

EOS 50/50e Elan II/Ile Operator's Manual

prepared by Jim Strutz, updated by Niloy J. Mitra*

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1 Introduction

Elan II/IIe (North American designation) is the same camera as the EOS 50/50e (international designation). The "e" in the name refers to the "eye control" option that is used to quickly select autofocus points as well as depth of field (DOF) preview. EOS, by the way, stands for Electro Optical System.

In writing this instruction manual for the Canon EOS 50/50e and Elan II/IIe, I have assumed that the user has a basic understanding of lens focal length, lens apertures, focusing, shutter speeds, exposure, film type and speeds, as well as SLR cameras and photography in general. If you need instructions with these basics, you will have to find them elsewhere. However, for the most part, this manual will often give you more advice and information than is available in the official Elan II/IIe manual.

The Elan II/IIe is a 35mm, Single Lens Reflex (SLR) camera. This allows the operator to look through the same lens that is used for picture taking. It uses Canon's exclusive Electro Focus (EF) bayonet lens mount. It has no mechanical linkages other than the mounting flanges themselves. All communication between lens and camera body is done electronically. Several of the electrical connectors are used for power and grounding and others are used to pass information and data in a serial buss fashion. This has allowed Canon to bring several upgrades to their lenses and cameras while still allowing complete compatibility with their older EOS equipment. It is a very versatile system that is also being used in Canon's newer digital SLRs.

2 Camera Top Controls

2.1 Shutter Button

The Elan II/IIe camera has several dials and buttons that you will need to familiarize yourself with.

The most important button on the camera is the **Shutter Button**. It's in the typical position on the front, right corner of the camera near the top. Your right index finger usually falls right to it as you hold the camera. If you press the shutter button part way down until a slightly increased resistance is felt, the camera comes to life. The camera's usual response is that the exposure meter and auto focus (AF) are activated, but this half press is also used for several other functions as well. Pressing it all the way down usually fires the shutter to expose the film, depending on what mode the camera is in.

2.2 Main Dial

On the right side, just behind the shutter button is a vertical dial called the **Main Dial** or sometimes the Electronic Input Dial. Depending on the mode the camera is in, it is used to set the aperture or shutter speed and select different functions. This may sound confusing but actually it's very logical in practice. If you need to make a value change, chances are the Main Dial does it.



Figure 1: Top View

2.3 Command Dial

On the top left of the camera you will find the **Command Dial**. It selects the camera's exposure modes and other functions. The red L position is Lock, or the camera off position. To turn the dial from the L position, press in the metal tab on the front of the dial. The green square is full auto mode. The four small symbols to the right are the PIC (Programmed Image Control) modes; portrait, landscape, macro, and action. Basically they bias the shutter/ aperture combinations to favor longer exposures and smaller apertures for landscape and macro modes and the other way around for portrait and action modes. Portrait & macro modes as well as full auto mode will also raise the flash when the camera thinks it's appropriate. The major restriction with full auto and PIC modes is that you cannot shift the relative values of the shutter and aperture like you can in P mode. Nor can you bias the exposure up or down like you can in P mode. The camera picks what it thinks is appropriate without allowing any further advice from you. Now that you know what they are, ignore them. Using them will just retard your education of photography as well as learning about the camera. The other positions of the Command Dial are generally more useful.

P is for Program mode. It sets both the shutter speed and the aperture. It's not much different than full auto but one thing it won't do is it won't raise the flash for you. This can be a useful mode when you need to grab the camera and shoot without much think-



Figure 2: Command Dial

ing. The primary advantage of P mode over full auto mode is that in P mode you can use the Main Dial to shift the relative values of the shutter and aperture selection. This is called Program Shift and it provides a way for you to bias the exposure towards faster shutter speeds or smaller apertures while the camera insures accurate exposures. You can also use the Quick Control Dial (QCD) on the camera back, to bias the exposure up (lighter images) or down (darker images) depending on the effect that you want. This is called Auto Exposure Compensation (AEC), and is only the ambient exposure bias. It does not effect flash exposure.

Tv is for time value mode, also called "shutter priority." You set the shutter speed with the Main Dial, based on the need to freeze action or portray subject movement or simply for hand hold ability. The camera then selects an appropriate aperture for correct exposure. While in Tv mode you can also use the QCD to change the exposure up or down (AEC). This is only ambient exposure bias and it does not effect the flash exposure.

Any shutter speed can be set between 1/4000 second to 30 seconds. Below 30 seconds the shutter goes into Bulb mode where it will stay open as long as you hold the shutter button down or until the battery goes flat. The remote controller, RC-1 and the remote switch, RS-60E3 both have methods to manually hold the shutter open as long as you like.

Av is for aperture value mode, also called "aperture priority." You select the aperture with the Main Dial, based on the need to limit or expand depth of field/focus, and the camera selects a shutter speed to provide the proper exposure. Av mode can also be used when you want to select the fastest shutter speed possible and still maintain proper exposure in changing light. To do that you just set the aperture to the largest setting

(smallest number) and the camera will automatically select the fastest shutter speed setting that will still provide the correct exposure. While in Av mode, you can also use the QCD to change/bias the exposure up or down (AEC). This is only the ambient exposure bias and it does not effect the flash exposure.

In P, Av or Tv modes, a blinking aperture or shutter indicator may mean that it is out of its available range. So if your aperture is blinking f/5.6 and that is the lens's largest aperture, you will have to select a slower shutter speed to bring the required aperture in line with your lens's available aperture. Also if 4000 is blinking, then use a smaller aperture to bring the required shutter speed down to what the camera is capable of doing.

The shutter speed also blinks as a shake warning if the shutter speed falls more than 1/2 stop below the reciprocal of the lens length.

M is for manual exposure mode. You select the aperture with the Main Dial and shutter speed with the QCD. The camera's built-in light meter will still function in manual mode and you can follow its lead or ignore it completely. The meter's display can be seen both in the viewfinder as well as on the top mounted Liquid Crystal Display (LCD) on the top right side of the camera. A proper exposure, according to the camera's meter, is when the meter indicator is centered on the scale. The meter scale covers a four stop range. Each hash mark represents 1/2 stop of exposure deviation. A negative indication shows with underexposure and a positive indication shows with overexposure.

