

# minolta

PRODUCT CATALOG





# Minolta Corporation Photographic Division 1981/1982 Catalog



## Corporate Headquarters

101 Williams Drive  
Ramsey, New Jersey 07446  
(201) 825-4000  
(212) 594-8010 (N.Y.)

## Distribution Centers

*Georgia*  
5904 Peachtree Corners, East  
Norcross, Georgia 30071  
(404) 449-3600

*Illinois*  
3000 Tollview Drive  
Rolling Meadows, Illinois 60008  
(312) 398-4400  
(312) 792-2166 (Chicago)

*California*  
3105 Lomita Boulevard  
Torrance, California 90505  
(213) 530-2022  
(213) 775-4191 (Los Angeles)





# Minolta Corporation

## Photographic Division

### Catalog Contents

<b>Minolta Warranty and Service Centers</b> .....	4
---	---

<b>Minolta Electronic Auto-Exposure 35mm SLR Cameras and CLE</b> ..	A1
Minolta XK Motor Drive .....	A2
Minolta XD-11 .....	A4
Minolta XD-5 .....	A6
Minolta XG-M and Motor Drive 1 .....	A8
Minolta XG-1 .....	A10
Minolta CLE .....	A12
Minolta CLE System Accessories .....	A14

<b>Minolta SR-T 35mm SLR Cameras</b> .....	B1
Minolta SR-T 201 .....	B2
Minolta SR-T 200 .....	B4

<b>Minolta SLR Lenses and Enlarging Lenses</b>	
Minolta Lenses .....	C1
Focal lengths from 7.5mm to 1600mm Compared .....	C2
Minolta 7.5mm and 16mm Fisheyes .....	C4
Minolta 24mm Variable Field Curvature and 35mm Shift Lenses .....	C5
Minolta 250mm, 500mm, 800mm, and 1600mm Catadioptric Lenses ..	C6
Minolta 400mm and 600mm Apo Tele Lenses .....	C7
Minolta 50mm and 100mm Macro Lenses .....	C8
Minolta Varisoft Lens .....	C9
Minolta Zoom Lenses .....	C10
Minolta Lens Specifications .....	C12
Minolta Enlarging Lenses .....	C13
Minolta Lens Accessories .....	C14
Minolta Bellows Lenses .....	C15

<b>Minolta 35mm SLR Accessories</b>	
XK Motor Drive Accessories .....	D1
XK-M and XD Focusing Screens .....	D4
XK-M Focusing Screen Exposure Compensation Chart .....	D5
XD/XG Accessories .....	D6
Close-Up Accessories Magnification Chart .....	D7
Close-Up Accessories .....	D8
General Accessories .....	D11
Minolta Filters .....	D13

<b>Minolta Electronic Flash Units</b>	
Auto Electroflash 320/320X .....	D14
Auto Electroflash 320/320X Accessories .....	D15
Auto Electroflash 280 .....	D16
Auto Electroflash 200X .....	D17
Auto Electroflash 132X and 128 .....	D18
Auto Electroflash 118X, 25 and Electroflash 20 .....	D19



<b>Minolta Exposure Meters and Accessories</b> .....	E1
Auto Meter III .....	E2
Flash Meter III .....	E3
Auto Meter III and Flash Meter III Accessories .....	E4
Spotmeter M .....	E5
Auto-Spot II .....	E6
Auto-Spot II Digital .....	E7
Color Meter II .....	E8

#### **Minolta Super-8 Movie Cameras and Projectors**

Autopak-8 D12 .....	F1
Autopak-8 D12 Accessories .....	F2
XL-601 .....	F3
XL-401 .....	F4
XL-Sound 84 .....	F5
XL-Sound 64 .....	F6
XL-Sound 42 .....	F7
Accessories for Minolta XL Sound Movie Cameras .....	F8
Minolta Sound 7000 Projector .....	F9

#### **Minolta 110 Zoom SLR and Pocket Autopak 110 Cameras** ..... G1 |

110 Zoom SLR MARK II .....	G2
110 Zoom SLR .....	G4
Weathermatic-A .....	G6
Pocket Autopak 470 .....	G8
Pocket Autopak 460TX .....	G9
Pocket Autopak 450EX .....	G10
Pocket Autopak 430EX .....	G11

#### **Minolta Hi-matic 35mm Cameras** ..... H1 |

Hi-matic AF2 .....	H2
Hi-matic S2 .....	H4
Hi-matic G2 .....	H6

#### **Minolta Color Enlarger**

Color Enlarger II .....	J1
Color Enlarger II Accessories .....	J2

#### **Minolta Binoculars** ..... K1 |

Mariner Binoculars .....	K2
Compact Binoculars .....	K3
Pocket Binoculars .....	K4

#### **Minolta Repair Service Manual and General Information**

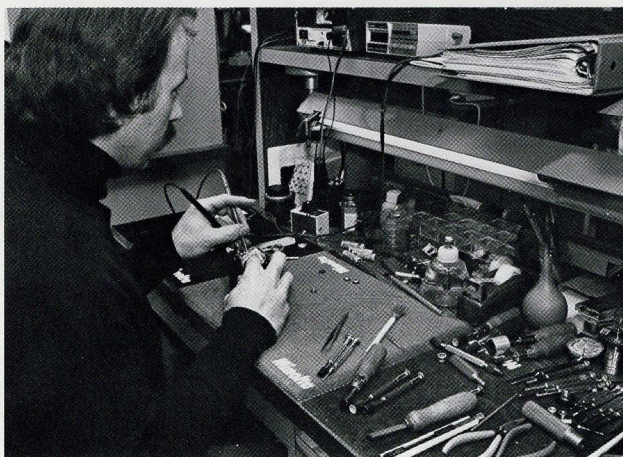
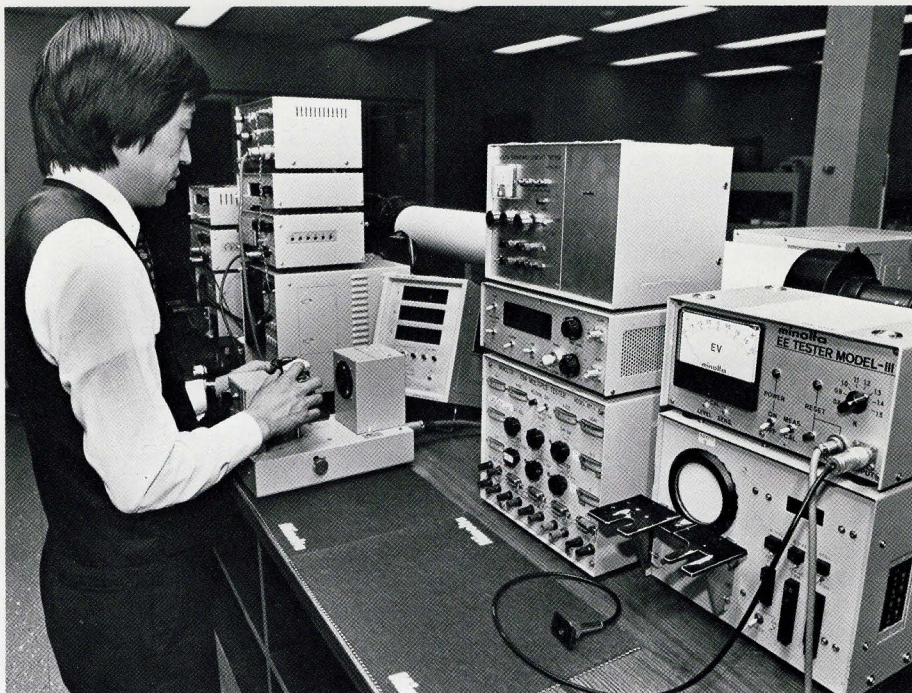
Minolta 35mm SLR Specifications .....	L1
Minolta Electronic Flash Specifications .....	L2
Minolta Exposure Meter Specifications .....	L3
Minolta Super-8 Movie Camera Specifications .....	L4
Minolta 110-Format Camera Specifications .....	L5
Minolta Hi-matic 35mm Camera Specifications .....	L6
Minolta Repair Service Manual .....	



# Minolta Warranty and Service Centers

Minolta Corporation warrants its products against defects in materials and workmanship as described on the warranty certificate packed with the product. Defective products will be repaired in accordance with the warranty terms and conditions set forth therein.

When service is needed, Minolta Regional Service Centers and Authorized Independent Service Centers are equipped with the most modern testing devices and staffed by highly qualified, factory-trained technicians. Minolta Regional Service Centers are strategically located to serve all fifty states.



## Minolta Regional Service Centers

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(201) 825-4000  
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5904 Peachtree Corners, East  
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(404) 449-3600

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3000 Tollview Drive  
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(312) 398-4400  
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3105 Lomita Boulevard  
Torrance, California 90505  
(213) 530-2022  
(213) 775-4191 (Los Angeles)

*NOTE: For additional service information see Section L*



# Minolta Electronic Auto-Exposure 35mm Single Lens Reflex Cameras and CLE



**Minolta's X-series 35mm single lens reflex cameras** combine state-of-the-art photographic technology with Minolta's traditional fine handling and human engineering to achieve precision instruments that are totally responsive to creative photography. Through-the-lens metering coupled with advanced, electronically governed focal-plane shutters provide highly accurate automatic exposure control. All X-series cameras are compatible with the vast array of lenses and accessories that comprise the Minolta single lens reflex system.

**Extreme ruggedness and flexibility are hallmarks of the Minolta XK Motor Drive.** Its integral motor drive provides single-frame and continuous-run film advance up to 3.5 frames per second with a fail-safe automatically governed framing rate. The AE-S finder gives automatic, through-the-lens exposure control via an ultra-sensitive silicon photo diode to assure exposure accuracy at the maximum framing rate. And, with motorized film rewind, changing film cassettes is quick and easy.

Interchangeable finders, focusing screens, film backs and battery packs allow the XK Motor Drive camera to adapt to virtually any assignment.

**Minolta XD-series cameras provide photographers with the versatility of multi-mode exposure control.** Minolta was first to offer this innovation, and now offers two models, both of which allow the

user the creative choice of aperture and shutter-priority automation, plus metered-manual operation at the turn of a lever. The photographer can select shutter-priority operation to freeze action or control the amount of blur for creative effect. Aperture-priority operation is not only useful for depth-of-field control, auto-exposure with bellows, extension tubes and mirror lenses, but for the control of shutter speed as well. Full metered-manual exposure control allows for special techniques.

A vibration-free electromagnetic shutter release triggers the quiet electronic shutter. Two mechanically-controlled shutter settings are also available in the event the batteries fail. An extremely bright Acute Matte Focusing Screen and extra-large instant-return mirror complement the full-information viewfinders. Versatility is added to XD-series cameras with special accessories for motorized film advance and "dedicated" automatic electronic flash units.

**The compact, economical XG-series cameras offer both aperture-priority automation and full manual exposure control.** Smooth and quiet in operation, XG-series cameras are quick and easy to use. A mere touch of a finger on the electromagnetic shutter release engages its unique sensor switch to activate the light-emitting diode (LED) viewfinder display. As an aid to prevent accidental overexposure, the release will lock if the auto-exposure

circuitry requires a shutter speed faster than 1/1000 second. These cameras allow full manual control for employing sophisticated photo techniques. The silent electronic self-timer features a large red LED signal which pulsates with increasing frequency during its ten-second operating cycle to indicate the approaching exposure.

The Motor Drive 1, designed exclusively for the XG-M, provides single-frame and continuous-run film advance up to 3.5 frames per second. Plus, auto winders and "dedicated" automatic electronic flash units are available as accessories to make the XG cameras a truly versatile system.

**The Minolta CLE** is the world's first 35mm rangefinder camera system with interchangeable lenses and aperture-priority automatic exposure control. It is a high quality, precision instrument with many sophisticated features previously found only on single lens reflex cameras. The CLE system includes three M-Rokkor lenses—28mm wide angle, 40mm standard and 90mm telephoto—and the special Auto Electroflash CLE for perfectly exposed flash pictures at any aperture.

The CLE features auto-exposure override control, bright frame lines for each M-Rokkor lens, LED shutter-speed viewfinder display, electronic self-timer, and an energy-saving touch-switch. This quiet, compact, lightweight system provides unsurpassed precision and performance.



# Minolta XK Motor Drive

The world's first 35mm single lens reflex camera designed specifically for integral motorized operation with automatic, electronic, silicon-cell through-lens exposure control, fail-safe, automatically governed framing rate and interchangeable finders, focusing screens and battery packs.

## AE-S Finder

Pentaprism provides bright viewing/focusing image. Houses instant-response, highly sensitive silicon-cell, center-weighted metering system and auto-exposure circuitry controlling XK Motor Drive's electronic shutter and automatically governed continuous-run framing rate. AE-S Finder allows automatic, metered-manual or completely manual exposure in all motor-drive operating modes, and is fully interchangeable with other XK system finders.

## Meter Coupler

Follows coupling lug on meter-coupled Minolta lenses.

## Lens Release Button

Releases bayonet mount lock for rapid lens changing.

## Synchronization Terminal

Cord-contact flash units synchronize through PC-type terminal, which is threaded for Minolta screw-lock synch cord.

## Synchronization Selector Switch

Adjusts for either X or FP flash synchronization.

## Depth-of-Field Preview Button

Full-aperture metering pushed in, depth-of-field preview or stop-down metering in outer position.

## Motor-Drive Housing

Permanently attached motor provides single-frame and continuous-run motorized film advance at framing rates to 3.5 frames per second, plus motorized rewinding. Fail-safe circuitry controlled by AE-S Finder prevents cycling faster than automatically set or user-set shutter speed permits, for proper exposure and perfect functioning. Integral design provides superior protection against dust and moisture.

## Standard Battery Pack

Holds 10 AA-size (penlight) batteries. Alkaline-manganese provide motor-drive power for 20 to 80 36-exposure cartridges, depending on framing rate. Detaches when camera is used with other interchangeable battery packs.

## Eyepiece-Shutter Control

Control opens or closes internal eyepiece blind.

## Finder Power Switch

Sets AE-S Finder for metering with part- or full-time LED/digital shutter speed indication. In OFF position, metering and LED/digital display are controlled by Senswitch in grip.

## Manual Film Rewind

Unfold crank to rewind film manually, pull knob up to open back.

## Battery Checker

When batteries powering electronic shutter and metering system have ample strength, lamp glows as battery-test lever is pushed.

## Finder Release Button

Permits removal of both finder and focusing screen.

## Reset Button

If reflex mirror locks in up position because of insufficient battery power or incorrect operating procedure, pushing button resets mirror to viewing/focusing position.

## Battery Chamber

Accepts two silver-oxide batteries (Mallory MS-76 or equivalent) powering both shutter and exposure-control system.

## Motorized Film Rewind Lever

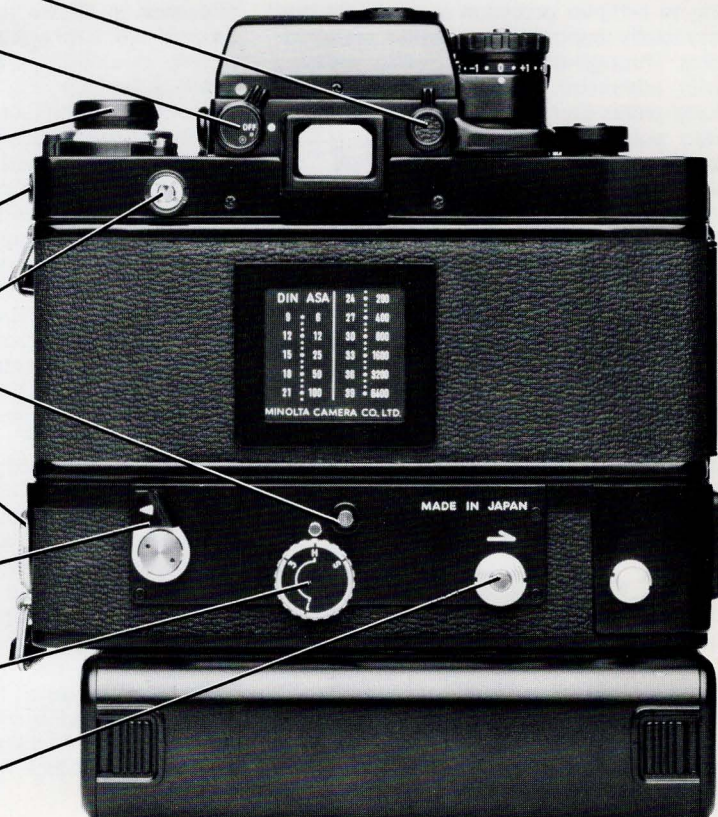
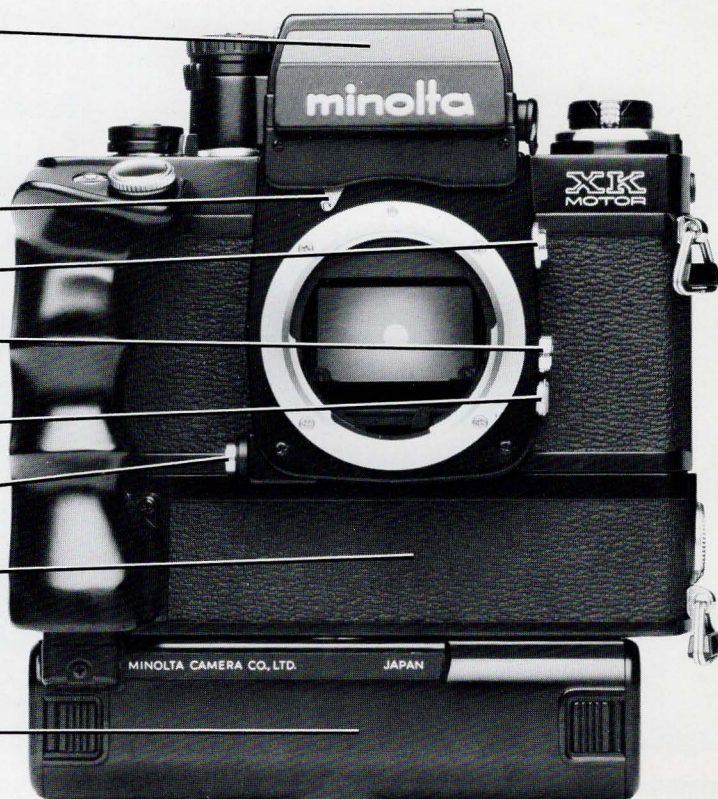
Moving lever to left rewinds film into cartridge via motor drive; sensor halts rewinding with leader outside cartridge. Lever resets to advance position when camera back is opened.

## Frame-Rate Selector

Sets motorized advance for single-frame (S) and continuous-run operation at 1, 2, 3 and 3.5 (H) frames per second. Fail-safe circuit prevents framing rate from "outrunning" shutter speed.

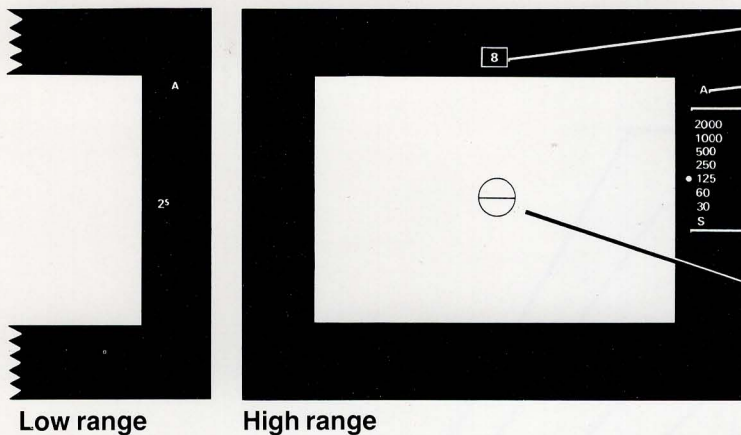
## Multiple-Exposure Control

Permits accurately registered multiple exposures in motorized or manual operating modes.



NOTE: Specifications subject to change without notice. See page L1 for additional information.





### Lens Aperture Readout

Window shows f/stop to which lens is set.

### Mode/Shutter Speed Readout

When AE-S Finder is set for auto-exposure operation, "A" is displayed; in metered-manual or nonmetered operation, user-set shutter speed is displayed.

### Shutter Speed Scale

Dual-range scale with stepless LED (High Range)/digital (Low Range) indication of speed being set automatically in AUTO mode or speed required for proper exposure in metered-manual mode. Range-change indication provided.

### Type PM Focusing Screen

Matte fresnel field with central split-image spot surrounded by microprism collar. Supplied as standard with XK Motor Drive, easily interchangeable.

### Shutter Speed Display-Range Selector

With lever angled down AE-S Finder displays high range (1/30 to 1/2000 second); with lever pointing forward, finder display switches to low range (8 seconds to 1/15).

### Operating Button and Lock Ring

Light pressure on electromagnetic-relay operating button releases shutter and triggers motorized film advance. Rotating lock ring prevents accidental operation.

### Anatomical Grip with Senswitch

Contoured for secure, comfortable holding. Senswitch (not visible) responds to fingertip pressure when grip is held and turns on exposure system instantly.

### Motor Drive Battery Checker

Push button and gauge (not visible) on side of hand grip monitor motor-drive battery power.

### Remote Control Input Jack

Accepts electrical connecting cords for intervalometers and other remote releases.

### Film Speed Setting Lock Release

Button must be pressed to change film speed setting.

### Long Exposure Selector Lever

For manual selection of electronically timed speeds from 2 to 16 seconds, with shutter speed dial set to B.

### Exposure Counter

Additive type, resets automatically when camera back is opened. Counts 1 through 40, magnified for easy reading.

### Auto-Exposure Override Control

Manually alters automatic exposure; up to  $\pm 2$  EV continuous range, with  $\frac{1}{2}$ -EV click stops and lock at 0.

### Shutter Speed/Function Selector and Lock Release

On AUTO, provides stepless, automatically set, electronically timed speeds from 8 seconds through 1/2000. Electronically timed stepped speeds may be set from 1 second to 1/2000 in metered-manual operation. Mechanically governed B and X settings allow long time exposures and electronic flash synch at 1/100 second, respectively. Central lock release button must be pressed to move dial from AUTO setting.

### Manual Film Advance Lever

Comfortably contoured single- or multiple-stroke lever has 20° standoff from body for easy access, smooth 110° winding stroke.

### Compensation Factor Selector

Adjusts meter response for certain focusing screen / lens combinations.

### Film Speed Selector

AE-S Finder may be set for film speeds from ASA 12 to ASA 6400 in 1/3-stop increments.

### Accessory Mount

Accepts lock-on accessory hot-shoe mount for cordless and cord-contact flash units.

### Standard Battery Pack Attachment Screw

Finger cutouts in oversized attachment screw head permit installing or removing battery pack without tools. Head is coin-slotted for convenience, and centrally threaded to accept tripod mounting screw.

## XK Motor Drive





# Minolta XD-11

The world's first compact 35mm SLR camera with multi-mode through-the-lens exposure control.

## Illumination Window

Light entering this window illuminates finder display indicating manually set shutter speed.

## Red Lens Index

To insert lens, match red index marker on lens mount to red index dot on camera, twist clockwise until lens locks.

## Lens Release Button

Push button to release lens lock for quick changing.

## Meter Coupler

Follows coupling lug on meter-coupled Minolta lenses.

## Viewfinder LED Display Coupler

Secondary lug on MD Rokkor-X and MD Celtic lenses engages the coupler when lens is at minimum aperture to activate LED aperture indicator display during shutter priority operation.

## PC Flash Synchronization Terminal

Cord-contact flash units synchronize with the shutter through this terminal.

## Oversized Instant-Return Mirror

Extra-large mirror prevents finder image cut-off even with extremely long telephotos or in close-up work. Special damper mechanism minimizes vibration and noise.

## Variable-Delay Self-Timer

May be set to release after approximately 10 seconds delay.

## Depth-of-Field Preview Button

In normal outer position, permits full-aperture metering and viewing; pushed-in position permits stopped-down metering and previewing depth of field.

## Bayonet Lens Mount

Rugged flange assures positive accurate seating of lens on camera body.

## Electronic Shutter

Metal-blade Seiko shutter (not shown) has stepless automatic speeds from 1 to 1/1000th second, manually set stepped speeds from 1 to 1/1000th second, plus "B," "X" (1/100th second) and "O" (1/100th second). The "B" and "O" settings are mechanically governed to provide a fail-safe against battery failure. (The Auto Winder D also operates in single frame with the camera on the mechanical settings.)

## Safe-Load Signal

Indicates that film is loaded and advancing properly through camera.

## Film Rewind

Unfold crank to rewind film, pull up on knob to open camera back.

## Eyepiece-Shutter Control

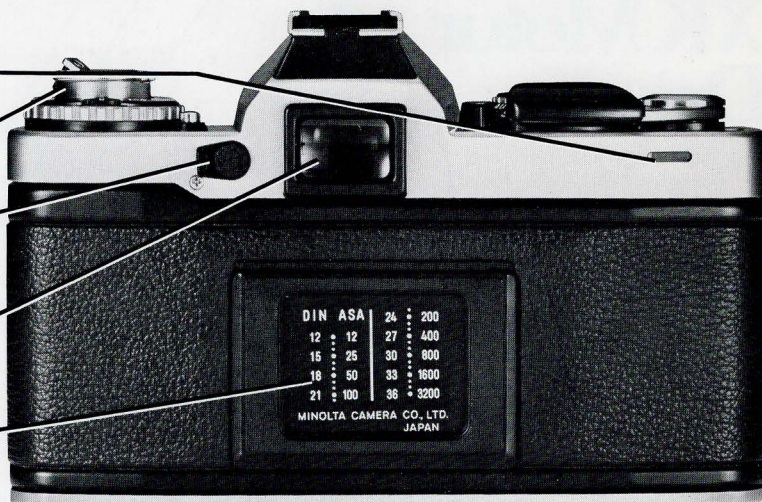
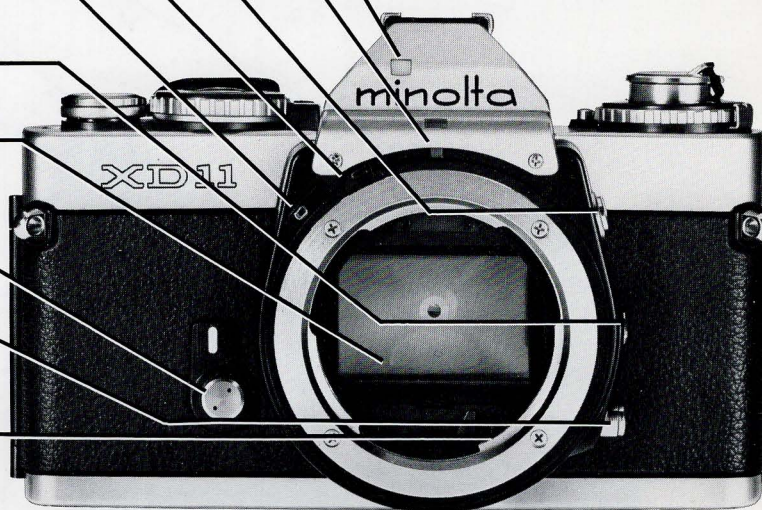
Turning control closes internal eyepiece blind to prevent stray light from entering and affecting auto-exposure when photographer is not viewing subject through finder.

## Finder Eyepiece

Oversized eyepiece for easy viewing even with eyeglasses. Slotted to accept correction eyepieces, anglefinder, magnifier.

## Memo Holder

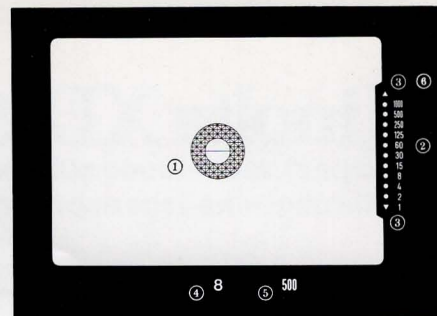
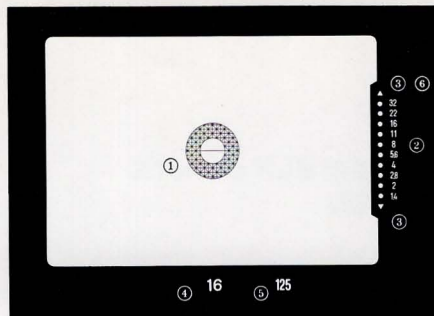
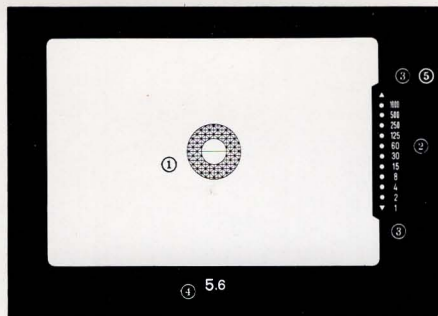
Frame holds end of film box as film-type reminder. Table converts DIN film speeds to ASA ratings.



DIN	ASA	24	200
12	12	27	400
15	25	30	800
18	50	33	1600
21	100	36	3200

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JAPAN





### Viewfinder Mode Readout

#### Aperture-priority mode:

1. Split/micro spot
2. Shutter speed scale
3. Over/under range indication
4. Pre-selected aperture
5. LED flash-ready signal

#### Shutter-priority mode:

1. Split/micro spot
2. Aperture Scale
3. Over/under range indication
4. Pre-set minimum aperture (in green)
5. Pre-selected shutter speed
6. LED flash-ready signal

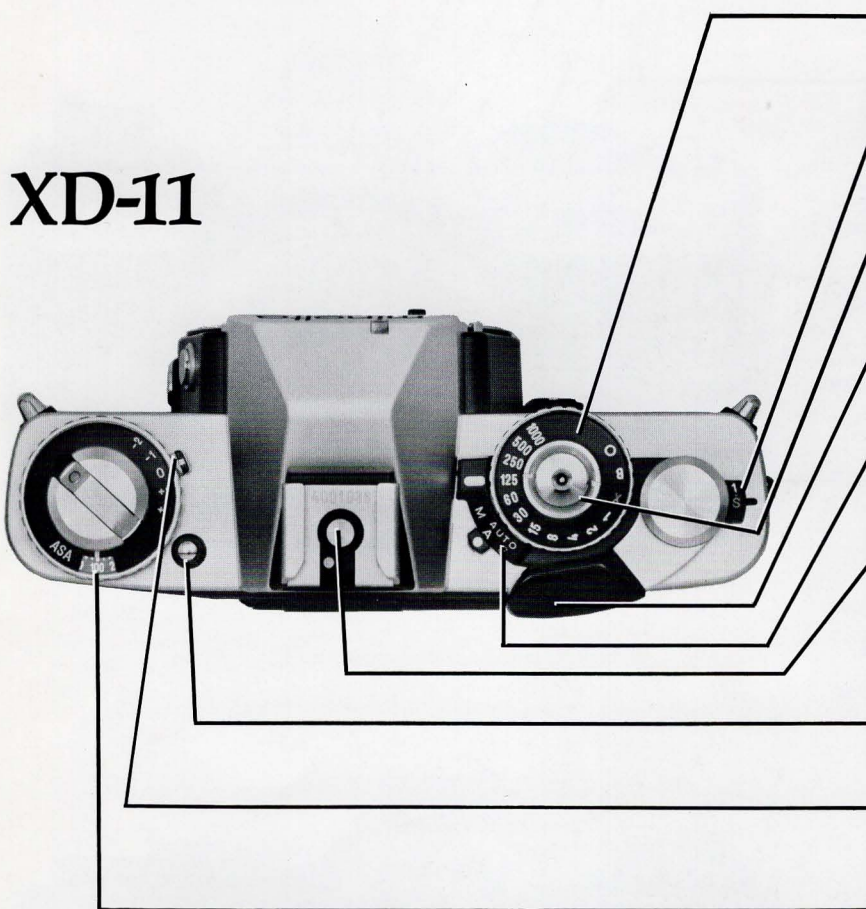
#### Manual mode:

1. Split/micro spot
2. Shutter speed scale
3. Over/under range indication
4. Pre-set aperture
5. Pre-set shutter speed
6. LED flash-ready signal

### Split-Image Rangefinder with Microprism Collar and Surrounding Acute Matte Field

Extremely bright Acute Matte Focusing Screen permits fast, precise focusing and composing in all photographic situations. Three alternate Acute Matte screen patterns are also available for the XD-11. See page D4 for additional information.

## XD-11



#### Shutter Speed Dial

Easily read markings for speeds from 1 to 1/1000th second, plus "B" and "O" (1/100th second). "X" synch at 1/100th (engraved in red) for electronic flash.

#### Exposure Counter

Additive type, resets automatically when camera back is opened. Counter does not advance with multiple exposures.

#### Shutter Release

Electromagnetic release provides gentle, shake-free exposure. Partial depression activates meter and LED readout. Threaded for cable release and remote cords.

#### Film Advance Lever

Comfortably contoured single-stroke lever has 30° standoff from camera body for quick access, silk-smooth 130° winding stroke.

#### Exposure Mode Control

Three position lever provides quick selection of aperture or shutter priority automation, or manual metering.

#### Flash Hot Shoe

Accepts standard shoe mount electronic flash units. Cordless synchronization with hot-shoe units. PC-cord synch with others. Flash automatically switches camera shutter to "X" synch at 1/100 second when dedicated companion Minolta flash units (designated "X") are attached and fully recycled. (See pages D14, D17, D18, D19 for additional information).

#### ASA Lock Release

Button must be depressed to unlock ASA setting scale, preventing accidental movement.

#### Auto-Exposure Override Control

Allows manual biasing of automatic exposure up to  $\pm 2$  EV in click stops or continuously. Locks at click stops and in normal position.

#### ASA Setting Scale

Film speed range ASA 12 to ASA 3200 in 1/3-stop increments.

#### Electrical Socket

Engages with prong from Auto Winder D.

#### Tripod Socket

Sturdy socket, positioned on lens axis, accepts standard tripod mounting screw.

#### Battery Chamber

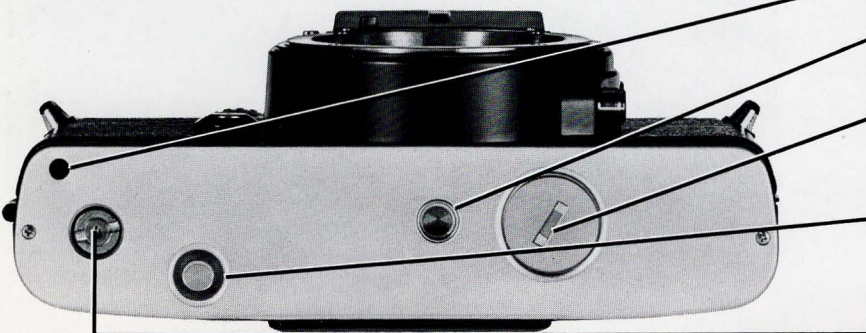
Contains two 1.5 volt silver-oxide cells (S-76 or equivalent) that power exposure system and electronically governed shutter.

#### Film-Release Button

Pressing button releases film-transport system, freeing film for rewinding into cartridge. Button remains in while film is being rewound. Depressing button also allows for intentional multiple exposure.

#### Film Advance Coupler

Connects to Auto Winder D for motorized film advance. (See page D-6 for additional information.)



**Size without lens:** 2 x 3 3/8 x 5 3/8 inches (51 x 86 x 136mm).

**Weight without lens and batteries:** 19 1/4 ounces (560 grams).

**Power source:** Two 1.5V silver oxide (S-76 or equivalent).



# Minolta XD-5

**A compact, multi-mode automatic 35mm SLR camera with through-the-lens exposure control.**

## Red Lens Index

To insert lens, match raised red index dot on lens mount to red index mark on camera, twist clockwise until lens locks.

## Lens Release Button

Push button to release lock for removing interchangeable lenses.

## Meter Coupler

Follows coupling lug on meter-coupled Minolta lenses.

## Viewfinder LED Display Coupler

Secondary lug on MD Rokkor-X and MD Celtic lenses engages the coupler when lens is set at minimum aperture to activate LED aperture display during shutter-priority automatic operation.

## PC Flash Synchronization Terminal

Cord-contact flash units synchronize with the shutter through this terminal.

## Oversized Instant-Return Mirror

Extra-large reflex mirror prevents finder image cut-off with long telephoto lenses or during close-up photography. Special damper mechanism minimizes noise and vibration.

## Variable-Delay Self-Timer

Mechanical timer, releases shutter after approximately 10 seconds delay.

## Depth-of-Field Preview Button

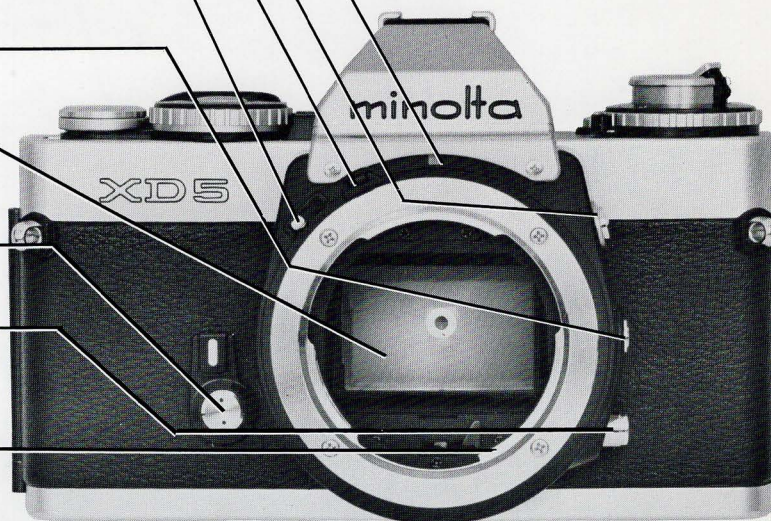
Spring-loaded button permits full-aperture metering and viewing in normal outer position; pushed in position permits depth-of-field preview and stopped-down metering.

## Bayonet Lens Mount

Rugged flange assures lasting, precision mounting of lens on camera body.

## Electronic Shutter

Metal-blade Seiko shutter (not shown) has stepless automatic speeds from 1 to 1/1000 second; manually set stepped speeds from 1 to 1/1000 second, plus "B", "X" (1/100 second) and "O" (1/100 second). The "B" and "O" settings are mechanically governed and operate even when the camera batteries are dead. (The Auto Winder D also operates in single frame with the camera on the "B" and "O" settings.)



## Film Rewind

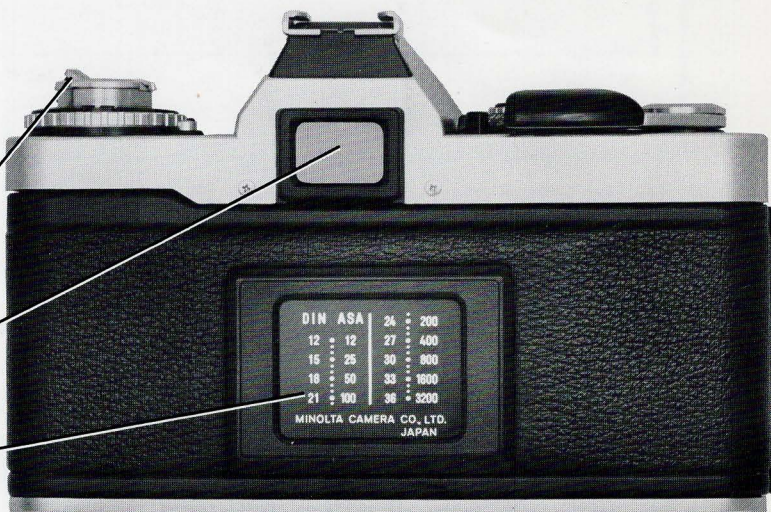
Unfold crank to rewind film, pull up knob to open camera back.

## Finder Eyepiece

Oversized eyepiece for easy viewing even with eyeglasses. Accepts eyepiece correction lenses, anglefinder, magnifier, rubber eyepiece hood or finder eyepiece cap.

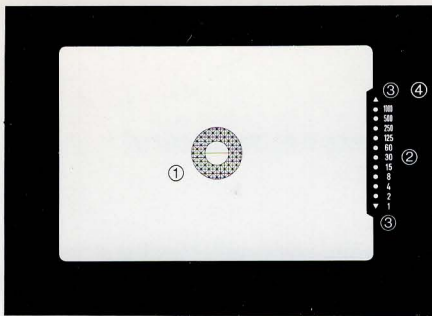
## Memo Holder

Frame holds end of film box as film-type reminder. Table converts DIN film speeds to ASA ratings.



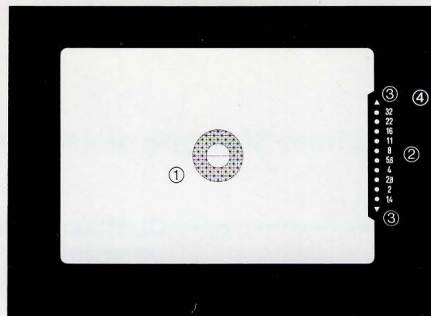
NOTE: Specifications subject to change without notice.  
See page L1 for additional information.





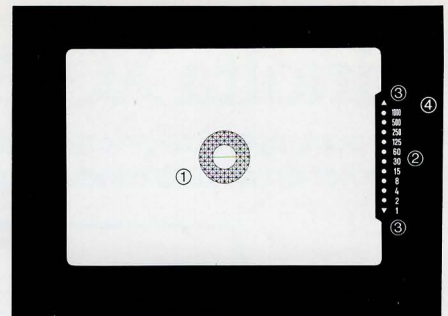
#### Aperture-priority mode:

1. Split/micro spot
2. Shutter speed scale
3. Over/under range indication
4. LED flash-ready signal



#### Shutter-priority mode:

1. Split/micro spot
2. Aperture Scale
3. Over/under range indication
4. LED flash-ready signal



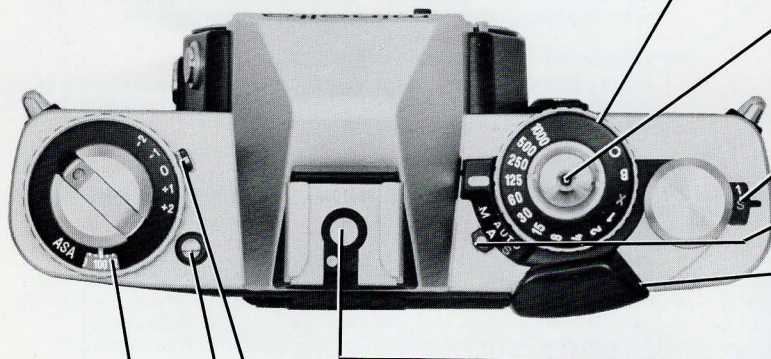
#### Manual mode:

1. Split/micro spot
2. Shutter speed scale
3. Over/under range indication
4. LED flash-ready signal

### Split-Image Rangefinder with Microprism Collar and Surrounding Acute Matte Field

Extremely bright Acute Matte Focusing Screen permits fast, precise focusing and composing in all photographic situations. Three alternate Acute Matte screen patterns are also available for the XD-5. See page D4 for additional information.

## XD-5



#### Shutter Speed Dial

Highly visible markings for speeds from 1 to 1/1000 second, plus "B" and "O" (1/100 second). "X" synch at 1/100 (engraved in red) for electronic flash.

#### Shutter Release

"Soft-touch," electromagnetic release provides gentle, vibration-free exposure. Partial depression activates metering system and LED readouts. Threaded for mechanical cable release or electrical remote cords.

#### Exposure Counter

Additive type, resets automatically when camera back is opened. Counter does not advance with multiple exposures.

#### Exposure Mode Control

Conveniently-placed, three-position lever allows quick selection of aperture or shutter priority automation as well as metered manual.

#### Film Advance Lever

Comfortable, plastic-tipped, single-stroke lever has 30° standoff from camera body for quick access, smooth 130° winding stroke.

#### Flash Hot Shoe

Accepts standard shoe mount electronic flash units. Cordless synchronization with hot-shoe units. PC-cord synch with others. Flash automatically switches camera shutter to "X" synch at 1/100 second when dedicated companion Minolta flash units (designated "X") are attached and fully recycled. (See pages D14, D17, D18, D19 for additional information).

#### Auto-Exposure Override Control

Permits manual biasing of automatic exposure up to  $\pm 2$  EV in click stops or continuously. Locks at click stops and in normal position.

#### ASA Lock Release

To prevent accidental movement, button must be depressed to unlock ASA setting scale.

#### ASA Setting Scale

Film speed range ASA 12 to ASA 3200 in  $\frac{1}{3}$ -stop increments.

#### Electrical Socket

Engages with prong from Auto Winder D.

#### Tripod Socket

Sturdy socket, positioned on lens axis, accepts standard tripod mounting screw.

#### Battery Chamber

Accepts two 1.5 volt silver-oxide cells (S-76 or equivalent) that power exposure system and electronically governed shutter.

#### Film-Release Button

Pressing button releases film-transport system, freeing film for rewinding into cartridge. Button remains in while film is being rewound.

#### Film-Advance Coupler

Connects to Auto Winder D for motorized film advance. (See page D-6 for additional information.)



**Size without lens:** 2 x  $3\frac{3}{8}$  x  $5\frac{5}{8}$  inches (51 x 87 x 136.5mm).

**Weight without lens and batteries:** 18 $\frac{1}{2}$  ounces (525g).

**Power source:** Two 1.5V silver oxide (S-76 or equivalent).



# Minolta XG-M

A compact, aperture-priority automatic 35mm SLR with metered-manual exposure control and motor drive/auto winder capability.



## Contoured Hand Grip

Convenient, waffled grip for secure, comfortable handling of the XG-M.

## Self-Timer/Battery Check LED Signal

Large red LED signal pulsates with increasing frequency during the 10-second self-timer operation cycle. Glows steadily when shutter-speed lock release is depressed for battery check.

## Red Lens Index

To mount lens, match red index dot on lens mount to red index mark on camera, twist clockwise until lens locks.

## Lens Release Button

Push button to release lens lock for quick changing.

## Meter Coupler

Follows coupling lug on meter-coupled Minolta lenses.

## Remote Control Socket

Threaded for use with accessory mechanical cable releases or electrical remote control cords for vibration-free triggering of the XG-M.

## Oversized Instant-Return Mirror

Extra-large, quick-return mirror prevents finder image cutoff, even with long telephoto lenses or during critical close-up work.

## Depth-of-Field Preview Button

Spring-loaded button permits full-aperture metering and viewing in normal outer position; pushed in position provides depth-of-field preview and stopped-down metering.

## Bayonet Lens Mount

Rugged flange assures positive seating of lens on the camera body.

## Flash Hot Shoe

Accepts standard shoe-mount electronic flash units. Cordless synchronization with hot-shoe units. PC-cord synchron with others via PC terminal. Flash automatically switches camera shutter to X-synch at 1/60 second when dedicated Minolta Auto Electroflash units (designated "X") are attached and fully recycled. (See pages D14, D17, D18, D19 for additional information.)

## Film Advance Lever

Comfortably contoured lever advances film with a smooth, single 130° stroke. Has 30° standoff from camera body for quick access.

## Finder Eyepiece

Oversized eyepiece for easy viewing even with eyeglasses. Accepts eyepiece correction lenses, anglefinder, magnifier, rubber eyepiece hood or finder eyepiece cap.

## Memo Holder

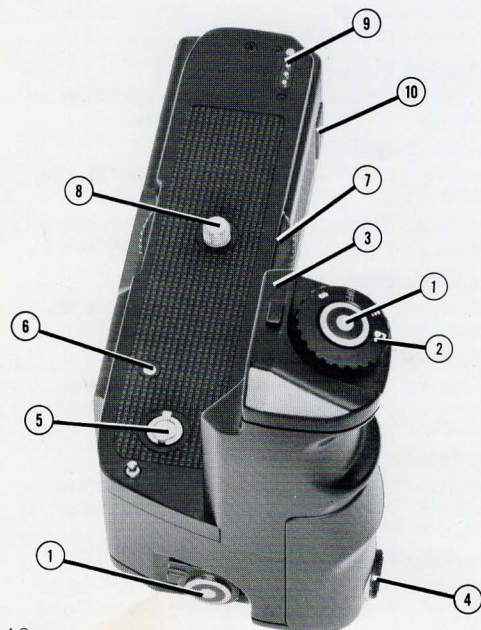
Frame holds film box tab as film-type reminder. ASA-DIN conversion chart. Detachable back cover interchanges with accessory Data Back G.

## Electronic Shutter

Horizontal-traverse, focal-plane shutter (not shown) with electromagnetic release. Stepless automatic speeds from 1 to 1/1000 second, manually set stepped speeds from 1 to 1/1000 second, plus B; X-synch at 1/60 second. Shutter action is smooth and quiet. In automatic mode, shutter release locks to prevent overexposure when speed required for proper exposure exceeds 1/1000 second.

## Motor Drive 1

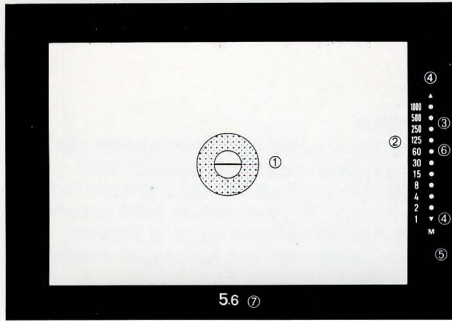
- |                                    |                               |
|------------------------------------|-------------------------------|
| 1. Electromagnetic Shutter Release | 6. Rewind Pin                 |
| 2. Frame-Rate Setting Dial         | 7. Mounting Screw Drive Wheel |
| 3. Setting Dial Release Lock       | 8. Mounting Screw             |
| 4. Remote Control Socket           | 9. Electrical Contact Pins    |
| 5. Film Advance Coupler            | 10. Battery Chamber Release   |



NOTE: Specifications subject to change without notice.  
See page L1 for additional information.



# Minolta XG-M



## Split-Image Range-finder with Microprism Collar and Surrounding Acute Matte Field

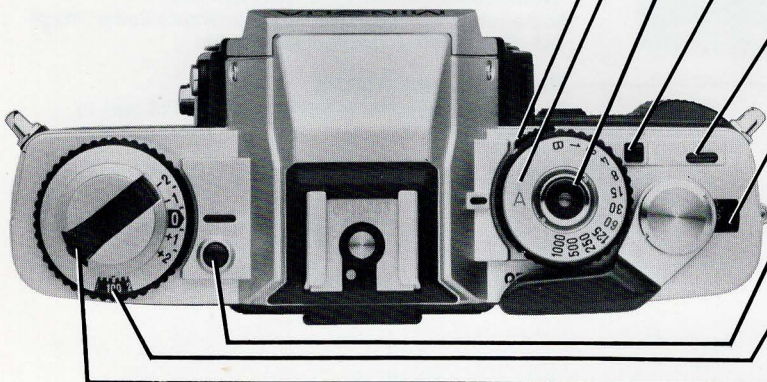
Extremely bright Acute Matte Focusing Screen provides exceptional corner-to-corner brightness for fast, accurate focusing and composing with all lenses.

## Shutter Speed Scale

LED indicators display the stepless shutter speed being set in the automatic exposure mode. Triangular LED's serve as under/overexposure warning signals. The 1/60 second LED indicator also serves as a flash-ready signal by blinking when dedicated "X-series" Minolta Auto Electroflash units used with the XG-M are fully recycled. Manual LED ("M") indicator appears in the viewfinder when camera is set at stepped manual shutter speeds.

## Viewfinder Readout

1. Split/micro focusing spot.
2. Shutter speed scale.
3. LED shutter speed indicator shows the shutter speed being selected by the automatic exposure system.
4. LED over/under range indicators.
5. LED metered-manual indicator.
6. LED flash-ready signal at 1/60 second position.
7. Pre-selected aperture.



## On/Off Switch

Convenient control turns camera on or off.

## Shutter Speed Dial

"A" sets camera on automatic mode and locks to prevent accidental changing. When shutter speed lock release is depressed, dial can be moved to stepped speeds from 1 to 1/1000 second, plus B.

## Electromagnetic Shutter Release

Provides vibrationless operation. The release features an electrical sensor switch that activates the viewfinder LED shutter speed display at the touch of a finger. Slight pressure on the release also activates metering system when wearing gloves. Further pressure triggers shutter. Release locks to prevent overexposure when the auto-exposure system requires a shutter speed faster than 1/1000 second.

## Shutter Speed Dial Lock Release/Battery Check

Press button to move shutter speed dial off "A" (automatic-exposure mode) position to set shutter speeds manually. Simultaneously, the LED signal on the front of the camera glows steadily for battery check.

## Safe-Load Signal

A moving red bar indicates that the film is loaded and advancing properly.

## Exposure Counter

Additive type, resets automatically when camera back is opened.

## Auto Exposure Override Control

Permits manual biasing of automatic exposure up to  $\pm 2$  EV in full or half click stop increments. Locks in normal position.

## ASA Setting Scale

Pull outer ring up to set film speeds from ASA 25 to ASA 1600.

## Film Rewind

Unfold crank and turn clockwise to rewind film, pull up knob to open camera back.

## PC Flash Synchronization Terminal

Cord-contact flash units synchronize with the shutter through this terminal.

## Film Advance Coupler

Connects to Motor Drive 1 or Auto Winder G for motorized film advance. (See page D6 for additional information.)

## Film Release Button

Pressing button releases film-transport system, freeing film for rewinding. Button remains in while film is being rewound.

## Tripod Socket

Sturdy socket, positioned on lens axis, accepts standard tripod mounting screw.

## Motor Drive Electrical Contact/Socket

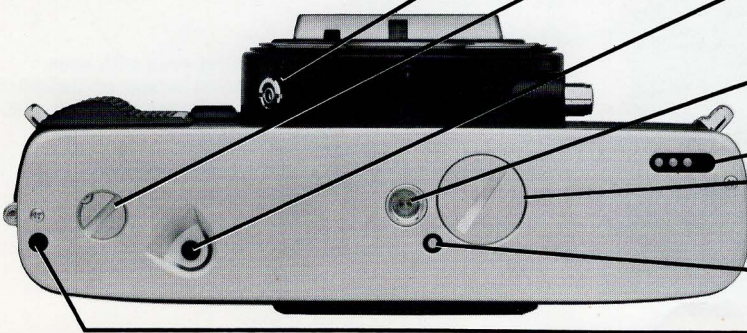
## Battery Chamber

Accepts two 1.5 volt silver-oxide cells (S-76 or equivalent) that power exposure system and electronically governed shutter.

## Winder Electrical Contact

## Motor Drive/Winder-Pin Socket

Engages with guide pin from Motor Drive 1 or Auto Winder G.



