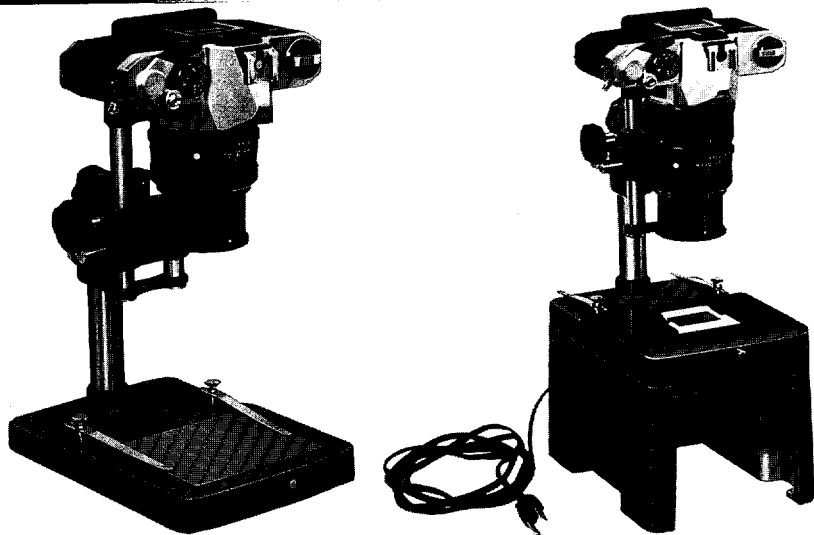


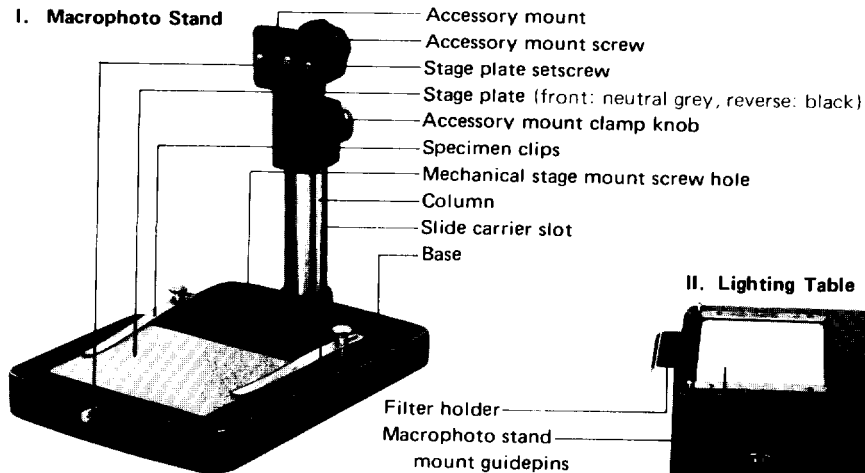
ASAHI
PENTAX

MACROPHOTO STAND & LIGHTING TABLE

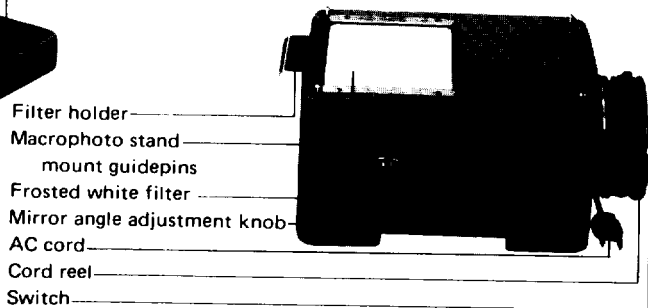


DESCRIPTION OF PARTS

I. Macrophoto Stand

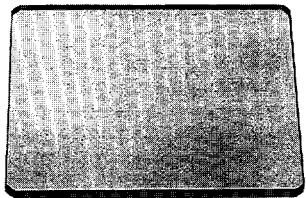


II. Lighting Table

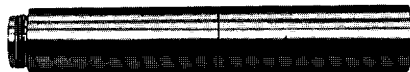


* The Macrophoto Stand and Lighting Table must be purchased separately.

