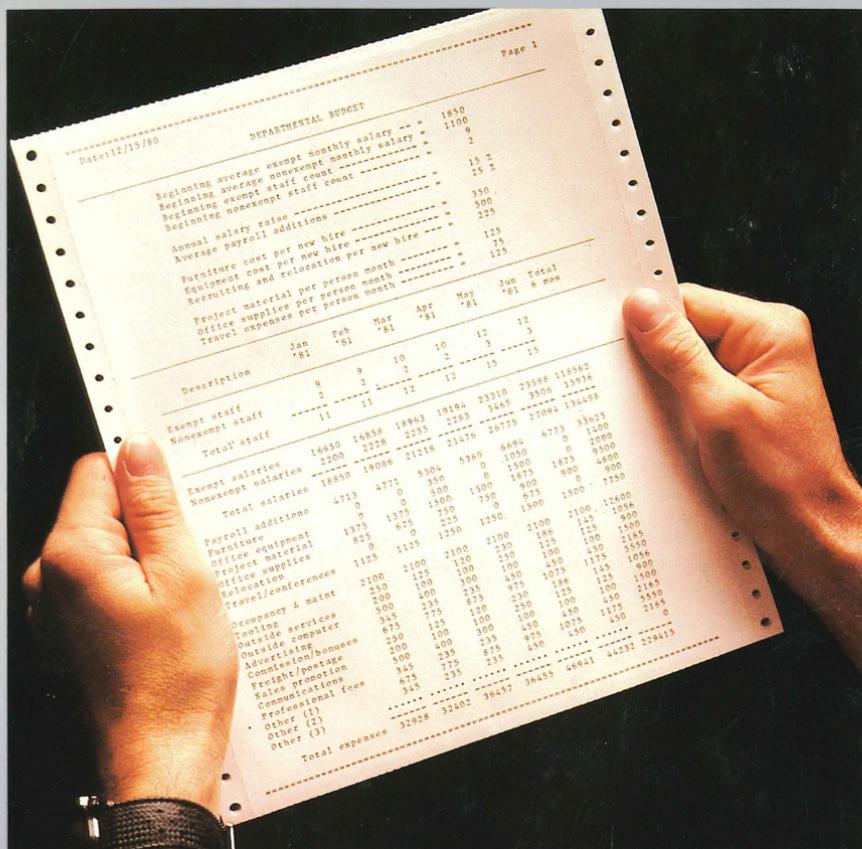




VISICALC® Sampler

Users Guide



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Apple III

VISICALC[®]

User's Guide

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Preface

This manual contains all the information you need to use the templates in the VisiCalc III Sampler. Chapter 1 introduces the VisiCalc commands you need in order to use the templates. (For a more complete discussion of VisiCalc commands, see the VisiCalc III User's Manual.) Chapter 2 gives detailed instructions on how to use each template in the Sampler.

The manual uses three special symbols to call your attention to important or useful points:



This means the following paragraph contains information that will give you a "helping hand."



This tells you that the next paragraph describes a special or unusual feature of your Apple III.



The Stop Sign means just what it says: stop and pay attention. The next paragraph describes a potentially irreversable situation in which you could lose some information you've stored or damage your Apple III.

Beginning VisiCalc

The VisiCalc™ III Sampler is a collection of *sample* templates: predefined VisiCalc worksheets designed for representative applications. The templates illustrate a cross-section of useful techniques. In addition to helping you learn to use VisiCalc™ III, they let you use the system immediately, before you have learned to design your own templates.

This chapter gives an overview of the templates and briefly describes VisiCalc III so you can begin using the templates. If you are already an experienced VisiCalc user, you may wish to read OVERVIEW OF THE TEMPLATES and then go directly to Chapter 2.

For a more complete description of VisiCalc's capabilities, see your VisiCalc III User's Manual.

Overview of the Templates

The VisiCalc III Sampler includes a template for calculating a personal budget, a departmental budget, a construction estimate, the time value of money, and depreciation. The following sections present an overview of those templates. Chapter 2 presents a more detailed description of each template.

Personal Budget

Tax season after tax season you probably make resolutions to organize your paperwork more efficiently, to make things easier on yourself the following year. You've probably also realized that if you could keep track of your expenses better throughout the year, there

would be less risk of a bank overdraft and fewer moments of financial tension.

The things that make household financial planning difficult are the expenses that don't occur regularly each month—real estate taxes, annual insurance premiums, quarterly income tax payments, and sporadic big-expense items such as a new car or appliance. If your expenses were the same each month, a simple budgeting procedure would work fine. It is the irregular expenses that can catch you by surprise and cause your bank balance to plummet.

The Personal Budget template allows you to plan a whole year ahead with estimates of both your regular and irregular expenses. The template will predict when you can expect to need more cash and how much you'll need. In this way you can plan your cash flow to keep your household budget running smoothly.

As you become proficient with VisiCalc, you will learn how you can add your own items to this template. In this way you can customize the template to fit your personal budgeting needs.

Departmental Budget

The Departmental Budget template will help you keep track of your department's expenses. It is designed to account for one-time expenses associated with the addition of new personnel to your department.

The Departmental Budget template differs from the Personal Budget template in that it automatically tracks expenses in proportion to the size of your staff. To recalculate your budget to accommodate increases and decreases in staff you need only change the number of staff on the template—VisiCalc automatically expands or contracts the budget accordingly.

Construction Estimate

The Construction Estimate template provides a checklist of expense items to help you keep track of the many categories of construction expenses that you must estimate in order to submit a bid for a job. After you fill in the estimated expenses, the template adds them and

calculates the size of your bid, based on your standard profit margin and bonding fees. If you have a printer attached to your Apple III, you can then print a report itemizing the cost of the proposed project, based on your data.

Even if you don't happen to own a construction company, this template is a useful example illustrating a simple way to use VisiCalc. You may well have a similar list of expense items in your own work that frequently needs to be revised, re-added, and retyped correctly.

Time Value of Money

If you're striving to beat today's rampant inflation rates, the Time Value of Money template may be of great help. This template gives you the equivalent of a complete financial calculator. It helps you analyze potential investments and annuities in terms of initial outlay, future value, length of term, interest rate, and monthly payment.

Depreciation

If you have a small business, you probably know that the method you use to depreciate your business assets can make a big difference in your tax liability and cash flow over the years. The Depreciation template allows you to evaluate and compare your tax savings under four common methods of depreciation (straight-line, declining balance, double declining balance, and sum-of-the-years'-digits) and choose the best depreciation method for your needs.

A Word on Using Diskettes

You should have received one copy of the VisiCalc III Sampler diskette. This diskette is called the master copy. It is write-protected; that is, nothing can be written to it. It's a good idea to make a copy of this diskette. Then, if you accidentally damage the original diskette, you have another copy. To make a copy, refer to the description of the Diskette Duplication Program in your Apple III Owner's Guide. After you have made the copy, take the original diskette and put it away in a safe place, away from extreme

temperatures and magnetic fields. Then use the copy you have just made as your working copy. If anything happens to this diskette, you can still make another copy from the master copy.

If you really want to be prudent, you can make a second backup copy from your working diskette. Then you will never need to use (and possibly damage) your original master diskette except in the unlikely event that both your working copy and your second backup copy are destroyed.

In addition to the Sampler diskette, you also need the VisiCalc III system diskette. The Sampler diskette will not work without the VisiCalc system diskette, since the latter contains both the Apple III operating system and the VisiCalc III program itself.

To save the results of your VisiCalc sessions, you will need a formatted blank diskette. To get this, take any blank diskette and format it, using the diskette formatting utility described in the Apple III Owner's Guide.



At some point your working Sampler diskette may become full, or you may just want to make an extra copy of a template. It is a good idea to format some blank diskettes and keep them on hand for such occasions. Your Apple III Owner's Guide tells how to format diskettes.

This simple precaution may save you hours of work later on. Nothing can be more frustrating than to spend hours customizing a template, only to discover when you try to save your work that your diskette is full. At such a time, an extra formatted diskette can be a lifesaver: you can save the template on the extra diskette, instead of having to spend hours reconstructing it from scratch.

Loading VisiCalc III

In order to use the VisiCalc III Sampler, you must first load the VisiCalc III system into your Apple. (If you already know how to use VisiCalc, you probably don't need to read the rest of this chapter and should skip to Chapter 2.)



For the reasons given in the preceding section, always make sure you have some blank formatted diskettes on hand before you load VisiCalc.

To load VisiCalc III, first insert the VisiCalc III system diskette into the built-in disk drive on the front of your Apple III. Hold the diskette with the label towards you and facing up, then slide the diskette carefully all the way into the disk drive. (If you hold the diskette with your thumb on the label and your palm up, you are almost certain to insert the diskette correctly.) When the diskette is in place, gently close the door of the disk drive.

Next turn on the Apple and the video monitor. The red "in use" light on the disk drive will come on, and the drive will whirl for several seconds. When the drive stops whirring, you should be greeted with a screen display like the one shown in Figure 1. This means you have successfully loaded VisiCalc III. (The date and version number on the second line from the top of the screen may differ in your version of VisiCalc.)