**Size Without Lens:**  
2 1/16 x 3 9/16 x 5 7/16 inches  
(52 x 89.5 x 138mm)

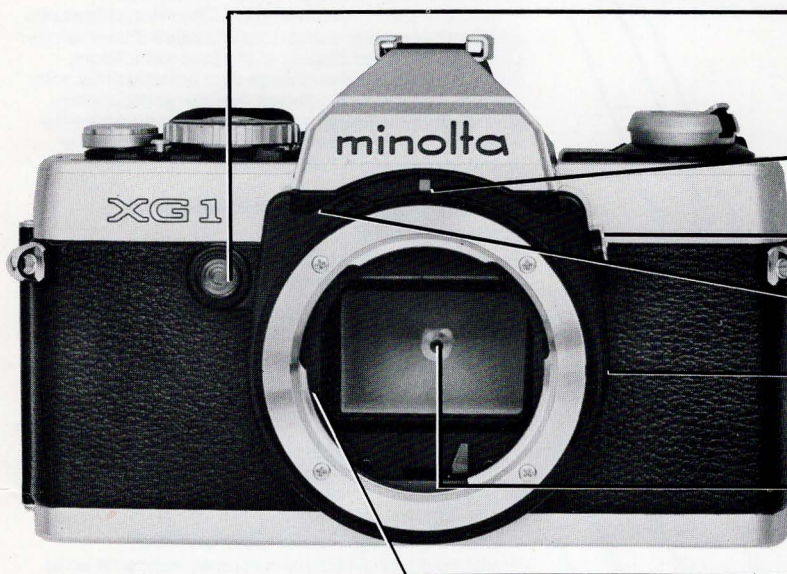
**Weight Without Lens and Batteries:**  
18 3/8 ounces (520g)

**Power Source:**  
Two 1.5 volt silver-oxide batteries  
(S-76 or equivalent)



# Minolta XG-1

An economical, compact 35mm SLR with aperture-priority automatic exposure and manual control.



## Electronic Shutter

Horizontal-traverse, focal-plane (not shown) with electromagnetic release. Stepless automatic speeds from 1 second to 1/1000, manually set stepped speeds from 1 second to 1/1000, plus "B"; X-synch at 1/60 second. In automatic mode, shutter release locks to prevent overexposure when speed required for proper exposure exceeds 1/1000 second.

## Self-Timer/Battery Check LED Signal

Large red LED signal pulsates with increasing frequency during the 10-second self-timer operation cycle. Glows steadily when operating selector is set to "B.C." for battery check.

## Red Lens Index

To mount lens, match red index dot on lens mount to red index mark on camera, twist clockwise until lens locks.

## Lens Release Button

Push button to release lens lock for quick changing.

## Meter Coupler

Follows coupling lug on meter-coupled Minolta lenses.

## Remote Control Socket

Threaded for use with mechanical cable releases or optional electrical remote control cords for vibration-free triggering of the XG-1.

## Oversized Instant-Return Mirror

Extra-large, quick-return mirror prevents finder image cut-off in all photographic situations.

## Bayonet Lens Mount

Rugged flange assures positive seating of lens to camera body.

## Flash Hot Shoe

Accepts standard shoe mount electronic flash units. Cordless synchronization with hot-shoe units. PC-cord synch with others via PC terminal. Flash automatically switches camera shutter to flash synch at 1/60 second when dedicated companion Minolta flash units (designated "X") are attached and fully recycled. (See pages D14, D17, D18, D19 for additional information).

## Film Advance Lever

Comfortably contoured lever advances film with a smooth, single 130° stroke. Has 30° standoff from camera body for quick access.

## Finder Eyepiece

Oversized eyepiece for easy viewing even with eyeglasses. Accepts eyepiece correction lenses, anglefinder, magnifier, rubber eyepiece hood or finder eyepiece cap.

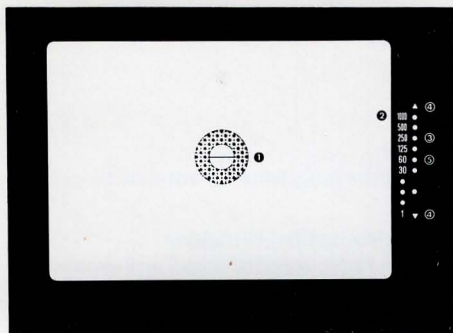
## Film-Speed Conversion Table

Table converts DIN film speeds to ASA ratings.





# Minolta XG-1



## Split-Image Range-finder with Microprism Collar and Surrounding Fresnel Field

Provides corner-to-corner brightness for fast, accurate focusing and composing with all lenses.

## Viewfinder Readout

1. Split/micro focusing spot.
2. Shutter speed scale.
3. LED shutter speed indicator shows the shutter speed being selected by the automatic exposure system.
4. LED over/under-range indicators.
5. LED flash-ready signal at 1/60 sec. position.

## Shutter Speed Scale

LED indicators display the stepless shutter speed being set in the automatic exposure mode. Triangular LED's serve as under/over exposure warning signals. The 1/60 second LED indicator also serves as a flash-ready signal by blinking when dedicated companion Minolta flash units used with the XG-1 are fully recycled.

## Shutter Speed/Function Dial

"A" sets camera on automatic mode and locks to prevent accidental movement. When function lock release is depressed, the "A" can be moved to provide auto-exposure override up to  $\pm 2$  EV using the adjacent scale; or turning further clockwise for stepped speeds from 1 to 1/1000 second, plus "B". Pull outer ring up to set film speeds from ASA 25 to ASA 1600.

## Function Lock Release

Press button to move shutter speed dial off "A" (automatic-exposure mode) setting for override control or manually selected shutter speed.

## Safe-Load Signal

A moving red bar indicates that the film is loaded and is advancing properly.

## Exposure Counter

Additive type, resets automatically when camera back is opened.

## Electromagnetic Shutter Release

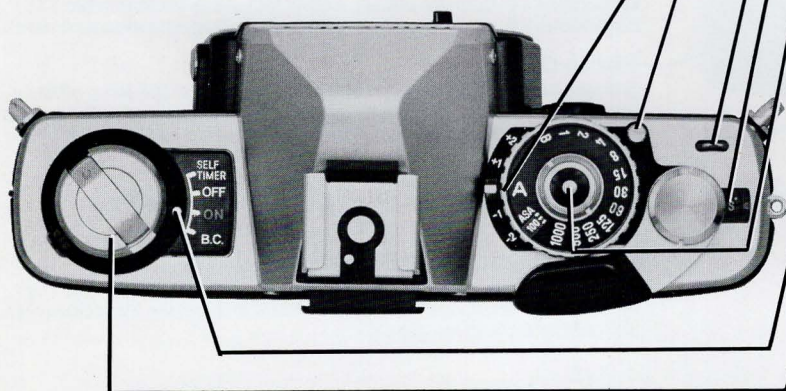
Provides vibrationless operation. The release features an electrical sensor switch that activates the viewfinder LED shutter speed display in the auto-exposure mode with the touch of a finger. Slight pressure on the release activates metering system if user has gloves on. Further pressure activates shutter. Release locks to prevent over-exposure when the auto-exposure system requires a shutter speed faster than 1/1000 second.

## Operating Selector

A four-position control switch for convenient selection of a ten-second delay electronic self-timer (triggered by shutter release), on or off power settings and a self-resetting battery-check position.

## Film Rewind

Unfold crank to rewind film, pull up on knob to open camera back.



## Film Advance Coupler

Connects to Auto Winder G for motorized film advance. (See page D-6 for additional information.)

## PC Flash Synchronization Terminal

Cord-contact flash units synchronize with the shutter through this terminal.

## Film Release Button

Pressing button releases film-transport system, freeing film for rewinding. Button remains in while film is being rewound.

## Tripod Socket

Sturdy socket, positioned on lens axis, accepts standard tripod mounting screw.

## Battery Chamber

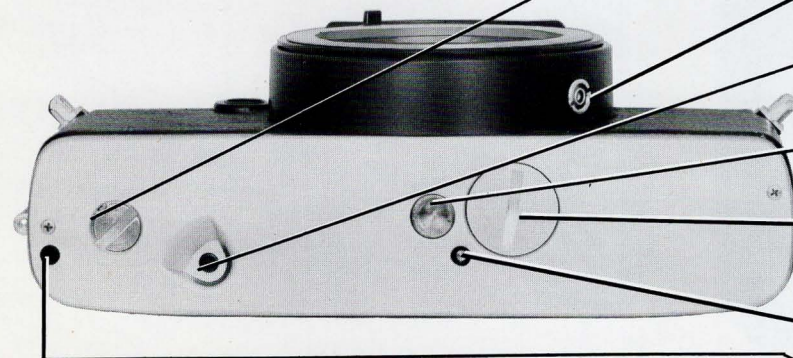
Accepts two 1.5 volt silver-oxide cells (S-76 or equivalent) that power exposure system and electronically governed shutter.

## Electrical Contact

Triggers film advancing circuit in Auto Winder G.

## Winder-Pin Socket

Engages with guide pin from Auto Winder G.



**Size without lens:** 2 x 3 $\frac{3}{8}$  x 5 $\frac{1}{2}$  inches (52 x 88 x 138mm).

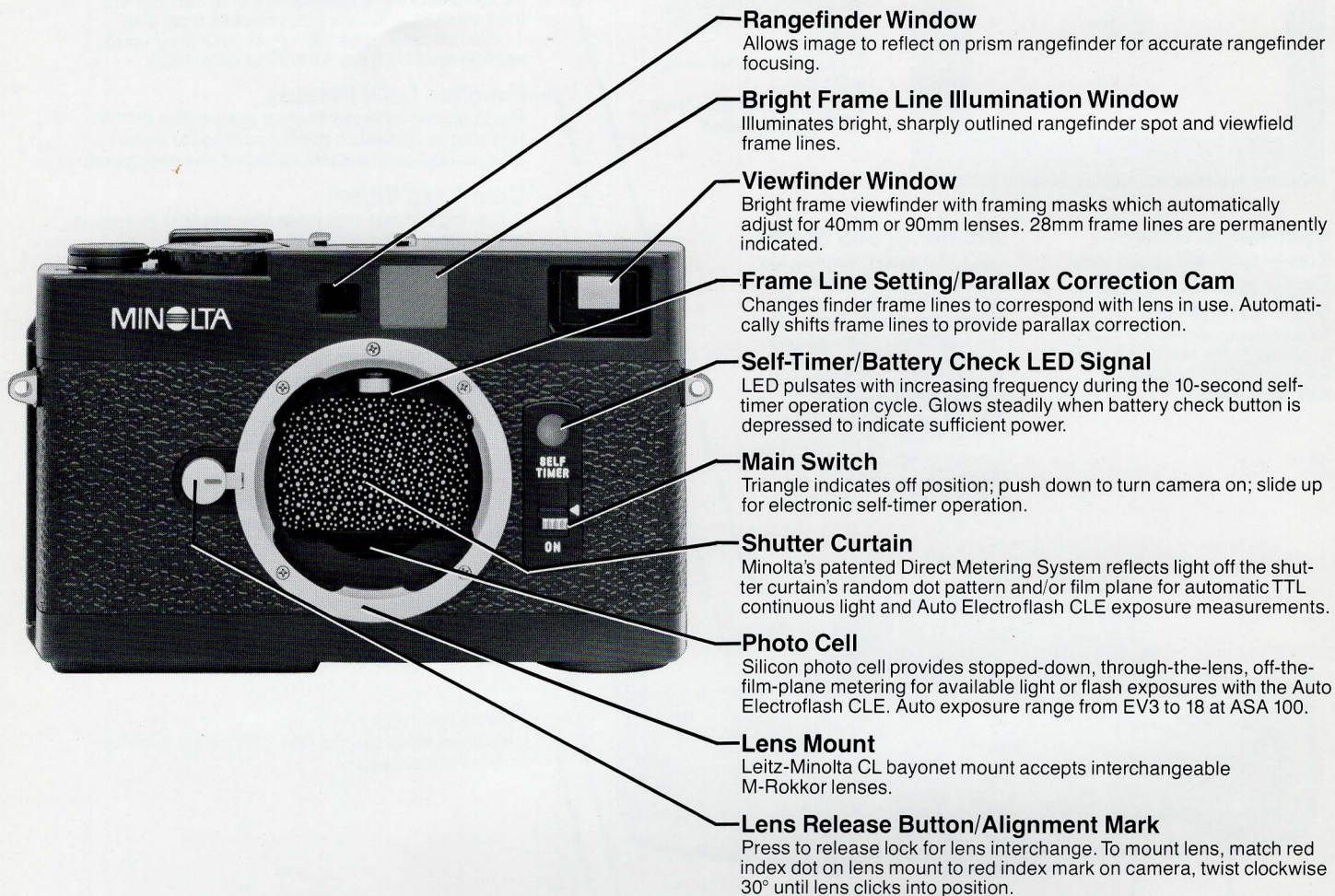
**Weight without lens and batteries:** 17 $\frac{3}{4}$  ounces (490g).

**Power source:** Two 1.5V silver oxide (S-76 or equivalent).



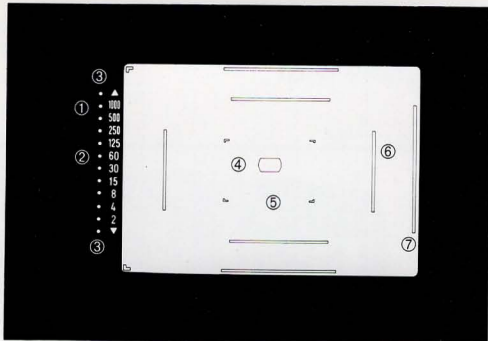
# Minolta CLE

World's first compact 35mm rangefinder camera system with interchangeable lenses and aperture-priority automatic exposure control.





# Minolta CLE



## CLE Viewfinder Information

1. LED shutter speed indicators.
2. LED flash-ready signal at 1/60 sec. position.
3. LED over/underexposure range warning lights.
4. Superimposed focusing spot.
5. Viewfinder frame lines for 90mm lens automatically appear when lens is mounted.
6. Viewfinder frame lines for 40mm lens automatically appear when lens is mounted.
7. Viewfinder frame lines for 28mm lens.

## Flash Hot Shoe

Accepts standard shoe-mount electronic flash units. Cordless synchronization with hot-shoe units. Minolta Auto Electro-flash CLE automatically switches camera shutter to X-synch (1/60 sec.) when shutter speed drops to 1/60 sec. or slower. See page A14 for additional information.

## Shutter Speed/Function Dial

"A" sets camera on automatic mode and locks to prevent accidental changing. When function lock release is depressed, the "A" can be moved to provide auto-exposure override up to  $\pm 2$  EV using the adjacent scale; turn further to set stepped speeds from 1 to 1/1000 second, plus B. Pull outer ring up to set film speeds from ASA 25 to ASA 1600.

## Function Lock Release

Press button to move shutter speed dial off "A" (automatic-exposure mode) setting for override control or manually selected shutter speed.

## Electromagnetic Shutter Release

Provides vibrationless operation. The release features an electrical sensor switch that activates the viewfinder LED shutter speed display in the auto-exposure mode with the touch of a finger. Slight pressure on the release also activates metering system if proper contact is hindered by wearing gloves. Further pressure triggers shutter. Release locks at low voltage.

## Exposure Counter

Additive type, resets automatically when camera back is opened.

## Film-Advance Lever

Advances film with a smooth, single 130° stroke. Has 30° standoff from camera body for quick access.

## Film Rewind Crank

Crank unfolds to rewind exposed film. Lift and turn to open camera back for loading.

## Battery Check Button

Push to monitor battery condition. LED on front of camera lights to indicate sufficient power.

## Film Release Button

Push in to disengage film-transport mechanism for rewinding film. Button remains in while film is being rewound.

## Tripod Socket

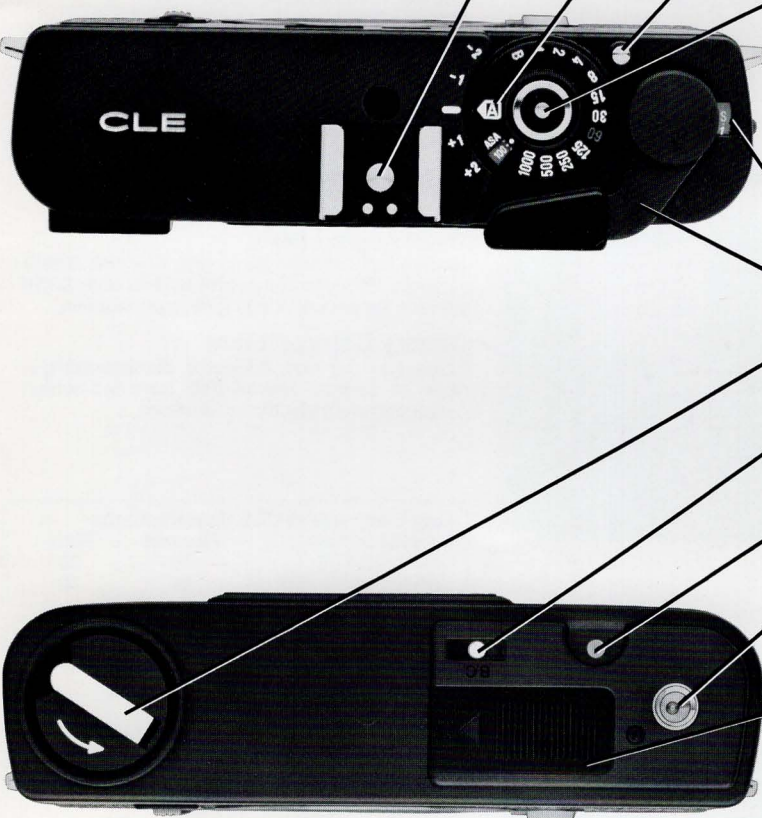
Sturdy socket, positioned on lens axis, accepts standard tripod mounting screw.

## Battery Chamber

Holds two 1.5 volt silver-oxide or alkaline-manganese batteries which power all camera functions.

## Remote Release Socket

Accepts both mechanical and electronic cable releases. (Not shown.)



**Size:**  
4 $\frac{7}{8}$  x 3 $\frac{1}{32}$  x 1 $\frac{5}{16}$  in.  
(124.5 x 77.5 x 32mm)

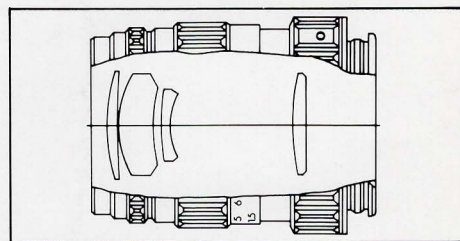
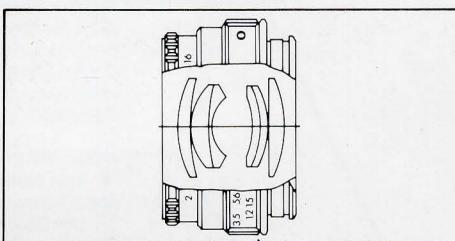
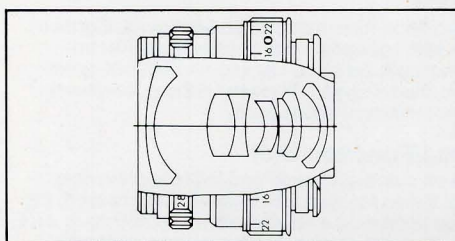
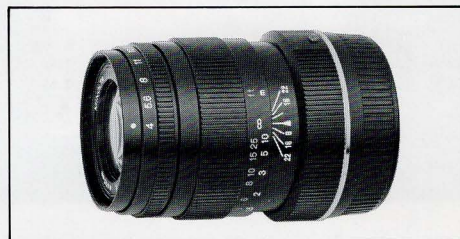
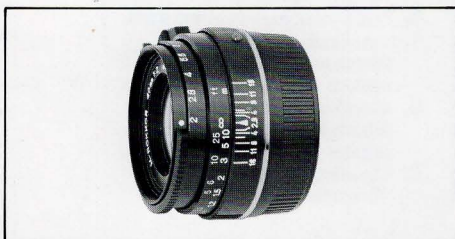
**Weight:**  
13 $\frac{7}{8}$  oz.  
(375g) without batteries



# Minolta CLE System Accessories

## M-Rokkor Lenses

Newly designed, interchangeable wide angle, normal and telephoto lenses with bayonet mount for use with the Minolta CLE.



### 28mm f/2.8 M-Rokkor

Aperture Scale: f/2.8-22  
Diaphragm: Manual  
Construction: 7 elements in 5 groups  
Angle of View: 75°  
Minimum Focus: 2 ft. 7 in.  
Filter Thread Diameter: 40.5mm  
Coating: Minolta Achromatic  
Size: 2 x 1<sup>13</sup>/<sub>32</sub> in.  
Weight: 4<sup>3</sup>/<sub>4</sub> oz.

### 40mm f/2 M-Rokkor

Aperture Scale: f/2-16  
Diaphragm: Manual  
Construction: 6 elements in 4 groups  
Angle of View: 57°  
Minimum Focus: 2 ft. 7 in.  
Filter Thread Diameter: 40.5mm  
Coating: Minolta Achromatic  
Size: 2 x 1 in.  
Weight: 3<sup>11</sup>/<sub>16</sub> oz.

### 90mm f/4 M-Rokkor

Aperture Scale: f/4-22  
Diaphragm: Manual  
Construction: 4 elements in 4 groups  
Angle of View: 27°  
Minimum Focus: 3 ft. 3 in.  
Filter Thread Diameter: 40.5mm  
Coating: Minolta Achromatic  
Size: 2 x 2<sup>9</sup>/<sub>16</sub> in.  
Weight: 8<sup>13</sup>/<sub>16</sub> oz.

## Minolta Auto Electroflash CLE

Fully dedicated unit for through-the-lens auto-flash exposures via Minolta's patented Direct Metering System.

### Hot Shoe Mount

Clips onto camera hot shoe for cordless flash synchronization. Camera control provision automatically switches to X-synch speed (1/60 sec.). Flash fires only when CLE's auto shutter speed is 1/60 sec. or slower.

### ASA Film Speed Indicator

Slide for setting ASA from 25 to 400. Adjusts green distance scale indicators for film in use.

### Distance Scale

Green scales indicate auto-exposure range in feet and meters for each aperture setting.

### Normal/Wide Angle Diffuser

### LED Indicators

Lights to show if flash diffuser is in place and indicates appropriate f/stop reference scale.

### Flash Ready/Open Flash Button

Lights when unit is charged. Allows flash to be fired without exposing film.

### On/Off Switch

Convenient control for on/off power settings. Power is switched off automatically when unit is removed from hot shoe.

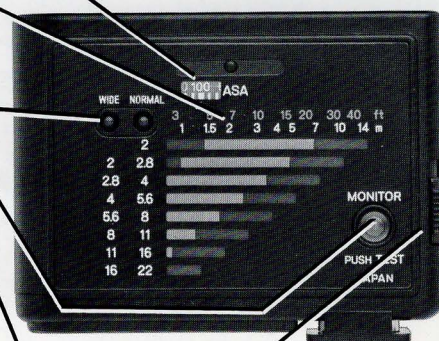


### Wide Angle Flash

Covers field of view for lenses down to 40mm normally, down to 28mm with built-in wide angle diffuser. Balanced for daylight-type color film.

### Battery Compartment

Holds two 1.5 volt AAA-size alkaline-manganese or sealed carbon-zinc batteries which power camera's electronic functions.



### Auto Electroflash CLE Specifications

Guide Number:	Normal	Wide
Feet, ASA 25	46	33
Meters, ASA 100	14	10

### Flash Duration:

1/40,000 to 1/3000 sec. in auto operation,  
1/3000 sec. in manual operation.

### Color Temperature:

Balanced for daylight-type color film

### Auto Exposure Range:

Distance varies with aperture set and/or CLE's auto exposure override. See back of unit illustration for actual range at ASA 100.

### Number of Flashes/Recycling Time:

C-Zn: 40/4  
AM: 80/7

### Size:

3 x 2<sup>5</sup>/<sub>16</sub> x 1<sup>1</sup>/<sub>8</sub> in.  
(77 x 58 x 29mm)

### Weight:

3<sup>3</sup>/<sub>8</sub> oz. (95g) without batteries



# SR-T 35mm Single Lens Reflex Cameras



**Minolta's SR-T 35mm single lens reflex cameras** include two match-needle models. Both offer through-the-lens metering, high optical and mechanical performance; automatic diaphragm coupling plus Minolta's traditional human engineering. Minolta SR-T's are easy to handle and accept the full line of Minolta bayonet-mount lenses from 7.5mm fisheye to 1600mm super-telephoto. And they are compatible with Minolta's vast system of single lens reflex photographic accessories.

The SR-T cameras incorporate the patented Minolta bayonet lens mount,

which requires only a 54° rotation to lock a lens into place.

**Through-the-lens, match-needle exposure metering.** With all Minolta lenses, metering is at full lens aperture for maximum finder brightness. Stopped-down reading is employed with nonmeter-coupled lenses and certain close-up equipment.

SR-T cameras have accurate, mechanical focal-plane shutters with rubberized cloth curtains, and speeds to 1/1000 second. Electronic flash X synchronization is at 1/60 second.

**Some of the many convenience**

**features** found on the SR-T cameras include: hot shoe and PC terminal, battery check, split image/microprism focusing, single or multiple-stroke film advance, ASA/DIN conversion chart, and depth-of-field preview.

Without doubt, the Minolta SR-T's and system of accessories form one of the most value-packed and versatile photographic systems. And all Minolta lenses and accessories used with SR-T cameras are compatible with Minolta's superlative X-series of electronic cameras.



# Minolta SR-T 201

An advanced version of Minolta's most popular match-needle 35mm single lens reflex camera.

## Pentaprism

Provides bright, unreversed viewing/focusing image. Houses CdS cell metering system that yields perfect full-aperture, through-the-lens exposures.

## Lens Lock

Releases bayonet mount for rapid interchangeability of Minolta lenses.

## Bayonet Lens Mount

Rugged Minolta bayonet fitting accepts all Minolta SLR lenses. Lenses interchange with 54° rotation; no special indexing of f/stop or ASA speed is required.

## Oversized Instant-Return Mirror

Extra-large mirror prevents finder image cut-off even with extremely long telephotos or in close-up work.

## Self-Timer

Allows up to a 10-second delay; triggered by its own release button. May be bypassed at any time by tripping shutter release button.

## X Synch Outlet

Accepts all standard PC-tip synch cords. Synchronizes electronic flash units at 1/60 (X) setting and all slower shutter speeds.

## Depth-of-Field Preview

Push in for depth-of-field previewing with all Minolta lenses, or for stopped-down readings with nonmeter-coupled lenses.



## Finder Eyepiece

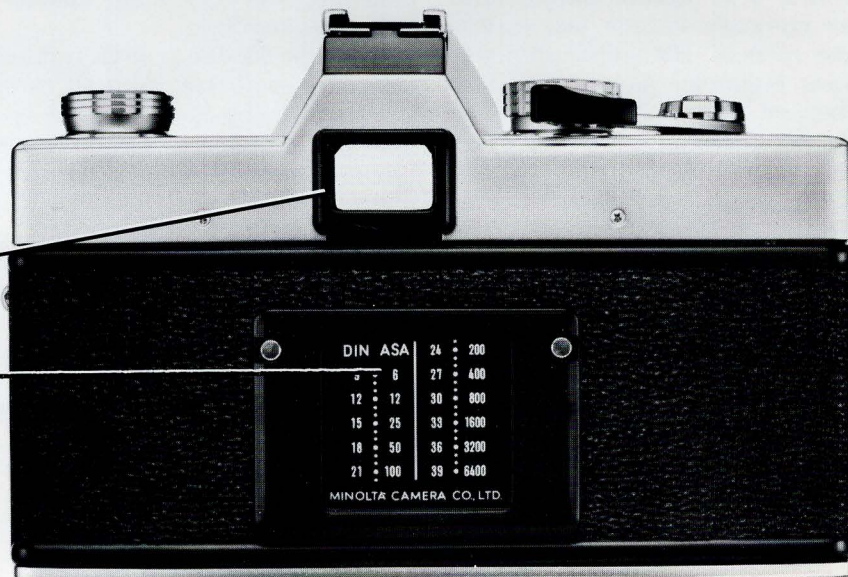
Oversized eyepiece for easy viewing even with eyeglasses. Slotted to accept correction eyepieces, anglefinder, magnifier.

## Memo Holder/Film Reminder

Frame holds end flap from film box as reminder of type of film in camera. Table converts DIN film speeds to ASA ratings.

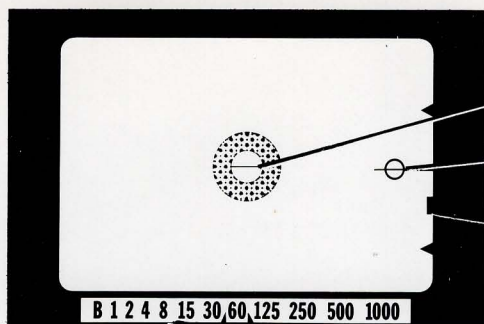
## Focal-Plane Shutter

Has rubberized cloth curtains; operates smoothly, accurately and quietly. Speeds from 1 second to 1/1000, plus B. (Not shown)



NOTE: Specifications subject to change without notice. See page L1 for additional information.





### Split/Micro Focusing Spot

Split-image spot with microprism collar and surrounding fine fresnel screen permit fast, accurate focusing.

### Exposure Indicators

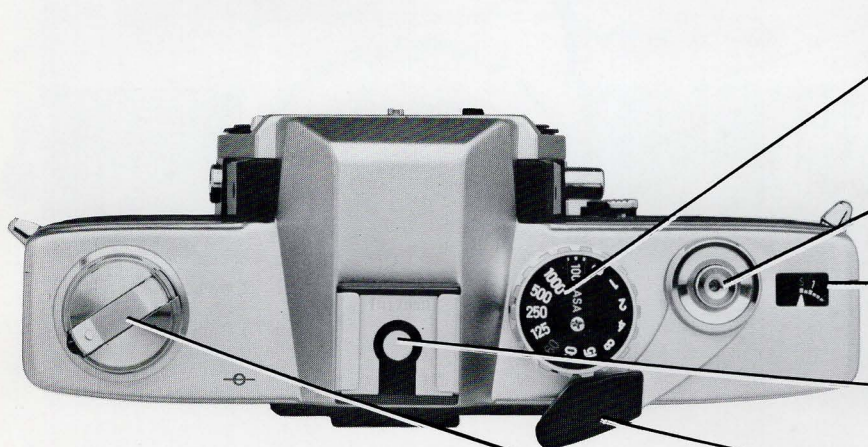
Aligning the circle-tipped wand with the meter needle by adjusting the lens diaphragm and/or shutter speed sets the camera for proper exposure.

### Battery Check Index

Meter needle will swing to index if battery is in good condition when meter switch is turned to B.C. position.

### Shutter Speed Scale

Movable indicator bracket linked to shutter speed dial shows speed to which shutter has been set.



### Shutter Speed Dial

Easily read markings for speeds from 1 to 1/1000 second, plus B. X sync at 1/60 (engraved in red) for electronic flash. Pull up rim to set film speeds from ASA 6 to 6400.

### Shutter Release

Built into pivot point of film advance for rapid, comfortable use. Threaded for cable release.

### Exposure Counter

Additive, resets automatically when back is opened. Has large, legible numbers for easy reading.

### Flash Hot-Shoe

Accepts any shoe-mount electronic flash unit. Wired for cordless X sync with hot-shoe units, PC-cord sync with others.

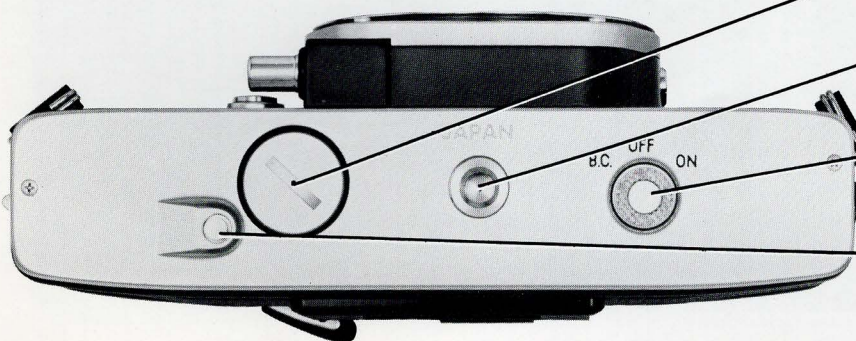
### Film Advance Lever

Single- or multiple-stroke film advance with 180° total throw, 30° free standoff from body for quick action.

### Film Rewind

Pulls up to open back for loading; rapid rewind crank unfolds to rewind film quickly and smoothly.

## SR-T 201



### Battery Compartment

Accepts long-life PX-13, PX-625 or equivalent mercury battery.

### Tripod Socket

Threaded for standard tripod mounting screws; located in line with lens axis for convenient camera positioning.

### Meter Switch

Rotary switch turns meter system on or off. When it is turned to B.C. position, battery check circuit is activated.

### Film Release Button

Pushing in disengages film transport mechanism for rewinding film.



# Minolta SR-T 200

An economical match-needle 35mm single lens reflex camera with shutter speeds to 1/1000 second.

## Pentaprism

Provides bright, unreversed viewing/focusing image. Houses CdS cell metering system that yields perfect full-aperture, through-the-lens exposures.

## Lens Lock

Releases bayonet mount for rapid interchangeability of Minolta lenses.

## Oversized Instant-Return Mirror

Extra-large mirror prevents finder image cut-off even with extremely long telephotos or in close-up work.

## Bayonet Lens Mount

Rugged Minolta bayonet fitting accepts all Minolta SLR lenses. Lenses interchange with 54° rotation; no special indexing of f/stop or ASA speed is required.

## X Synch Outlet

Accepts all standard PC-tip synch cords. Synchronizes electronic flash units at 1/60 (X) setting and all slower shutter speeds.

## Depth-of-Field Preview

Push in for depth-of-field previewing with all Minolta lenses, or for stopped-down readings with nonmeter-coupled lenses.



## Finder Eyepiece

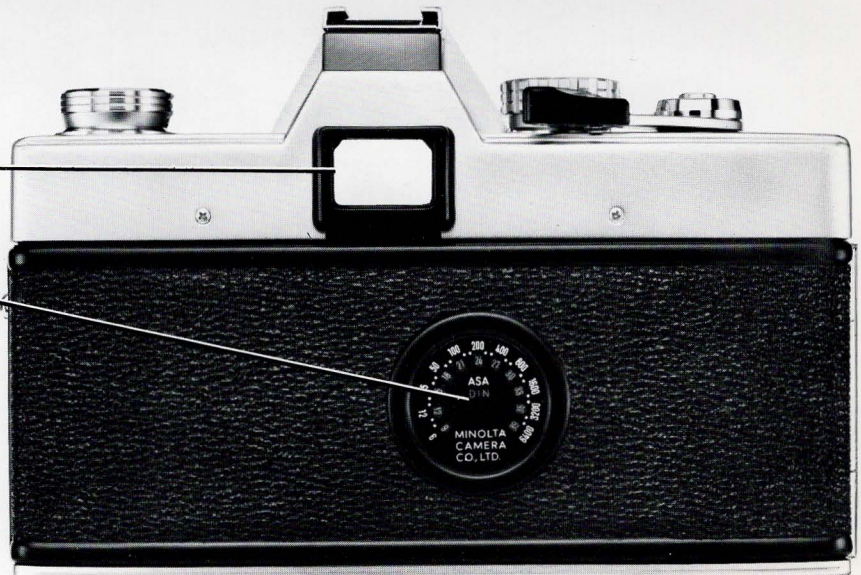
Oversized eyepiece for easy viewing even with eyeglasses. Slotted to accept correction eyepieces, anglefinder, magnifier.

## ASA/DIN Film Speed Converter

Circular table converts DIN film speeds to ASA film speeds from 6 to 6400 for convenient meter setting with foreign-made films.

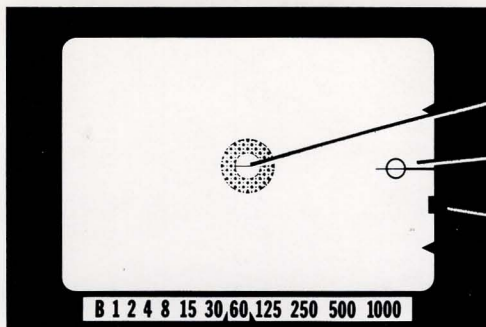
## Focal-Plane Shutter

Has rubberized cloth curtains; operates smoothly, accurately and quietly. Speeds from 1 second to 1/1000, plus B. (Not shown)



NOTE: Specifications subject to change without notice.  
See page L1 for additional information.





### Split/Micro Focusing Spot

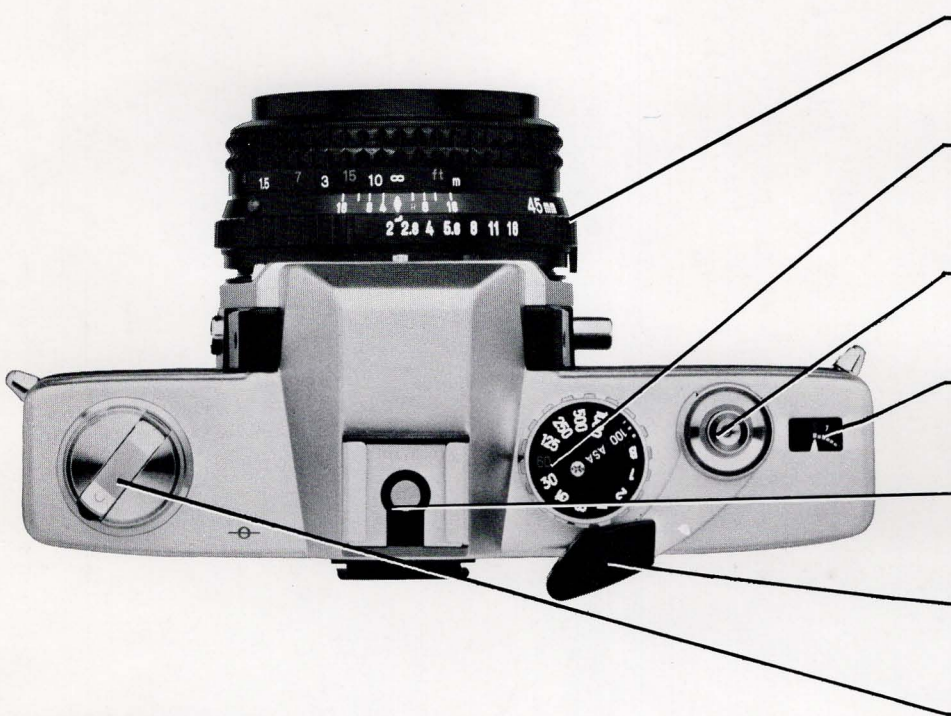
Split-image spot with microprism collar and surrounding fine fresnel screen permit fast, accurate focusing.

### Exposure Indicators

Aligning the circle-tipped wand with the meter needle by adjusting the lens diaphragm and/or shutter speed sets the camera for proper exposure.

### Battery Check Index

Meter needle will swing to index if battery is in good condition when meter switch is turned to B.C. position.



### Minolta Lens

Compact Minolta 45mm f/2 MD Rokkor-X lens (supplied with camera) focuses down to a minimum of two feet, and accepts 49mm threaded accessories.

### Shutter Speed Dial

Easily read markings for speeds from 1 to 1/1000 second, plus B. X synch at 1/60 (engraved in red) for electronic flash. Pull up rim to set film speeds from ASA 6 to 6400.

### Shutter Release

Built into pivot point of film advance for rapid, comfortable use. Threaded for cable release.

### Exposure Counter

Additive, resets automatically when back is opened. Has large, legible numbers for easy reading.

### Flash Hot-Shoe

Accepts any shoe-mount electronic flash unit. Wired for cordless X synch with hot-shoe units, PC-cord synch with others.

### Film Advance Lever

Single- or multiple-stroke film advance with 180° total throw, 30° free standoff from body for quick action.

### Film Rewind

Pulls up to open back for loading; rapid rewind crank unfolds to rewind film quickly and smoothly.

## SR-T 200



### Battery Compartment

Accepts long-life PX-13, PX-625 or equivalent mercury battery.

### Tripod Socket

Threaded for standard tripod mounting screws; located in line with lens axis for convenient camera positioning.

### Meter Switch

Rotary switch turns meter system on or off. When it is turned to B.C. position, battery check circuit is activated.

### Film Release Button

Pushing in disengages film transport mechanism for rewinding film.



# Minolta Lenses



**Minolta's system of single lens reflex lenses** ranges from 7.5mm fisheye to 1600mm super-telephoto, including macros, wide angle and telephoto zooms, and special-purpose lenses.

Minolta lenses are designed to satisfy the most rigorous photographic requirements. Many Minolta Rokkor-X lenses are unique in their state-of-the-art advances, and all feature Minolta's patented Achromatic coating.

In this exclusive coating process, selected lens elements are double coated with a layer of antimony oxide and with magnesium fluoride. This substantially cuts reflection, thus reducing flare, and allows almost 100% of the light to reach the film. Carefully balanced spectral transmission characteristics produce true, rich color tones, while undesirable effects of ultraviolet radiation are reduced to give you better, more lifelike color images.

**Minolta lenses are made in Minolta's own factories.** Even the optical glass for

these lenses is made by Minolta, starting with the rare earth compounds and combining the most modern computer design with traditional hand grinding and polishing. Even the crucibles in which the glass is mixed and melted are designed and built by Minolta.

This means that Minolta can enforce the most rigid quality control over every step in the design and manufacturing of its lenses. The result is the precise matching of optical and mechanical performance so important in advanced photography.

From start to finish, every Minolta lens is a superbly crafted optical instrument.

**Minolta lenses** are the vision for the creative photographer. There are fisheye lenses that produce dramatic 180° circular and full frame images. The Minolta complement of wideangle lenses give photographers a wide and highly creative capability for standard work or bold effects. And there are four "normal" lenses to choose from for economy or available light photography.

Minolta telephotos run the gamut from portrait focal lengths to long teles which incorporate a special crystalline fluorite element to virtually eliminate aberrations and deliver an extraordinarily sharp image.

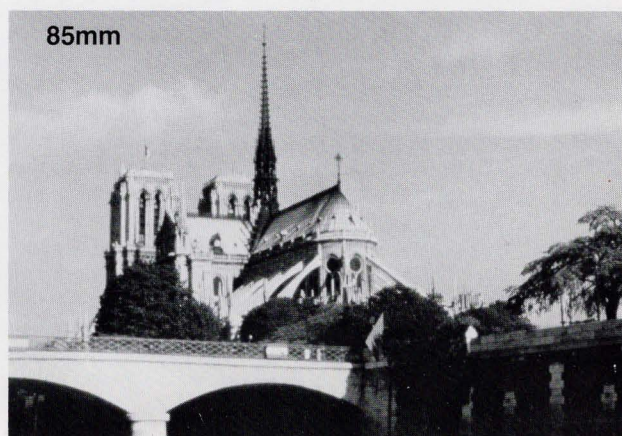
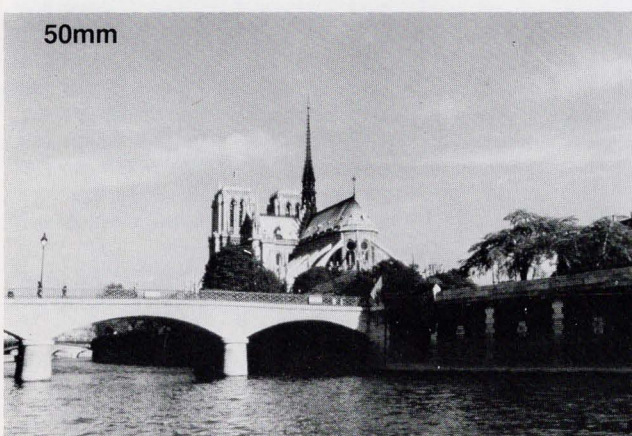
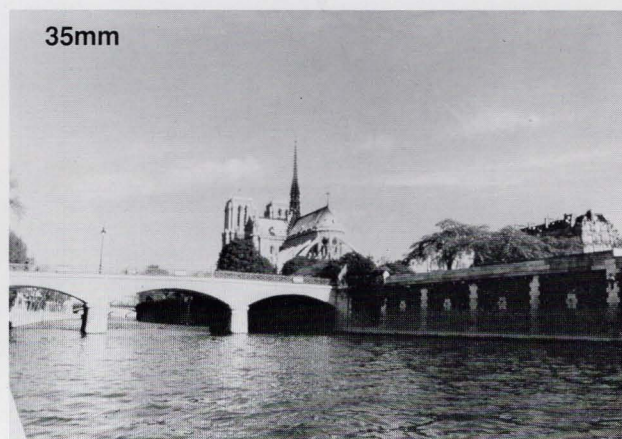
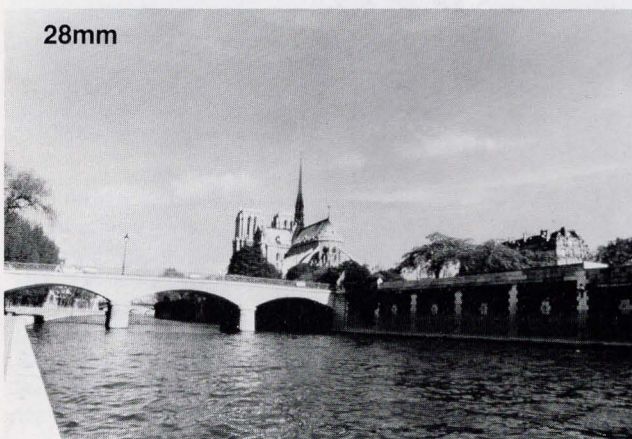
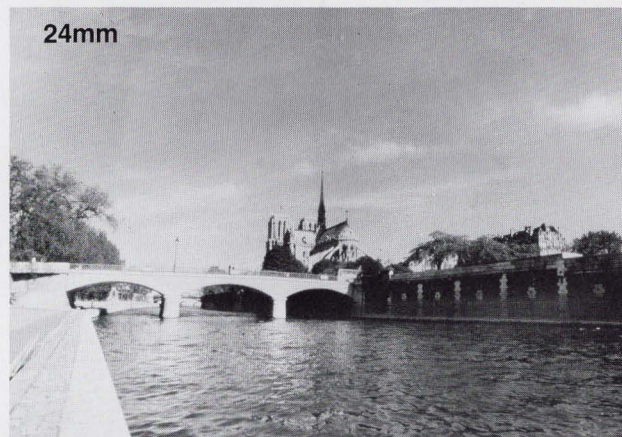
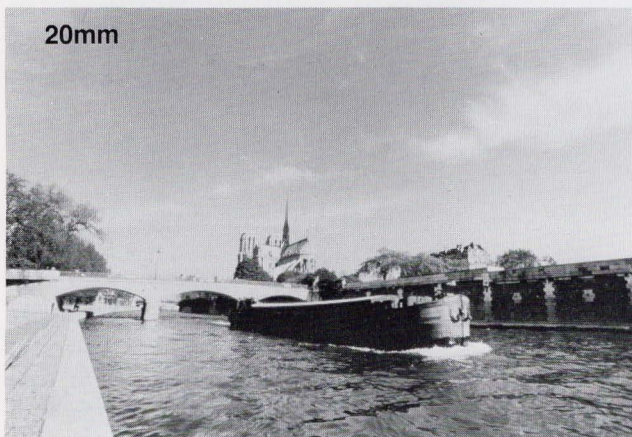
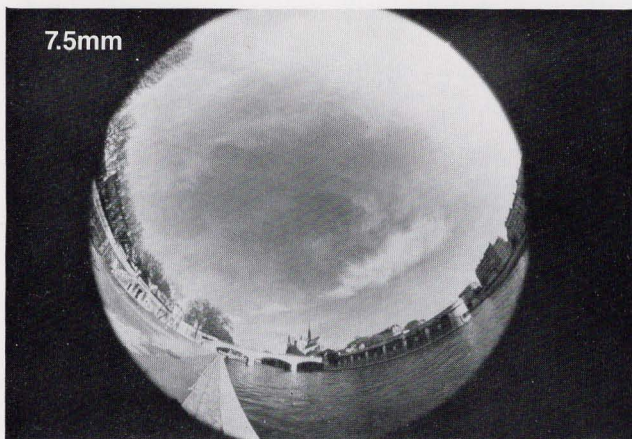
Minolta, the pioneer in mirror lens design now offers four catadioptric lenses, including the first truly compact 500mm and the extraordinary 250mm lens that's barely larger than a standard 50mm lens.

Minolta zooms offer a range of coverage from 24mm to 500mm, each with superb image quality on a par with fixed focal length lenses. And of course there are macros for close-up work and highly innovative special purpose lenses which can focus perfectly on a curved surface, control perspective or even change the image rendition from razor sharp to romantically soft focus.

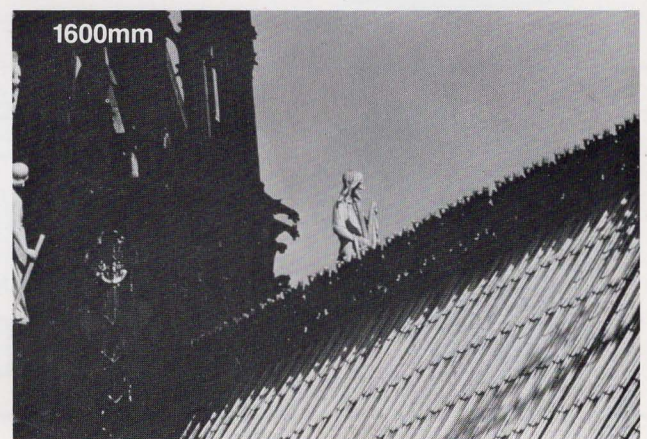
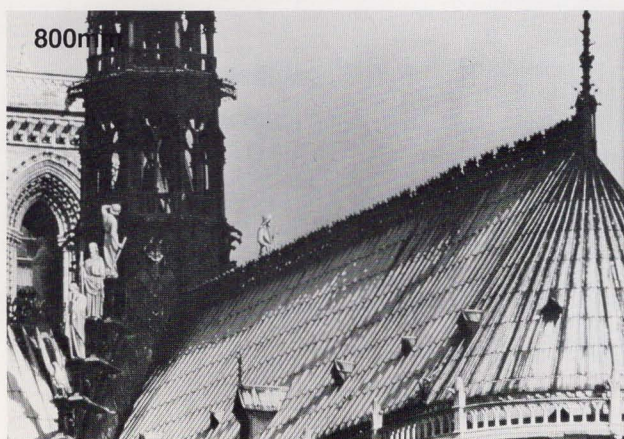
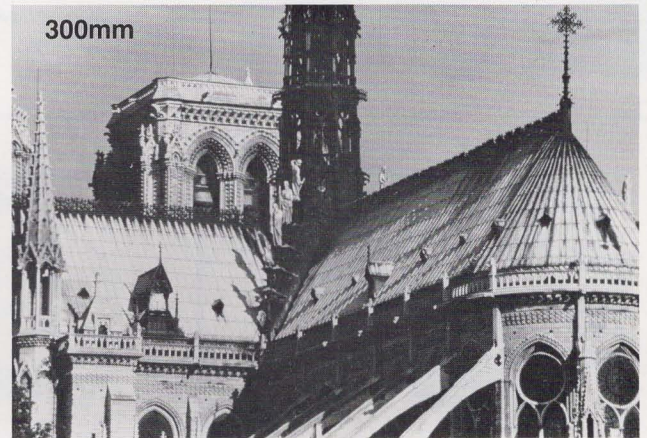
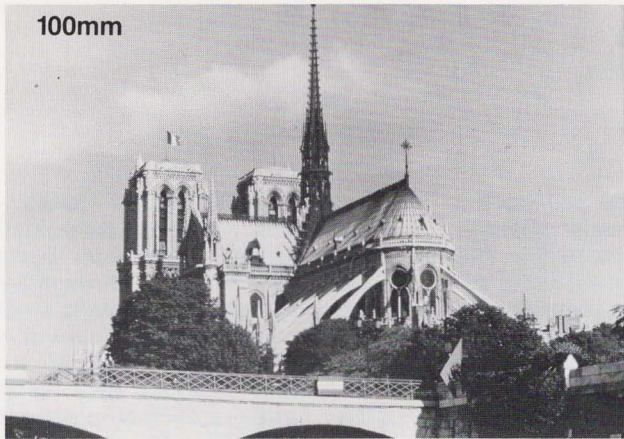
No matter what the picture-making need may be, Minolta has a lens that will do the job with distinction.



# Minolta Lenses Expand Your Vision





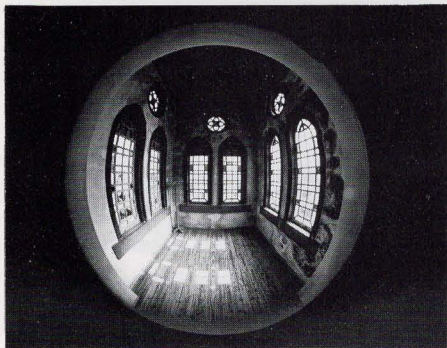




# Minolta Fisheye Lenses

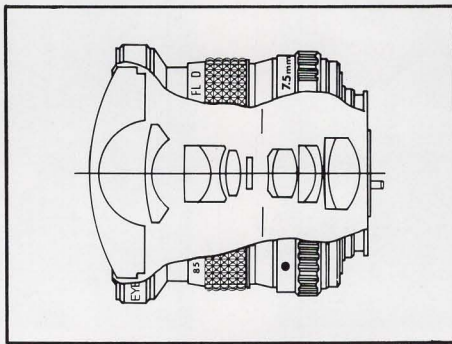
Computer-designed, state-of-the-art optics combine extraordinary image quality and dramatic perspectives.

## 7.5mm f/4 MD Fisheye



This extreme fisheye lens produces a proportional circular image approximately 23mm in diameter within the 24x36mm film frame. The dramatic images attainable with this lens allow the creative photographer unusual scope in achieving visual impact, while the lens' equidistant projection formula also suits it for use in technical applications that demand full 180° field coverage, such as surveillance, meteorology and astronomy.

The 7.5mm MD Fisheye Rokkor-X features Minolta's patented Achromatic coating, automatic diaphragm operation and couples to the through-the-lens metering systems of Minolta single lens reflex cameras. Image control on the focusing screen is retained. Any one of six built-in filters may be selected by turning a click-stopped control ring on the lens barrel. Focus is fixed at 4 feet; however, at the maximum aperture of f/4, depth of field extends from 19 $\frac{3}{8}$  inches to infinity.



### 7.5mm Specifications

Maximum Aperture: f/4  
Diaphragm: Fully automatic, f/4-f/22  
Construction: 12 elements in 8 groups  
Angle of View: 180°  
Focus: Fixed at 4 ft.; depth of field: 19 $\frac{3}{8}$  in. to infinity at f/4  
Filters: Built-in 1A, Orange, Red, 80B Conversion, 85 Conversion, FL-D (for fluorescent lighting with daylight-type color film)  
Weight: 12 $\frac{3}{8}$  oz.

