# CHAPTER 6 Application Controls 

## Introduction

The third set of keys arranged across the top of your Valdocs keyboard are called application controls. In the world of computers, an "application'' is any program that's designed to do one specific thing. Although many of the other keys on the Valdocs keyboard are technically applications, the applications keys allow you to use programs which are an integral part of Valdocs-working together with the word processor. And, as you'll soon see, you can also use one of the keys to "leave" Valdocs and use the QX-10 for other applications.


## MENU

By now, you're well acquainted with menus. They're used throughout Valdocs to allow you to make choices. Well, we have a little surprise for you: The MENU key is different. At first glance, you might assume that menu is a 'master'" menu of things you can do with Valdocs. But that's not the case. In fact, MENU is the key that allows you to leave Valdocs and enter the world of computers. The programs that make up Valdocs are all designed for processing documents. However, the QX-10, like all computers, has a number of utilities that allow you to do "non-Valdocs" applications.

## A Word of Warning!

If you're new to computers, we strongly suggest that you stay away from MENU for the time being. It's not necessary to know about it in order to use Valdocs. Although Valdocs is loaded with 'safety features' to prevent you from accidentally erasing or changing documents, once you leave Valdocs, those safety features don't exist. Until you learn about how the QX-10's operating system works and how files are stored, you might get into trouble. We'll give you an introduction in this chapter.

## The Operating System

Bear with us! The information we're about to cover is quite a bit more technical than anything else we've covered (or will cover) in this manual. If you're uncomfortable about it, skip this section and proceed to the next section (the SCHED key). We'll mention again that it's not necessary for you to know how to use Mend in order to use Valdocs.

Every computer system, no matter how large or small, has an operating system. An operating system is software that works as a "traffic cop" between the hardware (the QX-10 system-microprocessor, memory, disk drives, etc.) and the applications software (the Valdocs software). The software that makes up Valdocs can't operate the QX-10 hardware directly. The QX-10's operating system is named TPM-II (Transient Program Manager). Although it's very similar to the popular $C P / M$ (Control Program for Microprocessors), TPM-II is an advanced operating system that allows Valdocs to have all the special features you're reading about in this book. (By the way, if you're technically inclined, you'll be interested to know that TPM-II is completely compatible with CP/M. You can run most CP/M programs under TPM-II, but you can't run programs written specifically for TPM-II under CP/M.)

TPM-II sits between Valdocs and the QX-10 hardware, coordinating the flow of information, making sure the microprocessor always has a continuous flow of data to work on, putting information into memory and taking it out, and controlling the floppy disk drives. When you press MENU, you communicate directly with TPM-II. Before we go any further, let's see what you'll see when you press mend :


Don't choose any of the options yet! We'll cover them in detail as we go through this chapter.

## Files and Filenames

Throughout this manual, we've used the terms "file" and "document" interchangeably. But as we cover this section, we'll use the technically correct definition of a file. In a computer system, a file is a collection of information stored by the computer. A filename is a specific name for the collection of information that tells the computer where to get the collection of information.

The "index references" (see INDEX ) you type in when you store a document are not filenames. Instead, they're "pointers" that tell Valdocs and TPM-II where to get the file (document) you're looking for. The actual filenames are quite different from your index references. Let's use an example: Assuming you still have the mend menu on the screen, choose $<\mathrm{D}>$ irectory and press RETURN . Here's what you'll see:

- Which Drive? -

SEFT Drive
$\langle\mathrm{R}\rangle \mathrm{I} G \mathrm{H}$ Drive

Since all your documents are stored on a Valdocs data disk (which always goes in the right-hand drive), press RETURN . Here's what a "typical" directory will look like:

(The directory of your disk won't be exactly like this-the actual files will depend on how many documents you've created, whether you have an address book on the disk, and so on.)

This list shows the TPM files stored on the data disk. Filenames are actually made up of three parts: a name that can be up to eight characters (letters or numbers), a period, and a three-character extension that indicates what type the file is.

Before we go any farther, let's take a look at a typical list of the files you'll find on the Valdocs System disk:


As you can see, because of all the files on the Valdocs System disk, this listing is longer than the screen can show at one time, so let's press NEXT PAGE SHIFT $\square$ to see the rest of it:


## But What Do They Mean?

Okay, it's all Greek to you! But don't worry, as we've said, it's not essential that you understand everything right now. Anyhow, let's attempt to clear up the confusion. As we said, the three-character filename extension after the period indicates what type the file is. Here's a list of the types of files you'll find on the Valdocs disks and other disks you receive with your system.

VAL Valdocs document files
BAK Back-up document files
MAL MAIL files (such as the address book)
NDX INDEX files
DAT Data files used by Valdocs
TMP Temporary files created by Valdocs to store documents you're currently editing.
INI Initialization files that 'start' the system
FNT The file that stores the on-screen character fonts
HLP Files that store HELP information
CHN The files that make up the 'heart" of the Valdocs system. CHN stands for "CHAIN" and gives you an idea of how the different parts of the system work together-like links in a chain.
TIM A file that stores the time and date for SCHD
SYS TPM-II 'system'" files
COM TPM-II "command' files
(Pay particular attention to the SYS and COM files-we'll talk about them in detail a bit later in this section.)

The "protect" column next to the filename is the protection level of the file.

The "size" column shows how much storage space (in bytes) the file takes up on the disk.

Obviously, the "date" column is the date the file was created.

## Identifying Valdocs Documents

As you see in the list, all Valdocs documents are stored on data disks in files that have VAL extensions. It's important for you to know this if you ever want to move individual documents from one disk to the other (using the $<\mathrm{S}>$ ingle file copy option option of $\begin{gathered}\text { COPY } \\ \text { DISK }\end{gathered}$ ).

That string of numbers in that make up the first part of the VAL file names may seem confusing at first. However, let's use an example. Take the document stored in the file " 83214001 .VAL." Breaking it up will make it clearer:

As you might guess, the first two numbers are the year the document was created, then the month, day, and sequence number (which document it was for that date).

