

PC Storyboard

IBM

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IBM PC Storyboard

What to do first:

- Learn about support and register your purchase.

If you haven't done so already, read the brochure called *Extended Support Offering, Read This First for Service and Support Information* to learn about the support available from IBM.

To register, you must include the serial number of your program (*PC Storyboard*) on the registration card. The serial number is on the program diskette. The steps below tell how to display the serial number. Begin the steps with the DOS prompt on your screen.

STEP 1: Put your first diskette into drive A.

STEP 2: Type **type a:serial** and press Enter.

Copy the serial number you see on the screen onto the registration card. Fill out the registration card, located in the back of the *Extended Support Offering* booklet, and drop it in the mail.

- Read the "Program Specifications."

The "Program Specifications" following the book's table of contents contain general information about *PC Storyboard*.

- Install *PC Storyboard*.

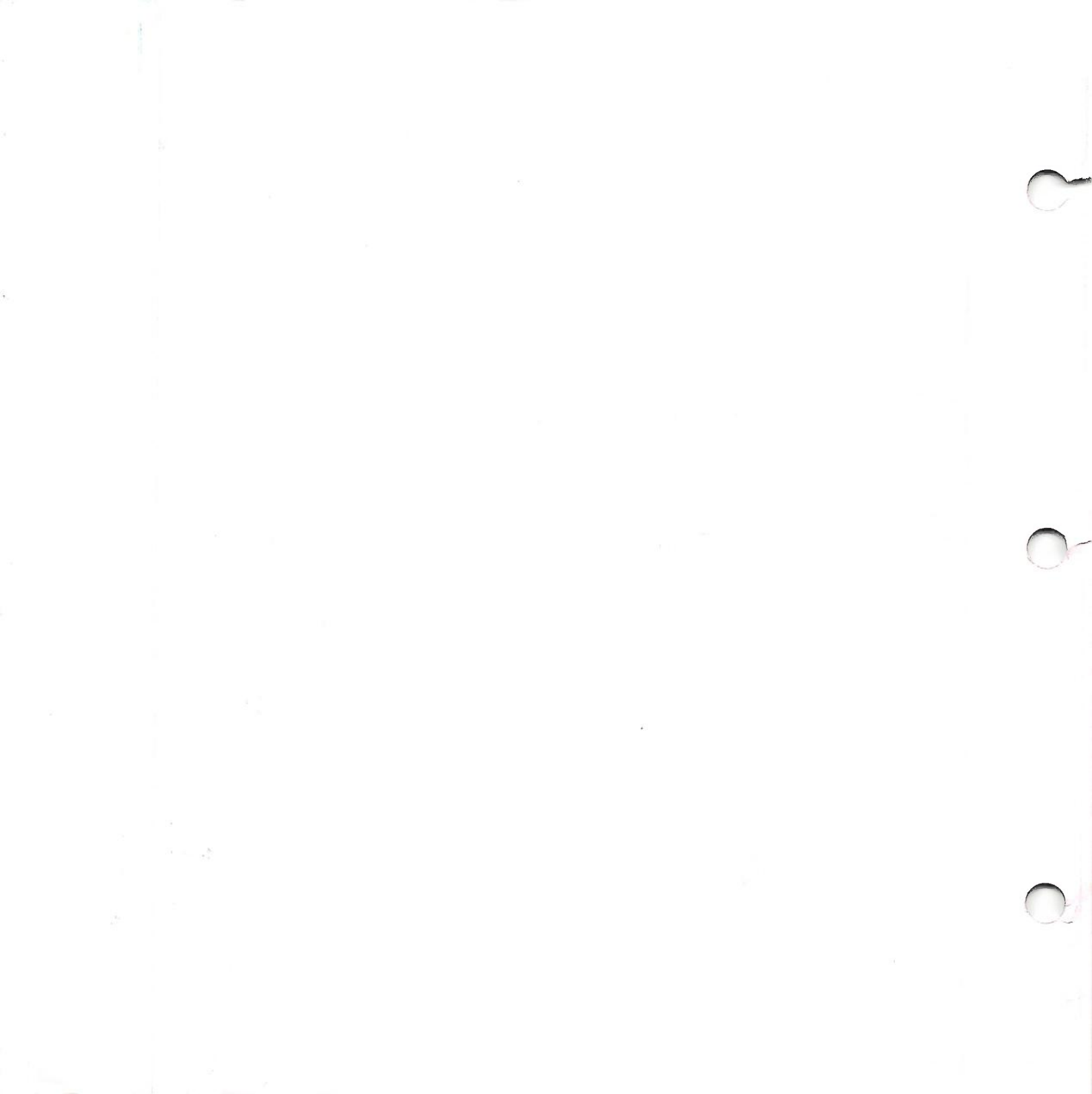
To install *PC Storyboard*, follow the instructions in Appendix A in the *PC Storyboard* book.

- Learn about *PC Storyboard*.

To see a demo of *PC Storyboard*,

- Place the PCSTORY3 diskette in drive A.
- Make A the default drive, if it is not already the default.
- Type **st demo** and press ← (Enter).

For help in learning about *PC Storyboard*, turn to the "Learning" part of the book and take the lessons.



PC Storyboard

IBM

Second Edition (September 1985)

Changes are periodically made to the information herein; these changes will be incorporated in new editions of this publication.

This manual contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples contain the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

References in this publication to IBM products, programs, or services do not imply that IBM intends to make these available in all countries in which IBM operates. Any reference to an IBM program product in this publication is not intended to state or imply that only IBM's program product may be used. Any functionally equivalent program may be used instead.

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About this book

How this book is organized

This book is about *PC Storyboard*, a productivity aid that can be used by you to create computer controlled presentations.

This book is divided into the following parts:

- “Learning” contains a set of lessons to teach you how to use *PC Storyboard* for your own work. Each set of lessons is based on examples and builds upon what you have already learned in previous lessons. By the end of the “Learning” part, you will have a solid working knowledge of *PC Storyboard*.
- “Using” contains the reference information you’ll need to use *PC Storyboard*. “Using” consists of:
 - “Using *PC Storyboard*”
 - “Using *Picture Maker*”
 - “Using *Picture Taker*”
 - “Using *Story Editor*”
 - “Using *Story Teller*”
- “Appendixes” contain information about:
 - Installing *PC Storyboard*
 - Advanced topics
 - Reporting problems to IBM
- “Index”
- “Messages” lists *PC Storyboard* messages in numeric order for each of the components, with explanations and suggested ways to correct errors.

About the demo

On the PCSTORY3 diskette is a demo about *PC Storyboard*. To run it:

- Place the PCSTORY3 diskette in drive A.
- Make A the default drive, if it is not already the default.
- Type **st demo** and press ↵ (Enter).

The demo contains an introduction and a menu from which you can make selections. If you don't choose anything, the demo will cycle through these selections.

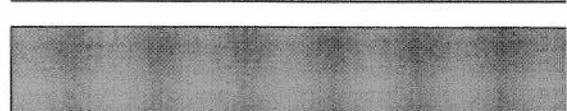
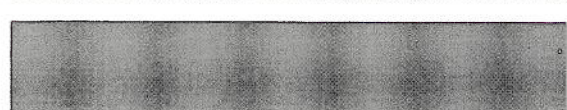
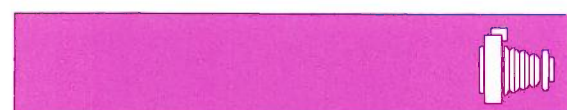
Included in the demo are examples of some interesting techniques. You can use *Story Editor* to list or view the story instructions and see how various techniques were produced.

Related publications

You should be familiar with the *IBM Guide to Operations* and the *IBM Disk Operating System*.

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Program specifications

The IBM PC Storyboard for the IBM Personal Computer

Licensing

The use of PC Storyboard is subject to the terms and conditions of the IBM Program License Agreement (Z125-3301-1) contained in this book, except as specifically stated below with respect to the *Story Teller* module.

The *Story Teller* module (ST.EXE) allows for the display of PC Storyboard stories. Additional copies of only this module may be made to allow the user to distribute and show stories provided each diskette copy is labeled as follows:

CONTAINS
IBM Story Teller program (ST.EXE)
© Copyright IBM Corp. 1985
All Rights Reserved

Limited warranty

The IBM PC Storyboard is warranted to the licensed user to conform to its Program Specifications as provided by IBM when properly used in the operating environment described in this document.

Program Specifications may be revised from time to time and such revisions may constitute a change in specifications.

Any other documentation with respect to these programs, including any documentation referenced in this document, is provided for information only and does not extend or modify these specifications.

The limited warranty period is 90 days from the date of delivery to you by IBM or IBM's authorized representatives, but not later than March 31, 1987.

Function

The *PC Storyboard* is a productivity aid that can be used by people who present information to others. A business or professional user can use this tool to create computer controlled presentations which can be shown directly on the IBM Personal Computer, projected with a video projector, or transferred to other media such as video tape, slides, or paper.

The *PC Storyboard* consists of the following four major components that address facets of story creation and display:

- *Picture Taker*

This component allows the contents of screens created by IBM Personal Computer DOS programs to be "taken" and saved on disk for later inclusion in a story. Screen contents are automatically written to diskette or fixed disk in a compressed format. Multiple pictures can be saved in one file. Various screen formats may be taken, including 40 and 80 column color text modes, 80 column monochrome text modes, and medium and high resolution color graphics modes.

User programs that modify the interrupt table (PrtSc 5 or DOS 21H interrupts) or program the Graphics Adapter directly, bypassing the Basic Input/Output System (BIOS), may prevent *Picture Taker* from capturing screens.

- *Picture Maker*

This component lets you create your own original pictures and modify previous pictures saved by *Picture Maker* or medium resolution graphics pictures taken with *Picture Taker*. You can draw, from the keyboard, freeform figures or use commands to draw boxes, lines, and ellipses. You can also use commands to create business charts, including horizontal and vertical bar graphs, line graphs, and pie charts. In addition, you can “cut” images from your pictures or from a library of existing symbols and “paste” them on your current picture. You can also cut and paste copy from picture to picture or within the same picture with the capability to make any color transparent so that the pasted picture will not destroy the background.

For text, you can choose from four typefaces, in five sizes each. You can also create your own fonts. You can italicize, shadow, or outline any character.

When drawing figures or writing text, you can choose from four types of cursors and two scales for alignment. You can also put shadowing behind drawings and text.

You can “zoom” a part of your picture for detailed observation and modification or for saving permanently. For filling areas, you can select from solid colors or existing color patterns, or create your own patterns. You can change colors, either on the full screen or within a defined area.

When the pictures are complete, you can save them on diskette or fixed disk. Saved pictures can be made accessible to BASIC programs. You can print the pictures on an IBM Personal Computer Graphics Printer (or equivalent) or choose from more than 50 colors and print the pictures on an IBM Personal Computer Color Printer (or equivalent). After the pictures are printed, they can be duplicated or made into overhead transparencies.

A special mode is provided for creating pictures for composite (TV) displays, providing a full sixteen colors.

■ ***Story Editor***

Story Editor lets you display pictures previously made by ***Picture Maker*** or ***Picture Taker*** and sequence those pictures into stories, using special effect dissolve techniques both between pictures and within pictures.

Story Editor has two separate time controls. One time control lets you control the time it takes a picture to appear, and a separate time control lets you control the pause time between pictures. You can select the proper amount of time on a picture by picture basis to gain the desired effect, including the ability for continuous, unattended showing.

As you interactively create a story, you can see the results of an addition or change immediately. You can display pictures sequentially forward or backwards, or jump ahead or behind on direct command or on specific keyboard input, such as a response to a menu selection. After you create or modify a story, you can save it on diskette or fixed disk.

■ *Story Teller*

Story Teller is a standalone program used to display a story previously created by *Story Editor*. You can make presentations to large groups on a large screen RGB or composite video monitor or video projector. You can record the entire show on video tape by connecting the "video out" port on the IBM Personal Computer Color Graphics Adapter card to the "video in" jack on a standard VCR. You can also present pictures created using *Picture Maker's* special "composite" mode which provides a full sixteen simultaneous colors and anti-aliased characters.

Operating environment

Hardware and software that is required or optional is discussed below.

Hardware requirements

To run the IBM PC Storyboard, your IBM Personal Computer must have the following minimum configuration:

- One of the following IBM computers
 - IBM Personal Computer
 - IBM Portable Personal Computer
 - IBM Personal Computer XT
 - IBM Personal Computer AT
 - IBM PCjr
 - IBM Personal Computer XT/370
 - IBM System/36 PC
 - IBM 3270 Personal Computer/G
 - IBM 3270 Personal Computer AT/G
 - IBM 3270 Personal Computer with 5272 Color Display, Color Display Adapter and All Points Addressable (APA) Adapter. (*Picture Taker* does not run when the 3270 PC control program is active in the 3270 Personal Computer.)
- Memory requirements
 - 256K bytes of memory (with DOS 2.00 or 2.10).
 - 320K bytes of memory (with DOS 3.00 or 3.10)
 - 384K bytes of memory (with an IBM PCjr)
- One double-sided diskette drive (360K bytes).
- One color monitor capable of displaying at least 24 lines of 80 characters each, with a resolution of 320 x 200 pixels, and an IBM Color Graphics Adapter or Enhanced Graphics Adapter (or equivalent).

The Enhanced Graphics Adapter is supported in Color/Graphics Adapter compatibility mode only. Switches on this adapter must be set to IBM Color/Graphics Adapter mode. Composite/TV monitors are not supported with this adapter.

Optional equipment: Optional equipment includes:

- A monochrome monitor capable of displaying at least 24 lines of 80 characters each.

If you have a monochrome monitor, a composite monitor could then be used as the color monitor.

- If printed graphics output is desired, an IBM 5252 Personal Computer Graphics Printer, IBM 4201 Proprinter, or equivalent.
- If color printed graphics output is desired, an IBM 5182 Personal Computer Graphics Printer, an IBM 3852 Model 2 Color Jetprinter, or equivalent. For color transparencies on the Jetprinter, order IBM part number 6293933 (box of 50 sheets).

Because PC Storyboard programs are based upon raster graphics display technology rather than vector graphics display technology, graphic images can be printed on graphics printers, but **not** on plotters. Images printed on graphics printers can be used to make good quality, printed documentation of your presentation.

Software requirements

The IBM PC Storyboard is shipped on double-sided/double-density diskettes.

To use the IBM PC Storyboard programs, you need the IBM Personal Computer Disk Operating System (DOS), Version 2.00, 2.10, 3.00, or 3.10, which is orderable separately.

PC Storyboard (Version 1.1) programs require the following amounts of available main memory in order to run:

Picture Taker	4608 Bytes
Picture Maker	222K Bytes
Story Editor	198K Bytes
Story Teller	163K Bytes

Statement of service

How to obtain service

Program service is available to users of the IBM PC Storyboard Personal Computer Program Product (6316998) during the first 90 days from the date of delivery to you by IBM or IBM's authorized representative. In order to use this service, you must register by completing the postage paid Service Registration card enclosed in the support information brochure and return it to:

IBM Corporation
P. O. Box 720576
Atlanta, GA 30358-9990

Description of product service

If you determine you have a problem caused by a defect in an unmodified portion of the program or publication during the 90 day service period, you may mail to IBM a description of the problem with any related information. Please refer to the problem reporting procedure in Appendix C of this book.

IBM will evaluate your documentation to determine whether a program correction is necessary and:

1. If the problem is an error and has been fixed, you will be sent a notice of availability or an update containing the correction and all other known corrections;

OR

2. If the problem is an error that has not previously been reported, IBM will make reasonable efforts to develop a correction and send it to you;

OR

3. You will be advised that the problem is not caused by a product defect.

A response to a defect will be made only if the defect occurs when the product is used in the operating environment described in this document.

IBM does not guarantee service results or that the program will be error free or that all program defects will be corrected.

**Duration of product
service**

Service will be available during the first 90 days from the date of delivery to you by IBM or IBM's authorized representative, but not later than March 31, 1987. During the service period, if you transfer this license to another party you must provide IBM with information about the new user; name, company, telephone number, and the service registration number (instructions for displaying the service registration number are located in the support information brochure). This information must be submitted to the following address:

IPS Product Support Center
IBM Corporation
P. O. Box 720576
Atlanta, GA 30358-9990

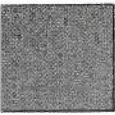
Program updates

Licensed users may request updates for supported licensed programs prior to the program service end date. Program updates contain all currently available changes for a licensed program. The user will be charged an update fee for each update sent from IBM. For information about availability and prices, please call IBM toll free at

(1) 800-IBM-2266.

IBM Extended Support for the IBM PC Storyboard

IBM Extended Support is available from IBM as a separately priced offering to licensed users of the PC Storyboard who desire program related service or in-depth technical support beyond what is provided with the program. For additional information, see the service and support information brochure included in this package.



Learning to use PC Storyboard



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Getting started

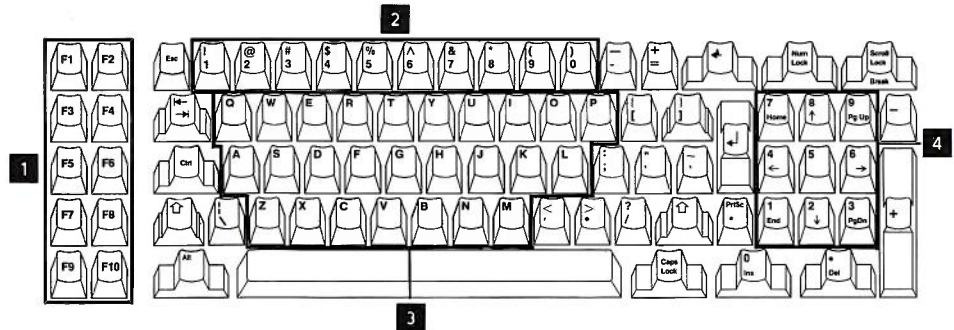


When you take the lessons in the “Learning” part of this book, you’ll learn how to create pictures and put them in a show. Because each lesson builds on what you’ve done before, you should complete them in order. Before you start the lessons, *PC Storyboard* should be installed. See Appendix A for instructions on installation.

Using the keyboard

Some of the keys commonly used with *PC Storyboard* are described in this section. The keyboard can be divided into four main areas.

- 1 Function keys
- 2 Number keys
- 3 Letter keys
- 4 Numeric keypad





Function keys: The grey keys labeled F1 through F10 on the left side of the keyboard are called function keys. Use them to carry out specific functions. For example, F1 takes you to a Help menu.

Letter keys: You can use the letter keys to give commands to *Picture Maker*. For example, you press T to tell *Picture Maker* to enter text. Sometimes you need to use two keys to give a command, such as holding down the Alt key and pressing Q to quit.

Number keys: You can use the number keys at the top of the keyboard to type numbers or, when you're using Help, to take you to specific Help pages.

Numeric keypad: You use the numeric keypad at the right side of the keyboard to move the cursor in *Picture Maker*. These keys are called cursor movement keys.

Using Picture Maker in Learning

The lessons in this part of the book are designed to be completed in order. When you start, follow the steps described below in "Starting Picture Maker." Whenever you want to stop doing the lessons, you can save a picture and end *Picture Maker* by following the instructions in "Saving a picture" and "Ending Picture Maker." Whenever you want to start again, you can get the picture back by following the steps in "Retrieving a saved picture."



Starting Picture Maker

Whenever you want to start *Picture Maker*, follow these steps:

1. Start your computer the way you normally would.

If you are using both a monochrome display and a color display, start *Picture Maker* on the monochrome display.

2. When the DOS prompt containing the drive appears:

If *Picture Maker* is on a diskette:

- Place the PCSTORY2 diskette in drive A and your work diskette on which you want to save the pictures in drive B.
- Type `pm b:` and press `↵` (Enter).

Now whenever you want to save a picture, you don't have to indicate on which drive you want it saved. *Picture Maker* will automatically save it on drive B.

If *Picture Maker* is on your fixed disk:

- Type `cd \pcscmd` and press `↵` (Enter) to change to the directory containing *PC Storyboard*.
- Type `pm` (for *Picture Maker*) and press `↵` (Enter).

3. Press any key to continue when the IBM *Picture Maker* screen appears.



Saving a picture

Any time you want to save a picture, follow these steps:

1. Press O (for Out to a picture file). *Picture Maker* asks for the name of the file.
2. Type a file name.

If the file name is currently being used, the picture you have just completed will replace it because only one picture is saved in a file.

You can qualify the file name with drive and directory using this format:

a: \dir\filename.ext

a: is the drive.

dir is the directory name: maximum of 8 characters, plus a 3 character extension.

filename is the file name: maximum of 8 characters.

.ext is the extension. You don't have to add an extension because *Picture Maker* automatically adds an extension of **.PIC**.

An example of a qualified file name is:

c:\showlib\picture

3. Press ↵ (Enter). *Picture Maker* saves your picture.



Retrieving a saved picture

Any time you want to retrieve a picture you saved, follow these steps:

1. Press I (for In from a picture file). *Picture Maker* asks for the name of the file.
2. Type the file name. You can qualify it with drive, directory, and extension. An example of a qualified file name is:

c:\showlib\picture

3. Press ← (Enter). *Picture Maker* presents your saved picture.

Ending Picture Maker

To end *Picture Maker*:

1. Hold down the Alt key and press the Q (for Quit) key.
2. *Picture Maker* asks you if you want to end.

If you have already saved the picture or you don't want to save it, press Y (for Yes).

If you want to save the picture, press N (for No) and save the picture (as described above) before pressing Alt Q again.

Using composite video

If you're using composite video, always start Alt V to remain in composite mode. Use the bold typeface wherever practical, and outline letters if necessary. The colors shown in the illustrations may be different from the colors in the pictures you create. You may want to change the colors we suggest using.

Lesson 1. Creating the first picture



This lesson shows you how to draw boxes and enter text. You'll also save a picture. The picture below is the one you'll create if you follow the instructions in this lesson.





Starting up

If you haven't already started *Picture Maker*, do it now. The directions are in "Starting *Picture Maker*" in the "Getting started" chapter that precedes this lesson. After you start *Picture Maker*, a black screen appears. The solid black color is the background color for your pictures until you change it. The white cross in the middle of the screen is one of the cursors available for your use.

Picking a cursor

When you're creating pictures, you can use any one of four cursors.

- Press either of the + keys four times to rotate through the different types of cursors. You'll see:
 - A small cross cursor that you'll probably use for most of the drawing commands.
 - A large cross cursor that you'll probably use to line up things on the screen.
 - An invisible cursor that you'll probably use when you want to see what your picture will look like in your show, when you're drawing freeform objects, or when you're printing your show.
 - A dot cursor that you'll probably use when you're filling small areas with color.
- When you're finished, rotate to the cursor you want to use. We suggest that you use the small cross cursor to start with.



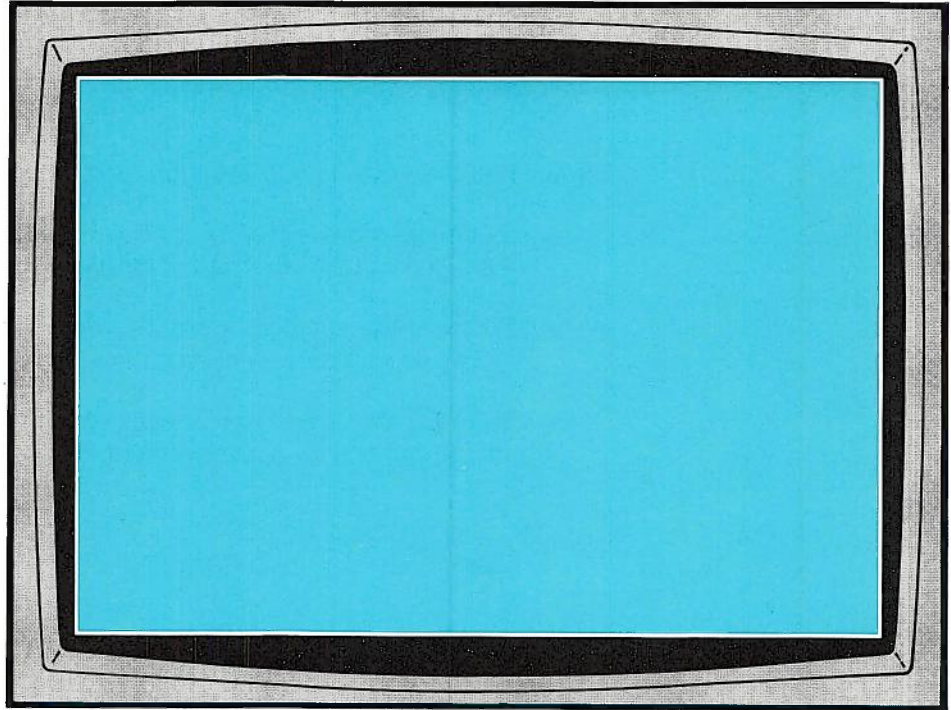
Moving a cursor

You move the cursor with the keys on the numeric keypad on the right side of the keyboard. Each of the keys, except 5 and 0, moves the cursor in a different direction. The keys are referred to as the cursor movement keys.

- Use the keys now to practice moving the cursor.
- If you try to move the cursor beyond an edge of the screen, you'll hear a beep that tells you the cursor can't move any farther in that direction.
- To move the cursor at a smaller increment (one pixel), hold down the \uparrow key as you press a cursor movement key.
- To move the cursor to the edge of the screen, hold down the Ctrl key as you press a cursor movement key.



This illustration shows how your screen will look after you complete the steps below.




Using drawing commands

Picture Maker has several drawing commands, but they all are performed in the same general way. Before you draw anything, let us tell you how drawing commands work. When you use a drawing command, you usually do the following things:

- Position the cursor where you want to begin drawing.
- Start the drawing command by pressing one of the letter keys. The letter key usually represents the first letter of the command.



- Use the cursor movement keys to define the area where you want the figure drawn.
- End the drawing command by pressing  (Enter).

Sometimes you may press the wrong key and find yourself in the middle of a command you had no intention of using. If this happens to you, press Esc to “escape” the wrong command. Then start the command you really intended to use.

Framing a picture: Now let’s actually use a drawing command. Here’s how to draw a frame around your picture:

1. Hold down Ctrl and press Home to move the cursor to the top left corner of the screen.


You’ve positioned the cursor where you want to start drawing.

2. Press B (for Box Draw).

You have started the Box Draw command, one of the *Picture Maker* drawing commands. The Box Draw command, like several other commands, uses an “elastic box” to draw a shape.

3. Hold down Ctrl and press PgDn to move the cursor to the bottom right corner.

You’ve used the cursor movement keys to define the area where you want the frame drawn. *Picture Maker* draws an elastic box.

4. Press  (Enter). A white frame is drawn, completing the Box Draw command.



Undoing your work

Suppose that you don't like the way you've drawn the frame or you decide you don't want a frame. You can easily remove it.

1. Press U (for Undo) .

The frame disappears. When you use Undo, the last apparent completed change to the screen is undone. In other words, the change is replaced by what you had before.

2. Press U (for Undo) again. The white frame returns. You can even undo an undo.

During the lessons in this book, your picture sometimes may not turn out the way you expected. If this happens, remember Undo. You may be able to undo the part of your picture that isn't right.

Filling the area inside the frame

The area inside the frame is black, the same color as the background. You can easily change the color inside the frame with the Fill command.

1. Move the cursor so that its center dot is well inside the frame.



2. Press F (for Fill) once. The color within the box changes.

When you are going to change the fill color, position the cursor high and to the left in that area. *Picture Maker* will fill the area around the cursor with color. The filled area expands until *Picture Maker* finds a color different from the one under the cursor. To determine what color should be changed, *Picture Maker* checks three dots to the right of the cursor and three lines below, as well as the dot and line under the cursor.

3. Press F (for Fill) several times to rotate through the different available colors and color patterns.
4. After you've seen the various choices, rotate to the solid cyan (blue) .



This illustration shows how your screen will look after you complete the steps below.



Putting the main title on your picture

Before you put the main title on your screen, you'll want to consider what typeface to use, what size of type to use, and whether to use shadow behind the letters. Then you'll write the text on your picture.



Picking a typeface

Picture Maker has four styles of type available: PM, Bold, Thin, and Roman. PM is the typeface *Picture Maker* uses unless you change the typeface. Since you're creating a main title, let's change the typeface to bold. To change a typeface:

1. Hold down Alt and press T (Typeface set) .

Picture Maker displays *pm.fac*, the name of the file in which the typeface is stored, in magenta letters.

If you accidentally press T without holding down Alt, *Picture Maker* will ask you to enter text. Press Esc to end this wrong command.

2. Type **bold** over pm.fac.

When you type a new entry over an existing one that is displayed in magenta letters, *Picture Maker* knows to ignore the old entry. You don't have to erase the remaining letters in the old entry. However, if you move the cursor under them, they will turn white like the letters in your new entry and *Picture Maker* will think they are part of your new entry. Then you will have to erase the white letters you don't want.

3. Press **↵** (Enter) .

Picture Maker tells you that five sizes of the bold typeface are available. The bold typeface will be used for all text until you change the typeface or until you end *Picture Maker*.



Picking a type size and shadow

Once you select a typeface, you can use any one of five sizes of that typeface. At the same time you're picking a type size, you can determine the amount of shadowing you want behind the letters. To pick the size of type you're going to use and the amount of shadow behind a letter, you use the S command.


1. Press S (for Size and Shadow).

An outline of a box appears. Since you are not in the middle of a text command now, *Picture Maker* assumes you are going to use a draw command.

2. Press  to tell *Picture Maker* that you want to work with text.

A letter in the bold typeface appears in a box. *Picture Maker* is showing you what size type will be used unless you change the size.

3. Press S to rotate through the five available sizes if you want to compare them.
4. Then press S to rotate to the fourth largest size.

If you pass it, you can hold down  and press S to rotate backwards. This size remains the size of type used for text until you change the size or end *Picture Maker*.



5. Press a cursor movement key to start the shadow.


The direction and width of shadowing behind letters is controlled with the cursor movement keys. To make the shadow wider, repeat pressing the key. If the shadow becomes too wide, press the opposite cursor movement key until the shadow is the thickness you want. If you don't like your shadowing at all, press the number 0 key at the top of the keyboard to remove all shadowing. The amount and direction of shadow also remains the same until you change the shadowing or end *Picture Maker*.

Entering a title

You use the Text Entry command to enter text. As you enter text on your picture, you'll use a special elastic box that is formed and expands as you type.

1. Press T (for Text Entry). The letter disappears, and *Picture Maker* asks you to enter your text.
2. Type **PROJECTED SALES** as the first line of the title.

When you start typing, the elastic box appears on the screen on top of the cursor. The box grows larger as you type. If you hear a beep, part of the elastic text box has moved past the edge of the screen. You can ignore the beep because you'll position the text later in the lesson.

3. Press  (Enter) after you finish typing.

The text you typed on the bottom of the screen disappears, but the elastic box remains. The title isn't written on the screen, but don't worry. *Picture Maker* is saving the title until you use a command to write it to the screen.



Centering the title: Now tell *Picture Maker* where you want the title located. To locate the title at the center of the screen, near the top:

1. Move the cursor towards the top of the screen so that the top point of the cursor is about an inch from the top of the screen.

Moving the cursor moves the elastic text box. You'll hear a beep if any part of the elastic text box is moved past the edge of the screen.

2. Hold down Alt and press W (Write mode set), to rotate through each of the four possible positions for text:
 - Text will start at the right of the cursor when the elastic box is to the right of the cursor.
 - Text will be centered on the cursor when the elastic box is centered on the cursor.
 - Text will end at the left of the cursor when the elastic box is to the left of the cursor.
 - Text will be centered on the screen when the elastic box is centered on the screen.

Sometimes this position looks like the position when the text is centered on the cursor. To help you tell the two positions apart, the elastic box changes color when this position is rotated.

If you accidentally press W without holding down Alt, the text will be written to the screen. Press U (for Undo), and the text will be removed.



3. Rotate to the position where the text is centered on the screen. Remember, the elastic box changes color when this position is reached.
4. Press ←↵ (Enter).

The title appears in bold typeface with shadow behind the letters. It's centered at the top of the screen.

Picture Maker will remember that you told it to center the text and will center all text until you change the instruction or end *Picture Maker*.

If you're not satisfied with the way the title looks, you can press U (for Undo) and start over.

Entering the second line: Now tell *Picture Maker* to enter the second line of the title.

1. Press T (for Text Entry).

Picture Maker puts an elastic box over PROJECTED SALES and shows you in magenta letters on the bottom line of the screen what it will write unless you give it new text.

2. Type FOR JULY as the second line of the title.

When you type a new entry over an existing one that is displayed in magenta letters, *Picture Maker* knows to ignore the old entry. You don't have to erase the remaining letters in the old entry. However, if you move the cursor under them, they will turn white like the letters in your new entry and *Picture Maker* will think they are part of your new entry. Then you will have to erase the white letters you don't want.



-
3. Press ← (Enter) after you finish typing. The title you typed disappears from the bottom of the screen.
 4. Use ↓ to position the elastic box under the first title so that there will be a line of space between the two titles.

Since you told *Picture Maker* you wanted text centered on the screen, you can't move the elastic text box left or right, only up and down. If you don't move the elastic box down, *Picture Maker* will write the second title over the first. The result will probably be unreadable.

5. Press ← (Enter) .

Picture Maker writes the title centered on the screen. Because you used the Alt W command to center the first title, all text you enter will be centered on the screen until you change this instruction or end *Picture Maker*.



This illustration shows how your screen will look after you complete the steps below.



Drawing a box

You've already used the Box Draw command once, to draw the frame. But this time you'll start the Box Draw command and then move the elastic box to a new location and change the draw color before you end the command.

1. Use the ↑, →, ← and ↓ keys to place the cursor where you want to start drawing a corner of the box.

Last time you drew a box, you used the Ctrl and cursor movement keys to move the cursor to a corner of the screen. This time, don't use Ctrl because you are not going to start drawing in a corner.



The box must be large enough in which to fit some text. Plan on making it about 4 inches wide and about 2 1/2 inches deep.


2. Press B (for Box Draw) .
3. Use the ↑, ↓, ←, and → keys to draw an elastic box.

If you were to complete the Box Draw command now, the box would be drawn in the location of the elastic box. But you can change the location by moving the elastic box before you complete the command.

Moving the elastic box: Before you move the elastic box, you need to understand two important concepts — the anchor point and the stretch point.

- The anchor point is the point where you started drawing the box.
- The stretch point is the point from which the box grows and expands.

The cursor is now at the stretch point, and it is black. To be able to move the box around, you must move the cursor to the anchor point.

1. Press . The cursor moves to the anchor point and becomes white. You can now move the entire elastic box without changing its shape or size.
2. Use the cursor movement keys to move the box around so that there is an equal amount of space on the left and right sides and an attractive amount of space above and below it.

If you were to complete the Box Draw command now, the box would be drawn in white, the current draw color. But you can use the draw color table to change the draw color before you complete the command.



Using the draw color table

Before, during, and after a command, you can select colors from the draw color table to use for drawing, fill, and shadow behind figures. Any function key from F5 through F10 displays the draw color table and lets you *check* the colors used for drawing, fill, and shadow. But you have to use a specific function key in order to *change* the draw color, a different function key to change the fill color, and another function key to change the shadow color. We'll tell you what these keys are as you need to use them.

Changing the draw color: Currently the draw color is white. For example, the frame around the picture was drawn in white. Let's change the draw color to black.

1. Press a function key from F5 to F10 to display the draw color table at the bottom of the screen.
2. Press F5 or F6 until a solid black rectangle appears next to *Draw*.

