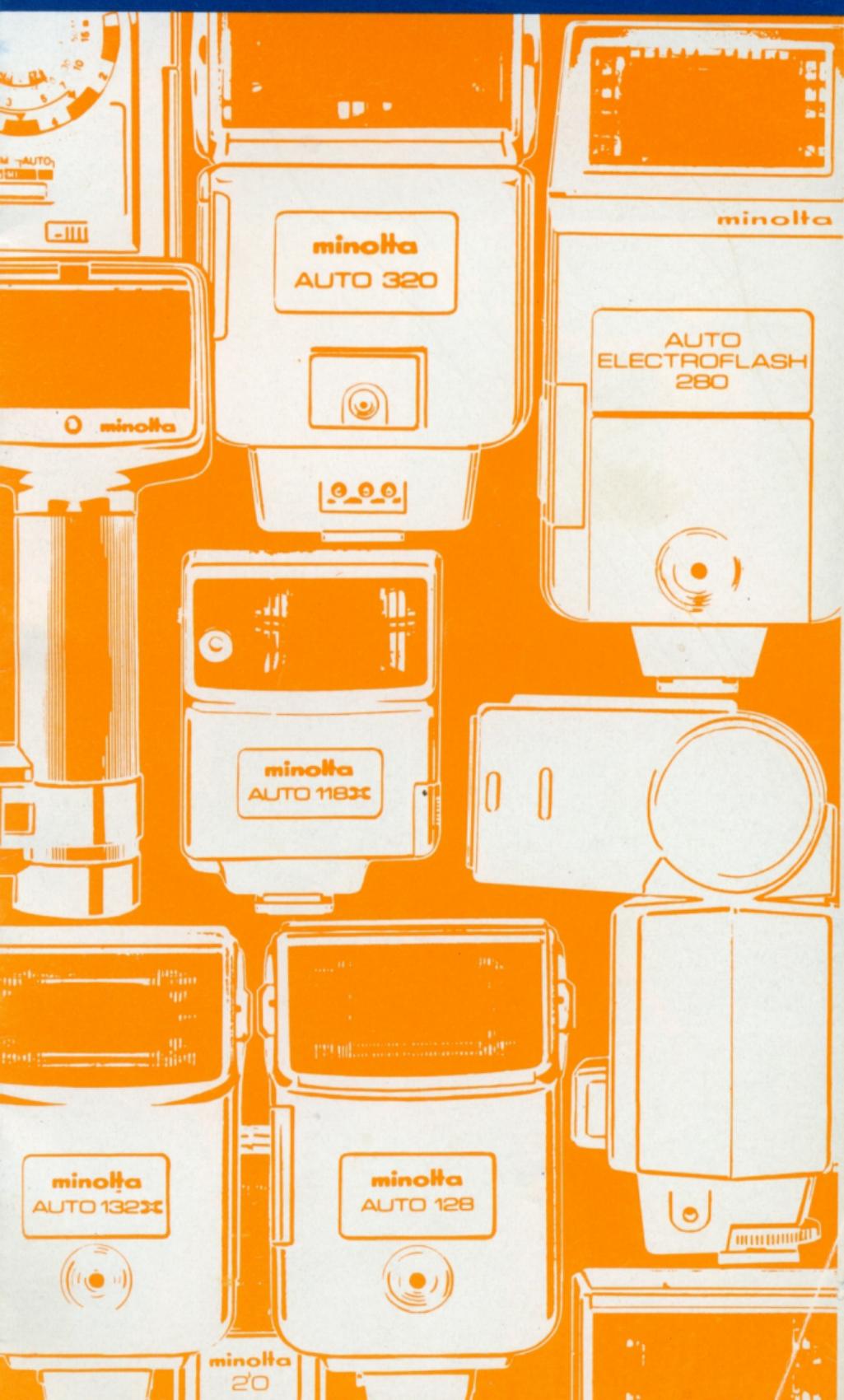


MINOLTA

AUTO ELECTROFLASH 320X/
200X/132X/118X/450/320/280/128/25
&
ELECTROFLASH 20



Tripping The Light Fantastic



Off-camera flash effects increase drama and add an imaginative flair to a variety of subjects.

