

Align

Enable automatically centers labels and right-aligns values. Set the alignment globally, or in a cell or range of cells by using Top Line Menu options. You may also change alignment when entering a label in a single cell by preceding the cell contents with an alignment character.

Global Align

Use the Global Alignment option to specify alignment for an entire spreadsheet. Global alignment applies to all labels or values on the spreadsheet except labels or values aligned using the Range Align option or an alignment character.

To set global alignment:

1. From the Top Line Menu, select **L**ayout, **G**lobal, **A**lign.
2. Select alignment for values or labels:
Values.
Labels.
3. Select alignment position:
Left. Align labels or values with the left border of the cell.
Right. Align labels with the right border of the cell or align values one character from the right border.
Centered. Center labels and values in the cell.

Range Align

To apply a different alignment to a particular group of cells, use the Range Align option. This option overrides the global alignment setting.

To align a range:

1. From the Top Line Menu, select **L**ayout, **R**ange, **A**lign.
2. Select alignment position:
Left. Align labels or values with the left border of the cell.
Right. Align labels with the right border of the cell and align values one character from the right border.
Centered. Center labels and values in the cell.
3. Type or point out the coordinates of the range to be aligned.

Reset

To reset a group of cells to the current global alignment:

1. From the Top Line Menu, select **L**ayout, **R**ange, **A**lign, **U**se global default.
2. Type or point out the coordinates of the range to reset.

Alignment Characters

Use an alignment character to position a label in a cell. This is especially useful for positioning a number that is used as a label. For example, to center the label "1992" in a cell, type ^1992. Alignment characters display in the Information Display Area as r (right-aligned), l (left-aligned), and c (centered); they do not display in the cells. Use the following alignment characters:

- > Right-align the label.
- < Left-align the label.
- ^ Center the label.

Center on Decimal Points

Values are normally right-aligned in cells. To center values on the decimal point:

1. From the Top Line Menu, select **T**ools, **D**efaults. Enable displays the Spreadsheet Environment box. The options listed are toggles; if the option is active, a checkmark displays next to it.
2. Select **Center values on a decimal point**.
3. Select **Accept** to center the values. All values that have been centered using the Global Align or Range Align options will now center on the decimal points. See also SS:Align:Global Align and SS:Align:Range Align.

Areas of the Spreadsheet

Enable's spreadsheet is shown in Figure 1. Notice the borders of the spreadsheet: the letters A-H represent the columns of the spreadsheet and the numbers represent the rows of the spreadsheet. The section that displays on screen is just a fragment of Enable's entire spreadsheet. There are actually 1,024 columns and 9,999 rows.

The area where a row and column intersect is called a cell. A cell is identified by its cell address: the intersection of a column and a row. For example the cell at the intersection of column B and row 4 is referred to as cell B4.

Since Enable's spreadsheet can have up to thirty-two levels, a level indicator (A to AF) precedes the cell address to identify each level. For example, the cell at the intersection of column B and row 4 on level G is referred to as cell G:B4.

Note the reverse video bar in cell A1. This is the pointer. Use the pointer to move around the spreadsheet, and to position in a cell for data entry or edit.

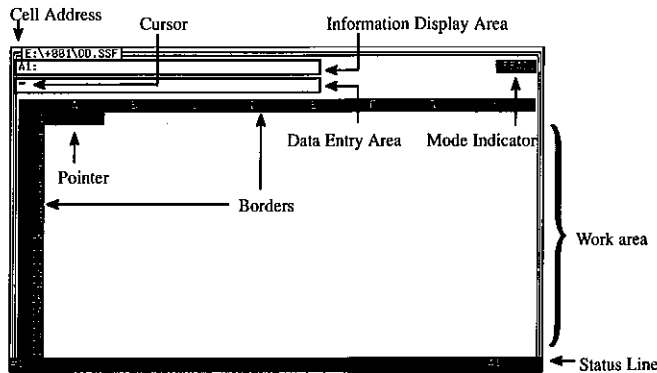


Figure 1: Areas of the spreadsheet.

The spreadsheet screen has six components:

Information Display Area. The Information Display Area in the top left corner of the screen shows the address of the cell pointer and provides information on cell entries. As the pointer moves from cell to cell, the contents of the current cell display in the Information Display Area. Features that have been applied to the entry, such as alignment, format (% , \$, etc.), or protection also display here.

Data Entry Area. When data is typed or edited, the data displays in the Data Entry Area along with a flashing underline, or cursor. Press \downarrow to put the new or edited data into the cell where the pointer is located.

Mode Indicator. A message which displays in the upper right corner of the screen indicates what operations Enable is performing or what actions you need to take. For example, when Enable is ready for an entry, the Mode Indicator reads *READY*. When Enable is processing a command, the Mode Indicator reads *BUSY*. Mode Indicator messages are:

- BUSY* Currently processing a requested action. Please wait.
- CMENU* Displaying a user-defined menu.
- COMM* Processing a command.
- DBMS* Copying DBMS records.
- EDIT* User is modifying existing cell data.
- GRAPH* Creating a graph.
- LABEL* User is entering a label.
- MENU* Displaying the Top Line Menu.
- POINT* User is pointing out a range or formula.

READY Waiting for the next command or entry. The READY message may display with one of the following prefixes:

- + The interruptible calculation feature is active.
- * A macro is being executed.
- # Both interruptible calculation and a macro are active.

VALUE User is entering a value, formula, or function.

Borders. The border areas include the letters along the top that label the columns and the numbers along the left side of the screen that label the rows. The columns are labeled A through AMJ and the rows are numbered 1 through 9999.

Work Area. The Work Area is the body of the spreadsheet. It is composed of 10,238,976 cells for each of thirty-two levels. Use the pointer to move to any part of the work area to enter, edit, and view data.

Status Line. Information about the spreadsheet file displays at the bottom of the screen in the Status Line. A window number displays on the far left indicating the active window; you may have up to eight open windows in Enable. **Caps Lock**, **Scroll Lock**, and **Num Lock** display if the keyboard option is activated. On the far right of the Status Line, the highest cell address (for the current spreadsheet level) displays. This is the address of the cell in the farthest row and column with an entry (or format or alignment or reference).

Audit Options

Navigate through the data in a spreadsheet, identify problems, and troubleshoot errors using Enable's audit features. See the following topics for descriptions of audit features:

SS:Calculate, SS:Calculate:Goal Seeking, SS:Find, SS:Highlight, SS:List, SS:Map and SS:Notes.

Calculate

Some spreadsheet programs calculate every formula on the spreadsheet each time a value in a cell is changed. Enable, by default, uses a minimal calculation technique where only the formulas that depend on the changed values are calculated. Minimal calculation greatly increases processing speed.

Enable offers several options to control calculation in your spreadsheet.

Automatic

As new data is entered in the spreadsheet, Enable automatically calculates all formulas affected by the new data. This is Enable's default calculation mode. Formulas are calculated in a logical order; no formula is calculated until the formulas on which it depends are calculated.

Universal

You can force a universal calculation by pressing **Ctrl/F5**. Enable will evaluate every formula in the spreadsheet, including those that link to other spreadsheets.

Manual

You decide when calculation occurs by using the manual calculation feature. For example, you may need to enter many new values and want to suspend calculation until all values have been entered. You also can create circular references (formulas that refer directly or indirectly to the cells where the formulas are typed) and control the number of times Enable will calculate the circular references.

To invoke manual calculation:

1. From the Top Line Menu, select **A**udit, **C**alculate, **M**anual.

When a new entry affects a formula on the spreadsheet, Enable displays the message **CALC** in the Status Line. Press **F5** when you are ready to calculate the formula. When you press **F5**, Enable performs a minimal calculation and also calculates all formulas, circular references and functions that depend on **@NOW**, **@TODAY**, **@RAND**, **@CURREW**, **@CURCOL** and **@CURLEVEL**.

Iterative

Enable normally calculates circular references once. However, you can instruct Enable to calculate circular references up to fifty times. This is called an iterative calculation.

To select iterative calculation:

1. From the Top Line Menu, select **A**udit, **C**alculate, **I**teration.
2. At the **Enter iteration count prompt**, enter the number of times you want Enable to calculate circular references.

Reset Automatic Calculation

To reset automatic calculation:

1. From the Top Line Menu, select **A**udit, **C**alculate, **A**utomatic.

Interrupt

Normally, while Enable calculates your spreadsheet, you must wait before continuing to enter new data or process commands. Setting Enable's interruptible calculation mode processes all calculations as background tasks. You are able to move around the spreadsheet to enter data or process new commands while calculation takes place.

To activate the interruptible calculation mode:

1. From the Top Line Menu, select **T**ools, **D**efaults. Enable displays the Spreadsheet Environment box.
2. Select **Interruptible Calculation**. A checkmark will display next to the option when selected.

3. Accept or cancel the interruptible calculation option for this spreadsheet:

Accept. Set interruptible calculation mode. Enable displays a plus sign (+) next to the READY message in the Mode Indicator to show that Interruptible Calculation is in process.

Cancel. Void the selection and return to the spreadsheet.

If you select a Top Line Menu option that modifies the spreadsheet data, such as Edit Move, Edit Copy, or Edit Insert, Enable will finish calculating before it executes the option. If you press **F5** while a background calculation is in process, Enable completes the initial calculation and invokes a new calculation. There may be a slight pause after pressing a key since Enable must complete the current action before it can process the keystroke.

Goal Seeking

Use Enable's goal seeking feature to adjust a cell value until a specified target (or goal) is reached in another cell. Goal seeking can best be explained with an illustration.

Figure 2 shows a spreadsheet for a ski shop that sells ski equipment packages at a discounted price. The list prices for individual pieces of equipment appear in column B. Column C shows a 10% discounted price on the same equipment when sold as a package.

Suppose there is a surplus of merchandise the owner needs to sell quickly. The owner must charge at least \$350 for the package to make a profit. The owner wants to offer the best possible discount on the equipment and still make a profit. Many spreadsheet users would begin to make a series of best guesses – a process referred to as “what if?” This process is time consuming and doesn't guarantee the best solution to the problem. Enable's goal-*seek* feature allows you to arrive at the best solution to the problem in seconds.

	A	B	C	D	E
1	SUPER SAVINGS SKI SHOP				
2				Discount: 10.0%	← Value to be adjusted
3					
4		List price	Package		
5	Skis	335.00	301.50		
6	Poles	69.00	62.10		Adjustment value: .01
7	Boots	170.00	153.00		
8	Bindings	55.00	49.50		
9					
10	Total:	637.00	573.30	← Target cell	

Completion value: 350

Figure 2: Performing an automatic goal-*seek*.

Automatic Goal Seek

To automatically calculate the spreadsheet until the goal is reached:

1. From the Top Line Menu, select **A**udit, **G**oal-*seek*, **A**utomatic.
2. At the Enter cell to be adjusted prompt, type or point out the cell whose value is to be increased or decreased.

In Figure 2, the cell to be adjusted is E2, the percent of discount.

3. At the `Enter adjustment value` prompt, enter the unit amount by which the value will be increased or decreased. Enter a positive number to increase the value or enter a negative number to decrease the value.
In Figure 2, .01 is the adjustment value. This means that Enable will increase the 10% discount by increments of one percent until the goal is reached.
4. At the `Enter target cell` prompt, type or point out the target cell whose value you want to effect.
In Figure 2, the total package price, cell C10, is the target cell.
5. At the `Enter completion value` prompt, enter the "floor" or "ceiling" value for the affected target cell. Enable will stop calculating when the target cell reaches this value.
In Figure 2, the floor is \$350 since this is the lowest price the owner can offer and still make a profit.
6. For longer goal seeking operations, Enable pauses after 100 calculations and displays the following message in the Status Line: `100 STEPS completed; press any key to continue, ESC to cancel STEP.` This message displays after every 100 calculations, giving you the opportunity to abort the goal-seek process.

Manual Goal Seeking

Perform manual goal seeking to step through a calculation for each unit amount of the adjustment value. During a manual goal seek, Enable waits for you to press either → or ← before performing a calculation.

To perform a manual calculation:

1. From the Top Line Menu, select **A**udit, **G**oal-seek, **M**anual.
2. At the `Enter cell to be adjusted` prompt, enter the cell address of the value to be increased or decreased.
3. At the `Enter adjustment value` prompt, enter the unit amount by which the value will be adjusted.
4. Press one of the following keys to increase or decrease the cell to be adjusted by the unit amount:
 - Increases the value by the specified unit amount.
 - ← Decreases the value by the specified unit amount.

Cell Address

Enable defaults to relative cell addressing during Copy operations. Override this default by setting absolute or mixed addresses where necessary.

Relative Address

When a formula or function is copied to a cell, Enable treats the cell addresses in the formula or function as "relative" to the position of the cell.

For example, suppose cell B4 of the spreadsheet contains the formula $+A3*C2$. If the formula is copied to cell D4, the meaning is the same, but, since the current cell is now D4 (two columns to the right), $+A3*C2$ becomes $+C3*E2$. Therefore, you can copy a formula without retyping. Relative cell addresses always change to reflect their new locations.

Absolute Address

Maintain a constant cell address in a formula by using absolute addressing. Absolute cell addresses will not change when copied to a new location. To make a cell address constant or absolute, precede both the column letter and the row number with a dollar sign (\$).

For example, suppose cell A4 of the spreadsheet contains the formula $+A3*\$C\2 . The formula contains an absolute reference to the value in cell C2. If the formula is copied to cell B6, the formula will change to $+B5*\$C\2 . Notice that the formula continues to reference the value in cell C2.

Mixed Address

Make part of a cell address absolute and part relative by preceding either the column letter or the row number with a dollar sign (\$). The dollar sign (\$) makes the character that follows it absolute so that the character will not change when the address is copied.

For example, suppose cell A4 of the spreadsheet contains the formula $+A3*C\$2$. The formula contains a mixed reference to the relative value of column C and the absolute value of row 2. If the formula is copied to the cell B7, the formula will change to $+B6*D\$2$. Similarly, if the formula $+A3*\$C2$ is copied to cell B8, the formula will change to $+B7*\$C6$.

Color

Enhance the spreadsheet display by applying colors to specific cells. A color display monitor is necessary to see the colors you apply.

For example, you might want to display all labels in green and all values in white. Colors can also be used as markers. To see at a glance which cells in the spreadsheet contain negative values, display all negative values in red. To see how the last calculation affected the spreadsheet, display all data that changed during the last calculation in blue. To see what cells in the spreadsheet depend on other spreadsheets for their values, apply a color to linked cells.

You can also apply colors to make cells invisible. For example, if the spreadsheet has a black background, you can make protected cells invisible by displaying all protected data in black. The protected data will display black on black and be invisible while protection is activated.

Design a Color Display

To design the color display:

1. From the **Top Line Menu**, select **D**isplay, **C**olors, **S**ettings. Enable displays a list of options. Note that a description of each option appears in the box at the left as the pointer moves through the list.
2. Press **↓** to select an option. If you select the **Less than X** option, you need to specify a number. (See the topic on **SS:Specify a Number** below.)
Enable displays a color palette of 128 possible color combinations.
Use the **←** and **→** keys to move the pointer to a color combination. Note that the word "text" displays in the top-right corner of the palette and changes to reflect the color combination at the current cursor position.
3. Keyboard users: Press **↓** to accept the color combination or press **Esc** to return to the options list.
Mouse users: Select **Ok** to accept the color combination or select **Cancel** to return to the options list.
4. The pointer returns to the options list. Note that the "C" to the left of the selected option now displays in the selected color combination.
5. To set another color, repeat steps 2 and 3.
6. Save or cancel the design:
End. Save the selected option(s) and return to the spreadsheet.
Esc. Void the selections and return to the spreadsheet.

Activate and Deactivate Color

To activate and deactivate the color display in your spreadsheet:

1. From the **Top Line Menu**, select **T**ools, **D**efaults. Enable displays the **Spreadsheet Environment** box.
2. Select the **Display Cell Colors** option. A checkmark next to the option means it's activated. The absence of a checkmark next to the option means that colors will not be displayed.
3. Accept or cancel the **Display Cell Colors** option for this spreadsheet:
Accept. Save the changes in the dialog box and display the colored cells in your spreadsheet.
Cancel. Void changes in the dialog box for this spreadsheet and return to the spreadsheet.

Color a Range

Color options are applied globally by default. You can, however, choose to apply a color setting only to a specific area of the spreadsheet by designating a specific range.

To apply color options to a range:

1. From the Top Line Menu, select **D**isplay, **C**olors, **R**ange.
2. Type or point out the coordinates of the range.

Specify a Number

If you select the **Less than X** option while designing the color display you need to specify a number. Enable will apply a color combination to all cells that contain values less than the specified number.

To specify a number:

1. From the Top Line Menu, select **D**isplay, **C**olors, **N**umber.
2. Enter a number.

Combine Files

Combine spreadsheet data in an open window with spreadsheet data in another open window or from a file on disk.

Open Window

There are several ways to combine spreadsheet data in an open window with data in another open window. The use of the File Combine option to combine data in two spreadsheet files is addressed here. See also SS:Window-copy and REF2:IN:Windows:Copy Information Between Windows for combining other types of data with the spreadsheet.

The File Combine option allows you to add or subtract cell values to existing cell data when you combine spreadsheet files. To combine data from another spreadsheet window with the spreadsheet currently displayed:

1. From the Top Line Menu, select **F**ile, **C**ombine.
2. Select the combine method:
 - Copy.** Copy data from another spreadsheet to the current spreadsheet.
 - Value copy.** Copy labels and numbers only (no formulas or functions) from another spreadsheet to the current spreadsheet.
 - Add.** Add values from another spreadsheet to cell values in the current spreadsheet.
 - Subtract.** Subtract values in another spreadsheet from cell values in the current spreadsheet.
3. Select **Spreadsheet Window.** Enable displays the Interwindow Copy screen.
4. Select the number of the window containing the cell data you want to copy. Enable displays that spreadsheet.
5. Press \downarrow to copy the entire spreadsheet.

or

Type or point out a specific range of data you want to copy.

Enable displays the spreadsheet window from which the File Combine command was initiated.