If your screen doesn't show this display, turn the Apple's power off and check to make sure the diskette is properly inserted into the disk drive and that the drive door is closed. Wait a few seconds, then turn the power on again. Usually the system will load successfully this time and the display shown in Figure 1 will appear on your screen.

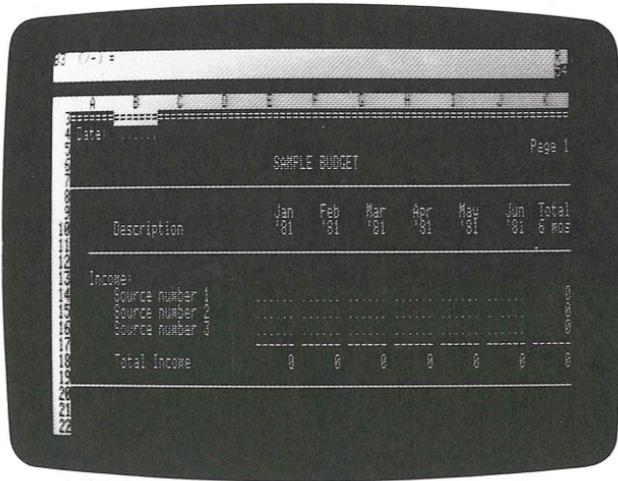


Figure 1. VisiCalc III opening display

The Electronic Worksheet

Along the left edge of the screen is a column of numbers from 1 to 20. Each of these numbers represents a row in the “electronic worksheet” on which the templates are displayed. Above the column of numbers is a white horizontal stripe containing the letters A to H. Each letter marks a column in the electronic worksheet. The combination of a column letter and a row number is called a *coordinate*, and identifies a *cell* of the worksheet. For example, the coordinate A1 represents the cell at the intersection of column A and row 1. Cell A1 should now look like a white rectangle.

The Status, Prompt, and Edit Lines

Now look at the top three lines on the screen. These are called the *status line*, the *prompt line*, and the *edit line*. During the course of a VisiCalc session, the system uses these lines to give you information about where you are and what you can do next.

- The *status line* is the one in inverse video (black on white) at the very top of the screen, with the coordinate A1 at its extreme left edge. This line tells you what cell the cursor is in (more on the cursor in the next section) and what that cell contains.
- The *prompt line* is located directly below the status line. This line is also in inverse video, and should now be displaying a copyright notice and version number. In the course of a session, this line tells you what your options are from moment to moment. It is called the prompt line because the system uses it to “prompt” you about what you can type next.
- The *edit line* appears directly below the prompt line and is in normal video (white on black). When you type something into a cell in the VisiCalc worksheet, it will appear here on the edit line. You can edit your input to correct errors at any time until you complete the instruction, usually by pressing RETURN. The information is then transferred from the edit line into the cell of the worksheet containing the cursor (see the next section).

The Cursor

VisiCalc can focus its attention on only one cell of the worksheet at a time. The cell currently under attention is marked by a white rectangle like the one on your screen at coordinate A1. This white rectangle is called the *cursor*, and the cell it occupies is called the *current cell*. The coordinate of the current cell is always displayed at the left end of the status line.

You can change the focus of the system’s attention (the current cell) by moving the cursor with the arrow keys. To move the cursor to the right, left, up, or down, simply press the appropriate arrow key. For example, try pressing the right arrow key once. The cursor moves immediately to cell B1. Notice that the prompt line is cleared and the coordinate at the beginning of the status line is changed to B1. Now press the left arrow key once. The cursor moves back to cell A1. Try pressing the down arrow key and then the up arrow key.



Notice that if you press an arrow key and hold it down, the cursor moves rapidly and continuously across the screen. In fact, every key on the Apple III keyboard will repeat if you hold it down continuously. This can sometimes lead to problems, since VisiCalc will receive the same character two or more times when you only meant to type it once. Developing a “light touch” on the Apple keyboard will improve your efficiency.

In the case of the arrow keys, there are actually two different speeds of repeat. Just holding the key down makes it repeat at one rate; pressing it down a little further produces a perceptible “click” and makes the key repeat at a faster rate.

VisiCalc's cursor movements are just fast enough to keep up with the slower repeat rate of the arrow keys. At the faster rate, your cursor movement signals are sent to VisiCalc faster than it can keep up with them. The extra signals are stored up until the system has time to obey them. Then when you release the arrow key, the cursor will shoot past the cell you wanted and keep right on going until all the stored-up signals have been obeyed. So again a lighter touch on the arrow keys will limit them to the slower repeat rate and give you better control over the cursor's movements.

The electronic worksheet is actually much bigger than your screen. With the cursor at cell A1, press the right arrow key seven times, so that the cursor rests at the right edge of the screen in cell H1. Now press the right arrow key once more. The display on the screen *scrolls* to the left, pushing the leftmost column off the screen and revealing another column on the right. If you continue to press the right arrow key, the screen display will continue to scroll to the left. Using the left arrow key to move the cursor past the left edge of the screen will cause the display to scroll the other way. Similarly, you can use the up and down arrow keys to scroll the screen display up and down.

Experiment with the arrow keys until you are familiar with the way they work.

You may already have discovered that if you inadvertently bump into one of the edges of the worksheet with the cursor, the Apple III will emit a low pitched beep. This sound is made to inform you that the cursor has reached the boundary of the worksheet and can go no further.

The Command Menu

To issue a command to VisiCalc III, begin by typing a slash (/). The system will respond by displaying the Command prompt line, which looks like this:

Command: BCDFGIMPRSTVW—

Each of the characters following the word “Command:” stands for a VisiCalc command, as detailed in Table 1. Not all commands are discussed in this manual—only those marked with an asterisk in the table, which are the ones you are most likely to need with the templates on the Sampler diskette. Refer to your VisiCalc III User’s Manual for a complete explanation of all VisiCalc commands.

Typing one of the characters on the Command prompt line will cause the command represented by that character to be invoked. If you change your mind about invoking a command, you can usually “back out” of the command at any time until it is actually executed by typing CONTROL-C (hold down CONTROL while typing the letter C). Do this now, to remove the Command prompt line from the screen.

Clearing the Worksheet

Before loading a new template from a diskette, you should always clear the VisiCalc worksheet with the Clear command. This ensures that the previous contents of the worksheet will not interfere with the new template you are about to load.

| Character | Command |
|-----------|-----------------|
| *B | Blank |
| *C | Clear |
| D | Delete |
| *F | Format |
| *G | Global |
| I | Insert |
| M | Move |
| *P | Print |
| R | Replicate |
| *S | Storage |
| T | Title |
| V | Version |
| W | Window |
| — | Repeating label |

Table 1. VisiCalc III commands

To clear the worksheet, type

/C

The prompt line will read

Clear: Type Y to confirm

Since we do want to clear the worksheet now, type Y for Yes. The screen will become blank for an instant, and almost immediately a fresh, empty worksheet display will appear. If the worksheet had not already been empty, anything it might previously have contained would now be lost (unless you had saved the worksheet's contents on a diskette before clearing it—see **SAVING THE WORKSHEET**, below).

The extra confirmation step ("Type Y to confirm") acts as a safeguard against losing your work accidentally. In the event that you type /C by mistake, you can safely back out of the operation without losing the contents of the worksheet by typing any character except the letter Y.

Loading a Template into the Worksheet

The templates in the VisiCalc III Sampler are stored as *files* on the VisiCalc III Sampler diskette. In order to load one of the templates into the VisiCalc worksheet, you must first place the Sampler diskette in one of the Apple III's disk drives. If your Apple has no external disk drives, carefully remove the VisiCalc III system diskette from the built-in drive and put it away in a safe place. Then insert your working copy of the Sampler diskette in the disk drive and close the drive door.



If your Apple has one or more external disk drives, you can place the Sampler diskette in one of those instead, leaving the VisiCalc III system diskette in the built-in drive. To load, save, or delete files on an external disk drive, you must supply the correct filename prefix to the Storage command. See your VisiCalc III User's Manual and your Apple III Owner's Guide for further details.



Before loading the VisiCalc worksheet, always be sure to clear it as described in the preceding section.

Loading the worksheet from a diskette file is one of the options in VisiCalc's Storage command. To invoke the Storage command, type

/S

for Storage. The prompt line will change to read

Storage: L S D Q # C

The characters following the Storage prompt stand for the Load, Store, Delete, Quit, Interchange, and Create Catalog options, respectively. (The Quit, Interchange, and Create Catalog options are not discussed in this manual. For more information on these options, see your VisiCalc III User's Manual.)

To load a template into the worksheet from a diskette file, type

L

for Load. The prompt line now says

Storage: File to Load

and a small white box appears at the beginning of the edit line.

At this point, if you know the name of the file you wish to load, you can just type the filename and press . If you don't know the exact name of the file you want, you can use the left and right arrow keys to search through the files on the diskette until you find it. Since you don't yet know the names of any of the files on the VisiCalc III Sampler diskette, press the right arrow key. The disk drive will whirl, and the name of one of the files stored on the diskette will appear on the edit line:

.D1/PERSONAL.BUDGET

.D1 is the device name of the built-in disk drive, and PERSONAL.BUDGET is the actual name of the file. We don't want to load this particular file, so press the right arrow key again to display the name of the next file on the diskette. Each time you press the right arrow key, the next filename will appear on the edit line. Pressing the left arrow key causes the edit line to "back up" to the previous filename.