Get that "professional look" in portrait photography, using a variety of daylight fill-in techniques.

The open flash technique allows stunning strobe effects to capture the excitement and mood-of-the-moment.



Minolta's full range of quality flash equipment can take you anywhere you want to go in the world of flash photography. Freeze droplets of water as they hit a flat surface...create a one-of-a-kind kaleidoscope of color and frozen movement. Welcome to the magic of flash photography through the use of Minolta quality flash equipment! Take your pick...and soon you'll be tripping the light fantastic with Minolta!



Two frame-per-second winder synchronization lets you experiment with all sorts of freeze-frame effects...and come up with a prize winner!



Want to freeze the action? Minolta Auto Electroflash units deliver up to 1/40,000 of a second!



Minolta Flash Units.....

With any one of this extensive line-up of Minolta flash units you can attain a fantastic variety of special effects simply by utilizing different flash techniques. Whether an amateur or a seasoned professional, you are assured of great results every time: Minolta technology does all the work!

The Minolta name assures you of precision-crafted, long-life components and dependable performance under even the most difficult conditions. Best of all, these units are lightweight and smartly styled. With any Minolta flash unit you choose, you can be sure of quality!

Automatic flash

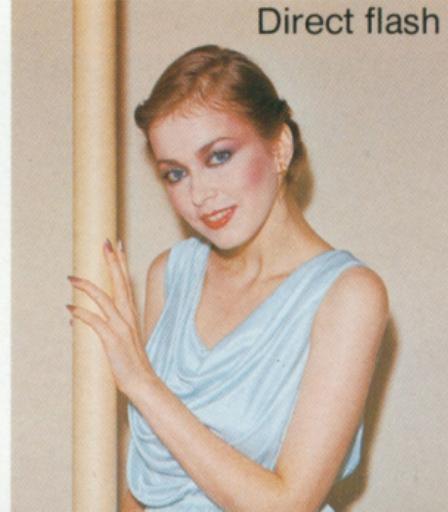
Minolta's extensive selection of automatic flash units are engineered for easy operation that eliminates errors. Simply attach the unit to your camera, make the proper settings, focus, and shoot—the automatic Minolta flash unit takes over and does the rest. The results speak for themselves...and they will be even better than you imagined!

Bounce flash

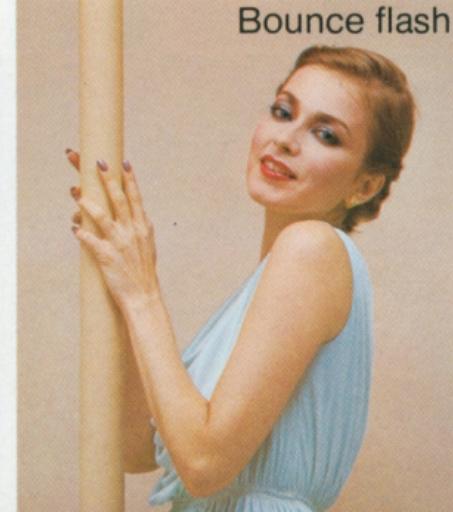
By using the bounce flash technique, you achieve a soft lighting effect that is free from harsh shadows and high contrast. The flash head on models 320X, 132X, 450, 320, 280 and 128 can be tilted back and/or swivelled so as to reflect emitted light from an overhead surface or a side wall. Most of the units feature several positions of tilt—each with a fixed stop.

Choose the angle best suited for your subject, focus and presto! You'll be amazed at the results; softer, more natural photos with just the effect you wanted to achieve...courtesy of Minolta!

Direct flash



Bounce flash



for an endless variety of uses, effects and techniques.

The series thyristor circuit

Minolta's Auto Electroflash 320X, 200X, 450, 320 and 280 units each feature a special circuitry that reduces recycling time to an absolute minimum. Minolta's series-thyristor circuit reduces recycling time to about 1/2sec., or faster, and gives more flashes per set of batteries. Minolta technology eliminates time wasted waiting for your unit to recharge! The series thyristor circuit discharges only the required amount of power; recharging is done with maximum efficiency to give you the freedom to shoot wherever and whenever you want.

