Foreword

Thank you for your purchase of a **NEEWER®** product.

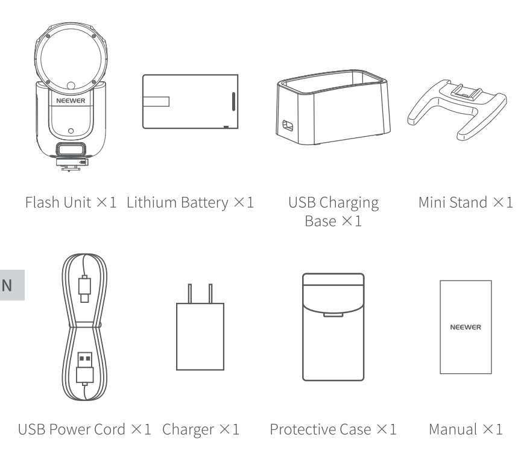
Z1-S is a TTL speedlite flash designed for Sony cameras. With TTL auto flash, you will automatically get the accurate amount of flash exposure for variable lighting conditions, thereby improving your overall shooting experience. The following features set it apart from the competition:

- The round head lamp design makes the light spot soft, even and natural, creating more creative light effects. It has 2W LED modeling lamp to simulate light effect and light source direction, which is convenient for light distribution.
- Maximum flash power of 76Ws, 81 levels of dimming (1/1~1/256)
- Professional lithium battery for an optimal experience.
  2600mAh Li-polymer battery with an autonomy of 480 flashes at full power, 1.5 seconds fast recharge.
- TTL Flash Compatible with Sony
  Supports TTL auto flash, can be used as a master or slave unit for wireless multi-lamp flash systems, making it easier and faster to shoot.
- Dot-matrix LCD panel
  Clear display, easy to operate.
- Built-in 2.4GHz wireless transmission
  Integrated transmitter and receiver with a large radius.
- Comprehensive range of functions for an optimal experience
  Supports manual flash, multi-flash, high speed sync/second curtain shutter sync, exposure compensation, etc.
- Stable output
  High speed continuous flash and color temperature with good even lighting.
- Updatable Firmware for total compatibility
  Firmware will be upgraded as the camera is updated.

Precautions

- Always keep this product dry.
- Keep this product out of reach of children.
- Do not disassemble or modify the product.
- Do not subject to any form of physical shock. The product shouldn't be exposed to fire or an environment where the temperature exceeds 50 degrees.
- Do not fire the flash directly into the eyes which could result in visual impairment.
- Do not use the product near chemicals, flammable gases or other volatile substances which may cause fire or electromagnetic interference.
- Do not use in the rain or in damp conditions.
- Turn off the product immediately, if it appears to be operating abnormally, and try to troubleshoot the likely cause.
- Failure to comply with the recommendations and warnings listed in the manual will invalidate the warranty.

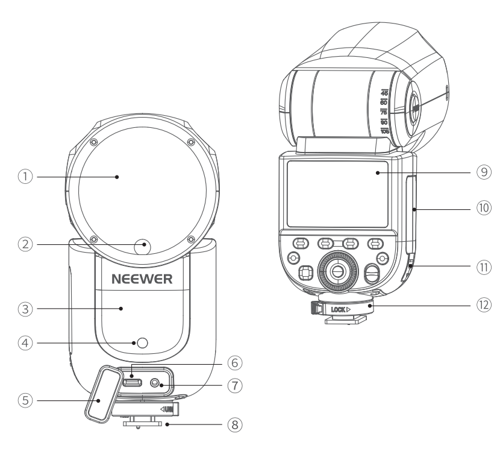
Package Contents



* Note: Please charge the flash battery with the included original 5V 2A charger to prevent any risk of damage to the charging base and battery.

Product Illustration

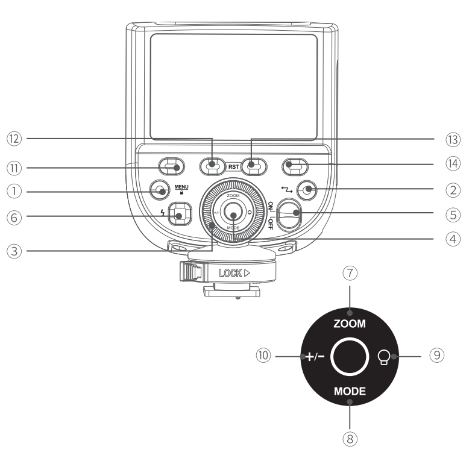
1. Flash Body



① Flash head	⑦ Sync Jack
② LED Modeling Lamp(01-10)	⑧ Hotshoe
③ Wireless Sensor	⑨ LCD Panel
④ Focus Assist Beam	⑩ Lithium Battery
⑤ Rubber port cover	⑪ Battery Eject Button
⑥ USB Type-C Port	⑫ Hotshoe Locking Ring

Product Illustration

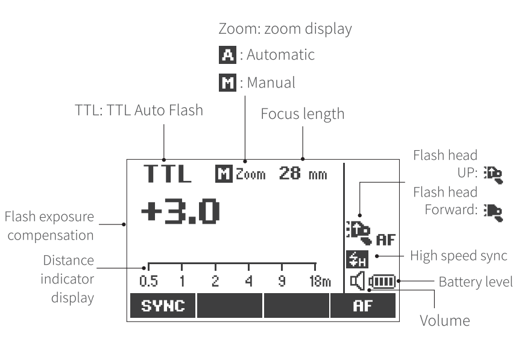
2. Control Panel



① <MENU>Flash Menu Button/Lock Button	⑧ <MODE>Mode Select Button
② < ⇆ >Wireless Selection Button	⑨ < 💡 >Modeling Lamp Setting
③ Select Dial	⑩ < +/- >Power Output
④ Set Button	⑪ Function Button1
⑤ ON/OFF Power Switch	⑫ Function Button2
⑥ < ⚡ >Test Button / Flash Ready Indicator	⑬ Function Button3
⑦ <ZOOM> Focus Length Setting	⑭ Function Button4

3. LCD Panel

(1) TTL Auto Flash



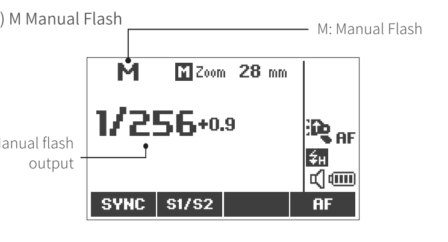
① The display will only show the settings currently applied.