DEP is for depth of field auto exposure mode. It allows the camera to decide the appropriate aperture and focus position to provide enough depth of field to keep two selected distances sharply in focus. The easiest way to use it is to turn the Command Dial to DEP, and use the center auto focus sensor, point the camera at the first subject and press the shutter button half way to autofocus. Let the button up and then point the same AF sensor on the top of the second subject and press the shutter half way again to allow the lens to autofocus on the second subject. Then reframe your camera and take the picture. The camera will select a focus distance between the subject distances, then select an aperture small enough to keep both subjects in focus and then select a shutter speed that will provide proper exposure. If you select the same subject distance twice, the camera will select the widest aperture available to keep depth of field very shallow. The lens must be set to AF for DEP mode to work and if you are using a zoom lens, you must not change its zoom setting during the entire procedure. You can also manually or eye control select the side AF sensors, but I think it just adds confusion.

A blinking aperture indicated that sufficient depth of field (DOF) can not be achieved. You must focus on subjects that are closer to the same distance apart or use a wider angle lens. Flash can not be used with DEP mode

CF (Custom Function) is discussed below

CAL (Elan IIe only) is used for calibrating the Eye Control Focus (ECF) of the Elan IIe to the shape and size of your eye. Turn the Command Dial to CAL, look directly at the blinking AF point, press and hold the shutter button until the camera beeps. Then look directly at the next blinking AF point and hold the shutter button until the camera beeps. Turn the camera to the vertical position and press and release the shutter briefly. Then look directly at the blinking AF point, press and hold the shutter button until the camera beeps. Then look directly at the next blinking AF point

and hold the shutter button until the camera beeps. You're all done, but you should do this repeatedly in different kinds of lighting. The more you recalibrate, the more accurate ECF will become.

There are three different calibration settings that can be used for different people or for when you wear glasses, contacts, etc. You can change the calibration setting by turning the Command Dial to CAL and then turning the Main Dial. You can see the selection (1, 2 or 3) in both the viewfinder and the LCD on the top of the camera.

You can erase a calibration setting by selecting it and then holding the two small thumb buttons on the upper right of the camera back, until the setting blinks in the LCD screen on the top of the camera. You should always erase a calibration setting if it is to be used by another photographer. Then recalibrate to their eye. Otherwise someone else's previous calibrations will continue to effect their new ones.

2.4 Metering Mode

Just below, and on the same switch stem as the Command Dial is the **Metering mode switch**. The front (blank square) position sets the camera to center weighted metering. If you are very used to metering patterns of older manual cameras and automatically correct for their metering errors in difficult situations, you might feel more comfortable with this position. The middle position sets the camera to 9.5% partial area metering. This is basically a fat spot meter. The area it meters is a bit larger than the bright circular area surrounding the center AF point. By setting custom function #8 to "1", the partial metering area will move to the area surrounding the active AF point if that point is selected manually or by eye control, otherwise it stays in the center. The rear position (square with circle in it) of the metering mode switch sets the camera to evaluative metering mode. This divides the picture area up into several areas, meters them independently and then compares that to a database of possible images that would create such a pattern of light & dark areas. The camera's computer then decides what exposure to use. This mode works quite well and provides the highest percentage of accurate exposures with the least amount of effort, but its down side is, you never really know how much it is biasing the exposure towards the dark or light areas. If you know what you're doing, in difficult lighting, such as a backlit portrait or an arctic fox in the snow, you would be better off using the partial meter and making your own compensations. You'll also learn more this way.

2.5 Self Timer / Remote Control

Just to the front and left of the Command Dial is the **Self Timer** button that also activates the IR remote switch. Press this button and the Self Timer indicator appears in the LCD. If you press the shutter, you will have 10 seconds before the shutter fires. This should give you time to get into the picture yourself. The red light on the front of the camera will blink every second and speed up for the last two seconds before it fires. The beeper will also sound during this time if you don't have the beeper turned off. With custom function #5 set to "1", the self timer is reduced to a 2 second delay with the mirror raising as soon as you press the shutter. This is used primarily to reduce camera vibrations caused by the mirror movement. Its main purpose is in extreme

macro and telephoto use. You can cancel the Self Timer during this 2 or 10 second wait, before the shutter fires by pressing the Self Timer button again.

The **RC-1 IR remote control** is relatively inexpensive and works very well for numerous situations. You can use it instead of the Self Timer when you want to be in the picture, or when you want to trip the shutter without touching the camera that would cause vibration. It also has a three position switch, off, on and 2 second delay. The 2 second delay position is for when you are in the picture and want to hide the remote before the exposure.

2.6 Focus Mode Switch

On the other side of the prism/flash hump you'll find the **Focus mode** switch and the Film Advance switch. The Focus mode switch is on top and has three positions and of course, only works when the lens is set to AF mode itself. In One Shot mode, as soon as you press the shutter button half way down, the camera will autofocus and lock onto a subject and it stays locked at this distance as long as you continue hold the shutter button half way down. In this mode the focus has to lock onto some distance before the shutter will fire. This can prevent out of focus pictures as long as the subject doesn't move towards or away from the camera.

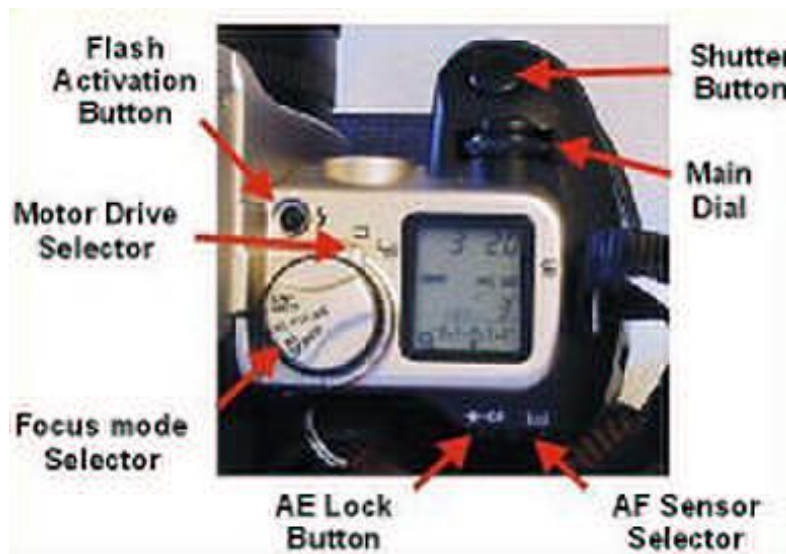


Figure 3: Focus Mode Switch

In AI Servo mode the camera will focus on the subject but will not lock anything.