\propto -special camera control

A special feature on the 320X, 200X, 132X and 118X models is the \propto -special camera control that insures precisely-exposed flash photographs every time. When these units are fully charged, an LED in the viewfinder of Minolta XD and XG cameras blinks to indicate that the flash is ready to fire. When the shutter is released, the \propto -special camera control electronically sets the camera's shutter speed to X sync. If, as sometimes happens, the flash capacitor is not fully charged or if the unit has been switched off, the camera reverts to the automatic or manual mode pre-selected. That's Minolta for you! Fail-safe photography...automatically!

1000	•
500	•
250	•
125	•
60	•
30	•

(XG)

1000	•
500	•
250	•
125	•
60	•
30	•

(XD)

Flash distance checker (FDC)

The Auto Electroflash models 320X, 132X, 320 and 128 feature a unique system that is of great help when using bounce flash techniques. Basically, FDC gives you visual confirmation that your subject is within the proper range for ideal flash coverage. After the flash has been fired in the automatic mode, a green lamp located on the back of the unit will light up to indicate that the exposure was correct. It's just that simple! Minolta technology takes the guesswork out of flash photography.



AUTO ELECTROFLASH 320X

Our newest, most advanced state-of-the-arts flash...with many new features for the utmost versatility.

What makes this Minolta Auto Electroflash 320X stand-out is that now, for the first time, you can exactly tailor the flash range you're working in. This is the only sophisticated, clip-on, automatic flash that allows such precise flash adjustment, so simply. The unbelievable versatility and flexibility of this unique flash unit is made possible by the combination of a complete system flash capability, the variable guide number/power control, and many other Minolta advances to maximize the 320X's creative functions.

Variable guide number/power control

Advanced unique new Minolta engineering has developed an easy-to-use function that allows you to determine the exact power output you need to cover the subject. This feature is invaluable for setting winder sync., faster recycling times, and perfect flash-fill for near or distant subjects.

The variable GN/power control can be used in either automatic or manual mode to allow selection, in half-stop increments, of up to nine guide-number and operating-range settings.



Remote sensor adapter (Optional accessory)

This accessory allows you to remotely use the 320X by means of a cord, for better flash fill while keeping the sensor attached to the camera for perfect exposure readings. The adapter is absolutely essential when the flash is to be used in an off-camera situation in the automatic mode.

Bounce flash adjustment

The Auto Electroflash 320X features a flash head with 4-position, 90° vertical and 11-position, 180° horizontal click stop adjustment for bounce-flash adjustment.





X-special camera control

When the unit is fully charged, an LED in the viewfinder of the XD/XG blinks to indicate that the flash is ready. When you release the shutter, the **X** special camera control electronically sets the XD/XG shutter for X sync.

Flash distance checker

The FDC on the back of the unit lights after flash firing in the automatic mode to confirm proper exposure.

Dial and f-stop illumination

To confirm you have the correct setting the illuminated dial lets you see the distance settings at a glance—even in the darkest situation. Another of the 320X's innovation is the extremely convenient LED light behind the f-stop: Minolta lights the way to virtually eliminate any error!

In summary.....

The Auto Electroflash 320X is the newest and most advanced of the **X**-series Auto Electroflashes. It is a little more sophisticated, a little more accurate, and a lot easier to use in many more situations.

Optional accessories

The complete Auto Electroflash accessory system includes: Remote-sensor adapter, AC Adapter-3, Power Grip 1 set, filter and lens panels and Ni-Cd Charger NC-2 with batteries.



AUTO ELECTROFLASH 200X

With this unit you'll never again have to worry about setting the proper sync. speed—it's done automatically!

The Auto Electroflash 200X is a cordless model that was specifically designed for use with Minolta's XD/XG cameras and which electronically solves various flash problems. It is an exceptionally easy unit to use; one that is versatile and virtually foolproof. Many special features on the Auto Electroflash 200X save you time and give you precise control so that you no longer need to worry about unusual conditions and subjects.

