



## Best Practices for preparing the C300 for shooting

For the complete instruction book, please go to:

[http://usa.canon.com/cusa/professional/products/professional\\_cameras/cinema\\_eos\\_cameras/eos\\_c300 - BrochuresAndManuals](http://usa.canon.com/cusa/professional/products/professional_cameras/cinema_eos_cameras/eos_c300-BrochuresAndManuals)

**NOTE:** The instruction book should be taken as the final authority on the operation of the C300.  
Please read the instruction manual.

**IMPORTANT:** Check to see that the camera has the latest firmware:

[http://usa.canon.com/cusa/professional/products/professional\\_cameras/cinema\\_eos\\_cameras/eos\\_c300](http://usa.canon.com/cusa/professional/products/professional_cameras/cinema_eos_cameras/eos_c300)

Look for 'Drivers and Software' (if the section is not visible, there are no updates)

Follow the instruction on website to update the camera's firmware

### **Troubleshooting:**

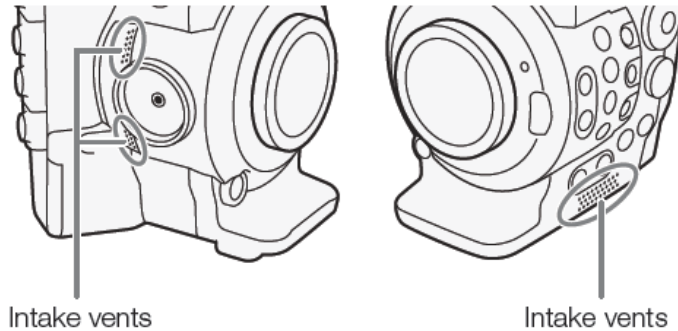
If you need help in troubleshooting an issue with the C300 (page 162 of the instruction manual)

Canon Customer support line: 1-855-246-3367

### **Status Screens:**

You can quickly check the C300 various settings (page 156 of the instruction manual)

**CAUTION:** Do not tape, or cover over ventilation holes  
The C300's nearly silent cooling system is dependent on the ventilation holes position in various parts of the camera body



**Powering the camera:**

Canon recommends that Canon batteries be used to power the camera

The BP-955 battery pack comes with the camera. Here is a list of compatible batteries:

BP-950G, BP-955, BP-970G, BP-975

With the BP970G and BP-975 batteries, the battery door will not close

The battery door is removable:

(page 169 of the instruction manual)

There is a battery charge check button on the battery it will indicate the remaining charge.

The batteries power the camera for a longer time than other cameras. You may not need as many batteries as you are used to having with other cameras

Typical operation/recording time for the BP-955 battery is 115 minutes

## **Reset the camera:**

For setting up for a new shoot, do a full reset on the camera. For the following days, as long as no one has touched the camera a full reset is not necessary.

In the menu system go to:

[👉 Other Functions] ➤ [Reset] ➤ [All Settings]  
and select 'OK'

## **Setting Date, Time and Language:**

It is very important to set the date and time correctly (page 27 of the instruction manual)

## **Check the sensor:**

NOTE: The camcorder's CMOS sensor is a delicate piece of precision engineering. Direct exposure of the sensor to ion rays or other types of cosmic radiation may affect it and may rarely appear as bright colored dots on the screen. This is the nature of CMOS image sensors and does not represent a malfunction. Adjusting the black balance may solve the problem.

The effects of the damages may be more noticeable when the camcorder is used in places subject to high temperatures, when a high ISO speed or gain level is used and when slow shutter speeds are used.

To check the sensor: Put body cap on (no lens), connect monitor, slowly increase the ISO. If there are noticeable pixels, then do a black balance. If this does not work, contact Canon support

ISO settings: (page 61 of the instruction manual)

Black balance: (page 46 of the instruction manual)

Canon Customer support line: 1-855-246-3367

### **Setting up the LCD and EVF:**

The camera can be operated with or without the LCD panel connected. There are several operator overlays: Edge Monitor Display, Peaking, Zebra Pattern, On Screen crop marks, etc. With the LCD panel you get the addition display options of Waveform and Vetrascope

Video scopes: (page 88 of the instruction manual)

Onscreen Markers and Zebra patters: (page 71 of the instruction manual)

**CAUTION ABOUT THE EVF:** pointing the EVF at the sun or to strong light sources may cause damage to internal components. When you are not using the viewfinder, make sure to attach the viewfinder cap or other covering to the viewfinder

### **Setting up the outputs:**

The C300 has HD-SDI, HDMI outputs as well as sync out. The HD-SDI output can be turned off, be sure to check this in the menu system  
(page 127 of the instruction manual)

### **Setting the ISO and Gain:**

Native ISO for the most dynamic range (12 stops) is 850 ISO when using C-Log

The C300 can be set up to 20,000 ISO – picture noise will increase as the ISO increases

The C300 can be set up from -6dB to 30dB gain  
(page 61 of the instruction manual)

## **Setting the Resolution, Bit Rate, and Frame Rate:**

The C300 can record in various bit rates and resolutions. The highest quality is 50Mbps at 1920x1080 resolution.  
(page 55 of the instruction manual)

The C300 is capable of many frame rates, including 23.976P and true 24.00P

Commonly, 23.976P is referred to as 24P, but is a technically accurate description

**IMPORTANT:** make sure that you check whether the frame rate should be 23.976P (sometimes called 23.98P or 24P) or true 24.00P

(page 55 of the instruction manual)

The C300 is also capable of interval recording, slow and fast frame rates: 1 to 30 fps at 1080P and 1 to 60 fps at 720P

Interval Recording: (page 93 of the instruction manual)

Slow and Fast Recording: (page 95 of the instruction manual)

## **Set the shutter speed (angle):**

The C300 can be set to display either shutter angle (ie: 180 degrees) or shutter speed (ie: 1/30 second)

Shutter speeds go from 11.5 degrees to 360 degrees (1/3 sec to 1/2000 sec)

(page 58 of the instruction manual)

## **Setting the camera for C Log (Cinema Preset) or REC709 recording:**

The C300 can record in either Canon Log (labeled in the menu as: CP CINEMA Locked) or Rec 709.

