the Jotter icon until you hear beep, then drag the Jotter Stick icon to an item that can have a note. For instance, drop the icon on an item in the Notepad's note list. The Jotter page is inserted at the end of the note.



Title	NoteBody
About Notepad...	Use the toolbar above (or c
Pen only!	You can hold and use the p
Using Graffiti	Just write Graffiti on your

Note

Stuck Jotter pages cannot be returned to the Jotter application.



World Time

Contents

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World Time displays the current time and date in cities around the world. You can also display a chosen city's location on the world map.

To start World Time, tap  and then .

The Local city depends on where you purchased your OmniGo 100. If you purchased it in the U.S., New York is the local city.

Local city name,
time and date
information

Tap to view more
information

A city with a
note attached

World Time: All cities ▲▼

Local city: Corvallis, OR, U... 4:57pm 6/19/95

City	Time
• Aarhus, Denmark	** 1:57am
Abadan, Iran	** 4:27am
Abidjan, Ivory Coast, R. of	11:57pm
Abu Dhabi, United Arab Emirates	+ 3:57am
□ Acapulco, Mexico	5:57pm
Accra, Ghana	11:57pm
Addis Ababa, Ethiopia	+ 2:57am
Adelaide, Australia	+ 9:27am
Aden, Yemen A.R.	+ 2:57am

New Find... Note □ View... Local... □



The local city is the reference point for the World Time application.

Note

The Local city field shows the current date and current time.

Working with Cities

New **[F1]** New opens a new city record so you can add a city. (Currently, the list contains 478 cities.)

Adding a city

Follow this procedure to add a new city:

1. Tap **New** or press **[F1]**.
2. Write or type the city information into the displayed fields.

World Time item

City

Int'l Access

City Prefix

GMT Offset 0

Latitude

Longitude

Daylight Savings

- ◆ None
- ◇ Yes
- ◇ Auto North
- ◇ Auto South
- ◇ Auto Europe

Marked city

New Find... Note D Cancel Done

3. Tap **Done** to add the city. If you change your mind, tap **Cancel**.

Daylight Savings Time



When Ben Franklin first proposed Daylight Savings Time, the idea was ridiculed by many.

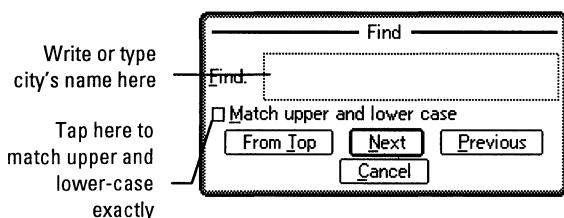
World Time allows five choices for daylight savings time:

- **Yes:** Sets Daylight Savings Time always on. Use **None** to turn it off.
- **None:** Sets Daylight Savings Time always off. Use **Yes** to turn it on.
- **Auto North:** Sets Daylight Savings Time to start the first Sunday in April and end the last Sunday in October. This is the schedule used in most of North America.
- **Auto South:** Sets Daylight Savings Time to start the last Sunday in October and end the first Sunday in March. This is the schedule used in most of the southern hemisphere.
- **Auto Europe:** Sets Daylight Savings Time to start the last Sunday in March and end the last Sunday in September. This is the schedule used in most European countries.

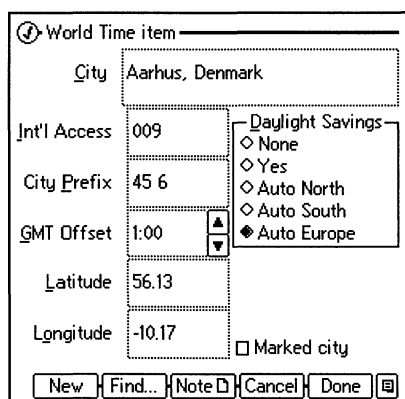
- Find** **F2** Find searches for a city. There are three ways to search for a city: using Find, tapping a letter on the alphabet bar, or typing a city name on the keyboard (cities matching the sequence of characters entered are highlighted).

Finding a city

1. Tap Find and enter the city's name.



2. Tap Next.
3. When the city you're looking for is highlighted, tap the city name or press **ENTER** to open its record. If the city is in the displayed list but not highlighted, tap the city to select it, or double-tap to open it.



- Note** **F3** Note displays the note field for the selected city.

Creating or editing a note

1. Select a city.
2. Tap Note to display the Note field.

3. Write or type a note, or edit an existing note. Editing notes is described in *The Notepad* on page 6-4.

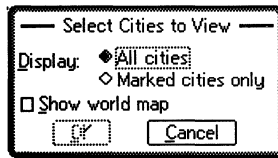
Note

Cities with notes display a note symbol (□) next to the city name.

- View** [F4] **View** lets you view an alphabetically sorted list of all cities, only the cities you mark for display, or a world map showing the location of a selected city.

Viewing cities and the world map

1. Tap **View** or press [F4] to display the **Select Cities to View** dialog box.



2. Choose which cities to view:

Tap **All cities** to view all of the cities sorted alphabetically by city name.

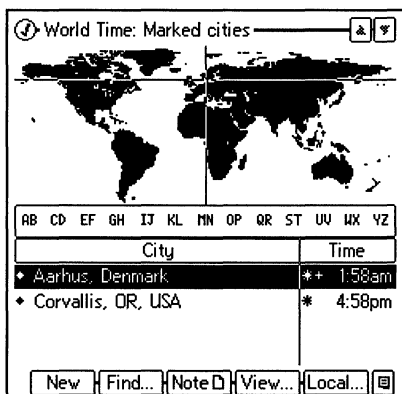
Tap **Marked cities only** to display only cities you have marked. Cities display alphabetically, sorted by city name.

3. Tap **Show world map** to view a selected city on the World map.
4. Tap **OK** or press [ENTER] to view the selected cities and the world map (if chosen).

The world map displays a vertical line and a horizontal line forming crosshairs. The point of intersection represents the location of the currently selected city.



Tap the world map and the crosshairs will jump to the closest listed city.



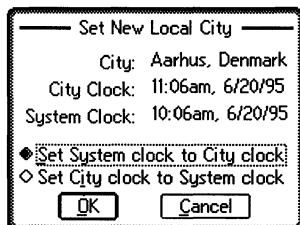
Local [F5] Local lets you to set the currently selected city as the local city.

Setting the local city

Note

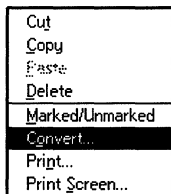
The local city is the reference point for the World Time application. The system time and date and the local city time and date are always the same.

1. Select a city to use as the local city.
2. Tap **Local** or press [F5]. The **Set New Local City** dialog appears:



3. Decide whether you want to change the system's time, or change the city's time. Select the first option if the city's time is already correct. Select the second option if the city's time is not correct. Tap **OK**. (If it is still not correct after you tap **OK**, use **Setup** to set the time.)

The Utility Menu



In addition to the functions common to all applications (see Chapter 2) the World Time utility menu has two additional functions:

- **Marked/Unmarked:** Marks a city. If a city is already marked, then it is unmarked. Marked cities can be displayed using **View**.
- **Convert:** Allows you to specify a time for the currently selected city. Then you can view the relative time for other cities around the world.

Marking a city

Marking cities allows you to create a subset of cities to display. To mark a city, use one of the three methods described below:

Method 1:

1. Select a city.
2. Press the spacebar to mark the city.

Method 2:

1. Double-tap a city to open the Edit screen.
2. Tap **Marked City** to mark the city.

Method 3:

1. Select a city.
2. Choose **Marked/Unmarked** from the utility menu.

To unmark a city, repeat one of the above procedures. A city must be marked in order to unmark it.

Note

Cities which are marked display a mark symbol (◆) next to the city name in the City List.

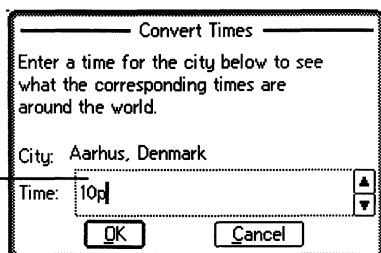
If a city is both marked and has a note, only the note symbol appears next to the city name.

The Convert function

The convert function lets you set a specific time for a selected city and then view what time it would be for other cities. For example, to find out what time it is in other cities if it were 10:00 p.m. in Aarhus, Denmark, follow these steps:

1. Select Aarhus.
2. Open the utility menu and select **Convert**.

3. Enter 10p.



Convert Times

Enter a time for the city below to see what the corresponding times are around the world.

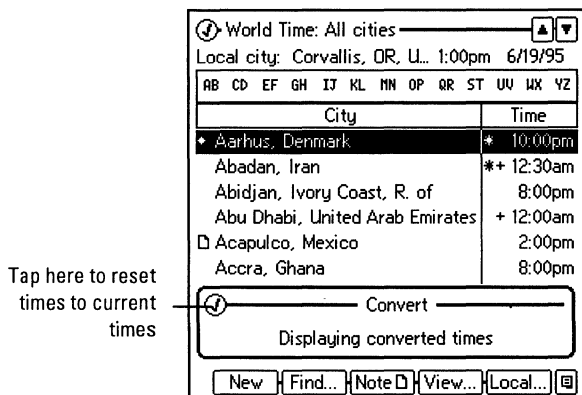
City: Aarhus, Denmark

Time: 10p

OK Cancel

4. Tap **OK** or press **ENTER**.

All of the displayed cities, including the local city, show the relative time as if it were 10:00 p.m. in Aarhus, Denmark. A dialog box lets you know that the times are converted.



World Time: All cities

Local city: Corvallis, OR, U.S. 1:00pm 6/19/95

City	Time
Aarhus, Denmark	* 10:00pm
Abadan, Iran	*+ 12:30am
Abidjan, Ivory Coast, R. of	8:00pm
Abu Dhabi, United Arab Emirates	+ 12:00am
Acapulco, Mexico	2:00pm
Accra, Ghana	8:00pm

Convert

Displaying converted times

New Find... Note View... Local...

Tap here to reset times to current times

5. Exit the Convert function by tapping .

When you exit, all displayed cities return to normal time (relative to the current local city time).

The Database

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The Database makes it easy to organize and access the information you need every day. With it, you can build and modify your own database templates that store your data.

To start the Database, tap



Databases

A database can be used to organize almost any collection of information: a contact list, your home library, favorite family recipes, even an inventory list. A well-designed database makes it easy to locate a particular piece of information, even though you may only remember a single keyword.

Database terms you need to know:

- Template** The framework of the database. The template describes how information is organized and displayed.
- Item** A single entry in your database. In a home library database, an item is a complete description of one book. It could include title, author, ISBN number, and a brief synopsis.
- Field** A piece of information within an item.

Take some time to plan your database before actually building it. Decide what pieces of information you need to know, and what is a logical way to organize them. Use the Phonebook application as a guide; it is a good example of a database.

Working with Templates

When you open the Database, existing databases appear in alphabetical order.

Databases	Records	Size
Compact Disc	6	2114b

New **F1** **New** lets you create a new database template. When you select **New** a dialog box appears.

New Database Title

Title:

OK Cancel

You must enter a title for the template.

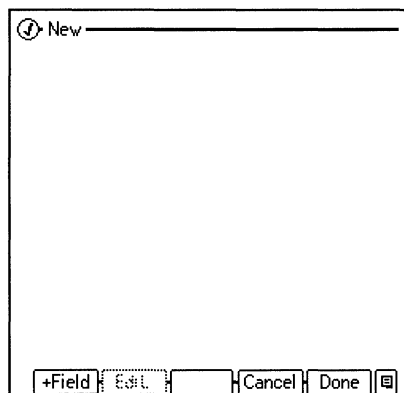
After you enter a title, a blank template appears. To add fields, see the next section *Creating templates*.

Modify **F4** **Modify** lets you change field names in existing database templates. You change field names the same way you assign field names. For more information, see the next section *Creating templates*.

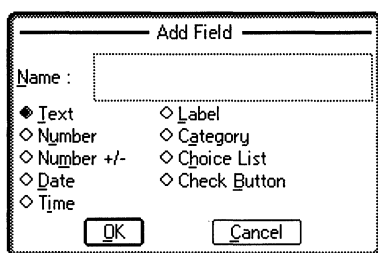
Title **F5** **Title** lets you change the title of an existing database template. When you select **Title** the Change Title dialog box appears. Enter a new title in the space provided and select **OK**.

Creating templates

There are special template edit commands for creating and modifying templates. When you create a new database template, a blank template appears.



+Field **F1** **+Field** opens the Add Field dialog box. The fields you add depend on the database you want to create. A new field must be given a name. There are nine different types of fields.



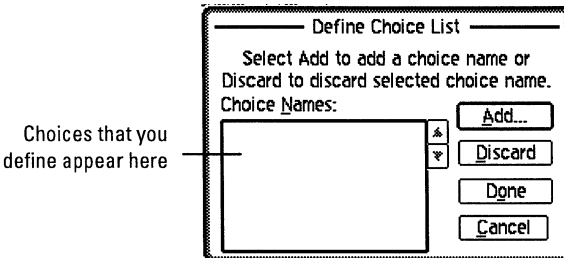
When you add fields, they appear one right after the next. All the fields are the same size except for Choice list, Check button, and Category.

The field types are described below:

Field	Description
Text	Accepts any text.
Number	Accepts numbers only.
Number +/-	Accepts numbers, and lets you increase or decrease the numbers with arrow buttons.
Date	Accepts dates only (format is specified in Setup).
Time	Accepts times only (format is specified in Setup).
Label	Does not accept any input, instead it lets you enter text that appears in each record.
Category	Accepts category selections from a list of user-defined categories.
Choice list	Lets you create a group of user-defined choices from which only one selection can be made.
Check button	Lets you create check boxes that may be on or off. More than one check box may be selected at a time.

To add a Choice list field:

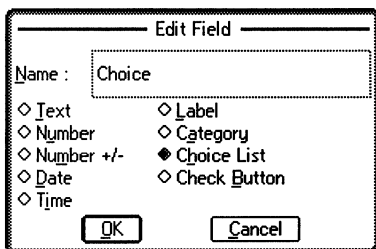
1. Tap **+Field**.
2. Tap **Choice list**.
3. Enter a name for the field.
4. Tap **OK**. The following dialog box appears:



5. Tap **Add**.
6. Enter a choice label and tap **OK**.
7. Repeat steps 4 and 5 to add more choices to the list. You should have at least two.
8. Tap **Done**.

Category fields are added in a similar way—first add the **Category** field. Then add each of the categories in the **Add Categories** dialog box. This is exactly the same as the **Phonebook**. See page 5-3, for more information.

Edit **F2** **Edit** lets you change the name of an existing field. Tap the field you want to edit, then tap **Edit**. The **Edit Field** dialog appears.



Change the name, then tap **OK**. Tap **Cancel** to disregard changes.

Done **F4** Tap **Done** to save and exit the template.

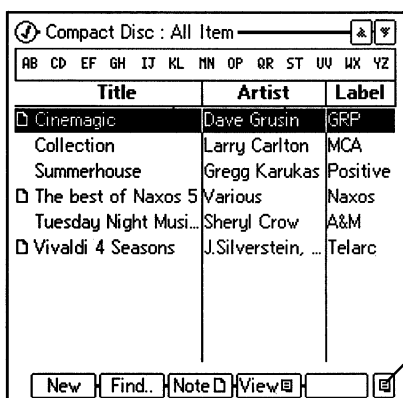
Cancel **F5** Tap **Cancel** to disregard the template modifications you made.

Working with Databases

When you open a database, a list of database items appears. Items are arranged alphabetically based on the information in the leftmost field. Any time you have more items than fit on a single screen, tap to scroll through the list.



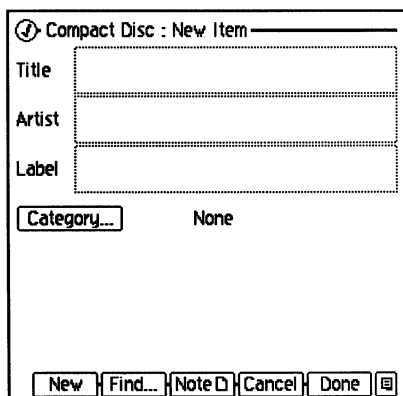
Open a database by tapping it.



The utility menu

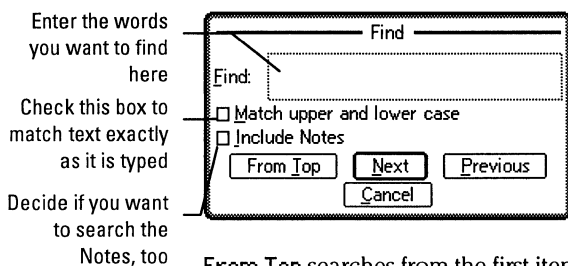
To delete an item, select the item by tapping it once and press **DEL**. You can also use **Delete** in the utility menu.

New **F1** **New** lets you create a new item. An item appears with empty fields.



For more information, see *Editing items* on page 9-9.

Find **F2** **Find** lets you search for words in the database. When you select **Find**, the Find dialog appears.



From Top searches from the first item in the list.

Next searches forwards through the list, starting from the next item in the list.

Previous searches back up through the list, starting from the previous item in the list.

Cancel quits the search.

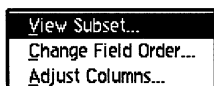
Note **F3** **Note** lets you add a note to a database item. The note edit screen is the same throughout all of the applications. See page 6-4 for more information on adding notes.

View **F4** **View** lets you select categories to view and change the way items are displayed.

Sometimes you don't want to see all the items in your database. If you use the Category field to group your items, you can use **View** to display only those groups.

To select which categories of your database to display:

1. Tap **View**, and the following options appear:



2. Tap **View Subset**.
3. Tap to select or deselect categories in the list. Tap **Display all items** to display all database entries.
4. Tap **OK** to save your changes or **Cancel** to discard them.

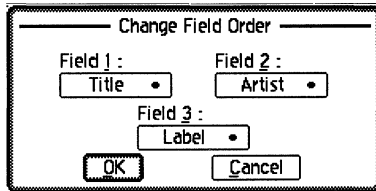
You can add and delete categories exactly like the Phonebook. See page 5-3 for more information.

Changing field order

Databases are displayed in alphabetical order based on the information in the first column. When you first start the database, the displayed columns are the first three fields in the database. You can change the three fields you see on your Database screen with **Change field order**.

To change the three fields:

1. Tap **View**.
2. Tap **Change Field Order**. The following dialog appears:



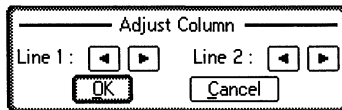
3. Select the fields you want using the choice lists.
4. Tap **OK** to save your changes or **Cancel** to discard them.

Resizing columns

If you are changing the field order of your database, you may need to resize the columns.

To resize the columns:

1. Tap **View**.
2. Tap **Adjust Columns**.



3. Tap the left and right arrow buttons on the screen to move the column divider to the left or the right.
4. Tap **OK** to save your changes, tap **Cancel** to discard them.

Editing items

Edit an item by tapping it.

Compact Disc : Item 1

Title Cinemagic

Artist Dave Grusin

Label GRP

Category... Instrumental

New Find... Note Cancel Done

When you create a new item, enter data into the fields you want and select **Done**, or if you change your mind, select **Cancel**.

To edit an existing entry:

1. Tap the entry to open the item.
2. Select the field you want to change.
3. Enter the new information.
4. Tap **Done** to save your changes or **Cancel** to discard them.

New (F1) **New** saves the current item, and lets you start a new one.

Find (F2) **Find** lets you search for words in the database. The Find dialog is the same as the Find dialog box described on page 9-6.

Note (F3) **Note** lets you add or edit a note for a database item. The note edit screen is the same throughout all of the applications. See page 6-4 for more information.

Cancel (F4) **Cancel** lets you close the item without saving your changes.

Done (F5) **Done** lets you save and exit the current item.

The Utility Menu

The standard editing tools are available when you tap the utility menu button. **Cut** and **Copy** act on selected text, and **Paste** inserts text from the clipboard at the insertion point.



Delete lets you delete the selected item from the Database. If you delete a database template, all items in that database are deleted.



The **Print** command allows you to print database entries singly (**Current item**), just those entries currently displayed (**Displayed items**), or all entries (**All items**). You can also choose to print only fields displayed in the current view (**Displayed fields**), or all fields (**All fields**).

Stopwatch

Contents

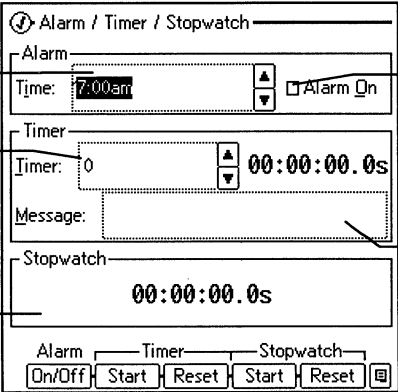
Using Alarms .. 10-2
 Using the
 Timer 10-2
 Using the
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The Stopwatch application lets you set a daily alarm, set a countdown timer, and use a stopwatch. When one of these starts, it continues to run, even when closed or hidden behind other applications.

To start the Stopwatch application, tap  and then  **Stop watch**

Note

The alarm and timer sounds are specified in the Setup application. Refer to Chapter 15, *Setup*, for more information.



The screenshot shows the application interface with the following sections and annotations:

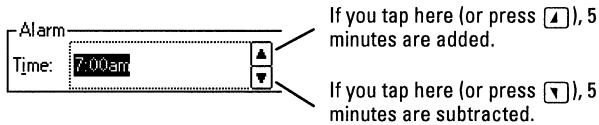
- Alarm Section:** Labeled "Set daily alarm time". It includes a "Time:" field set to "7:00am" and a "Alarm On" checkbox.
- Timer Section:** Labeled "Enter count down time". It includes a "Timer:" field set to "0", a time display showing "00:00:00.0s", and a "Message:" input field.
- Stopwatch Section:** Labeled "Stopwatch display field". It features a large digital display showing "00:00:00.0s".
- Bottom Controls:** A row of buttons: "On/Off" (under Alarm), "Start" and "Reset" (under Timer), and "Start" and "Reset" (under Stopwatch).

Annotations on the right side of the screenshot:

- "Check box to turn alarm on" points to the "Alarm On" checkbox.
- "Enter a message to display when the timer goes off" points to the "Message:" input field.

Using Alarms

You can set a daily alarm by entering a time in the **Time** field. Write or type the time of day you want the alarm to go off. Enter A for AM or P for PM. You can also enter times using a 24 hour clock, for example, 14:20 is 2:20 PM.



You must turn the alarm on by selecting the **Alarm On** check box.

Set the alarm

Set the alarm for 1:00 PM.

1. Write or type 1 P in the alarm **Time** field and press **[ENTER]**.
2. Select the **Alarm On** field to turn the alarm on.

When the alarm goes off, the following dialog box appears:



To turn off the alarm, tap **OK**, or press **[ENTER]**.

Using the Timer



Numbers can be entered in different ways:

5=5 minutes

65=1 hour 5 minutes

1:7=1 hour 07 minutes

You can set the countdown timer to sound an alarm and display a message after a specified amount of time has passed. Maximum countdown time is 23 hours 59 minutes (23:59). Minimum countdown time is 1 minute.

Numbers from 0 to 59 with no separators are interpreted as minutes. Numbers greater than 59 are converted to hour minute format. So if you enter 120 minutes, 2:00 hours appears. You don't have to use a colon(:) to separate numbers, comma (,), semicolon (;), and period (.) are all acceptable.

You can enter a message to display when the timer goes off. Messages may have up to 30 characters.

To turn off the Timer, tap **OK**, or press **ENTER**.

Set the Timer

Set the Timer to go off after 15 minutes and display the message "Break is over!"

1. In the **Timer** field, enter 15.
2. In the **Message** field, enter Break is over.
3. Tap the **Timer Start** function button or press **F2** to start the timer.
4. When the Timer goes off, your message displays. Tap **OK**, or press **ENTER** to acknowledge the Timer.

To reset the timer, tap the **Timer Reset** function button or press **F3**. The timer resets to the value you entered.

To stop the Timer before it finishes counting down, press **F2** or tap **Stop**.

Using the Stopwatch

The stopwatch measures hours, minutes, seconds, and tenths of seconds.

To start the Stopwatch tap **Start** or press **F4**.

To stop the Stopwatch tap **Stop** or press **F4**.

To reset the Stopwatch to 00:00:00.0 tap **Reset** or press **F5**.

If the stopwatch reaches 23:59:59.9, it begins from 00:00:00.0 again.

The Calculator

Contents

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The Misc Menu..... 11-6

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Use the Calculator to perform general arithmetic and technical math calculations.

To start the calculator, tap



Shows angle mode and status

The Calc Line displays numbers as you enter them and shows calculation results

Enter numbers with the keypad

Clears the Calc Line and resets the calculator

The Keypad

Memory store → $\rightarrow M$ Backspace

Memory recall → $M \rightarrow$ Raise to power

Subtract Calc Line from Memory → $M -$ Square root

Add Calc Line to Memory → $M +$ Reciprocal

Change sign → \pm



A circle has 360 degrees, 2π radians, and 400 grads.

Annunciators

The angle annunciator shows the current angle mode. The **RAD** annunciator indicates radians, the **GRAD** annunciator indicates grads, and if no annunciator is shown, then the calculator is in degree angle mode.

To set the angle mode:

1. Press **[MENU]**. The utility menu appears.
2. Select the angle mode you want. If you choose **Degree**, no annunciator appears above the Calc Line.

Above the right of the Calc Line is the automatic constant annunciator. An automatic constant is an operator and a number that can be used for repetitive calculations. For example, to continually double an amount, do the following:

1. Enter an amount, for this example, enter 3.
2. Double-tap times (*****) and tap 2.
3. Every time you tap equals (**=**) or press **[ENTER]**, the number displayed in the Calc line doubles.

Pressing another operator turns off the automatic constant.