All Valdocs documents are stored in this manner, making it easy to transfer files by cross referencing the Valdocs file names to the INDEX listing.

## Applications

The $<\mathrm{M}>$ enu of applications option on the main mend menu (that's right menu menu!) is similar to list, except that it shows you a list of files that can be run independently from Valdocs. Remember, a while ago we told you to pay particular attention to files that ended with the COM and SYS extensions? Well, these are files that you can run separately.

You "experts" might be tempted to run other files on the Valdocs System Disk. (There's a way to do it, but we won't tell you how!) Don't do it! Attempting to run the "CHN" files that make up Valdocs can not only give you strange results, but might ruin the Valdocs software!)

You'll find a number of applications programs on the "non-Valdocs" disk that came with your QX-10. There is however, a very important "runable" file on your Valdocs System disk. To find it, choose the $<\mathrm{M}>$ enu of applications and the $<\mathrm{L}>$ eft disk drive. You'll see a list similar to this: (yours may not be exactly the same):

$<\mathrm{M}>$ enu of applications shows you all the files that have either a SYS or COM extension and allows you to run them. RESTART.SYS will return you to Valdocs, although you don't have to "run" it to return to the document processor. You can just press UNDO until you're back.

IMPORTANT! Do not attempt to run the file named SPOOL.COM. It's a Valdocs file that couldn't (for technical reasons) be named with a CHN extension. Although you won't hurt anything by running it, you'll 'hang', the system and will have to press the RESET button to get started again.

## The SETUP Program

The important "runable" program we talked about a few paragraphs back is called SETUP.SYS (or SETUP.COM-depending on your system). It allows you to 'customize"' your system to the peripherals you've purchased for your Valdocs system, as well as for your special needs. (Note that as the system comes from the factory, we've set it up for "normal" needs.) It's the message you see the first time you start the system after you unpack it.

To see how SETUP works, move the cursor to it and press RETURN . You'll see another menu asking you to "type in any commands needed by the application." This is used for application programs that require you to specify an action or a file for the application to work on. Since SETUP.SYS doesn't require any, just press RETURN. After a few seconds, you'll see a menu something like this:


NOTE: Your SETUP menu may not look exactly like this-the exact wording and individual options will change from time to time as new versions are released.

Except for time/date, each of the items has a default setting that you can change by moving the cursor to your choice and pressing RETURN . You can see the time in the lower right-hand corner of the screen. Each of the choices takes you to another menu that lets you change the indicated system setting.

Here's what the individual entries mean:

Time/date-Set or change the time and/or date that's stored in the system.

Baud rate-the speed of communications using a modem and the MAIL program. Standard speeds for normal telephone lines are either 300 or 1200 baud, depending on your modem and the equipment you'll be communicating with.

Input and output assignments-An extremely advanced feature. To be truthful, if you don't know what it means, you probably won't need to use it.

Experience level-There are four experience levels in Valdocs: beginner, novice, advanced, and expert. These are mainly reserved for future use, although there are a few small differences in the way Valdocs works at various levels. We strongly suggest you leave this at "beginner"' unless you're an experienced "computer hacker."

Printer type-Choose this menu if you're using something other than an Epson MX-80 printer with your Valdocs system. Just follow the directions to let Valdocs know what type of printer you're using. This makes sure it sends the correct control information to the printer.

Disk allocation-This is also an advanced feature for experienced computer people only. You can use this option to change the disk Valdocs "boots" from and stores data on. If you purchased a hard disk with your system, you'll want to change the disk allocation. (Our best advice is see your dealer.)

ANOTHER WARNING! Don't change the settings in the SETUP menu unless you're absolutely sure you know what you're doing. If in doubt, consult your dealer.

Pressing CALC gives you immediate access to a general-purpose calculator that adds, subtracts, multiplies, and divides.
"So what?", you say. "When would I ever need a calculator?" Well, you'd be surprised. Because, in Valdocs, CALC is more than just a standard calculator. It gives you extras like automatically totalling rows and columns of figures that appear in your document. (Really handy for reports, financial statements, etc.) You can also perform calculations and insert them anywhere in á document, or even store calculations away for future use. Like so many Valdocs features, it won't take you long to think of numerous uses for your built-in calculator.


## Getting Down to Business

Let's look at how it's used. Press CALC . The red light on the key will light up (and stay lit until you exit the calculator). You'll see the following menu in the interaction window:

```
CALCILATOR: O|
<C\LEFR all
<M\EMORY plus [0]
<G\ET from memory
<I)ERO memory
```

Use the calculator keypad and editing keys
<INWSERT number in document.
<T>OTAL a column
<R>ON total
UNDO to resume editing
$\qquad$

The CALC menu works just a little differently from other menus in Valdocs. First of all, you'll notice that the cursor isn't positioned at the first choice; it's sitting there contentedly next to the message "CALCULATOR." What you have there is a full function calculator, ready to calculate.

Give the calculator a try! Use the keypad on the right side of the keyboard, just like you'd use your standard pocket calculator. (You can use the regular numeric keys at the top of the main keyboard, but you'll most likely find it much more comfortable to use the numeric keypad.) For instance, type:

```
25\times56=
```

There you go! 1400 (the correct answer, of course) appears. But your calculations don't have to be that simple. Let's try a more involved calculation.

First, clear the calculator. Where's the CLEAR key? It's the first choice on the menu- $<\mathrm{C}>$ lear all. Just press C and RETURN and the calculator will be cleared. You might have noticed that there isn't any CLEAR ENTRY key. No problem; just like in the Valdocs editor, you can use $\underline{\square}$ to erase individual entries.

Try this:

$$
12567.54 \times .05 \div 12-2.05=
$$

You'll notice that as you go along the subtotal occasionally appears. The calculator is simply doing its calculations as it goes along. The final answer is 50.31.

## Hold That Number!

The " $<\mathrm{M}>$ emory plus" and " $<\mathrm{G}>$ et from memory" options let you temporarily store the results of your calculations. They work much like a 'memory" on a calculator.