XY-special camera control

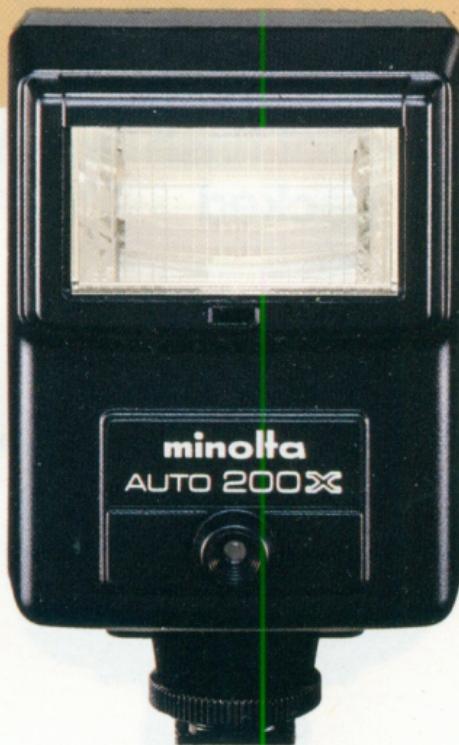
When the flash unit is fully charged, an LED in the viewfinder of the Minolta XD/XG camera blinks to indicate that the flash is ready to fire. When the shutter is released, the Auto Electroflash 200X electronically sets the camera's shutter speed to Xsync. In the event that the flash capacitor is not fully charged or if the unit has been switched off, the camera reverts to the automatic or manual mode you have previously selected.

Versatile flash power

The Auto Electroflash 200X has two operating settings for both "AUTO" and "MANUAL" modes; this allows you to choose the type of flash you need in even the most unusual circumstances.

In "Manual", the Low setting gives you winder sync. flashes up to 2 frames per second. The High setting is for conventional flash photography at maximum flash intensity. You can, on the other hand, set the unit to the Auto setting and get perfectly exposed flash photographs at either of two apertures, automatically. Perfect photography—it's a natural with Minolta technology to light the way!





Wideangle coverage

With the 200X, there is no need to worry about lighting the full scene. Thanks to the wideangle diffuser that is standard equipment with this compact unit, there is sufficient coverage for down to a 28mm lens. Even in tight locations, the 200X gives the photographer plenty of latitude so that there's no gradual falling-off of light around the edges. You get all the light you need for all the shots you want to take.

Optional accessories

The compact Ni-Cd charger NC-2 with batteries, is available for use with the Auto Electroflash 200X. With this unit, the Ni-Cd batteries that power the 200X can be recharged in only eight hours.



AUTO ELECTROFLASH 132X

The all-purpose compact flash unit with a host of power packed features.

The compact and easy-to-handle 132X offers many versatile features. It is a cordless unit that can also be used with a sync. cord if the camera has no hot shoe. The powerful output of this compact unit enables you to photograph subjects either indoors or outdoors. In addition, you have a choice of two apertures at each setting. The FDC lamp confirms autofocus brightness for correct exposure.

X-special camera control

An LED in the viewfinder of the Minolta XD/XG camera blinks to indicate that the unit is fully charged and ready to fire. The camera's shutter speed is automatically set to X sync. when the shutter is released. When the unit has not been fully charged or if it has been switched off, the camera reverts to the automatic or manual mode previously selected.

Flash distance checker (FDC)

The FDC gives you visual confirmation that the subject is within the proper range for ideal flash coverage. Trip the flash on the Auto Electroflash 132X; a green FDC lamp on the back of the unit will light if flash brightness is sufficient for proper exposure.

Bounce flash and wideangle coverage

The bounce flash technique is used to achieve a soft lighting effect that is free from harsh shadows and high contrast. The flash head moves vertically with click stops at 50°, 65°, and 90°. A snap-on wideangle diffuser allows the use of wideangle lenses down to 28mm.





Lighted computer dial and LED readout

The 132X incorporates a green illuminated control dial to facilitate its use in dark situations. LEDs behind the dial light indicate the appropriate autofocus f-stop numbers for added convenience.