When you string calculations together (chain calculations), operator precedence is as follows:

- Highest precedence: \wedge
- Next highest: $*$ and $/$
- Lowest: $+$ and $-$

The Calculator calculates intermediate results when operators have equal or lower precedence. If an operator has a higher precedence, the Calculator saves the previous entries as pending operations. You cannot have more than thirteen pending operations.

Use parentheses to change operator precedence. For example, $(5*2)^2$. Do not nest more than thirteen parenthesis.

Automatic Constants

Long calculations and operator precedence



Translation:
If you enter $5*2$ and then $+$, $10+$ displays.
If you enter $5*2$ and then \wedge , $5*2^\wedge$ displays.

The Math Menu

Math **F1** The math menu provides access to technical math functions.

RND
IP
FP
ABS
LN
E ^X
LOG
10 ^X

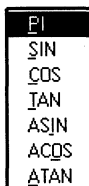
The following table describes the Math menu commands:

Command	Description	Example
RND	Rounds a number to the number of displayed decimal places.	If you display numbers to two decimal places: 4.589 + 2.6891 Calculates 7.2781 but displays 7.28. However, the entire result is in memory and is used in further calculations. RND Rounds the number in memory to 7.28.
IP	Displays the integer part of a number.	Enter 23.1234 IP Displays 23.
FP	Displays the fractional part of a number.	Enter 23.1234 FP Displays 0.1234.
ABS	Displays the absolute value of a number.	Enter -23.1234 ABS Displays 23.1234.
LN	Displays the natural (base e) logarithm of a positive number.	Enter 99 LN Displays 4.59511985.

E^X	Displays the natural antilogarithm.	Enter 4.59511985 E^X Displays 99.
LOG	Displays the common (base 10) logarithm of a positive number.	Enter 100 LOG Displays 2.
10^X	Displays the common (base 10) antilogarithm.	Enter 2 10^X Displays 100.

The Trig Menu

Trig **F2** The Trig menu contains trigonometric functions. Except for π , trig functions interpret angles in degrees, radians, or grads, depending on the angle mode. The annunciator at the top left of the Calc Line shows the angle mode in use.



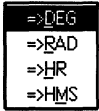
π is assigned a value of 3.141592653589793. The other menu items are trigonometric functions that operate on the pending number in the Calc Line.

The following examples assume the angle mode is set to degrees:

- 15 SIN Displays 0.26, the sine of 15°.
- 90–2.73 ATAN Displays 90–69.88, where 69.88 is the arc tangent of 2.73.

The Angle Menu

Angle **F3** The angle menu contains functions for converting angle units.



The following table describes the Angle menu items:

Command	Description	Example
=>DEG	Convert to degrees. Converts a number from a radian value to its decimal degree equivalent.	Enter 4.22369679 =>DEG Displays 242.
=>RAD	Convert to radians. Converts a number from a decimal degree value to its radian equivalent.	Enter 242 =>RAD Displays 4.22369679
=>HR	Convert to hours. Converts a number from hours (degrees)-minutes-seconds format (H.MMSSss or D.MMSSss) to decimal hours or degrees format.	Enter 10.45 =>HR Displays 10.75 (45 minutes is 0.75 of an hour.)
=>HMS	Convert to hours-minutes-seconds. Converts a number from decimal hours (or degrees) to hours (degrees) -minutes-seconds format (H.MMSSss or D.MMSSss).	Enter 10.5 =>HMS Displays 10.3

The Misc Menu

MISC **F4** The Misc menu contains probability functions.



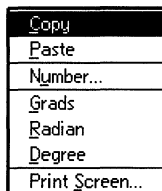
The following table describes the menu items:

Command	Description	Example
N!	Calculates the factorial of a number.	Enter 7 N! Displays 5040
SEED	Stores a seed for the random number generator. A seed is a number that initiates the sequence of random numbers. See RAN# . To use a new random seed from the system clock, enter 0 and choose SEED .	Enter 1 SEED You can repeat a random number sequence by storing the same non-zero seed.
RAN#	Displays a random number between 0 and 1.	RAN# Displays a random number. All random numbers have 12 significant digits.

The Utility Menu

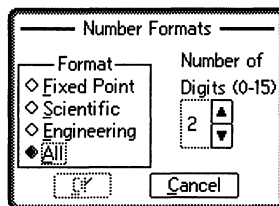
MENU

The utility menu lets you set calculator preferences and lets you use common editing commands.



The following table describes the utility menu commands that are unique to the calculator.

Command	Description
Grads	Sets the angle mode to grads.
Radian	Sets the angle mode to radians.
Degree	Sets the angle mode to degrees.
Number...	Displays the Number Formats dialog box so you can select the number format for the Calc Line.



- **Fixed Point** Sets the displayed number of digits to the right of the decimal point to a fixed number (specified in the **Number of Digits** field).
- **Scientific** Displays numbers using scientific notation. For example, 13,246.5678 displays as 1.32e4, when **Number of Digits** is set to 2.
- **Engineering** Displays numbers using Engineering notation. For example, 13,246.5678 displays as 13.2e3, when significant **Number of Digits** is set to 2.
- **All** Displays numbers to their full precision.

Financial Tools

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The Financial Tools Calculator is a full function business calculator that performs the following types of calculations:

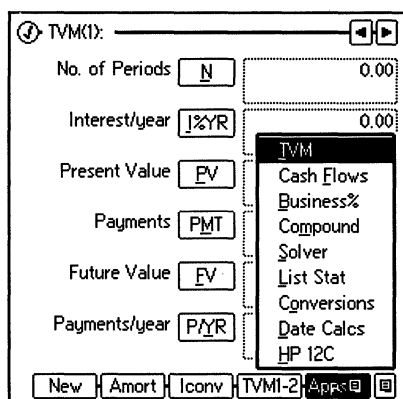
- Time Value of Money Loan, amortization, and interest-rate conversion calculations
- Cash Flow Interest rate, present value, future value, IRR, NPV, and calculations on accounts with variable payments or deposits
- Business Percentage Markup, margin, and percent change calculations
- Compound Interest Calculate investment growth with different compounding periods
- Conversions Conversion calculations for currency, length, area, mass, volume, and temperature
- Statistics One- and two-variable forecasting and statistical calculations
- Dates Number of days between dates
- Solver and function plotting Calculates unknown variables in custom equations and plots the results

To start the Financial Tools, tap



The Apps Menu

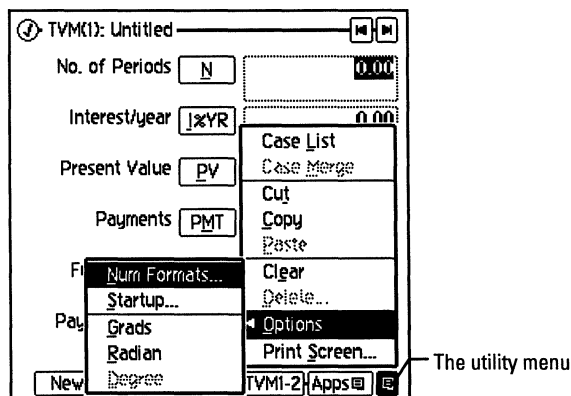
To select an application from the Financial Tools calculator, tap **Apps** then tap the application you want.



You can also type the underlined letter to select the application you want.

Setting Up Your Tools

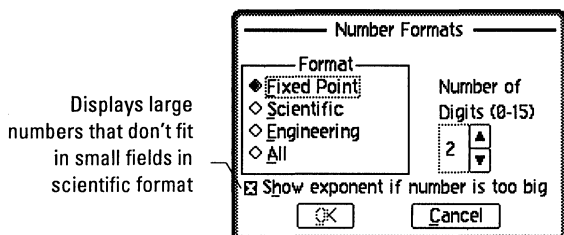
The Financial Tools have setup options that affect calculation results. The options menu (within the utility menu) lets you set up your tools. To open the options menu, tap the utility menu, then tap **Options**.



Command	Description
Num Formats	Set the number format.
Startup	Select the application the Financial Tools will display at startup.
Grads, Radian, Degree	Select the angle mode used for trigonometric functions.

Changing the number format

To change how numbers are displayed, tap **Options** then select **Num Formats**. The following dialog box appears:

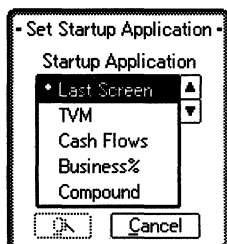


Select the format you want, then tap **OK**.

Number Format	Description
Fixed Point	Sets the displayed number of digits to the right of the decimal point to a fixed number (specified in the Number of Digits field).
Scientific	Displays numbers using scientific notation. For example, 13,246.5678 displays as 1.32e4, when Number of Digits is set to 2.
Engineering	Displays numbers using Engineering notation. For example, 13,246.5678 displays as 13.25e3, when Number of Digits is set to 2.
All	Displays numbers to their full precision.

Changing the startup application

To change the application the Financial Tools displays at startup tap **Options** in the utility menu then tap **Startup**. The following dialog box appears:



Tap the application that you want to appear when you tap the Financial Tools icon, and tap **OK**. In general, when you open the Financial Tools the last screen you used appears. Only when the Financial Tools application is no longer in memory is this setting used.

Last Screen displays the last application you were using.

Changing the angle mode

To change the angle mode that trigonometric functions use, tap **Options** then tap **Radian**, **Grads**, or **Degree** on the menu.

Saving multiple cases

The Financial Tools allows you to store multiple cases for different applications. A case is a collection of data used for a calculation in the following applications:

- Time Value of Money
- Cash Flows
- List Stats
- Solver

To display a list of all cases for an application, tap the utility menu and tap **Case List**.

Date	Title
5/5/95	TVM sample
6/20/95	House loan

To use the data from an entry in the case list, double-tap the item in the list. The application opens and displays the data.

- New** **F1** Starts a new case. (If existing application data has been modified you are asked if you want to save the changes.)
- Find** **F2** Opens a Find Dialog Box to search for text.
- Note** **F3** Attaches a note to the highlighted entry, or views an existing note. Notes are described on page 6-4.
- Apps** **F5** Lets you select another application within the Financial Tools.

Using Time Value of Money

Time value of money (TVM) lets you calculate loan amounts and payments, balloon payments, lease terms, amortization, and interest rate conversions.

Note

Financial calculations use the following rule: money that is paid to you is entered (or calculated) as a positive value; money that you pay out is entered (or calculated) as a negative value.

To display TVM, tap **Apps** then tap **TVM**.

Loan or interest rate calculations

When you start TVM, the following screen appears:

TVM(1): Untitled

No. of Periods

Interest/year

Present Value

Payments

Future Value

Payments/year Begin
 End

Fill in the known variables and tap the unknown variable to calculate its value.

Note

You can enter numbers or expressions in fields, for example, $147*6$ is a valid expression.

Field	Description
N	Total number of payments (or compounding periods)
I%YR	Annual interest rate expressed as a percentage
PV	Present value of a series of cash flows
PMT	Amount of each periodic payment
FV	Future value—the amount of the final cash flow or compounded value of a series of cash flows
P/YR	Number of payments (or compounding periods) per year (must be an integer in the range 1 through 999)
Begin/End	Select whether payments are made at the beginning or end of each period

Note

The calculator retains the values stored in the variables until they are changed or cleared. Press **MENU** and tap **Clear** to clear the values for the TVM case displayed.

- New** **F1** Save changes and start a new TVM Calculation.
- Amort** **F2** Determine the portion of payments that is interest and the portion applied against the principal. See page 12-9 for more information.
- Iconv** **F3** Perform interest rate conversions. See page 12-12 for more information.
- TVM1-2** **F4** Contrast two loans or investments.

Tapping **TVM1-2** displays two scenarios:

TVM: Untitled/Untitled			
0.00	N		0.00
0.00	I/YR		0.00
0.00	PV		0.00
0.00	PMT		0.00
0.00	FV		0.00
12 \diamond Begin \blacklozenge End	P/YR	12 \diamond Begin \blacklozenge End	
New	Case1	Case2	Apps \square \square

Tap **Case 1** to display only the first case.

Tap **Case 2** to display only the second case.

A Car Loan

For example, suppose you want to finance the purchase of a car for 3 years at 10.5% annual interest. The purchase price of the car is \$11,250 and the down payment is \$2,500. What is the payment per month?

1. Select the TVM form.

2. Select the number of periods field and enter 36 (12 payments per year for three years).
3. Tap the interest rate per year field and enter 10.5.
4. Tap the present value field and enter 11250 – 2500 (the total minus the down payment).
5. Tap the future value field and enter 0. (The final value of the loan.)
6. Tap the payments per year field and enter 12.
7. Tap PMT to calculate and display the monthly payment.

Your payment is 284.40 per month (negative values indicate money is paid out by you.)

Now determine what your payment would be if the interest rate were 9%.

1. Tap TVM1-2.
2. In this second case, reenter the values from case 1, but this time enter 9.0 as the interest rate.
3. Tap PMT.

TVM: Untitled/Untitled		
36.00	N	36.00
10.50	I/YR	9.00
8,750.00	PV	8,750.00
-284.40	PMT	-278.25
0.00	FV	0.00
12	◇ Begin ◆ End	P/YR
		12
		◇ Begin ◆ End
New	Case1	Case2
		Apps

Your payment is 278.25 per month.

The first 12 payments

Amortization calculations

Amortization calculations determine the portion of a payment that is interest and the amount that is applied against the principal balance in a given period. The amortization form is only accessible from the single-case TVM form.

After entering loan data, tap **Amort** to display the Amortization form.

You can calculate the interest and principal amounts for a specific group of payments. For example, if you are making monthly payments, use a group size of 1 to see how the interest and principal changes each month. Or use a group size of 12 to see how it changes each year.

Enter a group of payments you want to calculate the amortization for and tap **Go**. The form will display the remaining balance, total interest payments for the group, total accumulated interest, and the change in principal.

Continuing with the car loan in the last example, how much principal is left after one year of payments (at 10.5%)?

1. Select the TVM form.
2. Tap **Amort**.
3. Tap **Go** (**F2**).

TVM(1): Amortization	
Group:	1 Payments 12
Payments:	1 - 12 per Group
Amort interest	1%YR 10.50
Amort payment	PMT -284.40
Remaining balance	6,132.34
Interest	-795.14
Accum. Interest	-795.14
Principal	-2,617.66
<input type="button" value="Go"/> <input type="button" value="Adjust"/> <input type="button" value="Apps"/> <input type="button" value=""/>	

After the first year, \$6,132.34 is left to pay off.

Adjusting amortizations

You can change the interest rate or payment and recalculate to compare your options.

Tap **Adjust** to display the Amortization Adjust form.

Field	Value
Remaining Periods (N)	24.00
Interest rate (I%YR)	10.50
Remaining Balance (BAL)	6,132.34
Amort Payment (PMT)	-284.40
Balloon Payment (FV)	0.00

With this form you can change the values used to calculate the amortization.

Note

If you have all values but one, tap the button for that one and it will be calculated.

Field	Description
N'	The remaining payments (or periods).
I%YR	The annual interest rate expressed as a percentage.
BAL	The remaining balance.
PMT'	The amount of each periodic payment.
FV'	The future value—the amount of the final cash flow after all regular payments are made (the balloon payment).
✓	Return to the amortization form.

Adjustable Rate Mortgage

Pete Moss took out a \$100,000, 20-year ARM to purchase the building for his garden supply store. His interest rate for the first year is 8.25%. Moss expects the rate for the second year to increase to 8.75%. How would the increase affect his monthly payment for the second year?

Tap **Apps** and select **TVM**. (If you are still in **Adjust**, use \checkmark to exit.)

1. Enter the number of periods.
2. Enter the interest rate.
3. Enter the present value.
4. Make sure future value is 0.
5. Make sure payments per year is 12.

TVM(1): Untitled	
No. of Periods	N 240.00
Interest/gear	I%YR 8.25
Present Value	PV 100,000.00
Payments	PMT -852.07
Future Value	FV 0.00
Payments/year	P/YR 12 \diamond Begin \blacklozenge End
<input type="button" value="New"/> <input type="button" value="Amort"/> <input type="button" value="Iconv"/> <input type="button" value="TVM1-2"/> <input type="button" value="Apps"/> <input type="button" value=""/>	

6. Tap **PMT**.

His payment is 852.07 per month.

Now amortize the loan over the first twelve months of the loan.

1. Tap **Amort**.

2. Make sure payment per group is 12.

TVM(1): Amortization	
Group:	1 Payments 12
Payments:	1 - 12 per Group
Amort interest	I%YR 8.25
Amort payment	PMT -852.07
Remaining balance	97,948.74
Interest	-8,173.58
Accum. Interest	-8,173.58
Principal	-2,051.26
<input type="button" value="Go"/> <input type="button" value="Adjust"/> <input type="button" value="Apps"/> <input type="button" value=""/>	

3. Tap **Go**.

After 12 payments of \$852.07, he still owes \$97,948.74.

Now calculate his payment for the remainder of the loan at 8.75%.

1. Tap **Adjust**.

2. Enter the new interest rate.

3. Tap **PMT**.

TVM(1): Amortization Adjust

Compute adjusted I%YR and/or PMT.

Remaining Periods	IN	228.00
Interest rate	I%YR	8.75
Remaining Balance	BAL	97,948.74
Amort Payment	PMT	-882.62
Balloon Payment	FV	0.00

Apps

The new payment is \$882.62. His payment increased by \$30.55.

Interest rate conversion calculations

Interest rates are generally stated as nominal annual interest rates that are compounded periodically during the year. To compare investments that have different interest rates and different compounding periods investors calculate the effective interest rate—the annual interest rate the nominal interest rate would produce after a year of compounding—for each investment.

The interest rate conversion form is only accessible from TVM.

Enter the loan or investment information, and tap **Iconv** to display the Interest Rate Conversion form.

TVM(1): Interest Rate Conv. M M

Payments/year	12
Nominal annual rate	8.25
Effective annual rate	8.57
Periodic interest rate	0.69
Continuous annual rate	8.22
360/365 annual rate	8.11

Apps

Enter the values of any two variables to calculate the remaining values.

Field	Description
Payments/year	Number of payments per year.
Nominal annual rate	Nominal rate; the annualized periodic rate.
Effective annual rate	Annual effective rate that is equivalent to I%YR compounded P/YR times per year.
Periodic annual rate	Periodic rate; the rate that is actually applied each period.
Continuous annual rate	Annual effective rate that is equivalent to I%YR with continuous compounding.
360/365 annual rate	Annual effective rate that is equivalent to I%YR compounded by the 360/365 method.
<input checked="" type="radio"/>	Return to TVM.

Using Cash Flows

Cash Flows calculates each of the following for a series of equally spaced cash flows:

Internal rate
of return (IRR)

Nominal annual (or annualized)
interest rate required for the NPV to
equal zero.

Net present
value (NPV)

Present value of a series of cash flows
(including the initial investment)
discounted at a given annualized
interest rate.

Net uniform
series (NUS)

Amount of regular, periodic, even cash
flows that have a present value equal
to the NPV (with an initial flow of zero,
and the same number of flows as the
original).

Net future value
(NFV)

Future value of the NPV at the given
interest rate.

The cash-flow function can also plot the NPV against the annual interest rate.

To start Cash Flows, tap **Apps** then tap **Cash Flows**.

The screenshot shows the 'Cash Flows: Untitled' application window. At the top, there are two input fields: 'P/YR' with the value '12' and 'I%YR' with the value '0.00'. Below these is the 'Init Flow:' section with a value of '0.00' and a count of '1'. A table with three columns, 'Flow#', 'Amount', and 'Count', is displayed. The first three rows are labeled '1)', '2)', and '3)', each with empty input fields for 'Amount' and 'Count'. At the bottom of the window, there are several buttons: 'New', 'Go...', 'Plot', 'Vars', 'Apps', and a home button.

Each cash flow occurs once per period; that is, the number of periods per year is the same as the number of cash flows per year. To use the cash flow form enter the number of periods per year, then enter the cash flows in order of occurrence and the number of times each flow occurs before the next flow. If you need space to enter additional flows, tap ∇ and continue on the new screen.



Remember: money that is paid to you is a positive value; money that you pay out is a negative value.

After entering value, tap Go and a screen displays IRR, NPV, NUS, and NFV.

Field	Description
IRR%/YR	Annualized internal rate of return.
NPV	Net present value.
NUS	Net uniform series.
NFV	Net future value.

Tap OK and tap Plot to plot the NPV against the interest rates.

For information on plotting see page 12-39.

An investment with uneven cash flows

For example, you have \$140,000 that you want to invest in a project that will give you at least a 12% return on your money. Your brother-in-law lets you in on a project that is estimated to produce the cash flows in the table below.

Cash flows after initial investment:

1. 2 annual at \$25,000

2. 3 annual at \$35,000
3. 1 annual at \$85,000

The initial investment is \$140,000. Does this investment exceed the required rate of return of 12%?

1. Enter the number of cash flows per year.
2. Enter the cash flows in order of occurrence
3. Enter the number of times each flow occurs before the next flow. (You can enter additional flows by tapping and continuing on the next screen.)

⌂ Cash Flows: Untitled ✕ | ☰

P/YR J%YR

Init Flow:

Flow#	Amount	Count
1)	25,000.00	2
2)	35,000.00	3
3)	85,000.00	1

4. Tap Go and the screen displays IRR, NPV, NUS, and NFV.

The IRR% is 14.52.

The investment exceeds the required rate of return.

The previous example shows a conventional series of cash flows—cash flows that change to positive only, and whose sum is greater than the sum of the negative cash flows. If your cash flow problem is not conventional, refer to a financial management textbook for information on interpreting IRR% calculations.

Using Business Percentage

Business Percentage calculates markup, margin, and percent change. To start Business Percentage tap **Apps** then tap **Business%**.

The Business Percentage form has two screens. The first screen is shown below. (If the second screen is displayed, tap **%CHG** to display the first screen.)



$$\%Chg = \left[\frac{\text{New} - \text{Old}}{\text{Old}} \right] \times 100$$



$$\%Total = \left[\frac{\text{Part}}{\text{Total}} \right] \times 100$$

Field	Description
%CHG	Percent change between OLD and NEW .
NEW	Ending value given a beginning value and a percent change.
OLD	Starting value given an ending value and a percent change.
TOTAL	Total.
PART	Portion of total.
%TOTAL	Percent of total.

The second screen is used for markup and margin calculations. Tap **\$..^** to access it from the first screen.

Business Percentages

COST

PRICE

MARKUP

MARGIN

%CHG Apps



Markup =

$$\left[\frac{\text{Price} - \text{Cost}}{\text{Cost}} \right] \times 100$$

Margin =

$$\left[\frac{\text{Price} - \text{Cost}}{\text{Price}} \right] \times 100$$

Field	Description
COST	Calculates cost.
PRICE	Calculates price.
MARKUP	Calculates the difference between the price and the cost as a percentage of the cost.
MARGIN	Calculates the difference between the price and the cost as a percentage of the price.

Using Compound Interest

Compound Interest lets you calculate investment or savings appreciation. Interest can be reinvested at specific intervals. How often the interest is reinvested is called compound periods per year. For example, if the investment were compounded daily, 365 would be the compounding period per year.

Enter the number of compounding periods per year

Enter the total number of compounding periods

Enter annual interest rate

Enter the present value

Tap FV to calculate the future value

Tap **Apps**, and select **Compound** to start Compound Interest.

Comp. Periods/year		
No. of periods	N	0.00
Interest/year	%YR	0.00
Present value	PV	0.00
Future value	FV	0.00

Using the Solver

The Solver lets you enter your own equations, and solve for any of the variables. You can also plot an equation against any of its variables.

If you enter a name for your equation, the Solver saves it for later use.

Tap **Apps**, and select **Solver** to start the Solver. A list of your equations appears. Until you enter equations, the list is empty, but here is an example with some equations.

Name	Equations
Volume	$V=L*w*H$
Force	$f=m*a$
RTD	$Rate*Time=Distance$

Working with equations

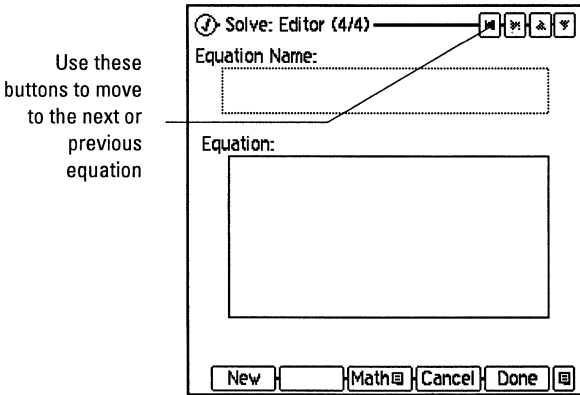
You can store as many equations as the OmniGo 100's memory permits. It is easy to add or edit equations.

New **F1** **New** creates a new case. A case contains groups of equations. Use cases to group related equations. Use **Case List** in the utility menu to open cases.

Note

If you tap **New** (or open another case) and you have not already saved the displayed equations, you'll be asked if you would like to save them in a case. If you select **Don't Save**, all of the currently displayed equations will be lost.

Edit **F2** **Edit** lets you edit or create an equation. Tap **Edit** and the following screen appears:



For example, suppose you buy carpet and must calculate how much it will cost. The price is quoted to you per square yard.

You use the following equation:

Price per square yard Length (feet) Width (feet)

$$\frac{\text{PPSY} * \text{L} * \text{W}}{9} = \text{COST}$$

Convert square feet to square yards

To enter the above Carpet equation into the Solver:

1. Tap **Apps**, and select **Solver** to select the Solver.
2. Select **Edit**.
3. Enter $(\text{PPSY} * \text{L} * \text{W}) / 9 = \text{COST}$ as the equation.
4. Enter **Carpet** as the equation name.
5. Tap **Done**. Tap the equation in the list to solve the equation. (If the Solver detects an error in the equation, an error message appears.)

Now calculate the cost of carpet needed to cover a 10 foot by 12 foot room. The carpet costs \$22.50 per square yard.

1. Tap **Carpet**.
2. Enter the price per square yard: 22.50.
3. Enter the length: 12.
4. Enter the width: 10.
5. Tap **COST** and the result appears: 300.00.

