Magic Paintbrush

4.0

for the Apple II
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Requires disk, 32K, and Applesoft firmware or the language system.

INSTRUCTIONS

The Drawing Program

The drawing program lets you draw on the hi-res graphics screen using the paddles. When the program is run, you will be shown the available options. Press RETURN to go to the drawing page. If you want to review the options later, or quit the program, typing 'H' from the drawing page returns to the options page.

On the drawing page there are two small circles; these are your cursors, and they are controlled with the paddles and paddle buttons. In addition, there are ten single key commands that affect what happens on the screen.

L: Line mode. In this mode, the button on paddle 1 puts the stationary cursor at the current location of the movable cursor. The button on paddle 0 draws a line connecting the two points. The endpoint becomes the starting point for the next line. By holding down button 0 while moving the cursor you can also draw continuous lines.

F: Fill mode. This is the same as line mode, except the starting point stays in place when a line is drawn. By holding down button 0 you can fill an area by sweeping out a section with color.

P: Paint mode. This allows you to select one of nine brushes with which to "paint" on the screen. Button 0 sets the brush down on the screen, and button 1 raises it.

T: Gets a shape table from disk. Use this command to load shapes that you designed with the shape program.

U: Use a shape (Shape mode). After you've loaded the shape table, this command lets you plot the shape anywhere on the screen. Button 0 draws the shape at its present location. Button 1 allows you to rotate and scale the shape, using the paddles. Setting both paddles all the way to the left gives you the normal positioning of the shape. To return to normal shape mode, press any key or button 1.

C: Select a drawing color. The selected color will be used for lines, paintbrushes, and shapes until another color is chosen. The choices are 0 through 7: 0 and 4 are black, 3 and 7 are white, 1 is green, 2 is violet, 5 is orange, and 6 is blue. These can be divided into two groups: 0 to 3, and 4 to 7. Putting colors from one group next to colors from the other group will cause some "bleeding" effect, which makes the two blacks and whites act differently in circumstances.

B: Select background color. This option clears the screen to one of the colors mentioned above.

S: Save picture. This allows you to save the displayed picture to disk.

G: Get picture. With this option you can load a previously saved picture back in from disk.

ESC: This key allows you to display full screen graphics. Pressing the key a second time returns the text at the bottom of the screen.

H: Help. This returns you to the options, and allows you to quit the program.

The Shape Program

The shape program allows you to design Apple shape tables either with the paddles or with keystrokes. When you enter the program you have the following options:

N: start a new table. This clears any existing shapes from memory.

L: load a table. This lets you load a previously saved table from disk.

S: save a table. This saves the current table in memory to disk.

A: add a shape. This gives you two options: to design the shape with keystrokes or with paddles. See the explanations of the methods below.

V: view a shape. This allows you to see any of the shapes in the current table. The paddles allow you to rotate and scale the shape while you view it.

D: delete a shape. This takes a shape out of the table, then compacts the table.

R: replace a shape. This allows you to delete a shape and put a new one in its place.

M: returns you to the master list of programs.

The paddle method of designing a shape is usually easier, but does not work well with shapes that will later be scaled. To use this method, you must first give the maximum width and height of the shape as even numbers from 2 to 38. A box will then be drawn in lo-res graphics, with a flashing cursor controlled by the paddles. Button 0 turns the plotting on, and button 1 turns it off. When done, type 'F' for finished. The shape will then be displayed in hi-res, and the paddles allow rotation and scaling. You may now type 'S' to save the shape in the table, or 'E' to go back to the lo-res drawing and edit it.

The keyboard method can be a more accurate method for designing a shape, but it usually takes a little longer. With the keyboard method, you can use the following commands:

I,J,K,M: cursor up, left, right, or down, respectively, in the same fashion in which these keys are organized on the keyboard.

Z,X: plotting on or off, respectively.

F: finished.

The paddles control the rotation and scaling while you design the shape.

Using Graphics in your Programs

To load a picture into your own program, use the following commands:

10 HGR : D$ = CHR$(4)

20 PRINT D$; "BLOAD name"

where 'name' is the name you used when you saved the picture.

To load a shape table into your program, use these commands:

10 D$ = CHR$(4) : POKE 232,0 : POKE 233,64

20 PRINT D$; "BLOAD name.SHP"

where 'name' is the name you gave the table when you saved it. You may then use the shape commands described in the Applesoft manual.

The Games

Invaders

Paddle 0 controls movement of your base, and button 0 fires your lazer. You need at least 10 charge units to shoot. Level 1 is the easiest, and 10 is the most difficult, although every level gets more difficult the longer you last. You lose after you are hit five times, or after one of the invaders scales the wall and is not hit.

Slot Machine

You start with $25, and any key places a $1 bet. Believe it or not, your chances here are much better than in Las Vegas, so think twice before you face a real "bandit". The ESC key returns you to the program menu.

Dogfight

This is a two-player game. There are 10 levels, which control the speed of the planes. 1 is verrrrry slow, and 10 is quite fast; recommended speed is around 5 or 6. Each player starts with 16 missiles, and you win by hitting your opponent 5 times. Try to avoid crashing into the other plane. If you don't have enough missiles left to win, you'll have to start dodging your opponent's shots and try for a tie. The missile is displayed in slow motion when you fire.

Collision

Also known by the name "Head On", you play this arcade-style game against the computer. You control a mine-sweeper with paddle 0. You move through concentric corridors trying to pick up as many mines as possible without colliding with the computer's vehicle, which is moving around the corridors in the opposite direction. The paddle steers your vehicle, and holding the button down doubles your speed. Occasionally the computer's vehicle will set down bonus mines, worth five points each. When all the mines are cleared, a new rack is started. To date, no one's been known to make it through three racks.

Sailboat Race

This program lets you create your own rules. The computer provides you with one or two sailboats, controlled with one or both paddles. There are three islands, which can be used to lay out a race course if you desire. A wind vane is shown in the upper-right corner of the screen, and the wind direction and speed are shown at bottom center.

Paddle 0 controls the white sailboat, and the heading and sail for that boat are shown in the lower left corner. Paddle 1 controls the second boat, and its information is in the right corner. The paddle controls the rudder, and the paddle button allows you to change sails. You have three sails. The jib is the smallest, and works best when you're traveling at a right angle to the wind. The genoa is a little larger, but it is too large for wind speeds greater than 35 mph. The spinnaker is a large, balloon-like sail, and it works best with the wind behind you. The spinnaker is too large for use with wind speeds greater than 30 mph.

When sailing, your boat will be drawn in the approximate direction that you are heading, but the compass bearing listed at the bottom should be used heavily. When you press the button to change sails, your sail will be taken down, and you must select the new sail with the keyboard by typing the first letter of its name. If your sail is inappropriate for conditions, your boat will be drawn in red. It won't tip over or sink, and you won't lose your mast; you'll just stop moving. The program is also very lenient about sailing through islands; it's up to your rules to determine if you're shipwrecked.

To move the boats back to their starting positions, press the ESC key. To go back to the program menu, type 'Q' to quit.