NISSIN DIGITAL

SPEEDLITE Di466

DIGITAL TTL POWER ZOOM FLASH

INSTRUCTION MANUAL

Nissin Speedlite Di466 is developed for digital SLR and hotshoe type cameras with the latest TTL flash control technology.

Note: No film camera can be used with Di466.

Type C is for Canon EOS digital SLR cameras, model EOS 300D*1, 350D*2, 400D*3, 450D*4, 10D, 20D, 30D, 40D, 5D, 1D Mark II, 1D Mark II N, 1Ds Mark II, 1D Mark III and 1Ds Mark III, as well as Powershot G7, G9 and S5IS.
It works automatically with E-TTL II and E-TTL auto-flash system.

*1,*2,*3,*4: In America and Canada : Rebel X, XT, XTi, XSi

Type N is for Nikon digital SLR and hotshoe type cameras, model D40, D40x, D50, D60, D70, D70s, D80, D200, D300, D2H, D2Hs, D2X, D2Xs and D3, as well as Coolpix P5000, P5100 and Fuji Finepix S5Pro.
It works automatically with i-TTL auto-flash system.

Attach Di466 to your camera, and then almost all jobs are controlled by the camera for the most proper exposure.
Read this instruction manual and refer your camera owner's manual to enjoy flash photography.

Nissin Japan Ltd., Tokyo
http://www.nissin-japan.com

Nissin Marketing Ltd., Hong Kong
http://www.nissindigital.com

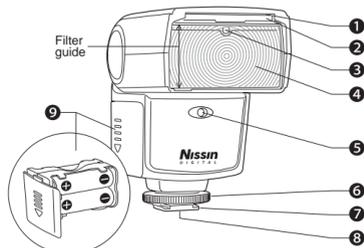## ⚠ WARNING

This sign refers the danger or serious damage.

● The flash unit contains high voltage electric parts. Do not try to open or repair the flash unit. Return it back to the repair service station or the store you bought it.

● Do not touch the inside parts from the opening when the unit was dropped and broken.

● Do not fire the flash direct to the eye at short distance. It may damage the eye. When taking flash picture especially toward a baby, it is recommended to keep the flash unit at least 1 meter (3.3feet) away from the subject.
Or use diffuser or bounce the light to the ceiling or to the wall to soften its intensity.

● Do not use the flash unit in the flammable gas, chemicals or such liquids. It may cause fire or electric shock.
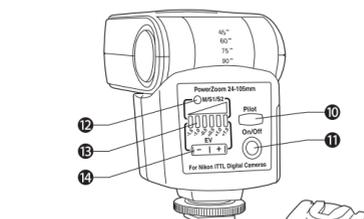
⚠ CAUTIONS

This sign refers the damage or defect.

● Do not leave or store the flash unit in the temperature over 40°C, such like in the automobile.

● The flash unit is not water resistance. Keep the unit away from rain, snow and humidity.

● Do not use benzene, thinner or other alcoholic agents to clean the unit.

● Do not use this flash with the cameras which is not listed in this instruction manual, otherwise it may damage the camera's circuitry.

● Remove the batteries when not in use for a longer period of time.

■ Nomenclature

① Fill-in reflector
② Light diffusing panel
③ Wireless flash sensor
④ Flash head
⑤ AF-assist light
⑥ Lock ring
⑦ Mounting foot
⑧ Hotshoe contacts
⑨ Battery magazine

Filter guide

Flash stand

⑩ Pilot lamp (Test flash button)
⑪ On/Off switch (Press button)
⑫ Mode select button/indicator
(TTL→Manual→Slave 1→Slave 2)
⑬ Flash power indication lamps (6 LEDs)
⑭ Flash power level select button

Accessories : Flash stand, Pouch

■ BASIC OPERATION

Inserting batteries

● Remove the battery magazine and insert 4 x size AA batteries as shown in the picture.

● The battery compartment is designed so that each cell is placed in same direction to avoid the confusion in poor light situation.

● +/- symbol is clearly marked at the battery compartment.

● Place the battery magazine back into the body.

NOTE
It is recommended to use all 4 batteries in same brand and type, and replace them all at the same time. Wrong insertion of each cell does not make electric contact.

Mounting Di466 on the Camera

● Turn the lock ring to loosen it as shown in the picture.

● Slide the mounting foot of Di466 into the hotshoe of camera.

● Turn the lock ring to opposite direction and tighten it.

● Lock pin comes out to hook the foot at the hotshoe for sure contact.

Removing Di466 from the Camera

● Loosen the lock ring and slide the mounting foot of Di466 off the hotshoe of the camera. Make sure to turn the lock ring all the way to completely clear the lock pin off the hooking slot on the hotshoe.

NOTE
Before mounting or removing Di466 into or from the camera, it is recommended to turn off the power switch of both Di466 and the camera.