Continue pressing the right arrow key until the filename

.D1/SAMPLE.BUDGET

appears on the edit line, then press

to complete the loading procedure. The disk drive will whirl, and an asterisk will flash on the edit line.

After about fifteen seconds the opening display of the Sample Budget template will appear on your screen, as shown in Figure 2. Each template in the VisiCalc III Sampler has an opening

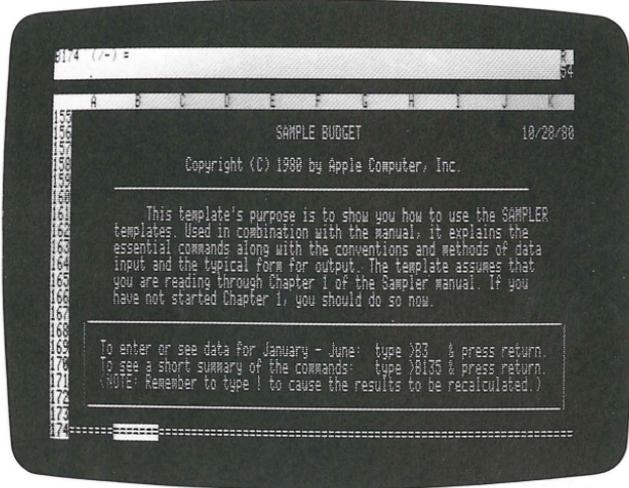


Figure 2. Sample Budget template opening display

display, which is the first thing to appear on your screen when you load the template. The opening display contains the following information:

- The title of the template and the date the template was last revised.
- A copyright notice.
- A short description of the template.
- A box explaining how to get to key areas of the template. The box also includes a reminder that you must type an exclamation point (!) to recalculate the template's results whenever you change any of its contents. See the section **THE GLOBAL RECALCULATION OPTION**, below, for further details.

The Go To Command

Instead of using the arrow keys to move the cursor around on the worksheet one cell at a time, you can move it directly to any desired coordinate with the Go To command. To invoke the Go To command, type the character

>

The prompt line will change to read

Go To: Coordinate

Now you can type the coordinate for the cell you want to move the cursor to. Type

B3

which is the location of the template's data area, as stated in the opening display. B3 should appear on the edit line. If you make a typing mistake, you can press **ESCAPE** to backspace over your error, then retype the coordinate correctly. By pressing **ESCAPE** enough times, you can back out of the Go To command entirely. You can also back out of the command by typing CONTROL-C (hold down **CONTROL** while typing the letter C).

When you have correctly typed the coordinate B3, press

RETURN

and the cursor will jump directly to that coordinate.

Entering Labels

Now that you have moved the cursor to cell B3, your screen should appear as shown in Figure 3.

The first thing to do is enter a date for this budget. Press the down arrow key once to move the cursor to cell B4. The status line displays

the contents of the current cell (the one occupied by the cursor). It should read:

B4 (L)

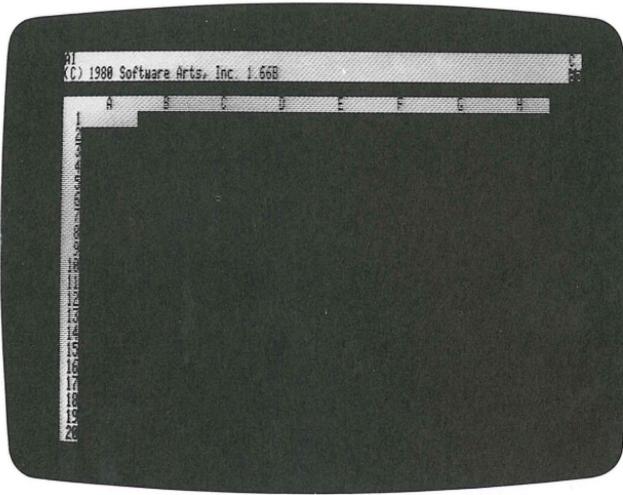


Figure 3. Sample Budget template data area

The letter in parentheses between the cell location and the cell contents identifies the type of information the cell contains. The (L) now displayed on the status line means that cell B4 contains a *label* (a piece of ordinary text, in this case the characters "....."). Press the left arrow key once to move the cursor to cell A4. This cell also contains a label ("Date:").

Press the right arrow key to move the cursor back to cell B4. The row of periods means that this cell is a place for you to fill in data. This is a standard convention used throughout the Sampler templates. Type

August

Notice that the word

Label

appears on the prompt line as soon as you type the first character.

Then, as you type the label, each new character you type is entered in the cell itself and also on the edit line. As long as the label appears on the edit line, you can back up to correct typing errors by pressing **ESCAPE**. Each time you press **ESCAPE**, one character will be erased from both the edit line and the cell. If you backspace enough times, you will back out entirely from entering the label. The word "Label" will disappear from the prompt line and the cell will revert to its original state. (Another way to back out of entering a label is by typing CONTROL-C.)

To enter the new label ("August") into the worksheet, press

RETURN

The prompt and edit lines will become empty and the status line will change to read:

B4 (L) August

The change in the status line shows that the label "August" has been accepted and incorporated as part of the template.

Now press the right arrow key once to move the cursor to cell C4, and type

25, 1980

Notice that the prompt line says "Value" instead of "Label". When you press

RETURN

the word

ERROR

will appear in cell C4.

What happened was that VisiCalc thought you were entering a numerical *value* instead of a label. Any time the first character you

type into a cell is a letter, VisiCalc assumes you are typing a label. If the first character you type is a digit, VisiCalc assumes you are typing a value.



VisiCalc will also assume you are typing a value if you start with a plus sign (+), a minus sign (–), or any character that can legally begin a VisiCalc expression, such as an at sign (@), a period (.), or a left parenthesis (.). (Expressions are discussed in detail in your VisiCalc III User's Manual.) You can also begin typing into a cell with a double quote character ("), as explained below. If you begin with any other character, VisiCalc will beep and ignore the character.



Instead of using the `RETURN` key, you can terminate a label, value, or expression you are typing by pressing one of the arrow keys. This will enter the contents of the edit line permanently into the current cell of the worksheet, then move the cursor one position in the direction indicated.

Well, then, how *can* you enter the label

25, 1980

or any other label that happens to begin with a digit? With the cursor still at C4, type a double quote character

“

and notice that the prompt line says “Label”. The double quote itself doesn't appear on the screen, either on the edit line or in the cell containing the cursor. It isn't part of the label—it's just a signal to VisiCalc that what you're about to type is a label and not a value.

Now you can type in

25, 1980

as a label. When you press

the new label is accepted and entered into cell C4, as you can see on the status line. But on the worksheet, cell C4 shows only

25, 198

This is because the columns are not currently set wide enough to display eight characters. One solution would be to make the columns wider; you will learn later how to do that. But for now, just press the right arrow key to move the cursor to cell D4, and type

"0

The date, August 25, 1980, should now appear in cells B4-D4.

Clearing a Cell

Now suppose you decide to represent the date in a different form. Move the cursor to cell B4 and type

"8/25/80

(Don't forget the double quote character at the beginning!) Now that the date is completely represented in one cell, you would like to clear the contents of cells C4 and D4, to make those cells blank again. You can do this with the Blank command. Press the right arrow key to move the cursor to C4, and type

/B

for Blank. Notice that the prompt line reads

Blank

Now press the right arrow key. Cell C4 will become blank and the cursor will move to cell D4. Type

/B

and cell D4 will also become blank.

The Blank command is useful when you are changing labels in a template. For example, move the cursor to cell B14. This area of the Sample Budget template is set aside for you to enter your monthly income. If this were your personal budget, you would want a more descriptive label than "Source number 1". Type

Apple

and press the right arrow key. Type

/B

and press the right arrow key again. Then type

/B

and you will have changed the label for the first income source from "Source number 1" to "Apple".

Now that you know how to enter labels on the VisiCalc worksheet and how to clear them with the Blank command, you can use these techniques to customize the templates in the VisiCalc III Sampler so that they reflect the specific needs of your business or household. Now is a good time to experiment. Type in the name of your primary income source to replace Apple and also enter labels for the other two sources, if necessary. Make sure the labels do not extend into column E. Cells E14-E16 are reserved by the rows of periods for numeric input.



Be careful where you type! Unless otherwise stated, you should type on the templates only to change labels or to enter data in the cells designated for input by a row of periods. When changing a label, be careful not to exceed the space provided for the label. If you were changing the label "Total Income" and inadvertently extended your new label into cell E18, you would destroy the formula stored in that cell that adds your income sources for the month of January. If you do destroy a formula, you will have to reload the template or attempt to reconstruct the formula for yourself. (For information on formulas, see your VisiCalc III User's Manual.)