Using F5 or F6 lets you change the draw color. F5 lets you rotate backward through the draw colors and F6 lets you rotate forward through them. Since you can only use a solid color as a draw color, *Picture Maker* won't let you rotate to any of the color patterns.

3. Press  (Enter).

The draw color table disappears. Anything you draw from now on will be drawn in black until you change the draw color or until you end *Picture Maker*.

4. Press  (Enter).

The box is drawn in black, completing the Box Draw command. Remember, if you're not satisfied with the way the box looks, you can press U (for Undo) and redraw the box.



Filling the area inside the box

The color inside the box is the same as the color outside. For a more interesting picture, change the color within the box.

1. Move the cursor inside the box.
2. Press F (for Fill) until you reach solid magenta.



This illustration shows how your screen will look after you complete the steps below.




Preparing to write more text

Before you write the text, you want to check the type size, change the color of the letters, change the outline color of the letters, and eliminate the shadow behind the letters.



Changing the type size: The type size you picked for the main title is too large for the text you want to put in the box. To change the type size:

1. Press S (for Size and Shadow). An outline of a box appears.
2. Press  to tell *Picture Maker* you want to work with text. A large letter appears.
3. Press S until you rotate to the next to the smallest size.

The letters in the box will be in a small text size. Shadowing behind small letters is usually not an effective technique. Currently, shadow will automatically appear behind letters because you set the shadow when you did the main title. You could use the cursor movement keys to remove the shadowing, but there is another way — by using the text color table.

Using the text color table

You've already used one color table — the *draw* color table. There is another color table called the *text* color table.

Before, during, and after a command, you can select colors from the text color table for letters, outline of letters, and shadow behind letters. Any function key from F5 through F10 displays the text color table and lets you *check* the colors used for letters, outline, and shadow. But you have to use a specific function key in order to *change* the color of letters, a different function key to change the outline color, and another function key to change the shadow color. We'll tell you what these keys are as you need to use them.



Changing the color of the text: Currently, text is displayed in white. For example, the letters in the main title are white. Let's change the text color to black so that the letters within the box will be black.

1. Press a function key from F5 to F10 to display the text color table at the bottom of the screen.
2. Press F5 or F6 until a solid black rectangle appears next to the word *Text*.

Using F5 or F6 lets you change the color of the letters. F5 lets you rotate backward through the letter colors and F6 lets you rotate forward through them. The letter in the box changes color as you rotate through the colors in the text color table.

Changing the outline color: Currently text is not outlined. For example, the letters in the main title are not outlined. Let's outline the black letters in white.

1. Press F7 or F8 until a white rectangle appears next to the word *Outline*. The outline of the letter in the box is now white.

Using F7 or F8 lets you change the color outlining letters. F7 lets you rotate backward through the outline colors and F8 lets you rotate forward through them.



Eliminating shadow: You could eliminate shadow with the S command by removing it with the cursor movement keys. But if you wanted to use shadow again, you'd have to use the S command and recreate the shadow. A simpler way to eliminate the shadow is to use the color table.

1. Press F9 or F10 until the word NONE appears next to the word *Shadow*.

Using F9 or F10 lets you change the color of the shadow behind letters. F9 lets you rotate backward through the shadow colors and F10 lets you rotate forward through them.

2. Press ← (Enter) .

The text color table disappears. *Picture Maker* will now use the colors you selected for letters, outline, and shadow.

3. Press ← (Enter) .

The box with the letter disappears. *Picture Maker* will now use the type size you selected.

Writing the text

When you entered the two main titles on the picture, you used a Text Entry command for each title. This time you'll use one Text Entry command to enter multiple lines of text. By using the M (for Multiple Mode) command before you start the Text Entry command, you can quickly enter text on successive lines.

To write information in the box:

1. Press M (for Multiple Mode) . *Picture Maker* tells you that multiple mode is on.



2. Press T (for Text Entry) .

Picture Maker displays in magenta letters the words FOR JULY, the last text you entered. If you don't enter new text, *Picture Maker* uses the main title for text within the box.

3. Type * **Nationwide** over the title.
4. Press ↵ (Enter) . The text you typed disappears. But *Picture Maker* keeps the text until you're ready to write it to the screen.

Before you write the text, check where the text will be put.

Checking where text will be put: The last time you positioned text, you told *Picture Maker* to put it in the center of the screen. Before you write the text to the screen, you should change this instruction.

1. Press Alt W until the elastic text box is to the right of the cursor.
2. Use the cursor movement keys to position the elastic box near the top and close to the left side of the magenta box.
3. Press ↵ (Enter) .

The text is written to the screen. The elastic text box moves down a line, and *Picture Maker* asks you to enter more text.

4. Type * **Chicago #1** over the phrase * **Nationwide**.



-
5. Press ↵ (Enter). The text you typed disappears.
 6. Press + once to position the second line double-spaced beneath the first.
 7. Press ↵ (Enter).

The text is written to the screen. The elastic text box moves down a line, and *Picture Maker* asks you to enter more text.

8. Type * SF, LA, KC, NY over the words * Chicago #1.
9. Press ↵ (Enter). The text you typed disappears.
10. Press + once to position the third line double-spaced beneath the second.
11. Press ↵ (Enter).

The text is written to the screen. The elastic box moves down a line, and *Picture Maker* asks you to enter more text.

Lesson 2. Drawing shadows and moving text



This illustration shows how your screen will look after you complete the steps below.



Changing text

In this part of the lesson, you'll use two different ways to remove text — one with the Undo command and the other with the Erase command.

Using the Undo command to change text: If you want to change the last line you typed and you're in text entry, you can't just press U (for Undo). If you do, *Picture Maker* thinks you want to enter the letter U as text. To use Undo, you have to end text entry.



1. Press Esc.

The text entry line and the elastic text box disappear. *Picture Maker* ends text entry.

2. Press U (for Undo). *Picture Maker* removes the last line of text you entered. Don't replace that line of text.

Suppose that you want to change the second line of text. Pressing U (for Undo) won't affect that line. You'll have to erase that line of text and replace it with a new line.

Using the Erase command to change text: The Erase command is another *Picture Maker* command that uses an elastic box. In the Box Draw command, you used an elastic box to draw a shape. In the Erase command, you use an elastic box to affect the portion of the picture within the elastic box. Most often you'll use the Erase command to remove text from your picture.

Let's emphasize the symbol #1 by changing the colors in which it appears. To do this, you have to use the Erase command to remove the current version of the symbol #1, the Text Entry command to enter the symbol #1 again, and the text color table to change colors.

1. Press T (for Text Entry). *Picture Maker* asks you to enter text.
2. Type #1 as your new text.
3. Press ← (Enter). The text you typed disappears.



-
4. Position the elastic text box around the #1 because this is where you want the new text to appear.

You may want to use the + key to rotate to the large cursor so that you can easily line up the text.

You also may want to press the - key to display one of two scales to help you line up the elastic text box.

You also may have to decrease the increment at which the cursor moves by holding down the ⏏ key while you press a cursor movement key.

5. Press S (for Size and Shadow).

The symbol # appears. *Picture Maker* knows you're working with text, so it doesn't show you the box. It shows you the symbol # because # is the first character in #1, the word you just entered. When you change text and outline colors, you'll be able to see how the letter looks in various colors.

6. Press a function key from F5 to F10 to see the text color table.
7. Press F5 or F6 to change the text color to cyan.
8. Press F7 or F8 to change the outline color to black.
9. Press ↵ (Enter).

The text color table disappears. *Picture Maker* will now use cyan for text and black for outline.



10. Press **↵** (Enter). The symbol # disappears.

11. Press E (for Erase) once. *Picture Maker* erases the text in the elastic box.

If you press E more than once, the text will be erased, but the color inside the elastic box will change from magenta to other colors. If this happens, press E until magenta appears again.

12. Press **↵** (Enter). *Picture Maker* writes the text to the picture.

If the text isn't in the right position, press U for Undo and then W (for Write text). Position the elastic text box where you want to text to appear and then press W again.

Saving the picture

You've done a lot of work on this picture. To save it, you must put it in a file.

1. Press O (for Out to the file).
2. The message "output to file:" appears at the bottom of the screen. *Picture Maker* is asking for the name of the file in which to save the picture.
3. Type *sample* for the file name.

If the file name is currently being used, the picture you have just completed will replace it.

4. Press **↵** (Enter). The picture is saved on your fixed disk or your work diskette.




Help

You learned about several commands that you can use when you're entering text and drawing figures. When you're using *Picture Maker*, you can get quick reference information about these commands and others by using Help. Try it now.



1. Press F1. A table of contents appears.

The main headings are in a box, along with a page number. Commands associated with each heading are listed below the heading.

2. Press 1 (the number key at the top of the keyboard) to see the information on Text. *Picture Maker* gives you a brief description of how to use the T (Text entry) command to enter text.
3. Press  to return to *Picture Maker*.

Clearing a screen

When you've saved your picture and want to start another one, you can easily clear the entire screen.

1. Hold down the Alt key and press U (for Clear screen). The entire screen is cleared and changed to the background color.
2. Press F3 several times to see the different background colors.
3. Press F3 to return to the black background color so that you can complete lesson 2.



The illustration shows how your screen will look after you complete the steps in this lesson.



This lesson shows you how to retrieve the picture you saved in lesson 1, draw a shadow behind the box, and move a block of text within the box.

Retrieving the picture you saved

To get the picture you saved in the last lesson:

1. Press I (for In from a picture file). *Picture Maker* asks for the name of the file you want to see.



2. Type the correct file name.


For example, type *sample* or *c:sample* if the picture was saved on a fixed disk, or *b:sample* if it was saved on a diskette in drive B.


3. Press  (Enter). *Picture Maker* displays your picture.

Drawing a shadow behind the box

You could, with the S (for Size and Shadow) command, have *Picture Maker* automatically put a shadow behind the box. However, you can get a different looking shadow by drawing it yourself. But first, you want to check the draw color.

Checking the draw color: You want the shadowing for the box to be black. Check the draw color before you start.

1. Press F5. The draw color table is displayed at the bottom of the screen.
2. Check to see what color appears in the rectangle next to *Draw*.
3. If it is not already solid black, press F5 or F6 until solid black appears.
4. Press  (Enter). The draw color is now black.

Drawing the shadow: You'll notice as you draw the shadow that the cursor nicks the outline of the box. This is all right for this box because the box is outlined in black and the shadow is also black. However, if the outline and shadow were in different colors, you'd want to change the increment at which the cursor moved by holding down the  key and pressing a cursor movement key. Then you could draw a shadow outline right up to, but not crossing, the box outline.



To draw the shadow:

1. Move the cursor to the upper right corner of the box.
2. Press ↓ to move the cursor down one position.
3. Press D (for Draw Continuous Line) .

You have started another *Picture Maker* draw command. Now you can draw a line wherever you want by using the cursor movement keys.

4. Press → to draw the line one position to the right.
5. Press ↓ to draw the line down until the cursor is even with the bottom of the box.
6. Press ↓ to draw the line one position more.
7. Press ← until the line is one position short of the left edge of the box.
8. Press ↑ to draw the line one position up.
9. Press ↵ (Enter) to end the Draw command.



Correcting your shadow: If your shadow doesn't come out the way you want, there are three different methods you can use to correct it.

- You can press U (for Undo), and the entire shadow outline is removed. If you use Undo, start the Draw command again and redraw the shadow outline.
- You can change the draw color to cyan, start the Draw command again, and draw over the black shadow outline, erasing it.
- You can erase the offending part with the Erase command.

Filling the shadow area with black: Now fill the shadow area with black. In order to change the color of the shadow area, you must move the cursor within that area. But you have a problem when you try to do this. The cursor moves at too large an increment.

1. Hold down the \hat{u} key and use the cursor movement keys to move the cursor within the shadow area. The cursor moves at a much smaller increment — one pel (picture element) at a time.
2. Position the cursor within the shadow area.

Remember, when filling an area, *Picture Maker* determines what color to change by checking three dots to the right of the cursor and three lines below, as well as the dot and line under the cursor. Position the cursor so that the check can be made.

3. Press F (for Fill) until the area is filled with black.



Moving the block of text

Erasing the third line of text in the box left the first two lines at the top of the box, with a lot of space below. You can move the block of text to a more pleasing position within the box with three commands: the Cut command to cut the text, the Erase command to erase the old version, and the Paste command to “paste” the cut version where you want it.

1. Use the ↑, ↓, ←, or → keys to place the cursor where you want to start drawing a corner of the elastic box.

The elastic box has to surround both lines of text and has to be within the magenta box. You may want to use the ⏏ key so that the cursor moves at a smaller increment.

2. Press C (for Cut).
3. Use the ↑, ↓, ←, or → keys to draw an elastic box around both lines of text.
4. Press C again to cut the text within the elastic box. If you don't use the C command a second time, *Picture Maker* erases your cut of the text and you lose it.
5. Press E (for Erase). The text inside the elastic box disappears.
6. Press ↵ (Enter). The elastic box disappears.
7. Press P (for Paste). The text reappears where it originally was.
8. Use the cursor movement keys to move the text around.
9. When the text is where you want it, press ↵ (Enter).



Finishing this lesson

You're finished with this picture.

1. Use the O (for Out to a picture file) to save it and use *sample* for the name of the file.
2. Clear the screen by holding down the Alt key and pressing U (for Undo). If the screen that appears is not black, press \uparrow F3 until the background color is black.

Lesson 3. Drawing graphs and charts



This illustration shows how your screen will look after you complete the steps below.



In this lesson, we'll show you how to draw vertical bar graphs, horizontal bar graphs, line graphs, and pie charts. We'll also show you how, when you're developing a graph, you can easily switch from one type of graph to another, so that you can see how the same data looks in different graphs. In order to switch from one graph to another in the way described in the lesson, you must draw all the graphs in one session.

For this picture, let's work on the black background.



Entering the title

First let's enter a title for this picture. But before you do, check which typeface *Picture Maker* is going to use.

1. Press Alt T (for Typeface set).
2. Type **bold** if *Picture Maker* tells you a typeface other than bold is going to be used.
3. Press ← (Enter).

Now get ready to write the title for the screen.

1. Press T (for Text Entry). *Picture Maker* asks you to enter text.
2. Type **SALES -- JULY** over any existing text *Picture Maker* shows you in magenta letters.
3. Press ← (Enter).

The title disappears. *Picture Maker* is waiting for you to tell it to write the title to the screen. But first, tell *Picture Maker* to center the title on the screen.

Locating where the title will be written: Now tell *Picture Maker* where you want the title located. To locate the title at the center of the screen near the top:

1. Move the cursor near the top of the screen.
2. Press Alt W (Write mode set) until the elastic text box is centered on the screen. Remember, the elastic text box changes color when it's in this position.



Using the text color table: Let's change the color of the letters and the shadow.

1. Press F5 to display the text color table and to change the color used for text.
2. Press F5 until a magenta and white pattern appears next to the word *Text*.
3. Check the outline color. If it is not black, press F7 until a solid black rectangle appears next to the word *Outline*.
4. Press F9 to change the shadow color to the solid cyan color.

Changing the type size and shadow: Now let's change the type size and shadow.

1. Press S (for Size and Shadow) .

Picture Maker shows you a bold letter. The text color table disappears. *Picture Maker* will now use the colors you selected for letters and shadow.

2. Press S to rotate to the fourth largest size.
3. Use the cursor movement keys to put a shadow behind the letter. Remember, repeated pressing of the cursor movement keys makes the shadow larger or smaller.



4. Press **↵** (Enter).

The box with the letter disappears. *Picture Maker* will now use the type size and shadow you selected.

5. Press **↵** (Enter). *Picture Maker* writes the title to the screen.

If the text is too close to the top of the screen or too far down, press U (for Undo) and then W (for Write text). Move the elastic text box up or down, and then press W again to write the text. Press **↵** (Enter) to remove the elastic text box.

Drawing graphs

You use two commands to draw graphs and charts:

- Alt G (for Graph Defined) which lets you enter data and give instructions on what the graph should look like.
- G (for Graph Draw) which lets you draw an elastic box that will contain the graph.

Using the Graph Defined command

To draw a vertical bar graph:

1. Press Alt G (for Graph Defined). *Picture Maker* asks you to enter data.
2. Type the following numbers with a space after each number: 2 6 4 5
8
3. Press **↵** (Enter).

Picture Maker presents graphing instructions for a vertical bar graph, which include directions on the amount of space between the bars, whether there is a scale, and the increment of tic marks.



Graphing instructions: The four graphing instructions that appear are:

vbar 100 , scale , low , high

- “vbar 100” is the first instruction.
 - The word “vbar” is an abbreviation of vertical bar — the type of graph *Picture Maker* will draw unless you change this instruction.
 - The 100 tells *Picture Maker* to make the bars 100% wide; in other words, not to leave any space between them.
- “scale” starts the second instruction.
 - If you don’t enter a value after “scale,” *Picture Maker* will not put a scale on your graph.
 - If you enter a value of 0, *Picture Maker* will put a scale on the graph but will not put tic marks on it.
 - If you enter a value other than 0 for “scale,” such as 2, *Picture Maker* will put a scale on the left side of your graph, with tic marks at increments of two.



- “low” starts the third instruction.
 - The word “low” indicates the lowest scale mark you want to use.

If you don’t enter a value after *low* and your data contains all positive numbers, *Picture Maker* uses 0 for the lowest scale mark.

If you don’t enter a value and your data contains negative numbers, *Picture Maker* uses the lowest number for the low scale mark.
- “high” starts the fourth instruction.
 - The word “high” indicates the highest scale mark you want to use.
If you don’t enter a value, *Picture Maker* uses the highest data value or 0, whichever is greater.

Changing graphing instructions: Let’s change the graphing instructions and tell *Picture Maker* to put a scale on the graph. You only have to type the instruction you are changing.

1. Type the instruction as follows, over the existing magenta letters. Don’t be concerned that you are typing a scale instruction over the *vbar* instruction.

scale 2

Since you didn’t enter a number for the high instruction, *Picture Maker* will use your highest data value (8) and put 4 tic marks on the scale (high value of 8 divided by scale of 2).

2. Press **↵** (Enter) to end the Alt G command. *Picture Maker* takes the graphing instructions and waits for you to tell it where to draw the graph.



Using the Graph Draw command

Before you draw the graph, check the draw color table to see what colors are being used for draw and fill.

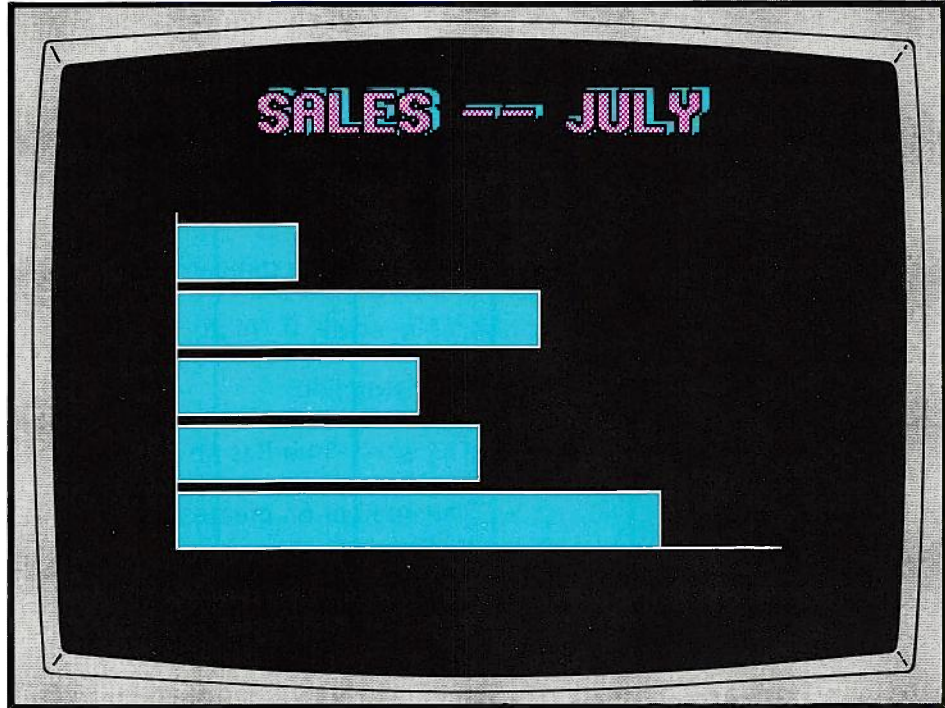
1. Press F5 to display the draw color table and to check the color used for drawing. If it isn't white, press F5 until a white box appears next to the word *Draw*.
2. Check the fill color. If it is not cyan, press F7 until a solid cyan rectangle appears next to the word *Fill*.
3. Press ↵ (Enter) to remove the draw color table.

To draw the graph:

1. Use the ↑, ↓, ←, and → keys to place the cursor where you want to start drawing a corner of the box. Plan on making the box about 7 inches wide and 4 inches high. Plan on leaving some space above, below, and on each side of the box so that you can enter text later, if you like.
2. Press G (for Graph Draw).
3. Use the ↑, ↓, ←, and → keys to draw an elastic box.
4. Press ↵ (Enter) to end the Graph Draw command. The vertical bar graph is drawn.
5. Use the O (for Out to a picture file) to save this bar graph and use *vbar* for the name of the file.



This illustration shows how your screen will look after you complete the steps below.



Drawing horizontal bar graphs

Now let's use the same data to draw a horizontal bar graph in the same position as the vertical bar graph.

1. Press + to select the small cross cursor.
2. Press U (for Undo). The vertical bar graph disappears.
3. Press Alt G (for Graph Defined). *Picture Maker* asks you to enter data and shows you the data it has.



4. Leave the data entered the same.
5. Press **↵** (Enter) .

Picture Maker asks for graphing instructions and shows you the graphing instructions it has. Remember, you only have to indicate which instructions you want changed.

6. Type the following three instructions over the existing magenta letters:
hbar 85, scale 0, high 10

In the first instruction:

- The word “hbar” is an abbreviation for horizontal bar.
- The number 85 creates a fairly wide bar with some space between bars.

In the second instruction:

- The word “scale” starts the instruction.
- The number 0 tells *Picture Maker* to put a scale on the graph but to omit tic marks from that scale.

In the third instruction:

- The word “high” tells *Picture Maker* to look for a value.
- The 10 indicates what the high value is.



7. Press \leftarrow (Enter). The graphing instructions disappear.

8. Press G (for Graph Draw).

9. Press \leftarrow \rightarrow . The elastic box is drawn.

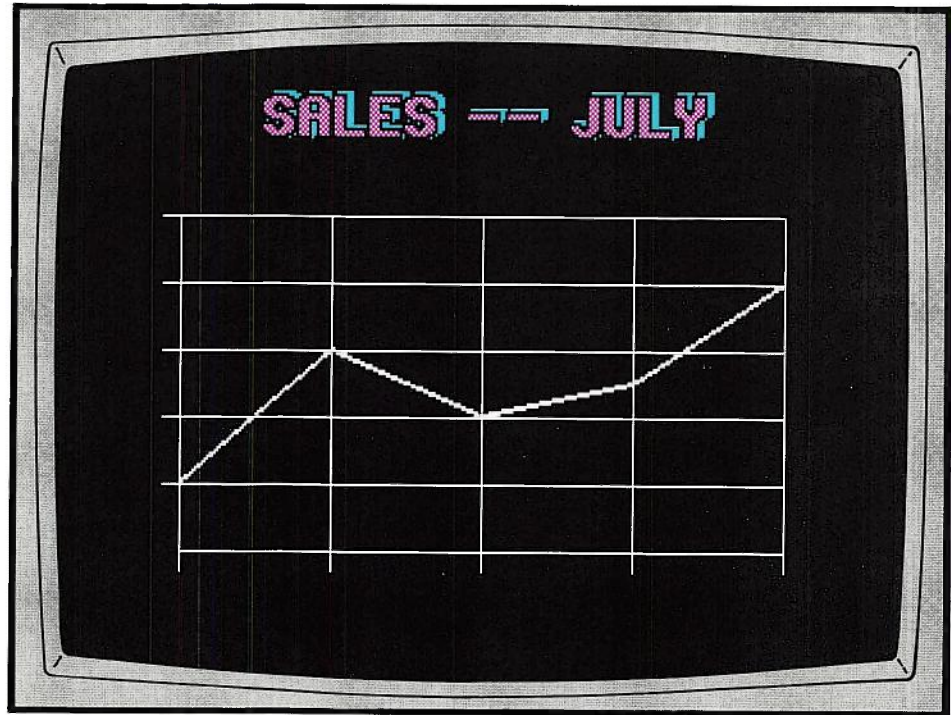
Using the \rightarrow key causes the previously drawn elastic box to be reused. If certain conditions occur, such as quitting and restarting *Picture Maker*, the previous elastic box no longer exists. Use the cursor keys to redraw a new elastic box.

10. Press \leftarrow (Enter). *Picture Maker* draws a graph with horizontal bars.

11. Use the O (for Out to a picture file) to save this bar graph and use *hbar* for the name of the file.



This illustration shows how your screen will look after you complete the steps below.



Drawing line graphs

Now let's see how the same data looks in a line graph in the same position as the previous bar graphs were.

1. Press U (for Undo). The horizontal bar graph disappears.
2. Press Alt G (for Graph Defined). *Picture Maker* asks you to enter data and shows you the data it has.
3. Leave the data entered the same.



4. Press \leftarrow (Enter).

Picture Maker asks for graphing instructions and shows you the graphing instructions it has. Remember, you only have to indicate which instructions you want changed.

5. Type the following two instructions over the existing magenta letters.

line 2, scale -2

In the first instruction:

- The word “line” is an abbreviation for line graph.
- The number 2 determines the thickness of the line drawn.

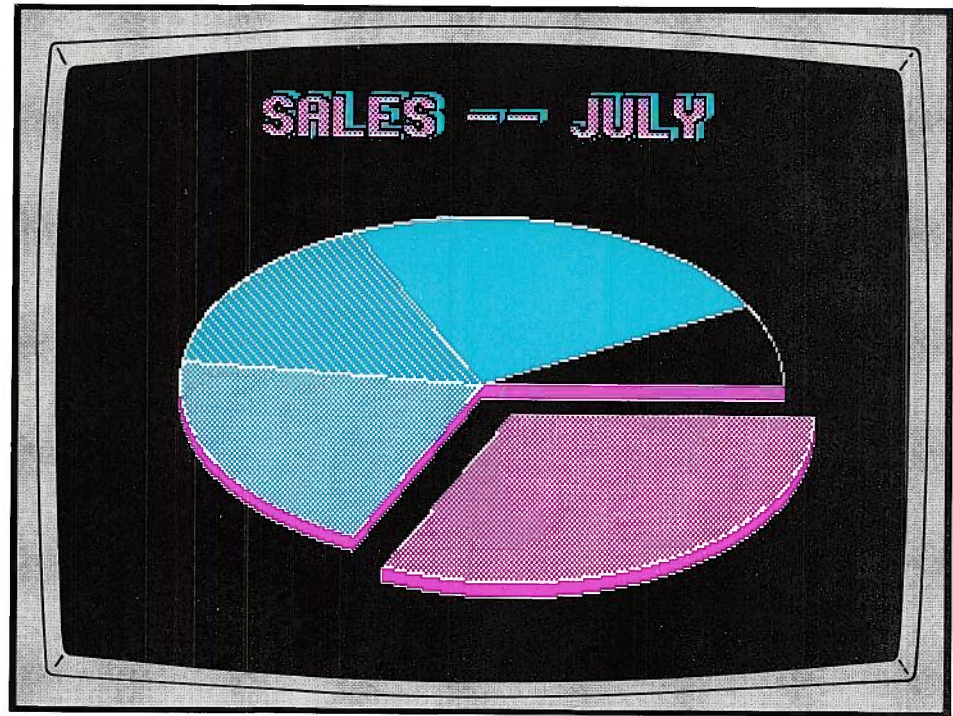
In the second instruction:

- The word “scale” tells *Picture Maker* to look for a value.
- The -2 tells *Picture Maker* to draw a grid behind your graph, with tic marks every two units.

6. Press \leftarrow (Enter). The graphing instructions disappear.
7. Press G (for Graph Draw).
8. Press \leftarrow \rightarrow \leftarrow \rightarrow . The elastic box is drawn.
9. Press \leftarrow (Enter). *Picture Maker* draws a line graph with a grid behind it.
10. Use the O (for Out to a picture file) to save this line graph and use *line* for the name of the file.



This illustration shows how your screen will look after you complete the steps below.



Drawing pie charts

Now let's see how the same data looks in a pie chart.

1. Press U (for Undo) . The line graph disappears.
2. Press S (for Size and Shadow) . *Picture Maker* shows you the outline of a box.
3. Use ↑ to move the shadow straight down from the box. Stop when you have a pleasing shadow.
4. Press ← (Enter) . The box and shadow disappear.



5. Press F7 to check and change the fill color.

To have *Picture Maker* make each piece a different color, press F7 until the word NONE appears opposite Fill.

6. Press Alt G (for Graph Defined) .

The color table disappears. *Picture Maker* asks you to enter data and shows you the data it has.

7. Change the 8 to -8

Remember to leave a space between the numbers. When *Picture Maker* draws the chart, this piece of the pie will be moved away from the rest of the pie.

8. Press ← (Enter) .

Picture Maker asks for graphing instructions and shows you the graphing instructions it has. Remember, you only have to indicate which instructions you want changed.

9. Type the following instruction over the existing magenta letters:

pie 20

- The word “pie” is an abbreviation for pie chart.
- The value “20” tells *Picture Maker* how far to move the “popped” piece away from the pie.



10. Press \leftarrow (Enter). The graphing instructions disappear.
11. Press G (for Graph Draw).
12. Press \leftarrow \rightarrow . The elastic box is drawn.
13. Press \leftarrow (Enter). *Picture Maker* draws a pie chart.
14. Use the O (for Out to a picture file) to save this pie chart and use *pie* for the name of the file.

Entering the rest of the graph information

Now you can pick your favorite graph from the ones you've drawn and enter scale numbers and other text. We'll show you the pictures we developed from the graphs, and you can use these pictures as guides to entering the rest of the information.

General reminders


Here are some general reminders on using *Picture Maker* commands to enter text, draw figures, and fill areas with color. You can use them not only now but also whenever you're entering text and drawing figures.

Entering text: When entering text, you'll probably use the following commands:

- Alt T to check and change the typeface.
- Alt W to check and change where the text will be written.
- S to check and change type size, and amount and direction of shadow.
- T to enter text.
- M and T to enter multiple lines of text.

You'll also use the text color table to check and change the color of letters, outline, and shadow. If you want to see the text color table and the draw color table appears, press \leftarrow \rightarrow to switch to the text color table.



Drawing figures: When drawing figures, remember to position the cursor where you want to start drawing a corner of the elastic box. Use the draw color table to check the draw, shadow, and fill colors. If you want to see the draw color table and the text color table appears, press  to switch to the draw color table.

Filling areas with color: When you are going to change the fill color in an area, remember to position the cursor high and to the left in that area so that *Picture Maker* can determine what color should be changed.

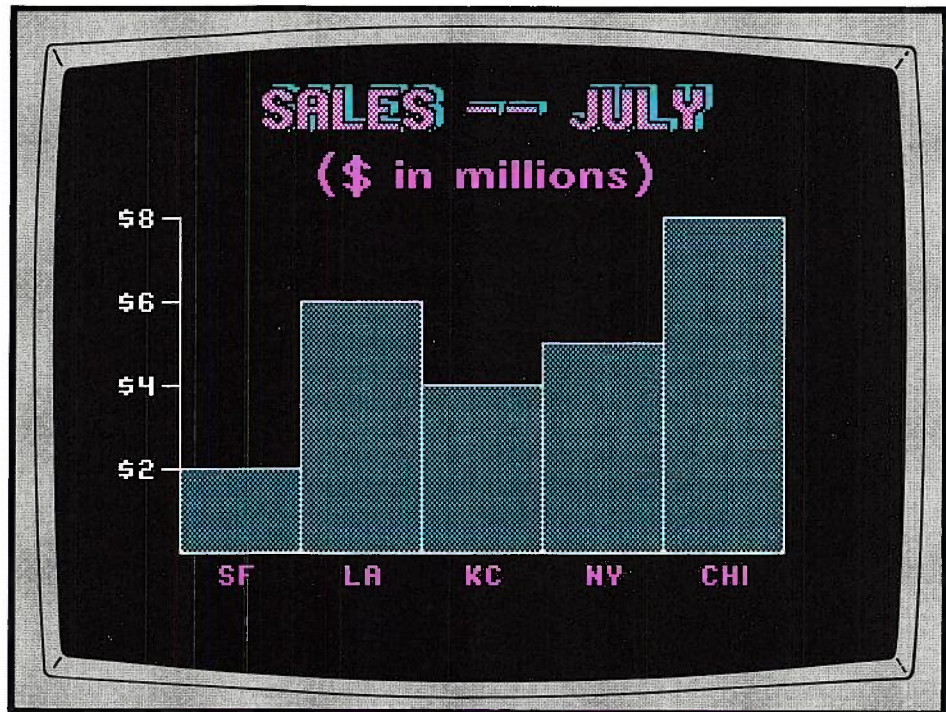
When you are drawing graphs, remember that NONE by *Fill* in the draw color table will produce a graph with different fill colors in each bar of a bar graph or each piece of a pie chart.

When you are filling areas with a color pattern, you may create a problem if the draw color is one of the colors in the color pattern. The outline created by the draw color may become dotted instead of a solid line. If you attempt to later change the fill color, some of the outlining may change to the new fill color.



The completed vertical bar graph

Here is what our vertical bar graph looked like when we finished it.

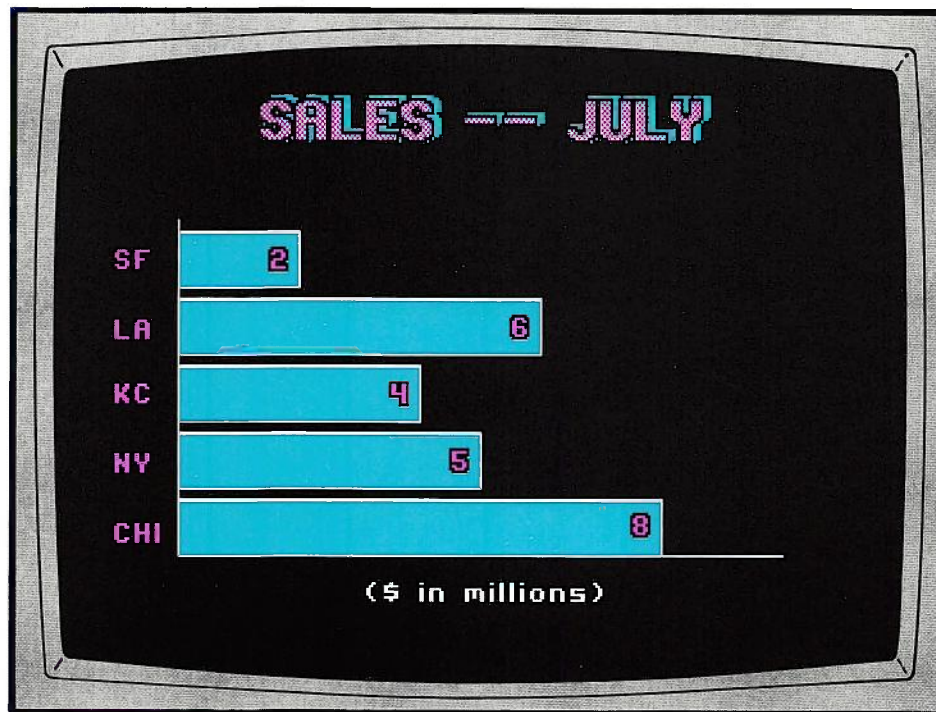


We added:

- A second centered title, in a different color and different type size. The commands used were T, S, and Alt W.
- Scale numbers on the left side of the graph. The commands used were T, S, and Alt W (text position to the left of the cursor).
- City names on the bottom of the graph. The commands used were T, S, and Alt W (text centered on the cursor).
- A different fill color for the bars. The command used was F.