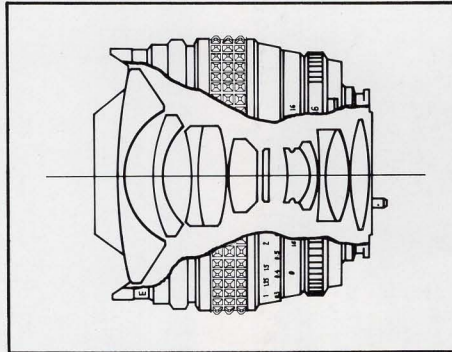
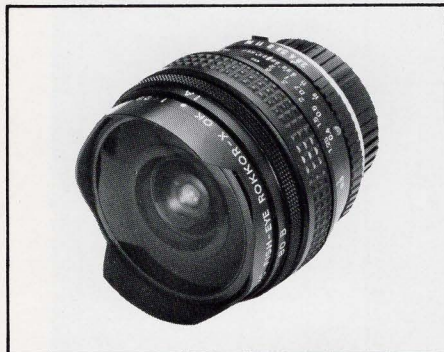
## 16mm f/2.8 MD Fisheye Rokkor-X



This fisheye lens is remarkable in several respects. It offers a diagonal angle of view of 180 degrees. Its f/2.8 maximum aperture is as fast as any fisheye available. It has a fully automatic meter-coupled diaphragm. Instead of the traditional fisheye circle, its image fills the entire frame. Yet it does all this while allowing completely normal, automatic reflex viewing. This gives the photographer marvelous freedom and flexibility to compose, meter and shoot as with any

other interchangeable Minolta lens.

The 16mm MD Fisheye Rokkor-X features Minolta's patented Achromatic coating, and is equipped with a built-in lens shade and four built-in filters that click into position when a control ring on the lens barrel is rotated. This is a lens with many commercial and creative uses that are enhanced even further by its surprisingly close minimum focusing distance of only one foot.



### 16mm Specifications

Maximum Aperture: f/2.8  
Diaphragm: Fully automatic, f/2.8-f/22  
Construction: 11 elements in 8 groups  
Angle of View: 180°  
Minimum Focus: 1 ft.  
Filters: Built-in 1A, Yellow, Orange, 80B Conversion  
Weight: 15 $\frac{1}{2}$  oz.



# Minolta Shift and Variable Field Curvature Lenses

Special purpose lenses to control perspective or adjust field of sharp focus from flat to curved.

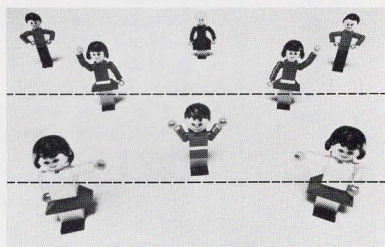
## 24mm f/2.8 MD VFC

This remarkable wide-angle is the first lens that allows the photographer to visually determine and adjust the curvature of the lens field to conform to subject fields ranging from concave to convex.

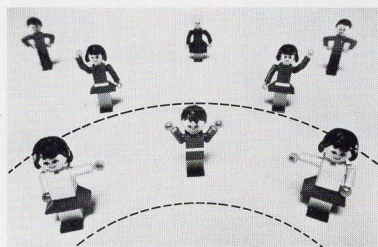
In three examples shown below, all photo-

graphs were made at f/2.8 to clearly show the VFC effects. Stopping the lens down to moderate or small apertures increases depth of field to supplement the effectiveness of the VFC feature in rendering curved subjects with maximum sharpness.

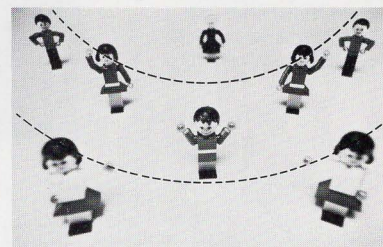
At the flat field control setting the fully meter-coupled 24mm f/2.8 VFC lens offers optical performance equal to that of a conventional 24mm f/2.8 wide-angle lens.



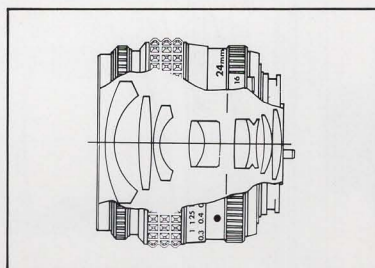
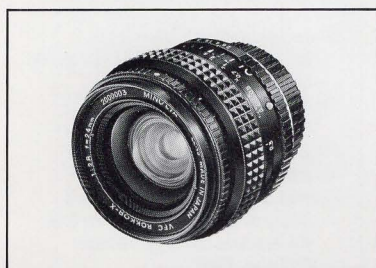
FLAT FIELD



CONCAVE FIELD



CONVEX FIELD



### 24mm VFC Specifications

Maximum Aperture: f/2.8

Diaphragm: Fully automatic, f/2.8–f/22

Construction: 9 elements in 7 groups

Angle of View: 84°

Minimum Focus: 1 ft.

Filter Thread Diameter: 55mm

Weight: 12 oz.

Special Control: Ring for manually varying field curvature continuously from convex through flat to concave

## 35mm f/2.8 Shift CA

This amazing wide-angle lens is the first to combine full-circle shifting of the lens barrel for perspective control, variable field curvature from concave through flat to convex and fully automatic diaphragm operation. Minolta's exclusive shifting mechanism for the 35mm f/2.8 Shift CA Rokkor-X is a com-

bination of sliding elements joined by vertical and horizontal dovetail grooves with locking clamps to secure the lens in a normal or shift position. With this design, the lens may be shifted easily in any direction over a full 360°.

When its special capabilities are not

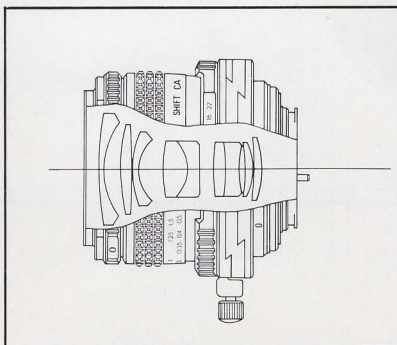
required, the 35mm f/2.8 Shift CA Rokkor-X serves as a fine medium wide-angle lens. It focuses to 1 foot by Minolta's "floating" system, which assures excellent sharpness even at close distances, and has Minolta's patented Achromatic coating for high contrast and excellent color rendition.



Camera tilted, verticals converge.



Lens shifted vertically, camera level, verticals remain parallel.



### 35mm Shift CA Specifications

Maximum Aperture: f/2.8

Diaphragm: Fully automatic, f/2.8–f/22

Construction: 9 elements in 7 groups

Angle of View: 63°

Minimum Focus: 1 ft.

Filter Thread Diameter: 55mm

Weight: 1 lb., 3/4 oz.

Special Controls: For vertical shifts up to 11mm up or down, lateral shifts up to 8mm left or right, oblique shifts up to at least 7.4mm; for varying field curvature continuously from concave through flat (click-stopped) to convex.

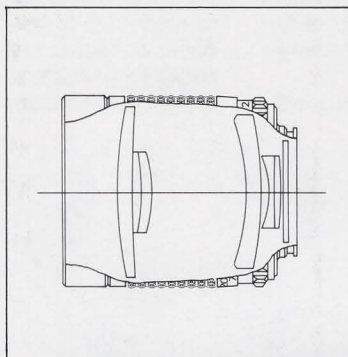


# Minolta Mirror Lenses

Advanced catadioptric design yields compact super-tele lenses.

## 250mm f/5.6 RF

This super-compact telephoto is nearly the same size and weight as a standard 50mm lens but with five times greater magnification. Using state-of-the-art computer-designed optics, Minolta has produced the lightest, most compact telephoto of its kind.



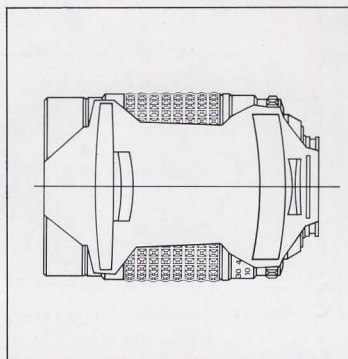
## 250mm f/5.6 RF

### Specifications

Maximum Aperture: f/5.6  
Diaphragm: None, light transmission changed from f/5.6 via ND filter  
Construction: 6 elements with 2 mirrors in 5 groups  
Angle of View: 10°  
Minimum Focus: 8.2 ft.  
Filters: Screw-in, rear-mounted integral-element type; Normal, 4X Neutral Density  
Optional Filters: Yellow, Orange, Red, 8X Neutral Density  
Weight: 8-13/16 oz.

## 500mm f/8 RF

Minolta made the first truly compact 500mm mirror lens. This extraordinary catadioptric lens offers high magnification in a compact, lightweight, easy-to-handle size. Like all Minolta mirror lenses, it accepts rear-mount integral lens element type filters.



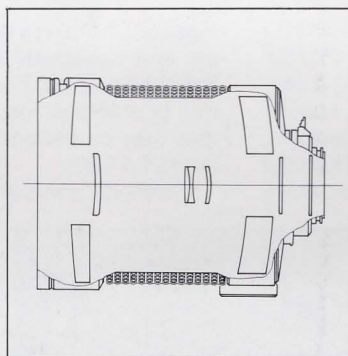
## 500mm f/8 RF

### Specifications

Maximum Aperture: f/8  
Diaphragm: None, light transmission changed from f/8 via ND filter  
Construction: 6 elements with 2 mirrors in 5 groups  
Angle of View: 5°  
Minimum Focus: 13.1 ft.  
Filters: Screw-in, rear-mounted integral-element type; Normal, 4X Neutral Density, Yellow, Orange, Red  
Weight: 1 lb., 5 1/8 oz.

## 800mm f/8 RF

This high-quality, compact Minolta 800mm telephoto lens utilizes reflex optical design for great magnification in a very portable and easy-to-handle size. For added creativity, the photographer can choose from five rear-mount integral lens element type filters.



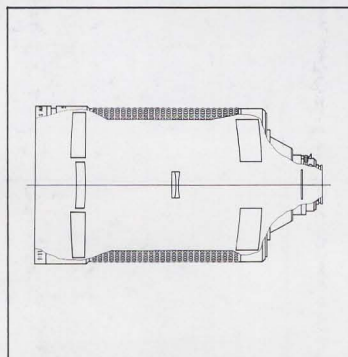
## 800mm f/8 RF

### Specifications

Maximum Aperture: f/8  
Diaphragm: None, light transmission changed from f/8 via ND filter  
Construction: 8 elements with 2 mirrors in 7 groups  
Angle of View: 3° 10'  
Minimum Focus: 26.2 ft.  
Filters: Screw-in, rear-mounted integral-element type, Normal, Yellow, Orange, Red; Slip-in 4X Neutral Density  
Weight: 4 lb., 3 oz.

## 1600mm f/11 RF

Minolta's most powerful telephoto provides phenomenal "reach," 32 times greater than a normal lens. Yet it is only slightly over a foot long because of its catadioptric design. Incorporating special optical mirrors in combination with conventional refractive lens elements, this super-telephoto lens provides superior image quality as well as compact design.



## 1600mm f/11 RF

### Specifications

Maximum Aperture: f/11  
Diaphragm: None, light transmission changed from f/11 via ND filter  
Construction: 6 elements with 2 mirrors in 5 groups  
Angle of View: 1° 30'  
Minimum Focus: 65.6 ft.  
Filters: Screw-in, rear-mounted integral-element type; Normal, Yellow, Orange, Red; Slip-in 4X Neutral Density  
Weight: 15 lbs., 1 1/8 oz.



# Minolta 400mm and 600mm Apo Lenses

Unusually sharp, fluorite-element tele lenses with apochromatic correction.

## 400mm f/5.6 and 600mm f/6.3 MD Apo Tele

The 400mm f/5.6 and 600mm f/6.3 MD Apo Tele Rokkor-X lenses are incredibly sharp, thanks to their special optical design which employs a fluorite (crystalline calcium fluoride) lens element. The fluorite element reduces chromatic aberrations to a level that places these lenses in the "apochromatic" category which yields maximum image quality. In addition to sharpness that is virtually unobtainable by conventional design, the Apo lenses produce images with excellent contrast and color quality. These characteristics are attributable to both the lenses' apochromatic design and the patented Minolta Achromatic coating.

Additionally, the 400mm and 600mm

Apo lenses feature a tripod socket on a rotating collar for good balance. This collar allows the camera and lens to be rotated into position and locked securely at any angle.

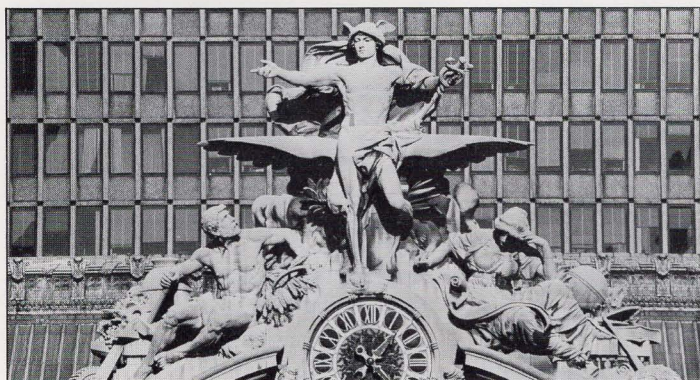
While the 400mm accepts standard 72mm diameter threaded filters, the 600mm incorporates integral lens-element type filters which slip into a slot provided at the rear of the focusing ring.

The 600mm Apo is manufactured with an internal focusing system, making it lighter and more compact than a lens of comparable focal length. This system also allows the lens to focus closer, while the

length of the lens remains constant during focusing.

For added flexibility, either lens can be used with Minolta's 300L Tele Converter which transforms them into 800mm f/11 and 1200mm f/12.7 super-tele, respectively, while maintaining optimum image quality.

Because of the outstanding optics and easy handling, the 400mm and 600mm Apo Tele Rokkor-X lenses are well-suited to sports, news, wildlife and other specialized long-lens photography that requires the sharpest definition in black-and-white or color.



*Photograph taken with APO lens alone.*



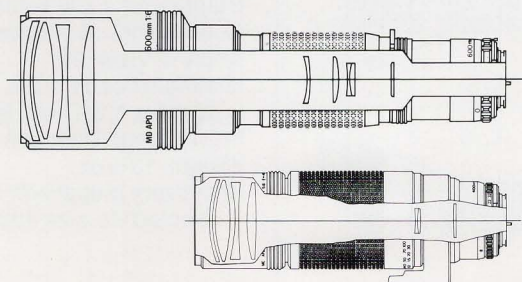
*Photograph taken with APO lens plus the 2X Converter. \**

*\*See page C14 for additional information regarding Minolta Tele Converters.*



### 400mm Apo Specifications

Maximum Aperture: f/5.6  
Diaphragm: Fully automatic, f/5.6-f/32  
Construction: 7 elements in 6 groups;  
including second element of crystalline calcium fluoride  
Angle of View: 6° 10'  
Minimum Focus: 16.4 ft.  
Filter Thread Diameter: 72mm  
Weight: 3 lb., 2<sup>13</sup>/<sub>16</sub> oz.



### 600mm Apo Specifications

Maximum Aperture: f/6.3  
Diaphragm: Fully automatic, f/6.3-f/32  
Construction: 9 elements in 8 groups;  
including second element of crystalline calcium fluoride and 1 filter  
Angle of View: 4° 10'  
Minimum Focus: 16.5 ft.  
Filters: Integral lens element type:  
"Normal", 4X Neutral Density, Yellow, Orange, Red  
Weight: 5 lb., 4<sup>5</sup>/<sub>8</sub> oz.



# Minolta 50mm and 100mm Macro Lenses

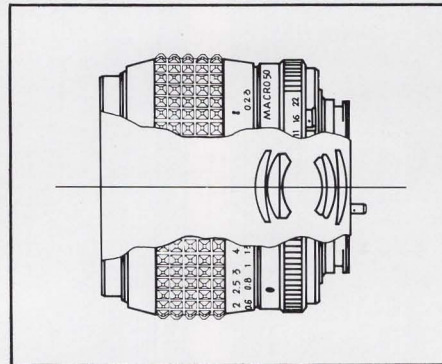
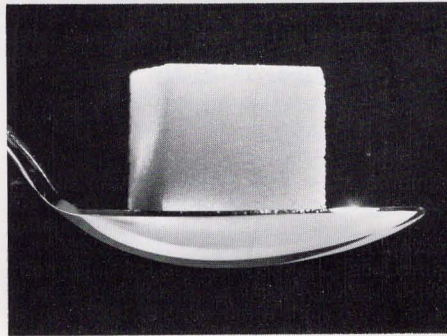
Two superb lenses that afford maximum convenience and versatility in close-up photography.

## 50mm f/3.5 MD Macro

Because of its extremely wide focusing range, the 50mm MD Macro Rokkor-X is ideally suited for use in place of a normal lens, as well as for macrophotography. While it provides the same 47° angle of view as a normal lens, it offers a substantially greater focusing range. It will produce a critically sharp picture at any distance between 9 inches and infinity and will provide magnifications up to one-half life-size without attachments. Magnifications up to life-size (1:1) are obtained by combining the 50mm Macro with its life-size adapter, which enables the photographer to focus down to 8 inches (subject-to-film-plane distance).

An optional 55mm-diameter reverse ring for the 50mm Macro lens allows it to be mounted in reverse on various Minolta close-up equipment.

The 50mm Macro has a fully automatic diaphragm and couples perfectly to the through-the-lens metering systems of Minolta SLR's. And it features Minolta's patented Achromatic coating.



### 50mm Macro Specifications

Maximum Aperture: f/3.5  
Diaphragm: Fully automatic, f/3.5-f/22  
Construction: 6 elements in 4 groups  
Angle of View: 47°  
Minimum Focus: 9 in. without life-size adapter, 8 in. with life-size adapter  
Filter Thread Diameter: 55mm  
Weight: 7¼ oz.  
Accessory (supplied): Automatic, meter-coupled life-size adapter

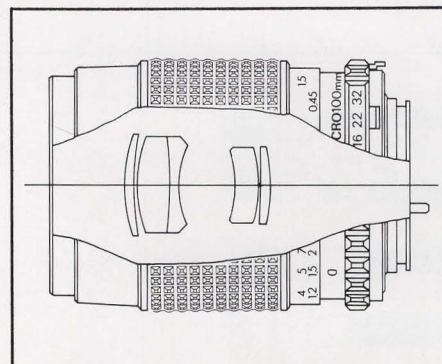
## 100mm f/4 MD Macro

The 100mm Macro serves as an all-around medium telephoto lens as well as for macrophotography. It provides the same 24° angle of view as a conventional 100mm telephoto lens, but will produce a critically sharp photograph at any distance between 1.5 feet and infinity without attachments.

This lets the 100mm Macro lens form razor-sharp images up to one-half life-size when used alone. Magnifications up to life-size (1:1) are easily and conveniently obtained by using the supplied automatic, meter-coupled life-size adapter.

Naturally, the 100mm Macro lens couples automatically to the through-the-lens metering systems of Minolta SLR's for full-aperture exposure control. And it benefits from Minolta's patented Achromatic coating.

The 100mm MD Macro Rokkor-X provides the close-up photographer with extraordinary optical performance, convenience, and the ability to maintain a greater distance from the subject than with the 50mm Macro.



### 100mm Macro Specifications

Maximum Aperture: f/4  
Diaphragm: Fully automatic, f/4-f/32  
Construction: 5 elements in 4 groups  
Angle of View: 24°  
Minimum Focus: 1.5 ft. without life-size adapter, 1.2 ft. with life-size adapter  
Filter Thread Diameter: 55mm  
Weight: 13¾ oz.  
Accessory (supplied): Automatic, meter-coupled life-size adapter



# Minolta Varisoft Lens

A unique short telephoto lens with a control for razor-sharp to soft-focus effects.

## 85mm f/2.8 Varisoft

This unusual short telephoto features a four-position adjustment ring that varies the image rendition from sharp to soft. The image becomes progressively more diffused towards the frame edges with a minimum of vignetting.

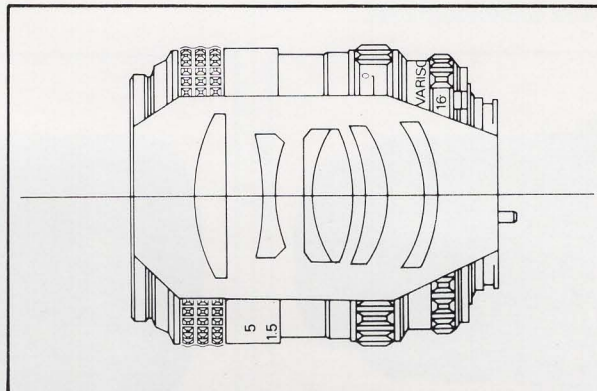
The 85mm f/2.8 Varisoft is of telephoto design with six lens elements in five groups. By adjusting the soft-focus control ring, the lens' rear element shifts to re-introduce controllable

spherical aberration into the optical system. This gives the soft-focus effect without changing the lens' original focus settings. The unique design of the Varisoft lens also provides for simultaneous movement of other lens elements at varied rates to maintain a certain degree of sharpness in the center portion of the photograph.

The softest focus is obtained at f/2.8 with the #3 setting. While the adjust-

ment ring provides click-stop detents for reference or to repeat the same effect, the control is continuously variable for intermediate effects. A fully automatic meter-coupled diaphragm and large f/2.8 maximum aperture provides a bright viewing image.

While ideal for portraiture, the razor-sharp results at the #0 setting makes this short telephoto lens superb for general photography.



### 85mm Varisoft Specifications

Maximum Aperture: f/2.8  
Diaphragm: Fully automatic, f/2.8-f/16  
Construction: 6 elements in 5 groups  
Angle of View: 29°  
Minimum Focus: 2.6 feet  
Filter Thread Diameter: 55mm  
Weight: 15 3/8 ounces



*Photograph taken with soft-focus control ring at #0 setting.*



*Photograph taken with soft-focus control ring at #1 setting.*



*Photograph taken with soft-focus control ring at #2 setting.*



*Photograph taken with soft-focus control ring at #3 setting.*

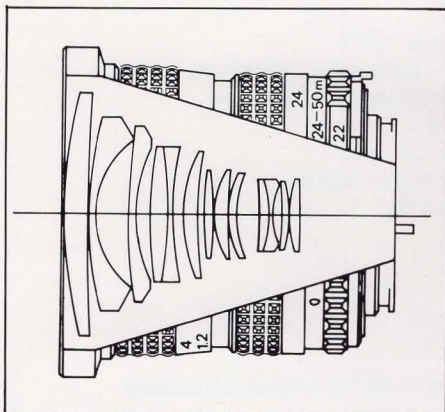


# Minolta Zoom Lenses

The convenience and fast operation that only zooms can provide, plus optical quality rarely achieved in zoom lenses.

## 24-50mm f/4 MD Zoom

This outstanding, close-focusing lens features one of the widest focal length ranges for a wide-angle zoom. It achieves this with uncompromising optical performance from 24 to 50mm in a remarkably compact design that weighs under one pound. The 24-50mm lens permits precise compositional control in wide-angle photography. This efficient, versatile optic is ideal for the illustrator and photojournalist.

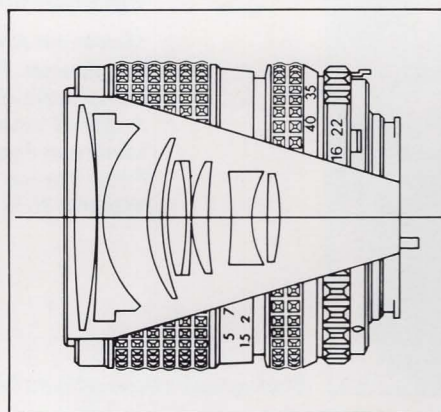
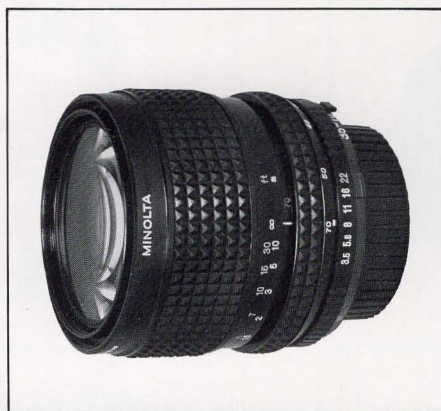


### 24-50mm Zoom Specifications

Maximum Aperture: f/4  
Diaphragm: Fully automatic, f/4-f/22  
Construction: 13 elements in 11 groups  
Angles of View: 84° to 47°  
Minimum Focus: 2.3 ft.  
Focusing/Zooming Method: Dual control  
Filter Thread Diameter: 72mm  
Weight: 13<sup>15</sup>/<sub>16</sub> oz.

## 35-70mm f/3.5 MD Zoom

The 35-70mm zoom is a versatile lens for general photography. Compact and lightweight, this lens offers a highly useful zoom range. Accurate focus is maintained throughout the entire zoom range. The 35-70mm zoom gives quality that is comparable to fine fixed-focal-length lenses.

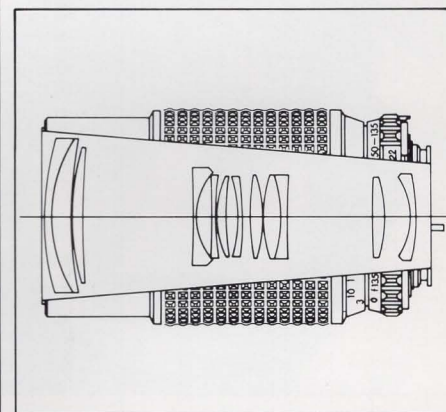


### 35-70mm Zoom Specifications

Maximum Aperture: f/3.5  
Diaphragm: Fully automatic, f/3.5-f/22  
Construction: 8 elements in 7 groups  
Angles of View: 63° to 34°  
Minimum Focus: 3.3 ft.  
Focusing/Zooming Method: Dual Control  
Filter Thread Diameter: 55mm  
Weight: 12<sup>7</sup>/<sub>8</sub> oz.

## 50-135mm f/3.5 MD Zoom

Remarkably light and compact, this lens serves as an intermediate range lens. With one-handed focus and zoom control, the 50-135mm is ideally suited for portraiture and photojournalism. Hardly larger than a conventional 135mm lens, this zoom will focus to just under 5 feet and offers consistently excellent optical performance throughout the zoom range.



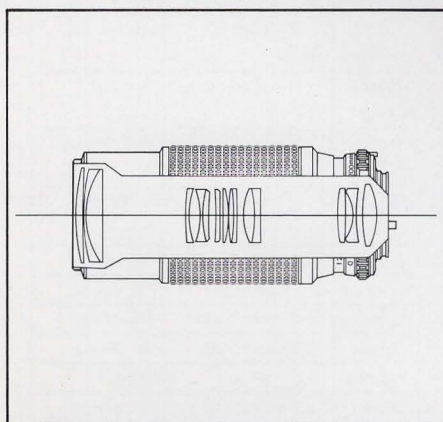
### 50-135mm Zoom Specifications

Maximum Aperture: f/3.5  
Diaphragm: Fully automatic, f/3.5-f/22  
Construction: 12 elements in 10 groups  
Angles of View: 47° to 18°  
Minimum Focus: 4.9 ft.  
Focusing/Zooming Method: Single Control  
Filter Thread Diameter: 55mm  
Weight: 1 lb., 15<sup>15</sup>/<sub>16</sub> oz.



## 75-200mm f/4.5 MD Zoom

An almost universally useful lens, this remarkable compact, lightweight zoom singlehandedly takes the entire short-through-medium telephoto range. Countless applications from portraiture to sports shots can be done with this lens. A minimum focus distance of 4 ft. helps make this an outstanding medium zoom.

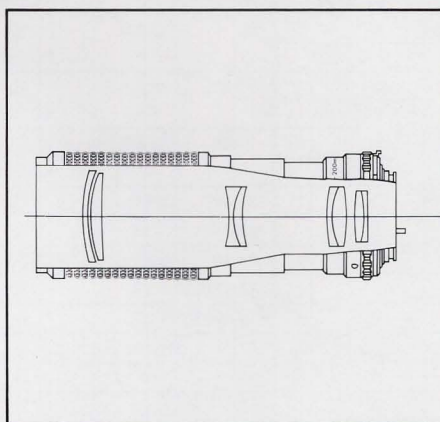


### 75-200mm Zoom Specifications

Maximum Aperture: f/4.5  
Diaphragm: Fully automatic, f/4.5-f/22  
Construction: 15 elements in 11 groups  
Angles of View: 32° to 12° 30'  
Minimum Focus: 3.9 ft.  
Focusing/Zooming Method:  
Single Control  
Filter Thread Diameter: 55mm  
Weight: 1 lb., 6¼ oz.

## 100-200mm f/5.6 MD Zoom

This telephoto zoom lens offers a 2:1 zoom ratio with single focus/zoom control for fast, accurate composing. Slim and lightweight, this economical 100-200mm zoom lens is great for sports shots and nature photography. And, it offers excellent image quality throughout its range.



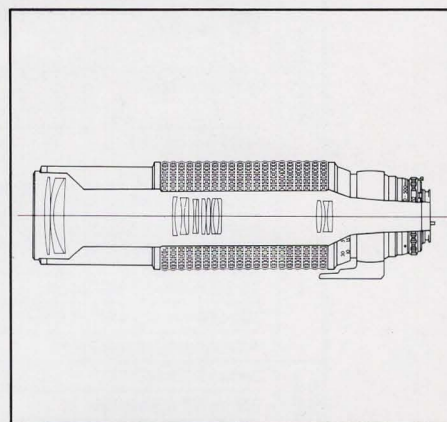
### 100-200mm Zoom Specifications

Maximum Aperture: f/5.6  
Diaphragm: Fully automatic, f/5.6-f/22  
Construction: 8 elements in 5 groups  
Angles of View: 24° to 12° 30'  
Minimum Focus: 8.2 ft.  
Focusing/Zooming Method:  
Single Control  
Filter Thread Diameter: 55mm  
Weight: 1 lb., 4⅞ oz.

## 100-500mm f/8 MD Zoom

The 100-500mm delivers an amazing 5:1 zoom ratio and powerful magnification in an impressively compact design, a natural choice for nature and sports work. The supplied accessory close-up achromat attachment gives this lens a 4.5 foot minimum focus.

The 100-500mm has a built-in tripod collar that rotates to any position 360° around the barrel making format changing from horizontal to vertical fast and convenient.



### 100-500mm Zoom Specifications

Maximum Aperture: f/8  
Diaphragm: Fully automatic, f/8-f/32  
Construction: 16 elements in 10 groups  
Angles of View: 24° to 5°  
Minimum Focus: 8.2 ft. unaided, 4.5 ft. with supplemental close-up achromat attachment  
Focusing/Zooming Method:  
Single Control  
Filter Thread Diameter: 72mm  
Weight: 4 lb., 7⅝ oz.



# Minolta Lens Specifications

LENS		ELEMENTS	GROUPS	ANGLE OF VIEW	MINIMUM FOCUS	MINIMUM f/STOP	FILTER MOUNT DIAMETER	DIMENSIONS (DIAM. X LENGTH)	WEIGHT
Fisheye	7.5 mm f/4 MD Fisheye	12	8	180°	1.6 ft. (Fixed)	f/22	Built-in	2 <sup>11</sup> / <sub>16</sub> x 2 <sup>1</sup> / <sub>2</sub> in.	12 <sup>3</sup> / <sub>16</sub> oz.
	16mm f/2.8 MD Fisheye	11	8	180°	1 ft.	f/22	Built-in	2 <sup>13</sup> / <sub>16</sub> x 2 <sup>1</sup> / <sub>2</sub> in.	15 <sup>1</sup> / <sub>2</sub> oz.
Wide Angle	17mm f/4 MD	11	9	104°	0.8 ft.	f/22	72mm	3 x 2 <sup>1</sup> / <sub>16</sub> in.	11 <sup>7</sup> / <sub>16</sub> oz.
	20mm f/2.8 MD	10	9	94°	0.8 ft.	f/22	55mm	2 <sup>1</sup> / <sub>2</sub> x 1 <sup>11</sup> / <sub>16</sub> in.	8 <sup>5</sup> / <sub>16</sub> oz.
	24mm f/2.8 MD	9	7	84°	1 ft.	f/22	55mm	2 <sup>1</sup> / <sub>2</sub> x 1 <sup>15</sup> / <sub>16</sub> in.	9 <sup>11</sup> / <sub>16</sub> oz.
	28mm f/2 MD	10	9	75°	1 ft.	f/22	55mm	2 <sup>5</sup> / <sub>8</sub> x 2 <sup>3</sup> / <sub>8</sub> in.	12 <sup>3</sup> / <sub>16</sub> oz.
	28mm f/2.8 MD	7	7	75°	1 ft.	f/22	49mm	2 <sup>1</sup> / <sub>2</sub> x 1 <sup>11</sup> / <sub>16</sub> in.	6 <sup>3</sup> / <sub>8</sub> oz.
	28mm f/2.8 MD Minolta/Celtic	7	7	75°	1 ft.	f/22	49mm	2 <sup>1</sup> / <sub>2</sub> x 1 <sup>11</sup> / <sub>16</sub> in.	6 <sup>3</sup> / <sub>8</sub> oz.
	35mm f/1.8 MD	8	6	63°	1 ft.	f/22	49mm	2 <sup>1</sup> / <sub>2</sub> x 1 <sup>7</sup> / <sub>8</sub> in.	8 <sup>5</sup> / <sub>16</sub> oz.
	35mm f/2.8 MD	5	5	63°	1 ft.	f/22	49mm	2 <sup>1</sup> / <sub>2</sub> x 1 <sup>1</sup> / <sub>2</sub> in.	5 <sup>13</sup> / <sub>16</sub> oz.
Normal	45mm f/2 MD	6	5	51°	2 ft.	f/16	49mm	2 <sup>1</sup> / <sub>2</sub> x 1 <sup>3</sup> / <sub>16</sub> in.	4 <sup>7</sup> / <sub>16</sub> oz.
	50mm f/1.2 MD	7	6	47°	1.5 ft.	f/16	55mm	2 <sup>9</sup> / <sub>16</sub> x 1 <sup>13</sup> / <sub>16</sub> in.	11 <sup>1</sup> / <sub>8</sub> oz.
	50mm f/1.4 MD	7	6	47°	1.5 ft.	f/16	49mm	2 <sup>1</sup> / <sub>2</sub> x 1 <sup>9</sup> / <sub>16</sub> in.	7 <sup>3</sup> / <sub>8</sub> oz.
	50mm f/1.7 MD	6	5	47°	1.5 ft.	f/16	49mm	2 <sup>1</sup> / <sub>2</sub> x 1 <sup>7</sup> / <sub>16</sub> in.	5 <sup>5</sup> / <sub>8</sub> oz.
Medium Telephoto	85mm f/1.7 MD	6	5	29°	3.3 ft.	f/22	55mm	2 <sup>13</sup> / <sub>16</sub> x 2 <sup>7</sup> / <sub>16</sub> in.	16 oz.
	85mm f/2 MD	6	5	29°	2.8 ft.	f/22	49mm	2 <sup>1</sup> / <sub>2</sub> x 2 <sup>1</sup> / <sub>8</sub> in.	9 <sup>7</sup> / <sub>8</sub> oz.
	100mm f/2.5 MD	5	5	24°	3.3 ft.	f/22	55mm	2 <sup>1</sup> / <sub>2</sub> x 2 <sup>1</sup> / <sub>2</sub> in.	12 <sup>7</sup> / <sub>8</sub> oz.
	135mm f/2.8 MD	4	4	18°	4.9 ft.	f/22	55mm	2 <sup>1</sup> / <sub>2</sub> x 3 <sup>1</sup> / <sub>4</sub> in.	18 oz.
	135mm f/3.5 MD	4	4	18°	4.9 ft.	f/22	49mm	2 <sup>1</sup> / <sub>2</sub> x 3 <sup>7</sup> / <sub>16</sub> in.	14 <sup>1</sup> / <sub>8</sub> oz.
	135mm f/3.5 MD Minolta/Celtic	4	4	18°	4.9 ft.	f/22	55mm	2 <sup>1</sup> / <sub>2</sub> x 3 <sup>7</sup> / <sub>16</sub> in.	14 <sup>1</sup> / <sub>8</sub> oz.
Telephoto	200mm f/2.8 MD	5	5	12°30'	6 ft.	f/32	72mm	3 <sup>1</sup> / <sub>16</sub> x 5 <sup>1</sup> / <sub>4</sub> in.	1 lb. 8 <sup>11</sup> / <sub>16</sub> oz.
	200mm f/4 MD	5	5	12°30'	8.2 ft.	f/32	55mm	2 <sup>1</sup> / <sub>2</sub> x 5 <sup>1</sup> / <sub>8</sub> in.	1 lb. 2 <sup>3</sup> / <sub>16</sub> oz.
	300mm f/4.5 MD	7	6	8°10'	9.8 ft.	f/32	72mm	3 <sup>1</sup> / <sub>16</sub> x 7 in.	1 lb. 9 oz.
	300mm f/5.6 MD	5	5	8°10'	14.8 ft.	f/32	55mm	2 <sup>9</sup> / <sub>16</sub> x 7 <sup>5</sup> / <sub>16</sub> in.	1 lb. 8 <sup>1</sup> / <sub>2</sub> oz.
	400mm f/5.6 MD Apo	7	6	6°10'	16.4 ft.	f/32	72mm	3 <sup>1</sup> / <sub>4</sub> x 10 <sup>1</sup> / <sub>8</sub> in.	3 lb. 2 <sup>13</sup> / <sub>16</sub> oz.
	600mm f/6.3 MD Apo	9	8	4°10'	16.4 ft.	f/32	Rear-mounted	4 <sup>1</sup> / <sub>4</sub> x 14 <sup>1</sup> / <sub>16</sub> in.	5 lb. 4 <sup>5</sup> / <sub>8</sub> oz.
Mirror Telephoto	250mm f/5.6 RF	6	5	10°	8.2 ft.	f/16 ND Filter	Rear-mounted	2 <sup>5</sup> / <sub>8</sub> x 2 <sup>5</sup> / <sub>16</sub> in.	8 <sup>13</sup> / <sub>16</sub> oz.
	500mm f/8 RF	6	5	5°	13.1 ft.	f/16 ND Filter	Rear-mounted	3 <sup>1</sup> / <sub>4</sub> x 3 <sup>7</sup> / <sub>8</sub> in.	1 lb. 5 <sup>1</sup> / <sub>8</sub> oz.
	800mm f/8 RF	8	7	3°10'	26.2 ft.	f/16 ND Filter	Rear-mounted	4 <sup>15</sup> / <sub>16</sub> x 6 <sup>9</sup> / <sub>16</sub> in.	4 lb. 3 oz.
	1600mm f/11 RF	6	5	1°30'	65.6 ft.	f/22 ND Filter	Rear-mounted	7 <sup>1</sup> / <sub>16</sub> x 12 <sup>11</sup> / <sub>16</sub> in.	15 lb. 1 <sup>5</sup> / <sub>8</sub> oz.
		2 Mirrors							
Zoom	24-50mm f/4 MD Zoom	13	11	84-47°	2.3 ft.	f/22	72mm	2 <sup>15</sup> / <sub>16</sub> x 2 <sup>3</sup> / <sub>4</sub> in.	13 <sup>15</sup> / <sub>16</sub> oz.
	35-70mm f/3.5 MD Zoom	8	7	63-34°	3.3 ft.	f/22	55mm	2 <sup>5</sup> / <sub>8</sub> x 2 <sup>9</sup> / <sub>16</sub> in.	12 <sup>7</sup> / <sub>8</sub> oz.
	50-135mm f/3.5 MD Zoom	12	10	47-18°	4.9 ft.	f/22	55mm	2 <sup>11</sup> / <sub>16</sub> x 4 <sup>5</sup> / <sub>8</sub> in.	1 lb. 1 <sup>5</sup> / <sub>16</sub> oz.
	75-200mm f/4.5 MD Zoom	15	11	32-12°30'	3.9 ft.	f/22	55mm	2 <sup>3</sup> / <sub>4</sub> x 6 <sup>1</sup> / <sub>8</sub> in.	1 lb. 6 <sup>1</sup> / <sub>4</sub> oz.
	100-200mm f/5.6 MD Zoom	8	5	24-12°30'	8.2 ft.	f/22	55mm	2 <sup>1</sup> / <sub>2</sub> x 6 <sup>13</sup> / <sub>16</sub> in.	1 lb. 4 <sup>1</sup> / <sub>8</sub> oz.
	100-500mm f/8 MD Zoom	16	10	24-5°	8.2 ft.	f/32	72mm	3 <sup>9</sup> / <sub>16</sub> x 13 in.	4 lb. 7 <sup>5</sup> / <sub>8</sub> oz.
Special Purpose	24mm f/2.8 MD VFC	9	7	84°	1 ft.	f/22	55mm	2 <sup>5</sup> / <sub>8</sub> x 2 in.	12 oz.
	35mm f/2.8 Shift CA	9	7	63°	1 ft.	f/22	55mm	3 <sup>5</sup> / <sub>16</sub> x 2 <sup>13</sup> / <sub>16</sub> in.	1 lb. 3 <sup>3</sup> / <sub>4</sub> oz.
	85mm f/2.8 Varisoft	6	5	29°	2.6 ft.	f/16	55mm	2 <sup>3</sup> / <sub>4</sub> x 3 <sup>1</sup> / <sub>8</sub> in.	15 <sup>3</sup> / <sub>16</sub> oz.
Macro	50mm f/3.5 MD Macro	6	4	47°	9 in.	f/22	55mm	2 <sup>1</sup> / <sub>2</sub> x 2 <sup>3</sup> / <sub>16</sub> in.	7 <sup>1</sup> / <sub>4</sub> oz.
	100mm f/4 MD Macro	5	4	24°	1.5 ft.	f/32	55mm	2 <sup>5</sup> / <sub>8</sub> x 3 <sup>1</sup> / <sub>2</sub> in.	13 <sup>3</sup> / <sub>8</sub> oz.
Bellows	12.5mm f/2 Bellows Micro	4	4	25°	20.5X via M-2 adapter	f/16	accessory 55mm	1 <sup>5</sup> / <sub>16</sub> x 1 <sup>5</sup> / <sub>16</sub> in.	1 <sup>7</sup> / <sub>16</sub> oz.
	25mm f/2.5 Bellows Micro	6	4	26°	9.3X via M-2 adapter	f/16	accessory 55mm	1 <sup>5</sup> / <sub>16</sub> x 1 <sup>11</sup> / <sub>16</sub> in.	1 <sup>7</sup> / <sub>16</sub> oz.
	50mm f/3.5 Auto Bellows Macro	6	4	47°	3.2X	f/32	55mm	2 <sup>1</sup> / <sub>4</sub> x 1 <sup>5</sup> / <sub>16</sub> in.	4 <sup>1</sup> / <sub>16</sub> oz.
	100mm f/4 Auto Bellows Macro	5	4	24°	1:1 magnification	f/32	55mm	2 <sup>1</sup> / <sub>4</sub> x 1 <sup>1</sup> / <sub>8</sub> in.	5 <sup>5</sup> / <sub>16</sub> oz.
	100mm f/4 Auto Bellows	3	3	24°	1:1 magnification	f/32	55mm	2 <sup>1</sup> / <sub>2</sub> x 1 <sup>3</sup> / <sub>8</sub> in.	5 <sup>7</sup> / <sub>16</sub> oz.



# Minolta Enlarging Lenses

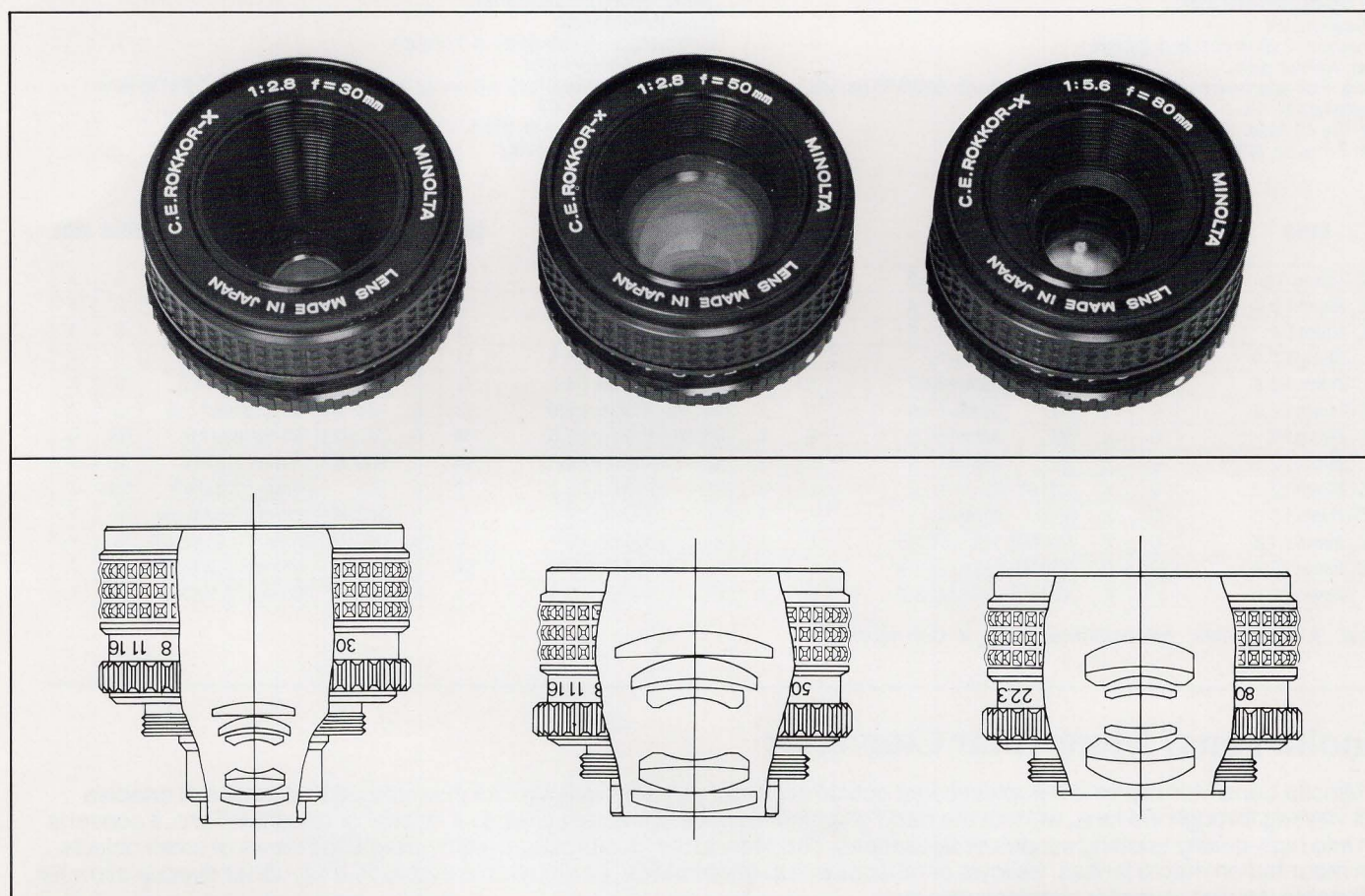
Unusually high optical performance coupled with several convenience features make these lenses the choice for professional quality enlarging.

Designed to meet the requirements of the most discriminating user, Minolta C.E. Rokkor-X lenses offer superior computer-designed optics with easy-to-use operation for darkroom efficiency. The Minolta C.E. Rokkor-X lenses come in three focal lengths to cover the most popular film formats. The 30mm f/2.8 is made for subminiature (16mm) and 110 film, the 50mm f/2.8 is for enlarging negatives up to the 35mm format and the 80mm f/5.6 will handle negatives to 6 x 7 cm (2¼ x 2¾ in.). All deliver high resolution and contrast with freedom

from distortion along with extremely flat field projection. Coated optics, rare earth glass and computer lens design contribute to their superb color correction and sharpness.

The fine optics are housed in equally refined mounts. The use of the standard 39mm Leica thread assures the widest enlarger compatibility. Oversized internally illuminated f/stops help prevent improperly set lens apertures. Two aperture scales, one on each side of the lens, provide easy f/stop readout regardless of lens position.

Positive click-stop aperture ring sets precise f/stop. Pulling away from the mount releases the click-stop mechanism to allow continuous fine aperture adjustment. This continuous control is especially important with color analyzer use. Pushing the ring toward the mount restores click-stop operation. Click or clickless, the Minolta C.E. Rokkor-X offers linear light transmission thanks to its smooth six-bladed diaphragm. The rubber waffle grip styling makes for positive handling and easy adjustment.



## Minolta 30mm C.E.

### Specifications

Format: 16mm and 110  
Mount: 39mm Leica screw thread  
Maximum Aperture: f/2.8  
Minimum Aperture: f/22  
Construction: 6 elements in 5 groups  
Coating: Amber  
Size: 2<sup>3</sup>/<sub>16</sub> x 2 in.  
Weight: 4<sup>13</sup>/<sub>16</sub> oz.

## Minolta 50mm C.E.

### Specifications

Format: Up to 35mm  
Mount: 39mm Leica screw thread  
Maximum Aperture: f/2.8  
Minimum Aperture: f/22  
Construction: 6 elements in 5 groups  
Coating: Amber  
Size: 2<sup>3</sup>/<sub>16</sub> x 1<sup>5</sup>/<sub>8</sub> in.  
Weight: 5<sup>7</sup>/<sub>8</sub> oz.

## Minolta 80mm C.E.

### Specifications

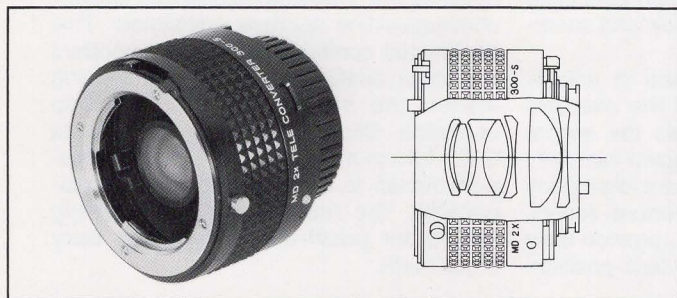
Format: Up to 2¼ x 2¾ in.  
Mount: 39mm Leica screw thread  
Maximum Aperture: f/5.6  
Minimum Aperture: f/45  
Construction: 6 elements in 4 groups  
Coating: Amber and Magenta  
Size: 2<sup>3</sup>/<sub>16</sub> x 1½ in.  
Weight: 5½ oz.



# Minolta Lens Accessories

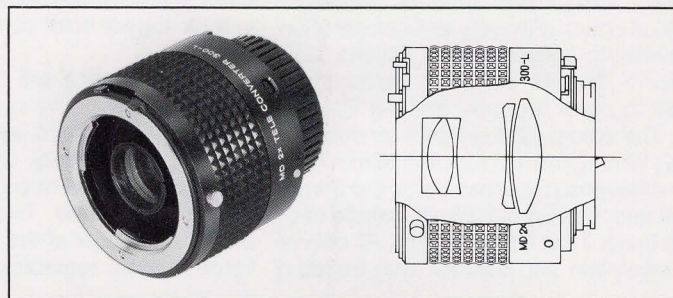
## MD 2X Tele Converter 300S/300L

Add on a Tele Converter to double the focal length of a lens. The 300S Tele Converter is primarily designed for lenses of 300mm or shorter, while the 300L Tele Converter provides optimum image quality when used with long tele lenses. These Minolta Tele Converters provide full aperture metering and maintain automatic exposure control in both aperture- and shutter-priority modes. Both feature Minolta's patented Achromatic coating. See chart below for specific applications of each Minolta 2X Tele Converter.



### 300S Specifications:

Magnification: 2X  
Construction: 7 elements in 6 groups  
Coating: Achromatic  
Metering: Full aperture metering; metercoupled with MC/MD lenses  
Exposure factor: 4X  
Size: 2-9/16 x 1-5/8 in. (65.5 x 41.5mm)  
Weight: 7-7/16 oz. (210g)



### 300L Specifications:

Magnification: 2X  
Construction: 5 elements in 3 groups  
Coating: Achromatic  
Metering: Full aperture metering; meter coupled with MC/MD lenses  
Exposure factor: 4X  
Size: 2-9/16 x 2-1/16 in. (65.5 x 52.5mm)  
Weight: 8-7/16 oz. (240g)

MD or MC	LENS	300S	300L	MD or MC	LENS	300S	300L	MD or MC	LENS	300S	300L	MD or MC	LENS	300S	300L
MD/MC	7.5mm f/4	G	X	MD	50mm f/1.2	G	X	MD	200mm f/2.8	G	A	MD	35-70mm f/3.5	G	X
MD/MC	16mm f/2.8	G	X	MD/MC	50mm f/1.4	G	X	MC	200mm f/3.5	G	A	MC	40-80mm f/2.8	G	X
MD/MC	17mm f/4	G	X	MD/MC	50mm f/1.7	G	X	MD/MC	200mm f/4	G	G	MD	50-135mm f/3.5	G	A
MD	20mm f/2.8	G	X	MC	50mm f/2	G	X	MC	200mm f/4.5	G	G	MD	75-200mm f/4.5	G	A
MC	21mm f/2.8	G	X	MC	55mm f/1.7	G	X	MD/MC	300mm f/4.5	G	G	MC	80-200mm f/4.5	G	X
MD/MC	24mm f/2.8	G	X	MC	55mm f/1.9	G	X	MD/MC	300mm f/5.6	G	G	MD/MC	100-200mm f/5.6	G	A
MD/MC	28mm f/2	G	X	MC	58mm f/1.2	G	X	MC/MC	400mm f/5.6	NA	G	MD/MC	100-500mm f/8	NA	G
MC	28mm f/2.5	G	X	MC	58mm f/1.4	G	X	MD	600mm f/6.3	NA	G	MD/MC	24mm f/2.8 VFC	G	X
MD/MC	28mm f/2.8	G	X	MD/MC	85mm f/1.7	G	A	RF	250mm f/5.6	G	A	CA	35mm f/2.8 Shift	NA	X
MD/MC	28mm f/3.5	G	X	MD	85mm f/2	G	A	RF	500mm f/8	G	G	MD/MC	50mm f/3.5 Macro	G	X
MD/MC	35mm f/1.8	G	X	MD/MC	100mm f/2.5	G	A	RF	800mm f/8	A	G	MD/MC	85mm f/2.8 Varisoft	G	A
MD/MC	35mm f/2.8	G	X	MD/MC	135mm f/2.8	G	A	RF	1600mm f/11	NA	G		100mm f/3.5 Macro	G	A
MD	45mm f/2	G	X	MD/MC	135mm f/3.5	G	A	MD	24-50mm f/4	G	X	MD	100mm f/4 Macro	G	A

G: Good A: Acceptable NA: Not Acceptable X: Can not use

## Minolta Lens/Monocular Converter

The Minolta Lens/Monocular is a sophisticated optical accessory for use with Minolta interchangeable lenses. It enables direct viewing through the lens, without the need of a camera body. When attached to a normal or telephoto lens, it converts them into high-quality spotting scopes or telescopes. The Monocular also provides highly-magnified views of small objects when mounted on macro lenses, bellows or other close-up accessories. Its adjustable eyepiece and rubber eyecup allow for comfortable viewing, even for eyeglass wearers.

