TTL FLASH IN A MODE

With your camera set to A mode and the 5400HS attached, you control the lens aperture and, thereby, the depth of field and flash range. When the flash is on, it will fire every time you take the picture.

Operation

Set the aperture according to the depth of field and/or flash range you want. After the flash has charged and you have checked that your subject is within the flash range displayed in the data panel, release the shutter.

TTL FLASH IN S MODE

If you are using the 5400HS with an si- or xi-series camera set to S mode, if the flash is on it will fire every time you press the shutter-release button, and it will not fire if it is turned off. You will not, however, be able to select a shutter speed faster than the camera's flash sync speed (see below). With an i-series camera, flash operation in S mode is the same as it is in P mode (see page 20).

Operation

Set the shutter speed you want. After the flash has charged and you have checked that your subject is within the flash range displayed in the data panel, release the shutter.

TTL FLASH IN M MODE

When the camera is set to M mode and the 5400HS is on, the flash will fire each time you take a picture. If the flash is off, it will not fire.

Operation

Use your camera's controls to set the aperture and shutter speed. After the flash has charged and you have checked that your subject is within the flash range displayed in the data panel, release the shutter. The aperture will control the depth of field and the flash range. A small aperture will provide large depth of field, but a short flash range. The opposite is true of a large aperture. The shutter speed will determine the amount of ambient light in the total exposure. Longer shutter speeds make room light or twilight appear more evident in the picture.
You cannot select shutter speeds faster than those listed below.

Camera	Flash Sync Speed
700si/600si (HSS on)	Any shutter speed
700si/600si (HSS off)	1/200
9xi	1/300
7xi/8000i	1/200
7000i	1/125
500si/400si/5xi/3xi/2xi/SPxi/5000i	1/90

- The above flash sync speeds are for Standard flash mode only. Sync speeds for other flash modes will vary. See following sections for details.

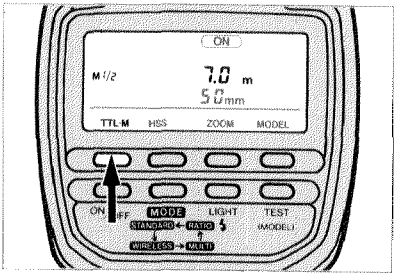
MANUAL FLASH CONTROL

With your camera in M mode, you can select any of six power levels. Each of the power levels appears in the data panel as a fraction of the maximum output of the 5400HS. With manual flash control, the exposure will depend on lens aperture and subject distance, as well as the power level you select. The guide number for each power level is provided on pages 48 and 49.

Before you begin

- Set your camera to M mode
- Attach the 5400HS
- Turn the flash on and set it to Standard Mode

Operation



1. Use the camera controls to set the shutter speed and aperture.
2. Press the TTL·M button once to switch to manual flash control with full output (M1/1).
3. Use the same control to select the flash power level.

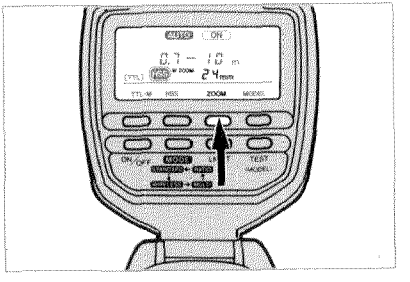
4. Wait for the flash to charge, focus on your subject and press the shutter-release button.

• When you set the flash to manual control, the flash range in the data panel will be replaced by a single value. This is the subject distance at which a correct exposure can be obtained with the current camera and flash settings.

ZOOM FLASH COVERAGE

In any flash mode, when the 5400HS is attached to your camera the flash head will automatically provide the correct coverage for focal lengths between 24 and 105mm. The flash also has seven manually-selectable settings within this range.

Operation



Press the ZOOM button once to change from auto to manual zoom mode, and press repeatedly thereafter to change the coverage manually.

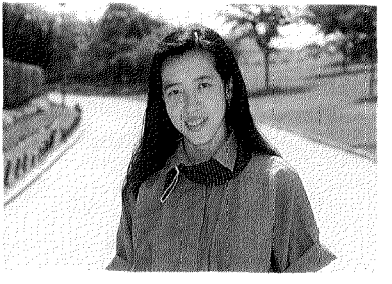
Auto · 24mm · 28mm · 35mm · 50mm · 70mm · 85mm · 105mm

NOTES ABOUT FLASH COVERAGE

- In Autozoom mode, if you attach a lens with a focal length less than 24mm, the focal length display will blink. If you take a picture, the corners will be under-exposed.
- If the focal length you have set manually is longer than the focal length of the lens and you take a picture, the corners of your pictures may be under-exposed.
- The flash guide number changes according to the flash coverage. See pages 48 and 49 for guide numbers.