Solve: Calculation	
Carpet: (PPSY*L*W)/9=COST	
PPSY	22.50
L	12.00
W	10.00
COST	300.00

When entering equations, follow these guidelines:

- To improve readability, add spaces between elements.

- You can add a comment at any point in an equation. Simply start and end the comment with an exclamation point (!).
- The maximum length of an equation is about 2270 characters, and a single equation can have up to 256 different variables.
- If two or more equations contain the same variable name, that variable (and its value) is shared among the equations in which it appears. If you delete or clear a shared variable, its value is lost to all the equations that share it.
- Equations follow the rules of precedence described on page 11-2.

When you're ready to use the equation, tap its name in the solve catalog.

Plot **F4** **Plot** lets you plot equations. For information on plotting equations see page 12-39.

Apps **F5** **Apps** lets you select other financial tool applications.

To delete an equation in the Solve Catalog, highlight it and press **DEL**.

How the Solver works

The Solver searches for a solution to a single unknown in an equation. If the Solver is able to find a solution, the answer is displayed.

In most cases, this is all you will need to know about how the Solver works. However, there are certain types of equations that are more difficult to solve. If, during the calculation, the display temporarily shows sets of changing numbers, such as:

A:1.500000000000

A:1.13476129834

the Solver is searching for a solution.

Initially, the Solver tries to find a *direct* solution by rearranging the equation and then solving for the variable. If the Solver finds a direct solution, it displays the answer, and no other information is displayed.

If the Solver is unable to find a direct solution, it tries to find an *iterative* solution. This involves searching for the answer by estimating a set of answers, seeing how close they are to a solution, and then making another set of estimates. The Solver displays the current estimates ("guesses") while it is searching for an answer iteratively. You should keep in mind that there may be more than one solution to an equation, and that it may be necessary for you to enter guesses in order to influence which solution the Solver finds.

There are four possible outcomes when searching for an iterative solution:

- The Solver displays an answer but displays no message. It is very likely that the Solver has found a solution. The Solver may display additional information if you repeat the calculation by tapping the variable again.
- The Solver displays an answer and automatically displays a message. The Solver has found a possible solution, but you must use judgment in interpreting the results.
- The Solver displays **Try again. Bad guesses**. This indicates that the Solver cannot begin the search with the current guesses.
- The Solver displays **Solution not found** because it was unable to find a solution. Check to see if your equation and stored values are correct. If the equation is correct, you may be able to find a solution by entering accurate guesses.

Halting and restarting an iterative search

When the Solver is searching for an iterative solution, you can halt the calculation by pressing any key. The Solver displays the best estimate it has found so far, and the message **Interrupted**. You can restart the search from where it left off by tapping the variable again. Or, you can restart the search using your own guesses. Using your own guesses serves two purposes. First, it can save time by telling the Solver where to start searching. Second, if more than one solution exists, entering guesses can help the Solver select the answer you want. You can enter guesses in the Solve Calc screen at these times:

- Before beginning the calculation, after you've stored a value for every variable except the unknown variable.
- After you've halted the iterative search.
- After the Solver has returned an answer, and you want to begin searching for another answer somewhere else.

You can enter one or two guesses. If you enter one guess, the Solver makes a second guess. If you enter two guesses, the Solver starts searching for a solution in the range between the two guesses.

To enter guesses:

1. Tap **Guess**.
2. Enter one or two guesses, and tap **OK**.

Rules for writing equations

The rules for writing equations use these terms:

- *Variables* are the named items for which you store or calculate values.
- *Constants* are numbers, for example, 3.14, or 365.
- *Operators* perform arithmetic, for example, + and *.
- *Functions* do calculations using mathematical capabilities built into the Solver, for example, $\text{SQRT}(x)$, $\text{USPV}(i\%,n)$, and $\text{DDAYS}(d1,d2,\text{cal})$.

Length of equations

An equation cannot exceed 2279 characters and cannot contain more than 256 different variables. There are no other limits as long as there is sufficient memory to store it.

Variable names

Solver variable names can be a maximum of 15 characters long and must be all one word (no spaces allowed). The following characters are not allowed in variable names: +, -, *, /, ^, (,), <, >, =, :, ;, !, {, }, [,], and |. Also, the character currently defined as argument separator (, in US mode and ; in European mode) is not allowed in variable names. You cannot use NOT, AND, OR, or XOR as variable names, nor can you use the names of functions that have no arguments as variable names. A variable name cannot begin with a number. Variable names are case sensitive.

The first seven characters of the variable names become the button labels. Therefore, make sure no two variables have the same first seven characters.

Constants

Constants must be keyed in as numbers without digit separators or other characters.

Functions

An equation can contain any of the functions shown in *Solver Functions* on page 12-26.

Operators, parentheses, and the order of calculations

When necessary, use parentheses to control operator precedence. Without parentheses, the Solver does calculations using the same rules as those used by an algebraic calculator. See page 11-2 for more information.

Note

You cannot use parentheses for implied multiplication. For example, an equation printed as $P_{SN}=P_S(1-F)$ must be typed into the Solver as $PSN=PS*(1-F)$. The * operator must be inserted between PS and the parenthesis.

Date formats

The functions CDATE, DATE, and DDAYS, either return a date or use one or more dates as arguments. The format in which these dates are expressed depends on the date format set in Setup. The formats shown in the second and third columns give the Solver date formats shown in the first column.

Solver	Setting in Setup
DD.MMYYYY	dd/mm/yy dd-mm-yy dd.mm.yy
MM.DDYYYY	mm/dd/yy mm-dd-yy mm.dd.yy

You won't see the entire date in the display unless you've set the number format to be All or Fixed Point with 6 digits.

Solver Functions



All of the Solver's functions are in the **Math** menu. While editing an equation, tap **Math** (**F3**) and then tap the submenu you want.

Functions may also be entered without using the menus; simply write or type them in upper or lower case.

Lowercase characters in parentheses stand for numbers, variable names, or numeric expressions that the functions use to do their calculations.

Related functions are grouped into six menus:

Math

RND	IDIV
IP	INT
FP	MOD
ABS	MIN
LN	MAX
EXP	SGN
LOG	SIGMA
ALOG	
SQRT	
SQ	
INV	
TRN	
LPNI	
EXPMI	

Trig

PI
SIN
COS
TAN
ASIN
ACOS
ATAN

Conv

DEG
RAD
HR
HMS
XCOORD
YCOORD
RADIUS
ANGLE
CTIME
CDATE
DATE
DDAYS

Prob

COMB
PERM
FACT
RAN#

Fin

N
I%YR
PV
PMT
FV
SPFV
SPPV
USFV
USPV

Others

IF
OR
XOR
AND
NOT
S
L
G

The following list describes the functions in alphabetical order. The menu that contains the function appears in parentheses.

ABS(x)

Absolute value. (Math)

ACOS(x)

Arc cosine. Uses the current angle mode: degrees, radians, or grads. (Trig)

ALOG(x)

Common (base 10) antilogarithm; 10^x . (Math)

ANGLE(x,y)

Returns polar coordinate angle θ given (x,y) rectangular coordinates. (Math)

AND

Logical operator used in conditional expressions. See page 12-33 for more information. (Others)

ASIN(x)

Arc sine. Uses the current angle mode: degrees, radians, or grads. (Trig)

ATAN(x)

Arc tangent. Uses the current angle mode: degrees, radians, or grads. (Trig)

CDATE

Current date. Uses the current date format, DD.MMYYYY, or MM.DDYyyy. (Conv)

COMB(x,y)

Number of combinations of x items taken y at a time. (Prob)

COS(x)

Cosine. Uses the current angle mode: degrees, radians, or grads. (Trig)

CTIME

Current time in HH.MMSS, 24-hour format. (Conv)

DDAYS(d1,d2,cal)

The number of days between dates $d1$ and $d2$. Uses the current date format, DD.MMYYYY, or MM.DDYyyy. Cal designates the calendar:

$Cal=1$ for the actual calendar, which recognizes leap years.

$Cal=2$ for the 365-day calendar, which ignores leap years.

$Cal=3$ for the 360-day calendar, which uses 12, 30-day months. (Conv)

DEG(x)

Converts x in radians to decimal degrees. (Conv)

EXP(x)

Natural antilogarithm; e^x . (Math)

EXPM1(x)

Natural antilogarithm minus 1; $e^x - 1$. (Math)

FACT(x)

Factorial; x is an integer ≥ 0 . (Prob)

FP(x)

Fractional part. (Math)

FV(n,i%yr,pv, pmt,p/yr,m)

TVM function for FV. See page 12-35 for more information.
(Fin)

G(var)

The GET function returns the contents of *var*. (Others)

HMS(x)

Converts x in decimal hours (degrees) to H.MMSS
(D.MMSS) format. (Conv)

HR(x)

Converts x in H.MMSS (D.MMSS) format to decimal
format. (Conv)

IDIV(x,y)

Integer part of the result of x divided by y . (Math)

IF(con,alg1,alg2)

If conditional expression *con* is true, use algebraic
expression *alg1*; otherwise, use *alg2*. (IF is discussed later
in this chapter.) (Others)

INT(x)

The greatest integer less than or equal to x . (Math)

INV(x)

Reciprocal, $1/x$. (Math)

IP(x)

Integer part. (Math)

I%YR(n,pv,pmt, fv,p/yr,m)

TVM function for I%YR. See page 12-35 for more
information. (Fin)

L(var,alg)

The LET function evaluates the algebraic expression *alg*,
stores the result in *var*, and also returns that result as the
value of the L function. (Others)

LN(x)

Natural (base e) log of x . (Math)

LNPI(x)

$\ln(1 + x)$. (Math)

LOG(x)

Common (base 10) log of x . (Math)

MAX(x,y)

Larger of x and y . (Math)

MIN(x,y)

Smaller of x and y . (Math)

MOD(x,y)

The remainder of the result of x divided by y . (Math)

N(*i*%*yr*,*pv*,*pmt*, *fv*,*p*/*yr*,*m*)

TVM function for N . See page 12-35 for more information.
(Fin)

NOT

Logical operator used in conditional expressions. See page 12-33 for more information. (Others)

OR

Logical operator used in conditional expressions. See page 12-33 for more information. (Others)

PERM(x,y)

Permutations of x items taken y at a time. (Prob)

PI

3.141592653589793 (16 digits). (Trig)

PMT(*n*,*i*%*yr*,*pv*, *fv*,*p*/*yr*,*m*)

TVM function for PMT . See page 12-35 for more information. (Fin)

PV(*n*,*i*%*yr*,*pmt*, *fv*,*p*/*yr*,*m*)

TVM function for PV . See page 12-35 for more information. (Fin)

RAD(x)

Converts x in decimal degrees to radians. (Conv)

RADIUS(x,y)

Returns polar coordinate radius R given (x,y) rectangular coordinates. (Conv)

RAN# or RAND

Pseudo-random number ($0 \leq r < 1$). (Prob)

RND(x,y)

x is rounded to y decimal places (when $0 \leq y \leq 15$) or to $|y|$ significant digits (when $-16 \leq y \leq -1$). When y equals 16, x is rounded to the number of decimal places given by the current display setting. (Math)

S(var)

Solving for var . var is a variable; $S(var)$ is used with the IF function to select an equation based on which variable is solved for. (S is discussed later in this chapter.) (Others)

SGN(x)

Sign of x (+1 if $x > 0$, 0 if $x = 0$, -1 if $x < 0$). (Math)

SIGMA (cv,c1,c2,s,alg)

Sums values of the algebraic expression (alg) for values of the counter variable (cv). cv starts with value $c1$ and is incremented in steps of s , to a final value of $c2$. (SIGMA is covered in more detail later in this chapter.) (Math)

SIN(x)

Sine. Uses the current angle mode: degrees, radians, or grads. (Trig)

SPFV(i%,n)

Future value of a single \$1.00 payment; equivalent to $(1+i\%/100)^n$. n is the number of compounding periods, $i\%$ is the interest rate per compounding period, expressed as a percentage. (Fin)

SPPV(i%,n)

Present value of a single \$1.00 payment; equivalent to $1/SPFV(i\%,n)$. n is the number of compounding periods. $i\%$ is the interest rate per compounding period, expressed as a percentage. (Fin)

SQ(x)

x^2 . (Math)

SQRT(x)

\sqrt{x} . (Math)

TAN(x)

Tangent. Uses the current angle mode: degrees, radians, or grads. (Trig)

TRN(x,y)

x is truncated to y decimal places (when $0 \leq y \leq 15$) or to y significant digits (when $-16 \leq y \leq -1$). When y equals 16, x is truncated to the number of decimal places given by the current display setting. (Math)

USFV(i%,n)

Future value of a uniform series of \$1.00 payments; equivalent to $(SPFV(i\%,n)-1) / (i\% / 100)$. n is the number of payments. $i\%$ is the periodic interest rate, expressed as a percentage. (Fin)

USPV(i%,n)

Present value of a uniform series of \$1.00 payments; equivalent to $USFV(i\%,n) / SPFV(i\%,n)$. n is the number of payments. $i\%$ is the periodic interest rate, expressed as a percentage. (Fin)

XCOORD(R,θ)

x -coordinate of polar coordinates. Uses the current angle mode: degrees, radians, or grads. (Conv)

XOR

Logical operator used in conditional expressions. See page 12-33 for more information. (Others)

YCOORD(R,θ)

y -coordinate of polar coordinates. Uses the current angle mode: degrees, radians, or grads. (Conv)

Conditional expressions (IF function)

Equations can include conditional expressions using the IF function. For example, the Solver accepts the equation:

$BONUS=IF(SALES>3000,.02*SALES,.01*SALES)$

The two commas inside the parentheses stand for "THEN" and "ELSE." According to this equation, if *SALES* is greater than 3000, then *BONUS* equals $.02 * SALES$; else, *BONUS* equals $.01 * SALES$.

In general, the form of the IF function is:

$IF(\text{conditional expr}, \text{algebraic expr}, \text{algebraic expr})$

A conditional expression can also be an algebraic expression. If the algebraic expression evaluates to zero, it is interpreted as false. Otherwise, it is interpreted as true. For example, if *A* equals -1 in the algebraic expression $A+1$, the expression is false. If *A* equals any other number, the expression is true.

The logical and relational operators that can be used in conditional expressions are:

NOT, AND, OR, XOR, >, <, =, >= (greater than or equal to), <= (less than or equal to), <> (not equal to).

Logical operations are done after arithmetic operations. Two or more logical operations are done in the order that they occur. For example, $A=360 \text{ AND } B=12 \text{ OR } A=365$ is true if *A* equals 360 and *B*=12, or *A* equals 365.

Here is an example of an equation using conditional operators:

$B=IF(7<A \text{ AND } A\leq 15, 2*A/6, 3*A+10)+C$

This means if *A* is greater than 7 and less than or equal to 15, then $B=(2*A/6)+C$. Otherwise, $B=(3*A+10)+C$.

Creating multiple equations (S function)

The S (solving for) function is used with the IF function to group equations and to specify the conditions where one or the other is used.

For example, consider these equations for calculating pay:

Wage

Pay based on an hourly wage:

$$W_{\text{pay}} = \text{Wage} * \text{Hrs}$$

where:

W_{pay} = gross wage pay

$Wage$ = hourly wage

Hrs = hours worked

Salary

Pay based on a fixed salary plus a 5% sales commission:

$$S_{\text{pay}} = \text{Salry} + .05 * \text{Sales}$$

where:

S_{pay} = gross salary pay

$Salry$ = fixed salary

$Sales$ = sales

To use the S function, the equations must first be rearranged to place 0 on one side of each equation:

$$W_{\text{pay}} - \text{Wage} * \text{Hrs} = 0$$

$$S_{\text{pay}} - \text{Salry} - .05 * \text{Sales} = 0$$

To create one equation that can be used for either case:

$$\text{IF}(S(W_{\text{pay}}), W_{\text{pay}} - \text{Wage} * \text{Hrs}, S_{\text{pay}} - \text{Salry} - .05 * \text{Sales}) = 0$$

- IF(S(W_{pay})) tests the condition: Solving for W_{pay} ?
- If the condition is true, the expression $W_{\text{pay}} - \text{Wage} * \text{Hrs}$ is used.
- If the condition is false, the expression $S_{\text{pay}} - \text{Salry} - .05 * \text{Sales}$ is used.

The =0 ending is optional. If it's omitted, =0 is implied.

The S function appears within the IF function in the conditional expression. In this case, the conditional expression is true if you solve for W_{pay} , and false if you solve for anything else. The algebraic expressions in the IF function are the two equations, rewritten to gather all the terms on one side of the equation, so that each expression is equal to 0.

The IF function can be set equal to an expression common to both equations. For example, the equations:

$$X + Y + (10/A) = Z$$

$$Q + R + (10/A) = T$$

can be combined to

$$\text{IF}(S(X) \text{ OR } S(Y) \text{ OR } S(Z), X + Y - Z, Q + R - T) = -10/A$$

The Solver uses the second equation to solve for Q , R , T , or A .

The TVM functions

The five Solver TVM functions allow you to write equations that do calculations analogous to the calculations done in the TVM application:

$N (i\%yr, pv, pmt, fv, p/yr, m)$

$I\%YR (n, pv, pmt, fv, p/yr, m)$

$PV (n, i\%yr, pmt, fv, p/yr, m)$

$PMT (n, i\%yr, pv, fv, p/yr, m)$

$FV (n, i\%yr, pv, pmt, p/yr, m)$

Each function calculates one TVM value, given the values for all the others. For example, the first function calculates N (the total number of payments or compounding periods), given the annual percentage interest rate, present value, payment amount, future value, number of payments per year, and the Begin/End mode.

The parameters of the functions (the contents of the parentheses) are defined identically (with one exception) to the TVM application's variables. The exception is that m stands for the Begin/End mode. Use $m=1$ for Begin mode, $m=0$ for End mode.

You can give the parameters any legal variable name; for example you can use *LOAN* in place of pv . Parameters can also be algebraic expressions. For example, the following equation calculates the monthly payment for a car loan:

$CARPMT=PMT(MONTHS,I\%YR,PRICE-DOWN,0,12,0)$

- MONTHS is the number of monthly periods (n).
- DOWN is the down payment.
- PRICE is the purchase price.
- PRICE-DOWN is the present value (pv).
- The first 0 is the final value (fv).
- 12 is the payments/year (p/yr).
- The final 0 specifies End mode.

Notice that PMT is *not* a variable in the equation; it is the name of the function.

The Solver TVM variables are not shared with the variables in the TVM application. For example, the variable *I%YR* in the *CARPMT* equation is separate from the TVM variable *I%YR*.

The summing function (SIGMA)

The SIGMA function provides the ability to do a variety of summing operations. The function has the form:

$SIGMA(\text{counter var}, \text{starting value}, \text{ending value}, \text{step size}, \text{algebraic expr})$

The *counter var* takes on a series of values, beginning with the *starting value*, and incrementing according to the *step*, until it passes the *ending value*. For each value of the counter, the *algebraic expr* is evaluated, and the value is added to the previous value. The function returns the final summation.

The following equation contains a counter *I* and two other variables, *X* and *THESUM*:

$THESUM = SIGMA(I, 1, 6, 1, I * X)$

The counter *I* runs from 1 through 6 in steps of 1—that is, 1, 2, 3, 4, 5, 6. For each value of *I*, $I * X$ is calculated and added to the sum. If you store 3 in *X* and then solve for *THESUM*, the Solver calculates $THESUM = 63$; that is, $3 + 6 + 9 + 12 + 15 + 18$.

Examples of Solver equations

Here are two examples using the Solver.

Simulating the toss of dice

The Solver random number function $RAN\#$ can simulate the toss of one or more six-sided dice. The equation

$Toss = IP(RAN\# * 6 + 1)$

generates integers in the range 1 through 6.

Similarly,

$Toss = IP(RAN\# * 6 + 1) + IP(RAN\# * 6 + 1)$

simulates the toss of two dice and gives the sum of both.

1. Enter an equation for the number of dice you want.
2. Tap Toss as many times as desired to see the results of the tosses.

You could modify the equation so it put the outcome of each toss on either side of the decimal separator (make sure the number format is set to **A11**):

$$\text{Toss}=\text{IP}(\text{RAN}\#\#6+1)+\text{IP}(\text{RAN}\#\#6+1)/10$$

A result of 6.6 means you got "box cars."

Distance between two locations

The following Solver equation calculates the approximate statute miles between two places, given their longitudes and latitudes. The longitudes and latitudes are entered in degrees-minutes-seconds format (D.MMSS); South Latitude and East Longitude are negative numbers. The Solver must be in Degrees mode.

Here is the equation:

$$\text{Dist}=69.0466*\text{ACOS}(\text{SIN}(\text{HR}(\text{Lat1}))*\text{SIN}(\text{HR}(\text{Lat2}))+\text{COS}(\text{HR}(\text{Lat1}))*\text{COS}(\text{HR}(\text{Lat2}))*\text{COS}(\text{HR}(\text{Lon1})-\text{HR}(\text{Lon2})))$$

where

Lat1, Lon1 = the latitude and longitude of the first place.

Lat2, Lon2 = the latitude and longitude of the second place.

Find the statute miles between Philadelphia, Pennsylvania (40°35'N, 75°10'W) and Corvallis, Oregon (44°35'N, 123°16'W).

1. Select **Degree** angle mode under **Options** in the utility menu.

- Enter the above equation into the Solver. Your screen should look like this:

Solve: Editor (5/5)

Equation Name:
Distance

Equation:
Dist=69.0466*ACOS(SIN(HR(Lat1))*SIN(HR(Lat2))+COS(HR(Lat1))*COS(HR(Lat2))*COS(HR(Lon1)-HR(Lon2)))

New Math Cancel Done

- Tap **Done** and double-tap the equation from within the Solve catalog.

- Enter 40.35
- Enter 44.35
- Enter 75.10
- Enter 123.16

Solve: Calculation

Distance: Dist=69.0466*ACOS(SIN(HR(Lat1))*SIN(HR(Lat2))+COS(HR(Lat1))*COS(HR(Lat2))*COS(HR(Lon1)-HR(Lon2)))

Dist	0.00
Lat1	40.35
Lat2	44.35
Lon1	75.10
Lon2	123.16

Guess... Apps

- Tap **Dist**.

The Solver calculates the distance to be 2,425.31 statute miles.

Drawing Graphs

The Solver's function plotting lets you draw a graph and determine roots of an equation or mathematical expression. You can autoscale the graph so the curve is sure to appear in the display. You can also zoom in and zoom out to see more detailed or wider views of the graph, and you can display the coordinates of any point on the graph. The general procedures below are followed by an example that demonstrates the power and flexibility of plotting.

To draw a graph:

1. Highlight an equation in the Solve Catalog.
2. Tap Plot ($F4$).

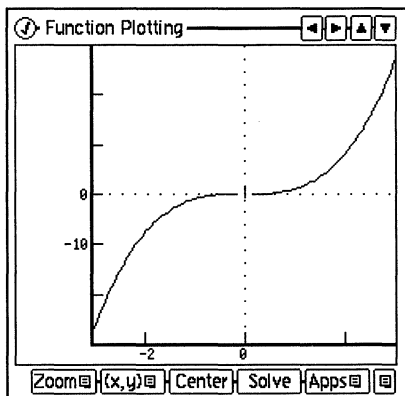
The screenshot shows the 'Function Plotting' menu for the function $y=x^3$. The menu items and their values are as follows:

Label	Setting	Value
Minimum x-axis value	X-minimum	-3.00
Maximum x-axis value	X-maximum	3.00
Minimum y-axis value	Y-minimum	-3.00
Maximum y-axis value	Y-maximum	3.00
Independent variable plotted along the x-axis	Resolution	112.00
	Plot variable	x
Number of points plotted along the x-axis	Auto	Draw

At the bottom of the menu are buttons for 'Auto', 'Draw', 'Apps', and a grid icon.

1. Tap **Auto** to set the plot conditions and draw the graph. If you know the range of interest, enter maximum and minimum values and tap **Draw**.

The function is drawn:



When you first graph an equation, the graph boundaries and the resolution have these values:

$$XMIN = -3.00$$

$$XMAX = 3.00$$

$$YMIN = -3.00$$

$$YMAX = 3.00$$

$$RES = 112.00$$

Working with graphs

Zoom **F1**

Auto Scale	
XY x5	
X x5	
Y x5	
XY x5 auto	
XY x0.2	
X x0.2	
Y x0.2	
XY x0.2 auto	

To zoom in (to view a smaller region of the graph in more detail) or zoom out (view a larger region), tap **Zoom**.

XY x5 zooms in on both axes by a factor of 5.

X x5 zooms in on the x-axis by a factor of 5.

Y x5 zooms in on the y-axis by a factor of 5.

XY x5 auto autoscales the x- and y-axis as it zooms in by a factor of 5.

XY x0.2 zooms out on both axes by a factor of 5 (image is one-fifth as large).

X x0.2 zooms out on the x-axis by a factor of 5.

Y x0.2 zooms out on the y-axis by a factor of 5.

XY x0.2 auto autoscales the x- and y-axis as it zooms out by a factor of 5.

You can also zoom in on an area of the graph by holding the pen against the screen and drawing a box around the area you want to see. The box coordinates become the new x and y endpoints of the graph. You can zoom out by double-tapping the graph area.

(x,y) **F2** To display the coordinates of any point on the screen, tap **(x,y)** and select **Coordinate** (coordinate mode is active).




Tap the point you want, and the coordinates of that point appear on the screen.

To display a function's value for any point on the curve, tap **(x,y)** and select **Trace** (trace mode is active).

Use the arrow keys or tap the curve to display the x-value you want. The function value appears on the screen.

Center **F3** To center the graph at current cursor position, tap **Center**.

If you hold  and tap **Center**, the y-axis autoscales as the graph centers.

Solve **F4** To solve for the roots of a function graphically, use **Solve** (or space).