6. Move the pointer to the cell to which you want to copy data and press ↵.

File on Disk

To combine data from spreadsheet files on disk with the spreadsheet currently displayed:

1. From the Top Line Menu, select **F**ile, **C**ombine.
2. Select the combine method:
 - Copy.** Copy data from another spreadsheet to the current spreadsheet.
 - Add.** Add values from another spreadsheet to cell values in the current spreadsheet.
 - Subtract.** Subtract values in another spreadsheet from cell values in the current spreadsheet.
3. Select **Disk File**.
4. Enter the name of the file from which the data will be copied. Include a directory path if necessary.
For example, you might type: `a:\data.ssf`
5. Press ↵ to copy the entire spreadsheet.
or
Type the name or coordinates of a specific range.
Enable displays the spreadsheet file from which the File Combine command was initiated.
6. Move the pointer to the cell to which you want to copy data and press ↵.

Copy

Copy is a powerful spreadsheet feature that eliminates tedious work. A spreadsheet can be designed quickly by copying data from a cell or a range of cells to new locations in the spreadsheet, eliminating the need to re-enter data. Exercise caution when copying data. If you copy data to a range that already contains data, Enable will write over the pre-existing data. See also SS:Cell Address, SS:Value-copy and SS:Move.

Cell

To copy data from a single cell:

1. From the Top Line Menu, select **E**dit, **C**opy.
or
Press **F8**.

2. At the Enter FROM range prompt, type or point out the coordinates of a single-cell range that contains the data to be copied.
3. At the Enter range to copy TO prompt, type or point out the single or multiple-cell range to which you want to copy data. Note that the To and From ranges may overlap.

Range

To copy data from a range of cells:

1. From the Top Line Menu, select **E**dit, **C**opy.
or
Press **F8**.
2. At the Enter FROM range prompt, type or point out the coordinates of the range that contains the data to be copied.
3. At the Enter range to copy TO prompt, type or point out the coordinates of the first cell of the range to which you want to copy data. Overlapping the To and From ranges may cause data to copy incorrectly.

Links

A cell containing a link can be copied, although the process of copying the link function is somewhat different than copying other formulas or functions in that an absolute cell reference to the external cell is maintained. When a cell containing a link is copied, Enable takes a snapshot of the link function, copies it to its new location and maintains the same reference to the external cell in the linked spreadsheet. See also SS:Linking and SS:Cell Address for information on absolute addresses.

If you need to create a relative cell address in a cell containing a link, use the @RNGSTR function in your @LINK function as follows:

```
@LINK({File_name},@RNGSTR({Range}))
```

{File_name} refers to the name of the external spreadsheet and {Range} is the range of cells in the external spreadsheet to which you are linked.

For example, suppose the spreadsheet contains the following link formula in cell B3:
@LINK(#LABOR,@RNGSTR(E3..E3)). If this formula is copied to the range B4..B6, Enable will produce the following copies:

```
B4:@LINK(#LABOR,@RNGSTR(E4..E4))
B5:@LINK(#LABOR,@RNGSTR(E5..E5))
B6:@LINK(#LABOR,@RNGSTR(E6..E6))
```

Create a File

To create an Enable spreadsheet:

1. From Enable's Main Menu, select **U**se System, **S**preadsheet. The Open File dialog box displays.

2. Enter a new file name. Include a full directory path and a file name extension if necessary. An empty worksheet with row and column borders will display.

Enter Data

Once in a spreadsheet, you can enter data into the cells and manipulate the data for calculations. The numbers, letters, and special characters you can produce on the screen by using the keyboard are collectively called characters. Enter up to 240 characters in a single cell. There are three types of character data:

Labels. Labels are the text used for titles, column headings and row headings. Any cell entry that is not a value or a formula is treated as a label. See also SS:Labels.

Values. Values are the numbers that display in your spreadsheet. All Arabic numerals (0 through 9) and the results of numeric calculations are values. See also SS:Values.

Formulas. Formulas are sets of instructions that perform a logical or mathematical operation. Use mathematical operators (+, -, *, / and **), string operators (&, &+ and &-) and @functions to write formulas. See SS:Formulas and Functions for information on mathematical and string operators and refer to REF2:APP:Functions for a list of @functions.

Defaults

Control the way the spreadsheet environment for all spreadsheets works by setting global profile options, or manually control the spreadsheet environment for the current spreadsheet by accessing the Spreadsheet Environment dialog box.

See REF2:IN:Profiles for complete information on using profiles. The profile contains a list of options for operating the spreadsheet module. The options will apply to each spreadsheet you create.

To override one or more settings in the profile, access the options in the Spreadsheet Environment box.

To display the Spreadsheet Environment box:

1. From the Top Line Menu, select **T**ools, **D**efaults. The Spreadsheet Environment box is displayed. An option is activated if a checkmark displays in front of it.

Options

The Spreadsheet Environment box permits you to adjust the environment in which your spreadsheet will run. The options you select in this dialog box apply to the current spreadsheet only. The dialog box contains the following options:

Center values on decimal point. Values are normally right-aligned. When values are centered in a cell, however, they do not line up on the decimal point. Center values around the decimal point by selecting this option.

Display cell colors. After designing your color display, activate or deactivate the display of special cell colors in the spreadsheet.

Display zero values. Determine how zero values display in the spreadsheet. Normally this option is inactive and all cells containing a zero value are left blank. When this option is active, all zeros are displayed, using the formats specified by you in the Range and Global Format options.

Interruptible recalculation. Interrupt a calculation to enter more data or process new commands. Calculation continues in the background while you enter more data or process commands.

Pointer location on border. Display the pointer location on the border. When this option is active, the pointer position is shown by reversing the video in the column and row borders as shown in Figure 3. When this option is inactive, the border remains solid.

B2:

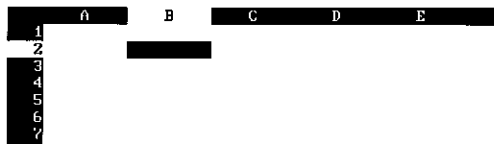


Figure 3: Displaying the pointer location in the border.

Undo last command feature. Activate the Undo Last Command feature and then use the Edit Undo command to undo the last menu action. See also SS:Undo.

Delete

Delete columns, rows, blocks or a level of a three-dimensional spreadsheet to erase unwanted data. Entire rows, columns or levels, including data not currently displayed, will be deleted.

Columns

Delete one or more columns in a spreadsheet. When you delete a range of columns, data contained in the columns is erased and adjacent data is shifted left.

To delete one or more columns:

1. From the Top Line Menu, select **E**dit, **D**elete, **C**olumn.
2. Select the level(s) on which to delete columns:
 - This level.** Delete columns on the current level of the spreadsheet.
 - All levels.** Delete columns on all levels of a 3D spreadsheet.
3. Type or point out the range of the columns you want to delete.

For example, to delete column B, position your pointer anywhere in column B and press **←**. To delete columns E through H, point out any range spanning columns E through H.

Rows

Delete one or more rows in your spreadsheet. When you delete a row, data contained in the row is erased and adjacent data is shifted up.

1. From the Top Line Menu, select **E**dit, **D**elete, **R**ow.
or
Press **Alt/F3**.
2. Select the level(s) on which to delete rows:
This level. Delete rows on the current level of the spreadsheet.
All levels. Delete rows on all levels of a 3D spreadsheet.
3. Type or point out the range of the rows you want to delete.
For example, to delete row 5, position your pointer anywhere in row 5 and press **↵**. To delete rows 10 through 20, point out any range spanning rows 10 through 20.

Blocks

Delete a block of cells on your spreadsheet. You specify whether adjacent data moves up or left.

1. From the Top Line Menu, select **E**dit, **D**elete, **B**lock.
2. Select the direction in which to move adjacent data after the block is deleted:
Up. Move data up after the deletion.
Left. Move data to the left after the deletion.
3. Type or point out the range of the block you want to delete.

Levels

Delete the current level – the level in which the pointer is positioned – in a three-dimensional (3D) spreadsheet:

1. Move the pointer to the level you want to delete.
2. From the Top Line Menu, select **E**dit, **D**elete, **L**evel.
3. Select deletion of the current level or cancellation of the delete action:
Yes. Delete the current level.
No. Cancel the delete and return to the spreadsheet.

Display Options

Display options offer ways to alter the display of your spreadsheet or specific cells in your spreadsheet. See the following topics for descriptions of display features: SS:Colors, SS:Hide, SS:Print:Page Breaks, SS:Split the Display, SS:Three-dimensional View and SS:Titles. See also REF2:IN:Basics:Selecting from Menus.

Edit Options

Edit options are used to organize data within the work area of the spreadsheet. Add new information, make changes to existing data or remove unwanted data. See the following topics for descriptions of edit features: SS:Copy, SS>Delete, SS>Erase, SS>Fill, SS>Insert, SS>Modify, SS>Move, SS>Parse, SS>Transpose, SS>Undo, SS>Value-copy and SS>Window-copy. See also REF2:IN:Clipboard.

Erase

When you erase data in a spreadsheet, Enable eliminates the data and leaves the cell(s) blank. Erase selected areas of a spreadsheet or the entire contents of a spreadsheet.

Cell

The quickest way to delete an unwanted cell entry and replace it with new information is to enter the new data on top of the old. However, if you want to delete data and leave the cell blank:

1. Move the pointer to the cell you want to erase.
2. Press **Space Bar**.
3. Press ↵.

Range

Use the Range Erase option to eliminate the data but preserve the space where the data was entered. Note that any formulas or functions that reference the erased data will be changed. Any features that were applied to cells in the erased range remain intact. For example, the column widths remain the same, formatted cells retain their format, and cells marked for protection keep their protection markers. Each of these features must be removed separately.

To erase a range of data:

1. From the Top Line Menu, select **E**dit, **E**rase, **R**ange.
2. Type or point out the coordinates of a range you want to erase.

Entire Spreadsheet

To erase all data on a spreadsheet, including all format and alignment settings:

1. From the Top Line Menu, select **E**dit, **E**rase, **S**preadsheet.
2. Select erasure or cancellation of erasure:
No. Cancel erasing the data on your spreadsheet.
Yes. Erase the spreadsheet.

Error Messages

Error messages occur when Enable encounters an error that interferes with processing. Usually a beep sounds and a self-explanatory message displays in an error box. Some errors do not interfere with processing. In this case, no beep sounds but an error message, indicating Enable encountered something you should be aware of, such as a circular reference, displays.

Exit

When you exit a spreadsheet, Enable automatically checks to see if data has been changed since the last time the spreadsheet was saved to disk. If data has been modified, you will be prompted to save the changes.

To exit a spreadsheet and return to Enable's Main Menu:

1. Select **F**ile, **E**xit.
2. If Enable detects unsaved changes in the file, it will prompt you to take further action. Select whether or not save the spreadsheet before exiting:
 - Yes.** Save the file and close the window.
 - No.** Close the window without saving any changes.
 - Cancel.** Cancel the exit and return to the spreadsheet.

Export

To use an Enable file with another program you must convert Enable's file format, or "export" the file to another format. Enable exports files to the following formats: Lotus 1-2-3 (releases 1A, 2 and 3), SuperCalc (releases 3, 4 and 5), Excel (releases 2 and 3), Lotus Works, MS Works, ASCII (for DOS and for UNIX) and DIF. See also SS:Save:Save As.

To export a file for use with another software program:

1. From the Top Line Menu select **F**ile, **E**xport.
2. Press **↓** to accept the current directory path and file name.

or

 Enter a new directory path and file name.
3. Select a file format:

LOTUS-123/3	EXCEL 2.X	ASCII
LOTUS-123/2	MS WORKS	ASCII-UNIX FORMAT
LOTUS-123/1A	SUPERCALC 5	DIF
LOTUS WORKS	SUPERCALC 4	
EXCEL 3	SUPERCALC 3	

4. Accept or cancel the export:

Accept. Save the file in the format selected.

Cancel. Void the options and return to the spreadsheet.

If Enable detects another file on disk with the same name, the Replace Existing File path/filename prompt displays. Select one of the following:

Yes. Replace the file on disk with the current file.

No. Redisplay the dialog box so you can enter another file name.

Cancel. Cancel the operation and return to the spreadsheet.

Exports to Lotus 1-2-3, Excel or SuperCalc spreadsheets will save cell contents (values, labels and formatting), formulas where there is exact correspondence of function name, argument and functionality, and associated structures (ranges, range names).

If a formula contains unsupported functions or refers to cells beyond the limits of the spreadsheet format, Enable will save the formula as a label.

Other spreadsheet features will be exported as reasonably feasible.

ASCII

Enable exports to ASCII formats for use in DOS (carriage return/line feed combination ends each line) and for UNIX (line feed ends each line). When a file is exported to ASCII format, all labels and values, as well as the value or label results of formulas are saved.

ASCII format data is saved as a delimited list with a .ASC extension. Column data within a row is separated in the file by the ASCII Import/Export Separator specified in the profile or Settings dialog box. Numeric data is saved using the ASCII Decimal Separator, also specified in the profile or Settings box. Labels are saved enclosed in double or single quotes. See REF2:IN:Settings:ASCII Import/Export Separators for more information.

DIF

Enable exports all labels and values, as well as the value or label results of formulas to a file with a .DIF extension. Numeric data is saved using the Decimal Separator specified in the profile or Settings box. See REF2:IN:Settings:Decimal Separator for more information.

Lotus 1-2-3, Lotus Works and MS Works

When exporting files to Lotus 1-2-3/Version 2, you will be prompted to Convert LICS characters? Enable stores characters in ASCII, while Lotus 1-2-3 uses the Lotus International Character Set (LICS). LICS has 256 codes (labeled 0-255). LICS codes 0-127 are identical to ASCII codes 0-127, but LICS codes 128-255 produce international characters that differ from ASCII codes 128-255. Enable can translate data from ASCII to LICS, except for certain characters that Enable doesn't support. (See the REF2:APP:ASCII Table.) Select **Yes** in response to the prompt to translate LICS characters to ASCII standard characters; otherwise, select **No**.

File Options

Perform tasks with the current spreadsheet file such as printing, saving, combining with another file, executing a macro or exiting altogether using Enable's file options. See the following topics for descriptions of File options: SS:Combine, SS:Exit, SS:Link, SS:Macro, SS:Open, SS:Print, and SS:Save. See also REF2:IN:File Manager.

Fill

A range can be filled incrementally with values or dates.

Values

Use the Edit Fill option to fill a range with numbers that change by a constant. To fill a range with values:

1. From the Top Line Menu, select **E**dit, **F**ill. Enable displays the Fill Options box.
2. At the Range prompt, type or point out the coordinates of a range.
3. Select **N**umbers.
4. Set the criteria for the fill:
 - Start.** Enter the first value for the range.
 - Step.** Enter an increment (positive or negative). For example, type *1* to consecutively increase the first value by one for each cell in the specified range. Or, type *-1* to consecutively decrease the first value by one for each cell in the specified range.
 - Finish.** Enable automatically calculates a finish value based on the information you supplied at the previous prompts.
Press **↵** to accept the finish value.

or

Enter another finish value.
5. Fill the range or cancel the fill:
 - Accept.** Fill the range.
 - Cancel.** Void the fill options and return to the spreadsheet.

Dates

To fill a range with dates:

1. From the Top Line Menu, select **E**dit, **F**ill. Enable displays Fill Options box.
2. At the Range prompt, type or point out the coordinates of a range to be filled.
3. Select a date increment:
 - Days.** Increment the start date by the number of days specified at the step prompt.
 - Weeks.** Increment by seven days for each week you specify.

Weekdays. Increment by the number of weekdays you specify.

Months. Increment by the number of months you specify.

Years. Increment by the number of years you specify.

4. Select the format you will use to enter the date, where MM represents the month of the year (01–12); DD the day of the month (01–31); and YYYY the year (for example, 1992):

MM DD YYYY.

YYYY MM DD.

YYYY DD MM.

5. Set the criteria for the fill:

Start. Enter the first date for the range. Note that the date must be entered in the selected format.

For example, to enter the date January 8, 1992, type *01/08/1992* if you selected the MM DD YYYY format at the previous prompt.

Step. Enter an increment (positive or negative).

For example, to produce a range of dates that are one week apart, select **Weeks** as the date unit and enter *1* as the step value.

Finish. Enable automatically calculates a finish date based on the information supplied at the previous prompts.

Press **↓** to accept the finish date.

or

Type another finish date.

6. Fill the range or cancel the fill:

Accept. Fill the range with date values. While the cells contain date values (notice the Information Display Area), the cells display dates in the Numeric Date data format specified under Settings. See REF2:IN:Settings:Numeric Date Format for more information. You can change the format of the range by using the Range Format menu option.

Cancel. Void the fill and return to the spreadsheet.

Find

Locate, change or delete specific data in a spreadsheet using the Audit Search option. Enable can search for and replace values, labels or strings.

A string is any combination of numbers, letters and special characters. A string can be a function such as @PROD(A1,B3), or a formula such as +H7*2, or a cell macro such as /XGC12~.

Enable also can find strings that are the result of string functions. See REF2:APP:Functions for information on string functions.

When you specify criteria for a search, Enable stores it. This makes it easy to repeat a search or simply edit the criteria to perform a new search. If you have entered new data in a spreadsheet you may need to edit the range to search. When you quit the spreadsheet, Enable clears the search criteria you specified.

Find Only

To find specific data on a spreadsheet:

1. From the Top Line Menu select **A**udit, **S**earch. Enable displays the Search box.
2. Set the criteria for the search:

Data to find. Type the value, label or string that you want to find.

Ignore case. Press **↓** to toggle case sensitivity. If there is a checkmark next to the prompt, Enable will search for all data that matches the specified data regardless of whether the data is entered in upper or lowercase letters. If there is no checkmark next to the option, Enable searches only for data that matches the specified data exactly.

Options. Select **Find only**.

Replace with. Press **↓**.

Range to search. Enable supplies range coordinates that include all data on the spreadsheet. Press **↓** to search all the filled cells in the spreadsheet.

or

Type or point out (Press the **F7** function key.) the coordinates of a smaller range to search.

Search in. Select a search for cells or formulas:

Cells. Search the data that displays in cells.

Formulas. Search the formulas in the spreadsheet.

3. Search the spreadsheet based on your criteria or cancel the search:

Accept. Save the selected options and begin the search.

Cancel. Void the selected options and return to the spreadsheet.

4. Enable moves the pointer to the first entry that matches the specified data and waits for you to press one of the following keys:

F4 Edit the cell entry.

F2 Find the next entry.

Esc Terminate the search.

Find and Replace

To search for specific data in a spreadsheet and replace it with new data, follow the steps under **Find Only**, substituting the responses below for the **Options** and **Replace with** prompts:

Options. Select **Find/Replace**.