If the subject moves the focus follows.

Sometimes you want to focus on a particular distance and then recompose with your subject off center. You can do this by selecting a side AF point, or by autofocusing in One Shot mode and holding the shutter button half way down to keep that focus distance selected. You can't do this in AI Servo mode, but then you can't track a moving object in One Shot mode. They both have their advantages. Most people prefer to keep the camera in One Shot mode and changing it when they need to.

There is a middle position, the AI Focus mode that is the same as One Shot mode until the camera detects that the subject has moved closer or farther away. Then it automatically shifts into AI Servo mode. This is a good compromise, but there are times when it will shift into AI Servo mode when you don't want it to and then there are other times when you want it to but it doesn't react fast enough.

2.7 Film Advance Switch

The **Film Advance switch** is right under the Focus mode switch. It has two positions. Single Shot mode is the usual position and it will take one picture at a time. You have to raise your finger off the shutter button completely and then press it again to take another picture. In Continuous Advance mode the camera will continue to take pictures at 2.5 frames per second as long as you keep your finger pressed down and there is still film to burn. In Continuous Advance mode, and if you are also in AI Servo focus mode, there will be a slight delay between frames as the camera looks to see if it is still in focus and then readjusts as necessary. However if you were in Continuous Advance mode and One Shot focus mode the camera would lock onto a distance and keep it there throughout its continuous shooting spree.

2.8 Built In Flash

Just in front of the Focus Mode switch there is a button that when pressed will raise the **built-in flash**. To get the flash to go back down you just push it down. The built-in flash is fairly weak and it's also close enough to the lens to cause red eye in many situations. Its primary benefit is when you have to have flash and didn't bring along a real one with you, and also when you need fill flash outdoors. As long as your distance isn't too great and your aperture isn't too small, it will work.

2.9 Custom Functions

CF mode is used to set the eleven available Custom Functions. These are used to customize the camera to your particular shooting style and to change the way the camera works for a particular situation. To use them, turn the Command Dial to the CF position, turn the Main Dial to select the custom function you want and then press the "*-cf" button to change its value.

Custom Functions only work in the non-PIC modes.

The custom functions are:

- 1) Rewind Speed 0 = quiet, 1 = fast
- 2) Film leader 0 = rewind it in, 1 = leave it out

- 3) Auto DX film speed setting 0 = on, 1 = off
- 4) Use of * button
 - 0 = AF start with shutter button, exposure lock with "*" button
 - 1 = AF start with "*" button, exposure lock with shutter button
 - 2 = same as 0, plus DOF check with "*" button
- 5) Mirror lock with self timer
 - 0 = normal ten second self timer,
 - 1 = mirror locks up and the self timer becomes two seconds
- 6) Second curtain flash sync 0 = off, 1) = on
- 7) AF assist beam 0 = off, 1) = on
- 8) Spot & FEL to focus point
 - 0 = Partial meter & Flash Exposure Lock at center point only
 - 1 = Partial meter and FEL follow the active AF sensor
- 9) Force 1/125 sync in AV mode
 - 0 = In Av mode with flash provides full ambient exposure
 - 1 = In Av mode the shutter is locked at 1/125 second
- 10) AF indicator lights 0 = off, 1) = on
- 11) Eye control DOF preview 0 = off, 1) = on (Elan IIe only)

3 Other Camera Controls & Features

3.1 Auto Exposure Lock Button

Just behind the top mounted LCD are two thumb buttons. The one on the left is the **AE Lock** button. It's marked with a "*-cf" symbol. The "cf" part of the symbol is to denote that it is used to set the values of the custom functions, explained above. When the camera is not set to the CF mode on the Command Dial, the AE Lock button can do several things. Its primary purpose is to set the exposure for one scene and then recompose the picture. This works particularly well with partial metering where you want to meter a subject but compose the scene with the subject off center.

Normally pressing the shutter button half way activates autofocus, and pressing the AE Lock button locks the exposure value that is determined by the camera's metering system. This is called Auto Exposure Lock (AEL). However, if custom function #4 is set to "1" the functions are reversed. The primary reason you might want this is to move your auto focus away from the shutter button. That way you would only reactivate AF when you wanted to, not every time you press the shutter. If you couple this with Canon's USM lenses that allow Full Time Manual focusing (FTM), you can autofocus by the push of the "*" button, and manually focus by turning the focus ring on the lens, all without switching the AF/MF switch on the lens. This may not sound like a big deal, but for many photographers this is the primary reason to buy Canon equipment. The low end line of Canon lenses use a micro motor USM that does not allow FTM, so pay attention to what you're putting your money down for. USM stands for UltraSonic Motor. They are nearly silent and the mid and upscale ones are fast!

Nikon has recently started selling a few Silent Wave lenses that are essentially the same thing as USM. Only some of the high-end lenses have this "S" designation and

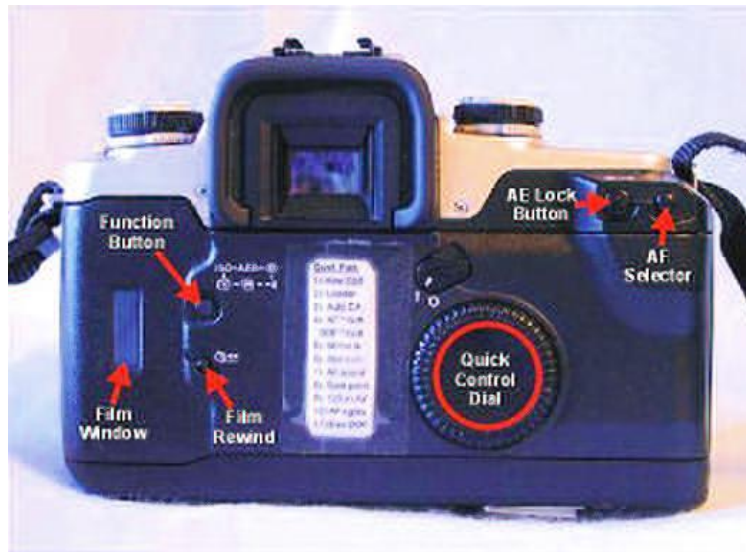


Figure 4: Back View

they only work with the latest Nikon Camera bodies, but the competition on this front is heating up. Also Sigma has some similar HSM lenses that are made in both Canon and Nikon mounts.

