# Tyler Stableford's Custom Functions for the Canon EOS 5D Mark II

Many people have asked me which settings I use for white balance, color space, video mode, and custom functions, etc. Here is list of the settings that I 'customize' on my Canon EOS 5D Mark II -- they are simply settings that I find helpful, and are in no way the absolute best method. I hope that you find them useful!

Raw mode. I prefer to shoot only in Raw, rather than Raw+Jpeg, as the camera writes files to the compactflash card faster. Plus, it's so easy to output a Jpeg from a Raw file these days.
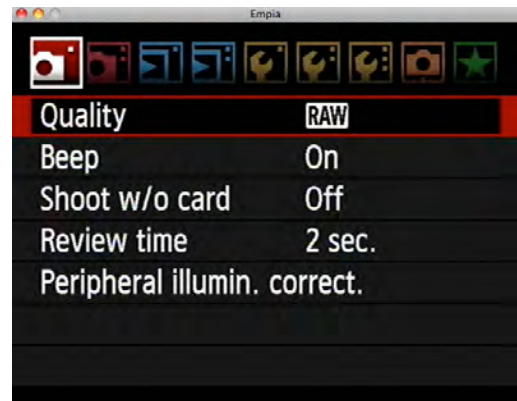


Be sure to turn "Shoot w/o card' to OFF -- otherwise you run the risk of taking photos without a compactflash card in your camera!
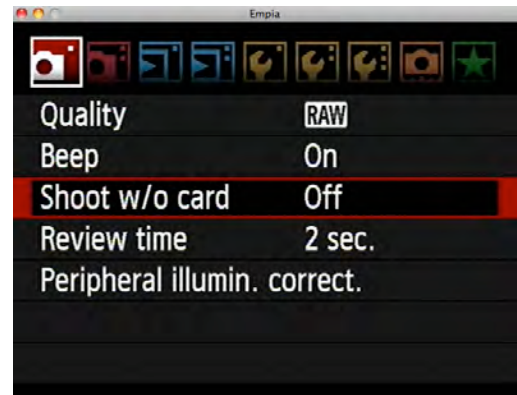


