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Micro PainterTM

Radio Shack®
A DIVISION OF TANDY CORPORATION
FORT WORTH, TEXAS 76102

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Introduction

From the far reaches of the Universe, toting a giant Magic Paintbrush and a Periscopik-Elektron-Magnifier (P.E.M. for short), Micro-Man returns. After a long, exhausting trek involving color retouches to the planets and other stellar bodies, Micro-Man has made his way to Earth to color all things for the pleasure of mankind.

Unfortunately, Micro-Man, from the planet Coloratura in a far away solar system, was called away on other important business before completing his task. He was thoughtful enough, however, to leave his Magic Paintbrush on Earth so that the job could be finished. Through the miracle of electronic technology, the Magic Paintbrush and the Periscopik-Elektron-Magnifier have been miniaturized and captured inside the Micro Painter Program Pak.

On Coloratura, no home is without a Magic Paintbrush and a Periscopik-Elektron-Magnifier. Coloraturians spend many hours drawing and painting pictures. A wise Coloraturian will save pictures on cassette tape for finishing, retouching, or viewing at a later time. Micro Painter also lets you draw and save your own pictures.

Micro Painter has capabilities unknown to most Earthlings. Therefore, you have to learn the secret coloring codes invented by the creative Coloraturians. These secrets, concealed within the keys of your Color Computer, will be revealed in the following pages.

Equipment You Need

To paint with Micro-Man's Magic Paintbrush, you will need a TRS-80® 16K Color Computer, a color television, a cassette recorder, and connecting cables. A blank cassette tape is required if you want to save your pictures. Joysticks are optional.

Note: In this instruction manual, the "cassette recorder" referred to is the Realistic® CTR-80A available at your local Radio Shack store. The CTR-80A has been specially designed for operation with TRS-80 computers.

Getting Started

With your computer OFF, slide the Micro Painter Program Pak into the slot on the right side of the computer. Turn your television on and make sure it is tuned to channel 3 or 4. Make sure the volume of your television is turned on (not over a quarter of the maximum volume). Turn your computer on by pressing the Power button.

The screen will show the title, with flashing color squares circling clockwise around the edge of the screen. If nothing appears on your screen, check and make sure that the Color Computer and television are properly connected.

Loading the Data Tape Pictures

To load pictures from tape, you must use the program's Tape Loading function. To get to the tape Loading screen, press the Color Computer's **L** key, or wait 30 seconds and the screen will show:

LOAD SUB-SYSTEM
ENTER PICTURES NAME

Note: The Micro Painter program has two built-in sound effects. Each time you correctly load a picture or select a color, you will hear a nice "pop" noise. If you make an incorrect color choice and attempt to paint in that color, you will hear a "siren" noise. Follow the instructions carefully and you'll hear more "pops" than "sirens."

The Micro Painter Data Tape

Included in the Micro Painter Program Pak is the Data cassette tape. The Data tape is like a coloring book which can be used with a Color Computer. After you have loaded the Program Pak into the Color Computer, you will need to put the Data tape into the tape recorder. Rewind the tape to the beginning. Set the recorder to play.

Make sure the tape recorder is correctly connected to the Color Computer. Start with the recorder's volume set between 3 and 5. Later in the Micro Painter manual, you will learn how to save colored Data tape pictures and original paintings onto tape.

Getting Started (continued)

The pictures on the Data tape are:

- | | |
|-------------|-------------|
| 1. MICROMAN | 6. GUITAR |
| 2. CAR | 7. COFFEE |
| 3. SUN&MOON | 8. SAILBOAT |
| 4. TIGER | 9. EINSTEIN |
| 5. STILLIFE | |

To load a picture from tape, just type the name of the picture and press **ENTER**. Any picture name loaded from the Data tape should be typed as shown in the list above.

Let's use Micro-Man's picture as an example. Type **M I C R O M A N** and press **ENTER**.

The television screen will change to show an S in the upper left hand corner as the computer searches for the picture. An F will appear in the upper left hand corner after the picture has been found.

The name of the picture choice will appear, followed by the picture. If you have followed directions as given above, the brave and much sought-after character, Micro-Man, should appear on the screen.

Note: Refer to Picture Loading Problems in the Quick Reference Guide if you receive a LOAD ERROR, or if no picture or the wrong picture loads.