② The functions displayed above (function buttons 1 to 4), such as < SYNC > and <M/A/B/C> will change according to settings' status.

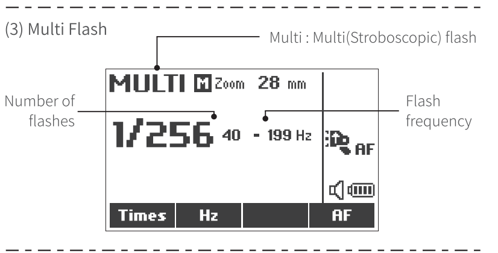
③ Pressing a button or moving the dial will illuminate the LCD panel.

Product Illustration

(2) M Manual Flash

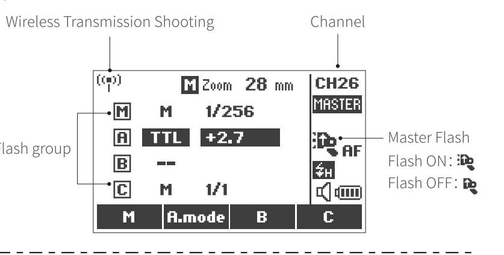


(3) Multi Flash

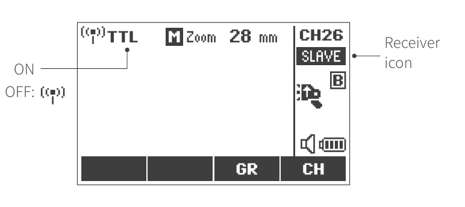


(4) Wireless Transmission Shooting

① Transmitter Unit

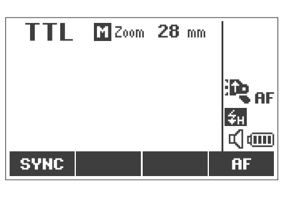


② Slave Units



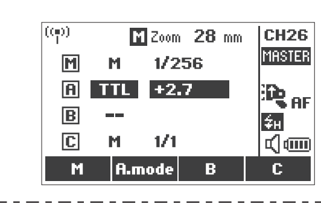
4. Illustrations showing LCD displays (4 modes)

(1) Attached to the Camera

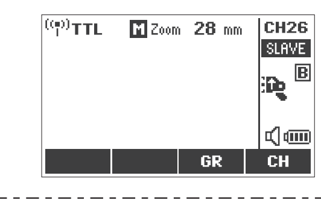


Product Illustration

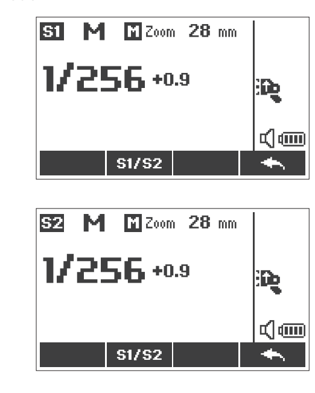
(2) 2.4G Wireless Transmission: As a Transmitter Unit



(3) 2.4G Wireless Transmission: As a Receiver Unit



(4) S1/S2 mode



Battery

1. Features

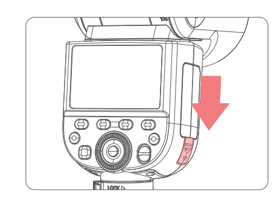
① This flash unit uses Li-ion polymer battery which boasts a long service life and can be charged / discharged up to 500 times.
② Safe and reliable, the built-in circuit protects against overcharge, overdischarge, overcurrent, and short circuit.
③ The standard charge time to fully charge the battery is 3.5 hours using the charger.

2. Caution

① Do not short circuit.
② Do not immerse the battery in water.
③ Keep the battery out of reach of children.
④ Do not exceed 24 hours of continuous charging.
⑤ Store the battery in a dry, cool and ventilated environment.
⑥ Do not place the battery near or in a fire.
⑦ Dead batteries should be disposed according to local regulations.
⑧ If the battery isn't to be used for some time, please ensure it is charged at least every 3 months.

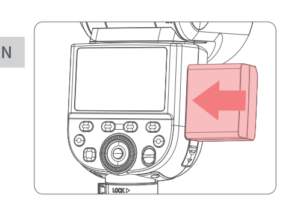
Battery

3. Inserting and Removing the Battery



① Removing the battery

Slide the button in the direction shown to remove the battery.



② Inserting the battery

Insert the lithium battery into the battery compartment in the direction indicated by the battery until the fastener snaps into place.

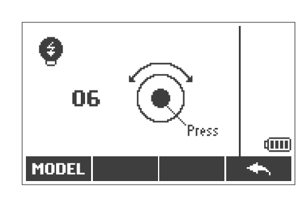
4. Battery Level Indicator

Make sure the battery is securely inserted in the flash. Check the battery level indication on the LCD panel to see the remaining battery level.

