

Beyond **Red Button** Recording



A guide to producing better video with your
Panasonic Lumix Bridge Camera
covering the

**FZ80/82, FZ200, FZ300/330, FZ1000,
FZ2000/2500**



Introduction

This document is my guide that I hope will help you to produce better quality video when using Panasonic Lumix Bridge cameras like the FZ80/82, FZ200, FZ300, FZ1000, FZ2000 etc.

It takes you, step by step, from making basic recordings made by pressing the “red button” to using the various elements of the creative video mode and includes the choice of recording quality

Red Button Recording.

Red button recording gives easy access for recording video clips with Panasonic Lumix cameras.

When you use the red button to record a video clip it will inherit almost all of the parameters that are set up for still image recording, with just a few notable exceptions.

Some of the operations and settings will depend upon camera model however most of the material here will apply to all the cameras except where noted.

You can set the camera to use any of its recording modes such as intelligent auto, program auto, aperture priority, shutter priority or manual exposure however when pressing the red button it will video recording will default to the Program Auto [Ⓟ] mode and use those parameters.



If you want the camera to make most decisions for you then set the camera to be **Intelligent Auto** mode (or the iA+ mode) and the camera will then adjust the exposure as you shoot. It uses its scene detection programming to try and optimise its settings for a type of subject you are trying to record.

If your camera supports an exposure compensation dial then you can adjust exposure before the recording or use the EV adjust from the Q-Menu or in real time with the dial.

Program Auto mode will allow access to a lot more features but will not honour any “program shift” settings that may have been applied. In this mode the camera will still adjust both aperture and shutter speed according to the lighting conditions, automatically, and you will also be able to set things like white balance, ISO, the metering mode and others.

If you use the **Aperture Priority** mode then if you set a particular aperture the camera will adjust the shutter speed and ISO automatically (if iISO or Auto ISO is set).

You also gain more access to some of the recording menu parameters. You can use this to set the camera to record with a shallow depth of field using wider apertures like f2.8 or with more depth of field by using smaller apertures like F11 (only available in the CREATIVE video mode and on some cameras - not the FZ80/82).

With **Shutter Priority** mode, the situation is similar with the camera adjusting aperture and ISO automatically. You can also access more of the camera set up menus as with aperture priority.

However, in recording video the shutter speed plays a vital role in the way the final video is recorded. I will explain later how this applies to the frame rate and why it’s important to set this shutter speed according to the 180 degree shutter angle rule.

If you are shooting in the manual stills mode then capturing video with the red button will revert to Program Auto Mode 

Video clips are recorded with a 16:9 aspect ratio so if you are using a different aspect ratio for the still images then the screen will change when you press the red button to start recording.

Capturing still images during video recording will depend upon the setting of **Picture Mode** in the Motion Picture set up menu. (ON SOME CAMERAS - NOT THE FZ80/82 can set the still image to be any aspect ratio or Small which is 1920x1080 pixels)

Incidentally, you cannot record still images during the video recording process while recording MP4 video with the 4K or VGA quality (if the camera supports 4K mode)

If you are using the AVCHD mode then if you have set FHD/24M/24p you cannot record still images in this mode.



If any filters have been applied to the still image set up the following ones will not be applied to the video clip being recorded;

Soft focus, star filter, sunshine, silky monochrome, and rough monochrome.

It does allow exposure value compensation changes to be applied however these can only be applied to the clip prior to pressing the red button to start recording.

If continuous focus AF is selected the camera will attempt to focus depending upon which AF area method is set. If continuous AF mode is not selected the camera can be forced to focus during the clip by half depressing the shutter release button.

The metering mode is exactly the same as when taking still images and they are found in the Rec Menu and they are; Multiple area, Centre Weighted and Spot.

The same parameters used in the Highlight and Shadow, Intelligent Dynamic, Intelligent Resolution, Intelligent Zoom and Digital Zoom are mirrored when in video recording mode.

The feature of being able to set an ISO limit in still image recording does not apply when recording video - it can only be set from ISO 200 through ISO 6400 or Auto ISO.

Now we have seen the ease of being able to record video at the press of a button it is probably worth a short discussion on how to select one of the recording options.

During everyday use for such examples as birthday parties, anniversaries or holiday trips it is probably better to turn the camera mode dial to the iA position and set the recording mode to MP4 in the Motion picture menu and set the recording Quality to FHD or 4K if your camera supports it

Using this method should produce some excellent quality video clips that are well exposed and are ready to show directly on a HDTV screen or to import to your favourite editing program.

If you want to add some additional colouring to your video consider switching the mode dial to the P (program auto) mode and then choose one of the Filters to add some vibrancy such as the Impressive art filter. If you want to produce some slow motion video clips use the 50/60p setting for AVCHD video and slow down the video clip to half using your editing program.

Creative Video Recording

With the creative video recording mode selected with the mode dial the world of video recording becomes more interesting and the quality of the recorded clips can increase dramatically especially if you shoot in the 4K UHD format

Once this mode is selected the Motion Picture set up menu now shows an entry for Exposure mode and you can select from any one of the P, A, S or M modes.