Use the instructions as given above for loading pictures or use the Loading instructions in the Quick Reference Guide anytime you need to load a picture.

For now, let's unveil the secret codes that make Micro Painter so fascinating. First, we'll examine the secret Code of the Prisms.

Code of the Color Prisms

A Prism (pronounced priz-um) is a crystal that separates light rays into colors. If you have ever seen a crystal chandelier, you have probably noticed that the sun's rays passing through the chandelier's cut-glass prisms will refract colors. Micro-Man supplied the Magic Paintbrush with three Prisms. Each picture you paint can have three sets of colors, just by pressing a key for each color Prism.

Each time you load a picture, it will first appear on the screen in Prism 3 colors. Prism 3 colors have a background of white with outlines of black (dark).

For Prism 1 colors, press **(1)** on your keyboard and the picture's colors will change to show a red background with green outlines.

For Prism 2 colors, press **(2)**. The picture's colors will change to show an orange background with buff outlines.

To return to Prism 3 colors, press **(3)**.

You can change color Prisms at any time without hurting the picture you are painting.

There are four colors in each Prism. As you switch from one Prism to another, all of the screen's colors will change. You can switch from one Prism to another without permanently changing the original Prism colors. The chart below will help you learn the colors of the three Prisms and the changes that occur when you switch from one Prism to another.

Remember that your choice of colors will never exceed four. This spectrum chart will show you how the colors correspond to one another as you alternate between Prisms.

Prism 1	Prism 2	Prism 3
Red and Green	Buff and Orange	Dark and White

The following colors correspond as you switch from one color Prism to another.

Green	→	Buff	→	Dark (black)
Yellow	→	Cyan	→	Blue
Blue	→	Magenta	→	Red
Red	→	Orange	→	White

Painting With the Magic Paintbrush

The blinking cross on the screen is the Magic Paintbrush.

To move the Magic Paintbrush, you can either use the arrow keys or a Joystick (optional). To move the Magic Paintbrush up, press the **↑** key. Pressing the **↓** key will move the Paintbrush down. To move the Magic Paintbrush to the right, press the **→** key. Pressing the **←** key will move the Magic Paintbrush to the left. Pressing a combination of the horizontal and vertical arrow keys will move the Magic Paintbrush in diagonal paths. For instance, if you press the **↑** and the **→** keys at the same time, the Paintbrush will move toward the upper left corner of the screen.

If you wish to use the Joystick, insert the Joystick plug into the connection at the rear of your Color Computer marked RIGHT JOYSTK. Press the **J** key to switch painting control from your keyboard to the Joystick. Each time you wish to change Paintbrush control you will need to press the J key.

The following is a quick explanation of the procedures you must follow when you paint. Read over it to get an idea of the painting process. Then you will use this information as you go step-by-step through the painting examples.

1. Move the Magic Paintbrush to the area you wish to paint.
2. Tell the computer what color the Magic Paintbrush is now ON by typing **B** (Background), then the first letter of the color. This sets the background, so the computer can tell what color you are painting ON.
3. Decide what color (or color pattern) you want the area under the Magic Paintbrush to become. Give Micro Painter the paint instructions by pressing **S** (Stripes) or **C** (Checks), then the first letter(s) of your color choice(s).
4. Press **P** (for Paint). The area should now be painted the color you specified.

Painting With the Magic Paintbrush (continued)

The Background

Selecting the background color is a very simple, yet very important step in painting with Micro Painter. You must specify a background color or the painting functions will not work. It is possible to select a background color once, and not have to change it while painting.

This is how you tell the Micro Painter program what color you want the background to be. The background color you select must always be a color currently appearing on the screen and the Magic Paintbrush must be over that color. After the Magic Paintbrush is over the desired background color, you would press B (for Background). Then, you would press the first letter of the color the Paintbrush is over (the color's initial depends on which Color Prism you are using).

If you do not select a background color, the program will become confused, and make that "siren" noise which was described earlier. The siren will tell you if you have neglected to establish this necessary communication with the program.

In this example, you can choose either dark or white as a background color. Continuing with our friend Micro-Man, move the Magic Paintbrush so that it is over a white area. Press **B** (Background) and then **W** for White. Nothing seemed to happen? Don't worry. The computer received your instructions to set the first background area as white. That's what makes the code so secret.