Battery Level Indicator	Indicates
4 bars	Full
3 bars	Medium
2 bars	Low
1 bar	Very low
Empty bar	Low battery. Please charge as soon as possible
Flashing	Battery is about to run out. The flash will no longer work. Please recharge the battery as soon as possible (within 10 days). the battery can then be used or stored for a long period.

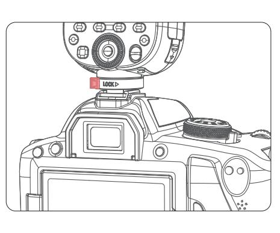
Modeling Lamp

Press the Modeling Lamp set button to activate the modeling lamp mode. Short press the Set Button to turn the modeling lamp on /off. After turning the modeling lamp on, turn the select dial to set the brightness level (10 levels 01~10) .



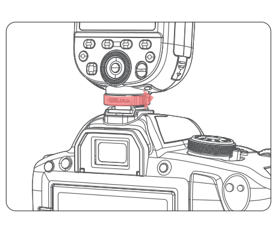
* After setting, press function button 4 to exit.

Mount / Unmount flash



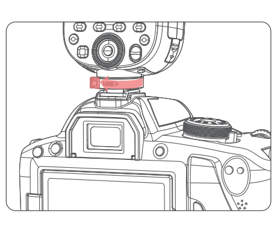
1. Mount the Camera Flash.

Turn the locking ring to the left to fully insert the camera's hot shoe.



2. Secure the Camera Flash.

Rotate the locking ring to the right until secure.



3. Unmount the Camera Flash.

Press the button and rotate the hotshoe locking ring to the left to loosen.

Power Management

* The flash's ON/OFF button powers up and powers off the the device. Please remember to switch it off if left unused for a long period of time. The flash also features an automatic sleep mode. When working as a master unit, the flash will automatically enter sleep mode if no operation is performed after 90 seconds. Simply half press your camera's shutter release or press any flash button for 1s to reactivate. When working as a slave unit, the flash will sleep when there is no operation within 60 minutes (or set to 30 minutes alternatively). Press any flash button for 1s to reactivate.

Note: ① When used off the camera, it is recommended that you customize the function to disable "automatic power off".
② Receiver Auto Power Off Timer is set to 60 minutes by default. A 30 minute timer can also be applied.

Flash Mode: TTL Auto Flash

The flash had three flash modes: auto flash(TTL), manual flash(M), and stroboscopic flash (Multi). When used in TTL mode, the flash will use your camera's metering system to read the light exposure from the subject and automatically adjust flash output to get even exposure of the subject and background. It features flash exposure compensation, high-speed sync, second-curtain shutter sync, etc.

* Press < MODE > Mode Selection Button. The three flash modes will display on the LCD panel in a cycle.

Flash Mode: TTL Auto Flash

1. TTL Mode

Press the <MODE> button to select <TTL> to make the flash enter TTL mode.

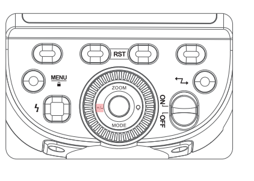
① Press the camera release button halfway to focus. The aperture and effective flash range will be displayed in the viewfinder.

② A pre-flash is fired moments before the shutter is released, and the flash receives camera information for the main flash.

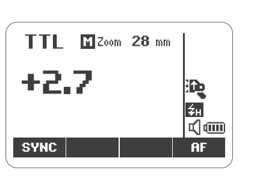
2. FEC(Flash Exposure Compensation)

In FEC mode, the flash can adjust flash exposure compensation in 1/3-stop increments between ±3 stops. This feature is useful when the TTL system needs to be fine-tuned to accommodate the shooting environment.

Setting flash exposure compensation:

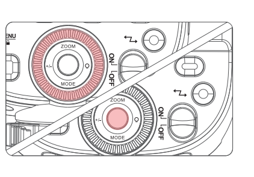


(1) Press <+/-> button.



(2) Set the flash exposure compensation amount.

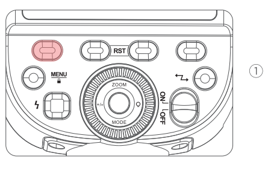
① Turn the Select Dial to set the amount.
② "0.3" indicates 1/3 step, "0.7" indicates 2/3 step.
③ To cancel the flash exposure compensation, set the amount to "+0".



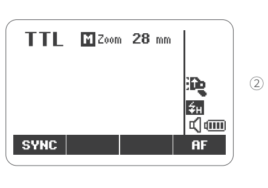
(3) Press the set button to confirm the new settings

3. HSS: High Speed Sync

High Speed Sync (FP flash) enables the flash to synchronize with all camera shutter speeds. This is convenient when you want to use aperture priority for fill-flash portraits.



① Press Function Button 1 < SYNC > so that < ⚡H > displays.



② Check that < ⚡H > is displayed in the viewfinder.

Flash Mode: TTL Auto Flash

* If the shutter speed is set to equal or slower than the camera's maximum flash sync speed, < ⚡H > will not appear in the viewfinder.
* With high-speed sync, the faster the shutter speed, the shorter the effective flash range.
* To return to normal flash, press < SYNC > button again. Then < ⚡H > will disappear.
* Multi flash mode cannot be set in high-speed sync mode.
* Over-temperature protection may be activated after 15 consecutive high-speed sync flashes.

4. Second-Curtain Sync

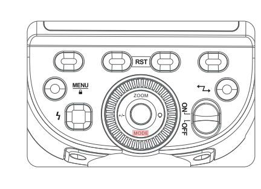
With a slow shutter speed, you can create a trail of light following the subject. The flash fires right before the shutter closes.

Set your Sony camera to REAR flash form within the settings.