Replace with. Type the value, label or string you want Enable to use as the replacement data.

Find and Delete

Use the Find/Replace feature to find and delete data in a spreadsheet. Type a set of double quotes ("") at the Replace with prompt to replace the specified data with an empty cell.

For example, to delete all instances of the label March, type *March* at the prompt Data to find prompt, and type "" at the Replace with prompt.

Wild Cards

Wild cards allow you to search for text in your spreadsheet, even if you do not know the complete text of the label or formula. Substitute a wild card character for the character(s) you do not know when you specify data to find during a search.

Substitute the ? (question mark) wild card for a single, unknown character in the label or formula you are searching for.

For example, at the Data to Find prompt type: *Budget Year 198?* The search will locate all labels whose first fifteen characters are Budget Year 198 and whose last (unknown) character varies from 0 to 9 and a to z.

Substitute the \$ (dollar sign) wild card for multiple unknown characters in the label or formula text you are searching for.

For example, at the Data to Find prompt you might type: *+H7+@sum(\$* The search will locate all formulas whose first nine characters are +H7+@sum(and whose remaining (unknown) characters are variable in number.

Enclose the expression in quotes ("") to search for trailing spaces at the end of a label or formula.

Format

Cells and ranges in a spreadsheet can be formatted for a particular type of display. Even as values in the cells are changed or erased, the format of the cell (i.e. the way data placed in the cell displays) remains constant.

Values can be displayed in several different formats. When you apply a format to a cell, the value in the cell displays with the new format. The original entry continues to display in the Information Display Area along with a format code that shows what format is currently applied and the number of decimal places. For example, the code (F,2) indicates a fixed format value with two decimal places. Enable has eleven display formats:

Fixed. Display values with a fixed decimal point. You specify the number of decimal places to the right (up to 14). The format code is (F,N) where F stands for fixed format and N for the number of decimal places.

Integer. Display values as whole numbers. Decimals round off to the closest whole number. For example, 55.5556 displays as 56. The format code is (I) for integer.

Dollar Sign. Display a dollar sign (\$) in front of the value and place a comma (,) every three digits. You specify the number of decimal places (up to 13). All negative values display in parentheses. For example, -9500 displays as (\$9,500). The format code is (\$,N) where \$ stands for dollar and N is for the number of decimal places.

Comma. Display values by placing a comma (,) every three digits. You specify the number of decimal places (up to 14). All negative values display in parentheses. For example, -123456789 displays as (123,456,789). The format code is (C,N) where C stands for comma format and N is for the number of decimal places.

Percent. Display values as percentages using the percent (%) symbol. Values must be entered as decimals. For example, enter .01 for 1%. You specify the number of decimal places (up to 14). The format code is (%N) where % stands for percent format and N is for the number of decimal places.

Date. Display values as dates. Enter dates as date values. A date can be represented by an integer value which is calculated by counting the number of days since the beginning of the century. (December 31, 1899 is equal to 000001 in integer representation.) For example, the date value for January 27, 1990 is 32899.

Use the @DATE function to convert dates to date values and vice versa. For example, to find the date value for January 27, 1990, enter @date(90,1,27) in a cell. Enable will return the date value 32899. See REF2:APP:Functions for information on @DATE. The format code is (D,n) where D stands for date format and n is for the number or letter of the selected date format.

For example, (D,8) is the Information Display Area notation for date format number eight.

Enable prints slashes, hyphens, dots or spaces as separators for all date formats, except formats 5, 8 and 9. For information on date separators, see SS:Settings, REF2:IN:Profiles:Description of Profile Options:System and REF2:IN:Settings:Numeric Date Format. There are thirteen display formats:

Format:	Display:
1=DD MON YY	27/Jan/90
2=DD MON	27/Jan
3=MON YY	Jan/90
4=YY MM DD	90/01/27
5=YYDDD	90027
6=YYYY MM DD	1990/01/27
7=MM DD YYYY	01/27/1990
8=Month DD, YYYY	January 27, 1990
9=DD Month YYYY	27 January 1990

A=DD MM YY 7/01/90
 B=MM DD YY 01/27/90
 C=DD/MM/YYYY 27/01/1990
 D=MM/YY 01/90
 E=Custom Numeric
 F=Custom Text

If you select the Custom Numeric date format, cells will be formatted as specified in the Settings dialog box. You can override the Settings dialog box and use the profile settings by selecting **No** at the profile prompt: Use standard settings saved with file. See SS:Settings, REF2:IN:Profiles:Description of Profile Options:System and REF2:IN:Settings:Numeric Date Format.

Selecting the Custom Text date will format cells as specified in the Settings dialog box. You can override the Settings dialog box and use the profile settings by selecting **No** at the profile prompt: Use standard settings saved with file. See SS:Settings, REF2:IN:Profiles:Description of Profile Options:System and REF2:IN:Settings:Text Date Format.

Time. Display values as time. Time can be represented by an integer value, which is calculated by counting the number of seconds since midnight, using a twenty-four hour (Military) clock. Use the function @TIME to convert a time to a time value, or vice-versa. See REF2:APP:Functions for more information on @TIME. The format code is (T,n) where T stands for time and n is for the number of the selected time format.

For example, to find the time value for 5:35:10 p.m., enter @time(17,35,10). Military time is required to distinguish between a.m. and p.m. Enable returns the time value 63310.

There are seven display formats for time:

Format (n):	Display:	Type:
1=HM:MM:SS	17:35:10	Military time
2=HH:MM:SS X	5:35:10 P	Standard time
3=DDD HM:MM:SS*	22 2:15:56	Elapsed time (military)
4=DDD HH:MM:SS X*	22 2:15:56 A	Elapsed time (standard)
5=HM:MM	17:35	Military time
6=HH:MM X	5:35 P	Standard time
7=DDD HM:MM*	22 2:15	Elapsed time (military)
8=Custom Time		

*Elapsed time formats are used with the @ETIME function.

Selecting Custom Time will format cells as specified in the Settings dialog box. You can override the Settings dialog box and use the profile settings by selecting **No** at the

profile prompt: Use standard settings saved with file. See SS:Settings, REF2:IN:Profiles:Description of Profile Options:System and REF2:IN:Settings:Time Format.

Scientific. Display values in exponential (or scientific) notation. You can specify the number of decimal places. For example, if three decimal places are specified, the number 128334196 will display as 1.283E+08. The format code is (S,N) where S stands for scientific and N is for the number of decimal places.

General. Display values as entered, suppressing trailing zeroes. For example, 1.20 will display as 1.2. Enable uses this format as the default. Very large and small numbers will display in scientific notation. The format code is (G) for general.

(+/-) Histogram. Display values as pictographs. Enable displays the values as + (plus signs) or - (minus signs). For example, 4 displays as ++++ and -2 displays as --. Zeros display as period (.). The format code is (+).

Label. Enter label text in cells without typing an alignment character first. Any text entered into a label-formatted cell by keyboard or the Fill command will be treated as a label. The format code is (L) for label.

Custom Currency. Select Custom Currency to format cells as specified in the Settings dialog box. You can override the Settings dialog box and use the profile settings by selecting **No** at the profile prompt: Use standard settings saved with file. See SS:Settings, REF2:IN:Profiles:Description of Profile Options:System and REF2:IN:Settings:Currency Format.

Custom Numeric. Select Custom Numeric to format cells as specified in the Settings dialog box. You can override the Settings dialog box and use the profile settings by selecting **No** at the profile prompt: Use standard settings saved with file. See SS:Settings, REF2:IN:Profiles:Description of Profile Options:System and REF2:IN:Settings:Number Format.

Global Format

Specify a format for all cells in the spreadsheet. The global format you select applies to all cells on the spreadsheet except cells formatted using the Range Format option.

To set the global format:

1. From the Top Line Menu, select **L**ayout, **G**lobal, **F**ormat.
2. Select a format. (Refer to the list above.) Depending on the format, you may need to specify the number of decimal places for display.

Format a Range

You may want to apply a different format to various groups or ranges of cells. Range formatting overrides the global format setting.

To format a range:

1. From the Top Line Menu, select **L**ayout, **R**ange, **F**ormat.

2. Select a format. (Refer to the list above.) Depending on the format, you may need to specify the number of decimal places for display.
3. Type or point out the coordinates of the range you want to format.

Reset

To reset a group of cells to the current global format:

1. From the Top Line Menu, select: **L**ayout, **R**ange, **F**ormat, **R**eset.
2. Type or point out the coordinates of the range to reset.

Formulas and Functions

A spreadsheet can do a lot more than display numbers. The real power lies in its ability to manipulate data and instantly recalculate as you make changes to the numbers on the spreadsheet. Use formulas and functions to perform mathematical or logical operations.

Enter a Formula

Perform a calculation based on supplied data or based on data in other cells. When writing a formula, reference cell addresses rather than actual cell data. Should data values change in the cells, the result of the formula will automatically reflect the changes in actual data. (The formula need not be retyped because it contains cell addresses, not data values.) This is what makes the spreadsheet such a powerful and time-saving tool.

For example, the formula $+A1+A2+A3$ adds the values in cells A1, A2 and A3. If new values are entered in these cells, Enable immediately calculates the formula and displays the new result.

Use the mathematical and string operators below to write formulas for calculations:

- + Add (or signify a positive number).
- Subtract (or signify a negative number).
- * Multiply.
- / Divide.
- = Equal.
- () Assign a precedence.
- ** Raise to the power of.
- < Less than.
- <= Less than or equal to.
- > Greater than.
- >= Greater than or equal to.
- <> Not equal to.
- & Concatenate text strings together.

- &+ Concatenate text strings and leave one trailing space in between.
- &- Concatenate text strings and add one trailing space in between.

Enable calculates formulas using standard orders of precedence. Operations in parentheses are always calculated first, followed by exponentiation (**). Operations that use the symbols asterisk (*) and forward slash (/) are calculated before operations that use the plus sign (+) and minus sign (-). For example, the formula $5+2/2$ returns 6, while $(5+2)/2$ returns 3.5. A formula displays as typed in the Information Display Area and its result displays in a cell. If a cell address is used as the first argument in a formula, it must be preceded by a mathematical operator to distinguish the cell address from a label. Some examples follow:

- +B32-10 subtracts 10 from the value in cell B32.
- +A16-A17 subtracts the value in cell A17 from the value in cell A16.
- +C2**3 raises the value in C2 to the power of 3.
- +Income/4 divides the value in the cell named Income by 4. (See SS:Name.)

Enter a Function

You can perform over a hundred simple to very complex calculations using Enable's resident functions. Functions are easy to recognize since they are almost always preceded by an "at" sign (@). The string functions &, &+ and &- are the only exceptions. Enable provides mathematical, trigonometric, logical, statistical, financial, string, date, time, selection, and testing functions. See REF2:APP:Functions for a complete list of Enable's functions.

Most functions require data to perform calculations. The items of data you supply are called arguments and are always enclosed in parentheses. Arguments can be values, cell addresses, formulas, or range names. The @SUM function is one of the most commonly used functions. @SUM adds the arguments enclosed in parentheses. Some examples follow:

- @sum(1,2,5) returns 8.
- @sum(6/(2+1),3) returns 5.
- @sum(a1..a5) adds the values in the range a1..a5.
- @sum(costs) adds the values in a range you previously named costs.
- @sum(price-.25*price,price*.075) calculates a 25% discount on a value in a cell named price and adds 7.5% sales tax.
- @sum(a1..a5,b1..b5,e1..e5) adds the values in the three ranges listed.

Point Out Data for Formulas and Functions

Type cell addresses or point to cells that contain the data for formulas and functions.

For example, the function @ABS(A1) calculates the absolute value of the value in cell A1. You can either type the cell address or point to the cell address while typing the function in a cell. The function @SUM(F5..F9) calculates the sum of the values in the range F5..F9. Either type the range coordinates or point out the range.

To point out cells for a formula:

1. Move the pointer to the cell in which the result of the formula will display.
2. Begin the formula by typing the first mathematical operator.
For example, type $+$. The mathematical operator appears in the Data Entry Area.
3. Use the arrow keys to move the pointer to the cell that contains the first value for the formula. Press the next mathematical operator to select the cell and continue pointing out cells for the formula.
Each time you enter a mathematical operator, the current cell address appears in the Display Entry Area and the pointer returns to the cell in which the formula result will display.
4. Repeat step 3 until you type the entire formula.
5. Press \downarrow to select the last cell for the formula. The result appears in the cell in which you typed the formula. Press the **F4** function key to see your formula.

To point out cells or ranges for a function:

1. Move the pointer to the cell where the result should appear.
2. Type @, the function name and the first parenthesis. For example, type @ABS (or @SUM (.
3. To point out a cell, use the arrow keys to move the pointer to the cell that contains the data for the function. Press \downarrow to select the cell for the formula.

or

To point out a range, use the arrow keys to move the pointer to the beginning of the range. Anchor the pointer by pressing period (.) and stretch it to the end of the range by using the arrow keys. See also SS:Range:Point Out.

4. Type the closing parenthesis and press \downarrow .

Circular References

A circular reference is a formula that refers directly or indirectly to the cell where the formula is typed. For example, if you type: $+A1+1$ in cell A1 of a spreadsheet, you will create a circular reference. Circular references are indirect loops. For example, if cell A1 refers to cell B1, cell B1 in turn refers to cell C1, and cell C1 refers to cell A1, then a circular reference exists.

The existence of a circular reference usually indicates an error in a formula or function. Enable displays the message *Circular reference found* when a circular reference is encountered. The message serves as a warning and will not interfere with calculations. If you notice the message but cannot locate the circular reference, list the circular formulas in the spreadsheet. (See SS:List.) By listing the formulas in the order they are calculated, you can easily locate circular references.

Sometimes circular references are created intentionally. Create a circular reference to perform calculations that depend on an intermediate result. Use Enable's Iterative

Calculation option to specify the number of times each circular formula is calculated. See SS:Calculation:Iterative.

Add Comments to Formulas and Functions

To add a comment to a formula or function on the spreadsheet, simply type two semicolons (;;) after the formula or function and then type the comment. When Enable calculates the formula or function, it ignores all text to the right of the two semicolons. The comment displays in the Information Display Area whenever the pointer rests on the cell where the commented formula is entered.

Three-dimensional (3D) Spreadsheets

Formulas and functions may include data from cells on various levels of a 3D spreadsheet. Simply type the level indicators followed by a colon (:), and the cell address of the argument.

For example, type `+a:c6+c:h7+f:g9` to add the value in level A, cell C6 to the values in level C, cell H7 and level F, cell G9.

To calculate the payment per period of a loan using the function `@PMT`, you need to supply three pieces of data. The cells that contain the principal of the loan, the interest, and the term of the loan may be on different levels of the spreadsheet. For example, a user may enter `@PMT(b:c3,b:c9,d:e6)` in a cell.

A function that requires a target range in which to display its results, such as `@CUMSUM`, is not restricted to one level. For example, type `@cumsum(a:b2..a:b9,b:c2..b:c9)` to calculate the cumulative sum of the values in level A and place the results in level B.

Global Options

Global options affect the appearance of the entire spreadsheet. For example, you can set a number format, an alignment for values and labels, and a column width for the entire spreadsheet. The global settings apply to every cell on the worksheet except those that have Range options applied to them. (Range settings have precedence over global settings.) See the following topics for descriptions of Global options: SS:Align, SS:Format, SS:Protect (Unprotect), and SS:Width.

Graph Options

Enable's Graphics options appear on the spreadsheet Top Line Menu. See REF1:GR for information on all Graphics options.

Hide

Hide data from view using the Hide feature. Hidden data will continue to be stored with the spreadsheet and can be redisplayed later. Hidden data will not print out until it is redisplayed.

Cell or Range

Hide individual cells or selected ranges of data. Hidden data will not display on screen or print.

To hide a cell or range of data:

1. From the Top Line Menu, select **D**isplay, **H**ide, **C**ell.
2. Press \downarrow to hide the cell the pointer is in.

or

Type or point out the coordinates of a range you want to hide. The data in the cell or range will disappear from view. Enable displays the message `HIDDEN CELL` in the Information Display Area when the pointer rests on a hidden cell.

Column

Hide one or more columns of data. The hidden columns will not display on screen or print.

To hide a column of data:

1. From the Top Line Menu, select **D**isplay, **H**ide, **C**olumn.
2. Type or point out a range of columns to hide.
3. Press \downarrow to hide the columns. The column(s) and any data contained therein will disappear from view.

Level

Hide up to 29 levels in a 3D spreadsheet. Hidden levels will not print.

To hide the level in which the pointer rests:

1. Move the pointer to a level.
2. From the Top Line Menu, select **D**isplay, **H**ide, **L**evel.
The level containing the pointer is hidden; the pointer maintains its relative position, but down one level in the spreadsheet.

Only one level can be hidden at a time. To hide a different level, repeat steps 1 and 2.

Redisplay

To redisplay hidden data:

1. From the Top Line Menu, select **D**isplay, **H**ide.
2. Under Reset Hidden, select one of the following:
Cells. Redisplay hidden cells or ranges.
Columns. Redisplay hidden columns.
Levels. Redisplay hidden levels.
3. Press \downarrow to redisplay all hidden cells, ranges, columns, or levels.

or

Type or point out the coordinates of a specific range to redisplay.

4. Press **Ctrl/PgUp** or **Ctrl/PgDn** to view restored levels and **Tab** or **Shift/Tab** to view restored columns.

Highlight

Enable makes it easy to find out how the formulas on a spreadsheet are related. If you are about to change the data in a particular cell, you may want to know what formulas or functions will be affected by the change. Or maybe you received an unexpected result in a cell and need to pinpoint quickly what cells contain the data that produced the result. Use the Highlight option to highlight all cells that refer to a specified cell. Enable will highlight the following types of related cells:

Referenced Cells. Cells that a given cell relies on for its value. For example, in the following list of cell entries, cell B24 relies on (or references) cells B22 and B23 for its value.

B22: 6
B23: 4
B24: +B22+B23

Dependent cells. Cells that are affected when a given cell changes. You can highlight all cells that directly or indirectly depend on the given cell or highlight only cells that directly depend on the given cell. For example, in the following list, cell A2 directly depends on cell A1 for its value while the formula in cell A3 indirectly depends on cell A1 for its value.

A1: 1
A2: +A1+2 (direct)
A3: +A2+3 (indirect)

To highlight related cells:

1. From the Top Line Menu, select **A**udit, **H**ighlight.

2. Select the type of related cell:

Referenced cells.

