

Live Capture

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WARNING!!!! If you came to this page without looking at the [Live Capture Setup](#) page, then shame on you! You will probably find that capture does not work properly because you didn't do something very important, mentioned in the [Live Capture Setup](#) page :)

It seems [gphoto2](#) has an issue if the shutter speed is slow. So using a shutter speed of say 1/250, then I can capture and download a file. If I use a shutter speed of say 3s, then I can capture, but download simply won't happen.

On the 700D, 1/6 seems to be the cut off, if you go to 1/4, then you lose the ability to capture and download in a single command. You can of course capture, execute a wait equivalent to the shutter speed (plus a bit for writing to the card) then do a download using the **-skip-existing** so you only download files that have not already been backed up.

Now, this depends on your camera, and whether [gphoto2](#) supports it on your model. To get the capabilities of your camera, use the following command:

```
gphoto2 --summary
```

Now on my 700D, I see the following:

```
Camera summary:
Manufacturer: Canon Inc.
Model: Canon EOS 700D
  Version: 3-1.1.3
  Serial Number: 46ff2aa38fba41f88d84eccb8eba8ada
Vendor Extension ID: 0xb (1.0)

Capture Formats: JPEG
Display Formats: Association/Directory, Script, DPOF, MS AVI, MS Wave, JPEG, CRW, Unknown(b103),
Unknown(bf02), Defined Type, Unknown(b104), Unknown(b105)

Device Capabilities:
  File Download, File Deletion, File Upload
  No Image Capture, No Open Capture, Canon EOS Capture, Canon EOS Shutter Button

Storage Devices Summary:
store_00020001:
  StorageDescription: SD
  VolumeLabel: None
  Storage Type: Removable RAM (memory card)
  Filesystemtype: Digital Camera Layout (DCIM)
  Access Capability: Read-Write
  Maximum Capability: 31678529536 (30211 MB)
  Free Space (Bytes): 31375130624 (29921 MB)
  Free Space (Images): -1

Device Property Summary:
Property 0xd402:(read only) (type=0xffff) 'Canon EOS 700D'
Property 0xd407:(read only) (type=0x6) 1
Property 0xd406:(readwrite) (type=0xffff) 'Unknown Initiator'
Property 0xd303:(read only) (type=0x2) 1
Battery Level(0x5001):(read only) (type=0x2) Enumeration [100,0,75,0,50] value: 100% (100)
```

Importantly, I see the following section:

Device Capabilities:

File Download, File Deletion, File Upload
No Image Capture, No Open Capture, Canon EOS Capture, Canon EOS Shutter Button

So my 700D does not allow [gphoto2](#) to capture files. There are several methods that you can use to try, and they are:

```
gphoto2 --trigger-capture
gphoto2 --capture-image
gphoto2 --capture-image-and-download
```

gphoto2 --trigger-capture takes a photo and stores it on the SD card.

gphoto2 --capture-image takes a photo and stores it on the SD card.

gphoto2 --capture-image-and-download takes a photo and stores it on the SD card and downloads it.

So if I list the files on my camera memory card:

```
gphoto2 --list-files
```

```
There is no file in folder '/'.
There is no file in folder '/store_00020001'.
There is no file in folder '/store_00020001/DCIM'.
There are 2 files in folder '/store_00020001/DCIM/100CANON'.
#1      IMG_5859.CR2          rd 20815 KB image/x-canon-cr2
#2      IMG_5860.CR2          rd 27070 KB image/x-canon-cr2
There is no file in folder '/store_00020001/MISC'.
```

We can see that there are two photos here (IMG_5859.CR2 and IMG_5860.CR2).

If we use the following command:

```
gphoto2 --capture-image
```

We can now again check the camera memory card:

```
There is no file in folder '/'.
There is no file in folder '/store_00020001'.
There is no file in folder '/store_00020001/DCIM'.
There are 3 files in folder '/store_00020001/DCIM/100CANON'.
#1      IMG_5859.CR2          rd 20815 KB image/x-canon-cr2
#2      IMG_5860.CR2          rd 27070 KB image/x-canon-cr2
#3      IMG_5861.CR2          rd 25884 KB image/x-canon-cr2
There is no file in folder '/store_00020001/MISC'.
```

We can see that a new image (IMG_5861.CR2) has appeared. So this works.

If we use the capture and download command:

```
gphoto2 --capture-image-and-download
```

I get this output (in the Raspberry Pi terminal)

```
New file is in location /store_00020001/DCIM/100CANON/IMG_5862.CR2 on the camera
Downloading 'IMG_5862.CR2' from folder '/store_00020001/DCIM/100CANON'...
Saving file as IMG_5862.CR2
Deleting file /store_00020001/DCIM/100CANON/IMG_5862.CR2 on the camera
Deleting 'IMG_5862.CR2' from folder '/store_00020001/DCIM/100CANON'...
```

So this indicates that the camera captured and image called IMG_5862.CR2 and downloaded it to the Raspberry Pi, then deleted it.

A simple 'ls' will check the Raspberry Pi folder (remember it will be downloaded to your current directory)

```
ls

IMG_5862.CR2
```

And yes it is there, if we do another check of the camera memory card.

```
gphoto2 --list-files
```

```
There is no file in folder '/'.
There is no file in folder '/store_00020001'.
There is no file in folder '/store_00020001/DCIM'.
There are 3 files in folder '/store_00020001/DCIM/100CANON'.
```

```
#1    IMG_5859.CR2          rd 20815 KB image/x-canon-cr2
#2    IMG_5860.CR2          rd 27070 KB image/x-canon-cr2
#3    IMG_5861.CR2          rd 25884 KB image/x-canon-cr2
There is no file in folder '/store_00020001/MISC'.
```

We can see that the captured image was indeed deleted (which if I am honest, is not what i would want).

If you wish to download and keep the files (this took a couple of attempts for me) then you can use the following syntax:

```
gphoto2 --capture-image-and-download --keep
```

And to go back to just downloading the files, you can use:

```
gphoto2 --capture-image-and-download --no-keep
```

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