HIGH-SPEED SYNC (Dynax/Maxxum 700si only)

High-speed sync (HSS) enables you to synchronize the 5400HS with the Dynax/Maxxum 700si at shutter speeds faster than 1/200 sec. in any exposure mode with TTL flash control. You will find HSS to be particularly helpful when you shoot portraits outdoors. With it, you can use a larger aperture to limit depth of field and separate your subject from the background while maintaining a correct background exposure.

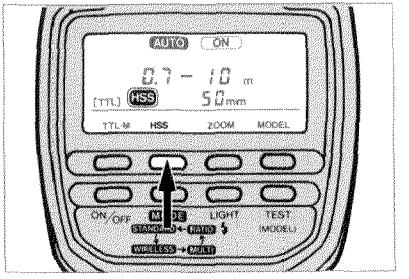


Without HSS

With HSS

In HSS mode, the 5400HS fires a short pre-burst when you press the shutter release. The camera measures this light to determines the flash output which will properly expose your main subject. The 5400HS then emits a "flat-pulse" flash burst which provides a constant level of illumination as the shutter opening passes across the film plane. Normal flash output with shutter speeds slower than 1/200 sec. occurs in a single burst when the shutter is completely open.

Operation



When you first attach the 5400HS to your 700si, the HSS indicator will appear in the flash data panel. This means that HSS mode is enabled and will be selected by the camera whenever necessary. When the HSS indicator appears in the camera's body and viewfinder data panels, high-speed flash sync will be used if you press the shutter release.

Press the HSS button to enable or cancel HSS mode.

In P and A Mode:

The camera will use HSS automatically whenever necessary.

In S and M Mode:

The camera will use HSS when the flash is on and you set a shutter speed of 1/250 sec. or faster.

NOTES ABOUT HSS

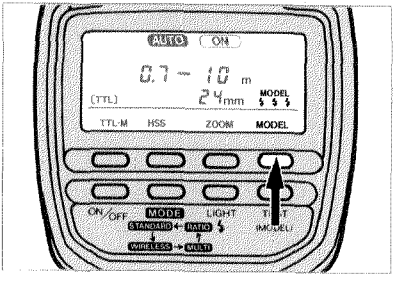
- If you press the camera's program reset button, the HSS setting on the flash will not change.
- You cannot use HSS with bounce flash or Bounce Reflector III Set. If you move the flash head from the forward position, the HSS indicator will not appear in the flash data panel and the HSS button will not function.
- In HSS mode, changing the shutter speed will effect the flash range. Be especially careful to check that your subject falls within the flash range displayed in the flash data panel when the shutter speed is between 1/200 and 1/8000 second.
- Under fluorescent lighting or if the camera determines that conditions are too dark for HSS flash to be effective, shutter speeds faster than 1/200 sec. will not be usable.

MODELING FLASH

This feature helps you view the effects of the flash's position in relation to your main subject before you take the picture. The 5400HS has two modeling flash modes:

Model 1 (ϟ ϟ ϟ): A low-frequency series of strong flash bursts for use in portrait situations or whenever your subject is large.
Model 2 (ϟϟϟϟϟ): A high-frequency series of low-power pulses that is most useful when you are taking close-up photographs.

Operation



1. Press the MODEL button to select modeling mode 1 or 2.
2. In Standard mode, press the TEST button to activate the modeling flash.
In Wireless mode, press the camera's spot/AE-lock button to activate the modeling flash of the off-camera flash.

NOTES ABOUT MODELING FLASH

- Mode 1 is best used for portraits. When you use Mode 1, pay particular attention to the area behind your subject. If any distracting shadows appear, reposition your subject so that the shadows disappear.
- Mode 2 is useful when you take close-up photographs of flowers or other small objects. When you use Mode 2, look for shadows in and around the subject. For example, when photographing flowers, you may discover a leaf or stem that casts a shadow through part of the image. Correct this before you take the picture.
- If the flash is not fully charged when you press the TEST button, the flash series may be irregular.
- If the flash is attached to your camera, the shutter will lock when the modeling flash is activated.
- In Wireless mode, the shutter can open while the modeling flash is on. However, the flash output is fixed and cannot be controlled by the camera to provide a correct exposure.
- Because the output of the modeling flash is fixed, you can only see the shape and direction of shadows. You cannot determine subject or scene contrast.
- You cannot use modeling flash to preview flash ratios or ambient/flash ratios.

