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The Minolta SR System of Creative Photography

Minolta makes a complete 35mm photographic system so that you can be a complete photographer. Now that you own one of the famous Minolta SR cameras, you have the nucleus of the world's finest system of 35mm photography. Your potential is practically unlimited.

Judged by any standards of photographic excellence, Minolta SR cameras are thoroughly professional instruments of uncompromising quality. With their versatile complement of Rokkor Lenses and precision Minolta accessories, they are capable of mastering virtually any photographic situation imaginable.

Minolta makes more than 125 lenses, ac-

cessories, and attachments for use with Minolta SR cameras. Encompassed are interchangeable Rokkor Lenses, including zoom-type, from 16mm fish-eye to 1000mm extreme telephoto plus the full range of accessories and attachments described in this booklet.

Now that you own a Minolta SR camera, you own it to yourself to fit it with genuine Minolta accessories and particularly with MC Rokkor interchangeable lenses that match it in quality. MC Rokkor Lenses are made by Minolta expressly for your SR. For best results, be sure you get genuine Rokkor Lenses; they are the only ones that will give you maximum performance every time.

The object of the SR system is to give every photographer, no matter what his skill, a creative choice in all areas of photography. Your Minolta dealer can demonstrate the full SR camera, lens, and accessory line and help you choose the equipment that best suits your needs. See him for technical help, too. Your adventures in creative photography may very well begin in his store.

How Minolta Makes a Rokkor Lens

Minolta is one of only two camera companies in Japan and one of a very few in the world that make their own optical glass and lenses. This little-known fact become very important when you consider that only in this way can a camera company ensure the precise optical and mechanical design properties so vital to advanced photography.

Before a Rokkor Lens is mounted on a Minolta camera, it passes through a complex series of manufacturing steps performed to the highest standards in the camera

industry. Each Rokkor Lens, in fact, is the end result of a long series of computations and tests aimed at eliminating the various aberrations that interfere with theoretically perfect lens performance. What kinds of glass should be used? What should the curvature and diameter of lens elements be? How should they be positioned? Minolta lens designers, aided by Minolta's own electronic computer, investigate and decide on these and many other problems long before the actual making of a lens.

The basic ingredients

The "recipe" of glass-making ingredients varies with the type of glass to be made. Among the materials often used are silica, sodium carbonate, alumina, barium, and lead oxide. Among many other ingredients that may be added to obtain special characteristics for quality Rokkor Lenses are tho-

rium, zirconium, and rare-earth elements such as lanthanum.

The measured materials are melted and stirred in crucibles (platinum-lined ones for high-index glasses) at temperature in the neighborhood of 1500°C for many hours, then gradually cooled over a period of days. The congealed glass is broken into easily-handled fragments, which are subjected to rigid inspections for bubbles, striae, and other defects, and imperfect pieces or parts are discarded. The perfect lumps are split into weight-sized pieces, which are tumbled, heat-softened, and hydraulically pressed into blanks. From one to two further weeks of fine annealing processing relieves internal stresses and adjusts refractive index.

Grinding, polishing, and Achromatic Coating

Diamond grinders are used for initial shaping of the disk-shaped lens blanks, which

are then further rough-ground with abrasive to approximate curvature. The rough-ground lens elements then pass through a series of mechanized abrasive and rough polishers with continual curvature gauging to produce the final high-precision finish. Optical centering and assembly in special dust- and temperature-controlled facilities precede final rigid adjustment and testing.

Conventional lens coating is done with magnesium fluoride, but Minolta, for decreased flare and improved color rendition, pioneered in developing a special technique called "Achromatic Coating" a decade and a half ago. This exclusive process provides a double coating of fluorides plus other ingredients to yield a very high rate of light transmission as well as superior color rendition. As a result, Rokkor Lenses give rich, true color tones—better than any other lens made today we are sure you'll agree.

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Focal Length, Lens "Speed," and Angle of View

The focal length of a lens is the distance from a calculated point on the lens axis (usually at or near the lens diaphragm for medium focal lengths) to the film plane when the lens is focused at infinity.