Turn on the flash unit

● Press the On/Off switch and Pilot lamp turn red showing the unit is turned on.

● In a few seconds, the Pilot lamp turns green. Di466 is ready to shoot.

● For a test flash, press the Pilot lamp. When using the test flash as an open flash, please note that the reference guide number in this case is G.No.10 (ISO 100).

● To turn off the flash unit manually, press the On/Off switch for 2 seconds.

Mode Canon	Nikon	Shutter Speed	Aperture Setting	Control on the camera
[□]	[AUTO]	Automatic	Automatic	Automatic
[P]	[P]	Automatic	Automatic	Automatic
[Tv]	[S]	Manual	Automatic	Any available shutter speed can be set.
[Av]	[A]	Automatic	Manual	Any available f-stop can be set.
[M]	[M]	Manual	Manual	Any shutter speed / f-stop combination can be set.

Di466 has energy saving double power off function.

To save battery energy, the power is automatically turned off (to stand-by mode), both in TTL mode & Manual Power mode, in about 2 minutes of idle use.
While Di466 is in the stand-by mode a Pilot lamp blinks every 2 seconds showing the flash unit is in stand-by mode.
To turn on Di466 again, press the camera's shutter button halfway or press any button of the flash unit.
In case Di466 is not in use over 30 minutes, the unit is completely turned off and shut out the current leakage from the batteries.
To turn on Di466 again, take the first step of turning the flash unit on.
In case of using Di466 as a slave flash (at slave mode*5), Di466 will not go into the stand-by mode. It will however automatically turn off when not used over 60 minutes.
*5: Slave mode : Refer instruction below.

Shooting Di466 automatically

Canon cameras;
[P](Program), [□](Full Auto), [Av](Aperture priority), [Tv](Shutter priority) or [M](Manual);

Nikon cameras;
[P](Program), [AUTO](Full Auto), [A](Aperture priority), [S](Shutter priority) or [M](Manual);

In all camera's shooting mode listed above, Di466 will fully work in TTL (**ETTL**, **ETTL-II** for Canon, and **i-TTL** for Nikon) automatic-flash system.

● Set Di466 to the camera's hotshoe and turn on the power switch.

● Di466 is automatically set for the camera's TTL flash mode when ready lamp lights up.

● Press the shutter button of your camera halfway to focus the subject.

● Shutter speed, aperture and flash mark (⚡) are indicated in camera's view finder.

● Take the picture. Di466 is fired and the result is immediately shown on the camera's LCD display.

● When you change the focal length, The power zoom flash head of Di466 responds without delay and immediately sets its position to match the lens focal length you selected.

● The flash illumination coverage of Di466 responds to the lens focal length of 16mm to 70mm (24mm to 105mm/film camera standard).

Set the camera's shooting mode, select focal length and take pictures with Di466 on your camera.
Di466 is a supplement to help your taking a creative and live picture. Almost all jobs are automatically done by the camera and you just control the camera only.

■ JOY OF FLASH PHTOGRAPHY

TTL flash power compensation

With the latest TTL flash control system, the flash power level is always automatically controlled by the camera for the most appropriate exposure. You wish if you can soften or weaken the flash light, or give more light to the subject without changing the environmental or background exposure effect Di466 can make it possible quickly for each shot at respective occasion of flash picture.

● TTL flash power compensation is provided in 7 steps by half Ev increment for -1.5 −1.0 −0.5,0,+0.5 +1.0, and +1.5ev.

● Set the Flash power level select button to the power level you desire.

● When Di466 shows no level indication LED is turned, the flash power compensation level is at even(0Ev) in ±0.5ev.

● Press the flash power select button, by each press of + marked knob, it sets the power of +0.5 → +1.0 → +1.5Ev. and the - marked knob sets it to −0.5 → − 1.0 → − 1.5Ev. The power level indication lamp shows the power level you set.

● Take a picture and the aimed subject is shown with required lighting effect by keeping the background exposure level as originally expected.

● On some cameras, the TTL flash power compensation setting is provided in its menu mode.
When setting the TTL flash power compensation on your camera, the same of Di466 is, in this case, to be counted in addition to the compensation you selected in the camera's menu mode.

Fill-in flash and Light diffusing panel

For short distance or portrait flash photography, we wish if the light is not too sharp or too strong to the subject. Use fill-in reflector flash or diffuse the light.

● If the subject is close(within 2 meter), turn the flash head 90 upward and pull out the fill-in reflector as shown in the picture.

● Take a picture as usual.
A blink of fill-in flash freshens up the subject in natural image.

● This small blink of flash is also useful when taking a picture of baby without scaring him.

● This technology is also useful to eliminate the shadow on the subject under the tree.

● For portrait photography, pull out the light diffusing panel and place it over the flash window as shown in the picture. The diffusing panel makes the flash light soften and creates a lively color effect on the subject.