All. (Dependent cells, both direct and indirect)

Direct. (Dependent cells, direct only)

3. Type or point out the coordinates of the cell whose related cells are to be highlighted.

The total number of related cells displays in the Status Line. The specified cell address remains frozen on screen for easy reference. The cell address and contents of the first highlighted cell display in the Information Display Area.

4. Use the arrow keys to move the pointer through the spreadsheet to view any off-screen, highlighted cells.

or

Press the **F2** function key to step through the dependent cells in the order they are calculated. The cell address and contents of the highlighted cell are displayed in the Information Display Area.

5. Press **Esc** once to use the Highlight option again. At the prompt `Highlight cells related to,` type or point out another cell address.

or

Press **Esc** twice to turn off the Highlight option.

Import

Enable can read (or import) files from other programs which use ASCII, DIF, Enable database, Lotus 1–2–3, Lotus Works, MS Works, SuperCalc, and Excel formats.

To import a file from another program:

1. From Enable's Main Menu, select **Use system, Spreadsheet**. Type the name of the file and its extension at the File Name prompt.

or

From the spreadsheet Top Line Menu, select **File, Open**. See also SS:Open.

Enable automatically recognizes Lotus 1–2–3, SuperCalc, Works and Excel files. For any other format, Enable displays a list of formats—ASCII Delimited, ASCII Text, DIF and Database (Enable's)—that can be imported. Select the correct format to import the file.

Lotus 1–2–3 releases 1A, 2.x, 3.0, SuperCalc releases 3, 4 and 5 and Excel releases 2.x and 3.0 can be imported into Enable.

Imports of Lotus, Excel and SuperCalc formats will bring in cell contents (values, labels, formatting), formulas where there is exact correspondence of function name, argument structure and functionality, and associated structures (ranges, range names).

If a formula contains unsupported functions or refers to cells beyond the bounds of an Enable spreadsheet (1024 columns by 9999 rows to 32 levels), Enable will convert the formula to a label and highlight it for display.

Other spreadsheet features will be imported as reasonably feasible.

ASCII

ASCII format data should be organized as a delimited list. A delimited list consists of rows of data, with each row terminated by a carriage return or line-feed character. Rows may contain column data separated by the ASCII Import Separator specified in the profile or Settings box. The format of numeric data must use the Decimal Separator, also specified in the profile or Settings box. See REF2:IN:Settings:ASCII Import/Export Separator for more information.

Labels that are enclosed in quotes should have a matching quote as a delimiter. For example, "SALES" is a valid format but "SALES' is not. For quotes within quotes, use single quotes

and enclose the entire label in double quotes. Do not use any control characters except the end-of-file character (Ctrl/Z).

DIF

DIF files can be imported into Enable without problem. Numeric data must use the Decimal Separator specified in the profile or Settings box. See REF2:IN:Settings:Decimal Separator for more information.

Lotus 1–2–3, Lotus Works, MS Works

If you import Lotus 1–2–3 files, you will be prompted to convert LICS characters. Select **Yes** to convert any characters from the Lotus International Character Set (LICS) to ASCII standard characters; otherwise, select **No**. See SS:Export for more information on LICS characters.

Lotus 1–2–3 macros can be converted to Enable 3.0 format. See REF2:IN:Profiles for information on converting Lotus 1–2–3 macros.

Insert

Insert new columns, rows, blocks or levels to make room on the spreadsheet for new data.

Columns

You can insert one or more columns in a spreadsheet. When inserting a new column, the column at the current pointer position and all columns to the pointer's right move to the right. For example, if the pointer is in column B, then column B and all the columns to the right will move right to make room for new columns.

To insert one or more columns:

1. Move the pointer to a column.
2. From the Top Line Menu, select **E**dit, **I**nsert, **C**olumn.
3. Select the level(s) in which to insert columns:
 - This level.** Insert new columns in the current level (the level in which the pointer is positioned) only.
 - All levels.** Insert new columns in all levels of a 3D spreadsheet.
4. Enter the number of columns to insert.

Rows

When inserting new rows in a spreadsheet, the row at the current pointer position and all rows below the pointer move down. For example, if the pointer is in row 6, row 6 and all the rows below will move down to make room for new rows.

To insert one or more rows:

1. Move the pointer to a row.
2. From the Top Line Menu, select **E**dit, **I**nsert, **R**ow.

3. Select the levels in which to insert rows:
This level. Insert new rows in the current level (the level in which the pointer is positioned) only.
All levels. Insert new rows in all levels of a 3D spreadsheet.
4. Enter the number of rows to insert.

Blocks

Use the Insert Block option to insert a block of cells on a spreadsheet. You specify whether data is moved down or to the right to make room for the inserted block.

To insert a block of cells:

1. From the Top Line Menu, select **E**dit, **I**nsert, **B**lock.
2. Select the direction in which to move adjacent data after the block is inserted:
Down. Move data down to make room for the new block.
Right. Move data right to make room for the new block.
3. Type or point out the range of the block you want to insert.

Levels

Insert a level in a three-dimensional (3D) spreadsheet:

1. Move the pointer to the level at which you want to insert another level.
2. From the Top Line Menu, select **E**dit, **I**nsert, **L**evel. The new level is inserted, moving data in the current level and all successive levels down one level.

Intersection

Refer to the intersection of a row and column by typing the two range names separated by a pipe (|). See SS:Name for information on naming ranges.

For example, if column D is named **Supplies** and row 15 is named **Quarter4**, use **supplies|quarter4** to refer to the intersection (cell D15).

Labels

A label is any entry on the spreadsheet that does not begin with an ordinal number (0–9), a mathematical operator, or an @function. Use labels to describe the data on a spreadsheet.

To enter a label:

1. Move the pointer to a cell.
2. Type the label. The letters will appear in the Data Entry Area and the Mode Indicator will display the message LABEL.
3. Press **↵** or press an arrow key (**↑**, **↓**, **→**, or **←**) to enter the label in the cell.

Lengthy Labels

Lengthy labels can spill over into the next column. If the adjacent cell is blank, Enable displays the entire entry. However, if the adjacent cell is filled, Enable displays as many characters as possible. To display all of a lengthy label, you may need to change the width of the column.

Correct a Mistake

To correct a mistake while typing a label:

1. Use the **Backspace** key. Do not press ← to back up since arrow keys are used to enter data in a cell.

or

Press **Esc** to cancel the entry.

Add Attributes

If your printer supports attributes, you may want to add boldface, italics, and underlining to labels and numbers. Please note that not all fonts support all attributes. Check your printer manual for information on font capability.

Some attributes require a graphics monitor. If your monitor supports attributes, alter the way the attributes display by changing the special text section of the profile. (See also REF2:IN:Profiles.) The following is a list of available attribute commands:

Alt/B Boldface

Alt/I Italics

Alt/U Underline

Alt/N Normal

The attribute must be applied to the first character in the cell. You can mix attributes in a cell by applying more than one attribute command.

To add attributes to a cell as you type a label:

1. Position the pointer on a cell. Apply one or more attribute commands and type the label.
2. Press ↵, and the data will display in the cell.
Look in the Information Display Area to see the applied attribute(s).
For example, type *Alt/B* to apply boldface. Type the label data. Upon pressing ↵, the data displays in the cell in boldface.

To apply attributes to an existing label in a cell:

1. Move the pointer to a cell containing a label and press the **F4** function key to display the cell contents.
2. Apply one or more of the attribute commands. The contents of the cell now display with the chosen attribute(s).

Remove Attributes

To remove attributes from a label in a cell:

1. Move the pointer to a cell that contains the entry with an attribute.
2. Press the **F4** function key to activate edit mode.
3. Press **Alt/N** and **↵**.

Numbers as Labels

A label that begins with a number must be identified so that Enable will treat it as a label and not as a value. For example, if you enter the label, 1990 Sales Figures, the error message "Missing Operator" will display. See also SS:Format for information on the menu option for label format.

To identify a numeric entry as a label:

1. Press the **Space Bar** immediately before typing the first character of the label.

or

From the Top Line Menu, select **L**ayout, **R**ange, **F**ormat, **L**abel. Type a range to be formatted for labels.

or

Type an alignment character in front of the entry. For example, ^1990 Sales Figures. See SS:Align:Alignment Characters.

ASCII Characters

Include characters from the standard ASCII character set in your labels. See REF2:APP:ASCII Table for a list of ASCII characters and corresponding codes. You must use the numeric keypad to enter ASCII decimal codes.

To enter an ASCII character:

1. Press and hold down the **Alt** key.
2. Type the appropriate ASCII decimal code and press **↵**.

Repeat a Character

Use the **** (backslash) key to repeat a character (or a set of characters), until it fills a cell. For example, typing **\=** in a cell fills it with equal signs. The repeated character(s) will be treated as a label. Use the repeat character with ASCII characters to create boxes and border patterns.

Layout Options

Use Enable's layout features to design the spreadsheet. Specify a format for the values, set column widths, select alignments for values and labels, name a range of cells for easy reference, and protect cells. Layout features are divided into two categories, Range options and Global options. Use the Range options to apply a feature to a specific range of cells. Use

the Global options to specify features for all other cells, excluding the cells that have Range options applied. See the following topics for descriptions of Layout features: SS:Align, SS:Format, SS:Global Options, SS:Name, SS:Protect (Unprotect), SS:Range Options and SS:Width.

Link

Linking is an effective way to consolidate data from several related spreadsheets. Break down large spreadsheets into several small spreadsheets that are faster to load, calculate, and save. When a link is created, Enable obtains a value from an external spreadsheet and displays it in the current spreadsheet. Enable saves the linked value with the current spreadsheet. See also SS: Copy for information on copying links and SS:Formulas and Functions for information on using links in formulas.

Figure 4 shows a sample link between two spreadsheets. The top spreadsheet is a third quarter sales report for the northeast region of a company. It lists the revenue, costs and profit for July, August and September. Total revenues, costs, and profits for the third quarter are entered in column E. The bottom spreadsheet is an annual sales report for all regions. The bottom spreadsheet contains a link to cell E6 of the top spreadsheet. Note that the total revenue of the northeast region displays in cell D5 of the bottom spreadsheet.

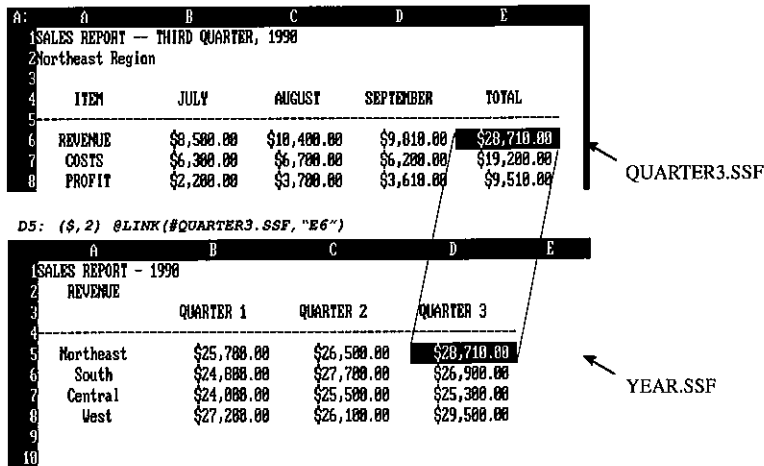


Figure 4: Linked spreadsheets.

Use linking to join one spreadsheet to a number of other spreadsheets. For example, you may create a spreadsheet to calculate a company's sales figures every month and other spreadsheets to calculate quarterly and annual sales figures. The spreadsheet for the annual sales report can link to quarterly spreadsheets and each quarterly spreadsheet can link to monthly spreadsheets. Figure 5 illustrates this hierarchy.

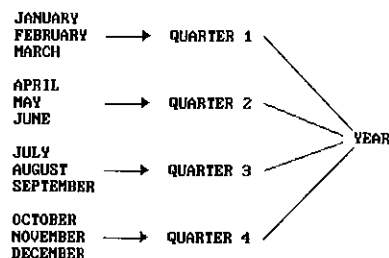


Figure 5: A model of a linking hierarchy.

Create a Link

The concepts of primary and external spreadsheets are essential to understanding how to create a link between two spreadsheets. The primary spreadsheet is the spreadsheet that contains the link formula. This spreadsheet relies on an external spreadsheet to supply the linked data.

The external spreadsheet is the spreadsheet from which the linked value is obtained.

To create a link to another spreadsheet:

1. Type the @LINK function in a cell in the primary spreadsheet using the following format:

@LINK(# {File_name}, "{Cell}")

{File_name} refers to the name of the external spreadsheet, which must be preceded by a # (pound sign). The external spreadsheet must be an Enable spreadsheet in the current format. Include a directory path if it is in a different directory from the primary spreadsheet.

{Cell} refers to the cell in the external spreadsheet you want to link to. You may link to a single cell or the first cell in a range by typing a cell address, range coordinates or a range name. If you specify a range for the link, Enable will create a link to the first cell in the specified range. The cell address, range coordinates, or range name must be enclosed in quotation marks ("").

If you want to create a link to a spreadsheet in an open window, save any changes made to the external file before creating the link. Once a link is created, Enable locks the external spreadsheet and makes it read-only. You can view the spreadsheet on screen, but cannot save any changes until the primary spreadsheet is closed. If you open an external spreadsheet while the primary spreadsheet is open, Enable will display the message Warning: File in use, or is read only. Press any key to continue. Press any key to open the external spreadsheet as a read-only file.

2. After you enter a @LINK function, Enable creates the link. The first time a link is made to an external spreadsheet, Enable displays a box with the prompt: Activate this external link? Select an option:

No. Create an inactive link. You may not want to activate a link until all formulas are entered in the primary spreadsheet, or you might want to create a primary spreadsheet before creating any external spreadsheets. When you select **No**, Enable displays REF in the cells that contain @LINK functions. The REF tag is a reminder that an inactive link exists; the message continues to display until the link is activated.

Yes. Create an active link. The external spreadsheet must exist on the disk before the link can be activated.

Link a Range

Use @EXTCOPY to link to a range in another spreadsheet. When you create a link to a group of cells in an external spreadsheet, Enable creates a separate link for each cell in the specified range.

To create a link to a range of cells in another spreadsheet:

1. Type the @EXTCOPY function in a cell in the primary spreadsheet using the following format:

```
@EXTCOPY(@LINK({File_name},"{CopyRange}"),{TargetRange})
```

{File_name} refers to the name of the external spreadsheet, which must be preceded by a # (pound sign).

{CopyRange} refers to the range of cells in the external spreadsheet you want to link to.

{TargetRange} refers to the range of cells in the primary spreadsheet in which you want to display the values obtained via the link to the external spreadsheet.

For example, @EXTCOPY(@LINK(#QUARTER2.SSF,"E6..E8"),B9..B11) creates links to the cells E6..E8 in a spreadsheet named Quarter2 and displays the values in cells B9..B11 of the current spreadsheet.

Activating and Deactivating Links

After creating several links to the same or various external spreadsheets using the @LINK function, make global or individual links active or inactive at any time using Enable's Link box, shown in Figure 6.

4. Accept or cancel changes made to the Link box:
 - Accept.** Apply any changes made to the links.
 - Cancel.** Void any changes and return to the primary spreadsheet.
 - Reset.** Cancel any changes. The Link box continues to display.

Password Protected Files

If you create a link to a password protected spreadsheet, you will be prompted for the password. If you enter the wrong password, Enable will display the prompt again. After a third input error, Enable creates an inactive link and displays REF in the linked cell.

Enable will repeat the same procedure for each password protected external spreadsheet linked to your primary spreadsheet. If a primary spreadsheet contains links to more than one password protected spreadsheet, you will be prompted for the other passwords.

CONFIG.SYS File

If you have DOS 3.1 or higher, you may need to increase the number of files in your CONFIG.SYS file to use linking. At present you should have a FILES=40 statement in the CONFIG.SYS file. The number of files you may need to add depends on a wide range of factors, such as the number of windows you have open and the number of spreadsheets to which you are linking, but cannot exceed a total of 255 files.

Updating Linked Data

Actively linked data in a spreadsheet is easily updated. (Inactive links do not update until you activate them using the Link box. See SS:Link:Activating and Deactivating Links.) When you open a spreadsheet file that contains @LINK functions, Enable displays a prompt: File contains external links! Update the links?

Select **Yes** to immediately update all cells with active links or select **No** to avoid updating cells with active links. You can update the cells with active links later by pressing **Ctrl/F5**.

Maintaining Links Between Spreadsheets

After linking two spreadsheets, you may want to change the layout of the external spreadsheet and move the linked data to a new location. You will have to change all relevant @LINK functions in the primary spreadsheet to refer them to the new address(es) in the external spreadsheet.

Some planning can avoid editing all @LINK functions should you decide to move data in your external spreadsheet. Create range names in the external spreadsheet for the data that will be linked to a primary spreadsheet. In the primary spreadsheet, use the range names in the @LINK function. The range names will continue to refer to the appropriate data in the external spreadsheet even if the data is moved to a new location. See SS:Name for information on creating range names.

If you rename an external spreadsheet you must open all affected primary spreadsheets and update the name of the external spreadsheet in the Link box. All cells in the primary spreadsheet containing links to the renamed external spreadsheet will be updated automatically to reflect the new name of the external spreadsheet in the @LINK functions.

Linked Data

Linked cells can be included in formulas. For example, the formula `+B8*@LINK(#INCOME.SSF,"C15")` multiplies the value in B8 of the primary spreadsheet by the value in C15 of an external spreadsheet named INCOME.SSF.

The function `@SUM(@LINK(#SALES.SSF,"A1..A4"),D4..D8)` calculates the sum of the values in A1..A4 of an external spreadsheet named SALES.SSF and the values in D4..D8 of the primary spreadsheet.

Dual range functions, such as `@CUMPCT`, `@CUMSUM`, and `@PCT` require a range in which to display the resulting values. For example, the function `@PCT(@LINK(#SALES.SSF,"A1..A4"),B1..B4)` calculates the percentage of values in A1..A4 of an external spreadsheet named SALES.SSF and displays the percentages in B1..B4 of the primary spreadsheet. Values generated by dual range functions will not display or be written to an external spreadsheet. See SS:Link for more information on creating links between spreadsheets.