Dividing the focal length by the diameter of the diaphragm aperture yields the F-number at that lens opening. At any constant focal length, the F-number thus becomes smaller as the aperture diameter becomes larger, but the volume of light passed by the lens increases. At usual apertures, each F-number setting in the series allows transmission of twice the light volume of the next numerically larger one and half that of

the next numerically smaller one. For example, when you change the lens setting from F5.6 to F4, light passing through the lens is doubled. Changing the setting from F5.6 to F8, on the other hand, cuts light transmitted in half. One such doubling or halving is one full F-stop.

The "speed" of a lens is indicated by its maximum aperture: The larger this lens opening (i.e., the smaller the F-number), the "faster" the lens. An F1.2 lens is considered one stop faster than, or twice as fast as, an F1.4.

Angle of view is a measurement in degrees of the amount of a scene included across the diagonal of the frame covered by the lens at a given distance. As focal length decreases, angle of view generally increases: Thus, a 55mm standard lens has an angle of view approximately double that of a 100mm telephoto, and a 28mm wideangle takes in about twice as much of a scene as does the 55mm.

Cleaning and Storage of Lenses

If a lens becomes dusty or soiled, loose matter may be whisked off with a bellows lens brush and the lens surface wiped gently with a soft, clean silicon-treated cloth.

Lenses should be stored away from heat, high humidity, and harmful chemicals and vapors. Always keep lenses capped in their cases when they are not in use.

When attaching or removing a lens from the camera body, be careful not to touch the glass surfaces.



Rokkor Wideangle Lenses

These lenses have a number of interesting and useful applications for both amateur and professional photographers. With their ability to take in a large part of a scene at short distances, they are especially useful when working at close quarters. Their exaggerated perspective suits them to use for special effects and in creative photography. Both these characteristics of wideangle lenses are employed to advantage in architectural photography.

The short focal length of wideangle lenses gives them considerable depth of field even at large apertures or short distances. This inherent extra depth of field can aid in making sharp photos at peak action without the delay needed for adjusting focus.

16mm F2.8 MC Fish-eye Rokkor
Construction: 11 elements in 8 groups
Angle of view: 180°
Min. focus distance: 0.3m (1 ft.)
Filter: Built-in
Diaphragm: Auto preset F2.8–F16



28mm F2.5 MC W Rokkor

Construction: 9 elements in 7 groups

Angle of view: 76°

Min. focus distance: 0.5m (1.75 ft.)

Filter thread diameter: 55mm

Diaphragm: Auto preset F2.5–F16

**28mm F3.5 MC W Rokkor**

Construction: 7 elements in 7 groups

Angle of view: 76°

Min. focus distance: 0.6m (2 ft.)

Filter thread diameter: 55mm

Diaphragm: Auto preset F3.5–F16



35mm F1.8 MC W Rokkor

Construction: 8 elements in 6 groups

Angle of view: 64°

Min. focus distance: 0.3m (1 ft.)

Filter thread diameter: 55mm

Diaphragm: Auto preset F1.8–F16



35mm F2.8 MC W Rokkor

Construction: 7 elements in 6 groups

Angle of view: 64°

Min. focus distance: 0.4m (1.3 ft.)

Filter thread diameter: 52mm

Diaphragm: Auto preset F2.8–F16





Rokkor Standard Lenses

The MC Rokkor 55mm F1.7 and the faster 58mm F1.2 and F1.4 lenses are widely known as the fine "normal" or "standard" lenses for Minolta SR cameras and are well suited for most general photographic purposes.

All are ideal for available-light photography indoors and for other low-illumination situations.

Light in weight and extremely easy to handle, these standard lenses, like all MC Rokkors, are fitted with automatic iris diaphragms and meter-coupling lug rings. They thus provide for full-aperture light measuring or focusing with the diaphragm always open to maximum aperture except at the instant of exposure.

55mm F1.7 MC Rokkor

Construction: 6 elements in 5 groups

Angle of view: 43°

Min. focus distance: 0.5m (1.75 ft.)

Filter thread diameter: 52mm

Diaphragm: Auto preset F1.7-F16



58mm F1.2 MC Rokkor

Construction: 7 elements in 5 groups

Angle of view: 41°

Min. focus distance: 0.6m (2 ft.)

