SUPER SKETCH™

OWNER'S MANUAL

PERSONAL PERIPHERALS, INC.

PPI

SUPER SKETCH™

GRAPHICS MASTER™
Software For Atari Computers
(400, 800, 600XL, 800XL, 1200XL, 1450XL with 48K)

A delightful new way of interacting with your computer to design detailed and colorful images. Designed for use by all ages.

Your SUPER SKETCH™ package contains:

- 1 SUPER SKETCH™ graphics tablet

- 1 GRAPHICS MASTER™ software cartridge

- 1 Instruction Booklet

- 1 STARTER KIT with drawings to trace

Developed By: Personal Peripherals, Inc., Irving, Texas

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Introduction

Congratulations! You are now in possession of one of the most versatile and easy-to-use computer graphics products available for your Atari computer. Super Sketch gives you the ability to create super video graphics without years of programming experience. In fact, you will be able to produce beautiful graphics immediately.

Creating "Computer Generated Graphics" onto a video screen has been possible for a number of years. The ability to do so in the past, however, has required advanced programming skills in conjunction with very expensive equipment.

Your Super Sketch graphics tablet is a highly sophisticated sensing device that electronically senses the movement of the control arm and translates that movement to your video screen. With the software cartridge included and easy push button control, there is virtually no limit to the image you can create on the video screen. There is no programming involved and all menu commands are included in the software cartridge. The capabilities of Super Sketch equal that of graphics terminals that cost $50,000 or more only 15 years ago.

The objective of this manual is to explain the many capabilities of Super Sketch, and how to utilize them. You will quickly realize that Super Sketch can be easily learned by children to perform very simple yet beautiful graphics. As you read on, however, you will see that there are many more advanced capabilities that will fascinate even the most advanced artists.

SPECIAL NOTE:

This manual refers only to the use of Super Sketch Model G2300 with the "Graphics Master" software cartridge. This tablet and software are compatible with the Atari 400, 800, 600XL, 800XL, 1200 XL & 1450XL computers with **at least** 48 K Ram installed. Do not attempt to use with other computer brands. As additional software becomes available, please be sure that it is compatible with Model G2300 if your present system is to be used. The uses of Super Sketch might be classified into the following major classifications:

Introduction

INTRODUCTION TO COMPUTERS

Super Sketch is a fun device for either child or adult. In addition, it provides the easiest possible introduction into the use of a computer. Its menu-driven command system provides an intuitive method of operation that is easy to learn for the first-time computer user. In addition to simple sketches and illustrations which can be accomplished by the unskilled user, future software programs will offer music composition, creative games, and other challenging activities.
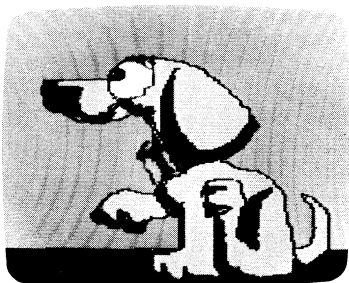

ART AND DESIGN

Super Sketch provides the lowest cost introduction to the world of computer graphics. It is an excellent new medium for the artist and a design vehicle for many graphics applications. With "Master Floor Planner" your home or office layout designs are readily completed and printed for use by the interior designer or home owner. Other types of design programs will be added in the near future.

Introduction

BUSINESS APPLICATIONS

All businesses eventually utilize visual aids in presentations. These include bar charts, pie charts, as well as various graphs and sketches. Super Sketch is the ideal tool for generating these visual aids. With our optional software ''The Business Presentor,'' the text as well as charts and graphs can be integrated into a full presentation and used just as other types of visual aids are used.
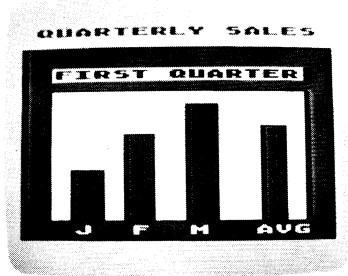
LIMITATIONS OF COMPUTERS & TV SETS

Within the Troubleshooting guide some of the technical details of how a home computer makes a picture appear on a television screen and how a computer may produce results other than those expected are explained. If you are concerned about the quality of the picture created on your television screen please refer to this section.

Setting Up
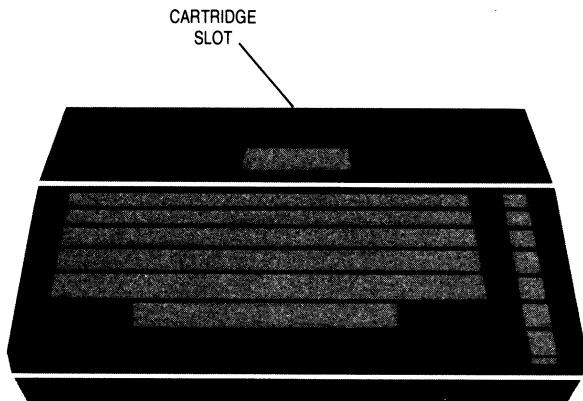
CARTRIDGE
SLOT

Setting up to draw with the Super Sketch is as simple as using any game cartridge with your Atari Computer, only there are a few more items in the box to help you on your way. The box should contain the Super Sketch graphics tablet, the software cartridge (looks like a game cartridge), a white envelope labelled "Starter Kit," this instruction book, and a warranty card. The software included in this package is identified as "Graphics Master" which is a trade name that will be referenced throughout the manual.