Anytime you want to temporarily store a result for later use (in another calculation or somewhere in a document), all you have to do is use the $<\mathrm{M}>$ option. When you choose $<\mathrm{M}>$ and press RETURN, you'll immediately see the number you've "calculated" appear in brackets next to the $<\mathrm{M}>$ option. (Go ahead, use $<\mathrm{M}>$ to store your answer.)

Now, the number you've just put in memory can easily be retrieved for use in other calculations. At any point while you're calculating, you can press $\mathbf{G}$ and RETURN to return the number to the calculator.

Let's try it. First clear the calculator by pressing C and RETURN and then type the following:

## $2 \times$ G RETURN $=$

What you've done is multiply the number in memory times two, and the answer (100.6) appears in the calculator.

Notice that [50.31] stays in the $<\mathrm{M}>$ line. Valdocs' calculator has one memory-you can only store one number at a time in it. Finally, as you might expect, the $<\mathrm{Z}>$ ero memory option clears the memory. (Go ahead and clear it! Press $\mathbf{Z}$ and RETURN .)

## Using the Calculator Results

Valdocs' calculator wouldn't be of much use if you couldn't use the results of your calculations. You could copy the numbers into the document you're writing, but why bother when we've built in a way for you to automatically insert the result anywhere in your document?

It's not done with mirrors, but rather with (surprise!) the $<\mathrm{I}>$ nsert number in document option. Pressing $<\mathrm{I}>$ and RETURN will give you the following message in the interaction window:


At this point, it's a simple matter of using the cursor movement keys (the arrows) to move the cursor to where you want the number inserted. (If the correct part of the document isn't shown in the document window, use PRIOR PAGE or NEXT PAGE to scroll through your document.) When the cursor is in the right place, just press RETURN again and the number next to CALCULATOR in the interaction window will be inserted into your document.

IMPORTANT! You must call up the calculator while you're editing the document you want to insert your calculations in. If you want to insert your calculations into another document, you'll have to put the results into the calculator's memory, exit the calculator, store the existing document, retrieve another one, get the number, and insert again. (OK, it sounds complicated, but it isn't really hard to do.)

## Totalling Rows and Columns

We've saved the best for last! The most unusual (and useful) feature of Valdocs' calculator is its ability to automatically total rows and columns of figures that you've already typed into your document. No need to get out your pocket calculator or use the Valdocs calculator to tediously enter all the numbers a second time. It's perfect for reports, memos, home finances, and the numerous other applications that require you to add long lists of numbers.

## The (Not-So) Gruesome Details

As with the rest of Valdocs, the best way to see how this feature of the calculator works is to use it. Store the document you're working on (if any) and then start a new one. Let's make up a hypothetical sales report (don't forget to use the ${\underset{\text { TAB }}{\text { DEC }}}_{\text {dey }}$ key so that all the decimal points in your report are lined up):

(Looks like Hi-Tech Widgets is having some problems!)

## Totalling Columns

Let's try a column total first. Press CALC (if you haven't already), then press $\mathbf{T}$ and RETURN to total a column. You'll see this:


Move the cursor anywhere into the last number in the column. (It doesn't matter where as long as it's in the number.) When you press RETURN there will be a few seconds' delay, and then the answer (4952.44) will appear in the calculator window. At this point, you can either put it into memory (using $<\mathrm{M}>$ emory plus) or insert it into your document.

You'll probably want to make up a new "totals" column and insert the totals-like this:


To do totals on the other columns, just proceed as we've described, using the $<\mathrm{T}>$ option.

## Column Subtotals

The Valdocs "column adder" stops adding a column when it encounters any character that isn't a number. With this in mind, you can subtotal parts of columns by inserting any character (except a number) anywhere in the column.

## Totalling Rows

You can also do a total across a horizontal row of numbers. The process is essentially the same as totalling a column, except you choose the $<\mathrm{R}>$ ow total option and place the cursor at the end of the last number of the row-like this:


Give it a try! The total of the first row should be 1535.40 . And just as with the column total, it's a simple job to make up another column of row totals.

## What Else?

It won't take you long to see how handy Valdocs' CALC feature is. There's no need to keep a calculator next to your computer to do things like adding up numbers in reports or memos. (After all, working with numbers is one of the things computers do best!)

The second applications control key is SCHED, a scheduler. You might think of it as a time machine-a general-purpose manipulator of time. It includes:

1. An appointment book and notepad
2. An itinerary printer
3. An event timer
4. A general-purpose clock and calendar

You'll find that the many functions of SCHED give you a handy way to keep track of your appointments and things to do. This powerful little key will help you organize your life!

## The Appointment Book

When you press SCHED, Valdocs reads the QX-10's built-in calendar and displays for you an appointment book for the current date. It looks like this:


This electronic page may look to you like the left-hand page of a standard desk calendar-and that's exactly what it's supposed to be. (The 'note page," as you'll see, is like the right-hand page of a calendar.) 'Flipping through'" the calendar is easy. To see yesterday, use PRIOR PAGE ( SHIFT $\uparrow$ ). To see tomorrow, use NEXT PAGE ( SHIFT $\boldsymbol{\square}$ ). Of course, pressing these keys repeatedly lets you quickly scan through the calendar as far back or as far forward as you like.

Let's take a look at how to use the calendar:


## Enter Appointment Book

When you choose the $<\mathrm{E}>$ nter appointment book option, the appointment book will stay on the screen. At the same time, a new message will appear in the interaction window:

## Choose your option:

Enter or change an appointment.
Feeserve a block of time.
Un-reserve a bilock of time.

## Enter or Change an Appointment

The cursor immediately moves up into the document window and you can start entering your appointments. At this point, Valdocs works very much like it does when you're editing an ordinary document. Use the arrow keys to move the cursor to the time you want and then just type away. The $\boxed{x}$ and keys function as usual. (Don't worry! You can't erase or write over the times that display on the screen. Valdocs protects them.)

When you're finished, your page might look something like this:


## Printing It Out

It's important to remember that whenever you're using the scheduler, you can get a printed copy of your appointment book or note page sim-

ply by pressing PRINT. It's a handy way to take your schedule with you if you're leaving the office or rushing off to an important meeting down the hall.

