



emf Smart Adapter User's Manual

Main Features

1. Lens maximum aperture can be set on camera, ranging from F/1.1 to F/45
2. Lens focal length can be set on camera, ranging from 1mm to 65535mm
3. Focus micro-adjustment of the lens can be set on camera.
4. Setting data is stored in the chip on the ring when powered off.
5. The ring enables camera viewfinder focus confirmation light and confirmation sound.
6. Supports AV (Aperture Priority) and Manual Mode.
7. Exposure aperture data can be recorded in EXIF*.

Notes:

EXIF data will contain the following information as a result of properly setting this chip

- Lens focal length in mm
- Lens maximum aperture
- (Lens name will be shown as "1-65535mm")

Installation of Chip onto Lens Adapter

These instructions are for installing a chip onto a Pentax/M42 to Canon EOS lens adapter. These instructions would work for any lens adapter that fits a Canon EOS camera.

Installation instructions for this chip were not provided by the seller. After looking at three pre-assembled lens adapter/chip combinations, it appears that the chip may be attached to the lens adapter using “gel” type super-glue, such as this:



1. Test fit the installation guide so that the pin fits into the lens adapter locking hole as shown below.



2. Test fit the chip and become familiar with the location it will occupy. Note that the installation guide may not be perfectly sized to allow the chip to fit perfectly. With my chip, I treated the edge of the guide

closest to the lens lock slot as the indexing point and trimmed the other edge of the installation guide to allow the chip to fit perfectly between the gap of the guide.

3. Using some blue painters tape, mark the position that the chip will occupy leaving the actual surface exposed.
4. Remove the installation guide temporarily. With some 1000-grit sandpaper, gently rough up just the portion of the ring to be covered by the chip. A light scuffing is sufficient.
5. Rough up the back side of the chip (the side without the metal contacts).
6. Clean both the lens adapter ring and the backside of the chip with a paper towel dampened in alcohol. Make sure the towel is almost dry to the touch so that no fluid seeps into the chip.
7. Place the installation guide onto the lens adapter as before and use some tape to mask off the area that is NOT occupied by the chip. This will prevent the glue from making contact with the portion of the ring that will not be covered by the chip.
8. Tape the installation guide to the lens adapter ring in the proper position to align the chip in the correct position. Test fit the chip again to make sure that it fits in the gap of the installation guide and lies flat on the lens adapter. Remove the chip being careful not to get anything on it, and set it aside for a moment.
9. Place a small bead of glue on the lens adapter where the chip will be located. Be careful not to use too much glue. A small line roughly one quarter the width of the surface, drawn down the middle of the location, and starting and ending a little ways in from the end points, will be enough glue to hold the chip in place, preventing excess glue escaping from beneath the chip when put into place.
10. Carefully place the chip in place and align with the installation guide. Hold the chip firmly in place for a minute, being careful not to get any glue on the metal contacts.
11. Set the assembly aside to dry for 10 minutes.
12. Carefully untape and remove the installation guide. Some glue may seep beneath the installation guide so take your time and slowly coax it loose.
13. Inspect the assembly to be sure no excess glue has contaminated the contacts, or fouled the lens adapter threads or bayonet fittings. If any glue has made it onto the contacts, carefully clean it off with a knife being careful not to scratch or dent the contacts. Better not to get glue on the contacts...

Shooting with Smart Adapter

(This portion of the guide was provided by the seller. It has been edited to improve the translation to English.)

***Shooting and Recording exposure aperture data**

Notice: Please set up the adapter before use.

[See the [How to Setup the Adapter](#) section]

You can:

1. Set the maximum aperture on lens
2. Set the desired aperture on camera
3. Focus and meter the object, when focus is achieved.
4. Set the lens maximum aperture to the same aperture as the camera setting
5. Press shutter button and take the picture.

And you can also:

1. Set the maximum aperture on lens
2. Set the aperture value on camera to maximum lens aperture
3. Focus and meter the object, when focus is achieved.
4. Set the lens aperture AND the camera aperture setting to the desired aperture.
5. Press shutter button and take the picture

Shooting and not recording exposure aperture setting

1. Set the aperture value on camera to the lens maximum aperture
2. Set the camera to AV mode
3. Set the desired aperture on lens
4. Focus and meter the object and take the picture.

Exposure aperture data recorded in EXIF is the lens maximum aperture.

How to Set Up the emf chip Smart Adapter

1. Attach the adapter to the lens. (Note: emf chip has already been attached to the lens adapter)

Attach the lens to the camera when camera is powered off.

Power on the camera and set the camera to Manual mode.

Set the camera in single shot drive mode. Set the shutter speed to 1/60 second and aperture increment step to 1/3 EV.

Notice: Do not set the camera in continuous shooting mode to avoid incorrect operation.