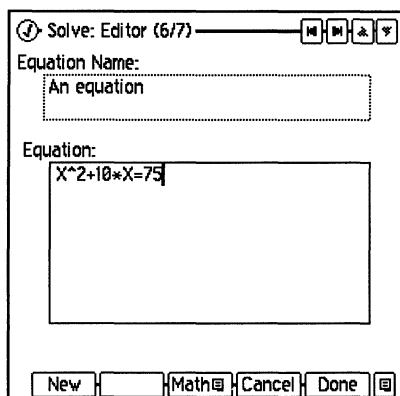
Move the cursor to an x-variable value close to a root (where the curve crosses the line $y=0$). This locates an initial guess for the root. Often, zooming out helps to find all roots.

Tap **Solve** to display the value of the root. If a "questionable solution" is found (a gap, pole, etc.), a message is displayed to that effect followed by the "root" on the top line.

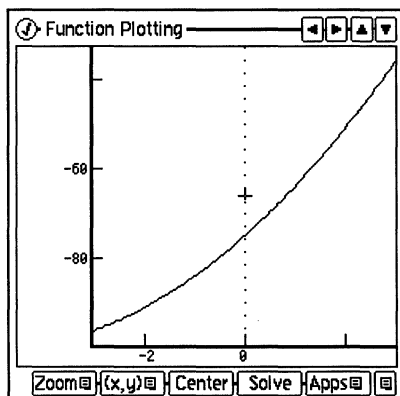
Finding the roots of an equation

This example shows how to find graphically the two roots of the equation $x^2 + 10x = 75$.

1. Enter the equation into the Solver. The screen should look like this:



2. Tap Done.
3. From the Solve catalog, highlight the equation and tap Plot.
4. Tap Auto to plot the curve. The following screen appears:



5. Tap Zoom and select $XY \times 0.2$ auto. This zooms out to display both roots.
6. Tap the left side of the screen, and tap Solve. This solves for the negative root: -15.
7. Tap the right side of the screen, and tap Solve. This solves for the positive root: 5.

How function plotting works. When a function is plotted, evenly spaced values of the plot variable are connected by straight lines. The number of these plotted points is determined by RES (resolution), the plot boundaries are given by XMIN, XMAX, YMIN, and YMAX, and the plot variable is given by XVAR. These values are shown in the screen that displays plot conditions.

A RES value of 10 means that the XVAR values between XMIN and XMAX are divided into 10 equal parts. For example, if XMIN is -50 and XMAX is +50, the function would be plotted for x-values of -50, -40, -30, . . . +40, and +50, and each of these plotted points would be connected by straight lines to produce the graph.

Selecting the expression to plot

Every graph is a plot of a function versus an independent variable (the XVAR value). You select a function or an equation to plot (the current equation) from the Solver's equation list. If you plot an equation of the form $y = f(x)$, the function $f(x)$ is plotted. If you plot an equation of the form $\text{expression} = \text{expression}$ (such as $x^3 + 10x = 5x^2 + 75$), the Solver automatically changes it into a single expression (no equal sign) by *subtracting the right side of the equation from the left side* ($x^3 + 10x - 5x^2 - 75$). The value of this expression is then plotted against XVAR.



XVAR is the independent variable. All other variables are set to constants based on their last displayed value.

This table shows examples of how equations would be converted to expressions by function plotting, and what choices you would have for the independent variable, XVAR.

Expression or Equation in List	What's Plotted as y-value	XVAR Choices
$y = \sin(x)$	$\sin(x)$	y^1, x
$\sin(x)$	$\sin(x)$	x
$(PPSY * L * W) / 9 = \text{COST}$ (from previous example)	$(PPSY * L * W) / 9 - \text{COST}$	PPSY, L, W, COST
$(PPSY * L * W) / 9$	$(PPSY * L * W) / 9$	PPSY, L, W

¹ If you select y as the XVAR, $\sin(x)$ is set to a constant. Therefore the plot of $y = \sin(x)$ is simply a straight line.

Using List Stats

The OmniGo 100 includes a statistical analysis package that lets you do any of the following:

- Calculate statistics for one and two variable data.
- Fit a curve to a set of data.
- Forecast estimates using “what if” criteria.
- Graph data.
- Save data in a file.

One variable statistics

Select **List Stats** from the **APPS** menu to display the following:

Item#	Variable-X
1)	
2)	
3)	
4)	
5)	
Sum	0

Buttons: New Stats FrCast Vars Apps

Enter a value and tap the next field. A new blank data line is displayed for your next entry and the sum is updated. To change an entry, select it and enter a new value.

New **[F1]** Asks you if you want to keep the current case, and starts a new case.

Stats **F1** After you enter your data, tap **Stats** to calculate statistical values and display the following:

Statistics: X (1-Var, Sample)	
Mean value	34.60
Standard deviation	39.87
Minimum value	5.00
Median value	7.00
Maximum value	88.00

These are the values calculated for sample statistics. If your data is the entire population, tap **Popul** for population statistics. You can switch back to sample statistics by tapping **Sample**.

To return and change your data, tap **Edit**.

Vars **F4** Tap **Vars** to display a menu that will let you insert or delete an entry, swap two variable columns, sort your entries, or toggle between one and two variable statistics.

Statistics: Edit X	
Item#	Variable-X
1)	5.00
2)	6.00
3)	7.00
4)	
5)	
Sum	

Insert Item
Delete Item
Swap Variable
2-Var
Sort

The **Vars** menu contains the following options:

Command	Description
Insert	Creates a new data line above the current value.
Delete	Deletes the current data item.
Swap variable	Swaps the position of the two columns of data even if only one column is displayed.
1-Var/ 2-Var	Switches between displaying one and two columns of data (there are always two columns of data in memory, but you can choose to display and work with one).
Sort	Sorts the column that the cursor is in from to lowest to highest (pairs of data are kept together).

Two variable statistics

You can also perform two-variable statistical calculations with List Stats. To do so, tap **Vars** and then tap **2-Var** on the menu.

Item#	Variable-X	Variable-Y
1)	0.00	0.00
2)	0.00	0.00
3)	0.00	0.00
4)	0.00	0.00
5)	0.00	0.00
Sum	0	0

Buttons: New, Stats, FrCast, Vars, Apps, Home

- Tap **Stats** to display statistical calculations for the sample and the population.
- Tap **Vars** to display the menu that allows you to delete or insert a row, swap the positions of the two columns, sort the columns, or switch to one-variable calculations.

In addition, you can use FrCast to perform "what if" speculation.

Forecasting

Forecasting is used to predict values that are not in your data. The prediction is based on the relationship (or fit) between the x- and y-values.

The first step is to choose a data model. To do this tap FrCast and the following screen is displayed.

Forecast

X VALUE	0.00
Y VALUE	0.00
Correlation	0.98
Slope	0.17
Intercept	9.16

Data Model

- Linear
- Exponential
- Logarithmic
- Power

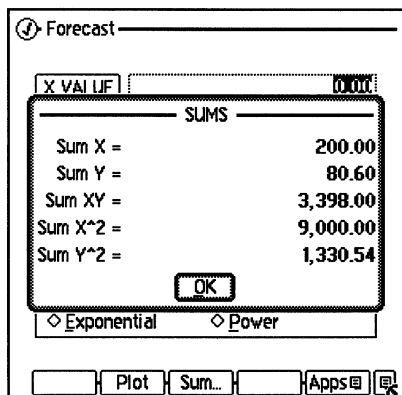
Plot Sum... Apps

When you choose a model, List Stat calculates the correlation coefficient for that model. The correlation coefficient shows how well the model's predictions fit your data. A value of 1 or -1 means the model is an accurate fit. Positive correlations indicate that y increases as x does. Negative correlations indicate that y decreases as x increases. If the correlation coefficient is close to zero, the model is not dependable; you should choose another data model. There are four models available in FrCast:

- Linear Fit
- Exponential Curve Fit
- Logarithmic Curve Fit
- Power Curve Fit

Once you are satisfied with a model you can perform "what if" analysis by entering values for one column (X or Y) and have the model forecast the value for the other column.

Sum displays summed statistics.



You can also tap **Plot** to see a graphical representation of how well the model fits the data. See page 12-39 for information on plotting.

A two variable example

For the past 6 weeks the manager of Tom's and Jerry's Pet Store has kept records of their sales and the number of minutes of radio advertising that were purchased:

Week	Minutes of Advertising	Sales
1	2	\$1,400
2	1	\$920
3	3	\$1,100
4	5	\$2,265
5	5	\$2,890
6	4	\$2,200

Determine whether there is a linear relationship between the amount of radio advertising purchased and the weekly sales.

1. Start List Stats and select **2-Var**, to display two columns of data.



You can append the data from an existing case using the **Case Merge** command in the utility menu.

2. Enter the data from the table. Your screen should look like this:

Item#	Variable-X	Variable-Y
1)	2.00	1,400.00
2)	1.00	920.00
3)	3.00	1,100.00
4)	5.00	2,265.00
5)	5.00	2,890.00
Sum	20	10,775

Tap here to go to the next page.

3. Tap **FrCast**. Select **Linear** as the data model. The correlation coefficient of 0.90 satisfies the manager that it is a linear relationship.

Estimate the level of sales if 7 minutes of advertising were purchased.

1. Enter 7 as the x -value and tap **YVALUE**.

Using the Linear fit model, Tom's and Jerry's can expect around \$3,300 in sales with 7 minutes of radio advertising.

Using Conversions

The conversions form performs conversions on each of the following:

- Currency
- Length
- Volume
- Mass
- Area
- Temperature

Selecting conversions

Select conversions by tapping **Apps** then tap **Conversions**. One of the conversion forms appears. Tap **Conv** to display a menu of all conversion options.

The screenshot shows the 'Currency Conversions' app interface. At the top, there is a title bar with a checkmark icon and the text 'Currency Conversions'. Below the title bar, there are two columns: 'Local Currency' and 'Local Amount'. The 'Local Currency' is set to 'US\$' and the 'Local Amount' is '100'. Below this, there is a row for '1 US\$ = Foreign Amount'. The 'Foreign Amount' is '100.00'. Below this, there are four rows for different currencies: 'Yen' (100), 'Mark' (1.5), 'Franc' (5.3), and 'Lira' (1,45). A menu is open over the 'Mark' row, showing options: 'Currency', 'Length', 'Area', 'Volume', 'Mass', and 'Temperature'. At the bottom, there is a navigation bar with buttons for 'Name', 'Local', 'Conv', 'Apps', and a home button.

Tap the conversion application you want to use.

Currency conversion

Currency conversion require a reference point so that the values can be calculated. The local currency is always set to 1 or 100, and all other currencies are set accordingly. To display currency conversion, tap **Apps** then tap **Conversions**. One of the conversion forms appears. Tap **Conv** and then tap **Currency**.

The screenshot shows the 'Currency Conversions' app interface. At the top, there is a title bar with a checkmark icon and the text 'Currency Conversions'. Below the title bar, there are two columns: 'Local Currency' and 'Local Amount'. The 'Local Currency' is set to 'US\$' and the 'Local Amount' is '100'. Below this, there is a row for '1 US\$ = Foreign Amount'. The 'Foreign Amount' is '100.00'. Below this, there are four rows for different currencies: 'Yen' (100), 'Mark' (1.58), 'Franc' (5.33), and 'Lira' (1,450). At the bottom, there is a navigation bar with buttons for 'Name', 'Local', 'Conv', 'Apps', and a home button.

To edit the currency amounts or exchange rates, tap the item you want to edit and enter the new value.

To set the local currency name, tap a currency and then tap **Local**.

To edit a currency name, tap it, tap **Name**, enter the new name in the dialog box, and then tap **OK**.

Decide if you want values to represent or 100 units of the elected currency.

— Edit Currency —

Name:

Trading Units: 1 Unit 100 Units

Length conversions

Length conversions let you convert between different units of length. To display length conversion, tap **Conv** and then tap **Length**.

⌚ Length Conversions

Unit & Desc.	Conversions
miles	<input type="text" value="0.00"/>
yards	<input type="text" value="0.00"/>
feet	<input type="text" value="0.00"/>
inches	<input type="text" value="0.00"/>
kilometers	<input type="text" value="0.00"/>

To convert lengths tap the length you want to edit and enter a new value. All other lengths are converted automatically. To see additional length conversions tap or press .

Volume conversions

Volume conversions let you convert between different units of volume. To display this form tap **Conv** and then tap **Volume**.



Unit & Desc.	Conversions
gallons	0.00
quarts	0.00
pints	0.00
liters	0.00
cubic yards	0.00

Volume conversions are changed by tapping the volume you want to edit and typing a new value. All other volumes are converted automatically. To see additional volume conversions tap **Conv** or press **PGDN**.

Mass conversions



Mass conversions let you convert between different units of mass. To display this form tap **Conv** and then tap **Mass**.




Unit & Desc.	Conversions
pounds	0.00
gunces	0.00
troy ounces	0.00
kilograms	0.00
grams	0.00



To convert mass units tap the mass you want to edit and enter a new value. All other masses are converted automatically. To see additional mass conversions tap   or press **PGDN**.

Area conversions

Area conversions let you convert between different units of area. To display the area conversion form tap **Conv** and then tap **Area**.

Area Conversions  	
Unit & Desc.	Conversions
square miles	<input type="text" value="0.00"/>
square yards	<input type="text" value="0.00"/>
square feet	<input type="text" value="0.00"/>
square inches	<input type="text" value="0.00"/>
square kilometers	<input type="text" value="0.00"/>

Conv  **Apps**  

To convert area units tap the area you want to edit and enter a new value. All other areas are converted automatically. To see additional area conversions tap   or press **PGDN**.

Temperature conversions

Temperature conversions let you convert between different units of temperature. To display this form tap **Conv** and then tap **Temperature**.

Unit & Desc.	Conversions
Degree Fahrenheit	32.00
Degree Celsius	0.00
Degree Rankine	491.69
Kelvins	273.15

To convert temperature units tap the temperature you want to edit and enter a new value. The other temperatures are converted automatically.

Using Date Calcs

Date Calcs performs the following:

- Computes the number of days between two dates using a 365 day calendar, a 360 day calendar, or the actual calendar.
- Determine the date of a given number of days in the future or past.

To display the Date Calcs tap **Apps** then tap **Date Calcs**.

Date Arithmetic

First Date

Second Date

Actual Days

360/Yr days

365/Yr days

Today Apps

Date Calcs uses the following fields and buttons.

Field	Description
DATE1	Stores or calculates a date in the current calculator date format. If the year is omitted, the current year is assumed
DATE2	Stores or calculates a date in the current calculator date format. If the year is omitted, the current year is assumed
DDAYS	Stores or calculates the number of days from DATE1 until DATE2 using an actual calendar (includes leap years)
360/Yr days	Displays the number of days from DATE1 until DATE2 using a 360 day calendar (assumes 30-day months)
365/Yr days	Displays the number of days from DATE1 until DATE2 using a 365 day calendar (ignores leap years)
Today	Stores the current date in the selected variable DATE1 or DATE2

How many days?

If you want to know how many days there are from July 3, 1995 until September 5, 1995 do the following:

1. Enter 7.031995 in the DATE1 field.
2. Enter 9.051995 in the DATE2 field.

Date Arithmetic	
First Date	DATE1 7.031995
Second Date	DATE2 9.051995
Actual Days	DDAYS 64
360/Yr days	62
365/Yr days	64
<input type="text"/> Today <input type="text"/> <input type="text"/> Apps <input type="text"/>	

3. Tap **DDAY**.

The **DDAYS** field will display 64.

When will that be?

Then, if you want to know the date 53 days after July 3, 1995 do the following:

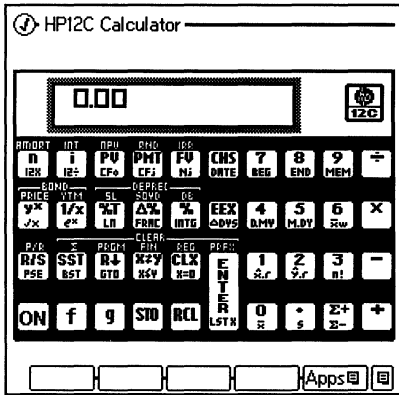
1. Enter 53 in the **DDAYS** field.
2. Tap **DATE2**.

The **DATE2** field will display 8.251995.

Remember, the calculator date formats are different from the date formats in the Setup application. For more information, see *Date Formats* on page 12-26.

Using the HP 12C Emulation

The HP 12C is emulated on the OmniGo 100 for users who are familiar with its operation. Tap **Apps**, and select HP 12C.



If you are unfamiliar with the 12C, and want to learn how to use it, there are many excellent books about it. If you would like more information about the HP 12C, and don't already have an HP 12C Owner's Handbook, please contact your local HP dealer for information on obtaining a copy of the manual.

HP 12C functions that are different or not supported

The following HP 12C functions are different or not supported:

- You always have 99 program steps and 20 registers available.
- Reset the calculator using **Clear All** in the utility menu. This replaces the **ON** **□** key combination.
- You cannot use a key combination to change the decimal separator. Use the Setup application instead.
- There is no HP 12C self test.

The Spreadsheet

Contents

- Working with the Spreadsheet List..... 13-1
- Working with Cell Data..... 13-3
- The Cell Menu..... 13-12
- The Formula Menu..... 13-18
- The Utility Menu..... 13-18
- Working with Functions..... 13-24
- Functions..... 13-33

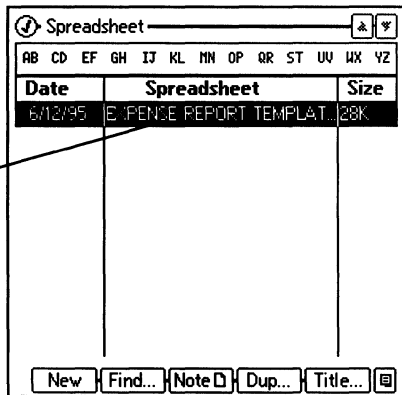
You can use the Spreadsheet to edit and organize small spreadsheets. Spreadsheet can be up to 64 rows by 64 columns.



To start the Spreadsheet, tap

Working with the Spreadsheet List

After you start the Spreadsheet application or close a spreadsheet with , you'll see a list of the spreadsheets stored on your OmniGo 100:



Tap here to open this spreadsheet

From this list, you can create and print spreadsheets, change spreadsheet titles, and more.

Creating a new spreadsheet

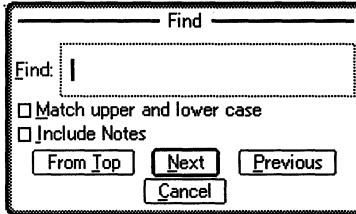
New To create a new spreadsheet, tap **New**. A dialog asks for the new spreadsheet's title.

Searching for text in a spreadsheet

Find [F2] To locate spreadsheets that contain certain text, tap Find. This opens the Find dialog:



If you tap Find while editing a spreadsheet, it finds cells in the current spreadsheet. If you want to search different spreadsheets, close the current one



You can search for spreadsheets and spreadsheet notes that contain the text in the Find field.

Editing a spreadsheet's note


Note [F3] Each spreadsheet may have a single note attached to it. To view or edit a spreadsheet's note, select the spreadsheet and tap Note. See page 6-4 of the Notepad chapter for more information on editing notes.

Duplicating spreadsheets.

Dup [F4] You can copy spreadsheets using the Dup command. Use Dup to reuse a spreadsheet that you've already created. For example, a monthly time sheet could be copied, and all you'd need to do is fill in the new data. Every time you tap Dup, a new spreadsheet is created.

The spreadsheet that came with your OmniGo 100 is a template. Every time you tap a template a new untitled spreadsheet is created, but the original is not changed. You can use this template to create your own spreadsheets that keep track of your expenses while away on business. You cannot create your own templates on the OmniGo 100. Duplicating the template creates an exact copy of the template.

Changing a spreadsheet's title

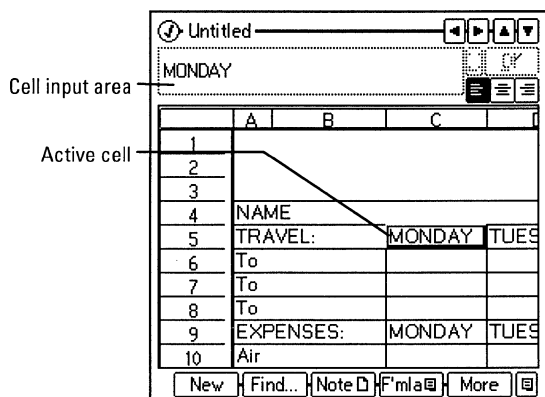
Title  To edit a spreadsheet's title, select the spreadsheet in the list of spreadsheets and tap Title.


Working with Cell Data

This section explains how to edit and format cell data, and what kinds of information cells can contain.


Editing the contents of a cell

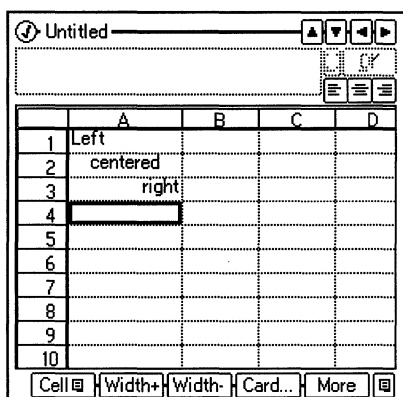
To edit the contents of a cell, select the cell you want to edit with the pen or the keyboard. The contents of the cell appear in the cell input area:



Edit the contents of the highlighted cell with the pen or keyboard. When you are done editing the cell's contents, tap OK (or press ) to accept the change, or tap X to cancel the change.

Changing cell alignment

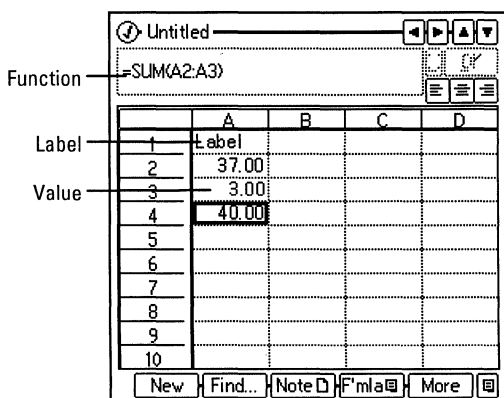
 To change the horizontal alignment of cells in the spreadsheet, select the cells you want to adjust. Then, tap a button to left justify, center, or right justify the cell data.



Cell data

A cell in the Spreadsheet application may contain one of the following:

- A *label*, such as *Groceries* or *First Quarter*
- A *value*, such as -35.77 or $1.682E-9$
- A *name*, such as `=cookies`
- A *function*, such as `=SUM(C3,C4,E6)`



The following sections explain each data type.

Cells with labels

You can use labels to describe data in a spreadsheet by selecting a cell, and typing in text. If the label is too wide for the cell, it extends past the right boundary of the cell, unless the cell to the right contains data.

Cells with values

Values can be entered as normal numbers (such as 1400), with separators (such as 1,400.00), and with scientific notation (such as 1.4E+3). The spreadsheet allows up to 16 digits of precision.

The same value may be represented in many ways. You can use the **Number format** command in the Cell menu to determine how you want the numbers in a certain cell to be displayed.

Cells with names

You can use names to define labels, ranges, formulas, or even values. Names are made up of a **Name** and a **Definition**. Name definitions have two rules:

- A **Name** must be letters in the alphabet. Names cannot contain punctuation, numbers, or special characters (for example, $\sqrt{\$!}$). Names can contain an underscore (`_`).
- A **Definition** never begins with an equals sign.

To define or insert a name, see page 13-18.

Cells with formulas

A cell formula describes the process that is used to determine the value of the cell. The highlighted cell's formula always appears in the cell input area, while the cell's value (the result of the formula) appears in the spreadsheet.

Here are some examples of valid formulas:



All formulas must begin with the = sign.

Formula	Result
<code>=6 + 9 * 5</code>	51
<code>=13 ^ 3</code>	2197
<code>="L1a" & "ma"</code>	Llama
<code>=(5 + 3) = 8</code>	1 (because 5+3 equals eight, this formula returns 1, indicating "true")

**Types of data
allowed in a
formula**

A formula can contain any of the following:

Type	Definition
Value	A number. See <i>Cells with values</i> on page 13-5 for information about valid values.
Operator	Any one of the following characters: () % ^ * / + - & or =.
Text	A set of characters. The characters must be enclosed in quote marks. <i>Examples</i> ="January" ="15th"
Function	A predefined operation, such as SUM or AVG. See <i>Working with functions</i> on page 13-24 for more information. <i>Examples</i> =MAX(10, C5) =SUM(C1:C8, F2)
Cell Reference	A code that represents a cell. When calculated, the contents of the cell replaces the cell reference. For example, C8 is replaced with the contents of column C, row 8.

Operators

Valid operators are listed in the table below. Operators are listed in the table from highest to lowest precedence.



Operators with the same precedence, such as * and /, are done in order from left to right.

Operator	Description
()	Parentheses (enclosed operations are done <i>first</i>)
%	Percentage (same as dividing by 100) <i>Example</i> 5% ⇨ .05
^	Exponent <i>Example</i> 2^3 ⇨ 8
* /	Multiplication and division
+ -	Addition and subtraction
&	Concatenation (returns a string instead of a numerical value) <i>Example</i> "Jan "&"12" ⇨ "Jan 12"
=	Equality (tests either numeric values or strings for equality) <i>Examples</i> "yes"="YES" ⇨ 1 (true) 15=12 ⇨ 0 (false) "25"=25 ⇨ #TYPE# (string and value types are not compatible)

The example below shows how the OmniGo 100 evaluates a long equation in order of precedence. The underlined section shows the operation with the highest precedence.

$$\begin{aligned} &= 7 + 2 \wedge \underline{(16 - 12)} * 50\% \\ &= 7 + 2 \wedge 4 * 50\% \\ &= 7 + \underline{2 \wedge 4} * .5 \\ &= 7 + \underline{16} * .5 \\ &= 7 + 8 \\ &= 15 \end{aligned}$$

To insert a function, see page 13-18.