## Reserving and Unreserving Time

The second option of the APPOINTMENT BOOK menu is " $<\mathrm{R}>$ eserve a block of time." It lets you lock blocks of time so that you can't schedule anything else there. For instance, if you're going to be in an important meeting all morning, you can reserve that block. Just choose $<\mathrm{R}\rangle$ and follow the directions. Marking blocks is a simple matter of moving the cursor to the beginning of the block, pressing RETURN, moving it to the end of the block, and pressing RETURN again. When you're done, the reserved block will look something like this:


Once you've reserved a block, you can't put any appointments in it unless you "unreserve"' it using the $<\mathrm{U}>$ nreserve a block of time option.

## Finding a Specific Date

Of course, you'll want to fill in appointments and such as they're scheduled. You can go to any date by choosing the second option from the main menu- $<\mathrm{G}>0$ to a specific date. Valdocs then asks you for the date and places the calendar for that date on the screen. You'll notice that the scheduler automatically calculates which day of the week the date is. Try it - for any date in any year—past or future! In fact, the scheduler is pretty clever at figuring out where $y o u$ want to go. Starting from the current date, it will automatically find the right date when you type in entries like " 2 nd Tuesday in September," " +1 ," " -100 ," or " 23 ". (For instance, try your birthday, then type "TODAY.'’)

## The Note Page

Let's look at the $<\mathrm{D}>$ isplay note page option. As we mentioned a couple of pages back, Valdocs' calendar is very much like a standard desk calendar. The note page is a blank page on which you can make miscellaneous notes or keep records for later use. When you press $<\mathrm{D}>$ from the main SCHEDULER menu, you'll be shown a blank page which you can write on.

## The Timer

Part of the scheduler offers you an "electronic stopwatch' for timing meetings, events, telephone calls, etc. If you choose the $<T\rangle$ option from the main SCHEDULER menu, you'll see the following:


## Using the Timer

Obviously, it's pretty easy to figure out what start, end, and reset do. (The elapsed time appears on the screen.)

What about insert and display?
$<$ I $>$ nsert allows the elapsed time setting to be inserted automatically at the cursor position of a document you're working on. You'll find it handy for keeping notes and computations.
$<\mathrm{D}>$ isplay changes the way time is displayed. Normally, it's MINUTES:SECONDS. But there are certain cases that require time to be recorded as hours and hundredths of hours. This option will change the display to HOURS:HUNDREDTHS OF HOURS. For example, if you do time billing, you can time work or meetings, convert it to decimal, and insert it into a document. You can even use CALC to add blocks of time!


## Itinerary Printing

We mentioned earlier that you can at any point print a hard copy of your calendar by pressing PRINT. But if you want to print an itinerary of several dates, you'll need to use the $<\mathrm{I}>$ tinerary printing option from the main SCHEDULER menu.

Valdocs will then ask you:

```
Get, the FIFST day of the itinerary visible.
    Lorrect. day is visible.
S%oto specific date.
    <UN[O for prior menu>>
```

If you want to start your itinerary with the current day, all you have to do is press RETURN. If you want to start it with another day, use the $<\mathrm{G}>\mathrm{o}$ to option, which works exactly the same as $<\mathrm{G}>\mathrm{o}$ to in the main SCHEDULER menu.

Valdocs then asks you for the last day of your itinerary and again lets you mark the time where the itinerary ends.

At this point, you'll have the starting and ending dates for your itinerary. Valdocs will then ask you if it's correct:

```
Your itinerary begins on Sunday, May, 15, 1983.
Your itinerary ends on Wednesday, May, 18, 1983.
If this is correct, press RETUNN to start, printing,
or press INDO to go back ard make a change.
```

UNDO for prior menu
$809: 27 \mathrm{H}$

Your itinerary will be printed with all the times and appointments on the left, and all notes you've made for that day on the right - ready to put into your briefcase and take along.

## Set Clock Calendar

The final option on the main SCHEDULER menu is $<\mathrm{S}>$ et clock/calendar/time divisions. This option lets you set the date and time from within Valdocs and change time divisions. (We already used it in Chapter 1 to set the clock and calendar when you first set up your system.)

## Change Time Divisions

We've set up the daily calendar using half-hour divisions during the day and one-hour divisions after the normal workday. But you might want to "customize" your appointment calendar. For example, you might begin your day early; then start the calendar at 7:00, or whenever. Perhaps you need 15 -minute time divisions. When you choose the $<\mathrm{C}>$ hange option, you can use the normal editing functions to customize the calendar. When it looks exactly the way you want it to look, press STORE and your appointment calendar will be stored in the chosen format. From this point onward, all calendar pages will be in your new format. If, at some point in the future, you decide you'd like to change it again, you can-any time.

The third key under Valdocs Applications is labeled DRAW . Pressing this key opens up a whole new world of Valdocs features. Up to this point, we've been working with words and numbers - documents. But DRAW,
as you might guess, lets you work with shapes. As you'll soon see, it's a powerful feature.

In this section, we'll be using graphics - shapes, lines, and charts. Graphics are powerful tools, allowing you to present information in a way that can immediately be grasped. Any of the charts, graphs, or other graphics you create with DRAW can be printed out for inclusion in a memo or report; or you can even send them to others or other people using MAIL (see Chapter 5).

## Using DRAW

Let's get started. Press DRAW . After a few seconds, the light on the key will go on and you'll see the following interaction window:

Choose the function you want to accomplish, then press RETURW
Create a riew graph
Setrieve a graph to [iraw, Frint, or Re-edit

INNO to return to the EIITOR $\qquad$

The $<\mathrm{R}>$ etrieve option lets you get a graph you've already created. But since you haven't done one yet, let's create one. Just press RETURN :


We've only just begun! Let's look at each of the options.