The completed horizontal bar graph

Here is what our horizontal bar graph looked like when we finished it.



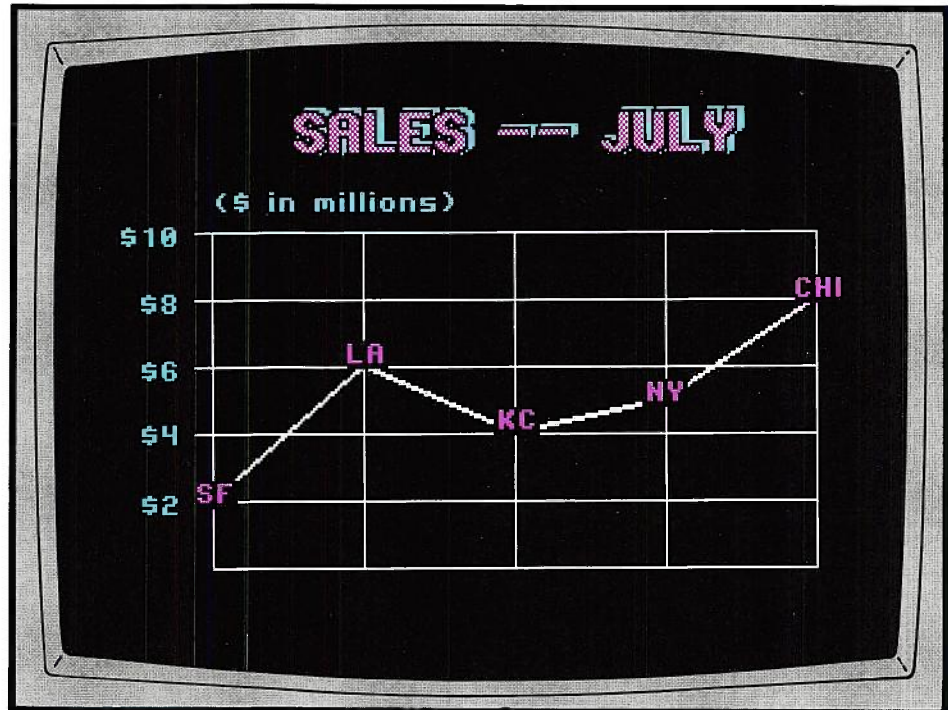
We added:

- A line of text at the bottom of the picture. The commands used were T, S, and Alt W (centered on the screen)
- City names on the left side of the graph. The commands used were T, S, and Alt W (text position to the right of the cursor).
- Scale numbers at the end of each bar. The commands used were T, S, and Alt W (text to the left of the cursor).



The completed line graph

Here is what our line graph looked like when we finished it.



We added:

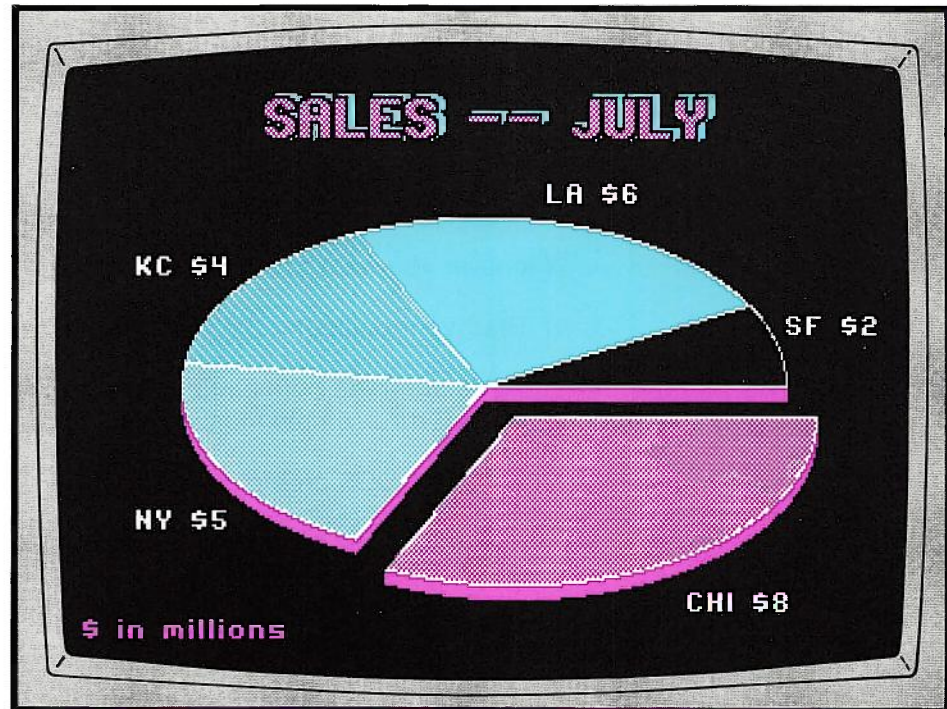
- A line of text starting at the left edge of the graph. The commands used were T, S, and Alt W (text to the right of the cursor).
- City names on the graph. The commands used were T, S, and Alt W (text position centered on the cursor).
- Scale numbers at the left of the graph. The commands used were T, S, and Alt W (text to the left of the cursor).

We used the E command to erase the area where we were going to write the city names and the vertical lines extending beneath the bottom horizontal bar.



The completed pie chart

Here is what our pie chart looked like when we finished it.



We added:

- A line of text at the bottom of the picture. The commands used were T, S, and Alt W (text to the right of the cursor).
- City names and dollar amounts next to the pieces of the chart. The commands used were T, S, and Alt W (text position to the right of the cursor).

Ending the lesson

You've finished using *Picture Maker*. Use Alt Q to quit.

Lesson 4. Putting your story together



Story Editor lets you put your pictures into a story. You can display entire pictures or just portions of pictures in any sequence you want. You can use a variety of dissolve methods to move from one picture to another. You can have your picture displayed until you press a key or for a period of time you designate. This lesson just introduces you to *Story Editor*. You can read more about it in the "Using Story Editor" chapter and learn more about some of its advanced features in Lesson 5.

Starting Story Editor

Whenever you want to start *Story Editor*, follow these steps:

1. Start your computer the way you normally would.

If you are using both a monochrome display and a color display, start *Story Editor* on the monochrome display.

2. When the DOS prompt containing the drive appears:

If *Story Editor* is on a diskette:

- Place the PCSTORY1 diskette in drive A and your work diskette containing the pictures in drive B.
- Type `se b:` and press `↵` (Enter).

If *Story Editor* and your pictures are on your fixed disk:

- Type `cd\pcscmd` and press `↵` (Enter) to change to the directory containing *PC Storyboard*.
- Type `se` and press `↵` (Enter).



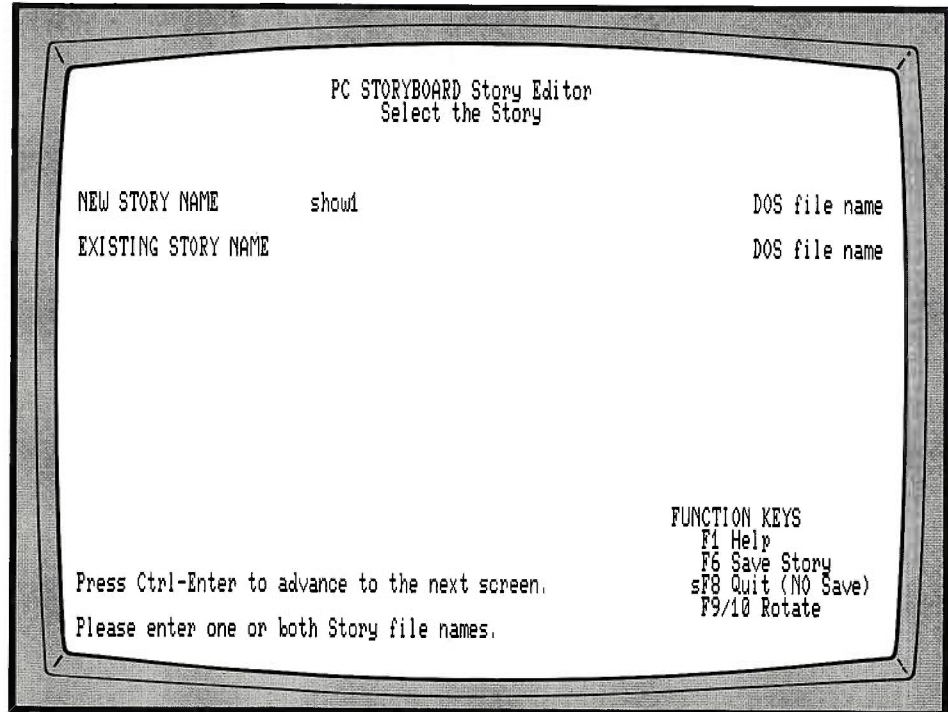
-
3. Press any key to continue when the IBM *Story Editor* screen appears.

There are other ways of starting *Story Editor*. For example, if you have both color and monochrome displays, you can enter story specifications on your monochrome display and run your story on the color monitor. For more information, see the "Using Story Editor" chapter.



Selecting your story

The first *Story Editor* screen appears. On this screen you enter the name of the story you want to create.



Here's what to do on this screen.

1. "NEW STORY NAME." Type **show1** as the name.
2. Hold down Ctrl and press **↵** (Enter). *Story Editor* shows you the next screen.



Editing your story

The second *Story Editor* screen appears. On this screen you can create a new story or change an existing one.

PC STORYBOARD Story Editor
Edit the Story

Story Name show1

Label	Picture Name or Command	Display picture using:				Then wait for	Set Color		Area
		Method	Dir	Line	Time		Pal	Back	
	SAMPLE VBAR HBAR LINE PIE	REPLACE EXPLODE DIAGONAL SPLIT CHECKER	UP	CYN	FAST	KEY	LCMW	BLK	FULL

FUNCTION KEYS F3 Step Story F6 Save Story F8 Select Story
 F1 Help F4 Run Story sF6 Save & Quit sF8 Quit (NO Save)
 F2 Editing Keys F5 View Picture F7 Print Story F9/10 Rotate W

Each line on this screen represents one step in the story. We're only going to tell you about a few types of entries you can make on this screen. You can learn about the rest of them by reading the "Using Story Editor" chapter and doing the exercise in lesson 5.



Entering the first line

Here's what to do on the first line of this screen.

1. "Picture Name or Command." The cursor is in this column. Press F10 to rotate in **sample**, the name of the first picture you created.
2. "Method." Leave **REPLACE** as the dissolve method.
3. "Then wait for." Leave **KEY** as the way to move to the next picture in the story.
4. Press **↓** to move the cursor down to the second line.

Entering the second line

Here's what to do on the second line of this screen.

1. "Picture Name or Command." Press F10 to rotate in the name of one of the graphs you created in lesson 3.

If you don't fill in information in the rest of the columns on the second line, "Story Editor" will use the information from the first line. Make only one more change on the second line.

2. Press **↵** (Enter) once to move to the next column.
3. "Method." Press F9 to rotate in a different dissolve method.

Entering the remaining lines

Here's what to do for the rest of this screen.

1. Press **↵** (Enter) until you move to "Picture Name or Command"



2. "Picture Name or Command." Press F10 to rotate in the name of one of the graphs you created in lesson 3.
3. Press ← (Enter) once to move to the next column.
4. "Method." Press F9 to rotate in a different dissolve method.

Running the show

When you've entered the names of all the graphs you've created, you're ready to run the story.

1. Press ↑ to move the cursor to the top line.
2. Press F4 to run the story. The story starts running from the line the cursor is on.
3. Press any key, after one picture appears, to see the next picture.
4. Press any key, after the last picture appears, to return to *Story Editor*.

Expanding your knowledge of Story Editor

Now that you've run your first story, try experimenting with other dissolve methods and with some of the other entries on the Edit the Story screen, such as "Dir," "Line," and "Then wait for." You can find out more information about them and the other entries on the screen in the chapter "Using *Story Editor*" and by doing the exercise in lesson 5

Ending Story Editor

When you have finished using *Story Editor*, press ⌘F6 to save your story. Note that the ⌘F6 key sequence is shown as sF6 when displayed at the bottom of the story editing screen.



Telling your story

Now you're ready to tell your story with *Story Teller*.

1. When the DOS prompt containing the drive appears:

If *Story Teller* is on a diskette:

- Place that diskette in drive A and your work diskette containing the story and the pictures in drive B.
- Type `st` and press `↵` (Enter).

If *Story Teller* and your story and pictures are on the fixed disk:

- Type `cd\pcscmd` and press `↵` (Enter) to change to the directory containing *PC Storyboard*.
- Type `st` and press `↵` (Enter).

2. Enter the name of your story when *Story Teller* asks for it.

Your story will start at your first picture. Remember to press a key if that is the way you indicated to advance to the next picture. When *Story Teller* is running, special keys can be used. For more information on them, see the "Using *Story Teller*" chapter. There is also some special licensing information that you need to know about *Story Teller*. To learn about that, see the "Program Specifications" chapter.

What's next?

Now you're ready to start putting together and running your own stories. Then, when you're ready to learn some advanced techniques, do the exercise in lesson 5.

Lesson 5. Using advanced techniques



Now that you've had some practice using *Picture Maker* and *Story Editor*, you're ready for some advanced story techniques. We'll show you how to:

- Write text in italic type.
- Use art from the picture library on one of your pictures.
- Build a new story from an existing one.
- Display only a part of a picture.
- Make a line of text blink.

But first you need to create three more pictures. These new pictures should be saved along with the pictures you created in Lessons 1, 2, and 3, and the story you created in Lesson 4.



Modifying sample

This illustration shows how your screen should look when you complete the steps below.



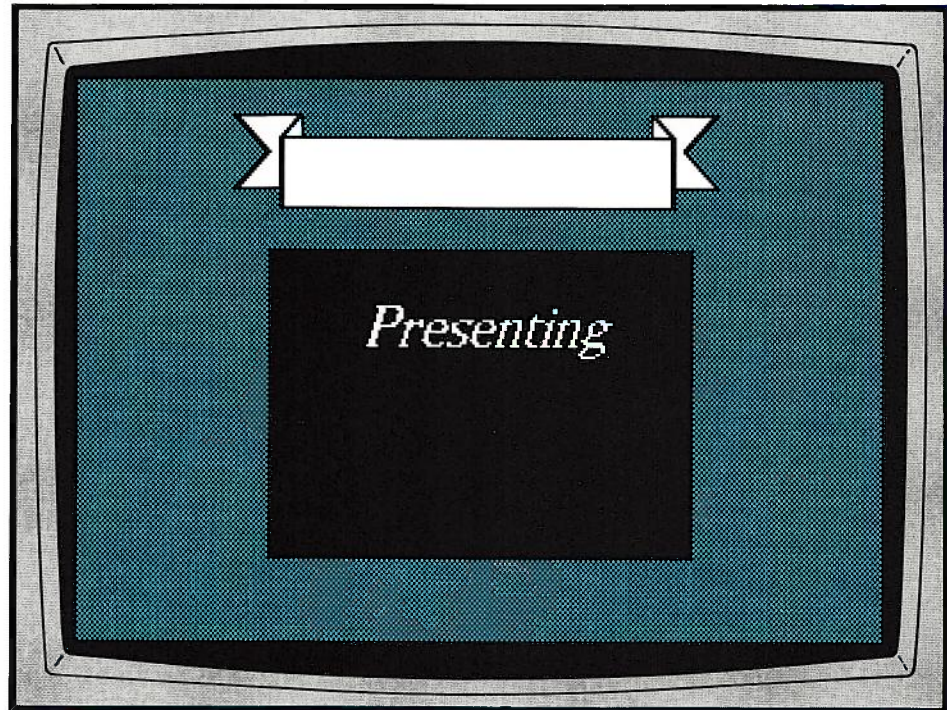
Use *Picture Maker* to create one of the new pictures by modifying an existing picture — *sample*.

1. Use the I (Input) command.
2. Enter *sample* when *Picture Maker* asks for the file name.
3. When the picture appears, modify it by using the E (Erase) command to remove the bullets and text within the box.
4. Use the name *sample0* to save the new picture.



Creating the opening picture

This illustration shows how your screen should look when you complete the steps below.



This picture will become the first picture in your new show. To use italic type for the text:

1. Press S (for Slant).
2. When the letter appears, hold down the \uparrow key and press the \leftarrow or \rightarrow key to tilt the letter. All letters will be displayed in italic until you use the S command again to change the slant.
3. Use the text command to write the heading.



The banner at the top of the screen is from the picture library. To use it on your screen:

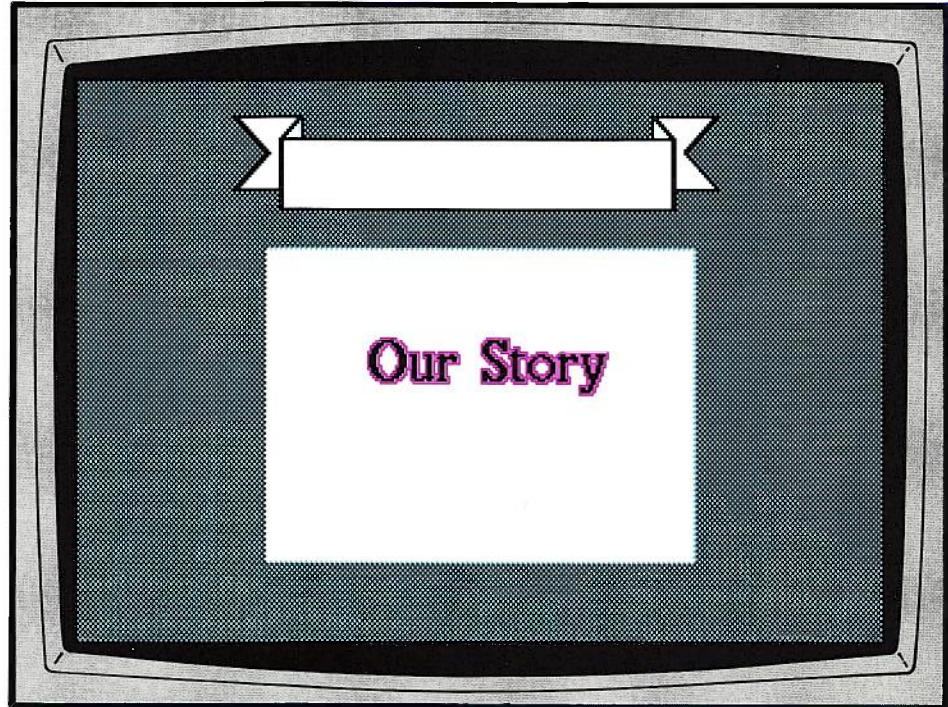
1. Press F2 to go to the picture library.
2. Press F2 to page through the picture library.
3. Use the C (Cut) command to cut out the banner you want.
4. Press U (Undo) to return to your picture.
5. Use the P (Paste) command to paste the banner on your picture.
6. Keep pressing P (for Paste) until the color behind the banner is the same color as your border.

Use the name *open1* to save this picture.



Creating the next picture

This illustration shows how your screen should look when you complete the steps below.



Create this new picture by modifying *open1*.

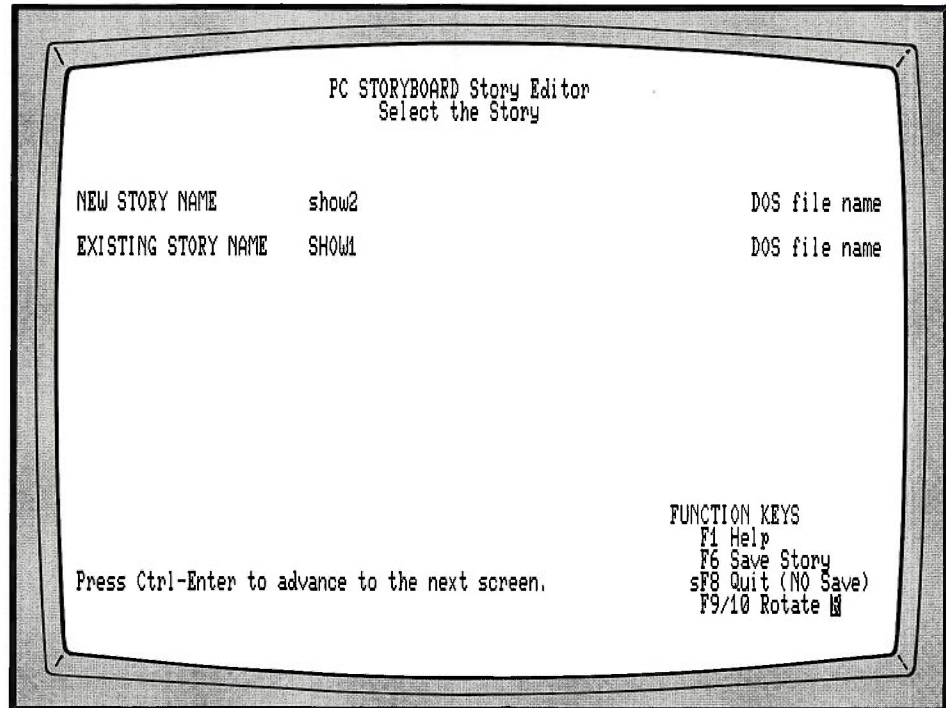
1. Use the Erase command to erase the text.
2. Use the Fill command to change the fill color from black to white.
3. Use the Text command to write a new heading.
4. Use the name *open2* to save the new picture.

Now you're ready to create a new story.



Building a new story

This illustration shows how your screen should look when you complete the steps below.



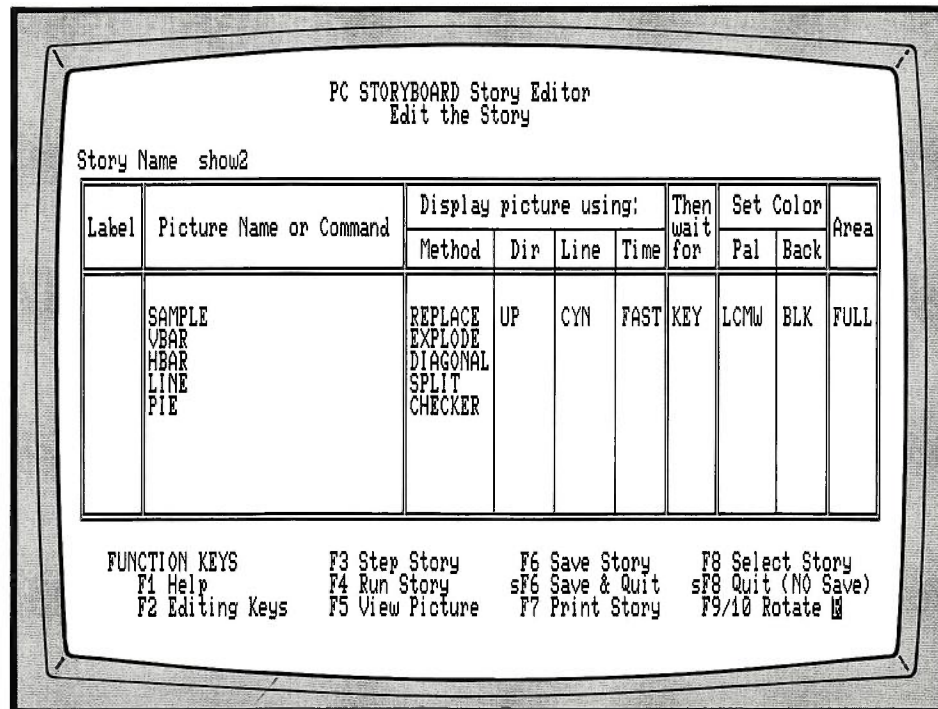
Story Editor lets you build a new story from an existing one. Here's how.

1. "NEW STORY NAME." Type **show2** as the name.
2. "EXISTING STORY NAME." Press F9 or F10 to rotate in the name **SHOW1**.
3. Hold down Ctrl and press **↵** (Enter). *Story Editor* shows you the next screen.



Inserting new pictures

This illustration shows how your screen should look when you complete the steps below.



Story Editor shows you the pictures and display instructions that are in the story *show1*. You want to add the new pictures at the beginning of the list. You'll have to use the editing keys. Press F2 to see those keys. The editing key you want is Alt I, or al, for Insert Line.

1. Check that the cursor is in the first line.
2. Hold down the Alt key and press the I key. *Story Editor* adds a blank line at the beginning of the story.



Entering the /CLEAR command

This illustration shows how your screen should look when you complete the steps below.

PC STORYBOARD Story Editor
Edit the Story

Story Name show2

Label	Picture Name or Command	Display picture using:				Then wait for	Set Color		Area
		Method	Dir	Line	Time		Pal	Back	
	/CLEAR	REPLACE	UP	NONE	FAST	2	LCMW	BLK	FULL
	SAMPLE	REPLACE	UP	CYN	FAST	KEY	LCMW	BLK	FULL
	VBAR	EXPLODE							
	HEAR	DIAGONAL							
	LINE	SPLIT							
	PIE	CHECKER							

FUNCTION KEYS	F3 Step Story	F6 Save Story	F8 Select Story
F1 Help	F4 Run Story	sF6 Save & Quit	sF8 Quit (NO Save)
F2 Editing Keys	F5 View Picture	F7 Print Story	F9/10 Rotate

When you show a story, there will be existing text on the screen. A nice way of clearing the text off is with the /CLEAR command.

1. Press F9 to rotate in the /CLEAR command.
2. Use F9 or F10 to rotate in values for the rest of the columns as shown in the example.



Entering the opening pictures

This illustration shows how your screen should look when you complete the steps below.

PC STORYBOARD Story Editor
Edit the Story

Story Name show2

Label	Picture Name or Command	Display picture using:				Then wait for	Set Color		Area
		Method	Dir	Line	Time		Pal	Back	
	/CLEAR	REPLACE	UP	NONE	FAST	2	LCMW	BLK	FULL
	OPEN1	FADE							
	OPEN2	FADE							
	SAMPLE	REPLACE	UP	CYN	FAST	KEY	LCMW	BLK	FULL
	VBAR	EXPLODE							
	HBAR	DIAGONAL							
	LINE	SPLIT							
	PIE	CHECKER							

FUNCTION KEYS	F3 Step Story	F6 Save Story	F8 Select Story
F1 Help	F4 Run Story	sF6 Save & Quit	sF8 Quit (NO Save)
F2 Editing Keys	F5 View Picture	F7 Print Story	F9/10 Rotate

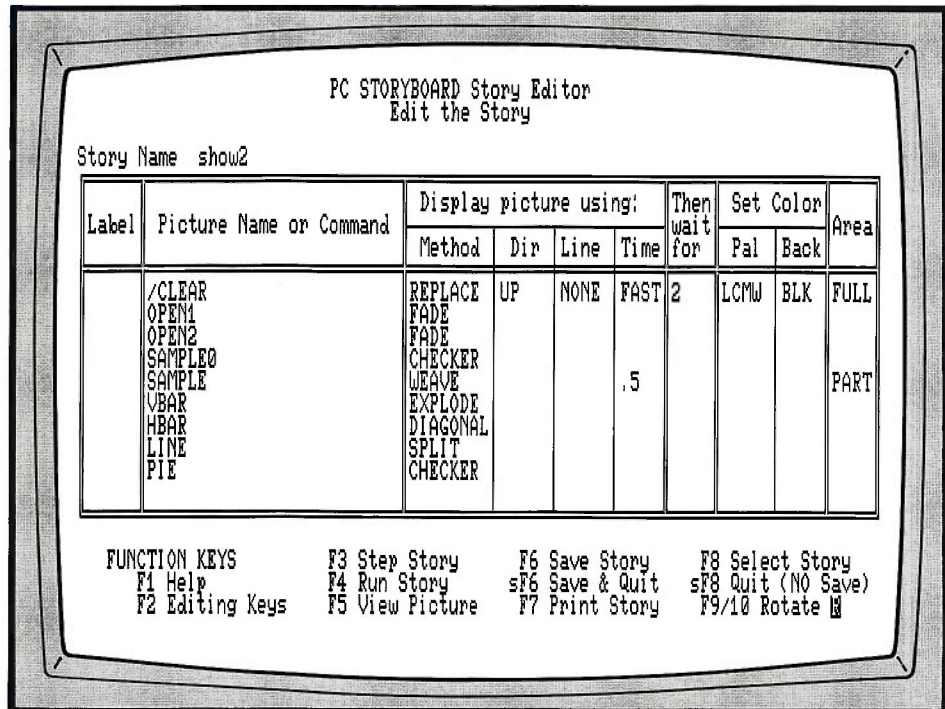
The borders of *open1* and *open2* are the same. Only the area within the borders is different. Fade and other dissolve techniques will be apparent only in the area within the border. To see an example of this technique:

1. Move the cursor to the second line.
2. Use the Alt I key to insert a blank line.
3. For the second line, use F9 or F10 to rotate in the picture name *open1* and other values as shown in the example.
4. Move the cursor to the third line and insert a blank line.
5. For the third line, use F9 or F10 to rotate in the picture name *open2* and other values as shown in the example.



Using partial pictures

This illustration shows how your screen should look when you complete the steps below.



You can take a rectangular area from a source picture and display it on another picture. This technique is useful when you want to display a list an item at a time. To see how this works, you'll tell *Story Editor* to take the first bulleted line from *sample* and display it on *sample0*.

1. Insert a blank line and enter the information shown for the picture *sample0*.
2. *Sample* is already in your list of pictures. Change the information you have for it so that it is the same as shown in our example.



This illustration shows how your screen should look when you complete the steps below.

PC STORYBOARD Story Editor
Edit the Story

Story Name show2

Display picture using:				Then wait for	Set Color		Area	From the Picture		To Screen
Method	Dir	Line	Time		Pal	Back		Upper X, Y	Lower X, Y	Upper X, Y
REPLACE	UP	NONE	FAST	2	LCMW	BLK	FULL	,	,	,
FADE								,	,	,
FADE								,	,	,
CHECKER								,	,	,
WEAVE			.5				PART	,	,	,
EXPLODE								,	,	,
DIAGONAL								,	,	,
SPLIT								,	,	,
CHECKER								,	,	,

FUNCTION KEYS F3 Step Story F6 Save Story F8 Select Story
 F1 Help F4 Run Story sF6 Save & Quit sF8 Quit (NO Save)
 F2 Editing Keys F5 View Picture F7 Print Story F9/10 Rotate

To see the rest of the Edit the Story screen, move the cursor to the right.

You have to tell *Story Editor* where the rectangle is on *sample* that you want to use. There is a simple way to do that.

Press F5 to see the *sample* picture.



This illustration shows how your screen should look when you complete the steps below.



The picture *sample* is displayed with an elastic box. You can move the top edge and the left side of the elastic box. To tell *Story Editor* the upper left coordinates:

1. Press + to move the top edge down so that it is above and close to the first bullet.
2. Press → to move the left side so that it is to the left of and close to the first bullet.



This illustration shows how your screen should look when you complete the steps below.



To tell *Story Editor* the lower right coordinates:

1. Press **↵** (Enter) . You can now move the bottom edge and the right side of the elastic box.
2. Press **↑** to move the bottom edge up so that it is below and close to the first bulleted item.
3. Press **←** to move the right side so that it is to the right of and close to the first bulleted item.



This illustration shows how your screen should look when you complete the steps below.

PC STORYBOARD Story Editor
Edit the Story

Story Name show2

Display picture using:				Then wait for	Set Color		Area	From the Picture		To Screen
Method	Dir	Line	Time		Pal	Back		Upper X,Y	Lower X,Y	Upper X,Y
REPLACE	UP	NONE	FAST	2	LCMW	BLK	FULL	,	,	,
FADE								,	,	,
FADE								,	,	,
CHECKER								,	,	,
WEAVE			.5				PART	104 ,115	207 ,136	SAME,
EXPLODE								,	,	,
DIAGONAL								,	,	,
SPLIT								,	,	,
CHECKER								,	,	,

FUNCTION KEYS F3 Step Story F6 Save Story F8 Select Story
 F1 Help F4 Run Story sF6 Save & Quit sF8 Quit (NO Save)
 F2 Editing Keys F5 View Picture F7 Print Story F9/10 Rotate
 Press F5 to see and interactively set partial area coordinates.

1. Press **←** (Enter) to return to the Edit the Story screen.

“From the Picture: Upper X,Y, Lower X,Y.” *Story Editor* has filled in the coordinates for you. The coordinates filled in for you may be different than the ones shown on the screen.

2. “To Screen Upper X,Y.” Press F9 or F10 to rotate in **SAME** to tell *Story Editor* to put the partial picture in the same location on the *sample0* picture as it was on the *sample* picture.



This illustration shows how your screen should look when you complete the steps below.

PC STORYBOARD Story Editor
Edit the Story

Story Name show2

Label	Picture Name or Command	Display picture using:				Then wait for	Set Color		Area
		Method	Dir	Line	Time		Pal	Back	
	/CLEAR	REPLACE	UP	NONE	FAST	2	LCMW	BLK	FULL
	OPEN1	FADE							
	OPEN2	FADE							
	SAMPLE0	CHECKER							
	SAMPLE	WEAVE			.5				PART
	/DISPLAY	WEAVE							PART
	VBAR	EXPLODE							
	HBAR	DIAGONAL							
	LINE	SPLIT							
	PIE	CHECKER							

FUNCTION KEYS F3 Step Story F6 Save Story F8 Select Story
 F1 Help F4 Run Story sF6 Save & Quit sF8 Quit (NO Save)
 F2 Editing Keys F5 View Picture F7 Print Story F9/10 Rotate

To display the next bulleted item, you'll use the /DISPLAY command, one of the special *Story Editor* commands.

1. Insert a blank line.
2. Press F9 to rotate in the /DISPLAY command.
3. Use F9 or F10 to fill in the rest of the line.
4. Move the cursor past **PART**.
5. Press F5 to display the *sample* picture.



This illustration shows how your screen should look when you complete the steps below.



The picture *sample* is displayed with an elastic box around the first bulleted item. To tell *Story Editor* the coordinates for the next bulleted item:

1. Move the elastic box down with the ↓ key. You may also want to use the ⏏ key to make the cursor move at smaller increments.
2. Press ↵ (Enter) two times.

You return to the “Edit the Story” screen.



PC STORYBOARD Story Editor
Edit the Story

Story Name show2

Display picture using:				Then wait for	Set Color		Area	From the Picture		To Screen
Method	Dir	Line	Time		Pal	Back		Upper X,Y	Lower X,Y	Upper X,Y
REPLACE	UP	NONE	FAST	2	LCMW	BLK	FULL	,	,	,
FADE								,	,	,
FADE								,	,	,
CHECKER								,	,	,
WEAVE			.5				PART	104 ,115	207 ,136	SAME,
WEAVE							PART	104 ,139	207 ,160	SAME,
EXPLODE								,	,	,
DIAGONAL								,	,	,
SPLIT								,	,	,
CHECKER								,	,	,

FUNCTION KEYS F3 Step Story F6 Save Story F8 Select Story
 F1 Help F4 Run Story sF6 Save & Quit sF8 Quit (NO Save)
 F2 Editing Keys F5 View Picture F7 Print Story F9/10 Rotate

3. "From the Picture: Upper X,Y and Lower X,Y." *Story Editor* has filled in the coordinates for you. The coordinates filled in for you may be different than the ones shown on the screen.
4. "To Screen Upper X,Y." Press F9 or F10 to rotate in **SAME** to tell *Story Editor* to put the partial picture in the same location on the *sample0* as it was on the *sample* picture.