Absolute and relative cell references

Relative references



If you cut and paste a cell, or if cells are moved when you insert or delete rows or columns, relative references are updated.

There are two kinds of cell references: relative and absolute. The type of reference determines what happens when you move a formula from one cell to another.

Relative references tell the spreadsheet application how to find a certain cell. For instance, a D2 in C2's formula means "Look one space to the right." Or, if B2 is in A1's formula, B2 means "Look one space down and to the right."

The screenshot shows a spreadsheet window titled "Untitled". The formula bar contains the text "=B2 + 3". Below the formula bar is a grid with columns labeled A, B, C, and D, and rows numbered 1 through 5. Cell A1 contains the value 5.00, and cell B2 contains the value 2.00. The grid is currently selected at cell A1.

When a relative reference is moved, it is changed to point to the correct cell. For example, if cell A1 is copied to C5, the formula in C5 points to D6.

The screenshot shows a spreadsheet window titled "Untitled". The formula bar contains the text "=D6 + 3". Below the formula bar is a grid with columns labeled A, B, C, and D, and rows numbered 1 through 6. Cell B2 contains the value 2.00, and cell C5 contains the value 3.00. The grid is currently selected at cell C5.

Absolute references



If you cut and paste a cell, or if cells are moved when you insert or delete rows or columns, absolute references are not changed.

Absolute references refer to a specific cell in the spreadsheet. If a formula is moved or copied, its absolute cell references are not changed.

For example, if we move the absolute reference in A1 to C4, both still point to the same cell, \$B\$2.

You can mix absolute and relative references in the same cell reference. For example, \$B2 contains an absolute reference to column B and a relative reference to row 2.

To specify a reference as absolute, precede the column or row names with \$ as shown in the table below:

Reference	Type
B3	Relative reference
\$B\$3	Absolute reference
B\$3	Relative column, absolute row
\$B3	Absolute column, relative row

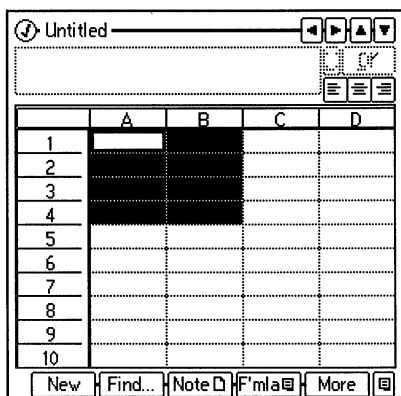


The table on page 13-12 lists the keyboard keys used to select cells or ranges.

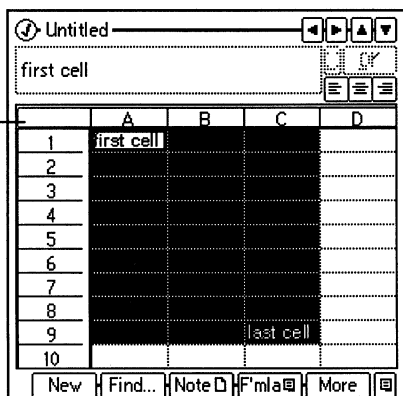
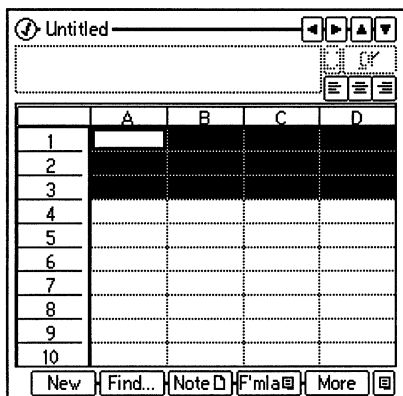
Selecting cells and ranges

While you're viewing a spreadsheet, there is a cell on the screen with a thick, black border. This cell is known as the *active cell*. You can select a different active cell by tapping on it.

You can also select a *cell range* by dragging the pen over a number of cells. The range of cells always includes the active cell:



To select a row or column, tap on its header. You can drag across more than one header to select many rows or columns:



To select all of the data in your spreadsheet, tap here.

Changing column width

- Width+** (F2) To change the width of a column, select a cell in the column you want to resize. Then, select the **Width+** and **Width-** buttons to expand and shrink the entire column's width.
- Width-** (F3)

Note

There are two sets of function bar buttons available while you're editing a spreadsheet. If you don't see the button you want, tap **More** to switch between the two sets.

If you select a range of cells, the **Width** buttons will change the width of all columns in the range.

You can also use the pen to change the width of a column. Put the pen on the right border of a column's header, and drag left or right to shrink or expand the column's width.

Using cell cards

In addition to text, numbers, and formulas, cells may contain a cell card. You could use cell cards to describe the contents of the cell. Tap the **Card** button to view or edit a cell's card.

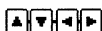
When a cell contains a cell card, a dot appears in the cell's upper right corner:

	A	B	C	D
1	Friday	Thursday	Wednesday	Tue
2				



Use the **Find** operation to locate cells based on their cell card.

Moving to different parts of the spreadsheet



To scroll around the spreadsheet, use the four arrow buttons at the top right of the OmniGo 100 screen.

To see a cell that's not on the screen, select **Goto Cell** from the Cell menu and enter the cell's address. For example, enter B3 to skip to the cell in column B, row 3.

Goto Cell












Cell: B3

OK Cancel

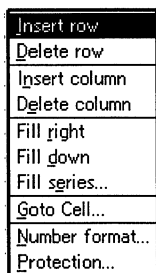
Find **F2** If you don't know the cell's address but you remember the contents of the cell, tap the **Find** button. The Find dialog appears. You can use the Find dialog to search for any kind of data in the spreadsheet, including numbers, cell cards, formulas, and labels.

Using the keyboard

You can also use the keyboard to move around the spreadsheet, and select cells and ranges. The table below explains the keys.

Key	Description
   	Moves to a new active cell.
 +	Extends the cell range from the active cell
   	
ENTER	Moves the active cell down
 + ENTER	Moves the active cell up
TAB	Moves the active cell right
 + TAB	Moves the active cell left
DEL	Deletes all data in the selected range or active cell
HOME	Moves to the top left corner of the spreadsheet (cell A1)
END	Moves to the bottom right corner of your data
PGUP	Moves one page up
PGDN	Moves one page down

The Cell Menu



The Cell menu lets you insert or delete rows or columns, fill cells with data, go to a particular cell, set a cell's number format, and protect cells.

For information on **Goto Cell**, see page 13-11.

Inserting rows or columns

To insert a blank row of cells, select a cell just below the place you want to insert a cell. For example, if you want a new row between rows 8 and 9, select any cell in row 9. Then, tap **Insert row** in the Cell menu.

Row will be inserted between row 8 and 9.

	A	B	C	D
1				
2	1.00	5.00	7.00	
3				
4	7.00	8.00	9.00	
5				
6				
7				
8	1.00	5.00	7.00	
9	4.00	6.00	8.00	
10				

To insert a blank column of cells, select a cell just to the right of where you want a new column. For example, to insert a new column at the far left of the spreadsheet, select a cell in column A. Then, tap **Insert column** in the Cell menu.

You can insert several columns or rows at once. For instance, if you select a range that is two cells high, then select **Insert row** from the Cell menu, then two additional rows will be inserted above the range.

Caution

Be careful when inserting and deleting entire columns and rows of data. Because cell formulas depend on the position of other cells, moving rows or columns around can cause problems. See *Absolute and Relative Cell References* on page 13-8 for cell referencing tips.

Deleting rows and columns



Use **Cut** from the utility menu if you want to erase data and leave blank cells behind.

To delete rows or columns from your spreadsheet, select a cell in the row or column you want to delete. Then, select **Delete row** or **Delete column** from the Cell menu. The data is erased, and rows or columns of data move up or left to fill the space.

You can also delete many rows or columns at once. For example, if you select a range that is three cells wide, then select **Delete columns** from the Cell menu, three columns are deleted.

All three columns will be deleted.

	A	B	C	D
1				
2	1.00	5.00	7.00	
3				
4	7.00	8.00	9.00	
5				
6				
7				
8				
9				
10				

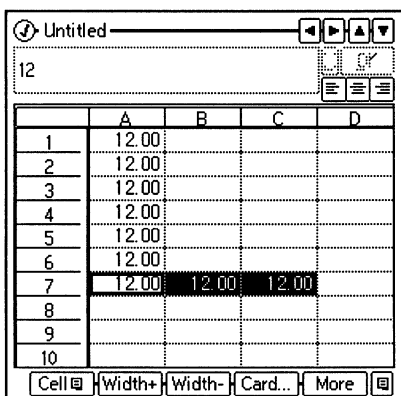
Cell Width+ Width- Card... More

Filling a cell with data automatically

With the Fill operations on the Cell menu, you can fill a group of cells with identical values, or a sequential series of values.

Filling a row

To fill a row or rows with identical data, select a range. Then, select **Fill right** from the Cell menu. All cells in the range will contain data from the leftmost cell in the range.



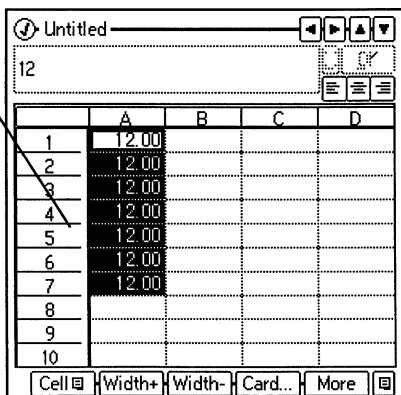
The screenshot shows a spreadsheet window titled "Untitled" with a toolbar at the top. Below the toolbar is a text entry field containing "12". The main area is a grid with columns A, B, C, and D, and rows 1 through 10. The value "12.00" is entered in cell A1. The cells A2 through A7 also contain "12.00". The cells B7, C7, and D7 are highlighted in black, indicating they have been filled with the value from A7. At the bottom of the window is a menu bar with options: Cell, Width+, Width-, Card..., and More.

	A	B	C	D
1	12.00			
2	12.00			
3	12.00			
4	12.00			
5	12.00			
6	12.00			
7	12.00	12.00	12.00	
8				
9				
10				

Filling a column

To fill a column of cells with identical data, first select a range. Then, select **Fill down** from the Cell menu. All cells in the range will contain data from the topmost cell in the range.

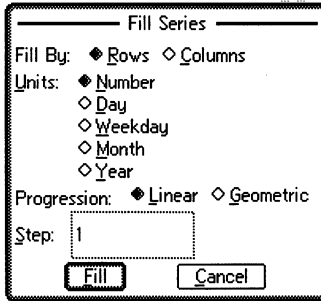
Fill down result



The screenshot shows the same spreadsheet window as above. The value "12.00" is entered in cell A1. The cells A2 through A7 are highlighted in black, indicating they have been filled with the value from A1. The rest of the grid is empty. At the bottom of the window is a menu bar with options: Cell, Width+, Width-, Card..., and More.

	A	B	C	D
1	12.00			
2	12.00			
3	12.00			
4	12.00			
5	12.00			
6	12.00			
7	12.00			
8				
9				
10				

Filling a series To fill a row or column with increasing numbers or dates, select the range you want to fill, then choose **Fill series** from the Cell menu. The Fill Series dialog appears:



Fill series operations always start from the top left cell of the selected range, and fill cells below or to the right.

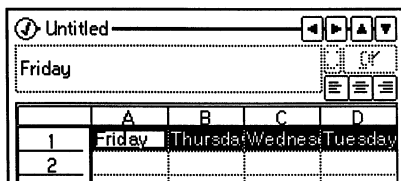
The **Fill By:** section indicates whether you are creating a row or a column of values.

The **Units:** section indicates the kind of values in the series. The top left cell or cells *must* contain data in the proper units:

Units	Example	Units	Example
Number	15.83	Day	5/12/62
Weekday	Thursday	Month	February
Year	1/96		

The **Progression:** section works when **Number** is chosen in the **Units:** section. If you select **Linear**, each cell will contain the previous cell's value, plus the value in **Step:**. If you select **Geometric**, each cell will contain the previous cell's value times the value in **Step:**.

The **Step:** section determines how much to increase or decrease between each cell. For example, if you choose **-1** for the **Step** and **Weekday** for **Unit**, the series will count days of the week backwards, starting from the leftmost (or topmost) cell in the selected row (or column):





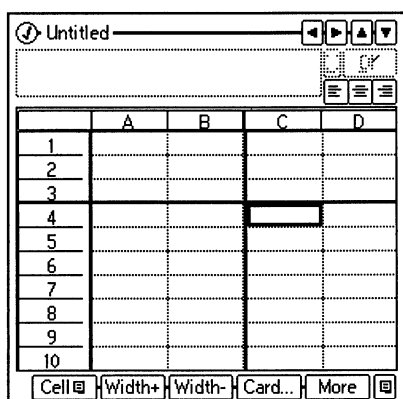
You cannot tap, or use **Goto cell**, to move to locked cells. Unlock them first.

Locking and unlocking cells

You may want to keep certain cells on the screen while you scroll down or across. This is especially useful when you want title rows or columns to appear at all times.

Lock cells locks every cell above and to the left of the currently highlighted cell. A thick black line appears along the locked border.

For example, if you highlight C4 and tap **Lock cells**, your screen would look like this:



You do not have to highlight C4 to unlock the cells. Tapping **Unlock cells** unlocks all locked cells.

Number Format

The Spreadsheet offers a wide variety of standard number and date formats. Individual cells can have different formats. You must highlight the cells before you select a format.

To change a cell's number format:

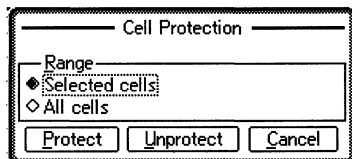
1. Highlight the cells you want to change.
2. Select **Number format** from the Cell menu.
3. Select a format and tap **OK**.

Protecting cells

You can prevent cells from being modified with **Protection** in the Cell menu.

To protect specific cells, do the following:

1. Select **Protection** from the Cell menu. The following dialog appears:



2. Tap **Selected cells** or **All cells** and tap **Protect**.

If you select **All cells**, all cells that contain data are protected. Protected cells cannot be modified.

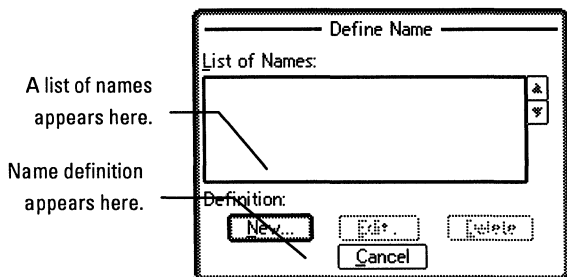
To unprotect cells repeat the procedure described above, but tap **Unprotect** instead of **Protect**.

The Formula Menu

The **F'mla** menu lets you define and insert names, and insert functions.

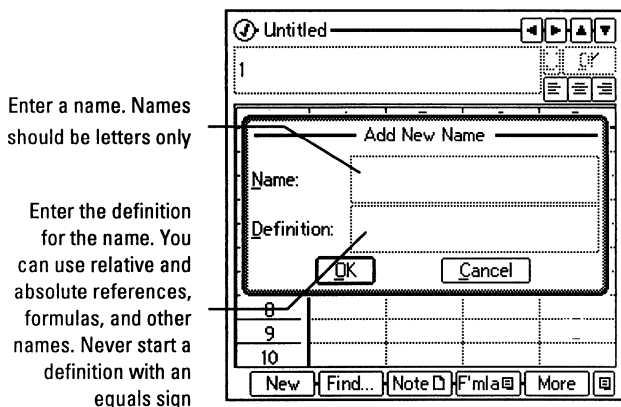
To define a name:

1. Tap **F'mla**.
2. Tap **Define Name**. The Define Name dialog box appears:



Defining names

3. Tap **New**. The Add New Name dialog box appears:



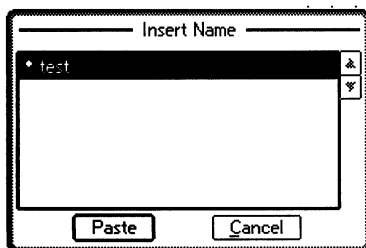
4. Tap **OK**. The new name will appear in the list in the Define Name dialog box.

You can change a name's definition by tapping **Edit** in the Define Name dialog box.

Inserting a name

You can use a name simply by typing an equals sign (=) and the name in the cell. You can also select the name from a list in the Insert Name dialog box.

1. Tap **F'mla** and then tap **Insert Name**. The following dialog box appears:

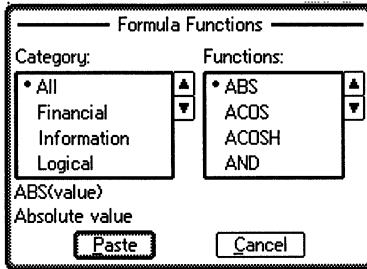


2. Select the name you want to insert.
3. Tap **Paste**.
4. Continue editing cell contents or tap **OK**.

Inserting functions

You can enter functions simply by typing an equals sign followed by the function. You can also select the function from a list using the Formula Functions dialog box.

1. Tap **F'mla** and then tap **Insert Function**. The following dialog box appears:



2. Select the function you want to insert. Functions are grouped in related categories. (Functions and category descriptions are on page 13-25.)
3. Tap **Paste**.
4. Continue to edit the cell contents (usually you must specify arguments for a function), and tap **OK**.

The Utility Menu

The utility menu lets you cut, copy, paste, or delete cells, force the spreadsheet to calculate, and print spreadsheet data.

Cutting, copying, pasting, and deleting cells

After selecting a cell or range of cells, you can use the **Cut**, **Copy**, **Paste**, and **Delete** commands from the utility menu.

Cutting cells

Cut copies the active cell or cell range to the clipboard, and erases the cell or range.

Copying cells

Copy copies the active cell or cell range to the clipboard, and leaves the original cell or range unaffected.

Pasting cells

Paste inserts cells from the clipboard. If a range is in the clipboard, **Paste** inserts clipboard range with its top left corner in the active cell. This operation may replace cells in order to paste the entire range.

If a range is selected when you choose **Paste**, the selected range and the range in the clipboard must be exactly the same size.

Deleting cells

Delete erases the active cell or cell range. Deleted cells are not saved in memory and cannot be restored.

Calculation

You can tell the spreadsheet when to calculate and set calculation preferences with **Calculate Now** and **Calculation**.

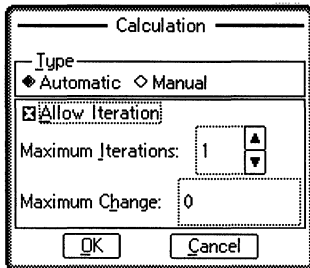
The Spreadsheet normally recalculates every time you make a change. If your spreadsheet is large or contains many complex formulas, this recalculation can be time-consuming. In that case, you may want to turn automatic calculation off. When automatic calculation is off, you may calculate the spreadsheet manually whenever you want.

Calculate Now

Calculate Now calculates all of the formulas in the spreadsheet.

Calculation

Calculation lets you set how the spreadsheet calculates cells. When you select **Calculation**, the following dialog appears:



Select **Automatic** to recalculate every time a change is made to the spreadsheet.

Select **Manual** to recalculate only when **Calculate Now** is selected from the utility menu.

If you select **Allow Iteration**, you can use iterations and formulas with circular references.

- **Maximum Iterations** sets the maximum number of times the spreadsheet is calculated.
- **Maximum Change** sets the maximum amount a result can change before it is considered converged. Results converge when they change less than this specified amount.

Iterations and circular references

You may want to create a formula that depends on its own result. This is called a circular reference. In the following example, both A3 and A4 are circular references.

	A	B	C
1			
2	Total:	Description	
3	=A4 + A5	first one	
4	=(A3)/2	second one	
5	100.00	a constant	
6			
7			
8			
9			
10			

If you calculate A3 and A4 more than once, each successive calculation results in a larger value. This is called iteration. Iteration is the process of recalculating a circular reference repeatedly, until convergence occurs—when the difference in the result of each successive calculation is too small to be significant.

The following table shows the results of a simple iterative calculation that converges:

Iteration Step	A3 =A4+A5	A4 =(A3)/2	A5 =100
1	0	0	100
2	100	50	100
3	150	75	100
4	175	87.5	100
5	187.5	93.75	100
6	193.75	96.875	100
7	196.875	98.4375	100
8	198.4375	99.21875	100
9	199.21875	99.609375	100
10	199.609375	99.8046875	100

As the value in A3 approaches 200, the value in A4 approaches 100. The Spreadsheet stops the iteration when the change in the results of a circular reference are less than the specified value (**Maximum Change**) or it reaches the number of iterations specified (**Iterations**) in the Calculations dialog box.

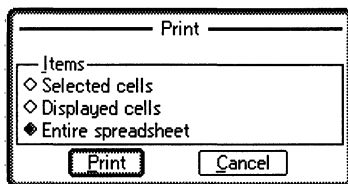
Maximum Change sets the acceptable maximum change between the previous and the current result before accepting convergence. If you specify zero for the maximum change, iteration will not stop until a formula converges (or reaches the maximum number of iterations).

Note

If you enter a circular reference in a formula but have not selected **Allow Iteration** in the Calculation dialog box, the result of the formula appears as **#CIRC#**.

Printing a spreadsheet

To print the spreadsheet (or parts of the spreadsheet), select Print from the utility menu. The Print dialog appears:



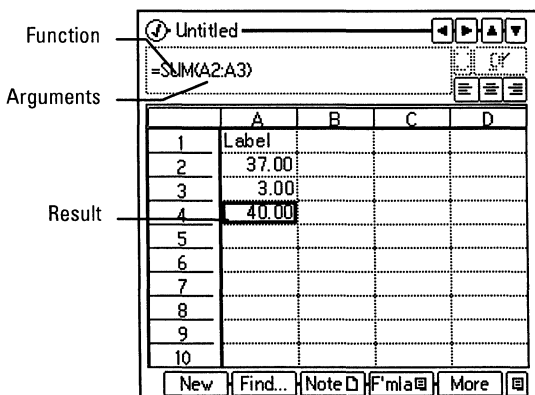
Select the option you want and tap Print.

Working with Functions

This section contains information about using functions in a formula, and a list of the functions available, grouped by subject. For an alphabetical function listing, see *Functions* on page 13-25.

Anatomy of a function

There are three main components to a function. The *function name* describes what the function does. The *arguments* are the values, cell references, or text that the function uses. The *result* is the result of the functions operation on the arguments. They appear on the screen as shown below:



Argument rules The OmniGo 100 supplies the functions, and you supply the function's arguments. Some functions, such as SUM, can have a variable number of arguments. Other functions, such as TODAY, require no arguments. Most functions have restrictions on the type of arguments you give them. For example, SUM("Charles", "Diana") produces an error because SUM requires numerical values as arguments.

Possible argument types are listed in the table below.



If you enter this formula: =LOWER(5), you get an error. 5 is a *value* and LOWER requires a *string*.

Type	Description
Value	A number, or a reference to a cell that contains a number.
String	A group of characters, surrounded by quote marks ("Sample"), or a reference to a cell that contains a label.
Range	A range of cells. <i>Examples</i> B2 : B5 Relative reference to cells B2, B3, B4, and B5 \$A\$1 : \$B\$3 Absolute reference to cells A1, A2, A3, B1, B2, and B3

Cell information functions

Functions by Subject

The cell information functions return information about a cell or range of cells.

CHOOSE(*index, value1, value2, ...*)

Chooses a value from a list.

COLS(*range*)

Number of columns in a range.

COUNT(*value1, value2, ...*)

Counts the number of non-empty cells in a range.

ERR()

Returns the #ERROR# message.

HLOOKUP(*value, range, offset*)

Returns a value from a horizontal lookup table.

INDEX(*range, column_offset, row_offset*)

Returns the value of the cell at the intersection of a row and column.

ISERR(*value*)

Returns 1 (true) if an expression is an error or 0 (false) if it is not.

ISNUMBER(*value*)

Returns 1 (true) if an expression is a number or 0 (false) if it is not.

ISSTRING(*value*)

Returns 1 (true) if an expression is a string or 0 (false) if it is not.

N(*range*)

Returns the value from the first cell in a range.

NA()

Causes the formula to evaluate to the **#NA#** (Not Available) error.

ROWS(*range*)

Number of rows in a range.

VLOOKUP(*value, range, offset*)

Returns a value from a vertical lookup table.

Date and time functions

The spreadsheet application uses serial numbers to represent times and dates. The serial numbers have a whole number part that represents the date, and a fractional part that represents the time. For instance, a serial number of 35064.5 corresponds to 12:00 noon on January 1, 1996.

DATE(*year, month, day*)

Converts a numeric date in days, months, and years to a serial number.

DATEVALUE(*string*)

Converts a date (in text form) to a serial number.

DAY(*date_value*)

Extracts the day from a serial number.

HOUR(*time_value*)

Extracts the hour from a serial number.

MINUTE(*time_value*)

Extracts the minute from a serial number.

MONTH(*date_value*)

Extracts the month from a serial number (1 = January, 12 = December).

NOW()

Returns the current date and time as a serial number.

SECOND(*time_value*)

Extracts the second from a serial number.

TIME(*hour, minute, second*)

Converts a numerical time in hours, minutes, and seconds to a serial number.

TIMEVALUE(*string*)

Converts a time (in text format) to a serial number.

TODAY()

Returns the current date as a serial number.

WEEKDAY(*date_value*)

Returns the number for the day of the week from a serial number (Sunday = 1, Saturday = 7).

YEAR(*date_value*)

Returns the current year from a serial number.

Financial functions

When the argument for a financial function is an interest rate, express it as its actual value (for example, enter .07 or 7% rather than 7 to indicate 7%). Be certain to use the same units for the term and the interest (for instance, if you express the term in months, you must express the interest in a monthly value as well).

CTERM(*interest, future_value, present_value*)

Number of compounding periods required for an investment to grow to a future value.

DDB(*cost, salvage, life, period*)

Double-declining balance depreciation of an asset.

FV(*payment, interest, term*)

Future value of a stream of cash flows.