## Which Is Which?

Which chart or graph you'll want to create is a matter of personal preference, and (more importantly) the data you'll be using for the graph. Pie charts are the best choice if you want to show percentages-how individual items fit into the whole. If you want to show discrete amounts at intervals, a bar graph is best. Line charts are best for showing changes over a period of time and scientific charts are the choice if you want to plot a number of points.

Here's an example of each of the four types of charts that you can create with Valdocs:


PIE CHART


BAR GRAPH


## LINE GRAPH



SCIENTIFIC GRAPH

Valdocs gives you complete freedom in creating charts; you can put titles and labels where you wish, as well as define the length and step on each axis.

## The Process of Creation

Each of the graphs Valdocs can create are done in a very similar way. All you have to do is have your data ready and follow along with the instructions that appear in the interaction window. We've made it easy to create eye-popping graphics.

In this part of the manual, we'll give you one example to show how the graph-making process works. We'll use a pie chart. (Make sure your Valdocs system is up and running so you can follow along with us.)

To create a pie chart, press $\mathbf{P}$ and RETURN. You'll be asked whether you want the title placed at the top or the bottom of the graph. Make your choice, and press RETURN . You'll see this menu:

Please type the name you wish to give this graph, then press FETUPN

The TITLE for this graph is =

- INLD for prior menu
$<09: 41 \mathrm{~A}$

Type in the name you want the chart to have. It will appear in large letters at the top of the chart. Let's call ours 'Percentage of Sales by Product Line."

The next message you'll see will be:

Enter thie number of slices the pie will hiave, then press RETURN

The number of slices for this graph is =

URNO for prior mernu
0.44 A

To make your pie chart as readable as possible, don't use too many slices; a crowded pie can be hard to interpret. You should use pie charts for a relatively small number of individual areas when you want to give a general impression. For our example, we'll use five slices.

## Getting the Data

You should have you data ready to enter. Our hypothetical company has the following five product lines and sales:

Widgets \$80,000
Geegaws \$53.000
Things \$39.500
Whatevers \$23,000
Red Herrings $\$ 10,250$

(A rather strange product line indeed!) Let's put the data into pie chart form for the steely-eyed board of directors.

## Slicing the Pie

After entering " 5 '" for the number of slices, you'll see the first "slice" menu:


Let's look at the menu a bit more closely:

You'll want a slice pulled out from the center of the pie if you want something highlighted. We're proud of widget sales, so we'll type $\mathbf{Y}$ and

## RETURN

## Shading the Slices

There are 10 shades, each ascending number giving a darker colored slice.

In this example, we'll start with shade one and proceed up through five. So type 1 and press RETURN .

## Naming the Slices

The next step is to name the slice.
That's easy, we'll call it "Widgets."

## Entering the Numbers

After you've named your slice, you'll be asked for the amount.
All you need to do is enter the amount of sales $(80,000)$. Valdocs graph generator will take all the numbers, automatically figure out the percentage, and create the correct pie chart. (How's that for classy?)

Note that Valdocs ignores dollar signs and commas in long numbers. But don't worry, everything will be figured correctly.

## Finishing the Chart

That's all there is to entering the information for the first slice. The "filled in" menu should look like this:

```
MOVE between blarks wi th IF/[OUNN FRROLS. WQNE betweeri slices
with PRIOR-NEXT/PFGE. ENTER the data for SLICE # O1.
    FUL the slice out from the center? (r) for VES y
    GHCE this slice (FromQ light to? dark) 1
    NaHE for this slice uldgets
    NMERIC PMONNT for this slice
                                    \NNO for prior SLICE >
                                    amal
```

The next time you press return, you see this menu:

```
MOWE between blanks with UP/DOWN GFFOWS. MCWE betweer slices
with FRIOR-IEXT/PFGE. ENTER the datia for SLICE \# dac.
    FUL the slice out from the center? 〈Q for VES
    SHCDE this slice (From \(Q\) light, to 9 dark)
    NATE for this slice
    NMERIC GrOMNT for this slice
        UNDO for prior SLICE \(>\longrightarrow<\) Q9:57
```

We're back to the beginning and ready to enter the information for the second slice. Go ahead, using the information we gave you a couple of pages back, finish doing the rest of the pie chart. Just so we'll end up with the same graph, don't pull any more slices out, and use shades 2-5 for the remaining slices:
(See you in a bit. In the meantime, we'll go out for a cup of coffee.)

## The Final Stages

We're back! Assuming you've finished entering all the information into the pie chart menus, you'll see this menu:

You have CREFTED a FIE graph. What would you like to do nest

```
SE-EDIT the graph
STOFE the graph
(D)PAW the graphi
<P`INT the graph
EXFASE the graph
INDO for prior menu
10:02A>
```

Since you're probably anxious to see what the graph looks like, let's take a look. Press D (Draw) and RETURN . In a few seconds, the pie chart will start diawing on the screen. It should look like this:


## What's Next?

If your printer is hooked up and ready to go, you can get a "hard copy", of the graph simply by pressing $\mathbf{P}$ and RETURN . The graph will appear on the screen and will print out.

IMPORTANT! Charts created by Valdocs' DRAW program are designed to be printed on Epson MX or FX series printers or other similar dotmatrix printers. If you're using a daisy wheel or other printer that creates fully formed characters, you won't be able to print out the charts. (The reason for this is that charts are printed as "bit images", -dot for dot.) Also, unlike the PRINT key, you won't be able to do anything else with Valdocs until the chart is finished printing.

## Storing Your Charts for Posterity

After all this effort, you'll want to make sure you store your chart for future reference. Press STORE, then choose the $<\mathrm{S}>$ tore the graph option and press RETURN. The index listing of your data disk will appear in a few seconds and you'll be asked for an index reference-just like when you're storing a document. All you have to do is type it in.

HINT: In order to quickly see which entries in your index are documents and which are charts, we suggest that you identify the charts in your index reference. Use something like the following:

Pie Chart: Percentage of Sales by Product Line
The exact wording is, of course, entirely up to you. Once you've typed in the index reference and pressed MENU , the chart will be stored on your data disk and you'll be returned to the graph menu.