Filter thread diameter: 55mm

Diaphragm: Auto preset F1.2–F16

**58mm F1.4 MC Rokkor**

Construction: 6 elements in 5 groups

Angle of view: 41°

Min. focus distance: 0.6m (2 ft.)

Filter thread diameter: 55mm

Diaphragm: Auto preset F1.4–F16



Rokkor Telephoto Lenses

Tele Rokkor Lenses are made in focal lengths from 85mm to 1000mm and offer a choice of automatic or manual preset diaphragms.

The 85mm, 100mm, and 135mm Tele Rokkors have long been popular among working professionals. All are ideal for candid or portrait photography, allowing greater working distances from subjects and preventing distortion of features (nose, ears, chin) nearest the lens.

The Rokkor 200mm and 300mm telephotos offer even more optical "reach" for the sports, nature, or human-interest photographer yet are light-weight and compact enough to be hand-held. The 300mm Tele Rokkor is equipped with a tripod socket for midsection support and perfect balance. It is invaluable for photographing unapproachable subjects such as distant landmarks or to keep you a safe distance from dangerous objects and situations.

The Rokkor 600mm offers nearly 20 times' the magnification of a standard lens and is thus ideal for sports, landscape, and nature photography at considerable distances.

The catadioptric-type 1000mm Rokkor super telephoto utilizes precision front-surface mirrors in combination with conventional refractive lens elements in its design. Light travels through the length of the lens three times in an overlapping reflex path, resulting in relative compactness for such an enormous focal length. Lens-stop settings for this lens are achieved with three neutral-density filters in a built-in revolving turret.

85mm F1.7 MC Tele Rokkor
Construction: 6 elements in 5 groups
Angle of view: 29°
Min. focus distance: 1m (3.3 ft.)
Filter thread diameter: 55mm
Diaphragm: Auto preset F1.7–F22



100mm F2.5 MC Tele Rokkor
Construction: 6 elements in 5 groups
Angle of view: 24°
Min. focus distance: 1.2m (4 ft.)
Filter thread diameter: 55mm
Diaphragm: Auto preset F2.5–F22



135mm F2.8 MC Tele Rokkor

Construction: 6 elements in 5 groups

Angle of view: 18°

Min. focus distance: 1.5m (5 ft.)

Filter thread diameter: 55mm

Diaphragm: Auto preset F2.8–F22

135mm F3.5 MC Tele Rokkor

Construction: 4 elements in 4 groups

Angle of view: 18°

Min. focus distance: 1.5m (5 ft.)

Filter thread diameter: 52mm

Diaphragm: Auto preset F3.5–F22



200mm F3.5 MC Tele Rokkor
Construction: 6 elements in 4 groups
Angle of view: 12°
Min. focus distance: 2.5m (8 ft.)
Filter thread diameter: 62mm
Diaphragm: Auto preset F3.5–F22



200mm F4.5 MC Tele Rokkor
Construction: 5 elements in 5 groups
Angle of view: 12°
Min. focus distance: 2.5m (8 ft.)
Filter thread diameter: 52mm
Diaphragm: Auto preset F4.5–F22



300mm F4.5 MC Tele Rokkor

Construction: 6 elements in 6 groups

Angle of view: 8°

Min. focus distance: 4.5m (15 ft.)

Filter thread diameter: 72mm

Diaphragm: Auto preset F4.5–F22



600mm F5.6 Tele Rokkor

Construction: 4 elements in 3 groups

Angle of view: 4°

Min. focus distance: 10m (33 ft.)

Filter thread diameter: 126mm

Diaphragm: Manual preset F5.6–F45



1000mm F6.3 RF Tele Rokkor

Construction: 2 mirrors, 7 lens
elements in 6 groups

Angle of view: 2°30'

Min. focus distance: 30m (100 ft.)

Filters: Built-in

F-stop control: F6.3–F22 by ND filters

**100-200mm F5.6 Zoom Rokkor**

Construction: 8 elements in 5 groups

Widest angle of view: 24°

Narrowest angle of view: 12°

Min. focus distance: 2m (7 ft.)