Optional accessories

Optional equipment available for use with the Auto Electroflash 132X includes Minolta's color filter set that contains red, green, blue, yellow, A13(85B), ND 2X, and ND 4X filters, a wideangle diffuser for coverage with lenses down to 24mm, and the Ni-Cd charger NC-2 with batteries.



AUTO ELECTROFLASH 118X

A light, easy-to-tote flash attachment with automatic camera shutter control.

This extremely compact, lightweight unit is rugged, and can be carried anywhere. Simplicity of design gives great versatility to its use, along with fast attachment and high quality results. The 118X features automatic camera shutter control and two selectable apertures in automatic operation. Truly, a superior flash! And it weighs a scant 130g (4 $\frac{9}{16}$ oz.)!

\times -special camera control

When the 118X is fully charged, an LED in the XD/XG's viewfinder blinks to indicate "flash ready". At the instant of shutter release, the 118X's \times -special camera control automatically sets the camera's shutter speed to the proper Xsync. While recharging or when switched off, this automatic flash unit returns the camera's shutter speed to the pre-set automatic or manual exposure setting.

Twin aperture selection

The Auto Electroflash 118X gives the user two selectable apertures to use in automatic operation. At ASA 100 (DIN 21), the f/2 selection enables coverage up to 9 meters (30 feet). At f/4 you can cover subjects up to 4.5m (15 feet) with ease, and be sure of adequate flash power.





Optional accessories

Wideangle diffuser for coverage of wideangle lenses down to 28mm; also, the Minolta Ni-Cd charger NC-2 with batteries.



AUTO ELECTROFLASH 450

The versatile and powerful, energy-saving professional Auto Electroflash.

The versatile Auto Electroflash 450 is a bracket type model that will meet the demands of the most exacting photographer. The 450 is the most powerful model in the Minolta flash line with a guide number of 74 (in feet) for ASA 25, but you can also use the 450 on or off the camera to get any of the special effects you want!



Five apertures to choose from

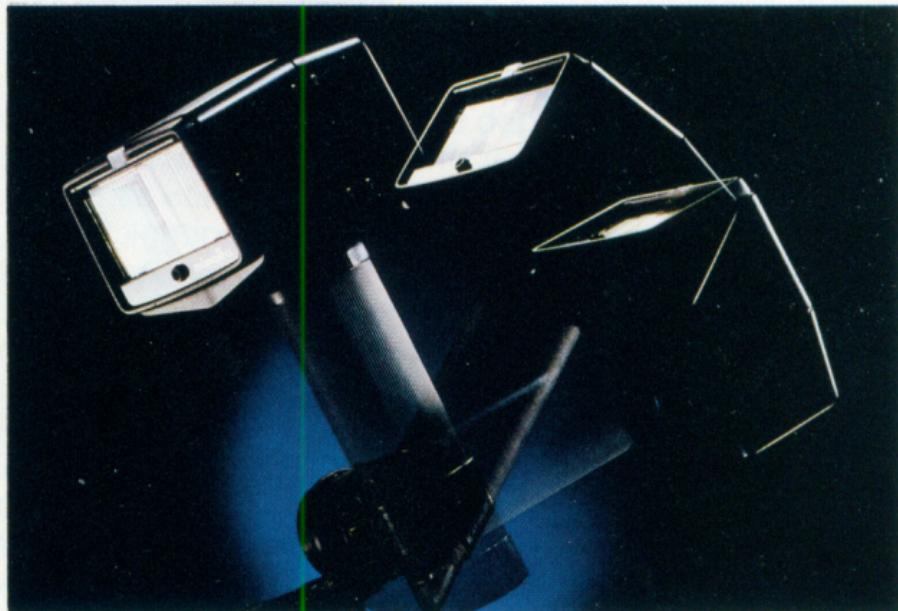
A key factor with the 450 is the wide range of apertures available with every setting, which allows you to enjoy maximum creative freedom. Whether you wish to have the fullest depth-of-field, highlight the subject or just fill-in, the 450 gives you creative use of depth-of-field.