## Throwing It Out

If, for some reason, you don't want to save the chart (why not?), you can use the $<\mathrm{E}>$ rase the graph option to throw it away (figuratively of course). If you're working with a graph you've already stored, using erase will delete the graph you're working on-but the original will still be stored on your data disk.

## Changing the Chart

Once you've created your chart, you can change it at any time by using the $<R>$ e-edit the graph option. It steps you through all the menus you used to create the chart and lets you change or update any of the data. You'll be shown the entry you previously made and can use standard Valdocs editing keys to change entries. (Remember you must STORE the updated chart.)

## Where Do We Go from Here?

So much for pie charts. We've attempted to give you a solid idea of all the fun (and utility) you can have with the graphs Valdocs creates. Now that we've covered pie charts in detail, go ahead and create a line graph and a bar graph. Make up some "dummy"' data, or better yet, use some that you'll be able to use (like last month's sales figures or your household budget).

## CHAPTER 7 <br> Typestyles

## Introduction

The fourth set of keys at the top of your Valdocs keyboard is marked "typestyles." As we stressed at the beginning of this manual, with Valdocs, "What you see is what you get." The typestyle keys are the epitome of this Valdocs feature.


You've probably never seen keys like this on other computers, and with good reason. Most computers are severely limited as to what they can show on the screen. They give you a standard set of letters, numbers, and punctuation, and that's about it. Sometimes you can print out special characters, but you can't see them on the screen. Typically, these characters are created by typing special codes in the midst of your documents. (What
a bother!) Not so with Valdocs. Without getting into lots of heavy technical jargon, we'll tell you that Valdocs uses a bit-mapped video display. This means you'll see characters on the screen exactly the way they'll look when they're printed out.

IMPORTANT! The typestyle keys are designed to be used with an Epson printer (either the MX or FX series). If you'll be using a different printer, such as a daisy wheel printer, you'll still see the requested typestyles on the screen (as we'll explain in a minute). But a non-Epson printer won't print them out exactly as they appear; in fact, the special codes sent to the printer when you've used the typestyle keys will often confuse a nonEpson printer-and you might end up with some strange looking text.

## BOLD and ITALIC

The Bold and ITALIC keys let you customize the look of your final document. You can intermix bold, italic, and "ordinary" text anywhere in your document. For instance, you might want to use bold characters for section headings on a report (as we've done in this manual) or to make a particular word or phrase stand out. Italic type also calls attention to words or phrases; we've used it throughout this manual to call attention to particularly important terms.

## BOLD

 ITALICUsing Bold or ITALIC keys is just as simple as the rest of Valdocs. Let's say you're typing along and want to highlight the next word. Just press BOLD, type the word or phrase you want highlighted, and press BOLD again. ITALIC works the same way. You'll see the words you selected, in bold or italic, right there on the screen, just the way they'll look in your finished document. You can think of BOLD and ITALIC as on/off switches. Every time you turn on the Valdocs system, they're off. Touch them once, and they're on; touch them again, and they're off.

## Bold Italic?

What if you press both BOLD and ITALIC ? (No, the system won't blow up!) That's right, you'll get bold italic characters. There's almost no end to what Valdocs can do.

## I Can't Believe I Did the Whole Thing.

You can also type your entire document in bold, italic, or bold italic. By touching the typestyle keys, or "setting the switches," at the beginning of your document, you can cause the entire document to appear in the typestyle of your choice. (Be the first on your block to send out computer-generated party invitations complete with fancy type!)


## Doing It Later

If, in the process of editing your document, you find words (or passages) that you decide you'd like to have in bold or italic, simply place the cursor where you want the bold (or italic) type to start, press the BOLD or ITALIC key, move the cursor (using the cursor keys) to the end of the word or passage you want changed, and touch BOLD or ITALIC again. The text will change instantly. (Don't be concerned when your entire document turns to bold, italic, or bold italic when you change the type in the middle of a document you've already created. As soon as you move the cursor to the end of the section you want to change, everything will return to normal.)


## SIZE and STYLE

Valdocs' sIzE and style keys aren't used in this version. They're reserved for future use and are "under construction." Check with your Epson dealer from time to time-he or she will have information on new versions of Valdocs as they become available. (Remember though, that the STYLE key, when pressed at the same time as CTRL , is a "caps lock" that makes all the letter keys produce uppercase characters. It differs from

## SHIFT <br> LOCK

since that key makes all the keys produce the top characters. You turn off "caps lock" by pressing CTRL and STYLE again.)

## That's All Folks

Congratulations! You've earned your degree in Valdocs. (We told you way back at the beginning that it would be fun!) But, just like life, education is a continuing process. Although we've stressed it all along, we'll say it again, the more you experiment with Valdocs, the more proficient you'll become. Although (as you found out) anyone can learn the basics of Valdocs in only a few minutes, we've built a good deal of power into our humble document processor. Have fun using it.


## INDEX

Address book, 5-24 - 5-30
address cards for, 5-27
as a data base, 5-25
designing labels with, 5-29
DESIGN/PRINT menu from, 5-29
entering information into, 5-25 - 5-26
mailing labels for, 5-28
name cards for, 5-26
printing labels from, 5-28, 5-29-5-30
telephone numbers with, 5-27
using PRINT key with, 5-27
Application control keys, 1-6, 6-1
Application program, definition of, 6-1
Applications software, 6-2
Appointment book, 6-17-6-22
entering information, 6-18-6-19
finding a specific date, 6-21
making changes, 6-18-6-19
note page of, 6-21
printing out, 6-19-6-20,
$6-22-6-23$
reserving time, 6-20
timer for, 6-21 - 6-22
unreserving time, 6-20
Automatic screen-blanking feature, 1-15

Background operation, definition of, 5-9
Back-up copies, importance of, 1-9-1-10
Bar graph, best use for, 6-24
Blank out the screen, how to, 1-15
BLOCK menu, 3-5 - 3-10
copying option, 3-8
deleting (block copy) option, 3-9
deleting/unmarking (block markers) option, 3-7
marking option, 3-5 -- 3-6
placemark option, 3-7
relocation option, 3-8
storing option, 3-9 - 3-10
BOLD key, 1-7, 7-2 - 7-4
Boot, definition of, in computers, 4-11, 6.9

