Read the warning on using their lenses on older cameras with the EE set!
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Your MC auto Lens is fully automatic and incorporates not only computer optical design but also the latest optical multi-coating techniques. The process of multi-coating assures virtually flare free photographs even under adverse lighting conditions resulting in crisp, high contrast pictures with full color fidelity. In addition your MC auto lenses are designed to retain the full range of exposure automation and metering capabilities of the camera on which they are mounted.

MOUNTING THE LENS
Your MC auto automatic lens mount is similar in design to that of the standard automatic lens (50mm, 55mm, etc.) with which your camera is equipped, and is mounted and dismounted in the same manner as the 'standard' lens. Consult your camera instruction manual for detailed instructions on mounting interchangeable lenses on your camera.

KR MOUNT
This is a new program mount for all Pentax ‘‘A’’ series, Pentax ‘‘K’’, and Ricoh programmed cameras. For use with programmed cameras, rotate the diaphragm ring to the green ‘‘AP’’ mark beyond the smallest aperture by pressing the lock-button.

SETTING THE F STOP
Rotate the diaphragm ring to set the desired F stop at the index mark on the lens barrel. The diaphragm can be set to full stops or to any position in-between. Proper F stop is chosen as indicated by the camera’s built-in exposure meter or an independent meter; or may be dictated by special requirements, such as controlling the depth of field.

METER COUPLING
Meter coupling of the lens to the camera is done automatically as the lens is mounted on the camera body. Full aperture metering of the original standard lens will, in most cases, be retained when using your MC auto lens. One exception to this is that when using your MC lenses with the Pentax Universal Screw Mount, metering must be done at shooting apertures only.

EE OPERATION
Minolta and Canon mount lenses allow automatic aperture selection when used on cameras having this feature.

With the Minolta XD-11 camera and Minolta Mount lenses, to use the shutter priority mode, set the diaphragm to the minimum aperture setting (marked in green) and set the camera controls as indicated in the camera instruction manual.

For use with the Canon EF, AE-1, A-1 and F-1 cameras, rotate the diaphragm ring to the green mark just beyond the minimum aperture setting.
CAUTION: Do not attempt to mount a lens on Canon cameras other than the F-1, A-1, AE-1, AV-1 or EF while the diaphragm ring is set to the EE position. First turn the diaphragm ring to a manual aperture setting in order to retract the EE pin on the rear of the lens.

INFRA-RED FOCUS
For infrared photography, correction of the distance scale is necessary because the infra-red rays are longer than the light rays of the visual spectrum. Focus first in the ordinary manner and then – before exposure – reset the distance indicated on the focusing ring to the appropriate R-index (red lines). For proper exposure and filtration with infra-red materials, follow the film manufacturers recommendations. Infra-red index lines are not included on all lenses.

DEPTH OF FIELD
Some lenses are provided with a depth of field scale. On these lenses depth of field is indicated for any distance and f stop setting on the double scale of f-numbers engraved on both sides of the center reference line. The distance settings opposite the f-number being used (shown on the left and right hand parts of the depth of field scale) indicate the range of sharpness at that distance and f stop.

FOCUSING THE LENS
Look through the view finder of your camera and rotate the focusing ring to get a sharp and clear image in the view finder. Due to the wider depth of field, it is more difficult to see the image 'snap' into focus with wide-angle lenses or wide-angle settings of zoom lenses than it is with telephoto lenses or settings. This depth of field makes wide-angle focal lengths desirable for quick, pre-focused shooting. For example, at f16 the depth of field on your 28mm lens extends from less than 3 feet to infinity. The distance scale indicates the distance between the focused subject and the film plane. The scale is necessary for checking the depth of field, exposure with flash and infra-red photography.

USING PARFOCAL ZOOM LENSES
The 80–200mm Compact Macro Zoom Lens is a true parfocal zoom lens. This means that focusing can be done at any focal length and proper focusing will be maintained as the zoom control is changed to compose your picture. For most critical focus with these lenses, your lens should first be set to the longest focal length of the zoom range, focused for the sharpest image in the view finder and then zoomed back for the desired composition. The larger image and shallower depth of field at the longest focal setting in the zoom range will help you to get more critical focus. Naturally, your lens may be focused at any point within the zoom range, but focusing at the shortest focal setting and zooming up should be avoided unless focus is re-checked before shooting.
HOW TO USE THE MACRO-FOCUSING SYSTEM
Convenient close focusing capability has been provided on the compact macro zoom lenses by having extended focusing range at close distances. Focusing at close distances with these lenses is done with the focusing ring in the same manner previously described for conventional focusing. Additional scales on the index barrel indicate the reproduction (Macro) ratios. These scales indicate the ratio of film image size to object size. The ratios, turn the zoom control to the largest focal setting, and the focusing ring to the closest setting.

USING ONE-TOUCH ZOOM LENSES
The Compact One-Touch Zoom Lens has one rotating barrel which covers everything . . . zooming, focusing, and macro-focusing (on some models) with one continued action. This one-touch zoom lens can be handled in the same manner as the parfocal zoom lens except the zooming can be done by sliding the barrel back and forth.

USING THE VARI-APERTURE ZOOM LENSES
Some wide-tele zoom lenses have variable aperture design. What this means is that the lens speed continuously changes as the focal setting on a zoom lens is altered. On a 28–80mm f3.5/4.5 zoom lens, for instance, the lens speed of f3.5 is accurate for the focal setting of 28mm and that of f4.5 for 80mm. These variations in the lens speeds can automatically adjusted for correct exposure by metering system on your camera.

USING THE VIEW-FINDER WITH TELEPHOTO LENSES
The effectiveness of different types of focusing screens varies with the focal length and maximum aperture of the lens. The range finder or microgrid prisms built into the ground glass do not work as well with longer focal length lenses as they do with the normal camera lens and most wide-angle lenses, and may blackout partially or fully. When such a condition exists, focusing is best done on the ground glass portion of the viewing screen. On some SLR cameras, long telephoto lenses appear to produce a cut-off image in the upper corners or along the entire upper edge of the view finder. Actually such viewing cut-off is caused by the size of the camera’s mirror which is adequate for the shorter focal length lenses only. The exposed slide or negative will be unaffected by this viewing deficiency.

PROPER CARE OF YOUR MC AUTO LENS
Your MC auto lens should always be capped to protect it when not in use. Like other precision optics, it should never be simply wiped with tissue since such tissue may abrade the surface with any dust which might be on it or on the lens.

Any accumulated dust should occasionally be blown off with a syringe or one of the available pressurized air products. To remove a fingerprint or smear, shred the edge of a lens tissue and roll it to make a swab; dampen it with a lens cleaner specially made for photographic optics and gently wipe the surface without exercising any pressure. If repeating the procedure is necessary, use a new swab.
Focusing Zoom
Distance Scale
Index for Distance Scale
R-Index for Infra-Red Photography
Zoom Ring
Zoom(Focal Length) Scale
Index for Diaphragm and Focal Length(Zoom) Scale
Diaphragm Scale
Focusing and Zoom Ring
Distance Scale
Macro Ratio Scale
Zoom (Focal Length) Scale
R-Index for Infra-Red Photography
Index for Distance and Focal Length (Zoom) Scale
Index for Diaphragm Scale
Diaphragm Scale