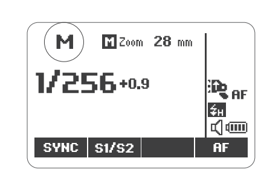
M: Manual Flash

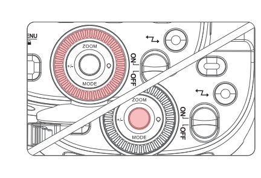
The flash output is adjustable from 1/1 full power to 1/256th power in 1/10th stop increments.

To obtain a correct flash exposure, use a hand-held flash meter to determine the required flash output.



① Press <MODE> button so that <M> is displayed.





② Turn the Select Dial to set the flash output rating.

③ Press Set Button again to confirm the setting.

Press function button 2 to adjust the S1/S2 mode

* S1 Optical control unit setting

In M manual flash mode, the S1 function can be used and the flash unit can function as an optical S2 secondary flash. It will fire synchronously when the main flash fires, the same effect as that obtained by the use of radio triggers. This helps the photographer create multiple lighting effects.

M: Manual Flash

* S2 Optical control unit setting

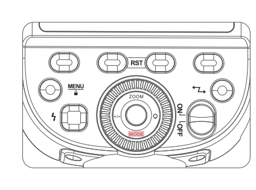
In M manual flash mode, the S2 function can be used and the flash unit can function as an optical S2 secondary flash. In this mode, it will ignore the pre-flash emitted by the TTL flash and will only fire in response to the second flash from the main unit.

Note: S1 and S2 optical triggering is only available in M manual flash mode.

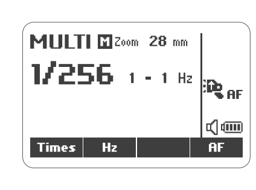
Multi: Stroboscopic Flash

The term stroboscopic flash relates to a rapid series of flashes being 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.

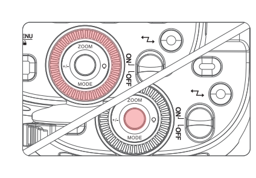


(1) Press the <MODE> button so that <MULTI > displays.



(2) Set the flash frequency and the number of flashes.

① Press the Function Button 1 <Times> to select the number of flashes. Turn the Select Dial to set the value.
② Press the Function Button 2 <Hz> to select the flash frequency. Turn the Select Dial to set the value.



(3) Turn the Select Dial to set the flash output. Press SET Button to confirm and all settings will be displayed.

Calculating the Shutter Speed:

During a stroboscopic flash, the shutter remains open until the firing stops. Use the formula below to calculate the shutter speed and set it with the camera.

Number of Flashes / Flash Frequency = 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 seconds.

Multi: Stroboscopic Flash

* To avoid overheating and deterioration of the flash head, do not use the stroboscopic flash more than 10 times in succession. After 10 times, allow the camera flash to rest for at least 15 minutes. If you try to use the stroboscopic flash more than 10 times in succession, the flash may stop flashing automatically. This is to protect the flash head. Should this happen, please allow the camera to rest for 15 minutes.
* Stroboscopic flash is most effective with a highly reflective subject against a dark background.
* It is recommended to use a tripod and a remote control.
* A flash output of 1/1 and 1/2 cannot be set for stroboscopic flash mode.
* Stroboscopic flashes can be used with the "buLb" function.

Maximum number of strobe flashes

Flash output \ Hz	1	2	3	4	5	6-7	8-9
1/4	8	6	4	3	3	2	2
1/8	14	14	12	10	8	6	5
1/16	30	30	30	20	20	20	10
1/32	60	60	60	50	50	40	30
1/64	90	90	90	80	80	70	60
1/128	100	100	100	100	100	90	80
1/256	100	100	100	100	100	90	80

Flash output \ Hz	10	11	12-14	15-19	20-50	60-199
1/4	2	2	2	2	2	2
1/8	4	4	4	4	4	4
1/16	8	8	8	8	8	8
1/32	20	20	20	18	16	12
1/64	50	40	40	35	30	20
1/128	70	70	60	50	40	40
1/256	70	70	60	50	40	40

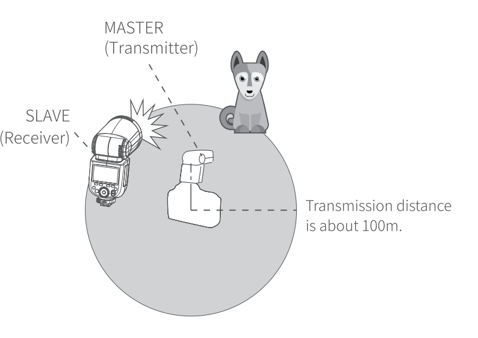
Wireless Flash Shooting: Wireless (2.4G) Transmission

* "Master unit" refers to the Z1-S flash mounted directly on the camera, while the wirelessly triggered Z1-S is called the slave unit.
* A Z1-S flash in slave mode can also be controlled wirelessly using a Q-S/QPro-S TTL transmitter (available separately). Please refer to the manual for the transmitter for more detailed instructions on how to set the master/slave unit.

Speedlite flashes (master/slave) that support wireless radio transmission can also be used to obtain wireless flash group control in the same way that normal TTL auto flash does. Their positions to each other and operation range are as shown in the image. Simply set the master flash unit to TTL to start TTL auto flash photography.

Positioning and Operation Range (Example of wireless flash shooting):

Autoflash Shooting with One Receiver Unit

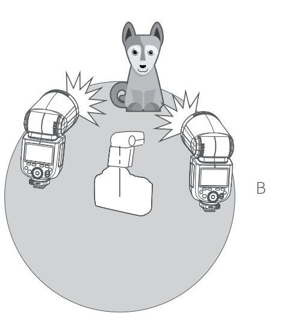

MASTER (Transmitter)
SLAVE (Receiver)
Transmission distance is about 100m.