IRR(guess, range)

Internal rate of return of a stream of cash flows.

NPV(interest, range)

Net present value of a stream of cash flows.

PMT(principal, interest, term)

Payment of loan.

PV(payment, interest, term)

Present value of a stream of equal cash flows.

RATE(future_value, present_value, term)

Required interest rate to reach a future value.

SLN(cost, salvage, life)

Straight-line depreciation.

SYD(cost, salvage, life, period)

Depreciation of an asset, using the sum of year's digits method.

TERM(payments, interest, future_value)

Required number of payment periods to reach a future value.

Logical functions

Logical functions (except IF) return a logical value (1 for true or 0 for false).

AND(logical1, logical2, ...)

Returns 1 only if all arguments are true or non-zero, otherwise, returns 0.

FALSE()

Returns 0.

IF(logical, true_value, false_value)

Evaluates a condition and returns the first value if true, and the second value if it is false.

OR(logical1, logical2, ...)

Returns 1 if any argument is true or non-zero, or 0 if all arguments are false.

TRUE()

Returns 1.

Mathematical functions

Mathematical functions require values or ranges as arguments and return a number.

ABS(*value*)

Absolute value of a number.

EXP(*value*)

Value of the mathematical constant e raised to the power of *value* (e^{value}).

FACT(*value*)

Factorial of a number.

INT(*value*)

Value rounded to the next lowest integer.

LN(*value*)

Natural (base e) logarithm of a number.

LOG(*value*)

Base 10 logarithm of a number.

MOD(*value*, *divisor*)

Modulus (remainder of a division calculation).

PRODUCT(*value1*, *value2*, ...)

Result of multiplication of a list of numbers.

ROUND(*value*, *places*)

Value rounded to the specified number of decimal places.

SQRT(*value*)

Square root of a number.

SUM(*value1*, *value2*, ...)

Total of a list of numbers.

TRUNC(*value*)

The integer portion of a number (no rounding is applied).

Printing functions

The print functions return the name of the file, the current page, and the number of pages for inclusion in headers and footers when printing documents with the spreadsheet application.

FILENAME()

Returns the name of the spreadsheet.

PAGE()

Returns the current page number.

PAGES()

Returns the total number of pages.

**Statistical
functions**

Statistical functions always return a number.

AVG(*value1, value2, ...*)

Arithmetic mean of the values in a list.

MAX(*value1, value2, ...*)

Largest number in a list.

MIN(*value1, value2, ...*)

Smallest number in a list.

RANDOM()

Random number greater than 0, but less than 1.

RANDOMN(*value*)

Random number greater than 0, but less than *value*.

STD(*value1, value2, ...*)

Sample standard deviation of the values in a list.

STDP(*value1, value2, ...*)

Standard deviation of a population.

VAR(*value1, value2, ...*)

Variance of a sample.

VARP(*value1, value2, ...*)

Variance of a population.

**String
manipulation
functions**

The OmniGo 100 uses character code numbers internally to represent each character. The CHAR and CODE string functions convert these codes to characters and vice versa.

CHAR(*value*)

Converts a character code number to one character of text.

CLEAN(*string*)

Strips unprintable characters from a string.

CODE(*string*)

Converts a character to the corresponding character code number.

EXACT(*string1*, *string2*)

Compares two strings for an exact match.

FIND(*substring*, *string*, *start*)

Searches for a substring within a specific string.

LEFT(*string*, *num*)

Returns characters from the leftmost position of a string.

LENGTH(*string*)

Returns the number of characters in a string.

LOWER(*string*)

Converts all characters in a string to lower case.

MID(*string*, *start*, *num*)

Returns characters from the middle of a string.

PROPER(*string*)

Converts the first character of each word in a string to upper case.

REPEAT(*string*, *num*)

Repeats a string a specified number of times.

REPLACE(*original*, *start*, *num*, *replace*)

Replaces characters at a certain position in a string with other characters.

RIGHT(*string*, *num*)

Returns characters in the rightmost position of a string.

STRING(*value*, *precision*)

Converts a number into a string with a certain number of decimal places.

TRIM(*string*)

Removes leading, trailing and extra internal spaces from a string.

UPPER(*string*)

Converts a string to upper case.

Trigonometric functions

VALUE(*string*)

Converts a number in string form to a value.

Trigonometric functions always return a number. If an angle is required, it must be specified in radians. To convert an angle in degrees to radians, use the RADIAN function.

ACOS(*value*)

Returns the angle that is the arccosine of a number.

ACOSH(*value*)

Returns the angle that is the hyperbolic arccosine of a number.

ASIN(*value*)

Returns the angle that is the arcsine of a number.

ASINH(*value*)

Returns the angle that is the hyperbolic arcsine of a number.

ATAN(*value*)

Returns the angle that is the arctangent of a number.

ATANH(*value*)

Returns the angle that is the hyperbolic arctangent of a number.

ATAN2(*x, y*)

Returns the arctangent of the angle determined by the coordinates (*x,y*).

COS (*angle*)

Returns the cosine of a number.

COSH(*value*)

Returns the hyperbolic cosine of a number.

DEGREES(*radians*)

Converts radians to degrees.

PI()

Value of π .

RADIANS(*degrees*)

Converts degrees to radians.

SIN(*angle*)

Returns the sine of a number.

SINH(*angle*)

Returns the hyperbolic sine of a number.

TAN(*angle*)

Returns the tangent of a number.

TANH(*angle*)

Returns the hyperbolic tangent of a number.

Functions in Alphabetical Order

ABS(*value*)

This mathematical function returns the absolute value of *value*.

Examples

ABS(-12) ⇔ 12

ACOS(*value*)

This trigonometric function returns the arccosine, the angle for which the cosine equals *value*. The angle is returned in radians between $-\pi/2$ and $\pi/2$.

Value must be from -1 to 1.

Example

ACOS(.50) ⇔ 1.047198

ACOSH(*value*)

This trigonometric function returns the hyperbolic arccosine of *value*. The hyperbolic arccosine is the number for which the hyperbolic cosine is *value*.

Value must be equal to or greater than 1.

Example

ACOSH(5) ⇔ 2.292432

**AND(*logical1*,
logical2, ...)**

This logical function returns 1 if all of the arguments are non-zero or 0 if any of the arguments are 0. This function is often used inside the IF function. The results of all *logical* arguments must be numeric.

Examples

AND(1+3=4, 3+1=3) ⇔ 0

AND(1+3=4, 3+1=4) ⇔ 1

ASIN(value) This trigonometric function returns the arcsine of a value. The arcsine is the angle (in radians) which is the sine of *value*. The angle is between $-\pi/2$ and $\pi/2$.

Value must be from -1 to 1 .

Example

ASIN(.75) \Leftrightarrow 0.848062

ASINH(value) This trigonometric function returns the hyperbolic arcsine of *value*. The hyperbolic arcsine is the number for which the hyperbolic cosine is *value*.

Examples

ASINH(10) \Leftrightarrow 2.998223

ASINH(15) \Leftrightarrow 3.402307

ATAN(value) This trigonometric function returns the arctangent of a number. The arctangent is the angle (in radians) for which the tangent equals *value*.

Value is the tangent of the angle you want.

Example

ATAN(90) \Leftrightarrow 1.559686

ATAN2(x, y) This trigonometric function returns the arctangent of *x,y* where *x* and *y* are coordinates in the Cartesian plane. The arctangent is the angle formed by the *x*-axis and a line passing through the origin (0,0) and the specified *x,y* coordinate. The coordinates *x,y* can be in any quadrant.

The angle is returned in radians from $-\pi/2$ to $\pi/2$. A positive result indicates a counterclockwise angle from the *x*-axis.

If you use 0,0 for *x,y*, the ***VALUE*** error appears in the cell.

Example

ATAN2(1.5, 2.0) \Leftrightarrow 0.93

ATANH(value) This trigonometric function returns the hyperbolic arctangent of *value*. *Value* must be between (but not including) -1 and 1 . The inverse hyperbolic tangent is the number for which the hyperbolic tangent is *value*.

Example

ATANH(0.75) \Leftrightarrow 0.972955

**AVG(*value1*,
value2, ...)**

This statistical function returns the arithmetic mean of a list of *values*. You can use as many arguments as you want. Empty cells count as zeros.

Examples

AVG (A15 : A24) ⇨ the average of cells A15 through A24

AVG (-15, 15) ⇨ 0

AVG (89, 94, 91, 98) ⇨ 93

CHAR(*value*)

This string function returns a string containing the character corresponding to *value*. You can use values between 1 and 255. The function CHAR is the opposite of CODE.

If *value* is out of the 32–255 range, CHAR returns a **#VALUE#** error.

Examples

CHAR (65) ⇨ A

CODE (CHAR (67)) ⇨ 67

**CHOOSE
(*index*, *value1*,
value2, ...)**

This cell information function returns one of the *values* based on *index*. *Index* must be a numerical value, but each *value* may be either a numerical value or a string.

Index must be greater than zero, and less than the number of *values*.

Examples

CHOOSE (4, A1, A2, A3, A4, A5) ⇨ the contents of cell A4

CHOOSE (1, "apple", "orange") ⇨ "apple"

CLEAN(*string*)

This string function removes control characters from *string*. This is a useful function for removing non-printable characters from imported text.

Example

CLEAN ("text") ⇨ text

CODE(*string*)

This string function returns the character code for the first character in *string*. CODE is the opposite of the CHAR function.

Examples

CODE ("A") ⇨ 65

CODE ("Now is the time") ⇨ 78

COLS(*range*) This cell information function returns the number of columns in *range*.

Example

COLS (B2 : F5) ⇨ 5

COS(*angle*) This trigonometric function returns the cosine of *angle*. You must express *angle* in radians. Use the RADIANS function to convert an angle in degrees to radians.

Examples

COS (1.5) ⇨ 0.070737

COS (RADIANS (40)) ⇨ 0.766044

COSH(*value*) This trigonometric function returns the hyperbolic cosine of *value*.

Example

COSH (2) ⇨ 3.762196

COUNT (*value1*, *value2*, ...) This cell information function returns the number of arguments. *Values* referring to blank cells are not counted.

Examples

COUNT (23, 42, 65, 23) ⇨ 4

COUNT (B3 : B6) ⇨ number of non-blank cells in the range

CTERM (*interest*, *future_value*, *present_value*) This financial function returns the number of compound periods required for an investment to grow to a future value. *Interest* is the interest rate for the calculation.



Future_value is the proposed value of the asset.

Present_value is the current value of the asset.

If *future_value* is less than *present_value*, you'll get a negative number.

Example

CTERM (9%/12, 1000, 500) ⇨ 92.77

(It would take about 93 months to double \$500 to \$1000 at 9% interest, compounded monthly.)

DATE(year, month, day)



The year argument appears before the month and day arguments.

This date function returns the serial number for the date *year*, *month*, and *day*.

Year can be from 1900 to 2099. For the years 1900 to 1999, you can enter just the last two digits, for example 96 rather than 1996.

Month must be between 1 (January) and 12 (December).

Day can be a value from 1 to 31, depending on the number days in *month*.

If you use *year*, *month*, or *day* values that are out of range, DATE returns #VALUE#.

Examples

DATE (93 , 01 , 20) ⇔ 33988

DATE (93 , 01 , 32) ⇔ #VALUE# (because the day value 32 is out of bounds)

DATEVALUE (string)

This date function converts a text date into a serial number.

Examples

DATEVALUE ("1/20/93") ⇔ 33988

DATEVALUE ("Jan 20, 1993") ⇔ 33988

DAY (date_value)

This date function returns the day of the month from the *date_value* serial number. Use DATEVALUE to convert dates entered as labels.

Examples

DAY (33988) ⇔ 20

DAY (DATEVALUE ("1/20/93")) ⇔ 20

DEGREES (angle)

This trigonometric function converts *angle* (expressed in radians) to an angle expressed in degrees.

Example

DEGREES (PI ()) ⇔ 180

DDB(cost, salvage, life, period)

This financial function calculates the depreciation of an asset, using the double-declining balance method. Depreciation is highest in the first period and decreases in successive periods. Each year's depreciation is a constant percent of the asset's current value, and continues until the asset's value equals the salvage value.



This function tells you how much depreciation is experienced during a specified time period, *not* the depreciation for the life of the asset.

$DDB = \text{cost} - \text{salvage (total depreciation from previous periods)} * 2 / \text{life}$

Book Value is the value of the asset at any given period, taking depreciation into account.

Cost is the original cost of the asset.

Salvage is the ending value of the asset.

Life is the duration of the depreciation, using the same units as *Period*.

Period is the time-period for which the depreciation calculation occurs.

Examples

$DDB(5000, 250, 60, 1) \Leftrightarrow 166.67$ (first month's depreciation)

$DDB(5000, 250, 60, 2) \Leftrightarrow 161.11$ (second month's depreciation)

$DDB(5000, 250, 5, 1) \Leftrightarrow 2000$ (first year's depreciation)

ERR()

This cell information function causes the formula to evaluate to **#ERROR#** and stop. This is particularly useful with IF functions to say, "If the condition is false, then return **#ERROR#**." You must include the empty parentheses.

Example

$IF(A5 > 100, ERR(), A5) \Leftrightarrow \#ERROR\#$ (if the value in A5 is less than or equal to 100; otherwise, it returns the value in A5)

EXACT (string1, string2)

This string function compares two strings to determine if they match exactly. EXACT is case sensitive, meaning that April and april do not match. If *string1* and *string2* match, EXACT returns 1; if they do not match, EXACT returns 0. Its action is similar to the equals sign except that = is not case-sensitive.

Examples

$EXACT("iteration", "Iteration") \Leftrightarrow 0$

$IF(EXACT(A5, "Hotel"), 1000; 0) \Leftrightarrow 1000$ if A5 contains Hotel, or 0 if it does not

$IF(A5 = "Hotel", 1000, 0) \Leftrightarrow 1000$ if A5 contains hotel in any capitalization style, or 0 if it does not

EXP(value) This mathematical function returns e raised to the power of *value*, where e is approximately equal to 2.71828182845904, the base of the natural logarithm.

Example

EXP(2) ⇨ 7.389056 (the value of e^2)

FACT(value) This mathematical function returns the factorial of *value*. The factorial is equal to $1 \times 2 \times 3 \dots \times value$, where *value* is a positive integer. If *value* has a fractional portion, FACT calculates the factorial for the integer portion of *value*.

Examples

FACT(4) ⇨ 24 ($1 \times 2 \times 3 \times 4$)

FACT(2.5) ⇨ 2 (1×2)

FALSE() This logical function returns 0. You can use FALSE in a calculation or enter it directly into a cell, where it is interpreted as a logical value. You must include the empty parentheses. *See also* TRUE.

FILENAME() This print function returns the name of the current spreadsheet.

FIND
(substring, string, start) This string function finds the *substring* within the entire *string* and returns the numeric position of the first character of the *substring*. Optionally, you can specify the numeric position of the starting character for the search with the *start* argument. The first character in the string is in position 0.

Examples

FIND("is", "Now is the time", 0) ⇨ 4

FIND("i", "Mississippi", 3) ⇨ 4

FV(payment, interest, term) This financial function returns the future value of a stream of regularly invested payments.



Be sure to enter the interest rate for the same time period as the payments.

Payment is the payment made each period.

Interest is the interest rate for the same time period as *payment*.

Term is the total number of payments to be made.

Examples

FV(250, .05/12, 120) ⇨ 38820.57

To compare the present value with the future value if you invest \$500 every month for 10 years at an interest rate of 5%, you would use the following expressions:

`FV(500, .05/12, 120)` ⇨ 77641.14

`PV(500, .05/12, 120)` ⇨ 47140.68

HLOOKUP
(*value, range, offset*)

This cell information function allows you to use a spreadsheet table like a database. It is useful when you have several alternatives to look up, such as tax rates, commissions, or discounts. *See also* VLOOKUP.

Value determines which row in *range* will be used. HLOOKUP chooses the first column whose first row contains a value not greater than *value*. For example, if the first row in the range contains 2, 4, 6, and 8, and *value* is 5, the column beginning with 4 is selected. *Value* can be a numerical value or a string.

Range is the cell addresses that define the table.

Offset defines which row in the selected column contains the information. The offset of the top row is zero.

Example

	A	B	C	D	E
1		Claudia	Jane	Kyle	Steve
2	10	12.00	14.00	16.00	15.00
3	20	10.00	11.00	8.00	6.00
4	30	9.00	13.00	8.00	19.00
5	40	13.00	8.00	17.00	5.00

`HLOOKUP("Jane", B1:E5, 2)` ⇨ 11

`HLOOKUP("Kyle", B1:E5, 4)` ⇨ 17

HOUR
(*time_value*)

This time function returns the hour of the day from the *time_value* serial number. The hour is an integer from 0 to 23. Time serial numbers are decimal fractions and can be part of a date/time combination. If there is no fractional part in *time_value*, the time is midnight.

Examples

`HOUR(29453.5)` ⇨ 12 (Noon)

`HOUR(TIMEVALUE("11:58PM"))` ⇨ 23

**IF(logical,
true_value,
false_value)**

This logical function is a conditional statement that you could read as: "If *logical* is true, then return *true_value*; otherwise, return *false_value*." For example, IF(B12=C12,50,25) means "If the value in B12 equals the value in C12 then return 50; otherwise, return 25."

Logical is any expression or value that can be evaluated as true (non-zero) or false (zero).

True_value is the value returned if the logical expression is true.

False_value is the value returned if the logical expression is false.

Examples

IF (B13>500, 50, -50) ⇔ 50 if B13 is greater than 500; otherwise, it returns -50

IF (AND (A1>B1, A1<C1) , 100, 200) ⇔ 100 if A1 is greater than B1 and less than C1; otherwise, it returns 200

IF (D14 = "warm", "red", "yellow") ⇔ red if D14 contains warm; otherwise, it returns yellow

**INDEX(range,
column_offset,
row_offset)**

This cell information function returns the data in the cell at a particular position within *range*.

Range defines the range.

Column_offset defines the column offset, starting at zero, in the specified range.

Row_offset defines the row offset, starting at zero, in the specified range.

Example

INDEX (B1 : H6 , 2 , 1) ⇔ the contents of D2

INT(value)

This mathematical function returns the integer portion of *value*, rounding down to the nearest integer. *Value* can be a positive or negative.

Examples

INT (123.999) ⇔ 123

INT (-123) ⇔ -123

INT (-123.001) ⇔ -124

IRR(guess, range)

This financial function calculates the internal rate of return on a series of irregular payments at regular intervals. It returns the interest rate when you know the initial investment and know you will get regular payments of varying amounts. (NPV finds the initial investment when you know the interest rate.)

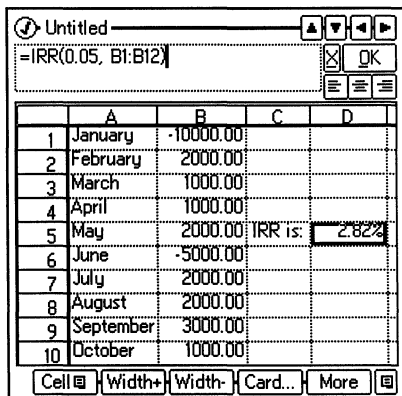
IRR calculates the percentage rate at which the NPV of a series of cash flows is equal to the initial investment. IRR assumes that the income from the investment is reinvested at the same interest rate as the internal rate of return.

Guess is the number you guess is approximately the interest rate.

Range is the cell addresses that define the cash flow table.

Example

Your friend is starting a pizza restaurant and you invest \$10,000 initially. He then pays you back varying amounts every month. You make an additional investment after 6 months to add more staff to the restaurant for the summer. The spreadsheet below shows the cash flow in the range B1:B12.



IRR(.05, B1:B12) ⇨ 2.82%

ISERR(value)

This cell information function tests an expression and returns 1 (TRUE) if the expression is an error. This function is particularly useful in IF statements.

Examples

ISERR (B2) ⇔ 1 if the value in B2 is an error, otherwise, returns 0

IF (ISERR (B2) , " " , B2) ⇔ an empty string if there is an error; otherwise, it returns the contents of B2

**ISNUMBER
(value)**

This cell information function tests an expression and returns 1 (TRUE) if the expression is a number. This function is useful in IF statements.

Examples

ISNUMBER (B2) ⇔ TRUE

IF (ISNUMBER (B2) , " " , B2) ⇔ an empty string if B2 contains a number, or B2's contents if B2 contains a string

**ISSTRING
(value)**

This cell information function tests an expression and returns 1 (TRUE) if the expression is a string. This function is useful in IF statements.

Examples

ISSTRING (B2) ⇔ TRUE if B2 is a string

IF (ISSTRING (B2) , " " , B2) ⇔ an empty string if B2 contains a string. Otherwise, the expression returns the contents of B2.

**LEFT(string,
num)**

This string function returns characters from the leftmost position in *string*. *Num* is the number of characters to return. A reference to cells containing values produces an error. See also RIGHT and MID.

Examples

LEFT ("Hale" , 1) ⇔ H

LEFT ("12 items" , 2) ⇔ 12 (a string, not a number)

**LENGTH
(string)**

This string function returns the number of characters in *string*. LENGTH counts all characters, punctuation marks, and spaces enclosed in quotation marks.

Example

LENGTH ("Now is the time.") ⇔ 16

LN(value)

This mathematical function returns the natural logarithm of *value*, using the mathematical constant *e* as a base. LN is the inverse of EXP. *Value* must be a positive number.

Example

$\text{LN}(2) \Leftrightarrow 0.693147 \text{ (Log}_e 2)$

LOG(*value*)

This mathematical function returns the base 10 logarithm of *value*. *Value* must be a positive number.

Example

$\text{LOG}(100) \Leftrightarrow 2 \text{ (Log}_{10} 100)$

LOWER(*string*)

This string function converts all characters in *string* to lower case.

Example

$\text{LOWER}(\text{"SUMMER, 1993"}) \Leftrightarrow \text{summer, 1993}$

**MAX(*value1*,
value2, ...)**

This statistical function returns the largest value. Each argument can be a number or a range. MAX ignores empty cells and treats text as a zero. *See also* MIN.

Examples

$\text{MAX}(2, 4, \text{C2}) \Leftrightarrow 4 \text{ (unless C2 is higher)}$

$\text{MAX}(-2, -4, -6, -8) \Leftrightarrow -2$

$\text{MAX}(\text{B3:D5}) \Leftrightarrow \text{the largest number in the range B3:D5}$

**MID(*string*,
start, *num*)**

This string function returns the specified number (*num*) of characters in *string*, beginning at the position specified by *start*. The first character in the string is in position 0. *See also* RIGHT and LEFT.

Example

$\text{MID}(\text{"The United States"}, 4, 6) \Leftrightarrow \text{United}$

**MIN(*value1*,
value2, ...)**

This statistical function returns the smallest value. Each argument can be a number or a range. MIN ignores empty cells and treats text as a zero. *See also* MAX.

Examples

$\text{MIN}(2, 4, 6, 8) \Leftrightarrow 2$

$\text{MIN}(-2, -4, -6, -8) \Leftrightarrow -8$

$\text{MIN}(\text{B3:B13}) \Leftrightarrow \text{the smallest number in the range B3:B13}$

MINUTE
(time_value)

This time function returns the minute from the *time_value* serial number. The minute is an integer from 0 to 59. Time serial numbers are decimal fractions and can be part of a date/time combination. If there is no fractional part in *time_value*, the time is midnight. *See also* TIMEVALUE.

Examples

MINUTE (TIMEVALUE (" 11:58PM")) ⇔ 58

MINUTE (29453.55) ⇔ 12

MOD(value, divisor)

This mathematical function returns the modulus, which is the remainder from a division of *value* by *divisor*. *Divisor* must be non-zero.

Example

MOD (14, 4) ⇔ 2 (14 divided by 4 is 3 with a remainder of 2)

MONTH
(date_value)

This time function returns the month from the *date_value* serial number. *Month* is an integer from 1 (January) to 12 (December). *See also* TIMEVALUE.

Examples

MONTH (DATEVALUE ("May 6, 1968")) ⇔ 5

MONTH (25420.5) ⇔ 8

N(range)

This cell information function returns the numerical value of the first cell in *range*. If that cell contains text, the function returns 0.

Example

N (B1 : B13) ⇔ the contents of cell B1

NA()

This cell information function stops the evaluation of a formula and generates **#NA#** (not available) in the formula cell. This function is useful if you are using a spreadsheet and do not have all the required values. If a formula refers to a cell containing **#NA#**, it also returns **#NA#** to indicate that the spreadsheet is not complete. You must include the empty parentheses when using the NA function.

NOW()

This date time function returns the serial number for the current date and time. The whole number represents the date as a serial number starting January 1, 1900 and the decimal fraction of the number represents the time, beginning at midnight = 0. You must include the empty parentheses.

Example

NOW() ⇨ 33988.50 (if evaluated at 12:00 noon on January 20, 1993)

NPV(*interest, range*)

This financial function returns the net present value, which is the amount of money (in today's dollars) to be spent in the future. When you want to discount a future cash flow of equal amounts, calculate its present value. If you want to discount future cash flows of unequal amounts, use net present value.

Use NPV when you know the interest rate and want to know the initial investment. Use IRR when you know the initial investment and want to calculate the rate. Both NPV and IRR use irregular payments at regular intervals.

The future cash flows are figured at a constant interest rate, assuming that payments are made at the end of each period. If there is a down payment at the beginning of period 1, add that amount to the result of the NPV calculation.

Interest is the interest rate for the calculation.

Range is the cells addresses containing the cash flow information.

Example

Suppose you want to send your daughter to college next month. You know the tuition payments are due in August and November, and she will need living costs every month. If the total expense will be \$10,500, how much will you have to set aside at the beginning of the school year in an interest account paying 6.25 percent to cover the necessary expenses each month?

	A	B	C	D
2	August	4250.00		
3	September	250.00		
4	October	250.00		
5	November	4250.00	Sum=	10500.00
6	December	250.00	NPV=	10326.87
7	January	250.00		
8	February	250.00		
9	March	250.00		
10	April	250.00		
11	May	250.00		

$\text{NPV}(.0625/12, B2:B11) \Leftrightarrow 10326.87$

OR(logical1, logical2, ...)