3.2 Auto Focus Point Selection Button

The other thumb button back here is the **AF Point Selection** button. You press it and then use the Main Dial to select the particular AF point you want, or to select eye control AF. Or you can select all the AF points, which will then allow the camera to automatically select the AF point it thinks you probably want for the scene, usually the closest subject with sufficient contrast. When you have selected what you want, either press the AF Point Selection button again or press the shutter button half way down to confirm your selection.

3.3 Quick Control Dial

The large dial on the camera back is the **Quick Control Dial (QCD)**. Most previous EOS cameras did not have a QCD. That forced the Main Dial to do too many functions depending on what button you had pushed. The QCD allows you to bias the exposure while in P, Av or Tv modes and in Manual mode it sets the aperture while the shutter is controlled by the Main Dial. There is also an **on/off switch**, above and to the left of

the QCD. This simply activates the QCD when in the "1" position. I usually leave it on. Others complain that the dial gets moved accidentally, so they keep it turned off.

3.4 Function Button

On the camera back near the left side is the **Function** button. Repeated presses of the button cycle you through several different options. There is no fixed starting point in this cycle so the first press may be anywhere in the cycle of options. I'll start with the **ISO selector**. Press the Function button repeatedly until you get there, and then turn the Main Dial until you get the film speed you want. Press the shutter button half way to confirm your selection. Unless you have custom function #3 set to "1", this EI (Exposure Index) or "rated" ISO will only apply to the roll of film you have in the camera. As soon as you put another film canister into the camera it will select the film speed that is imbedded into the DX coding. Obviously custom function #3 is for when you want to "rate" a film and have several rolls of it you want to burn right away. Wedding photographers frequently do this with some professional films.

Another press of the Function button will get you to **Auto Exposure Bracketing** (AEB). By turning the Main Dial you will see the single exposure point, on the exposure scale, in the LCD, turn into three points. As you turn the dial further the exposure points will separate more. Each click of the dial separates the exposure points an additional 1/2 exposure stop away from each other. If you want AEB to be three separate exposures, 1 stop apart, set the scale so the outside points are at -1 and +1 with the center point in the center of the exposure graph. Press the shutter half way to confirm your selection. The next three shots will be; 1) at the selected exposure, 2) one stop under exposed, and then 3) one stop over exposed. You can do this same thing without AEB by using Auto Exposure Compensation for each exposure, but AEB provides an easy way to do this for several different shots in a row. Maybe even the whole roll. If you want more or less than a 3 shot AEB, you would have to do it with AEC or just use Manual mode.

The next press of the Function button brings the camera to **Red Eye Reduction mode**. Use the Main Dial to select "0" for off, or "1" for on. Press the shutter button half way down to confirm your selection. This only works with the built-in flash in the up position. You probably won't need it with an external flash as it sits farther away from the lens axis. This mode provides you with several seconds of a bright white light to help reduce the iris of the subjects eyes. Just press the shutter button half way down for three seconds and then take the picture. This will annoy your subjects to no end, and in my opinion this is a nearly worthless feature, but other cameras have them, so Canon had to do it too.

The next press of the Function button brings the camera to the **beep control feature**. Use the Main Dial to select "0" for off, or "1" for on. Press the shutter button half way down to confirm your selection. I don't normally like cameras beeping at me, but I leave this one on because it confirms when the focus has locked on, and it's quiet enough not to be a real bother.

The next press of the Function button brings the camera to the **Multi-Exposure** mode. Use the Main Dial to select the number of exposures you will want on this frame of film. Nine is the maximum. Press the shutter button half way down to confirm your

selection. The exposure counter in the LCD will now display the remaining exposures to be taken on this frame instead of the usual frame number. If you decide you don't want to use all the Multiple Exposures you selected, simply press the MF button again and then turn the Main Dial until the numbers remaining disappear. Press the shutter button half way to confirm this selection. Getting more than 9 exposures on a single frame is also possible; before you get to the last exposure for this frame, press the MF button until you get back to the Multi-Exposure mode and turn the Main Dial to add more exposures. Press the shutter button half way to confirm this selection.

The next press of the Function button brings the camera to the **Flash Exposure Compensation (FEC)** feature. This works for both the built-in flash and any attached dedicated flash units. Use the Main Dial to select + or - FEC. Press the shutter button half way down to confirm your selection. With Canon EOS cameras, flash exposure is totally separate from the regular ambient exposure. Applying the regular Auto Exposure Compensation will not effect the flash exposure, and using FEC will not effect AEC. There are many times you would want to adjust one or the other but not both, however resetting the film ISO will effect both. Often using -0.5 to -1.0 FEC is desired for additional fill flash reduction. Keep in mind that Canon already applies up to -1.5 stops of auto fill flash reduction depending on light levels.

3.5 Film Rewind Button

Just below the Function button is the **Film Rewind** button. You can use this to rewind the film early. It will also increase the speed of the rewind by pressing it again. Normally the Elan II/Iie auto rewinds when it comes to the end of a roll. It does this in the silent rewind mode. You can speed this up by pressing the rewind button after it starts to auto rewind.

The Elan II/Iie uses an **Infrared (IR) frame counter** that allows you to remove a roll of partially used film by pressing the rewind button, and with custom function #2 set to "1" the film leader will be left out. You can then mark on the canister how many frames have been used. When you reload it into the camera to use the remaining unused frames, set the Command Dial to M, the shutter at 1/4000, put the lens cap on, set the focus switch on the lens to MF, and fire the shutter until you get back to the same frame number you had when you removed the film. There is no need to waste an extra frame to guarantee that you won't overlap the last exposure. The IR frame counter will place you back to the same exact position every time without frame overlap.

3.6 Film Window

The dark little **Film Window** on the left side of the camera back allows you to see what type and speed of film you have loaded.