Continue learning the secret codes, and you'll soon be adding color to the situation. Later, examples will show you how the background color may need to be changed during painting to paint certain patterns.

Painting With the Magic Paintbrush (continued)

Code of Colors

Painting Stripes and Checks

One of Micro Painter's biggest assets is that it lets you paint in stripes or checks. Your next step in the painting process is to add another secret code to your painting vocabulary. To paint Stripes, you press S. To paint Checks, you press C.

On a white background in Prism 3, you can paint the following patterns and solids:

Striped Red and Blue	Checked Blue and White
Striped Red and Dark	Checked White and Dark
Striped Blue and Dark	Checked Blue and Dark
Checked Red and Blue	Solid Red
Checked Red and Dark	Solid Blue
Checked Red and White	Solid Dark

Let's continue with Micro-Man as an example. Remember how to move the Magic Paintbrush? That's correct. Use the arrow keys or the Joystick lever.

Move the Magic Paintbrush to Micro-Man's left shoe. You've already selected a background color.

Continuing with our example, press **(S)** for Stripes. So far, you've selected a background color (B + W for Background of White), and S (Stripes). Our next step is to select colors. You must choose two different colors to paint stripes or checks.

Now you have to select two colors.

Press **(R)** (for Red) then **(B)** (for Blue). You could also press B then R, as the color order doesn't matter. The final step is to press **(P)** to Paint.

How about that? Micro-Man's shoe is now striped. Let's paint the other shoe. Move the Magic Paintbrush to the other shoe. This time you don't even have to select a color (if you want the shoes to match). Just press **(P)** and Micro-Man will have two matching red and blue striped shoes.

Note: If you accidentally press an incorrect color code, you can cancel a selection by pressing the red **(BREAK)** key once. Then, type the correct code.

Let's make the inside of Micro-Man's cape match his shoes. Move the Magic Paintbrush to the left lining of Micro-Man's cape. Again, you do not have to select a color. Micro Painter remembers the colors as you enter them. Just press **(P)** and magically, the cape lining matches the shoes.

Painting With the Magic Paintbrush (continued)

Move the Magic Paintbrush to the other cape lining. You know what to do? That's right, just press **(P)**.

Let's experiment with painting checks. To change the pattern, first press **(C)** for Checks. Now choose two colors. Press **(R)** (Red) then **(D)** (Dark). Move the Magic Paintbrush to the white area above the rainbow. Then press **(P)** to Paint. The Magic Paintbrush will disappear while the sky becomes the rich color of a sunset. The Magic Paintbrush will return after the area is completely colored. While an area is being painted, the color controls will not function until the Magic Paintbrush reappears.

Note: If the colors are reversed (red is blue and blue is red), refer to the Quick Reference Guide for instructions on how to "reset" the colors. Experiment with your television's tint controls if the colors seem slightly off. For example, adjusting the tint control might be a good idea if red appears as purple.

Isn't it interesting that anywhere an outline occurs, the coloration stops? Micro Painter acknowledges the outlines just as you would if you were coloring in a coloring book.

The lightning bolt outline extends to the edges of the screen, so the bottom portion of the sky was not painted. To complete the sky, move the Magic Paintbrush to the lower left corner of the screen beneath the lightning bolt. Press **(P)**, and that small area will be painted.

Move the Magic Paintbrush to the lower right area of the screen beneath the lightning bolt. Press **(P)**, and the sunset colors are almost complete. The areas in the letters, such as the center of the O of MICRO*PAINTER, still need to be painted.

Painting Solid Colors

Now you're ready to paint solid colors. Since the Magic Paintbrush is at the lower portion of the screen, why not paint the lightning bolt? Move the Magic Paintbrush inside of the lightning bolt outline. For solids, you have the option of either pressing C (Checks) or S (Stripes).

Continuing with this example, let's press **S**. To paint a solid blue color, press **B B** (Blue twice). Press **P**. Now you know the secret codes for painting stripes, checks, and solid colors.

Whenever you paint, make sure the Magic Paintbrush is not positioned over another color or the outline. Each time you change colors, you will need to select either stripes or checks and then make color choices.