### Lens/Monocular Specifications:

Construction of eye piece lens: 4 elements in 3 groups  
Prism: direct viewing roof prism  
Magnification with normal or telephoto lens: approximately 1/10 the focal length of the lens (i.e. 50mm lens provides 5X magnification)  
Magnification with close-up accessories: approximately 25 times the magnification of the lens and close-up equipment (i.e. 2X life-size reproduction ratio provides 50X magnification)  
Adjustable range of eyepiece: -5 to +3 diopters  
Size: 2 7/16 x 2 in. (62mm x 51mm)  
Weight: 3 11/16 oz. (105g)



Example magnifications when used with various interchangeable lenses

Lens	Magnification range
50mm	5X
100mm	10X
200mm	20X
50-135mm Zoom	5-13.5X
100-200mm Zoom	10-20X
50mm Macro at 1:2	12.5X
50mm Macro at 1:1	25X
50mm Macro & Auto Bellows III	20-90X
50mm Standard & Auto Bellows III	20-80X



# Minolta Bellows Lenses

These four lenses are primarily for use with Minolta Bellows Systems. Magnification for these lenses range from 18 times life-size to infinity. All are specially designed and optically corrected for close-up work. Their tapered barrels permit easy illumination and a black finish reduces undesirable reflections. The micro lenses are also designed for use directly on a microscope.

## 50 mm f/3.5 Auto Bellows Macro Lens



### Specifications:

**Type:** Gauss type, short-mount macro for bellows use

**Construction:** 6 elements in 4 groups

**Diaphragm:** Automatic preset, f/3.5-32 with full and half click-stops

**Focusing:** By bellows and/or focusing rail

**Pupil magnification:** 0.98X **Size:** 2 1/4 x 1 5/16 in. (57 x 24.5mm)

**Coating:** Minolta Achromatic **Weight:** 4 1/16 oz. (115g)

**Accessories:** Supplied: Lens hood (accepts 55mm filters)  
Optional: Holder for gelatin filters

## 100mm f/4 Auto Bellows Macro Lens



### Specifications:

**Type:** Modified Gauss type short-mount macro tele for bellows use

**Construction:** 5 elements in 4 groups

**Diaphragm:** Automatic preset, f/4-32 with full and half click-stops

**Focusing:** By bellows and/or focusing rail

**Pupil magnification:** 0.96X **Size:** 2 1/4 x 1 1/8 in. (57 x 28.5mm)

**Coating:** Minolta Achromatic **Weight:** 5 5/16 oz. (150g)

**Accessories:** Supplied: Lens hood (accepts 55mm filters)  
Optional: Holder for gelatin filters

50mm f/3.5	0.8X	3.2X
100mm f/4	1/∞	1.0X

Magnification Chart

## 12.5mm f/2 Bellows Micro Lens



### Specifications:

**Type:** Einstar type, high-magnification lens for bellows or microscope use

**Construction:** 4 elements in 4 groups

**Diaphragm:** Manual, f/2-16

**Focusing:** By bellows and/or focusing rail

**Pupil magnification:** 1.26X

**Coating:** Single **Size:** 1 5/16 x 1 5/16 in. (33 x 23.5mm)

**Mount:** 20.32mm screw-type **Weight:** 1 7/16 oz. (40g)

**Accessories:** Supplied: Aperture-adjusting lever  
Optional: M-1 and M-2 adapters with Minolta SLR bayonet mount; gelatin filter holder

## 25mm f/2.5 Bellows Micro Lens



### Specifications:

**Type:** Gauss type high-magnification lens for bellows or microscope use

**Construction:** 6 elements in 4 groups

**Diaphragm:** Manual f/2.5 to 16

**Focusing:** By bellows and/or focusing rail

**Pupil magnification:** 1.18X

**Coating:** Single **Size:** 1 5/16 x 1 1/16 in. (33.5 x 17mm)

**Mount:** 20.32mm screw-type **Weight:** 1 7/16 oz. (40g)

**Accessories:** Supplied: Aperture-adjusting lever  
Optional: M-1 and M-2 adapters with Minolta SLR bayonet mount; gelatin filter holder

## M-1/M-2 Adapters



The Minolta 12.5mm f/2 and 25mm f/2.5 Bellows Micro lenses mount on Minolta Bellows units via the M-1 or M-2 adapters.

Magnification Chart

	1/∞	1/1	5/1	10/1	20/1	30/1
12.5mm f/2 + M-1 Adapter			8.0X	18.0X		
12.5mm f/2 + M-2 Adapter			10.5X	20.5X		
25mm f/2.5 + M-1 Adapter		3.2X	8.1X			
25mm f/2.5 + M-2 Adapter		4.4X	9.3X			

NOTE: Specifications subject to change without notice.  
See pages D7-D10 for additional information on Minolta Close-up equipment.



# Minolta XK Motor Drive Accessories



## AE-S Finder

Designed specifically for use with the Minolta XK Motor Drive, the AE-S Finder is also fully compatible with older model non-motorized XK cameras. It consists of an eye-level pentaprism with built-in silicon-cell, center-weighted, through-the-lens metering system and automatic/electronic exposure-control circuitry.

Auto-exposure range is from EV -2 to EV 17 (8 seconds at f/1.4 to 1/2000 second at f/8) in single-frame operation and from EV 3 to EV 17 (1/4 second

at f/1.4 to 1/2000 second at f/8) in continuous-run mode with an f/1.4 lens at ASA 100. In automatic operation, the AE-S Finder adjusts electronic shutter speeds steplessly over a range of 8 seconds through 1/2000 second, providing pinpoint exposure accuracy. For metered-manual and nonmetered exposures, the locking shutter-speed/function dial may be set to electronically timed discrete speeds from 1 second to 1/2000, plus mechanical B and X (1/100) settings. Nonmetered, electronically

timed speeds from 2 to 16 seconds may be set with the long-exposure selector lever. The silicon cell provides exceptionally fast, accurate response to changing light levels, and is immune to "memory" effects.

The AE-S Finder may be set for ASA speeds from 12 to 6400 in 1/3-stop locking increments, and has an auto-exposure override control for modifying automatically set exposures up to  $\pm 2$  EV. A click-stopped screen compensator allows adjusting meter response from -0.5 to +3.5 EV for optimum exposure accuracy with various focusing-screen/lens combinations.

All necessary exposure information is visible in the AE-S Finder: f/number set with meter-coupled Minolta lenses; stepless dual-range LED/digital indication of automatically set shutter speed or speed required for proper exposure in metered-manual mode; and readout indicating A for auto operation or manually set shutter speed.

Additional information about this highly efficient and versatile finder appears on pages A2 and A3.



## Plain Finder

This finder allows manual control with both shutter-speed and aperture figures clearly visible in the viewfinder. It is suggested for use when a built-in light-metering system is not required. The Plain Finder is light and compact, and well suited to the needs of the studio photographer who works extensively with electronic flash. The shutter speed selector dial of the Plain Finder offers the same range of speeds found on the AE-S Finder, and the stepped shutter speeds provide electronic precision.



## High-Magnification Finder

Magnifying the entire field of view 6.20 times, the High-Magnification Finder is designed for use whenever extremely critical focusing is needed. It is particularly well suited for close-up photography and photomacrography. Convenience features include a rubber-cushioned eyepiece and built-in adjustment capability (+3 to -5 diopters) for individual eyesight requirements. The shutter speed selector dial has the same range of speeds as the other finders, and all speeds maintain their electronic accuracy. This finder incorporates no meter, and the viewing image is laterally reversed.



## Waist-Level Finder

This finder is designed for copying, photomacrography, candids and other applications where right-angle viewing is preferable. It is ideal for photojournalistic shooting when the camera must be held aloft to shoot over the heads of people in a crowd, and for extremely dramatic low-angle photography where the camera is placed on the ground and eye-level viewing is almost impossible. The folding hood springs open and, at the press of a button, a magnifier swings up for critical focusing. Again, the total range of shutter speeds is available and all maintain their electronic accuracy. This finder, too, incorporates no exposure meter and provides a laterally reversed viewing image.



# Minolta XK Motor Drive Accessories



## Standard Battery Pack

The Standard Battery Pack for the XK Motor Drive attaches beneath the motor-drive housing via a mounting screw that engages the tripod socket in the bottom of the housing. (The oversized head of the mounting screw also incorporates a threaded socket for tripod mounting the complete assembly.) A rugged connecting terminal integral with the battery pack mates securely with a socket built into the bottom of the XK Motor Drive's hand grip. This mounting method prevents accidental loss of contact, as positive connection is maintained until the battery pack is detached. And the resulting compact configuration allows maximum photographic mobility in rapidly changing picture situations.

The Standard Battery Pack holds 10 AA-size (penlight) batteries. Alkaline-manganese cells provide sufficient power for motorized advancing and rewinding of approximately 20 to 80 36-exposure film cartridges depending on framing rate. For extended shooting sessions, the photographer has the option of replacing the expended batteries in the attached battery pack, or removing the entire pack and replacing it with another pack preloaded with fresh batteries.

flexible, four-foot cable ending in a terminal that mates with the power socket in the bottom of the camera's hand grip.

As the Standard Battery Pack is removed when using the Separate Battery Pack, overall size and weight of the XK Motor Drive are reduced to little more than those of a manually operated 35mm SLR, facilitating handheld photography during prolonged shooting sessions. And in cold weather, the Separate Battery Pack may be kept warm in a pocket or worn close to the body to preserve battery efficiency.



## Battery Grip

Intended primarily for use with the 250-Frame Film Back, the cylindrical Battery Grip may also be mounted directly beneath the XK Motor Drive's motor housing in place of the Standard Battery Pack. In either application, it screw-mounts to the tripod socket provided and does double duty as a power supply and textured, nonslip vertical hand grip.

The Battery Grip holds 10 AA-size (penlight) batteries in an interchangeable plastic cartridge. Electrical connection to the camera is through a permanently attached 8½-inch cable that plugs into the power socket at the bottom of the camera's hand grip. The Battery Grip incorporates an electromagnetic-relay release button with lock ring similar to that on the camera's hand grip. Either one may be used to trigger the motor drive.

## 250-Frame Film Back

The 250-Frame Film Back attaches to the XK Motor Drive in place of the removable, standard swing-open back, and holds up to 33 feet of 35mm film, sufficient for making 250 exposures without reloading. When the 250-Frame Film Back is used, motor-drive power must be provided by the Battery Grip or Separate Battery Pack (the Standard Battery Pack cannot be used). Manual film advance is also possible.

The film supply and take-up chambers of the 250-Frame Film Back each holds a removable, interchangeable metal cartridge (two are supplied). Film-feed apertures in the cartridges open automatically for scratch-free film transport as the back cover is locked, and close for daylight film changing when the cover is unlocked.

Other built-in features of the 250-Frame Film Back include: frame counter; film cutter; Battery Grip/tripod socket; and strap lugs.

In addition to its utility for providing uninterrupted coverage of conventional photographic assignments, the 250-Frame Film Back coupled with the unique capabilities of the XK Motor Drive provides unmatched performance and convenience for such specialized applications as surveillance, instrumentation recording and other types of remote and/or unmanned photography. It is available with or without the accessory Battery Grip.



## Separate Battery Pack

An extremely compact accessory power supply for the XK Motor Drive, the Separate Battery Pack holds 10 AA-size (penlight) batteries in a rigid, black, leather-look case that measures only 5x3½x7/8 inches. A snap-secured belt loop permits wearing the pack conveniently, or hanging it on a tripod control handle. And the flat-pack form makes it easy to carry in a jacket or coat pocket. It connects to the XK Motor Drive by a slender,





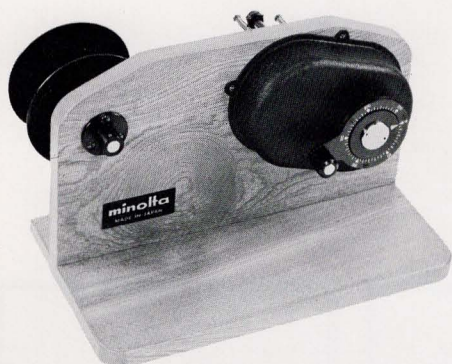
### Film Cartridge for 250-Frame Film Back

Each all-metal cartridge consists of a flanged spool with film-end retaining clips on the core that fits within a double-walled, two-piece casing. Two are supplied with the 250-Frame Film Back, one serving for film supply, the other for film take-up.

The cartridge used for film supply is dark-room-loaded with up to 33 feet of 35mm film, and the film aperture is closed after assembly by rotating the inner casing until the assembly locks together. When shut, the cartridges are light-tight for convenient daylight reloading of the film back.

Supply and take-up cartridges are loaded into their respective chambers in the film back, and locking the back automatically opens the film aperture in each cartridge for drag-free, nonscratch film transport.

Individual cartridges are available as replacements and as extras that can be preloaded to facilitate rapid film changing during long shooting sessions.



### Film Loader

This crank-operated unit is specially designed to load film cartridges used in the 250-Frame Film Back quickly and conveniently. The calibrated counter can be set to load film lengths providing up to 250 frames in five-frame increments. The counter markings are luminous for resetting in the dark. A positive stop blocks the smoothly geared winding mechanism when the preset film length has been wound onto the cartridge take-up spool. The Film Loader is supplied complete with its own removable film-supply spool.



### Intervalometer PM

This compact repeating timer is powered by five AA-size (penlight) batteries contained in a plastic cartridge, and can be set for intervals from 0.5 to 60 seconds between single-frame exposures. It attaches to the accessory mount shoe of the XK Motor Drive and connects electrically to the input jack on the camera's hand grip with separately supplied Connecting Cords S or L. The Intervalometer PM is extremely accurate and dependable, and presents a simple, thoroughly reliable means of obtaining precisely timed unmanned sequences illustrating time-related processes, procedures and developments.



### Connecting Cords S and L

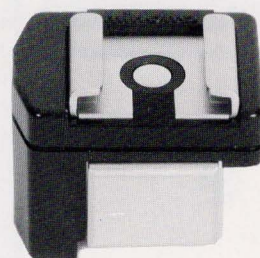
These flexible cords are used to electrically connect the Intervalometer PM and similar devices to the XK Motor Drive camera. Cord S is approximately 20 inches long and Cord L is about 8.5 feet in length. Each has a four-prong plug at one end for the device to be connected and a single-prong plug on the other for insertion into the input jack on the camera's hand grip.



### Remote Control Cords S and L

These slender cords are used to operate the XK Motor Drive at a distance. They pro-

vide vibration-free triggering of the XK Motor Drive in situations when the photographer must control the moment of exposure yet be free to move about or be stationed away from the camera position. Each cord plugs into the input jack on the camera's hand grip. The Remote Control Cord S is approximately 40 inches long and the Remote Control Cord L is 16.5 feet long. Each ends in a small housing fitted with a soft-touch push button.



### XK Motor Drive Accessory Hot Shoe

This fits over and locks onto the slide-on mount of the XK Motor Drive camera body and older model XK cameras to provide hot-shoe flash operation with cordless units. It also serves as a conventional shoe mount for slide-in accessories.



### Holding Strap and Neck Strap

The leather Holding Strap provides a secure, comfortable means of holding the XK Motor Drive in hand-held photography. It consists of an adjustable strap with contoured pad for the right hand, and a spring-locked, snap-on clip that engages the holding strap lug on the lower right rear of the camera body.

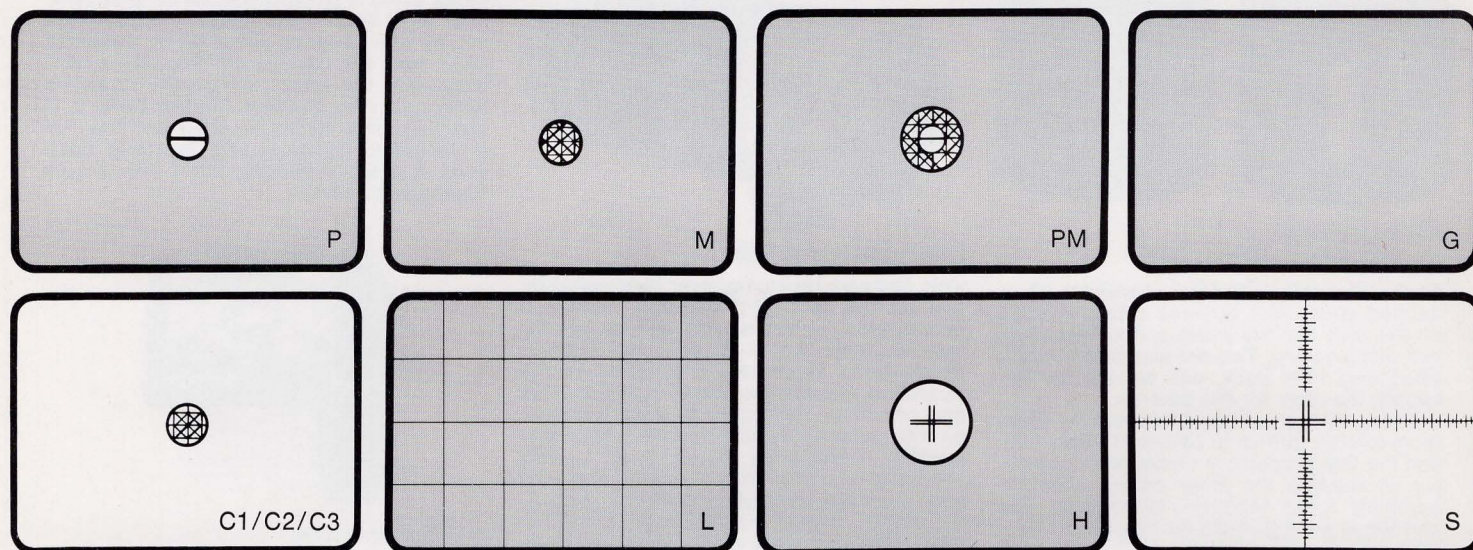
The adjustable-length Neck Strap is made of tough, durable woven nylon and is furnished with a nonslip rubber pad incorporating two storage wells for spare shutter/exposure system batteries. The strap may be attached to the split rings on the camera body or to the strap fittings on the top of the 250-Frame Film Back.

The Holding Strap and Neck Strap are supplied with the XK Motor Drive and are also available as accessory/replacement items.



# Minolta XK-M Focusing Screens

Precisely made interchangeable screens provide fast, accurate focusing in any photographic situation.



**Type P:** Matte fresnel field with central horizontally oriented split-image rangefinder spot; for general photography.

**Type M:** Matte fresnel field surrounding central microprism spot; for general photography.

**Type PM:** Matte fresnel field with central split-image spot surrounded by microprism collar; for general photography.

**Type G:** Matte fresnel field only; for general photography.

**Type C1:** Clear fresnel field with microprism spot; for general photography.

**Type C2:** Same as C1 for certain lenses.

**Type C3:** Same as C1 for certain other lenses.

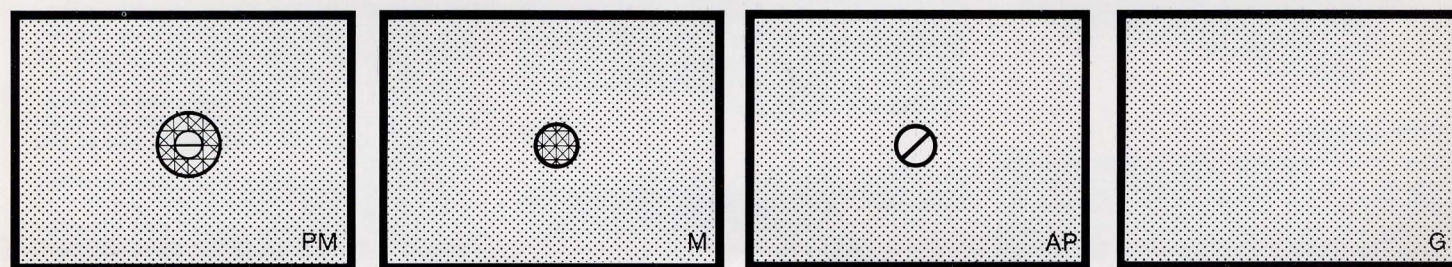
**Type L:** Matte fresnel field with grid of fine horizontal and vertical lines etched at 6mm intervals; for architectural and other work requiring precise composition or subject alignment, particularly with the 35mm f/2.8 Shift CA Rokkor-X lens.

**Type H:** Matte fresnel field with central clear circle containing etched double cross mark; for astro-photography, photomicrography and other high-magnification applications.

**Type S:** Clear fresnel field with central double cross plus vertical and horizontal measuring scales; for parallax and dioptric focusing in close-ups, photomicrography and other high-magnification applications.

# Minolta XD Focusing Screens

Alternate Acute Matte Focusing Screens available for XD-11 and XD-5 cameras—installed by authorized Minolta service centers.



**Type PM:** Standard Acute Matte Focusing Screen supplied with XD cameras has both split-image rangefinder and surrounding microprism collar.

**Type M:** Central microprism, 4mm in diameter, which fractures out-of-focus images decisively, surrounded by an Acute Matte field. A good choice for use with short focal length lenses.

**Type AP:** Central diagonally-oriented split-image focusing screen with surrounding Acute Matte field. It provides an unusually bright image with f/5.6 or faster lenses.

**Type G:** Plain Acute Matte screen over the entire viewing area, permitting clear, extremely bright focusing. This screen is particularly useful for telephoto and close-up work.



# Minolta XK-M Focusing Screen Exposure Compensation Chart\*

This chart details the best lens/focusing screen combinations which can be used with the Minolta XK Motor and older XK cameras. Exposure compensation settings are also listed for exposure metering with the AE-S finder.

LENSES	METERING METHOD	P	M	PM	G	L	AP	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	H	S
7.5mm f/4	Full-Aperture	●	●	●	●	●	2.5	3.5	3.5	3.5	●	★
16mm f/2.8	Full-Aperture	●	●	●	●	●	1.5		3.0	3.0	●	★
17mm f/4	Full-Aperture	●	●	●	●	●	1.5		3.0		●	★
20mm f/2.8	Full-Aperture	●	●	●	●	●	1.5	3.0	3.5		●	★
24mm f/2.8 & 24mm f/2.8 VFC	Full-Aperture	●	●	●	●	●	1.5	2.5	2.5		●	★
28mm f/2	Full-Aperture	●	●	●	●	●	1.5	2.5	2.5	2.5	●	★
28mm f/2.8	Full-Aperture	●	●	●	●	●	1.5	3.0	2.5		●	★
35mm f/1.8	Full-Aperture	●	●	●	●	●	1.0	2.5	2.0		●	★
35mm f/2.8 Shift	Stop-Down	●	●	●	●	●	1.5	3.0	2.5	2.5	●	★
35mm f/2.8	Full-Aperture	●	●	●	●	●	1.5	3.0	2.5		●	★
45mm f/2	Full-Aperture	●	●	●	●	●	1.0	2.5	2.5		●	★
50mm f/1.2	Full-Aperture	●	●	●	●	●	●	2.5	2.5	2.0	●	★
50mm f/1.4	Full-Aperture	●	●	●	●	●	0.5	3.0	2.5	2.5	●	★
50mm f/1.7	Full-Aperture	●	●	●	●	●	1.0	2.5	2.0		●	★
50mm f/3.5 Macro	Full-Aperture	●	●	●	●	●	1.5		3.0		●	★
85mm f/1.7	Full-Aperture	●	●	●	●	●	1.0	2.5	2.0	2.0	●	★
85mm f/2	Full-Aperture	●	●	●	●	●	1.5	2.0	2.5	2.5	●	★
85mm f/2.8 Varisoft	Full-Aperture	●	●	●	●	●	1.0	2.5	2.5	2.0	●	★
100mm f/2.5	Full-Aperture	●	●	●	●	●	1.5	2.5	2.5	2.5	●	★
100 f/4 Macro	Full-Aperture	●	●	●	●	●	1.5			3.5	●	★
100mm f/4 Auto Bellows	Stop-Down	●	●	●	●	●	2.0				●	★
135mm f/2.8 & 135mm f/3.5	Full-Aperture	●	●	●	●	●	1.5		3.0	3.0	●	★
200mm f/2.8 & 200 mm f/4	Full-Aperture	●	●	●	●	●	1.5			3.5	●	★
250mm f/5.6	Stop-Down	●	●	●	●	●	1.5				●	★
300mm f/4.5	Full-Aperture	●	●	●	●	●	1.5			3.5	●	★
300mm f/5.6	Full-Aperture	●	●	●	●	●	1.5				●	★
400mm f/5.6	Full-Aperture	●	●	●	●	●	1.5				●	★
500mm f/8	Stop-Down	●	●	●	●	●	1.0				●	★
600mm f/6.3	Full-Aperture	●	●	●	●	●	2.0				●	★
800mm f/8	Stop-Down	●	●	●	●	●	2.0				●	★
1600mm f/11	Stop-Down	●	●	●	●	●	2.5				●	★
24-50mm f/4	Full-Aperture	●	●	●	●	●	1.5	3.0	3.0		●	★
35-70mm f/3.5	Full-Aperture	●	●	●	●	●	1.5	3.0	3.0		●	★
50-135mm f/3.5	Full-Aperture	●	●	●	●	●	1.0		3.0	3.0	●	★
75-200mm f/4.5	Full-Aperture	●	●	●	●	●	2.0			3.5	●	★
100-200mm f/5.6	Full-Aperture	●	●	●	●	●	2.0				●	★
100-500mm f/8	Full-Aperture	●	●	●	●	●	2.0				●	★

(1) ● Indicates no compensation necessary; the dot should appear in the compensation-factor window for proper metering. Where numbers appear in this table, the corresponding numbers should be set to appear in the compensation-factor window when using that lens/screen combination.

(2) Except 35mm f/2.8 Shift, exposure cannot be measured by the stop-down method when C-type screens are used.

(3) ★ The Type S screen can be used with all lenses but only with the High-Magnification Finder.

(4) Blank spaces indicate unusable combinations.

(5) When a number appears in the compensation-factor window, movement of the film speed selector dial is limited at one end of the scale or the other. (For example, 2 appears in the window, the selector can be moved only as far at 1600.)

\* **Note:** This chart does not apply to alternate Acute Matte Focusing Screens for Minolta XD cameras.

March, 1981

D5



# Minolta XD and XG Accessories



## Motor Drive 1

This detachable motor drive, designed exclusively for the Minolta XG-M, provides photographers with motorized film advance up to 3.5 frames per second. It couples directly to the camera without the need to remove or store cover caps. Functionally designed, the Motor Drive 1 incorporates dual shutter release buttons for comfortable vertical or horizontal shooting. Both releases utilize Minolta's exclusive, energy-saving touch switch which activates the metering system. A locking, frame-rate selector dial can be set for single, 2 fps or 3.5 fps firing rates. Eight AA-size penlight batteries power up to 80, 36-exposure cartridges. A red LED on the back of the motor lights after each shot to indicate proper film advance.

To prevent film damage, the Motor Drive 1 automatically shuts off and the LED glows steadily at the end of a roll. A built-in film-release switch permits film rewinding with the motor attached.

## Motor Drive 1 Specifications

**Power Source:** 8-AA size carbon-zinc, alkaline or Ni-Cad batteries

**Size:** Battery Chamber: 5<sup>7</sup>/<sub>8</sub> x 1<sup>9</sup>/<sub>16</sub> x 1<sup>1</sup>/<sub>2</sub> in. (149 x 40.5 x 38mm)

Grip: 3<sup>7</sup>/<sub>8</sub> x 2<sup>5</sup>/<sub>16</sub> (98.5 x 74.5mm)



## Auto Winder D and G

Winders for XD/XG cameras provide motorized single frame or continuous-run film advance at about 2 frames per second. They couple directly to the camera without having to remove or store cover caps. Four AA-size batteries power the winder's coreless micro-motor for up to 150, 36-exposure cartridges. A bright LED signal on the back of each unit flashes for each frame to indicate proper advance. At the end of a roll, the motor shuts off automatically to prevent film damage while the LED glows steadily. The built-in film-release switch permits rewinding film with the winder attached as well as motorized multiple exposures with XD cameras.

## Auto Winder D and G Specifications

**Power Source:** 4-AA carbon zinc, alkaline or Ni-Cad batteries.

**Auto Winder D:**

**Size:** 1<sup>3</sup>/<sub>8</sub> x 1<sup>7</sup>/<sub>16</sub> x 5<sup>3</sup>/<sub>8</sub> in.  
(35 x 37 x 136mm)

**Weight without batteries:**  
7<sup>3</sup>/<sub>16</sub> oz. (205g)

**Auto Winder G:**

**Size:** 1<sup>3</sup>/<sub>8</sub> x 1<sup>7</sup>/<sub>16</sub> x 5<sup>7</sup>/<sub>16</sub> in.  
(35 x 37 x 138mm)

**Weight without batteries:**  
7<sup>3</sup>/<sub>8</sub> oz. (210g)

## Data Back D and G

The removable back cover supplied with all Minolta XD/XG series cameras (except the XG-1) can be interchanged with Minolta's Data Back D/G for date recording or other similar record keeping purposes. The data backs synchronize with the camera's shutter via a cord which connects to the P.C. terminal. As an exposure is made, the information is recorded directly on the bottom right-hand corner of the film. An on/off switch also controls the data-exposure intensity for either normal or high-speed films. A red LED serves as a battery check indicator as well as a signal that data is being recorded.

## Data Back D and G Specifications

**Setting dials:** Left "DAY" dial: 31 figures (1-31) plus one blank  
Center "MONTH" dial: 19 figures (1-12, A-G) plus two blanks  
Right "YEAR" dial: 30 figures (78-98, A-I) plus two blanks

**Power:** Two 1.5V silver-oxide batteries (S-76 or equivalent)  
**Size:** Data Back D: 5<sup>3</sup>/<sub>8</sub> x 2<sup>1</sup>/<sub>8</sub> x 1<sup>3</sup>/<sub>16</sub> in. (137 x 54 x 30mm)  
Data Back G: 5<sup>1</sup>/<sub>2</sub> x 2<sup>1</sup>/<sub>8</sub> x 1<sup>1</sup>/<sub>8</sub> in. (139.5 x 53 x 27mm)  
**Weight:** 3<sup>3</sup>/<sub>16</sub> oz. (90g)



## Eveready Cases

Eveready cases for the XD and XG cameras are semi-flexible and molded to the camera's shape, with a removable padded lens section for additional protection. The front of the case drops down and need not be removed for camera use. Constructed of attractive, scuff-resistant leather-like material, the cases come in two styles: for camera and lens alone or with the auto winder attached.



## Neck Strap

Made of durable woven nylon, these straps attach to the lugs on the camera body. Adjustable in length for user preference, they feature a battery pouch for holding extra batteries and a non-slip shoulder pad for secure, comfortable carrying.



## Remote Control Cords

These cords are used to remotely operate the XD and XG cameras either manually or with the auto winder attached. They provide vibration-free, electrical triggering of the cameras in situations that require the photographer to control the moment of exposure while away from the camera position. The 20-inch and 16.5-foot length cords screw into the camera like a conventional cable release and end in a small housing fitted with a soft-touch push button.



# Close-up Accessories Magnification Chart



0.1X

0.5X

1X

10X

20X

Lens' Focal Length	Attachment	0.5	1	2	5	10	20	
Telephoto 200 mm	Normal	0.1X	0.2X	1.6X				Lens only 
		0.03X	0.4X	0.2X	0.9X			
Telephoto 100 mm	Normal	0.1X	0.1X	0.8X				Close-up lens 
		0.08X	0.8X	0.4X	1.8X			
Standard 50 mm	Normal	0.15X	0.05X	0.5X				Extension tube 
		0.1X	1.4X	0.8X	3.4X			
	Reverse		0.8X	2.1X				Bellows 
			1.7X	3.8X				
Wideangle 28 mm	Normal	0.15X	0.03X	0.3X				
		0.2X	2.4X	1.4X	4.8X			
	Reverse			2.1X	4.3X			
				2.8X	7.3X			
Wideangle 20 mm	Reverse			3.2X	5.9X			
				4.2X	10.3X			
Bellows Micro: 12.5 mm + M1 Adapter 12.5 mm + M2 Adapter 25 mm + M1 Adapter 25 mm + M2 Adapter						8.0X	18.0X	The maximum magnification indi- cated for each accessory includes the length the lens is extended.
						10.5X	20.5X	
Auto Bellows Macro: 50 mm 100 mm	Normal		0.8X	3.2X				Magnification is the ratio of the size of the subject and the size of the image on film, as expressed in:
			1X					
Macro 100 mm	Normal		1.2X					Magnification = Image size on film Size of subject
		0.5X	(Life-size adaptor necessary) 1X					
Macro 50 mm	Normal	0.1X	1.3X					
		0.1X	1.1X					
		0.4X	2.2X					
		0.5X	(Life-size adaptor necessary) 1X					
		0.05X	0.8X					
		0.1X	1.7X					
			0.8X	3.7X				



# Minolta Close-Up Accessories

## Minolta Auto Bellows III

The Auto Bellows III is a precision instrument that can achieve the ultimate in close-up photography.

### Camera Standard

Camera attaching ring on this standard may be turned 90° for vertical framing without repositioning bellows unit.

### Lens Standard

Has swing and shift movements to adapt to any photographic situation. Rotates for reverse-lens usage. Wide range of lenses from 20mm to 200mm can be mounted. Bellows IV lens standard is reversible only.

### Bellows Release Tabs

Press tabs to release bellows for reverse lens operation. Bellows then reattaches to front of lens like a lens cap. An adapter is provided for 49mm filter-thread diameter lenses.

### Diaphragm Stop-down Button

Lockable stop-down button for depth-of-field preview and stop-down metering through any Minolta SLR camera.

### Swing-Clamp Knob

Permits swinging lens standard up to 360°. Click-stops at zero and 180° positions.

### Shift-Clamp Lever

Allows 10mm lateral movement left or right with click-stop at center position.

### Extension Scale

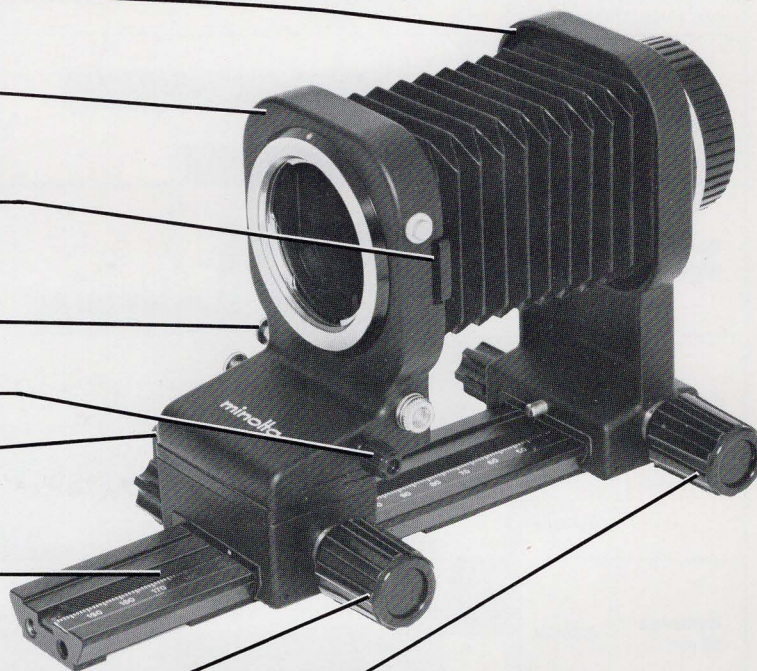
This scale, engraved in millimeters, can be used in conjunction with the bellows owner's manual to determine image magnification, lens-to-subject working distances, distance between film plane and subject, exposure corrections in f/stops for bellows extension.

### Lens Standard Control Knob

Has dual rack-and-pinion mechanism for smooth, precise movement. Knob on opposite side locks standard in position.

### Camera Standard Control Knob

Has smooth, precise movement via dual rack-and-pinion mechanism. Knob on opposite side locks standard in position.



## Minolta Bellows IV

For precise focusing, magnification control and operating convenience, the Minolta Bellows IV features independently moving rack-and-pinion lens and camera standards. Its detachable bellows enables easy reverse-lens operation without adding accessory adapters. The camera standard's bayonet mounting ring rotates 90° for horizontal and vertical framing. The non-automatic diaphragm coupling in the Bellows IV requires exposures to be made with the lens manually stopped down. All bellows accessories shown on page D9 attach to both Minolta bellows units.



# Minolta Bellows Accessories



## Focusing Rail AB-III

This single-rail, rack-and-pinion focusing rail allows 110mm tracking to aid in precise focusing with the Auto Bellows III or Bellows IV set at a predetermined magnification. Secures bellows units to Macro Stand AB-III or a tripod via standard 1/4 in. tripod socket. This versatile accessory also has a rotating hot shoe for making strobe-illuminated close-ups and slide copies.



## Macro Stand AB-III

Attaches to the focusing rail for vertical or horizontal use with 20mm through 85mm lenses. Its removable 18% neutral grey stage rotates a full 360°. Retaining clips hold subjects flat and in place. The Macro Stand's vertical support folds for convenient storage.



## Slide Copier AB-III

This specially designed unit fits directly onto the extension rail of either bellows unit and has its own locking, focusing mechanism. Lenses from 28mm to 58mm can be used normally or reversed, while 20mm and 24mm lenses, mounted in reverse, can achieve extreme enlargements. For even greater versatility in composing or cropping, this Slide Copier provides a vertical shift of 7mm up and 6mm down, and a horizontal shift 8.5mm left or right. The Copier's film carrier accepts up to 35mm mounted transparencies or film strips.



# Minolta Close-Up Accessories



## Magnifier V

An invaluable aid for precise focusing, the Magnifier V features an adjustable eyepiece and magnifies the central portion of the focusing image 2.5X. It attaches to the eyepiece of any Minolta 35mm SLR camera.



## Anglefinder V

The Anglefinder V permits viewing and focusing while looking at right angles to the lens axis. The eyepiece tube rotates 360°, permitting focusing from any position. It can also be adjusted for individual eyesight. The Anglefinder V attaches to any Minolta 35mm SLR camera.



## Microscope Adapter II

The Microscope Adapter II makes photomicrography easy by allowing the photographer to connect any Minolta SLR camera to a microscope. The Microscope Adapter will fit ocular tubes from 23mm to 29mm in diameter.



## Meter-Coupled Automatic Extension Tubes

The three separate 14mm, 21mm and 28mm tubes can be used in seven different combinations, providing a wide range of image sizes and working distances, according to the focal length of the lens and the number of tubes being used. All meter-coupled Minolta lenses maintain fully automatic, full-aperture operation throughout. No exposure-compensation calculations are necessary when the extension tubes are used with the through-the-lens metering systems of Minolta SLR cameras.



## Extension Tube Set II

This extension tube set consists of three separate tubes and two rings of various lengths that can be arranged in eight different combinations to permit frame-filling close-up photographs. The combined rings and tubes can be fitted between any Minolta 35mm SLR and Minolta lens. Stop-down exposure readings may be taken through the tube/lens combination, but auto-diaphragm lenses must be used manually.



## Close-up Lenses

Minolta close-up lenses No. 0, 1 and 2 are designed for substantially closer focusing when attached to 35mm to 135mm lenses. Fine optical glass and two-element construction produce sharp image detail. Available in 49mm, 52mm and 55mm filter-mount diameters.



## Reverse Ring II

For optimum close-focusing performance with regular, non-macro lenses, the lenses are mounted in reverse on the camera, extension tube or bellows with the Reverse Ring II. Available in 49mm and 55mm filter thread diameters.



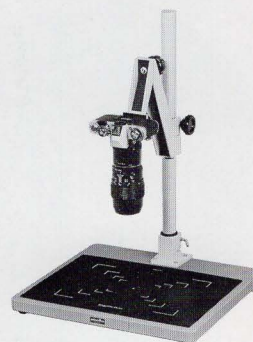
## 100mm f/4 Auto Bellows Lens

The 100mm f/4 Auto Bellows lens is a short-mount lens designed for convenient close-up and macro-photography in conjunction with the Minolta Bellows System, and has a focusing range from 1:1 (life-size) to infinity. The lens permits stop-down readings with Minolta SLR through-the-lens metering systems, and is a desirable tool for any photographer seriously engaged in close-up work. See page C12 for lens specifications. For additional information on the 50mm f/3.5 and 100mm f/4 Auto Bellows Macro and 12.5mm f/2 and 25mm f/2.5 Bellows Micro Lenses see page C15.



## Meter-Coupled Life-Size Adapter

This 25mm extension tube is the same unit supplied with the 50mm f/3.5 MD Macro Rokkor-X lens. It allows automatic, close-up work with any meter-coupled Minolta lens and provides full-aperture, through-the-lens viewing and exposure-metering with Minolta SLR cameras.

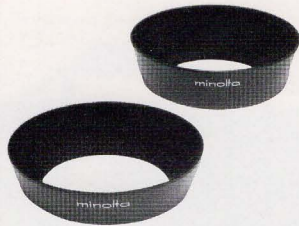


## Copy Stand II

The Copy Stand II provides a rigid camera support for use when photographing flat or small three-dimensional objects. The camera locks in place on a multi-position movable arm that rides on a 22<sup>3</sup>/<sub>4</sub>-inch tube. The large baseboard is 17<sup>11</sup>/<sub>16</sub> x 15<sup>3</sup>/<sub>4</sub> inches. A mat is included with markings to aid in proper centering of the material.

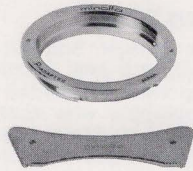


# Minolta General Accessories



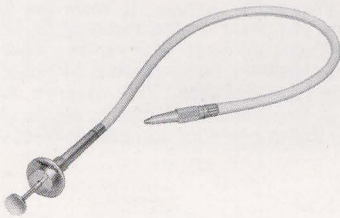
## Lens Shades

Lens shades prevent glare and loss of contrast caused by stray light hitting the lens. They also help protect the front element of the lens from physical damage. Minolta lens shades are available as accessories or replacements.



## Lens Mount Adapter

This lens mount adapter allows fitting Praktica screw-mount lenses on Minolta SLR cameras. Praktica-thread lenses operate manually throughout their full focusing range. Adapter locks securely into the Minolta SLR lens mount with a special key supplied with the adapter.



## Cable Release II

This heavy duty flexible release screws directly into the camera. A spring-loaded locking mechanism at the base of the plunger permits a long time exposure without risk of jarring the camera. 16 inches long, the release is essential for rock-steady tripod exposures and photomicrography, macro and tele photography.



## Rubber Eyepiece Hood VN

This eyepiece hood is a soft rubber eyecup that fits into slots provided in the camera eyepiece. Aids more rapid and accurate focusing by conforming to the eye and blocking stray light.



## Step-Up Adapter Rings

These step-up adapter rings permit the use of 55mm screw-in filters and lens shades on lenses with 52mm and 49mm mount diameters.



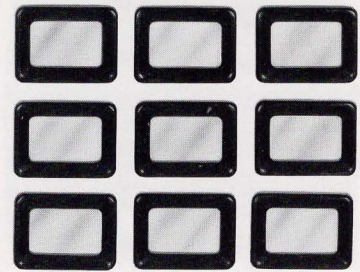
## Panorama Head II

Fitted between a Minolta SLR camera and tripod, the Panorama Head II greatly simplifies the making of panoramic photographs up to 360°. The device turns in click-stop segments to provide precise interval and overlap between successive frames with 28, 35, 50, 85 and 100mm lenses. The built-in body spirit level greatly facilitates perfect camera positioning. The head also incorporates a special "pan" setting for smooth horizontal panning with still and movie cameras.



## C-Adapter

This adapter enables the use of Minolta bayonet-mount, 35mm SLR lenses on television and cine cameras which have C-type lens mounts. Adjustable click-stop settings enable positioning of the lens for optimum viewing of aperture ring and distance scale.



## Eyepiece Correction Lenses

These supplementary lenses provide an aid to easier focusing with far-sighted or near-sighted vision. These lenses snap into slots provided in the camera eyepiece. They are available in nine different diopter strengths.

For far-sighted vision:	For near-sighted vision:
No. 1V: +0.5 diopter	No. 6V: -1.0 diopter
No. 2V: +1.0 diopter	No. 7V: -2.0 diopter
No. 3V: +1.5 diopter	No. 8V: -3.0 diopter
No. 4V: +2.0 diopter	No. 9V: -4.0 diopter
No. 5V: +2.5 diopter	



## Mini Tripod TR-1

This compact, folding, table-top tripod can support any of Minolta's full line of cameras from 35mm SLR's to 110-format models and even movie cameras. It has a swiveling standard ball head and large, padded camera stage. The Mini Tripod TR-1 weighs 12 oz. and folds to 1 1/4 x 7 3/8 in. for storage in its case.



## Tele Holder

Designed for use with Minolta SLR's, the Tele Holder is a completely adjustable, firm support for handheld photography with long telephoto lenses. The support rail telescopes from a compact 16 3/4 inches up to 28 inches for the required stability. Lightweight and well balanced, the holder features a cushioned hand grip and shoulder pad plus an adjustable nylon shoulder strap for user comfort throughout long picture-taking sessions.





### Camera Bag PB-1

The Minolta Camera Bag PB-1 is a handsome, functionally-designed carrying case which accommodates cameras, lenses, film and accessories. Measuring 4 in. wide x 9½ in. long x 9 in. high, the bag has two moveable inside dividers plus a convenient outside pocket. The PB-1 is made of a scratch-resistant, leather-like material and has a flexible, braided, reinforced-nylon shoulder strap.



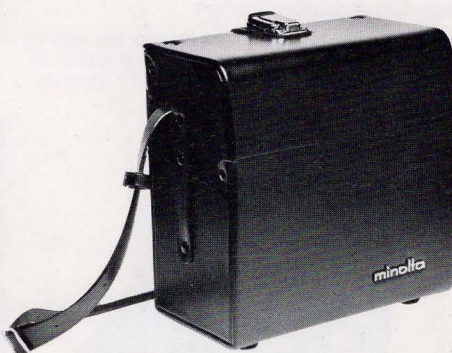
### Camera Bag PB-3

The Minolta Camera Bag PB-3 is a black, scuff-resistant carrying case with a molded top and hard exterior for added protection. Its interior has six elasticized straps to hold lenses and accessories snugly and is covered with a soft felt material. The PB-3 measures 5½ in. deep x 10 in. wide x 9½ in. high and will hold two SLR bodies, assorted lenses and accessories.



### Professional Tote Bag

Made of sturdy, black scuff-resistant material with the look and feel of glove-soft leather, the Professional Tote Bag has a main compartment measuring approximately 5½ inches wide by 10½ inches long by 10 inches tall, and holds a large amount of assorted Minolta SLR equipment. The main compartment zippers shut securely at the top. Zippered external compartments at the front and side can hold film, filters and accessories such as a hand-held accessory meter or electronic flash unit. A wide, adjustable-length shoulder strap allows easy carrying.



### SR Gadget Bag

This handsome black, scuff-resistant gadget bag provides ample room for a wide variety of Minolta SLR equipment. The SR Gadget Bag has a secure chrome snap lock and a plush interior with two molded lens compartments and SLR body sections, plus rigid dividers. The top of the case is fitted with an elastic strap to hold filters or shades and an additional accessory compartment is provided. The bag, measuring 5 in. wide x 11 in. long x 8 in. high, comes with a wide shoulder strap for carrying comfort.



### Professional Soft Bag III

The Minolta Soft Bag III is a handsome leather shoulder bag with a reinforced adjustable nylon strap designed to hold cameras and a host of accessories. Sturdy zippers provide quick access inside from both the top and side of the bag. An exterior zippered compartment can hold film, filters and an electronic flash unit or exposure meter. The Soft Bag III measures 10 in. deep x 5¼ in. wide x 13 in. long.



### Gadget Bag XB-7S

The Minolta Gadget Bag XB-7 is an extremely handsome and practical luggage-type carrying case well suited to the needs of the photographer who must take an extensive range of equipment on assignment. The top panel lifts and the front panel folds out for instant access to all equipment for greater efficiency. Movable partitions allow compartmenting the interior as desired. Depending on partition arrangement, the Minolta Gadget Bag XB-7 can easily hold: two Minolta SLR's, each with a lens up to 200mm mounted; two lenses up to 200mm; one 300mm lens; two or three wide-angles; and an assortment of film, filters, electronic flash unit, hand-held meter and other accessories. The Gadget Bag XB-7 measures 9½ x 14½ x 11½ inches. It may be slung over the shoulder by the removable, heavy-duty, adjustable strap with nonslip pad supplied, or may be hand-carried by its strong luggage-type handles. The exterior is finished in wear-resistant black; black velour interior lining protects equipment from wear.



### Camera Luggage XDG

Made of sturdy, brown, scuff-resistant leather-like material, the Camera Luggage Model XDG will provide superior protection. Interior foam shell can be cut to hold a variety of Minolta SLR equipment. The case features luggage-type handles for hand-carrying, or it can be slung over a shoulder using the removable, adjustable strap with non-slip cushioned pad supplied.



# Minolta Filters

To preserve the superlative performance of Minolta lenses, Minolta makes its own optical-glass filters (most of which are multicoated) to the highest optical and mechanical standards. Filter surfaces are ground optically flat to prevent image distortion, and the filter discs are then mounted in black satin-finished metal rings that are precision-threaded to seat perfectly.

This table summarizes the image-control effects obtainable with Minolta filters, the sizes in which they are made and filter factors to be used under conditions that do not permit through-the-lens metering, as in flash photography. The meter system in Minolta cameras provides properly compensated exposures through filters without filter factor calculations.

FILTER	SIZES	EFFECT	FILTER FACTORS
Yellow	40.5mm 46mm 49mm 52mm 55mm 62mm 72mm	With b&w panchromatic films, lightens red and yellow subjects; darkens blue skies, emphasizes clouds.	1.5 Daylight 1.2 Tungsten
UV Haze	40.5mm 46mm 49mm 52mm 55mm 62mm 72mm	With color and b&w films, absorbs excessive ultraviolet radiation in mountain, snow, marine and longdistance scenes. Tends to cut through haze, and reduces blue cast with color films.	None
Neutral Density 4X	40.5mm 46mm 49mm 52mm 55mm 62mm 72mm	Controls exposure with color and b&w films. Reduces amount of light entering camera by 2 f/stops. Allows use of large lens openings or slow shutter speeds even with fast films in bright light.	4 Daylight and Tungsten
Red	49mm 52mm 55mm 72mm	Used with b&w panchromatic and infrared film. With b&w, causes pronounced darkening of blues, lightening of reds, yellows, greens. With infrared, creates "moonlight" effects. Increases image contrast and cuts through haze.	6 Daylight 4 Tungsten
Orange	49mm 52mm 55mm 72mm	With b&w panchromatic films, absorbs ultraviolet, darkens blues and some greens, lightens reds and yellows. Darkens blue skies, emphasizes clouds. Some haze penetration effects.	2 Daylight 1.5 Tungsten
Green	49mm 52mm 55mm	With b&w panchromatic films, darkens blue skies slightly, lightens greens.	1.5 Daylight and Tungsten
1A Skylight	52mm 67mm 72mm	With daylight-type films outdoors, reduces excess blue, absorbs excess ultraviolet. Produces slightly "warmer" overall color rendition.	None
1B Skylight (multi-coated)	46mm 49mm 55mm 62mm		
80B Conversion	46mm 49mm 52mm 55mm 72mm	Adapts outdoor (daylight-type) color film for exposure by incandescent light sources.	2 Tungsten
85 (Type A) Conversion	49mm 52mm 55mm 72mm	Adapts tungsten (indoor, Type A) color film for exposure by daylight or electronic flash.	2 Daylight
Polarizing	49mm 52mm 55mm	With b&w and color films, reduces or eliminates reflections. Can darken blue skies, emphasize clouds; may also be used to reduce overall amount of light entering camera.	3 Daylight and Tungsten

NOTE: The Minolta Step-Up Adapters permit the use of 55mm screw-in filter and lens shades on lenses with 52mm and 49mm mount diameters.



# Minolta Auto Electroflash 320/320X

Thyristor flash units with movable heads for bounce flash operation, variable power output and capability for hot-shoe or off-camera use. Camera control provision on 320X automatically sets shutter speed of XD/XG cameras for flash synchronization.

## Wide-Angle Flash

Covers field of view of lenses down to 35mm normally, down to 28mm wide angle with supplied diffuser. Accessories: optional wide angle diffuser provides coverage for lenses down to 24mm; optional telephoto adapter provides coverage for 100mm lenses or longer. Balanced for daylight-type color film.

## Adjustable Flash Head

Tilts up to 90° from lens axis for convenient bounce flash operation. Flash head swivels 180° horizontally.

## Removable Flash Sensor

Has 15° acceptance angle. Permits auto exposure flash operation from 2.3-36 ft. Optional separate sensor slips into hot shoe for subject readings regardless of flash direction.

## External Power Socket

Receives optional AC adapter or TR Power Grip.

## Synch-Cord Socket

Accepts attachable PC-tipped synch cord which disconnects hot-shoe contacts.



## Illuminated Computer Dial

Lights for easy reading of working distance/aperture in dim light. Red indicator lights behind selected choice of three auto-flash apertures.

## Open-Flash Test Button/Ready Light

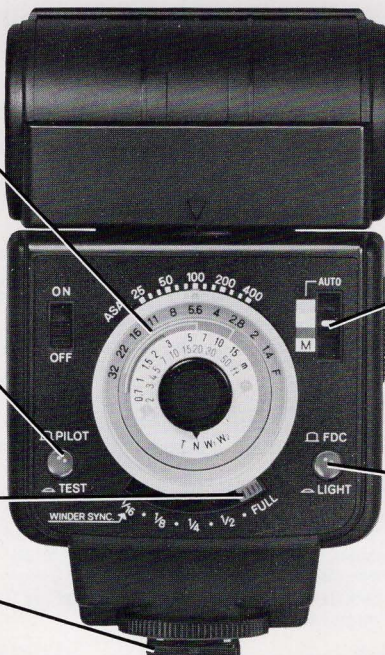
Lights to signal full charge. Button permits open flash technique and allows flash to be fired without exposing film. Ideal for bounce-flash test exposure in conjunction with unit's Flash-Distance Check Lamp.