● Since the light diffusing panel expands the lighting area, it covers the range of 12mm focal length lens(18mm for film camera standard).

Bounce Lighting

When taking a picture of a baby or small children, do not shoot the flash straight on to them. Bounce the light off the ceiling or wall so that it won't scare them.
The lighting on a subject in front of the wall, creates an unnecessary sharp shadow on the wall resulting the picture disappointed. Bounce the light off the ceiling or wall to soften the light on the subject, and the shadow fade out.

● Turn the flash head upwards. It turns upward to 45 > 60 > 75 > 90.

● When the flash head stays at turning or tilting position, the zoom setting position of Di466 is automatically set at the position for 33mm(50mm/film camera standard) focal length lens.

● The wall or ceiling in this case should be flat surface and white color is preferable. Colored ceiling or wall may reflect its color on the subject.

AF assist light emitter

Under the low light condition, in the dark place, AF assist light will automatically emit the beam and illuminate the subject, so that the camera can easily focus the subject in darkness. The beam is however not shown in the picture.

Flash Power Lock

When the back ground of the main subject is too bright, the camera's exposure reading system adjusts the flash light intensity for such back ground condition and it result the main subject underexposed. Or in case the main subject is not placed in the center of the viewfinder, flash picture may result the aimed subject under or over exposure.
You can lock the correct flash exposure for the aimed subject in such a condition. This flash exposure pre-set remains locked in, even if you change the aperture or zoom the lens in and out. This mode can only be set on the camera.

With Canon cameras; **FE lock**

● Focus the subject.

● Aim the viewfinder center over the main subject and press [∗] button on the camera (or [FEL] button on some cameras).

● Pre-flash is fired to pre-set the correct light amount for the main subject.
Remarks: FEL only work on P, TV, AV, M & A-Dep mode.

With Nikon cameras; **Fv lock**

● Set the Fv lock mode at the menu on your camera.

● Focus the subject.

● Aim the viewfinder center over the main subject and press [AE-L] button on the camera (or [AF-L]) button on some cameras).

● Set the picture frame as you desire and release the shutter.

For Nikon Version only

Following functions are available on Nikon cameras. Refer to camera owner's manual for details.

Slow shutter synchronization
The flash is controlled at a slow shutter speed to the correct exposure for both the main subject and back ground in low light conditions or at night.

Red-eye reduction
To prevent the subject's eyes from appearing read, Di466 fires three controlled flash just before the picture is taken. Red-eye reduction can be combined with slow sync.

Rear curtain synchronization
In rear-curtain sync., the flash fires just before the rear curtain close. By using this function at slow shutter speeds, a moving subject will appear with such moving marks behind.

Manual Exposure Flash

In some occasion, or for special expression, you may need your own flash exposure instead of automatic controlled exposure. You can set Di466 for non-automatic flash mode, and select the desired flash power from 6 different levels

● When the flash unit is turned on, it is automatically set for TTL (E-TTL II / E-TTL for Canon, or i-TTL for Nikon) automatic flash mode. In this mode, the mode select indicator does not light.

● Press the mode select button.

● The color of mode select indicator turns to Red as shown in the picture.

● You can select the power, from the left to right, 1/32 → 1/16 – 1/8 – 1/4 – 1/2 – 1/(Full) power.

● Set the camera shooting mode to either [AV](Canon), [A](Nikon), or [M].

● Select your desired F-stop and/or shutter speed. Point the subject and press the shutter.

Wireless Remote Flash

Di466 has a wireless flash system as a slave flash. You can enjoy creative flash photography with multiple lightings from the various directions. 2 slave modes are provided, Slave 1 (S1: color green) for digital pre-flash system and Slave 2 (S2: color blue) for analog flash system.

Slave 1: In this mode, Di466 synchronize to the pre-flash system. The master flash is to be set at TTL(e-TTL for Canon and i-TTL for Nikon) mode.

Slave 2: In this mode, Di466 synchronize to the traditional single flash system. The master flash is to be set at manual mode. Studio lighting system synchronizes to this mode. This mode is also available for open flash, and for a standard flash in the market.

■ Setting master flash:

Place the master flash on the camera and switch it on. Or set the camera for flash mode to always fire the built-in flash.

■ Setting slave flash Di466:

Switch Di466 on and while the ready lamp is on, press the mode select button to select **S1**(color turns **Green**) or **S2**(color turns **Blue**). The mode select button turns to TTL(nolight)—Manual(red)—S1(green)—S2(blue) and back to TTL.

When flash is set to either slave mode, the fist lamp of Flash power level indication lamps is lighten.
This lamp shows the 1/32 manual power level. Press the Flash power level select button at marked + to select different power of 1/16→1/8→1/4→1/2 and Full.
Press the button at marked — to power downward. The power you selected is memorized and remains unchanged untill the unit is switched off.

