Nikon AstroIR remote

The AstroIR remote allows you to take automated long exposure pictures with your Nikon DSLR camera.

Exposure time can be set from 10 seconds to 15 minutes in increments of 10 seconds in normal mode.
Or
From 1 minute to 15 minutes in 1 minute increments in quick mode.

The gap between pictures can be set from 1 to 6 seconds.

All settings are stored in memory.
When switched back on or after changing the battery the last used setting are restored.

Buttons info

The **Left hand button** is used to switch the remote on and off.
The **Centre button** is used for quick setup, picture gap setting and to switch the remote off.
The **Right hand button** is used for normal setup and picture gap setting.

Switching on

Press and release the **left hand button**.

The remote will now indicate the last stored exposure time and picture gap by flashing the led on the remote.

Each green flash equals an exposure duration of 1 minute.
Each red flash equals an exposure duration of 10 seconds.

After indicating the exposure time the remote will indicate the picture gap time by flashing yellow.

Each yellow flash equals a picture gap duration of 1 second.

10 seconds after this the first camera trigger will be sent starting the exposure with the remote flashing green two times fast.
After the stored time has elapsed the remote will send the second camera trigger to end the exposure and the remote will flash red two times fast.

After the picture gap time the next exposure will start.

The remote will repeat this until switched off.

Switching off

Press and release the **left hand button** then press and release the **centre button**.
The led on the remote will flash three times the last flash will fade away.
The remote is now switched off.

Normal exposure setup

The exposure can be set between 10 seconds and 15 minutes in increments of 10 seconds.

Press and hold the **right hand button** then press and release the **left hand button** the remote will start to flash red and yellow (red + green on at the same time) this indicates that the remote is ready to store the exposure time. When you release the **right hand button** the remote will start to flash red. Each red flash equals a duration time of 10 seconds with a green flash on whole minutes.

eg. R = red flash
G = green flash

Led flash number	1	2	3	4	5	6	7	8	9	10	11	12	13	~	88	89	90
Colour of flash	R	R	R	R	R	G	R	R	R	R	R	G	R	~	R	R	G
Exposure seconds	10	20	30	40	50	60	70	80	90	100	110	120	130	~	880	890	900

After counting off the required time press and hold the **right hand button** until the remote turns yellow to store the accumulated exposure time.

After releasing the **right hand button** the remote will indicated the stored time by flashing green for each minute and red for each 10 second period.

eg.

If 30 seconds was stored the remote will flash red three times.
If 1 minute 20 seconds was stored the remote will flash green once and red twice.
If 5 minutes 30 seconds was stored the remote will flash green five times then red three times.

After displaying the exposure time the remote will indicate the picture gap time by flashing yellow, each flash equals 1 second.

One yellow flash = one second
Two = two seconds
Three = three seconds

Up to a maximum gap time of 6 seconds.

10 seconds after this the first camera trigger will be sent starting the exposure with the remote flashing green two times fast.
After the stored time has elapsed the remote will send the second camera trigger to end the exposure and the remote will flash red two times fast.

After the picture gap time the next exposure will start.
The remote will repeat this until switched off.

Quick setup

The exposure can be set between 1 minute and 15 minutes in increments of 1 minute.
Press and hold the **centre button** then press and release the **left hand button** the remote will start to flash green and yellow (red + green on at the same time) this indicates that the remote is ready to store the exposure time. When you release the **centre button** the remote will start to flash green. Each green flash equals an exposure duration time of 1 minute.

eg. G = green flash

Led flash number	1	2	3	4	5	~	13	14	15
Colour of flash	G	G	G	G	G	~	G	G	G
Exposure minutes	1	2	3	4	5	~	13	14	15

After counting off the required time press and hold the **centre button** until the remote turns yellow to store the accumulated exposure time.

After releasing the **centre button** the remote will indicate the exposure and gap time by flashing green for each exposure minute and yellow for each gap second currently stored.

10 seconds after this the first camera trigger will be sent starting the exposure with the remote flashing green two times fast.
After the stored time has elapsed the remote will send the second camera trigger to end the exposure and the remote will flash red two times fast.

After the picture gap time the next exposure will start.

The remote will repeat this until switched off.

Picture gap setup

Press and hold the **centre and right hand buttons**.

Then press and release the **left hand button**
the remote will turn yellow.

Release both **centre and right hand buttons**.
The remote will now flash yellow up to 6 times.

Each flash equals a 1 second gap duration.

Press and hold the **right hand button** after the required duration flash until the remote displays solid yellow you can now release the **right hand button**.

eg.

Pressing the **right hand button** after 1 yellow flash will set a gap duration of 1 second.
Pressing the **right hand button** after 2 yellow flashes will set a gap duration of 2 seconds.
The maximum picture gap duration that can be set is 6 seconds.

Led Indicator status

The bi coloured red / green LED can also show yellow, red and green on at the same time.

Steady yellow = ready to store picture gap / time duration stored

Two red flashes and a third flash that fades away = Remote switching off

Red / yellow alternating = Normal setup mode ready

Green / yellow alternating = Quick setup mode ready

Red flash = 10 second exposure duration

Green flash = 1 minute exposure duration

Yellow flash = 1 second picture gap duration

2 green fast flashes = Start exposure trigger

2 red fast flashes = End exposure trigger

Camera setup

You will need to set the remote control time to 15 minutes in the cameras setup menu and also turn off the cameras long exposure noise reduction system in the cameras setup menu.

Then set the lens and camera to Manual control so you can set the focus, f/stop and the shutter to bulb mode. Then set the camera to trigger from an infrared remote control.

Your camera is now ready to take long exposure pictures using the AstroIR remote.

Helpful info

The remote needs to be placed in a location pointing at the infrared sensor on the camera or alternatively fixed to the camera pointing at the infrared sensor.
eg. Fixed to the body of the lens with a rubber band.

When using the remote make sure that the start of the exposure is triggered with the green double flash and not the red double flash.

To end the last exposure turn the camera off this will close the shutter on the camera.

The remote will operate at a distance of over 3 metres.
Battery type is a CR2032 and will operate for over 300 hours.

The remote weighs 29 grams.
Size of the remote 60mm*35mm*20mm

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