Let's paint the MICRO*PAINTER letters solid red. Move the Magic Paintbrush to the inside area of the M. Press **S** or **C**. Press **R R** (Red twice), and then press **P**. Continue by painting the other letters. Finish painting the letters and then proceed to learn some handy tricks which will help you make some more color patterns by changing the background color.

Changing the Background Colors

There are some striped color patterns which can only be produced if you color an area, change the background to that color, and then paint over the color with a new pattern of stripes. For example, in Prism 3 you cannot paint in striped white and red if the background color is white or red. You must change the background color.

To paint red and white stripes, you would have to do the following:

1. You would move the Magic Paintbrush to the area you want to paint. If the area is either red or white, you would need to repaint it dark or blue using the Color Codes you have learned.
2. With the Magic Paintbrush over the dark or blue area, change the background color to either dark or blue (depending on what color the area is). For example, with the Magic Paintbrush over a blue area, you would press B for Background, then B for Blue.
3. Next, you would press S (Stripes). Press W (White), R (Red), then P (Print).

In Prism 3 on a white background, the following patterns will require that you paint the area a new color, then change the background color to that new color:

Striped red and white—As explained above.

Striped white and blue—Paint the area dark or red, then change the background to dark or red.

Striped white and dark—Paint the area red or blue, then change the background to red or blue.

Solid white—Paint the area red, blue, or dark, then change the background to red, blue, or dark.

As an example, let's use the MICRO*PAINTER banner you recently painted red. Move the Magic Paintbrush inside the outlined M. Press **(B)** (for Background), then **(R)**. This tells Micro Painter that you want the background to be red.

Your next step is to select a pattern. Press **(S)** (for Stripes). With the red background, you can now change the red M to striped blue and white. Press **(B)** then **(W)**, and then press **(P)**. On a white background, you couldn't have painted a striped blue and white pattern.

Painting With the Magic Paintbrush (continued)

Move the Magic Paintbrush to the **I** in the banner. Micro Painter remembers that you have just chosen a red background. Let's change the red **I** to striped white and dark. Press **S**. Press **W** then **D**. Press **P** and the red **I** will change to striped dark and white.

Move the Magic Paintbrush to the **C** in the banner and just press **P**.

Let's experiment with an area not already colored. Move the Magic Paintbrush to Micro-Man's left leg. Change the background color to white. Then, color the leg blue.

Now, with the Magic Paintbrush over the blue leg, change the background color to blue by pressing **B** then **B**. Let's make the leg striped red and white. Press **S**, then **R**, then **W**. Press **P**. To paint the other leg, repeat the steps as given for the left leg.

Replacing Colors

Replacing colors is a convenient method of changing existing colors. For example, to replace red with blue, you would press R (for Replace), then R then B. You don't have to press P to paint. The first color will be replaced by the second color.

Warning! Using this function will change all specified prepainted areas on the screen. For example, if you replaced dark with white, all dark areas on the screen (including outlines) would be replaced by white.

We will explore replacing colors in the section of this manual called "Creating Your Own Pictures."

As you are painting, remember these simple rules:

When you start a painting, there will only be two colors on the screen, so the first background color choice will have to be one of those two colors.

You cannot paint a new color or pattern over checks or stripes unless you use the P.E.M. to color each individual check or stripe.

You cannot paint stripes over a background color which is contained in the striped pattern. For example, in Prism 3, you cannot paint red and dark stripes on top of either red or dark areas, and you cannot paint white and blue stripes on white or blue areas.

If the area in which you want to paint stripes is already colored, and the existing color will not let you put stripes on it, just change the existing color to one not in the striped pattern. (Follow the instructions in this list.) Then paint the desired stripes over the new color.

If you are in the process of painting or drawing a picture and press the W or L key by accident, the picture may disappear from the screen, and a large blinking cross may appear. Don't worry, just press the **BREAK** key to return to the picture.

Keep practicing, and before long you will be painting like a professional!

The Illusion of Color

There are some qualities of color which you may or may not have experienced. Artists often have to mix two colors to make a new color. For instance, yellow and blue paint can be mixed to make green. With Micro Painter, you can combine colors using striped or checked patterns to create color illusions. The illusions may vary according to your color television's tint and color settings.

Below are some combinations which create the illusion of new colors with the four basic colors in each color Prism.