## Power-Ratio Selector

Varies flash output from 1/16, 1/8, 1/4, 1/2 to full power. Winder synch flash pictures at about 2 frames per second can be made at 1/16th power setting.

## Locking Hot-Shoe Mount

Wired for cordless flash synch. Has clamp for secure attachment. Camera control provision on 320X automatically switches XD/XG cameras to X-synch speed and starts LED viewfinder flash-ready signal blinking when unit is fully charged.



## Auto Electroflash 320/320X Specifications

### Guide Number:

52.5 in feet, ASA 25

### Variable power guide numbers:

	Power Output*				
	Full	1/2	1/4	1/8	1/16
<b>Flash Coverage:</b>					
35mm or longer	52	36	26	18	13
With 28mm wide angle diffuser	36	26	18	13	9
With 24mm wide angle diffuser	26	18	13	9	6.5
With 100mm telephoto attachment	74	52	36	26	18

\*The Guide Numbers are based on an ASA rating of 25 in feet.

### Auto-Exposure Flash Ranges (ASA 100):

f/2.8: 3.3-36 ft. (1-11m)  
f/5.6: 2.3-19 ft. (0.7-5.6m)  
f/11: 2.3-9.5 ft. (0.7-2.8m)

### Flash Duration:

1/20,000 to 1/1000 sec. in auto operation  
1/1000 sec. in manual operation

### Color Temperature:

Balanced for daylight-type color film

### Coverage (without accessories):

60° horizontally, 45° vertically

### Power Source:

Four 1.5V AA-size alkaline-manganese or nickel-cadmium batteries; accessory TR Power Grip uses six Ni-Cad batteries; AC via optional accessory adapter.

### Number of Flashes/Recycling Time:

AM batteries: 60/8 sec.  
Ni-Cad batteries: 60/5 sec.

### ASA Film-Speed Indicator:

Has ASA settings from 25 to 400

### Distance Scale:

2 - 50 ft. (0.7-15m)

### Aperture Scale:

f/1.4-32

### Synch Contacts:

Direct for hot shoe, jack for separate PC-tip synch cord.

### Size and Weight:

3 x 3<sup>5</sup>/<sub>16</sub> x 4<sup>13</sup>/<sub>16</sub> in. with flash head forward  
(76 x 85 x 123mm)  
13<sup>3</sup>/<sub>8</sub> oz. (380g) without batteries.

### Exposure Mode Selector

Four position switch for auto/manual operation. Color coded settings correspond to auto flash working ranges indicated on computer dial.

### Battery Compartment

Holds four 1.5V AA-size alkaline or Ni-Cad batteries.

### Flash-Distance Check Lamp

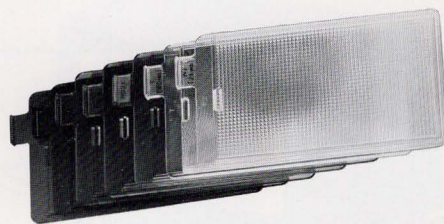
Lights to signal sufficient light output for correct automatic flash exposure for either direct or bounce operation. This same button will also illuminate the calculator dial.

### Energy-Saving Thyristor Circuitry

In auto-exposure modes, uses only the power actually needed for correct exposure, saving and storing the remaining charge. This circuitry increases the number of flashes and allows for faster recycling. (Not shown.)



# Minolta Auto Electroflash 320/320X Accessories



## Power Grip 1

The Power Grip 1 consists of a bracket and handgrip for off-camera placement of the Auto Electroflash 320/320X. It has a self-contained Ni-Cad power supply which, when used with Ni-Cad batteries, more than doubles the number of flashes. Recycling time is reduced, enabling winder and motor-drive synch rates up to five flashes per second. The grip/bracket assembly can be mounted on either side of the camera, and, for convenient handling, has a cable release on the grip. The Ni-Cad Charger QC-1, which can fully recharge the grip's special Ni-Cad Battery Pack NP-2 in only one hour, is supplied with the Power Grip 1.

## Ni-Cad Charger NC-2 with batteries

Provides an economical power source for Minolta Auto Electroflash units. Ni-Cad batteries can be recharged almost indefinitely and are less affected by low temperature. They provide shorter recycling times, enabling the Auto Electroflash 320/320X to fully synchronize with auto winders. LED's indicate proper battery installation and charging.

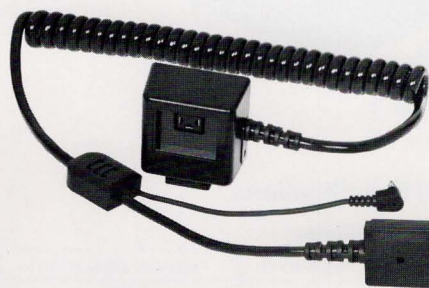
## Panel Set and Adapter

With this versatile accessory, photographers can add exciting color to pictures, make color corrections for tungsten film or reduce flash output for macro work. The set contains red, blue, yellow, green, 2X neutral density and tungsten conversion filters. There are also panels which extend flash coverage for 24mm and 28mm wide angle lenses and 100mm or longer telephotos.



## AC Adapter-3

Permits flash operation from standard household electricity for an unlimited number of flashes with consistent recycle times. The 10 ft. power cord attaches to the flash unit, plugs into A.C. outlet.



## Remote-Sensor Adapter

For creative off-camera flash operation while maintaining auto-flash exposures, the Remote-Sensor Adapter can provide an exciting new dimension in electronic flash photography. The 320/320X flash units coupled with this accessory permit using the flash up to four feet from the camera. For Minolta XD/XG camera owners, the Auto Electroflash 320X's dedicated flash operation is maintained when the adapter is used. At full charge, these cameras are automatically switched to X-synch speed and a viewfinder flash-ready LED blinks.



# Minolta Auto Electroflash 280

Auto-exposure with a wide choice of f/stops  
for direct or bounce flash, plus clip-on convenience.



## Adjustable Flash Head

Swivels up to 60° from horizontal, turns up to 90° left or right for bounce flash.

## Wide-Angle "Daylight" Flash

Balanced for daylight-type color film, covers field of view of a 35mm wide-angle lens.

## Energy-Saving Circuitry

Uses only the power actually needed for auto-exposure flashes, for more shots per charge and faster recycling.

## Battery Compartment Cover

Battery chamber holds four interchangeable AA-size AM or Ni-Cad cells for extended shooting capability.

## Flash Sensor

Has 30° acceptance angle. Permits auto-exposure flash operation from under 2.5 feet to 23 feet.

## Locking Hot-Shoe Mount

Mounting foot is wired for cordless flash sync on cameras with hot shoes. Has lock for secure attachment.

## Sync Cord Jack

When PC-tipped sync cord is plugged into jack (not shown), hot-shoe contacts are automatically disconnected.

## Ni-Cad Battery Charger (optional)

Recharges Ni-Cad batteries in flash unit in 3½ hours. Adjustable for 115- or 230-volt a.c. line current.

## Auto Electroflash 280 Specifications

### Number of Flashes per Set of Batteries:

Power Source	Automatic Operation	Manual Operation
4 AM AA Cells	120-1200	120
4 Ni-Cad AA Cells	70-500	70

Guide Number (Manual Operation, ASA 25): 46

Aperture Selection in Automatic Mode (correlated to ASA speeds and distance ranges):

ASA	25	50	100	200	400	Distance Ranges
f/stops*	2	2.8	4	5.6	8	4-23 ft.
	2.8	4	5.6	8	11	3-16 ft.
	4	5.6	8	11	16	2.4-11 ft.
	5.6	8	11	16	22	2.4-8 ft.

\*Aperture selection is continuously variable within each four-f-stop range.

### Recycling Times:

Power Source	Automatic Operation	Manual Operation
4 AM AA Cells	0.5 to 11 sec.	11 sec.
4 Ni-Cad AA Cells	0.5 to 7 sec.	7 sec.

### Flash Durations:

Automatic Operation: 1/30,000 to 1/1000 sec.  
Manual Operation: 1/1000 sec.

Color Temperature: balanced for daylight color film

Lighting Field: 55° horizontally, 40° vertically (for 35mm or longer focal length on 35mm camera)

Sensor Acceptance Angle: 30°

Flash Head Movement: 60° upward from horizontal, 90° to left or right of lens axis



# Minolta Auto Electroflash 200X

Provides the latest electronic flash technology including fast recycling for auto winder speeds and automatic X synchronization with XD/XG cameras.

## Wide-Angle "Daylight" Flash

Balanced for daylight type color film; covers field of view of a 35mm wide-angle lens. Snap-on wide-angle diffuser provides coverage for 28mm lens.

## Flash Sensor

Has 20° acceptance angle. Permits auto-exposure flash operation from 2.3 feet to 23.1 feet.

## Locking Hot Shoe Mount

Spring-loaded terminals provide direct contact with hot shoe for cordless operation. When the 200X is attached and fully cycled, it automatically switches the XD-11 or XG-7 for X synchronization. Has screw lock for secure attachment.



## Battery Compartment Cover

Battery chamber holds four AA-size penlight batteries.

## ASA Film Speed Indicator

Turn the knurled calculator dial ring to set film speeds from ASA 25 to ASA 400.

## Lo-Power Aperture Scale

Blue and black colored scale indicates f/stop setting opposite distance scale when the unit is used in Lo-power manual mode for use with winder-flash synchronization.

## Distance Scale

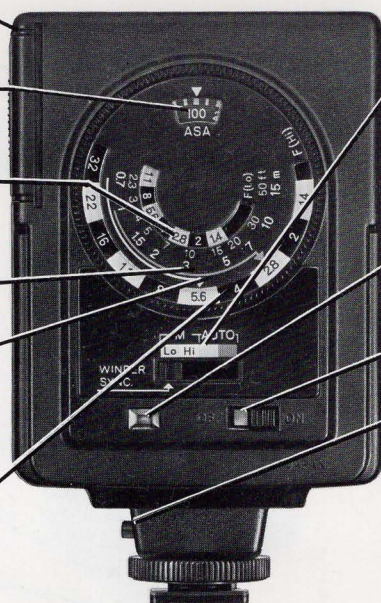
Shows distance in feet with green numerals, in meters with white numerals.

## Auto-Exposure Aperture and Range Indicators

Top red indicator shows effective distance range and f/stop setting for red auto-exposure mode, yellow indicator shows range and f/stop for yellow auto-exposure mode.

## Hi-Power Aperture Scale

White and black color scale indicates f/stop setting opposite distance scale when the unit is used in the Hi-power manual mode.



## Exposure Mode Selector

Provides four exposure modes for maximum versatility. Blue-coded Lo-power manual mode offers fast recycling for synchronization with the Auto Winder D & G. Hi-power manual mode provides full flash output for distant subjects or special flash techniques. Red and Yellow auto-exposure modes give the convenience of automatic flash exposure and control of depth-of-field.

## Flash Ready Light

Glowes when unit is recycled (a blinking flash ready signal is also visible in the XD-11 and XG-7 viewfinders).

## On/Off Power Switch

Shows red signal in the "On" position.

## Open Flash Button

Red button permits open flash technique and allows flash to be fired without exposing film.

## Energy-Saving Thyristor Circuitry

Uses only the power actually needed for auto-exposure, for increased number of flashes and faster recycling.

## Power Source

4-AA carbon zinc, alkaline or ni-cad batteries.

## Size

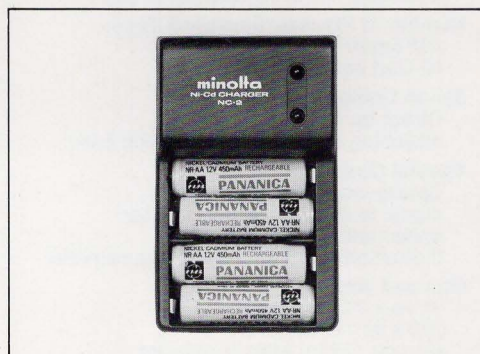
56 x 70 x 90mm (2 $\frac{3}{16}$  x 2 $\frac{3}{4}$  x 3 $\frac{3}{16}$  in.)

## Weight without batteries

210 grams (7 $\frac{3}{8}$  ounces)

## Ni-Cad Charger NC-2 and Ni-Cad Battery Set (optional)

Provides an economical power source for the Auto Electroflash 200X with the shortest possible recycle time. This UL approved charger is supplied with four Ni-Cad batteries. Extra battery sets are available.



## NC-2 Specifications

Input: 115Volts AC 50/60 Hz 3 Watts  
Output: 2.8 Volts DC 70 mA x2  
Charge Time: 8 Hours  
Batteries: 4 x AA-size nickel cadmium cells with 1.2 volts 450mAh each.



# Minolta Auto Electroflash 128

A compact automatic flash unit with movable head for bounce operation and special flash-distance check lamp.

## Wide-Angle "Daylight" Flash

Covers field of view of 35mm wide-angle lens, supplied wide-angle diffuser extends coverage for 28mm lenses; optional diffuser to cover field of view of 24mm wide-angle lens; balanced for daylight-type color film.

## Adjustable Flash Head

Tilts up to 90° from lens axis, with click-stops at 50° and 65° for convenient bounce operation.

## Computer Dial

Indicates working distance/aperture with color-coded auto-flash range. (Not shown.)

## Battery Compartment

Holds four AA-size C-Zn, AM or Ni-Cad batteries.

## Flash Sensor

Has 20° acceptance angle.

## Locking Hot-Shoe Mount

Wired for cordless flash synch. Has tightening clamp for secure attachment.

## Synch-Cord Socket

Accepts attachable PC-tipped synch cord which disconnects hot-shoe contacts.

## Flash Ready Light

Lights when unit is fully recycled. (not shown)

## Flash-Distance Check Lamp

Lamp lights to check or verify sufficient light output for correct exposure during automatic operation. (not shown)

## Auto Electroflash 128 Specifications

### Guide Number:

28 in meters, ASA 100 (46 in feet, ASA 25)

### Auto-Exposure Flash Range (ASA 100):

0.7-5m (2.3-16.4 ft.)

### Flash Duration:

1/40,000 to 1/1000 second in auto operation;  
1/1000 sec. in manual operation.

### Color Temperature:

Balanced for daylight-type color film.

### Coverage:

Up to 60° horizontally, 45° vertically without wide-angle diffuser.

### Power Sources:

4 AA-size C-Zn, AM or Ni-Cad batteries.

### Number of Flashes/Recycling Time:

C-Zn batteries: 40/8 sec.  
AM batteries: 200/7 sec.  
Ni-Cad batteries: 80/4 sec.

### Synch Contacts:

Direct for hot shoe; jack for attaching separate PC-tip synch cord.

### Size and Weight:

4<sup>11</sup>/<sub>16</sub> x 2<sup>9</sup>/<sub>16</sub> x 2<sup>9</sup>/<sub>16</sub> in. (119 x 65 x 65mm)  
7<sup>3</sup>/<sub>4</sub> oz. (220g) without batteries



# Minolta Auto Electroflash 132X

A compact electronic-flash unit offering higher power, choice of two automatic apertures and distance ranges, and "dedicated" operation with XD and XG cameras.

## Wide-Angle "Daylight" Flash

Covers field of view of 35mm lens on full-frame 35mm cameras; supplied wide angle diffuser provides coverage for lenses down to 28mm; optional diffuser extends coverage for 24mm wide-angle lenses; balanced for daylight-type color film.

## Adjustable Flash Head

Movable head rotates up to 90° from lens axis for convenient bounce operation. Click-stops at 50°, 65°, and both extremes.

## Battery Compartment

Holds four AA-size AM or Ni-Cad batteries.

## Illuminated Computer Dial

Lights up for easy reading in dark. Red lamp behind applicable auto-flash f/number for quick reference. Offers choice of two shooting apertures in auto operation. (Not shown.)

## Auto Electroflash 132X Specifications

### Guide Number:

32 in meters, ASA 100 (52 in feet, ASA 25)

### Auto-Exposure Flash Ranges (ASA 100):

f/4: 0.7-8m (2.3-26.3 ft.)  
f/8: 0.7-4m (2.3-13.1 ft.)

### Flash Duration:

1/40,000 to 1/1000 sec. in auto operation  
1/1000 sec. in manual operation.

### Color Temperature:

Balanced for daylight-type color film.

### Coverage:

Up to 60° horizontally, 45° vertically without wide-angle diffuser.

### Power Sources

4 AA-size AM or Ni-Cad batteries.

### Number of Flashes/Recycling Time:

AM batteries: 160/8 sec.  
Ni-Cad batteries: 70/5 sec.

### Synch Contacts:

Direct for hot-shoe, jack for attaching separate PC-tip synch cord.

### Special Contact:

Spring-loaded contact for signal to control camera shutter speed and finder flash-ready indication in XD and XG-series cameras.

### Size and Weight:

4<sup>11</sup>/<sub>16</sub> x 2<sup>9</sup>/<sub>16</sub> x 2<sup>9</sup>/<sub>16</sub> in. (119 x 65 x 65mm)  
8<sup>5</sup>/<sub>16</sub> oz. (235g) without batteries



## Flash Ready Light

Glow when unit is recycled. (A blinking flash ready signal is also visible in the viewfinders of XD and XG cameras.) (Not shown.)

## Flash-Distance Check Lamp

Lights to check or verify sufficient light output for correct exposure during automatic operation. (not shown)

## Flash Sensor

Has 20° acceptance angle.

## Synch-Cord Socket

Accepts attachable PC-tipped synch cord which disconnects hot-shoe contacts.

## Locking Hot-Shoe Mount

Wired for cordless flash synch. Has tightening clamp for secure attachment.

## Auto Electroflash 128 and 132X Optional Accessories

### Color Filter Set

Includes red, yellow, green, blue, and tungsten conversion, as well as 2X and 4X ND filter panels that snap onto flash head for light balancing and special effects.

### Ni-Cad Charger NC-2 With Batteries

UL approved charger, supplied with four AA-size Ni-Cad batteries, provides an economical power source for both the Auto Electroflash 128 and the 132X with the shortest possible recycle time. Extra battery sets are available.

### Wide-Angle Diffuser W2

Snap onto the flash head to extend light coverage for lenses down to 24mm.



# Minolta Auto Electroflash 118X

An economical and compact automatic flash unit offering "dedicated" operation with the 110 Zoom SLR MARK II and XD/XG 35mm cameras.

## Wide-Angle Flash

Balanced for daylight type color film, covers down to a 25mm lens on 110-format film; down to a 35mm lens on 35mm film. Optional snap-on, wide-angle diffuser.

## Flash Sensor

Has 20° acceptance angle. Permits auto-exposure flash operation from 2.3 to 30 feet.

## Battery Compartment

Battery chamber holds two AA-size penlight batteries. (Not shown.)

## Exposure Mode Selector

Provides three exposure modes for maximum versatility. Manual mode provides full flash output for distant subjects or special flash techniques. Red and yellow auto-exposure modes give the convenience of automatic flash exposure and control of depth-of-field.

## Hot Shoe Mount

Spring-loaded terminals provide direct contact with hot shoe for cordless operation. When the 118X is attached and fully recycled, it automatically switches the 110 Zoom SLR MARK II and XD/XG cameras for X synchronization.

## Distance Scale

Shows distance in feet with green numerals, in meters with white numerals. (Not shown.)

## ASA Film Speed Indicator

Turn the knurled calculator dial ring to set film speeds from ASA 25 to ASA 400. (Not shown.)

## Flash Ready Light

Glow when unit is recycled (a blinking flash ready signal is also visible in the 110 Zoom SLR MARK II, XD and XG camera viewfinders).

## Auto-Exposure Aperture and Range Indicators

Top red indicator shows effective distance range and f-stop setting for red auto-exposure mode, yellow indicator shows range and f/stop for yellow auto-exposure mode. (Not shown.)

## Manual Aperture Scale

White and black color scale indicates f/stop setting opposite distance scale when the unit is used in the manual mode. (Not shown.)



## Minolta Auto Electroflash 118X Specifications

### Guide Number:

30 in feet, ASA 25

### Auto-Exposure Flash Ranges:

f/4 (ASA 400):  
3.3–30 ft. (1.0–9m)  
f/4 (ASA 100):  
2.3–14.75 ft. (0.7–4.5m)

### Flash Duration:

1/40,000 to 1/3,000 sec. in auto operation  
1/3,000 sec. in manual operation

### Color Temperature:

Balanced for daylight-type color film

### Coverage:

Up to 60° horizontally, 45° vertically without wide angle diffuser

### Power Sources:

Two 1.5V AA-size (penlight) AM, C-Zn or Ni-Cad batteries

### Number of Flashes/Recycling Time:

C-Zn batteries: 45/9 sec.  
AM batteries: 200/7 sec.  
Ni-Cad batteries: 90/4.5 sec.

### Sync Contact:

Direct for hot shoe

### Special Contact:

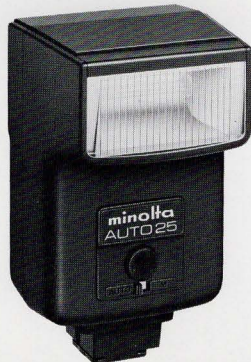
Spring-loaded contact for signal to control camera shutter speed and finder flash-ready signal in 110 Zoom SLR MARK II, XD and XG cameras.

### Size and Weight:

3<sup>5</sup>/<sub>16</sub> x 2<sup>3</sup>/<sub>8</sub> x 1<sup>7</sup>/<sub>8</sub> in. (84 x 61 x 36mm)  
4<sup>9</sup>/<sub>16</sub> oz. (130g) without batteries

# Minolta Auto Electroflash 25

Automatic flash convenience in a compact, economical unit.



**Type:** Clip-on automatic or manual electronic flash, cord or cordless operation

**Auto Working Range:** 2.3 to 14.8 ft. (0.7–4.5m) at f/5.6 with ASA 100 film

### Sensor Acceptance

**Angle:** 20°

**Power Source:** 4 AA-size AM or C-Zn cells

**Guide Number:** 41 with ASA 25 film (manual operation)

**Recycling Time:** 6 sec. with fresh AM batteries, 7 sec. with fresh C-Zn batteries; ready lamp comes on when recycling is complete

**Sync Contacts:** Wired for hot-shoe operation; jack for separate sync cord supplied with unit; open-flash button in manual (nonautomatic) operation

**Flash Duration:** 1/40,000 to 1/2000 sec. in auto mode, 1/2000 in manual (nonautomatic) operation

**Color Temperature:** Balanced for daylight-type color film

**Flash Coverage:** 60° horizontally, 45° vertically

**Size:** 2<sup>3</sup>/<sub>16</sub> x 2<sup>3</sup>/<sub>8</sub> x 4<sup>1</sup>/<sub>8</sub> in. (35 x 61 x 105mm)

**Weight:** 5<sup>7</sup>/<sub>16</sub> oz. (155g) without batteries

# Minolta Electroflash 20

A tiny, lightweight electronic flash unit for cordless, clip-on operation.



**Type:** Clip-on manual electronic flash for cordless hot-shoe operation

**Power Source:** 2 AA-size AM or C-Zn cells

**Guide Number:** 33 with ASA 25 film

**Recycling Time:** 9 sec. with fresh batteries; ready lamp comes on when recycling is complete

**Sync Contact:** Wired for hot-shoe operation; open-flash button

**Flash Duration:** 1/2000 sec.

**Color Temperature:** Balanced for daylight-type color film

**Flash Coverage:** 50° horizontally, 60° vertically

**Size:** 2<sup>1</sup>/<sub>2</sub> x 1<sup>1</sup>/<sub>4</sub> x 2<sup>1</sup>/<sub>2</sub> in. (65 x 32 x 65mm)

**Weight:** 3<sup>1</sup>/<sub>8</sub> oz. (90g) without batteries

NOTE: Specifications subject to change without notice.  
See page L3 for additional information.



# Minolta Exposure Meters and Accessories



**Minolta hand-held meters**, designed for complex lighting situations that are beyond the scope of any built-in meter, are considered the most sophisticated, yet easiest to use meters ever created. A traditional leader in meter technology, Minolta has developed exposure meters which provide the professional photographer and advanced amateur with unfailing accuracy and dependability.

**The Minolta Auto Meter III** is the world's first direct-reading exposure meter to combine a built-in microcomputer, memory function and Liquid-Crystal Display (LCD). It offers the accuracy of a digital readout and the graphic indication of an analog scale. At the touch of a button, the meter provides all necessary exposure information. The Auto Meter III will also automatically recalculate the information when the ASA or shutter speed is changed. And the meter's memory can store and display up to two exposure readings for comparison with a third. The Auto Meter III enables photographers to even work in very complex lighting situations.

**The Minolta Spotmeter M** is a reflected-light meter that measures a 1°

spot on the subject through an SLR viewfinder. Using the combined advantages of a built-in microcomputer, memory function and LCD, it digitally displays the exposure reading. Simultaneously, the reading is displayed on an analog f/number scale. The Spotmeter M has an exclusive exposure-zone calculation capability which biases the readout to give exposure priority to highlight or shadow areas. Or, an average exposure, based on the two areas being measured, can be calculated at the touch of a button. It does this with extreme accuracy, providing all necessary exposure information required for complex or highly advanced photographic techniques.

**The Minolta Auto-Spot II and Auto-Spot II Digital** are sophisticated hand-held 1° spot meters especially designed to meter specific areas on the subject which are difficult to reach. The Auto-Spot II uses a motorized scale in the viewfinder to give the correct shutter speed/aperture combinations and EV numbers. The Auto-Spot II Digital provides LED digital readouts of EV numbers in the finder and f/stop information on the side of the meter.

**The Flash Meter III**, a multi-function

meter with microprocessor technology and LCD, is designed to measure electronic flash and flash bulbs, as well as continuous light. The Flash Meter III makes precise readings of incident or reflected light with assured 1/3 stop accuracy. For user convenience, the head of the Flash Meter III swivels 270°. The light receptor may be pointed in any direction while the controls and exposure information still face the user.

**The Minolta Color Meter II** measures a ratio of the three colors of continuous or non-continuous light sources, or a combination of light sources, and then recommends appropriate filtration for the film type being used. This specialized meter digitally displays accurate color compensation and light balancing filter indexes to determine the right filters to use. With the Color Meter II the filtration for any film type can be determined easily, from any light source, at the push of a button.

Accessories for Minolta flash or incident meters include: Viewfinder 10°, Mini Receiver, Flat Diffuser, Spot Mask II and Booster Kit. These accessories make Minolta meters the most versatile hand-held meters available today.



# Minolta Auto Meter III

World's first exposure meter with liquid-crystal digital/analog readout and memory.  
Solid-state microprocessor technology assures professional reliability.

## Spherical Diffuser

Standard dome-shaped diffuser for incident metering. Interchanges with 40° reflected-light attachment or accessory neutral density diffusers, spot mask, flat diffuser or 10° Viewfinder. See page E4 for additional information.

## Receptor Bayonet Index

Align index dot on meter accessories with index line on receptor head bayonet mount; turn clockwise to lock into position.

## Power Switch

On/off switch to power meter.

## LCD Analog Scale

Pointers indicate measured and memorized exposure readings for convenient comparisons on f/number array. Indicators move to reflect ASA or shutter speed changes.

## LCD Digital Readout

Displays f/numbers from 0.7 to 64.9 or EV numbers from -5 to 28.5 in 1/10 stop increments and Time/ASA settings. Readout displays an "E" if more than two readings are put into memory; if memory is cleared, "O" appears when recall key is pushed.

## Memory-Clear Key

Push key to clear memory.

## ASA/Exposure-Time Selector Key

Press key to alternate input of ASA settings from ASA 12 to 6400 or shutter speed settings from 1/2000 sec. to 30 min.

## Accessory Receptor Jack

Receptor for connecting optional Booster Kit and Mini-Probe. See page E4 for additional information. (Not shown.)

## Receptor Head

Rotatable receptor head houses silicon photo cell for instant response and precise readings in low light. Meter head and body constructed of reinforced ABS synthetic resin for durability.

## Measuring Button

Press button to take an exposure reading when meter is set in "Time" mode. Meter will make continuous readings when measuring button is held in.

## Increase/Decrease Keys

Push keys to raise and lower ASA or shutter speed settings.

## F-Number/EV Display Key

Press key to alternate display from f/numbers to EV readouts.

## Recall Key

Press for digital recall of exposure measurements stored in memory.

## Memory Key

Push key to enter exposure reading in memory. Up to two readings can be stored, and will remain displayed on the analog scale.

## Battery Chamber

Accepts one 1.5V AA-size penlight battery. (Not shown.)

## ASA (ISO)/DIN and Cine Conversion Tables

Use table on back of meter to determine exposures for film-making. Converts DIN speeds to ASA (ISO) ratings. (Not shown.)

## Measuring range at ASA 100:

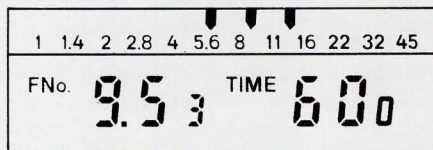
Incident: EV-2 to 19.5

Reflected: EV1 to 22.5

Size: 5<sup>3</sup>/<sub>16</sub> x 2<sup>11</sup>/<sub>16</sub> x 4<sup>3</sup>/<sub>16</sub> in.  
(132 x 69 x 31mm)

Weight: 5<sup>5</sup>/<sub>16</sub> oz. (150g)

## LCD Readout



Three indicators on the analog f/number array represent two measurements stored in memory and the third comparative exposure measurement. The third reading is also displayed digitally. Memorized readings can be recalled digitally. Readouts change to reflect changes in ASA or exposure time settings.



# Minolta Flash Meter III

A multiple function exposure meter for measuring continuous light and/or flash by microcomputer with liquid-crystal display.

## Receptor Head

Receptor head rotates 270° for reading convenience. Silicon photo cell has 1/100,000 sec. response time. Meter head and body constructed of reinforced ABS synthetic resin for durability.

## Receptor Bayonet Index

Align index dot on meter accessories with index line on receptor head bayonet mount; turn clockwise to lock into position.

## Spherical Diffuser

Standard dome-shaped diffuser for incident light metering. Interchanges with 40° reflected light attachment or accessory neutral density diffusers, spot mask, flat diffuser or 10° Viewfinder. See page E4 for additional information.

## LCD Display Window

Readout shows set measuring mode, f/number (f/1 to f/90.9) or EV (EV 1 to 23.2) exposure readings to within 1/3 stop and multiple flash count. On "AMBI," readout changes automatically when shutter speed is changed. Displays "O" or "E" as battery check, blinks to signal for battery replacement.

## Measuring-Mode Selector

Slide switch up for f/number display, down to read exposure index (EV).

## Power Switch

On/off switch to power meter.

## Synch Terminal

Insert flash unit PC cord in synch terminal for metering on "cord" mode. Terminal is threaded to secure accessory Synch Cord II in place.

## Battery Chamber

Accepts 6-1.5V silver-oxide batteries. (Not shown).

## Accessory Receptor Jack

Receptor for connecting optional Booster Kit and Mini-Probe. See page E4 for additional information. (Not shown.)

## Display-Mode Selector

Four position sliding switch sets meter for measuring ambient light ("AMBI"), cord-connected flash ("CORD"), non cord connected flash ("NON. C") or multiple flash ("MULTI").

## Measuring Button

Press button for continuous ambient light measurements, for cord-connected readings or to reset meter for non-cord or multi flash exposure metering.

## Shutter Speed Window

Align selected shutter speed with white index mark adjacent to window.

## Shutter Speed Selector

Turn knurled dial to input shutter speeds from 30 to 1/1000 sec. for ambient light measurement; 1 to 1/250 sec. for cord, non-cord or multiple flash measurements.

## Film-Speed Window

Align selected ASA with white index mark adjacent to window.

## Film-Speed Selector

Press in chrome release button on back of meter to release dial for setting film speeds from ASA 12 to ASA 3200 in 1/3 stop increments.

## Measuring Level Adjuster

Insert small screwdriver in slot to turn screw for adjusting the measuring level by  $\pm 1$  EV. White graduation marks equal increments of 0.2 EV. (Not shown.)

## Measuring Ranges at ASA 100:

Flash, Incident and Reflected: f/1.4 to 90.9  
Continuous Light, Incident and Reflected: EV 1 to 18.2

Size:  $1\frac{3}{16} \times 2\frac{11}{16} \times 6\frac{3}{16}$  in.  
(30 x 73 x 153mm)

Weight:  $8\frac{7}{16}$  oz. (240g.) without batteries.

## AMBI

"AMBI" measuring mode for continuous light sources displays EV or f/number. Readout changes automatically to reflect shutter speed changes.

## CORD

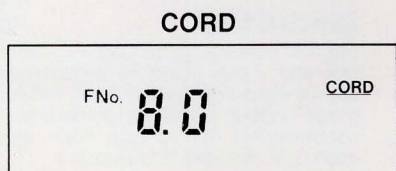
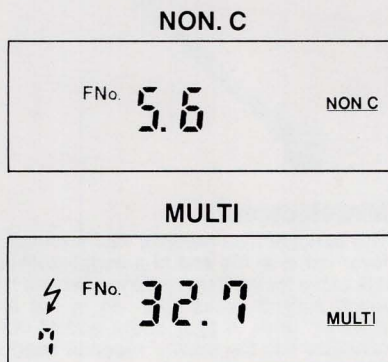
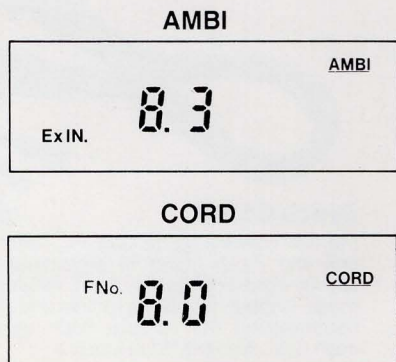
"CORD" mode for measuring cord-connected electronic flash and M-class flash bulbs; displays EV or f/number.

## NON. C

"NON. C" operation for single-burst electronic flash without a PC cord connection: EV or f/number readouts. Press measuring button to reset meter.

## MULTI

"MULTI" position for metering multiple or cumulative electronic flash without PC cord connection. Readout displays f/number and cumulative flash count; shows last digit of accumulations over 9 flashes.



NOTE: Specifications subject to change without notice.  
See page L3 for additional information.



# Minolta Auto Meter III and Flash Meter III Accessories

A system of interchangeable accessories to expand the applications and versatility of the meters.



## 10° Spot Attachment

Fitting in place of the incident-reading dome, this optional attachment converts the meters into spot meters with a narrow 10° angle of view. The attached optional finder allows accurate aiming for precise measurements.\*



## Spherical Neutral Density Diffusers

ND4X and ND8X diffusers permit making readings from extraordinary bright light sources. The ND4X dome reduces the intensity by 2 stops, the ND8X by 3 stops.\*



## Spot Mask II

For darkroom work, adapts the meters for use as a spot-reading, on-easel enlarging exposure meter. After test printing a reference frame to determine proper aperture setting and exposure time, the spot mask aids in obtaining similar-quality exposure values. Also fits Auto Meter II.



## Flat Diffuser

Attach this diffuser to measure the lighting ratio between the main and auxiliary light sources for light balancing, to determine illuminance values or read incident light for flat objects. With Flash Meter III, the Flat Diffuser can also be used to determine the guide number of electronic or M-bulb flash units.\*



## 40° Reflected-Light Attachment

This flat disc makes wide area reflected light readings. It has a 40° angle of acceptance.\*



## Mini-Receptor

The optional mini-receptor has a miniature diffuser dome at the end of a metal-shielded flexible cable for incident reading of small, hard-to-reach subject areas such as in still life and close-up work. A plug at the end of the cable connects into the meters' receptor head accessory jack.\*



## Spherical Diffuser

This dome-shaped diffuser (supplied with meters) attaches to receptor head for measuring incident light. Its deeply curved form assures proper integration of all photographically relevant light illuminating the subject.\*



## Minolta Booster Kit

This optional kit greatly extends the meters' versatility. It features a (1-6V silver-oxide) battery-operated meter booster that plugs into the meter receptor head accessory jack to increase the low-light sensitivity for specialized applications. The measuring range (at ASA 100) of the Auto Meter III is extended to EV -7 to 19.5; EV -6.3 to 18.2 with the Flash Meter III. Booster Kit attachments permit metering from an SLR viewfinder eyepiece, focusing screen or view camera ground glass, 35mm film plane and microscope eyepiece. Without attachments, the booster can also be used as a conventional reflected-light meter.\*



## Synch Cord II

Permits connecting camera PC terminal, flash unit and Flash Meter III simultaneously. This allows cord-connected flash readings to be made without the chore of disconnecting and reconnecting the camera flash synch cable each time. Also fits Flash Meter II.

\*Also fits Auto Meter II and Flash Meter II

NOTE: Specifications subject to change without notice.



# Minolta Spotmeter M

World's first 1° spot meter with liquid-crystal digital/analog readout, memory and exposure-zone calculation capability.

## Power Switch

On/off switch to power meter.

## LCD Analog Scale

Pointers indicate measured and memorized exposure readings for convenient comparison on f/number array. Indicators move to reflect ASA or shutter speed changes.

## Lens

Fixed-focus lens for readings from about 5 ft. to infinity.

## LCD Digital Readout

Displays f/numbers from 0.7 to 64.9 or EV numbers from -4.3 to 28.5 in 1/10-stop increments and ASA/Time settings. Display changes automatically to reflect changes in ASA or shutter speed. Readout displays an "E" if exposure-zone calculations are made without memorized readings, or if more than two entries are stored; if memory is cleared, "O" appears when recall key is pushed.

## Memory Clear Key

Push key to clear memory.

## Measuring Button

Squeeze trigger to activate meter for continuous light measurement.

## ASA/Time Display Key

Press key to alternate display and/or input of ASA settings from ASA 12 to 6400 or shutter speed settings from 1/2000 sec. to 30 min.

## Display Illumination Button

Press button to illuminate digital finder display for easy viewing in dim light.

## Battery Chamber

Accepts one 1.5V AA-size penlight battery. (Not shown.)

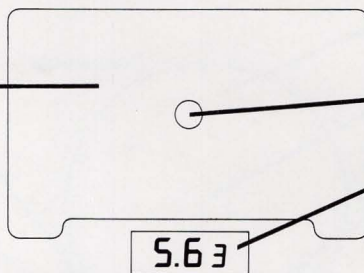
## Measuring Level Adjuster

Turn control inside battery chamber for fine adjustment of measuring level by  $\pm 1$  EV in 0.2 EV increments. (Not shown.)

## Viewing Field

Fixed-focus, through-the-lens reflex view via pellicle mirror and pentaprism with 1.4X magnification; shows 12 x 17° rectangular view.

## Viewfinder Information



## Shadow Key

To bias exposure for dark, shadow areas, measure dark area and store in memory; press Shadow Key; meter will automatically recalculate exposure setting. See illustration below for additional information.

## Highlight Key

To bias exposure for bright, highlight areas, measure bright area and store in memory; press Highlight Key; meter will automatically recalculate exposure setting. See illustration below for additional information.

## Eyepiece

Built-in eyepiece is adjustable from -2.5 to +1.2 diopters.

## Average Key

To calculate the average exposure of a scene, meter and memorize readings for both bright and dark areas; press Average Key; meter will automatically calculate a median exposure point. See illustration below for additional information.

## F-No./EV Display Key

Press key to alternate display from f/numbers to EV numbers.

## Increase/Decrease Keys

Push keys to raise and lower ASA or shutter speed settings.

## Recall Key

Press for digital recall of exposure measurements stored in the memory.

## Memory Key

Push key to enter exposure reading in memory. Up to two readings can be stored, and will remain displayed on the analog scale.

## Tripod Socket

Threaded for standard tripod mounting screws. (Not shown.)

**Measuring range at ASA 100:** EV 1.0 to 22.5

**Size:** 1 7/8 x 3 9/16 x 5 7/8 in.

**Weight:** 8 1/8 oz. (230g) without batteries

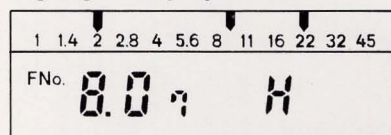
## Measuring Spot

Defines 1° angle of acceptance.

## LCD Exposure Readout

Digital display shows measured f/number or EV-number. Lights when illuminator button on grip is depressed.

## Highlight Display



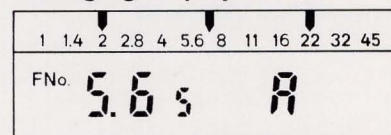
LCD shows recalculated exposure reading, biased to correctly reproduce the highlight areas of a scene. The calculated highlight readout increases exposure by 2.3 stops.

## Shadow Display



LCD shows recalculated exposure reading, biased to correctly reproduce the shadow areas of a scene. The recalculated shadow readout reduces the exposure by 2.7 stops.

## Averaging Display



Measurements of a highlight and shadow area of a scene, stored in memory, appear on the analog scale. Press "A" key to compute the average exposure of the two readings.

NOTE: Specifications subject to change without notice.  
See page L3 for additional information.



# Minolta Auto-Spot II

Provides accurate 1° spot measurements via a unique flareless SLR optical system.

## Battery Chamber

Accepts one 9V "transistor-type" battery.

## Lens

Provides 9° circular view of the scene; Focuses to 3.3 ft.; 40.5mm filter thread accepts close-up lens adapter for readings as close as 6 in.

## Lens Hood

Retractable rubber shade (supplied with meter) helps prevent glare from interfering with accurate measurements.

## Focusing Grip

Waffled rubber grip provides quick, sure focusing.

## Battery-Check Indicator

Lights to indicate sufficient power for meter operation.

## Measuring Trigger

Squeeze trigger to activate meter for continuous measurement.

## Battery-Check Button

With meter turned on, indicator lights when button is depressed for battery check.

## Power Switch

On/off switch with spring-loaded "lamp" position to illuminate viewfinder scales.

## Film Speed Setting Knob

Pull out and turn knob to set ASA from 3 to 25,000 in 1/3 stop increments. Release knob to lock setting. ASA readouts in viewfinder.

## Handgrip

Comfortable grip with rubberized, non-slip surface for sure handling.

## Eyepiece

Turn eyepiece until measuring spot in finder is clearly visible; adjustable from -4.58 to +2.73 diopters.

## Tripod Socket

Accepts standard tripod mounting screw; located on bottom of handgrip.

## EV-Luminance Table

Converts Exposure Values to luminance readings in foot-Lamberts (ft-L) or candelas per square meter (cd/m<sup>2</sup>). (Not shown.)

## Measuring Level Adjustor

For fine adjustment of measuring level by ±1 EV in 1/3 stop increments. (Not shown.)

## ASA/DIN Conversion Table

Located on bottom of handgrip. Table converts DIN film speeds to ASA ratings.

**Measuring Range at ASA 100 :** EV 3 to 17 (up to 21 with accessory ND filter)

**Size:** 27/8 x 63/8 x 411/16  
(62 x 162 x 119mm)

**Weight:** 193/4 oz. (560g) without battery.

## Motorized Viewfinder Scale

## Viewing Field

Shows Circular 9° viewing area.

## Measuring Spot

Shows precise 1° angle of acceptance for metering.

## Cine Scale

Use for movie cameras with 180° shutter sector for metering at 8 to 128 fps.

## Time Scale

Shows shutter speeds from 1/2000 to 30 seconds.

## EV Scale

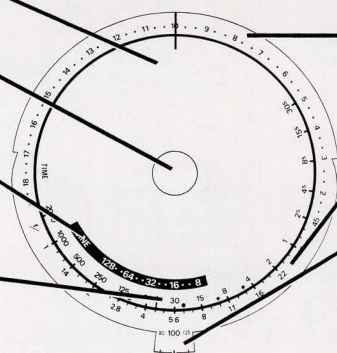
Shows exposure values from EV 2 to 18.

## Aperture Scale

Displays f/numbers from f/1 to f/45.

## Film Speed Indication

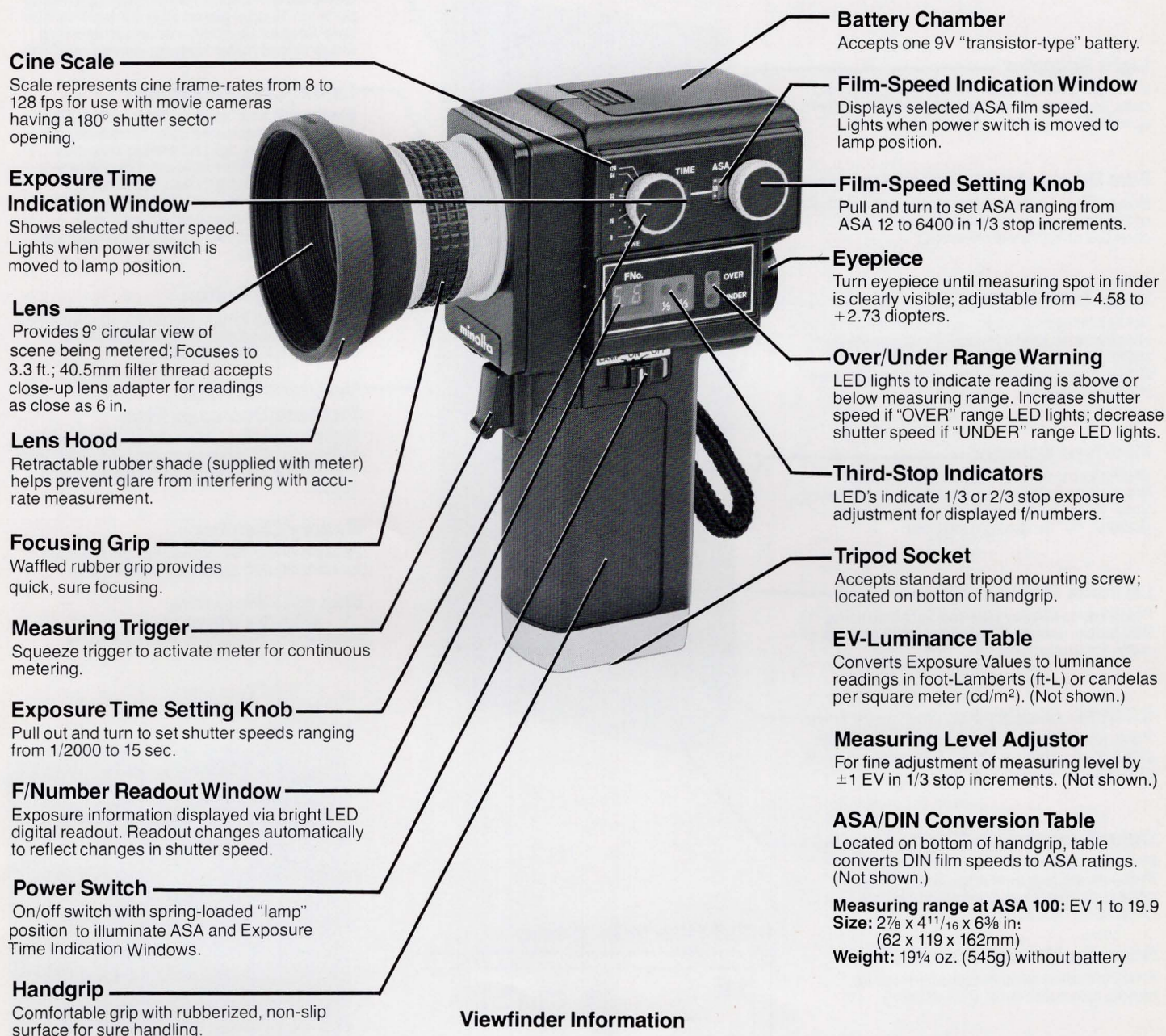
Shows set ASA.





# Minolta Auto-Spot II Digital

Highly accurate 1° spot meter with solid-state design and digital LED exposure readouts via a unique flareless SLR optical system.



NOTE: Specifications subject to change without notice.  
See page L3 for additional information.



# Minolta Color Meter II

World's first digital, three-color meter provides highly accurate readings for filtering any film/light-source combination.

## Light Receptor

Integrating flat diffuser houses 3 silicon photo cells, each filtered respectively for sensitivity to specific blue, green and red light.

## Film Display Input Key

Press "FILM" button to input color temperature of film being used. Setting will remain until changed or battery is removed.

## Variable/Preset Selector

Set at preset position to input color temperatures of commonly used films via film-type selector switch. Variable setting permits input of color temperature for virtually any film type between 2000 and 7500K.

## Film-Type Selector

Sliding three-position switch inputs preset film-type color temperatures of commonly used films. "A" for Type A (3400K), "B" for Type B (3200K), "D" for daylight (5500K).

## LB Index Display Key

Press key to display blue/red light balancing filter index number. Check filter table on back of meter for proper filtration.

## CC Index Display Key

Press key to display green/red color compensating index number. Check filter table on back of meter for proper filtration.

## Color Temperature Display Key (K)

Press key to put meter in measuring mode. Press measuring button to display metered color temperature of continuous and non-continuous light sources.

## Receptor Head Release Button

Press button to remove receptor head for remote measurements. (Not shown.)

## Measuring Button Lock

Locks measuring button for continuous read-outs or to prevent accidental metering. (Not shown.)

## Receptor Head

Detachable receptor head connects to meter body via 18 gold-plated plug contacts. Accessory Adaptor Cord MA-1 attaches between receptor and meter body for remote readings.

## Liquid-Crystal Display

Energy efficient liquid-crystal readout displays set or measured color temperature in degrees Kelvin; light balancing and color compensating filter indexes. Low battery power indicated by three LCD decimal points. Display blinks if measured color temperature is above or below measuring range but meter can still display proper LB and CC indexes.

## Measuring Button

Hold in button to measure color temperature of surrounding light. Minimum light level required, EV 2 at ASA 100.

## Variable Film Type Increase/Decrease Keys

Raise or lower variable color temperature settings in 10K increments between 2000 and 4000K, 50K increments between 4000 and 7500K.

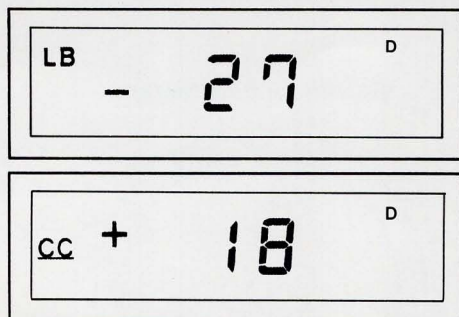
## Battery Chamber

Accepts one 9-Volt "transistor-type" battery for up to 30,000 readings. (Not shown.)

Size:  $1\frac{5}{16} \times 2\frac{13}{16} \times 6\frac{11}{16}$   
(33 x 72 x 170mm)

Weight:  $8\frac{1}{16}$  oz. (230g) without battery.

## CC/LB Filter Index Display



Light balancing indexes from -762 to +999 mireds for blue/red light ratio;  $\pm 2$  mired accuracy. Color compensating index from -99 to +99 decamireds for green/red light ratio;  $\pm 1$  decamired accuracy. Provides CC and LB indexes even if color temperature is above or below measuring range.

## Filter Table

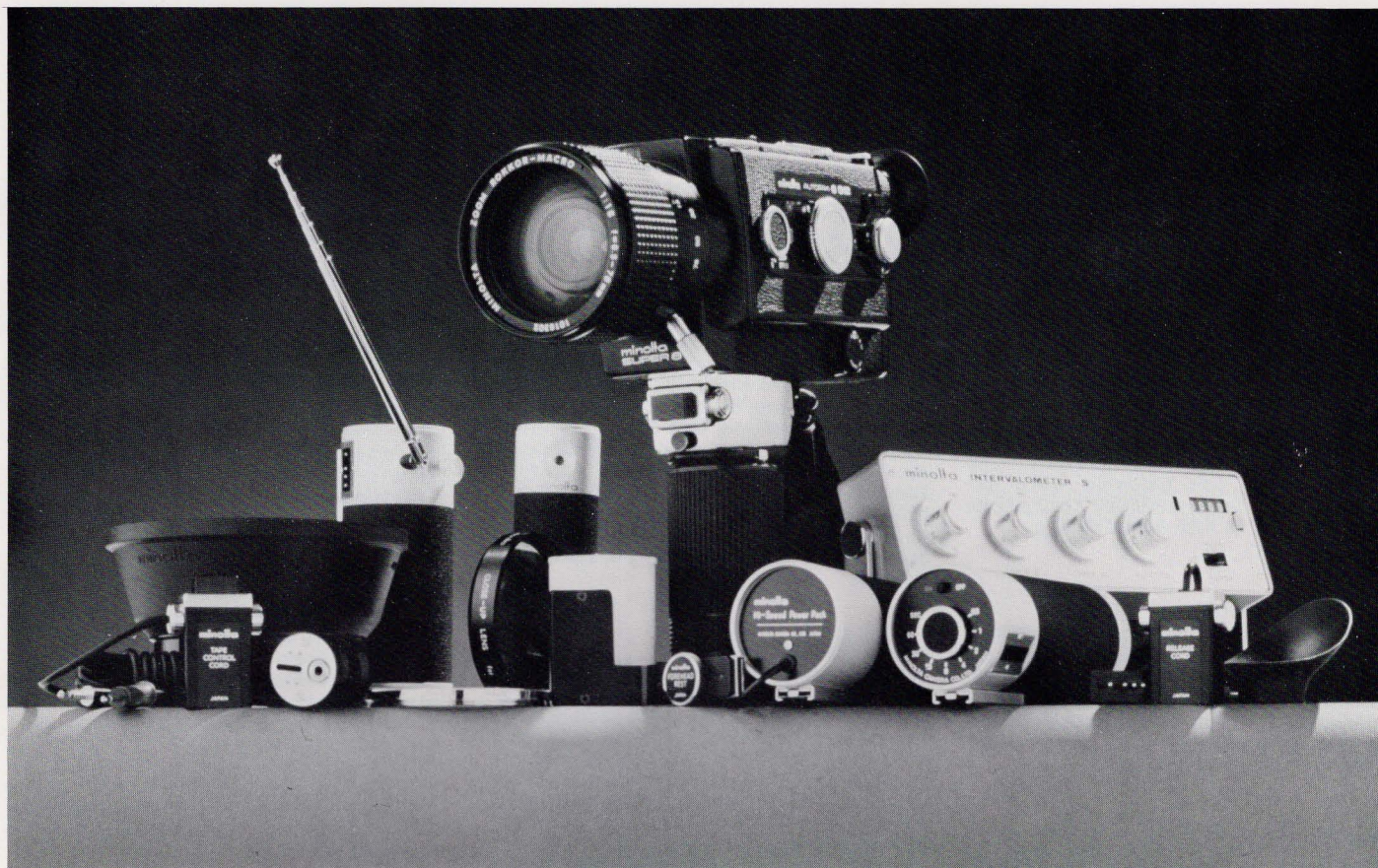
LB LIGHT BALANCING INDEX					
LB+ AMBER +EV			LB- BLUE +EV		
+10	81	1/3	-10	82	1/3
+18	81A	1/3	-18	82A	1/3
+27	81B	1/3	-32	82B	2/3
+35	81C	1/3	-45	82C	2/3
+42	81D	2/3	-55	80D	1/3
+53	81EF	1/3	-81	80C	1
+81	85C	1/3	-112	80B	1 2/3
+112	85	2/3			
CC COLOR COMPENSATING INDEX					
CC+ MAGENTA +EV			CC- GREEN +EV		
+2	5M	1/3	-2	5G	1/3
+4	10M	1/3	-4	10G	1/3
+8	20M	1/3	-7	20G	1/3
+13	30M	2/3	-10	30G	2/3
+18	40M	2/3	-13	40G	2/3

Converts LB and CC indexes into standard Kodak filter designations. Positive indexes for "warming" filters, negative for "cooling" filters. If metered index number does not exactly match filter table index number, approximate to closest one. Two numbers on the table can be added together to equal the metered index number. Filter table also gives exposure factors. Other filter brands are listed in owner's manual.