Combining @LINK Functions

Combine `@LINK` functions with mathematical operators. Some examples are:

```
@LINK(# {File_name}, "{Cell}") + @LINK(# {File_name}, "{Cell}")
```

```
@SUM(@LINK(# {File_name}, "{Range}")) + @SUM(@LINK(# {File_name}, "{Range}"))
```

List

Enable can provide information regarding the status and contents of a spreadsheet. Use the List option to list the formulas, notes and range names in a spreadsheet or to list the status of command settings. Display the list on screen, print it out or store it in a file.

Formulas, Cell Notes, or Range Names

To create a list of formulas, a list of cell notes, or a list of range names:

1. From the Top Line Menu, select **A**udit, **L**ist.
2. Select the type of list you want:
 - Formulas Id-order.** List all formulas in the spreadsheet from the lowest cell to the highest cell. At the Enter range to list prompt, type or point out the coordinates of a range from which all formulas will be listed. The formulas will be listed with corresponding cell addresses.
 - Formulas Calc-order.** Trace the logical flow of the formulas on a spreadsheet. This option is fast because it only lists cells that change during a calculation and is especially helpful for troubleshooting and tracking down circular references since it lists all the formulas in the spreadsheet in the order in which they are calculated. Only formulas that depend on other cells will be listed with the corresponding cell address.

For example, the Calc-order option would not list the function @ABS(4) but it would list the function @ABS(G12). The following is a sample of formulas in calculation order:

R8:+R7*.01

S9:+V6-V7

V13:+V7*V12

V16:+R8/V7

V19:@PMT(S9,V16,V13)

Circular formulas. List formulas that contain circular references.

Notes. List all cell notes on the spreadsheet with corresponding cell addresses.

Range names. List all the range names and corresponding range coordinates.

3. Select a method of viewing the list:

Screen. List the information on screen. Press ↓ to view the entire list and press any other key to exit the list. Mouse users must use the arrow keys to scroll through the list.

Printer. Print the list.

Enable format file. Save the list on disk. Print the list later from Enable's Main Menu.

Table. Range names and corresponding range coordinates can be listed in a columnar table within the spreadsheet. At the Enter table starting cell prompt, type or point out the cell in which the table display will begin.

Status

List information on the status of settings in a spreadsheet. Status information can only be listed on screen and is divided into five categories:

Spreadsheet Environment Settings. Enable indicates which environment settings are active. See SS:Defaults for information on environment settings.

Profile Information. Enable indicates what profile options are active. See REF2:IN:Profiles for information on profile settings.

System Information. Enable indicates how much base and expanded memory is available. Enable also notes the existence of a math coprocessor, and displays the current directory path.

Global Settings. Enable indicates what global settings are active. See SS:Global Options for information on global settings.

Worksheet Information. Enable indicates whether the spreadsheet contains notes, links or circular references. See SS:Notes, SS:Link and SS:Formulas and Functions for more information. Enable also informs you of the last level, column and row on the spreadsheet that contains data.

To list the status information:

1. From the Top Line Menu, select **A**udit, **L**ist, **S**tatus. Enable displays the status information on screen.

Macros

Enable spreadsheet has three levels of macro capability to enable you to build spreadsheet applications that automate routine tasks, provide step-by-step instructions for novice users, and quickly complete simple to complex calculations on data supplied by the user.

First, Enable has the standard cell macros which are created in the cells of a spreadsheet and execute commands only within that spreadsheet. See SS:Macros:Cell Macros.

Enable also provides a macro library facility. Keep all of your frequently used cell macros in a separate macro spreadsheet and access them by using the @MACRO command. See SS:Macros:Macro Library.

Finally, Enable has system macros which allow you to automate tasks across applications – in Word Processing, Database and Spreadsheet. See REF2:IN:Macros for a discussion of system wide macro commands and capabilities.

Cell Macros

Create cell macros in your spreadsheet that begin automatically when you open the spreadsheet or when you press a keystroke combination. Cell macro commands are executed by Enable from top to bottom; hence commands that perform a sequence of actions must be typed in a column. You may have multiple commands in one cell. Cell macros are typed in an area of the spreadsheet that is adjacent to any data.

When typing a macro command in a cell, precede the command with an alignment character such as < or ^ ; do not use a space since it may produce unsatisfactory results. Without the alignment character, Enable interprets the forward slash (/) as the menu key and will display the Top Line Menu. For example, type: ^/XQ.

Minimally, to create and run cell macros, you must name the cell macro's starting point, type macro commands in the spreadsheet and activate the macro. See SS:Macros:Name a Macro, SS:Macros:Activate and SS:Macros:Macro Commands for more information.

Name a Macro

A macro must have a range name before it can be activated.

To name the macro:

1. From the Top Line Menu, select **L**ayout, **R**ange, **N**ame, **C**reate. Enable prompts you to enter a name.
2. To create a macro that can be activated automatically upon accessing the spreadsheet, type: \0.

or

To create a macro that must be activated manually, enter a name that consists of a backslash (\) and a single character. For example, type: \b.

3. Enable prompts you to type or point out a range. Enter the coordinates of the cell that contains the first command of the cell macro.

Activate

If a macro is given the name \0, Enable will begin to execute it as soon as the spreadsheet file is opened. All other names must be activated manually.

Note that spreadsheet macros will only execute while the file containing the macro commands is in the active window. If an automated spreadsheet contains system macro commands that open or go to another window, the macro will pause until you return to the window that contains the macro commands.

To activate a macro manually:

1. Open the spreadsheet that contains the macro.
2. Press **Shift/F9** and then the single character you specified for the macro name. For example, press **Shift/F9 b** to activate a macro named \b.

Macro Commands

Following is a list of cell macro commands in Enable. Variables are enclosed in the curly braces ({ and }); do not type the braces when entering a macro command. If a string variable (usually {Message}) is enclosed in quotes (" and "), remember to place quotes around the directly-entered string (such as "Enter the name of the Lender"), but not around a cell or named range reference (such as D5 or SALES).

Prompt for Keyboard Entry

The /XL and /XN commands display your preset message and cause Enable to wait for data entry from the keyboard. Use the /XL command in applications that require you to enter label text; the /XN command to enter a value. Use the following format:

```
/XL{Message}~{Cell}~
```

```
/XN{Message}~{Cell}~
```

{Message} is the message Enable will display in the Information Display Area as it waits for input from the keyboard.

{Cell} refers to the address of the cell where the input from the keyboard will be placed. You may specify a cell address or a range name. Note that the pointer will not physically move to the specified cell but the data will appear there. If this argument is left blank, Enable will enter the data in the current cell. If you specify a protected cell, Enable will display an error message and the macro will stop.

For example, the spreadsheet in Figure 7 contains the command /XLEnter the name of the Lender:~W3~ (in cell J4). When executing this macro, Enable displays the message ENTER THE NAME OF THE LENDER in the Information Display Area and waits for you to enter label text. After you enter the text and press ↵, Enable places the label text in cell W3.

```

1 DESCRIBE LOAN      CALCULATE    VIEW AMORTIZATION  RESET TABLES
2 Make entries on thisPrepare amortView amortization tabErase the loan a
3 /XLEnter purpose of loan: "R3"
4 /XLEnter name of lender: "M3"
5 /XLEnter amount required for expenditure: "U6"
6 /XLEnter funds to be applied against expenditure: "U7"
7 /XLEnter life of loan in years: "U12"
8 /XLEnter number of payment periods in each year:"U47"(goto)U13"+$U$47*$U$12
9 /XLEnter annual interest rate as a decimal (e.g. .075 for 7.5%): "U15"
10(goto)Q1"/XNJI"/XQ"
    
```

Cell macro commands for the DESCRIBE LOAN option.

Figure 7: Cell macro commands.

User-defined Menu Options

Use the /XM command in applications to create your own menu options. While designing the macro you can include explanatory messages (maximum length of 78 characters) for each menu option. The messages display on the first line beneath the option as you highlight the options by moving the pointer. Use the following format:

/XM{Cell}~

{Cell} is the cell containing the menu option text.

You may create up to eight menu options. The number of characters displayed for each menu option depends on the number of options and the length of the menu option text. Enable displays at least the first nine characters of each option. If you want to select options by pressing the first letter of the option, avoid creating options that begin with the same letter.

Figure 8 shows a spreadsheet application with a list of menu options at the top.

Q	R	S	T	U	V	W
DESCRIBE LOAN CALCULATE VIEW AMORTIZATION RESET TABLES QUIT						
Make entries on this loan table.						
LOAN AMORTIZATION (Fixed Payments)						
PURPOSE:				LENDER:		
EXPENDITURE REQUIRED.....				\$0.00		
AVAILABLE FUNDS.....				\$0.00		
LOAN AMOUNT.....				0.00		
LIFE OF LOAN (years).....				0		
PERIODS (life of loan).....				0		
ANNUAL INTEREST RATE.....				0.00%		
PERIOD INTEREST RATE.....				0.00%		
PAYMENT EACH PERIOD.....				\$0.00		

Figure 8: User-defined menu after selecting DESCRIBE LOAN option.

To design a list of menu options:

1. Type each menu option across a row in separate columns.

2. Type explanatory messages in the row directly below the corresponding options. (Note that the message text can overlap. Press **F4** – edit mode – to view the entire message and make changes.)

or

If no explanatory messages are needed, leave the entire row directly below the options blank.

3. Enter the first command for the first option in the cell directly below the explanatory message.
4. Continue to enter the commands for the first option in consecutive rows of the column.
5. Enter the commands for the remaining options in the same manner under the appropriate menu option.
6. Type `/XM{Cell}~` in a column of cell macro commands to send Enable to the list of menu options.
For example, the spreadsheet in Figure 7 contains the command `/XMJ1~` (in cell J10) which tells Enable to look in cell J1 for the list of menu options. You may specify a cell address or a range name.

Go to Another Cell for Commands

Use the `/XG` command to send Enable to another location for additional macro commands. Enable does not physically move the pointer, but it goes to the specified cell to execute macro commands. Use the format:

`/XG{Cell}~`

{Cell} is the address of the cell you want to go to for processing.

For example, type the command `/XGH11~` to tell Enable to go to cell H11 for further commands.

If-Then Condition

Use the `/XI` command to tell Enable to take an action based on a condition. The condition can be the result of any mathematical or logical formula. Use the format:

`/XI{Condition}~{Action}~`

{Condition} is a formula that sets a condition. If the condition is true, then Enable executes the specified action. If the condition is false, then Enable executes the commands in the cell directly below the `/XI` command.

{Action} refers to the action Enable should take if the condition is met. You can include a command that sends the macro to a new location. Remember that after Enable executes the commands for the true condition, it will continue by executing the keystrokes in the cell directly below the `/XI` command. Often, this cell contains the commands for the false condition. To avoid executing the commands for the false condition too, add a `/XG` (go to) command to the true condition action to direct Enable to other macro commands.

For example, the command `/XIA1<0~Overdrawn~` checks if the value in cell A1 is less than zero; if it is, then the label "Overdrawn" is entered in the current cell.

Execute a Subroutine and Return to the Current Location

The `/XC` command, like the `/XG` command, tells Enable to go to another location to process macro commands. However, `/XC` is paired with the `/XR` command in the execution of subroutines. When the `/XC{Cell}` command is encountered, Enable goes to the specified cell and executes the macro commands there until a `/XR` command is encountered. Then Enable returns to the place where it left off (the cell directly below the cell that contains the `/XC` command) and continues to execute commands. Use the format:

```
/XC{Cell}~
```

```
/XR
```

{Cell} is the address of the cell you want to go to and process commands.

Note that since the `/XR` command returns control to the cell below the `/XC` command, do not enter additional commands in the cell containing the `/XC` command.

Evaluate an Expression

Use `/XE` to evaluate an expression and put the result in a specified cell. (The pointer will not move.) Use the format:

```
/XE{Expression}~{Cell}~
```

{Expression} is any formula or @ function.

{Cell} is the cell address or range name in which the result of the expression will display.

In the following example, if you select Yes in answer to the prompt, Enable will calculate the date in integer format based on the data in cell G6 and put the result in cell H7.

```
/XLDo you want to convert the integer in cell G6 to a date number?~K11~
```

```
/XIK11="y"~XE@DATE(G6)~H7~
```

Quit Macro Execution

Use `/XQ` to tell Enable to stop executing macro commands and return to ready mode. Use the format:

```
/XQ
```

Create an Automated Spreadsheet

Spreadsheets can be automated by using cell macros or Enable's system macro commands or a combination of these commands. See REF2:IN:Macros.

For example, the amortization application shown in Figure 8 contains four options. Figure 7 shows the commands for the first option. Note that all the macro commands are entered in consecutive rows in column J.

{File_name} is the name of the spreadsheet containing the macro library. (Make sure to include the .LIB extension in the file name.) The file name must be preceded by a # (pound sign).

{DisplayCell} refers to the address of the macro label in the macro library. Macros frequently have a label in the cell immediately to the left of the first macro command.

{ExecuteCell} is the address of the macro library cell that contains the macro commands. If a macro doesn't have a label, specify the execute cell twice. For example: @MACRO(#COMMANDS.LIB,"G6,G6")

Enable displays the macro label in the cell where the @MACRO function is entered. The Information Display Area displays the entire @MACRO command.

3. Enable prompts you to activate the link:
Yes. Create an active link.
No. Do not activate the link.
4. Execute the macro in the primary spreadsheet by pressing **Shift/F9 x**, where x is the macro's single-character name.

For example in figure 10, the macro in named range \r in the primary spreadsheet on the left is linked to the COMMANDS.LIB macro library file via the @MACRO command.

A2: (C) @MACRO(#COMMANDS.LIB,"b3,c3")

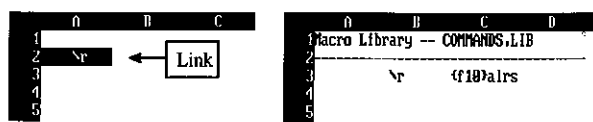


Figure 10 : Linking to a macro library.

Map

The Map feature provides a bird's eye view of the data types in your spreadsheet. When you map a spreadsheet, Enable scans each cell to determine the type of entry (label, value, formula or hidden cell) and assigns a one-character code:

- " Denotes a cell containing a label.
- # Denotes a value.
- + Denotes a formula.
- H Denotes a hidden cell.

An abbreviated version (37 columns on screen) or "map" of your spreadsheet displays with the codes in the cells.

To map a spreadsheet:

1. From the Top Line Menu, select **A**udit, **M**ap, **S**et.

Figure 11 displays a spreadsheet map.

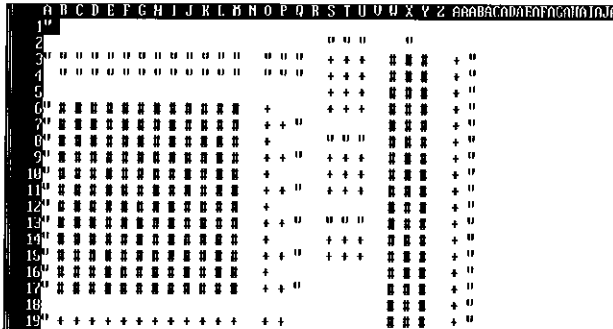


Figure 11: Map of a spreadsheet.

To turn off mapping and return to the normal display of cell data:

1. From the Top Line Menu, select **A**udit, **M**ap, **C**lear.

Modify

Modify the values in a range of cells by a constant. Cells containing formulas will not be affected.

To modify a range of values by a constant:

1. From the Top Line Menu, select **E**dit, **M**odify.
2. Select the method of range modification:
 - Add.** Add the constant to each cell in the range.
 - Subtract.** Subtract the constant.
 - Multiply.** Multiply by the constant.
 - Divide.** Divide by the constant.
3. Enter the coordinates of a range to modify.
4. Enter a constant.

The Modify option is useful for scaling data values in a spreadsheet. For example, multiply a budget spreadsheet containing actual dollar values by .001 to obtain values in thousands of dollars that are easier to work with.

Move

Move a cell or range from one location to another in the spreadsheet. Make certain there is no important data in the range to which data is being moved, since Enable will write over the data. The From and To ranges can overlap when moving multiple-cell data. See also SS:Cell Address.

To move a cell or range of cells:

1. From the Top Line Menu, select **E**dit, **M**ove.
2. At the From prompt, type or point out the coordinates of a cell or range of data to relocate.
3. At the To prompt, type or point out the coordinates of the first cell of the new location.

Formulas that refer to a moved cell are updated to refer to the cell's new address. For example, if you enter the formula +A1+A2 in cell A3 of a spreadsheet and then move the data in cell A1 to cell D3, the formula in cell A3 will automatically change to +D3+A2.

If a formula contains a range that includes a moved cell, the formula still refers to the original range unless you move the entire range to a new location. For example, if you enter the formula @SUM(A1..A4) in a spreadsheet and then move the data in cell A1 to a new location, the formula will not change. The @SUM formula will recalculate, treating the empty cell (A1) as a zero. If, however, you move A1..A4 to D1..D4, the formula will automatically change to @SUM(D1..D4).

Movement

The Spreadsheet has both a cursor and a pointer. The cursor is the flashing underline in the Data Entry Area and is used for entering and editing data. The pointer is the reverse video bar used to move around the spreadsheet cells in the work area. There are many ways to move the pointer around the spreadsheet to position it in a cell for data entry or edit. See also the topic on SS:Protect:Skip Protected Cells.

Go to

Use Enable's "Go to" command to move the pointer to a specific cell or range in the spreadsheet:

1. Press the **F2** function key.
2. Type the coordinates or name of a cell or range.

Manual Scrolling

To manually scroll through the spreadsheet:

1. Press an **Arrow** key (**↑**, **↓**, **→** or **←**) and hold it down until the pointer reaches the edge of the screen. Continue to hold down the arrow key. The cells scroll and sections of the work area that were off-screen become visible.

or

Press the **Scroll Lock** key and an **Arrow** key. The entire spreadsheet scrolls in the direction of the arrow. A SCR message appears in the Status Line when this feature is in use. Press **Scroll Lock** again to deactivate it. The SCR message disappears.

Automatic Scrolling

To scroll through the spreadsheet automatically:

1. Press **Alt/F9** and one of the following keys:

↓	Scroll down by row.
PgDn	Scroll down by page.
↑	Scroll up by row.
PgUp	Scroll up by page.
→	Scroll right one cell.
←	Scroll left one cell.
Ctrl/Break	Stop scrolling.