* Use the supplied mini stand to position the Receiver unit.
* Perform a test flash and test shot before shooting.
* The transmission distance might be shorter depending on the conditions such as the positioning of the Receiver units, the surrounding environment and weather conditions.

Wireless Multiple Flash Shooting

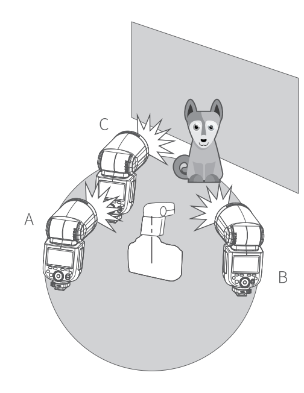
The slave units can be divided into two or three groups to fire TTL auto flash simultaneously while changing flash light ratio. In addition, different flash groups (4 groups maximum) can be set to work in different flash modes.

① Auto flash shooting with two slave groups.



Wireless Flash Shooting: Wireless (2.4G) Transmission

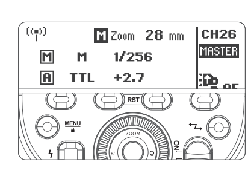
② Auto flash Shooting with three slave groups



1. Wireless Settings

You can switch between normal and wireless flash modes.

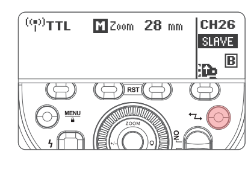
* Use your camera to switch between the flash modes.



① Select the wireless flash mode on your camera. < ((·)) > and < MASTER > will show on the display.

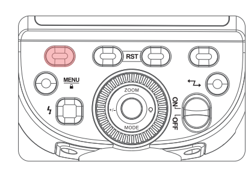
* For further information about how to select a flash mode on your camera, please check the the manual that came with it.

Receiver (Slave) Unit Setting

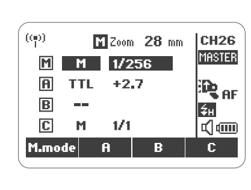


② Press < ⇆ > button so that < ((·)) > and < SLAVE > displays on the LCD panel.

2. Flash Group Mode Selection

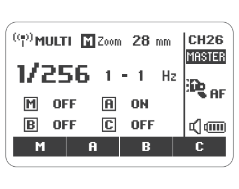


① Press the function buttons 1/2/3/4 to control the M/A/B/C flash groups respectively.



② Taking Function Button 1 as an example. Press it and the <M.mode> will appear on the display. Short press it to switch between TTL/M/--. Select one of these modes as the master unit's flash mode.

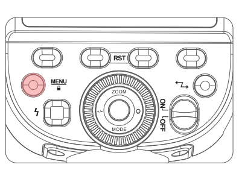
Wireless Flash Shooting: Wireless (2.4G) Transmission



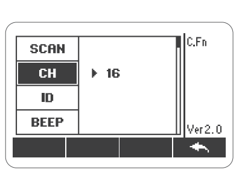
③ Press the MODE button to switch to Multi Flash mode.

3. Setting the communication channel

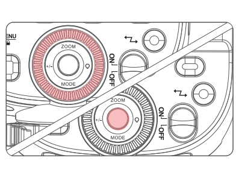
If there is more than one wireless flash system nearby, you can change the communication channel to prevent signal interference. Ensure that the channel of the transmitter and receiver units are matching.



① Press <MENU> Button to enter CH custom settings.



② In Custom CH settings screen, turn the Select Dial to choose a channel from 1 to 32.

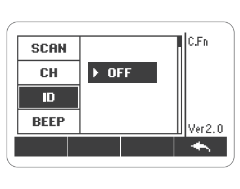


③ Press the SET button to confirm.

* After setting, press function button 4 to exit.

4. Wireless ID Settings

In addition to changing the wireless communication channel to avoid signal interference, you can also change the wireless ID to prevent interference. Set the channel and the wireless ID of the transmitter unit and the receiver unit to the same values. Go to C.Fn ID and choose wireless ID from 01 to 99. Select OFF to disable the wireless ID.

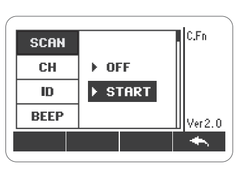


* After setting, press function button 4 to exit.

Wireless Flash Shooting: Wireless (2.4G) Transmission

5. Scan for a free, unused channel

To avoid the issue of interference by using the same channel(s) already in use by others, use this function: enter the C.Fn settings and find the SCAN option. When setting it to START, it will scan from 1% to 100%. The 8 spare channels will be displayed after the scan is completed.

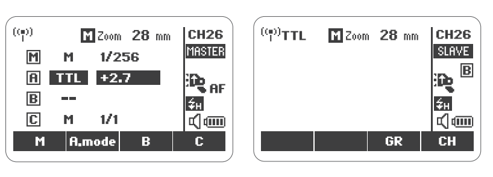


* After setting, press function button 4 to exit.

6. TTL: Fully auto wireless flash

Note: The transmitter (master) unit and the receiver (slave) unit must have the same wireless ID, channel and group before the flashes can be fired wirelessly.

Using Automatic Wireless Flash with a Single Receiver Unit



(Press the function button 1/2/3/4(corresponding M/A/B/C) to independently adjust to TTL mode.)

* Press function button 2(corresponding to A) to select group A, and then press function button 2 again to select TTL/M/-- option (turn the dial to adjust power and set flash output power), as shown in the picture.