# Minolta Autopak-8 D12

An extraordinarily responsive tool for the filmmaker, combining professional-level filming capabilities with super 8 operating convenience.



- 6.5-78mm f/1.8 Zoom Rokkor lens with 12:1 zoom ratio
- Five-speed power zooming covers full range in 2 to 12 seconds
- Macro filming range controlled by switch on camera body permits focusing as close as front surface of lens, filling frame with subject as small as  $1\frac{1}{8} \times 1\frac{1}{8}$  in.
- Total control-center SLR viewfinder has central split-image rangefinder, f/stop scale, over/underexposure warning signal, film safe-run signal, shutter-opening fade indicator and film-end signal
- Finder eyepiece adjusts to user's eyesight
- Built-in eyepiece blind
- Through-the-aperture auto-exposure system compensates for running speed, focal length, zooming, filtration and close-up photography
- $\pm 2$  EV auto-exposure override for aesthetic control or unusual situations
- Manual f/stop control from f/1.8 to f/45
- Running speeds of 8, 12, 18, 24, 32 and 54 fps, plus single-frame (32 and 54 fps with supplied Hi-Speed Power Pack)
- Film speeds from ASA 10 to ASA 640 keyed automatically
- Variable-sector rotary shutter for exposures as short as  $1/486$  second
- Automatic 54-frame lap-dissolves
- Automatic and manual fades
- Electromagnetic shutter release is vibrationless, interchanges with other Minolta electromagnetic releases for wire or wireless remote control, automatic time-lapse, other advanced applications
- Electronic flash synchronization via PC terminal for time-lapse or special-effects filming
- Battery test circuit
- Advanced system of accessories for maximum versatility
- The Minolta Autopak-8 D12 is available in a complete outfit including Camera, Lens Shade, Hi-Speed Power Pack, Remote Control Cord, Oversize Eyepiece Hood, Forehead Rest, 1A Filter and Fitted Case



# Minolta Autopak-8 D12

## Accessories

### Carrying Case

This handsomely crafted compartmented carrying case allows the Autopak-8 D12 to be carried and stored with maximum protection against accidental damage. In addition to the D12, the case will hold a Lens Hood, Hi-Speed Power Pack, Remote Control Cord, Oversize Eyepiece Hood, Forehead Rest, 1A Filter and various small accessories.

### Hi-Speed Power Pack

The Hi-Speed Power Pack is used when filming at 32 or 54 fps. It mounts on the D12's accessory rail and plugs into a special socket on the bottom of the camera with a short cord. The Hi-Speed Power Pack holds 7 AA-size 1.5v batteries, which replace the batteries in the D12's handgrip as a power source for high-speed filming.

### 1A Skylight Filter

Designed specifically for the D12, this filter has a 67mm-diameter threaded mount. It's clear to the eye, has no filter factor and absorbs ultraviolet radiation for superior color rendition, and for better contrast in black-and-white when filming in areas where UV radiation is excessive.

### Lens Shade

Large, deep lens shade is made of soft, flexible rubber. It helps prevent lens flare when filming in strong, direct light and side-lighted situations, shields the lens from the elements in bad weather and provides physical protection from bumps.

### Lens Cap

The Lens Cap protects the front surface of the lens from dirt and damage when the camera is not actually in use. It is installed and removed by pressing on the two buttons located on either side of the cap.

### Close-Up Lens

Attached to the zoom lens of the D12, the Close-Up Lens permits photographing as close as 17 inches, filling the frame with a subject area as small as  $\frac{1}{8} \times \frac{1}{4}$  inch. It requires no special focusing and does not affect exposure and zooming. The Close-Up Lens supplements the built-in macro focusing of the Autopak-8 D12 and allows making close-up zoom shots.

### Oversize Eyepiece Hood

Made of soft, flexible rubber, it attaches easily to the D12's eyepiece, where it prevents extraneous light from entering the finder and possibly affecting exposure accuracy, and provides an additional measure of comfort. In bright areas, it makes it easier to concentrate on the finder image, too.

### Intervalometer-P

This solid-state, six-transistor timer is battery-operated and mounts directly on the accessory rail of the D12. It connects with the Release Cord to the D12's electromagnetic shutter release, and trips the camera at intervals of 0.5, 1, 2, 4, 8, 15, 30 or 60 seconds. It features shockproof construction for long service life, and operates reliably over an extremely wide temperature range. It is powered by 5 AA-size batteries and accepts the same Battery Magazine as the D12.

### Intervalometer-S

This sophisticated instrument incorporates three high-quality timers plus a counting device, and may be used with motor-driven still cameras as well as with the Autopak-8 D12. The Intervalometer-S can be used for conventional time-lapse, memomotion (a series of single-frame exposure actuations at fixed intervals), work sampling (a series of continuous-run sequences filmed for a certain duration at fixed intervals) and indent work samplings (a series of time-lapse or memomotion single-frame exposures filmed for a certain duration at regular intervals). The Intervalometer-S provides an unusually broad range of intervals from  $\frac{1}{2}$  second to 10 minutes. It is designed for a long service life, thanks to silicon-transistor solid-state timers, which provide superior shock-resistance, and flip-flop circuits for extreme accuracy under prolonged use. The Intervalometer-S operates flawlessly over an extremely wide temperature range. It is powered by six C-size batteries in a built-in battery compartment. It incorporates a magnetic counter to four digits, battery test circuit and work-sampling signal lamp mark.

### Forehead Rest

The Forehead Rest attaches to the accessory rail on top of the Autopak-8 D12 and is locked into position with a clamping screw. It's cushioned for comfort and allows the D12 to be braced against the photographer's forehead, providing more secure and stable support for the camera.

### Battery Magazine

A spare Battery Magazine is convenient for extended filming sessions. The plastic case holds 5 AA-size batteries and is instantly interchangeable with the Battery Magazine in the D12's handgrip. Carrying additional loaded Battery Magazines ensures that no time will be lost—or footage missed—while covering lengthy activities.

### Release Cord

This 12-inch cord serves as an electric cable release. One end fits the D12 in place of the electromagnetic shutter release, which is in turn attached to the free end of the release cord. This cord is useful for making single-frame exposures, as in animation or titling. It prevents camera movement for maximum steadiness in tripod-mounted applications.

### Remote Control Cord

This 16.5-foot cord plugs into the D12 in place of the Electromagnetic shutter release, permitting camera operation at a distance. Up to three cords may be linked for manual control of the film run from about 50 feet from the camera. The Remote Control Cord may also be used to operate more than one camera at a time. Where multi-camera triggering is desired, special adaptation is required to interconnect the necessary number of Remote Control Cords with one master switch.

### Tape Recorder Control Cord

This cord connects the D12 via the electromagnetic shutter release with a cassette tape recorder for synchronizing filming and sound recording. The tape recorder will operate while the filming button is depressed. Any portable recorder using a two-pin plug may be employed.

### Wireless Remote Control Unit

This battery-powered system consists of a transmitter and a camera-mounted receiver that permit remote operation without connecting wires up to a distance of 260 feet. The receiver mounts on the D12's accessory rail, and connects by cord through the camera's electromagnetic shutter release. Pushing the main switch of the transmitter activates the camera. The transmitter and receiver are designed for long service, and will operate reliably over an extremely wide range of temperatures.



# Minolta XL-601

**Minolta's lightweight compact low-light super 8 movie camera with 6:1 power macro zoom lens, built-in intervalometer with self-timer, and through-the-lens automatic exposure control.**

- 7.5-45mm f/1.7 Zoom Rokkor lens with 6:1 zoom ratio.
- High-speed lens and wide-sector shutter for dim-light filming without movie lights.
- Full-range power zooming by rocker switch, plus manual zoom control.
- Macro focusing to front surface of lens controlled by macro switch on camera.
- Through-the-aperture CdS auto-exposure system compensates for focal length, zooming, filtration and macrophotography.
- Manual f/stop control from f/1.7 to f/45. Allows fade-in/fade-out.
- Easy, foolproof drop-in loading with super 8 cartridges.
- + 1.5 EV backlight exposure adjustment.
- Red run signal on the front of the camera pulsates during film run.
- Built-in intervalometer for time-lapse filming fires single frames at intervals from 0.5 second to every 60 seconds.
- Built-in self-timer incorporated in the intervalometer permits a 10 second delay before the start of the film run. A red run signal on the front of the camera glows steadily during the delay and also pulsates during the self-timer-controlled film run. Can be varied from 10 to 20 seconds.
- Running speeds of 18 fps, single frame and intervalometer-controlled range.
- Accepts film speeds from ASA 25 to ASA 160 keyed automatically.
- Total control-center SLR viewfinder with central split-image rangefinder, manual setting signal, film-run signal, over/underexposure warning signal, bat-



tery check signal and film-end warning indicator.

- Filter switch controls internal conversion filter for proper color balance indoors and outdoors.
- Electromagnetic shutter release is vibrationless.
- Electronic flash synchronization via PC terminal for time-lapse or special-effects filming.
- Swing-away handgrip for fast, easy tripod mounting; has wrist strap for safe carrying.
- Accessory input socket accepts remote control cords, wireless

remote units and supplementary timing devices.

- Film supply window shows how much unexposed film remains.
- Film load window shows whether or not camera is loaded, type of film in camera.
- Finder eyepiece adjustable to user's eyesight.
- Lens mount threaded to accept 46mm diameter filters.
- Rubber lens shade shields lens from stray light, protects it from damage and folds for convenient storage.

## XL-601 Accessories

### Soft Shoulder Case

Lightweight carrying case protects camera while carrying.

### Lens Cap

Available as replacement for cap supplied with camera.

### Remote Control Cord

Ten-foot cord serves as cable release for electromagnetic shutter release of XL-601. Built-in lock for continuous filming.

### Connecting Cord S

Twelve-inch cord connects Intervalometers P and S and Wireless Remote Control Unit's receiver to XL-601.

### Connecting Cord L

Ten-foot cord connects Intervalometers P and S and Wireless Remote Control Unit's receiver to XL-601.



# Minolta XL-401

**A Minolta quality compact low-light super-8 movie camera with most of the features of the XL-601.**

- 8.5-34mm f/1.2 Zoom Rokkor lens with 4:1 zoom ratio.
- High-speed lens and wide-sector shutter for dim-light filming without movie lights.
- Full-range power zooming by rocker switch, plus manual zoom control.
- Macro focusing to front surface of lens controlled by macro switch on camera.
- Through-the-aperture CdS auto-exposure system compensates for focal length, zooming, filtration and macrophotography.
- Manual f/stop control from f/1.2 to f/45. Allows fade-in/fade-out.
- Easy, foolproof drop-in loading with super 8 cartridges.
- +1.5 EV backlight exposure adjustment.
- Red run signal on the front of the camera pulsates during film run.
- Built-in intervalometer for time-lapse filming fires single frames at intervals from 0.5 second to every 60 seconds.
- Built-in self-timer incorporated in the intervalometer permits a 10 second delay before the start of the film run. A red run signal on the front of the camera glows steadily during the delay and also pulsates during the self-timer-controlled film run. Can be varied from 10 to 20 seconds.
- Running speeds of 18 fps, single frame and intervalometer-controlled range.
- Accepts film speeds from ASA 25 to ASA 160 keyed automatically.
- Total control-center SLR viewfinder with central split-image rangefinder, manual setting signal, film-run signal, over/underexposure warning signal, battery



check signal and film-end warning indicator.

- Filter switch controls internal conversion filter for proper color balance indoors and outdoors.
- Electromagnetic shutter release is vibrationless.
- Electronic flash synchronization via PC terminal for time-lapse or special-effects filming.
- Swing-away handgrip for fast, easy tripod mounting; has wrist strap for safe carrying.
- Accessory input socket accepts remote control cords, wireless

remote units and supplementary timing devices.

- Film supply window shows how much unexposed film remains.
- Film load window shows whether or not camera is loaded, type of film in camera.
- Finder eyepiece adjustable to user's eyesight.
- Lens mount threaded to accept 46mm diameter filters.
- Rubber lens shade shields lens from stray light, protects it from damage and folds for convenient storage.

## XL-401 Accessories

### Soft Shoulder Case

Lightweight carrying case protects camera while carrying.

### Lens Cap

Available as replacement for cap supplied with camera.

### Remote Control Cord

Ten-foot cord serves as cable release for electromagnetic shutter release of XL-401. Built-in lock for continuous filming.

### Connecting Cord S

Twelve-inch cord connects Intervalometers P and S and Wireless Remote Control Unit's receiver to XL-401.

### Connecting Cord L

Ten-foot cord connects Intervalometers P and S and Wireless Remote Control Unit's receiver to XL-401.



# Minolta XL-Sound 84

Minolta's deluxe Super-8 sound movie camera provides for low available-light filming, automatic exposure control, sound-mixing and wireless remote recording capability, 8-to-1 power zooming and macro focusing.

## Operating and Handling Features

- Accepts Super-8 sound or silent film cartridges for foolproof, drop-in loading. Keys automatically to film speeds from ASA 25 to 160.
- Permits low available-light filming without movie lights.
- 7-56mm f/1.4 Zoom-Macro Rokkor lens provides 8-to-1 wide-angle-to-telephoto ratio.
- Full-range power zooming by rocker switch, plus manual zooming.
- Macro focusing up to front surface of lens controlled by switch on camera body.
- Fully automatic exposure system makes all adjustments for changing light conditions, even while filming. Compensates automatically for zooming, panning, macrophotography or filters.
- Full manual exposure control.
- +1.5 EV backlight adjustment.
- Through-the-lens viewing and focusing, with fast, accurate split-image rangefinder.
- Full-information viewfinder permits monitoring major functions while filming. Has aperture scale, red over/underexposure warning, battery check, safe-run signal and green recording signal.
- One-button operation starts filming and sound recording.
- 18 f.p.s. running speed assures compatibility with Super-8 sound projectors. Also single frame and 24 f.p.s.
- Built-in Type A filter controlled by switch permits shooting indoor color film outdoors.
- Running lock lets the user get into the scene.
- Remote release switch is incorporated into supplied microphone.
- Power for film transport, zooming, auto-exposure system and sound recording is provided by six 1.5 volt AA (penlight) batteries housed in folding hand grip.

## Sound Filming Features

- Standard wired microphone provided with camera permits recording up to 11 $\frac{3}{4}$  feet away or up to 26 $\frac{3}{4}$  feet away with an accessory extension cord.
- Monitor earphone permits user to hear sound before and during filming/recording.
- Automatic gain control (AGC) evens out varying sound levels.



- Audio gain switch with low and normal positions adjusts sensitivity to suppress undesirable background noise.
- Run signal on front of camera shows subjects when they are being filmed.
- Wireless remote recording capability. Accepts FM receiver accessory to permit recording of sound without wires from up to 50 feet away.
- Auxiliary sound capability. Accessory

FM wireless receiver permits recording sound from FM radio broadcast. Auxiliary input accessory permits plugging in a separate sound source such as phonograph or tape recorder.

- Sound-mixing capability. Two audio sources may be mixed on the track by means of the auxiliary input accessory.
- Accepts all Minolta sound system accessories. See catalog page F8 for details.



# Minolta XL-Sound 64

**A full-featured, low-light Super-8 sound movie camera with sound-mixing and wireless remote recording capability, automatic exposure control, 6-to-1 power zooming and macro focusing.**

## Operating and Handling Features

- Accepts Super-8 sound or silent film cartridges for foolproof, drop-in loading. Keys automatically to film speeds from ASA 25 to 160.
- Permits low available-light filming without movie lights.
- 8-48mm f/1.4 Zoom-Macro Rokkor lens provides 6-to-1 wide-angle-to-telephoto ratio.
- Full-range power zooming by rocker switch, plus manual zooming.
- Macro focusing up to front surface of lens controlled by switch on camera body.
- Fully automatic exposure system makes all adjustments for changing light conditions, even while filming. Compensates automatically for zooming, panning, macrophotography or filters.
- Full manual exposure control.
- +1.5 EV backlight adjustments.
- Through-the-lens viewing and focusing, with fast, accurate split-image rangefinder.
- Full-information viewfinder permits monitoring major functions while filming. Has aperture scale, red over/underexposure warning, battery check, safe-run signal and green recording signal.
- One-button operation starts filming and sound recording.
- 18 f.p.s. running speed assures compatibility with Super-8 sound projectors. Single frame silent operation.
- Built-in Type A filter controlled by switch permits shooting indoor color film outdoors.
- Running lock lets the user get into the scene.
- Remote release switch is incorporated into supplied microphone.
- Power for film transport, zooming, auto-exposure system and sound recording is provided by six 1.5 volt AA (penlight) batteries housed in folding hand grip.



## Sound Filming Features

- Standard wired microphone provided with camera permits recording up to 11¾ feet away or up to 26¾ feet away with an accessory extension cord.
- Monitor earphone permits user to hear sound before and during filming/recording.
- Automatic gain control (AGC) evens out varying sound levels.
- Audio gain switch with low and normal positions adjusts sensitivity to suppress undesirable background noise.
- Run signal on front of camera shows subjects when they are being filmed.
- Wireless remote recording capability. Accepts FM receiver accessory to permit recording of sound without wires from up to 50 feet away.
- Auxiliary sound capability. Accessory FM wireless receiver permits recording sound from FM radio broadcast. Auxiliary input accessory permits plugging in a separate sound source such as phonograph or tape recorder.
- Sound-mixing capability. Two audio sources may be mixed on the track by means of the auxiliary input accessory.
- Accepts all Minolta sound system accessories. See catalog page F8 for details.



# Minolta XL-Sound 42

An economical low-light Super-8 sound movie camera with sound-mixing and wireless remote recording capability, automatic exposure control and 4-to-1 power zooming.

## Operating and Handling Features

- Accepts Super-8 sound or silent film cartridges for foolproof, drop-in loading. Keys automatically to film speeds from ASA 25 to 160.
- Permits low available-light filming without movie lights.
- Fast 8.5-34mm f/1.2 Zoom-Macro Rokkor lens provides 4-to-1 wide-angle-to-telephoto ratio.
- Fully automatic exposure system makes all adjustments for changing light conditions, even while filming. Compensates automatically for zooming and panning.
- Full manual exposure control.
- +1.5 EV backlight adjustment.
- Through-the-lens viewing and focusing with fast, accurate split-image rangefinder.
- Full-information viewfinder permits monitoring major functions while filming. Has aperture scale, red over/underexposure warning, battery check, safe-run signal and green recording signal.
- One-button operation starts filming and sound recording.
- 18 f.p.s. running speed assures compatibility with Super-8 sound projectors. Single frame silent operation.
- Built-in Type A filter controlled by switch permits shooting indoor color film outdoors.
- Running lock lets the user get into the scene.
- Remote release switch is incorporated into supplied microphone.
- Power for film transport, zooming, auto-exposure system and sound recording is provided by six 1.5 volt AA (penlight) batteries housed in folding handgrip.



## Sound Filming Features

- Standard wired microphone provided with camera permits recording up to 11 $\frac{3}{4}$  feet away or up to 26 $\frac{3}{4}$  feet away with an accessory extension cord.
- Monitor earphone permits user to hear sound before and during filming/recording.
- Automatic gain control (AGC) evens out varying sound levels.
- Audio gain switch with low and normal positions adjusts sensitivity to suppress undesirable background noise.
- Run signal on front of camera shows subjects when they are being filmed.
- Wireless remote recording capability. Accepts FM receiver accessory to permit recording of sound without wires from up to 50 feet away.
- Auxiliary sound capability. Accessory FM wireless receiver permits recording sound from FM radio broadcast. Auxiliary input accessory permits plugging in a separate sound source such as phonograph or tape recorder.
- Sound-mixing capability. Two audio sources may be mixed on the track by means of the auxiliary input accessory.
- Accepts all Minolta sound system accessories. See catalog page F8 for details.



# Accessories for Minolta XL Sound Movie Cameras



## FM Wireless Receiver Kit

Compact FM receiver mounts on side of camera. Picks up signal from wireless mike up to 50 feet away or from FM radio broadcast. Automatically feeds signal to recording head in camera. Kit includes FM receiver, antenna and wireless microphone with on/off switch.



## Zoom Microphone

A professional-quality microphone that can be used two ways. It attaches to the camera and extends 2 feet toward the subject for better sound pick-up. Or it can be used as a hand-held microphone with the accessory extension cord.



## Shoulder Case

A flexible case that holds a Minolta XL-Sound 64 or 42 camera, standard microphone, monitor earphone, extra film.

## Shoulder Case II

The Minolta XL-Sound 84 camera fits into this flexible case along with standard microphone, monitor earphone, and extra film. (Not shown.)

## Microphone Extension Cord

Extends the working range of the standard or zoom mike by up to 15 feet (Not shown.)



## External Battery Pack

Permits keeping battery cartridge in a pocket to keep batteries warm during operation in low temperatures.



## Boom Microphone

A high-quality directional condenser microphone complete with windscreen. Excellent for following subject sound from the camera position.



# Minolta Sound 7000

**A high-quality projector for Super-8 and Single-8 magnetic-sound and silent films, with sound-on-sound/dubbing capability, Zoom Rokkor lens and automatic threading.**

- Easy, automatic reel-to-reel threading.
- Projects Super-8 and Single-8 magnetic-sound and silent movie film.
- Sharp 15-25mm f/1.3 P. Zoom Rokkor lens for bright, crisp images.
- Advanced, built-in audio capabilities for:
  - Adding sound to silent films that have been magnetically-striped.
  - Adding music, voice or sound effects to sound films.
- Automatic or manual sound-level recording control.
- Illuminated recording level meter.
- Recording key with safety release.
- Single knob controls sound-on-sound/dubbing recording, mixing, sound fade-in or fade-out and erasing.
- Volume-control knob regulates sound level during projection and during manual-control recording.
- Jacks for low-impedance monitor/auxiliary output, input for radio, phono or other audio sources, DIN combination input/output for audio sources, low-impedance microphone input and extension-speaker output.
- Amplifier with 2 integrated circuits, 7 silicon transistors and 5 silicon diodes; 2-watt output to built-in 4-inch, 8-ohm speaker, and 4-watt output (at 8 ohms) to extension-speaker jack.
- Attached leader trimmer is used to trim film for reliable feeding through projector's automatic threading system.
- Reel capacity is 600 ft. of Super-8 film or 900 ft. of Single-8, for up to 60 minutes of uninterrupted sound or silent projection.



- Brilliant 12-volt, 100-watt halogen lamp with built-in dichroic reflector for bright projection and consistent color quality.
- Adjustable framing for clean, professional-looking projection.
- Minolta Sound 7000 operates on 117-

volt 50/60-cycle a.c. line power.

- Sleek, modern styling and clearly labeled controls for easy operation.
- Compact design measures only 13 1/8 x 11 1/4 x 7 1/16 in. (without reels and with arm folded) for convenient storage.

## Minolta Sound 7000 Accessories

### Automatic Take-Up Reel

Nine-inch reel (supplied) engages film automatically and accepts up to 600 ft. of Super-8 or 900 ft. of Single-8 stock.

### Microphone and Stand

Dynamic 400-ohm microphone and stand (supplied) permit recording through projector's audio system.

### Monitor Earphone

An 8-ohm magnetic earphone (supplied) permits monitoring sound as it is recorded through projector's audio system.

### Gate-Cleaning Brush

Soft brush (supplied) is used to clean film gate periodically to insure smooth, clean film transport.

### Dust Cover

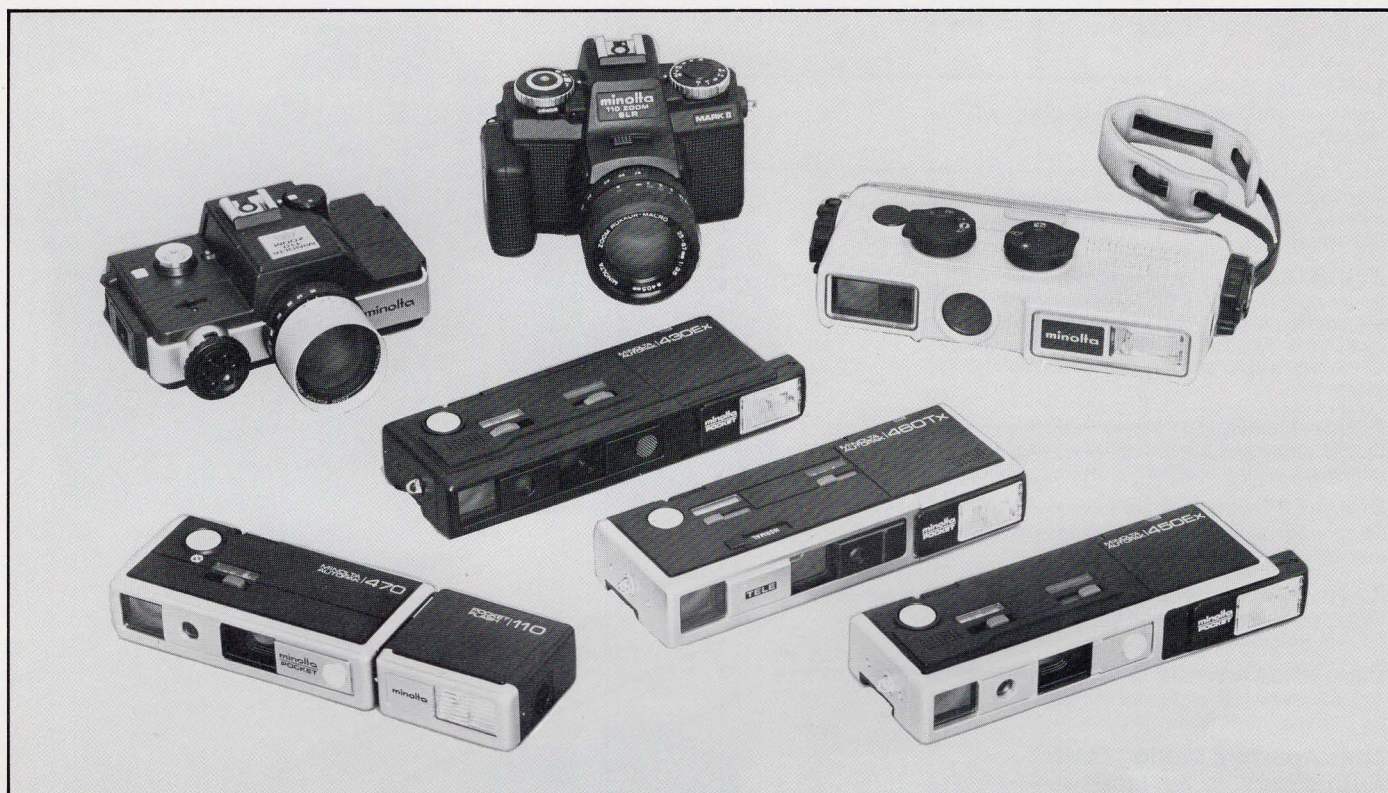
Dust cover (supplied) keeps projector clean when not in use.

### Viewer II

This handy optional accessory attaches to the Minolta Sound 7000 for daylight previewing or editing of films. It permits viewing films conveniently without having to darken the room or set up a screen. It is compact, easy to use and provides a bright, clear viewing image.



# Minolta 110 Zoom SLRs and Pocket Autopak® 110 Cameras



**Minolta 110 cartridge-loading cameras** reflect the high level of photographic technology, human engineering and manufacturing precision that has been traditionally associated with Minolta's 35mm single lens reflex cameras. Because of this, Minolta's 110-format cameras go beyond convenience and foolproof loading—they are practical photographic instruments that offer many innovative features with easy handling for simple, technically excellent photographs, of a wide range of subjects.

Minolta built the world's first 110 SLR camera and offers two models which incorporate single lens reflex viewing with the versatility of a macro-zoom lens. Both feature aperture-priority automatic exposure control and electronically governed shutters which provide the exact stepless shutter speed required over a wide range up to an action-stopping 1/1000 second. Despite their size, Minolta's 110 Zoom SLR's incorporate such "large-camera"

features as: LED finder signals, an instant-return mirror,  $\pm 2$  EV auto-exposure override and a hot shoe for electronic flash. Additionally, the 110 Zoom SLR MARK II offers an electronic self-timer, convenient action hand grip and an adjustable diopter eyepiece for easy viewing even for eyeglass wearers. With this amazing versatility, the Minolta 110 Zooms are hand-sized photographic systems.

**The world's first watertight 110-format camera**, made by Minolta, is designed to literally go anywhere. Rain, snow, dirt and other natural elements will not harm the Weathermatic-A. It can even be used up to 15 feet under water.

**Minolta's Pocket Autopak cameras** are precision-made, easy-to-use, pocket-size 110-format cameras that make photography virtually effortless. All provide simple operation, foolproof, drop-in cartridge loading and the take-anywhere convenience of small size and light weight. Depending on the

model, they offer such useful features as built-in, pop-out electronic flash for freezing action sharply, built-in close-up or telephoto lens, full-information viewfinder for monitoring major camera functions at eye level, sliding lens cover that also locks the shutter release button, soft-touch shutter release that minimizes camera movement and convenient attachment lug for neck or wrist strap.

The Pocket Autopak 460TX, 450EX and 430EX also have audible and visible low-light exposure warnings and illuminated distance scales.

The Pocket Autopak 470 offers the added precision of electronically controlled automatic exposure and a detachable electronic flash.

Whether the photographer's needs are maximum versatility in the 110 format or utter simplicity of operation combined with Minolta quality, there is a Minolta 110-format camera to fit the requirements.



# Minolta 110 Zoom SLR MARK II

A single-lens-reflex camera for 110 cartridge film, with macro-range 2.7X zoom lens, through-the-lens metering with aperture-priority automatic exposure control and "dedicated" electronic flash system.

## Self-Timer Switch

Turn switch to use self-timer. Activated by pressing shutter release button.

## LED Self-Timer Signal

Front mounted flashing LED pulsates with increasing frequency during the self-timer operation.

## Rokkor Lens

Sharp 25-67 mm f/3.5 Zoom Rokkor-Macro with separate zoom and focusing controls; apertures from f/3.5 to f/16 with click-stop settings. 12 elements in 10 groups, plus built-in close-up element.

## Action Handgrip

Detachable handgrip (supplied with the camera) for sure handling in action-shooting situations.

## Distance Setting Scale

Continuous focusing from 3.6 ft. to infinity; to 7.7 inches in macro range.

## Zoom Setting Ring

Fingertip focal length setting from 25mm to 67 mm telephoto.

## Exposure Override Control

Adjusts automatic exposure control up to  $\pm 2$  EV for unusual lighting conditions.

## Lens Aperture Setting Dial/ Auto-Exposure System

Permits setting lens aperture for automatic, flash or manual operation. In auto mode, once the lens aperture is set (from f/3.5 to f/16), the electronically governed shutter adjusts itself to the correct speed required for precise exposure. Inserting the film cartridge automatically keys the system to the proper ASA speed. Working range EV 4.6 (1/4 sec. at f/3.5) to EV 18 (1/1000 sec. at f/16) at ASA 100.

## Flash Hot Shoe

Accepts standard shoe-mount electronic flash units for cordless synchronization. Camera control contact automatically switches shutter to X-synch (1/125 sec.) and starts viewfinder flash-ready LED blinking when accessory Minolta Auto Electroflash 118X (or other Minolta "X-series" units) is fully charged.

## Macro Focusing Switch

Switch engages built-in macro-focusing lens element for close-up at all focal lengths. Macro focusing range from 7.7 to 34.6 inches.

## Function-Selector Dial

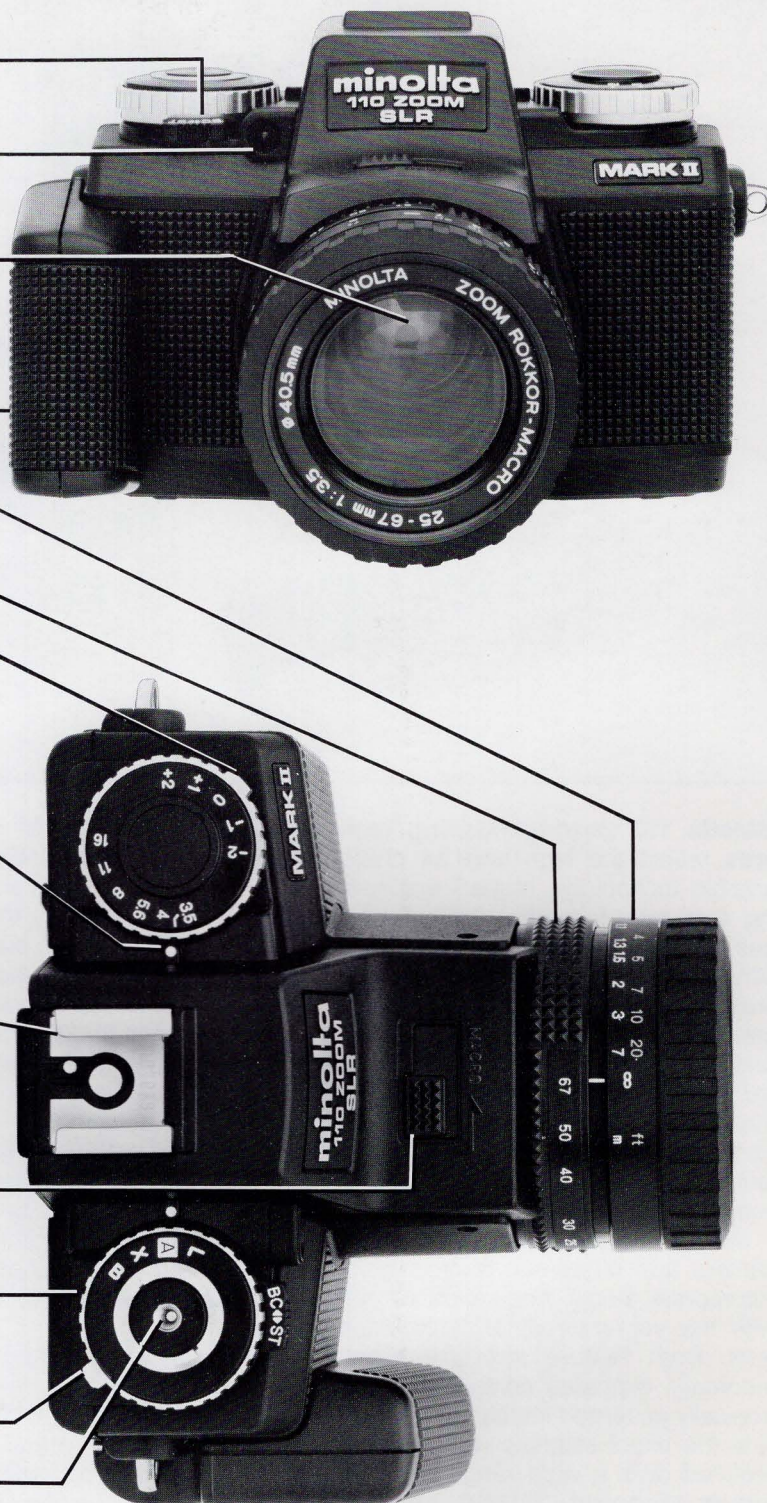
Selects mode of operation; locks in at "A" for automatic exposure control; "X" for flash synch or photography at 1/125 sec.; "B" for time exposures; "L" locks shutter release.

## Function-Selector Dial Release

Unlocks dial to change function setting.

## Electromagnetic Shutter Release

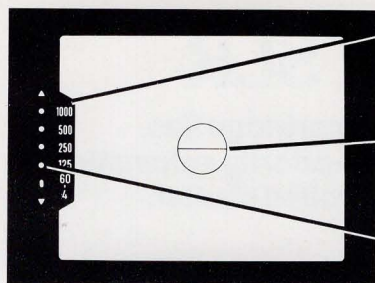
Partial depression activates metering system and LED readouts. "Soft-touch" electromagnetic release provides gentle, vibration-free exposure. Threaded to accept mechanical cable release or electrical remote cords. Release locks at low voltage.





## Through-the-Lens Viewing and Focusing

Exclusive reflex system provides precise composition and focus control unobtainable with most 110 cartridge cameras. Eye-level through-the-lens viewing and focusing are at full aperture for maximum brightness. Instant-return mirror eliminates finder blackout. Finder image size varies with zoom lens setting, ranging from 0.68X life-size at 25mm to 1.75X life-size at 67mm. (Not shown.)



### Shutter Speed Scale

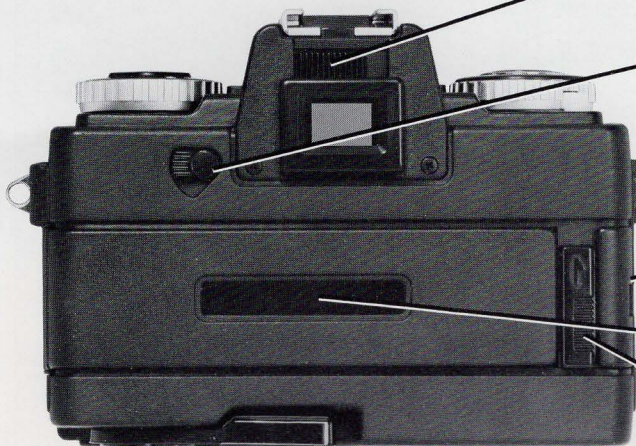
LED indicator showing speed being set automatically in AUTO mode. LED over/under-exposure warning indicators.

### Central Split-Image

For fast, accurate focusing, even in dim light. Finder screen has horizontal split-image range-finder surrounded by matte focusing field.

### Flash-Ready Signal

LED flash-ready signal blinks when dedicated Minolta Auto Electroflash units (designated "X") are fully recycled.



### Eyepiece Adjustment Switch

Moving switch adjusts viewfinder eyepiece to suit the users eyesight. Continuously adjustable from -1.0 to +0.7 diopters.

### Eyepiece Shutter Control

Turning control closes internal eyepiece blind to prevent stray light from entering and affecting auto-exposure when the photographer is not viewing through the finder.

### Strap Lugs

Accepts detachable strap for easy carrying.

### Action Grip Attachment Socket

Camera grip (not shown) attaches to 110 Zoom SLR MARK II via this threaded socket. Grip has textured surface for secure and comfortable handling.

### Film Identification Window

Transparent window reveals type of film in use, number of exposures in cartridge and number of pictures taken.

### Film Chamber Lock

Slides up to allow hinged film chamber door to open.

### Electronically Governed Shutter

Behind-the-lens metal shutter sets stepless speeds from 1/4 sec. to an action-stopping 1/1000 sec. depending on lens opening, light conditions and film in use. (Not shown.)

### Tripod Socket

Standard mount screw socket for tripod-supported long exposures.

### Battery Compartment

Contains two 1.5V silver oxide (S-76 or equivalent) batteries.

### Film Advance

Large thumb-operated lever permits advancing film in a single stroke.

**Dimensions**  
4 1/4 x 4 x 2 15/16 in.  
(105 x 102 x 75mm)

**Weight**  
16 3/8 oz.  
(465g)



# Minolta 110 Zoom SLR

The first single lens reflex camera for 110 cartridge film, with macro-range 2X zoom lens, aperture-priority automatic exposure control and electronically controlled shutter.

## Function-Selector Dial Release

Frees dial for changing setting.

## Flash Hot Shoe

Accepts standard shoe-mount electronic flash units for cordless synchronization.

## Function-Selector Dial

Selects mode of operation; locks in at three positions: "A" for automatic exposure control; "X" for flash sync or photography independent of battery condition at 1/150 sec; "B" for time exposures and operation without battery power.

## On/Off Switch

Locks shutter release in off position; shuts off battery circuit.

## Shutter Release

Light touch trips shutter; cable release socket threaded for standard cable release.

## Battery-Check Button

Illuminates signal in viewfinder to indicate sufficient battery power.

## Exposure Override Control

Adjusts automatic exposure control up to two stops under or over for unusual lighting conditions.

## Lens Aperture Setting Dial/ Auto-Exposure System

Permits setting lens aperture for automatic, flash or manual operation. In auto mode, once the lens aperture is set (from f/4.5 to f/16), the electronic shutter adjusts itself steplessly to the exact speed required for precise exposure. Inserting the film cartridge automatically keys the meter system to the proper ASA speed. Working range EV 1 (10 sec. at f/4.5) to EV 18 (1/1000 sec. at f/16). Power for the exposure metering system is supplied by two 1.5-volt silver oxide batteries (S-76 or equivalent).

## Zoom Setting Ring

Fingertip focal length setting from wide-angle 25mm to telephoto 50mm; moves inward to lock lens in macro focusing mode.

## Distance Setting Scale

Continuous focusing from 3 ft. to infinity; to 11 $\frac{3}{8}$  inches in macro range.

## Electronically Governed Shutter

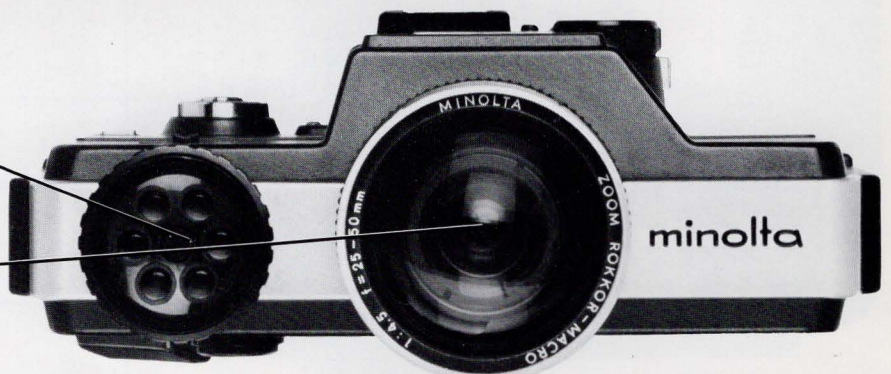
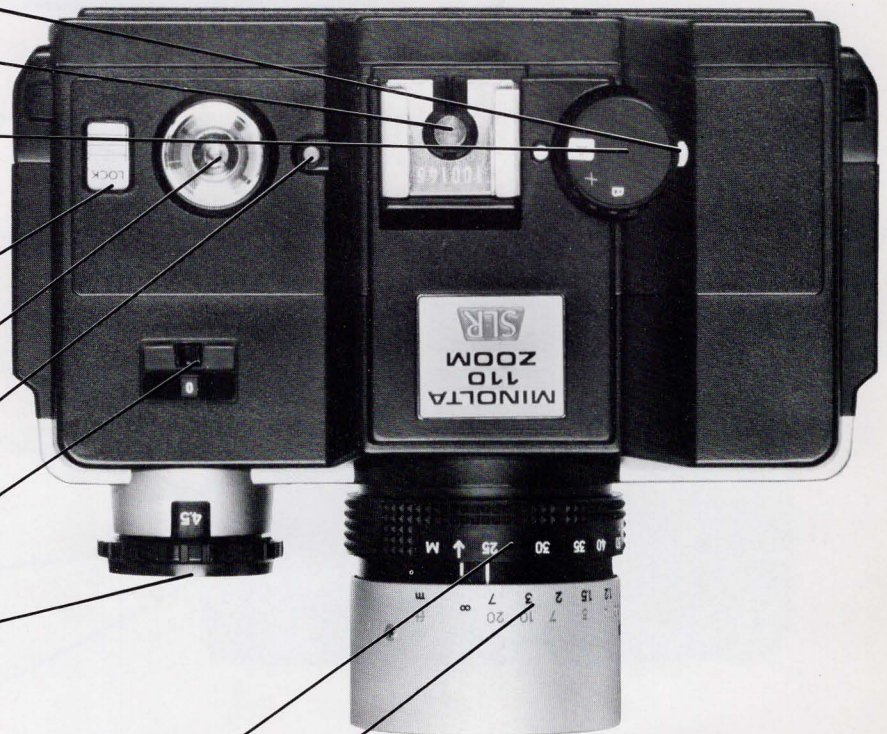
Behind-the-lens slit type with metal construction. Sets itself steplessly from 10 full seconds to an action-stopping 1/1000 sec. depending on lens opening and light conditions (not shown).

## CdS Meter Windows

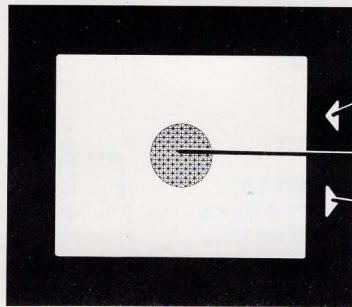
Change amount of light reaching CdS cell as lens aperture is changed; read light from scene for aperture-priority auto-exposure setting.

## Rokkor Lens

Sharp 25-50mm f/4.5 Zoom Macro with separate zoom/macro and focusing controls; apertures from f/4.5 to f/16 with click-stop settings. 10 elements in 10 groups, plus swing-in close-up element.







#### **Battery Check/ Overexposure/B, X Signal**

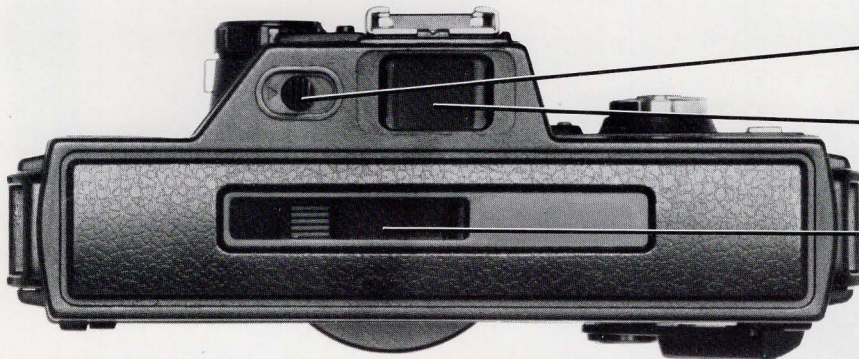
LED signal glows red when battery check button is pressed to indicate adequate battery power; when light is too bright for proper exposure; and when B or X setting is in use.

#### **Central Micropism Spot**

For fast, accurate focusing. Surrounded by matte focusing field.

#### **Slow Shutter Speed Signal**

LED signal glows yellow to indicate shutter speed under 1/50 sec.



#### **Film Chamber Lock**

Slides sideways to allow hinged film chamber door to open.

#### **Viewfinder Eyepiece**

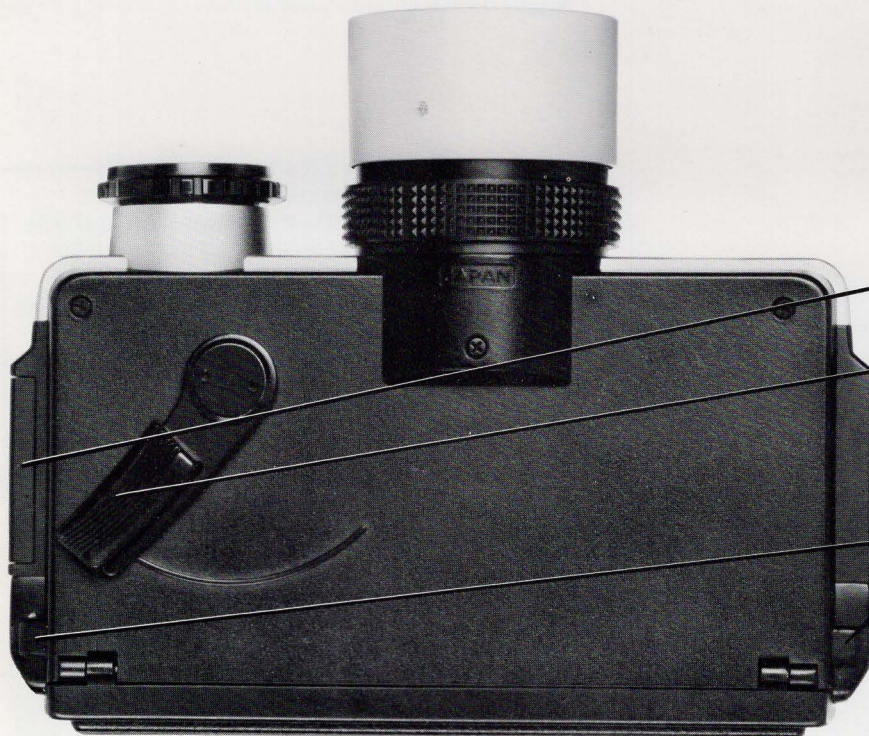
Accepts accessory eyepiece correction lenses. Blocked by internal blind when battery voltage is too low for proper exposure.

#### **Film Identification Window**

Transparent window reveals type of film in use, number of exposures in cartridge and number of pictures taken.

#### **Through-the-Lens Viewing and Focusing**

Exclusive reflex system provides precise composition and focus control previously unobtainable with #110 cartridge cameras. Eye-level through-the-lens viewing and focusing are at full aperture for maximum brightness. Instant-return mirror eliminates finder blackout. Finder image size varies with zoom lens setting, ranging from 0.56X life-size at 25mm to 1.1X life-size at 50mm (not shown).



#### **Battery Compartment**

Hinged cover slides open for quick change of two S-76 (or equivalent) batteries.

#### **Film Advance**

Large thumb-operated lever permits advancing film in a single stroke.

#### **Tripod Socket**

Standard mount screw socket for tripod-supported long exposures (not shown).

#### **Strap Lugs**

Recessed attachment points accept detachable strap for easy carrying.

#### **Dimensions**

5 $\frac{5}{16}$  inches wide, 4 $\frac{1}{16}$  inches deep, 2 $\frac{1}{8}$  inches high.

#### **Weight**

15 $\frac{7}{8}$  ounces.

### **Accessories for the Minolta 110 Zoom SLR**

#### **Soft Case**

Soft case with detachable neck strap protects camera from dust and scratches (not shown).

#### **Lens Hood**

Supplied with camera. Collapsible soft rubber hood shades lens from extraneous light (not shown).

#### **Close-Up Lens Kit**

This kit consists of an adapter ring and a close-up lens and is designed to increase the available close-up magnification of the 110 Zoom SLR without exposure adjustments to a maximum of 0.254X. Desired image magnifications to a minimum of 0.133X may be set by adjustment of the focusing and zoom rings.

#### **Eyepiece Correction Lenses**

Fit into viewfinder eyepiece. Provide an aid to easier focusing with far- or near-sighted vision. Available in 9 different diopter strengths. For additional information, see page D11.



# Minolta Weathermatic-A

"Go-anywhere" 110-format, cartridge loading camera with built-in electronic flash for use in or out of water.

## Shutter Release

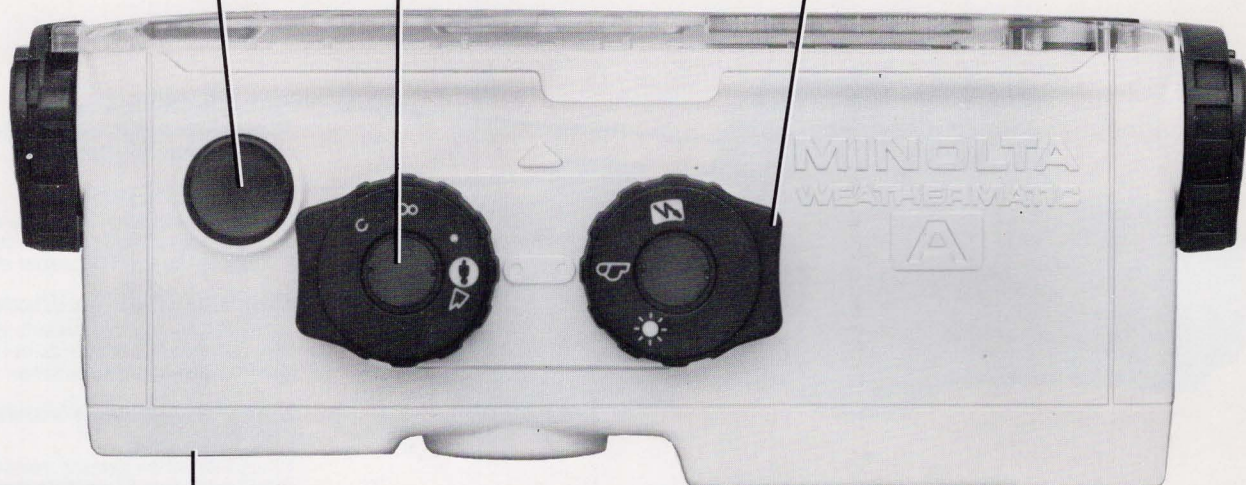
Depress slightly to activate metering system. Further pressure activates shutter.

## Focus Knob

Oversized knob with symbols representing five focus positions for distances from 3 ft. to infinity.

## Exposure/Function Knob

Easy-to-adjust, three-position, oversized knob with settings for bright outdoor light (f/8), or cloudy or indoor light (f/3.5) or flash.



## Watertight Housing

In yellow, for high-visibility, this buoyant, impact-resistant ABS plastic housing will weather the natural elements.

## CdS Meter Window

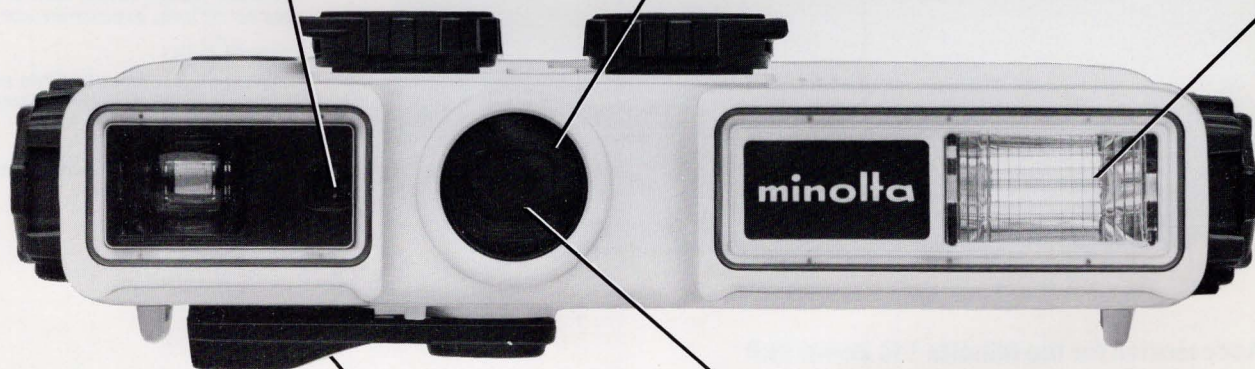
Measures light from scene to determine whether light is adequate for proper exposure, or if flash is needed.