Moving by Pages

A page consists of the rows and columns that fit on the screen at one time. Move from one page of a spreadsheet to another by pressing the following keys:

PgUp	Move the pointer up one page.
PgDn	Move the pointer down one page.
Tab	Move the pointer one page to the right.
Shift/Tab	Move the pointer one page to the left.

Moving to Corners

To move to the corners of the spreadsheet:

1. Press **Home** to move the pointer to the upper left corner (cell A1).
2. Press **End**, then **Home** to move to the highest cell in the current level of the spreadsheet.

Moving from Side to Side

To move the pointer to the highest or lowest column in the current row:

1. Press the **F2** function key.
2. Press one of the following keys:
 - Move the pointer to the highest column.
 - ← Move the pointer to the lowest column.

Moving to Blocks of Data

You can move between groups of data. The direction the pointer moves (up, down, right, or left) is a result of pressing the corresponding arrow key. When the pointer is in an empty cell, or the last filled cell in a group, it will move to the next filled cell in the direction of the arrow. When the pointer is in the first cell of a group, it will move to the last cell in the block. If there are no filled cells left in the direction of the arrow, the pointer moves to the edge of the spreadsheet.

To move to the beginning or end of a group of data:

1. Press **End**.
2. Press an **Arrow** key.

For example, press **End** → to go to the end of a row of data.

In Three-dimensional (3D) Spreadsheet

In addition to the keystrokes for the two-dimensional (2D) spreadsheet, the following keystrokes provide movement in Enable's three-dimensional (3D) spreadsheet:

Ctrl/PgDn	Go to the next level.
Ctrl/PgUp	Go to the previous level.
Ctrl/Home	Go to level A, cell A1.
Ctrl/End	Go to the last level and last cell that contains data.

To specify a level for the "Go to" command (**F2**) in a 3D spreadsheet, type the level reference followed by a colon (:) and the cell address. For example, press **F2** and type *f:d5* to go to level F, cell D5.

Name

It is useful to give names to cells and ranges in a spreadsheet. Names are easier to remember and therefore convenient for large or frequently used ranges. For example, you may not remember exactly where the interest rate for a loan is entered. Searching for a cell or range is tedious and time consuming, especially if the same information is needed for several calculations. Give the cell or range a name that is easy to recall.

Range names can be used in formulas, in functions, in response to Top Line Menu prompts, from within dialog boxes and with the "Go to" (**F2**) command. Names can be up to 15 characters long.

Avoid using range names that can be mistaken for values or cell addresses. If a range is named 10 or C5, it cannot be used in a formula since Enable will treat the former as a value and the latter as a cell address. Do not use spaces or special characters in range names.

Special characters include the following: ~ ' ! # \$ % ^ & * () _ + - = { } | [] \ : " ; ' ? / , .

Create

To name a range:

1. From the Top Line Menu, select **L**ayout, **R**ange, **N**ame, **C**reate.
2. Enter a descriptive name for the range at the Enter name prompt.
3. Type or point out the coordinates of the range at the Enter range prompt and press ↵.
4. Repeat steps 2 and 3 to name successive ranges on the spreadsheet.

or

Press **Esc** at the Enter name prompt if you do not want to name another range.

Modify

To change the coordinates of a named range:

1. From the Top Line Menu, select **L**ayout, **R**ange, **N**ame, **M**odify.
2. Type the name of the range whose coordinates need to be changed at the Enter name prompt.
3. Type or point out the new range coordinates at the Enter range prompt.
4. Repeat steps 2 and 3 to modify successive range coordinates.

or

Press **Esc** at the Enter name prompt if you do not want to modify range coordinates.

Formulas affected by range modification will be recalculated.

Go to

To quickly go to a named range, press the **F2** function key and type the range name. For example, press **F2** and type *interest* to move the pointer directly to a range named "interest."

Convert Labels to Range Names

Convert a row or column of labels in the spreadsheet to range names that reference an adjacent column or row of data.

To convert a list of labels to range names:

1. From the Top Line Menu, select **L**ayout, **R**ange, **N**ame, **L**abels.
2. Select the position of the adjacent cell:
 - Right.** Use the coordinates of the cell to the right of each label.
 - Down.** Use the cell below each label.
 - Left.** Use the cell to the left of each label.
 - Up.** Use the cell above each label.

3. Type or point out the coordinates of the range that contains the labels.

For example, a spreadsheet may have a list of months in column A. The labels can be used as range names that reference the adjacent values in column B. Then you can use the range name **January** to reference the value for January in column B. The range name **February** can be used to reference the value for February in column B, and so forth.

Delete

To delete a range name:

1. From the Top Line Menu, select **L**ayout, **R**ange, **N**ame.
2. Select all or individual range names in a spreadsheet for deletion:
Delete. Select individual range names for deletion. Enter each name to delete. The data in the range(s) will remain intact. Press **Esc** to deactivate the delete feature.
Reset. Select all range names on the spreadsheet for deletion.
3. Select deletion or cancellation:
Yes. Delete the range name(s).
No. Cancel the deletion of any range name(s).

Notes

Include specific information about a formula or other data in a cell by creating a cell note.


Create

To create a cell note:

1. From the Top Line Menu, select **A**udit, **N**otes. Enable displays a note pad.
or
Press **Ctrl/N**.
2. Enter the text for the note.

Display or Edit

To display or edit a note:

1. Move the pointer to the cell that contains a note. When the pointer rests on a cell containing a note, a note symbol () displays in the Information Display Area.
2. From the Top Line Menu, select **A**udit, **N**otes.
or
Press **Ctrl/N**. Enable displays your note.

Save

To save the currently displayed note:

1. Press **Alt/F10**.

Enable saves the note, clears the note pad from the screen and displays a note symbol (P) in the Information Display Area.

Delete

To delete the currently displayed note:

1. Press **Alt/D**. Enable deletes the note.

Cancel Changes

To exit the note pad without saving any changes:

1. Press **Esc**.

Open

You can open another file while working in your spreadsheet. Open a spreadsheet file in the current level, or open any file type in the current window or in another window.

In Current Level

To open another spreadsheet in the level in which the pointer currently rests:

1. From the Top Line Menu, select **F**ile, **O**pen, **L**evel.
2. Select whether or not data in the file to be opened will replace the current level's data:
 - Yes.** At the Open File dialog box, type a file name or select one from the list. The data in the file displays in the current spreadsheet level.
 - No.** Cancel the file open operation.

In Current Window

To open another spreadsheet and automatically close the current spreadsheet:

1. From the Top Line Menu, select **F**ile, **O**pen, **W**indow.
2. Select whether or not to save the current file before opening a new file:
 - Save current file.** Save the spreadsheet in the current window before replacing it with a new file.
 - Open, no save.** Replace the spreadsheet in the current window with a new file.
3. At the Open File dialog box, select or type the name of an existing file. Enable displays the named file. If you type the name of a non-existent file, Enable creates a new file and displays a blank spreadsheet.

Another Window

Open up to eight windows in Enable. The current file can remain in an open window while you instruct Enable to open a new window for another file. See also REF2:IN:Windows.

To open a new file in another window:

1. From the Top Line Menu, select **T**ools, **W**indows, **O**pen.

or

Press **Alt/Home**.

You will be positioned in Enable's Main Menu. Note the number in the lower left of the screen. It tells you the number of the window.

2. At the Open File dialog box, select or type the name of an existing file. Enable displays the named file. If you type the name of a non-existent file, Enable creates a new file and displays a blank spreadsheet.

Page Preview

Enable's Page Preview feature displays on-screen what your spreadsheet will look like when printed. While you cannot edit the spreadsheet in page preview mode, you can scan it to consider layout improvements before printing.

The accuracy of page preview is dependent on the capabilities of the printer. For example, if the printer does not support bold or italic, the printed spreadsheet will not contain bold or italic, even if those attributes display in page preview. While page preview accurately represents the page layout, it does not display font design.

You must have a printer installed to use page preview.

To use page preview:

1. From the Top Line Menu, select **F**ile, **P**rint, Page **p**review. Page preview will display the spreadsheet beginning with page one.
2. Select an option from the Page Preview Options Menu:
 - Single Page.** Display a single page of the spreadsheet at a time.
 - Facing Pages.** Display two facing pages of the spreadsheet simultaneously.
 - 100%.** Display the spreadsheet at 100% of its actual size.
 - Exit.** Ends page preview mode; returns to customary spreadsheet view.Even-numbered pages will display on the left side of the screen; odd-numbered pages will display on the right side of the screen.
3. Follow the directions on the bottom of the screen to navigate the spreadsheet:
 - Press **F10** to view the Page Preview Options Menu.
 - Press **PgUp** to return to the previous page or partial page.
 - Press **PgDn** to advance to the next page or partial page.
 - Press **Home** to return to the top of the current page, when displaying the spreadsheet at 100%.
 - Press **Ctrl/Home** to go to the beginning of the spreadsheet.
 - Press **Ctrl/End** to go to the end of the spreadsheet.

Scan the rows in your From range to locate a row that more accurately represents the full range of data. Press the **F5** function key to display the next row of data and the **F6** function key to display the previous row.

To modify Enable's approximations, type *C* (character), *N* (number) or *I* (ignore) under the last position of each field. Use →, ←, Tab and Shift/Tab to move among the fields. To automatically approximate the field type and length based on the arrangement of the data in the row selected, press the **F7** function key. Press ↵ or select **Accept** when you are finished.

In Figure 12, the first three fields are character data and will be put into three consecutive columns of labels containing the name, city/state and social security number. The fourth field will go into a separate cell as the number 45000. (The \$ will be omitted since the field is defined as a number.) Notice the empty field (end designated by an I) between the number 45000 and the phone number. Enable will ignore the data from spaces 46 to 50 when parsing any row.

Print

Print the spreadsheet for a comprehensive view of your on-screen data. A printed spreadsheet can be used as a worksheet for further analysis or as a finished report (for example, a budget).

Enable prints as many spreadsheet columns and rows as it can on the first page. If a spreadsheet is too wide to fit on one page, it will print in sections. See REF2:PR:Setup Page Form for information on specifying the length and width of the printout.

Printing starts with the upper left section of the spreadsheet, then moves right to the adjacent section. When Enable finds no more data to the right, it returns to column A, moves down one section and then continues across the spreadsheet as shown in Figure 13. Hidden data will not appear in the printout. See also SS:Page Preview to preview the spreadsheet layout before printing.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1																						
15																						
29																						
33																						
34																						
48																						
62																						
66																						
70																						
84																						
98																						
100																						

Figure 13: Print sections for a wide spreadsheet.

The Enable profile contains information necessary for success in printing spreadsheets. See REF2:IN:Profiles for information on revising, saving and using profiles. At the Current printer prompt in the Hardware section of the profile, designate the printer that you are

using. At the Do you wish to select a Default font? prompt, designate a default font for your printer. The spreadsheet will be printed in the default font. Proportional fonts are not available for spreadsheet. (If you select a proportional font, Enable will select another font – usually pica – for the default.) See REF2:IN:Profiles:Description of Profile Options:Hardware for information on both of the prompts and REF2:PR:Fonts for font information.

When you create a new spreadsheet, Enable automatically assigns the printer and default font specified in the profile to the spreadsheet. When you print, Enable sends data customized for the printer selected. If a printer and default font are not specified in the profile, the Generic Printer and a font (usually pica) will be selected for you. Printing results may vary.

When you are ready to print a spreadsheet, we recommend that you check the hardware and page specification information Enable is using to print your spreadsheet. Make sure the printer selected is the printer you are using.

To access the Hardware Form and select a printer for printing your spreadsheet and/or modify the default font:

1. From the Top Line Menu, select **F**ile, **P**rint, **H**ardware.

or

From the Setup Page Form, press **Tab** to go to the commands at the bottom of the screen. Use the arrow keys to select **Hardware setup**.

Specify the printer you are using, connection verification, the interface type, graph options for print, and the default font. Options set in the Hardware Form can be saved with the spreadsheet for future printings. See REF2:PR:Hardware Form for instructions on completing and saving the Hardware Form.

To access the Setup Page Form and set page specifications for your spreadsheet:

1. From the Top Line Menu, select **F**ile, **P**rint, **S**etup page.

or

From the Hardware Form, press **Tab** to go to the commands at the bottom of the screen. Use the arrow keys to select **Page**.

Specify the number of copies, the range of data to print, the page/margin/spacing sizes, and the page orientation for printing. Options set in the Setup Page Form can be saved with the spreadsheet for future printings. See REF2:PR:Setup Page Form for instructions on completing and saving the Setup Page form.

Print Now

To quickly print a copy of an entire spreadsheet:

1. From the Top Line Menu, select **F**ile, **P**rint, **P**rint now.

or

Press **Alt/F2**.

Cancel Print

To cancel spreadsheet printing:

1. From the Top Line Menu, select **F**ile, **P**rint, **C**ancel.

or

Press **Ctrl/F2**.

Printing will end when the printer's memory buffer is empty of data.

Interrupt Print

To interrupt the printing of a spreadsheet:

1. From the Top Line Menu, select **F**ile, **P**rint, **I**nterrupt.

Resume Print

To resume printing of a spreadsheet that was interrupted:

1. From the Top Line Menu, select **F**ile, **P**rint, **R**esume.

Three-dimensional (3D) Spreadsheets

To preserve the organization of a 3D spreadsheet, Enable will print each level on a separate page. Any hidden levels will not appear in the printout. Print the entire spreadsheet or specify a 3D range to print at the **Print range** prompt in the Print Options box of the Design sheet.

For example, type **a:a3..b:a7** in response to the Print Option box's **Print range** prompt.

Page Breaks

View system-generated and user-defined page breaks or set your own page breaks before printing a spreadsheet. Page breaks set at any one level of a three-dimensional (3D) spreadsheet will govern all other levels.

View Page Breaks

To view system-generated and user-defined page breaks:

1. Select **D**isplay, **P**age breaks from the Top Line Menu.
<< in the column and >> in the row borders denote the position of a system-generated page break. A page break occurs to the left of << in the column border and below the row containing the >> in the row border.
< in the column border and > in the row border denote the position of a user-defined page break. A page break occurs to the left of the < in the column border and below the row containing the > in the row border.

User-Defined Page Breaks

To set your own page breaks:

1. Position your pointer and select **F**ile, **P**rint, **P**age **b**reak, **S**et page break from the Top Line Menu.

The page break will be inserted to the left of the column and above the row in which the pointer was positioned initially.

Clear User-Defined Page Break

To clear a user-defined page break:

1. Position your pointer under the row containing the > and to the right of the column containing the <.
2. From the Top Line Menu, select **F**ile, **P**rint, **P**age **b**reak, **C**lear page break.

Clear All User-Defined Page Breaks

To clear all user-defined page breaks:

1. From the Top Line Menu, select **F**ile, **P**rint, **P**age **b**reak, **C**lear **a**ll page breaks.
System-generated page breaks will determine how pages break for printing.

Ranges, Headers, Footers, Borders and Print Files

Enable has several features to help customize printed spreadsheets. You can print a specific section of the spreadsheet, print a title at the top of each page or print text at the bottom of every page. Include the letters that label the columns and the numbers that label the rows in the printout and even specify your own borders for the printout. Save a file in print format and print it later from Enable's Main Menu.

To customize the printout:

1. From the Top Line Menu, select **F**ile, **P**rint, **D**esign sheet. Enable displays the Print Options box.
2. At the **Print range** prompt:
Press **↓** to print the entire spreadsheet.
or
Type or point out the coordinates of a specific range you want to print.
3. The following prompts are optional. Respond to them or bypass by pressing **↓**.
Header. Print a line of text at the top of every page. Type the text at the **Header** prompt. Headers vary by font up to 150 characters in length.
Footer. Print a line of text at the bottom of every page. Type the text at the **Footer** prompt. Footers vary by font up to 150 characters in length.
Row Borders. Print out a specific range of rows at the top of every page. Enter the coordinates of the range you want to print on each page.

Note that if you have locked horizontal titles, row borders are automatically set. See SS:Titles:Lock Titles.

Blank Lines. Leave blank lines between the row border and the body of the spreadsheet. Enter a number. For example, enter 1 to leave a single blank line between the row border and the rest of the spreadsheet.

Column Borders. Print out a specific range of columns at the left border of every page. Enter the coordinates of the range you want to print on each page.

Note that if you have locked row titles, column borders are automatically set. See SS:Titles:Lock Titles.

- The following prompts are toggles. A checkmark next to the option means that the option is activated. Press **Tab** to bypass them if unwanted.

Row ID border. Print the row numbers on the left of the spreadsheet, as shown in Figure 14.

Column ID border. Print the column letters at the top of the spreadsheet, as shown in Figure 14.

Print to disk. Save to disk a print file that can be printed later from Enable's Main Menu or retrieved in word processing. See REF2:PR:Enable Print Files.

Row ID border

Column ID border

	A	B	C	D	E	F	G	H
1				Hours	—	Biweekly		
2	Name: Clark							
3		05-Jan 88	19-Jan 88	02-Feb 88	16-Feb 88	02-Mar 88	16-Mar 88	30-Mar 88
4	Regular	5	3	12	18	2	8	6
5	Overtime							

Figure 14: A printout with row and column ID borders.

- Save the print options and print:

Save. Save the selected options and return to the spreadsheet.

Print. Save the selected options and immediately print the spreadsheet.

Cancel. Void any selected options and return to the spreadsheet.

Page Numbers and Dates

The page number and today's date can be included as part of a spreadsheet header or footer.

- From the Top Line Menu, select **File**, **Print**, **Design sheet**. Enable displays the Print Options box.
- To print the page number in the header or footer, type a pound sign (#) at the Header or Footer prompt. A page number that is included in the header will override any page numbering set in the Setup Page. See REF2:PR:Setup Page Form.

or

To include today's date, type `%DATE` at the Header or Footer prompt.

For example, to print today's date, a heading and the page number at the top of every spreadsheet page, enter the following at the `Header` prompt:

```
%DATE BEST FINANCIAL SERVICES/ALBANY Page #
```

Noncontiguous Ranges

Noncontiguous ranges can be printed by using range names in the `Print range` prompt in the Spreadsheet Print Design Sheet. You can create as many as 26 different sets of noncontiguous ranges with up to 10 ranges (subsets) in each set.

To print a set of noncontiguous ranges:

1. For each range you want to print, create a range name in the format: `print_range_xn`. `x` represents a set label consisting of any letter from A to Z; `n` a subset label of any number from 0 to 9. See SS:Name for information on creating range names.
2. From the Top Line Menu, select **File, Print, Design sheet**.
3. At the `Print range` prompt, type `print_range_x` (where `x` is any letter from A to Z) to print all the noncontiguous ranges in set `x`.
4. Select **Accept** to begin printing.