Making lines blink

This illustration shows how your screen should look when you complete the steps below.

PC STORYBOARD Story Editor
Edit the Story

Story Name show2

Label	Picture Name or Command	Display picture using:				Then wait for	Set Color		Area
		Method	Dir	Line	Time		Pal	Back	
x1	/CLEAR	REPLACE	UP	NONE	FAST	2	LCMW	BLK	FULL
	OPEN1	FADE							
	OPEN2	FADE							
	SAMPLE0	CHECKER							
	SAMPLE	WEAVE			.5				PART
	/DISPLAY	WEAVE							PART
	/COLOR wb bw	REPLACE	UP	NONE	FAST	.1			PART
	/IFNOT key goto x1								
	VBAR	REPLACE	RIGHT	NONE	FAST	KEY			FULL
	HBAR	DIAGONAL							

FUNCTION KEYS F3 Step Story F6 Save Story F8 Select Story
 F1 Help F4 Run Story sF6 Save & Quit sF8 Quit (NO Save)
 F2 Editing Keys F5 View Picture F7 Print Story F9/10 Rotate

You can produce a blinking effect on the second bulleted item by entering two other *Story Editor* commands — the /COLOR command and the /IFNOT command.

1. Insert a blank line.
2. Press F9 to rotate in the /COLOR command and type in the rest of the information shown in the example.

The /COLOR command tells *Story Editor* to change what is white (w) in the partial area to the background (b) color, and what is in the background (b) color to white (w).



3. Insert a blank line.
4. Press F9 to rotate in the /IFNOT statement and type in the rest of the information shown in the example.

The /IFNOT statement tells *Story Editor* to go to the line with the x1 label if a key is not pressed. In other words, *Story Editor* will do lines 7 and 8 over and over until a key is pressed.

5. Change the display information for your first graph to what is given for our graph *vbar*.

Running the show

To see all the special effects:

1. Move the cursor to the first line on the screen.
2. Press F4 to run the show.

When you're through, save the show by pressing F6 or \square F6. Then you'll have an example of how to produce certain special effects when you create your own shows.



Using PC Storyboard



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Using PC Storyboard



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How PC Storyboard works



What PC Storyboard does

PC Storyboard is an easy-to-use system for preparing and giving color presentations on an IBM Personal Computer. It helps you create screen displays of text, figures, and charts, and also include displays from other PC DOS programs. It lets you organize these into stories that can be presented with a wide variety of special effects.

PC Storyboard has four parts:

Picture Maker allows you to create and modify pictures in medium resolution graphics mode. You use a variety of *Picture Maker* commands to write text, draw figures, generate charts, and cut and paste images between pictures.

Picture Taker is used to capture picture images of screens from other PC application programs. Later using *Story Editor*, you can assemble these captured pictures into your story.

Story Editor allows you to organize pictures into presentations (stories). *Story Editor* has several special features to help you make attractive presentations. You can select a variety of picture-to-picture transition methods that allow one picture to dissolve into another. You can also select other variables such as display times, colors, and whether the picture will be developed as a full picture or as a series of partial pictures. You can run your story in part or in full while using *Story Editor* so that you can quickly and easily experiment with various presentation techniques in a “try it and see” manner.

Story Teller allows you to present stories built by *Story Editor*. It can be copied onto the same diskette as your story and pictures so that the story can be distributed and run on a single diskette. (Refer to the special terms and conditions in the “Program specifications” chapter.)

An introduction to color graphics

The color monitor

When using *Picture Maker* to create and edit pictures, the pictures must be in medium resolution graphics mode and they can be displayed only on a color monitor.

In medium resolution graphics mode, the monitor screen displays 64,000 dots to display a picture. These dots are known as “picture elements,” and are often referred to as “pels” or “pixels.” The 64,000 dots are arranged into 200 rows with 320 pels across each row.

The color of each pel can be set individually. The combination of settings for the 64,000 pels creates a graphics picture. As you use *Picture Maker* commands to write text and geometric shapes on the color monitor display, you change the color of pels. Sometimes you may change only one pel, but usually you will change a group of pels, such as when you write a text character on the screen.

Let's take a look at how this works. When you start a new picture, all the pels are set to the same color called the background color. Although the background can be set to any of 16 colors, let's assume it's set to black. Next let's instruct *Picture Maker* to write the word **SALES**. To make these letters stand out on the screen, they must be in a color other than black; so we will choose white. As *Picture Maker* writes the word **SALES**, it automatically changes the color of a group of pels from black to white. The pattern of this group of pels forms the letters in the word “SALES.” Letters such as L and E can be formed very precisely because they are formed with pels running in straight horizontal and vertical lines. Letters such as S and A are more difficult because pel patterns must approximate curves and diagonals. The degree of graphics resolution (medium or high) will affect the precision with which curved shapes can be formed.





Medium and high resolution graphics modes

The IBM Color/Graphics Monitor Adapter, which controls output to the color monitor, has two graphics modes, medium and high. Although high resolution graphics mode divides the screen into 128,000 pels (200 rows of 640 pels each) and gives more precise or sharper images, it is limited to displaying two colors at a time. Medium resolution graphics mode has less precision but has more color versatility, because it allows use of four colors at a time.

Color choices

In medium resolution graphics mode, the four colors available at a time are from two sources:

- a background color
- a 3-color palette

The background color can be one of 16 choices, such as black, green, red, blue, white, and so forth.

Two color palettes are available. One offers green, red and yellow, while the other offers cyan, magenta and white. Each palette can also be shown in either of two intensities, which are a "light" or "intensified" mode and a "non-intensified" mode. Therefore each picture you create with *Picture Maker* must be in:

1. Medium resolution graphics mode
2. Either: Green/Red/Yellow palette and a background
Or: Cyan/Magenta/White palette and a background
3. Either in intensified or non-intensified display mode.

More color variation

Patterns of colors offer additional color variation. In addition to the four basic colors just discussed, patterns having combinations of the basic colors, for example alternating pels of cyan and magenta, are provided by *Picture Maker*. These patterns provide a visual half-tone effect making areas appear as additional colors, such as pink or purple.



PC Storyboard pictures can be displayed on an RGB monitor and on a composite video monitor, each with different apparent results. The RGB monitor, such as the IBM 5153 Color Display, displays the basic colors and patterns as explained above. However a composite video monitor, using certain color patterns also provided by *Picture Maker*, can display up to 16 colors at the same time. Composite video is discussed in more detail later in this book.

Other display modes

Although *Picture Maker* only prepares pictures in medium resolution graphics mode, pictures that are in other modes can be included in your story. The other picture modes are:

- High resolution graphics
- Medium resolution text mode (80-column text)
- Low resolution text mode (40-column text)

These pictures can come from other application programs running under DOS. While running these programs, the pictures you select can be captured by *Picture Taker*. Later they can be displayed by both *Story Editor* and *Story Teller*.

The IBM Color/Graphics Monitor Adapter allows only one picture mode to operate at any instant. Therefore you cannot simultaneously mix display modes. For example, you **cannot** display text and graphic images at the same instant with *Story Editor* or *Story Teller*, but you can change



display modes between two successive screen displays. Also note that you can only use *Picture Maker* to edit **medium resolution graphics** screens, and therefore **cannot** use it to edit captured text mode or captured high-resolution mode screens.

For a technical description of the operation of this adapter, refer to the IBM Color/Graphics Monitor Adapter section of the *Technical Reference* in the IBM Personal Computer Hardware Reference Library.

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How Picture Maker Works

What Picture Maker does

Picture Maker is the program you use to create the pictures in your story. You can begin with either a blank screen, or with any picture created in medium resolution graphics mode and previously stored in a picture file. You then use *Picture Maker* commands to build your new picture, or edit an existing picture. When done, you store your picture in either a new picture file or use it to update an existing picture file. Later using *Story Editor*, you will assemble these pictures into your story.

How to start

Unless you specify otherwise or are running from a diskette, the program to install *PC Storyboard* will put the programs in a DOS subdirectory called PCSCMD. If your *Picture Maker* program is in a DOS subdirectory, change to that subdirectory using the Change Directory command. For example:

```
C>cd \pcscmd
```

Enter **pm** to start *Picture Maker*, and press any key to advance past the copyright screen. For example:

```
C>pm
```

If you want to set the path for reading and writing pictures, using the In and Out commands, type the path information after **pm**. For example if *Picture Maker* is in the subdirectory PCSCMD of drive C and you want to read and write pictures that are in a different subdirectory (mypics) branching off the root directory on drive C, you would enter:

```
C>pm c:\mypics\ or c>pm \mypics
```



If the pictures were in a subdirectory branching off the PCSCMD subdirectory, you would enter:

```
C>pm c:mypics\ or C>pm \mypics
```

In the above examples, the entry on the right shows the most abbreviated form while the one on the left shows the complete form.

This path information does the same function as *Picture Maker's* CD (Change Directory) command described later.

How to end

To end *Picture Maker*, press Alt Q. See the Quit command.

If you have two displays

If you have both a monochrome and an RGB (color/graphics) monitor attached to your IBM Personal Computer, start *Picture Maker* by entering the command on the monochrome display. This will cause messages, such as Help and directory displays, to go to the monochrome display and pictures to go to the RGB display. If *Picture Maker* is started from the RGB monitor, *Picture Maker* will use only the RGB display. For more information about control of output, see the DOS MODE Command.

Using the cursor

The cursor shows your work location on the screen. It can be displayed in four ways: a dot, a small crosshair, a large crosshair, and invisible or non-displayed. Use the Set Cursor Type (+) command to change the cursor from one type to another.

Using the numbered keypad on the right side of the keyboard, the cursor is moved sideways (the X axis) with the cursor left and cursor right keys and vertically (the Y axis) with the cursor up and cursor down keys. Diagonal movement is controlled with the Home, PgUp, PgDn, and End keys. The amount of movement with each keystroke is controlled by the



Cursor Step (K) command. Also, regardless of the cursor increment setting, you can move the cursor one pel (dot on screen) in any of the 8 directions by using the \uparrow key with the cursor movement keys. Pressing the Num Lock key changes the cursor movement from the size set by the K command to continuous single pel movement, or back again.

To immediately move the cursor to any of the four corners of the screen, press Ctrl with the Home, PgUp, PgDn, or End keys.

If you attempt to move the cursor off the edge of the screen, a beep will sound to indicate the cursor cannot be advanced any further in that direction.

The $\leftarrow \rightarrow$ key alternates the cursor between two opposite corners of an elastic box (explained below), allowing you to alternately change the size or location of the elastic box. When an elastic box is not involved, the $\leftarrow \rightarrow$ key alternates the cursor between the current position and last recorded position.

When the color table (explained below) is displayed for either text or draw colors and patterns, the cursor movement keys can be used to move the white pattern box, which serves as the pattern cursor, directly to the desired choice rather than using function keys F5 through F10 to rotate the selection.

Using the elastic box

The elastic box is one of the most important features of *Picture Maker*, because for many commands it defines the area within which a command will be performed. For example to draw a line from one point to another, the ends of the line are defined by the corners of the elastic box. An elastic box is a variable sized area whose edges are designated by dashed lines.





An elastic box is expanded by positioning the cursor at one corner of the area in which the command will be used, pressing the key for the command, and then using the cursor movement keys to expand the elastic box in any direction on the screen from the starting point until the desired area has been enclosed.

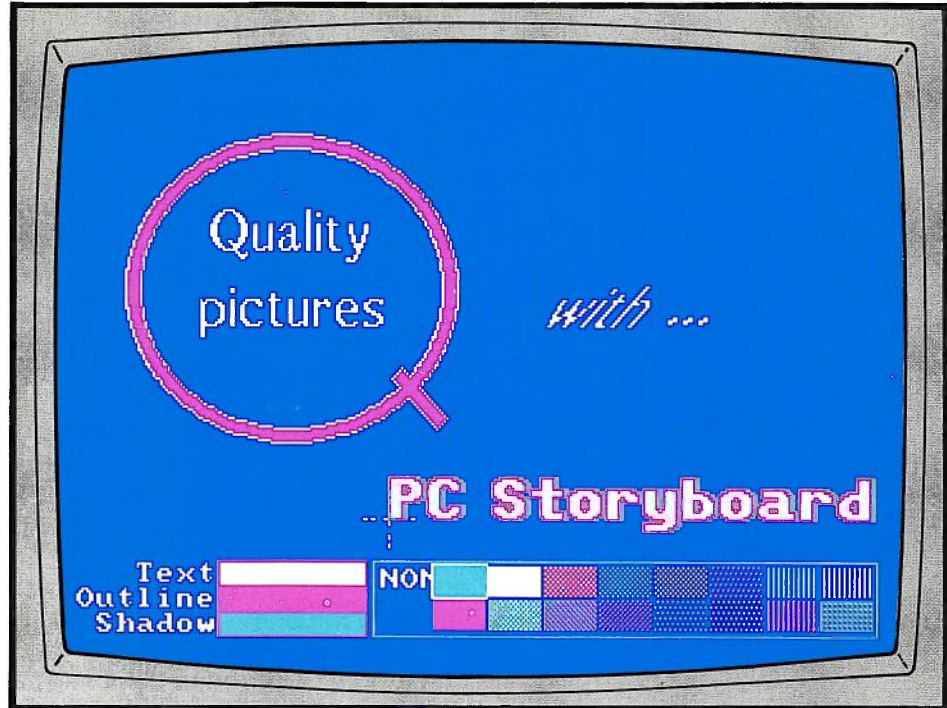
To move the location of the box, press the $\leftarrow \rightarrow$ key to move the cursor to the opposite corner of the box. Next use the cursor movement keys to relocate the box without changing its size. You can return to changing the size of the elastic box by again pressing the $\leftarrow \rightarrow$ key, which returns the cursor to the opposite corner of the box.

When a command using the elastic box is ended normally by pressing the Enter key, the elastic box will be removed. If you wish to preserve the elastic box for repetitive use, end the command by pressing the key you used when starting the command. This ends the current command, but preserves the elastic box, and starts a new command. Alternatively, you can use the Multiple (M) command to preserve the elastic box.

The elastic text box

Picture Maker has a special box used with text. This elastic text box is formed and expanded automatically as text is entered using the Text (T) command. The size of this box will also change as the text size and shadow are changed. The location of this box will change when the cursor is moved and when the write mode is changed with the Alt W command.

Using the color table




The color table is shown at the bottom of the screen when function keys F5 through F10 are used. This text color table shows the settings for the words PC Storyboard, which are text in white, outline in magenta, and shadow in cyan. The white pattern box is around cyan in the table on the right side.



Colors and patterns can be selected from the color table at any time. Press any function key F5 through F10 to display the table at the bottom of the screen. The colors on the left side of the table show the current color settings, while those on the right show the other colors and patterns you can select. A white pattern box, or pattern cursor, is shown around one of the colors or patterns on the right side of the color table. This box can be moved among the various selections in the color table either by using the cursor movement keys to move it directly to the desired choice, or by using function keys F5 through F10 to rotate the pattern cursor through the color table selections. As the pattern cursor moves, the color or pattern inside the white box is also shown as one of the three current color settings on the left side of the color table.

When using the text commands, the color table will show colors for the face of the text, the outline of the text, and the shadow behind the text. Otherwise the color table will show the color to be used to draw a geometric shape, the fill color, and the shadow behind the shape.

When either the text or draw color table is displayed, you can switch the display to the other one by pressing the  key.

The F5 and F6 keys will rotate color selections forward and back for the draw or text color. The F7 and F8 keys will rotate colors for the fill or outline color. The F9 and F10 keys will rotate colors for the shadow color.

You can also move the white pattern box directly to your desired choice by using the cursor movement keys on the right side of the keyboard. Complete your selections by pressing Enter.

With the text commands, any color or pattern can be used for text, outline or shadow. But with other commands, the draw and shadow selections are limited to solid colors when using an RGB color monitor, and to the first four colors when using video (composite) display.

You can add your own patterns to the color table using the Color Table Pattern (Alt C) command, and remove them with the Del key. These changes can be made permanent by using the Save Color Table (Alt Y) command.

Changing the color palette

The Color/Graphics Monitor Adapter on the IBM Personal Computer has two color palettes. These are the cyan/magenta/white palette and the green/red/yellow palette. Each palette can be displayed in either high or low intensity.



The palette is controlled by function keys F3 and F4. You can use these keys at almost any time to rotate forward or backward through the two intensities of the two palettes while displaying your picture.

Picture Maker does not make the palette an attribute of your picture. Rather, it is a condition that is set by *Story Editor*. Therefore you can create a picture with one palette and show it in *Story Editor* or *Story Teller* in another, as explained in the *Story Editor* chapter of this book.

Changing the background color

At almost any time, you can rotate forward and backward through the sixteen background colors by pressing the \uparrow key and either the F3 or F4 key. Further information about colors can be found in the *IBM Personal Computer BASIC* book, under the COLOR Statement for text and graphics.


Color can be fine tuned in several ways. You should consider adjusting the color palette, the background color, and the color settings on your monitor for optimum effectiveness of your pictures. For example, the G/R/Y palette used with the dark blue background and the display contrast knob turned down to nearly black can give sharp, effective picture contrasts.


Changing all colors

At times you may want to change all the colors on the screen. For example, you may want to change the colors on a picture from which you will cut an area so that the cut area matches the colors of the picture to which you will paste the area.

Use Alt with function keys F3 and F4 to rotate the colors displayed on the entire screen forward and backward through the available foreground and background colors for the current display palette. You can rotate the displayed picture through 24 possible color combinations.

Answering prompts

With some commands, you will see a prompt at the bottom of the screen. Below the prompt, you will see the last response that was entered. To reuse the entire response, just press Enter. To use part of the response, use the  key or cursor movement keys to move the cursor over each word or part of the response you want to include. If you want to change any or all of the response, retype that information. Use the Ins, Del, and cursor movement keys as necessary. You will notice that the new response information will be of a different color than that which was originally displayed to you. When this occurs, only the new information will be acted upon.

In unusual circumstances, you may not see all of the prompt information, because the line drawn above the prompt message, the prompt message, or the display of the previous response is in the same color as the background color. If this is a problem, correct it by rotating the background color by pressing  with function keys F3 and F4.



If you lose the cursor

On occasion the cursor may disappear from your screen for any of several causes. Because the + key controls the four cursor types, you may have accidentally pressed this key and be using the invisible cursor. Try using the + key to rotate the cursor type. Or while rotating background colors, the cursor may have disappeared because it is the same color as the background. Try using F3 and F4 to rotate the palette, or ⌘ F3 and ⌘ F4 to rotate the background.

Often when the cursor has disappeared you will also hear beeps when you press the cursor movement keys. This is because the cursor is both at the edge of the screen and is not visible or apparent to the user. Try moving the cursor in various directions to get it away from the edge of the screen.

Note that the cursor automatically changes color when being used for different actions. In the C/M/W palette, the cursor is white when moving freely, is cyan while expanding an elastic box, and magenta while moving an elastic box of fixed size. In the G/R/Y palette, the cursor changes from yellow to green to red for these same three actions. These changes can cause the cursor to disappear because it can become the same color as the background. Try rotating the palette and the background color.

When you make a mistake

When you begin the wrong command or do not want to continue using the same command, press the Esc key either once or twice to end the command without changing anything.

If you have completed a command and find that what you have drawn is not what you wanted, use the U command to undo the last change made to the picture.

If the last several commands have not produced what you want, either use the E command to erase the part you don't want, or if you want to start with a cleared screen, use the Alt U command to undo the entire picture.



Common mistakes

Shape or text does not display: Draw or text color is probably the same color as the background. Try new color settings.

Cursor moves only one pel (dot) at a time: Press NumLock key to return to normal cursor increment movement.

Undo (U) does not remove last change to picture: Either function key F1 (Help) or another command operation has ended the opportunity to undo a change. Use other commands to make the change.

/DIR command does not list pictures in subdirectory: Put the \ after the directory name. For example: `dir c:\mydir\`

Saved picture not in subdirectory: If the path was incorrectly specified when starting Picture Maker or when using the Out (O) command, the picture may have been saved in the root directory or in *Picture Maker's* subdirectory. Or through a typing error it may be stored under a wrong name. Or you may have incorrectly attempted to use more than 8 characters for the file name. Or it may be stored under the name of a previously accessed picture. When you store a picture using the Out (O) command, be sure to read the confirming message noting where it was stored.

Paste command starts with some colors missing: Paste color settings were left this way by a prior Paste (P) command. Rotate through other paste color settings.

A paste area moves with the cursor: The prior Paste command has not been ended using the Enter key.



Shadowing does not shadow: Check the color table to see that a shadowing color different from the background has been selected.

Using Help screens

Help screens give you a convenient instant summary of commands and other product functions.

At any time, press F1 to display the Help menu.

You can locate the Help page containing the product summary information you need by either of two ways. Either you can use a number key 1 to 9 on the top row of the keyboard or an alphabetic key on the keyboard to go directly to the Help screen you need and to go directly from one Help screen to another. Or you can use function keys F9 and F10 to rotate through the Help pages.

Press Enter or Esc to return to your picture.

WARNING: When Help is called with function key F1, you no longer have the opportunity to use the Undo (U) command to remove the last change to the current picture.

Using the Picture Library

You may want to quickly add graphic designs to your picture without taking the time to draw your own. *Picture Maker* provides a library of screens containing graphic designs that can help you do this.

To use this library, press F2. Press F2 again to rotate through the various screens in the Picture Library.





Changing the Picture Library

You will see screens containing various graphic designs or parts of designs. All of the *Picture Maker* commands and function keys can be used on these screens to alter them as you may need. You might want to use permanent Zoom (Alt Z) to alter the size of some of these graphics before moving them to your picture.

When you have an image you would like to move to a picture in the story you are developing, use the Cut (C) command. Use the Undo (U) command to return to your picture. Then use Paste (P) to put the graphic design into your picture.

The screens stored in the Picture Library are not changed by *Picture Maker* commands. They will be in their original form the next time you display them with F2.

Two Picture Libraries are supplied with *Picture Maker*. The main one is called PM.LIB and the other is PMALT.LIB. These files are captured files in the same form as if they had been created by Picture Taker. They are a series of several picture images in the same file. Multiple images in one file is the feature that allows you to rotate through several screens using the F2 key.

To change the name of the file called by function key F2, press the Alt key and F2. Then type a new file name and press Enter.

If the new file is a .PIC file, F2 will not rotate a series of screens. If the new file is a .CAP file with more than one picture image in it, F2 will cause rotation through the picture images.

If you have either a .PIC or .CAP picture that you would like to add to a Picture Library such as PM.LIB, use the In (I) command to display the picture and then the Out (O) command designating the file PM.LIB. Use a path to the subdirectory that has the *PC Storyboard* programs.

Using composite video

PC Storyboard produces pictures that can be displayed in two ways. Normally pictures are displayed on an RGB color display monitor. However pictures can also be displayed in composite video mode for display on a video monitor, video projector, or television screen. The composite mode provides up to 16 simultaneous colors. Although it actually has less image resolution, appropriate use of color can give the impression of greater resolution than on an RGB monitor. Also if you intend to record your stories on a video cassette recorder (VCR), you should use composite video mode.

Further information about the attachment of composite video and RGB monitors to the Color/Graphics Monitor Adapter board in the IBM Personal Computer can be found in the *Guide to Operations* book.

To prepare pictures for correct display in composite video, you **must** first use the Composite Video (Alt V) command. This command will assure that images are aligned on even pel boundaries, as required for composite video display technology.

WARNING: Pictures that are prepared or edited for composite video display without the composite video mode ON may not produce acceptable results. Pictures prepared with composite video mode ON usually give very acceptable results when displayed on an RGB monitor, but they have less color variation.



ALTER COLOR

A, Alt A

The A command changes every pel of a specified color to another specified color within the elastic box area. The Alt A command changes every pel of a specified color to another specified color on the entire screen.

In either the green/red/yellow or cyan/magenta/white palettes (refer to function keys F3 and F4), colors can be altered to and from the following:

C/M/W:	Cyan (c)	Magenta (m)	White (w)	Background (b)
G/R/Y:	Green (g)	Red (r)	Yellow (y)	Background (b)

Using A and Alt A commands:

1. Press A or Alt A.
2. For the A command, extend and/or move the elastic box.
3. For the A command, either press Enter to display From/To color change prompt, or press A again to display From/To color change prompt and also maintain the elastic box.
4. Type your color change selections, and press Enter.

Notes:

- Normal rules apply for the Esc key, the U command, and moving the elastic box.
- More than one color change can be entered with the same command. For example in C/M/W palette, a single color change from magenta to cyan would be 'mc', whereas simultaneous change of magenta to cyan and cyan to magenta would be 'mc,cm'.



BOX DRAW**B, Alt B**

This command draws a rectangular shape in the current color and shadow setting.

For the B command, the elastic box defines the corners of the box you draw. For the Alt B command, the elastic box defines the distance from the center of the box to the corner of the box you draw.

Using B and Alt-B commands:

1. Press B or Alt B.
2. Extend and/or move the elastic box.
3. To check or change colors, use function keys F5 through F10. To check or change shadowing, use the S command.
4. Press Enter to draw the box and end the command, or press B or Alt B to draw a box and maintain the elastic box.

Notes:

- Normal rules apply for the Esc key, the U command, and moving the elastic box.
- To draw a square box on the IBM 5153 Color/Graphics Monitor with the diagonal cursor movement keys, the ratio of cursor movement in the X and Y axes should be 6X to 5Y. The standard setting for the Cursor Steps (K) command is 12,10,2, which will provide this ratio.



COLOR TABLE PATTERN (Add and Delete) Alt C, Del

This command adds a new pattern to your color table. (Refer to “Using the color table” in this section.)

The pattern added is the contents of the 4 pel by 4 pel area to the right and below the cursor when Alt C is keyed. Two picture files containing additional patterns are provided with *PC Storyboard*. You may want to select patterns from them to add to your color table. RGBPATS.PIC contains patterns for RGB monitor mode, while COMPATS.PIC contains patterns for composite video mode.

A pattern is removed from the table by displaying the color table, moving the white pattern box in the color table to the pattern to be deleted, and pressing the Del key. Deleted patterns cannot be restored with the Undo (U) command. If deleted patterns are needed, save your picture and restart *Picture Maker*.

Using the Alt C command:

1. Position the cursor.
2. Press Alt C. The pattern is added to your color table.

Notes:

- The color changes made with the Alt C and Del keys are temporary for the current *Picture Maker* session. If you want to make the changes permanent, refer to the Save Color Table (Alt Y) command.
- Separate color tables are maintained for RGB monitor mode and for composite video mode. A change to either color table does not affect the other table.



COMMANDS (Files and Directories)

/

The / command allows you to make inquiries and changes to files and do other DOS directory operations while using *Picture Maker*.

Picture Maker commands are entered as a command name followed by information that is similar to DOS commands. (Refer to the *IBM Personal Computer Disk Operating System* book for further information about tree structured directories and use of system commands.) Most *Picture Maker* commands perform the same functions as standard DOS commands. However, the CD (change directory) command does **not** change the current DOS system directory. The CD command only changes the directory for pictures filed or retrieved with the Out (O) and In (I) commands, for Hardcopy print (H) put into a file, and for the DIR, DEL, and ERASE commands shown below.

Picture Maker commands do not always have the same format or function as DOS commands. The Directory (dir) command by itself will give only the .PIC and .CAP files in the current directory. If you want to see the content of a subdirectory, follow its name with a \ character. Otherwise the Directory command will only show you that a directory of that name is present.

The nine file and directory command names are:

cd	(Change directory)	bsave
del	(Erase a picture)	in
dir	(Directory)	out
erase	(Erase a picture)	
md	(Make a directory)	
rd	(Remove directory)	

The IN, OUT, and BSAVE file commands do the same thing as *Picture Maker*'s I, O, and Alt O commands.



Examples of the entry of commands, assuming your current directory is "mydir" on drive C:

dir a:\

Display the directory of all files in the root directory of drive A diskette.

dir c:\mydir

Display the particular file (mydir) in the root directory. (It would show as a directory.)

dir c:\mydir\
or
dir c:

Display the contents of the directory (mydir), including all files therein.

md c:\mydir\myfile
or
md c:myfile

Make a new subdirectory (myfile) within an existing subdirectory (mydir).

del c:\mydir\myfile\picture8.pic
or
del c:myfile\picture8.pic

Erase a picture file (picture8) from a second-level subdirectory (myfile).

Using the / command:

1. Press /.
2. On the bottom line of the screen, type one of the nine command names, followed by a space. Using the format shown above, type the to or from location for the file or directory.
3. Press Enter.
4. Press any key to clear a displayed message.

CURSOR STEP

K

This command controls the cursor movement in the left-right, up-down, and between text line directions. It has the form:

X axis increment, Y axis increment, space between text lines

The third value takes effect whenever the elastic text box is displayed. This value controls the spacing distance between lines, measured from the lowest character descender on a line to the highest character ascender on the next line.

The standard setting in pels is 12,10,2. This will give round circles and square boxes on an IBM 5153 Color/Graphics Monitor, but diagonal lines drawn in square boxes will have a slightly jagged shape. To make such diagonals truly straight, set the cursor step to 10,10,2. When the cursor steps are displayed, the S key resets the standard values.

Using the K command:

1. After pressing K, type the cursor step values (in pels) , or press S.
2. Press Enter.

Notes:

- When doing repetitive work at standard increments, such as constructing a grid, you may wish to change the K command so that the cursor movement equals the standard increment used in your picture.
- The cursor step values you assign remain in effect until you change them or restart the *Picture Maker* program.



CURSOR TYPE SET

+

This command rotates the cursor display among four types. These are dot (one pel) , small crosshair, large crosshair, and invisible (non-displayed) cursor.

Using the + command:

1. Press the + key (either one) one or more times to select the desired cursor type.

Note:

- Typically, this command is used in the middle of other commands. For example, while drawing a box you can change cursor types as often as needed while using the Box command.



CUT (copy/move/fill)**C**

This command copies any area of a displayed screen image and holds it for later use by other commands. Used with the Paste (P) command, you can “cut and paste” with portions of pictures. This gives you the ability to either duplicate or move any area of a displayed picture to another area on the same or different picture. Used with the Fill (Alt F) command, you can fill an area with the image that was cut out.

Using the C command:

1. Press C.
2. Extend and/or move the elastic box.
3. Press Enter to copy the area inside the elastic box into a specially reserved area for later use with other commands, or press C to cut the area and maintain the elastic box.

Steps to copy an area:


1. Press C.
2. Extend and/or move the elastic box.
3. Press Enter to copy the area inside the elastic box.
4. Move the cursor to the area to receive the copy and press P, one or more times to select the desired Paste mode transparency color. The copied area is displayed.
5. Using cursor movement keys, exactly position the copied area.
6. Press Enter again to paste the copied area.



Steps to move an area:

1. Press C.
2. Extend and/or move the elastic box.
3. Press C again. The area inside the elastic box is copied.
4. Press E one or more times to erase the area inside the elastic box to the desired color.
5. Move the cursor to the area to receive the copy and press P, one or more times to select the desired Paste mode transparency color. The copied area is displayed.
6. Using cursor movement keys, exactly position the copied area.
7. Press Enter again to paste the copied area.

To copy from Picture B to Picture A:

1. Use the O command to save Picture A, as a precautionary step.
2. Use the I command to go from Picture A to Picture B.
3. Use F3 and F4, or  with F3 and F4, or Alt with F3 and F4 to get colors set correctly.
4. Press C.
5. Extend and/or move the elastic box to the area to be transferred to Picture A.
6. Press Enter. The area inside the elastic box is copied.
7. Either use the I command or the U command to return to Picture A. (See note.)



8. On Picture A, move the cursor to the area to receive the copy and press P one or more times to select the desired paste mode transparency color. The copied area is displayed.
9. Using cursor movement keys, exactly position the copied area.
10. Press Enter again to paste the copied area.

To copy from the Picture Library to Picture A:

1. Press F2 one or more times to go to the desired picture in the Picture Library.
2. Use F3 and F4, or \uparrow with F3 and F4, or Alt with F3 and F4 to get colors set correctly.
3. Press C.
4. Extend and/or move the elastic box to the area to be transferred to Picture A.
5. Press Enter. The area inside the elastic box is copied.
6. Use the U command to return to Picture A.
7. On Picture A, move the cursor to the area to receive the copy and press P one or more times to select the desired paste mode transparency color. The copied area is displayed.
8. Using cursor movement keys, exactly position the copied area.
9. Press Enter again to paste the copied area.



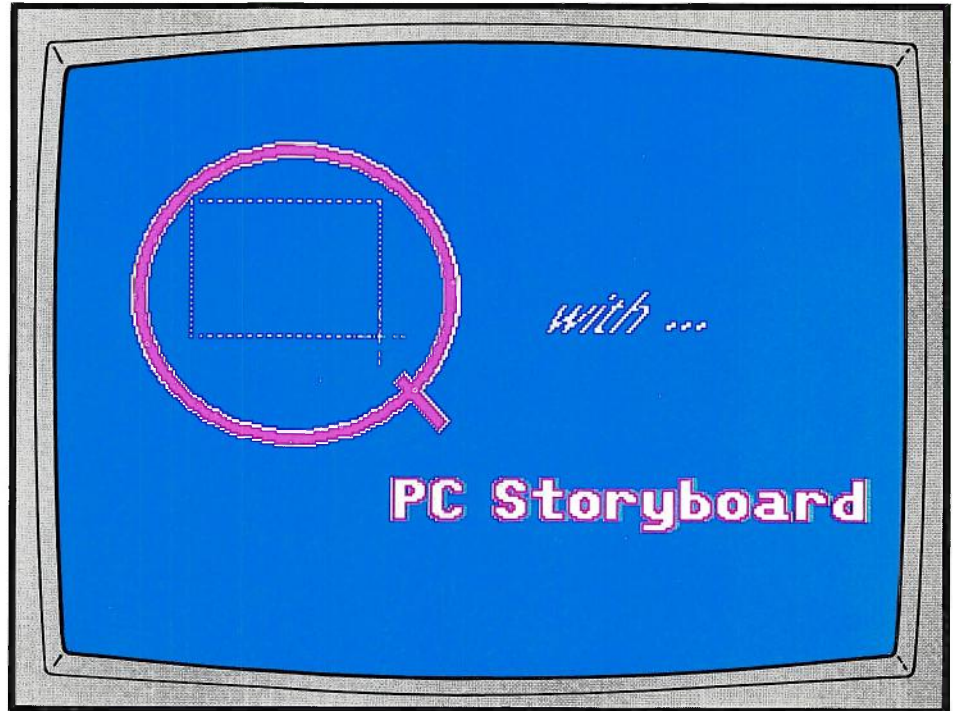
Notes:

- Normal rules apply for the Esc key, the U command, and moving the elastic box.
- A cut area can be pasted with a shadow by using the S command. If you intend to use this feature, be particularly careful where you place the elastic box when cutting an area, because shadowing of the cut area will occur **outside** the edge of the elastic box.
- The cut area can be pasted multiple times. It is retained until another Cut command is used.
- When moving an area from Picture B to Picture A, the I command will reload as Picture A the version you last saved with the O command. However, the U command will return to Picture A as it was when you went to Picture B, assuming you used nothing more than the C command on Picture B. In the latter case, if you use more than the C command on Picture B you may lose part or all of Picture A, because the U command will act to undo the last change on Picture B rather than causing a return to Picture A.