Entering Data

Move the cursor to cell E14. As mentioned earlier, the row of periods in this cell designates a place for entering input data. Type the number 1400. As usual, if you make a typing mistake, you can use the **ESCAPE** key to backspace over your error so you can retype the number correctly. The word "Value" appears on the prompt line, and the number 1400 appears on the edit line to the left of the small white box. Just as in entering labels, the edit line works like a temporary scratch pad that shows you what will replace the contents of the current cell, in this case E14, when you press **RETURN** or an arrow key. Now press

RETURN

and four changes will occur:

- The number 1400 appears in the current cell, E14. This is now the value of that cell.
- The status line now reads

E14 (V) 1400

This shows that the number you typed, 1400, has been accepted and incorporated as part of the template. The (V) shows that cell E14 now contains a value instead of a label.

- The prompt and edit lines are empty again.
- The number 1400 has also replaced the previous value of 0 in cells E18, K14, and K18. These cells represent, respectively, the total income from all sources during January, from source number 1 during the first six months of the year, and from all sources during the first six months of the year.

Now move the cursor down one row to cell E15 and type

900

A similar set of changes occur, but this time the totals in cells E18 and K18 change to 2300, the total in cell K14 remains 1400, and the total in cell K15 becomes 900—just as you might have expected.

Do a little experimenting on your own, replacing the numbers you just entered with numbers of your own choosing. You can also enter numbers into the other input cells (those designated with periods), but again, be careful not to destroy the formulas in any of the other cells.

Saving the Worksheet

Just for practice, let's save this modified version of the Sample Budget template on the blank formatted diskette you made at the beginning of the chapter. Type

/S

to invoke the Storage command. The Storage prompt will appear on the prompt line:

Storage: L S D Q # C

Now type

S

for Save. The prompt line will change to read

Storage: File for Saving

and a small white box will appear on the edit line, showing that VisiCalc is waiting for you to type the filename under which you want to save the worksheet. Type

MY.BUDGET

and the current contents of the worksheet will be saved on your Sampler diskette under the filename MY.BUDGET . It isn't necessary to enter the filename in capital letters—you can use any combination of upper- and lowercase letters you wish. VisiCalc will automatically convert all lowercase letters into their uppercase equivalents.

If you wish to save the contents of the worksheet under a filename that already exists on the diskette, you needn't type in the filename yourself. Instead, you can use the left and right arrow keys to search through the existing filenames, as described earlier in the section **LOADING A TEMPLATE INTO THE WORKSHEET**, pressing when you get to the name you want. The current contents of the worksheet will then be saved on the diskette under that name, replacing the previous file of the same name.



Saving the worksheet under an existing filename destroys the old version of the file already stored on the diskette under that name. Unless you are sure this is what you want to do, it is best to type in a new name, different from any filename already on the diskette.



It is a good idea to save your worksheet occasionally during the course of a VisiCalc session as insurance against disaster. Then, if someone should happen to trip over your Apple's power cord, you can back up to the last version of the worksheet you saved, losing only the work you've done since then. Accidents do happen—don't "play for more than you can afford to lose"!

Printing Reports

Before Printing

Your VisiCalc III boot diskette comes set up to print to the Silentype printer directly, and to the Qume Sprint 5 printer through the filename .QUME. If you plan to use a printer other than the Silentype or Qume, you or your dealer must reconfigure your VisiCalc III boot diskette so that included on it is a file that will drive your particular printer.

You can also reconfigure your VisiCalc III boot diskette so that the printer you use most frequently is the standard printer. For instance, if you plan to do most of your printing to the Qume, you can make the Qume, rather than the Silentype, your standard printer. By doing so, you don't have to type .QUME each time you want to use the Qume; you can print to it simply by typing P (for Printer) after the print command. In VisiCalc III the standard printer always has the driver name .PRINTER; when you type P after the print command VisiCalc uses the printer that is currently set up as .PRINTER. To use any other printer that VisiCalc is configured for, you must type F (for File) after the print command and then type the name of the printer's driver file.

To learn more about how to add printer drivers and how to change the standard printer, turn to Appendix A of this manual. Appendix A gives preliminary information and refers you to the appropriate sections of the Apple III Standard Device Drivers Manual. You will also need to refer to the manual that came with your printer for information on how to handle any special conditions your printer

may require, such as control characters for suppressing line feeds, changing line lengths, and so forth.

Printing

Let's print a sample report. (If you do not have a printer connected to your Apple III, skip the remainder of this section and go on to the next.) If you have been following along with the examples, you should still have the Sample Budget template on your screen (with a few of the labels customized and a few data values filled in). Type

>A1

to position the cursor at cell A1. This marks the top left corner of the portion of the worksheet you are going to print. Now type

/P

to invoke the Print command. You are now faced with this choice

Print: Printer, File

To use the standard printer (the one designated .PRINTER), type

P

for Printer.

To use any other printer for which you have an active driver file, type

F

for File. Then, when the prompt line changes to

Print: File name

type the name of the driver associated with your printer. For example, if you are using a Qume Sprint 5 printer, type

.QUME



Notice the period (.) at the beginning of the name .QUME. All device drivers in the Apple III's SOS operating system have names beginning with a period.

Whether you have chosen the P or the F option, the prompt line should now read

Print: Lower right, "setup, or +

You have already designated the upper left corner of the portion of the worksheet you wish to print, by the position of the cursor at the time you invoked the Print command. (If you have been following along with the examples, your cursor should be in cell A1.) The prompt line is now telling you to finish defining the area to be printed by specifying the lower right corner.

You can move the cursor to the desired location either by pressing the arrow keys or by typing the coordinate of the location, but not by doing both. If you start by pressing the arrow keys and then type the coordinate, VisiCalc will quit the print command—and you'll have to go back to square one and start all over again with /P. If you specify the corner by typing its coordinate, you can use the ESCAPE key to backspace over mistyped numbers and then retype them correctly. However, if you backspace over the first letter (the column designation), VisiCalc will quit the print command.

Specify the lower right corner by typing

K22

or move the cursor to that cell by pressing the arrow keys. Now press RETURN and your printer will print a "hard copy" of the portion of the worksheet you have specified, in this case from cell A1 at the upper left to cell K22 at the lower right.

You can specify any portion of your VisiCalc worksheet for printing—even a single cell, row, or column. However, be careful to choose a portion that is narrower than the width to your paper and within the

limits of the printer, otherwise your printed copy may be incomplete or jumbled. VisiCalc can only print information contained in the working area of the worksheet; the status line, prompt line, edit line, and row and column labels cannot be printed.



If the report you have just printed came out double-spaced, or if your printer didn't space the report at all, but printed everything on the same line, you probably need some of VisiCalc's other print options to run your printer properly. See your VisiCalc III User's Manual and the manual that came with your printer for further information.

Deleting a File

Deleting a file from a diskette is similar to loading the contents of a file into the worksheet. First invoke the Storage command by typing

```
/S
```

for Storage. When the Storage prompt line

```
Storage: L S D Q # C
```

appears, type

```
D
```

to choose the Delete option. The prompt line will change to read

```
Storage: File to Delete
```

You really don't need the file MY.BUDGET that you saved on your diskette earlier—you only created it for practice—so now let's delete it from the diskette. To specify the file you wish to delete, you can either type the filename, followed by , or use the arrow keys to search through the files on the diskette one at a time, just as you can with the Load option.

Press the right arrow key until the name

.D1/MY.BUDGET

appears on the edit line, then press

RETURN

The prompt line will display the message

Delete File: Type Y to confirm

If you now confirm the deletion by typing Y for Yes, the designated file will be permanently removed from your diskette and its contents will be lost forever. Because this action is irrevocable and may have drastic consequences, VisiCalc gives you one last chance to back out of the sequence without destroying any files. If you have changed your mind about deleting the file, or have reached this point in the Delete sequence by mistake, you can back out by typing any character except a letter Y.

In this case, since you really do wish to delete file MY.BUDGET from your diskette, type

Y

and the file will be deleted.

Changing Display Formats

The VisiCalc Format command allows you to control the format in which information on the worksheet is displayed and printed. Clear your worksheet by typing

/CY

for Clear Yes, then load the file SAMPLE.BUDGET from your VisiCalc III Sampler diskette and type

>B3

to bring the first page of the Sample Budget template into view. Move the cursor to cell E14 and type the value

65

into the cell. Now type

/F

to invoke the Format command. The prompt line will change to read

Format: D G I L R \$ *

The characters following the Format prompt stand for the available format options, as detailed in Table 2.

| Character | Format setting |
|-----------|-------------------|
| D | Default |
| G | General |
| I | Integer |
| L | Left |
| R | Right |
| \$ | Dollars and Cents |
| * | Graphics |

Table 2. Format settings

With the cursor still in cell E14 and the Format prompt still showing on the prompt line, type

\$

to change the format of cell E14 to Dollars and Cents. Notice that the number you entered previously (65) is now displayed in Dollars and Cents format (65.00). Now in the same cell type

65.758

and watch the rounded value 65.76 appear on the worksheet. Notice, however, that the status line reads

E14 (V) 65.758

showing that the cell actually contains the exact, unrounded value just as you typed it. VisiCalc will use this exact value in all calculations; the rounding applies only to the way the number is displayed or printed.

