

An All-Around Guide To

PoSRIC

The **P**ortable **S**cripted **Ri**PorFS Interface in **C**89



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Introduction

During the summer of 2015 Gip-Gip ran into some problems using FAT-formatted flash drives, as he couldn't store full disk images with a file-size limit of 4 GiB. To overcome this problem, he sought out to create a free-to-use filesystem specification that had virtually unlimited file size, aka the **Ridged Portable FileSystem**.

RiPorFS, as it will be called hereafter, is a very basic concept, and gets its name from the visualization of the “ridges” being viewed above everything else. The “ridges” are 8-bit integers that were paired with checksums in later iterations, and they describe data in groups of 128 bytes. This allows a computer to easily pair data together regardless of endian-ness, bit-depth or memory constraints, and at the same time puts no limit on the size of files and their metadata.

The first implementations of RiPorFS were very basic, buggy, and ugly. The ***Portable and Scripted RiPorFS Interface in C89*** aims to solve these problems by creating an easy-to-learn and powerful archiver that can easily be ported to all modern (post-1990) systems. Unlike its predecessors, **PoSRIC** allows interface through low-level scripts and command-line arguments, allowing flexibility not available in most archivers. It takes more steps to do certain tasks, and as a result it isn't well suited for file transfer; what PoSRIC is suited for is long-term archival, as the tool is easily ported and the format doesn't need any extra calculations to be read properly.

This manual was created to provide both a well-detailed resource and an easy-to-follow guide for everything PoSRIC, from basic back-up instructions to modifying the source code itself. PoSRIC isn't something you should pick up and just use, it takes a little bit of learning to properly utilize all of its features. It is recommended that if you ever wish to use PoSRIC more than once you go through most of the manual, as there are a few tricks you can accomplish that'll make your experience many times smoother.

Glossary

- Data Ridge: A ridge with the 8th bit unset; tells PoSRIC there is a preceding collection of data with a size of 1-128 bytes.
- Descriptor Ridge: A ridge with the 8th bit set; tells PoSRIC how to interpret the following data ridges.
- PoSRIC: The **P**ortable and **S**cripted **Ri**PorFS **I**nterface in **C**89. The in-development implementation of a RiPorFS archiver
- Ridge: An 8-bit integer accompanied by a Fletcher-16 checksum. Used for either marking a collection of data (see Data Ridge) or describing following data ridges (see Descriptor Ridge)
- RiPorFS: The **R**idged **P**ortable **F**ile**S**ystem. What PoSRIC uses as an archive format.