WIRELESS/REMOTE OFF-CAMERA FLASH MODE (700si/600si/500si/400si/300si/9xi/7xi/5xi/3xi)

One of the keys to creative photography is experimenting with light. Wireless mode enables you to easily explore the limitless creative lighting possibilities with off-camera flash and TTL control. In Wireless/Remote mode, your 5400HS is controlled by a signal from the camera's built-in flash or another accessory flash (5400xi or 5400HS). In addition, it can be used on the 700si or 9xi to control another off-camera flash unit and provide a 2:1 lighting ratio. The 5400HS can also be used with the Wireless Remote Flash Controller and another of the above flash units to provide a 2:1 or 1:2 lighting ratio with both flashes placed off-camera. You can select each of these options with the OPT button. An explanation of each option begins on page 33.

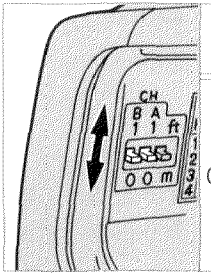
NOTES ABOUT WIRELESS/REMOTE MODE

- In Wireless/Remote mode, shutter speeds faster than 1/60 sec. cannot be selected.
- If you are using your camera's built-in flash or your 5400HS as the on-camera controller, you can control any number of off-camera flash units set to wireless/remote mode.
- The signal which controls the off-camera flash is a small burst from the on-camera flash. In order to maximize the range of this signal, you should reduce the brightness of your surroundings as much as possible when using Wireless/Remote mode.
- The sensor which detects the control signal is located next to the flash's AF illuminator. When you position the 5400HS off-camera, turn the body of the flash so that the AF illuminator faces your camera.
- If eye-start has activated the camera, you will not be able to test-fire the off-camera flash using the camera controls.

CONTROL CHANNELS

The 5400HS has four separate control channels so that the signals from your flash will not interfere with another Maxxum/Program Flash in Wireless/Remote mode.

To select the control channel:



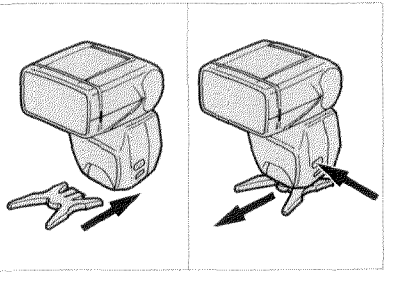
Switch	A	B
Channel 1	0	0
2	0	1
3	1	0
4	1	1

1. Open the battery cover and remove the batteries.
2. Refer to the table at left and set the channel-selector switches to the channel you want to use.

• If you change the control channel while you are using the 5400HS off-camera, you must reattach the flash to your camera and activate eye-start or press the shutter release button partway down before proceeding.

MINI STAND

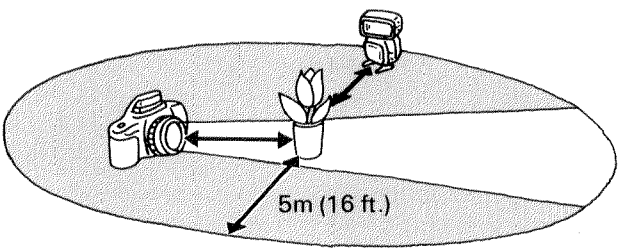
Mini Stand MS-2 is included with your 5400HS and attaches directly to the mounting foot to allow you to stand the flash on a flat surface. Attach and remove it as shown here. The stand also has a tripod socket so that you can attach the flash to a tripod.



FLASH/CAMERA RANGE

When you use Wireless mode, the flash range display will not appear. Use the tables below to position your camera and flash before you photograph.

NOTE: The information below is for use with a flash coverage of 24mm.
- The off-camera flash may not detect the control signals if it is placed behind the subject.