Wideangle coverage

The 450 has a built-in wideangle diffuser that is stored in the flash head, so it is always handy when you need it. Coverage is sufficient for lenses down to 24mm wideangle. Now you won't feel like you are always in quarters that are too close for the right shots, the 450 will have you covered.

Quick recycling

With the Auto Electroflash 450 you won't miss out on the action shots. It offers quick recycling, as fast as 1/3 sec. which means flash synchronization with motor drive operation is also possible. This rapid recycling with the energy-saving series thyristor circuit enables you to capture a moving subject for stroboscopic-like effect.



Bounce flash

Bounce flash lets you bring a greater amount of individual expression to your photography, and the 450 can be used automatically both on and off the camera. For bounce flash the 450 has an adjustable bracket. For off camera and bounce flash use there is a separate sensor.

Optional accessories

A 510v battery pack* provides a maximum of 3,000 shots and gives top speed recycling. Ni-Cd charger* and cartridge* can be quickly recharged. A separate sensor for auto bounce both on and off camera is available, together with a sensor sync. cord for cameras without hot shoes.

*Not available in some areas.

AUTO ELECTROFLASH 320

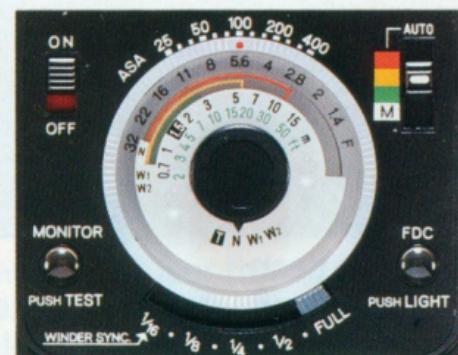
Versatile, compact, and powerful: here's the perfect flash for everyday use!

The 320 is an exact replica of the Minolta 320X, except that it is not designed with automatic camera control capability. Every other feature is similar. With the 320 you can precisely limit the flash's range, thus giving you better exposure and faster recycling time. It is amazingly simple to operate, and is a great favorite of many types of photographers.



Variable guide number/power control

This easy-to-use function allows you to determine the exact power output you need to cover the subject. It is invaluable for setting winder sync., faster recycling times and perfect flash-fill for near or distant subjects.



FDC and f-stop illumination:

The FDC on the back of the 320 lights after the flash has been fired in the automatic mode to indicate proper exposure. A push of a button lights up the dial to check distance settings. The convenient LED light behind the f-stop virtually eliminates any error! The Auto Electroflash 320 features a flash head with 4-position, 90° vertical and 11-position, 180° horizontal click stop adjustment for precise bounce-flash adjustment. It is one of the most versatile, easy-to-use flash units you'll ever own!

AUTO ELECTROFLASH

280

It handles the job with power to spare.

With the 280 you get a compact unit that has the power to handle any shooting condition indoors or out. The guide number of the 280 is a powerful 46 in feet at ASA 25. That's powerful! And, yet, it's easy to handle!



Four apertures to choose from

With continuous settings over a 4-aperture range, the 280 gives you a natural fill-in to balance out any unevenly-lit areas. At every setting, any one of the four apertures lets you control the depth-of-field...to create just the feeling you want. This feature gives you increased control over your subject, and over background lighting.

Rapid recycling

To make sure you are able to capture even the fastest action, the Auto Electroflash 280 has a minimum recycling time of only 1/2 sec. The series thyristor circuit maximizes energy saving because only the amount of energy discharged by the flash circuit has to be recharged; this makes extremely rapid recycling possible.

Versatile bounce flash

Bounce flash techniques are simplified by the Auto Electroflash 280. The flash head swivels upward 60° and from left-to-right 180°. The 280 can fully cover an area down to that of a 35mm wideangle lens.

Optional accessories

A Ni-Cd charger 280 is available. It can fully charge Ni-Cd batteries in 3½ hours without removing the batteries from the unit.



128

AUTO ELECTROFLASH

The cordless, super- powered Minolta flash with FDC.

The compact, easy-to-handle model

128 offers many versatile features.