Repeat the three steps above for each range you want to print.

For example, you could create the following list of names for noncontiguous ranges in your spreadsheet:

Set:	Range name:	Range Coordinates:
Set A>	<code>print_range_A0</code>	A1..B3
	<code>print_range_A1</code>	C7..H9
	<code>print_range_A2</code>	J3..L7
Set B>	<code>print_range_B0</code>	B4..C6
	<code>print_range_B1</code>	M13..O21
Set C>	<code>print_range_C0</code>	R19..T27
	<code>print_range_C1</code>	P37..R44

Figure 15: List of names for printing noncontiguous ranges.

The ranges listed above are grouped into three sets. Set A contains three noncontiguous ranges (subsets); sets B and C each contain two noncontiguous ranges. Before you can print the ranges in one of the sets, you must tag the set by creating a range name for it. Create a range name with the following format: `print_range_x`, where `x` is a set label containing any letter from A to Z; the coordinates of the range are ignored. (For example, type `print_range_a` to create a tag for Set A.)

Protect

Protect essential data from inadvertent changes and safeguard data before allowing others to use your spreadsheet. The `Protect all cells` option in the profile determines how Enable's protection scheme works. Normally, this option is off and only cells marked for protection are affected by the global protection option. See REF2:IN:Profiles.

Apply Marking

The first step for protecting cells is marking the data to be protected from edit. Mark single cells, ranges or an entire spreadsheet. Once data is marked for protection, a protection marker (P) displays next to the cell entry in the Information Display Area.

To mark data for protection:

1. From the Top Line Menu, select **L**ayout, **R**ange, **P**rotect.
2. Type or point out the coordinates of a single cell or a range that you want to mark for protection.

Data that is only marked for protection can be updated. To fully block any changes to the data, you must activate protection.

Activate Protection

Activate protection to lock all data that has been marked for protection.

To activate protection:

1. From the Top Line Menu, select **L**ayout, **G**lobal, **P**rotect.

Once protection is active, Enable displays the message `Prot` in the Status Line. You can still move the cursor to the protected data; however, changes will not be permitted. If you attempt to make a change to protected data, Enable produces a beep and the message `Protected cell` displays in an error box. A spreadsheet that is saved with protection active, will have protection active when the file is reopened.

Unprotect

To deactivate protection (data remains marked for protection):

1. From the Top Line Menu, select **L**ayout, **G**lobal, **U**nprotect.

Remove Marking

Remove the protection marker (P) from specific data to allow changes to the data while protection is activated.

To remove the protection marker:

1. From the Top Line Menu, select **L**ayout, **R**ange, **U**nprotect.
2. Enter the coordinates of a cell or range.

Skip Protected Cells

Normally, the pointer moves from cell to cell as you cursor around the spreadsheet. By using the skip feature, you can opt to bypass protected cells while moving around the spreadsheet.

To skip protected cells:

1. Press **Alt/F6**.

As you press **arrow** keys (↑, ↓, → or ←) to move around the spreadsheet, the pointer moves to unprotected cells only. If the pointer is next to protected cells, it skips them and moves to the next unprotected cell in the direction of the **arrow** key. Press **Alt/F6** again to turn off the Skip feature.

Lotus 1–2–3 and SuperCalc Protection

Spreadsheet protection is normally off in the Enable profile. If you plan to use files created in Lotus 1–2–3 or SuperCalc, where protection is normally on, change the Enable profile's protection setting. To protect every cell in the spreadsheet, first set protection in the Enable profile to Yes, then activate the global protection option. See REF2:IN:Profiles:Description of Profile Options for information on setting the profile.

Use the Range Unprotect command to specify ranges in which you want to allow changes. Once protection has been removed from specific data, it can be reapplied using the Range Protect command.

Files saved with Lotus-style protection will always be protected this way even if Enable's profile option is changed. Once the profile option is set to **No** again, all new files will use Enable style protection while files with Lotus style protection will continue to use Lotus style protection.

Range

A range is simply a block of cells in the spreadsheet. A range can be as small as one cell or as large as the entire spreadsheet and is always rectangular in shape. Figure 16 shows some examples of ranges. Many of Enable's Top Line Menu options prompt you to enter a range. Type the range coordinates, point out the range or use a range name to respond to the prompt. See also SS:Erase, SS:Fill, SS:Modify, SS:Name and SS:Save for information on how to create and maintain range designations.

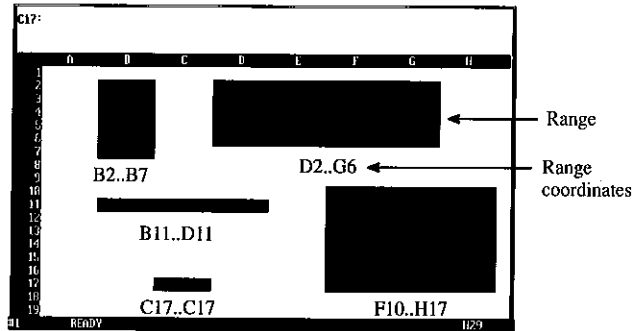


Figure 16: Examples of different ranges on a spreadsheet.

Coordinates

A range is defined by its coordinates. Coordinates can be typed as described here or pointed out in response to Enable’s prompts. The coordinates are the cell address of the upper-left and lower-right corners. Separate the cell addresses with two periods.

For example, the notation D2..G6 means “the range of cells from D2 to G6.”

To specify a 3D range, type the level indicator with the range coordinates.

For example, to specify the range of data shown in Figure 17, type: A:A1. . B:C3

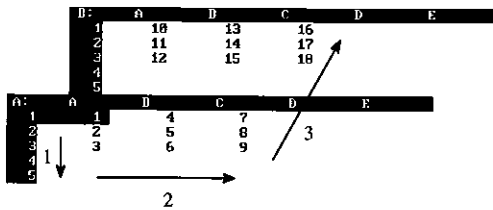


Figure 17: A three-dimensional (3D) range.

Point Out

It is usually quicker to point out a range in response to a request to enter range coordinates than to type range coordinates.

Two-dimensional Range

To point out a range:

1. Using the arrow keys, move the pointer to the first cell in the range.

2. Keyboard users: Press **period** (.) to anchor the pointer. Use the arrow keys to stretch the pointer until it covers the entire range. Press **↵** to accept the range.
 Mouse users: Hold down the left mouse button to anchor the pointer and drag the mouse until the pointer covers the entire range. Release the button to accept the range.

Additionally, you can point out a range from within a dialog box. For example the Fill Options dialog box is shown in Figure 18. Note that the dialog box covers part of the spreadsheet. Press the **F7** function key at the Range prompt to display the entire spreadsheet. Follow steps 1 and 2 above to point out the range. The dialog box redisplay after you accept the range.

SPREADSHEET FILL OPTIONS

Range: A1..B15
[F7 to point]

<p style="text-align: center;">UNITS</p> <ul style="list-style-type: none"> * Numbers <input type="radio"/> Days <input type="radio"/> Weeks <input checked="" type="radio"/> Weeks <input type="radio"/> Months <input type="radio"/> Years 	<p style="text-align: center;">DATE INPUT FORMATS</p> <ul style="list-style-type: none"> * MM DD YYYY <input type="radio"/> YYYY MM DD <input type="radio"/> YYYY DD MM
<p>Start: 0 Step: 1 Finish: 29</p>	

[Accept] [Cancel]

Figure 18: Press **F7** to point out a range from within a dialog box.

Three-dimensional (3D) Range

A range that includes cells from more than one level is called a three-dimensional (3D) range. When you enter a range as part of a formula, a command, a function, or a range name, Enable assumes the range is in the current level, unless you specify otherwise.

To point out a three-dimensional (3D) range:

1. Using the arrow keys, position the pointer in the spreadsheet.
2. Press **period** (.) to anchor the pointer.
3. Stretch the pointer using the arrow keys to cover the rest of the range.
4. Press **Ctrl/Pgdn** for each level you want to include in the 3D range.
 Mouse users must also use the keyboard to point out 3D ranges.

Range Options

Range options affect the appearance of specific data on the spreadsheet. For example, you can set a number format, an alignment for values and labels, a column width for a particular

range of data or name a range for easy reference. Mark cells for protection using the Range Protect option and then turn protection on and off for the marked cells using the Global options. See the following topics for descriptions of Range options: SS:Align, SS:Format, SS:Name, SS:Protect (Unprotect) and SS:Width.

Revise a File

To revise an Enable spreadsheet:

1. From Enable's Main Menu, select **U**se System, **S**preadsheet. The Open File dialog box displays.
2. Type or select from the list the name of an existing file. Your spreadsheet will display.

Save

It is a good idea to save your spreadsheet periodically while working. Save an entire spreadsheet under the current name or under a new name; convert a file to another format (export) or save a specific part of a spreadsheet. See also SS:Export.

Quick Save

To save the entire spreadsheet under the current name:

1. From the Top Line Menu, select **F**ile, **S**ave.
or
Press **Alt/F10**.

Save As

If you plan to use a spreadsheet in an earlier version of Enable, or save just a range of data, save the spreadsheet using the File Save As option.

To specify save options for the spreadsheet:

1. From the Top Line Menu, select **F**ile, **S**ave **a**s.
2. Press **↓** to accept the current file name and directory path.
or
Type a new file name and/or directory path. We recommend entering a new file name so that the original version of the file remains intact.
3. Select one of the following Enable formats:
ENABLE 4.5 3D. Save an entire 2D or all levels of a 3D spreadsheet in 4.5 format.
ENABLE 4.5 2D. Save the current level of a spreadsheet in 4.5 format.
ENABLE/OA 4.0 3D. Save an entire 2D or all levels of a 3D spreadsheet in 4.0 format.
ENABLE/OA 4.0 2D. Save the current level of a spreadsheet in 4.0 format.

ENABLE/OA 3.0 3D. Save an entire 2D or all levels of a 3D spreadsheet in 3.0 format.

ENABLE/OA 3.0 2D. Save the current level of a spreadsheet in 3.0 format.

ENABLE 2.15/2.0. Save the current level of a spreadsheet in 2.15 or 2.0 format.

4. Save the entire file or just a block:

Entire file. Save the entire spreadsheet.

Block. Save a portion of the spreadsheet. Enter the coordinates of a range or press the **F7** function key to point out a range. Blocks defined starting on a lower level will be moved up to level A when saved.

For example, if you select a range in level B for saving, it will be moved up to level A when saved. If you select a range in levels B and C, it will be saved to levels A and B.

5. Save or exit the save process:

Accept. Accept the save options selected and begin the save.

Cancel. Cancel the save operation.

If Enable detects another file with the same name, the prompt `Replace existing file:filename` displays. Select an option:

Yes. Replace the file on disk with the current file.

No. Display the Save As dialog box in which you can enter another file name.

Cancel. Cancel the save and return to the spreadsheet.

If you rename the file, and choose to save the entire file in the current Enable format, the prompt `Display drive:\directory\filename` in current window displays. Select **Yes** to display the renamed file in the active window; select **No** to continue working in the original file.

Template

By saving everything in the spreadsheet except the data, you can create a model or template for later spreadsheets. The skeleton spreadsheet will retain all the formulas, labels, column widths, cell formats and range names.

To save a spreadsheet as a template:

1. From the Top Line Menu, select **F**ile, **S**ave **A**s.
2. Enter a new file name and/or directory path.

or

Press **↵** to accept the current file name and directory path.

3. Select **Enable Template** for the format.
4. Select **Entire File** for the range.
5. Select **Accept**. Enable saves the template of your spreadsheet with a .SST file extension. For example, if you save the finance.ssf spreadsheet as a template, the template file will be named finance.sst.

Backup Copy

Use the backup feature to automatically make a backup copy of your spreadsheet as you work. You can return to the previous version of a file at any time.

Each time you save a file, Enable renames the current file on disk, replacing the third letter of the .SSF extension with an at sign (@).

Activate the spreadsheet backup feature by setting the backup option in the Enable profile:

1. At the Backup existing spreadsheet files when saving prompt, select **Yes** to make backups. See REF2:IN:Profiles:Description of Profile Options. For example, if the backup feature is activated and you save a spreadsheet named SAMPLE.SSF, the backup will be named SAMPLE.SS@.

Search

Locate, change or delete specific data in a spreadsheet using the Audit Search option. Enable can search for and replace values, labels or strings. See SS:Find for complete information.

Settings

Override system-wide profile options that specify Unit measurement (English or Metric), Decimal Separator (period or comma), Number, Currency, Time, Numeric Date and Text Date Formats as well as ASCII Import/Export Separator (period or semicolon) and Decimal Separator (period or comma).

To access the Settings dialog box:

1. From the Top Line Menu, select **T**ools, Settings.
For information on completing all prompts in the dialog box, see REF2:IN:Settings. See also SS:Format.
2. Select **Accept** to accept options for the current session or window.

Sort

Rearrange data in a spreadsheet by sorting the data. Perform a row sort which changes the order of row data by sorting a column of data. Perform a column sort which changes the order of columnar data by sorting on the contents of a row.

When sorting, Enable performs an ascending sort in the following order:

Values are sorted first from the most negative to the most positive. Formulas in the key range (primary and/or secondary) are sorted by their current results and treated as values.

Formulas outside the sort range that refer to sorted cells will continue to reference the same cell addresses. Therefore formula results vary because the values in the cells have changed due to sorting. Formulas within the sort range are sorted and moved to

their new locations; cell addresses in the sorted formulas adjust according to the rules of copying relative and/or absolute cells or ranges. See SS:Cell Address for more information.

Labels are sorted alphabetically. Uppercase letters are sorted before lowercase letters. If the spreadsheet contains numbers that have been converted to labels using alignment characters, Enable uses the number, not the alignment character for the sort. The number will be treated as a label and not as a value.

Non-alphanumeric characters and special characters are sorted last according to the ASCII character chart. See REF2:APP:ASCII Table.

Enable performs a descending sort by sorting values from the most positive to the most negative; labels from Z to A; and non-alphanumeric characters and special characters in reverse order, according to the ASCII character chart.

To sort data:

1. From the Top Line Menu, select **T**ools, **S**ort. Enable displays the Sort box.

2. Select the criteria for the sort:

Sort range. Type or point out the coordinates of the range of data to sort.

Sort order. Select whether to sort rows or columns:

Row key. Sort a row of data to reorder columns.

Column key. Sort a column of data to reorder rows.

Primary key. Type the address of any cell in the row or column that Enable will use as the initial criterion to sort the data.

For example, enter a1..a1 to base the sort on the contents of column A (row sort) or to base the sort on the contents of row 1 (column sort).

Order. Select the sort order:

Ascending. Sort the data in the row or column as specified by the primary key in increasing order.

Descending. Sort the data in the row or column as specified by the primary key in decreasing order.

Secondary key. Type or point out the address of any cell in the row or column Enable will use as the secondary criterion for sorting data. If sorting on the primary key is sufficient, leave this prompt blank.

Order. If you select a secondary key, you must select an order:

Ascending. Sort the data in the row or column as specified by the secondary key in increasing order.

Descending. Sort the data in the row or column as specified by the secondary key in decreasing order.

3. Activate or cancel the sort:

Accept. Sort the data according to the specified criteria.

Cancel. Void the specified criteria and return to the spreadsheet.

For example, the unsorted spreadsheet in Figure 19 keeps track of sales personnel and annual sales figures.

	A	B	C
1	Annual Sales		
2			
3	Last	First	Sales
4			
5	O'Brien	Margaret	70,000
6	Smith	Kevin	85,000
7	Carrone	Steve	90,000
8	Latsch	John	100,000
9	Smith	Andrew	100,000
10	Jenkins	Connie	85,000
11	O'Brien	Helen	100,000
12	Quinn	Nelly	120,000
13			

← Sort Range

Figure 19: Spreadsheet before sorting.

Let's order the rows by ascending last name by performing a column sort on the column named "Last." The Sort box responses are shown below in figure 20.

SPREADSHEET SORT OPTIONS

Sort range: A5..C12
[F7 to point]

Sort order: Row key Column key

Primary key: A5..A12
[F7 to point]

Order: Ascending Descending

Secondary key: B5..B12
[F7 to point]

Order: Ascending Descending

[Accept] [Cancel]

Figure 20: Sort dialog box.

The sort range is A5..C12. Select **Column key** since we are sorting column A. Type the address of any cell in column A at the **Primary key** prompt. Select **Ascending** order. Type B5..B5 at the secondary prompt to further order the rows by ascending first name. Select **Ascending** order and activate the sort by selecting **Accept**.

The result of a spreadsheet sort is shown in Figure 21.

	A	B	C
1	Annual Sales		
2			
3	Last	First	Sales
4			
5	Carrone	Steve	90,000
6	Jenkins	Connie	85,000
7	Latsch	John	100,000
8	O'Brien	Helen	100,000
9	O'Brien	Margaret	70,000
10	Quinn	Kelly	120,000
11	Smith	Andrew	100,000
12	Smith	Kevin	85,000
13			

Primary key Secondary key
 Ascending ascending
 Order Order

Figure 21: Spreadsheet sorted by last name and first name.

Split the Display

Split the spreadsheet display to view two sections of the spreadsheet at the same time. Enable splits the display immediately above the current pointer position or just to the left of the current pointer position depending on whether you select a horizontal or vertical split.

Horizontal and Vertical Splits

To split the display:

1. Position the pointer in the row or column at which you want to split the spreadsheet.
2. From the Top Line Menu, select **D**isplay, **S**plit.
3. Select the split type:
 - Horizontal.** Split the screen horizontally above the current pointer position.
 - Vertical.** Split the screen vertically to the left of the current pointer position.

To move between the two parts of the split display, press **F6**.

Synchronized and Unsynchronized Scrolling

Upon splitting the spreadsheet display, the two parts of the split display will scroll in a synchronized manner. As the pointer moves across a horizontally split spreadsheet, both parts scroll left and right together. If the spreadsheet is split vertically, both parts scroll up and down together.

To invoke unsynchronized scrolling:

1. From the Top Line Menu, select **D**isplay, **S**plit, **U**nsynchronize.

As the pointer moves across a horizontally or vertically split spreadsheet, the data on the other side of the split screen remains the same.