The words "Quality pictures" were not centered within the letter Q. To move them, C was pressed and the elastic box expanded around the words. C was pressed again to copy the area inside the box.



E was pressed to erase the words inside the elastic box.



P was pressed, the elastic box disappeared, and the image to be pasted was shown. The cursor was stepped by single pels to move the image 4 pels right and 4 pels down. Enter was pressed to paste the image so it was better centered.

DRAW (continuous sketching)**D**

This command draws a continuous line by using the cursor control keys.

Using the D command:

1. Press D.
2. Use the cursor movement keys to draw a continuous line in any combination of the 8 directions.
3. To check or change colors at any point on the continuous line, use function keys F5 through F10. To check or change shadowing at any point, use the S command.
4. Press Enter or Esc to end the line.

Notes:

- Normal rules apply for the Esc key and the U command. Because the U command will undo all drawing back to the last time the D command was used, you may want to press the D key intermittently to update the point to which you will undo your drawing.
- You can alter your cursor type (+ key) or change your cursor steps (K command) while using this command.



ERASE**E, Alt E**

These commands erase the area within the elastic box to the color at the cursor position or erase the entire screen to the color at the current cursor location. Repeated use of these commands will rotate the color of the area through all the colors and patterns available in the color table.


Using the E command:

1. Press E.
2. Extend and/or move the elastic box.
3. Press Enter.

**Using the Alt E command:**

1. Press Alt E. The screen is erased.

Notes:

- After pressing either E or Alt E, repeated use of either command will cause rotation through all available colors and patterns with an eventual return to the screen image that existed before the keys were pressed.
- Pressing the  key with E rotates through the colors in a reverse direction.
- Erasure to any selection in the color table can allow you to quickly draw filled boxes.

FILL**F, Alt F**

The F command fills the area around the cursor with a color or pattern. The filled area expands until a color different from the one under the cursor is encountered. Repeated use of this command rotates the fill through all the colors and patterns available in the color table.

The Alt F command fills the area around the cursor with a pattern. The pattern is the size and content taken by the previous Cut command.

**Using the F command:**

1. Press F once to fill an area with a color.
2. Press F one or more times to rotate the fill colors or use \uparrow F to rotate the opposite direction through the color table.

Using the Alt F command:

1. Press Alt F once to fill an area with the pattern last cut with the C command.

Notes:

- Fill color will leak through openings as small as one pel. This can occur with irregular shapes.
- The initial fill color will be the current fill setting in the color table for draw (refer to function key F7-F8).
- In a complex area, the Fill command may reach a maximum fill limit before filling the entire area. You may need to move the cursor and do a second Fill command.
- *Picture Maker* checks an area three pels to the right and three lines below the cursor when evaluating whether it is filling a pattern. Therefore avoid putting the cursor on the bottom or right edge of a pattern when using Fill.

GRAPH DRAW

G

This command draws horizontal and vertical bar charts, pie charts, and continuous line charts with a variety of scales and special features.

The graph is drawn within the boundaries of an elastic box according to the data and the graph specifications entered with the Graph Definition (Alt G) command, which must be used prior to completing the G command.

Once the graph is drawn to your satisfaction, use the Fill (F) command to augment coloring and use the Text (T) command to annotate the chart.

Using the G command:

1. Press G.
2. Extend and/or move the elastic box.
3. To check or change colors, use function keys F5 through F10. To check or change shadowing, use the Shadow (S) command.
4. Press Enter to draw the graph and end the command, or press G to draw the graph and maintain the elastic box.

Notes:

- Normal rules apply for the Esc key, the U command, and moving the elastic box.
- If no graph definition data has been entered, you will be prompted for this data. (See Graph Definition (Alt G) command.)

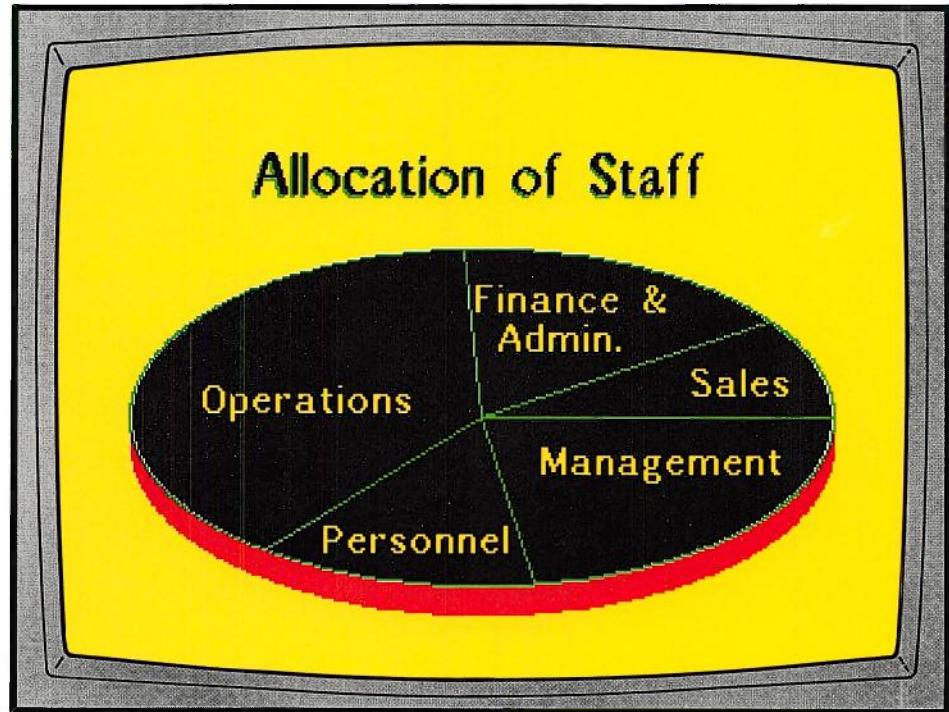




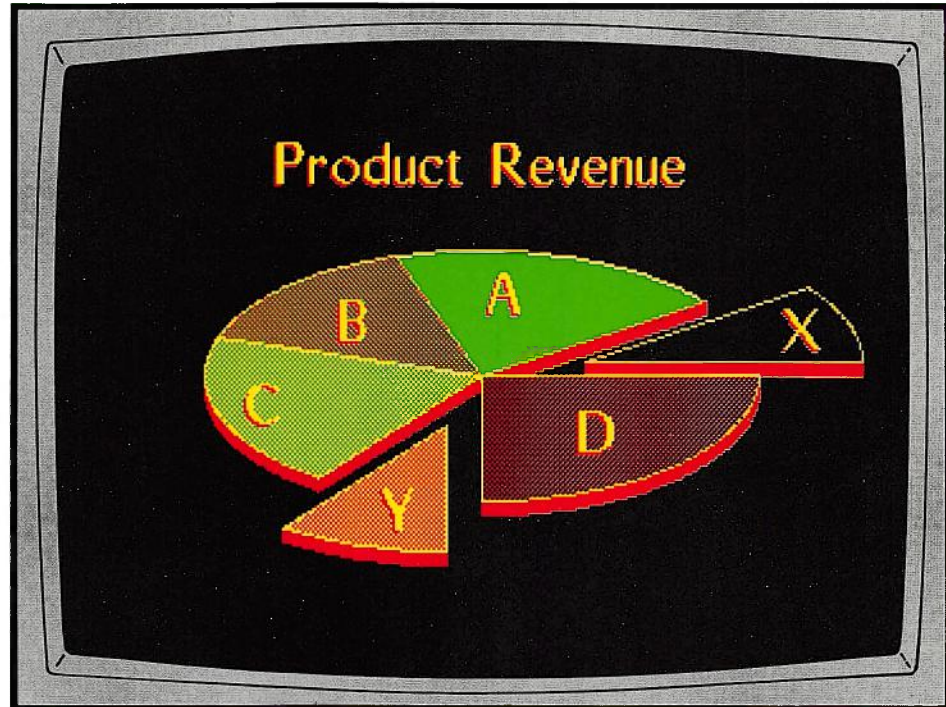
-
- Used with shadowing, colors, and patterns, this command draws a large variety of charts. If you wish to experiment with these variations, press G rather than Enter to draw your graph. This will allow you to retain the elastic box, erase or undo its contents, adjust colors, shadowing, and graph instructions, and redraw the graph in the same size and location. You can even overlay a chart of one color with a chart of another to show components or changes in data.
 - The current draw color (function keys F5-F6) is the color of the bar outline, the pie segment divisions, the line in a line graph, the scale lines, and the grid lines.
 - The current fill color (function keys F7-F8) is the bar and pie chart fill color. For these charts, if the fill color setting is "NONE," the pieces of the pie or the bars on the graph will automatically be colored in separate colors or patterns from the draw color table.
 - The current shadow color (function keys F9-F10) determines the shadow color. When shadowing is used with grid lines, these lines align to the back edge of the shadow.
 - CAUTION: When filling an area to augment the coloring of graphs, you should not end with a fill that uses a pattern containing the same color as the one which outlines the bar, pie, line, or grid. When fills do contain all or part of the same color as in the outline, subsequent color changes with the Fill command may not distinguish between the fill area and its outline, resulting in unsatisfactory color changes.



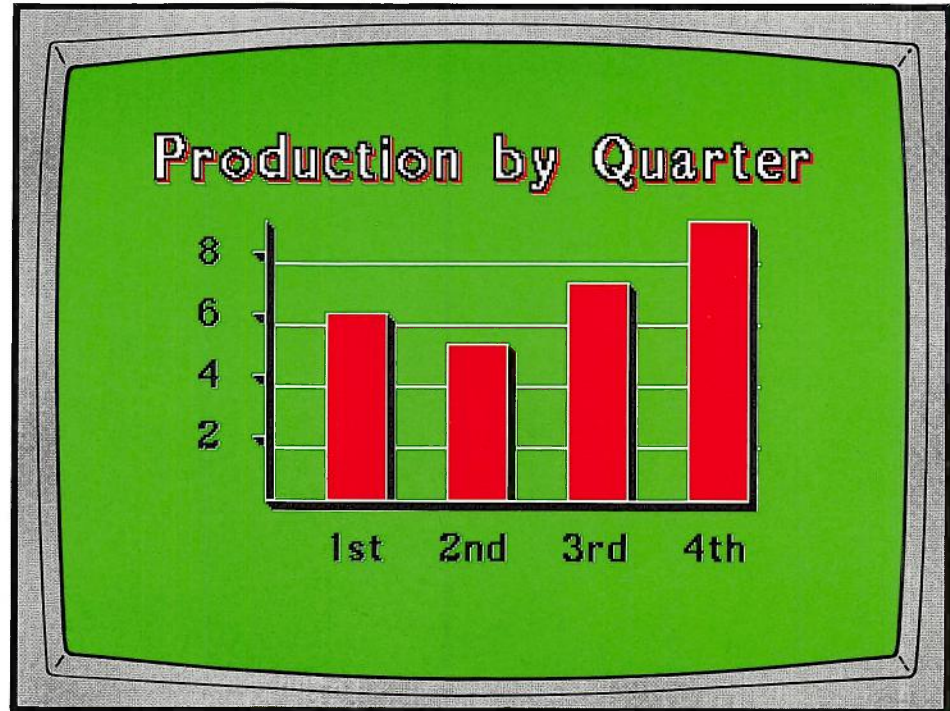
This HBAR chart graphs five data values between 75 and 120. The HBAR value was 50. The scale of 100 gave the tic for 100%. The letters and numbers were added to the chart using the Text and the Size, Shadow, Slant commands.



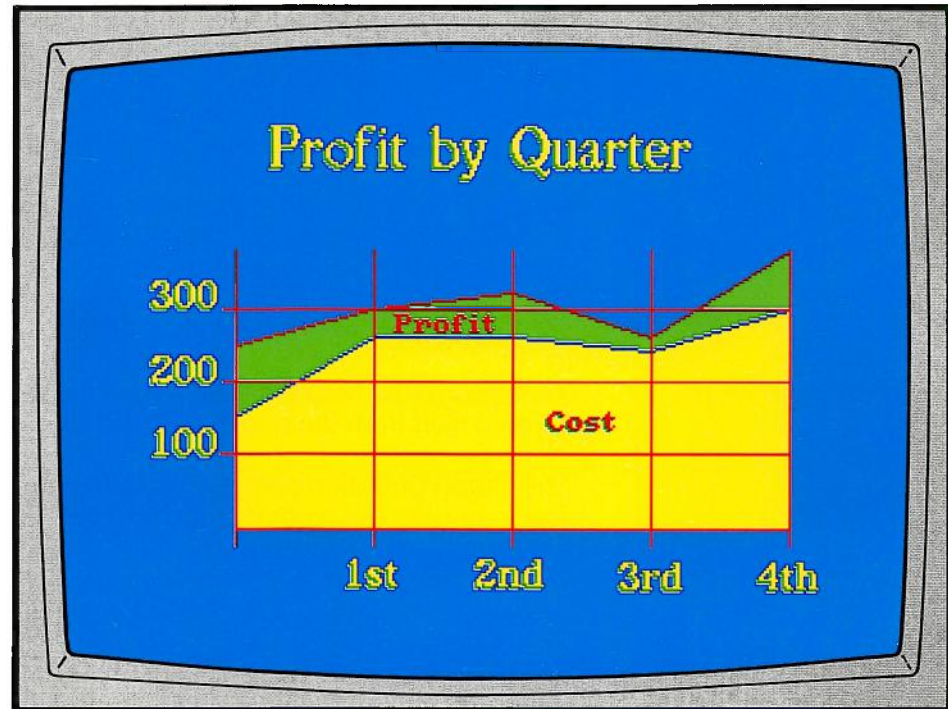
This PIE chart has five values, all entered as positive values. Shadowing was used to give the chart a cylindrical or coin-shaped appearance.



This PIE chart has six values, two of which were entered as negative values, causing these pieces to be removed from the center. The PIE value was 40, moving the pieces with negative values out 40% of the length of the radius. The Fill color in the draw color table was set to NONE, causing *Picture Maker* to automatically select a different fill pattern or color for each segment of the pie.



This VBAR chart graphs four data values between 5 and 9. The VBAR value was 50. The scale was -2, which gave grid lines across the chart at an interval of 2. Numbers and letters were added with the Text command. Shadowing of text was set differently from shadowing of the chart.



This LINE chart was developed as three overlaid charts, while varying the Graph Definition (Alt G) command and draw colors. The five profit values were entered first and the area below filled with green. The draw color was changed, the high mark value was set to the maximum profit value, and the cost values were entered creating a new line on the chart. The area below was filled with yellow. Again with the same high mark value, the draw color was changed, the five data values were set to zero, and the scale value was set to -100. This created the overlay grid and tics.

GRAPH DEFINITION

Alt G

This command is used for the entry of graph data and the entry of graphing instructions. These two pieces of information are used by the Graph Draw (G) command to draw graphs. The last set of graph data and graphing instructions you have entered will remain the current data and instructions for all graphs until you change them.

Graph data can be either positive or negative values expressed as either whole or decimal numbers. The graph data values are separated by commas or blank spaces. For example:

12.5, 7, 3.25, -5.95, -3, 5.1

With pie charts, negative data values cause those segments of the pie to be exploded from the center.

The Graph Definition command has four graph instructions. These allow you to specify the type of graph or chart, the scale interval on your graph, and the low and high marks on your graph scale. For example to make a vertical bar chart with 50% of the column filled by the bar, and a scale extending from the lowest data value (or zero if the lowest value is positive) to the highest data value with tics (scale marks) every unit, you would enter:

vbar 50, scale 1, low, high

The four instructions can be entered in any order, and from one to four instructions can be entered at one time. The previously entered value of an instruction, or its standard value, will remain in effect until changed.

Each of the four graph instructions can be followed by a numeric value. *Picture Maker* will assume standard instruction values or the instruction value you last entered, if you do not enter new values. Positive and negative instruction values can create different types of graphs, as shown in the following tables:



HBAR and VBAR Graphs:

	+	Standard	-
HBAR or VBAR value	Percent of column filled by bar. Bars overlap if >100.	100 = 100%	Graph does not touch axis. Bars overlap if <-100.
Scale interval value	Enter any value. Tics on axis only.	Blank = no scale. (0 = scales without tics.)	Enter any value. Grid lines extend across graph.
Low mark value	Enter any value (*).	Blank = minimum data value or zero, whichever is less.	Enter any value (*).
High mark value	Enter any value (*).	Blank = maximum data value or zero, whichever is greater.	Enter any value (*).

(*) If low and high values are set inside the maximum and minimum data values, graphs will not show values extending beyond these limits.



PIE Charts:

	+	Standard	-
Pie value	Distance that exploded pieces are removed from center of pie. Distance is a % of radius length.	20 = 20%	Any negative value causes exploded pieces to not be shown.
Scale interval value	N/A	N/A	N/A
Low mark value	N/A	N/A	N/A
High mark value	N/A	N/A	N/A

LINE Graphs:

	+	Standard	-
Line value	Enter any value for line width in pels.	1 = graph line is 1 pel wide. (0 = no line.)	Enter any value for line width in pels.
Scale interval value	Enter any value. Tics on both axes.	Blank = no scale. (0 = scales without tics.)	Enter any value. Tics extend from both axes to form grid.
Low mark value	Enter any value (*).	Blank = minimum data value or zero, whichever is lower.	Enter any value (*).
High mark value	Enter any value (*).	Blank = maximum data value or zero, whichever is higher.	Enter any value (*).

(*) If low and high values are set inside the maximum and minimum data values, graphs will not show values extending beyond these limits.



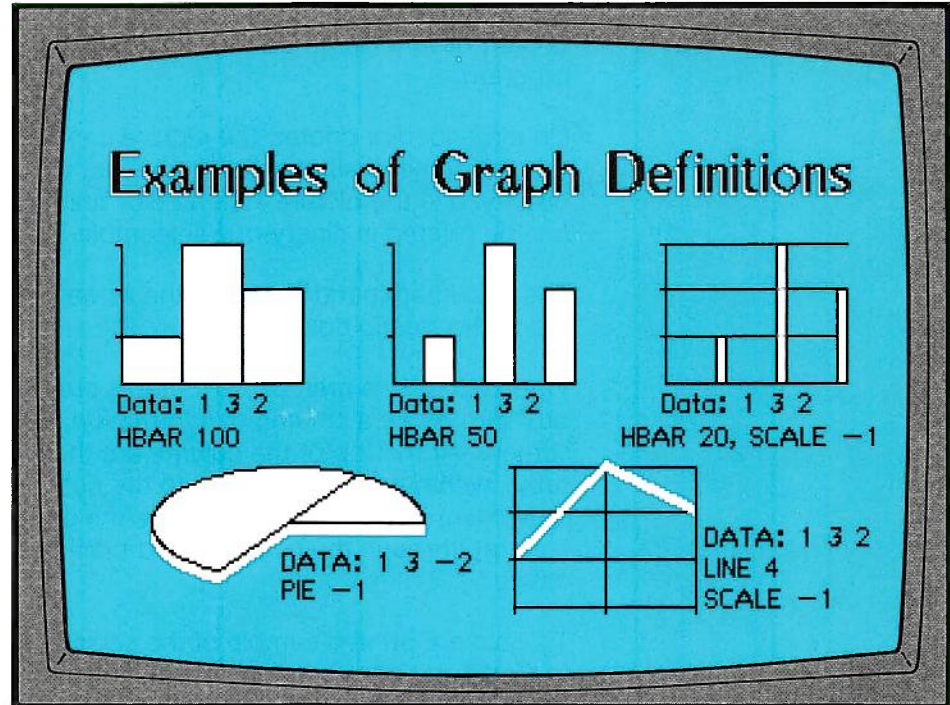
Using the Alt G command:

1. Press Alt G.
2. Enter or change the graph data values, if necessary.
3. Press Enter.
4. Enter or change the graphing instructions, if necessary.
5. Press Enter. The new values are set for the next use of the Graph (G) command.

Note:

- Because of the variations in the way graphs can be created, you may wish to draw a graph by pressing G rather than Enter. This will keep the elastic box, allow you to erase or undo its contents, adjust colors and shadowing, reenter graph instructions, and then redraw the graph in the same size and location.





This screen shows the effect of various changes in graph definitions.

HARDCOPY PRINT

H, Alt H

The H command prints picture images on a graphics printer, a color printer, or to a file on disk for later copying to a printer or another program.

On a monochrome printer, the picture can be printed in seven selectable print patterns (halftones) to represent the various colors and patterns displayed in the picture. On a color printer with 4-color ribbon, the picture can be printed in ninety-one selectable colors and halftone shades.

The Alt H command performs the same functions but only for the area inside the elastic box.

When either H is pressed, or Enter is pressed after expanding the elastic box with Alt H, a column of information is shown on the left side of the screen. At the top of the column are the colors and patterns in your color table, with numbers or blanks to the right. The up and down cursor movement keys allow you to cycle the print pattern cursor (a colored square) through the numbers and blanks, including the position shown as "skip:"

To obtain a printed sample of the selectable print patterns, press P while the left hand column of information is displayed. The numbers printed below the printed patterns correspond to the numbers you can place next to the colors and patterns in the left-hand column of information, thereby assigning a print pattern to one or more display colors and/or patterns. The printed sample for the color printer is a 7x13 array of color shades. These are assigned with a 2-character designation, such as C4.

"Skip:" sets the number of lines to skip between printed pictures. A blank indicates a skip to the next page. A skip value of zero (0) causes no space to be skipped between printed pictures. This is helpful when you wish to print several graphics images on one page.



If you do not specify an output device for printing your picture, your picture will print on the currently active printer, identified as PRN in DOS.

If you wish to delay the printing of one or more pictures until a later time, you can 'print' the graphic image of your picture (s) to disk, and print them later using the DOS COPY command with output to PRN, LPT1, LPT2, etc. Do this by pressing O for the file option and entering the path and name of the file in which you will store one or more picture images. Use any filename extension, or *Picture Maker* will append a .PRT extension. Repeated requests to print hardcopy will add more images to this file. Note however that each picture stored in your disk print file takes approximately 50,000 bytes of storage and will take a minute or two to copy. If you want to return to directing printing to the printer and no longer "print" to disk, enter PRINTER.

The Rotate option is for large color tables. If you have more color patterns in your color table than can be displayed at one time, press R to rotate through all the color table choices.

To return the color and pattern assignments to their standard settings, press S.



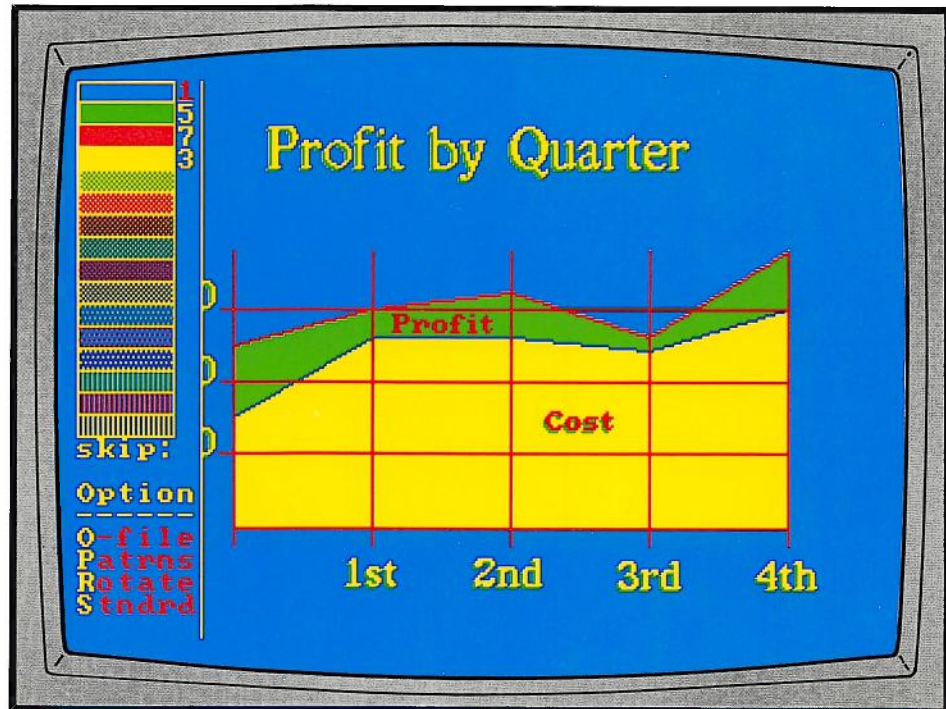
Using H and Alt H commands:

1. Press H or Alt H.
2. If Alt H was pressed, expand the elastic box to the area to be printed. Press Enter or Alt H again.
3. If this is the first picture printed, answer the color printer question with a Y or N and press Enter.
4. Change any values or take any options shown in the left-hand column of information.
5. Press Enter.

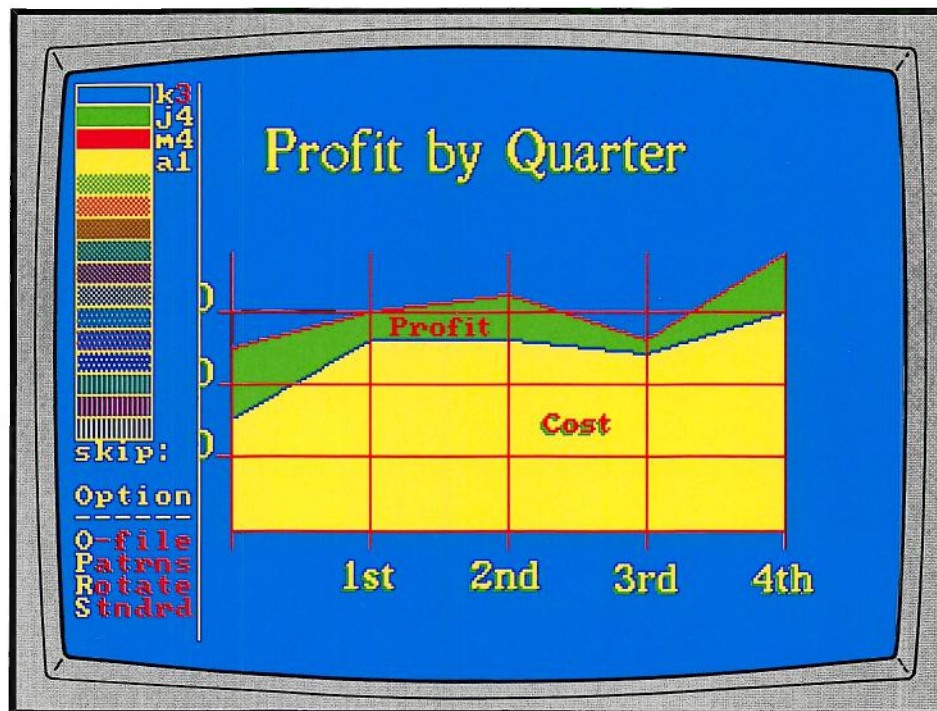
Note:

- Esc key can be used to stop printing.





The monicolor (graphics) printer selections for the Hardcopy Print command are shown in the column on the left side of the screen. The colors and patterns in the color table are shown at the top of the column. The numbers for the first four colors have been changed from the standard 7, 5, 3, 1, to 1, 5, 7, 3, to alter the patterns printed for each color displayed.



The column on the left side of the screen shows color printer selections for the Hardcopy Print command. The letter and number following the color indicates the color to be selected for printing from the 7x13 array of available color shades.

IN (from a picture file)**I**

This command retrieves and displays a copy of any medium resolution graphics picture stored in a disk or diskette file.

Using the I command:

1. Press I.
2. Using standard DOS format, type the drive ID, the path, and the name of the file containing the picture.
Examples: A:mypic05 C:\picdir\mypic06
3. Press Enter.

**Notes:**

- You do not need to type the .PIC file extension on your filename. The .PIC extension was added by the Out (O) command in *Picture Maker*, if you did not enter a file extension.
- If you do not specify a path and none was specified with *Picture Maker* commands, the current directory is used. If you do not specify a path, but a path was entered either with *Picture Maker* commands or when *Picture Maker* was started, that path will be used.
- To get a picture saved by *Picture Taker*, enter the path, filename, and file extension followed by a number representing the sequence number of the picture in the file. In the chapter about *Picture Taker*, we recommended that the file of pictures created by *Picture Taker* have the .CAP file extension used with the file name.
- Normal rules apply for the Esc key and the U command.
- Refer to the Commands (/) command for information about finding picture files in your system.

LINE DRAW

L, Alt L

This command draws a line with any slope in the current color and shadow setting.

For the L command, the elastic box defines the ends of the line you draw. For the Alt L command, the elastic box defines the middle and one end of the line you draw.



Using L and Alt-L commands:

1. Press L or Alt L.
2. Extend and/or move the elastic box.
3. To check or change colors, use function keys F5 through F10. To check or change shadowing, use the S command.
4. Press Enter to draw the line and end the command, or press L or Alt L to draw a line and maintain the elastic box.

Notes:

- Normal rules apply for the Esc key, the U command, and moving the elastic box.
- If you are using an IBM 5153 Color/Graphics Monitor and want to draw straight diagonal lines, you may want to use the Cursor Step (K) command to set the cursor increment to 10,10,2.

MULTIPLE COMMANDS

M

This command allows you to use the Enter key to repeatedly perform any command that uses an elastic box without needing to recall the command or to reexpand the elastic box. The command also allows you to quickly enter text on successive lines (power typing) and to draw multiple points by simply moving the cursor.

Using the M command:

1. Press M to alternate between Multiple Mode On and Multiple Mode Off.
2. With Multiple Mode On, you can select any command that uses an elastic box and repeat the command by just pressing Enter. You can also use the Text command to enter successive lines of text.
3. To turn Multiple Mode Off while using the Text (T) command, stop the text entry cycle when the elastic text box is shown without the input text being displayed at the bottom of the screen.

Press Esc. The elastic text box disappears.

For other commands, turn Multiple Mode Off by pressing either M or Esc.

Notes:

- After pressing the period key (.) with Multiple Mode On, points are repeatedly drawn directly by using the cursor movement keys. You may wish to use the invisible type of cursor at this time.
- Normal rules for expanding and moving the elastic box apply. By moving a fixed-size elastic box, geometric shapes, color changes, and zoomed areas can be quickly repeated.
- If needed, you can move and/or reshape the elastic box between each Enter.



NOISE

N

When on, this command causes your computer to beep when the color under the cursor changes.

Using the N command:

1. Press N to alternatively turn the beep on and off.

Notes:

- This command helps you precisely locate the cursor on an edge or line.
- When you are using the Draw command to draw a line over other colors, no beep occurs because the color under the cursor is not changing.



OUT (to a picture file)**O, Alt O**

The O command stores a copy of your current picture in a disk or diskette file in the *Picture Maker* file format.

The Alt O command also saves the current picture, but in BSAVE format (so that the BASIC language can read the picture file).

Using O or Alt O commands:

1. Press O or Alt O.
2. Using standard DOS format, type the drive ID, the path, and the name of the file that will contain the picture.

Examples: A:mypic07 C:\picdir\mypic08

3. Press Enter to save your picture.
4. Press any key to clear the confirming message.

Notes:

- You do not need to type the .PIC file extension on your file name. Unless you add a different extension, the .PIC file extension is automatically added by the Out (O) command in *Picture Maker*, and is used by *Picture Maker* to distinguish picture files from other types of files. Do not, for example, use *picname.1* as a name.
- If you do not specify a path and none was specified with *Picture Maker* commands or when *Picture Maker* was started, the current directory is used. If you do not specify a path, but a path was entered either with *Picture Maker* commands or when *Picture Maker* was started, that path will be used.
- You can either put your picture in a new file or update an existing file.



-
- If you want to put your picture in a .CAP file (made by Picture Taker) or in PM.LIB (the Picture Library), add .CAP to your picture name, or put the picture out to PM.LIB. This will append the Out picture to the existing pictures in the .CAP or .LIB files. You can also build new .CAP and .LIB files with this technique.
 - Normal rules apply for the Esc key.
 - The U command does NOT apply to this command.
 - Refer to the / command for information about finding and deleting picture files in your system.



PASTE

P

This command writes (pastes) the area previously defined by the Cut (C) command, allowing you to repeat an image at one or more locations on your picture.

This command has a special feature allowing you to rotate the transparent color in the pasted area. Depending upon the palette you are using, you can do this by repeatedly pressing the P key to rotate the transparency of the green/red/yellow or cyan/magenta/white colors in the pasted area. Such transparency allows colors underneath the pasted area to show through. Any transparency you select stays in effect until you again change it.



Using the P command:

1. After using the C command, press P to display the cut area.
2. Use the cursor movement keys to exactly position the cut area to the area to be pasted.
3. Press P one or more times to rotate color transparency, if desired. Or press \hat{P} to rotate transparencies in the reverse direction.
4. Press Enter to Paste the Cut area.

Notes:

- Refer to the Paste Mode Set (Alt P) command for information about adding additional transparent colors to the Paste command rotate list.
- Refer to the Cut (C) command for more information about cutting an area.
- A cut area can be pasted with a shadow by using the S command. If you intend to use this feature, be particularly careful where you place the elastic box when cutting an area, because shadowing of the cut area will occur **outside** the edge of the elastic box.

PASTE MODES SET

Alt P

This command allows you to specify additional color changes to be displayed when the P key is used repeatedly to rotate through the various transparency colors for the Paste (P) command.

In either the green/red/yellow or cyan/magenta/white palettes, the transparency colors can be altered to and from the following:

C/M/W:	Cyan (c)	Magenta (m)	White (w)	Background (b)
G/R/Y:	Green (g)	Red (r)	Yellow (y)	Background (b)

For example, to change the transparency in the paste area so that the background becomes cyan, magenta becomes transparent, white becomes magenta, and cyan becomes transparent, you would respond to the "Enter any color/transparency changes:" prompt with:

bc,mt,wm,ct

Using the Alt P command:

1. Press Alt P.
2. Type your transparency color selections, and press Enter.

Notes:

- The Alt P command can be used at any time, but is normally used while using the Paste (P) command.
- Refer to the Paste (P) command for more information.



POINT DRAW

This command draws a single point in the current color and shadow setting.

Using the . command:

1. To check or change colors, use function keys F5 through F10. To check or change shadowing, use the S command.
2. Press . (the period key) . The point is drawn.

Notes:


- Normal rules apply for the U command.
- For multiple points, refer to the Draw (D) and Multiple (M) commands.



QUIT**Alt Q**

Use this command to end *Picture Maker*.

If you want to keep your picture for later use, be sure you **save** your picture (use the Out command) **before** using this command.



**Using the Alt Q
command:**

1. Press Alt Q.
2. Enter Y or N in response to the message. (See Note below.)

Note:

- A Y response causes the program to end immediately, and whatever is currently on the screen is not saved. Unless you had previously saved your picture using the Out (O) command, you **cannot** recover the screen image that had been displayed. An N response cancels this command, and you now have the opportunity to continue with the program, such as using the O command to save the current picture displayed on the screen.

ROUND DRAW

R, Alt R

This command draws an elliptical or circular shape in the current color and shadow setting.

For the R command, the elastic box defines the sides of the circular shape you draw. For the Alt R command, the elastic box defines the distance from the middle of the circular shape to its edges. This can be useful when you want to draw an arc of a circle.

Using R and Alt R commands:

1. Press R or Alt R.
2. Extend and/or move the elastic box.
3. To check or change colors, use function keys F5 through F10. To check or change shadowing, use the S command.
4. Press Enter to draw the round shape and end the command, or press R or Alt R to draw the shape and maintain the elastic box.