The box itself is designed to be a permanent storage tray for your Super Sketch. Returning the warranty card will put your name on our mailing list for information on new Super Sketch software and other products for your computer from Personal Peripherals.

With your computer switched off, plug the software cartridge into the cartridge slot and the cord from the graphics pad into controller port number 1. If you have a disk drive, printer, or monitor, they can continue to be connected in the normal fashion. After all connections have been made, you can switch the computer on. After a few seconds, the Super Sketch title screen should appear on the screen. If you encounter any problems along the way, refer to the Troubleshooting Section later in this manual.

A Tour Of Your Tablet

Your Super Sketch Graphics Tablet is your entry point into the wonderful world of computer art. It is a precision tool which can accurately read and translate your commands through a control arm which determines position, and four buttons which can be used to control the system. The following describes the purpose of the different parts on your tablet.

- RELEASE — The long bar in the center simply lifts the paper clamps on each side of the tablet to hold a paper sheet either for drawing or tracing.

- LIFT — There are two lift keys (On one side for the convenience of left-handed people, and another on the opposite side for right-handed people). This button, when pushed, allows you to move the control arm without drawing on the screen or to escape the menu and return to the drawing.

- MENU — When the MENU key is pressed, any current activity will stop and the main menu will appear on the left side of the screen. The menu is a list of commands and colors that will be used while you draw.

- SELECT — The button marked SELECT tells the computer to select that command or color while in the menu mode. The selection is made by first placing the arrow next to the feature desired and then pressing SELECT. To return to the drawing after selecting a feature, press the LIFT button. SELECT is also used to tell the computer to do the currently selected feature while in the drawing mode.

- CONTROL ARM and POINTER — The control arm moves the pen holder around the tablet. The computer knows exactly where this pointer is at all times and this is your drawing utensil for all functions. You can place a pencil or other drawing utensil through the pen holder.

A Tour Of Your Tablet

RELEASE BAR

SELECT

MENU

LIFT

LIFT

CONTROL
ARM

CLAMPS

POINTER
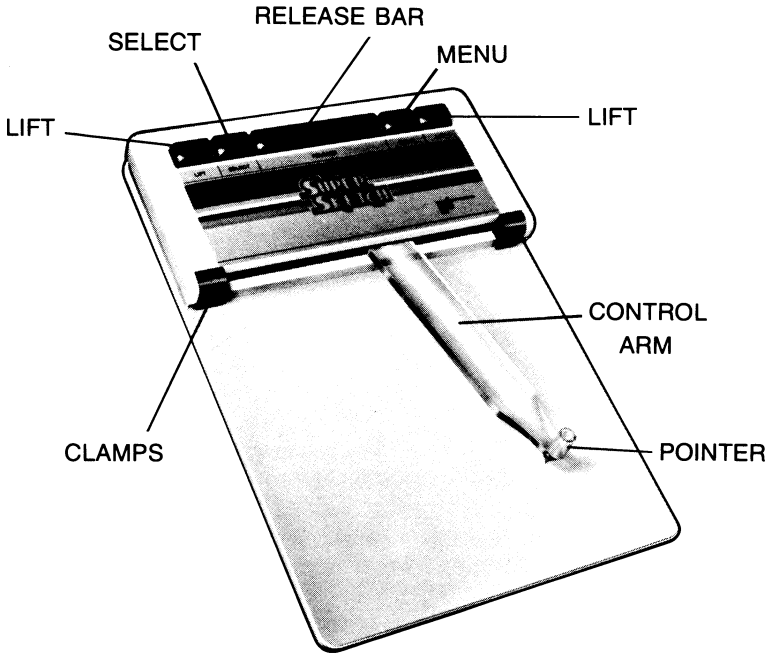
Your First Picture

A "Starter Kit" is included with your Super Sketch in order to aid you in getting started on your first drawings. This is a collection of line drawings that can easily be clamped onto the drawing area by using the RELEASE bar. There are six drawings of various difficulty included in this kit. Bluebird is the simplest and will be used for this first lesson.
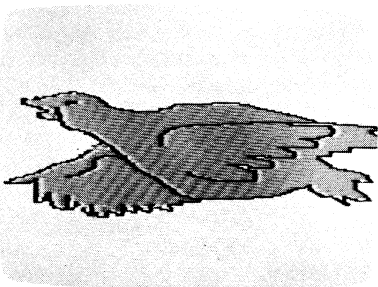
STARTING TO DRAW

1. Holding the RELEASE bar down, slide the Bluebird sketch under the CONTROL ARM and then the paper clamps.

2. Turn on the computer by turning the computer power switch to on. The Super Sketch title screen should appear.

3. Move the control arm so that the pointer is as far to the bottom and right of the pad as possible, then depress the MENU key. The title screen will be replaced with the drawing screen.

Since the GRAPHICS MASTER software automatically starts with the color blue as the current color and is in the DRAW mode, there are no other selections needed at this time to draw the Bluebird.

4. Simply hold down the LIFT key to remove the menu from the screen. While holding down the LIFT button, position the pointer of the control arm over the outline.