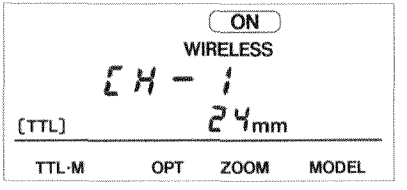
	Camera-Subject Distance m/ft.		Flash-Subject Distance m/ft.	
Aperture	ISO 100	ISO 400	ISO 100	ISO 400
f/2	2-5m/6.6-16.4 ft.	4-5m/13.2-16.4 ft.	2-5m/6.6-16.4 ft.	4-5m/13.2-16.4 ft.
f/2.8	1.4-5m/4.6-16.4 ft.	2.8-5m/9.2-16.4 ft.	1.4-5m/4.6-16.4 ft.	2.8-5m/9.2-16.4 ft.
f/4	1-5m/3.3-16.4 ft.	2-5m/6.6-16.4 ft.	1-5m/3.3-16.4 ft.	2-5m/6.6-16.4 ft.
f/5.6	1-5m (4m)/3.3-16.4 ft. (13.1 ft.)*	1.4-5m/4.6-16.4 ft.	0.7-4m/2.3-13.1 ft.	1.4-5m/4.6-16.4 ft.
f/8	1-5m (2.8m)/3.3-16.4 ft. (8.8 ft.)*	1-5m/3.3-16.4 ft.	0.5-2.8m/1.6-8.8 ft.	1-5m/3.3-16.4 ft.
f/11	1-5m (2m)/3.3-16.4 ft. (6.6 ft.)*	1-5m/3.3-16.4 ft.	0.4-2m/1.3-6.6 ft.	0.7-4m/2.3-13.1 ft.

* Values in parentheses indicate the maximum distance for wireless/remote ratio control (pp. 33, 35)

STANDARD WIRELESS OPERATION

(All xi- and si-Series cameras except 9xi)

In this mode, the 5400HS functions as the off-camera flash and is controlled wirelessly by the camera's built-in flash, a 2:1 lighting ratio can also be selected automatically.



Before you begin

- Attach the 5400HS to your camera and activate both.
- Refer to your camera's instruction manual and select wireless/remote flash mode.

Operation

1. Remove the flash and position it and your camera according to the information on page 32.
2. Wait for both the 5400HS and the camera's flash to charge.
- The AF illuminator will blink when the off-camera flash is fully charged.

3. Press the spot button (700si), flash-mode button (500si, 400si), red-eye reduction button (300si), AE-lock button (600si, 7xi, 5xi), or pre-flash button (3xi) to test-fire the flash.
4. Wait until both flashes re-charge and take the picture.

WIRELESS/REMOTE RATIO CONTROL (except 300si)

In Wireless/Remote mode, you can use the camera's built-in flash or an attached accessory flash to provide 1/3 of the total exposure, for a 2:1 light ratio.

Operation

Press the camera's flash-control button (700si/600si/500si/400si/5xi/3xi) or flash pop-up button (7xi) and hold it while you take the picture. The flash levels will be adjusted automatically.

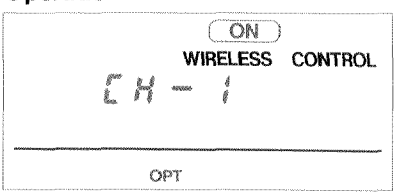
5400HS AS WIRELESS FLASH CONTROLLER (700si/600si/9xi)

Because the 9xi has no built-in flash, a 5400xi or 5400HS must be attached to the camera and used to control the off-camera flash unit. In addition, the 5400HS can also be used as the on-camera controller when attached to the 700si/600si.

Before you begin

- Make sure both flash units are set to the same control channel.
- Position the off-camera flash and set it to Wireless/Remote mode, off-camera operation (see previous section).
- If you are using a 3500xi off-camera, set wireless/remote mode by pressing the on/off button to activate the flash and holding the button down until the wireless lamp lights.

Operation

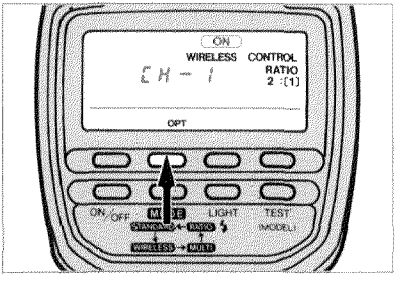


1. Press the MODE button and select Wireless/Remote flash mode.
2. Press and hold the OPT button until WIRELESS CONTROL appears in the flash data panel (approx. 2 sec.). The flash is now set to operate as a wireless remote controller on the channel which appears in the data panel.
3. Attach the 5400HS to your camera.
4. Wait for both the on- and off-camera flashes to charge and press the AE-lock button to test fire the off-camera flash.
5. Wait for both flashes to re-charge and take the picture.

WIRELESS/REMOTE RATIO CONTROL

With the 5400HS functioning as the wireless/remote controller, you can also set it to provide 1/3 of the flash exposure for a 2:1 lighting ratio.

