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LENCARTA

Atom 180 portable flashgun

The Atom 180 forms part of the Atom portable flash system and is used in conjunction with the AtomPower portable battery pack & range of dedicated light shapers

LENCARTA

ATOM 180

Powerful & Portable Flash

Thank you for purchasing the Atom 180 portable flash.

These instructions relate ONLY to the Atom180, please refer to the separate instructions for other products in the Atom range



Instruction Manual

FOREWARD

Before using this product

Please read this user manual carefully in order to ensure your safety and the proper operation of this product. Keep for future reference.


The ATOM 180 is a powerful and portable lighting system designed for professional photographers and photography enthusiasts. It is compatible with cameras from Canon, Nikon, Pentax, Olympus etc. The ATOM 180 offers:

- **High Power:** up to 180W/S, GN 60 (m ISO 100, with standard reflector).
Approx. 28 mm flash coverage when operating with the standard reflector.
- **Bare bulb:** providing even illumination, essential when using a softbox
- **Precise Output:** adjustment from full power to 1/128th in 1/3 stop increments
- **Portability:** compact size and lightweight body & accessories
- **Stable Colour Temp:** 5600±200k over the entire power range
- **Advanced Functions.:** incl. Multi flash, Focus-assist beam on/off & Hi-Speed sync triggering
- **Wireless Commander:** controlling flash functions and triggering
- **High power capacity:** drawing from external power pack (AtomPower: 11.1V/4500mAh)
- **Wide-Range of dedicated Accessories:** incl. softbox, reflector, fold-up umbrella, and beauty dish, etc

FOR YOUR SAFETY

- ▲ Always keep this product away from rain or dampness to avoid fire or electric shock.
- ▲ This product contains high-voltage electronic parts. Touching the high-voltage circuit inside it may result in electric shock. Do not disassemble. Should repairs become necessary, this product must be sent to the Lencarta repair centre
- ▲ Stop using this product if beomes damaged.
- ▲ Do not fire the flash directly into the eyes (especially those of babies) within short distances. When taking pictures of babies, keep the flash unit at least 1 metre (3.3 feet) away from them. Using bounce flash to reduce light intensity is also recommended.
- ▲ Do not use the flash unit in the presence of flammable gases, chemicals and other similar materials. In certain circumstances, these materials may be sensitive to the strong light emitting from this flash unit and fire or electromagnetic interference may result.
- ▲ Do not leave or store the flash unit if the ambient temperature reads over 50°C (e.g. in a vehicle). Otherwise the electronic parts may be damaged.

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Name of Parts

• Body




- 01. Reflector/Accessory Mount
- 02. Accessory Locking Ring
- 03. Flash Tube
- 04. Tube Socket
- 05. Release Button
- 06. Power Socket
- 07. Wireless Control Port

- 08. Sync Cord Jack
- 09. PC Sync Socket
- 10. MF-Assist Beam
- 11. Slave Sensor
- 12. Control Panel
- 13. Hotshoe Stand

• Control Panel



- 14. LCD display
- 15. MF-Assist Beam Button
- 16. Beep Button
- 17. MODE Selection Button
- 18. SET Button
- 19. ON/OFF Power Switch
- 20. Test Button/ Flash Ready Indicator
- 21. Select Dial

 The flash unit t draws its power from Lencarta AtomPower portable battery pack (sold separately).

• Included Accessories

- 1. Flash tube*1
- 2. Protecting bag*1
- 3. Mini stand*1
- 4. Reflector*1
- 5. Power cable*1
- 6. Reflector diffuser*1



• Accessories available separately

The product can be used in combination with the following accessories:

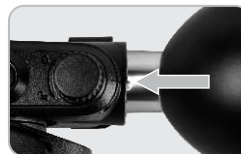
Remote Control/radio trigger, dedicated Umbrella, Light Stand, Beauty Dish, Snoot, Softbox, etc.



Fitting the Reflector



- 1. Rotate Accessory Locking Ring (2) counter-clockwise until it is loose.



- 2. Insert the reflector into the Accessory Mount (1).



3. Rotate Accessory Locking Ring (2) clockwise to lock it up. Do not over-tighten.

Attaching Flash Tube



1. Remove the reflector or other accessories from the flash head.



2. Match the red dot on the base of the flash tube with the red dot in the Tube Socket (4). Push the flash tube in until it is securely seated into the socket.

Connecting to an AtomPower Power Pack



1. Before connecting, make sure that the power pack is turned off.

2. Plug one end of Power Cable into Power Socket (6) of the flash unit, and insert the other end into the output socket of the power pack.