5. Now release the LIFT button and trace the outline of the bird with the pointer. As you trace, the outline drawing of the bird will appear on the television screen.

Your First Picture

WHAT IS A CURSOR?

While you are drawing, there are some other events on the screen that you should note. First the spot on the screen where you are drawing is designated by a "cursor." This is the small symbol that gently flashes to indicate where the line to be drawn will start. There is also a "d" indicating that you are in the DRAW mode. Different letters will accompany the cursor based on the currently active mode of operation.

WHAT IS A ZOOM WINDOW?

On the Graphics Master software there is a "zoom window" available in the upper left hand corner of the screen as you work if you select it from the EXPERT menu. This window is an enlarged view of the image being created immediately around the area of the cursor. As you draw, you can see the line formed in the zoom window. If you attempt to draw in that corner of the screen, the zoom window will disappear. The zoom window is available in most modes and can be turned off if desired.

COLOR THE BLUEBIRD

After you have made the complete outline of the bird, make sure that the two ends of the blue lines meet. The best way to do this is to look at the zoom window as you close the outline.

1. Depress the MENU key to view the available selections. The main menu will appear on the left side of the screen again.

2. Using the control arm, move the cursor to FILL. Do not worry about moving the pointer when in the menu mode. No drawing activity occurs in this mode.

3. While pointing at FILL, press the SELECT key. The "F" will become highlighted.

4. Now press the LIFT key to exit from the menu mode.

5. Position the cursor (now designated with "f") anywhere within the area enclosed by the blue lines.

6. Press the SELECT key on your graphics pad to tell the computer to start filling at the location of the cursor. You will see the bird appear in brilliant blue on the screen.

The Main Menu
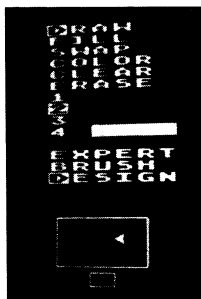
The menu provided by your Graphics Master software is your gateway to all the special features and functions that are a part of this advanced software package. With your computer and Super Sketch in operation, press the MENU button and we will go through each of the commands. Pressing the MENU at any time while you are working will stop whatever is currently happening and return you to MENU mode.

COLORS

As the Super Sketch comes on, it automatically is set on color 4 which is a medium blue. Color 4 is also the color used for the menu, therefore if you change color 4, the menu changes as well. Color 1 is the same color as the screen. Colors 2 and 3 are alternate drawing colors. Although you may only have four colors at any one time, these four colors can be selected from 128 available shades. These shades are made up of 16 different colors and 8 available luminances for each. Color shade selection will be discussed under the "SWAP" and "COLOR" commands. To select one of the four current screen colors:

- Move the cursor over the desired color by moving the graphics pad control arm.
- Press and release the SELECT button. The active color number will be highlighted.

The Main Menu

COLOR

COLOR is a feature which allows you to define the desired color shades to be used in the four color slots in the menu. In this command, the menu will remain on the screen while the selected color is being defined.

- First, select the color slot that you wish to change by placing the cursor on it and then depress SELECT. (Note: Color Slot #1 is the screen color.)
- Move the cursor so it points to COLOR and depress SELECT.
- As you move the control arm on the pad, the color in this slot and on the screen will change.
- More specifically, moving the control arm to the left or right will vary the luminance of the color shade, and moving it up or down will vary the color selected.
  NOTE: If anything is drawn on the working area of the screen in the color that is being modified, it will also be changed as you move the cursor.
- When you see the shade that you want to use, simply depress SELECT. This will lock that color in the color slot and then return you to the menu mode.

SWAP

SWAP allows you to perform exactly the same function as COLOR. The only difference is that while using SWAP, the menu is withdrawn from the screen so that you are able to view the effect of the color change on your artistic creation.
HINT: Use COLOR only when the color you are changing is not already present in your drawing.

- Select color slot to be changed
- Move cursor to SWAP and depress SELECT.
- The menu will disappear and your full picture will be visible after you depress the LIFT key.
- Move the control arm to vary the color and luminance of your selected color slot on the screen.
- When you are pleased with the shade visible, depress SELECT to lock in this color and you will be returned to the menu mode.

The Main Menu

CLEAR

Clear allows you to erase an entire screen. To clean your working area for a new drawing:

- Enter menu mode by depressing the MENU key.

- Move the cursor to CLEAR and press SELECT. Note that the "C" will be highlighted but nothing else happens. This is a safety feature of the Graphics Master software that reduces the possibility of accidentally erasing your latest artistic creation.

- The screen will not be cleared until CLEAR is selected and SELECT is pressed a second time.

- At that time the screen will clear.

DRAW

DRAW is the normal mode of operation as discussed earlier. It allows freehand drawing or tracing with the currently selected color, brush style, and design. To select DRAW:

- Make sure you have selected the color, the brush, and design with which you wish to draw.

- Move the cursor to the word "DRAW" and press the SELECT key.

- Press LIFT and keep holding it to exit the menu mode and prepare to draw.

- Position the cursor before you release the LIFT key. When it is released, a line will be drawn on the screen as the control arm is moved on the pad.

In order to move the pointer without drawing a line, simply depress and hold down the LIFT key. This is similar to lifting a paintbrush off the canvass when you want to start drawing elsewhere. When the cursor has been repositioned, release the LIFT key to draw again.