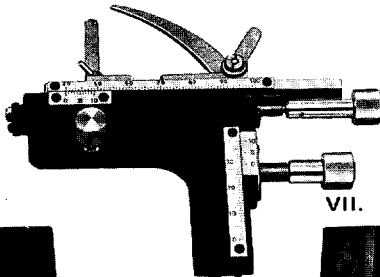
III. Transparent glass stage plate (Lighting Table accessory)



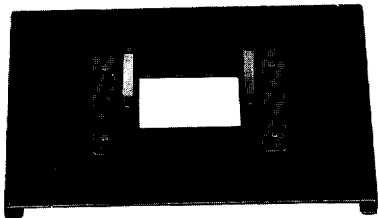
IV. Extension columns (two sections)



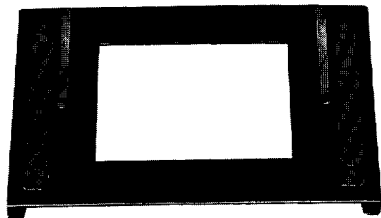
V. Mechanical Stage



VI. 35mm slide carrier



VII. 6 x 7 slide carrier



* Item III above comes with the Lighting Table; items IV – VII are available as optional accessories.

FEATURES & SPECIFICATIONS (Macrophoto Stand/Lighting Table)

The Pentax Macrophoto Stand is an extremely compact stand which comes in handy for ultra close-ups and macrophotography. Used in conjunction with certain Pentax accessory fine focus adjustors and auto bellows units it is capable of extremely stable shooting at high magnification. The stage plate is replaceable and its sides can be reversed. Specimen clips are also provided making it easy to hold thin objects in place.

The Pentax Lighting Table is used in conjunction with the Macrophoto Stand and serves as a source of permeable lighting or "trans-illumination." Moreover, both 35mm and 6 x 7 format slide carriers may be employed in conjunction with the above equipment for slide copying. Extension column sections are also available which enable magnifications both higher and lower than those which can be obtained in instances when a fine focus adjustor is used alone.

MACROPHOTO STAND SPECIFICATIONS

Camera:

All Asahi Pentax 35mm SLR cameras

Lenses:

Mainly the 50mm f/4 SMC Pentax M Macro, SMC Pentax Macro or SMC Macro Takumar; also other lenses with a focal length less than 55mm. The 85mm f/1.8 can be used in the vicinity of 1X with the auto bellows (this is not advised, however, due to the need to correct aberration). The Macro 100mm f/4 can be employed only in conjunction with the two extension columns.

Film-plane-to-subject distance:

		w/1 ext. column	w/2 ext. columns
FF Adjustor II or III	246~188mm	304~246mm	362~304mm
Auto Bellows, Auto Bellows K	353~106mm	411~164mm	469~222mm

**The 50mm macro lens is not usable for the entire range of the above; a wide range of data has been included to serve as reference for other lenses.*

Fine focusing range: Fine Focus Adjustor 58mm
Auto Bellows (all units) 278mm

**Magnification:
Subject coverage
area:**

	FFA II, III	Auto Bellows (all units)
Macro 50mm f/4	0.45x~2.1x **	0.73x~3.1x
Macro 50mm f/4	53x80mm~11.4x17.1mm	33x49mm~7.7x11.6mm

* *Magnification and subject coverage area have been calculated based on the surface area of the stage plate; thus, the above values may not be obtained with thick object unless the extension columns are used.*

* *Refer to the illustrations on page 3 for test shots taken at the above magnifications.*

** *To obtain the latter figure, a 79mm combination of extension tubes must be used. The Nos. 1 + 2 + 3 tubes of either auto or manual extension tube sets give a 1.92X magnification (refer to Fig. 2 on page 7).*

Stage plate: Neutral grey on one side w/18% reflectivity; reverse side: black (94.5W x 79.5D x 5Tmm.)

Dimensions and weight: 130W x 166H x 201Dmm (max. dimensions)
860g

Macrophoto stand accessories:

Lighting Table

Extension column sections (two, length 58mm)
w/one extension column:

Fine Focus Adjustor II or III + Macro 50mm gives 0.28X to 3.5X (a 131mm extension tube combination must be added to obtain 3.5X).

w/two extension columns:

Fine Focus Adjustor II or III + Macro 50mm f/4 gives 0.21X to 4.4X (*an extension tube combination totaling 185mm must be used to obtain 4.4X*).

Auto Bellows + Macro 100mm f/4 gives 0.45X to 1.7X magnification.

