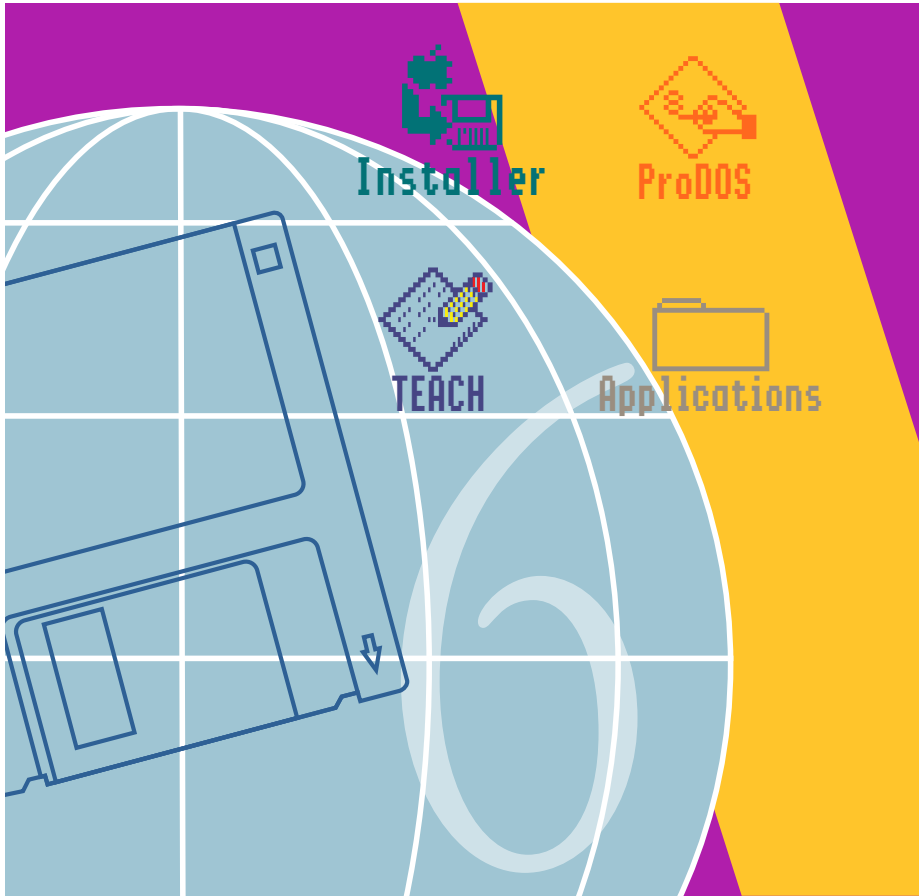




ADU Mac Driver Spec

Version 1.00



System 6 IIGS

Apple® IIgs® System Software 6.0 — Release Notes
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Advanced Disk Utility Macintosh Driver File Specification v. 1.0
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Overview

When ADU partitions a hard disk, it first lays down a partition map which contains four empty partitions of type “Apple_Driver” of size 16K bytes each, and then attempts to find a Macintosh driver image to install into the first driver partition. In order to decide where to look for this driver, ADU issues a mode sense D_STATUS call (subcode \$801A, page code \$30) to the drive which returns the SCSI ID string. If the first five characters of this string are “APPLE” then ADU assumes that the drive is an Apple-supplied drive; otherwise, the drive is considered to be a “generic” drive. In acquiring the driver image, ADU always loads two resources into memory; a rSCSIDrvr resource containing the image to be installed into the driver partition itself, and a rSCSIDescDrvr resource containing information about the driver for the corresponding partition map entry (these resources are specified below).

If the drive was determined to be an Apple drive, then ADU loads these resources from the “Adv.Disk.Util” file itself. The ADU v1.2 application file contains a resource fork which includes these resources. This driver is designed to work with all Apple-supplied hard drives, and assumes that the drive supports certain commands.

If the drive was determined to be a generic drive, then ADU attempts to load these resources from the file with the pathname *:SYSTEM:DRIVERS:GenericMacSCSI”. At this time, this file is not supplied by Apple or by anyone else. This file is intended to contain a driver which makes few enough assumptions about the drive it works with to allow proper functioning with any SCSI hard drive.

If ADU successfully acquires a driver image, then it installs a Driver Descriptor Map on the drive which contains a valid entry for that driver. If ADU is unable to acquire the driver image (as would be the case when partitioning a generic drive in the absence of the generic driver file) then it displays an alert box notifying the user that the drive will not be usable on a Macintosh, and then installs a Driver Descriptor Map showing no valid entries.

Generic Driver File Format

In understanding the following material, refer to the SCSI hard disk partition structures described in *Inside Macintosh, Volume V*, pp576-582.

To function properly with ADU v1.2, the file “GenericMacSCSI” need only reside in the folder “*:SYSTEM:DRIVERS:” and contain the correct resources, each with resource ID \$00000002; the data fork of the file can contain anything, or be absent.

The resource type definitions are as follows:

```
#define rSCSIDrvr      $4D61 /* unusual value for uniqueness */
#define rSCSIDescDvr $5E72 /* unusual value for uniqueness */
type rSCSIDescDvr {
/*   ### numbers get compiled into Mac byte order   ###
   ### because that's how they appear in the       ###
   ### partition map entry                          ### */
reversebytes{longint;};          /* pmLgBootStart*/
reversebytes{longint;};          /* pmBootSize   */
reversebytes{longint;};          /* pmBootLoad   */
reversebytes{longint;};          /* pmBootLoad2  */
reversebytes{longint;};          /* pmBootEntry  */
reversebytes{longint;};          /* pmBootEntry2 */
wide array[128] {
    byte;
}; /* 128 bytes of boot-specific arguments */
};
type rSCSIDrvr { /* binary image of Macintosh SCSI driver */
wide array {
    byte;
};
};
```

The following notes apply to these resource definitions:

- Both the rSCSIDrvr and the rSCSIDescDrv resource in the generic file must have resource IDs of \$00000002 (the resources for Apple drives in ADU's resource fork have ID \$00000001)
- The rSCSIDrvr resource MUST contain a multiple of \$200 bytes and no more than 16K bytes.
- The field pmBootSize equals the logical length of the driver image and is used to calculate the driver checksum as described on page 580 of *Inside Macintosh, Volume V*.
- The “read” directive can be used in the rez source file to load the image from a binary file in lieu of a standard resource definition, which would consist of a hex dump of the driver.