As well many parameters of the image can be manipulated to suit the shooting situations, such as: Knee, Toe, master R,G,B, sharpness, skin detail, etc. These are called Custom Picture Settings.

Cinema Preset (C Log): (page 54 and 109 of the instruction manual)

Custom Picture Settings: (page 104 of the instruction manual)

The outputs and the image on the C300 will be displayed with the C Log applied. You can change the displays on the C300 to approximate normal gamma - the outputs cannot be changed (page 109 of the instruction manual)

## **Setting up Time Code:**

The C300 uses SMPTE standard Time code.  
(page 73 of the instruction manual)

## **Built- in ND Filters:**

There are 3 built-in glass ND filters: ND1 (2stops), ND2 (4 stops), ND3 (6stops)  
(page 63 of the instruction manual)

Manually Operating the ND filters in case of a malfunction:  
(page 172 of the instruction manual)

## **White and Black Balance:**

White balance can be set in several different ways including degrees Kelvin  
(page 66 of the instruction manual)

Black balance  
(page 46 of the instruction manual)

### **Audio Recording:**

If the C300 is operated without the LCD panel assembly, then the only audio input is a mini jack on the camera – this is good for scratch audio. The LCD panel assembly has 2 XLR terminals that can be used for high quality audio recording.  
(page 80 of the instruction manual)

### **Photo Mode:**

The C300 can capture a single frame onto an SDHC card during recording (without interrupting the video recording) or during playback. This frame is exactly the resolution that the camera is set in.  
(page 139 of the instruction manual)

### **Color Bars and audio reference signals:**

The C300 has a number of color bar and audio reference generators built in  
(page 87 of the instruction manual)

### **Setting up assignable Buttons:**

There are 15 assignable buttons on the C300. These can be assigned to various functions to make it easier to operate the camera  
(page 99 of the instruction manual)

### **3D shooting:**

The C300 has a function to invert the recorded image horizontally and/or vertically  
(page 110 of the instruction manual)

## **Setting up CF cards for recording:**

You can use UDMA-compatible Type 1 CF cards with a capacity of at least 512 MB with the camcorder. Depending on the CF card, you may not be able to record even when using a UDMA-compatible CF card.

**IMPORTANT:** make sure that CF cards that are approved by Canon are used

[http://usa.canon.com/cusa/professional/products/professional\\_cameras/cinema\\_eos\\_cameras/eos\\_c300 - Specifications](http://usa.canon.com/cusa/professional/products/professional_cameras/cinema_eos_cameras/eos_c300-Specifications)

The C300 has 2 CF card slots for recording  
(page 41 of the instruction manual)

The C300 can record on both cards simultaneously, so that you have a clone for backup purposes.  
(page 43 of the instruction manual)

CF cards should be initialized in the camera before use  
(page 43 of the instruction manual)

Maximum recording Time:  
(approximate figures based on continuous recording)

16GB CF Card:

50 Mbps: 40 min., 35Mbps: 55 min., 25 Mbps: 80 min.

64 GB CF Card:

50 Mbps: 160 min., 35Mbps: 225 min., 25 Mbps: 310 min.

### **Disposal of Recording Media:**

When you delete data on the recording media, only the File allocation table is altered and stored data is not physically erased. Take necessary precautions when you dispose of the recording media, for example by physically damaging it to prevent leakage of private data.

If giving the recording media to another person, initialize it (using the [Complete] initialization option for the card (page 43 of the instruction manual).

Fill it up with unimportant recordings, and then initialize it again. This makes recovering the original recordings very difficult.

### **Saving Setting to SDHC card:**

Save all your user settings to an SD card for easy setup and reset

Saving your settings to the SD card allows for easier, and identical set up of multiple cameras.

(page 111 of the instruction manual)

### **Mounting the camera:**

From the factory the C300 ships with both a 3/8" and 1/4" threaded screw holes for rigs and tripods. If you remove the 4 small screws the plate can be changed to one that only has a 1/4" threaded screw hole and an alignment hole.

**NOTE:** Canon recommends that with heavy lenses, that the front of the lens be supported to reduce the strain on the lens mount. This support is available from various third party manufacturers.

## **On Set and Near Set backup and footage check:**

Canon has a program called XF Utilities that can be used to scrub through the footage, add metadata and make backups of the original cards. There are also plug-ins for Apple FCP 7 and Avid Media Composer on this disk (Adobe Premier does not need any plug-in).

The XF Utilities is included with the C300. It will shortly be available for download from the Canon USA website:

[http://usa.canon.com/cusa/professional/products/professional\\_cameras/cinema\\_eos\\_cameras/eos\\_c300](http://usa.canon.com/cusa/professional/products/professional_cameras/cinema_eos_cameras/eos_c300)

**IMPORTANT:** Copy the complete contents of the CF cards when backing up the cards. Some NLE systems require the associated files on the CF cards to properly ingest the footage.

Please consult the owner's manual for more detailed instructions.

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