35mm slide carrier 6 x 7 slide carrier Mechanical stage

Fine Focus Adjustor Fine Focus Adjustor II Fine Focus Adjustor III

**Usable Camera
accessories:**

Auto Bellows, Auto Bellows K (Use of Bellows Unit, Bellows Unit II and Bellows Unit K is not recommended as these are not equipped with fine focusing mechanisms on their rear plates.)

Auto Extension Tube Set K, Auto Extension Tube K 50mm, Auto Extension Tube K 100mm, Manual Extension Tube Set, Manual Extension Tube Set K, Helicoid Extension Tube, Helicoid Extension Tube K.

Reverse Adapter, Reverse Adapter K 49mm, Reverse Adapter K 52mm
Microscope Adapter K

LIGHTING TABLE SPECIFICATIONS

Built-in light source:	25W Tungsten lamp (G-50, 100/110V, 25W, 1.9m AC cord, lamp and cord fixture removable) manufactured by Toki Denki Co., Ltd.
Other light source:	90 degree rotating mirror for reflected lighting from both front and back.
Filter holder:	w/frosted white filter (filter dimensions same as those for stage plate)
Accessory stage plate:	Transparent glass plate.
Size and weight:	156W x 111H x 240Dmm (max. size) 1,760g

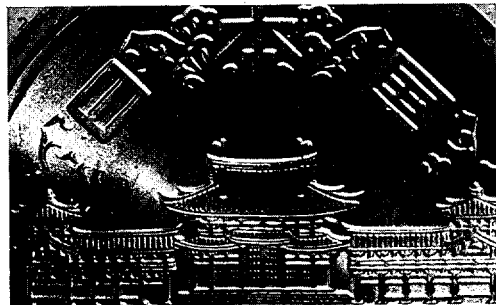
● Ultra close-ups taken with Neopan F film, f/11, 1/2 to 3 sec. exposure, one 500W photoflood.



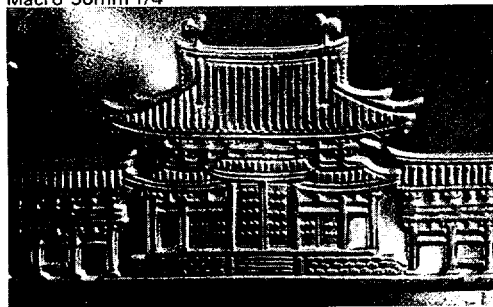
0.45x Fine Focus Adjustor + Macro 50mm f/4



0.73x Auto Bellows (minimum extension) + Macro 50mm f/4



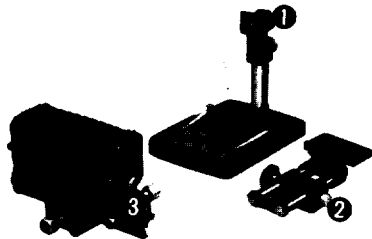
1.92x Fine focus Adjustor + Extension Tubes nos. 1, 2 and 3 + Reverse Adaptor + Macro 50mm f/4



3.1x Auto Bellows (lens reversed, maximum extension) + Macro 50mm f/4

ASSEMBLING THE MACROPHOTO STAND

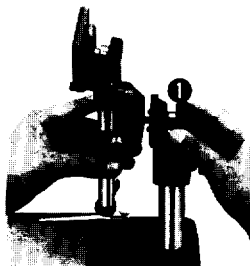
8



Illust. 8 Both Pentax Fine Focus Adjustors (2) and Auto Bellows units (3) may be attached directly to the accessory mount screw of the Macrophoto Stand (1). In choosing which unit to use, refer to the magnification ratio and subject area coverage data given in the specifications at the beginning of this text. (Generally speaking, somewhat higher magnifications can be obtained with the auto bellows than with other close-up equipment; use of Microscope Lens Adaptor K is limited specifically to the auto bellows.) Whether using screw-mount S series Pentaxes or bayonet mount K series, be sure that the accessory employed has provisions for mounting with the camera being used.

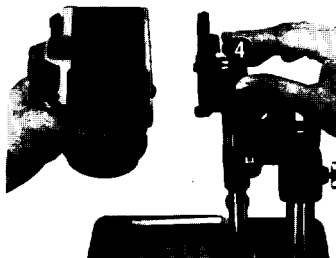
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Illust. 9 The Fine Focus Adjustor may be mounted by threading the stand's accessory mount screw (1) into the tripod mount at the base of the adjustor.