## Lens-Cover Glass

Watertight plastic housing has glass lens-cover for sharp pictures.

## Built-In Electronic Flash

Turning Exposure/Function knob to flash position turns unit on and sets camera for flash pictures in or out of water. Fast, action-stopping 1/5000 second flash duration. Flash-ready signal in viewfinder and on camera body. One AA-size alkaline battery provides up to 180 daylight-quality flashes. Minolta's "flashmatic" system sets lens aperture for correct flash exposure as focus is set.



## Focus-Symbol/Flash-Range Table

Convenient reference table on bottom of camera gives distances in feet and meters for five focus symbols. Shows working flash distances for popular film types (not shown).

## Film Advance

Thumb-activated single stroke lever with 52° winding angle.

## Minolta Lens

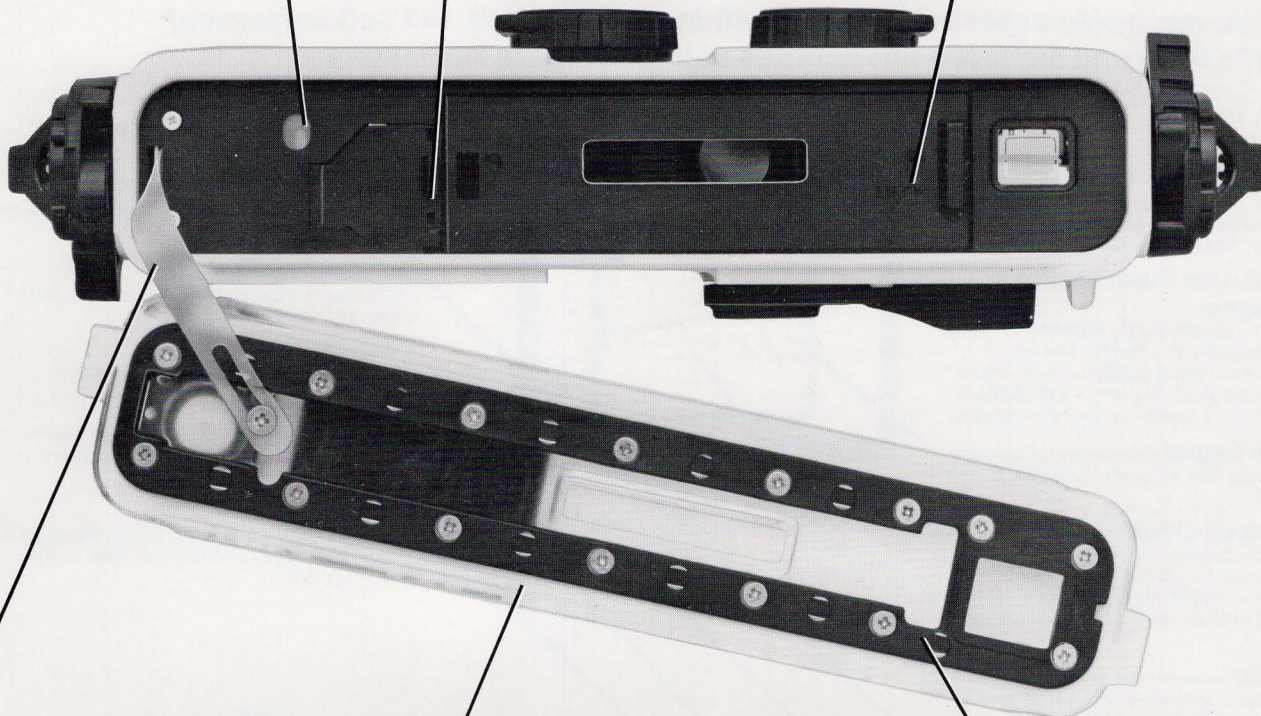
High-quality, all-glass 26mm f/3.5 Minolta lens for sharp pictures in bright or dim light. Focuses down to 3 ft.



**Flash Ready Signal**  
Pulsates to indicate flash is fully recycled.

**Battery Chamber**  
Single 1.5V AA-size battery powers light sensor, finder lamp and flash operation.

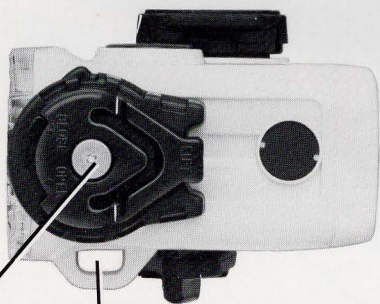
**Film-Chamber Cover**  
Interior cover has pressure-plate springs for accurate film alignment.



**Back Cover Connector**  
Plastic strap keeps back cover attached to camera body.

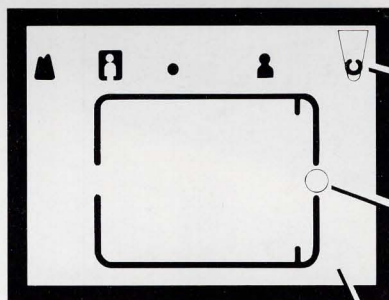
**O-Ring**  
Gasket must be clean and dry to keep camera water-tight.

**Back Cover**  
Has transparent windows for film identification and flash-ready signal.



**Back Cover Release Knob**  
Lift locking tabs and turn knobs on both sides to open water-tight back cover to load film or change battery.

**Strap Eyelets**  
Buoyant wriststrap or accessory neckstrap attaches here for carrying camera.



**Focus Setting Symbols**  
Rapid, eye-level focus setting has five positions for easy, accurate operation.

**Low Light/Use Flash/Flash Ready Signal**  
When shutter release is partially depressed, lamp lights to indicate low light/use flash; pulsates when flash unit is fully charged.

**Viewfinder**  
Shows clear, bright view of subject; bright frame lines with parallax correction marks.

**Shutter**  
Metal-blade, mechanical shutter provides exposures at a fast 1/200 second (not shown).

**Size:**  
1½ x 2 13/16 x 7½ in.  
(38 x 72 x 190mm)

**Weight:**  
12½ oz. (355g) without battery

## Weathermatic-A Accessories

### Sportsfinder-A

This accessory attaches easily to the camera as an aid in fast framing without the need to look through the viewfinder. Permits accurate composition even when wearing a diving mask or ski goggles.

**Wrist Strap**  
(Supplied with camera)

**Neck Strap**  
**Sportscase With Belt**  
**Carrying Case**





# Minolta Pocket Autopak® 470

Automatic electronic exposure control, built-in close-up lens and action-freezing electronic flash unit are just a few features of this compact 110 camera.

## Focus Setting Symbols and Indicator

Rapid, eye-level focus setting has five positions for easy, accurate operation.

## Low Light/Use Flash/Battery Check Signal

With shutter release partly depressed, lamp glows red steadily to indicate low light/use flash. Depressing battery check button will also cause lamp to glow when there is sufficient battery power to operate camera.

## Close-Up Signal

Red flag pops into view when close-up lens is in position.

## Bright Frame Lines

Outline picture area at normal distances; parallax correction marks indicate composition for close-up photography at 1.6 feet shifts to correct parallax when close-up lens is in position.

## Viewfinder

Shows clear, bright view of subject, and all information needed for photography.

## Electronic Shutter

Has metal blades that provide electronic stepless speeds from 1/1000th to 2 seconds (not shown).

## Soft Shutter Release

Light touch trips shutter, locks when lens cover is in place.

## Cable Release Socket

Threaded for standard cable release.

## Neck Cord Lug

Neck cord clips on for carrying or measuring close-up distance. Cord (not shown) is proper length for accurate measurement.

## Focus Slide

Allows fingertip focus setting as close as 3 ft. in normal range, and to 1.6 ft. with built-in close-up lens.



## Film Advance

Thumb-operated slide provides a quick, smooth, one-stroke film advance.

## CdS Meter Window

Measures light for programmed EE exposure control from EV2.6 to EV16.3 with ASA 64 to ASA 400 at automatically changed apertures of f/3.5 and f/9.

## Close-Up Lens Slide Tab

Positions built-in close-up lens for photography at 1.6 ft. Viewfinder signal indicates that the camera is in close-up mode. Camera's neck cord (not shown) is proper length for measuring shooting distance.

## Battery Check Button

Activates red lamp inside of viewfinder to indicate batteries are o.k.

## Pocket Flash 110 Electronic Flash

Compact unit clips on to camera's hot shoe (not shown) and automatically synchs with camera at 1/100 second. Provides up to 120 daylight-quality flashes with one AA-size AM battery. Also included on this diminutive unit are an on-off switch, glowing flash ready signal and a hot shoe lock to prevent the flash from accidentally disengaging from the camera. (Not shown).

## Lens Cover Slide

Moves protective cover over lens, masks viewfinder and locks shutter release to prevent accidental exposure.

## Rokkor Lens

High-quality 26mm f/3.5 lens for sharp pictures in dim or bright light.

## Flashmatic

Focusing camera sets lens aperture for correct flash exposure (not shown).

## Tripod Socket

Threaded to accept tripod mounting screw (not shown).



# Minolta Pocket Autopak® 460TX

A 110-format cartridge-loading camera with built-in telephoto lens, electronic flash and audible/visible low-light exposure warning.

## Shutter

Metal blade, mechanical shutter provides exposures at a fast 1/200 second (not shown).

## Low Light/Use Flash/ Flash Ready Signal

When shutter release is partially depressed, lamp glows red steadily to indicate low light/use flash warning. Simultaneously, an audible tone can be heard as an additional warning signal. When flash is used, lamp pulsates to indicate the unit is ready to fire.

## Bright Frame Lines

Outline picture area at normal and telephoto viewing; bright frame with parallax-correction marks.

## Viewfinder

Oversize type, shows clear, bright view of subject. Magnification changes when telephoto lens is in place.

## Soft Shutter Release

Light touch trips shutter; locks when built-in lens cover slide is in place and when lens is not properly positioned or film properly advanced.

## Neck Cord Lug

Neck strap attaches for easy carrying.

## Film Advance

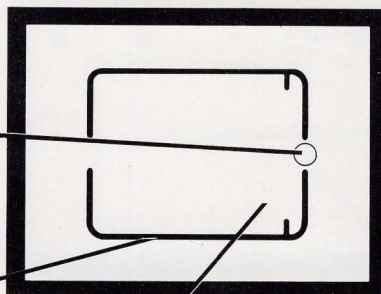
Thumb-activated slide that advances film quickly with a single short stroke. Positive stop for accurate film advance.

## Telephoto Lens Selector Tab

Sliding tab from "normal" to "telephoto" positions high-quality 43mm tele Rokkor lens; finder magnification is also changed automatically for proper viewing.

## Flashmatic

Focusing camera adjusts lens aperture automatically for proper flash exposures with either lens (not shown).



## Illuminated Distance Scale

Distance scale lights when electronic flash is in use.

## Focus Slide

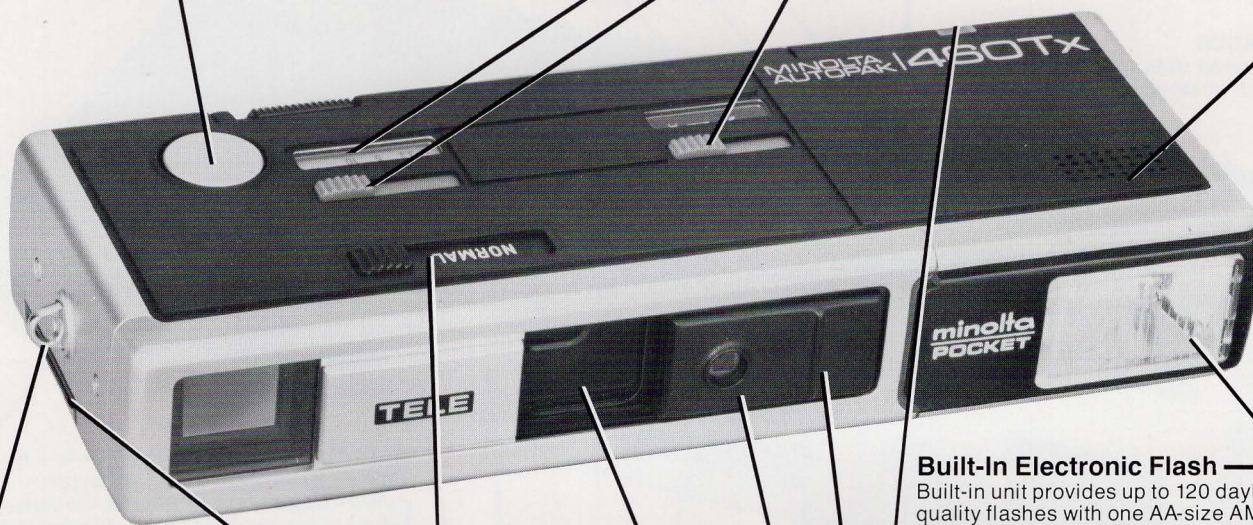
Permits fingertip focus setting from 3.3 ft. to infinity by continuous slide control with distance scale in feet and meters for use with both normal and telephoto lenses.

## Lens Aperture Control

Three-position click-stop slide for bright, outdoor light (normal lens: f/8; telephoto lens: f/13.2) or cloudy or indoor light (normal lens: f/3.5; telephoto lens f/4.7), or flash.

## Audio Exposure Warning

Electronic tone signals as a low-light warning in conjunction with the visible red signal lamp in the camera's viewfinder.



## Built-In Electronic Flash

Built-in unit provides up to 120 daylight-quality flashes with one AA-size AM battery. Action-stopping 1/5000 second flash duration; ready light in viewfinder. Unit pops out and turns on automatically when lens aperture control is set at flash-symbol.

## Flash Ready Signal

External monitor lamp pulsates when flash is fully recycled (approximate 10 second recycling time).

## Lens Cover Slide

Built-in slide moves protective cover over lens and locks shutter release to prevent accidental exposure.

## CdS Meter Window

Measures light from scene to determine whether camera setting is adequate for proper exposure or if flash is needed.

## Rokkor Lens

High-quality all optical glass 26mm f/3.5 lens at normal setting; 43mm f/4.7 lens at telephoto setting for sharp pictures.



# Minolta Pocket Autopak® 450EX

Cartridge-loading pocket camera with built-in electronic flash, close-up lens and audible/visible low-light exposure warning.

## Focus Setting Symbols and Indicator

Rapid, eye-level focus setting has five positions for easy, accurate operation.

## Low Light/Use Flash/Flash Ready Signal

When shutter release is partially depressed, lamp glows red steadily to indicate low light/use flash warning. Simultaneously, an audible tone can be heard as an additional warning signal. When flash is used, lamp pulsates to indicate the unit is ready to fire.

## Close-Up Signal

Red flag pops into view when close-up lens is in position.

## Bright Frame Lines

Outline picture area at normal distances; parallax correction marks indicate composition for close subjects; frame lines shift to correct parallax in close-up photography at 1.6 ft.

## Soft Shutter Release

Light touch trips shutter; locks when lens cover is in place.

## Film Advance

Thumb-operated slide with positive stop for accurate film advance.

## Neck Cord Lug

Neck cord clips on for carrying or measuring close-up distance. Cord (not shown) is proper length for accurate measurement.

## CdS Meter Window

Measures light from scene to determine whether light is adequate for proper exposure or flash is needed.

## Close-Up Lens Slide Tab

Positions built-in close-up lens for photography at 1.6 ft. Viewfinder signal indicates that camera is in close-up mode. Camera's neck cord (not shown) is proper length for measuring shooting distance.

## Shutter

Mechanical shutter provides exposures at a fast 1/200 second (not shown).

## Viewfinder

Shows clear, bright view of subject, and all information needed for photography.

## Illuminated Distance Scale

Distance scale lights when electronic flash is in use.

## Focus Slide

Allows fingertip focus setting as close as 3 ft. in normal range, and to 1.6 ft. with built-in close-up lens.

## Audio Exposure Warning

Electronic tone signals as a low-light warning in conjunction with the visible red signal lamp in the camera's viewfinder.

## Lens Aperture Control

Fingertip setting for bright outdoor light (f/8) or cloudy or indoor light (f/3.5) or flash.

## Built-In Electronic Flash

Built-in unit provides up to 120 daylight-quality flashes with one AA-size AM battery. Action-stopping 1/5000 second flash duration, ready light. Unit pops out and turns on when camera is set for flash. Eliminates the need for expensive, disposable flashbulbs.

## Flash Ready Signal

External signal pulsates when flash unit is fully recycled for use.

## Lens Cover Slide

Moves protective cover over lens, masks viewfinder and locks shutter release to prevent accidental exposure.

## Rokkor Lens

High-quality 26mm f/3.5 lens for sharp pictures in dim or bright light.

## Flashmatic

Focusing camera sets lens aperture for correct flash exposure (not shown).



# Minolta Pocket Autopak® 430EX

Built-in electronic flash for stop-action indoor pictures. Adjustable focus. Audible/visible low-light exposure warning signal.

## Viewfinder

Shows clear, bright view of subject, plus useful warning signals.

## Low Light/Use Flash/ Flash Ready Signal

When shutter release is partially depressed, lamp glows red steadily to indicate low light/use flash warning. Simultaneously, an audible tone can be heard as an additional warning signal. When flash is used, lamp pulsates to indicate the unit is ready to fire.

## Soft Shutter Release

Light touch trips shutter; locks when lens cover is in place.

## Audio Exposure Warning

Electronic tone signals as a low-light warning in conjunction with the visible red signal lamp in the camera's viewfinder.

## Wrist Strap Lug

Wrist strap clips on for easy carrying.

## Film Advance

Thumb-operated slide with positive stop for accurate film advance.

## CdS Meter Window

Measures light from scene to determine whether light is adequate for proper exposure or flash is needed.

## Rokkor Lens

Sharp 26mm f/5.6 lens for brilliant prints or slides.

## Illuminated Distance Scale

Distance scale lights when electronic flash is in use.

## Focus Slide

Fingertip, three-zone focus setting for nearby, mid-range and distant subjects.

## Lens Aperture Control

Fingertip setting for outdoor or flash photography.

## Flash Ready Signal

External signal pulsates when flash unit is fully recycled for use.

## Built-In Electronic Flash

Provides up to 120 daylight-quality flashes with one AA-size AM battery. Action-stopping 1/5000 second flash duration, ready light. Unit pops out and turns on when camera is set for flash. Eliminates the need for expensive, disposable flashbulbs.

## Lens Cover Slide

Moves protective cover over lens, masks viewfinder and locks shutter release to prevent accidental exposure.

## Shutter

Mechanical shutter provides exposures at a fast 1/200 second (not shown).

NOTE: Specifications subject to change without notice.  
See page L2 for additional information.



# Minolta Hi-matic 35mm Cameras



**Minolta Hi-matics** are economical cameras designed to produce high-quality 35mm slides and prints. Outdoors, the Hi-matics automatically read the light level and set the proper exposure. Indoors, flash photography is made simple with Minolta's "Flash-matic" system. Yet, with a host of exciting and even revolutionary features, the Minolta Hi-matic cameras remain compact and lightweight.

All Hi-matics feature a high-quality 38mm lens and programmed auto exposure for optimum combinations of shutter speeds and f/stops to stop action and maintain depth-of-field.

**The Hi-matic AF2 offers auto focus, auto exposure and auto flash.** LED's and audible tones warn the user when to use the built-in, pop-up flash, when the subject is outside the flash range and when the subject is too close to focus. And Minolta's specially-designed infrared focusing module enables the camera to focus auto-

matically even in extremely low-light conditions.

The AF2 features an easy film loading system and safe-load signal, both of which ensure that the film is advancing properly through the camera. In addition, an auto focus lock permits the user to focus on a subject and then position it anywhere within the frame for a more pleasing composition. The AF2 will hold this focus, or it can even be cancelled without taking the picture.

The Minolta Hi-matic AF2 is, quite simply, the most foolproof 35mm camera ever made.

**The economical Hi-matic S2 offers auto exposure and pop-up flash.** A "beep" and LED signal warn the user when to use the built-in, electronic flash. And, when the flash is activated, the focusing ring lights up for easy reading in dim light. The S2 also has a new, easy film-loading system and a safe-load signal.

Lightweight and compact, the S2 fea-

tures a bright viewfinder with parallax correction frame lines and a zone-focus symbol scale, which allow the user to focus on the action while composing a scene in the viewfinder.

**Minolta's Hi-matic G2 offers automatic exposure and easy zone focusing.** The photographer simply sets the focusing ring to the symbol which best corresponds to the camera-to-subject distance. The camera takes care of everything else--the electronic eye measures the brightness of a scene and automatically sets the correct exposure.

The Hi-matic G2's full frame viewfinder makes it easy to compose a scene. In addition, a low light signal warns the user if there is not enough light for proper exposure.

The Minolta Hi-matic cameras take the guesswork out of photography without compromising on quality.



# Minolta Hi-matic AF2

The world's most foolproof automatic focusing, 35mm camera offers automatic exposure, built-in electronic flash and an exclusive audible/visible warning system.

## Electronic Flash

Built-in, pop-up electronic flash. Recycling time is 5 to 7 seconds; up to 250 flashes with 2-1.5V AA alkaline batteries. Flash exposure is controlled by "Flashmatic" system, which adjusts the lens aperture as the camera automatically focuses. Shutter release locks until flash is fully recycled. Viewfinder zone-focus LED blinks and audible warning sounds when camera is focused beyond flash range.

## Viewfinder Window

Bright optical viewfinder with framing lines for quick, accurate composing at normal and close distances.

## Audible Warning Signal

Audible tone sounds in conjunction with viewfinder warning lamps to indicate low-light/use flash, close-focus warning, or subject is beyond flash range.

## Minolta Auto-Focus Module

Minolta-designed auto-focus system has infrared beam for accurate focusing even in dim light.

## Film-Speed Window

Shows ASA film-speed setting.

## ASA Setting Ring

Sets film speed from ASA 25 to ASA 400 in 1/3 stop increments.

## High-Quality Minolta Lens

Sharp, semi-wide-angle 38mm f/2.8 Rokkor lens has 59° field of view; focuses down to 3.3 feet; 46mm filter thread diameter.

## Self-Timer Lever

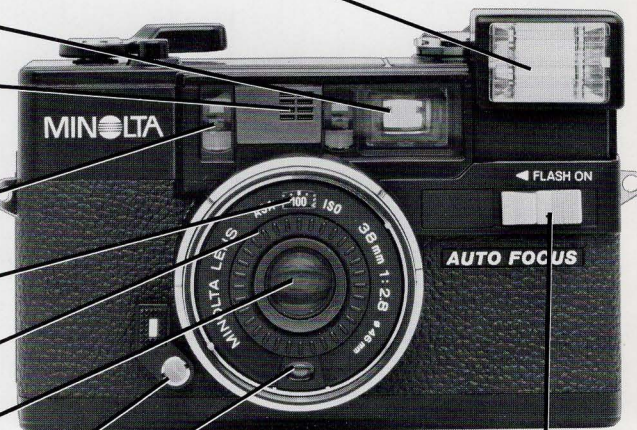
Mechanical timer releases shutter after approximately 10-second delay.

## CdS Cell

Measures the available light for accurate automatic exposures; compensates for filters.

## Flash-On Switch

Horizontal switch releases the recessed electronic flash unit to its flash-ready position and activates the flash power circuit.



## Shutter Release/Focus Lock Button

Press shutter release part way down to check for warning signals; press all the way down to trigger shutter. Activates auto-focus and auto-exposure circuits. Locks when flash unit is not fully charged and when battery power is insufficient for proper camera function. Lock focus position by holding button halfway down. Lock can be cancelled by releasing button.

## Film Rewind

Unfold crank to rewind film, pull up knob to open camera back.

## Frame Counter

Additive, auto-reset counter shows number of frames exposed.

## Film Advance Lever

Advances film in single 140° stroke after 30° standoff.



NOTE: Specifications subject to change without notice.  
See page L6 for additional information.



# Minolta Hi-matic AF2

## Bright Frame Lines

Accurately outline picture area at normal shooting distances; parallax correction marks show proper framing at close-focus range (3.3 feet).

## Flash-Ready Light

Flash-ready signal appears in eyepiece.

## Auto-Focus Zone

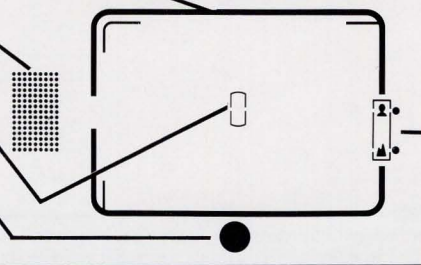
Central frame lines indicate focus area.

## LED Warning Signal

When shutter release is partially depressed, lamp glows steadily to indicate low-light/use flash warning.

## Zone-Focus Symbols

LED indicators next to zone-focus symbols light as lens is automatically focused and when focus lock is engaged for verification of subject distance. Top LED blinks for close-focus warning, bottom LED blinks to warn user shot is beyond flash range.



## Flash-Ready Light

Eyepiece LED lights when flash is fully recycled.

## Finder

Shows frame lines, auto focusing zone area, zone focusing symbols, warning lamps and blinking flash-ready signal. Accepts eyepiece correction lenses.

## Safe-Load Signal

Shows that camera is loaded and that film is advancing properly.

## Easy Film-Loading System

Place film leader in take-up spool, close back and advance film wind lever continuously until it stops and number 1 appears in frame counter window. (Not shown.)

## Electronically Controlled Shutter

Behind-the-lens programmed electronic shutter for fully automatic exposure control. Shutter speeds range from 1/8 to 1/430 second. (Not shown.)



## Battery Chamber

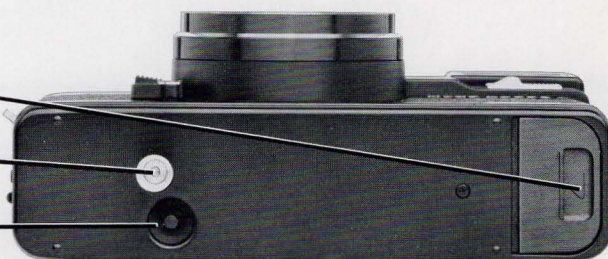
Holds 2-1.5V AA size penlight batteries to power camera and flash unit.

## Tripod Socket

Threaded for standard tripod mounting screws.

## Film-Release Button

Push in to disengage film-transport mechanism for rewinding film.



**Size:** 5 1/8 x 3 x 2 1/8 in. (130 x 76 x 54mm)

**Weight:** 11 13/16 (335g) without batteries



# Minolta Hi-matic S2

Automatic 35mm camera with  
built-in electronic flash and audible/visible warning systems.

## Electronic Flash

Built-in, pop-up electronic flash, shown in flash-ready position, has recycling time of 5 to 7 seconds. "Flashmatic" system adjusts lens aperture as the camera is focused. Audible and visible warning signals if camera is focused beyond flash range.

## Audible Warning Signal

Press shutter release part way to check for warning signals. Audible tone sounds for low-light/use flash warning or if camera is focused beyond flash range.

## Viewfinder Window

Bright optical viewfinder for quick, accurate composing.

## Film Speed Window

Shows ASA film speed setting.

## ASA Setting Ring

Sets film speeds from ASA 25 to ASA 400 in 1/3 stop increments.

## High-Quality Minolta Lens

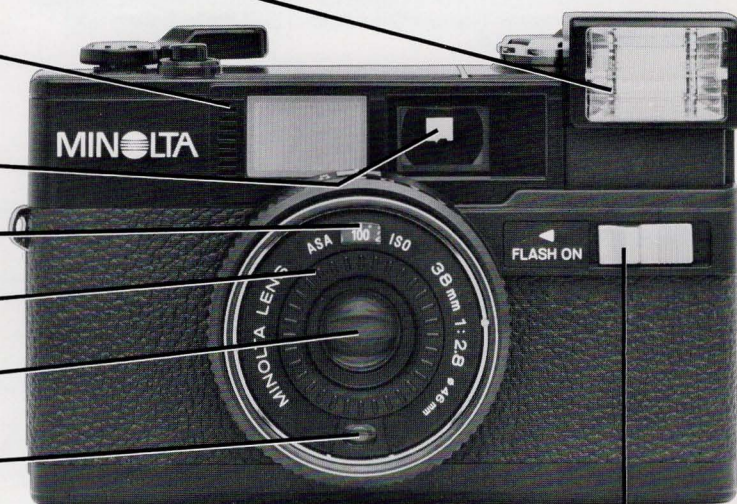
Sharp, semi-wide-angle 38mm f/2.8 Rokkor lens has 59° field of view; focuses down to 2.6 ft.; 46mm filter thread diameter.

## CdS Cell

Accurate automatic exposure control; compensates for filters.

## Flash On Switch

Horizontal switch releases recessed electronic flash unit to its flash-ready position and activates the flash power circuit.



## Illuminated Focusing Ring

Lights when flash is in use for easy setting even in dim light.

## Frame Counter

Additive, auto-reset counter shows number of frames exposed.

## Shutter Release Button

Press part way to check for audible and visible warning signals, press all the way down to trigger shutter. Shutter release locks at low voltage.

## Rewind Crank/Back Release

Unfolds to rewind film. Pull up to open camera back.

## Film Advance Lever

Winds film in a single 140° stroke after a 30° standoff.



NOTE: Specifications subject to change without notice.  
See page L6 for additional information.



# Minolta Hi-matic S2

## Bright Frame Lines

Accurately outline picture area at normal distances; parallax correction marks show proper framing for subjects closer than 3.3 feet.

## Flash-Ready Light

Flash-ready signal appears in eyepiece.

## Zone-Focus Symbol Scale

Turning lens focusing ring sets the needle indicator to one of the five distance symbols to assure sharp pictures from 2.6 feet to infinity.

## Flash-Range Warning LED

LED below zone-focus symbol scale blinks if lens is set to focus beyond flash range. Audible tone also sounds as warning signal.

## Flash-Ready Lamp

Lights when flash is fully recycled.

## Finder Eyepiece

Shows frame lines, zone-focusing scale. Accepts eyepiece correction lenses.

## Low-Light/Use Flash Signal

Viewfinder LED indicates low-light/use flash. Audible tone sounds simultaneously as an additional warning signal.

## Safe-Load Signal

Shows that camera is loaded and that film is advancing properly.

## Electronically Controlled Shutter

Behind-the-lens programmed electronic shutter for automatic exposure control with a speed range of  $\frac{1}{8}$  to  $\frac{1}{430}$  second. (Not shown.)

## Easy Film-Loading System

Place film leader in take-up spool, close back and advance film wind lever continuously until it stops and number 1 appears in frame counter window. (Not shown.)

## Battery Chamber

Holds 2-AA penlight batteries to power camera and flash unit.

## Tripod Socket

Threaded for standard tripod mounting screws.

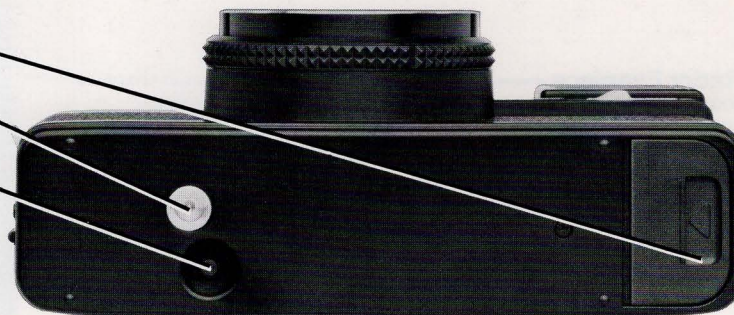
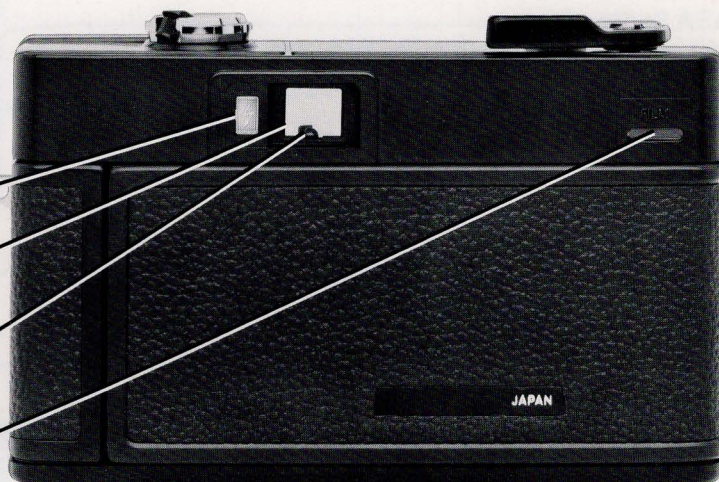
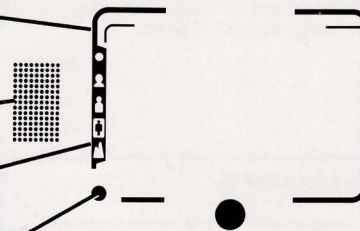
## Film Release Button

Push in to disengage film transport mechanism for rewinding film.

**Size:**  $5\frac{1}{8} \times 3 \times 2\frac{1}{8}$  in.

(130 x 76 x 54mm)

**Weight:**  $10\frac{15}{16}$  oz. (310g) without batteries





# Minolta Hi-matic G2

Minolta's most economical full-frame 35mm camera with automatic exposure control.

## Bright Frame Lines

Accurately outline picture area at normal distances; parallax correction marks show proper framing for subjects at 3.3 ft.

## Aperture Scale

Needle indicates automatically set aperture. Red area below scale represents underexposure warning, indicating need for flash. If needle fails to leave lower red zone in bright light, meter battery is dead.

## Viewfinder Window

Bright optical viewfinder for quick, accurate composing.

## CdS Cell

Accurate automatic exposure control; compensates for filters.

## High-Quality Minolta Lens

Sharp, semi-wide-angle 38mm f/2.8 Rokkor lens has 59° field of view; focuses down to 3.3 ft.; 46mm filter thread diameter.

## ASA Setting Ring

Sets film speeds from ASA 25 to ASA 400 in 1/3 stop increments.

## Film Speed Window

Shows ASA film speed setting.

## Focusing Ring

Set appropriate focus symbol to index line to assure sharp pictures from 3.3 ft. to infinity. Foot/meter scale is on focusing ring.

## Guide Number Index Ring

Set to proper film/flash guide number for flash photography.

## Shutter Release Button

Threaded for standard cable release.

## Frame Counter

Additive, auto-reset counter shows number of frames exposed.

## Hot Shoe

Wired for synch with cordless flash units.

## Rewind Crank/Back Release

Crank unfolds to rewind film, pulls up to open back.

## Finder Eyepiece

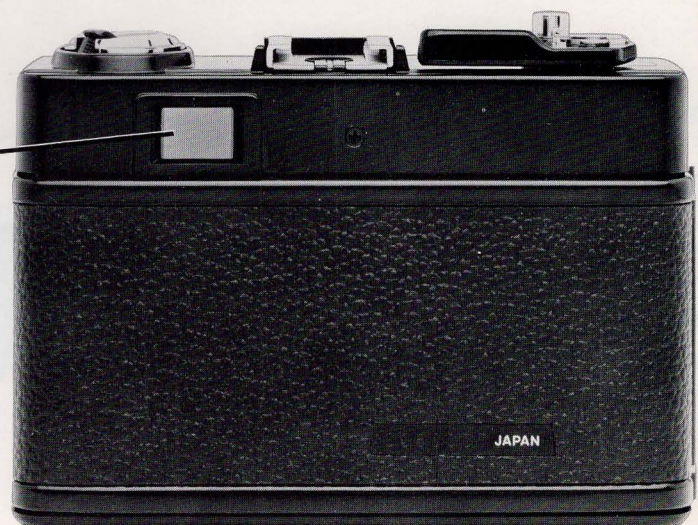
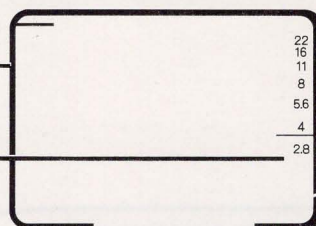
Shows frame lines, aperture scale, underexposure and overexposure warning zones.

## Shutter

Programmed for auto-exposure from 1/60 second at f/2.8 to 1/250 second at f/22. Flash synch at 1/25 second. (Not shown.)

**Size:** 4 7/16 x 2 7/8 x 2 1/8 in.  
(113 x 73 x 54mm)

**Weight:** 10 oz. (285g) without batteries



NOTE: Specifications subject to change without notice.  
See page L6 for additional information.



# Minolta Color Enlarger II

High-quality, compact unit for making enlargements from 110-format through 6 x 7cm-format films.

## Filtration Windows

Illuminated, color-coded filtration windows display density scale in increments of 1 CC.

## Lamphouse

Diffusion type light source minimizes the effects of dust and scratches on negatives. The 150 watt halogen lamp provides constant brightness and color temperature. Reflex-type illumination system with heat-absorbing infrared filter keeps film cool. Fanless, convection-type cooling ensures silent, vibration-free operation.

## Colorhead

Houses continuously variable cyan, magenta and yellow dichroic filters. Critical alignment of optical components, enlarger colorhead and magnification column are factory-calibrated. Unitized construction for ruggedness assures stability.

## Magnification Control

Allows one-hand operation. Depressing the oversized magnification control frees the counter-balanced carriage for effortless travel to any height on the column. The carriage locks when the control is released.

## Calibrated Column

A luminous elevation scale calibrated in centimeters plus magnification settings for 50mm and 80mm lenses permits positioning enlarger head at the desired image size for exposing enlargements or contact prints. Column can be reversed for oversized enlargements.

## Baseboard

Strong, non-warping construction with wipe-clean, stain-resistant, moisture-sealed finish. Prints as large as 16 x 20 inches can be made directly on baseboard.

## Filter Dials

Large, knurled filter dials are simple and fast to use. Stepless, dial-in cyan and magenta filtrations up to CC 150; yellow up to CC 200.

## Negative Carrier

Raise the handle for fast, easy loading or positioning of negative. Nine film carriers available including glass negative carriers for 6 x 7cm, 6 x 6cm and 35mm; glassless negative carriers for 6 x 7cm, 6 x 6cm, 6 x 4.5cm, 35mm and 110/16mm; 2 x 2 in. mounted slide carrier.

## Lens Mounting Disk

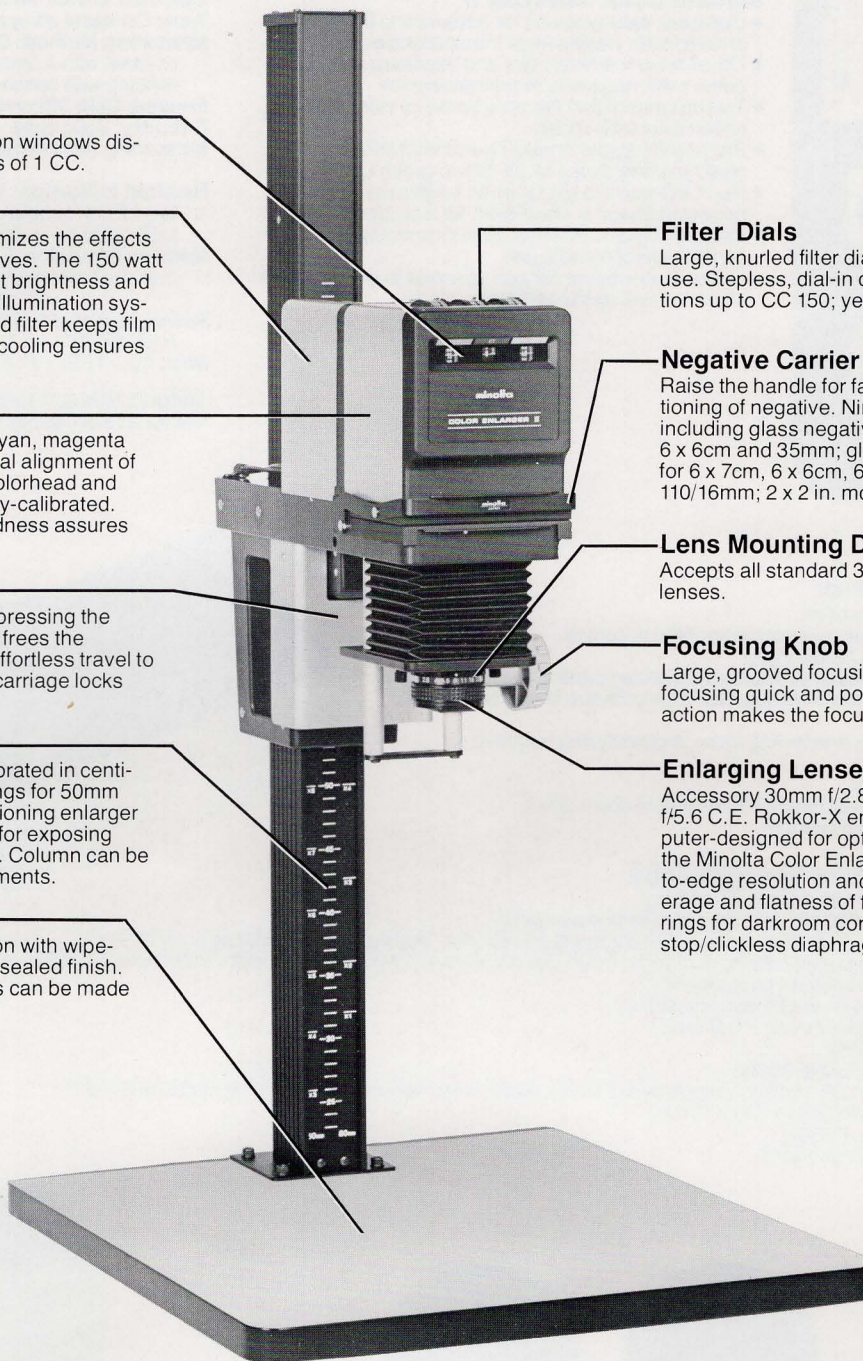
Accepts all standard 39mm Leica screw thread lenses.

## Focusing Knob

Large, grooved focusing knob makes pinpoint focusing quick and positive. Friction roller action makes the focusing extra-smooth.

## Enlarging Lenses

Accessory 30mm f/2.8, 50mm f/2.8 and 80mm f/5.6 C.E. Rokkor-X enlarging lenses are computer-designed for optimum performance with the Minolta Color Enlarger II. All provide edge-to-edge resolution and contrast, even coverage and flatness of field; illuminated f/stop rings for darkroom convenience and click-stop/clickless diaphragm settings.



## Minolta Color Enlarger II Specifications

**Type:** Diffusion type enlarger with continuous filtration for cyan, magenta and yellow

**Light Source:** 120V, 150W ESD Halogen lamp

**Power Source:** 117V, 60Hz, 150W

**Filtration Range:** Yellow: continuous CC 0-200 units  
Cyan and magenta: continuous CC 0-150 units

**Lens Mount:** Standard 39mm Leica thread

**Negative Sizes:** 110/16mm, 35mm, 6 x 4.5cm, 6 x 6cm, 6 x 7cm

### Magnifications on Baseboard:

30mm lens: up to 27.8X

50mm lens: up to 13.3X

80mm lens: up to 6.8X

(Enlarger column can be reversed for greater magnifications)

**Dimensions:** Baseboard: 18 $\frac{7}{8}$  x 21 $\frac{1}{4}$  in. (48 x 54cm)  
Column: 35 $\frac{7}{16}$  in. (90cm)

**Weight:** 26 lb. 14 oz. (12.2kg)

**Accessories** (included with unit): lamp, glassless 35mm negative carrier

### Optional Accessories:

Lenses: 30mm f/2.8, 50mm f/2.8 and 80mm f/5.6 C.E. Rokkor-X

Glassless Carriers: 6 x 7cm, 6 x 6cm, 6 x 4.5cm, 35mm, 110/16mm

Glass Carriers: 6 x 7cm, 6 x 6cm, 35mm

Mounted Transparency Carrier: 2 x 2 in. slides

Minolta Color Analyzer II

Minolta Digital Timer

Minolta Stabilizer II



# Minolta Color Enlarger II Accessories



## Minolta Color Analyzer II

- Compact, spot-type unit for determining filtration for printing color negatives or transparencies.
- On-easel unit makes color and exposure analysis of either color negatives or transparencies.
- Two programmable memory banks to store color analysis for later recall.
- Programming and analyzing accomplished by matching brightness levels of two green LEDs.
- Red LED warning signal when brightness of the projected image is insufficient for a proper reading.
- Color and exposure determinations made by sensitive silicon photo cell.
- Optional accessory diffuser attaches to enlarger lens stage for averaged readings.

## Minolta Color Analyzer II Specifications

**Type:** On-easel analyzer for spot or average analysis  
**Measuring Method:** Spot-type color and exposure at easel with 4.5mm aperture sensing cell; average reading with optional integrating diffuser attachment.  
**Sensing Cell:** Silicon photo cell  
**Circuitry:** Solid state  
**Measuring Accuracy:** Color balance:  $\pm 5CC$ ; Exposure:  $\pm 0.3 EV$   
**Readout Indication:** Equalization of light output of two LED's for both color balance and exposure; red LED lights as under-range warning indicator  
**Memory Provision:** Color: Two programmable channels with memories for yellow and magenta; Exposure: Calibrated scale  
**Power Supply:** 9V Battery (Eveready 216 or equivalent)  
**Size:**  $2\frac{1}{16} \times 3\frac{1}{8} \times 7\frac{1}{16}$  in. (52 x 80 x 180mm)  
**Weight:** 15 $\frac{7}{8}$  oz. (450g) without battery  
**Optional Accessory:** Integrating Diffuser II

## Minolta Digital Timer

- Solid-state electronic timer.
- LED digital display has adjustable brightness control.
- Timing range from 0.1 to 999 sec.
- Convenient HOLD button facilitates specialized printing techniques by enabling the user to instantly stop and then continue timing at any point during the interval.
- Print/focus switch for previewing focus and analyzing negative or timing exposure.
- Accuracy:  $\pm 0.03$  sec.
- Buzzer (with on/off switch) signals the end of count down.
- Optional accessory footswitch.



## Minolta Digital Timer Specifications

**Type:** Electronic timer with digital LED display  
**Timing Range:** 0.1 to 999 sec. in 2 ranges changed by switch  
**Controls:** Timing: 3 click-stop knobs to set timing intervals with "X1" setting for 0.1 to 99.9 sec.; "X10" for 1 to 999 sec. Other: Cycle-start button; print/focus switch for respective timed/uninterrupted current flow to appliance cycle; HOLD button to interrupt timing cycle.  
**Display:** LED figures with brightness adjustment.  
**Accuracy:** Line-frequency error  $\pm 0.03$  sec.  
**Input Power:** 117V, 60 Hz  
**Maximum Appliance Load:** 300W  
**Other:** Buzzer (with on/off switch) to signal end of timing cycle, footswitch outlet, fuse, grounded power cord  
**Size:**  $7\frac{11}{16} \times 5\frac{1}{8} \times 2\frac{3}{4}$  in. (195 x 130 x 70mm)  
**Weight:** 3 lb. 6 $\frac{11}{16}$  oz. (1550g)  
**Optional Accessory:** Footswitch



## Minolta C.E. Rokkor-X Enlarging Lenses

- Coated optics, rare earth glass and computer lens design assure superb color correction and sharpness.
- All deliver high resolution and contrast with freedom from distortion along with extremely flat field projection.
- Internally illuminated f/stop with click-stop or clickless aperture ring.
- Standard 39mm Leica screw mount assures the widest enlarger compatibility.
- See Page C-13 for additional information.



## Minolta Stabilizer II

Provides consistent voltage output for constant color balance even with fluctuation in voltage source.

## Specifications

**Type:** Voltage stabilizer for exclusive use with Minolta Color Enlarger II  
**Input:** 105 to 129V, 60Hz (cycle) alternating current  
**Output:** 117V ( $\pm 3V$ ) 1.25A  
**Size:**  $4\frac{3}{4} \times 4\frac{3}{4} \times 4\frac{1}{3}$  in. (120 x 120 x 110mm)  
**Weight:** 7 $\frac{1}{2}$  lbs. (2550g)



# Minolta Binoculars



**Minolta binoculars** are manufactured with the same dedication to optical quality that has long been associated with Minolta lenses. Each Compact, Pocket and Mariner model delivers distortion-free images that were at one time only possible with binoculars many times their size.

Minolta binoculars can magnify a subject from 6 to 12 times. 10 x 40 binoculars, for example, magnify the image 10 times. This is indicated by the number before the "X" in the model designation.

The number immediately after the "X" represents the diameter, in millimeters, of the front lens. These two numbers are used to calculate the brightness index of binoculars. The brightness index is the amount of relative light which reaches the eye—necessary information when purchasing binoculars.

All Minolta binoculars feature large front lenses and exit pupils for maximum brightness and clarity.

Minolta binoculars are designed to adjust and focus quickly and smoothly, yet stay in

their set position—time after time with no binding or loosening.

Adjustable eyepieces allow precise eyepiece correction from +4 to -4 diopters for those who don't like to wear eyeglasses when using binoculars. In addition, removable and foldable rubber eyecups help keep outside glare to a minimum.

Each model has a large, easy-to-reach knob for fast, fingertip focusing. And, all models are equipped with convenient carrying cases.

**Minolta's Mariner binoculars** are carefully crafted to weather the roughest conditions. They use O-ring seals that eliminate any chance of fogging and which protect the inner mechanisms from bad weather. Mariner binoculars are available in 8x32 and 10x40 models.

The roof prisms and lenses in the Minolta Mariner binoculars, as well as the Compact and Pocket models, have an anti-reflective coating to improve visibility and illumination.

**Minolta Pocket binoculars**, available in

five magnifications, feature a special roof prism which offers high performance in a small package. With the 6-12x24 Pocket Zoom binoculars, it is possible to change magnification quickly and track moving objects with ease. The lens barrels are perfectly aligned for comfortable viewing, and are sealed with a moisture-resistant compound which allows these powerful binoculars to withstand years of use.

**The Minolta Compact binoculars** utilize precisely aligned, high-quality lenses and prisms to give the user the advantages of large binoculars in a lightweight, easy-to-tote package.

Minolta Compact binoculars feature a special roof prism design that improves image brightness by 15 percent over conventional prisms.

Minolta Pocket, Compact, and Mariner binoculars offer unsurpassed performance and precision in all lighting situations.



# Minolta Mariner Binoculars

**Rugged and water-resistant with powerful magnification for all outdoor activities.**

- Minolta Mariner Binoculars contain the latest optical design in a rugged, water-resistant housing.
- Roof-prism construction makes these Mariner models smaller and lighter than porro-prism binoculars of comparable magnification, so they are easily portable for outdoor use.
- High-resolution optics and precise alignment afford comfortable viewing without eyestrain.
- The die-cast body, internal focusing system, and sealed exit pupils protect against damage by moisture or dust.
- Fast central focusing permits zeroing in on moving subjects and a diopter-compensation dial allows for adjusting the Mariner binoculars for the user's individual eyesight.
- Both models feature rubber eyecups for comfortable viewing.



## Minolta Mariner Binocular Specifications

Binocular Model	8 x 32	10 x 40
Magnification	8X	10X
Objective Diameter	32mm	40mm
Angle of View	7°	5.6°
Field at 1000 Yards	394 ft.	328 ft.
Exit Pupil Diameter	4.0mm	4.0mm
Brightness Index	16.0	16.0
Weight	18 <sup>5</sup> / <sub>16</sub> oz.	22 <sup>9</sup> / <sub>16</sub> oz.
Length (Including Eyecups)	5 in.	6 <sup>1</sup> / <sub>8</sub> in.
Width (Folded)	4 <sup>9</sup> / <sub>16</sub> in.	4 <sup>7</sup> / <sub>8</sub> in.
Depth (Folded)	1 <sup>1</sup> / <sub>2</sub> in.	1 <sup>15</sup> / <sub>16</sub> in.



# Minolta Compact Binoculars

**Small, lightweight binoculars with large binocular performance.**

Minolta compact binoculars deliver magnification and performance on a par with full-size binoculars. Ruggedly constructed to withstand rigorous use, they are the ideal choice for backpackers, hunters, birdwatchers or anyone who requires optical excellence without a lot of weight. Special BaK4 reverse prisms increase the image brightness by at least 15% over conventional prisms. Lenses and prisms have an anti-reflection coating for better illumination and visibility. Fast, convenient center focusing takes just one finger to turn the focus knob and reveal a crystal clear image. These binoculars are available in three models—6 x 20, 8 x 20 and 10 x 20—each of which features adjustable, removable rubber eyecups, a convenient carrying cord and a durable protective case.



## Minolta Compact Binocular Specifications

Binocular Model	6x20	8x20	10x20
Magnification	6x	8x	10x
Objective Diameter	20mm	20mm	20mm
Angle of View	7°30'	7°12'	5°48'
Field at 1000 Yards	393 ft.	378 ft.	304 ft.
Exit Pupil Diameter	3.3mm	2.5mm	2.0mm
Brightness Index	10.9	6.3	4
Weight	7 $\frac{3}{4}$ oz.	7 $\frac{3}{4}$ oz.	8 $\frac{3}{4}$ oz.
Length (Including Eyecups)	3 $\frac{5}{8}$ in.	3 $\frac{5}{8}$ in.	4 $\frac{3}{8}$ in.
Width (Folded)	4 in.	4 in.	4 in.
Depth (Folded)	1 $\frac{1}{8}$ in.	1 $\frac{1}{8}$ in.	1 $\frac{1}{8}$ in.

NOTE: Specifications subject to change without notice.

March, 1981

K3



# Minolta Pocket Binoculars

**Ultra small and light full field binoculars that fit in a pocket.**

Remarkably small and light, these binoculars provide powerful magnification with outstanding optical quality. Special BaK4 roof-prism design permits this compact take-anywhere convenience. The high resolution coated optics and barrels are precisely aligned for comfortable viewing without eyestrain or fatigue. The die-cast body and the dust and moisture sealing allows these powerful binoculars to withstand years of use. Fast, easy-to-use center focusing helps you zero-in on moving subjects. With five models to choose from, there is a binocular for everyone's pocket. Each one features folding, removable rubber eyecups, a convenient carrying cord and a protective traveling case.