Notes:

- Normal rules apply for the Esc key, the U command, and moving the elastic box.
- To draw a circle on an IBM 5153 Color/Graphics monitor using the diagonal cursor movement keys, the ratio of cursor movement in the X and Y axes should be 6X to 5Y. The standard setting of 12,10,2 for the Cursor Steps (K) command will provide this ratio.



SAVE COLOR TABLE

Alt Y

This command permanently saves the current color table in the PM.PAT file, so that these color settings will be active the next time you start *Picture Maker*. The command is used when you have added or deleted patterns to the color table.



Using the Alt Y command:

1. Press Alt Y.
2. Enter Y or N in response to the confirmation prompt.
3. After entering Y, press any key to clear the Patterns Saved message.

Notes:

- Command U does not apply to this command.
- Refer to the Color Table Pattern (Alt C) command for adding and deleting patterns to your color table.
- Separate color tables are maintained for RGB monitor mode and for composite video monitor mode. Therefore a change and save to the color table in one mode does **not** affect the separate color table of the other mode. However, the tables for both modes are saved at the same time with the Alt Y command.
- If you want to restore a pattern inadvertently removed from the color table, you may be able to copy the pattern from the RGBPATS.PIC or COMPATS.PIC files, or you may want to reload the PM.PAT file from the program distribution diskette.

SCALE TYPE SET

-

This command rotates the cursor location scale among three types. These are small scale grid (X and Y axes at 10 pels per tic) , large scale grid (X axis at 20 and Y axis at 25 pels per tic) , and no displayed scale grid.

Scales help you precisely locate the cursor, especially when using the invisible (non-displayed) cursor. As the cursor moves, its location on the grid is indicated by a tic of a different color. The small grid is normally used for alignment by pel count, whereas the large grid is for alignment proportional to total screen height and width.



Using the - command:

1. Press the - key (either one) one or more times to select the desired scale type.

Note:

- Typically, this command is used in the middle of other commands. For example, while drawing a box you can change cursor scales as often as needed.

SIZE, SHADOW, and SLANT

S

This command controls the size and the slant of the type entered into your picture and controls the amount of shadowing behind both text and drawn shapes, including pasted areas. Character slant can make italic text.

With text, use the S command while using the Text (T) or Write (W) command.

With shapes, use the S command at any time when you are not writing text.

The direction and depth of shadowing and the amount of slant is variable. Set the shadow by using the cursor movement keys. Set the slant by using \uparrow with the \leftarrow key or \uparrow with the \rightarrow key.

Using the S command with text:


1. Before the text is written to the screen, press S.
2. The current size, style, slant, and shadowing of the first character to be written is displayed within a box.
3. Press S one or more times to rotate through the available type sizes.
4. Press the cursor movement keys as needed to achieve the desired shadowing.
5. Press \uparrow with \leftarrow and \rightarrow keys to adjust the character slant.
6. Press Enter or any other key to end sizing and shadowing.
7. Continue with the Text command.



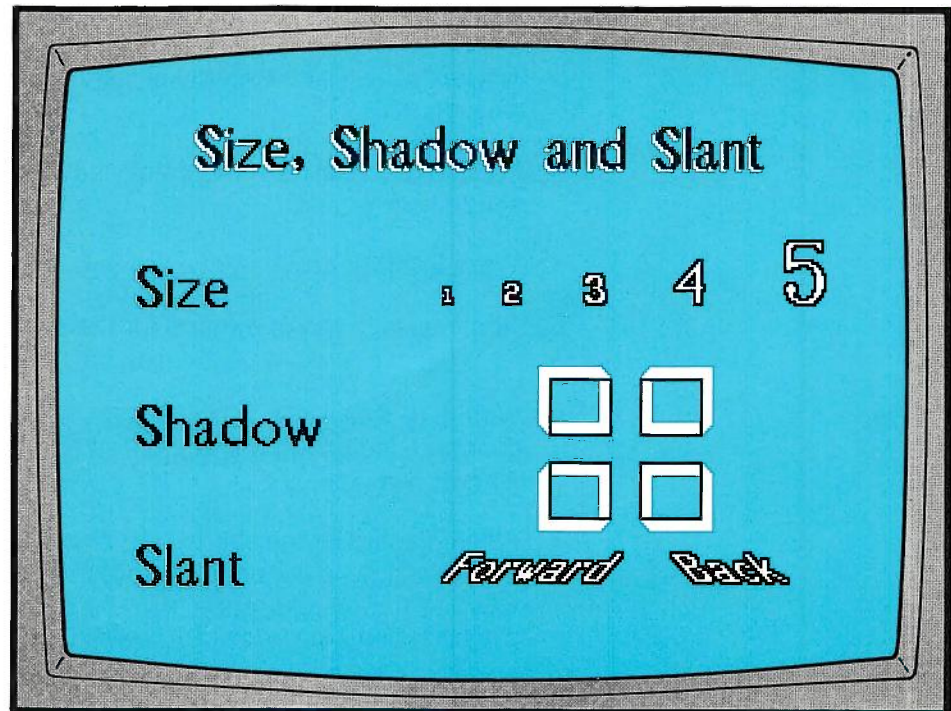
Using the S command with shapes:

1. Before the shape is drawn to the screen, press S.
2. A small square showing the current amount of shadowing is displayed within a box.
3. Press the cursor movement keys as needed to achieve the desired shadowing.
4. Press Enter or any other key to end shadowing.
5. Continue with the command for the shape.

Notes:

- With text, the elastic box will change as the size and shadow is changed, indicating the amount of space that the text will take at the current settings.
- When displaying the shadowing box, the zero (0) key will remove shadowing, and the equal (=) key will make draw mode shadowing equal to that in text mode, if you are in draw shadow, otherwise it will make text shadow equal to draw shadow.
- If you want to shadow text and the shadowed square is shown, or if you want to shadow a shape and a shadowed character is shown, press the  key to switch between draw and text shadowing displays.





This screen shows five type sizes, four shadowing directions, and a forward and backward slant on words. Larger type sizes give greater character detail or typeface definition.

TEXT ENTRY

T

This command enters text into your picture in several type styles and sizes, with or without shadowing. With *Picture Maker* are four type styles (typefaces) each in five sizes. These are:

Bold Thin Roman PM

Use the typeface set (Alt T) command to change the typestyles. Use the Size, Shadow and Slant (S) command to change type size, type shadowing and slant of characters.



Using the T command:

1. Press T.
2. On the bottom line of the screen, respond to the prompt by either keying new text or tabbing the cursor to the right of any text you wish to reuse. The End key will place the cursor to the right of the last character in the text area. The elastic text box will change size while keying text, reflecting the amount of space that the shadowed text will require.
3. Press Enter to end text entry.
4. Options:
 - To check or change text colors, use function keys F5 through F10.
 - To check or change the typeface, use the Alt T command.
 - To check or change type size, shadowing, or slant, use the S command.
 - To check or change distance between text lines, use the K command.



-
- To check or change distance between characters, use Alt 4 (see below).
 - To change the position of the elastic text box relative to the location of the cursor, use the Alt W command to rotate through the four elastic text box positions.
 - To move the box location, move the cursor.
 - If necessary to erase what is currently displayed within the elastic text box, use the Erase (E) command.

5. Press Enter to write the line of text and end the command.

Notes:

- Refer to the Multiple Commands (M) command if several lines of text are to be entered.
- Refer to the Write Text (W) command if adjusting the size, color, shadow, and position of the text lines.
- Use Alt 4 if you want to adjust the amount of space (in pels) between adjacent characters. Alt 4 will reset the character spacing for one size of one type style (the current one) at a time, and can be altered again as needed.
- Trailing blanks are accepted as characters.

TYPEFACE SET**Alt T**

This command changes the style of the typeface entered into a picture. With *Picture Maker* are four type styles (typefaces) each in five sizes. These are:

Bold Thin Roman PM

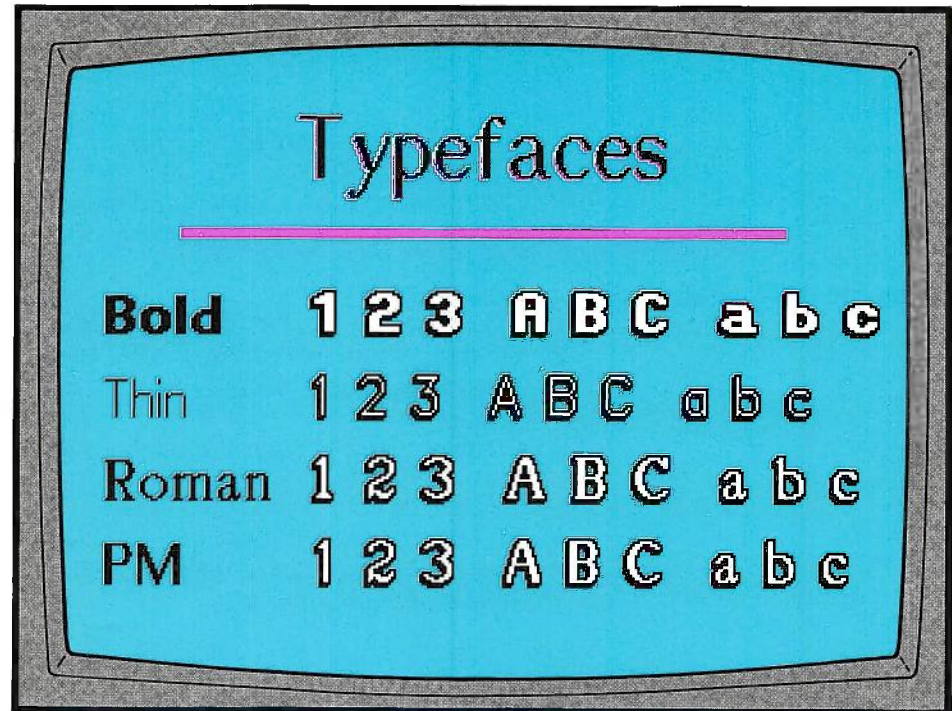
You use these names to select a different typeface. The typeface selected remains in effect until changed by another Alt T command.

**Using the Alt T command:**

1. Press Alt T.
2. On the bottom line of the screen, type one of the four typeface names shown above and press Enter.
3. Press any key to clear the confirmation message.

Note:

- You do not need to type the .FAC file extension after the typestyle name. *Picture Maker* uses the .FAC extension to distinguish type style files from other files.



Examples of the four typefaces are shown on this screen. The typeface names are without outline or shadow, while the text samples have an outline and one pel of diagonal shadow. All are in Size 4 type size (next to largest). The samples show the relative width of typestyles at the same spacing (Alt 4) between characters.

UNDO**U, Alt U**

These commands undo the last change to the screen or all previous changes to the screen, and are helpful when you make a mistake.

Using U and Alt U commands:

1. Press U to remove the last change made to the screen. For example, if wording or placement following a Text (T) command is not correct, a U command will remove the text just written.
2. Or, press Alt U to clear the screen.

Notes:

- If you want to restore what you have just removed with either U or Alt U, press U again. This will undo the undo.
- **WARNING:** When Help is called with function key F1, you no longer have the opportunity to use the Undo command to remove the last change to the current picture.
- The U command can be very helpful in doing work between two pictures. For example if you are working on Picture A and want to quickly refer to Picture B, you can load Picture B using the In (I) command, view it, and then use a U command to return to Picture A.

CAUTION: Use the U command immediately after viewing Picture B. Otherwise if other commands are performed, you may not be able to return to Picture A, and can only recover the image of Picture A as of the last time it was saved with the Out (O) command.

- The U command is also used to return from the Picture Library to your current picture. See “Using the Picture Library” earlier in this chapter.



VIDEO (composite)**Alt V**

This command turns composite video mode on and off.

When preparing pictures for display in composite video mode (display on a composite monitor or television), composite video should be ON. Otherwise for display on an RGB monitor, composite video should be OFF. Pictures prepared in composite video mode can be displayed on an RGB monitor.

**Using the Alt V command:**

1. Press Alt V to alternatively turn on and off composite video mode.
2. Press any key to clear the composite video message.

Notes:

- The BOLD typeface is recommended for best results with composite video. Refer to the Typeface Set (Alt T) command.
- **WARNING:** Pictures that are prepared or edited for composite video display without the composite video mode ON may not produce acceptable results when viewed on a composite monitor.

WRITE MODE SET**Alt W**

This command repositions the elastic text box for text entry to one of four positions. These are:

- Text positioned to the right of cursor.
- Text centered on cursor.
- Text positioned to the left of cursor.
- Text centered in the middle of the display screen.

The positioning remains in effect until changed by another Alt W command.

Using the Alt W command:

The effect of the Alt W command is best observed after some text has been entered with the Text (T) command.

1. Press Alt W one or more times to rotate the positions for the elastic text box.



WRITE TEXT

W

This command gives you a quick way to rewrite the same line of text that was previously entered with the Text (T) command.

This command is particularly helpful when you are testing various combinations of colors and patterns for text, outline and shadow and do not want to continually reenter the same text. It can also be used when changing the location, size and shadowing of text.



Using the W command:

1. Press W to display an elastic text box. This box is sized for the previously-entered line of text, at the current settings for type size, shadow, colors and write mode.
2. Options:
 - To check or change text colors, use function keys F5 through F10.
 - To check or change the typeface, use the Alt T command.
 - To check or change type size, shadowing, or slant, use the S command.
 - To change the position of the elastic text box relative to the location of the cursor, use the Alt W command to rotate through the four elastic text box positions.
 - If necessary to erase what is currently displayed within the elastic text box, use the Erase (E) command.
3. Press W to write the line of text and maintain the text box, or press Enter to write the text and end the command.

Note:

- If you are only changing colors before each use of the W command, you do not need to erase the text inside the elastic text box. Just write the text with the new color on top of the old text.



X,Y COORDINATE DISPLAY

X

This command displays the current location of the cursor in pels, and as a percent of the maximum pel values for the X and Y axes. For example, the upper left corner of the screen is location 0,0 and $x=0\%$, $y=0\%$, the center of the screen is location 160,100 and $x=50.1\%$, $y=50.2\%$, and the lower right corner is location 319,199 and $x=100\%$, $y=100\%$.



Using the X command:

1. Press X to view location information.
2. Press any key to clear the location information.

ZOOM

Z, Alt Z

The Z command displays an enlarged view of an area, allowing you to easily make pel by pel changes to the zoomed area, then returns the changes to your original picture (unzoomed).

While the area is zoomed, pels can be individually changed in color as you move the zoom cursor. The zoom cursor is the rectangular area you can move with the eight cursor movement keys. You can also draw pels continuously in any color with the draw (D) command.



The Alt Z command permanently enlarges an area to a new full size picture. This conversion is permanent and cannot be unzoomed. However, the original picture can be returned with the Undo (U) command, if the Undo is performed immediately.

The degree of enlargement with either command depends upon the size of the elastic box you extend in your original picture. A small elastic box gives a greater degree of enlargement than a large elastic box.

Using the Z command:

1. Press Z.
2. Extend and/or move the elastic box.
3. Press Enter. The zoomed area is displayed, along with the unzoomed area displayed within a box. The color of the box around the unzoomed area always indicates the current draw color for the zoom cursor.
4. Use the cursor movement keys to change the zoom cursor location.

-
5. Press the first letter of a color name to change a pel of color.

In the green/red/yellow palette, press g, r, or y.

In the cyan/magenta/white palette, press c, m, or w.

In either palette, press b for the background color.

6. To continuously draw pels in the current color, use the Draw (D) command. Press the first letter of a color name to change the current color. Use the Esc key to stop using the Draw command.
7. Press Enter to return to the original unzoomed picture, or press U to return with no changes.

Using the Alt Z command:

1. Press Alt Z.
2. Extend and/or move the elastic box.
3. Press Enter. The area inside the elastic box is zoomed to a permanent, full size picture.



Notes:

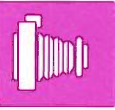
- The Esc key only ends the Draw (D) command in a zoomed picture. The Undo (U) command allows return to the original unzoomed picture without any changes.
- To erase pels, change their color to the surrounding color, frequently the background color.
- If the area in which you want to work is covered by the box displaying the unzoomed area, move the cursor to this box, thereby causing it to move to the opposite corner of the screen.
- Alt Z is helpful for making enlarged letters for special effects. The height and width of your elastic box will determine both the size as well as the relative height and width of the enlargement.
- You may want to use Alt Z to enlarge certain graphic images in the Picture Library before cutting and moving them to your picture. Such enlargement is usually most effective with non-circular shapes.





Alt Z was used to zoom Size 5 Bold type with outline and shadow to double size. This technique can put special emphasis in your show.

Using Picture Taker



How Picture Taker works

What Picture Taker does

Picture Taker is the program you use to capture picture images of application screens while you are running other application programs. User programs that modify the interrupt table (PrtSc 5 or DOS 21H interrupts) or program the Graphics Adapter directly, bypassing the Basic Input/Output System (BIOS), may prevent *Picture Taker* from capturing screens.

When *Picture Taker* is active, the PrtSc (print screen) key works like the shutter button on a camera. While viewing any application screen, just press \uparrow and the PrtSc key to "take" a picture of the screen and save it under a designated DOS file name in the current or designated directory. You can "develop" the picture later to meet your needs by using either the commands in *Picture Maker*, or those in *Story Editor*, or both.

Picture Taker works by attaching a small program of approximately 5K bytes to part of the DOS control program. This program can be turned on and off, it can capture both 40- and 80-column text mode as well as medium and high resolution graphic screen images, and it can print the image of captured pictures. Also, it can put more than one picture in the designated file, and in this event will sequentially number these screens. If you stop a *Picture Taker* session and later start a new session with the same path, directory and filename, the second session will add pictures to the end of the file created during the first session.



How to start **Picture Taker**

If your *PC Storyboard* programs are in a DOS subdirectory (such as PCSCMD), change to that directory by using the Change Directory command. For example:

```
C>cd pcscmd
```

Enter **PT** followed by additional optional information (parameters) that specify how you want *Picture Taker* to work. You can choose to enter one or more of the parameters shown below inside the brackets [].

```
A>PT [DOS filename] [/P] [/N] [/C] [/A] [/G]
```

Where:

(no parameters) If you do not enter any parameters, *Picture Taker* will display a list of the parameters, and will indicate whether *Picture Taker* is turned on or off.



DOS filename

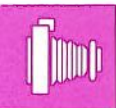
This is the drive, path to the directory and name of the file in that directory in which you will put your captured pictures.

If *Picture Taker* is turned on, you do not need to specify a *DOS filename* when changing the other parameters unless you want to change the filename.

If you do not enter a drive and path specification, *Picture Taker* will put the captured pictures in the designated file in the current directory on the current drive when the *Picture Taker* program is started. The following example shows how you would start *Picture Taker* putting the captured pictures in a file (eg: IMAGES) in a directory (eg: KAPTURED) branching from the root directory.

```
C>pt c:\kaptured\images
```

We recommend that you use the .CAP file extension, or allow *Picture Taker* to add a .CAP file extension if you do not specify it. This will help you rotate through available captured picture files when using *Story Editor*, and is a convenience in locating these files when using the DIR command in *Picture Maker*.



-
- /P** If specified, the picture will be printed as well as saved. If pictures are printed in graphics mode, the DOS GRAPHICS command must have been run **prior** to the first use of *Picture Taker* in the current DOS session. **Never** run the DOS GRAPHICS command after starting *Picture Taker*. See Operating Considerations below for a discussion about programs that use the PrtSc key.
- /N** If specified, printing will be turned off if previously turned on with /P.
- /C** If specified, picture taking will be cancelled, and the PrtSc key will return to its normal operation. However *Picture Taker* remains attached to DOS. To remove this program from memory, you must restart DOS with the Alt-Ctl-Del key sequence.
- /A** If specified, *Picture Taker* will capture the picture shown on the currently active display monitor, either color or monochrome, at the moment the PrtSc key is pressed. This is the standard action if /G is not specified. (The application program must have used DOS or BIOS to have set the currently active display monitor.)



/G

This parameter is primarily intended for use on a system having both a monochrome and a graphics (color) display when both displays are operating. But it can also be used to capture medium resolution graphic pictures produced by programs that do not use the BIOS to set the screen mode. (See "Operating considerations" below.) If specified, *Picture Taker* will only capture the medium resolution pictures displayed on the color monitor. When /G is used, the program assumes two things. First that regardless of which of the two displays is currently active, the picture will be captured from the color monitor. Second that regardless of the current mode of the color monitor, the picture will be captured as if it were a medium resolution graphics picture. (If the picture is not being displayed in medium resolution graphics mode, incorrect results will occur when attempting to display that picture.)



Operating considerations

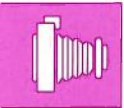
PrtSc key: The *Picture Taker* program (PT.COM) alters the function of the PrtSc key to capture pictures. Other programs, notably the DOS GRAPHICS program, may also attach themselves to DOS and alter the function of this key. The order in which you run the programs that affect this key is important. After you have started DOS (the Alt-Ctl-Del key sequence), run any other programs that attach to DOS and alter the PrtSc key **before** you run the PT program. If you find that you need to run such a program after starting *Picture Taker*, you must first restart DOS then run that program (or programs) then run the PT program last. Operation of the PT program can be changed by again entering PT followed by any of its parameters. **Do not** run or rerun any other programs that alter the function of the PrtSc key between entries of the PT command, even though the /C parameter has been entered to cancel picture taking.

Programs that do not use the BIOS: If you are attempting to capture graphics screens, but are getting incorrect results, the program you are using may have bypassed the BIOS. The basic input/output system, or BIOS, resides in Read-Only Memory (ROM) on the system board and provides device level control for the major input/output devices in the system. Although BIOS is intended to provide an operational interface to the system and relieve the programmer of concern about the characteristics of hardware devices, some programs do not use the BIOS. Should this be the case, *Picture Taker* may not be able to determine the current display mode. To help with this problem when displaying graphic images, use the /G parameter to cause *Picture Taker* to capture the image in medium resolution color graphics mode.

For further information, refer to “Types of screens usable with *Story Editor*” in the “Using Story Editor” chapter.



Changing Picture Taker options



Reminder: *Picture Taker* will capture **all** information on a graphics screen, including shapes such as a cursor and an elastic box. If you do not want to have such shapes in your picture, remember to remove them before pressing the \uparrow and PrtSc keys.

If you wish to change the drive, the file, or any of the parameters in the PT command, just reenter the PT command with the new parameters.

Examples:

A>PT B:PICFILE.CAP

After this command is entered, each time the PrtSc key is pressed *Picture Taker* will save the image in the PICFILE.CAP file on drive B.

A>PT NEWFILE.CAP /P

Changes the captured picture file to NEWFILE.CAP on the current drive (A) and path and prints each picture saved.

A>PT /C

Turns off *Picture Taker*.

Taking pictures

After turning *Picture Taker* on by entering a DOS filename, press the \uparrow and PrtSc keys when you see a screen you want to capture. *Picture Taker* will respond in one of three ways:

3 short beeps

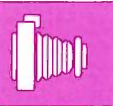
Picture has been taken.

1 short beep

This indicates that DOS is currently running. The picture will be taken when the currently active DOS command has completed. DOS may be waiting for you to press one or more keys. Three short beeps will then follow.

High-low sound

A high-low “chirp” sound will be heard if an error has occurred. Errors can result from problems such as a diskette or disk that is full, from a write-protected or improperly inserted diskette, a diskette drawer that is open, or a bad or unformatted diskette.



Retrieving the captured pictures

Each time an additional captured picture is put in the same file, the picture is added to the file following all pictures already in the file. Because this is a single file, a DOS DIRECTORY command will not show the number of pictures in the file. Therefore you should keep a log of the pictures so that you can call them by number in *Picture Maker*, *Story Editor* and *Story Teller*.

Pictures captured in graphics mode can be viewed and edited in *Picture Maker*. Use the In (I) command in *Picture Maker* to view captured pictures. When more than one picture is stored in a captured picture file, each is given a sequential number. For example when using *Picture Maker* or *Story Editor*, you would enter PICFILE.CAP 3 to get the third captured picture in PICFILE.CAP. Once a graphics picture from a captured file has been modified by *Picture Maker*, it cannot replace the original picture in the captured file. You should use the Out (O) command to put it into a .PIC file as a single picture.

Captured text files cannot be retrieved by *Picture Maker*, but they can be displayed as full or partial pictures by *Story Editor*.



Using Story Editor



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How Story Editor Works

What Story Editor does

Story Editor is the program you use to describe the sequence of pictures in a story, how they will be displayed, and how the system will handle the transition from picture to picture. We will call this descriptive information your "story."

Story Editor has several special features to help you make attractive presentations. You can select any of several picture-to-picture transition methods that allow one picture to "dissolve" into another. You can vary the speed of the dissolve and the length of time each picture is displayed. You can select color palettes and backgrounds for each picture. You can display a picture in its entirety or develop it as a series of partial pictures that result in a full picture. And you can easily enter, move or change the selections in your story, often without having to type in picture names.

You also can run your story in part or in full while using *Story Editor*, so you can quickly experiment with various presentation techniques. The "try it and see" technique may be the easiest and fastest way to get the result you want.

How to start Story Editor

If your *PC Storyboard* programs are in a DOS subdirectory (such as PCSCMD), change to that directory using the Change Directory command. For example:

```
C>cd \pcscmd
```

Before using *Story Editor*, you should have used *Picture Maker* and/or *Picture Taker* to create several pictures for your story.



You may have placed your pictures in the same or different directory from the one containing your *PC Storyboard* programs. You need to determine where you will keep your story and pictures when you start *Story Editor*. We recommend that you keep your story in the same directory as the pictures in that story.

If your story and pictures are in the current directory (which would be the one containing the *PC Storyboard* programs), you would enter:

```
A>se    or    C>se
```

If your story and pictures are in a different directory, enter the path to that directory after *se*. For example if *Story Editor* is in the subdirectory PCSCMD of drive C and you want to edit a story that is in a different subdirectory (mypics) branching from the root directory on drive C, you would enter:

```
C>se c:\mypics\    or    C>se \mypics
```

If the pictures were in a subdirectory branching from the PCSCMD directory, you would enter:

```
C>se c:\mypics\    or    C>se mypics
```

In the above examples, the entry on the right shows the most abbreviated form while the one on the left shows the complete form.

Designating a path to stories and pictures when you start *Story Editor* gives you additional flexibility. If you keep more than one story in the specified directory, you can use function keys to rotate through all stories in the directory rather than having to explicitly enter each one as needed.



Either way you start *Story Editor*, you will see an initial copyright screen. Press any key to continue.

How to end Story Editor

Use the appropriate function keys indicated at the bottom of the display screens.

If you have two displays

If you have both a monochrome and a color monitor (RGB or composite) attached to your IBM Personal Computer, start *Story Editor* by entering the SE command on the monochrome display. This will cause the story table to go to the monochrome display and pictures to go to the color display. If *Story Editor* is started from the color monitor, it will use only the color display.

For more information about control of output, see the DOS MODE Command.

Types of screens usable with Story Editor

The Color Graphics display adapter and the Enhanced Color Graphics display adapter on the IBM Personal Computer support various types of pictures. The types are:

Medium resolution graphics: Screens of 320 by 200 pels in four colors. These can be created by *Picture Maker* or captured by *Picture Taker*, or created with BSAVE in a BASIC program.

High resolution graphics: Screens of 640 by 200 pels in two colors. These can be captured by *Picture Taker*.

80-column color or monochrome text: These can be captured by *Picture Taker*.

40-column color or monochrome text: These can be captured by *Picture Taker*. This mode is not available on the IBM 3270 PC.



Selecting the story

On the first screen after the copyright screen, you can enter either a new story name, or an existing story name, or both.

If you want to create a new story (eg: storyB) and put it in either the current directory or the directory you specified when you started *Story Editor*, enter the name of the new story.

Example: NEW STORY NAME storyB

If you want to put the story in a different directory, put the path to the other directory (newdir) before the story name.

Example: NEW STORY NAME newdir\storyB

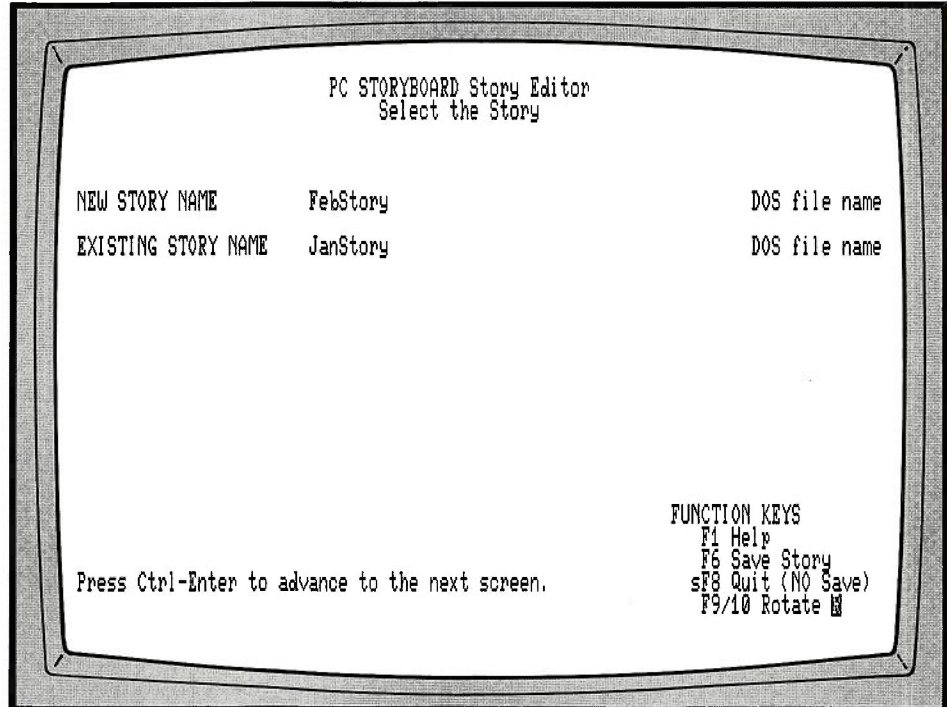
If you want to modify an existing story, press Enter to go to the EXISTING STORY NAME field. Then either key the name of an existing story, including the path if needed, or use function keys F9-F10 to rotate through the stories in the current directory. If you specified a directory when you started *Story Editor*, that directory is the current directory. The reverse image R in the lower right corner of the screen indicates that the rotate keys F9 and F10 are active.

If you want to make a new story using all or part of the old story, but keeping the old one the way it was, enter a name for the new story on the first line and the name of the existing story on the second line. When you save your story, you will have both an old (storyA) and new (storyB) version.

Example: NEW STORY NAME storyB
 EXISTING STORY NAME storyA



On this screen, JanStory is being used to create a new story called FebStory.



To enter these names, either press Ctrl and Enter, or press the large + key on the right side of the keyboard to advance to the Edit the Story screen.

If you do **not** enter a filename extension on your story name, *Story Editor* will automatically add a .SH~ extension.

Don't use a blank in a story name. If you do, DOS won't be able to work with a file.

Editing the story

You describe how your story will work by filling in information in the columns of the table on the Edit the Story screen. Each line in the story table represents **one** step in the resulting show.

If you are building a new story, you will initially see a table with information in some columns. This initial story display information to the right of the picture name will remain in effect for all following steps in your story unless you change it on the first line in the table or put a new value on any following line in the table. Each new value will remain in effect until changed by another value on a subsequent line.

If you are editing an existing story to make a new one, you will see many lines describing the steps in the existing story. Any of this information can be changed to create your new story.


This is easy to do because you can use the function keys F9 and F10 to rotate through all the options possible in any field. After an option is selected, use the Enter key to go to the next field. The active field is indicated by a colored box, or by a cursor line on a monochrome monitor.



PC STORYBOARD Story Editor
Edit the Story

Story Name FebStory

Label	Picture Name or Command	Display picture using:				Then wait for	Set Color		Area	
		Method	Dir	Line	Time		Pal	Back		
	vertbar	Production	REPLACE	UP	CYN	FAST	KEY	LGRY	BLK	FULL
	pie1	Staff Alloc								
	pie2	Prod Revenue								
	horizbar	Grp Achieve								
	line	Profit by Q								

FUNCTION KEYS F3 Step Story F6 Save Story F8 Select Story
 F1 Help F4 Run Story sF6 Save & Quit sF8 Quit (NO Save)
 F2 Editing Keys F5 View Picture F7 Print Story F9/10 Rotate 

This story shows the five graphs you will find in the section on the Graph command in the *Using Picture Maker* chapter. Pictures were selected by using F9-F10 to rotate through names of pictures in the current directory. A comment was added to identify each picture.

Picture-to-picture transition

When the topics of dissolve techniques, partial pictures, and *Story Editor* commands are discussed later in this chapter, you will be learning about different ways that one picture becomes another picture. You may be able to better understand this by knowing that *Story Editor* and *Story Teller* keep two picture images in memory. When a picture is loaded from disk or diskette, it first goes into a preview area. Then the picture is transferred to the display area and the content of the display area is what you see on your screen. How the picture is transferred to the display area depends upon the dissolve method selected. In the case of display method NONE, the picture is loaded into the preview area but not copied into the display area. This allows you to alter the picture in the preview area before it is copied to the display area. In the case of partial pictures, only a part of the picture in the preview area is copied to the display area. Also if several partial pictures are copied from the same picture in the preview area, the partial pictures can be displayed faster than if each is from a different picture that must be separately loaded into the preview area.

Columns in the story table (full screen display)

Labels: *Story Editor* has an advanced feature that allows you to include logical statements that will control the flow of your story. Labels allow you to branch to a designated line in your table, which is a particular step in your story. See the “Go to command” and “Action keys” for more information.



Picture Name or Command: Enter the names of your pictures in the order that you want to display them in your story. A picture name must be entered for each full or partial picture, as the previous picture name does not remain in effect if a picture field is left blank. When you created pictures with *Picture Maker*, the Out (O) command stored them with a .PIC file extension. Pictures created by *Picture Taker* were put in a file with a .CAP file extension. If you are using pictures with a .PIC file extension, you do not need to enter this extension when you type the picture name, as it is assumed. If you are using pictures captured by the *Picture Taker* program, you must include the .CAP file extension and follow this by the desired picture number in the .CAP file. However if you use several pictures successively from the same .CAP file, you can enter the full file name with the picture number for the first picture and follow this with only the picture number of screens immediately following in the story table. If you are using story logic commands, these commands can also be put in this column. F9-F10 will rotate through available pictures (both .PIC and .CAP pictures) in your current directory and through logical commands. You can follow your picture name in this column with a documentary comment, as long as the comment does not begin with a digit (0-9).

Although we recommend putting your story in the same directory as your pictures, picture names can be preceded by a drive and path designation. If neither is specified here, the story will be placed in the directory specified when you selected the story to edit, or if that was not specified it will be placed in the directory specified when *Story Editor* was started, or if that was not specified it will be placed in the current directory.



Display picture using: These columns describe how *PC Storyboard* will present the picture; the dissolve method to be used, the dissolve direction, use and color of separator line, and dissolve time.

Method: *PC Storyboard* can present your pictures using a variety of picture dissolving techniques. Select the one you want using F9-F10. (See also: Picture Display Method.)

Dir: Dissolves can proceed in several screen directions. Select the direction you want using F9-F10. (For valid directions, see: Picture Display Method.)

Line: On dissolves having a straight line between old and new pictures, you can select to have lines of various colors displayed between the old picture image and the new picture image while the transition between pictures is taking place. Line color depends upon palette selected. Select options with F9-F10.