The Main Menu

FILL

The purpose of FILL is to automatically paint the area bounded by drawn borders with a preselected color or "design".

- Before filling, select the color and design from the menu that you wish to use as the filler.
- Move the cursor to FILL and press the SELECT key.
- Return to the picture by pressing LIFT.
- Position the fill cursor within the area to be filled.
- Press the SELECT key to begin filling at this location.
- You may stop the fill at any time by pressing one of the buttons on your graphics pad. To return to the menu, simply press the MENU key.

ERASE

Think of the ERASE command as your pencil eraser. If you have something on the screen that needs small changes:

- While in menu mode, move the cursor adjacent to ERASE and push the SELECT button.
- Push and hold down the LIFT button. You will see your cursor on the screen with an "e" indicating that you are in the erase mode.
- When you release this button the area under the cursor will be erased, that is, it will be returned to background color.

EXPERT

- When you align the cursor with EXPERT and push the SELECT button, a complete new menu of advanced functions is available to you. These functions will be described in the expert menu section.
- While in EXPERT menu, depress MENU key to return to the main menu.

Brush Menu

BRUSH

When you select BRUSH, a new menu will appear which gives you a wide variety of brushes to select from as well as the ability to design and save your own brushes. The eight standard brushes and their resulting paint strokes are shown on the opposite page.

In addition to the eight standard brushes, you may also create your own brush. The large box near the bottom of the menu is used for this purpose.

As you choose various brushes from the standard list, notice that a correct sized brush appears in the small box immediately under the large box while an enlarged version appears in the larger box. If you want to create your own brush first select one of the empty brush storage slots [8,9,A,B,C,D,E,F]. Then select EDIT if you will create your own. Once selected, a flashing cursor will be available in the large box. As you move the control arm, this flashing box will move within the large box. As you press the SELECT key a small dot will appear. Pressing SELECT again allows you to erase that dot. By moving the cursor and placing dots you can define your own brush. To leave this brush edit mode, depress the MENU key once. Your brush will be stored in the brush slot you previously chose.

You can also use any pattern on the screen as your brush by using the COPY command. Again, select the brush storage slot that you wish to work with first. Then select COPY by moving the cursor to the word and then depressing SELECT. The large box now acts like the zoom window, in that it is a magnification of the area immediately surrounding your cursor. Once you have the pattern you desire framed in the large box, simply depress the SELECT key. The brush pattern will be captured and shown in the brush storage slot you previously selected.

NOTE: the default brush when you start is a single dot which draws a fine line when used. Once a new brush is selected it is active until a different brush is selected.

To return to the main menu simply depress the MENU key once you have selected a brush.

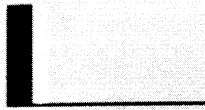# Brush Menu

EXAMPLES OF STANDARD BRUSH STROKES
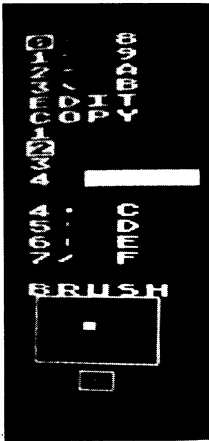
0. Small Dot

1. Med. Horizontal

2. Large Horizontal
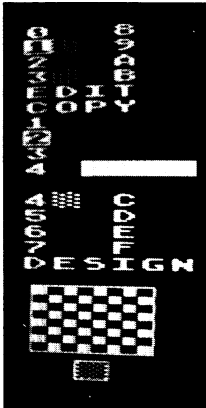

3. Diagonal Slash

4. Medium Dot
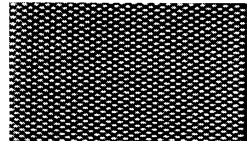

5. Medium Vertical

6. Large Vertical

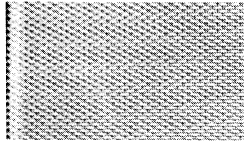7. Diagonal Backslash

Design Menu

EXAMPLES OF STANDARD DESIGN PATTERNS
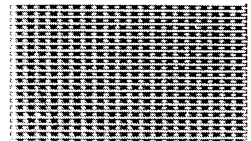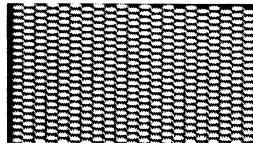

0. Solid

1. Fine Crosshatch
Color 4

2. Fine Crosshatch
Color 2

3. Weave

4. Medium Crosshatch

Design Menu

DESIGN

Through the use of the DESIGN command the Super Sketch with Graphics Master software can do magic that is out of the realm of possibility with only the brush. With one stroke you can paint a broad line that is a multicolor plaid! Other design patterns permit delicate shadings even to skin tones. For business applications an area of a chart can be filled with an unlimited number of colors and patterns. All of this is possible with the DESIGN command.

With the menu displayed, move the control arm to position the arrow adjacent to the DESIGN symbol and press the SELECT button. As with BRUSH, a new menu appears as shown in the illustration. On this menu there are five different DESIGN patterns. The topmost is a solid pattern to help you clear your pattern if you wish to start over. The Super Sketch is normally in this unpatterned mode and this selection is present to return from a patterned texture to an unpatterned one. All of the others will produce very distinctive patterns. These patterns and their appearance in a larger area are shown on the opposite page.