2. Turn the aperture setting dial and set the aperture value to F/64 and press shutter button once.
3. Turn the aperture dial and set the aperture value to F/57 and press shutter button once.
4. Turn the aperture dial and set the aperture value to F/64 and press shutter button once.

The operation combination of F/64-shutter button+F57-shutter button +F/64-shutter button will activate the setting mode of the ring.

5. Turn the aperture dial. If the maximum aperture value can be set to F/1.0, your ring is now in set-up mode. You can begin to set the focal length, maximum aperture value and focus micro adjustment of your lens.

How to enter values in setting mode

When setting up the ring, you will need to enter some values. In setting mode, the ring interprets specified aperture values to numbers. The conversion rule is stated in the chart below:

F/2.0	F/2.2	F/2.5	F/2.8	F/3.2	F/3.5	F/4.0	F/4.5	F/5.0	F/5.6
0	1	2	3	4	5	6	7	8	9

The ring has THREE setting modes:

Mode 0- Enter lens Maximum Aperture.

Mode 1- Enter lens Focal Length.

Mode 2- Enter lens Focus Micro Adjustment.

Turn the aperture dial to a specific aperture value and press shutter button to enter a desired setting mode. For example, if you want to enter the lens maximum aperture, turn the aperture dial to F/2.0 (which means Mode 0 to the ring) and press shutter button. You are setting the ring in Maximum Aperture enter mode.

Enter the Maximum Aperture

1. Turn the dial and set the aperture to F/2.0 and press shutter button to enter this mode.
2. Turn the dial and set the aperture to the actual maximum aperture of your lens and press shutter button. The maximum aperture will be registered in the ring. The ring accepts aperture value ranging from F/1.1 to F/45.

Notice:

Do not set the maximum to F/1.0. This value is reserved for engineering purposes and will not be accepted by the ring.

Do not set the maximum aperture smaller than F/5.6. The focus detecting system of your digital camera might fail to function properly when a lens slower than F/5.6 is attached.

Follow instructions in the “Store the Parameters to emf Chip” section to save the setting.

Enter the Focal Length

1. Turn the dial and set the aperture to F/2.2 and press shutter button to enter this mode.
2. Focal length can be set from 1mm to 65535mm. The ring needs five digits to store the focal length data. If the focal length of your lens is smaller than five digits, you need to insert zeros in front of actual numbers. Each time you choose a number, press shutter button to enter.

Follow instructions in the “Store the Parameters to emf Chip” section to save the setting.

For example, if the focal length of your lens is 50mm, you shall enter 00050, that will be a combination of operations: F/2.0-shutter + F/2.0-shutter + F/2.0-shutter + F/3.5-shutter + F/2.0-shutter.

Enter Focus Micro Adjustment

1. Turn the dial and set the aperture to F/2.5 and press shutter button to enter this mode.
emf chip accepts focus micro adjustment value, ranging from 0 to 31. The value is defined by two numbers. If the micro adjustment value of your lens is smaller than two numbers, you shall insert a zero in front of the actual number. Choose the desired number and press shutter button to enter the value one by one.

Follow instructions in the “Store the Parameters to emf Chip” section to save the setting.

For example, if the micro adjustment value is 25, you shall enter F/2.5 - shutter button + F/3.5 – shutter button

Note: Please enter the micro adjustment value according to your own tests. The value shall not be entered based on calculation alone.

Store the Parameters to emf Chip

When you finish entering all the parameters of your lens, store them in the chip for normal shooting.

Here is how:

Change the aperture value to F/57, press shutter button once.

Change the aperture value to F/64, press shutter button once.

Change the aperture value to F/57 again, press shutter once.

If all the values you've entered are correct, the above three steps will store all the parameters you've just entered to the chip on emf chip.

If you missed a step in the entering process or the value you've entered does not fit the value range requirement stated above, the ring will automatically exit set-up mode and no parameters will be stored in the ring.

All the data stored in emf chip will not be lost when camera is powered off.

The default parameter setting of the emf chip is 50mm F/1.4. Please change the parameters according to your lens' specifications.

Caution:

1. Do not touch the golden contact points of the circuit board of emf chip when attaching and detaching the ring to your lens and camera.
2. Do not use F/64-shutter + F/57- shutter + F/64 – shutter combination in normal shootings. This combination will set emf chip to setting up mode. If you unintentionally enter this mode, choose an aperture value between F/6.3 and F/51 and press shutter button once to exit.

Notes:

If the chip does not operate check to make sure the contacts are clean. If glue gets on one of the metal contacts during installation, carefully remove it without damaging the metal contact.

Each parameter (lens maximum aperture, lens focal length) may be set and stored separately.

Purchase multiple chips and label the lens adapter ring with the current setting using a Sharpie or other permanent marker.