Filter thread diameter: 52mm

Diaphragm: Manual preset F5.6–F22





Close-ups and Photomacrography: Striking New Views of Ordinary Objects

Of all the kinds of photography possible with the Minolta SR system, the two that probably yield that most consistently unusual pictures are close-up photography and photomacrography.

For even the beginning photographer the possibilities in these fields are practically unlimited, and the results are almost always uncommonly exciting. Everyday objects such as stamps or coins, mechanical sub-

jects such as the movements or gears of a wrist watch, insects, plants and myriads more take on aspects missed by the human eye. The commonplace becomes extraordinary through magnification.

The world of close-ups and photomacrography provides a stimulating challenge for any photographer to test his techniques and imagination. But today, particularly using a TTL-metering Minolta SR with special attachments makes these kinds of photography easier, faster, and more practical than ever before.

The main advantage of using these cameras with accessories for close-ups or photomacrography is that the through-the-lens metering system eliminates the need to calculate exposure factor or effective aperture. It thus does away with the most complicated and troublesome factor involved with longer-than-normal extension: Since light is measured through the lens and any other Minolta close-up or extension devices being used, all adjustment for exposure is completely automatic, regardless of magnification ratio.

50mm F3.5 MC Macro Rokkor

Construction: 6 elements in 4 groups

Angle of view; 45°

Min. focus distance: 0.23m (0.75 ft.)

Filter thread diameter: 55mm

Diaphragm: Auto preset F3.5–F22

Accessory: Life-size adapter;
Reverse ring



Used with a TTL Minolta SR, this Macro Rokkor makes photomacrography easier than ever before. All information required to determine magnification ratio and properly adjust exposure is engraved on the lens barrel. The lens is set for correct exposure simply by turning its aperture ring until the two-needles are aligned in the SR's viewfinder. The lens attaches to any Minolta SR camera and focuses all the way from infinity to half life-size in its regular mount without attachments. Using the life-size adapter, magnification ratios from half life-size to 1:1 (life-size) can be obtained. It may also be used for ordinary photography with excellent results.



100mm F4 Auto Bellows Rokkor

Construction: 3 elements in 3 groups

Angle of view: 24°

Filter thread diameter: 55mm

Diaphragm: Auto preset F4–F32



This lens is designed for use with the Auto Bellows I (see page 27). It comes in a short mount so that an increased magnification ratio from a greater distance can be achieved and so that there is greater freedom for the placement of lighting equipment. Focusing range (with bellows) is from infinity to 1:1 magnification ratio (life-size) on the film. As with other Rokkor Lenses, the 100mm Bellows Lens has a depth-of-field preview button.

LENS	ELEMENTS	GROUPS	DIAPHRAGM	ANGLE OF VIEW	MINIMUM FOCUS	MINIMUM F-STOP	FILTER MOUNT DIAMETER	DIMENSIONS	WEIGHT
16mm F2.8 MC Fish-Eye Rokkor	11	8	Automatic	180°	0.3m/1ft	F16	Filters Built-in	73×63mm	445g/15.7oz.
28mm F2.5 MC W Rokkor	9	7	Automatic	76°	0.5m/1.75ft	F16	55mm	63×61mm	364g/12.8oz.
28mm F3.5 MC W Rokkor	7	7	Automatic	76°	0.6m/2ft	F16	55mm	63×45mm	245g/8.6oz.
35mm F1.8 MC W Rokkor	8	6	Automatic	64°	0.3m/1ft	F16	55mm	66×67mm	420g/14.8oz.
35mm F2.8 MC W Rokkor	7	6	Automatic	64°	0.4m/1.3ft	F16	52mm	63×45mm	215g/7.6oz.
55mm F1.7 MC Rokkor	6	5	Automatic	43°	0.5m/1.75ft	F16	52mm	63×37mm	225g/7.9oz.
58mm F1.2 MC Rokkor	7	5	Automatic	41°	0.6m/2ft	F16	55mm	69×54mm	455g/16oz.
58mm F1.4 MC Rokkor	6	5	Automatic	41°	0.6m/2ft	F16	55mm	65×41mm	275g/9.7oz.
85mm F1.7 MC Tele Rokkor	6	5	Automatic	29°	1m/3.3ft	F22	55mm	73×62mm	460g/16.2oz.
100mm F2.5 MC Tele Rokkor	6	5	Automatic	24°	1.2m/4ft	F22	55mm	63×68mm	410g/14.4oz.