3.7 Camera Back Release

On the left side is the **Camera Back Release**. Canon made two backs for the camera, one with a date feature and one without, but they are not interchangeable. With the back open you can see where the film is to be loaded. Put the film canister into the

space on the left side and pull the film leader out until it lines up with the orange mark on the right side of the open camera, and close the back. If the camera is not already on, turn it on now, and the film will wind to the first frame. Can't get much easier with 35mm film.

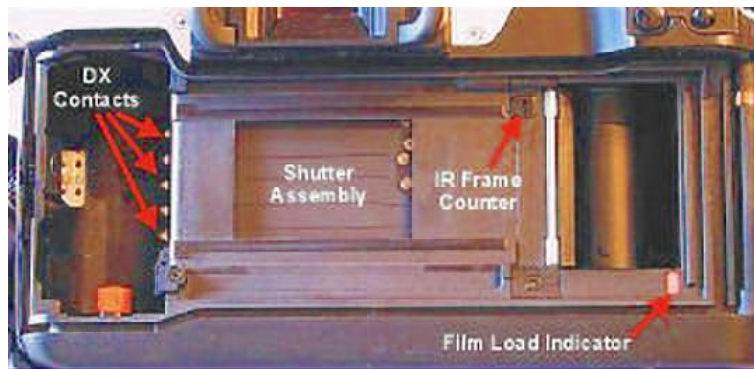


Figure 5: Inside View

You can see the IR frame counter near the top of the film rail on the right side. This might fog some infrared type films, but most IR film users report that it is actually not a problem in spite of Canon's cautions against using IR films with the Elan II/IIe.

3.8 Lens Release Button

To the left of the lens mount is the **Lens Release** button. Push it in and turn the lens counter clockwise to remove it.

3.9 Auto Focus Assist Light

Also on the front of the camera is the red **Autofocus Assist Light**. It emits a patterned near infrared light that will allow the camera to autofocus in otherwise complete darkness. This light comes on automatically and very briefly when the camera is autofocus in low light situations. It's range is up to 21 feet for center AF point and 13 feet for side AF points. This will depend on the lens being used. If you have an external Speedlite flash unit attached the camera will usually use the AF assist light in the external flash instead of the one built into the camera body. This will save the camera battery power and the external lights are usually more powerful. Some external flash



Figure 6: Front View

units do not cover the side AF points however, so with those flashes, the camera will use it's own AF assist light when a side AF point is selected. When using some large diameter lenses the left side AF assist light may be blocked by the lens barrel. The dark red circle that houses the AF assist light, close to the shutter button, also houses the receiver for the optional IR remote control, RC-1.

3.10 Remote Release Port

On the left side of the camera is a small hole that is actually the plug in port for the **RS-60E3 Cord Remote**. Just plug it in and you can trip your shutter without touching your camera. This makes for much steadier shots when using a tripod.

3.11 Battery Compartment

The Battery Compartment is on the bottom, on the right side. It uses a 2CR-5 lithium 6 Volt battery. Canon claims that you can expect up to 90 rolls of 24 exposure film with one battery. Cold weather and use of the internal flash will reduce that considerably. Below zero (F) temps and using flash on all exposures will reduce this to as little as 6 rolls of film.

4 LCD and Viewfinder Information

4.1 Liquid Crystal Display

The **liquid crystal display** (LCD) on the top right side of the camera, shows quite a bit of information about what is going on with the camera. At the top left is a numeric display that shows the shutter speed when metering, but is also used to show the film speed, custom function number and eye calibration number. At the top right is the aperture display that is also used to show AEB amount, and custom function option, red eye, and beeper setting numbers. The next row down has the ECF on indicator, ISO, AEB and red eye reduction on symbols. The next row down has the ECF on indicator, ISO, AEB and red eye reduction on symbols.

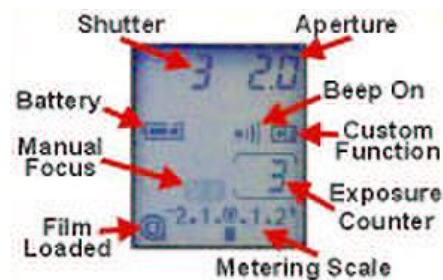


Figure 7: LCD Panel

The third row down has the battery indicator that shows how much battery power is left. It usually shows full until shortly before the battery starts to die. A flashing battery indicator, or no battery indicator at all, usually means the battery is dead. A flashing battery indicator can also mean that the camera has locked up for some reason. The usual solutions are; take the battery out, try a new battery, clean the battery contacts, clean the lens and lens mount contacts, remove the lens, remove the external flash unit. If it still blinks, you've got a problem.

To the right of the battery indicator is the multiple exposure indicator. When this is lit you should also see the frame counter portion of the LCD showing how many multiple exposures are left before the camera advances the film. Moving further to the right is the beeper on indicator and then a CF indicating that a custom function has been turned on.

The fourth row has the Flash Exposure Compensation indicator that shows whenever the FEC is something other than 0. To the right is the self timer / remote activation indicator. Just below it is the MF (Manual Focus) indicator that shows up whenever you turn the autofocus switch on your lens to MF. To the far right is the film frame counter, that is also used to display the number of multiple exposures left to be taken before the film advances and it also counts down the self-timer. The bottom of the LCD shows a film canister if film is loaded and blinks if it is rewound.

To the right is the exposure graph. Most of the time the indicator is under the 0 mark, but if you have set Auto Exposure Compensation (AEC) the indicator will move to the - or the + side to show how much compensation you are using. It has a +/- 2 stop range. This graph is also used to show Auto Exposure Bracketing (AEB). As you set AEB you will see the single indicator become three indicators showing how much AEB you have selected. You will also see a numeric indication of the AEB amount in the upper right hand of the display. You can combine AEB with AEC, but you are still limited to the 2 stop maximum range.

The graph also is used as a short count down indicator for the red eye reduction lamp.

The exposure graph is also used when metering in manual mode. Setting the indicator to 0 is what the camera's meter recommends. Of course one of the prime reasons for using manual mode is disregard what the meter says, but it still gives you an indication of how far you are from the recommended exposure.