It is cordless, but can also be used with a sync. cord if your camera has no hot shoe. The 128's powerful flash output is sufficient to cover a wide range of subjects, both indoors and out.

And a special check (FDC)

confirms autofocus brightness for correct exposure.



Flash distance checker

Now you can confirm the proper exposure of your subject before shooting, to give you uniformly excellent flash effectiveness. After the test flash is fired, a green FDC lamp on the back of the Auto Electroflash 128 will light if flash brightness is sufficient. You can now go ahead and expose film for maximum results.

Optional accessories

As optional equipment to the Auto Electroflash 128, one may use the Minolta color filter set that includes red, green, blue, yellow, A13 (85B), ND 2X and ND 4X filters; a wideangle diffuser for coverage with lenses down to 24mm; and the Ni-Cd charger NC-2 with batteries.

Bounce flash and wideangle coverage

Bounce flash is used to give natural, soft lighting effects on the subject. The 128's flash head moves to vertical click-stop positions of 50°, 65° and 90° to achieve bounce flash capability. The unit also comes with a snap-on wideangle diffuser for coverage down to a 28mm lens.



AUTO ELECTROFLASH 25



The lightweight, economy model.

This model succeeds in wrapping economy and convenience into one compact unit. The Auto Electroflash 25 weighs only 155g (5^{7/16} oz.) yet it gives you the fool-proof accuracy of Auto Electroflash. It's cordless, but can be used with a sync. cord for cameras without hot shoes. The Minolta model 25 is small, but it performs like a pro!

ELECTROFLASH 20



Super compact non-automatic.

The Electroflash 20, a non-automatic unit, connects cordlessly to the hot shoe of any camera. Powered by two AA-size batteries, you get up to 170 flashes per set of alkaline batteries and up to 40 with sealed carbon-zinc batteries. The computer dial is easy-to-read and makes exposure settings fast and easy. The Electroflash 20 is color-balanced for use with daylight type film.