LENS	ELEMENTS	GROUPS	DIAPHRAGM	ANGLE OF VIEW	MINIMUM FOCUS	MINIMUM F-STOP	FILTER MOUNT DIAMETER	DIMENSIONS	WEIGHT
135mm F2.8 MC Tele Rokkor	6	5	Automatic	18°	1.5m/5ft	F22	55mm	67×93mm	490g/17.3oz.
135mm F3.5 MC Tele Rokkor	4	4	Automatic	18°	1.5m/5ft	F22	52mm	63×88mm	370g/13.2oz.
200mm F3.5 MC Tele Rokkor	6	4	Automatic	12°	2.5m/8ft	F22	62mm	70×135mm	720g/25.4oz.
200mm F4.5 MC Tele Rokkor	5	5	Automatic	12°	2.5m/8ft	F22	52mm	63×130mm	500/17.6oz.
300mm F4.5 MC Tele Rokkor	6	6	Automatic	8°	4.5m/15ft	F22	72mm	88×200mm	1150g/40.5oz.
600mm F5.6 Tele Rokkor	4	3	Manual	4°	10m/33ft	F45	126mm	132×530mm	4700g/155oz.
1000mm F6.3 RF Tele Rokkor	2 Mirrors 7 Lenses		Manual	2°30'	30m/100ft	F22	Built-in	217×450mm	10.6kg/23.2 lb.
100mm F4 Auto Bellows Rokkor	3	3	Automatic	24°	—	F32	55mm	63×35mm	165g/5.8oz.
50mm F3.5 MC Macro Rokkor	6	4	Automatic	45°	0.23m/0.75ft	F22	55mm	68×55mm	330g/11.6oz.
100–200mm F5.6 Zoom Rokkor	8	5	Manual	24°-12°	2m/7ft	F22	52mm	58×175mm	535g/19.5oz.

The Tools of Close-up Photography and Photomacrography

Even without accessories or attachments, the standard lenses on Minolta SR cameras permit a considerable variety of close-up photography. The MC Rokkor 58mm F1.4 Lens can be focused for pictures as close as 60cm (1.97 ft.) in its standard mounting on the camera. The 55mm F1.7 focuses down to 55cm (1.75 ft.) just as it is. But to get closer to your subject for even more dramatic results, use Minolta's special equipment designed to provide photographs much larger than life size.

The simple combination of a Minolta SR camera with 55mm lens and a supplementary screw-on close-up lens is sufficient, at modest cost, to do many close-ups and copying. For more specialized work, you can select from a range of Minolta extension tubes and bellows, special Rokkor Lenses, and so on for the performance and flexibility needed.

Besides precision lenses or attachments and a measure of patience, the great majority of close-ups and macrophotography will require a sturdy tripod or other base from which to shoot, as the slightest movement of camera or support will be greatly exaggerated. The Minolta Copy Stand, described on page 29, was designed to provide the maximum stability essential in these kinds of photography.

Lighting techniques for photomacrography and close-ups in many ways resembles those for other types of photography. You may wish to experiment with such basic lighting types as back lighting to show edge details, front lighting for standard effects, side lighting to bring out texture, diffuse shadowless lighting for subjects of sufficient color contrast, or transmitted illumination for translucent or transparent subjects. Keep in mind that the considerable heat generated by most lamps will rapidly affect heat-sensitive objects at close range, while living things may wilt or die if kept under the lamps too long.

Auto Bellows I

Attached to an SR camera, this deluxe double-track bellows provides calibrated extension between the lens and film. It features an automatic diaphragm-coupling device and attaches to the SR camera body in the same manner as a lens. Used with the standard 55mm Rokkor Lens, the Auto Bellows I permits continuous magnification between 0.7x-2.9x. The detachable focusing rail can be used separately for positioning or focusing the camera when the camera is equipped with MC Rokkor Lens, extension tubes, or a close-up lens.