Let's use Prism 3 as an example. (But don't be afraid to experiment with Prisms 1 and 2.)

In Prism 3, the four basic colors are red, white, dark and blue. The following colors can be simulated by combining patterns (stripes and checks) in these colors:

Purple—Striped Blue and Red
Light Orange—Checked Red and White
Dark Orange—Checked Red and Dark
Dark Blue—Checked Blue and Dark
Green —Checked White and Dark
Light Blue—Checked Blue and White

See if you can find some more.

Micro-Man of a Different Color

Let's see what happens when we use the other color Prisms. Press **(2)** on your keyboard. That's quite a change, isn't it? Press **(1)** on your keyboard. Press **(3)** to return to Prism 3. For an added touch, press the **S H I F T** and the **(3)** key at the same time. The colors have reversed.

You can do this in all three color Prisms. Press **S H I F T** and **(3)** again to return to the original Prism 3 colors.

Special Effects/Special Features (continued)

Painting in Color Prisms 1 and 2

To paint in Prism 1, just press **(1)**. To paint in Prism 2, just press **(2)**. Follow the same directions given for painting in Prism 3. However, remember that some of the abbreviations differ in each color Prism.

In Prism 1, the abbreviations are:

G for Green
Y for Yellow
B for Blue
R for Red

In Prism 2, the abbreviations are:

B for Buff
C for Cyan
M for Magenta
O for Orange

The Periscopik-Elektron-Magnifier (P.E.M.)

This is your chance to fill in those white areas which were not completed when you colored a larger area. Often, single dots will not be colored because they are isolated from the larger area by outlines. The P.E.M. can be used to color these little dots. Or, with the P.E.M., you can create new outlines to make the painting more complex.

To illustrate this, let's use Micro-Man's giant paintbrush. Move the Magic Paintbrush inside Micro-Man's giant screen paintbrush. Press the long gray key (the Space Bar) on your keyboard. Now that's a giant paintbrush!

The P.E.M. will always stay in the center of the screen. The magnified picture, not the P.E.M., will move. Use the arrow keys (or the Joystick lever) to move the picture to the desired painting area.

To paint with the P.E.M., just press the first letter of the color. Then, press **P**. You do not have to choose a background color or select a pattern. For example press **(D)** for Dark, then **(P)**.

Let's make a horizontal line across the center of the enlarged paintbrush. Move the picture until the P.E.M. is at the extreme left edge of the enlarged paintbrush. You've already chosen dark for the color. Press the **(→)** key then **(P)**. As you can see, the P.E.M. paints one square at a time.

Complete the horizontal line by pressing the **(→)** key then **(P)** until you reach the extreme right edge of the enlarged paintbrush.

Special Effects/Special Features (continued)

Now press the Space Bar. As you can see, you have created a new outline.

Let's color the tip of the paintbrush to make it look like it's just been dipped in red paint. Move the Magic Paintbrush to the center of the tip of the paintbrush. Returning to the regular painting procedure, press **B** then **W** for a Background of White. Press **C** for Checked. Then, press **R****R** (Red twice). Press **P**, and the tip of the paintbrush will be red.

The P.E.M. can be used to paint over areas that have already been painted. For instance, you can return to a certain area and paint the squares inside a borderline a different color without affecting the rest of the colors.

Also, use the P.E.M. to paint detailed areas that may not have been colored when you were painting large outlined areas. Experiment with the P.E.M. and you will find that there are little dots which were not painted, even though you painted an adjacent area. The P.E.M. is an indispensable detailing tool for painting those pesky little dots.

This concludes the instructions in using the various painting options included in Micro Painter. Now you should be able to apply the painting options to the other pictures on the Data tape. If you want to save the example painting, refer to "Saving Pictures on Tape." To load another picture from the Data tape, refer to "The Micro Painter Data Tape." If you prefer to learn to draw your own pictures, proceed with the following section.

Creating Your Own Pictures

Press the Power button to turn the computer off. Then press it again to turn the computer back on. Without removing the Program Pak, press the **L** key. Then press the **(BREAK)** key.

Now you should see the Magic Paintbrush blinking on a clear screen. You need to select a background color. The screen will be in Prism 3 colors. Here you have no other choice but to press **B** (Background) then **W**, because White is the only color appearing on the screen. Press **C** for Checked, then **R R** (Red twice). Press **P** to create a red background. Just like magic, the Paintbrush disappears, the red expands over the white, and the Paintbrush reappears when the screen is completely red.