By moving the control arm and pressing the SELECT key you can (one-by-one) select these patterns. Notice that immediately below the large box there is a small square where the texture selected will appear in actual size and color. This is how an area will look on the screen that has been drawn or filled using this design. Above this there is a larger opening that is an enlargement of the pattern chosen. As with BRUSH this window is key to the ability to make your own patterns beyond the standard patterns available.

To make your own colored design pattern you can either start from an untextured pattern or one of the five textured patterns. Let us assume that we start with a red untextured pattern. (We get that by selecting red before we select DESIGN.) After we select DESIGN there should be a large red square at the bottom of the menu. Select one of the empty design storage slots [6 thru F] to specify where you would like to save this pattern after you design it. Now select a color with which you wish to create a pattern. As a BRUSH, select EDIT to be

Design Menu

DESIGN (continued)

able to place colored dots in your pattern by moving the flashing cursor and pressing SELECT. When you are finished editing with a color, depress MENU once and then select a new color to edit with. When you have completed your pattern (you may use all four colors) press MENU and this pattern will be saved in the slot you chose.

As in BRUSH, you may use any pattern from the screen by choosing COPY and using your cursor as a magnifying glass to select the pattern.

Once you have selected or created a design it will be active for every drawing function. For instance, you may draw a patterned line by selecting a custom design pattern and then entering the DRAW mode. Most commonly, you will want to FILL areas of your picture with special patterns to add depth and shading to your art.

Expert Menu

When you align the arrow with EXPERT and push the SELECT button, a complete new menu of advanced functions is available to you. These functions will be described in the following section.
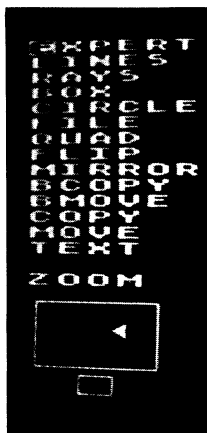
LINES

The LINES command lets you draw one or a series of straight lines between points you choose. To use this command:

- Place the cursor on LINES and push SELECT.
- You can leave the menu by pushing the LIFT button.
- Place the cursor (now showing "I" for lines) at your desired starting point.
- Press the SELECT button and move the control arm and cursor to the desired opposite end of the line. Notice that a flashing line constantly goes between the starting point and the position of your cursor. This line indicates the location of the final line and can be moved only by moving the cursor.
- The line becomes a part of your drawing when you press SELECT.
- To start a line from a new starting point, press SELECT at the new starting point.

RAYS

The RAYS command produces a number of lines starting from one starting point. For this command:

- Place the cursor to the desired center point and then press the SELECT button.

- As you move the cursor, lines will be drawn continuously from the starting point to the cursor.

- To stop drawing press "SELECT" or "LIFT"

- To select a new origin, move the cursor to that point and then press and release "SELECT".

- To return to the menu, press and release the MENU key.
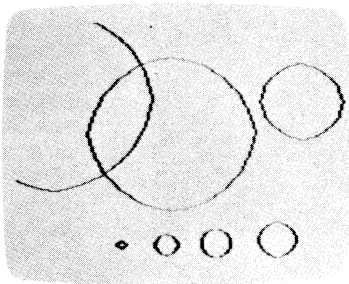
Expert Menu

BOX

BOX uses a combination of horizontal and vertical lines to form a rectangle.

- As in LINES, the SELECT button is depressed when the cursor is at one corner of the desired rectangle.
- Move the cursor to the diagonally opposite corner.
- A flashing line indicates the location of the rectangle.
- It will become a part of the drawing when the SELECT button is pressed.
- Use SELECT again to define new starting points.

CIRCLE

The CIRCLE command will draw circles on the screen just as BOX draws rectangles and squares.

- After selecting the CIRCLE command, press LIFT and place the cursor at the desired location of the **center of the circle.**
- Use SELECT to pick this center point and begin defining the CIRCLE.
- As you move the control arm outward from the center position, you will see a flashing line indicating the size of the circle being defined.
- When you have the circle that you want, press the SELECT button and the desired shape will be a part of your drawing.
- Use SELECT again to define new starting points
- Use LIFT to escape and be ready to either define a new center or escape to menu.
- Use MENU to return to expert menu.

Expert Menu

B COPY

The B COPY (Block Copy) command allows you to select a portion of your screen to duplicate in other locations on the screen. Using B COPY (or COPY) command, you can draw one picture of a tree and end up with an entire forest. The "B" in B COPY indicates that the screen background will be copied along with any other colors drawn in your selected area. (The COPY command ignores the background color.)

- Start by selecting the command and then depressing LIFT to exit the menu mode.
- Position your cursor so that it is located at the upper left-hand corner of an imaginary box that will define the portion of your drawing you wish to copy.
- Press and release SELECT to lock this corner.
- As you move the control arm a flashing box will indicate the edges of the area to be copied.
- To escape and relocate the first corner depress LIFT and move back 3 steps in this discussion to start over.
- When you have defined the area for copy, depress SELECT.
- As you move the control arm, the flashing box will move on the screen.
- Press SELECT when you have positioned the box where you would like a copy.
- You can copy as often as you want on the screen. When finished, press LIFT and then MENU to exit to menu mode.