If you are dealing with large amounts (thousands or millions of dollars), you may find the Dollars and Cents format distracting. You can display amounts in whole dollars (or any other whole units) by using the Integer format. This format allows three more digits in each cell than the Dollars and Cents format, and is useful when only whole unit amounts are significant.

With the cursor still in cell E14, type

/FI

for Format Integer. The value displayed in cell E14 will be rounded to 66, the nearest integer (whole number). Notice that the cell actually still contains the value 65.758, as shown on the status line.



Another approach to handling large dollar amounts is to use the Dollars and Cents format and interpret the value 1.00 as a thousand dollars, a million dollars, or any other appropriate unit of money. For example, in units of a thousand dollars, the value 65.76 would represent \$65,760.

To see another of VisiCalc's format options, type

/FG

for Format General. The value displayed in cell E14 will change to 65.758, the true value. In the General format, VisiCalc always displays numbers with as much precision as possible within the available column width. (Later you will learn how to change the column width if you wish.)

Move the cursor to cell E9 and type

/FL

for Format Left. The cell's contents (the label "Jan") will move from the right edge of the cell to the left edge. To move the label back to the right, type

/FR

for Format Right. The Left and Right format options can be used with numerical values as well, but they are most useful for formatting text (labels).

The meaning of the Default format option (/FD) will be explained later. The Graphics format option (/F*) is not discussed in this manual. See your VisiCalc III User's Manual for information on this option.

Setting Global Properties

Certain properties of the VisiCalc worksheet can be set *globally*. That is, you can specify one setting that will be used throughout the worksheet. Type

/G

to invoke the Global command. The prompt line will display

Global: C O R F

The letters following the Global prompt stand for the Column, Order, Recalculation, and Format options, respectively. (The Order option is not discussed in this manual. For more information on this option, see your VisiCalc III User's Manual.)

The Global Format Option

With the Global prompt still showing on the prompt line, type

F

to select the Format option of the Global command. The prompt line will change to read

Format: D G I L R \$ *

These global format options have the same meanings as the local format options discussed earlier. When you specify a format option with the Format command (/F), that format applies only to the current cell; when you use the Format option of the Global command (/GF), the option you select applies to every cell of the worksheet that hasn't been given a definite format of its own. For example, try typing

\$

to set the global format to Dollars and Cents. All the row and column totals on the worksheet will change to Dollars and Cents format, but the value you entered earlier in cell E14 will not, because you gave it a local format setting of General. To make the global format apply to cell E14 as well, move the cursor to that cell and type

/FD

for Format Default. The contents of cell E14 will change to Dollars and Cents format. Notice that this is a local format setting (specified with /F instead of /GF). Giving a cell the Default *local* format means

that you want VisiCalc to format that cell according to whatever *global* format is in effect. Now if you type

/GFI

for Global Format Integer, every number on the worksheet, including the one in cell E14, will be converted to Integer format.

The Global Column Width Option

The global Column option allows you to control the width of the columns displayed on the VisiCalc worksheet. Move the cursor to cell D23 of the Sample Budget template. The status line shows that the cell contains the label

The global

but only the letters

The glo

appear on the worksheet. Only 7 characters are visible, because that is the global column width that has been set for this template.

The message in row 23 of the template, labeled "Ignore this message", is unreadable, because not all of the characters in cells D23-G23 are visible on the screen. To make them visible, type

/GC

for Global Column. The prompt line will change to read

Column width

Type

11

to set the global column width to 11 characters. The message in row 23 will become readable, but notice that many of the other labels on

the worksheet have been disrupted by the extra four spaces added at the end of each cell. To set the worksheet right again, type

/GC

followed by

7

to return the column width to the original 7 characters.

You can set the global column width to any value from 3 to 255 characters. However, since the VisiCalc III screen is only 77 characters wide, you will normally want to confine your column widths to 77 characters or less.



Numerical values are always displayed beginning with at least one blank character, to avoid collision with adjoining cells. This means, for example, that if the global column width is set to 7 characters, numerical values are limited to no more than 6 characters. If the value to be displayed is too large to fit in the allotted column width, the cell is filled with angle brackets

>>>>>>

to show that it has “overflowed”.

The Global Recalculation Option

Earlier, when you entered a numerical value in the Sample Budget template, the results appeared instantly in the row and column totals. This is because the Sample Budget template is set up to do *automatic recalculation* whenever you enter a value on the worksheet. However, because recalculating all the results on a sizable worksheet every time you enter a new number can be time-consuming and frustrating, most of the templates in the VisiCalc sampler do *manual recalculation* instead.

Type

/GR

for Global Recalculation. The prompt line will change to read

Recalc: A M

Now type

M

for Manual. The worksheet is now set to do manual instead of automatic recalculation. Move the cursor to cell F14 and type

123.45

Notice that the row and column totals do not change. Move to cell E15 and type

456.78

Again the row and column totals are not affected. Now type

!

and the totals will be recalculated to include the new data you have entered.

Manual recalculation is most useful when you are working with a large worksheet and don't want to have to wait for a full recalculation every time you enter a value. It allows you to enter as many values as you wish, then signal VisiCalc to recalculate the worksheet by typing an exclamation point (!).

With smaller worksheets, you may find automatic recalculation more convenient. To return to automatic recalculation now, type

/GR

for Global Recalculation, and when the Recalc prompt

Recalc: A M

appears, type

A

for Automatic. Now if you move the cursor to cell E14 and change the value there by typing

666.66

the row and column totals will instantly reflect the new value.

Using the Templates

This chapter explains in detail how to use each template in the VisiCalc III Sampler. Each of the numbered paragraphs in the description of a template corresponds to a number in the figure representing the template. We recommend that you read this chapter with your Apple III in front of you, running VisiCalc III. As you read the section on a template, load that template and fill it in according to the instructions given in the numbered paragraphs.



The rows of periods (.....) in the templates mark the cells in which you can enter input data. Cells occupied by numbers (usually zeros) contain formulas from which VisiCalc will calculate results based on the data you supply. Be careful not to type anything into these cells, or you may destroy the formulas from which the results are calculated. If you destroy a formula you will have to reload the template or attempt to reconstruct the formula for yourself. (For information on formulas, see your VisiCalc III User's Manual.)



When you first load a template from the Sampler, you may see the word ERROR in one or more cells of the template. This is no cause for concern. In loading the template, VisiCalc must calculate the initial results of all the formulas it contains. When the template is empty (you haven't yet filled in any data), some of these calculations may involve impossible operations such as division by zero, causing an error message

to be displayed. When you fill in some data and recalculate the results, the error messages will disappear.

Structure of the Templates

The templates in the VisiCalc III Sampler are arranged in “pages” for convenient printing (see PRINTING THE TEMPLATES, below). Each page is 66 rows high (11 inches on a standard printer) and 7 or 11 columns wide, depending on the template. Most of the templates consist of two such pages (the Depreciation Methods template has only one).

After loading a template from the Sampler, you can display the beginning of page 1 on your screen by typing

>B3

To move from page 1 to page 2, type

>B88

Printing the Templates

To print the first page of one of the templates, move the cursor to cell A1 and invoke the Print command. When you are asked for the lower right corner of the print area, specify cell G66 or K66, depending on the template—use the letter of the last column you can see on your screen. To print the second page of a template, start with the cursor in cell A67 and specify G132 or K132 as the lower right corner. To print the full two-page report in one operation, start with the cursor in cell A1 and specify G132 or K132 as the lower right corner.

The Personal Budget Template

The Personal Budget template is designed to help you organize your personal household budget. It will help you avoid cash shortages

caused by sporadic expenses, such as insurance payments, new cars and appliances, real estate taxes, and so forth.

Clear your VisiCalc worksheet and load the file PERSONAL.BUDGET from the VisiCalc III Sampler diskette, using the method described in Chapter 1 under LOADING A TEMPLATE INTO THE WORKSHEET. When the template has been loaded, type

>B3

to display the first page of the template, as shown in Figure 4. Then follow the numbers in the figure while reading the instructions below.



Figure 4 shows only the first page of the template, covering the first six months of the budget year. To complete the template, you must also fill in the budget information for the second half of the year on page 2.

To fill in the Personal Budget template:

1. Enter the date here. (Remember to begin with a double quote if the first character is not a letter.)
2. The template is set up to plan your budget for the year 1981, with the first six months on page 1 of the template and the last six months on page 2. If you wish, you can change the column labels to refer to some other year instead.
3. The template provides space for up to three sources of income. Type in the name of your first income source to replace the label "Source number 1," and do the same on the second and third lines, if necessary. Then enter the amounts you will receive from each source each month. If you don't have three income sources, you can use the Blank command to blank out the cells you don't need.

4. The amounts you specified as income in step 3 will be added and displayed here. Be careful not to type anything in this row or column, or you will destroy the formulas that add the incomes.
5. If you own your house and are repaying a mortgage loan, enter the amount of your monthly payments on the line labeled "Mortgage." Then enter your homeowner's insurance premiums and property taxes on the following lines. Expenses such as taxes and insurance, which occur at irregular intervals, can be difficult to plan for without a yearly budget like this one.

