

SPECTRAVIDEO™

The logo is set against a black background with a network of fine white cracks. Below the text are three horizontal stripes: a top red stripe, a middle yellow stripe, and a bottom red stripe. The entire logo is contained within a dark, rectangular frame.



SPECTRAVIDEO'S USER'S MANUAL STATEMENT

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna
- Relocate the computer with respect to the receiver
- Move the computer away from the receiver
- Plug the computer into a different outlet so that computer and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems" This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

WARNING:

This equipment has been certified to comply with the limits for a class B computing device, pursuant to Subpart J of Part 15 of FCC Rules. Only peripherals, (computer input/output devices, terminals, printers, etc.) certified to comply with the Class B limits may be attached to this computer. Operation with non-certified peripherals is likely to result in interference to radio and TV reception.

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Graphics by: Cremarco Advertising, Inc.

Published by
SPECTRAVIDEO INTERNATIONAL LTD.

First Edition

First Printing 1983

Printed in Hong Kong

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PART ONE

CHAPTER 1 A New Beginning



The introduction of the Atari® VCS 2600 video game machine in 1978 revolutionized the world of toys. Children and adults alike were now able to play a new kind of game. With its flashy graphics and hair-raising sounds, the Atari® machine was much more exciting than any toy truck or toy doll.

However, the home computer became the hit of the 1980's and probably will continue as such well into the future. Millions of Atari® game machine owners had little choice but to give up their little Atari® machines and buy expensive personal computers in order to join the microcomputer generation. That is until now, with the introduction of Spectravideo's Compumate™.

You have made a wise decision in selecting the Compumate™, which enables you to transform your Atari® game machine into a real computer! You already know that you can play games with your VCS, but we will show you that now, with Compumate™, you can also play music, draw pictures, print words and even learn how to program a computer. And by the time you finish reading this guide, you will agree that computers can be easy and fun to use.

CHAPTER 2

Set-Up

To set up the Compumate™ follow these steps:



1. Turn off the power to your VCS.



2. Remove the game cartridge, joysticks, paddles or any other device presently connected to your VCS.



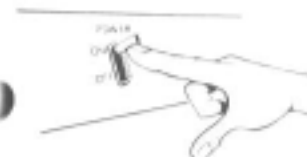
3. Place the Compumate™ on the VCS.



4. Insert the Compumate™ cartridge into the game cartridge slot.



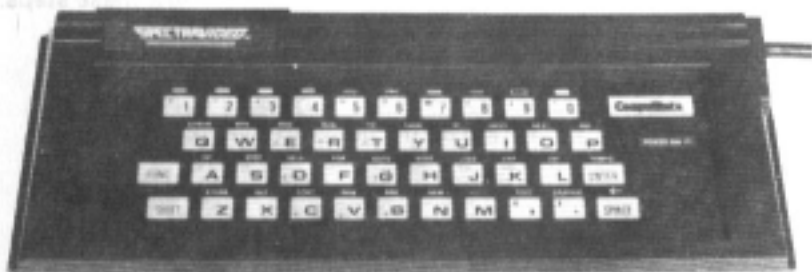
5. Insert the plugs connected to the cartridge into the left and right joystick slots on the back of the VCS. Make sure that the plug marked "left" is in the left joystick slot and the plug marked "right" is in the right joystick slot.



6. Everything is now connected. We will tell you to turn on the power for the Atari® VCS very soon. Please continue reading.

CHAPTER 3

Meet the Keyboard



Today, most computers are controlled by the user sending instructions to the microprocessor—the brain of the computer—through the keyboard. Maybe someday in the future computers will be able to understand our voice, but until then, we must use a keyboard. The computer's keyboard should look familiar to you because it resembles that of a typewriter.

Turn the power switch to the "ON" position and then look at the TV set. Compumate™ should display the picture that appears in Figure 1 and then play a few notes from "Twinkle Twinkle Little Star".

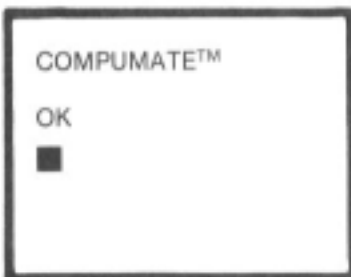


Figure 1

If you do not see this display on the screen immediately after turning on the power, turn to the troubleshooting chart in Appendix B for assistance.