To make the two parts of the split display scroll simultaneously again:

1. From the Top Line Menu, select **D**isplay, **S**plit, **S**ynchronize.

Reset

To remove the split screen display of your spreadsheet:

1. From the Top Line Menu, select **D**isplay, **S**plit, **C**lear.

Three-Dimensional (3D) View

You can build a spreadsheet with up to thirty-two levels. Three levels of a three-dimensional (3D) spreadsheet can be displayed simultaneously. See also SS:Formulas and Functions for information on using 3D formulas.

Activate

To activate the 3D View feature:

1. From the Top Line Menu, select **D**isplay, **3**D View.

or

Press **F9 3**

3D View will display the level in which the pointer is located plus the next two levels. For example, if the pointer is in level A when 3D View is activated, Enable displays levels A, B, and C. The pointer will remain in level A.

Move to Other Levels

To move the pointer to different levels in a 3D View:

1. Press **F6** to move the pointer between the three levels currently displayed on-screen.

or

Press **Ctrl/PgDn** to display the next level as the top level and press **Ctrl/PgUp** to display the previous level as the top level.

In the Information Display Area, the level indicator prefixing the cell address changes as you move from level to level.

Order of Operation

When processing Top Line Menu options and functions in a 3D spreadsheet, Enable proceeds down a column, across a row, and then down a level.

Following the example in Figure 22, Enable would execute the Edit Fill command starting in column A and work down the column until the end of the specified range is reached. Then Enable would move right to column B and work down the column; this would be repeated for column C. After the entire range in level A is filled, Enable would move down to level B and repeat the same procedure, starting in the first column and row of the specified range.

Keep this order of operation in mind when you specify ranges for Enable's commands and functions.

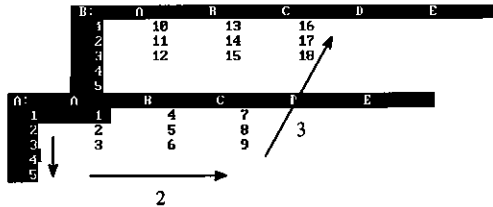


Figure 22: Using Edit Fill to illustrate a 3D range and the order of operation.

Top Line Menu

Access the Top Line Menu from any level under 3D View.

Top Line Menu Options that Affect all Levels

Some Top Line Menu options affect all levels of the spreadsheet. All Global options (Format, Align, Width, Protect, Unprotect), Range Width, Audit options List, Highlight, Map and Calculate, and the Display options Titles and Split act upon all levels.

The Global Width option, for example, sets the current column width for all levels; if column A is 12 characters wide in one level, then column A is 12 characters wide in all levels.

Top Line Menu Options that Work with 3D Ranges

All of the Layout Range options, some Edit options (Copy, Value-copy, Parse, Window-copy, Insert, Delete, Erase, Fill, Modify), and the Audit Search option work with 3D ranges.

For example, suppose you are setting up the 3D spreadsheet in Figure 23. You could use level A (a two-dimensional range) as a template and copy it to the three levels below. To copy the template:

1. From the Top Line Menu, select **E**dit, **C**opy.
2. To point out the From range, move the pointer to cell A3 in level A and press **period** (.) to anchor the pointer. Then move the pointer to cell C5 and press **↵**.
3. To point out the To range, press **Ctrl/PgDn** to move down to the next level. Press **period** (.) to anchor the pointer in B:A3 and press **Ctrl/PgDn** twice to move down two levels. Press **↵**.

You can also use the Edit Copy option to make copies of a 3D range. (Type or point out a 3D range at the From range prompt.)

	1989	1998
Personnel	300,000	300,000
Supplies		

	1989	1998
Personnel	150,000	150,000
Supplies		

	1989	1998
Personnel	200,000	200,000
Supplies		

	1989	1998
Personnel	650,000	650,000
Supplies		1998

Figure 23: Using the first level as a template.

Titles

Spreadsheets often have column and row labels, or titles. You can lock the titles so they remain fixed on screen as the pointer moves around to other areas of the spreadsheet. Once the titles are locked, the pointer is barred from the locked area.

Position the pointer below the row containing titles and/or to the right of the column containing titles you want to lock before selecting the Titles option. Once you select the Titles option, Enable locks all rows above the current pointer position and/or all columns to the left of the current pointer position.

Lock Titles

To lock titles:

1. Move the pointer to the appropriate position. To lock a row of titles, position the pointer below the row. To lock a column of titles, position the pointer to the right of the column.
2. From the Top Line Menu, select **D**isplay, **T**itles.
3. Select whether you want to lock a row, column or both:
 - Horizontal.** Lock all rows above the current pointer position.
 - Vertical.** Lock all columns to the left of the current pointer position.
 - Both.** Simultaneously lock all rows above and all columns to the left of the current pointer position.

For example, in Figure 24 rows 1, 2, and 3 of the spreadsheet are locked and don't scroll off screen as the pointer moves down the spreadsheet. Note that rows 4 through 37 have scrolled past.

	A	B	C	D
1			SNACKS	
2		Popcorn	Cashews	Trail Mix
3	Pounds			
38	8.75	\$7.07	\$7.07	\$6.36
39	9	\$8.09	\$7.27	\$6.54
40	9.25	\$8.32	\$7.48	\$6.72
41	9.5	\$8.54	\$7.68	\$6.90
42	9.75	\$8.77	\$7.88	\$7.08
43	10	\$8.99	\$8.08	\$7.27
44	10.25	\$9.21	\$8.28	\$7.45
45	10.5	\$9.44	\$8.49	\$7.63
46	10.75	\$9.66	\$8.69	\$7.81
47	11	\$9.89	\$8.89	\$7.99
48	11.25	\$10.11	\$9.09	\$8.17
49	11.5	\$10.34	\$9.29	\$8.36
50	11.75	\$10.56	\$9.50	\$8.54

} Frozen rows

↓ ↓ ↓ ↓ ↓

Figure 24: A spreadsheet with locked row titles.

Unlock Titles

To unlock titles so that the spreadsheet scrolls normally and you can put your pointer in a title area:

1. From the Top Line Menu, select **D**isplay, **T**itles, **C**lear.

Titles in a Split Display

To use locked titles in both sections of a split display, lock the titles before splitting the spreadsheet.

Print

The locked titles will print as borders (or headings) on each page of a printed spreadsheet. To eliminate the borders, be sure to unlock the titles before printing.

Tools Options

Use the Tools options to access Enable's system-wide utilities. See SS:Sort to sort data in a spreadsheet, SS:Defaults to change the spreadsheet's default environment settings and SS:Settings to select international units of measurement. See also REF2:IN:Accessories to activate desktop accessories and REF2:IN:Windows to take advantage of Enable's window capabilities which include the ability to invoke the operating system in a window.

Top Line Menu

All of Enable's spreadsheet options can be accessed from the Top Line Menu. The Top Line Menu is accessible from any level of a three-dimensional (3D) spreadsheet. See SS:Three-dimensional View for more information on top line menu options under 3D.

Activate

To activate the Top Line Menu:

1. Press **F10**.

or

Press / (forward slash).

or

Mouse users can click on the F10 at the top of the window border.

Menu Overview

Below is a list of the Top Line Menu options available in spreadsheet:

File options. Perform tasks with the current file such as print, save the file in its current format, save the file to a new format, execute macros, and exit. See SS:File Options.

Layout options. Set up and design your spreadsheet. There are two types of layout options – Global and Range. Range options apply to an individual group (or range) of cells that you specify. Global options apply to the entire spreadsheet. See SS:Layout Options.

Edit options. Reorganize, add new information, make changes to existing data or remove unwanted data. See SS>Edit Options.

Display options. Easily analyze, compare and present data by changing the screen display. See SS:Display Options.

Audit options. Navigate data in your spreadsheet, track down problems, and troubleshoot errors. See SS:Audit Options.

Tools options. Sort your spreadsheet, set the spreadsheet environment and international measurement units. Access Enable's Window capabilities and desktop accessories. See SS:Tools Options.

Graph options. Represent data from a spreadsheet in a graph. See RBF1:GR for information on creating graphs from spreadsheet and database data.

Transpose

Use the Transpose feature to switch row data to a columnar orientation and to switch columnar data to a row orientation.

To transpose columns and rows:

1. From the Top Line Menu, select **E**dit, **T**ranspose.
2. At the **F**rom prompt, type or point out the range of data to be transposed.
3. At the **T**o prompt, type or point out the first cell of the range in which you want the transposed data to display. The From and To ranges cannot overlap.

For example, Figure 25 shows spreadsheet data arranged in two rows.

A1: Admin

	A	B	C	D	E	F	G
1	Admin	Legal	QC	Personnel	Sales		
2	588	678	348	268	428		

Figure 25: Spreadsheet data arranged in rows.

To transpose the rows in Figure 25 to columns (Figure 26), type `A1..E2` at the **From** prompt and `A3` at the **To** prompt.

	A	B	C	D	E	F	G
1	Admin	588					
2	Legal	678					
3	QC	348					
4	Personnel	268					
5	Sales	428					

Figure 26: Rows transposed to columns.

Undo

The Undo feature allows you to undo the last data modifying commands applied to a spreadsheet. File Combine, Tools Sort and all commands under the Top Line Menu option Edit can be undone. Modifications to individual cells can also be undone.

Deleted Data

When a cell entry is changed, its original value is stored. You can recall the previous data at any time and place it in the same location or a new location.

To recall the previous cell contents:

1. Position your pointer in the cell in which you want to display the data.
2. From the Top Line Menu, select **E**dit, **U**ndo.

or

Press **F9 U**

Last Command

The Undo Last Command feature will undo the last actions taken by File Combine, Tools Sort, and the Copy, Value-copy, Move, Window-copy, Delete, Fill, Transpose and Modify commands under the Top Line Menu option Edit.

To activate the Undo Last Command feature:

1. From the Top Line Menu, select **T**ools, **D**efaults.
Enable displays the Spreadsheet Environment box.
2. Activate the Undo Last Command feature by selecting **U**ndo **L**ast **C**ommand **F**eature. (A check mark displays next to the option when activated.)

3. Select **Accept** to set the Undo Last Command feature.

To undo the last command:

1. Undo the last command by selecting **Edit, Undo** from the Top Line Menu.

Enable will warn you if you attempt to make a change that cannot be undone. For example, if you attempt to erase several pages of data, Enable assesses whether or not there is room to store the data. If there is not enough room, Enable displays a warning and asks whether or not to proceed with the erasure.

Value-copy

Copy labels and numbers to a new location using Value-copy. Value-copy copies only the values produced by formulas and functions; it does not copy the formulas and functions. Compare that to the Copy option which copies the actual formulas and functions as they were typed in the spreadsheet. See also SS:Copy and SS:Move.

To copy only the results of formulas or functions:

1. From the Top Line Menu, select **Edit, Value-copy**.
2. At the From prompt, type the range that contains the values to copy.
3. At the To prompt, type the range to which you want to copy the values.

Values

Values include all the Arabic numerals (0 through 9) and the results of numerical calculations. In spreadsheets, values must always be entered without formats. Do not type a dollar sign (\$), a percent sign (%), or a comma (,) while entering a value.

For example, type 1000, not \$1,000. To format cells to enhance the display of values, see the topic on SS:Format.

To enter a value:

1. Move the pointer to a cell.
2. Type the value. The numbers will appear in the Data Entry Area and the Mode Indicator will display the message VALUE.
3. Press ↵ to place the value in the cell.

Correct a Mistake

To correct a mistake while typing a value:

1. Use the **Backspace** key. Do not press ← to back up since arrow keys are used to enter data in a cell.

or

Press **Esc** to cancel the entry.

Numeric Keypad

If you do a lot of number-crunching, you are accustomed to entering numbers with one hand using a calculator-style keypad. In Enable, you can press and hold down the **Shift** key to use the numeric keypad for a few keystrokes, or use the numeric keypad in calculator style for heavy data entry.

To use the computer's numeric keypad:

1. Press **Num Lock**. NUM will appear in the Status Line.
When Num Lock is active, press the **Shift** key to use the Arrow keys.
2. Press **Num Lock** again to disengage the numeric keypad.

Asterisks

Some formatted values may display as a string of asterisks indicating the cell is not wide enough to display the value in the selected format. See SS:Width to widen the columns that contain asterisks to display the values.

Scientific (or Exponential) Notation

Lengthy values display in scientific notation. Scientific notation is a means of writing very large or very small numbers. Scientific notation is always written with a number followed by an E and an exponent. The exponent is a whole number that can be either positive (for large numbers) or negative (for small numbers). The exponent indicates the number of places the decimal point must move to convert the notation to a number.

For example, 1.56E+6 equals 1,560,000 and 3.2E-2 equals .032. See SS:Width to widen the column to display the entire number.

Width

Widen the columns on the spreadsheet to make room for lengthy labels and values or decrease the width to display more columns on the screen.

In Figure 27, note that the label in A1 spills into column B. The entire label displays since B1 is blank. Enable can only display part of the labels in B2, C2, and D2 since the adjacent cells are filled. Widen the columns to display lengthy labels in their entirety.

B2: First Quarter

	A	B	C	D	E	F	G	H
1	Ballston Lake Inn							
2		First Qua	Second Qua	Third Qua	Fourth Quarter			
3	Expenses							
4								

Figure 27: Lengthy labels.

Global Width Change

Use the Global Width option to widen all of the columns on the spreadsheet. Note, however, that those columns set with Range Width will not be affected.

To specify a new column width for all columns:

1. From the Top Line Menu, select **L**ayout, **G**lobal, **W**idth.
2. Enable prompts you to enter a column width. Enter a number from 1 to 72.
Press → to manually increase the column width.
or
Press ← to manually decrease the column width.
3. Press ↵ to accept the new column width.

Column Width Change

Use the Range Width option to change the width of individual columns. Columns set using this feature will not be affected by any changes made to the global width.

To change the width of a single column:

1. From the Top Line Menu, select **L**ayout, **R**ange, **W**idth, **S**et.
2. Enable prompts you to enter a range.
3. Enable prompts you to enter a column width.
Press → to manually increase the column width or ← to manually decrease the column width. Note the changing width of your spreadsheet display as you press the arrow keys.
or
Enter a number from 1 to 72.
4. Press ↵ to accept the new column width.

Reset

A column that has been set using the Range Width option will not be affected by changes to the global width.

To reset an individual column to the current global width:

1. From the Top Line Menu, select **L**ayout, **R**ange, **W**idth, **R**eset.
2. Enable prompts you for a range.

Window-copy

The Edit option Window-copy allows you to copy the contents of another open window into your spreadsheet. See also SS:Combine Files and REF2:IN:Windows:Copy Information Between Windows.

1. From the Top Line Menu, select **E**dit, **W**indow-copy.

The Interwindow Copy Options screen displays, listing available open windows.

2. Select the number of the window containing the data you want to copy. Enable displays that window.
3. Mark the data to be copied. In word processing and database windows, use F7 to mark the data to be copied. In spreadsheet, point out the range of data to be copied. See REF1:WP:Blocking and Marking Text, REF1:DB:Marking Records and SS:Range for additional information on how to mark data.
Press **Alt/F5** to continue the copy process.
4. If copying data from a word processing or database window, select whether or not to insert or overlay the data:
Insert. Insert new rows in the spreadsheet to accommodate copied data.
Overlay. Place data onto existing spreadsheet cells.
5. Move the pointer to the cell to which you want to copy data and press ↵.

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Spreadsheet Quick Commands

In addition to the Top Line Menu options, Enable also provides an extensive range of quick commands for spreadsheet. Reviewing these commands, and noting which of them are most applicable to the type of tasks you perform regularly, will facilitate your work.

To use the quick commands, press the appropriate sequence of keystrokes:

ACTION	KEYSTROKES
ACTIVATE 3D DISPLAY	F9 3
ALIGN CELL CONTENTS	
center	Alt/F4, F9 Del +
left	Ctrl/[
right	Ctrl/]
AUTOSCROLL	
scroll	
down by row	Alt/F9 ↓
up by row	Alt/F9 ↑
down by page	Alt/F9 PgDn
up by page	Alt/F9 PgUp
left one cell	Alt/F9 ←
right one cell	Alt/F9 →
stop scrolling	Ctrl/Break
CALCULATE	
expression	F5
universal	Ctrl/F5
COPY	
between windows	Alt/F5
cell contents	F8
DELETE	
range of rows	Alt/F3, F9 Del L
FILE MANAGER	F9 D
DISPLAY	
SAVE prompts	F9 S Z
spreadsheet and graphics simultaneously (on/off)	Shift/F7
EDIT MODE	F4
ERASE RANGE	F9 Del B
INSERT	
row(s)	F3
row above the pointer	F9 Ins L
LIST	
current formulas	F9 L F
current range names	F9 L N
MAKE RELATIVE CELL REFERENCES ABSOLUTE	F7
MOVE CELL CONTENTS	Alt/F8
MOVE POINTER	
up one cell	↑

down one cell (with NUM LOCK on)	↓ Ctrl/␣
up one page	PgUp
down one page	PgDn
from blank cell to next non-blank cell in direction of arrow	End ↑, ↓, ←, →
from non-blank cell to last non-blank cell in direction of arrow	End ↑, ↓, ←, →
left one cell	←
right one cell	→
left one screen-width	Shift/Tab
right one screen-width	Tab
to cell A1 (or first cell after any fixed titles)	Home
to cell A:A1	Ctrl/Home
to cell [n] ("Go to")	F2 (cell address)␣
to first cell in range [n]	F2 (range name)␣
to first non-blank cell in a row	F2 ←
to last non-blank cell in a row	F2 →
to highest cell (intersection of highest row and column in use)	End/Home
NOTES	
Create or display a cell note	F9 N, Ctrl/N
PRINT	
print now	Alt/F2
cancel printing	Ctrl/F2
priority print (print queue must be turned on)	Shift/F2
RANGE	
mark	F7
unmark	Alt/F7
SAVE	
file	
and close window	F9 S Home
and create a new file	F9 S C
and return to DOS	F9 S End
and return to same file	F9 S E, Alt/F10
and revise another file	F9 S R
with a new name	F9 S N
in DIF format	F9 S D
indicate range	F9 S B
SKIP PROTECTED CELLS	Alt/F6
SPLIT WINDOW COMMANDS	
clear split window	F9 W X
move between halves of split window	F6
split window	
horizontally	F9 W H
vertically	F9 W V
synchronize scrolling	F9 W S
unsynchronize scrolling	F9 W U
UNDO LAST COMMAND	F9 U