

ADE Operators Guide

The ADE (ADAMnet Drive Emulator) project was created by Sean Myers. This document covers the usage of Sean's official ADE project, as well as variants made by John Lundy and others, such as Chris Tersteeg's ADE shield project, that use digital input buttons instead of analog. This guide assumes your ADE is running current code. More ADE project details and future code updates can be found on Sean's ADE GitHub page.

<https://github.com/Kalidomra/AdamNet-Drive-Emulator>

ADE device specifics

The ADE will emulate up to four disk drives at once and can be configured to enable or disable any drive combination to allow use with a physical disk drive at the same time. It is capable of running floppy disk images (.dsk), most digital data pack tape images (.ddp), Colecovision cartridge ROM (.bin, .rom or .col) images 32K in size or smaller, and is able to store 300 images/directories per directory.

The ADE supports special SD command codes that allow the unit to auto boot when a boot.dsk image is present and also provides a number of additional functions to help manage your images on the SD card. Be sure to download ADE Commander to take full advantage of SD commands and features in the latest version of code. More information can be found at Sean's ADE Commander GitHub page.

<https://github.com/Kalidomra/ADE-Commander>

Device operation

Names represented in () are the equivalent button name on the Arduino LCD Keypad Shield based on the original ADE project and not variants made by John Lundy.

- Pressing DRIVE SELECT (SELECT) will cycle through Drives 1-4 depending on configuration to mount/unmount images.
- Long press of DRIVE SELECT (SELECT) will turn on/off auto booting of the boot disk image in Drive 1. This is helpful when you just want to boot to SmartWRITER or boot from a DDP tape drive instead. Keep in mind that this function doesn't automatically unmount the previous image and you will need to unmount it yourself before you reset the console.
- Holding down DRIVE SELECT (SELECT) during power-on will enter configuration mode to allow enabling and disabling of specific drive configurations. This function is useful when using the ADE along side a real physical disk drive to avoid specific drive conflicts.
- UP and DOWN scroll through images and folders on the SD card.
- MOUNT/UNMOUNT (RIGHT) will mount or unmount images on selected drives. Short press will mount and a long press will unmount images.
- Holding MOUNT/UNMOUNT (RIGHT) on power-on will display the approximate input voltage of the unit for troubleshooting purposes.

- Short press of [/] [...] (LEFT) will drop back to the previous directory on the SD card, and a long press will drop back to the root directory on the SD card.
- SWAP (ADE variants made by John Lundy and some others with digital button inputs) provides an easy way to mount the next disk in a multi-disk set. The first image will need to be .dsk followed by .ds2-ds4 (ds4 is the maximum) for additional images in the set. The name of each disk image in the set must have the exact same name except for the extensions just described. The ACTIVITY LED will flash one to four times when the SWAP button is pressed indicating what image in the set was just mounted. Each press will mount the next image in the series and rolls over to the original image after the last image was reached.
- RESET (RST) is used when SD cards are changed while the device is powered on. This step is needed to refresh the SD card index for the newly inserted SD card.
- Using ADE Commander will allow control of the unit remotely from the ADAM itself, as well as additional SD card functions not possible from the front panel. It can run automatically when the ADAM console is powered on or reset as long as the ADE Commander image is named “boot.dsk” and auto booting is enabled.

Additional information

The difference with ADE variants made by John Lundy and others using digital button inputs require ADE-Pro code instead of the standard ADE code. The only exception is the ADE Lite which requires ADE-Lite code. The only difference between ADE-Pro and ADE-Lite code is the reverse usage of the Activity LED that now acts as a power indicator when the ADE Lite is connected and flashes off with drive activity. The ADE Lite requires the use of ADE Commander to operate.

Troubleshooting

- The ADAM will not boot with the ADE attached.
 - The ADE must be powered ON whenever it is attached to the ADAM. The ADE Lite and ADE Pro internal are powered from the ADAM itself.
 - Be sure there are no drive conflicts when using a real physical drive. The physical drive number being used must be disabled in the ADE.
- A cartridge image will not run.
 - Make sure it is 32K or less with an extension .bin, .rom, or .col.
 - Some cartridge images may require special hardware like a Super Game Module (SGM) to work.
 - Some ADAM-only cartridge images will not work with the software workaround to run from disk and will not work from the ADE in this case.
- A DDP tape image will not run.
 - While the ADE has great success running most DDP tape images, there are some that are hard-coded to use a specific DDP drive number and will not work from the ADE as it is a disk drive emulator. Many hard-coded, drive-specific DDP images have been modified to work from non-specific DDP drive numbers and will now also work from the ADE.