

September 1987

## RAINBOW

The Color Computer Monthly Magazine

## ON DISK

RAINBOW ON DISK contains the programs featured in the pages of THE RAINBOW, The Color Computer Monthly Magazine. It is intended as a companion to the magazine, not as a separate entity. The articles accompanying the programs in THE RAINBOW may include important information and system requirements necessary to the operation of the programs.

The disk is specially formatted and contains both BASIC and OS-9 operating system programs.

This edition of RAINBOW ON DISK includes:

**Dollar\$ for Good Grade\$** Keep your kids in line with this report card payoff calculator.

**BASIC for Beginners** In this first part of the series, David W. Ostler presents *Cl*s and *Variable* for beginning programmers.

**Animals** Delve into the world of artificial intelligence with this program designed to help your CoCo learn about animals.

**Fraction Pie** Use graphics to illustrate fractions to youngsters.

**Home Court Advantage** Let your CoCo keep score of your next official Nerf tournament.

**Bee Zapper** How many bees can your chameleon buzz in this exciting arcade-style game?

**ABC** Reinforce those ABCs with a touch of graphics.

**Novices Niche** Six shorties to provide educational entertainment.

**Wishing Well** Use *Road Skills* to enhance drivers education.

**Family Tree** In this first part of the series, use *Page* to print those tedious information-finding sheets.

**The Electronic Blackboard** Let *Roots* and *Graphs of Functions* help you prove those tough trig and calculus identities. The bonus program, *Equations*, will drill you on algebraic manipulations.

**Education Notes** Do you know the differences between the various types of triangles? *Triangle* can help.

**CoCo Tachistoscope** Now CoCo can help increase reading speed and comprehension.

**Trivial Chances** Pursue trivial info with up to five friends and your CoCo.

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The OS-9 files on the "flip" side of this month's RAINBOW ON DISK include:

**KISSable OS-9** *KISSDraw* and *CoCo Draw* will pave the way for colorful graphics on the CoCo using OS-9 Level II.

**Sometimes BASIC09 Isn't Fast Enough** Peter Dibble illustrates the speed of BASIC09 with *Compress*, a set of routines to help squeeze down long graphics files.

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### Instructions for Use

This disk is a "flippy," formatted under Disk Extended BASIC on the front side and under the Microware OS-9 operating system on the back. To access the OS-9 programs on the back, you must remove the disk from your drive, boot your OS-9 system, turn the disk over and reinsert it.

This month's RAINBOW ON DISK is formatted in such a way that programs for Disk BASIC are on both sides of the disk. The flip side of the disk has been "partitioned" and does hold six Disk BASIC files. You may copy these files to another disk manually or back up the entire flip side of the disk.

Before you run any of the programs on RAINBOW ON DISK, you should first use the Disk BASIC BACKUP command to make a backup of both sides of the disk, giving you a working copy. You are able to back up the OS-9 formatted side of the disk under Disk BASIC. For the protection of the RAINBOW ON DISK master, the disk does not have write-protect notches, so you cannot accidentally write to it.

The Disk BASIC portions of the disk are menu-driven. To begin, type RUN~MENU~ and press ENTER. A menu of the files appears, from which you may run any of the BASIC programs by pressing its corresponding letter key. The machine language programs, indicated by an asterisk, will not run properly from the menu. These machine language files must be loaded and executed with the LOADM and EXEC commands.

When a file is run from the RAINBOW ON DISK menu, part of the menu itself remains in memory. Because of this, you may encounter an OM? Error on some of the programs, indicating that the file is too large for memory. If this occurs, you will have to remove the disk and turn off your CoCo for a few seconds, then LOAD and RUN the program as you normally would from Disk BASIC, bypassing the menu.

### How Do I Get to the OS-9 Programs?

The OS-9 side of RAINBOW ON DISK contains two directories: CMDS and SOURCE. It also contains a file, read.me.first, which explains the division of the two directories. The CMDS directory contains executable programs and the SOURCE directory contains the ASCII source code for these programs. BASIC09 programs will only be offered in source form so they will only be found in the SOURCE directory.

Since this month's RAINBOW ON DISK offers BASIC09 programs, the SOURCE directory will be the only one found on the disk. There is no CMDS directory on this month's RAINBOW ON DISK. To use this month's programs, first boot OS-9 and execute BASIC09. Then, use the chd command to make the RAINBOW ON DISK SOURCE directory your current data directory and load the programs into the BASIC09 workspace.

OS-9 is a very powerful operating system. Because of this, it is not easy to learn at first. However, while we can give specific instructions for using the OS-9 programs, you will find that the OS-9 programs will be of little use unless you are familiar with the operating system. For this reason, if you haven't "learned" OS-9 or are not comfortable with it, we suggest you read *The Complete Rainbow Guide to OS-9* by Dale Puckett and Peter Dibble.

The following is not intended as a course in OS-9. It merely states how to get the OS-9 programs from RAINBOW ON DISK to your OS-9 system disk. Use the procedures appropriate for your system. Before doing so, however, boot the OS-9 operating system according to the documentation from Radio Shack.

- 1) Type `load dir list copy` and press ENTER.
- 2) If you have only one disk drive, remove the OS-9 system disk from Drive 0 and replace it with the OS-9 side of RAINBOW ON DISK. Then type `chd/d0` and press ENTER. If you have two disk drives, leave the system master in Drive 0 and put the RAINBOW ON DISK in Drive 1. Then type `chd/d1` and press ENTER.
- 3) List the `read.me.first` file to the screen by typing `list read.me.first` and pressing ENTER.
- 4) Entering `dir` will give you a directory of the OS-9 side of RAINBOW ON DISK. To see what programs are in the CMDS directory, enter `dir cmds`. Follow a similar method to see what source files are in the SOURCE directory.
- 5) When you find a program you want to use, copy it to the CMDS directory on your system disk with one of the following commands:

One-drive system: `copy /d0/cmds/ filename /d0/cmds/ filename -s`

The system will prompt you to alternately place the source disk (RAINBOW ON DISK) or the destination disk (system disk) in Drive 0.

Two-drive system: `copy /d1/cmds/ filename /d0/cmds/ filename`

Once you have copied the program, you execute it from your system master by placing that disk in Drive 0 and entering the name of the file.

Many of these programs require special loading instructions and other information necessary to the proper functioning of the program. For complete instructions regarding each of the following files on RAINBOW ON DISK, refer to the September 1987 edition of RAINBOW magazine. (The corresponding page number is noted for your convenience.)

Front Side		Back Side	
Page	Filename	Disk BASIC Files	
SEP	MENU	139	TRIANGLE
022	GRADE\$	142	TACHISTO
029	CLS	DAT	PUDDING
029	VARIABLE	154	TRIVIAG
038	ANIMALS	155	TRIVIAFC
041	FRACTION	DAT	TRIVIA
043	SCOREBRD		
053	BEEZAP		
060	ABC		
070	MONEYJAR		
071	MATHTCHR		
072	TIMETABL		
074	LETRGETR	160	KISSDraw
074	CRUNCHER	167	CoCoDraw
076	GRADER	170	SaveImage
091	ROADSKIL	170	Compress
103	PAGE	172	GetBuffer
112	GRAPH	172	GetWinAttr
112	EQUATION		

#### OS-9 Files

read.me.first

#### SOURCE

Page	Filename
160	KISSDraw
167	CoCoDraw
170	SaveImage
170	Compress
172	GetBuffer
172	GetWinAttr

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