(1) Transmitter Unit Setting

Set the Z1-S flash mounted on camera as the master unit. (Page 13)

(2) Receiver Unit Setting

Set the Z1-S to be controlled wirelessly as a slave unit. (page 13)

(3) Receiver Unit Setting

Set the master unit and the slave unit to the same channel. (Page 14)

(4) Position the camera and flashes.

Position the master and the slave unit at close range as shown on Page 12.

(5) Check if the flash is ready.

Check that the Transmitter flash ready indicator is lit.

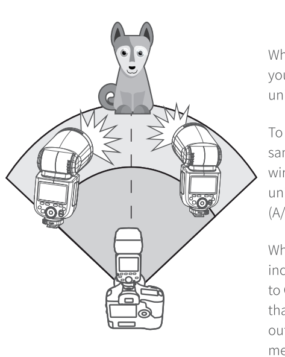
(6) Check the flash operation.

① Press the Transmitter unit' s Test Button < ⚡ >.

② The Receiver unit should then flash. If it doesn't, check the receiver is placed within the operating range.

Wireless Flash Shooting: Wireless (2.4G) Transmission

Using Automatic Wireless Flash with Multiple Receiver (slave) Units



When a larger flash output is required, you can increase the number of slave units and flash them as a single flash.

To add receiver (slave) units, use the same steps as setting "automatic wireless flash with a single Receiver unit". Any flash group can be set (A/B/C/D/E).

When the number of slave units is increased or the master flash is set to ON, automatic control ensures that all flashes fire at the same flash output so that the total flash output meets the standard exposure.

* If the auto power off of the slave unit has kicked in, press the test button on the Master unit to trigger a flash button enables the slave unit. Please note that the flash cannot be tested during the camera's metering time.
* You can change the delay setting for when the slave flash unit automatically enters sleep mode (C.Fn-Sv SYBY/Page 19).

Using a fully automatic wireless flash

The flash exposure compensation (FEC) and other settings set on the master unit are also set automatically in the slave unit. Operation of the slave unit is not required. The following settings can be used for shooting with no line flash in the same way as for normal flash shooting.

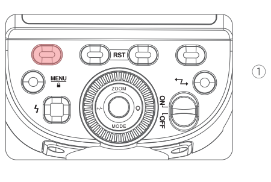
* Flash Exposure Compensation (Page 8)

About Transmitter Unit

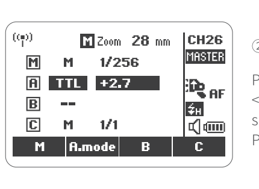
Two or more master units can be used. By configuring multiple cameras with master units, you can change the cameras used for shooting while maintaining the same lighting (slave units).

7. M: Manual Wireless Flash Shooting

Shooting with manual flash with no line (multi-flash) allows you to set different flash outputs for each slave unit (flash group) for shooting. All parameters need to be set on the master control unit.



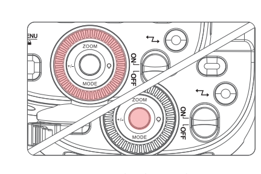
① Press the function button 1/2/3/4 (corresponding M/A/B/C) to adjust to M mode.



② To set the flash output

Press the function button 1/2/3/4 <M/A/B/C> , Turn the Select Dial to set the flash output of the groups. Press the Set Button to confirm.

Wireless Flash Shooting: Wireless (2.4G) Transmission

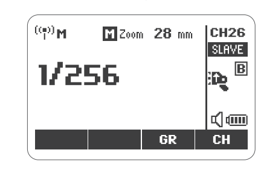


③ Taking pictures

Each group fired at the set flash ratio.

Setting <M> Flash Mode

You can directly operate the Receiver unit to manually set the manual flash or stroboscopic flash.

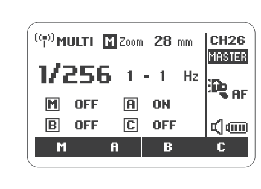


(1) Setting the Receiver unit.

(2) Setting flash mode to <M>.

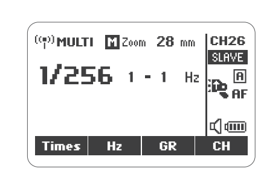
① Press <MODE> button so that <M> displays.
② Set the manual flash output.

8. Multi: Wireless Flash Shooting with Manual Flash



To set the <MULTI> strobe mode.

① In the main control screen mode, press the <MODE> mode selection button to display <MULTI>.
② Set the strobe flash setting in the main control screen mode.



In receiver unit mode, press the <MODE> button to display <MULTI>.

Troubleshooting: 2.4G wireless flash misfiring

1. Interference of the 2.4g signal resulting from external factors (such as a wireless hub, 2.4G Wi-Fi routing, Bluetooth equipment, etc.)

→ Please adjust the channel CH setting of the transmitter(+10 is recommended) to find a channel without interference, or turn off other 2.4G devices in close proximity whilst working.

2. Please ensure that the flash is fully recycled, the flash ready indicator is on and that the overheat protection feature hasn't been triggered.

→ Please lower the flash setting by changing to manual mode (M) If the device is in TTL mode, you need to fire a preflash)

3. Please check whether the flash detector and the receiving device are running low on power

→ Please replace the batteries (1.5V disposable alkaline batteries are recommended for the flash receiver battery)

Other Applications

1. Sync Triggering

The Sync Cord Jack is a Φ2.5mm connector. Insert a trigger plug here and the flash will be fired in sync with the camera shutter.

2. Auto Focus Assist Beam

In low-brightness or low-contrast shooting situations, the flash's built-in autofocus assist lamp turns on to make autofocusing easier. When focusing is difficult, the red autofocus assist light comes on.

To turn off the autofocus function, set "AF" to "OFF" in C.Fn.