**Bellows III**

Reasonably priced, compact and lightweight, this bellows performs many of the same functions as the Auto Bellows I. Magnifications between 0.65x and 2.92x can be obtained with the Bellows III and a 55mm lens. The unit also has magnification and extension-distance scales for 55mm lenses engraved on track.



Extension Tube Set II

This set of five separate tubes can be used in various combinations for close-up photography with Rokkor Lenses. Function of the tubes is to increase magnification by lengthening the lens-to-film distance. Selection of the proper extension tube or combination depends on the area to be covered or the image size required. When used with TTL Minolta SR cameras, no compensation for exposure is necessary since exposure readings may be taken directly through the tube and lens combination.



Close-up Lenses

These lenses screw into the filter mount of normal Rokkor Lenses to permit focusing at close-up distances. Lenses 1 and 2 may be used in combination to allow work as close as 9 inches from the subject. Lens 0 is for continuous magnification when telephoto lenses are used. With any of the close-up lenses, aperture is set as it would be for normal photography.



Copy Stand II

A rigid camera support that assures maximum stability in all photomacrography, this unit is highly recommended when photographing either flat or three-dimensional objects. Unusually sturdy, the stand features a heavy-duty $15\frac{1}{2} \times 17\frac{1}{4}$ -inch baseboard and a 24 inch-high chrome tube (2 inches in diameter) to provide secure support for camera and macro equipment.



Magnifier V

This is a useful tool for precise focusing when making photomacrographs, copying, and taking distant telephoto pictures. It features an adjustable eyepiece and 2.5x magnifying power. It fits into slots provided in the camera eyepiece and can be focused for individual eyesight.



Angle Finder V

This device permits viewing with the camera held below the eye. It can be focused for individual eyesight, and is ideal for microscopic photography and many other applications. It fits into slots provided in the camera eyepiece.

**Microscope Photo Unit II**

Particularly suited for use with Minolta SR camera bodies, this extremely versatile unit can be used with most interchangeable-lens cameras and most microscopes. Viewing and focusing are through a virtual-image finder with a 5.6x eyepiece adjustable to give best corner-to-corner viewing at any magnification. A half-mirror prism enables spot-type through-the-lens exposure determination by measuring a 7x9mm area centered for either 16mm or 35mm frames. A color-temperature meter is built-in for precise light color control. Bellows and exposure system are anti-vibration mounted.



Microscope Adapter

This two-piece device is used to connect an SR camera to a microscope. One section bayonets into the camera body in place of the lens while the other end fits into the ocular adapter tube section of the microscope. Taking photomicrographs is convenient with this adapter because you can follow moving specimens up to the precise moment of exposure. The adapter fits ocular tubes from 23mm to 29mm in diameter.



Electroflash

New features make this compact electronic flash perfect for both black-and-white and color photography. It is equipped with Hi and Lo neon lights to indicate precise guide numbers and to prevent under-exposure. When battery voltage declines and light weakens, the Lo lamp warns that the camera aperture should be adjusted for correct exposure. Gives 370 flashes per load when used with alkaline batteries. Also works on AC, penlight, and NiCd batteries.

**Deluxe Flash Unit III**

This compact and powerful flash unit has a folding type reflector whose bowl adjusts for regular and wideangle lenses and swivels to any of 5 click-stop positions to allow bounce flash, etc. It takes regular-base, pinless-base, and AG-type flash bulbs and can be used either with or without the cord. The unit unfolds and installs on the camera body in seconds.



Auto-Spot 1°

This remarkable instrument is the world's only power-scale exposure meter with a 1° angle of acceptance for critical spot measurement. It works automatically as rapidly as you sight your subject, with motor-driven scales reacting instantly in response to light changes. Total viewing area is 8° and exposure readings are taken through the lens as you view and focus your subject. ASA range: 3 to 25,000. DIN range: 8 to 45. EV range: 2 to 18. Aperture range: F1 to F45. Shutter speed range: 1/2000th second to 30 seconds. Cine range: 8 to 128 frames per second. Hard leather carrying case and leather wrist strap supplied.