3. Turn on the power pack. The flash unit will normally be fully charged and ready for use.

! The flash unit is not powered by itself, but draws power from the Lencarta Atom PowerPack (sold separately).

Connecting the Flash to a Camera



1. Loosen the screw on the mounting foot.



2. Slip the mounting foot of the flash unit into the camera hotshoe.



3. Secure the flash unit by locking up the screw, do not overtighten it.

Using the Flash

1. Power Management

ON/OFF Power Switch (19) controls the on-and-off of the flash unit. Turn off the power pack if the flash unit will not be used for an extended period.

2. Flash Output

Flash output can be varied from 1/128th power to 1/1 full power in 1/3 stop increments. To obtain a correct flash exposure, use a hand-held flash meter to determine the required flash output, or refer to your camera histogram.

Adjust the power output by rotating Select Dial (21). The following table makes it easier to see how the output changes in terms of f/stop when you increase or decrease the flash output:

Figures displayed when reducing flash output level→

1/1	1/1-0.3	1/1-0.7	1/2	1/2-0.3	1/2-0.7	1/4	...	OF
	1/2+0.7	1/2+0.3		1/4+0.7	1/4+0.3		...	

←Figures displayed when increasing flash output level



"OF" denotes OFF. When "OF" is shown on the LCD display, it means that there is no flash output and flash firing is turned off.

3. M Mode: Manual Mode

Press MODE Selection Button (17) to enter M mode. In this mode, you can set the flash unit onto either your camera hot shoe or your trigger hot shoe for firing. Before shooting, adjust the power output of the ATOM 180. When the camera's shutter is pressed, the flash will fire. Slave triggering mode is not available in M mode.

4. S1 Mode: S1 Slave Triggering Mode

Press Mode Selection Button (17) to enter S1 mode. In this mode, the flash unit can function as a slave flash for creating multiple lighting effects.

In S1 mode, the flash unit will fire synchronously when the master flash fires, the same effect as when fitted with a radio receiver.

5. S2 Mode: S2 Slave Triggering Mode

Press Mode Selection Button (17) to enter S2 mode. In this mode, the flash unit can function as a slave flash for creating multiple lighting effects.

In S2 mode, the flash unit will ignore a single "preflash" from the master flash and will only fire in response to the second, actual flash from the master.

6. RPT Mode: Stroboscopic Flash

Press Mode Selection Button (17) to enter RPT mode (Multi/Stroboscopic flash). With stroboscopic flash, a rapid series of flashes is fired. It can be used to capture multiple images of a moving subject in a single photograph.

You can set the firing frequency (number of flashes per sec. expressed as Hz), the number of flashes, and the flash output.

This is how it's done:

- Press the Mode Selection Button (17) so that "RPT" is displayed.
- Press Set Button (18) to select the item to be set. The item blinks when selected.
- Rotate Select Dial (21) to set a desired number.

Calculating the Shutter Speed

During stroboscopic flash, the shutter remains open until the firing stops. Use the following formula to calculate the shutter speed required to capture the full sequence of flashes:

$$\text{Number of flashes / Firing frequency} = \text{Shutter speed}$$

For example, if the number of flashes is 10 and the firing frequency is 5 Hz, the shutter speed should be at least 2 sec.

Note:

- Stroboscopic flash is most effective with a light subject against a dark background.
- Using a tripod, a remote switch, and an external power source is recommended.
- A flash output of 1/1 or 1/2 cannot be set for stroboscopic flash.

- Stroboscopic flash can be used with "bulb".



To avoid overheating and deteriorating the flash head, do not use stroboscopic flash more than 10 times in succession.

Maximum Stroboscopic Flashes:

Flash Output \ Hz	1	2	3	4	5	6	7
1/1	1	1	1	1	1	1	1
1/2	1	1	1	1	1	1	1
1/4	30	2	2	2	2	2	1
1/8	50	4	2	2	2	2	2
1/16	70	70	7	4	3	3	3
1/32	80	80	80	16	8	6	5
1/64	99	99	99	99	99	99	25
1/128	99	99	99	99	99	99	99

Flash Output \ Hz	8	9	10-11	12-13	13-15	15-19	20-99
1/1	1	1	1	1	1	1	1
1/2	1	1	1	1	1	1	1
1/4	1	1	1	1	1	1	1
1/8	2	2	2	2	2	2	2
1/16	2	2	2	2	2	2	2
1/32	5	4	4	3	3	3	3
1/64	15	10	6	6	5	5	5
1/128	99	99	99	99	99	36	20

7. Hi-Speed Sync Triggering

To enter Hi-Speed Sync mode, press both Mode Selection Button (19) and Set Button (20). Press Mode Selection Button (17) again to exit Hi-Speed Sync mode.