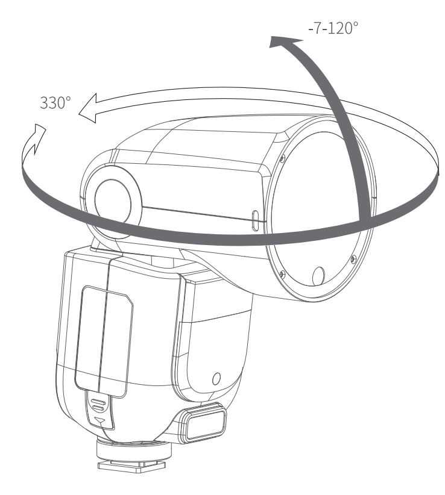
* If the user finds that the assisted focus light is not on when using it, it is because the camera is already accurately focused.

Position	Operating range
Center	0.6-10m / 2.0-32.8 feet
Periphery	0.6-5m / 2.0-16.4 feet

3. Bounce Flash

By pointing the flash head toward a wall or ceiling, the flash will bounce off the surface before illuminating the subject. This can soften shadows behind the subject for a more natural-looking shot. This is commonly known as a 'bounce flash'.

Position the flash head to set the bounce direction.

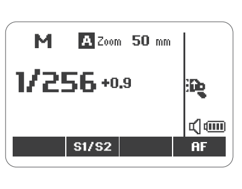


* Position the flash head to set the bounce direction.
* The wall or ceiling should be a plain, white color for high reflectance. If the bounce surface isn't white it will result in "off color" photos.

Other Applications

4. ZOOM: Set the flash coverage

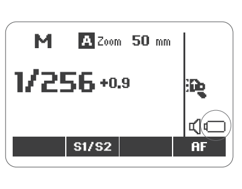
The flash coverage can be set automatically or manually. It can be set to match the lens focal length from 28mm to 105mm. In auto zoom, the focal length changes with the camera's zoom lens to provide the best flash effect.



In Manual Zoom mode, press the <ZOOM> button.

① Turn the Select Dial to change the flash coverage.
② If A is displayed, the flash coverage will be set automatically.

* If you set the flash coverage manually, make sure it covers the lens focal length so that the picture will not have a dark periphery.



If the battery power is low, < ▭ > will flash on the LCD panel. Please replace the battery as soon as possible.

C.Fn: Setting Custom Functions

Use the Customize function to complete settings according to the following chart.

Custom Function Symbols	Function	Setting No.	Set-Up and Instructions
m/ft	Distance indicator display	m	m
		ft	feet
AF	AF-assist beam	ON	on
		OFF	off
STBY	Auto sleep setting	ON	on
		OFF	off
SV STBY	Receiver auto power off timer	60min	60min
		30min	30min
		OFF	off
SCAN	Scan for idle channels	OFF	off
		START	Start search for idle channel
CH	Channel setting	01~32	Choose a channel from 01-32
ID	Wireless ID	OFF	off
		01-99	Choose any figure from 01-99

C.Fn: Setting Custom Functions

Custom Function Symbols	Function	Setting No.	Set-Up and Instructions
BEEP	Beeper	ON	on
		OFF	off
LIGHT	Backlight Duration	12sec	Off in 12 sec
		OFF	Always off
		ON	Always on
LCD	LCD contrast ratio	-3~+3	7 levels
DIST	Flash distance	1-100m	1-100m flash
		0-10m	0-10m flash

1. Press MENU Button until C.Fn menu displays. The " Ver x.x " in the lower-right corner refers to the software version.

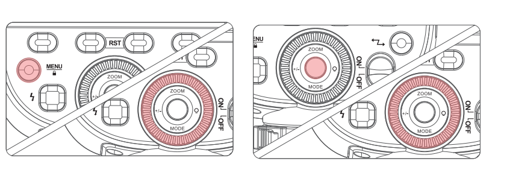
2. Select the Custom Function No. by turning the selector dial.

3. Change the Setting.

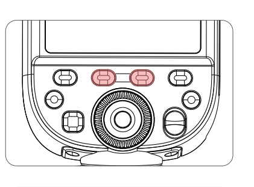
① Short press the MENU button to select the C.Fn sub-menu.

② Rotate the adjustment knob to select the item to be adjusted. Press the set button to change value.

③ After adjusting the settings, press the <MENU> button to start shooting.

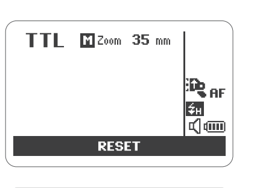


Restore factory settings

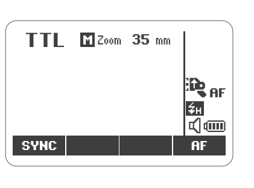


① Long press the two < RST> buttons at the same time.

Note: this function isn't available in the C.Fn. setting.



② "RESET" will appear on the screen to indicate that the factory settings have been restored.



Protection Function

1. Over-Temperature Protection

① To prevent the flash head from deteriorating and overheating, it is recommended not to fire more than 30 continuous flashes in fast succession at 1/1 full power. After 30 continuous flashes, pause the use of the flash for at least 10 minutes.
② If you fire more than 30 continuous flashes and then fire more flashes in short intervals, the inner over-temperature protection function may be activated. The recycling time will be longer (over 10s). If this occurs, the use of the device should be paused for at least 10 minutes for the flash unit to operate as normal.