Note: If the screen becomes blue instead of red, press the Reset button and the blue will become red. The colors sometimes reverse when the reset button is pressed. Refer to the Quick Reference Guide if a problem continues.

To make the screen White again, press **R** (Replace), **R** (Red), and then **W** (White). The red is then swept off the screen by the white.

As in painting pictures from the Data tape, you can also select a color Prism when composing your own picture. Let's be adventurous and press **2** for Prism 2.

In a flash, the screen changes to Orange. You can change the screen to show buff, cyan, or magenta by replacing orange with one of the other Prism 2 colors.

For this example, let's change the screen to buff. Press **R** (Replace), then **O**, then **B**. Orange is quickly replaced by buff.

Next, you select a background color. (Remember that the background color must be one that is already on the screen.) Press **B**, and then **B** (for Buff).

Drawing an original picture requires that you use the P.E.M.. To illustrate this method, let's try drawing and painting a simple geometric rectangle. Press the Space Bar to use the P.E.M..

Press **C** (for Cyan) and then **P**. This is your starting point. Press the **→** key to move to the next space. Press **P** again. Repeat the same **→** then **P** movement 13 more times.

Now you have created a line 15 units long. Press the **↑** then the **P** key 15 times to make a right (90 degree) angle. Press the **→** then **P** key 15 times. Press **↓** then the **P** key 15 more times to finish the rectangle.

Creating Your Own Pictures (continued)

Press the Space Bar. The rectangle certainly doesn't appear as large as it did when drawn with the P.E.M.! When you are drawing with the P.E.M., press the Space Bar often to see the size of your drawing on the unmagnified screen.

Let's give that rectangle some color. You must be in the unmagnified screen to paint a large area. Move the Paintbrush to the interior of the rectangle. Press **C** (Checked), then **O** then **M**. Press **P** and the rectangle should have a magenta and orange glow.

Move the cursor outside the rectangle. Press **S** (Stripes). Press **C C** (Cyan twice), then press **P**.

For a change of pace, press **1** for Prism 1. The cyan screen area becomes yellow.

To illustrate how the Magic Paintbrush can easily be moved diagonally, let's put a housetop shape on the top of the rectangle.

Press the Space Bar for the P.E.M.. Now move the picture so that the P.E.M. is positioned over the upper left corner of the rectangle. Press the **↑** and **→** keys simultaneously. You should move one unit to the right and one unit up (this takes some practice).

Press **G** for Green. Press **P**. Press the **↑** and **→** keys simultaneously to move one more diagonal unit up. Press **P**. Use the same diagonal movement five more times, pressing **P** after each. You should create a Green diagonal line.

Simultaneously press the **↓** and **←** keys. Press **P**. Repeat these movements five more times until this line connects with the upper right corner of the rectangle.

Press the Space Bar. Use the Prism 1 colors creatively to fill in the triangular area created by the diagonal lines.

Refer to this section when drawing your own pictures until you know the process by heart.

Saving Pictures on Tape

You can save your creations on cassette tape for further retouches or later viewing (showing what a fine artist you are). To save your artwork, you will need to use a blank cassette tape.

Make sure the Micro Painter Data Tape is not in the tape recorder. Check to see if the tape you are using has a "leader." A "leader" will appear to be a different color than the rest of the tape. Leader tape cannot accept recorded data. Insert the tape into the recorder. Be sure to "Fast Forward" past the leader.

You can record many pictures onto both sides of one blank cassette tape. For the first picture recorded on a tape, set the recorder counter to zero. Simultaneously, press the "Play" and "Record" buttons on the recorder. Now press **(W)** on your keyboard. W means to Write (copy) this picture onto tape.

The screen will show:

WRITE SUB-SYSTEM
ENTER PICTURES NAME

You can call your picture anything you want, but the name cannot be more than eight characters. Continuing with the example you just drew, let's call the drawing RECTANG. Type **R E C T A N G** and press **ENTER**.

The tape recorder will start. This means that your drawing is being recorded onto the blank cassette tape. After the picture has been recorded, the drawing will reappear on the screen. Remove the tape and write down the ending counter number where the recording was completed. (This counter number plus five counter units would be an acceptable counter number of the next saved painting.)