Operation



After step #2 on the previous page, press the OPT button again. This display indicates that the flash will function as the on-camera control unit and also provide 1/3 of the total exposure. Continue with the remainder of the steps in the section.

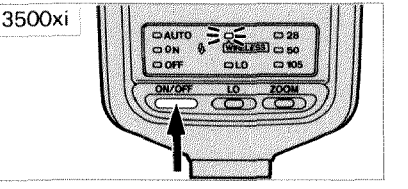
NOTE: The off-camera flash must be set to TTL control.

MULTIPLE WIRELESS/REMOTE RATIO CONTROL (With 700si/600si/9xi and Wireless Remote Flash Controller)

Multiple wireless ratio control enables you to obtain a 2:1 lighting ratio between two off-camera flashes in wireless/remote mode. To do so, you must attach a Wireless Remote Flash Controller, available separately, to your camera. Maxxum/Program Flash 5400xi and 3500xi may also be used off-camera in this mode. However, if you use a 3500xi, a 5400HS or 5400xi must also be used and set to RATIO 2:[1].

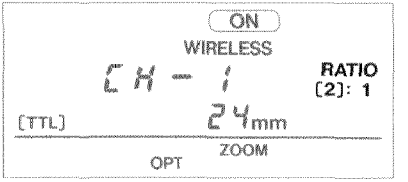
Before you begin

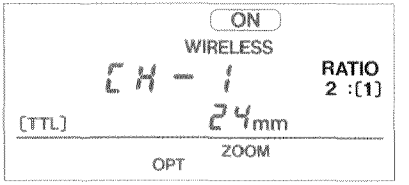
- Read the directions included with the Wireless Remote Flash Controller. Make a note that, although it is not mentioned in the instruction sheet, the 700si/600si and 5400HS can be used with the Wireless Remote Flash Controller.
- Attach the Wireless Remote Flash Controller to your camera and turn both on.
- Set the control channel on the Wireless Remote Flash Controller.
- If you are using a 3500xi, you can only use channel 1 or 2 of the Wireless Remote Flash Controller. To set Wireless/Remote mode on the 3500xi, press the ON/OFF button to turn the flash on and hold the button down until the wireless lamp blinks.



- If you are using a 5400xi, you will find the directions for using it in this mode in the Wireless Remote Flash Controller's instruction manual.
- Make sure the flash units are set to the same control channel as the Wireless Remote Flash Controller.

Operation



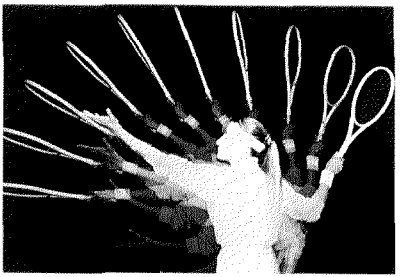


1. Press and hold the OPT button until WIRELESS CONTROL appears in the data panel.
2. Press OPT two more times. The display shown at left should appear in the data panel — RATIO should appear, but CONTROL should not.
3. Now you must decide which flash unit will provide the main portion of the ratio and which will act as the fill light. If your 5400HS is to act as the main light ([2] selected), it is ready. If you want to use it as a fill light, press OPT once more. RATIO 2:[1] should appear.

• If you are using a 3500xi, the 5400HS must be used as the fill light.

4. Position both flash units according to the information on page 32.
5. Press the camera's spot button (700si) or AE-lock button (600si/9xi) to test-fire the flashes.
6. Wait for the flashes to recharge, focus on your subject, and press the shutter-release.

MULTI-FLASH MODE



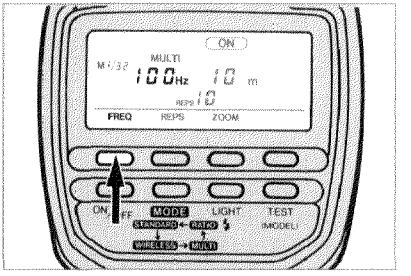
In this mode, the flash will fire several times in succession. The frequency and number of bursts which the flash fires are manually selectable. With multi-flash mode, you can capture several flash images on the same frame, such as in a photographic study of a moving subject.

Before you begin

- Set your camera to M mode and attach the 5400HS.
- Turn the flash on and press the MODE button until MULTI appears in the data panel.

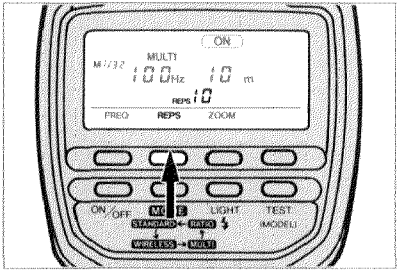
Operation

NOTE: The operation of the ZOOM button is the same as described on page 25.