COPY

COPY works exactly as does B COPY except that the background color is ignored while copying. This is useful if you want to lay your copy area over another section without erasing any of that section.

Expert Menu

B MOVE / MOVE

The MOVE and B MOVE (Block Move) command are simply variations on copy. In as such, the operation of these two commands are identical to that described under B COPY.

The primary difference between MOVE and COPY is that after the area you wish to move has been defined it is erased at its original location. This can be useful in a situation where you simply want to move a part of your picture to another poriton of the screen without making multiple copies (for example, moving a tree closer to a house you have drawn).

The "B" in B MOVE has the same meaning here as in B COPY. The background is moved with all other colors in the defined Move area.

NOTE: The Move commands can be used as a selective eraser by selecting a Move area, which erases it, and then escaping MOVE by depressing LIFT before you press SELECT to stamp it elsewhere.
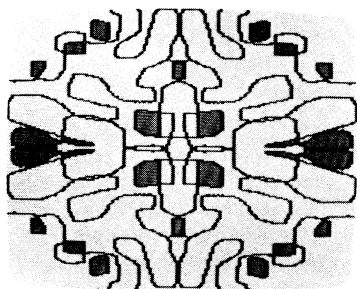
Expert Menu

MIRROR FUNCTIONS — MIRROR, QUAD, FLIP

The mirror functions are special drawing modes that allow you to draw on one part of the screen while your drawing is mirrored on another part of the screen. In MIRROR, the screen is split vertically in the center. An object that you draw in the right hand side of the screen will be mirrored in the left or vice-versa. In QUAD, the screen is divided both vertically and horizontally into four quadrants. Drawing in one quadrant is mirrored into the other three corners of the screen, similar to the effect of a kaleidoscope. Finally, FLIP divides the screen horizontally into upper and lower halves and otherwise is identical to MIRROR. Selecting EXPERT on the expert menu will return you to normal full screen drawing.

The mirror functions not only apply to DRAW but to all the main menu functions and most of the expert functions. Various brushes and designs, ERASE, and SWAP all operate with the mirror functions and produce very artistic results. Of the EXPERT functions, the various types of lines, BOX and LINES all operate properly. Choosing TEXT will produce text, but only where it is typed. It will not be mirrored into the other halves or quadrants. Experiment a while and see the interesting patterns you can make
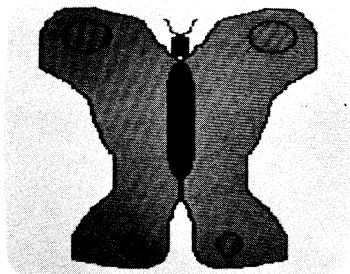
Quad

Mirror
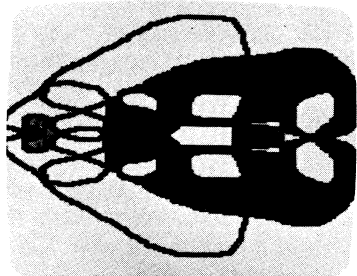
Flip

Expert Menu

TEXT

With the TEXT command you can add labels to your business charts and captions to your cartoons.

- Simply select the TEXT command and depress LIFT.
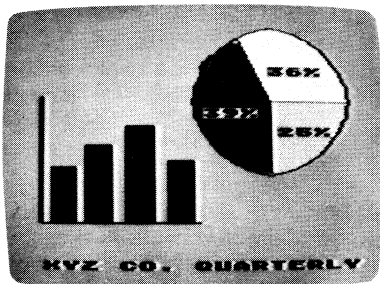
- Place the cursor where you want the caption to begin and then depress SELECT.

- Type the characters you desire, either alphabet, numbers, symbols, or graphics characters on your computer keyboard.

- Typing RETURN completes the caption and returns you to cursor control to select a new start point.

- Depress MENU to return to the expert menu.

ZOOM

In using the function MIRROR, QUAD, and FLIP, a conflict may result in loss of new additions in the ZOOM window corner of the screen. As well, you may decide that you prefer drawing without the ZOOM window constantly available. The ZOOM command can help. If the ZOOM window is on (active), selecting ZOOM will turn it off. If you want to turn it back on, merely reselect ZOOM.
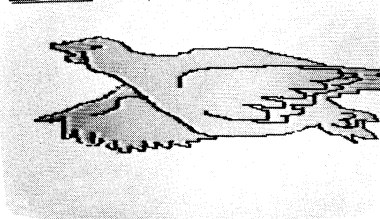
EXPERT

The purpose of EXPERT is to set all modes back to their original full screen with normal drawing. This command turns off QUAD, MIRROR and FLIP if they are currently active.

- Move cursor to the word EXPERT and press SELECT
- Press LIFT to perform the reset.

Files Menu

FILE

FILE is the mode used to save and retrieve pictures on a diskette drive, as well as do disk utilities. To select this storage capability:

• Move the cursor to point at EXPERT and press the SELECT key.

• Move the cursor to point at FILE and press SELECT. The "F" will become highlighted.

• Depress LIFT to enter the FILE MENU.

• The file menu offers you four command functions, a message line for help, and a directory of any pictures previously stored on the disk.

To SAVE a Picture:

• Move the cursor to the word SAVE and depress SELECT. The following message will appear:
"ENTER FILESPEC DI:**********"

• Respond by using the keyboard of your computer to type in a file name.