Note: When saving several pictures on one cassette tape, rewind the tape. Set the counter to zero. Check and see what the last saved painting's counter number was. "Fast Forward" the tape to at least five counter units past the last saved painting. Then proceed with the normal recording instructions.

Since you have already saved the work onto a cassette tape, press the Power button once to turn the computer off. Press the Power button again to clear the screen and begin again. Later you can load any picture you saved by:

1. Rewinding the cassette tape.
2. Fast Forwarding the tape until it reaches the desired counter number, then pressing "Stop."

Saving Pictures on Tape (continued)

3. Pressing "Play" on your recorder.
4. Pressing **L** on the keyboard.
5. Typing the name and pressing **ENTER**.

You can also save pictures from the Micro Painter Data tape by using the steps shown above.

To Load Pictures

Whether you are loading the Micro Painter Data tape, or loading a tape composed of your own work, you will use the steps below:

1. Rewind cassette tape.
2. Set counter at zero.
3. "Fast Forward" tape to counter number of the desired picture . Press "Stop."
4. Press "Play" on your tape recorder.
5. Press **L** on your keyboard.
6. Type the name of the picture and press **ENTER**.
7. Wait for the picture to load and appear on the screen.

Data Tape Names

The names of the Data tape's paintings are:

- | | |
|-------------|-------------|
| 1. MICROMAN | 6. GUITAR |
| 2. CAR | 7. COFFEE |
| 3. SUN&MOON | 8. SAILBOAT |
| 4. TIGER | 9. EINSTEIN |
| 5. STILLIFE | |

To Color

1. Select color Prism **1**, **2**, or **3**.
2. Move the Magic Paintbrush inside an outlined area using the arrow keys (or Joystick lever).
3. Select a background color. (The color must be the one appearing on the screen under the Magic Paintbrush.)
4. Press **C** for Checks, or **S** for Stripes.
5. Select two colors and press **P** to Paint. For Solid colors, press the first letter of the color twice, then press **P**.

Quick Reference Guide (continued)

Replacing Colors

1. Press **R** to Replace colors.
2. Press the first letter of the color you want replaced, then press the first letter of the color you want. For example, to replace red with blue, press **R** (Replace), then **R** for Red, then **B** for Blue.

Using the Periscopik-Elektron-Magnifier (P.E.M.)

1. Press the Space Bar on your keyboard for magnification.
2. Use the arrow keys (or Joystick lever) to move the background to a spot of your choice.
3. Press the first letter of the color choice.
4. Press **P** to paint one square.
5. Press the Space Bar to exit the P.E.M..

Drawing and Painting Your Own Artwork

1. Turn the computer Off, then turn the computer back On.
2. Press **L**, then press the **B R E A K** key.
3. Press the Space Bar, and use the P.E.M. to draw a picture.
4. Press the Space Bar to exit the P.E.M..
5. Use Coloring steps as described before.

Saving Pictures on Tape

1. Make sure the Micro Painter Data Tape is **not** in the tape recorder.
2. Insert a tape into the recorder and "Fast Forward" the tape past the last painting.
3. Press the "Record" and "Play" buttons on your recorder.

4. Press **(W)** on your keyboard.
5. Type a name for your drawing or painting project (no more than eight characters).
6. Press **(E N T E R)**.
7. The picture will reappear on the screen. Press "Stop." Remove and label your tape with the counter number as the place to begin your next painting's recording.
8. You may repeat the Loading procedure to see if the tape was Saved successfully.

Pressing the W (Write) or L (Load) Key in Error

If you are in the process of painting or drawing a picture and press the W or L key by accident, just press the **(B R E A K)** key to return to the picture.

Picture Loading Problems

If no picture appears or the wrong picture appears:

1. Try changing the volume setting of the recorder.
2. Make sure that you are following the Loading instructions correctly.
3. Check your TRS-80 Color Computer Owner's Manual to make sure that you have correctly connected your computer to the tape recorder.

If the LOAD ERROR message appears:

1. Press any key.
2. Follow Loading Instructions.

Reverse Colors

If, for example, you press B for Blue and the screen shows red, press the Reset button at the rear of your Color Computer. The color should be corrected immediately.

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