White Balance. When shooting Raw files outdoors, auto white balance often works just fine as you can easily adjust the white balance afterward in Lightroom. However if you are shooting with strobes or in challenging light conditions, you may want to set a custom setting.
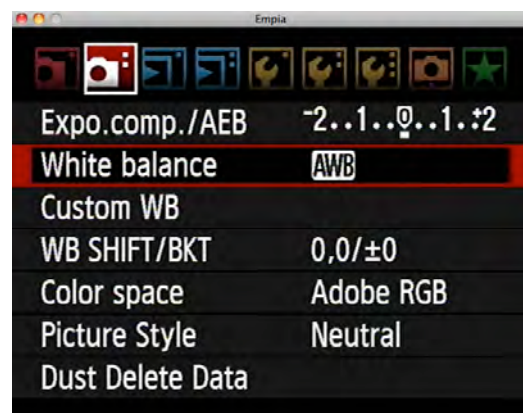
When shooting jpegs or video, it's crucial to set a custom white balance that is as accurate as possible. Jpegs and video clips are highly compressed files and don't allow for dramatic adjustments in color temperature, so you need to get it right in the camera. The box on the right shows how I set a custom color temperature. Take a test shot or use Live View mode to check your settings, and tailor the settings until the scene looks right.
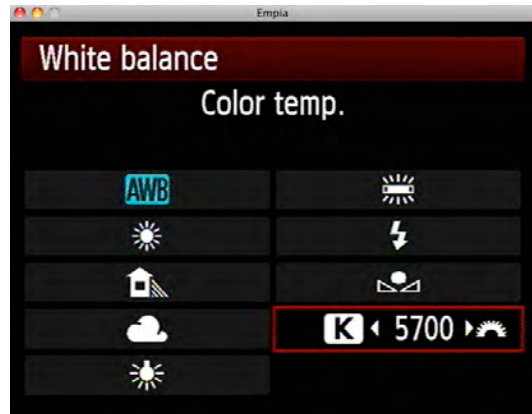
You can do further white balancing in the WB Shift/Bkt pane. Selecting this menu brings up the pane below.
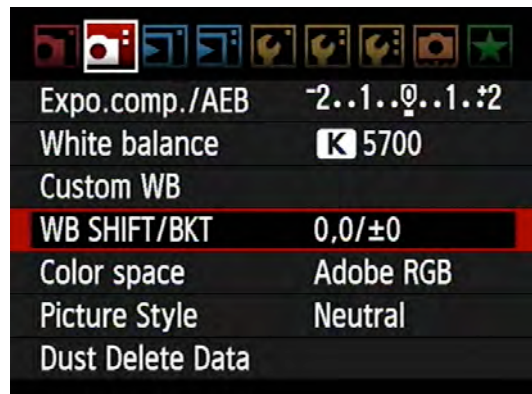
Here, I don't use the bracket feature but rather the White Balance Shift options. If your subject's face is showing too much red, try tabbing the cursor to the left one or two clicks. Take another close-up test frame or use Live View, and zoom in to see how the color looks now. Keep experimenting until the scene looks good.
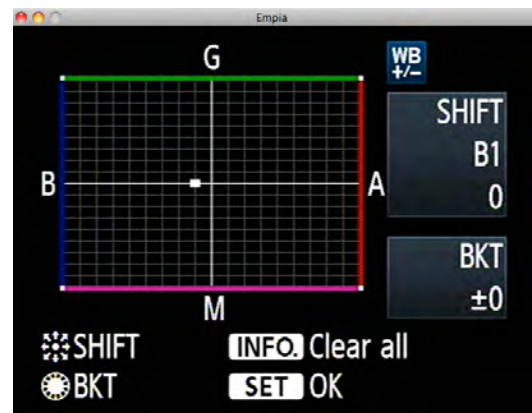
Color Space. I set the camera to capture in Adobe RGB as it has a wider color gamut than sRGB, and as such allows for greater manipulation of the images with less degradation. Raw images will shoot RGB images regardless of what is selected here; and video will shoot sRGB regardless; so this really only applies to jpegs.
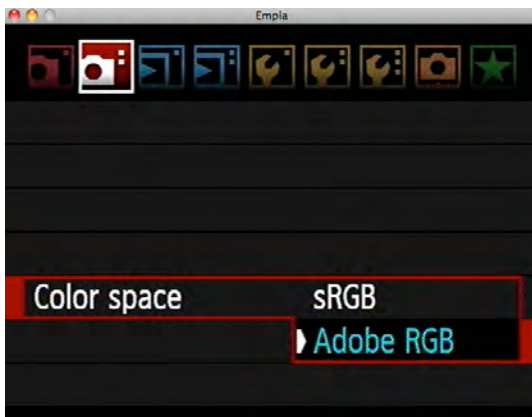
Picture Style. This is a crucial custom setting when shooting video, as it allows you to reduce contrast and to capture a wider range of highlight and shadow detail. It's not as important when shooting Raw stills, as only the jpeg preview of the Raw file will mirror the picture style you set; the Raw file itself is unchanged.
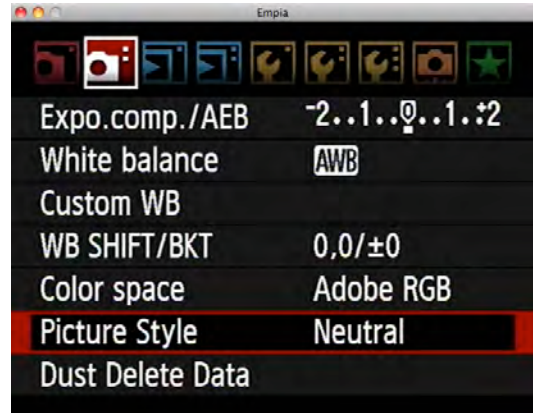
My preferred video setting is the Neutral picture style, and then I further customize it as seen in the paragraph below. Remember that these are just my preferences, as a starting point for bringing my video clips into Adobe Premiere Pro for editing, so please experiment and find your own if you think a different setting will work better for your needs.

After selecting Neutral, I go into the detailed settings and drag Contrast 3 clicks down. I commonly shoot straight into the sun on the snowy mountains of Colorado, so I prefer a very low-contrast setting to capture the full range of light and shadow -- remember you can always boost contrast later, but it's nearly impossible to recover clipped highlights or shadows if you don't get them in the original file. **See the last page of this PDF to see how to enable the Neutral Picture Style when developing a Raw image in Lightroom.

Auto Exposure Bracketing. When shooting outdoors in changing light conditions, I often bracket my images 2/3 of a stop on either side to make sure I don't clip the highlights.
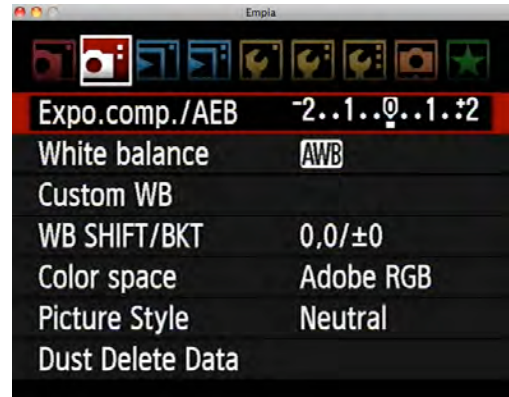
This screen shows my settings. Be sure to press the Set button or the bracketing won't register! Also, you'll want to go into the Custom Functions panel and disable the AEB Auto Cancel feature -- please see the section on Custom Function 1-4 further down for details.