• When a RETURN is hit, the picture you had on your screen will be SAVED.

• When the SAVE is complete the directory will be updated with the new file name.

To LOAD a Picture:

• Move the cursor to the word LOAD and press SELECT. The following message will appear:
"Position Cursor Then Press SELECT"

• Simply move the active cursor over the filename in the directory which you wish to load, then depress the SELECT key.

• After the picture is loaded, you must depress the MENU key to exit the file menu and view the loaded picture.

Files Menu

To DELETE a Picture:

- Move cursor and select DELETE. The following message will appear:
  "POSITION CURSOR THEN PRESS SELECT"
- Move the cursor to the file name you wish deleted and then depress
  SELECT. The following message will appear as a precaution:
  "OK TO DELETE?" LIFT"
- If you **did not** want to delete this picture just press MENU and you will
  immediately return to the main menu.
- If you **do** want to delete, press LIFT.
- When the file is completely erased, the directory will be updated.

To FORMAT a diskette:

- Move cursor to point to FORMAT and depress SELECT. The following
  message will appear:
  "OK TO FORMAT DISK IN DRIVE #1? LIFT"
- If you want to prepare a new disk (or erase a used disk) simply depress
  LIFT and the disk will be erased and formatted for your use.
- If you do not want to format, depress the MENU key to escape.

Drawing Hints

USING THE "STARTER KIT"

Not all of us are artistically creative. Super Sketch is designed so that you can trace from drawings in the Starter Kit and other sources such as magazines and coloring books. The Starter Kit contains six line drawings that were made specially for use with your Super Sketch. These drawings include the Bluebird that was discussed earlier, the Island, Rover, Cottage, and two others. These drawings were chosen to provide a starting point for your own creativity and as a training vehicle for some of the special features of the Graphics Master software package.

Bluebird was discussed earlier as the first drawing to select. You can make a blue outline of the bird and then fill with another blue. Then you can add some special touches. First, using black, draw detail in the wings and the tail to make your sketch look more like the drawing. Now, if the bluebird does not appeal to you, let's try a cardinal. Make sure the color slot that is blue is selected. Now select SWAP and then depress LIFT. As you move the cursor you can now instantly change the bird's color until it is the red you desire.

Cottage gets into more advanced functions. Let's first create the stepping stones in the walkway using the CIRCLE command on the EXPERT menu. Select your first color, for example yellow, then choose EXPERT and CIRCLE. Press LIFT to return to the drawing screen and hold that key while placing the cursor at the center of one of the stepping stones. Press SELECT and move the cursor to the edge of the stone. When the oval looks like the stone, press SELECT. Now, fill the stone with yellow. Repeat this procedure with the other stones. You can use "LINES" in the EXPERT menu to draw the cottage, the roof, and the fence. Trace the landscape and tree with all detail and make sure that all lines are connected and enclose areas for later filling. You can now select colors and patterns to paint your cottage scene.

Drawing Hints

TRACING FROM OTHER SOURCES

It is easy for the non-artistic person to get support from other sources to make a sketch of difficult subjects. For example, very few people can draw a graceful horse without any aids. If, however, we find a picture of a horse in some magazine we can trace the horse outline onto the screen. Using other commands we can FILL the horse, then add darker shading in the shadows and then create a background. After the horse is in satisfactory condition it can be SAVEd to disk. We can then experiment with adding a rider, perhaps a jockey in multicolor silks and maybe a fence in the foreground.

DRAWING HINTS

If your first jockey does not please you, simply clear the screen and then load from disk. This provides an easy way to improve your artistic ability without the frustration of "improvements" not working out. Taking this approach will let you create much better drawings on your television or monitor screen than you would get as a beginner with other media.

Business Use

SUPER SKETCH FOR USE IN BUSINESS

The Super Sketch is ideally suited for making drawings, charts, and graphs for business applications. You can create a full "slide" presentation, with text, drawings and charts. You may store them on disk and then establish any order you want for the slides. You can use the Super Sketch at the speaker stand to control the "slide" show by loading pictures in order.

Some very effective business graphics can be created. Product sketches and other pictorial business aids can be made using the techniques described in earlier sections. Here we will concentrate on various graphs and charts.
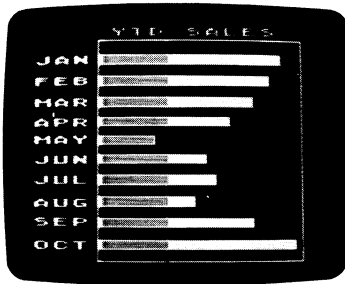
Business and visual aids are oriented to a grid layout, for example, horizontal and vertical lines, with only an occasional round pie chart or diagonal line. The easiest way to proceed in making charts and graphs is to make a grid over the entire screen. The grid can be made to vanish after the chart is complete by changing the grid color to the background color. (Using the SWAP command).

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Such a grid can be created by selecting a color, selecting DESIGN, and then selecting an L shaped design. Now go back to the main menu by pressing the MENU button. Select FILL and fill the entire screen. When this fill is completed, the screen will be divided into 24 squares vertically and 20 squares across.