Time: You can select the amount of transition time that the dissolve will take by rotating the selections with F9-F10 or keying a value. Numeric TIME values can be in seconds and (optionally) tenths of seconds, and are approximately the same among IBM PC models. The FAST, MED, and SLOW options are relative. Their actual speed varies among PC models, and is faster for partial displays.

Then wait for: This is the amount of time that your picture will be displayed before going into the next dissolve. Or the display can wait for you to press a key, if you select "Key." Select choices using F9-F10, or key a value in seconds and tenths of seconds.



Set color (Palette and Background): In *Picture Maker*, you set colors for your pictures, and you could also use F3-F4 in *Picture Maker* to rotate the display through two color palettes, each in high and low intensity, and use \uparrow F3-F4 to rotate through 16 background colors. However the palette and the background you used while creating your pictures was not saved with your picture.

This column in *Story Editor* is where you establish which of these color options you will use to display your picture. Select them using F9-F10. CMW and GRY are the two color palettes and the letter L in front of them indicates light or intensified display intensity.

The Palette column only applies to screens displayed in graphics mode. Information in this column is ignored when either 40- or 80-column text mode screens (captured with *Picture Taker*) are displayed. The color of text mode screens can be altered with the /COLOR command. The Background column controls the color of the frame around the text area.

Area: This column can be either FULL for a full screen display, or PART for a partial screen display, or blank, which allows the previously run line with an entry in the same column to take effect. Partial displays are an advanced feature covered next.



PC STORYBOARD Story Editor
Edit the Story

Story Name FEBSTORY

Label	Picture Name or Command	Display picture using:				Then wait for	Set Color		Area
		Method	Dir	Line	Time		Pal	Back	
vertbar	Production	REPLACE	UP	CYN	FAST	1.5	GRY	BLU	FULL
pie1	Staff Alloc	CRUSH	IN-V		SLOW		CMW		
pie2	Prod Revenue	FADE			MED	2	GRY		
horizbar	Grp Achieve	STRIPES	UP		FAST	3.7	LGRY		
line	Profit by Q	EXPLODE	OUT-H			4	GRY		

FUNCTION KEYS

F1 Help	F3 Step Story	F6 Save Story	F8 Select Story
F2 Editing Keys	F4 Run Story	sF6 Save & Quit	sF8 Quit (NO Save)
	F5 View Picture	F7 Print Story	F9/10 Rotate

Using F9-F10, different display methods, times and colors were selected. Only the "Then wait for" time of 3.7 seconds was keyed. Because a value in any column remains in effect until a new value is encountered, the first two screens for example will be displayed for 1.5 seconds.

Columns in the story table (partial screen display)

The most straightforward way to present your pictures is to make them a series of full screen displays, as described previously. This allows the variety of screen dissolve techniques in *Story Editor* to provide picture-to-picture transition.

However as you increase your skill with *PC Storyboard*, you may want to have certain pictures “develop” on your display screen as a series of partial pictures. For example, an organization chart might be presented one level at a time so that the audience can more easily understand the information.

As with full pictures, each line in the table represents **one** step in the resulting show, so each partial picture must be on a separate line in the table.

To begin using partial pictures, use F9-F10 to rotate the word PART into the Area column (rightmost column in the table for full screens). This should be on the line with the name of the picture you want to develop in a sequence of partial pictures. Then press Enter.

Three additional columns are now displayed. They describe the partial area of a picture that you will write to your screen. The information you enter describes the coordinates or location of the partial picture and the location where you want the partial picture displayed.



For graphics screens, the values are in pels (dots on the screen) measured from the upper left corner of the screen. For medium resolution graphics screens, the possible X-axis values are 0 to 319 and the Y-axis values are 0 to 199. For high resolution graphics, X can be 0 to 639 and Y can be 0 to 199. For 80-column and 40-column text screens, X refers to the character column (0 to 79 or 0 to 39) and Y refers to the line (0 to 24).

From the Picture (Upper X,Y): The first value is the distance on the horizontal (X) axis from the left side of the screen to the left side of the partial picture area. The second value is the distance on the vertical (Y) axis from the top of the screen to the top of the partial picture area.

From the Picture (Lower X,Y): The first value is the distance on the horizontal (X) axis from the left side of the screen to the right side of the partial picture area. The second value is the distance on the vertical (Y) axis from the top of the screen to the bottom of the partial picture area. These values can be determined **interactively** for you, so you will normally **not** need to measure in pels. To do this, press F5. The picture you have named is displayed with an elastic box. Use the cursor movement keys to locate the upper left corner of the elastic box around the partial area. Press Enter. Now use the cursor movement keys to position the lower right corner of the elastic box around the partial picture. Press Enter again to insert the coordinates into your table.



To Screen (Upper X,Y): The values indicate the location where the upper left corner of the partial picture will be displayed on the screen. Use F9-F10 to rotate through SAME or a blank in this field. SAME will cause the partial area to be displayed on the screen in the same location as on the original picture from which it came. You can enter other coordinates. However if you press F5, you can use the elastic box to define a new location for display of the partial picture. Press Enter to cause *Story Editor* to calculate and show the new display location in the table. No value in this location will cause the partial picture to be displayed in the same location as the previously run line with an entry in this column.


In both the From the Picture and To Screen sections of the table, the area defined by the elastic box moves in 4-pel increments on the X-axis, but by a 1-pel increment on the Y-axis. If values not matching the 4-pel increments are entered, *Story Editor* will round them to a slightly larger area definition.



PC STORYBOARD Story Editor
Edit the Story

Story Name FEBSTORY

Label	Picture Name or Command	Display picture using:				Then wait for	Set Color		Area
		Method	Dir	Line	Time		Pal	Back	
vertbar	Production	REPLACE	UP	CYN	FAST	1.5	GRY	BLU	FULL
pie1	Staff Alloc	CRUSH	IN-V		SLOW		CMW		
pie2	Prod Revenue	WEAVE			FAST	1	GRY		PART
PIE2		FADE			MED	2			
horizbar	Grp Achieve	STRIPES	UP		FAST	3.7	LGRY		FULL
line	Profit by Q	EXPLODE	OUT-H			4	GRY		

EDITING KEYS aB Mark Block aE Erase Line F6 Save Story
 F1 Help aC Copy Block aI Insert Line F7 Print Story
 F2 Function Keys aD Delete Block aU Unmark Block F9/10 Rotate 

To display PIE2 using two partials, Alt I was used to insert a line above HORIZBAR and PIE2 was rotated into this line. Different display methods and times were set for each partial (the picture title and picture body). Area was set to PART. EDITING KEYS are shown below the story.

PC STORYBOARD Story Editor
Edit the Story

Story Name FEBSTORY

Display picture using:				Then wait for	Set Color		Area	From the Picture		To Screen
Method	Dir	Line	Time		Pal	Back		Upper X, Y	Lower X, Y	Upper X, Y
REPLACE	UP	CYN	FAST	1.5	GRY	BLU	FULL	,	,	,
CRUSH	IN-V		SLOW		CMW			,	,	,
WEAVE			FAST	1	GRY		PART	0 ,14	319 ,48	SAME,
FADE			MED	2				0 ,56	319 ,177	,
STRIPES	UP		FAST	3.7	LGRY		FULL	,	,	,
EXPLODE	OUT-H			4	GRY			,	,	,
								,	,	,
								,	,	,
								,	,	,
								,	,	,
								,	,	,
								,	,	,

FUNCTION KEYS F3 Step Story F6 Save Story F8 Select Story
 F1 Help F4 Run Story sF6 Save & Quit sF8 Quit (NO Save)
 F2 Editing Keys F5 View Picture F7 Print Story F9/10 Rotate
 Press F5 to see and interactively set partial area coordinates.

Moving the cursor to the right of the Area column shows the information for partial pictures. F5 was used to view PIE2 and interactively select the area of the partial display by moving the elastic box. Note that the Area for HORIZBAR was changed to FULL. Here the FUNCTION KEYS are shown below the story.

Picture display method (dissolves)

The following describes the 11 picture display methods with the valid dissolve directions for each.

Name	Display method description	Directions
CHECKER	New picture replaces the old by using upward expanding boxes. Has checkerboard appearance.	Not applicable.
CRUSH	New picture overlays the old in two directions simultaneously. IN-V overlays from top and bottom toward center. OUT-H overlays from the center to the right and left sides.	OUT-V IN-V OUT-H IN-H
DIAGONAL	New picture diagonally overlays the old. UP = Lower right to upper left. DOWN = Upper left to lower right. RIGHT = Upper right to lower left. LEFT = Lower left to upper right.	UP DOWN RIGHT LEFT
EXPLODE	New picture overlays the old simultaneously in four directions. OUT = new picture starts in center.	OUT-H IN-H




Name	Display method description	Directions
FADE	New picture fades over the old in random groups of one, two, or four pels.	Not applicable.
PUSH	New picture pushes out the old in one of four directions.	UP DOWN LEFT RIGHT
REPLACE	New picture replaces the old by overlaying it in one of four directions.	UP DOWN LEFT RIGHT
SPLIT	<p>New picture appears under or over the old as screen is split.</p> <p>OUT-V = vertical removal of old. IN-V = vertical overlay of old. OUT-H = horizontal removal of old. IN-H = horizontal overlay of old.</p>	OUT-V IN-V OUT-H IN-H





Name	Display method description	Directions
STRIPES	New picture overlays the old as stripes in specified direction. UP and DOWN = horizontal stripes moving up or down. LEFT and RIGHT = vertical stripes moving left or right.	UP DOWN LEFT RIGHT
WEAVE	Old picture is pushed out in two directions simultaneously, and replaced by the new one. Always horizontal.	Not applicable.
NONE	The new picture is loaded into memory but not displayed. The values in "Then wait for" and "Set Color" are applied. This allows display of partial pictures and use of <i>Story Editor</i> commands on subsequent lines in the story table.	Not applicable.



Controlling the cursor in the story table

You can move the cursor through fields in the table by using the group of numbered keys on the right side of the keyboard, the  key, the Enter key, and certain combinations of keys shown below.

Cursor movement keys (←, →, ↑, ↓) If the cursor is at the beginning of a field, the cursor left key moves the cursor to the beginning of the field to the left of the cursor. Otherwise it works like the other cursor movement keys, moving the cursor one space in the indicated direction.

 key: The  key moves the cursor one field to the right.

Shift and  keys: These keys move the cursor one field to the left.

Enter key: The Enter key moves the cursor one field to the right.

Ctrl and Enter or large + key: These keys advance the cursor to the picture name on the next line in the table.

Home key: This key puts the cursor in the Label column of the current line.

Ctrl and Home keys: These keys move the cursor to the first line in the story.

End key: This key puts the cursor at the end of the information in the current field.

Ctrl and end keys: These keys move the cursor to the end of the story.



Function keys (F1 through F10)

PgUp key: This key shows the previous nine lines.

PgDn key: This key shows the next nine lines.

The function keys shown below the story table help you prepare and save your story.

F1 Help: Help screens give you a convenient instant summary of commands and other product functions.

At any time, press F1 to display the Help menu.

You can locate the Help page containing the product summary information you need by either of two ways. Either you can use a number key 1 to 9 on the top row of the keyboard or an alphabetic key on the keyboard to go directly to the Help screen you need and to go directly from one Help screen to another. Or you can use function keys F9 and F10 to rotate through the Help pages.

Press Enter or Esc to return to your story.

F2 Function keys / edit keys: This function key will change the information displayed on the bottom of the screen from function Keys to editing keys. The editing keys are described in the next section. Both function keys and editing keys can be used at any time, regardless of which is displayed at the bottom of the screen.



F3 Step Story: This function key allows you to step through part or all of your story one line at a time. Use the cursor movement keys to position the cursor to the line containing the name of the picture you would like to see next. Press F3. Press any key to see the next step in the story, or F4 if you want to run the story. Press Esc when you want to stop stepping through the story.

F4 Run Story: Same as function key F3, except that the presentation of your story will go from picture to picture according to the story specifications you have entered into the table. Press Esc to stop running your story, or F3 if you want to step through the story.

F5 View Picture: This function key displays a single picture. It is particularly useful with partial pictures, because when the cursor is in any of the partial picture fields, the picture in the Name field is displayed with an elastic box. Use the box to define the area of the partial picture to be displayed, in both the From the Picture and in the To Screen portions of the story table. Press Enter to stop viewing the picture or to enter the coordinates of the elastic box.

F6 Save Story: This function key will save your story in the current directory or the directory you specified when you began using *Story Editor*. You will be able to continue editing your story.

sF6 Save & End: Pressing \uparrow with function key F6 will save your story, end *Story Editor*, and return to DOS.



F7 Print Story: This key will print all or part of the information in your story table regardless of the position of the cursor. To print part of a story table, mark the desired area with the Mark Block (Alt B) command. Otherwise the whole table will be printed. The Esc key cancels printing.

F8 Select Story: This function key returns to *Story Editor's* Select the Story screen, so that you can choose to edit a new story. You may want to use function key F6 before using F8. If you would like to copy some portion of the story you are now editing to another existing story or a new story, first use the Mark Block (Alt B) command to mark the lines to be copied. Then press F8 to go to the Select the Story screen. If the story receiving the block of lines is a new story, put its name on the NEW STORY NAME line. Otherwise put the name of the existing story that will receive the lines on the EXISTING STORY NAME line. Either press Ctrl Enter or the large + key. The copied lines will become the only lines in the new story, while they will become the last lines in the existing story. In either case they remain blocked and can be manipulated with editing keys.

sF8 Quit: This function key stops *Story Editor*, returning to DOS without saving the story.

F9/F10 Rotate (R): These function keys allow you to rotate forward and backward through the available selections for each field (line in a column). This option is available when the R is indicated after the word "ROTATE" in the lower right corner of the screen. If you enter a starting letter for an item in any column of the table that can be rotated, such as a picture name, and then press F9-F10, rotation will begin with the first name in the rotate list that begins with this letter.

If you use F9/F10 to rotate picture names, only those names with a .PIC or a .CAP will be shown.



**Edit keys (aB, aC, aD,
aE, aI, aU)**

When the title FUNCTION KEYS is shown below the table, press F2 to display EDITING KEYS. If the title EDITING KEYS is shown, press F2 to return to FUNCTION KEYS. Function keys F1, F2, F6, F7, and F9/F10 are shown on both displays and are described above. All editing and function keys remain active, regardless of which is currently shown.

aB Mark Block: Press the Alt key and the B key to mark the current line for copying, deleting, or printing. Move the cursor to another line and press Alt B to mark an entire range of lines. The marked block is shown in reverse image.

aC Copy Block: Press the Alt key and the C key to copy a marked block of lines to the line above the cursor line. The copied lines are inserted on the cursor line and the line following the original cursor line is pushed down below the new lines copied. The original marked lines are not changed and remain marked. You may delete the marked lines with Alt D, or unmark them with Alt U, or copy them again with Alt C.

aD Delete Block: Press the Alt key and the D key to delete a marked block of lines. You must respond with Y to the question "Are you sure?"
CAUTION: Once lines are deleted, they cannot be retrieved unless you have previously saved your story.

aE Erase Line: Press the Alt key and the E key to erase a line containing the cursor from the table. **CAUTION:** The typematic action of the keyboard can cause several lines to be deleted if you keep the E key depressed.



aI Insert Line: Press the Alt key and the I key to insert a line **before** the line with the cursor. Enter new information on the newly created line.

aU Unmark Block: Press the Alt key and the U key to remove the mark from the currently marked block.

Action keys (-, +, Esc, /)

Use these keys at any time when you are **running** your story. For example if you have pressed F4 and you are testing the flow of your story, but you want to either back up and run part of it again, or branch to some other part of your story, or stop running your show and return to the story table, you would use these keys.

- key: Either minus (-) key causes the story to back up to the last full display, or the last partial display with a leading or standalone period (.) in the Label column. This previous picture is displayed using the display method of the current picture but in the reverse direction. Press any key except - or + to resume the story. The minus key will cause the story to back up one more picture. If you try to back up beyond the beginning of the story, a beep will sound.

+ key: If the story has been backed up several steps, either plus (+) key will cause the story to resume at the point of the first backup (first use of - key) or point of direct branch. This allows you to back up several steps, then resume where you left off.

Esc key: The Esc key causes the story to stop running and return to the story table.



/ key: The / key allows you to enter a label name (corresponding to one that is in the Label column), to press Enter, and to have the story branch to the picture named on the line with the label. The name of the label is not displayed when you type it. If the label is not found, a beep will sound and *Story Editor* will wait for another *//label* sequence. The + key can be used to return to the point in the story where the direct branch was taken.

Using a joy stick

You can also control the presentation sequence with the two buttons on a joy stick connected to the IBM Game Control Adapter card. Button A advances the show if the show is waiting for any key to be pressed before continuing, while button B backs up the story in the same manner as the - key.

Any device that will close a contact across the IBM Game Control Adapter pins 2 and 4 will have the same effect as joy stick button A, while a contact closure across pins 5 and 7 will have the same effect as joy stick button B. Buttons and momentary switches can be used. However a convenient device is the Kodak EC-1 Remote Control for Kodak Carousel TM₁ slide projectors. Note that you will need to construct an adapter so that the 5-pin plug on the EC-1 can be connected to the 15-pin D-Shell Connector on the IBM Game Control Adapter card.

Story Editor commands

Commands allow you to add logical statements in the picture column of your story to further manipulate and control the display of pictures. This includes changing colors, entry of variable information that will change the sequence of your story, branching to other stories, and similar advanced techniques. We suggest that you master basic *Story Editor* functions before attempting to include commands in your story.

¹ Kodak and Carousel are registered trademarks of the Eastman Kodak Company.



Syntax: Many commands have additional information (parameters) that you can add after the command name to further specify how the command is to function. Some of the choices are optional. Others are mutually exclusive, in that you can only select one of the choices. The syntax for indicating these choices is:

Optional parameters. [. . .]

Mutually exclusive { . . . }
parameters.

Do not type the brackets [] or the braces { }.

Clear:

`/CLEAR [{ B G R Y C M W }]`

This command causes the current full or partial picture in the preview area to be cleared to the color specified in the parameter and then displayed using the method specified. `/CLEAR` can be used with display method `NONE` in order to alter one or more partial picture areas before any action is seen on the screen. The altered screen can be displayed by using the `/DISPLAY` command on a subsequent line in the table. The `/CLEAR` command does not alter the picture stored on disk or diskette.

If no color is specified, the background (B) color is used. Otherwise depending upon the color palette currently specified in the Set Color column, G R Y and C M W will clear the picture area either to green, red, or yellow, or to cyan, magenta, or white. The cleared picture area and the background border area can be different colors. For example if the G/R/Y palette is currently active and you want to clear the picture area to red, you would enter:

`/clear r`



Color:

`/COLOR fromcolor-tocolor [fromcolor-tocolor ...]`

Within the current full or partial picture area, the *fromcolor* is changed to the *tocolor* using the specified display method. If you use display method NONE on the story line containing the picture name, you can modify the picture while it is in the preview area by using /CLEAR, /COLOR and /DISPLAY commands before displaying it. For example this is helpful when you want to use the same picture several times in your story, but show it in different colors each time it appears. The /COLOR command does not alter the picture stored on disk or diskette.

For graphics mode screens, and depending upon the background and color palette specified in the Set Color columns of the table, the *fromcolor* and *tocolor* can be B (for background), and G (green), R (red), Y (yellow), or C (cyan), M (magenta) W (white). For text mode screens, the Palette column is not active. G, R, Y, C, M, and W are the same colors as shown for graphics mode. In addition, U is blue and B is black.

Changing colors with two or more /COLOR commands has an additive effect. For example, /COLOR R-B changes all pels within the full or partial area from red to background. If /COLOR B-G follows, all background pels will be changed to green, including those changed from red to background by the previous /COLOR command. However specifying two color changes in the same /COLOR command does not have an additive effect. For example:

`/color r-g g-y`

will change all originally red pels to green while at the same time changing all originally green pels to yellow.



The /COLOR command only supports the colors in the C/M/W and G/R/Y palettes as displayed on the RGB monitor. However they will also alter the patterns that create colors in composite mode and will cause different results.

Display:

/DISPLAY

This command forces the immediate display of the full or partial picture contained in the preview area, using the current or previously specified display method.

This command is frequently used to display a picture that has been altered using /CLEAR and /COLOR commands. It is especially useful when used in a subroutine to display a series of partial pictures independent of the picture name. (See "Macro dissolves" at the end of this chapter.)

Go To:

/GOTO *label*

This command causes the story to branch to the line in the story table that has the designated *label* in the Label column. This command is commonly used to branch back to the beginning of the story so that the story will run continuously or to branch back to a menu screen.



Go Subroutine:

`/GOSUB label`

This command calls the subroutine beginning on the line in the table having the designated *label* in the Label column. The subroutine will continue until a /RETURN command is found. The /RETURN will cause the story to return to the line immediately following the /GOSUB command. Other subroutines can be called from within a subroutine, but one subroutine cannot be placed inside another subroutine. (See “Macro dissolves” at the end of this chapter.)

If and If Not:

```
/IF [NOT]  {data} {GOTO label}  
           {KEY}  {GOSUB label}  
           {END}
```

If the characters keyed match the characters specified in the *data* parameter, processing will branch to the line having the designated *label* in the Label column, or processing will end if the END parameter is specified. *Data* can be any characters other than the word “key.”

If KEY is specified, then the processing will test to see if **any** key has been pressed. When the IFNOT form of this command is used, the story can continue processing (such as continued animation) until a key is pressed.



Input:

`/INPUT [keystrokes]`

This command causes the story to read input from the keyboard.

The *keystrokes* parameter is the number of characters that must be entered before the story will continue. If omitted, 1 keystroke is assumed. If *keystrokes* is 0, the `/INPUT` command does not wait for a keystroke to be entered; however, if a keystroke has been entered, it is read as input. This allows ongoing animation while waiting for a key to be pressed. The Enter key will always cause the story to proceed.

The characters keyed as a response to the `/INPUT` command can be tested with the `/IF` and `/IFNOT` commands.

Return:

`/RETURN`

This command causes the story to return to the line immediately following the last `/GOSUB` command that was processed.

End:

`/END`

This command causes the story to stop immediately. It is commonly used with menus where one of the choices is to end. It is also used as the last line in a story to separate the story from the subroutines that follow.



Tell:

`/TELL [d:] [path] storyname`

This command causes the current story to branch to the designated *storyname*, using any designated drive and path, and begin processing at the first line of the new story. The specified drive and path also sets the drive and path for all pictures in the new story, unless otherwise explicitly specified in the new story. Upon completion of the second story, processing will not return to the first story. However, the second story can also contain a Tell command included at the end of the second story.

This command is entered with the *Story Editor* command but ONLY operates with *Story Teller*.

Because a story is limited to 360 lines in the story table, this command normally is used to chain together one or more stories for a large presentation.

Comment:

`/*`

The `/*` command allows you to enter a documentary comment into your story. Also you can insert a `/*` in front of an active picture or command name to temporarily deactivate that line, and later delete the `/*` to reactivate the line.



Print Screen:

`/*PRTSC [# of lines or FF] [,fromcolor-tocolor [fromcolor-tocolor]]`

This command prints the currently displayed picture image. The [*# of lines*] parameter controls the number of lines to space after printing. *FF* gives a single forms feed after printing, which is also what will occur if this parameter is omitted. The second parameter temporarily changes colors while the screen is printing, and works the same way as the `/COLOR` command. (Refer to the `/COLOR` command for range of values.)

Place `/*PRTSC` commands in your story on the lines following the displayed images you may wish to print. Normally these commands are treated as a comments in *Story Editor*, except when activated by $\hat{F}4$ (shown as sF4 at bottom of screen). Pressing $\hat{F}4$ causes the story to ignore the timings in the story and run at maximum speed, but stopping to print each time a `/*PRTSC` command is found. If a block has been marked (Alt B), $\hat{F}4$ will start the show running from the beginning to the end of the block, otherwise running will begin at the current cursor location in the story table. The Esc key stops running the story in $\hat{F}4$ mode.

`/*PRTSC` is always treated as a comment in *Story Teller*.

To use `/*PRTSC`, you must load `GRAPHICS.COM`, or an alternate graphics print processor such as `PRT3852D.COM` (supplied with *PC Storyboard*) for the IBM Color Jetprinter, each time you restart your IBM Personal Computer, and before you run *Story Editor*.



PC STORYBOARD Story Editor
Edit the Story

Story Name FEBSTORY

Label	Picture Name or Command	Display picture using:				Then wait for	Set Color		Area
		Method	Dir	Line	Time		Pal	Back	
strt1	pie2 Prod Revenue	WEAVE			FAST	1	GRY	PART	
	PIE2	FADE			MED	2			
strt2	horizbar Grp Achieve	STRIPES	UP		FAST	3.7	LGRY	FULL	
	line Profit by Q	EXPLODE	OUT-H			4	GRY		
flash	/color g-r r-g	CRUSH	UP	NONE		0			
	/input 0								
	/if 1 goto strt1								
	/if 2 goto strt2								
	/ifnot key goto flash								
	/* End if not a 1 or 2.								

FUNCTION KEYS F3 Step Story F6 Save Story F8 Select Story
 F1 Help F4 Run Story sF6 Save & Quit sF8 Quit (NO Save)
 F2 Editing Keys F5 View Picture F7 Print Story F9/10 Rotate

This story shows examples of *Story Editor* commands for branching, color changes, keyboard input, and a comment. The Color command causes the picture called LINE to rapidly change red and green colors until a key is pressed.

Macro dissolves

Your library of *PC Storyboard* programs contains a story called MACROS that has several special dissolve techniques in the form of subroutines. These macros are intended for use with full screens, but could be modified by the user for use on partial areas.

To get the macros into your story, block and copy them as explained earlier in this chapter in the "Function keys" section. To use a macro, first enter a picture name with dissolve method NONE. Follow this by a GOSUB command that names the label on your macro. On the GOSUB command line, specify the values to the right in the table, such as dissolve method, time, color and wait for period. Note that the time and wait specifications apply to **each** step or element in the macro dissolve. If you want your story to wait for a key after the dissolve has occurred, do this by putting a DISPLAY command with a dissolve of NONE and a wait for of KEY immediately following the GOSUB command.

The macros also show examples of how to use the *Story Editor* commands.





Using Story Teller



How Story Teller works

What Story Teller does

Story Teller is the program you use to run stories previously created with *Story Editor*.

Story Teller begins with the first line in your show and continues in the same way as when you used function key F4 (Run Story) in *Story Editor*, except that it will also chain to another story if it encounters a /TELL command in the story being shown.

Assembling a story

Additional copies of only the *Story Teller* module may be made to allow the user to distribute and show stories, provided each diskette copy is labeled as follows:

CONTAINS
IBM Story Teller program (ST.EXE)
© Copyright IBM Corp. 1985
All Rights Reserved

You can use the DOS COPY command to put *Story Teller*, your story, and your PIC and .CAP files on the diskette.

How to start

If your *PC Storyboard* programs are in a DOS subdirectory (such as PCSCMD), change to that directory by using the Change Directory command. For example:

```
C>cd pcscmd
```

However you may have *Story Teller* on a diskette with the story and the pictures.

You can start *Story Teller* in several ways. You can start it without a story name. For example:

```
C>st
```

You will then be prompted for the STORY_NAME. Enter the name of the story along with the drive and path, if needed.

You can start *Story Teller* naming the drive, path and name of the story at the same time, and bypassing the prompt. For example:

```
C>st c:\picfileA\mystory
```

Or if *Story Teller* is on one drive and the story is on another:

```
A>st b:mystory
```

Or you can start *Story Teller* from one diskette without specifying a story name, but when prompted for STORY_NAME, change to a second diskette having the story and pictures. Then enter the story name and run the show.

Although *Story Editor* and *Story Teller* use the .SH~ file extension to distinguish story files from other types of files, you do not need to enter the .SH~ file extension on the story name.

Using special keys

When *Story Teller* is running, the following keys can be used:

- | | |
|-----|---|
| F3 | This function key causes the story to be presented one step at a time. Press F3 to continue stepping the story. |
| F4 | This function key resumes normal story running. |
| Esc | This key temporarily stops the story. You are asked if you want to continue <i>Story Teller</i> . A "Y" response continues, but a "N" response will stop <i>Story Teller</i> and return to DOS. |
| - | This key will cause <i>Story Teller</i> to back up to either the previous full picture or previous line with a period in the label field, and wait until you press any key to continue. |
| / | Entering the slash (/) key followed by a label used in the story will cause an immediate branch to the line in the story containing that label. The label name entered is not displayed. If the label cannot be found, a beep is sounded. |



+

This key either returns to the point in the story where you began backing up (using the - key), or to the point where you first took a direct branch using the / key. The story will wait until you press any key to continue.

Joy stick

You can also control the presentation sequence with the two buttons on a joy stick connected to the IBM Game Control Adapter card. For more information, see "Using a joy stick" in the "Using Story Editor" chapter.





Appendix A. Installing PC Storyboard

This appendix explains how to install *PC Storyboard* on your IBM Personal Computer. If a problem occurs during installation, hold down the Ctrl key and press the Break key. Then restart installation.

Installing PC Storyboard on a diskette-only system	A-2
Installing PC Storyboard on fixed-disk system	A-3
8087 Math Coprocessor	A-4

Installing PC Storyboard on a diskette-only system

If you are going to use *PC Storyboard* from diskettes, you should make backup copies of your master diskettes. Your master diskettes are the ones you received when you purchased *PC Storyboard*.

You can use the DOS DISKCOPY command to make backup copies. See the DISKCOPY command in the DOS manual for information. Your master diskettes will be your "source" diskettes and the copies you're making will be your "target" diskettes.

After you finish copying the master diskettes, you can run *PC Storyboard* from your backup copies.

Note: When you start *Picture Maker* or *Story Editor*, an IBM title screen appears. If this screen does not disappear when you press any key, read the section on the 8087 Math Coprocessor switch at the end of this appendix.

Installing PC Storyboard on a fixed-disk system

If you are going to use *PC Storyboard* on a fixed-disk system, you need to install it on your disk. Here's how.

1. Start your IBM Personal Computer the way you normally would.
2. Type **a:** and press **←** to change the default drive to drive A.
3. Insert *PCStory1* in drive A.
4. Tell *PC Storyboard* where to install the programs by entering one of the following commands:

Type **install c:** if your fixed disk is drive C.

Type **install d:** if your fixed disk is drive D.

5. Follow the instructions on the screen.

During installation, a directory PCSCMD will be created on your fixed disk and *PC Storyboard* will be stored in that directory. When you start *PC Storyboard*, change to that directory as follows:

Type **cd \pcscmd** and press **←** (Enter).

Then enter the initials of the *PC Storyboard* program you want to use.

Note: When you start *Picture Maker* or *Story Editor* an IBM title screen appears. If this screen does not appear, read the section on the 8087 Math Coprocessor switch at the end of this appendix.

8087 Math Coprocessor

When you start *Picture Maker* or *Story Editor* an IBM title screen appears. If this screen does not appear and the cursor goes to the upper left of the screen, it may be because of the setting of the 8087 Math Coprocessor switch on switch block 1. You should check the setting. For information about removing the cover of your IBM Personal Computer and changing switch settings, see the *Guide to Operations*.

When you locate switch block 1, set switch 2 as follows:

- If you have the 8087 Math Coprocessor, switch 2 on switch block 1 must be off.
- If you do not have the 8087 Math Coprocessor, switch 2 on switch block 1 must be on.

Note that these settings might be different from those specified in the *Guide to Operations*.

Appendix B. Advanced topics

Using composite video	B-2
Creating and changing typefaces with Picture Maker	B-5
Constructing a remote control adapter	B-11
The Interrupt command	B-13

Using composite video

Types of color displays

Several devices can receive a color display signal from your IBM Color/Graphics Monitor Adapter:

An RGB monitor (such as the IBM 5153 Color Display) attached through the 9-pin connector to the adapter board.

A composite monitor attached through the circular (RCA-type) jack. This type of monitor does not work with RF modulation.

A standard color television, when an RF modulator device has been installed either on the Color/Graphics Monitor Adapter board or externally in the line running from the circular jack to the TV input.

Video Cassette Recorders (either VHS or Beta format). Connect the circular jack on the IBM Color/Graphics Monitor Adapter board to the "video in" jack on the VCR. However if the composite signal has RF modulation, connect the wire from the adapter board to the "TV antenna" connection on the VCR.

Some televisions, monitors and projection devices accept two or more types of signals.

The PC Storyboard Program Product supports the IBM Enhanced Graphics Adapter board only to the extent that it operates in compatibility with the IBM Color/Graphics Monitor Adapter. The IBM Enhanced Graphics Adapter only has RGB output as a standard feature.

Advantages of RGB and Composite displays

An RGB color monitor has the benefit of very precise display of color dots (pels). In graphics mode, it can display four colors at any moment (one background and three foreground colors). It also has a text display mode allowing display of text in up to 16 colors.

A composite monitor, when used with the IBM Color/Graphics Monitor Adapter, has the benefit of greater color selection, but with less resolution of pels and with text mode displays that are not as sharp as those in RGB mode. The adapter board addresses side by side pairs of pels (therefore less resolution) but can display them in up to 16 different colors (therefore more color selection). However the variety of colors and the application of certain programming techniques can make composite pictures appear to have smoother lines and better visual impact than the same pictures displayed on an RGB monitor.

RGB and Composite display technologies

The IBM Color/Graphics Monitor Adapter directly drives the red, green, and blue color guns in the RGB monitor. This is a TTL interface. The IBM Color/Graphics Monitor Adapter drives a composite monitor with an analog frequency (which if going to a TV must also have RF modulation added). The analog frequency output of the adapter board is such that it only addresses every two pels, compared to every pel in an RGB monitor.

This difference is important because what can appear as a half-tone pattern (alternating pels in two colors) on an RGB monitor will appear as a solid color on a composite monitor. Furthermore if the pattern in RGB is shifted one pel right or left, a different color will be displayed in composite mode. You will see no apparent correspondence between the two modes, because composite is not a blend of RGB half-tones.

Special considerations for composite video

Because composite video is displayed as pairs of pels, alignment of images is important for control of color and image quality. *Picture Maker* will maintain alignment control for you when you use the Video (Alt V) command. Pictures prepared with the composite video mode ON will be properly displayed in both RGB and composite modes. However, pictures prepared with the composite video mode OFF will be properly displayed in RGB mode (and can be made in greater detail) but will give unpredictable results in composite display mode.

Picture Maker maintains two color tables, one for RGB and one for composite mode. If you display the color composite table in RGB mode, you will see half-tone patterns, whereas the same patterns will be displayed as various solid colors in composite mode.

When using composite mode, the Bold typeface will produce the best results. Normally text displayed in a light color surrounded by a dark color will give characters that appear to be smoother than when displayed in RGB. We recommend that you experiment in composite mode with different colors, text sizes, and color control adjustments on your monitor.

Also you will probably find that monitors that take direct composite video signals without RF modulation will give the sharpest image. Note that the IBM PCjr comes with both an RF modulated and a standard composite signal output.

Creating and changing typefaces with Picture Maker

Creating a typeface (Alt 0) This command creates a file for a new typeface. The face can have from 1 to 5 sizes, which you can select when prompted. When a typeface is created, every character in every size is set to blank. This new typeface becomes the current typeface and is saved in a file under the name you specify.

Using the Alt 0 command:

1. Press Alt 0 (Alt zero).
2. Respond to the prompt by typing a name for the new typeface, a space, and the number of typeface sizes you wish to prepare.
3. Press Enter.

Notes:

- If you do not specify an extension for the typeface name, *Picture Maker* will add a .FAC file extension.
- The number of sizes in a face cannot be changed after the face is created.
- The new typeface will replace any existing typeface with the same name.