Number of flashes that will activate over-temperature protection:

Power	Number of Flashes
1/1	30
1/2 +0.7	40
1/2 +0.3	50
1/2	60
1/4(+0.3,+0.7)	100
1/8(+0.3,+0.7)	200
1/16(+0.3,+0.7)	300
1/32(+0.3,+0.7)	500
1/64(+0.3,+0.7)	1000
1/128(+0.3,+0.7)	
1/256(+0.3,+0.7)	

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

Power	Number of Flashes
1/1	15
1/2(+0.3,+0.7)	20
1/4(+0.3,+0.7)	30
1/8(+0.3,+0.7)	
1/16(+0.3,+0.7)	40
1/32(+0.3,+0.7)	
1/64(+0.3,+0.7)	50
1/128(+0.3,+0.7)	
1/256(+0.3,+0.7)	

2. Other Safety Functions

* The system provides real-time protection to secure the device and your safety. The following lists prompts for your reference:

Prompts on LCD Panel	Indicates
E1	A fault has developed with the flash's recycle system so that the flash cannot fire. Please restart the flash unit. If the problem still exists, please send this product to a maintenance center.
E2	The system beomes overheated. Please stop using the flash for a period of 10 minutes.
E3	The voltage on two outlets of the flash tube is too high. Please send this product to a maintenance center.

Technical Data

Model	Z1-S
Compatible Cameras	Sony Digital Single Lens Reflex Camera
Power(1/1 output)	76Ws
Flash Coverage	28 to 105mm
	Auto zoom (Flash coverage set automatically to match the lens focal length and image size)
	Manual zoom
	Swinging/tilting flash head (bounce flash): 0 to 330° horizontally and -7° to 120° vertically
Flash Duration	1/300s-1/20000s
Exposure Control	
Exposure control system	TTL autoflash and manual flash
Flash exposure compensation (FEC)	Manual. FEB: ±3 stops in 1/3 stop increments (Manual FEC and FEB can be combined.)
Sync mode	High-speed sync (up to 1/8000 seconds), first-curtain sync, and second-curtain sync
Multi flash	Autonomy(up to 100 times, 199Hz)
Wireless flash (radio 2.4G transmission)	
Wireless flash function	Transmitter, Receiver, Off
Transmitter groups	M,A,B,C
Controllable Receiver groups	A, B, C, D, E (E group can be controlled by QPRO series flash trigger available on Neewer.com)
Transmission range (approx.)	100m
Channels	32 Groups：01~32
ID	01~99
Frequency Range	2412.75MHz-2464.25MHz
Maximum radio-frequency power	5.30dBm
Auto Focus Assist Beam	
Effective range (approx.)	Center: 0.6~10m / Periphery: 0.6~5m
LED Modeling Lamp	
Power	2W
Color Temperature	3300K±200K
Power source	
Built-in Li-ion battery	7.4V/2600mAh Li-ion battery
Recycle time	Approx 1.5 seconds. Red LED indicator will light up when the flash is ready.
Number of flash in full power	Approx. 480
Energy-saving	Auto Power off after approx. 90 seconds of idle operation. (60 minutes if set as Receiver)
Sync Triggering Mode	Hotshoe, 2.5mm sync line/2.4G Q system
Color Temperature	5600±200K
Dimensions	
Volume	76*93*197 mm
Net weight without battery	420g
Weight with battery	530g

List of compatible cameras

This camera is compatible with the following models of SONY digital single mirror reflex camera series:

α6600 α6500 α6400 α6100 α6000 α99 α9 II α7M3 α7R III α7S3
α7R4 α7 α7C α7S α7S II α7 II α7R II α7 IV α1 α9 α350

Note: This table only lists the camera models that have been tested at present, and does not cover all Sony series cameras. Other camera models can be tested by users.

Firmware upgrade

The firmware of this product can be upgraded through the USB port. The latest software announcements and instructions will be published on the official website.

※ This product does not come with a USB cable for the firmware upgrade. Please purchase separately. The USB port of this product is a Type-C port. Please use only a USB Type-C cable.

※ Upgrading the firmware requires Neewer Firmware software support. Please download and install "Neewer Firmware Update", and then select the corresponding firmware file before updating.

※ As the product is undergoing a firmware upgrade, please refer to the latest electronic version of the manual.

Troubleshooting

If you experience a problem with the device, please refer to this Troubleshooting Guide.

1. The Camera Flash does not fire

① The camera flash is not attached securely to the camera.
→Attach the hot shoe base mount of the flash securely to the camera.
② The electrical contacts of the camera flash and camera are dirty.
→Clean the contacts.
③ < ⚡ > or < ⚡H > is not displayed in the viewfinder of camera.
→Wait until the flash is fully recycled and the flash ready indicator lights up.
→If the flash ready indicator lights up, but < ⚡ > or < ⚡H > is not displayed in the view finder, check whether this flash unit is securely attached to the camera hotshoe.
→If the flash ready indicator does not light up after a long period of time, check whether the battery power is sufficient. If the battery is low (low battery voltage icon flashes on the flash screen), please replace the battery immediately.

2. Auto power off

① After 90 seconds of idle operation, auto power off will have activated if the flash is set as Transmitter (Master).
→Half press your camera's shutter release or press any flash button for 1s to reactivate.
② After 60 minutes (or 30 minutes) of idle operation, the flash unit will enter sleep mode if it is set as Receiver (Slave).
→Press any flash button to wake up.

3. Auto zoom does not work.

The camera flash is not attached securely to the camera.
→Attach the camera flash's mounting base to the camera.

4. The flash exposure is underexposed or overexposed.

① You used high-speed sync.
→With high-speed sync, the effective flash range will be shorter. Make sure the subject is within the effective flash range displayed.
② Use Manual Flash mode.
→Set the flash mode to TTL or modify the flash output.

5. Photos have dark corners or only parts of the target subject are illuminated.

The focal length of lens exceeds the flash coverage.
→Check the focal length that has been set. This flash unit has the flash coverage between 28 and 105mm, which fits medium-format cameras.