For graphs or bar charts, the next step will be to create the horizontal and vertical axis. This is done with the LINES command on the EXPERT menu. First, you need to change the color to another color you wish the axis lines to be. You must clear the DESIGN to draw an uninterrupted line. Starting from a point about four or five squares up and to the right of the bottom left hand corner, draw a horizontal line to a point about four squares from the right margin. Now, move the cursor to draw a vertical line from this same starting point. You are now ready to plot the points, or draw the bar charts and add the captions and text that you need for your presentation. The difference is that a complete visual aid can be done in five minutes, not the hour or so as required by other techniques.

A pie chart can be done just as quickly by going through the following sequence. First, in the DRAW mode, make a small dot on the screen where you want the center of the pie chart to be. Next, in the CIRCLE mode, center a circle by placing cursor over dot and pressing SELECT (the zoom window is ideal for doing this). Then release and move the pointer arm diagonally until the circle is round and the size that you want.

After you have a circle, the next step is to divide it up into pie sections. The easiest way to do this is using the LINES command. Select LINES and then (again using the zoom window) place the first point over the center dot. Press SELECT and then move the cursor to the circle and press select for the line you need. Remember to check with the zoom window to make sure that there is not a gap between the line and the circle that will cause you trouble when you fill.

Now, for the final touches you can fill the various segments with different colors, add text and captions as required, and you are finished. This again is another five minute job.

Photographing Hints

PHOTOGRAPHING HINTS

Photographing your creations is an excellent way of permanently saving them for all to see. Also it gives you the ability to blow them up to any size that you desire. Fine artists may choose to perform final touch-up directly on the photo print for special effects.

You may want to experiment with different techniques, but the guidelines you should keep in mind at first are as follows:

• Use a tripod for stability.

• For color photographs, use Kodachrome 64 for slides and Kodacolor II for prints.

• Shutter speed should be set for one second. You may wish to bracket at other settings.

• The room in which you are located must be totally darkened in that any light will reflect off the television screen.

• Expect slight distortions due to a curved video screen.

Troubleshooting

TROUBLESHOOTING GUIDE

The Super Sketch Graphics tablet and software used in conjunction with your computer and video screen is a very complex system containing the equivalent of several hundred thousand transistors and thousands of other components. Twenty years ago, this much equipment would have occupied a large room and consumed as much power as a small factory. Also, a large team of technicians was required to maintain that much equipment.

In systems of this complexity, it is no surprise that problems can occur. The purpose of this section is to provide some guidance as to where to look in case of trouble. If you believe you are having problems with picture clarity or color, please read "Understanding How Your Computer and Television Work Together," which immediately follows. For other problems, simply scan down the list on the left hand side of the page until you come to the one that describes your problem. From there you follow through the steps and suggestions to isolate and possibly repair the problem.

MAKE SURE THAT COMPUTER, TV, AND DISK ARE OPERATING

If there are problems when you first turn your Super Sketch on, make sure that the computer, TV and disk (if you have one) are operating properly without the Super Sketch or software cartridge plugged in. If it does not operate properly as a computer then fix this problem first.

HINT: Check all connections, Antenna Switch, box switch and power as described in your computer manuals.

Troubleshooting

TROUBLESHOOTING (continued)

SUPER SKETCH LOGO DOES NOT APPEAR WHEN TURNED ON

Software cartridge is not properly plugged in. Turn off switch and make sure that cartridge is properly seated in socket.

If still not operating check system with another cartridge.

If Super Sketch cartridge is defective return to dealer.

SUPER SKETCH LOGO APPEARS BUT GRAPHICS TABLET HAS NO EFFECT

Make sure that Super Sketch plug is completed pushed into socket on computer.

Make sure that Super Sketch plug is plugged into joystick socket CONTROL PORT 1.

Make sure control arm is placed in lower right corner of pad to exit title screen.

Always check that you have pressed keys in the correct sequence to perform the desired task.

OTHER DEFECTS IN GRAPHICS TABLET OR CARTRIDGE

For other defects in the graphics tablet or cartridge please return to dealer for replacement.

Troubleshooting

UNDERSTANDING HOW YOUR COMPUTER AND TELEVISION WORK TOGETHER

In forming characters and graphics on the television screen, the computer generates small squares of light on the TV screen called "pixels." The Atari computers generates 160 pixels across the television screen horizontally and 192 pixels in a vertical line.

There are several distortions and built-in limitations that keep things we draw on the screen from being faithful reproductions of what is copied or drawn on the Super Sketch. The first problem is linearity — the lines on the television screen are sometimes not evenly spaced. For example, a large circle created by Super Sketch on the screen may have a slightly flattened side, or a square box on the pad may be taller or wider on the screen.

Another problem has to do with generating small dots or vertical lines in color. Even the best TV set or color monitor is sometimes not able to reproduce the right color on a single pixel or a line that is a pixel width. The result may be a variation in color or the wrong color reproduced in these very small areas. However, large areas should hold true to the color you select.

There are other limitations built into the Atari computers that affect their ability to display color graphics. Although you can select from 16 different colors with 8 luminance settings which give an effective range of 128 different colors, you may only have 4 colors on the screen at one time. Many creative graphics can be drawn using only 4 colors. You may find that dark colors on the screen tend to bend / stretch the picture or an audible hum is exhibited. This is due to a condition where the TV color gun is overdriven. This is not an effect of the software.