Highlight Alert. I like having Highlight Alert enabled; when reviewing the image on the LCD screen, the clipped highlights will blink white. I don't always attempt to capture all the highlights, but nonetheless I find it helpful to know what's being lost.

Histogram. I set my histogram to display in all three channel of Red, Green and Blue. Skin tones often appear in the red channel, giving me a more accurate idea of the exposure on a model's face.

Auto Power Off. When shooting video and using Live View to preview a scene, I like to set at least 4 minutes of time before Live View shuts off. This isn't as important for stills, and will drain the camera's battery faster.
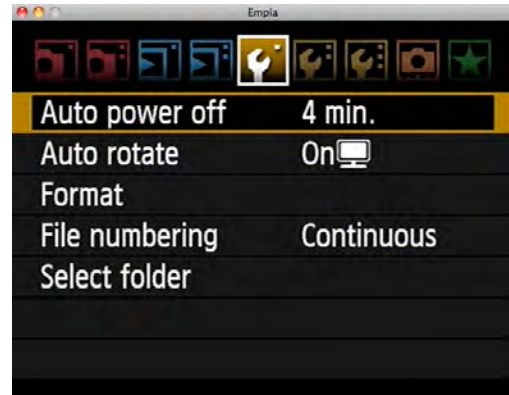


Auto Rotate. I set the camera to rotate images only when ingested to the computer, and not on the back of the camera. This way I can view vertical images using the camera's full LCD screen for a larger preview.
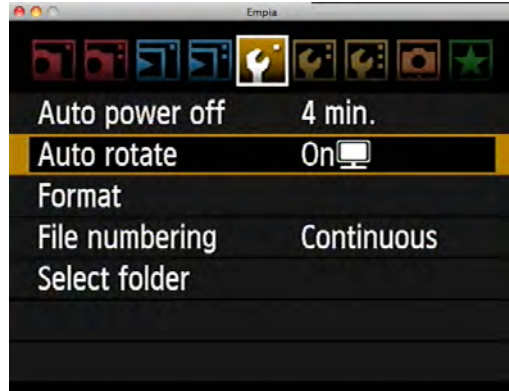


Video System. NTSC is the preferred system for most uses in the U.S.A.



Live View/Movie Function Settings. This menu is the biggie for shooting video. It also controls the Live View settings, which can be very helpful for honing focus when shooting stills on a tripod. See the boxes below for my preferred settings.

This image shows my preferred settings for video and live view. I like having the grid enabled to help keep horizons straight.
-Silent Shoot in Mode 1 will reduce camera shake when shooting long-exposure landscapes in Live View Mode. It slows your frame rate down, however, so disable Silent Shooting when you want your camera to operate at full-speed frame rates.
-I set AF Mode to Quick Mode, when you press the autofocus button in Live View, the mirror drops to enable faster focusing. That said, whenever possible it is best to focus manually using the 5X and 10X magnification feature while in Live View.

Click on the LV Func Setting to go deeper into this menu. Here, I select Still + Movie mode. Press the Set button to go deeper.
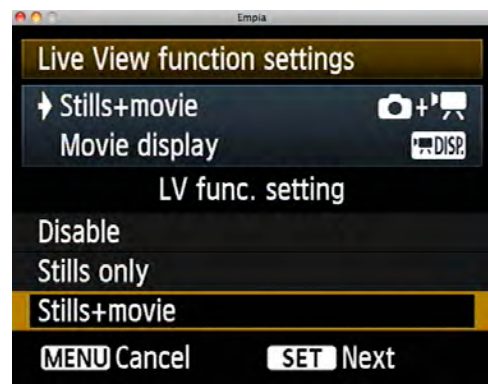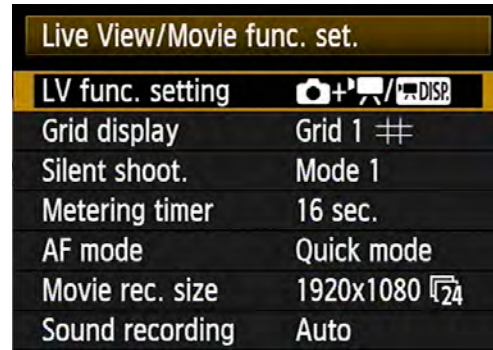
Next, in the Screen Settings dialogue, select Movie Display. This will enable a histogram during live view mode. *Note that if you select 'Exposure simulation,' the camera will shoot in Auto mode and you will not be able to control the exposure manually.