Specifications

Auto Electroflash					Electroflash					
	320X	200X	132X	118X	450	320	280	128	25	20
Type	Clip-on	Clip-on	Clip-on	Clip-on	Bracket	Clip-on	Clip-on	Clip-on	Clip-on	Clip-on
Auto circuitry	Thyristor	Thyristor	Bypass	Bypass	Thyristor	Thyristor	Thyristor	Bypass	Bypass	—
Max. G. No. In meters (ASA 100) In feet (ASA 25)	32 52	20 33	32 52	18 30	45 74	32 52	28 46	28 46	25 41	20 33
Auto working range	11–0.7m (36' to 2.3')	7–0.7m (23' to 2.3')	8–0.7m (26' to 2.3')	9–0.7m (30' to 2.3')	16–0.5m (52' to 1.6')	11–0.7m (36' to 2.3')	7–0.7m (23' to 2.3')	5–0.7m (16' to 2.3')	4.5–0.7m (15' to 2.3')	—
Flash duration in sec. (Automatic)	1/20,000– 1/1,000	1/40,000– 1/1,000	1/40,000– 1/1,000	1/40,000– 1/3,000	1/20,000– 1/600	1/20,000– 1/1,000	1/30,000– 1/1,000	1/40,000– 1/1,000	1/40,000– 1/2,000	—
(Manual)	1/1,000	1/6,000 and 1/1,000	1/1,000	1/3,000	1/600	1/1,000	1/1,000	1/1,000	1/2,000	1/2,000
Selectable apertures	f/2.8, f/5.6 and f/11 at ASA 100	f/2.8 and f/5.6 at ASA 100	f/4 and f/8 at ASA 100	f/2 and f/4 at ASA 100	f/2.8, f/4, f/5.6 f/8 and f/11 at ASA 100	f/2.8, f/5.6 and f/11 at ASA 100	f/4–f/11 at ASA 100	f/5.6 at ASA 100	f/5.6 at ASA 100	—
Power sources	4 AM or Ni-Cd AA cells	4 AM, sealed C-Zn or Ni-Cd AA cells	4 AM or Ni-Cd AA cells	2 AM, sealed C-Zn or Ni-Cd AA cells	6 AM or Ni-Cd AA cells 510v battery	4 AM or Ni-Cd AA cells	4 AM or Ni-Cd AA cells	4 AM, sealed C-Zn or Ni-Cd AA cells	4 AM, sealed C-Zn AA cells	2 AM, sealed C-Zn AA cells
Recycling time in sec	0.2–8*	0.3–6*	5 or 8*	4.5, 7 or 9*	0.33–23*	0.2–8*	0.5–11	4, 7 or 8*	6 or 7*	10*
Number of flashes	60–1,600*	70–2,200*	70–160*	45–200*	50–2,000*	60–1,600*	70–1,200*	40–200*	70–210*	40–170*
Angle of coverage for lenses down to (with wideangle diffuser)	35mm 28mm	35mm 28mm	35mm 28mm	35mm	50mm 24mm	35mm 28mm	35mm	35mm	35mm	38mm
Automatic bounce flash	Possible with adjustable head	—	Possible with adjustable head	—	Possible with separate senser	Possible with adjustable head	Possible with adjustable head	Possible with adjustable head	—	—
Variable GN/power control	Incorporated	—	—	—	—	Incorporated	—	—	—	—
Camera control contact	Incorporated	Incorporated	Incorporated	Incorporated	—	—	—	—	—	—
Flash distance checker	Incorporated	—	Incorporated	—	—	Incorporated	—	Incorporated	—	—
Dimensions (width) (depth) (height)	76mm (3") 85mm (3-5/16") 123mm (4-13/16")	56mm (2-3/16") 70mm (2-3/4") 90mm (3-8/16")	65mm (2-9/16") 65mm (2-9/16") 119mm (4-11/16")	61mm (2-3/4") 47mm (1-7/8") 84mm (3-5/16")	98mm (3-5/16") 103mm (4-1/16") 230mm (9-1/16")	76mm (3") 85mm (3-1/16") 123mm (4-13/16")	72mm (2-13/16") 54mm (2-5/16") 153mm (6")	65mm (2-9/16") 65mm (2-9/16") 119mm (4-11/16")	55mm (2-3/16") 61mm (2-3/4") 105mm (4-1/2")	32mm (1-1/4") 65mm (2-9/16") 65mm (2-9/16")
Weight (without batteries)	380g (13-3/16 oz.)	210g (7-7/16 oz.)	235g (8-5/16 oz.)	130g (4-9/16 oz.)	780g (27-7/16 oz.)	380g (13-3/16 oz.)	325g (11-1/16 oz.)	220g (7-3/16 oz.)	155g (5-5/16 oz.)	90g (3-3/16 oz.)
Optional accessories	Remote-sensor adapter, AC Adapter-3, Power Grip 1 set, Panel set**; Wideangle diffuser for coverage with lenses down to 24mm, Tele panel for 100mm and longer lenses, Ni-Cd Charger NC-2 with batteries	Ni-Cd charger NC-2 with batteries	Color-filter set*** Wideangle diffuser for coverage with lenses down to 24mm, Ni-Cd charger NC-2 with batteries	Wideangle diffuser for coverage with lenses down to 28mm, Ni-Cd charger NC-2 with batteries	510v battery pack**, Ni-Cd battery cartridge & charger** Separate Sensor with sensor sync	Remote-sensor adapter, AC Adapter-3, Power Grip 1 set, Panel set***; Wideangle diffuser for coverage with lenses down to 24mm, Ni-Cd charger NC-2 with batteries	Ni-Cd batteries & charger 280	Color-filter set*** Wideangle diffuser for coverage with lenses down to 24mm, Ni-Cd charger NC-2 with batteries	—	—

*Depending upon power source and/or subject distance

**Not available in some areas

***red, green, blue, yellow, A13 (85B), ND

Specifications subject to change without notice

XD-11 Body 286⁰⁰ to 300⁰⁰
MD-11 f2.8-35mm 80⁰⁰
380⁰⁰

BELTSVILLE SNAP SHOP

XG-7 Body 199⁰⁰ to 190⁰⁰ to 208⁰⁰
XD-5 Body

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