● Set slave flash at any place and direct the flash head as you desire. Slave sensor may not respond to the master flash in the extremely bright condition or under the poor sensing situation.

● Use the flash stand included. Place Di466 on to the flash stand which can be placed either on the flat place or on the tripod by the screw.

NOTE Metal type accessory shoe is not recommended since it may give electric damage on the electrical contact of the flash hotshoe.

■ Shooting the subject:

Set the camera for flash shooting mode. Point the subject and shoot.
The slave flash will synchronize to the master flash and gives additional lighting from the different direction you desired.

Energy saving system for stand-by mode will not work when it's in slave mode.
Automatic shut off function is however effect. It automatically turns-off when not in use over 60 minutes.
The zoom setting position is automatically set for the focal length of 35mm while using Di466 as a slave unit.

To reset the flash unit to the other mode, press the mode select button for TTL and for Manual mode.

TTL Exposure level custom setting

TTL exposure level is accurately calibrated for standard balance in accordance with Nissin's standard. If any adjustment is however required, or if you like to set your preferable level, it can be adjusted for about ±0.75(3/4)ev. This adjustment can only be set when the flash is off. Insert the battery magazine with 4 batteries fully loaded as instructed above.

Press the pilot lamp and On/Off switch both together and hold for 3 sec.
The mode select lamp turns purple showing the unit is ready for TTL exposure level adjustment.

Press the power level select button either + or − to adjust it to the required exposure level. Each LED shows 0.25(1/4)ev increments and it can be adjusted up to +0.75(3/4)ev.(over exposure efficiency), or down to −0.75(3/4)ev.(under exposure efficiency). Press the On/Off switch for 3 sec. to turn the unit off. The adjusted level is memorized and kept as customized default TTL exposure setting. This setting is permanently kept until you alter the setting to the other required level.
Start to use flash unit from "Turn on the flash unit" at "**BASIC OPERATION**" explained as above.

■ SPECIFICATIONS

Usable cameras	Canon EOS digital cameras	Nikon iTTL digital cameras
Guide No.	33/108 at 105mm focal length (ISO 100 m/ft)	
Illumination coverage	24-105mm (18mm with diffuse panel) (Automatically set for the lens focal length)	
Power source	4 x size AA batteries (Size AA Ni-MH or lithium batteries usable)	
Battery life	200-1500 flashes according to the mode (with alkaline batteries)	
Energy Saving	Come to Stand-by mode in 2 min., and Power off in 30 minutes after the power on or the last use of flash unit.	
Recycle time	4 sec. with fresh alkaline batteries	
Flash Exposure	Automatic exposure	
	E-TTL / E-TTL II	i-TTL
	Manual exposure at 6 power level (See guide number table below)	
Flash Power Lock	FE lock With [FEL] or [∗] button on EOS cameras	Fv lock With [AE-L] or [AF-L] button on the camera
AF assist light	Effective range of approx. 0.7 to 6m / 2.3 to 20 ft.	
Color Temperature	5600 K	
Flash Duration	1/800 (full power flash) sec. 1/800-1/20,000(controlled flash) sec.	
Wireless Flash	Slave function with 6 power level (See guide number table below)	
Dimensions	67(W) x 105(H) x 95(D) mm / 2.60(W) x 4.1(H) x 3.7(D) inches	
Weight	230 g	

■ Guide Number table
Guide No. at manual exposure mode (ISO 100 in meters/feet)

Zooming Position	Flash Power Level					
	Full	1/2	1/4	1/8	1/16	1/32
24mm	18/59	12.7/42	9/29	6.4/21	4.5/15	3.2/10
28mm	20/65	14/46	10/33	7/23	5/16	3.5/12
35mm	22/72	16/52	11/36	7.8/26	5.5/18	4/13
50mm	24/79	18/59	12.7/42	9/29	6.4/29	4.5/15
70mm	27/88	19/62	13.5/44	9.5/31	6.7/31	4.7/15.5
85mm	30/98	21/69	15/49	10/33	7/23	5/16
105mm	33/108	23/75	16.5/54	11/36	8/26	5.6/18

■ TROUBLE SHOOTING

The flash unit does not start charging.
● Batteries are not correctly installed
>>> Install batteries to correct direction.
● Batteries are exhausted
>>> Replace the batteries if the recycle time beyond 30 sec.

The flash unit does not fire.
● The flash unit is not firmly clipped on the camera
>>> Mount the flash unit firmly on the camera's hot shoe.
● The flash unit is automatically powered off
>>> Turn on the switch again.

The flash picture is overexposed or underexposed.
● A reflective object or strong lighting near the subject
>>> Use FE or Fv lock.
● The unit is set for manual exposure mode
>>> Set to TTL mode or other power level.