## Minolta Pocket Binoculars Specifications

Binocular Model	6x16	8x20	8x24w	8x30	6-12x24 Zoom
Magnification	6x	8x	8x	8x	6-12x
Objective Diameter	16mm	20mm	24mm	30mm	24mm
Angle of View	9°5'	7°12'	8°5'	7°	6.9° (6x) 4.4° (12x)
Field at 1000 Yards	498 ft.	378 ft.	450 ft.	367 ft.	340 ft. (6x) 230 ft. (12x)
Exit Pupil Diameter	2.6mm	2.5mm	3.0mm	3.75mm	4.0mm (6x) 2.0mm (12x)
Brightness Index	6.76	6.3	9.0	14.06	16.0 (6x) 4.0 (12x)
Weight	5 oz.	6 oz.	9 oz.	13 <sup>3</sup> / <sub>8</sub> oz.	12 <sup>1</sup> / <sub>8</sub> oz.
Length (Including Eyecups)	3 in.	3 <sup>3</sup> / <sub>4</sub> in.	3 <sup>3</sup> / <sub>8</sub> in.	4 <sup>1</sup> / <sub>2</sub> in.	4 <sup>3</sup> / <sub>8</sub> in.
Width (Folded)	2 <sup>1</sup> / <sub>8</sub> in.	2 <sup>1</sup> / <sub>8</sub> in.	2 <sup>1</sup> / <sub>2</sub> in.	3 in.	2 <sup>1</sup> / <sub>2</sub> in.
Depth (Folded)	1 <sup>1</sup> / <sub>4</sub> in.	1 <sup>1</sup> / <sub>4</sub> in.	1 <sup>1</sup> / <sub>2</sub> in.	1 <sup>1</sup> / <sub>8</sub> in.	1 <sup>1</sup> / <sub>8</sub> in.



# Minolta 35mm SLR Camera Specifications



## XK MOTOR

## XD-11

## XD-5

## XG-M

## XG-1

## SR-T 201

## SR-T 200

<b>Type:</b>	Integral motor-drive, interchangeable-finder/screen-type 35mm SLR with electronic, focal plane shutter.	Compact 35mm SLR with aperture- or shutter-priority automatic or metered/full-manual exposure control.	Compact 35mm SLR with aperture- or shutter-priority automatic or metered/full-manual exposure control.	Compact 35mm SLR with aperture-priority automatic and full metered-manual control.	Compact 35mm SLR with aperture-priority automatic and full manual control.	35mm SLR with through-the-lens, match-needle exposure metering.	35mm SLR with through-the-lens match-needle exposure metering.
<b>Exposure range:</b>	EV 2 to EV 17 for single-frame operation; EV 3 to EV 17 for continuous operation.	EV 1 to EV 18	EV 1 to EV 18	EV 2 to EV 17	EV 2 to EV 17	EV 3 to EV 17	EV 3 to EV 17
<b>Shutter:</b>	Electronically controlled titanium-foil, horizontal-traverse focal-plane type; two mechanically-controlled settings. Electronic speeds: 16 to 1/2000 sec. in steps, 8 to 1/2000 sec. steplessly. Mechanical settings: X (1/100 sec.) and B.	Electronically controlled, vertical-traverse, metal-blade, focal-plane with electromagnetic release. Electronic speeds: 1 to 1/1000 sec. steplessly or steps, or at X (1/100 sec.). Mechanical settings: "0" (1/100 sec.), B.	Electronically controlled, vertical-traverse, metal-blade, focal-plane with electromagnetic release. Electronic speeds: 1 to 1/1000 sec. steplessly or steps, or at X (1/100 sec.). Mechanical settings: "0" (1/100 sec.), B.	Electronically controlled, horizontal-traverse, focal-plane with electromagnetic release. Exposure system automatically prevents shutter release when speed required for proper exposure is over 1/1000 sec. on automatic mode.	Electronically controlled, horizontal-traverse, focal-plane with electromagnetic release. Exposure system automatically prevents shutter release when speed required for proper exposure is over 1/1000 sec. on automatic mode.	Focal-plane shutter with speeds from 1 sec. to 1/1000 sec. plus B, self-timer.	Focal plane shutter with speeds from 1 to 1/1000 sec. plus B.
<b>Film advance:</b>	Motor-driven: single micromotor for single-frame, 1, 2, 3 and 3.5 ("H") fps. Manual: 110° winding angle. Film advance locks when voltage is low. Rewind: motor-driven or manually by crank.	Lever type, single 130° stroke. Motorized film advance with Auto Winder D.	Lever type single 130° stroke. Motorized film advance with Auto Winder D.	Lever type, single 130° stroke. Motorized film advance with Motor Drive 1 or Auto Winder G.	Lever type, single 130° stroke. Motorized film advance with Auto Winder G.	Lever type, single or multiple stroke with 150° winding angle.	Lever type, single or multiple stroke with 150° winding angle.
<b>Metering:</b>	Aperture-priority, automatic electronic and metered manual exposure control with AE-S Finder. Full-aperture through-the-lens center-weighted type by silicon photocell. Film speed range: ASA 12 to 6400. Auto-exposure adjustment up to ± 2EV.	Through-the-lens, center-weighted by silicon photo diode. Film speed range: ASA 12 to 3200. Auto exposure adjustments: up to ± 2EV.	Through-the-lens center-weighted by silicon photo diode. Film speed range: ASA 12 to 3200. Auto exposure adjustments: up to ± 2EV.	Full-aperture, through-the-lens, center-weighted type by two CdS photo cells. Film speed range: ASA 25 to 1600. Auto-exposure adjustment: up to ± 2EV.	Full-aperture, through-the-lens, center-weighted type by two CdS photo cells. Film speed range: ASA 25 to 1600. Auto-exposure adjustment: up to ± 2EV.	Through-the-lens, full-aperture measuring system via CdS photo cell. Film speed range: ASA 6 to 6400.	Through-the-lens full-aperture measuring system via CdS photo cell. Film speed range: ASA 6 to 6400.
<b>Finder:</b>	Interchangeable	Fixed, eye-level pentaprism.	Fixed, eye-level pentaprism.	Fixed, eye-level pentaprism.	Fixed, eye-level pentaprism.	Fixed, eye-level pentaprism.	Fixed, eye-level pentaprism.
<b>Focusing Screen:</b>	Interchangeable	Bright Acute Matte, micro/split.	Bright Acute Matte, micro/split.	Bright Acute Matte with micro/split.	Matte-Fresnel field with micro/split.	Matte-Fresnel field with split-image spot surrounded by microprism collar.	Matte-Fresnel field with split-image spot surrounded by microprism collar.
<b>Field of view:</b>	98%	94%	94%	93%	93%	94%	94%
<b>Magnification:</b>	0.8X	0.87X	0.87X	0.9X	0.9X	0.83X	0.83X
<b>Viewfinder Information:</b>	LED/digital shutter speed indicator, f/number set.	LED shutter speed display with f/number and/or shutter speed set. LED aperture display with speed and f/number set. Over/under-exposure warning by LED. Flash-ready by blinking LED.	LED shutter speed display. LED aperture display. Over/under-exposure warning by LED. Flash-ready by blinking LED.	LED shutter speed display with f/number set. Over/under-exposure warning by LED. Flash-ready by LED at "60." LED manual exposure signal.	Simplified shutter speed display with slow speeds (1 to 1/15) indicated by one LED. Over/under-exposure warning by LED. Flash-ready by LED at "60."	Match-needle for exposure control. Battery-check indicator. Shutter-speed scale.	Match-needle for exposure control. Battery check indicator.
<b>Flash Contact:</b>	X contact: 1/100 sec. (X) and slower speeds. FP contact: all speeds through 1/2000 sec., single PC terminal with X/FP switch.	X contact: 1/100 sec. (X) and slower speeds. PC terminal and hot shoe.	X contact: 1/100 sec. (X) and slower speeds. PC terminal and hot shoe.	X contact: 1/60 sec. (X) and slower speeds; PC terminal and hot shoe.	X contact: 1/60 sec. (X) and slower speeds. PC terminal and hot shoe.	X contact: 1/60 sec. (X) and slower speeds. PC terminal and hot shoe.	X contact: 1/60 sec. (X) and slower speeds. PC terminal and hot shoe.
<b>Power:</b>	Two 1.5V silver-oxide (Eveready S-76 or equivalent). Ten 1.5V "AA" batteries for motor drive.	Two 1.5V silver-oxide (Eveready S-76 or equivalent) batteries.	Two 1.5V silver-oxide (Eveready S-76 or equivalent) batteries.	Two 1.5V silver-oxide (Eveready S-76 or equivalent) batteries.	Two 1.5V silver-oxide (Eveready S-76 or equivalent) batteries.	1.35V mercury battery (Eveready EPX-625 or equivalent).	1.35V mercury battery (Eveready EPX-625 or equivalent).
<b>Other Features:</b>	<ul style="list-style-type: none"> <li>Multiple exposure</li> <li>Built-in auto "senswitch"</li> <li>Battery checks for exposure and motor batteries</li> <li>Memo holder</li> <li>Remote-control input jack</li> <li>Eyepiece-shutter blind (on AE-S finder)</li> </ul>	<ul style="list-style-type: none"> <li>Mechanical self-timer</li> <li>Built-in eyepiece shutter</li> <li>Multiple exposure</li> <li>Depth-of-field preview button</li> <li>Detachable back cover</li> <li>Memo holder</li> <li>Safe-load signal</li> <li>Electronic/mechanical release socket</li> </ul>	<ul style="list-style-type: none"> <li>Mechanical self-timer</li> <li>Depth-of-field preview button</li> <li>Detachable back cover</li> <li>Memo holder</li> <li>Electronic/mechanical release socket</li> <li>Multiple exposure</li> </ul>	<ul style="list-style-type: none"> <li>Electronic self-timer</li> <li>Detachable back cover</li> <li>Memo holder</li> <li>Safe-load signal</li> <li>Electronic/mechanical release socket</li> <li>Depth-of-field preview button</li> <li>Contoured hand-grip</li> </ul>	<ul style="list-style-type: none"> <li>Electronic self-timer with flashing LED indicator</li> <li>Safe-load signal</li> <li>Electronic/mechanical release socket</li> </ul>	<ul style="list-style-type: none"> <li>Depth-of-field preview button</li> <li>Battery ON/OFF and B.C. switch</li> <li>Memo holder</li> <li>Hot shoe</li> </ul>	<ul style="list-style-type: none"> <li>Depth-of-field preview button</li> <li>Battery ON/OFF and B.C. switch</li> <li>Hot shoe</li> </ul>
<b>Optional Accessories:</b>	<ul style="list-style-type: none"> <li>250-frame film back and film loader</li> <li>Battery grip or separate pack</li> <li>Remote control cords S and L</li> <li>Intervalometer PM and connecting cords</li> <li>Hot shoe</li> </ul>	<ul style="list-style-type: none"> <li>Dedicated X-series Auto Electroflash units</li> <li>Auto Winder D</li> <li>Data Back D</li> <li>Electronic remote control cord S, L</li> </ul>	<ul style="list-style-type: none"> <li>Dedicated X-series Auto Electroflash units</li> <li>Auto Winder D</li> <li>Data Back D</li> <li>Electronic remote control cord S, L</li> </ul>	<ul style="list-style-type: none"> <li>Dedicated X-series Auto Electroflash units</li> <li>Motor Drive 1</li> <li>Auto Winder G</li> <li>Data Back G</li> <li>Electronic remote control cord S, L</li> </ul>	<ul style="list-style-type: none"> <li>Dedicated X-series Auto Electroflash units</li> <li>Auto Winder G</li> <li>Electronic remote control cord S, L</li> </ul>		
<b>Size (body size):</b>	3¼ x 5¼ x 6¼ in. (83 x 147.5 x 171mm) (with AE-S finder)	2 x 3¾ x 5½ in. (51 x 86 x 136mm)	2 x 3¾ x 5½ in. (51 x 87 x 136.5mm)	2 1/16 x 3 9/16 x 5 7/16 (52 x 89.5 x 138mm)	2 x 3 7/16 x 5½ in. (52 x 88 x 135mm)	5¼ x 1 7/8 x 3¾ (145 x 47.5 x 95mm)	5¼ x 1 7/8 x 3¾ in. (145 x 47.5 x 95mm)
<b>Weight (body only):</b>	51 oz. (1445g) with AE-S finder (without batteries.)	19 1/16 oz. (560g)	18 1/2 oz. (525g)	18 3/4 oz. (520g)	17 1/4 oz. (490g)	24 13/16 oz. (705g)	24 5/16 oz. (690g)

NOTE: Specifications subject to change without notice.

March, 1981

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# Minolta Electronic Flash Specifications

Minolta electronic flash units.	Dedicated Auto Electroflash				Auto Electroflash			Electroflash	
	320X	200X	132X	118X	320	280	128	25	20
Type	Clip-on	Clip-on	Clip-on	Clip-on	Clip-on	Clip-on	Clip-on	Clip-on	Clip-on
Auto circuitry	Thyristor	Thyristor	Bypass	Bypass	Thyristor	Thyristor	Bypass	Bypass	Non-automatic
Guide number In meters at ASA 100 In Feet at ASA 25	32 52	20 33	32 52	18 30	32 52	28 46	28 46	25 41	20 33
Auto working range	36' to 2.3' (11 to 0.7m)	23' to 2.3' (7 to 0.7m)	26' to 2.3' (8 to 0.7m)	30' to 2.3' (9 to 0.7m)	36' to 2.3' (11 to 0.7m)	23' to 2.3' (7 to 0.7m)	16' to 2.3' (5 to 0.7m)	15' to 2.3' (4.5 to 0.7m)	Non-automatic
Flash duration in sec. (Automatic) (Manual)	1/20,000– 1/1000 1/1000	1/40,000– 1/1000 1/6000 and 1/1000	1/40,000– 1/1000 1/1000	1/40,000– 1/3000 1/3000	1/20,000– 1/1000 1/1000	1/30,000– 1/1000 1/1000	1/40,000– 1/1000 1/1000	1/40,000– 1/2000 1/2000	1/2000
Auto flash apertures (At ASA 100)	f/2.8, f/5.6 and f/11	f/2.8 and f/5.6	f/4 and f/8	f/2 and f/4	f/2.8, f/5.6 and f/11	f/4 f/11	f/5.6	f/5.6	Non-automatic
Power sources	4 AM or Ni-Cad AA cells	4 AM, sealed C-Zn or Ni-Cad AA cells	4 AM or Ni-Cad AA cells	2 AM, sealed C-Zn or Ni-Cad AA cells	4 AM or Ni-Cad AA cells	4 AM or Ni-Cad AA cells	4 AM, sealed C-Zn or Ni-Cad AA cells	4 AM, sealed C-Zn AA cells	2 AM, sealed C-Zn AA cells
Recycling time in sec.*	0.2 to 8	0.3 to 6	5 or 8	4.5, 7 or 9	0.2 to 8	0.5 to 11	4, 7 or 8	6 or 7	10
Number of flashes*	up to 1600	up to 2200	up to 160	up to 200	up to 1600	up to 1200	up to 200	up to 210	up to 170
Angle of coverage: For lenses down to (with wide-angle diffuser)	35mm 28mm	35mm 28mm	35mm 28mm	35mm	35mm 28mm	35mm	35mm 28mm	35mm	38mm
Automatic bounce flash	Yes		Yes		Yes	Yes	Yes		
Variable guide number/ power control	Yes				Yes				
Flash distance checker	Yes		Yes		Yes		Yes		
Dimensions W x D x H	3" x 3 <sup>5</sup> / <sub>16</sub> " x 4 <sup>13</sup> / <sub>16</sub> "	2 <sup>3</sup> / <sub>16</sub> " x 2 <sup>3</sup> / <sub>4</sub> " x 3 <sup>9</sup> / <sub>16</sub> "	2 <sup>9</sup> / <sub>16</sub> " x 2 <sup>9</sup> / <sub>16</sub> " x 4 <sup>11</sup> / <sub>16</sub> "	2 <sup>3</sup> / <sub>8</sub> " x 1 <sup>7</sup> / <sub>8</sub> " x 3 <sup>5</sup> / <sub>16</sub> "	3" x 3 <sup>5</sup> / <sub>16</sub> " x 4 <sup>13</sup> / <sub>16</sub> "	2 <sup>13</sup> / <sub>16</sub> " x 2 <sup>1</sup> / <sub>8</sub> " x 6"	2 <sup>9</sup> / <sub>16</sub> " x 2 <sup>9</sup> / <sub>16</sub> " x 4 <sup>11</sup> / <sub>16</sub> "	2 <sup>3</sup> / <sub>16</sub> " x 2 <sup>3</sup> / <sub>8</sub> " x 4 <sup>1</sup> / <sub>8</sub> "	1 <sup>1</sup> / <sub>4</sub> " x 2 <sup>9</sup> / <sub>16</sub> " x 2 <sup>9</sup> / <sub>16</sub> "
Weight (without batteries)	13 <sup>3</sup> / <sub>8</sub> oz.	7 <sup>3</sup> / <sub>8</sub> oz.	8 <sup>5</sup> / <sub>16</sub> oz.	4 <sup>9</sup> / <sub>16</sub> oz.	13 <sup>3</sup> / <sub>8</sub> oz.	11 <sup>7</sup> / <sub>16</sub> oz.	7 <sup>3</sup> / <sub>4</sub> oz.	5 <sup>7</sup> / <sub>16</sub> oz.	3 <sup>1</sup> / <sub>8</sub> oz.
Optional accessories	Remote-sensor adaptor. AC adaptor. Panel set (including wide angle, telephoto and color panels). Power grip set. NC-2 charger.	NC-2 charger.	Wide-angle diffuser. NC-2 charger. Color filter set.	Wide-angle diffuser. NC-2 charger.	Remote-sensor adaptor. AC adaptor. Panel set (including wide angle, telephoto and color panels). Power grip set. NC-2 charger.	Ni-Cad batteries and charger 280.	Wide-angle diffuser. NC-2 charger. Color filter set.	None	None

\*Depending on power source and subject distance.

NOTE: Specifications subject to change without notice.



# Minolta Exposure Meter Specifications

	AUTO METER III	AUTO-SPOT II	AUTO-SPOT II DIGITAL	SPOTMETER M	FLASH METER III	COLOR METER II
<b>Type:</b>	Multi-function exposure meter for incident/reflected continuous light with LCD readout and memory by microprocessor.	Reflex-viewing spot-reading light meter with motorized moving scale.	Reflex-viewing spot-reading light meter with LED readout.	Reflex-viewing spot-reading light meter with LCD readout, memory and exposure-zone calculations by microprocessor.	Multi-function exposure meter for incident/reflected measurement of continuous and/or flash illumination with LCD readout; microprocessor.	Three-color measuring light analyzer for color photographic use with microprocessor and LCD readout.
<b>Photo Sensor:</b>	Silicon photo cell; receptor head rotates 270°	Silicon photo cell with 1° angle of acceptance; 9° field of view.	Silicon photo cell with 1° angle of acceptance; 9° field of view.	Silicon photo cell with 1° angle of acceptance.	Silicon photo cell; receptor head rotates 270°	3 silicon photo cells filtered to detect blue, green and red light.
<b>Readout:</b>	LCD f/number, EV number, ASA indexes, shutter speeds, over/under range indicator, analog f/number scale.	Motorized moving scales visible through viewfinder show ASA index, EV number, exposure time, f/number: cine scale.	LED f/number, EV number, over/under range indicator: cine scale.	LCD f/number, EV number, ASA, shutter speeds, over/under range indicator, analog f/number scale.	LCD f/number, exposure index number, over/under range indicator, multiple flash count.	LCD readout of color temperature ("K), light balancing (LB) and Color Compensating (CC) filter indexes.
<b>Measuring Ranges at ASA 100:</b>	Incident: EV 2 to 19.5 Reflected: EV 1 to 22.5	EV 3 to 17 (up to EV 21 with standard accessory ND filter).	EV 1 to 19.9	EV 1 to 22.5	<i>Flash:</i> incident/reflected f/1.4 to f/90.9 <i>Continuous:</i> incident/reflected EV 1 to 18.2	<i>LB indexes:</i> 762 to +999 mireds <i>CC indexes:</i> -99 to +99 decimireds <i>Color Temperature:</i> 1600 to 40,000K
<b>ASA Setting Range:</b>	12-6400 in 1/3 stop increments.	3-25,000 in 1/3 stop increments.	12-6400 in 1/3 stop increments.	12-6400 in 1/3 stop increments.	12-3200 in 1/3 stop increments.	Not applicable.
<b>Shutter Speed Settings:</b>	30 min. to 1/2000 sec.	30 to 1/2000 sec.	15 to 1/2000 sec.	30 min. to 1/2000 sec.	<i>Ambient:</i> 30 to 1/1000 sec. <i>Flash:</i> 1 to 1/250 sec.	Not applicable.
<b>f/numbers:</b>	f/0.7 to f/64.9	f/1 to f/45	f/1 to f/45	f/0.7 to f/64.9	f/1 to f/90.9	Not applicable.
<b>Other:</b>	ASA/Time display button with increase and decrease keys; alternate f/number/ EV number display button; dual memory capacity indicated on analog scale with digital recall; conversion table for ASA/DIN and exposure-time/cine speeds; readout reflects time/ASA changes.	Adjustable eyepiece diopter built-in lamp to illuminate finder scales; ± 1 EV fine measuring adjustment; conversion tables for EV-to-luminance, ASA/DIN; focusing from 3.3 ft. to infinity; tripod socket.	Adjustable eyepiece diopter built-in lamp to illuminate non-LED scales; ± 1 EV fine measuring adjustment; conversion tables for EV-to-luminance, ASA/DIN; readout reflects time changes; focusing from 3.3 ft. to infinity; tripod socket.	Adjustable eyepiece diopter built-in lamp to illuminate finder readout; ± 1 EV fine measuring adjustment; dual memory capacity indicated on analog scale with digital recall; conversion tables for ASA (ISO)/DIN and time/cine fps; readout reflects time/ASA changes; shadow, highlight and averaging exposure-zone calculation; tripod socket.	Four measuring modes: <i>AMBI:</i> continuous light <i>CORD:</i> cord-connected flash <i>NON.C:</i> single burst flash without cord connection <i>MULTI:</i> cumulative multiple flashes without cord connection. ± 1 EV fine measuring adjustment; readout reflects time changes; tripod socket.	Automatic zero calibration; index/filter conversion table; film-type settings preset for Type A, Type B, and Daylight films plus variable film settings in degrees Kelvin; detachable receptor head; tripod socket.
<b>Accessories:</b>	40° Reflected Light Attachment; Minolta Booster Viewfinder 10°; Mini Receptor; 4X, 8X ND Spherical Diffuser; Flat Diffuser; Spot Mask II.	16X ND filter; close-up lens adapter ring.	16X ND filter; close-up lens adapter ring.	—	40° Reflected Light Attachment; Minolta Booster; Viewfinder 10°; Mini-Receptor; 4X, 8X ND Spherical Diffuser; Flat Diffuser.	Adapter Cord MA-1 for remote use.
<b>Power Source:</b>	One 1.5V "AA" penlight (Eveready E91 or equivalent).	One 9V battery (Eveready 216 or equivalent).	One 9V battery (Eveready 216 or equivalent).	One 1.5V "AA" penlight (Eveready E91 or equivalent).	Six silver-oxide batteries (Eveready S76 or equivalent).	One 9V battery (Eveready 216 or equivalent).
<b>Size:</b>	5 <sup>3</sup> / <sub>16</sub> x 2 <sup>11</sup> / <sub>16</sub> x 4 <sup>3</sup> / <sub>16</sub> in.	2 <sup>7</sup> / <sub>8</sub> x 6 <sup>3</sup> / <sub>8</sub> x 4 <sup>11</sup> / <sub>16</sub> in.	2 <sup>7</sup> / <sub>8</sub> x 6 <sup>3</sup> / <sub>8</sub> x 4 <sup>11</sup> / <sub>16</sub> in.	1 <sup>7</sup> / <sub>8</sub> x 3 <sup>9</sup> / <sub>16</sub> x 5 <sup>7</sup> / <sub>8</sub> in.	1 <sup>3</sup> / <sub>16</sub> x 2 <sup>7</sup> / <sub>8</sub> x 6 in.	6 <sup>11</sup> / <sub>16</sub> x 2 <sup>13</sup> / <sub>16</sub> x 1 <sup>5</sup> / <sub>16</sub> in.
<b>Weight (without batteries):</b>	5 <sup>5</sup> / <sub>16</sub> oz.	19 <sup>3</sup> / <sub>4</sub> oz.	19 <sup>1</sup> / <sub>4</sub> oz.	8 <sup>1</sup> / <sub>2</sub> oz.	8 <sup>7</sup> / <sub>16</sub> oz.	8 <sup>1</sup> / <sub>16</sub> oz.

NOTE: Specifications subject to change without notice.








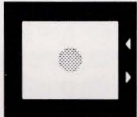
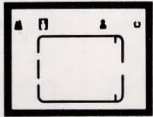
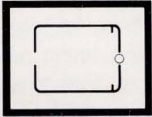
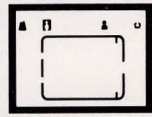



# Minolta Super-8 Movie Camera Specifications

XL-SOUND 84			XL-SOUND 64	XL-SOUND 42	AUTOPAK-8 D12	XL-601	XL-401
Type:	Super-8 sound movie cameras with low-light filming capability.				Professional-quality Super-8 silent movie camera.	Super-8 silent movie cameras with low-light filming capability.	
Lens:	7–56mm (8X) f/1.4 Zoom-Macro; 62mm filter thread.	8–48mm (6X) f/1.4 Zoom-Macro; 49mm filter thread.	8.5–34mm (4X) f/1.2 Zoom-Macro; 46mm filter thread.	6.5–78mm (12X) f/1.8 Zoom-Macro; 67mm filter thread.	7.5–45mm (6X) f/1.7 Zoom-Macro; 46mm filter thread.	8.5–34mm (4X) f/1.2 Zoom-Macro; 46mm filter thread.	
Exposure System:	TTL auto-exposure via CdS cell; meter lock; + 1.5 EV backlight control; full manual.				TTL auto-exposure via CdS cell; ± 2 EV exposure compensation; full manual.	TTL auto-exposure via CdS cell; meter lock; ±1.5 EV backlight control; full manual.	
Shutter:	Rotary type with 220° sector opening and speed of 1/29.5 sec. at 18 fps, 1/39.3 sec. at 24 fps, single frame.	Rotary type with 220° sector opening and speed of 1/29.5 sec. at 18 fps, single frame.			Rotary type with variable sector opening (full, 1/2, 1/4); continuously variable for auto/manual fade-in or fade-out; X-synch at single-frame; 5 filming speeds from 8–54 fps.	Rotary type with 220° sector opening and speed of 1/29.5 sec. at 18 fps, single frame.	
Viewfinder:	SLR type with split-image; scale for f/number; over/under-exposure warning; LED safe-run/battery check, sound recording and film-end signals; manual setting signal; + 1 to –4 diopter eyepiece adjustment.				SLR type with split-image; scale for f/number; over/under exposure warning; safe – run and film-end signals; fade indicators; shutter opening indicator; + 1 to –4 diopter eyepiece adjustment.	SLR type with split-image; under-exposure warning; manual setting signal; safe-run/battery indicator and film-end signal; + 1 to –4 diopter eyepiece adjustment.	
Sound System:	Built-in magnetic head and audio amplifier with Auto Gain Control at two input levels 12 dB apart; FM input; monitoring switch; auxiliary socket.				Synch-sound recording with optional tape recorder.		
Drive System:	Electric micromotor for film transport, shutter operation and power zoom. 2-speed zoom control for XL-Sound 84 only.				Electric micro-motor controlled by 3 transistors for film transport; micro-motor for power zoom via IC for 5 speeds from 2 –12 sec.	Electric micromotor for film transport, shutter operation and power zoom.	
Focusing:	to 4 ft., macro range: 84 to 0.04 in. from lens surface.	to 4 ft., macro range: 43 to 0.02 in. from lens surface.	to 4 ft., macro range: 13 to 0.07 in. from lens surface.	to 5 ft., macro range: 16.5 ft. to ¼ in. from lens surface.	to 3.5 ft., macro range: 46 to 4 in. from lens surface.	to 4 ft., macro range: 17 to 4 in. from lens surface.	
Film:	Super-8 sound or silent cartridges; ASA 40 or 160.				Super-8 silent cartridges		
					ASA coupling range: 10–400.	Daylight: ASA 25 or 100. Tungsten: ASA 40 or 160.	
Power Source:	6–1.5V AA batteries.				5–1.5V AA batteries; 7–1.5V AA batteries in hi-speed power pack.	2–1.5V AA batteries.	
Others:	Film supply indicator; electromagnetic release; remote control socket; compact folding handgrip; external LED run light; built-in No. 85 filter; run/lock switch; flexible lens hood; cartridge ejector; tripod socket.				Electromagnetic shutter release; built-in No. 85 filter; X-synch terminal; accessory bracket; movie light socket; tripod socket; folding handgrip.	Electromagnetic shutter release; built-in intervalometer; remote input socket; built-in No. 85 filter; folding handgrip; self-timer.	
Size:	2 <sup>7</sup> / <sub>16</sub> x 6 <sup>3</sup> / <sub>4</sub> x 9 <sup>7</sup> / <sub>16</sub> in.	2 <sup>7</sup> / <sub>16</sub> x 6 <sup>3</sup> / <sub>4</sub> x 7 <sup>3</sup> / <sub>16</sub> in.	2 <sup>7</sup> / <sub>16</sub> x 6 <sup>3</sup> / <sub>4</sub> x 7 <sup>9</sup> / <sub>16</sub> in.	2 <sup>3</sup> / <sub>4</sub> x 8 x 9 <sup>1</sup> / <sub>4</sub> in.	1 <sup>5</sup> / <sub>8</sub> x 4 <sup>3</sup> / <sub>4</sub> x 7 <sup>3</sup> / <sub>8</sub> in.	1 <sup>5</sup> / <sub>8</sub> x 4 <sup>3</sup> / <sub>4</sub> x 7 <sup>3</sup> / <sub>8</sub> in.	
Weight: (without batteries.)	3 lb. 4 <sup>5</sup> / <sub>8</sub> oz.	2 lb. 12 <sup>7</sup> / <sub>16</sub> oz.	2 lb. 8 <sup>9</sup> / <sub>16</sub> oz.	4 lb. 6 <sup>3</sup> / <sub>4</sub> oz.	1 lb. 9 oz.	1 lb. 9 oz.	



# Minolta 110-Format Camera Specifications

	110 ZOOM SLR MARK II	110 ZOOM SLR	470	460TX	450EX	430EX
						
<b>Camera type:</b>	110 single-lens-reflex camera with zoom/macro lens, aperture-priority automatic exposure control and "dedicated" flash system	110 single-lens-reflex camera with zoom/macro lens and aperture-priority automatic exposure control	110 camera with programmed electronic shutter and built-in close-up lens	110 camera with switchable normal & telephoto lenses & built-in electronic flash plus audible exposure warning	110 camera with built-in electronic flash and close-up lens plus audible exposure warning	110-camera with built-in electronic flash plus audible exposure warning
<b>Lens (all glass):</b>	25-67mm f/3.5 to f/16 Zoom Rokkor-Macro; Filter size 40.5mm	25-50mm f/4.5 to f/16 Zoom Rokkor-Macro; Filter size 40.5mm	26mm f/3.5 and f/9	normal: 26mm f/3.5 or f/8 tele: 43mm f/4.7 or f/13.2	26mm f/3.5 or f/8	26mm f/5.6 (fixed)
<b>Shutter:</b>	electronically controlled behind-the-lens metal shutter, 1/1000 to 1/4 sec., electronic "X" (1/125 sec.), B	electronically controlled behind-the-lens shutter, 1/1000 to 10 sec.; mechanical "X" (1/150 sec.), B	electronic, 1/1000 to 2 sec.	mechanical, 1/200 sec.	mechanical, 1/200 sec.	mechanical, 1/200 sec.
<b>Exposure control:</b>	through-the-lens aperture-priority automatic via CdS photo cell; EV 4.6 to EV 18 (ASA 100); $\pm 2$ EV exposure override	aperture-priority automatic via CdS photo cell; EV 1 to EV 18 (ASA 100); $\pm 2$ EV exposure override	programmed EE from EV 2.6 to EV 16.3 with ASA 64 to 400	3-position slide with click-stop Sun (normal: f/8; tele: f/13.2), Cloud (normal: f/3.5; tele: f/4.7) and Flash settings	3-position slide with click-stop Sun (f/3.5), Cloud (f/8) and Flash settings	2-position slide with click-stop Sun (f/5.6) and Flash settings
<b>Focusing:</b>	3.6 ft. to infinity; 7.7 to 34.6 in. in close-up setting	3.3 ft. to infinity; 11.25 to 12.1 in. in close-up setting	continuous slide control: 3 ft. to infinity; 5 zone focusing positions; close-ups at 19 in.	continuous slide control: 3 ft. to infinity; scale focusing in feet and meters	continuous slide control: 3 ft. to infinity; 5 zone focusing positions; close-ups at 19 in.	continuous slide control: 5 ft. to infinity; 3 zone focusing positions
<b>Viewfinder:</b>	 split-image rangefinder in matte screen LED shutter speed indicators LED over/underexposure warning LED flash-ready signal	 microprism in matte screen yellow LED slow speed warning red LED overexposure warning red LED B or X setting warning battery check	 bright frame zone focus symbols low light/use flash lamp close-up setting signal parallax correction marks	 bright frame low light/use flash/flash-ready lamp magnification changed when tele lens is in place parallax correction marks	 bright frame zone focusing symbols low light/use flash/flash-ready lamp close-up lens finder signal parallax correction marks	 low light/use flash/flash-ready lamp
<b>Power source:</b>	two 1.5V silver-oxide batteries (Eveready S-76 or equivalent)	two 1.5 silver-oxide batteries (Eveready S-76 or equivalent)	two 1.5V silver-oxide batteries (Eveready S-76 or equivalent)	one 1.5V AA-size (penlight) battery for both meter and flash	one 1.5V AA-size (penlight) battery for both meter and flash	one 1.5V AA-size (penlight) battery for both meter and flash
<b>Size:</b>	2-15/16 x 4 x 4-1/8 in.	2-1/8 x 4-1/4 x 5-1/4 in.	1-1/16 x 2-3/16 x 4-5/8 in.	1-1/8 x 2-3/8 x 6-9/16 in.	1-1/8 x 2-1/4 x 6-3/8 in.	1-1/8 x 2-1/4 x 6-3/8 in.
<b>Weight (without batteries):</b>	16-3/8 oz.	15-1/8 oz.	6-5/16 oz.	9-7/8 oz.	8-1/4 oz.	8-1/4 oz.
<b>Other features:</b>	shutter speed switches to X-synch when "dedicated" flashes are charged electronic self-timer with LED signal built-in eyepiece blind adjustable viewfinder eyepiece, -1 to +0.7 diopters electromagnetic shutter release locks at low voltage cable release socket tripod socket handgrip attaches to side of camera battery check	finder black-out at low voltage cable release socket tripod socket	lens cover/release lock battery check lamp cable release socket tripod socket neck strap measures close-up distance	lens cover/release lock battery check lamp audible & visible exposure warning illuminated distance scale with flash	lens cover/release lock battery check lamp neck strap measures close-up distance audible & visible exposure warning illuminated distance scale with flash	lens cover/release lock battery check lamp audible & visible exposure warning illuminated distance scale with flash
<b>Flash:</b>	accessory Auto Electroflash 118X**	accessory Auto Electroflash 25**	accessory Pocket Flash 110 (synchs at 1/100 sec.)	built in, pops out for use	built-in, pops out for use	built-in, pops out for use
<b>Maximum guide number (ASA 25, ft.):</b>	30	41	—	—	—	—
<b>Automatic working range (ASA 100):</b> <b>(ASA 400):</b>	f/2: 3.3-30ft., f/4: 2.3-15ft. f/4: 3.3-30ft., f/8: 2.3-15ft.	f/5.6: 2.3-14.75 ft. f/11: 2.3-14.75 ft.	2.6-12 ft. 2.6-20 ft.	<b>Normal Tele</b> 3-13 ft. 3.3-10 ft. 3-21 ft. 3.3-15 ft.	2.6-12 ft. 2.6-20 ft.	4-8 ft. 4.6-13 ft.
<b>Flash duration:</b>	auto: 1/40,000 to 1/3000 sec. manual: 1/3000 sec.	auto: 1/40,000 to 1/2000 sec. manual: 1/2000 sec.	1/5000 sec.	1/5000 sec.	1/5000 sec.	1/5000 sec.
<b>Number of flashes/recycling time**</b> <b>C-Zn</b> <b>AM</b> <b>Ni-Cad</b>	45/9 sec. 200/7 sec. 90/4.5 sec.	70/7 sec. 210/6 sec.	40/10 sec. 120/10 sec. 90/6 sec.	40/10 sec. 120/11 sec. 90/7 sec.	40/10 sec. 120/10 sec.	40/10 sec. 120/10 sec.
<b>Size of flash:</b>	3-15/16 x 2-3/8 x 1-7/8 in.	2-3/16 x 4-1/8 x 2-3/8 in.	1 x 2-3/16 x 2-5/16 in.	—	—	—
<b>Weight of flash:</b>	4-9/16 oz.	5-7/16 oz.	2-1/4 oz.	—	—	—

**Note:** During electronic flash operation with Minolta's Pocket Autopak cameras, the flashmatic system automatically adjusts the lens aperture as the camera is focused for correct flash exposures everytime.

\*As determined by Minolta's standard testing method.  
**Note:** For information on the Minolta Weathermatic-A, see pages G6-G7.

\*\* While any electronic flash unit may be used with the 110 Zoom SLR MARK II and 110 Zoom SLR, the companion flash units listed are recommended for optimum operating convenience.

**NOTE:** Specifications subject to change without notice.

March, 1981

L5

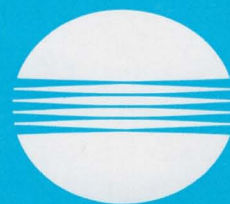


# Minolta Hi-matic 35mm Camera Specifications

	HI-MATIC AF2	HI-MATIC S2	HI-MATIC G2
<b>Type:</b>	Compact 35mm auto-focus camera with built-in flash	Compact 35mm zone-focus camera with built-in flash	Compact 35mm zone-focus camera
<b>Minolta Lens:</b>	38mm f/2.8	38mm f/2.8	38mm f/2.8
<b>Filter Mount:</b>	46mm	46mm	46mm
<b>Focusing System:</b>	Minolta infrared auto-focus to 3.3 ft.	Zone-focus and ft./m scale to 2.6 ft.	Zone-focus symbols and ft./m scale to 3.3 ft.
<b>Exposure System:</b>	Programmed electronic; measuring range EV 6 to 17, 1/8 sec. at f/2.8 to 1/430 sec. at f/17	Programmed electronic; measuring range EV 6 to 17 1/8 sec. at f/2.8 to 1/430 sec. at f/17	Programmed mechanical; measuring range EV 9 to 17, 1/60 sec. at f/2.8 to 1/250 sec. at f/22
<b>Film Speed Range:</b>	ASA 25-400	ASA 25-400	ASA 25-400
<b>Viewfinder:</b>	Bright frame lines with parallax correction marks, auto-focus zone area, zone-focus symbols with LED indicators, low-light and flash-ready lamps	Bright frame lines with parallax correction marks, zone-focus symbol scale with pointer, low-light and flash-ready lamps	Bright frame lines with parallax correction marks, aperture scale with over/underexposure warning area
<b>Warning System:</b> Low-light use flash	LED + audible tone	LED + audible tone	Aperture scale needle drops to red zone
Close-focus warning	LED + audible tone	—	—
Beyond flash range	LED + audible tone	LED + audible tone	—
<b>Power Source:</b>	2-1.5V AA penlight, AM/C-ZN/Ni-Cad	2-1.5V AA penlight, AM/C-ZN/Ni-Cad	1-1.35V mercury battery
<b>Flash:</b> Number of flashes/ recycling time Guide Number (ASA 100/m)	Built-in pop-up  250/5 sec.  14	Built-in, pop-up  250/5 sec.  14	Accessory  —  —
<b>Other:</b>	<ul style="list-style-type: none"> <li>• Easy-load film system</li> <li>• Safe-load signal</li> <li>• Cancellable focus lock</li> <li>• Self-timer</li> <li>• Shutter locks at low voltage</li> <li>• Flashmatic system</li> <li>• Shutter locks until flash is charged</li> </ul>	<ul style="list-style-type: none"> <li>• Easy-load film system</li> <li>• Safe-load signal</li> <li>• Shutter locks at low voltage</li> <li>• Flashmatic system</li> <li>• Illuminated focus ring</li> </ul>	<ul style="list-style-type: none"> <li>• Flashmatic system</li> </ul>
<b>Size:</b>	5 1/8 x 3 x 2 1/8 in.	5 1/8 x 3 x 2 1/8 in	4 7/16 x 2 7/8 x 2 1/8 in
<b>Weight:</b> (without batteries)	11 3/16 oz.	10 15/16 oz.	10 oz.



REPAIR  
SERVICE  
MANUAL  
NO. 4 FEB. 1, 1981



MINOLTA



MINOLTA equipment is designed to provide the user long lasting troublefree service. In order to assure quality service to owners of MINOLTA products and thus encourage maximum and effective use of this equipment MINOLTA has established strategically located Service Centers and Authorized Service Centers for nationwide coverage. MINOLTA trained personnel at the Service Centers stand ready to exert their utmost efforts to solve your service and/or maintenance problems.

This manual provides information on repair service as follows:

	PAGE
1 Packing Equipment for Shipment	4
2. First Class Enclosures	4
3. Where To Send Equipment To Be Serviced	4
4. Handling Of Consumer Repairs	
a. Things to look for	
b. Repair tags	6
5. In Warranty Service	6
6. Out Of Warranty Service	7
7 Interchangeable Lens Repair	7
8. Water And Sand Damage	7
9. Water Damage Unrepairable	7
10. Out Of Warranty Repair Classifications	9
11 Battery Guide	10



# HOW TO PACK YOUR CAMERA, LENS OR OTHER DELICATE INSTRUMENT FOR SURVIVAL IN TRANSIT

## 1 PACKING EQUIPMENT FOR SHIPMENT

Shipments must be packed to withstand the rough handling encountered during transportation (U.S. Mails, United Parcel Service, freight, etc.). Often equipment is not properly packed, resulting in severe damage above and beyond the original repair problem.

**Remember,** MINOLTA will not assume the responsibility for damage encountered in transit and will institute charges for any repairs required. It is strongly recommended that the steps listed below be followed:

- A. Use the original product carton **with** inserts. If the original carton is not available, place the equipment in a container large enough to allow sufficient space for packing material. Do not pack more than one item per carton.
- B. Insert the original product carton or substitute carton into a larger, solid shipping container with additional packing material between each carton.
- C. **Insure the shipment.**
- D. If the carton contains a letter, postal regulations must be followed as explained in Item 2.
- E. If the equipment is damaged in transit, the claim must be initiated by sender. MINOLTA CORPORATION will assist the sender whenever possible.

## 2. FIRST CLASS ENCLOSURES

You can enclose a first class letter in third and fourth class parcels without paying first class postage for the entire package. Simply mark the package "First Class Mail Enclosed" and add the first class letter's postage to the parcel's postage. Or, as an alternative, tape your first class letter with its own postage on it to the front of the parcel.

### A. Placement of Postage

If not taped to the front of the parcel the enclosure should be placed on top of other items in the parcel when practical.

### B. Payment of Postage

Postage for the enclosure must be placed on the outside of the parcel. It may be added to the postage for the parcel and the total amount paid together, or the postage for the enclosure may be affixed separately from the postage for the parcel.

### C. Marking required

The mailer must place the endorsement "First Class Mail Enclosed" on each parcel, below the postage and above the address. The endorsement may be hand stamped, printed or put on by any other method.

**MINOLTA CORPORATION WILL NOT BE RESPONSIBLE FOR FAILURE TO COMPLY WITH THE U.S. POSTAL REGULATIONS.**

The foregoing summary of certain postal regulations is provided for your convenience. We suggest, however, that you contact your local Post Office to verify the summary and be sure no changes have been made in the regulations.

## 3. WHERE TO SEND EQUIPMENT TO BE SERVICED

Send the equipment to the MINOLTA Regional Service Center which services your store or to one of our Authorized Independent Service Centers.



## REGIONAL SERVICE CENTERS

Minolta Corporation 201/825-4000 N.J.  
101 Williams Drive 212/594-8010 N.Y.  
Ramsey  
New Jersey 07446

Attn: Photo Service Department

Minolta Corporation 404/449-3600  
5904 Peachtree Corners, East  
Norcross  
Georgia 30071

Attn: Photo Service Department

Minolta Corporation 312/398-4400  
3000 Tollview Drive 312/792-2166 Chicago  
Rolling Meadows

Attn: Photo Service Department

Minolta Corporation 213/530-2022  
3105 Lomita Boulevard 213/775-4191 LA  
Torrance  
California 90505

Attn: Photo Service Department

## AUTHORIZED INDEPENDENT SERVICE CENTERS

### ★ ARIZONA

PHOENIX CAMERA REPAIR, INC.  
3232 North 16th Street  
Phoenix, Arizona 85016  
(602) 277-1811

### ★ CALIFORNIA

CAMERA REPAIR SERVICE  
380 14th Street  
Oakland, California 94612  
(415) 444-1900

JIMMIE'S CAMERA REPAIR  
7129 Balboa Boulevard  
Van Nuys, California 91406  
(213) 988-6511

KURT'S CAMERA REPAIR  
Time Square Center  
7805 Mission Gorge Road  
San Diego, California 92120  
(714) 286-1810

PROFESSIONAL PHOTO REPAIR  
1725 "L" Street  
Sacramento, California 95814  
(916) 446-2803

### ★ COLORADO

ROCKY MOUNTAIN CAMERA REPAIR CO.  
240 Broadway  
Denver, Colorado 80203  
(303) 744-3459

### ★ DISTRICT OF COLUMBIA

STRAUSS PHOTO TECHNICAL SERVICE, INC.  
1240 Mt. Olivet Road N.E.  
Washington, D.C. 20002  
(202) 529-3200

### ★ FLORIDA

SOUTHERN PHOTO TECHNICAL SERVICE, INC.  
1750 Ninth Avenue North  
St. Petersburg, Florida 33713  
(813) 896-6141

### ★ HAWAII

ALII CAMERA, INC.  
677 Ala Moana (Suite 303)  
Honolulu, Hawaii 96813  
(808) 531-4728

### ★ MASSACHUSETTS

PRECISION CAMERA REPAIR, INC.  
43 Sheridan Street  
Chicopee Falls, Massachusetts 01020  
(413) 598-8005

### ★ MICHIGAN

MIDWEST CAMERA REPAIR, INC.  
318 Oak Street  
Wyandotte, Michigan 48192  
(313) 285-2220

### ★ MINNESOTA

CUSTOM CAMERA & ELECTRONICS SERVICE  
823 West Lake Street  
Minneapolis, Minnesota 55408  
(612) 822-2421

### ★ MISSOURI

CPI CAMERA REPAIR CENTER  
7935 Clayton Road  
St. Louis, Missouri 63117  
(314) 725-5649

### ★ NEW YORK

TOKYO CAMERA REPAIR SERVICE  
60 East 42nd Street (Room 1333)  
New York, New York 10017  
(212) 687-3600

### ★ NORTH CAROLINA

SOUTHERN PHOTO TECHNICAL SERVICE, INC.  
2610 South Boulevard  
Charlotte, North Carolina 28209  
(704) 523-0012

### ★ OHIO

CAMTRONICS CAMERA & PROJECTOR REPAIR  
4345 North High Street  
Columbus, Ohio 43214  
(614) 262-2784

### ★ OREGON

ASSOCIATED CAMERA REPAIR, INC.  
3333 N.E. Sandy Boulevard  
Portland, Oregon 97232  
(503) 232-5625

### ★ PUERTO RICO

MURPHY'S CAMERA REPAIR  
909 Fernandez Juncos Avenue  
(Stop 14)  
Santurce, Puerto Rico  
(908) 725-1565

### ★ TENNESSEE

SOUTHERN PHOTO TECHNICAL SERVICE, INC.  
3388 Summer Avenue  
Memphis, Tennessee 38112  
(901) 452-0728

### ★ TEXAS

CAMERA SERVICE, INC.  
3407 South Sheperd Drive  
Houston, Texas 77098  
(713) 528-6652

HAVEL CAMERA SERVICE  
1504 Fredericksburg Road  
San Antonio, Texas 78200  
(512) 735-7412

### ★ WASHINGTON

PHOTO TRONICS, INC.  
223 Westlake North  
Seattle, Washington 98109  
(206) 682-2646

### ★ WISCONSIN

BDC ENTERPRISES, INC.  
133 West Johnson Street  
Madison, Wisconsin 53703  
(608) 257-6315



#### 4. HANDLING OF CONSUMER REPAIRS

##### A. Things to look for:

- 1 Battery check:
  - a. are they "dead"?
  - b. are they the proper ones for the particular model?
  - c. were they inserted properly?
  - d. are battery contacts clean?
2. Check whether the film was properly loaded.
3. Look carefully at the camera to determine whether it has been dropped or has otherwise suffered from impact damage.
4. Check whether the exterior of the body of the camera or lens shows water or other liquid or sand damage (rust and/or corrosion).
5. Check whether camera has been tampered with.
6. Check the brand. We accept only MINOLTA products for service. Do not send other brand name merchandise.

##### B. Repair Tags

- 1 Be as specific as you can with respect to the nature of the defect. PLEASE refrain from just marking the tag "defective" Mark all information; such as, dropped, water or sand damage, etc.
2. It is important that the customers' comments be entered on repair tag or that a note be attached if such comments concern bad color, fuzzy picture, light leak, over or under exposed, etc. If possible, include samples or prints of slides, which will be returned.
3. Review the information on the repair tag with your customer
4. Please make sure to list all attachments sent with camera; case, filter, flash, lens cap, etc.
5. **Loaded Camera** - MINOLTA CORPORATION cannot accept responsibility for film left in camera sent for repairs.

#### 5. IN WARRANTY SERVICE

- A. MINOLTA CORPORATION, in compliance with regulations issued under the Magnuson-Moss Warranty Act, makes available to all dealers its full warranty data in 8½ x 11 format for inclusion in binders at dealers' locations.
- B. All MINOLTA products listed in Section C below are supplied with a limited warranty to which a warranty registration is attached. In order for the customer to obtain the benefits of the warranty, the mail-in portion (the registration card) must be completed and mailed within 15 days of the date of purchase.
- C. In warranty claims will be approved after checking the product against the registration logged by our Electronic Data Processing Center on the following products (warranty periods shown commence on the date of first retail purchase):
  - 1 SLR's two years.
  2. Rokkor-X Lenses five years
  3. Celtic Lenses two years
  4. 35mm Rangefinders, 110 Pocket Cameras one year
  5. 110 SLR's two years
  6. Movie Cameras one year
  - 7 Auto Electroflash Strobes one year
  8. Meters one year
  9. Enlargers two years
  10. Binoculars five years
- D. In warranty claims on the products listed below must be substantiated by sales slip if requested by the MINOLTA Regional Service Center or Authorized Service/Repair Center (Warranty periods shown commence on the date of first retail purchase).
  - 1 Pocket Autopak Cameras one year
  2. Electroflash 32, 28, 25, 14, and 20 one year
- E. Upon receipt from dealer of the equipment to be serviced, acknowledgement will be sent to dealer stating nature of repairs to be performed.
- F. Time in Service Center MINOLTA's past experience reveals that under normal conditions allowance should be made for five ten working days, plus time for transportation back to the dealer



- G. If an in warranty repair is required outside of the U.S.A., the service facility may charge a handling fee which is the responsibility of the owner
- H. Hidden damage - If, upon the implementation of the warranty repair service, water, sand, liquid or impact damage is found, or the problem is determined to be otherwise outside the coverage of the warranty, MINOLTA CORPORATION reserves the right to cancel the no-charge in warranty estimate and issue a second repair estimate covering the necessary repairs.
- I. All Dealer Stock Repairs must be sent to closest MINOLTA Regional Service Center

## 6. OUT OF WARRANTY SERVICE

- A. A product will be considered out of warranty if:
  - 1. A defect in workmanship or material is not present or the product shows evidence of any occurrence detailed in Paragraph 6 of the terms on the warranty card as listed below:

*"THIS WARRANTY BECOMES VOID IF THE PRODUCT SHOWS EVIDENCE OF SAND AND/OR WATER DAMAGE, MISHANDLING, TAMPERING, BATTERY OR CHEMICAL CORROSION, USE CONTRARY TO THE APPLICABLE INSTRUCTION MANUAL, SHIPPING DAMAGE OR REPAIR PERFORMED BY OTHER THAN AN AUTHORIZED MINOLTA REPAIR STATION. ROUTINE CLEANING AND NORMAL COSMETIC AND MECHANICAL WEAR ARE NOT COVERED UNDER THE TERMS OF THE WARRANTY"*
  - 2. The warranty period has expired.
- B. Upon receipt of the equipment to be serviced, an acknowledgement and estimate will be sent stating nature of repairs to be effected and estimated dealer cost. The dealer retains the acknowledgement copy, signing and returning the estimate. Should the dealer fail to return the signed estimate within thirty (30) days, a "follow-up" estimate is mailed. If the second estimate is not returned within sixty (60) days from the invoice date, the equipment will be returned unrepared to the dealer

MINOLTA CORPORATION WILL NOT ACCEPT ESTIMATE APPROVAL BY PHONE, NOR WILL MINOLTA CORPORATION QUOTE REPAIR ESTIMATES BY PHONE, BUT MINOLTA CORPORATION WILL ALLOW A BLANKET AUTHORIZATION FROM OPEN ACCOUNTS ONLY TO REPAIR WHEN CHARGES DO NOT EXCEED \$65.00. THIS AUTHORIZATION REQUEST MUST BE SUBMITTED IN WRITING TO THE MANAGER OF THE LOCAL MINOLTA SERVICE CENTER.

If the dealer is not an authorized MINOLTA dealer, with an open billing account, payment must be sent with the approved estimate.
- C. Repaired, out of warranty equipment acquires a six months LIMITED warranty effective with the date of repairs.
- D. Hidden damage - If, upon implementation of the repair service, water, sand, liquid, or impact damage is found, MINOLTA CORPORATION reserves the right to cancel the original repair estimate and issue a second repair estimate covering the additional necessary repairs.

## 7. INTERCHANGEABLE LENS REPAIR

The front element can be replaced in the U.S.A. Inside and rear elements must be repaired or replaced at the factory in Japan. For repairs in Japan, the estimated time is three months.

## 8. WATER AND SAND DAMAGE

### A. Short spray exposure

If estimate indicates this type of damage, **written** approval by the dealer is needed at once to avoid further internal corrosion damage.

### B. Immersion

Generally cannot be repaired. Dealers should recommend replacement purchase.

## 9. WATER DAMAGE UNREPAIRABLE

Example #1 will assist you in clarifying why most water damaged equipment cannot be repaired.