Saving a typeface (Alt 1)

This command saves the current typeface in a file under the name you specify.

Using the Alt 1 command:

1. Press Alt 1.
2. Respond to the prompt by typing the drive, path and name for the typeface you wish to save.
3. Press Enter.

Notes:

- If you do not specify an extension for the typeface name, *Picture Maker* will add a .FAC file extension.
- The new typeface will replace any existing typeface with the same name.

Setting the baseline (Alt 2) This command sets the baseline used when editing characters in a typeface file with the Alt 3 command. The baseline is the distance in the vertical direction between the bottom of a character and the line on which it is written. You might think of the baseline in the same way as a ruled line used when printing words on a piece of paper. When Alt 2 is pressed, the baseline value shown is the line on which the cursor is currently displayed. As each character is edited with Alt 3, the bottom of the elastic box for the character is set relative to the baseline so that words can be displayed as a straight line of characters.

Using the Alt 2 command:

1. Move the cursor up or down until the character to be edited is at the desired distance above or below the cursor.
2. Press Alt 2. The baseline is set and the number of the line on which the cursor is currently located is displayed.
3. Continue with editing using Alt 3.

Note:

- The baseline only affects those characters edited after the baseline has been set. The baseline remains in effect until changed.

Editing a character (Alt 3)

This command edits the currently displayed character or graphic symbol assigning it to the keytop character you specify in the current setting of the type size and in the current typeface.

If you have an existing character you wish to modify, display the character and use *Picture Maker* commands such as Draw or Zoom to make the desired changes before beginning the Alt 3 command. If you have no existing character, use *Picture Maker* commands to create the desired character or graphic before beginning the Alt 3 command.

The graphic image you create and assign to a character key can be any image. For example, you might want to frequently use certain special symbols, such as Greek letters, mathematical symbols, or logos, and want to be able to key them in text mode rather than cutting and pasting them from a Picture Library.

Using the Alt 3 command:

1. If necessary, use the Alt 2 command to set the baseline.
2. If necessary, use the Size, Shadow and Slant (S) command to set the current size for the character or characters you are editing.
3. Press Alt 3 to begin an elastic box.
4. Expand and/or move the elastic box to indicate the area of the picture (previously created or changed with *Picture Maker* commands) to be used as the new character.

-
5. Either press Alt 3 to edit the picture and retain the elastic box, or press Enter to edit the character and end the command.
 6. Respond to the Edit Character prompt by pressing the keytop of the character with which to associate the new character or graphic symbol. The keytop you pressed and the current character size will be displayed. Press any key to continue.

Notes:

- The keytop you press when editing a character or graphic symbol must be a character with an ASCII code between 32 and 128. This includes all letters, numbers, and standard punctuation marks.
- Only the shape of the new character is retained. Coloring takes place during writing. Any color other than the background color is treated as part of the character.
- The change will remain in effect until the character is edited again or until another face is loaded or until *Picture Maker* is ended. To permanently save the change, use the Save a Face (Alt 1) command.

**Setting character spacing
(Alt 4)**

This command sets the spacing between characters when written from the current typeface in the current size. You may use this command both when creating a typeface and when writing it with the Text (T) or Write (W) commands.

Using the Alt 4 command:

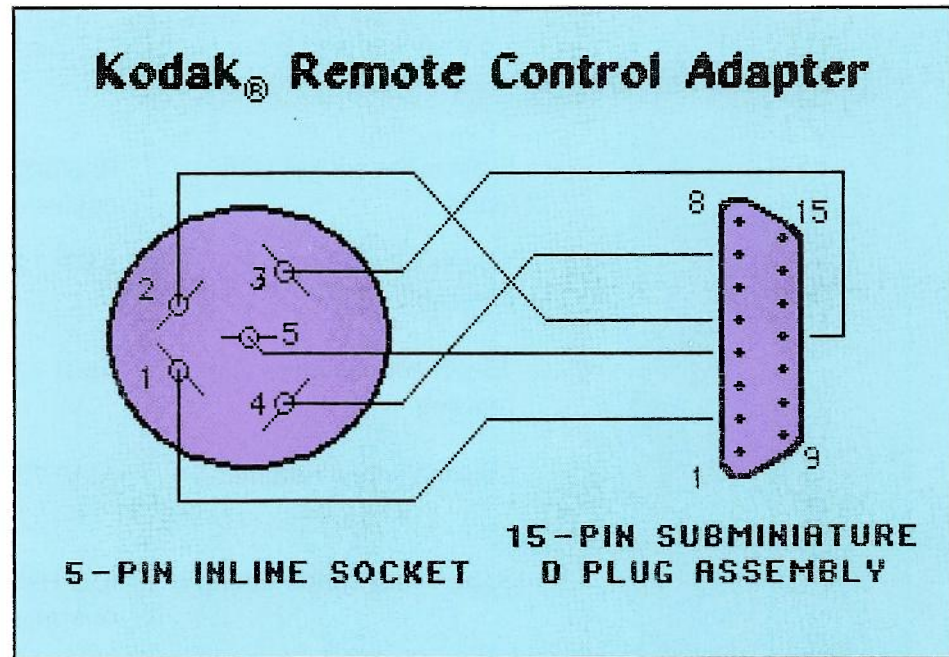
1. If necessary, use the Size, Shadow and Slant (S) command to set the size of the current typeface for which you want to change the spacing.
2. Press Alt 4.
3. Respond to the change spacing prompt by pressing any number 0 to 9 for the number of spaces you wish to have between characters in the current size and typeface.

Note:

- The spacing you set will remain active until it is changed, or until another face is loaded or *Picture Maker* is ended. If you wish to permanently save the change you made, use the Save a Face (Alt 1) command.

Constructing a remote control adapter

In the “Using *Story Editor*” chapter of this book, under the topic “Using a joy stick,” an adapter for using a Kodak EC-1 Remote Control was mentioned. Wiring and parts for this adapter are shown below. Construction by a qualified electrician is recommended.



Note: The numbers shown above are on the wire side of the Radio Shack 274-1215 socket. They do not correspond to the numbers on the plug of the Kodak EC-1. (Plug pin 1 is socket pin 2; plug pin 2 is socket pin 1; plug pin 3 is socket pin 4; plug pin 4 is socket pin 3.)

The leads are connected to plug and socket pins as follows:

- 5-pin socket lead 1 connects to 15-pin plug lead 2.
- 5-pin socket lead 2 connects to 15-pin plug lead 5.
- 5-pin socket lead 3 connects to 15-pin plug lead 12.
- 5-pin socket lead 4 connects to 15-pin plug lead 7.
- 5-pin socket lead 5 connects to 15-pin plug lead 4.

Parts list:

5-pin inline socket with leads	Radio Shack ¹ 274-1215, or equivalent
15-pin subminiature D plug assembly	AMP 728-2, or equivalent
15-pin subminiature D plug housing	AMP 728-3, or equivalent
Locking screw retainer	AMP 732-2, or equivalent
3/32" heat shrink tubing	ICO Rally "Heatrax" 8502, or equivalent

¹ Radio Shack is a registered trademark of the Tandy Corporation.

Interrupt command

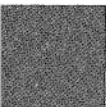
The Interrupt command is an advanced command intended for use by people with programming skills. This command allows interruption of the *Story Editor* or *Story Teller* programs, a branch to another program specifically designed to work with *PC Storyboard* according to the conditions outlined below, and a return to the *PC Storyboard* program that was interrupted.

Interrupt:

```
/INT nnn [,ax] [,bx] [,cx] [,dx]
```

This command optionally loads registers AX, BX, CX, and DX with the values in the 2nd through 5th parameters, and issues a branch to the interrupt specified by *nnn*, which can be expressed decimally (000 to 255) or hexadecimally (00h to FFh). Registers AX, BX, CX, DX, SI, DI, DS, ES, and the Flags register are saved and need not be restored. The interrupt processing program must leave the stack pointer (SP) and stack segment (SS) registers in the same state as they were before leaving *Story Editor* or *Story Teller*.

The program that processes the interrupt must be a DOS-resident .COM program. It must be loaded before *Story Editor* or *Story Teller* is started. The .COM program must return to the interrupted program. DOS reserves interrupts 60 through 67 for user software.



Appendix C. Reporting problems to IBM

Reporting problems to IBM

If you have a problem with *PC Storyboard*, you can report the problem to IBM. On the following pages are forms you can use to report your problem. You can also print a copy of these forms with *PC Storyboard*.

How you print the Problem Report Form depends on whether you have a fixed-disk system or a diskette-only system.

- If *PC Storyboard* is installed on your fixed-disk, check that the default directory is PCSCMD. Then type **pcsprob** and press **←**.
- If you run *PC Storyboard* from diskettes, place PCSTORY1 diskette in drive A. Check that A is your default drive. Then type **pcsprob** and press **←**.

Please fill out the forms as completely as possible and send all four pages to IBM. If you're not sure of the size of your computer's memory, type **chkdsk**. If you're not sure what DOS version you have, type **ver**. United States customers can send the problem report, to:

IBM Corporation
P.O. Box 720576
Atlanta, GA 30358-9990

IBM PC Storyboard
Problem Report

Your Company: _____

Your Name: _____

Alternate Contact: _____

Address: _____

City: _____

State/Prov: _____ Zip/Postal Code: _____

Country: _____

Telephone: (_____) _____ Extension _____

How much memory does your computer have? _____ K

What is the level of your PC DOS? _____

What type of display(s) do you have?

Monochrome Manufacturer _____ Model _____

Graphics Manufacturer _____ Model _____

What type of color/graphics adapter do you have?

Manufacturer _____ Model _____

What type of graphics printer do you have?

Color? _____ Manufacturer _____ Model _____

If you have purchased the IBM Extended Support
Service, please enter your Support Authorization
Number: _____

IBM PC Storyboard
Problem Report

Please identify the problem:

Program with the error (PT PM SE ST): _____

Message number (if any): _____

Publication Name: _____

Page number (s): _____

Describe the problem: _____

Use additional sheets if necessary.

IBM PC Storyboard
Problem Report

Please describe how this problem is affecting or restricting your use of the IBM PC Storyboard.

Please include any materials which might help IBM solve your problem such as:

- Copies of any screens in error
- Listings or PrtSc images
- Directory listing of disk or diskette

COPIES OF SCREENS AND LISTINGS WILL NOT BE
RETURNED UNLESS REQUESTED.
DO NOT SEND DISKETTES UNLESS REQUESTED BY IBM.

IBM PC Storyboard
Problem Report

Licensed Program Information
Date: _____

If you have a fixed-disk system and want to display the serial number, version, and level information for PC Storyboard, first check that your default directory is PCSCMD. Then enter **type serial**. If you have a diskette-only system, insert diskette PCSTORY1 into drive A, check that the drive A is the default drive, and enter **type serial**. Write all this information below. Be sure to include this information when you mail the form in.

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Messages

Messages

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DOS messages

While you are using *PC Storyboard*, you may see messages from DOS or from *PC Storyboard*.

There are three errors that may cause DOS error messages to appear.

Printing a listing: If you press F7 to tell *Story Editor* to print a listing of the lines in a show and the printer is not turned on, the following DOS message appears on top of the *Edit the Story* screen:

Write fault error writing device PRN
Abort, Retry, Ignore?

Abort Ends *Story Editor* and returns you to DOS without further printing or without giving you an opportunity to save the story.

Retry Tries again to print the same character in the print line of the show. Prints it if you have turned your printer on.

Ignore Tries again to print the next character in the print line of the show. Prints it if you have turned your printer on.

Indicating a drive that isn't ready: Another DOS error occurs if you tell *Story Editor* to get a story from a drive or save a story in a drive when the:

- Drive doesn't contain a diskette.
- Drive lever isn't closed.
- Drive contains a diskette that isn't initialized.
- Drive contains a disk initialized beyond the capacity of your drive.

The following DOS message appears on top of a *Story Editor* screen:

Not ready error reading drive x
Abort, Retry, Ignore?

The x is replaced by the letter of the drive that isn't ready.

Abort Ends *Story Editor* and returns you to DOS without saving your story.

Retry Tries again to read or write to the diskette. If you have inserted a diskette or closed the drive lever, press R until the screen clears.

Ignore Returns to *Story Editor* without reading or writing the story. You may have to press I several times until the screen regenerates. *Story Editor* will display an error message.

Entering a name that is a DOS reserved word: If you tell *Story Editor* to use a word that is reserved by DOS for a story name, the following DOS message may appear on top of the Select Story screen:

Read fault error reading device xxx
Abort, Retry, Ignore?

The xxx is replaced by the DOS reserved word. Press I several times until the Select Story screen regenerates. *Story Editor* will display an error message.

PC Storyboard messages

PC Storyboard has two basic types of messages: status messages and error messages.

Status messages: *PC Storyboard* issues status messages to tell you what's happening. For example:

The end of the story has been reached.

Since you don't have to do anything about status messages, they are not discussed in this book.

Error messages: *PC Storyboard* issues error messages when it can't do something that you requested. For example:

SE17 Unable to find this picture.

Each error message begins with a four-character identifier, such as SE17.

SE Identifies it as an *Story Editor* message. Messages are also issued by *Picture Maker* (PM), *Picture Taker* (PT), and *Story Teller* (ST).

17 Identifies this message number.

Starting on the next page, error messages are listed for each program, in order by message number. Under each message is an explanation of why the message was displayed and suggestions on how you might correct the condition.

Picture Maker messages

PM01 Error creating xxx

The xxx is replaced by the name of the typeface in which you're creating a symbol or character. One of the following things happened:

- You used unacceptable characters in the name. The following characters are acceptable:

a...z and A...Z

0...9

! \$ # % & () - _ ^ ' ' ~ @

- You used an incorrect form for the name. The following form is correct:

d:\dir\filename.ext

d: represents the letter of the drive.

dir is the directory name: maximum of 8 characters, plus a 3 character extension.

filename is the file name: maximum of 8 characters.

ext may be .fac.

- The drive or directory information is not correct.
- There is no diskette in the drive.
- Access to the file specified is not allowed.

NOTE: If this message is displayed immediately after *Picture Maker* is started, the pm.fac file has not been found and *Picture Maker* has been unable to create a pm.fac file for you for one of the above reasons.

PM02 Need # of sizes to create face

The # represents the word "number." To create a face, you must type a name followed by a space and a number.

PM03 Error loading xxx

The xxx is replaced by the name of the typeface you asked *Picture Maker* to use. *Picture Maker* can't find the typeface. One of the following things happened:

- You may have mistyped the name. The typefaces that come with *Picture Maker* are called Bold, Thin, Roman, and PM.
- The file containing the typeface has been erased.

- The drive or directory information is not correct.
- There is no diskette in the drive or the drive lever is open.

PM04 Error editing xxx size n

The xxx is replaced by the name of the typeface for which you asked *Picture Maker* to create a character or symbol. The n is replaced by the size in which the error occurred.

There is a limit to the size of a file in which typefaces are stored. You may have reached this limit. You can save this character in a different file or modify characters in the file by making them smaller.

PM05 Error saving xxx

The xxx is replaced by the name of the typeface you tried to save.

The file was not saved because one of the following things happened:

- You used unacceptable characters in the name. The following characters are acceptable:

a...z and A...Z

0...9

! \$ # % & () - _ ^ ' ' { } ~ @

- You used an incorrect form for the name. The following form is correct:

d:\dir\filename.fac

d: represents the letter of the drive.

dir is the directory name: maximum of 8 characters, plus a 3 character extension.

filename is the file name: maximum of 8 characters.

fac is the extension.

- You used a reserved word. The names AUX, COM1, COM2, CON, LPT1, LPT2, LPT3, NUL, and PRN are reserved words in DOS.
- A diskette was not in the drive you specified.
- The lever was not closed in the drive you specified.
- The directory you indicated or implied was not in the drive you specified.

PM06 Do you want to save your patterns?

Enter N, if you don't want to save the patterns in your color table. Enter Y if you do want to save them. If you save your patterns, the new color table will replace the old color table in the file PM.PAT.

PM07 Error saving patterns

Picture Maker could not save the patterns. The error may have occurred because there is no diskette in the drive.

PM08 Picture library xxx not found

The xxx is replaced by the library name you typed. PM.LIB and PMALT.LIB are the names of the picture libraries that came with *Picture Maker*.

If you are using *Picture Maker* from a diskette and you want the PMALT.LIB library:

- Remove the PCSTORY2 diskette.
- Insert the PCSTORY1 diskette.
- Press Alt F2.
- Enter **pmalt.lib**
- Press F2.

PM09 Do you want to end Picture Maker?

Enter Y (for Yes) or N (for No).

If you end *Picture Maker*, the picture on your screen will not be saved before you quit. If you want to save the picture, enter N and then use the O (Out) command.

PM10 Pattern already in list

The pattern that you tried to save in the color table is already there.

PM11 Pattern limit reached

The color table is full. You can't put any more patterns in it until you remove some of the patterns already in it.

To remove patterns, use a function key from F5 to F10 or a cursor movement key to move the white frame to the pattern you want to delete and press the Del key.

PM12 Error loading xxx

The xxx is replaced by the file name or number you typed. You have entered a file name or number that *Picture Maker* can't find. Be sure that you've entered the correct name, that you're in the correct directory, that you have the correct diskette inserted, that you specified the correct drive and directory information, and that you haven't erased the file.

The following form is correct:

d:\dir\filename.ext

d: represents the letter of the drive.

dir is the directory name: maximum of 8 characters, plus a 3 character extension.

filename is the file name: maximum of 8 characters.

ext may be .pic (for a picture file) or .cap (for a captured file).

PM13 No spaces or commas allowed in file name

Picture Maker will not save the picture because the file name contains spaces or commas. Enter a new name.

If you want to add to the end of a .cap or .lib file, enter the file name with extension .lib or .cap. *Picture Maker* will add the current picture to the end of the picture file. You may not replace pictures in the middle of any file. *Picture Maker* will not add pictures to the end of any other picture file type.

PM14 Access to xxx denied

The xxx is replaced by the name of the file in which you tried to save the picture. Access was denied for one of the following reasons:

- The file is protected, which means that although you can view the picture that is in it, you can't return the picture to that file. If you want to save the picture, you can save it in a different file or save it in another directory by adding directory and drive information.
- You tried to use a reserved word as the name of file. The names AUX, COM1, COM2, CON, LPT1, LPT2, LPT3, NUL, and PRN are reserved words in DOS.

PM15 Error. Check disk and file name

One of the following things happened:

- A diskette was not in the drive you specified.
- The lever was not closed in the drive you specified.
- You tried to use a reserved word as the name of file. The names AUX, COM1, COM2, CON, LPT1, LPT2, LPT3, NUL, and PRN are reserved words in DOS.

PM16 HELP file (PM.HLP) not found

HELP information has been erased from the current DOS directory and/or drive.

If you are using *Picture Maker* from a diskette and you don't want to end, remove your copy of the *Picture Maker* diskette and replace it with the original *Picture Maker* diskette. Then press F1 for HELP information. When you end *Picture Maker*, you may want to use the DOS COPY command to copy the PM.HLP from the original *Picture Maker* diskette to your diskette.

If you are using *Picture Maker* from a fixed disk, end *Picture Maker* and then use the DOS COPY command to copy the PM.HLP file from the original *Picture Maker* diskette to the *pcscmd* directory on the fixed disk.

PM17 Error saving xxx

The xxx is replaced by the file name you typed. The file was not saved because one of the following things happened:

- You used unacceptable characters in the name. The following characters are acceptable:

a...z and A...Z

0...9

! \$ # % & () - _ ^ ' ' { } ~ @

- You used a reserved word. The names AUX, COM1, COM2, CON, LPT1, LPT2, LPT3, NUL, and PRN are reserved words in DOS.
- A diskette was not in the drive you specified.
- The lever was not closed in the drive you specified.
- The directory you indicated was not in the drive you specified.

PM18 Printer error. Try again?

Your printer is probably not turned on. Turn it on, and enter Y to start printing. If you don't want to print the picture, enter N to end the H (Hardcopy) command.

If your printer is turned on, check to see if "Ready" is selected.

PM20 Text files can't be edited by PM

You are trying to use *Picture Maker* with a text file. You can't. You must use the same method that created the original image.

PM21 That character can't be edited

You can edit any character whose ASCII code is between 32 and 127, which includes all letters and numbers and most of the standard punctuation marks. For more information on ASCII codes, see "Appendix G" of the *IBM Personal Computer BASIC* manual.

PM22 Command xxx is an unknown command

The xxx is replaced by the word you typed. Enter the correct command. For more information, see "Commands" in the chapter "Using *Picture Maker*."

PM23 File not found: xxx

The xxx is replaced by the word you typed. You entered a directory name that *Picture Maker* can't find. Be sure that you've entered the correct name, that you have the correct diskette inserted, that you specified the correct drive and directory information, and that you haven't erased the directory.

PM24 Bad file name

You entered a directory name that *Picture Maker* can't find. Be sure that you've entered the correct name, that you have the correct diskette inserted, that you specified the correct drive and directory information, and that you haven't erased the directory.

PM27 Dir error

One of the following things happened:

- The correct diskette wasn't in the drive specified.
- The lever wasn't closed in the drive you specified.

PM28 Error making directory xxx

The xxx is replaced by the name of the directory that you tried to create.

The directory was not created because one of the following things happened:

- You used unacceptable characters in the name. The following characters are acceptable:

a...z and A...Z
0...9
! \$ # % & () - _ ^ ' ' { } ~ @

- You used a reserved word. The names AUX, COM1, COM2, CON, LPT1, LPT2, LPT3, NUL, and PRN are reserved words in DOS.
- The name is already being used for a directory.
- The fixed disk or diskette on which you specified the directory should be created is full.

PM29 Error removing directory xxx

The xxx is replaced by the name of the directory you tried to erase. *Picture Maker* won't erase the directory for one of three reasons:

- The directory contains files.
- The directory is the one you're currently using.
- It can't find the directory. Check the drive and the spelling of the directory name.

PM30 Access to xxx denied

The xxx is replaced by the name of the file you tried to erase. You can't erase it because it is protected.

PM31 xxx not found

The xxx is replaced by the name of the file you tried to erase. *Picture Maker* didn't erase the file because it couldn't find the file. Check the spelling of the file name and the drive and directory information.

PM32 Go to full screen with no changes?

You press U (for Undo) while you were working in zoom mode. If you enter Y (for Yes), you will return to the full screen picture and no changes will have been made to it. If you enter N (for No), you will remain in zoom mode.

PM33 Graph limits conflict

The high limit you entered in the graphing instructions is equal to or less than the low limit. Use Alt G to change the graphing instructions.

PM34 Not enough data for graph or chart

One of the following things happened:

- You did not enter any data.
- You entered only one data value and you are trying to do a line graph.

Use Alt G to enter data.

PM35 Insufficient memory available to run *Picture Maker*. nnK additional bytes are required.

There is not enough free memory at this time to run *Picture Maker*. The nn is replaced by the amount of free memory you need.

You may be able to get enough free memory by freeing the memory used by resident programs such as *Picture Taker*. If you are using DOS 3.0 with *Picture Maker*, you need 320K of memory.

PM36 XPRINT.COM not found

XPRINT.COM is the printer file that came with *Picture Maker*.

Picture Taker messages

PT01 File failed to open.

One of the following things happened when you entered the file name:

- *Picture Taker* couldn't find the file because the name, directory, or drive information is incorrect.
- You have a problem with the fixed disk or diskette the picture is saved on.
- You have a problem with the file containing the picture.

One beep

The application program (the program that created the picture you want to capture) is waiting for you to press a key. When you press that key, *Picture Taker* will attempt to take the picture. You will hear three beeps if *Picture Taker* took the picture. You will hear a descending sound, followed by a low sound if *Picture Taker* didn't take the picture.

Three beeps

Picture Taker took a picture.

Descending sound followed by a low sound

Picture Taker didn't take a picture because one of the following things happened:

- The diskette has a file protect sticker.
- The disk or diskette is full.
- The diskette lever wasn't closed in the drive you specified or implied.
- The directory specified or implied is no longer present in the system.

Story Editor messages

SE02 This story name is already in use. Please enter another.

One of the following things happened when you entered a name in the "New Story Name" field.

- The name you entered is already being used for another story or file in the current directory.
- You entered the name of a picture file.
- You used a reserved word. The names AUX, COM1, COM2, CON, LPT1, LPT2, LPT3, NUL, and PRN are reserved words in DOS.

Enter a different name.

SE03 This file does not contain a story. Please enter another.

The file name you entered is being used to store information other than stories. Enter a different name.

SE04 This name is incorrect. Please reenter.

One of the following things happened:

- You mistyped the name.

- You used unacceptable characters in the name. The following characters are acceptable:

a...z and A...Z

0...9

! \$ # % & () - _ ^ ' ' { } ~ @

- You entered incorrect directory or drive information.
- You entered a name for "Existing Story Name" that does not exist in the current directory you specified.
- You entered the name of a picture file for "Existing Story Name."

SE05 A disk read error occurred while reading this file.

One of the following things happened when you entered a name in the "Existing Story Name" field.

- You used a reserved word. The names AUX, COM1, COM2, CON, LPT1, LPT2, LPT3, NUL, and PRN are reserved words in DOS.
- You have a problem with the fixed disk or diskette the story is saved on.

If you have a disk or diskette problem:

- Try entering the name again.
- Use a backup copy of the story.

SE06 WARNING, unable to find this picture.

You have typed the name of a picture that *Story Editor* cannot find.

If the name and directory are correct, but for some reason the picture is not currently mounted, you may ignore the warning and proceed. Running the show with this condition will cause the show to stop.

To correct the condition now:

- Press F9 or F10 to rotate the names of the pictures in the current directory.
- Check the picture name, directory, and drive information you typed.

If the picture doesn't have the .PIC extension, you must enter the extension (for example, MYFILE.RAS).

If you incorrectly entered the name, directory, or drive, correct it and another check will be made.

The following form is correct for a *Picture Maker* picture:

d:\dir\filename.pic

Either of the following forms is correct for a *Picture Taker* file:

d:\dir\filename.ext,pic #

pic #

If only a picture number is given, the last file specified is used.

The following form is correct for a BASIC BSAVE file:

d:\dir\filename.ext

SE07 This label is used on another line. Enter a different label.

You've used the same label on two different lines. You must change this one in order to leave this line.

SE08 Please enter KEY or the number of seconds to wait (0 - 300).

You've entered something other than a blank, the word KEY, or a positive number for the field "Then wait for." Press F9 or F10 to rotate the valid entries or enter your own. Valid entries are:

- blank (to use the previous value)
- key (to wait for a key stroke before proceeding)
- the number of seconds to wait before proceeding (You may enter tenths of seconds, such as 1.5 or .3.)

SE09 Enter the number of seconds required to display the picture.

You typed an unacceptable entry in the "Time" field. To correct your entry, do one of the following things:

- Press F9/F10 to rotate in an entry.
- Type the number of seconds. You may enter tenths of seconds, such as 3.4.
- Leave the field blank so that the previously entered value is used.

SE10 Enter either FULL (full picture display) or PART (partial).

You typed a word other than full or part. Press F9/F10 to rotate in FULL, PART, or a blank. If blank is on the first line, it will default to full. If blank is on one of the following lines, it will default to the last entry for the field.

SE11 This value is not a valid screen coordinate.

Your entry contained a character or symbol, instead of all numbers. Either enter the coordinates yourself or determine the values interactively by pressing F5. See the description for the "From the picture" and "To screen" fields in the "Using Story Editor" chapter for information on how to interactively determine these values.

Valid coordinates are:

	X	Y
320 x 200	0-319	0-199
640 x 200	0-639	0-199
80 col text	0-79	0-24
40 col text	0-39	0-24

**SE12 This is not a picture name or command.
Use F9 to rotate them.**

You used a / in front of something other than an acceptable command. Press F9 or F10 to rotate the acceptable commands and the pictures in the current directory or retype your entry.

**SE13 Use this form: /IF n GOTO label or
/IFNOT n GOSUB label.**

The form you used for a /IF or /IFNOT statement is incorrect. N represents a value that you will compare with the input typed on the last /INPUT statement.

SE14 Unable to find this label on any line.

Picture Maker can't find the label you have used in a GOTO or GOSUB command. You can either enter one now or later in the story table. If you're stepping through or running a show, you can move the cursor to the next line in the story table and continue.

SE15 The label to GOTO is missing. Please enter one.

You did not type a label after a GOTO or GOSUB command. You must enter one so that *Story Editor* or *Story Teller* knows where to branch.

**SE16 Colors are: G(green) R(red) Y(yellow)
B(backgnd) C M or W.**

You have incorrectly entered the name of the color in a CLEAR or COLOR command. The following entries are allowed: g (green), r (red), y (yellow), b (background), c (cyan), m (magenta), or w (white).

Here is how you can clear an entire screen, except the background, to red.

```
/CLEAR r
```

Here are some examples of how to change green to red:

```
/COLOR g-r  
/COLOR gr
```

SE17 Unable to find this picture.

You have typed the name of a picture that *Story Editor* cannot find.

If you don't want to correct the condition now, you can continue stepping through or running the show after you move the cursor to the next line.

To correct the condition now:

- Press F10 to rotate the names of the pictures in the current directory.
- Check the picture name, directory, and drive information you typed.

If the picture doesn't have the .PIC extension, you must enter the extension (for example, MYFILE.RAS) .

If you incorrectly entered the picture name, directory, or drive, correct it and another check will be made.

The following form is correct for a *Picture Maker* picture:

d:\dir\filename.pic

Either of the following forms is correct for a *Picture Taker* file:

d:\dir\filename.ext.pic #

pic #

If only a picture number is given, the last file specified is used.

The following form is correct for a BASIC BSAVE file:

d:\dir\filename.ext

SE18 A disk write error occurred. The story was NOT saved.

You have a problem with the diskette or fixed disk on which you are trying to save the story. You can:

- Change the name of the story and try writing it to the diskette or fixed disk.
- Save the story on a different, formatted diskette (if you are trying to save it on diskette) or save the story on a formatted diskette (if you are trying to save it on a fixed disk) .

To change the drive or name:

- Press F8 to return to the Select Story screen.
- Enter a new name and drive for "New Story Name."
- Do not change "Existing Story Name."
- Press F6.

**SE19 The story name for a /TELL is missing.
Please enter one.**

You must enter a story name when you use a /TELL command. The form for the story name is:

d:dir\storyname

If you don't give drive and directory information, *Story Editor* uses the same drive and directory information it used to access the invoking story.

Story Editor does not check to see if the story exists or if the drive and directory information are correct. *Story Teller* makes these checks when the story is running.

SE20 Story Editor HELP file (SE.HLP) not found.

HELP information has been erased from the current DOS directory and/or drive.

If you are using *Story Editor* from a diskette and you don't want to end, remove your copy of the diskette and replace it with the original *Story Editor* diskette. Then press F1 for HELP information. When you end *Story Editor*, you may want to use the DOS COPY command to copy the SE.HLP from the original *Story Editor* diskette to your diskette.

If you are using *Story Editor* from a fixed disk, end *Story Editor* and then use the DOS COPY command to copy the SE.HLP file from the original *Story Editor* diskette to the *pccmd* directory on the fixed disk.

SE21 Part or all of block lost because resulting story too big.

The story that would have resulted if *Story Editor* had copied the indicated block of lines would have contained more than 360 lines. *Story Editor* kept the original lines in the story but did not copy all the lines you requested. Consider using /TELL commands to branch to other stories rather than including them in this story.

SE22 /TELL command only operates with Story Teller.

You have told *Story Editor* you want to branch to another story. Branching only occurs when *Story Teller* is actually running the story. If you're stepping through the story with F3 or running the show with F4, you can move the cursor to the next line in the story table and continue, although logically the /TELL command will be the last command executed by *Story Teller* in the current story.

SE23 No marked block exists.

You have told *Story Editor* to copy a block of lines but you have not marked the block with the Alt B keys.

SE24 About to delete a marked block. Are you sure? (Y or N)

Enter Y if you want to delete the marked block, and N if you don't want to.

SE25 No room to copy marked block.

You can't have more than 360 lines in a story. You used all the lines available, either with lines containing data or with blank lines. Blank lines are created when you use Alt I; they may also be created if you move the cursor below the last non-blank line on the screen. In the latter case, you may not have realized that you were creating blank lines.

Either erase blank lines or put some of your lines in a different story and use a /TELL command to branch to that story.

SE26 Cannot copy into marked block.

You are trying to copy a marked block of lines into itself. *Story Editor* will not do this type of copy.

SE27 No room to insert line.

You can't have more than 360 lines in a story. You used all the lines available, either with lines containing data or with blank lines. Blank lines are created when you use Alt I; they may also be created if you move the cursor below the last non-blank line on the screen. In the latter case, you may not have realized that you were creating blank lines.

To insert new lines, either erase blank lines or put some of your lines in a different story and use a /TELL command to branch to that story.

SE28 About to quit without saving story. Are you sure? (Y or N)

Enter Y if you want to quit without saving the story. Enter N if you don't want to quit. Then press F6 to save the show.

SE29 The value is incorrect; rotate acceptable values.

You have typed an incorrect value. Press F9 or F10 to rotate acceptable values for this field.

SE30 Insufficient memory available to run Story Editor. nnK additional bytes are required.

There is not enough free memory at this time to run *Story Editor*. The nn is replaced by the amount of free memory you need.

You may be able to get enough free memory by freeing the memory used by resident programs such as *Picture Taker*.

Story Teller messages

ST01 The file does not contain a story. Please enter another.

The file you named when you started *Story Teller* contains information other than a story. Restart *Story Teller*, using the correct file name.

ST02 Unable to find this story: xxx

The xxx is replaced by the name of the story that *Story Teller* can't find. You incorrectly entered the name either while you were starting *Story Teller* or in a /TELL command included within the story.

- Check the names of the stories on the current drive.
- Check the directory and drive information for the story.

ST03 A disk read error occurred while reading the story.

You have a problem with the fixed disk or diskette on which the story is saved. You can:

- Reenter the name and try again.
- Use a backup copy of the story.

Story line n contains the following error:

ST04 Unable to find this label: xxx

The n is replaced by a number. The xxx is replaced by the label that *Story Teller* can't find.

The number tells you which line contains the reference to the label. You can print the line numbers when you print the show by pressing F7 on the "Edit the Story" screen of *Story Editor*.

Enter Y to continue running the story, N to stop the story and return to DOS. Use *Story Editor* to correct the error.

Story line n contains the following error:

ST05 Unable to find this picture: xxx

The n is replaced by a number. The xxx is replaced by the name of the picture that *Story Teller* can't find.

The number tells you which line contains the reference to the picture. You can print the line numbers when you print the show by pressing F7 on the "Edit the Story" screen of *Story Editor*.

Enter Y to continue running the story, N to stop the story and return to DOS. Use *Story Editor* to correct the error.

ST06 Insufficient memory available to run Story Teller. nnK additional bytes are required.

There is not enough free memory at this time to run *Story Teller*. The nn is replaced by the amount of free memory you need.

You may be able to get enough free memory by freeing the memory used by resident programs such as *Picture Taker*.

A

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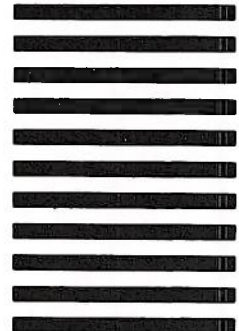
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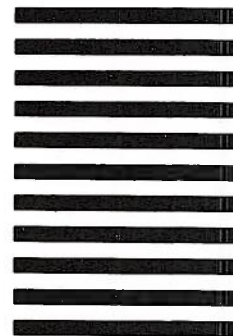
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