4.2 Viewfinder Display

The **viewfinder** also shows much of the same information as the LCD so that you can see necessary data without removing your eye from the viewfinder. The screen is called a New Laser Matte screen and it is fairly bright, but it is accused of sacrificing contrast for brightness. This would be bad, if true, in a manual focus camera but isn't much to complain about with autofocus. You can see three autofocus squares that light up as they come into focus, indicating which AF point is active. The actual AF area is slightly larger than the small squares show but accurately indicate the spot. There is also an AF indicator dot in the line of lights below the screen. These AF squares will also light up when you manually focus your EF (EOS) mount lens. But if you are using a manual focus lens with a lens adapter they will not work.

The central AF point is a cross type sensor and is sensitive to contrasting lines in any direction. The outer AF points are linear and are sensitive to horizontal contrasting lines. They won't work if the only lines are completely vertical. In practice this isn't much of a issue and you can always tip the camera a bit for vertical lined subjects.

Also on the screen is a small square in the upper left. This is what you look at to activate the DOF preview when using eye control on the Elan IIe. To use it you have to have the camera in One Shot focus mode, lock the focus on something using eye control to select the AF point, then look at the little square. The lens will then stop down to the taking aperture and you will see the screen get darker and the depth of field get deeper. Of course you have to have selected an aperture smaller than the lenses maximum for this to do anything.

When you press the shutter button half way down the meter is activated and the viewfinder data display is lit up. At the bottom of the view screen, starting on the left, there is an eye control indicator. Next to it is the * of the Auto Exposure Lock (AEL) indicator, followed by a flash ready indicator that is also used to indicate invalid Flash Exposure Lock (FEL) warning. The numeric display is for the shutter speed, eye control calibration, and FEL lock indication. The next numeric display is for the aperture value. Followed by the Flash Exposure Compensation (FEC) indicator. Then there is the exposure graph like the one on the LCD and is used for the same purposes. The

farthest right, bottom indicator is a dot to show that the camera has found something to focus on.

5 Flash

5.1 Built In Flash

The Elan II/IIe's **Built In Flash** is TTL only. Like all such built in flash units, it is limited by its low power. It is also very close to the lens axis, and this frequently causes the dreaded red eye effect in your pictures, which is really just the flash lighting up the back side of the subject's eyeball. Moving the flash farther above your lens is the best solution. This will also cause any shadows on the wall behind your subject to fall below the image of your subject where it will either not be seen or not be as objectionable.

The built in flash unit also houses a bright white light that acts as a red eye reduction lamp. With the flash up and red eye enabled, press and hold the shutter button until the graph indicator at the bottom of the viewfinder (as well as the one in the LCD) centers itself. Then take the picture. What happens is the bright light shines in the eyes of the subject and causes the iris of the eye to contract, reducing the red reflection from the back of the eye. Most people find this totally annoying, so now that you know how to do it, turn the thing off! There are better ways of dealing with red eye. Including red eye removal pens for your prints.

When using some larger lenses the built in flash may be partially blocked by the lens barrel. This will cause a rounded shadow at the bottom of the picture. This is most pronounced at wide zoom settings and close distances. The cure is to use an external flash since it is mounted higher above the lens.

5.2 Flash Metering

The Elan II/IIe is capable of Through The Lens (TTL) and Advanced TTL (A-TTL) flash metering with external Canon E and EZ series Speedlites. It is also capable of Evaluative TTL (E-TTL) flash metering with external Canon EX series Speedlites. For several reasons, E-TTL is generally the preferred metering method.

With **TTL and A-TTL**, the camera's built-in flash meter senses the light Through The Lens (TTL) and reflected Off The Film (OTF). When enough light has reached the film the camera signals the flash to stop its flash pulse. This all takes place in less than 1/1000 second. On the Elan II/IIe this exposure is metered by a four area, three zone flash meter and metering is biased toward the general area of whatever autofocus point is active at the time.

With **E-TTL** mode, the flash exposure control is determined before the shutter opens by means of a pre-flash that is metered by the same meter as the camera's regular, ambient light, evaluative meter. This pre-flash occurs about 1/20 second before the main flash and you can usually see it in the viewfinder just before it blacks out for the exposure. This system compares the ambient light reading with the flash reading and adjusts both the ambient exposure and flash exposure to, hopefully, provide the optimal

exposure. E-TTL also biases the flash exposure towards the area surrounding the active AF point.

E-TTL usually works better than TTL and A-TTL when the lighting is difficult such as a backlit or small nearby subject with a distant background, or an off-center subject. E-TTL is also an improvement with daylight fill flash, providing a more natural look.

5.3 E-TTL Features

Canon's E-TTL system allows the pre-flash to be fired up to 16 seconds before the main flash, so you can have Flash Exposure Lock (FEL) by pressing the AE Lock button. This allows you to point the camera at the subject, determine and set the flash exposure for the subject, and then recompose to shoot. It is very similar to Auto Exposure Lock (AEL) but for the flash exposure. FEL normally biases the exposure to the area surrounding the central AF, but if custom function #8 is set to "1" the flash is biased to the active AF point if the AF point is either manually chosen or selected by eye control.

E-TTL also provides a method of metered **high speed sync** (FP Flash) to allow you to use an EX series Speedlite at a shutter speed faster than the normal top sync speed of the camera (1/125 sec.) This will allow you to use faster film and wider apertures when using daylight fill flash. Canon's FP Flash mode works in E-TTL mode so it automatically calculates flash exposures.

Wireless E-TTL Flash can also be done with some Canon Speedlites. You need a master mounted on camera (or attached to an Off Camera Shoe Cord 2) and at least one slave. The 550EX works best as a master and you use either a 420EX or another 550EX as the slave. The wireless mode only works in E-TTL or wireless manual modes, and only with the Speedlites that have this feature built in. At the time of this writing, this limits you to the 420EX, 550EX, or one of Canon's two E-TTL ring flashes. The ST-E2 has no flash built in, but can be used as the shoe mounted master instead of using another flash for this. The Sigma EF-500 Super is a third party 550EX clone and can also be used as either a slave or a master.