Compumate™ acts in three different ways: It draws pictures, plays music and uses computer programs that you write. Each of these functions uses its own special screen. One is the TEXTSCREEN, where any message you type is displayed and where you can program in the BASIC computer language. Second is the MUSICSCREEN where you can play musical notes and write songs, and the third is the GRAPHICSCREEN where you can draw and create animated pictures.

Compumate™ places you on the TEXTSCREEN automatically after you turn the power on. The word "OK" is the message to you from the computer that it is ready to accept your commands. The white square underneath the word "OK" is called the "Cursor". Its position on the screen informs you of the location of the next letter you type.

As you can see, Compumate's™ keyboard is full of multi-colored letters, numbers, words and symbols. Believe it or not, all these marks have meanings and we will explain them to you.

Compumate's™ keyboard not only looks like a typewriter's keyboard, but it also acts like one. To convince yourself, press the "W" key and then the "E" key. The screen display should be identical to Figure 2.

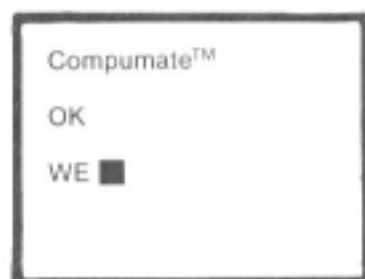


Figure 2

SPACE

Press the **SPACE** key, located on the lower right side of the keyboard, and the cursor will move one space to the right.

The only characters that can be typed on the TEXTSCREEN in a way that the computer understands are the letters of the alphabet and the numbers 0-9. Although the music and drawing symbols can appear on the TEXTSCREEN, the computer will not understand them and will tell you that you made an error.

FUNC

The **FUNC** key located on the left side of the keyboard is called the "Function" key. This key is known as the "Changer" because when it is pressed together with any one of three different keys it causes the computer to switch from the present type of screen (i.e. TEXTSCREEN) to another type (e.g. GRAPHICSCREEN OR MUSICSCREEN).

The **FUNC** key is also used to correct typing mistakes. Let's say, for example, that you typed an "A" instead of an "S". By pressing the **FUNC** key and holding it down while you press the **SPACE** key, the cursor will move one position to the left and erase the letter "A". Then you just type the letter "S".

Continue typing for a few minutes, to become familiar with the keys. Remember to use only the alphabet and number keys. If you type more than 12 characters on one line, the computer will automatically advance the cursor to the next screen line. When you feel you have had enough practice, please continue reading.

The remainder of this manual is divided into two sections: Part two and Part three. Part two will teach you three things: How to play musical notes and begin writing a song; how to draw simple pictures; and how to write simple BASIC programs (BASIC is an easy computer language to learn). Part two will give you enough material to practice to make you comfortable with the way Compumate™ works. When you are ready, proceed to Part three which contains information on Compumate's™ advanced music, graphics and BASIC programming capabilities.

PART TWO

CHAPTER 1 Simple Music



Compumate™ places you in the TEXTSCREEN when you turn the power on. Do you remember which key you must press to change from the textscreen to the music screen? We hope you remembered that it is the **FUNC** key. But you must also press a second key together with the **FUNC** key. Can you guess which one it is?

We will give you a hint. Look very closely at the keyboard. All the symbols for the musical notes are written in red ink on or above the letter keys. All these keys are marked in Figure 3.

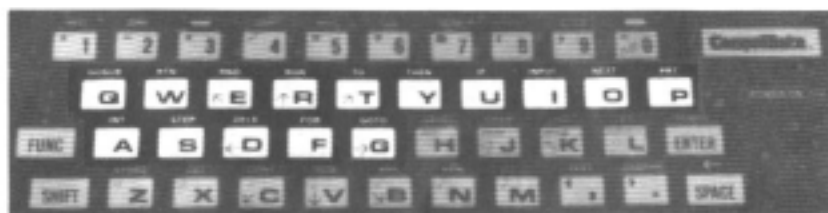


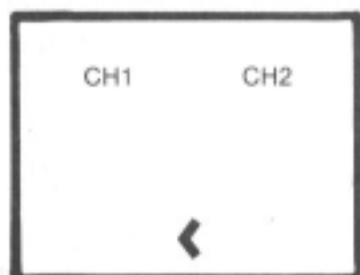
Figure 3

FUNC

MUSIC

M

Have you found the key we need yet? We need the "M" key, because directly above it is the word "MUSIC". Now that you know which keys to use, go ahead and press the **FUNC** key while you simultaneously press the "M" key. The TV screen should look like this:



You can instruct Compumate™ to play a series of notes on two different channels. When these two channels are played at the same time they sound like a stereo system. The sign "CH1" refers to music channel one, and "CH2" refers to music channel two. You should have noticed that the cursor (the little white box) disappeared. Well, it didn't exactly disappear. The arrow at the bottom of the screen is the new cursor. It tells you which channel you are instructing.

Before showing you how to write your own songs, we recommend that you listen to Compumate's™ built-in songs. They will give you an idea of what you can do. The following is a list of the four built-in demonstration songs and the keys to press to hear them.

KEY TO PRESS

SONG

3

TWINKLE TWINKLE LITTLE STAR

4

LONG LONG AGO

5

JINGLE BELLS

6

MY BONNIE

Listen and enjoy them. To stop a song in the middle press the **SPACE** key.

We will now explain how to use both channels, how to simulate the sound of a piano or organ, and how to change the speed at which a song is played. In Part Three we will show you how to save your songs and replay them at a later date.

Press the following keys one after the other: "Q" (DO), "W" (RE), "E" (ME), "R" (FA), "T" (SO), "Y" (LA), "U" (TE), "I" (DO), "O" (RE), "P" (ME), "A" (ME), "S" (FA), "D" (SO), "F" (LA), "G" (TE).

These are the musical notes that are available to you.

Press these keys again and this time look at the screen. You will notice that the arrow cursor is pointing at these notes. Compumate™ can accept many notes at a time and it keeps track of them in the order that you type them in. The number 001 (actually number 1) is the number of the first note that you typed. Since you typed all the musical notes listed above one after the other and did not tell the computer to remember them in the order that you typed them, the number 001 stayed there and the computer did not advance to note 002, 003 etc.

OK. You are now ready to begin writing your own songs! Follow our instructions carefully.

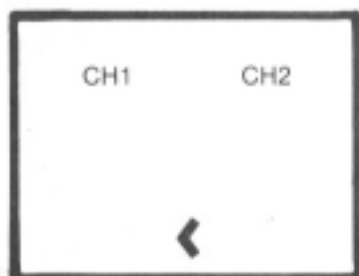
1. If you are already on the MUSICSCREEN go to step 2. If you are still on the TEXTSCREEN, press the **FUNC-M** key combination to get onto the MUSICSCREEN.
2. Press the **FUNC-N** key combination. This tells the computer to clear space in its memory to temporarily store your work. In the future, you should press this key combination to clear the screen of any previous work and prepare the computer for you to start over again.
3. Here we go. After you input the notes for the following song, try to figure out which song it is. Be sure to glance at the screen after you type each note to make sure that you have typed the right key. If you make a mistake and type the wrong key, Press the **FUNC-D** key to delete (erase) the key you just typed incorrectly, and then type the correct key.

FUNC

MUSIC

M

Have you found the key we need yet? We need the "M" key, because directly above it is the word "MUSIC". Now that you know which keys to use, go ahead and press the **FUNC** key while you simultaneously press the "M" key. The TV screen should look like this:



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- Press:
- | | |
|---------------|---------------------|
| 1. DO SPACE | 29. SO SPACE |
| 2. RE SPACE | 30. DO SPACE |
| 3. ME SPACE | 31. RE SPACE |
| 4. DO SPACE | 32. ME SPACE |
| 5. ME SPACE | 33. FA SPACE |
| 6. DO SPACE | 34. SO SPACE |
| 7. ME SPACE | 35. LA SPACE |
| 8. RE SPACE | 36. LA SPACE |
| 9. ME SPACE | 37. RE SPACE |
| 10. FA SPACE | 38. ME SPACE |
| 11. FA SPACE | 39. FA SPACE |
| 12. ME SPACE | 40. SO SPACE |
| 13. RE SPACE | 41. LA SPACE |
| 14. FA SPACE | 42. TE SPACE |
| 15. ME SPACE | 43. TE SPACE |
| 16. FA SPACE. | 44. ME SPACE |
| 17. SO SPACE | 45. FA SPACE |
| 18. ME SPACE | 46. SO SPACE |
| 19. SO SPACE | 47. LA SPACE |
| 20. ME SPACE | 48. TE SPACE |
| 21. SO SPACE | 49. <u>DO</u> SPACE |
| 22. FA SPACE | 50. TE SPACE |
| 23. SO SPACE | 51. LA SPACE |
| 24. LA SPACE | 52. FA SPACE |
| 25. LA SPACE | 53. TE SPACE |
| 26. SO SPACE | 54. SO SPACE |
| 27. FA SPACE | 55. <u>DO</u> SPACE |
| 28. LA SPACE | |