This logical function returns 1 if at least one of the arguments is true (non-zero) or 0 if all of the arguments are false (zero). You use as many arguments as you want. OR ignores empty cells. If an argument doesn't contain a logical value, OR returns the ***TYPE*** error. OR is often used inside IF expressions. *See also* AND.

Examples

$\text{OR}(1+2=3, 2+3=5) \Leftrightarrow 1$

$\text{OR}(1+2=3, 2+3=4) \Leftrightarrow 1$

$\text{OR}(1+2=2, 2+3=3) \Leftrightarrow 0$

$\text{IF}(\text{OR}(A1>100, A1=B1), 25, 50) \Leftrightarrow 25$ if A1 is 100 or less, or if A1 equals B1

PAGE()

This print function returns the current page number. You must include the empty parentheses.

Example

"Page"&PAGE()&" of"&PAGES() \Leftrightarrow Page 3 of 15

PAGES()

This print function returns the total number of pages in the document for use in a spreadsheet header or footer. You must include the empty parentheses. If you use PAGES outside of a spreadsheet header or footer, PAGES is calculated when you print.

Example

"Page" & PAGE() & " of " & PAGES() ⇨ Page 3 of 15

PI()

This trigonometric function returns an approximate value of π (3.141592653589793). You must include the empty parentheses.

PMT(*principal, interest, term*)



Be sure to enter the interest rate for same time period as the terms.

This financial function calculates the constant payment required to repay a loan at a specified interest rate over a given period of time.

Principal is the amount of the loan.

Interest is the interest rate for the same time period as the term.

Term is the interval at which the payments are made.

Example

What is the monthly payment for a 20 year loan of \$75,000, at 5% annual interest?

PMT(75000, .05/12, 240) ⇨ 494.97

PRODUCT (*value1, value2, ...*)

This mathematical function multiplies all of the given *values*. You can use as many arguments as you want.

Examples

PRODUCT(B1:B3, 2) ⇨ B1 × B2 × B3 × 2

PRODUCT(250, 3, 2) ⇨ 1500

PROPER (*string*)

This string function capitalizes the first letter of every word and the first letter following any non-letter character. PROPER converts all other characters to lower case.

Examples

PROPER("Now is the time") ⇨ Now Is The Time

PROPER("1993BUDGET") ⇨ 1993Budget

PV(payment, interest, term)



Be sure to enter the interest rate for same time period as the term.

This financial function returns the present value of a constant payment stream and interest rate. When you want to discount a future cash flow, calculate its present value (PV). If you want to discount unequal future cash flows, use net present value (NPV).

Payment is the amount of each payment.

Interest is the interest rate for the same time period as the term.

Term is the total number of periods over which the payments are made.

Example

If you have car payments of \$500 every month for 10 years at an interest rate of 5%, what is the present value of the loan?

$$PV(500, .05/12, 120) \Leftrightarrow \$47,140.68$$

RADIANS (angle)

This trigonometric function converts *angle* (expressed in degrees) to an angle expressed in radians between $-\pi$ and π .

Example

$$\text{Radians}(180) \Leftrightarrow 3.1415926$$

RANDOM()

This statistical function returns a random number greater than 0, but less than 1. RANDOM returns a new random number every time the Spreadsheet application recalculates.

Example

$$\text{RANDOM}() \Leftrightarrow \text{a random decimal value}$$

RANDOMN (value)

This statistical function returns a random integer greater than 0, but less than *value*. RANDOMN returns a new random number every time the Spreadsheet application recalculates.

$$\text{RANDOMN}(100) \Leftrightarrow \text{a random integer between 0 and 100.}$$

RATE (future_value, present_value, term)

This financial function calculates the interest rate required to make the present value of an investment equal the future value.

Future_value is the value of the annuity at the end of the investment period.

Present_value is the value of the annuity today.

Term is the number of time periods for the investment to compound.

Example

If you have \$5000, what annual interest rate would you need to have \$8000 in 5 years?

`RATE(8000,5000,5)` ⇨ 9.86%

REPEAT
(string, num)

This string function repeats the string *num* times. If *num* is zero, REPEAT returns an empty string.

Examples

`REPEAT("Zu",2)` ⇨ ZuZu

`REPEAT("Ho ",3)` ⇨ Ho Ho Ho

REPLACE
(original,
start, num,
replace)

This string function replaces characters within a string.

Original is the string in which you want to replace characters.

Start is the position of the first character that you want to replace. The first character in the string is at position 0.

Num is the number of characters in the original string that you want to replace.

Replace is the replacement string. You can use more or fewer replacement characters than are replaced, in the original string.

Examples

`REPLACE("1992",2,1,"8")` ⇨ 1982

`REPLACE("Blip",3,1,"the")` ⇨ Blithe

`REPLACE("Monday",0,3,"Thurs")` ⇨ Thursday

RIGHT(string,
num)

This string function returns characters from the rightmost position in *string*. *Num* is the number of characters to return. See also LEFT and MID.

Examples

`RIGHT("Section A",1)` ⇨ A

`RIGHT("4:30pm",2)` ⇨ pm

ROUND(value,
places)

This mathematical function rounds *value* to the number of decimal *places* you specify.

Example

ROUND(12.23761,2) ⇨ 12.24

ROWS(*range*)

This cell information function returns the number of rows in *range*.

Example

ROWS(B2:F64) ⇨ 63

SECOND(*time_value*)

This time function returns the second from the *time_value* serial number. The second is an integer from 0 to 59. Time serial numbers are decimal fractions and can be part of a date/time combination. If there is no fractional part, the time is midnight. You can use TIMEVALUE to convert text time.

Examples

SECOND(TIMEVALUE("11:58:45PM")) ⇨ 45

SECOND(29453.49) ⇨ 36

SIN(*angle*)

This trigonometric function returns the sine of *angle*. You must express *angle* in radians. Use the RADIANS function to convert an angle in degrees to radians.

Example

SIN(RADIANS(45)) ⇨ 0.707

SINH(*angle*)

This trigonometric function returns the hyperbolic sine of *angle*. You must express *angle* in radians. If you know an angle in degrees, you can use the RADIANS function to convert it to radians.

Example

SINH(0.5) ⇨ 0.521095

**SLN(*cost*,
salvage, *life*)**

This financial function returns the straight-line depreciation of an asset for a period of time.

Cost is the initial cost of the asset.

Salvage is the value of the asset at the end of the time period.

Life is the useful life of the asset, the number of time periods the asset is being depreciated.

Examples

SLN(12000,2000,5) ⇨ 2000

SQRT(*value*) This mathematical function returns the square root of *value*. *Value* must be a positive number.

Example

SQRT(144) ⇨ 12

**STD(*value1*,
value2, ...)** This statistical function returns the sample standard deviation of the *values*. You can use as many *values* as you want.

Example

STD(254, 255, 253, 248, 257, 255, 256) ⇨ 2.944

**STDP(*value1*,
value2, ...)** This statistical function returns the standard deviation of an entire population. You can use as many *values* as you want.

Example

STDP(254, 255, 253, 248, 257, 255, 256) ⇨ 2.726

**STRING(*value*,
precision)** This string function converts *value* into a string, using *precision* decimal places. *Precision* can be a number from 0 through 15.

Example

STRING(245.356, 1) ⇨ 245.4 (a string, not a number)

**SUM(*value1*,
value2, ...)** This mathematical function returns the total of the *value* list. You can use as many arguments as you want.

Examples

SUM(B3:B13) ⇨ Sum of all values in B3:B13 range

SUM(23, 45, 67) ⇨ 135

**SYD(*cost*,
salvage, *life*,
period)** This financial function returns the depreciation of an asset for the current period, using the sum-of-year's digits method.

Cost is the initial cost of the asset.

Salvage is the value of the asset at the end of the time period.

Life is the useful life of the asset, the number of time periods the asset is being depreciated.

Period is the period for which the depreciation is calculated.

Example

What is the depreciation in the 4th year for a computer system that initially cost \$12000, which after 5 years could be sold for \$2000?

SYD(12000, 2000, 5, 4) ⇨ 1333.33

TAN(*angle*)

This trigonometric function returns the tangent of *angle*. You must express *angle* in radians. If you know an angle in degrees, you can use the RADIANS function to convert it to radians.

Example

TAN(RADIANS(45)) ⇨ 1.0

TANH(*angle*)

This trigonometric function returns the hyperbolic tangent of *angle*. You must express *angle* in radians. Use the RADIANS function to convert an angle in degrees to radians.

Example

TANH(0.5) ⇨ 0.462117

TERM (*payments*, *interest*, *future_value*)



Be sure to enter the interest rate for same time period as the term.

This financial function returns the number of time periods required for a number of equal investment payments to reach a future value. Payments are made at the end of each term and earn a constant interest rate.

Payments is the amount of the periodic payments.

Interest is the interest rate for the investment per time period.

Future_value is the value of the annuity at the end of the investment period.

Example

How long will it take to accrue \$10,000 if you make monthly payments of \$250 at an annual interest rate of 5.5%?

TERM(250, .055/12, 10000) ⇨ 36.8

TIME(*hour*, *minute*, *second*)

This time function returns the serial value from the *hour*, *minute*, and *second* arguments.

Example

TIME(12, 34, 23) ⇨ 0.523877

TIMEVALUE (*string*)

This time function returns the serial value for a time in *string*.

Example

TIMEVALUE("1:10PM") ⇨ 0.54861111

TODAY()

This date function returns today's serial number.

Example

TODAY () ⇔ 35561.00 (if today's date is May 12, 1997)

TRIM(string)

This string function removes extra spaces before, after, and between words.

Example

TRIM(" New York, NY") ⇔ New York, NY

TRUE()

This logical function returns 1. You can use TRUE in a calculation or enter it directly into a cell, where it is interpreted as a logical value. You must include the empty parentheses. *See also* FALSE.

TRUNC(value)

This mathematical function removes the fractional portion of *value* without rounding.

Example

TRUNC(23.66) ⇔ 23

UPPER(string)

This string function converts *string* to upper case.

Example

UPPER("usa") ⇔ USA

VALUE(string)

This string function converts *string* to a value.

Example

VALUE("1.75") ⇔ 1.75

VAR(value1, value2, ...)

This statistical function returns the sample variance from a list of *values*. You can use as many arguments as you want.

Example

VAR(254, 255, 253, 248, 257, 255, 256) ⇔ 8.666667

VARP(value1, value2, ...)

This statistical function returns the population variance from a list of *values*. You can use as many arguments as you want.

Example

VARP(254, 255, 253, 248, 257, 255, 256) ⇔ 7.42857

VLOOKUP(value, range, offset)

This cell information function allows you to use a spreadsheet table like a database. It is useful when you have several alternatives to look up, such as tax rates, commissions, or discounts. *See also* HLOOKUP.

Value determines which column in *range* will be used. VLOOKUP chooses the first row whose first column contains a value not greater than *value*. For example, if the first column in the range contains 2, 4, 6, and 8, and *value* is 5, the row beginning with 4 is selected. *Value* can be a numerical value or a string.

Range is the cell addresses that define the table.

Offset defines which column in the selected row contains the information. The offset of the first column is zero.

Example

	A	B	C	D	E
1		10	20	30	40
2	Claudia	12.00	14.00	16.00	15.00
3	Jane	10.00	11.00	8.00	6.00
4	Kyle	9.00	13.00	8.00	19.00
5	Steve	13.00	8.00	17.00	5.00

VLOOKUP ("Jane", A2 : E5, 2) ⇨ 11.00

WEEKDAY (*date_value*)

This date function returns the day of the week for *date_value*. 1 is returned for Sunday, 2 for Monday, etc.

Date_value must be a serial number. Use DATEVALUE to convert dates entered as labels.

Examples

WEEKDAY (33988) ⇨ 4 (Wednesday)

WEEKDAY (DATEVALUE ("1/21/93")) ⇨ 5 (Thursday)

YEAR (*date_value*)

This date function returns the year from the *date_value*. *Date_value* must be a serial number. Use DATEVALUE to convert dates entered as labels.

Examples

YEAR (33988) ⇨ 1993

YEAR (DATEVALUE ("1/20/93")) ⇨ 1993

The Book Reader

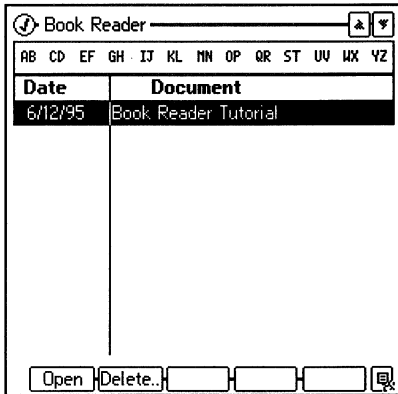
Contents

Using the Book Reader	14-1
The Utility Menu	14-3


The Book Reader lets you read online books. Online books often have links. Links are areas on the screen that link to another page, cause the OmniGo 100 to make a sound, or run a program. Usually it is easy to tell a link (it's circled or underlined). Tapping a link executes it.




To start the Book Reader, tap  Book Reader.

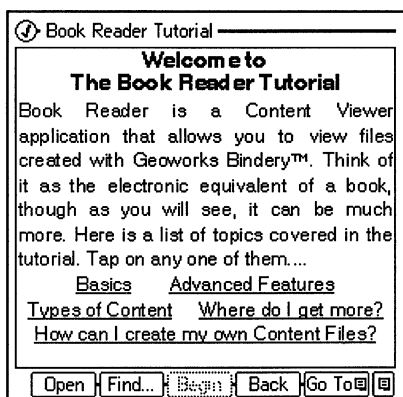


Using the Book Reader

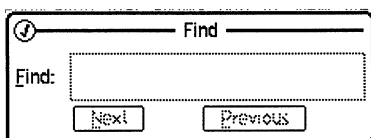
Open  **Open** opens a book. You can search through the list of books using the alphabet bar, or by typing the first few letters of the title.

Delete  **Delete** deletes the selected book.

An open book has different function keys.



- Find** (F2) Find searches for text on the current page. Tap Find, and the Find dialog box appears:

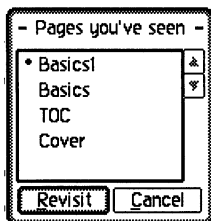


Enter the text you want to search for in the Find field.

Next searches forward through the page starting from the current cursor position (if this is the first search, it starts from the top). **Previous** searches backwards through the page starting from the current cursor position. Tap **Cancel** when you are done searching.

- Begin** (F3) **Begin** takes you back to the beginning of the book.
- Back** (F4) **Back** takes you to the previous page you looked at.
- Goto** (F5) **Goto** has three options:
- **Previous Page** takes you to the page prior to the one that you are on. This is the electronic equivalent of turning back one page.
 - **Next Page** takes you to the next page in sequential order. This is the electronic equivalent of turning the page.

- **History** displays a list of pages you've already seen:



You can return to an already displayed page by tapping its title and selecting **Revisit**. If you tap **Revisit**, the history list is restarted from the currently selected page. If you do not want to go to a page you've already seen, tap **Cancel**.

The Utility menu

The Utility menu lets you copy and print a page or print the entire screen.

To print or copy a portion of the page, highlight the text you want, then select **Print** or **Copy**. After copying, you can open an application and use **Paste** to insert the copied text.



To print or copy the entire page, simply select **Print** or **Copy**.

To print the entire screen, select **Print Screen**.


Setup

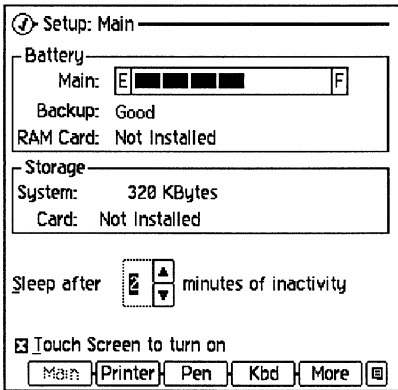
Contents	
Using Setup.....	15-1
The Utility Menu.....	15-8

Setup lets you select a printer, configure the pen and keyboard, set the sounds your OmniGo 100 makes, change the date or time, set a password, and more.

To start Setup, tap   Setup.

Using Setup

Main  Use the main setup screen to check the battery level of your OmniGo 100, see how much storage space you have, and set the number of minutes before your OmniGo 100 sleeps.



If any of the battery indicators display **Replace**, it is important that you replace the batteries soon.

Note

If you remove the backup battery and the main batteries at the same time, all data is lost, and your OmniGo 100 is reset.

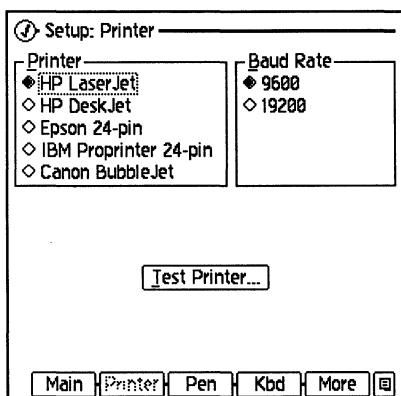
The amount of storage space left on your OmniGo 100 and any installed cards appears in the **Storage** section. If the amount of storage space is 10 Kbytes or less, make more space by deleting old appointments, obsolete database entries, and unused spreadsheets. Deleting old notes and Jotter pages also frees up space.

If batteries are low, touch turn on is automatically deactivated.

Use **Sleep after __ minutes of inactivity** to set how many minutes of inactivity pass before your OmniGo 100 turns off. You can set the number of minutes from 1 to 5.

Set the OmniGo 100 to turn on when the screen is tapped by checking **Touch Screen to turn on**. If this is not selected, you must press **[ON]** to turn on the OmniGo 100.

Printer **[F2]** **Printer** lets you configure or test a connected printer.

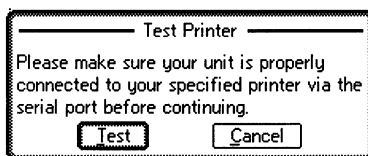


You can select any of the listed printers. If you do not own one of them, read your printer's manual to determine if it can emulate one of them.

You must use the HP1015A serial cable to connect your OmniGo 100 to the printer.

Select your printer's baud rate. If the OmniGo 100's baud rate and your printer's baud rate do not match, your printer will not print. Read your printer's manual to determine the correct baud rate.

To test your printer, tap **Test**. The following dialog appears:

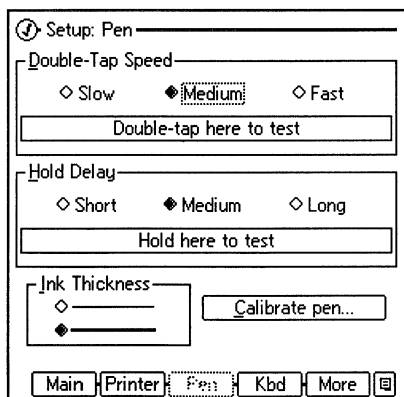


Make sure your OmniGo 100 is connected to the printer, and tap **Test**.

The printer prints a page with a message similar to the following:

```
System
printer test for
HP LaserJet on COM1
```

Pen **F3** Pen lets you configure and calibrate the pen.

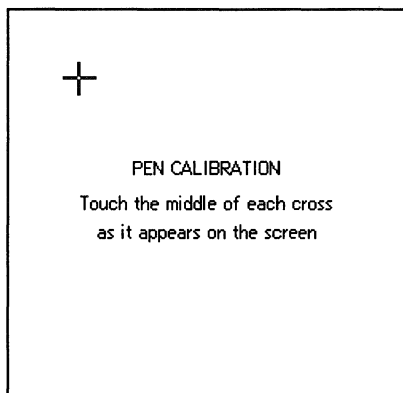


Tapping **Slow**, **Medium**, or **Fast** sets the double-tap speed. Test the selected setting by double-tapping the test button.


Tapping **Short**, **Medium**, or **Long** sets how long you must hold the pen against the screen before you can select text or drag an item. Test the selected setting by holding the pen against the test button.

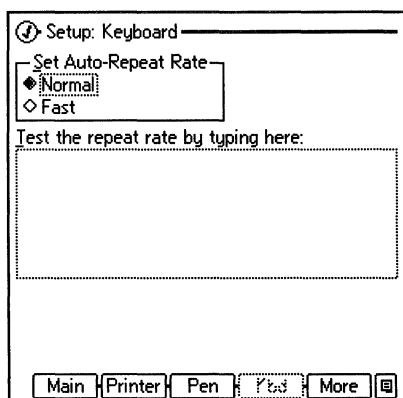
Selecting the thin or thick line sets the ink thickness used when drawing pictures in a note or on a Jotter page. Test your setting by starting the Jotter and selecting **Draw Ink** from the Pen mode menu.

You may need to calibrate the pen if you are having problems selecting buttons or icons, or if when you write with the pen, the ink appears shifted over. **Calibrate pen** runs the calibration program. This is the same program that ran when you started your OmniGo 100 for the first time.



Follow the instructions on the screen.

Kbd  **Kbd** lets you configure the keyboard.

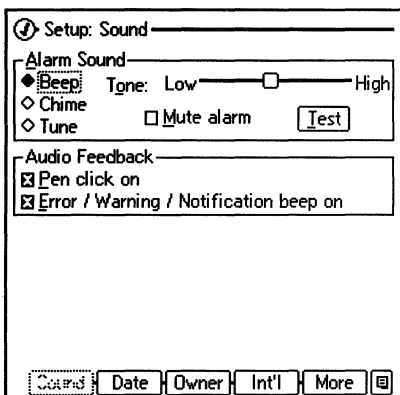


Tap **Normal** or **Fast** to set how long you must hold down a key before it starts repeating. This is especially useful for cursor movement keys. Test the repeat rate by typing text in the space provided.

More **[F5]** More displays other Setup screens.



Sound **[F1]** Sound lets you set the alarm sound and configure system sounds.

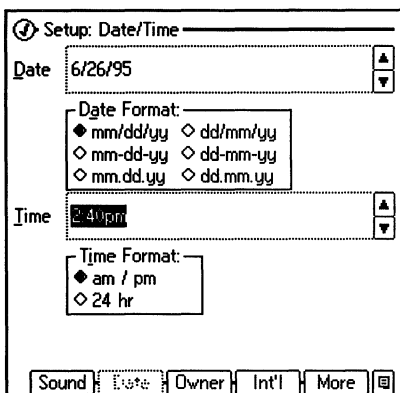


Beep, **Chime**, and **Tune** set the alarm sound. Drag the **Tone** slider along between **Low** and **High** to change the beep pitch. Tap **Test** to test your settings.

Check **Pen click on** if you want the OmniGo 100 to click when the pen touches the screen.

Check **Error/Warning/Notification beep on** if you want your OmniGo 100 to beep when an error occurs.

Date **[F2]** Date lets you set the date and time, and specify their formats.




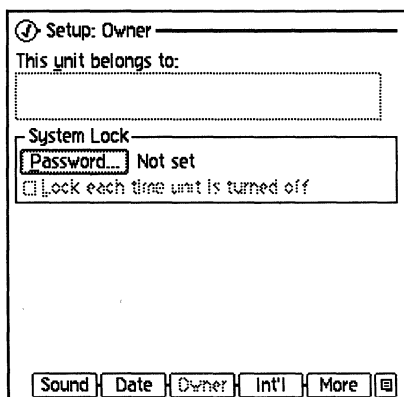
Select a date format by tapping the desired format. Changing the date format affects the way some of the calculations are performed by the Financial Tools. See Chapter 12 for more information.

Enter today's date in the **Date** field. You must enter the date according to the selected date format. You can increase or decrease the date one day at a time by tapping **+** or **-**.

Select a time format by tapping **am/pm** or **24 hour**.

Enter the time in the **Time** field. You can always enter the time in 24 hour format, but it is converted to the selected format. You cannot enter am or pm, when **24 hour** format is selected. You increase or decrease the time by 15 minutes each time you tap **+** or **-**.

Owner  **Owner** lets you personalize your OmniGo 100 and set a password.




Setup: Owner

This unit belongs to:

System Lock

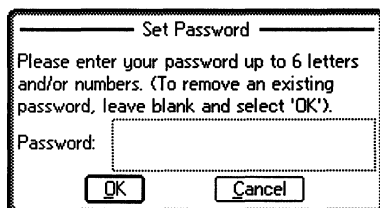
Password... Not set

Lock each time unit is turned off

Sound Date Owner Int'l More 


Enter any personal information you want under **This unit belongs to:**.

To set a password, tap **Password**. The following dialog box appears:




Enter a password up to six characters long. You'll be asked to retype your password.

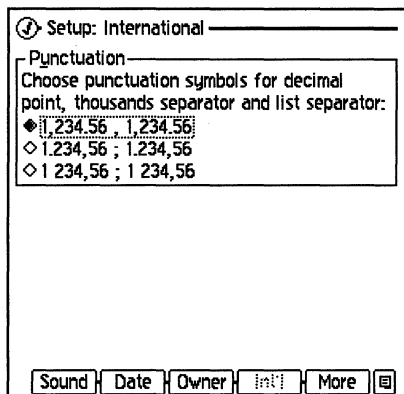
Caution

If you forget your password, the only way to break the lock is to do a RAM initialization. *All data will be lost.* Remove all three batteries, or press **ON**  **NEXT** to do a RAM initialization.

After your password is set, check **Lock each time unit is turned off** to have your OmniGo 100 ask for your password when you turn it on.

If you want to remove your password, tap **Password**. Enter your password and tap **OK**. When you're asked to enter a new password, leave the field blank and tap **OK**. When you're asked to retype your password, leave the field blank and tap **OK**. Your password is erased.

Int'l  **Int'l** lets you set the decimal, list, and thousands separator.



There are three different settings for thousands, list, and decimal separators. Select the desired setting by tapping it.

If you change the decimal separator to comma (,), the list argument delimiter (for Solver functions and Spreadsheet functions) is a semi-colon (;). For example, the function `AVG(1.2,1.3,1.4)` would be written `AVG(1,2;1,3;1,4)`.