Autometer Professional

This sophisticated meter features effortless one-hand operation with a battery-powered, moving scale that gives instant direct readings completely automatically—no needle reading or manual dial alignment is necessary. A sensitive CdS cell and high-grade integrated circuit give both incident- and reflected-light readings with high accuracy over an unusually high range. The light, sturdy unit features automatic over- and under-exposure warning lamps that flash when light is above or below acceptable level. Accessories are available that permit a wide range of uses including light measurement on groundglass, for illuminance determination, and enlarger exposure.



Color Meter

Minolta's very compact all-new 3-color-measuring Color Meter, designed for precise professional measurement of light color temperature from any source and rapid, direct determination of proper light-balancing and color-correction filters, provides particularly high accuracy by dividing its broad measuring capability into four ranges. The Minolta Color Meter reads a wider range of color temperatures—from 2,500°K to 12,500°K—than any other color meter and gives consistently accurate readings regardless of variations in illumination level within an extremely broad range of from 10 to 128,000 lucas. Red, blue, and green detectors incorporated in the light receptor feature spectral response similar to that of color films. A fourth detector measures incident light for the built-in illumination-intensity meter, permitting use as an ordinary photographic exposure meter or for determining illumination levels for other purposes. Sturdy diecast aluminum body contains a hermetically-sealed transistor circuit that needs no warm-up. Needle locks automatically to "remember" reading.



Flash Meter

Remarkably accurate thanks to ideal combination of a high-response silicon blue cell with high-stability electronic components, this meter gives incident or reflected readings of bulb or electronic flash, as well as of continuous illumination. Readings are registered directly in F-numbers; no calculations or conversions are needed. The Minolta Flash Meter offers a selection of measuring times (shutter speeds) for convenient measurement of fill-in flash in combination with ambient light. Compact and lightweight, this unit incorporates hermetically sealed printed circuits with silicon transistors in a die-cast aluminum body. Accessories are available to satisfy a wide range of requirements. A scale illuminator makes for easy reading under dim conditions.



Minolta Filters

Solid Glass Filters

Minolta's filters are invaluable for correcting or obtaining various photographic effects. They are made of solid glass ground optically flat in Minolta's own factories to prevent distortion and mounted in satin-finish metal rings.

Refer to the following brief explanations to determine which filters best suit your photographic purposes, or consult your Minolta dealer for further information. The table at the end of the listing indicates the mount diameters in which the various Minolta filters are available.

For Black-and-White Photography

- UV: This filter absorbs excessive ultraviolet rays when shooting mountain, snow, and other distant scenes. Exposure is the same as without a filter, and it may be kept attached to protect the lens.
- Green: For correct monochromatic rendition of colored subjects as they appear to the eye, this filter is used with panchromatic film.
- Yellow: Red and yellow subjects are rendered lighter than the eye sees them by this filter. It tends to increase over-all contrast somewhat and is often used to darken blue skies and emphasize white clouds.

Orange: Use of this filter with panchromatic films produces effects similar to but more pronounced than those with a yellow filter.

Red: This filter used with panchromatic materials greatly lightens red, produces strong contrast, and can be used for exaggerated cloud effects. Used in combination with infrared film, it eliminates atmospheric haze and produces spectacular, high-contrast effects.

For Color Photography

- 1A: Use this filter to improve bluish rendition of subjects in shade illuminated by blue sky, on overcast or rainy days, or obscured by atmospheric haze. It requires no increase in exposure and is often used with color or monochromatic materials to protect the lens.
- 80B: This filter is used for shooting with daylight-type color film indoors with artificial light of 3400°K color temperature (as of photoflood lamps).
- 85: Type A color films (balanced for exposure with light of 3400°K color temperature) can be used in daylight by exposing through this filter.

For Black-and-White and Color Photography

Polarizing Filter: This filter is ideal for reducing or eliminating specular reflections as from glass or water to provide clearer views or richer tones or textures; it can also be used to darken skies in either color or monochrome.

