

Firmware Hack Installation

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Introduction

This document describes the Installation procedure for 400plus ; if you need information on using the hack, please read the [User Guide](#).

Details

Before you begin

*In order to install 400plus you are definitively going to **need** a CF card reader; it is simply **not possible** to install 400plus through a USB cord attached to your camera.*

Preparing the camera

The following steps prepare your camera to execute 400plus each time it starts up; this procedure must be done only once per camera:

1. Use a fully charged battery.
2. Your camera **must** be running version 1.1.1 of Canon's official firmware; if yours has an older version, follow the update instructions at [Canon Firmware Update](#).
3. Download the "400plus-testfir-1.bin.zip" from the latest release at the [400plus releases page](#), unpack it and copy the `testfir.fir` file into the root folder of your CF card, using the card reader.
4. Insert the CF into the camera and run the firmware update procedure using `testfir.fir` ; the screen will go blank. **Wait at least 2 minutes**, then turn it off, and finally take battery out and back in.

Preparing each card

The following steps prepare a card to contain 400plus and be recognized by the camera; this procedure must be done once per card:

1. First step is to format the CF card, preferably using the camera, but you can format it on the PC, too.
2. Now the card must be made *bootable*, so the camera recognizes it; you need CF card reader and a Windows, Linux, or Mac computer. On a Mac, you can use the native method, or use Windows under Bootcamp/VMware Fusion, or use the Linux method instead.

Make card *bootable*

Windows XP

Use [EOScard](#). You need to check both EOS_DEVELOP and BOOTDISK, and filesystem must be FAT (for cards smaller than 4GB) or FAT32 (for cards 4GB or larger); do not select any ML or CHDK at all.

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For developers:

- [General info for developers](#)
- [Translators' Guide](#)

Extra info:

- [Chronological list of changes](#)
- [We wish to say thanks to these guys](#)

Clone this wiki locally

<https://github.com/400plus/> 

 Clone in Desktop

Sometimes, [EOScard](#) will try to download and install some files from [Magic Lantern](#), and leave the card unprepared if that fails; in this case, try to copy the files for 400p1us to the card first (see "Install 400p1us into card below"), and then make it bootable using this procedure.

Windows 7 / 8 / 10

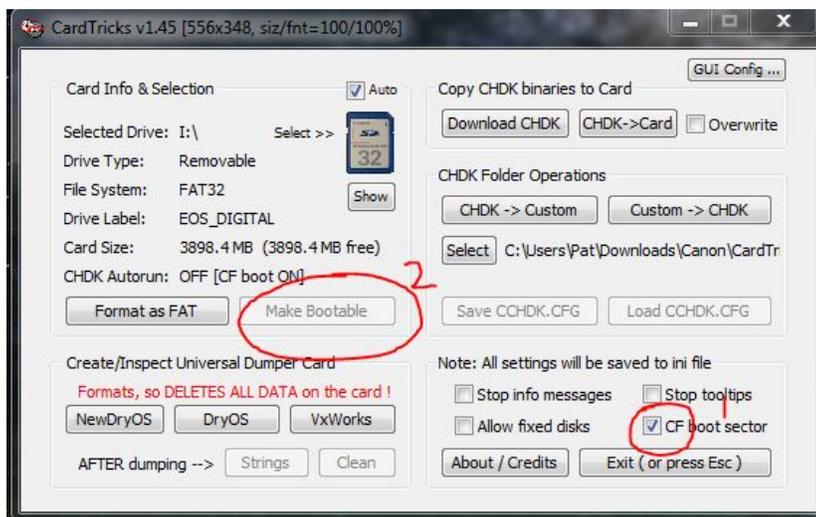
EOSCard

Try first the method described above for Windows XP; some users report that it just works for them. If you have problems, try right clicking the EOSCard.exe and click Compatibility tab, then check "Run this program as administrator".

CardTricks

If that fails, you can also try using [CardTricks](#):

1. Mark CF boot sector
2. Click Make Bootable



Virtual Machine

Some Windows 7 users reported that no method was working for them, however; in that case, install VirtualBox with a Linux LiveCD or WinXP running in it, and then use the appropriate method inside the VM (after attaching the card reader to the VM).

Mac

Use zeno's [MacBoot](#) automated tool (select "Make DSLR Bootable").

Linux

Use the direct method (below) or use the method and files described [here](#) (use the second version).

Direct method

Use this method for Linux; Mac, and Windows can also use this method, with [cygwin](#) or [dd](#).

- Find the device corresponding to your CF card (this command produces a list of devices, to see where your CF card is; easy way to find it is to match the size):
 - Linux: `sudo fdisk -l`
 - Mac (*unmount* the card from Disk Utility before): `diskutil list`
- FAT12 / FAT16 (CF cards up to 2GB) (replace sdX1 with the name of the device corresponding to the first partition of your CF device):

```
dev=/dev/sdX1
echo EOS_DEVELOP | sudo dd of="$dev" bs=1 seek=43 count=11
echo 800TDISK | sudo dd of="$dev" bs=1 seek=64 count=8
```

- FAT32 (CF cards 4GB or larger) (replace sdX1 with the name of the device corresponding to the first partition of your CF device):

```
dev=/dev/sdX1
echo EOS_DEVELOP | sudo dd of="$dev" bs=1 seek=71 count=11
echo 800TDISK | sudo dd of="$dev" bs=1 seek=92 count=8
```

Install 400plus into card

1. Download the [latest official release](#), extract it, and copy the `AUTOEXEC.BIN` file to the root folder of the CF card.
2. Create a new `400PLUS` folder on the card's root.
3. If you want support for additional (non-English) languages, also copy the `LANGUAGES.INI` file to the `400PLUS` folder.
4. Insert the CF card back into the camera... and you are done!

Testing 400plus

If the blue LED of your camera briefly lights up when the camera is turned on, the hack has been successfully loaded.

Updating 400plus

To update from a previous version of `400plus`, just overwrite the `AUTOEXEC.BIN` and `LANGUAGES.INI` files in all your cards.

Removing 400plus

Permanently remove 400plus

The first step of the installation procedure cannot be undone (at least for now), and the camera will always try to execute `400plus` *if it is in the CF card*; thus, formatting all your cards will remove `400plus` for all practical purposes.

Temporarily disable 400plus

Power Off the camera, then press and hold the **TRASH** button. While holding the button, power on the camera, it should boot without `400plus` now.

What's next

Now you can read the [User Guide](#).

Sources

- [raingrove at CHDK's forum](#)
- [whim at CHDK's forum](#)