CALC key, 1-6, 6-10 - 6-16
directions for use, 6-11
inserting results in copy, 6-12-6-13
memory options, 6-11-6-12
subtotals, 6-15
totalling columns, 6-13, 6-14-6-15
totalling rows, 6-13, 6-15-6-16
using DEC TAB with, 6-13
Clock/calendar, 1-15
how to set, 6-23
Column width of paper, 3-19
Computers, compared to human beings, 1-3
Control key, see CTRL key
Control keyboard, 3-1 - 3-4
special menus from, 3-4
COPY DISK key, 1-6, 1-9. 1-13,
4-3-4-11
copying a single file, 4-9
copying Valdocs files, 4-10-4-11
if there's data on disk, 4-7
making a data disk, 4-8-4-9
making an exact copy of a disk, 4-4 - 4-8
time needed to copy, 4-7
Cross indexing, 5-7 - 5-8, 5-14 - 5-15
Cross referencing, see cross indexing
CTRL B, see BL.OCK menu
CTRL keys,
definition of, 3-2
to control cursor movement, 3-3
use with menus, 3-4 -- 3-22
CTRL L, see LOOK FOR menu
CTRL M, see MISCELI ANEOUS menu
CTRL O, see ON-SCREEN FORMATTING menu
CTRL P, see PAGE menu
CTRL PRINT, to get printed copy of everything on screen, 5-13
CTRL STOP, to blank out screen, 1-15
Cursor,
definition of, 2-11
how to control, 2-11-2-12
key combinations, 2-14
using arrow keys, 2-11-2-12
using combinations of heys to control, 2-12-2-14

Data, definition of, 1-4
Data disks,
correct drive for, 1-13
definition of, 1-12, 1-13

Decimal tabs, 2-22, 2-23
how 10 set, 2-22
DEC TAB key, 2-22, 2-23
used with CALC key, 6-13
Delete keys, $x$ and $x$, 2-18-2-20
key combinations, review of, 2-19
used with other keys, 2-18-2-19
Destination drive, 4-10
DIP switches, 1-8
Diskettes, see disk(s)
Disk(s),
copying, definition of, 4-6
copying a file on, 4-9
data, definition of, 1-12-1-13
data, storing chart on, 6-31
formatting, definition of, 4-5
hard, definition of, 1-13
"housckeeping'" on, 4-9
how to care for, 1-9 - 1-11
magnetic fields and, 1-11
magnetic surface of, 1-10-1-11
making back-up copies of, 1-9-1-10
making data, 4-8-4-9
making exact copy of, 4-4-4-8
physical harm to, 1-11
reading, definition of, 4-5
sectors on, 4-4, 4-5
source, 4-11
storage capacity of, 1-14
system, definition of, 1-12
temperature, optimum, 1-11
tracks on, 4-4, 4-6
type to buy, 1-9
verifying, definition of, 4-6
"work space" on, 1-14
Document window, 2-3
DRAW key, 1-6, 6-23-6-32
directions for use, 6-25, 6-27-6-31
pie chart, creating with, 6-27-6-31

Editing, 2-10-2-25
definition of , 2-10
Epson MX and FX series printers, 5-11, 6-31
Epson MX printer, 6-9
Epson printer(s), 2-20, 5-10

## File(s),

combining, 5-8
definition of, 5-1, 6-3
how to store, 5-4
indexed, 5-23
naming, 5-4 -- 5-6
non-Valdocs, 5-23
TPM, 5-23
types of, 6-6
Valdocs, copying of, 4-10-4-11
File control keys, 1-6, 5-1
File name(s),
definition of, 5-3, 6-3
parts of, 6-4
Flag line, 2-8
Floppy disks, see disk(s)
Foreign language symbols, 2-25

Graphics keyboards, 2-25-2-26
Great American Novel, 1-14, 1-15, 2-19, 3-8, 3-10, 5-1, 5-23
GRPH SHIFT keyboard, 2-25

Hard copy, 6-22
definition of, 5-9
Hard disk, 6-9
definition of, 1-13
Hardware, 6-2
HASCI keyboard, 2-1
HELP key, 1-6, 2-2, 4-3
Horizontal scrolling, problem with, 3-19

Inbasket, 5-30-5-31
menus, 5-31
options, 5-30-5-31
Index,
alphabetical, 5-14, 5-16
cross, 5-14 - 5-15, 5-16
sequential, 5-14, 5-15-5-16
INDEX key, 1-6, 4-10, 5-3, 5-13 - 5-16, 5-20
choosing files to work on, 5-20
directions for using, 5-14
options, 5-20
to retrieve a document, 2-24, 5-7
Index reference, 4-10, 4-11, 6-31
compared to filename, 6-3
definition of, 5-3 - 5-4
restrictions on, 5-5
INSERT key, 2-14-2-17
insert mode of, 2-15-2-16
replace mode of, 2-16-2-17
Interaction window, 2-4
ITALIC key, 1-7, 7-2 - 7-4

Justification, 2-10
definition of, 2-10
turning on and off with Valdocs, 2-10

Keyboard, Valdocs, 1-6-1-7
application keys on, 1-6
file control keys on, 1-6
system control keys on, 1-6
typestyle keys on, 1-7

Lights, disk drive, 1-13
Line charts, best use for, 6-24
LINE key and arrow keys, used to move cursor, 2-12
LOOK FOR menu, 3-10-3-14
conditional replacement of text, 3-11-3-12
locating beginning of document, 3-13-3-14
locating end of document, 3-13-3-14
locating specific section of a document, 3-10-3-11
repeating commands, 3-13
replacing text, 3-12