Selecting the P mode allows the camera to automatically set the shutter speed and aperture however there is no on screen display of what settings the camera is using.

This means that you could be using apertures which are into the diffraction limited resolution area or shutter speeds which are too high giving a jerky motion effect to your recorded video.

In P mode you do have the opportunity to preset an ISO value or use the iISO. If you choose to use iISO then you will lose the sight of the ISO the camera is using and again you may be using high ISO values which result in noisy video.

In P mode and with iISO the camera naturally gravitates to using the lowest aperture value and shutter speed consistent with the frame rate. The only way to see what the camera is selecting is to use the Panasonic Image App which is a bit of a disappointment for video shooters.

There is, I feel, an anomaly in the P mode video recording in the creative video mode. If you choose to use exposure compensation there is no change to the indicated shutter speed or aperture and if you have an ISO value preset the screen still reflects the changes made with the EV control! so what is changing here?

If you select Aperture priority mode from the menu then on screen you will see the value that you have set but not the associated shutter speed (or ISO if you have iISO or auto ISO set)

The minimum shutter speed is usually set to the lowest frame rate (25 normally), there is no exposure meter on the screen so the actual exposure has to be set visually.

If you select Shutter priority mode from the menu then on screen you will see the value that you have set but not the associated aperture value (or ISO if you have iISO set)

Again there is no exposure meter on the screen so the actual exposure has to be set visually.

The most professional mode to use is the Manual mode, again set from the menu.

In this mode you can set the Aperture, Shutter speed and ISO value and there is an on screen indication of the exposure. with an exposure scale. With some cameras an aperture of F11 can be set which is advantageous in brighter lighting conditions.

The minimum shutter speed is consistent with the frame rate of the video clip being recorded (normally 25) however if you switch to manual focus you can select a slower shutter speed.

The only warning I have here is that this will give rise to subject motion blur if there is any motion at all in your video otherwise it is an excellent way of capturing low light video situations.

Choice of Recording Format



The recording format sets the file output parameters which will include the codec used and the amount of file compression.

The codec (which stands for COmpressor/DECompressor) is a matter of choice for quality versus quantity. In most cases the codec used will be H.264

The quality is determined by the overall bit rate of the recorded clip and the quantity is the file size generated by the compression codec.

With the bridge cameras like the FZ200/300/330 and FZ1000 the format is usually limited to the choice between AVCHD or MP4. Mirrorless, micro four thirds cameras and the FZ2000/2500 also include MOV formats as well as a more varied compression option.

Perhaps the main difference between AVCHD and MP4 files is the container format, though both recording video codec as MPEG-4 AVC/H.264. Generally, the AVCHD-formatted video uses .m2ts extension saved with the Picture Motion Browser (PMB) software, whereas MP4-formatted video uses .mp4 file extension saved with the PMB software.

AVCHD was once a very popular format however this format leads to an over-large file size though its video employs MPEG-4 AVC/H.264 compression.

Nevertheless, files in MP4 format are smaller in size but high in audio and video quality.

For instance, a 30 minutes of 1920*1080 AVCHD video clip usually takes up 300-400 MB while the file size of a MP4 video is commonly 100MB. So if the file size is your prime concern, MP4 is undoubtedly the best choice in the AVCHD versus MP4 battle.

When choosing the AVCHD (Advanced Video Coding High Definition) the recording quality can be set from a “progressive” or “interlaced” option.

With modern TV displays, monitors and internet streaming the need for interlaced files has become largely redundant. The use of an interlaced file can show ghosted images or images with striped edges. Unfortunately Panasonic still set the default option to be interlaced.

It's best to set a progressive option from the list of options such as FHD 28M 50p which is the full 1920 x1080 pixels, has a bit rate of 28 megabits per second and a frame rate of 50 which is a progressive mode.

AVCHD is a moderately compressed file format and this takes up less space on the memory card. However it does require a PC with fairly good processing capability to be able to edit the program without running into performance issues. You cannot just copy the files from the memory card, they need to be imported into the video editing program to maintain the file structure and thumbnails etc.

MP4 is the alternative file format and it is one that is gaining more popularity as it is the format chosen for 4K UHD video recording because of the size/quality gains in using it.

15 minutes may be the longest clip length when using 4K due to file size restrictions



It is possible to choose any of the photo styles for creative video recording. On cameras after the FZ200 the provision was made to add two video friendly photo styles, the Cinelike D and Cinelike V. These are not available on the FZ80/82.

Cinelike D has a lower contrast than Cinelike V and can be used to extend the range of highlights and shadows that are able to be captured. You will need to make adjustments to the recorded video in your video editing program to bring back the contrast/saturation to levels that you may prefer.

As with all the photo styles the individual parameters can be adjusted to suit your own preferences.



If you have the FZ200 then these two photo styles are not available however you can use the Natural photo style and adjust the contrast to -2 and saturation to -2 to achieve a similar effect.

In another video I will discuss audio recording for video production.