Second Curtain Sync with custom function #6 set to "1", is a feature that effects flash exposures with relatively long shutter speeds. Its primary purpose is to get light trails to follow the flash instead of leading it. In normal sync mode the flash fires at the beginning of the exposure. If the exposure is long and the subject moves, some of that movement might be recorded on film, and it will look like it's in front of the flash exposure. Scenes like moving cars with headlights on will appear to be moving backwards. Setting the sync to the second curtain makes the trailing movement appear behind the subject. Second curtain sync can usually be left on without any negative results and it works with the built-in flash. There will be a multi headed arrow symbol that shows on the LCD of an external Speedlite when second curtain sync is on. Second Curtain Sync works with all of Canon's E, EZ and EX series Speedlites.

5.4 Flash Exposure Modes

In low light with the camera in **P, Full Auto, and PIC** modes the camera will usually select a wide aperture. Also the shutter speed will be held to no slower than 1/60 second, but as light levels increase the shutter speed will rise to be equal to the camera's

highest sync speed (1/125 sec.). Also as light levels increase, to the point of over exposure by the brighter ambient light, the lens aperture will get increasingly smaller.

With the camera in **Av, Tv and M** modes, the camera meter will insist on a full and proper ambient light exposure in addition to your flash exposure. It's the same thing as night flash mode in some other cameras. The background will be properly exposed by the ambient light exposure and the flash will insure that the subject in the foreground is properly exposed by the flash. However, if the light is dim, the shutter speed will get very slow, often too slow to hand hold the camera. If that happens you can simply turn the camera back to P mode which will raise the shutter to 1/60 second, but this will usually create dark, underexposed backgrounds. A slow shutter speed with the camera mounted on a tripod is often the best solution. Also, the Elan II/Iie has custom function # 9 to keep the shutter speed at 1/125 sec. in Av mode if you want that.

I find that when using flash, setting the camera to manual mode is usually easier to keep everything in control. Since the flash exposure is being determined automatically anyway, having the camera on manual really doesn't slow much of anything down. Also, remember, that with flash the aperture effects both ambient lighting and flash lighting, but the shutter speed only effects ambient lighting. This is because the flash pulse is much faster than the shutter.

5.5 Auto Fill Flash Reduction

The Elan II/Iie automatically provides negative Flash Exposure Compensation (FEC) when shooting in bright light. If using flash with light levels above 10EV (equal to f/5.6 @ 1/30 seconds) the camera assumes you want a normal ambient light exposure with fill flash to brighten the nearby subject, so it reduces the normal flash output. This effect fades in as the brightness of the ambient lighting increases above EV10. The maximum of -1.5 stops of FEC is applied with TTL/A-TTL metering and up to 2 stops with E-TTL. This auto FEC happens in all camera modes and is designed to make your fill flash pictures more natural looking. Most people like the effect but many photographers want even more reduction for their fill flash pictures. This can be easily done with the Elan II/IIE by means of the FEC control on the camera body. This FEC will be in addition to any auto FEC the camera decides on. Some EOS cameras have a custom function to eliminate this **Auto Fill Flash Reduction**, but the Elan II/Iie does not.

5.6 Other Flash Options

Other Flash Options: The Elan II/Iie does not have a flash PC connector to use with **studio lights and other manual flash units**, but you can use a generic hot shoe to PC adapter. Nikon's AS-15 is a good quality one, but there are lower cost versions as well. With a manual or studio flash you will need a flash meter to get consistent flash exposure. Published guide numbers can't always be trusted.

The Elan II/Iie can also use **auto flash** units like the venerable Vivitar 283/285 or Sunpak 383. This is a way to get a more powerful flash without breaking the bank to do it. There are several big limitations however. The meter is in the flash unit and it will not take into account the lens's field of view. This can give inaccurate exposures.

You will also have more things to set on the flash (ISO, aperture, zoom) and on the camera you will have to manually set the lens aperture to what the flash says, and you will have to make sure that your shutter doesn't exceed 1/125 second. Still, with all that, auto flash is a bargain if power and versatility are the main considerations. But if speed & ease of use are a priority get an EX series Speedlite.

The most important consideration with non-dedicated flash units is the **sync voltage**. You must test this with a good volt meter (at least 20,000 ohms per volt). With the flash charged up & ready to fire, lay one lead across the contact at the side of the flash foot and the other on the center pin. Canon says it has to be 6 volts or less, although up to 10 volts is probably close enough. Some flash units like the older models of the Vivitar 283 have more than a 200 volt sync trigger. These can fry your camera in one pop, and accumulated use of even a 20 volt sync could damage your camera.

The most complete information about Canon flash technology, metering and theory can be found at: <http://teladesign.com/photo/eos-flash/>

6 Lenses

6.1 EF Mount Lenses

All lenses that are designed for EOS cameras have an **EF mount** on them. They all should work with the Elan II/IIe. Some older third party lenses are known to cause the camera to temporarily lock up due to an incompatibility problem that is discussed below. All Canon EF mount lenses will work fine. The better grade of Canon USM lenses (28-105 USM, etc.) use a ring type AF motor that allows Full Time Manual (FTM) focusing without selecting MF on the lens switch. FTM allows you to auto focus and then quickly touch up your focus manually. Used with custom function #4 to move the AF start to the AE Lock button, these lenses will change the way you take pictures. Or at least the way you focus. Before you buy one of Canon's cheaper lenses try one of the better versions. Be warned that cheaper USM lenses (28-90 USM, 75-300 USM) will not allow FTM.

In my opinion there are no good reasons to buy a cheap **third party lens** with any Canon EOS camera. There are too many incompatibility problems and they are no better than Canon lenses of equal price. However there are quite a number of better third party lenses that can save you money over Canon's good but pricey selection of better lenses. Keep in mind that you get what you pay for. At least sometimes you do.

6.2 Other Lenses

In addition you can use any **T mount** lens with a T mount adapter ring. T mounts are frequently used for cheap mirror lenses that have nearly worthless image quality. But the T-Mount is also used for macro bellows, attaching the camera to a microscope or telescope as well as some worthwhile older lenses.

You can also use any **M42 screw mount** lens with a M42 to Screw mount adapter. Very decent, low cost fisheye lenses are often found in M42 mount. These lenses were

designed for cameras like the early Pentax Spotmatic. Some of the lenses were very good and can be found cheap.

There are also adapters made to fit older Canon manual focus lenses, but these will either not allow infinity focus or will increase the focal length of your lens with a small teleconverter built in. They are not really worth the price or limitations unless you have a very special old Canon lens to use with your EOS camera.