1. Press the FREQ button to select the firing frequency. The value is displayed in Hertz (flashes per second).

→ 100 · 50 · 30 · 10 · 5 · 3 · 2 · 1 →



2. Press the REPS button to select the number of times the flash will fire.

→ 10 · 7 · 5 · 4 · 3 · 2 · -- →

- If you select --, the flash will fire until its charge has been depleted or the shutter closes.

3. Set the shutter speed and aperture.

- Refer to the table on the next page to set the shutter speed.

4. Focus on your subject and release the shutter.

NOTES ON USING MULTI-FLASH MODE

- When you select Multi-Flash mode, the power level is automatically set to 1/32 and cannot be changed.
- If you change the camera's exposure mode to P, A, or S, the flash will switch to Standard mode automatically.
- A single value will appear in the flash-range display. This is the distance at which one burst from the entire sequence will provide a correct exposure. You can change this value by adjusting the lens aperture. Some experimentation will be necessary to obtain an acceptable exposure for the entire series.
- The camera settings will depend primarily on your own experience. However, the shutter speed you select must be long enough to ensure that the shutter remains open for the duration of the flash sequence. The table below lists the fastest shutter speed you can set with the various combinations of frequency and flash repetitions.

		REPETITIONS					
		10	7	5	4	3	2
FREQUENCY (Hz)	100	1/8	1/8	1/15	1/15	1/30	1/30
	50	1/4	1/4	1/8	1/8	1/15	1/15
	30	1/2	1/2	1/4	1/4	1/8	1/15
	10	1	1	1/2	1/2	1/2	1/4
	5	2	2	1	1	1	1/2
	3	4	4	2	2	1	1
	2	8	4	4	2	2	1
	1	15	8	8	4	4	2

(sec.)

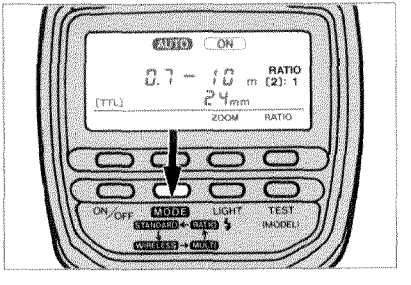
RATIO FLASH MODE
(700si/600si/500si/400si/9xi/7xi/5xi/3xi/2xi/SPxi/8000i/7000i)

You can cannect the 5400HS to up to three other i- or xi-series flash units to obtain a 2:1 or 1:2 lighting ratio automatically with TTL flash control. **NOTE:** This section gives instructions for using your 5400HS as the "control flash". If you intend to use it as a secondary flash, connect it to your designated control flash and set it to standard flash mode. Then follow the instructions supplied with the flash you are using as control unit.

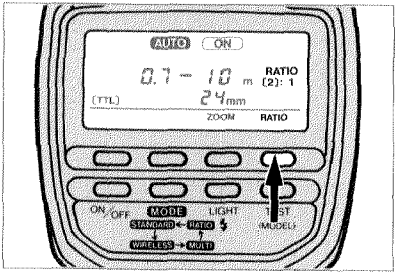
Before you begin

- Connect your flash units to the accessory terminal of the on-camera flash using the accessory cables and connectors.
- Turn all flashes on.
- Set any 5400HS, 5400xi, or 5200i, you are using off-camera to TTL control. You must also manually select the focal length coverage of your off-camera flash units.

Operation



1. Press the MODE button until RATIO appears in the data panel. **NOTE:** Do not select ratio mode on any flash other than the control unit.



2. Press the RATIO button to select the lighting ratio. The number in brackets indicates the output of the control unit in relation to the other flashes.

3. After all flashes are completely charged, focus on your subject, make sure it is within the range displayed in the flash data panel, and press the shutter release.

NOTES ABOUT RATIO FLASH

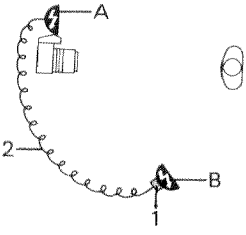
- When you use Ratio mode with your camera set to P, A, or S modes, the shutter speed will be automatically set to 1/60 sec. or slower. In M mode, you will not be able to select a shutter speed faster than 1/60 second.
- If you are using Maxxum/Program flash 4000AF, 2800AF, or 1800AF, you must set the control unit to 2:[1].