The Utility Menu

The utility menu lets you restore default settings or print the screen.



To restore the default settings for all of the Setup screens, select **Restore Defaults**. All screens are returned to their factory settings. All Setup screens shown in this manual display their default settings.


To print the screen, select **Print Screen**.

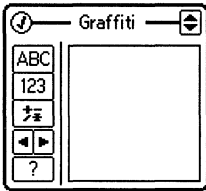
Graffiti

Contents










Using the Graffiti Window	16-1
Graffiti Strokes .	16-2

Graffiti recognizes letters and symbols written with the pen, and transforms them into typed text. You must learn to write using the Graffiti writing system in order to achieve 100% accuracy. You can write Graffiti letters on any part of the screen or within the Graffiti window. The bigger you write the more accurate the recognition.

To open the Graffiti window, tap .



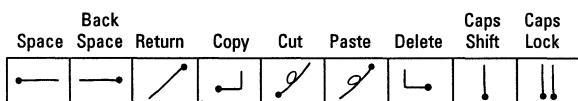
Using the Graffiti Window

-  Caps Lock button for Graffiti. Characters entered will be capital. Pressing   also turns on Caps Lock.
-  Number lock button for Graffiti.
-  Equation lock button for Graffiti. This is useful when using the Financial Tools or the Calculator.
-  Cursor buttons. Moves the cursor backwards or forwards.
-  Help button. Displays the online help.
-  Shrink/Expand button. Shrinks the window down to a toolbar, or expands the toolbar to a window.
-  Exit button. Closes the Graffiti window

Graffiti Strokes

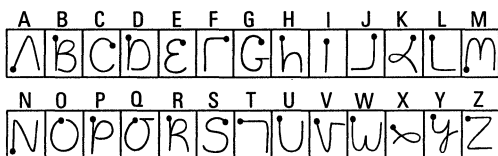
Editing strokes

The following strokes are used to edit text or change the Graffiti input mode.



The alphabet

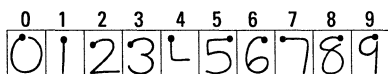
Use these strokes to enter letters. Some letters have more than one stroke shape. Only the most commonly used stroke is shown.




To reset Graffiti back to the lowercase alphabet (after entering a shift or lock state), use the reset stroke:

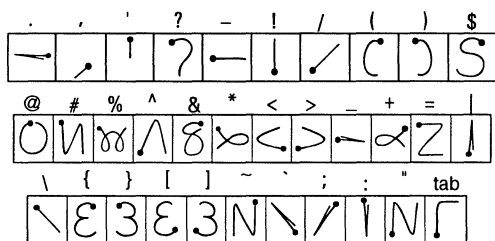
Numbers

Use these strokes to enter numbers. Use in the Graffiti window or the number lock stroke to enter numbers:





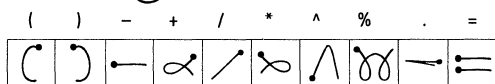
Punctuation

You must tap the Graffiti window before entering any of the following strokes. If you are not using the Graffiti window, you must make the punctuation shift stroke: 




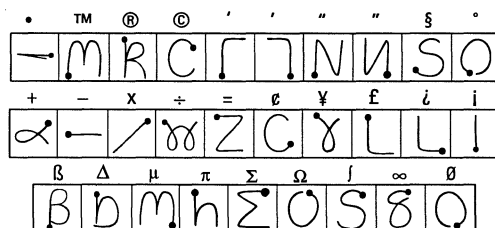
Equation Lock

The OmniGo 100 comes with a special equation lock mode. Tap  in the Graffiti window or toolbar, or use the equation lock stroke: 



Extended characters

Before entering any of the following strokes, you must make the extended character stroke: 

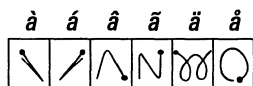


Accented characters

You can enter any of these letters:

à á â ã ä å è é ê ë ì í î ï ò ó ô õ ö ù ú û ü ÿ ñ

Enter an accented letter by using the standard letter stroke followed by the desired accent stroke. For example, to create an accented "a" draw an "a" followed by one of the following:




The following characters require no special shifting:

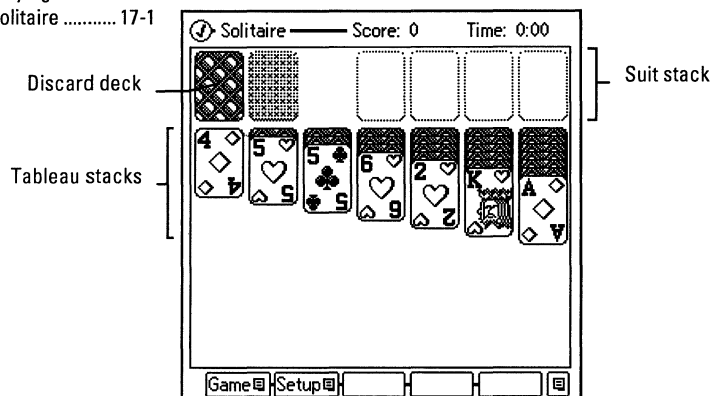


Solitaire

Contents

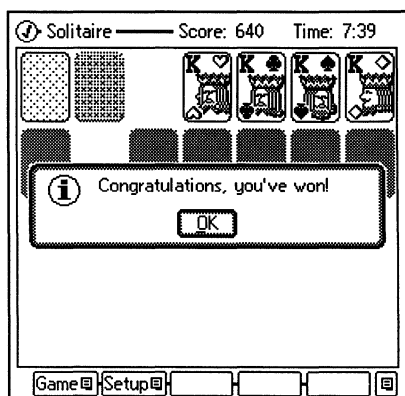
To start Solitaire, tap  Solitaire

Playing
Solitaire 17-1



Playing Solitaire

Solitaire consists of a discard deck, four suit stacks, and seven tableau stacks. Your goal is to get all 52 cards on the suit stacks, one suit on each stack, like this:



Tap the discard deck to uncover cards and move them to the tableau or suit stacks. If you can move the top card, the next one down is available to play. Once you've gone through the deck, tap it to go through it again.

Build tableau stacks by adding cards in descending order (King to Ace), alternating light and dark suits. Only a King can be moved to an empty tableau stack.

Move cards from the tableau stacks to the suit stacks. You can also move a card (or a sequence of cards) from one tableau stack to another. When you uncover a face-down card in a tableau stack, tap to turn the card face up.

Build suit stacks by adding cards in ascending order from Ace to King. All cards in a suit stack must be the same suit. Only an Ace can be moved to an empty suit stack.

The game ends when you can't make any more moves or you've completed the suit stacks. If you want more information, see the online help.

Warranty, Support, and Service

Limited One-Year Warranty

What Is covered

Your HP OmniGo 100 (except for the batteries, or damage caused by the batteries) and accessories are warranted by Hewlett-Packard against defects in materials and workmanship for one year from the date of original purchase. If you sell your unit or give it as a gift, the warranty is automatically transferred to the new owner and remains in effect for the original one-year period. During the warranty period, we will repair or, at our option, replace at no charge a product that proves to be defective, provided you return the product, shipping prepaid, to a Hewlett-Packard service center. (Replacement may be made with a new or reconditioned product, or with a newer model of equal or better functionality.)

This warranty gives you specific legal rights, and you may also have other rights that vary from state to state, province to province, or country to country.

What Is not covered

Batteries, and damage caused by the batteries, are not covered by the Hewlett-Packard warranty. Check with the battery manufacturer about battery and battery leakage warranties.

This warranty does not apply if the product has been damaged by accident or misuse or as the result of service or modification by other than an authorized Hewlett-Packard service center.

No other express warranty is given. The repair or replacement of a product is your exclusive remedy. **ANY OTHER IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS IS LIMITED TO THE ONE-YEAR DURATION OF THIS WRITTEN WARRANTY.** Some states, provinces, or countries do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. **IN NO EVENT SHALL HEWLETT-PACKARD COMPANY BE LIABLE FOR CONSEQUENTIAL DAMAGES.** Some states, provinces, or countries do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Products are sold on the basis of specifications applicable at the time of manufacture. Hewlett-Packard shall have no obligation to modify or update products, once sold.

Consumer transactions in Australia and the United Kingdom

The above disclaimers and limitations shall not apply to consumer transactions in Australia and the United Kingdom and shall not affect the statutory rights of consumers.

Customer Support

In the United States

If you have questions that this *User's Guide* doesn't answer (see the contents and index first), you can contact Hewlett-Packard's Mobile Computing Customer Support department at the address or phone number on the inside back cover of this manual.

Outside the United States

Your authorized Hewlett-Packard dealer is committed to provide full after-sale support. Authorized dealers are able to provide local, personal, and uniquely-responsive support, and they are backed by the full resources of Hewlett-Packard.

If Your OmniGo Requires Service

Contact Hewlett-Packard for service information, shipping instructions, and out-of-warranty service charges *before* you send your unit in for repair.

In the United States

Call the Customer Support telephone number listed on the inside of the back cover. *Do not ship the unit for service without first contacting a Hewlett-Packard office.*

In Europe

Contact your Hewlett-Packard dealer or sales office for the location of the nearest service center. *Do not ship the unit for service without first contacting a Hewlett-Packard office.*

In other countries

Contact your Hewlett-Packard dealer or sales office for the location of other service centers.

Repairs are warranted against defects in materials and workmanship for 90 days from the date of service.

HP Marketing Headquarters Outside the U.S.

Should you need to contact Hewlett-Packard, check your local telephone directory for the HP Sales and Service Office near you. If you cannot locate an HP office, contact one of the Worldwide HP Marketing Headquarters listed here.

ASIA

Far East Sales Region Hdqtrs
Hewlett-Packard Asia Ltd.
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Batteries and Environmental Limits



Batteries are delivered with this product. When they are empty, do not throw them away, but collect them as small chemical waste.

Main battery type

When to Replace Batteries

When you see a low-battery message in the display, *replace the indicated batteries as soon as possible*. If the display beeps and turns off immediately after you turn it on, replace the main batteries.

The backup battery, which prevents data loss when the main batteries are dead or out of the unit, should be changed a year after it's installed even if a low backup-battery message doesn't appear.

Battery Types and Battery Life

Any brand of 1.5-volt, size AA Lithium or Alkaline batteries. The Lithium batteries will give you a better performance and life for your HP OmniGo 100.

Backup battery type

3-volt CR2032 lithium coin cell. If fresh main batteries are maintained, the backup battery should last a year before you need to replace it.



Bij dit produkt zijn batterijen geleverd. Wanneer deze leeg zijn, moet u ze niet weggooien maar inleveren als KCA.

The battery life you get with your OmniGo 100 depends on

- The type and quality of batteries you use.
- How you use your OmniGo 100. (Things like flash-disk memory cards and serial communications require higher current and therefore drain your batteries faster.)

For typical use, fresh Alkaline batteries should last from 2 to 5 weeks.

Battery Caution Statements

Warning

Do not mutilate, puncture, or dispose of batteries in fire. The batteries can burst or explode, releasing hazardous chemicals. Replace batteries with only the types recommended in this manual. Discard used batteries according to the manufacturer's instructions. The back-up (lithium) battery can explode if it is inserted incorrectly.

Varning

Explosionsfara vid felaktigt batteribyte. Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren. Kassera använt batteri enligt fabrikantens instruktion.

Advarsel

Eksplussionsfare ved fejlagtig handtering. Udskiftning ma kun ske med batteri af samme fabrikat og type. Lever det brugte batteri tilbage til leverandoren.

Varoitus

Paristo voi räjähtää, jos se on virheellisesti asennettu. Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

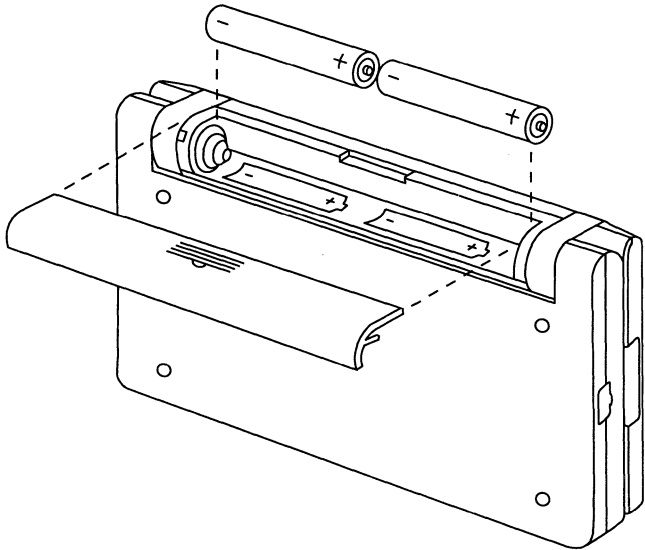
Removing and Installing Batteries

Caution

Do not remove both the main batteries and the backup battery at the same time—complete memory loss will result.

To change the main batteries:

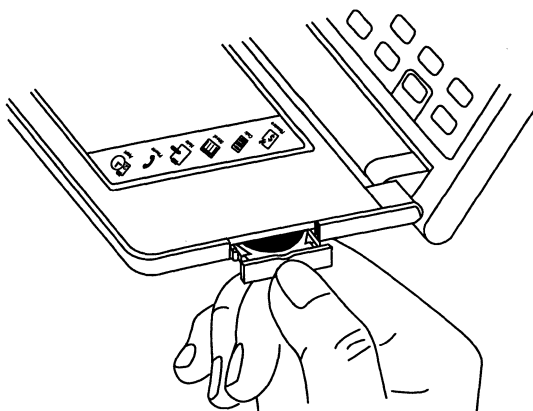
1. **Important:** Turn your OmniGo 100 off and close the case.
2. Remove the battery cover and old batteries.



3. Install two fresh AA batteries, orienting them as shown by the symbols in the battery compartment.
4. Replace the cover and turn your OmniGo 100 on. If the OmniGo 100 won't turn on after you replace the batteries, go back over the procedure and check the orientation of the batteries as shown in step 2—you may have put the batteries in backwards.

To change the backup battery:

1. Important: Turn the OmniGo 100 off.
2. Remove the backup-battery cover and pull out the battery tray.



3. Remove the old battery from the tray and insert a fresh, 3-volt CR2032 coin cell. *Be sure the "+" on the battery is facing up in the tray.*
4. Insert the battery tray back into the OmniGo 100 and replace the cover.
5. Turn the OmniGo 100 on. If the battery-low message is still present in the display, go back over the procedure and check the battery orientation as shown in step 3—you may have put the battery in the tray upside down.

Environmental Limits for Your OmniGo 100 and Plug-In Cards

To maintain product reliability, avoid getting the equipment wet and observe the following temperature and humidity limits for the OmniGo 100 and Hewlett-Packard plug-in cards:

Battery operated at 3Vdc 400mA max.

Operating temperature: 0° to 40°C (32° to 104°F).

Storage temperature with data retention: 0° to 60°C (32° to 140°F).

Operating and storage humidity: 90% relative humidity at 40°C (104°F) maximum.

You will likely lose data below 0°C (32°F), but you can have storage temperatures down to -20°C (-4°F) without damaging the hardware.

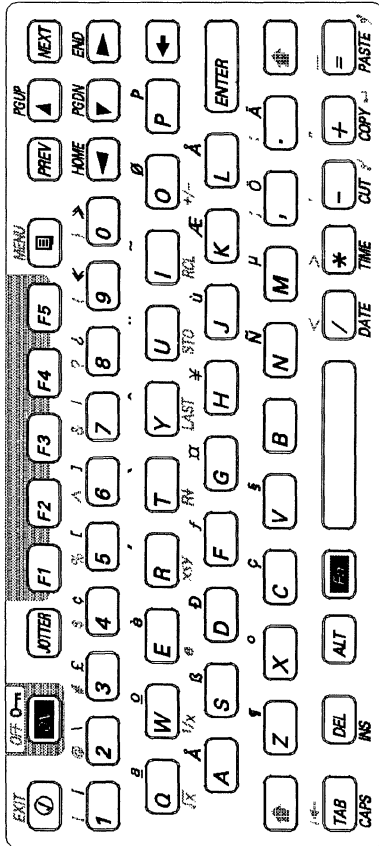
Low Batteries

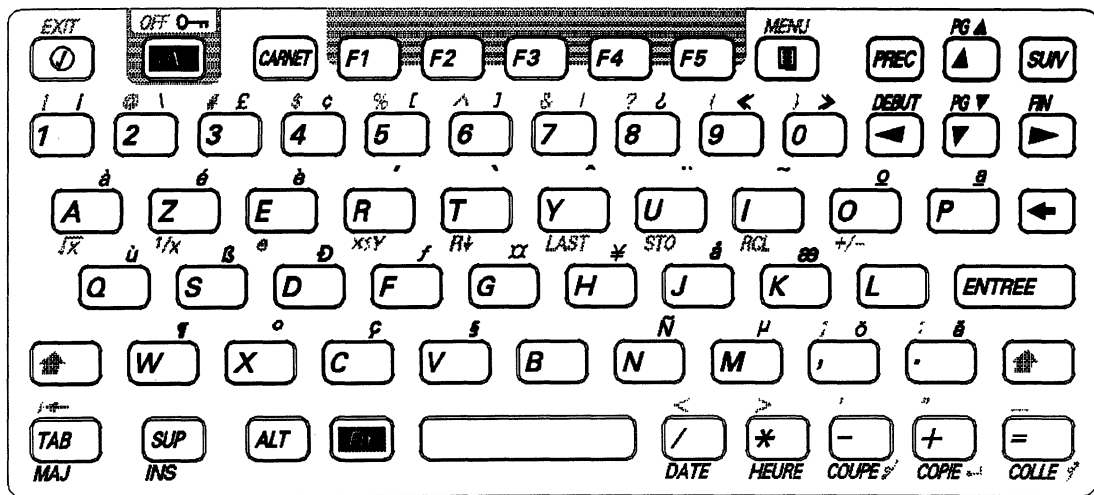
When the batteries are low, avoid tasks that drain the batteries, such as formatting PCMCIA cards. When the batteries are very low, the OmniGo 100 will not turn on by touching the screen. When the batteries are extremely low, pressing **[ON]** will have no effect. If you want to save your data, you should change the batteries as soon as any of the above conditions occur.

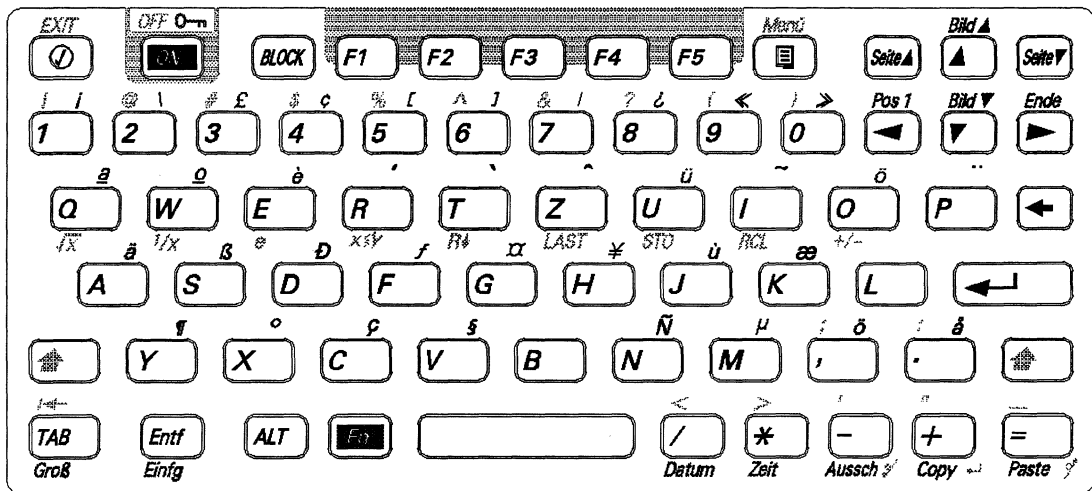
Keyboards

To access special characters that appear above and to the right of a key, press **[Fn]** before pressing the key.

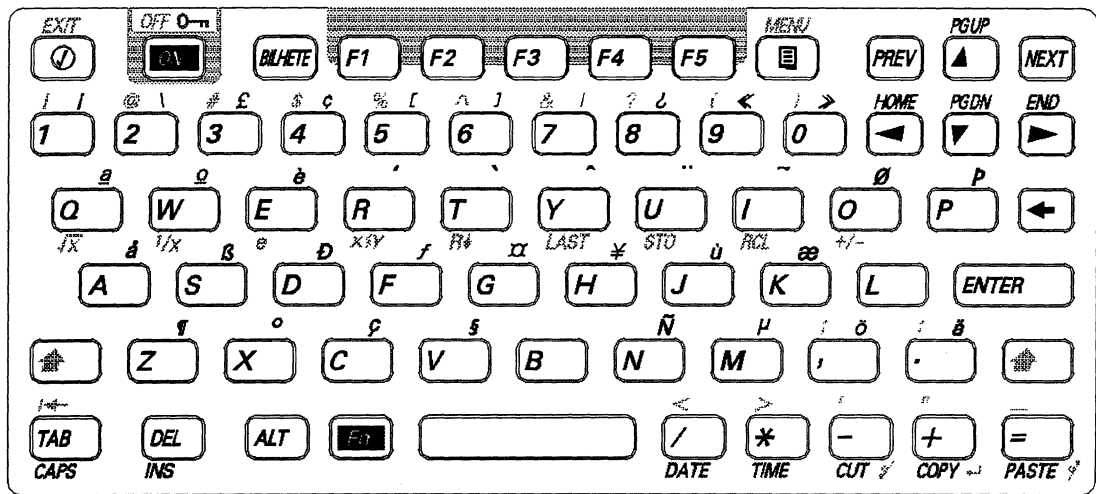
English

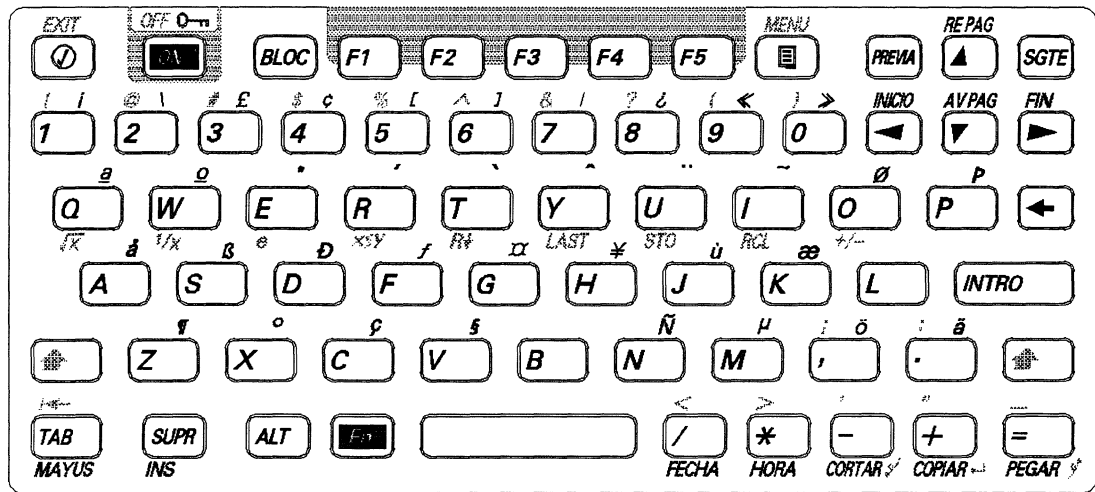






German





Spanish

D

Regulatory Information

U.S.A.

This handheld organizer complies with the limits for a Class B digital device as specified in Part 15 of FCC Rules which provide reasonable protection against harmful interference in a residential area. This handheld organizer generates and uses radio frequency energy and may interfere with radio and television reception. In the unlikely event that there is interference to radio or television reception (which can be determined by turning the organizer off and on), try the following:

- Reorienting or relocating the receiving antenna (radio or television).
- Relocating the organizer with respect to the receiver.

For more information, consult your dealer, or an experienced radio/television technician.

The HP F1015A Serial Interface Cable must be used to connect the organizer to printers, computers, and other peripheral devices to ensure compliance with the Class B emission limits for residential use.

Canada

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing equipment regulations.

Cet appareil numérique de Classe B respecte toutes les exigences du Règlement Canadien sur le matériel brouilleur.

Japan



この装置は、第二種情報処理装置（住宅地域又はその隣接した地域において使用されるべき情報処理装置）で住宅地域での電波障害防止を目的とした情報処理装置等電波障害自主規制協議会（VCCI）基準に適合しております。

しかし、本装置をラジオ、テレビジョン受信機等に近接してご使用になると、受信障害の原因となることがあります。

取扱説明書に従って正しい取り扱いをして下さい。

Europe

Declaration of Conformity
(according to ISO/IEC Guide 22 and EN 45014)

Manufacturer: Hewlett-Packard Singapore (Pte) Ltd
Address: Asia Pacific Personal Computer Division
72 Bendemeer Rd. #01-01/07-01
Singapore 1233

declares that the following product:

Product name: Handheld Organizer
Model Number: HP OmniGo 100
Options: All

conforms to the following product specifications:

Safety: IEC 950:1991+A1,A2 / EN 60950 (1992)+A1,A2
EMC: CISPR 22:1993 / EN 55022 (1994): Class B (1)
EN50082-1:1992
IEC 801-2:1991 / prEN 55024-2 (1992): 4kV CD, 8kV AD
IEC 801-3:1984 / prEN 55024-3 (1991): 3V/m
IEC 801-4:1988 / prEN 55024-4 (1992): 0.5 kV signal lines.

Supplementary Information:

The product herewith complies with the requirements of the EMC Directive 89/336/EEC.

(1) The product was tested in a typical configuration with Hewlett-Packard personal computer peripherals.

Singapore, August 15, 1995

Seah Beng Geok

Seah Beng Geok/QA Manager

European Contact: Your local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Dept. Technical Relations Europe, Herrenberger Straße 130, D-71034 Boblingen (Fax:+49-7031-143143)

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