There are also adapters made to fit the EF mount camera to Nikon, Tamron Adaptall and other lenses. The downsides to using any of these adapted lenses is that they can be manual focused only and they will have to be metered in the stop down mode. That is, they will not have an auto aperture, so metering will be done in M, Av or P mode, with a slightly darkened viewfinder. So focus first. The LCD and viewfinder display will show the aperture as "00" but you set the aperture on the lens barrel with these anyway.

7 Optional Equipment

7.1 Battery Packs / Grips

The BP-50 Vertical Grip is available for the Elan II/IIe. It is also a battery pack as it takes either four AA batteries or the 2CR-5 that the camera normally uses. It also has an additional shutter button to use in the vertical position and a switch to disable it. It's quite handy and I usually leave mine on unless I'm trying to reduce the size of my photo equipment. One problem with the vertical grip is that it displaces the tripod mount from directly under the lens axis to a position just over an inch to the right side. It also would be more useful to add a Main Dial, AE Lock button and AF point selector button. But at least this leaves an upgrade path for future cameras.

The **BP-5B** is an external battery pack that is used with the vertical grip. It has a dummy 2CR-5 battery attached to a coiled wire, and at the other end is a battery pack for 4 D cells. You can keep the batteries warm in your coat & still take pictures in sub zero temperatures. The BP-5B is the same as a BP-5 (for the EOS 5/A2/A2e) but adds a top plate for the BP-50 that has a hole for the power cord to go through. You can use the slightly cheaper BP-5 and modify the top plate yourself if you want.

7.2 Remotes

The **RC-1 Infra Red Remote** is also available and will trip the shutter from up to 15 feet in front of the camera. You can also use it to trip a tripod mounted camera from directly overhead if you are close enough, so it can be used for macro and long lens use as well. With custom function #5 set to "1" and the shutter set to bulb, a quick press of the RC-1 will raise the mirror, wait two seconds, then open the shutter and hold it open until you press the RC-1's button again.

The **RS-60E3 Cord Remote** is short, but convenient for tripod use. It plugs into the small connector at the lower right side of the camera. It uses a small mini-plug and some stereo audio extension cords can be used with it to extend its range. It has a two position switch just like the camera shutter button. Half a press to activate AF and a

full press to fire the shutter. It also has a switch lock to keep the lens open in bulb mode without having to hold the button.

7.3 Viewfinder Options

Dioptric Corrective Lenses ED are available to correct vision problems. The Elan II/Iie has 19.5mm of eye relief. Normally people with glasses or contacts have no problem with the viewfinder of the Elan II/Iie but glasses wearers may have to move their eye around some to see all of the image or the data display at the bottom of the screen. For this and other reasons some people prefer to take their glasses off while shooting. For these people and others that have a hard time seeing the viewfinder image sharply Canon makes Dioptric Corrective Lenses (DC lenses) for the Elan II/Iie. The viewfinder has a -1 built in making the image appear about 1 meter away. The DC lenses are marked to take this into account so a 0 DC lens is actually a +1 to compensate for the built in -1. If your normal distance prescription is -4, buy the Canon -4 DC lens. But you may want to try them out before you buy.

The **Eyecup Ec II** is standard but the optional larger Eyecup Ed-E can also be used. The viewfinder attachments, **Angle Finder B and Magnifier S** can be used but you have to use the **Adapter Ed** to mount them to the larger than normal viewfinder of the Elan II/Iie.

7.4 Off Camera Shoe Cord 2

The **Off Camera Shoe Cord 2** (OCSC2) is used to get an external Speedlite flash mounted off the camera's hot shoe. It provides about 2 feet of easy extension and if you pull on the coiled wire you can stretch it to about 3 feet. Canon recommends against it, but you can extend this by adding two OCSC2's together, end-to-end. Check this out thoroughly before you need to make sure you don't have any impedance induced exposure errors.

8 Known Problems

8.1 Battery Compartment

Not all 2CR-5's are exactly the same dimensions. Some are just a wee bit short and this can cause problems with the Elan II/Iie. The usual problem is the camera will lock up when you take a picture and the battery indicator in the LCD will blink. (There are other problems that can also cause this same symptom however.) This can be easily remedied by putting a small piece of cardboard between the bottom of the battery and the battery door. This will press the battery farther into its compartment, insuring better contact. You can also reach into the battery compartment with a small hook and raise the battery contacts as they seem to bend down too far with use. For what it's worth, Sanyo 2CR-5 are reported to work best with the Elan II/Iie.

The **battery door hinge** is just a thin piece of plastic that bends when you open it. With a lot of use or abuse this can fail. Canon USA sold me one for cheap although

the repair process was a bit tricky. Fortunately this hasn't proven to be as frequent a problem as many people expected that it would be.

8.2 Lens Incompatibility

Other than problems with the battery compartment, the most frequently reported trouble seems to be an incompatibility with some third party lenses. They sometimes cause the camera to lock up with the battery indicator flashing in the LCD. Some lenses will simply not work at all with the Elan II/IIe and others will lock up only if you use it with the motor drive set on continuous. Some third party lenses will not cause this symptom but the aperture will not work or it will display some other malady.

9 Specifications

The EOS Elan II/IIe is a great camera with plenty of features for the enthusiast. It has proven to be reliable and easy to use. It has been upgraded to the EOS 30/Elan 7/7e which has a few more AF point, a bit faster operation and a few other improvements, but the Elan II/IIe isn't far behind.

Viewfinder coverage: 90% vertical and 92% horizontal with 19.5mm of eye relief

Metering system: 6 zone evaluative, 9.5% partial and center weighted

Metering range: EV1 to EV 20 with 50mm f/1.4 lens and 100ISO film

Film Speed range: ISO 6 to ISO 6400, or ISO 25 to ISO 5000 with DX coding

AF working range: EV 0 to EV18 with ISO 100 film

AF assist beam: Near infrared, up to 21 feet for center AF point and 13 feet for side AF points

Shutter: Electronically timed, 30 seconds to 1/4000 second, top flash sync at 1/125 sec.

Film advance: 2.5 frames per second max.

Built in flash: GN of 42 feet with ISO 100 film, coverage for 28mm lens

Dimensions & weight: 152.5mm (W) x 104.4mm (H) x 71mm (D), 590 grams