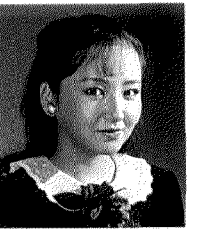
The following are some examples of photos taken in Ratio Mode. The accessories used in each situation are also listed.

A. Control Flash
(5400HS, 5400xi, or 5200i)
B. Secondary Flash
(any HS-, xi-, or i-Series flash)

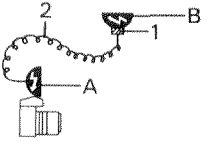
1. MS-2 or OS-1100
2. Cable CD
3. TC-1000
4. OC-1100
5. Cable EX

Example 1
Main light off-camera with on-camera (control) flash providing fill light.
Ratio setting: 2:[1]

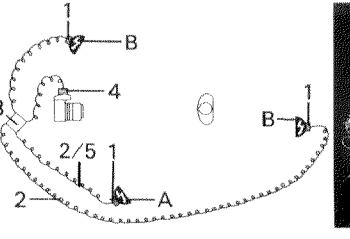




Example 2
Main light bounced off of ceiling with on-camera (control) flash providing fill light.
Ratio setting: 2:[1]



Example 3
Main (control) flash to the right of subject with fill light above camera and accent light behind subject.
Ratio setting: [2]: 1

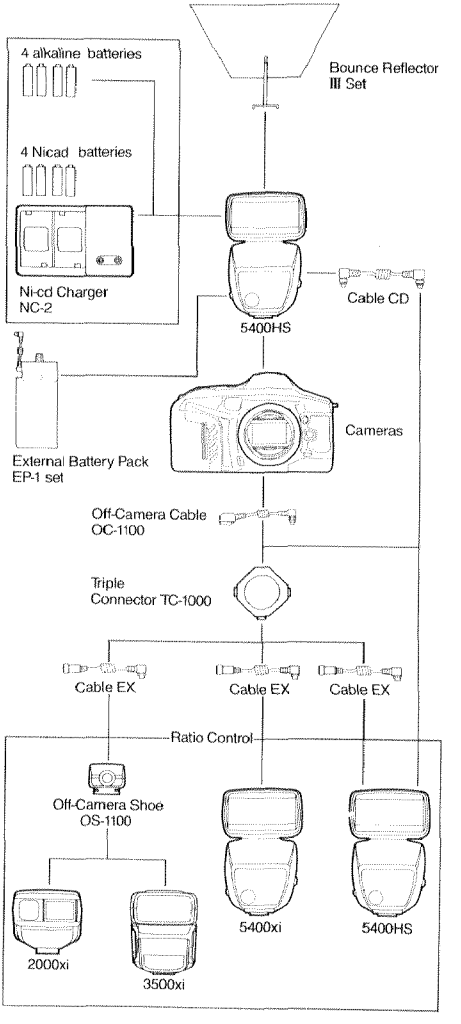


APPENDIX

CARE AND STORAGE

- This flash is not waterproof. If it comes in contact with water, wipe it dry with a clean cloth and bring it to an authorized Minolta service facility.
- If your flash is subjected to a sudden change in temperature, as when you bring it into a warm room on a cold day, condensation may form inside. To prevent this, seal the flash in a plastic bag before transferring it from the cold to the warm environment, and wait for it to adjust to the surrounding temperature before taking it out of the bag.
- The flash may not operate satisfactorily at temperatures above 50°C (122°F) or below -10°C (14°F).
- If the flash becomes dirty, it may be cleaned with a clean, dry cloth. Do not allow alcohol or other chemicals to come in contact with the flash.
- Never subject the flash to shock, high heat, or high humidity. Be particularly careful not to leave it in the glove compartment or other places in motor vehicles where it may be subjected to high heat.
- When storing the flash for more than two weeks, remove the batteries and store the flash in a cool, dry place away from dust or chemicals.
- The flash contains high-voltage circuits. Never attempt to disassemble the flash. Any repairs should be done by an authorized Minolta service facility.
- Fire the flash at least several times a month to check its operation.

ACCESSORIES



Off-Camera Cables and Connectors

To control the flash position and lighting angle, attach one end of Off-Camera Cable OC-1100 to the 5400HS's accessory terminal and the other to the camera's accessory shoe. If the flash is mounted on a tripod, use Off-Camera Shoe OS-1100. For multiple flash operation Triple Connector TC-1000, Cable EX, and Cable CD can also be used.