AUTOPLAY

L

Now press the **AUTOPLAY KEY** (the "L" key), sit back and try to name the tune.

Did you get it? That's our version of "Doe-a-Deer" played on one channel!

4. How long a note is played is called its "duration". Each note that you just typed was played for the same amount of time. To change the length of time that each note of our song "Doe-a-Deer" was played, you must first return to the first note of the song (note number 001). To do so, press the **FUNC** key and continue to hold it down while you press the **SPACE** key. You will see all the notes flash by on the screen until the arrow cursor points to note number 001.

5. Press one of the musical scale keys that appear on the bottom row of keys on the keyboard, and then the **SPACE** key. The musical scale keys are highlighted in Figure 4.

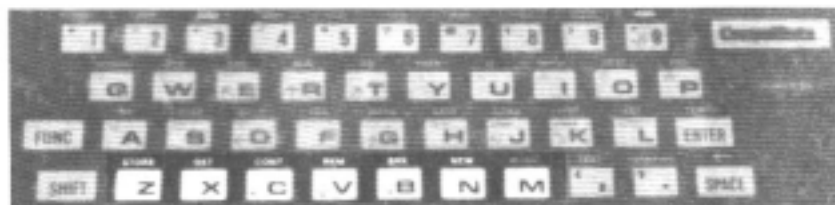


Figure 4

If you do not know what the different scale symbols mean, don't give up hope. Experiment. Whatever you do is OK. You can't hurt the computer. You will learn the differences among the scales by attaching different scales to the same note, and you will be able to hear the sound that the computer makes after you press the **SPACE** key.

After you choose a musical scale and press the key that contains that symbol, the symbol will appear to the right of the note on the screen. When you press the **SPACE** key the computer will produce the note for you to hear and will then advance to note number 002. Continue to choose the musical scales for the other notes of the song. (Don't forget to press the **SPACE** key after pressing each scale symbol.) When you have given each note a symbol, press the **AUTOPLAY** key to hear your new version of the song.

6. The speed or pace at which a song is played is called its "Tempo". You can select the Tempo you want by pressing the **FUNC** key and, while holding it down, pressing the **ENTER** key (above the **ENTER** key is the word **TEMPO**). Then release both keys and press a number from **1** to **9**, then press **AUTOPLAY**. The lower the number you choose the quicker the song will be played, and the higher the number you pick the slower the song will be played.

7. Once you understand how to teach the notes to the computer to play on Channel One, it is very easy to teach it the notes to play on Channel Two. To tell the computer what notes to play on Channel Two, press the right arrow symbol which is located on the same key that contains the period mark (on the bottom row of the keyboard). The arrow cursor will then point to Channel Two on the right side of the screen. To reverse the arrow and make it point at Channel One, press the key that contains the left arrow symbol (which is on the same key that contains the comma).

8. You are now set to input notes to Channel Two. Follow steps 3-5 listed above. Channel Two works just like Channel One. When you have finished instructing Channel Two, press the **AUTOPLAY** key to hear your masterpiece.

9. If the notes you typed don't produce the song that you expected, go back to the beginning of the song (note number 001) by pressing the **FUNC-SPACE** keys and check to make sure you typed the correct notes. To check your notes, press the **SPACE** key again and again. Each time you press the **SPACE** key, Compumate™ will play one note. When you have found your error you can either delete (remove) the note which doesn't belong there, or you can insert (add) a forgotten note. We will illustrate how to do so with an example:

EXAMPLE: let's say your song consists of five notes

001 DO

002 RE

003 ME

004 FA

005 SO