Magnetic fields, danger of, to disks, 1-11
MAIL key, 1-6, 5-21 - 5-24
call waiting feature, problems caused by, 5-21
directions for use, 5-21 - 5-23
sending mail, 5-23-5-24
use with modem, 5-21
Margins, 2-20 - 2-21
changing, 2-21
default setting, 2-20
MAR REL key, 2-20, 2-21
Menu(s), 2-4 - 2-6
choosing from, 2-5 - 2-6
definitions of, 2-4
MENU key, 1-6, 6-2 - 6-10
applications option, 6-7-6-8
MISCELLANEOUS menu, 3-14-3-17
amount of space left on data disk, 3-14
changing data disks, 3-16-3-17
deleting a document, 3-15
erasing a document, 3-15
justifying copy, 3-15-3-16
refiling a document, 3-15
reformatting a document, 3-15
word wrap option, 3-16
Modem(s)
D.C. Hayes Smartmodem ${ }^{\text {M }} 300,5-21$
D.C. Hayes Smartmodem 1200, 5-21
intelligent, 5-21
QX-10 plug-in, from COMREX, 5-21

MODEM program, 5-21
Murphy's Law, 1-10

Noise words, 5-5

ON LINE button, 5-10, 5-11, 5-12
ON-SCREEN FORMATTING menu, 3-17-3-20
centering, 3-17-3-18
keeping words together, 3-18
margin, bottom, 3-20
margins, default, 3-19
margins, left and right, 3-19
margin, top, 3-20
Operating system, 4-10, 6-2-6-3
CP/M, 5-21, 6-2
definition of, 6-2
TPM, 4-10
TPM-11, 4-11, 6-2
Outbasket, 5-30-5-31
options, 5-31

Page break(s), 2-8
PAGE menu, 3-20 - 3-22
controlling widows, 3-21
go to specific page option, 3-21
setting paper length, 3-22
starting new page, 3-20-3-21
Paper length, standard, 3-22
Pattern, definition of, 1-3
Person-to-person/network connection, $5-31-5-33$
use with Compuserve ${ }^{i=1}, 5-31$
use with Dialog ${ }^{1 M}$, 5-31
use with The Source ${ }^{\text {M }}, 5-31$
Pie chart(s),
best use for, 6-24
changing, 6-31
creating, 6-27-6-30
deleting, 6-31
printing, 6-31
storing, 6-31
Printer spooling, 5-12
PRINT key, 1-6, 2-4, 5-9 - 5-13
use with address book, 5-27
use with appointment book, 6-22-6-23
PRINT TIME menu options, 5-11-5-12
beginning page number, 5-11
correspondence quality, 5-11-5-12
ending page number, 5-11
line spacing, 5-11
number of copies, 5-11
stop after each page, 5-11
Print-time options, definition of, 5-10-5-11
PUSH button(s), 1-12, 1-13, 2-3, 4-5

QX-10, 5-9, 5-21
as a "dumb terminal," 5-21
calendar, built-in, 6-17
clock/calendar on, 1-15
Epson, 1-1
getting started on, 1-8
hard disk for, 1-13
main power switch of, 1-14
main system unit of, 1-14
modems used with, 5-21
network services available with, 5-31
timer, built-in, 1-15
QX-IO Operations Manual, 1-2, 1-8, 4-7

RESET button, 6-8
RETRIEVE key, 1-6, 1-14, 2-22, 2-24,
5-6 - 5-8
cross indexing with, 5-7 - 5-8
use with existing file, 5-7
when combining files, 5-8
Retrieving a document, 2-24-2-25, 5-6-5-7
Ruler line, 2-8

SCHED key, 1-6, 1-15, 6-16-6-24
appointment book, 6-17-6-22
setting clock/calendar, 6-23
using PRINT key with, 6-22-6-23
Scientific applications, symbols for, 2-25
Scientific charts, use for 6-24
Screen dump,
definition of, 5-12 - 5-13
using CTRL and PRINT, 5-13
$<\mathrm{S}>$ et the clock option, 1-15
SETUP program, 1-14, 5-11,
6-8-6-10
baud rate, 6-9
disk allocation, 6-9
experience level, 6-9
input and output assignments, 6-9
printer type, 6-9
time/date, 6-9
SHIFT and arrow keys, to move cursor, 2-13
SHIFT and LINE to move cursor, 2-12
SHIFT and WORD to move cursor, 2-12

SHIFT GRPH SHIFT keyboard, 2-26
SIZE key, 1-7, 7-4 - 7-5
Source disk, 4-11
Source drive, 4-10
Status line, 2-7, 2-8
STOP key, 1-6, 2-2, 4-2
STORE key, 1-6, 2-22, 2-23,
5-2 - 5-6
existing document, 5-6
file, how to store, 5-4
new document, storing, 5-4
use with address book, 5-27
use with charts, 6-31
Storing a document, 2-23-2-25
STYLE key, 1-7, 7-4 - 7-5
Symbols, types of, 1-4
System control keys, 1-6, 4-1
System disks,
correct drive for, 1-12
definition of, 1-12

Tabs, 2-21-2-23
decimal, 2-22-2-23
removing, 2-21 -- 2-22
setting, 2-21
storing, 2-22
TAB key, 1-15, 2-21
TAB REL key, 2-20, 2-22
TAB SET key, 2-20, 2-22
Temperature, optimum, for disks, 1-11
TPM, 4-10
Typestyle keys, 1-7, 7-1 - 7-5

UNDO key, 1-6, 1-15, 2-2, 4-11-4-13
in menus, 4-12
in word processing, 4-11-4-12
used with delete, 2-19-2-20, 3-15
what it won't do, 4-13

Valdocs,
as document processor, 1-2
best way to learn, 2-1
definition, 1-2
electronic tools of, 1-4-1-5
how it works, 1-3-1-5
review of start-up procedure, 2-3
video screen of, 2-3-2-10
Valdocs card file, 5-22
Valdocs files, copying of, 4-10-4-11
Valdocs Keyboard Reference Guide, 1-2
Vaidocs/QX-10 system as mind amplifier, 1-7-1-8
Visual page, definition of, 2-13

Widow, definition of, in printing, 3-21
WORD key and arrow keys, used to
move cursor, 2-12
Word wrap, 2-9