Here is a snapshot of the camera's LCD screen while in live view mode, with the RGB histogram enabled. Press the Info button to cycle the histogram etc on and off. *IMPORTANT note on ISO speeds for video: shoot in increments of 160, e.g. 160, 320, 640, 1250 etc for the least amount of noise. This doesn't apply to stills, only video. See Tony Lorentzen's helpful 7D video tests to see for yoursel:
http://vimeo.com/1047373
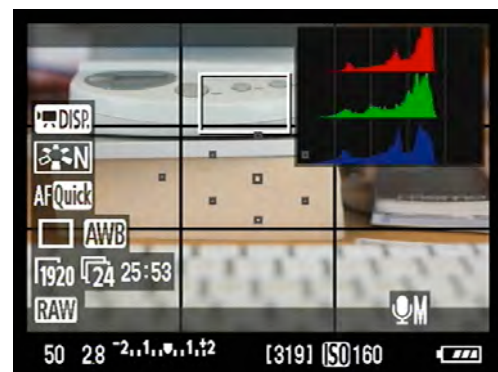
Another important setting in the Live View/Movie Function Setting pane is the Movie Recording Size, which selects both movie size and the frame rate. I commonly choose a 24p frame rate (technically 23.976 frames per second) as it looks more like Hollywood film and less like handycam video. However many people use 30p, so always check with your client for their needs.
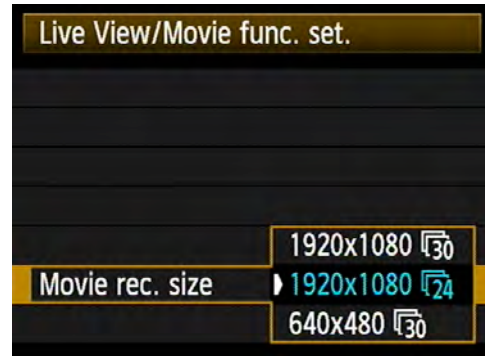
Sound Recording. For run-and-gun style shooting outdoors with a shotgun video microphone attached to the camera's hotshoe, I prefer setting sound levels to Auto. When shooting indoors with controlled sound levels, it's better to dial in the sound levels in the Manual mode.

**FRAME RATES. While this isn't a 5D menu function, it's worth mentioning here. It's important to try to shoot video with a '180 Degree Shutter' which essentially means that if you're shooting 24 frames per second, shoot with a shutter speed of 1/48th of a second (1/50th is the closest setting); and when shooting 30 frames per second, set the shutter speed to 1/60th of a second. See Tyler Ginter's helpful blog post here for more info: http://tylerginter.com/post/11480534977/180-degree-shutter-learn-it-live-it-love-it
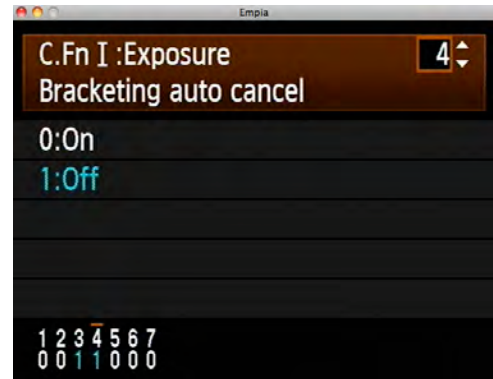
Custom Functions. Below are the settings that I customize, beginning with the Exposure panel.
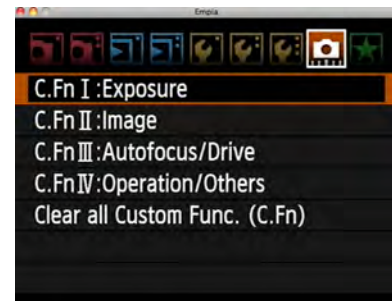
C.Fn I-3, ISO Expansion. Turn this on to enable shooting as low as ISO 50 and as high as ISO 25,600.
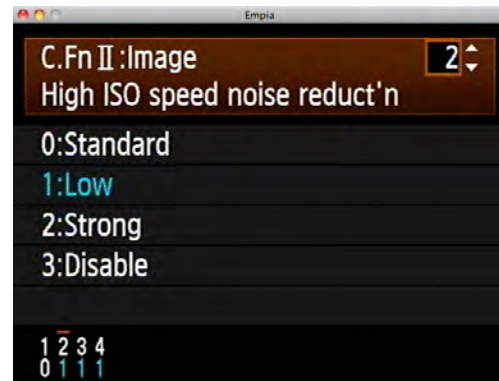
C.Fn I-4, Bracketing auto cancel. Turn this to Off; otherwise the camera will cancel bracketing after only one sequence of three shots.