In Hi-Speed Sync mode, you can use a suitable hi-speed sync trigger to have your flash unit synchronize with all shutter speeds available on your camera.


This is convenient when you want to use aperture-priority for full-flash portraits.

Note:

- Hi-speed sync triggering mode is effective only when the flash unit is used together with a hi-speed sync trigger
- Hi-speed sync triggering mode is not available when the flash unit is mounted





onto the camera hotshoe.

 To avoid overheating or damaging the flash head, the over-temperature protection function will be activated automatically after 10 continuous high-speed flashes in HSS mode and the recycle time becomes 10s longer.

Number of flashes that will activate over-temperature protection in high-speed sync triggering mode:


Power Output Level	Number of Flashes (Approx.)
1/1	10
1/2	15
1/4	20
1/8	30

8. MF-Assist Beam

Under poorly-lit or low-contrast conditions, you can turn on the MF-assist beam (15) in order to make it easier to autofocus. When the MF-assist beam is lit,  is shown on the LCD display. 

9. Buzz Function

The beep function can be controlled by pressing BUZZ Button (16).


When the beep is turned on,  is shown on the LCD display. The buzzer provides an indication that the AD180 flash unit has fully recycled.

10. Wireless Control Function

- The flash unit is built in with a Wireless Control Port (7) so that you can wirelessly control the on-and-off of your flash, modelling lamp and beep, as well as adjust the flash output level, etc.

- To control the flash wirelessly, you need a you need a LENCARTA remote control remote control set (on-camera and on-flash). Insert its receiver into the Wireless Control Port (7) on the flash and insert the transmitter into the camera hot shoe. Settings made on the hotshoe-mounted transceiver will be wirelessly communicated to the flash. Then you can press the camera shutter-release button to trigger the flash.

- For full instructions on the use of LENCARTA remote control and flash trigger, see its user manual.

- When the flash unit receives wireless signals,  is shown on the LCD display.

11. Non-dedicated radio triggers

The Sync Cord Jack (8) is a standard $\Phi 3.5$ mm plug. If required, a third party radio receiver can be plugged into it to trigger the flash only.

12. PC Sync cord Triggering

Insert one end of a PC sync cable into the PC Sync Socket (9) of the flash unit.

Overheat Protection Function

Over-Temperature Protection

- To avoid overheating and damaging the flash head, do not fire more than 75 continuous flashes in fast succession at full power. After 75 continuous flashes, allow a rest time of at least 10 minutes.

- After firing 75 continuous flashes at full power, the internal over-temperature protection function may be activated and increase the recycling time to about 10 to 15 seconds. If this occurs, allow a rest time of about 10 minutes, and the flash unit will then return to normal.

When the over-temperature protection is activated,  is shown on the LCD display.

Number of flashes that will activate over-temperature protection:

Power Output Level	Number of Flashes (Approx.)
1/1	75
1/2	100
1/4	200
1/8	300
1/16, 1/32	400
1/64, 1/128	500

Technical Data

Model	ATOM 180
Max. Power	180W/S
Guide No. (m ISO 100)	60 (m ISO 100, with standard reflector) Approx. 28mm flash coverage when operating on a camera with the standard reflector
Vertical Rotation Angle	-15° - 90°
Horizontal Rotation Angle	0-270°
Power Supply	Power pack (ATOM POWER)
Number of Flashes	900 (With ATOM POWER power pack, at full power)
Recycle Time	Approx. 0.05-2.6s (With ATOM POWER power pack)
Colour Temperature	5600±200K
Flash Duration	1/800s - 1/10000s
Dimensions	205*90*70 mm (flash tube & reflector not included)
Net Weight	550g (flash tube & reflector not included)



Maintenance

- Shut down the device immediately should abnormal operation be detected.
- Avoid sudden impacts.
- It is normal for the flash tube to be warm when in use. Avoid continuous flashes if possible.
- Maintenance of the flash must be performed by our authorised maintenance department which can provide original accessories. The flash-tube is user-replaceable. Replacement tubes can be obtained from the manufacturer.
- This product, except consumables e.g. flash tube, is supported with a 3 year warranty.
- Unauthorised service will void the warranty.
- If the product has failed or become wet, do not use it until it has been inspected or repaired by our repair department.
- Disconnect the power when cleaning the unit or when changing the flashtube.

Changes made to the specifications or designs may not be shown in this manual.