ND X4: Used to adjust light volume from a scene or subject, this neutral density filter can be employed to avoid over-exposure (as when shooting beach or brilliant snow scenes, especially with fast films). It is also useful for depth-of-field control under certain conditions to emphasize a subject against an out-of-focus background.

Filter Sizes

UV	46mm	52mm	55mm	62mm	67mm	77mm	126mm
Yellow	46mm	52mm	55mm	62mm	67mm	77mm	126mm
Red		52mm	55mm				126mm
Orange		52mm	55mm				
Green		52mm	55mm				
Polarizing		52mm	55mm				
80B		52mm	55mm				
85A		52mm	55mm				
1A		52mm	55mm				
ND		52mm	55mm				



Eyepiece Corrector

Focusing aid for far- and near-sighted photographers is provided by these special lenses which fit into slots provided in the camera eyepiece. Minolta makes nine different diopter strengths, from -4 to $+3$.

**Panorama Head**

Installed between a Minolta SR camera and tripod, the panorama head allows shooting up to 360° panoramic view in overlapping sections without misjudging the camera's coverage of any section. Its rotation scale is marked in 12° graduations, with click stops every 24° . A built-in spirit level aids proper camera positioning. A chart provided with the panorama head shows the number of sectional pictures required when using various Rokkor Lenses, as well as the overlap between sections.



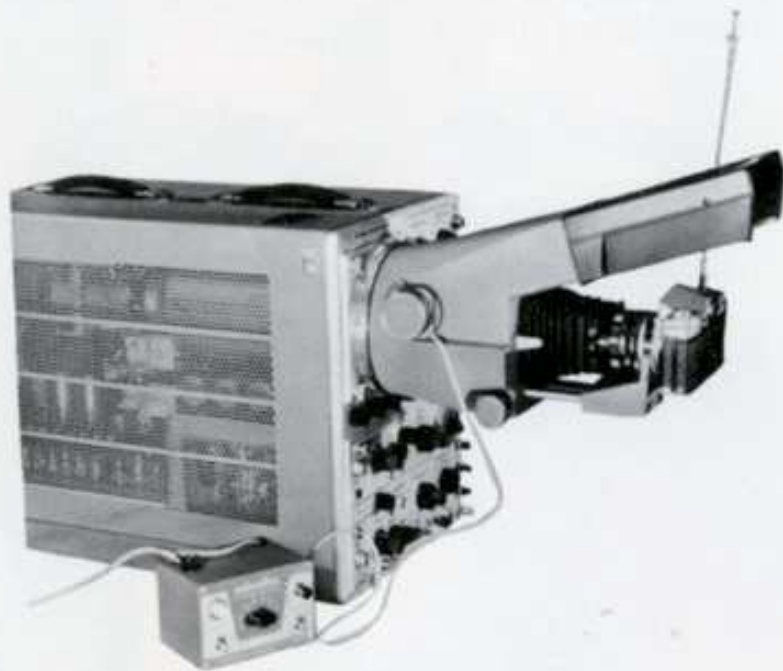
Slide 300 Projector

Deceptively small and lightweight, this new projector offers big performance: It projects both 35mm and 16mm slides with sharp Rokkor Lenses, featuring semi-automatic slide positioning and stacking in order after showing. An efficient condenser system makes for bright, evenly-lighted screen images, and a high-performance sirocco fan gives cool operation and protects slides. Optional accessories include lens for 16mm projection, an autochanger, tele/wide conversion lens, strip-film carrier, and projection screens.



Photo Oscilloscope Unit II

Designed principally for academic and industrial research, this instrument accurately records the images from Braun tubes and oscilloscopes. Incorporated in the adapter are an oversize finder for ease of observation and a date-recording device.



Lens Mount Adapters

Minolta makes adapters for Leica, Praktica, and Exakta lenses, all of which lock securely on Minolta SR camera bodies with the use of the special key provided. Any Exakta- or Praktica-mount lens can be used with SR cameras and can be focused through its full range. Leica-mount lenses can be used only for close-ups and copying, since they have a different back focus.

**Cable Release**

This very flexible metal release threads directly into the shutter release button. It features a screw-type lock which permits time exposures, is essential for steady tripod exposures, photomicrography, photomacrography, and telephotography.





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