Next let's go to the C.Fn.II panel.



C.Fn II-2. I find that Lightroom's noise-reduction features are very robust, so I turn down the in-camera noise reduction to Low.



C.Fn II-3, Highlight Tone Priority. This setting enables the camera to capture a greater range of detail in highlights like backlit snow, clouds and water. Turning this setting on will make ISO 200 the lowest possible ISO. Note that when shooting video, this can at times produce extra noise -- however if shooting on snow at, say, ISO 320, it's probably a worthwhile compromise.
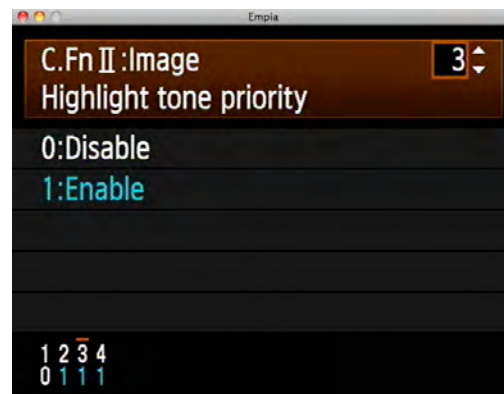
C.Fn II-4, Auto Lighting Optimizer. This setting essentially brightens the shadows in a scene; it can be helpful when shooting run-and-gun video without a lighting crew. Try it at a Low setting and experiment to see if you like it; it's a judgement call. This setting applies only to Jpeg and Video files; it does not affect Raw files.
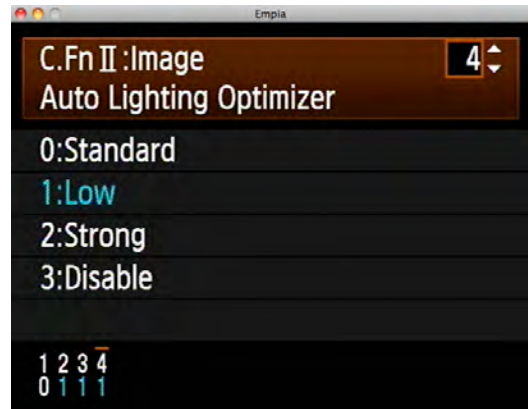
I skip the C.Fn III panel as there's nothing I customize there, and continue to C.Fn IV.
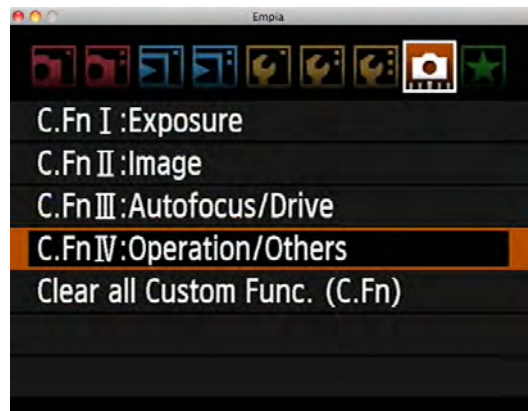
C.Fn IV-1, Shutter Button and Auto Focus. I select option 2 which moves autofocus controls to the AF-ON button rather than the shutter button. This way I can focus with my thumb on the AF-ON button, which I find more helpful when tracking a moving subject in AI Servo autofocus mode.

Here is a snapshot of the various 'quick-view' settings I enable for easy access, using My Menu Settings. In the My Menu Settings dialogue, you can Register a range of menu settings for quick access. Click Register to view the full list and add a setting; click Delete to remove unneeded settings from the panel.

**Addendum: Using Lightroom to develop Raw files with specific Picture Style settings.**

The Picture Style settings you select on the camera don't automatically apply when processing Raw files in Lightroom. Here's how to select the style you want, as a starting point for further processing: scroll down to the bottom right panel in the Develop mode to Camera Calibration, and click the fly-down menu for Profile. I select Camera Neutral, which replicates the Neutral Picture Style. Keep in mind that you can often replicate this same setting, or do better, by playing with Lightroom's Develop Module controls, so use this tip simply as a suggestion for a starting point.