If you rent your home, you don't have to worry about mortgage payments, homeowner's insurance, or property taxes. You probably just pay one constant amount each month. In this case you can replace the label "Mortgage" with "Rent" and blank out the next two lines. Then enter your monthly rent in the dotted cells. You may wish to allow for possible rent increases.

6. Life insurance is another expense category that can be difficult to plan for. Your premiums may be due annually, quarterly, or just about any other way your insurance company may require. Enter the names of the carriers and the premiums for each life insurance policy in your household in this section of the template.
7. Estimate the costs for fuel, payment, and repairs on your car or cars, and enter the amounts in this section. If you commute regularly, you might wish to change some of the labels in this section to cover items such as fares and tolls.
8. This section of the template covers various categories of household expenses. Be sure to account for inflation when estimating these costs.

Date: ...1...

Page 1

PERSONAL BUDGET

| Description | 2 | Jan '81 | Feb '81 | Mar '81 | Apr '81 | May '81 | Jun '81 | Total 6 mos |
|-----------------------------|----------|---------|---------|---------|---------|---------|---------|-------------|
| Income: | | | | | | | | |
| 3 Source number 1 | | | | | | | | 0 |
| Source number 2 | | | | | | | | 0 |
| Source number 3 | | | | | | | | 0 |
| Total Income | | 0 | 0 | 0 | 0 | 0 | 0 | 4 0 |
| Expenses: | | | | | | | | |
| 5 House | | | | | | | | |
| Mortgage | | | | | | | | 0 |
| Insurance | | | | | | | | 0 |
| Property taxes | | | | | | | | 0 |
| 6 Life Insurance | | | | | | | | |
| Mine ---- X Co | | | | | | | | 0 |
| Spouse -- Y Co | | | | | | | | 0 |
| Child --- Z Co | | | | | | | | 0 |
| 7 Transportation | | | | | | | | |
| Car 1-gas | | | | | | | | 0 |
| Car 1-payment | | | | | | | | 0 |
| Car 1-repair | | | | | | | | 0 |
| Car 2-gas | | | | | | | | 0 |
| Car 2-payment | | | | | | | | 0 |
| Car 2-repair | | | | | | | | 0 |
| 8 Household Expenses | | | | | | | | |
| Groceries | | | | | | | | 0 |
| Gas & Electric | | | | | | | | 0 |
| Telephone | | | | | | | | 0 |
| Water | | | | | | | | 0 |
| Garbage | | | | | | | | 0 |
| 9 Miscellaneous | | | | | | | | |
| | | | | | | | | 0 |
| 10 Personal Expenses | | | | | | | | |
| Clothing | | | | | | | | 0 |
| Medical | | | | | | | | 0 |
| Babysitting | | | | | | | | 0 |
| Pocket Money | | | | | | | | 0 |
| Gifts | | | | | | | | 0 |
| Entertainment | | | | | | | | 0 |
| 12 Total Expenses | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 Total Net Inflow | | | | | | | | |
| Beginning Cash Level | ...11... | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 Ending Cash Level | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

15

Figure 4. Personal Budget Template

9. Every budget should include an allowance for miscellaneous or unexpected expenses. Some types of expenses, such as major home or car repairs or medical bills, are almost impossible to anticipate. The best you can do is set aside a monthly amount for emergencies, which will accumulate and afford some protection when the unexpected expenses do occur.
10. Use this section of the template to enter your personal expenses. Change some of the labels, if necessary, to suit your individual needs.
11. Enter your initial cash level at the beginning of the year in this cell. This should be a realistic estimate of your total liquid cash, including your checking and savings accounts. The remaining cells on this line contain formulas for calculating your monthly cash levels for the rest of the year, so be careful not to type into them.

Now that you have filled in all your income and expenses for the first six months of the year, you must do the same for the last six months. Type

>B88

to display the beginning of page 2 of the template. Then repeat steps 2-10 above to enter your budget data for the second half of the year.

12. When the template is completely filled in, type

!

to calculate the results. VisiCalc will add up your expenses for each month and display the totals on this line.

13. This line shows your net inflow for each month, defined as total income minus total expenses.
14. On the last line, VisiCalc will calculate your ending cash level for each month by adding your net inflow for that month to

your cash level at the beginning of the month. The result is then carried forward as the beginning cash level for the next month.

15. On the first page of the template the rightmost column gives the six-month totals for each line. On the second page, the rightmost column gives the annual totals.

The Departmental Budget Template

Like the Personal Budget template, the Departmental Budget template is designed to project expenses over time. But whereas the Personal Budget template emphasizes cash flow and planning for unanticipated or sporadic expenses, the Departmental Budget template focuses on projecting expenses in relation to the number of people in the department, with close attention to salary details and incremental “new-hire” expenses.

The template plans a departmental budget over a twelve-month period, with the first six months on page 1 and the last six months on page 2. Payroll estimates are based on the average pay at the beginning of the year for both salaried and hourly personnel, along with expected average pay increases. The template also considers planned additions to the payroll, and projects associated expenses such as new office equipment, furniture, and recruiting costs. The result is a typical yearly office expense budget.

Clear your VisiCalc worksheet and load the file DEPART.BUDGET from the VisiCalc III Sampler diskette, using the method described in Chapter 1 under LOADING A TEMPLATE INTO THE WORKSHEET. When the template has been loaded, type

>B3

to display the first page of the template, as shown in Figure 5. Then follow the numbers in the figure while reading the instructions below.

Date: ...7...

DEPARTMENTAL BUDGET

Beginning average exempt monthly salary -- = ..3...
 Beginning average nonexempt monthly salary = ..4...
 Beginning exempt staff count ----- = ..4...
 Beginning nonexempt staff count ----- = ..4...
 Annual salary raise ----- = ..5... %
 Average payroll additions ----- = ..6... %
 Furniture cost per new hire ----- = ..7...
 Equipment cost per new hire ----- = ..7...
 Recruiting and relocation per new hire --- = ..7...
 Project material per person month ----- = ..8...
 Office supplies per person month ----- = ..8...
 Travel expenses per person month ----- = ..8...

| Description | 2 | Jan '81 | Feb '81 | Mar '81 | Apr '81 | May '81 | Jun '81 | Total 6 mos |
|-----------------------------|---------|---------|---------|---------|---------|---------|---------|-------------|
| Exempt staff | ..9... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Nonexempt staff | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 11 Total staff | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exempt salaries | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Nonexempt salaries | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 Total salaries | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 Payroll additions | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Furniture | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Office equipment | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Recruit/relocation | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Project material | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Office supplies | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Travel/conferences | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Occupancy & maint | ..10... | ..... | ..... | ..... | ..... | ..... | ..... | 0 |
| Tooling | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 0 |
| Outside services | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 0 |
| Outside computer | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 0 |
| Advertising | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 0 |
| Commission/bonuses | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 0 |
| Freight/postage | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 0 |
| Sales promotion | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 0 |
| Communications | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 0 |
| Professional fees | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 0 |
| Other (1) | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 0 |
| Other (2) | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 0 |
| Other (3) | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 0 |
| 14 Total expenses | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Figure 5. Departmental Budget Template



Figure 5 shows only the first page of the template, covering the first six months of the budget year. To complete the template, you must also fill in the budget information for the second half of the year on page 2.

To fill in the Departmental Budget template:

1. Enter the date here. (Remember to begin with a double quote if the first character is not a letter.)
2. The template is set up to plan your budget for the year 1981, with the first six months on page 1 of the template and the last six months on page 2. If you wish, you can change the column labels to refer to some other year instead.
3. Fill in these two cells with the average pay figures at the beginning of the year for salaried and hourly-paid employees in your department. These numbers are the basis for the template's payroll calculations.
4. Enter the number of salaried and hourly-paid employees in your department in these two cells.
5. Enter the average annual pay increase here in percent. The template assumes that pay rates escalate continuously over the course of the budget year.
6. Enter your average payroll additions for social security and benefits, as a percentage of base pay. For example, if your payroll additions average 25% of base pay, enter 25.
7. These cells are for the incremental costs of additions to your staff. Enter the amount it costs you to add a new employee, for new furniture, equipment, and recruiting and relocation costs.
8. Estimate your monthly expenses per employee for project material, office supplies, and travel or conference expenses, and enter the amounts in these three cells.

9. Fill in your projected monthly staffing needs on these two lines, broken down by salaried and hourly personnel.
10. This area of the template is reserved for expenses that are not directly related to the number of employees in your department. Fill in your monthly projections for the expense categories shown, or change the labels to include categories of your own.

Now that you have filled in your staffing and expenses for the first six months of the year, you must do the same for the last six months. Type

>B88

to display the beginning of page 2 of the template. Then repeat steps 9 and 10 above to enter your budget data for the second half of the year.

11. When the template is completely filled in, type

!

to calculate the results. VisiCalc will add your salaried and hourly staffing projections for each month and display the totals on this line.