External Battery Pack EP-1 Set

EP-1 accepts 6 C-size nickel-cadmium or alkaline-manganese batteries and attaches directly to the 5400HS's external power terminal. It provides faster recycling as well as a greater number of flash exposures.

Ni-Cd Cahrger NC-2

Nickel-cadmium batteries can be recharged for repeated use. They also provide faster recycling and are virtually unaffected by low temperature. This compact charger can recharge 2 or 4 batteries in eight hours (set of 4 batteries included).

Bounce Reflector III Set

This compact accessory attaches to the 5400HS to provide an excellent bounce surface. With bounce lighting soft natural effects can be obtained indoors and out. Minolta direct autoflash controls the flash duration for proper exposure.

TECHNICAL DETAILS

Type: Fully dedicated autoflash for use with Minolta Maxxum/Dynax i-, xi-, and si-Series cameras

Exposure control: Direct TTL OTF metering in all exposure modes; 6 manual power levels selectable when camera set to M mode

AF illuminator: Focus-assist LED automatically activated in low-light, low-contrast situations; range: 0.5 - 9m (3'3" - 16'); figures based Minolta's on standard testing procedures using a 50mm lens

Flash coverage: Power-zoom head automatically provides correct flash coverage for lenses between 24 and 105mm; 7 positions also manually selectable

	Flash Coverage Setting						
	24mm	28mm	35mm	50mm	70mm	85mm	105mm
Vertical angle	60°	53°	45°	34°	26°	23°	20°
Horizontal angle	78°	70°	60°	46°	36°	31°	27°

Guide number (at ISO 100, in meters):

Power Level	Flash Coverage Setting						
	24mm	28mm	35mm	50mm	70mm	85mm	105mm
1/1	28	32	36	42	46	52	54
1/2	20	23	25	30	33	37	38
1/4	14	16	18	21	23	26	27
1/8	10	11	13	15	16	18	19
1/16	7	8	9	10.5	11.5	13	13.5
1/32	4.9	5.7	6.4	7.4	8.1	9.2	9.5
W'less	22	25	28	33	26	41	42

High-speed sync (HSS) flash: With 700si, flash emits flat pulse to synchronize with shutter speeds 1/250 sec. and faster

HSS guide number *(at ISO 100, in meters):*

Shutter Speed	Flash Coverage Setting						
	24mm	28mm	35mm	50mm	70mm	85mm	105mm
1/250	11	12	13	16	17.4	17.4	19
1/500	8	8.7	9.7	11	12	12	13
1/1000	5.6	6.1	6.7	8	8.7	8.7	9.5
1/2000	4	4.4	4.8	5.6	6.1	6.1	6.7
1/4000	2.8	3.1	3.4	4	4.4	4.4	4.8
1/8000	2	2.2	2.4	2.8	3.1	3.1	3.4

Flash duration: 1/50,000 - 1/600 sec.

Wireless/Remote mode: Off camera flash control possible using camera's built-in flash or other compatible accessory flash; ratio and multiple off-camera ratio control also selectable

Multi-flash mode: Can be set for successive flash bursts with settings for firing frequency (100, 50, 30, 10, 5, 3, 2, or 1Hz) and total number of bursts (10, 7, 5, 4, 3, 2, or continuous)

Ratio mode: With a second xi- or i-series flash attached to accessory terminal, output ratio can be pre-set (1:2 or 2:1)

Bounce flash: Flash head can be rotated 90° vertically (click stops at 45°, 60°, 75°, and 90°), 90° clockwise (click stops at 30°, 45°, 60°, 75°, and 90°), and 180° counterclockwise (click stops at 30°, 45°, 60°, 75°, 90°, 120°, 150°, and 180°)

Power sources: Four AA-size batteries, either 1.5v alkaline-manganese or 1.2v rechargeable nickel-cadmium (Ni-Cd); accessory terminal for external power source

Flash-camera contacts: Contacts on mounting foot for firing flash, automatic setting of flash coverage, setting x-sync speed, activating viewfinder's flash-ready signal, direct atutoflash control, triggering AF illuminator, and reading wireless/remote control channel
Other: When flash is attached to camera and camera's program reset button is pressed, flash is automatically switched on and set to default settings: Standard mode, TTL metering, and autozoom, modeling flash canceled if set
Dimensions: 80.5 x 132.5 x 105mm (3-3/16 x 5-3/16 x 4-1/8 in.)
Weight without batteries: 385g (13-9/16 oz.)

Specifications and accessories are based on the latest information available at the time of printing and are subject to change without notice.

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MEMO