

# RAINBOW

The Color Computer Monthly Magazine

## ON DISK

February 1990

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:

**From Fractures to Fractions** Perform mathematical calculations on fractions and reduce them to their lowest form.

**The Total Figure** A spreadsheet program written in assembly language for smooth operation and speed.

**Novices Niche** Six shorties to entertain and help you learn to program.

**Barden's Buffer** A project for interfacing thermometers and other input devices with the Hi-Res Joystick Interface.

**A New Fangled Maze** Solve the mysterious maze within the allotted number of moves, but don't lose count.

**BASIC Training** Rotate images in quadrants to achieve spectacular results.

**Wishing Well** Use *Music 101* to quiz children in musical notation.

**Bank & Budget** Maintain your checkbook and track your cash flow.

**From Screen to Printed Page** Print the 32-, 40- and 80-column text screens to the printer with a single keystroke.

**Concentrate** Find the matching cards and test your memory skills.

**Education Notes** Score points in a game of basketball by solving mathematical problems.

**Darkroom** Build a simple interface for an enlarger with an automatic exposure timer.

**Guitar 3** Strum along with the CoCo as you browse through the chords shown on the screen.

**Medic 3** Keep track of all those medical bills the easy way.

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The OS-9 "flip" side of this month's RAINBOW ON DISK includes:

**Verify** Achieve faster disk operations by disabling the verify option.

**BreakPoint** Learn about dissecting the command line with a sample directory utility.

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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.

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. For the protection of the RAINBOW ON DISK master, the disk does not have write-protects 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.

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 February 1990 edition of RAINBOW magazine. (The corresponding page number is noted for your convenience.)

| Front Side<br>Disk BASIC Files |                 | Back Side<br>OS-9 Files |                 |
|--------------------------------|-----------------|-------------------------|-----------------|
| <b>Page</b>                    | <b>Filename</b> | read.me.first           |                 |
| FEBRUARY                       | MENU            | <b>CMDS Directory</b>   |                 |
| 012                            | FRACTION        | <b>Page</b>             | <b>Filename</b> |
| 030                            | COCOCALC        | 056                     | vfy             |
| 034                            | LOADER          | 123                     | udir            |
| 035                            | MARQUEE3        | <b>SOURCE Directory</b> |                 |
| 036                            | MCP             | <b>Page</b>             | <b>Filename</b> |
| 036                            | HBUFF           | 056                     | vfy.c           |
| 037                            | ESCAPE          | 123                     | udir.c          |
| 038                            | LISTER          |                         |                 |
| 040                            | JOURNAL         |                         |                 |
| 049                            | READHI          |                         |                 |
| 050                            | MAZEWAY         |                         |                 |
| 054                            | AOPTION         |                         |                 |
| 062                            | MUSIC101        |                         |                 |
| 076                            | CHECK1          |                         |                 |
| 079                            | CHECK2          |                         |                 |
| 084                            | PRT             |                         |                 |
| 085                            | * PRTASM        |                         |                 |
| 090                            | CCTRATE         |                         |                 |
| 095                            | BASKET          |                         |                 |
| 098                            | DARKROOM        |                         |                 |
| 112                            | GUITAR3         |                         |                 |
| 118                            | MEDIC3          |                         |                 |

\* Indicates a machine language program.

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