12. In this section of the template, VisiCalc will calculate the amount paid in salaries and wages each month, based on the data you have supplied.
13. Here VisiCalc will project your other staff-related expenses (material, supplies, travel) along with those expenses connected with the addition of new employees (furniture, equipment, recruiting and relocation).
14. The last line shows your department's total monthly expenses.
15. On the first page of the template the rightmost column gives the six-month totals for each line. On the second page, the rightmost column gives the annual totals.

The Construction Estimate Template

The Construction Estimate template provides a checklist of cost categories for use by a hypothetical construction company in submitting bids for contracts. After you fill in the estimated costs in the various categories, VisiCalc will calculate the amount of the bid, allowing for a profit add-on percentage.

Clear your VisiCalc worksheet and load the file CONSTRUCTION from the VisiCalc III Sampler diskette, using the method described in Chapter 1. When the template has been loaded, type

>B3

to display the first page of the template, as shown in Figure 6. Then follow the numbers in the figure while reading the instructions below.

To fill in the Construction Estimate template:

1. Enter the date here. (Remember to begin with a double quote if the first character is not a letter.)
2. Enter the project name, the location of the job site, your name, and your client's name on these lines.
3. Enter the estimated amount for each cost item in this section of the template.
4. After you have filled in all the cost items on the first page of the template, type

>B88

to display the second page, as shown in Figure 7. Fill in the amounts for the cost items listed on page 2. Items 7700 and 7800 have been intentionally left blank for you to fill in any extra categories you may care to add.

Date:1.....

Page 1

CONSTRUCTION ESTIMATE
Building Estimate Check List and Summary

2 Project Name Est. by
Job Site Est. for

M A S T E R B I D C H E C K L I S T

| Item | Operation | Amount |
|------|---|-----------------------------|
| 100 | Wrecking, moving, and clearing site | \$ ³ |
| 200 | Temporary construction: office, sheds, etc. | ..... |
| 300 | Excavation, grading, and fill | ..... |
| 400 | Foundation support: piles, caissons, etc. | ..... |
| 500 | Shoring, sheeting: temporary & permanent | ..... |
| 600 | Underpinning: temporary & permanent | ..... |
| 700 | Water, gas, drains, sewers, conduits | ..... |
| 800 | Paving, curbs, sidewalks, & driveways | ..... |
| 900 | Concrete, except items 800 & 2700 | ..... |
| 1000 | Concrete surfacing & cement work | ..... |
| 1100 | Concrete forms: wood, metal, & metal arches | ..... |
| 1200 | Reinforcing rods, mesh; metal inserts | ..... |
| 1300 | Concrete brick | ..... |
| 1400 | Common brick | ..... |
| 1500 | Face brick | ..... |
| 1600 | Firebrick: flue lining & special brick | ..... |
| 1700 | Hollow tile: load bearing & partition | ..... |
| 1800 | Terra cotta fireproofing: arches, furring | ..... |
| 1900 | Gypsum block: lintels, furring, block tile | ..... |
| 2000 | Water and dampproofing | ..... |
| 2100 | Architectural terra cotta | ..... |
| 2200 | Artificial stone | ..... |
| 2300 | Cut stone: lime, sand, blue, etc. | ..... |
| 2400 | Exterior marble & granite | ..... |
| 2500 | Structural steel & iron | ..... |
| 2600 | Metal lumber | ..... |
| 2700 | Stacks: metal, brick, concrete | ..... |
| 2800 | Ornamental and misc. iron | ..... |
| 2900 | Iron doors, grates, & shutters | ..... |
| 3000 | Vault lights | ..... |
| 3100 | Metal store fronts | ..... |
| 3200 | Bronze & other art metal | ..... |
| 3300 | Lumber, wallboard, & rough carpentry | ..... |
| 3400 | Insulation & soundproofing | ..... |
| 3500 | Millwork & finished cabinetry | ..... |
| 3600 | Special cabinet, panel, stair, & door work | ..... |
| 3700 | Artwood floors: parquetry | ..... |
| 3800 | Rough hardware | ..... |
| 3900 | Finished hardware | ..... |
| 4000 | Roofing: nonmetal, slate, tile, composition | ..... |
| 4100 | Sheet-metal work, plain, metal roofing | ..... |
| 4200 | Pressed sheet metal: ceilings, panels | ..... |
| 4300 | Metal furring, lathing, corners, grounds | ..... |

Figure 6. Construction Estimate Template (page 1)

CONSTRUCTION ESTIMATE
Building Estimate Check List and Summary

M A S T E R B I D C H E C K L I S T

| Item | Operation | Amount |
|------|---|-----------------------------|
| 4400 | Plastering: plain, ornamental; plasterb'rd | \$ ⁴ |
| 4500 | Stucco | ..... |
| 4600 | Imitation marble & stone, & scagliola | ..... |
| 4700 | Interior marble, slate, stone | ..... |
| 4800 | Tile, mosaic, & terrazo | ..... |
| 4900 | Composition, cork, & patented floors | ..... |
| 5000 | Kalamein & other fire doors, windows | ..... |
| 5100 | Hollow metal doors, windows, & trim | ..... |
| 5200 | Steel sash & partitions | ..... |
| 5300 | Caulking | ..... |
| 5400 | Weather strips | ..... |
| 5500 | Glass & glazing | ..... |
| 5600 | Priming & painting | ..... |
| 5700 | Decorating | ..... |
| 5800 | Plumbing & gas fitting | ..... |
| 5900 | Electrical wiring | ..... |
| 6000 | Electrical fixtures | ..... |
| 6100 | Heating & ventilating; boiler setting | ..... |
| 6200 | Elevators, dumb-waiters, hoists; controls | ..... |
| 6300 | Elevator doors & enclosures | ..... |
| 6400 | Mail chutes | ..... |
| 6500 | Pneumatic system | ..... |
| 6600 | Vacuum system | ..... |
| 6700 | Refrigeration system: refrigerators | ..... |
| 6800 | Sprinkler system | ..... |
| 6900 | Tanks | ..... |
| 7000 | Vaults & Vault doors | ..... |
| 7100 | Revolving doors | ..... |
| 7200 | Awning, shades, & blinds | ..... |
| 7300 | Fly screens | ..... |
| 7400 | Floor coverings | ..... |
| 7500 | Special equipment not otherwise listed | ..... |
| 7600 | Special interior fixtures | ..... |
| 7700 | ..... | ..... |
| 7800 | ..... | ..... |
| 7900 | Landscape: leveling, sodding, & planting | ..... |
| 8000 | Job overhead: equipment, fees, permits, etc. | ..... |
| 8100 | Compensation, liability, contingent insuran. | ..... |
| 8200 | Taxes, sales & use tax, tax on payrolls | ..... |
| 8300 | Total cost: labor, materials, subbids | \$ 7 0.00 |
| 8400 | Profit (at ⁵ % total cost) | 8 0.00 |
| 8500 | Subtotal | \$ 6 0.00 |
| 8600 | Bond | ..... |
| 8700 | AMOUNT OF BID | \$ 9 0.00 |

Figure 7. Construction Estimate Template (page 2)

5. Enter the amount of your profit add-on here as a percentage of total costs.
6. Enter in this field the amount of any required bonding fees that will be charged to your client.
7. When the template is completely filled in, type

!

to calculate the results. VisiCalc will add up the cost figures you have supplied and display the total here.

8. Your profit is calculated from the add-on percentage you supplied in step 5 and the total cost calculated in step 7.
9. The bottom line of the template shows the amount of the final bid.

The Time Value of Money Template

Everyone knows “time is money.” The Time Value of Money template performs a number of useful calculations that can help you determine just *how much* money your investment time is worth. The template acts as an interactive financial calculator with the added ability to print “hard copies” of your investment reports.

The first page of the template performs calculations on four interrelated variables: the size of the initial investment, the interest rate, the term of the investment in years and months, and the future value of the investment at the end of the term. If you supply values for any three of these variables, the template will solve for the fourth (unknown) variable.

Page 2 does calculations involving the concept of an *annuity*, or regular monthly payment. Again, you supply values for some combination of variables and the template calculates the unknowns.

Clear your VisiCalc worksheet and load the file TIMEVALUE.MONEY from the VisiCalc III Sampler diskette, using the method described in Chapter 1 under LOADING A TEMPLATE INTO THE WORKSHEET. When the template has been loaded, type

>B3

to display the first page of the template, as shown in Figure 8. Then follow the numbers in the figure while reading the instructions below.

To fill in the Time Value of Money template:

1. Enter the date here. (Remember to begin with a double quote if the first character is not a letter.)
2. Enter the annual interest rate of the investment or annuity (if known).
3. Enter the term of the investment or annuity in years and months (if known).
4. Enter the amount of the initial investment or the present value of the annuity (if known).
5. Enter the value of the investment or annuity at the end of its term (if known).
6. For annuity calculations, enter the amount of the monthly payment (if known). This is the last cell in which you can enter data. Be careful not to type anywhere else on the template, or you may destroy the formulas from which VisiCalc will calculate the results.
7. After you have entered the values of all known variables, type

!

to calculate the results. VisiCalc will compute the monthly interest rate and display it here.

 Date:1.....

TIME VALUE OF MONEY

NOTE: Interest compounded monthly,
 Payments at end of period.

Annual interest rate =2..... %
 Years ----- =
 Months ----- =
 Present value ---- = \$4.....
 Future value ---- = \$
 Monthly payment -- = \$6.....

The interest rate is 7 0.00 % per month
 and the time period is 8 0 months.

 Future value of the investment: 9

If you invest \$ 0.00 today
 at 0.00 % per year,
 after 0 years
 and 0 months
 you will have \$ 0.00 .

 Present value of a future return: 10

In order to have \$ 0.00
 after 0 years
 and 0 months
 at 0.00 % per year
 you must invest \$ 0.00 today.

 How long for the future return: 11

If you invest \$ 0.00 today
 at 0.00 % per year
 to have \$ 0.00
 it will take ERROR years
 and ERROR months.

 Required interest rate for the time period: 12

If you invest \$ 0.00 today
 to have \$ 0.00
 after 0 years
 and 0 months
 you must earn ERROR % per year.

Figure 8. Time Value of Money Template (page 1)

TIME VALUE OF MONEY 13

Future value of an annuity: 14

| | |
|------------------|------------------|
| If you invest \$ | 0.00 per month |
| for | 0 years |
| and | 0 months |
| at | 0.00 % per year, |
| you will have \$ | ERROR . |

An annuity to receive a future return: 15

| | |
|---------------------|------------------|
| In order to have \$ | 0.00 |
| in | 0 years |
| and | 0 months |
| at | 0.00 % per year, |
| you must invest \$ | ERROR per month. |

How long for an annuity to produce the future return: 16

| | |
|---------------------|-----------------|
| If you invest \$ | 0.00 per month |
| at | 0.00 % per year |
| in order to have \$ | 0.00 , |
| it will take | ERROR years |
| and | ERROR months. |

Present value of an annuity: 17

| | |
|-----------------|-----------------|
| A payment of \$ | 0.00 per month |
| at | 0.00 % per year |
| for | 0 years |
| and | 0 months |
| is worth \$ | ERROR today. |

Time required for an annuity to repay the present value: 18

| | |
|---------------------|---------------------|
| If you invest \$ | 0.00 today |
| at | 0.00 % per year and |
| get a payment of \$ | 0.00 per month, |
| it will be paid in | ERROR years |
| and | ERROR months. |

Annuity required to repay the present value: 19

| | |
|---------------------|------------------|
| If you lend \$ | 0.00 today |
| at | 0.00 % per year |
| for | 0 years |
| and | 0 months |
| you will receive \$ | ERROR per month. |

Figure 9: Time Value of Money Template (page 2)

8. The length of the term in months is computed and displayed here.
9. In this section of the template VisiCalc will calculate the future value of an investment from the initial value, interest rate, and term.
10. Here the initial value of an investment is calculated from the future value, term, and interest rate.
11. This section calculates the term of an investment from the initial value, interest rate, and future value.
12. In this section the interest rate is calculated from the initial value, future value, and term of the investment.
13. Calculations involving annuities are displayed on the second page of the template. If you are doing an annuity calculation, type

>B88

to display page 2 of the template, as shown in Figure 9.

14. The first section on page 2 calculates the future value of an annuity from the monthly payment, term, and interest rate.
15. In this section VisiCalc calculates the monthly payment from the future value of the annuity, the term, and the interest rate.
16. The term of an annuity is calculated here from the monthly payment, the interest rate, and the future value.
17. This section calculates the present value of an annuity from the monthly payment, the interest rate, and the term.
18. Here the term of an annuity is calculated from the present value, the interest rate, and the monthly payment.

19. In this section the monthly payment is calculated from the present value of the annuity, the interest rate, and the term

The Depreciation Template

The method by which you choose to depreciate a business asset can significantly affect the size of your tax liability in future years. The Depreciation template calculates the net present value of your future tax savings under four common methods of depreciation (straight-line, declining balance, double declining balance, and sum-of-the-years'-digits), to help you find the most financially advantageous depreciation method.



The Depreciation template is only a calculator, not a financial counselor! Be sure to consult with a qualified tax attorney before making any significant decisions affecting your taxes or finances.

Clear your VisiCalc worksheet and load the file DEPRECIATION from the VisiCalc III Sampler diskette, using the method described in Chapter 1 under LOADING A TEMPLATE INTO THE WORKSHEET. When the template has been loaded, type

>B3

to display the first page of the template, as shown in Figure 10. Then follow the numbers in the figure while reading the instructions below.

To fill in the Depreciation template:

1. Enter the date here. (Remember to begin with a double quote if the first character is not a letter.)
2. Enter the lifetime of the asset (the number of years over which it is to be depreciated) in this cell.

3. Enter the depreciable basis (the initial capital value of the asset) here.
4. Enter the final salvage value of the asset after it has been fully depreciated.
5. New assets having a useful life of at least three years can be depreciated under the declining balance method, using a base rate less than or equal to the 200% used in double declining balance depreciation. (In some cases this is required by law. For example, the maximum declining balance base rate allowable for real property is 150%.) If applicable, enter the base rate for declining balance depreciation in this cell.
6. Enter your marginal tax rate (the rate you pay on each additional dollar of income in your tax bracket).
7. Enter the discount rate (the rate of interest or yield your money could earn if invested), for use in the template's net present value calculations.
8. The remainder of the template calculates your tax savings under the various methods of depreciation. Don't type anything in this part of the template, or you'll destroy the formulas that calculate the results.

When you have finished filling in the data called for in steps 1-7, type

!

to calculate the results. VisiCalc will calculate the amount of depreciation and the depreciable residue for each year in the life of the asset (up to 30 years), using each of the four methods of depreciation. The results are displayed in columns for easy comparison.

9. The best determinant of the most advantageous depreciation method is the net present value of the yearly tax savings,

evaluated as a cash flow. VisiCalc computes this value for each of the four depreciation methods considered, and displays the results here.



The IRS allows you to change from accelerating depreciation (declining balance or double declining balance) to straight-line depreciation at any time. To take advantage of this feature, the Depreciation template automatically makes this change when it is to your advantage. You can always tell when this change has been made, because the the depreciation charge in the Declining Balance or Double Declining column becomes the same for each year, which is true for straight line depreciation but not the other two methods.

Reconfiguring VisiCalc III

Your VisiCalc III boot diskette comes configured for the standard devices of an Apple III system. This means that it is set up to communicate with these devices:

- the standard console (the monitor and keyboard),
- one built-in disk drive,
- one external disk drive,
- a Silentype printer.

(It can also print to a Qume printer indirectly through the filename .Qume.)

If you plan to use a device that is not included in this list—for instance, if you want to use more than one external disk drive, or want to print to a different printer—you must reconfigure your diskette so that it can communicate with the device. For each new device you must add a file that will drive it; such a file is known as a “device driver.”

You may also wish to reconfigure your system to change the name of a device. For instance, if your printer is a Qume Sprint 5, you can reconfigure the system so that the Qume is the standard printer by changing the name of its driver to .PRINTER—the system will then print to the Qume in response to the print command /PP.

The system configuration file of the VisiCalc III boot diskette is named SOS.DRIVER. This file contains the drivers for the standard

Apple III devices listed above. You must use the System Configuration Program on your Apple III Utilities diskette to change the drivers in the SOS.DRIVER file.

Before you can reconfigure your VisiCalc III boot diskette, you must unlock SOS.DRIVER by following these steps:

1. Remove the write-protect tab from your VisiCalc III boot diskette.
2. Boot your Apple III Business BASIC diskette.
3. When the BASIC prompt character (a right parenthesis) and the blinking cursor appear on your screen, remove the BASIC diskette from the built-in disk drive and insert your VisiCalc III boot diskette.
4. Type

UNLOCK .D1/SOS.DRIVER

and press

You can now boot your Apple III Utilities diskette and use the System Configuration Program to edit SOS.DRIVER so that it suits your devices. See Chapter 2 of your Standard Device Drivers Handbook for information on how to do this.



Be careful when reconfiguring your Visicalc III boot diskette! Read the instructions in the Standard Device Drivers Handbook carefully before you start. A false move can render your VisiCalc III diskette unusable—and since the diskette is copy protected, you can't make a backup copy first.



It is important to limit the number of active drivers in your SOS.DRIVER file; drivers with active status are loaded into memory and therefore reduce the amount of memory available to the VisiCalc worksheet. You may include any number of drivers in your SOS.DRIVER file, but make sure that only the drivers you need have active status. For VisiCalc III to operate properly, the console, internal disk drive, and audio drivers must have active status. For more information about active and inactive drivers, see the DRIVER STATUS section of EDIT DRIVER PARAMETERS in Chapter 2 of your Standard Device Drivers Handbook.

When you reconfigure your system, name the driver for the printer you wish to use as your standard printer .PRINTER. This is the driver that handles text when you type the VisiCalc III print command /PP. You may also include other printer drivers in your VisiCalc SOS.DRIVER file under different names. If these printer drivers are active, you can print to them by typing

`/PF .NAME`

where NAME is the name of the driver for the printer you wish to use. To learn how to change a driver name, refer to the section EDIT DRIVER PARAMETERS in Chapter 2 of the Standard Device Drivers Handbook.

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