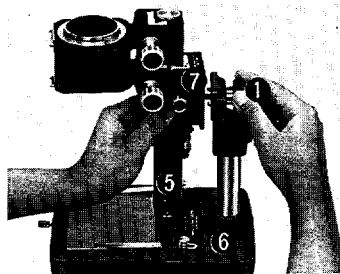
10



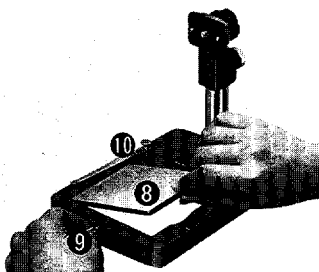
Illust. 10 Insert the camera mount screw of the Fine Focus Adjustor (4) into the tripod mount of a Pentax body fitted with a 50mm macro lens.

Illust. 11 The Auto Bellows unit may be mounted by inserting the accessory mount screw (1) of the stand into the bellows tripod mount (7). Be sure that the tripod mount is positioned so that it will not allow the front edge of the bellows rail (5) to

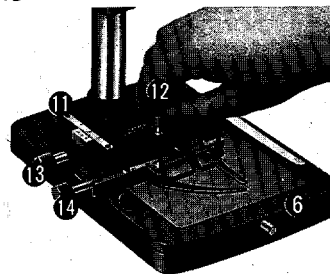
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12



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hit against the base (6). Then, attach the Pentax body and lens as explained in the "Auto Bellows" instruction manual.

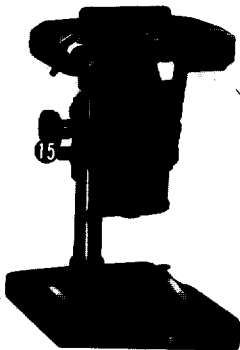
Illust. 12 Select either the grey or black side of the stage plate (8), whichever is more suitable for the type of shooting you are doing, and place it upright in the indentation of the base. The stage plate setscrew (9) is used for inserting and removing the stage plate. When use of other colors is desired, cover the stage plate with colored paper or colored cloth, etc. These are secured in place with the specimen clips (10).

Illust. 13 The mechanical stage (11), available as an optional accessory, may be used for performing fine adjustments to the subject. Remove the specimen clip on the left side of the stage plate, and mount the mechanical stage to the base with the mechanical stage clamp screw (12). Fine adjustments of the position of the stage (up-down-right-left) may be made with adjustment knobs (13) and (14).

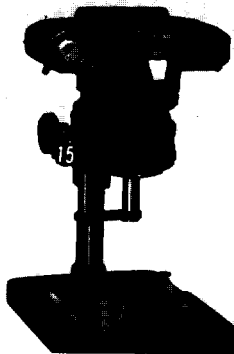
Illust. 14 To shoot $1/2 \sim 1x$ magnifications using Fine Focus Adjustor II or III in conjunction with a f/4 macro lens, use any combination of auto or manual extension tubes nos. 1, 2 and 3 (for detailed information refer to the instructions for the extension tube set in use).

Illust. 15 To employ either Fine Focus Adjustor II or III for obtaining magnifications in excess of $1x$, reverse the lens using the appropriate 49mm or 52mm Reverse Adaptor in conjunction with auto or manual extension tubes.

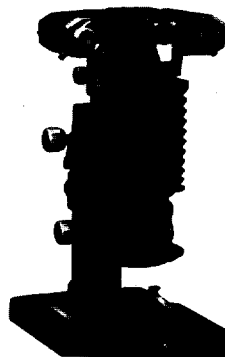
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16



Illust. 16 When an auto bellows is used in conjunction with a 50mm f/4 macro lens, shooting up to $1.23x$ may be performed by operating the bellows in the normal manner. To shoot in excess of $1.23x$ you must reverse the lens (refer to the instructions for the auto bellows in use). After you have decided at which magnification you wish to shoot, insert the bellows scale rod in the appropriate manner and hook up the double cable release.

Note: With certain arrangements the scale may hit against the stage plate. If this occurs, refrain from use.

FOCUSING

EXPOSURE FACTOR INCREASE AND MODIFIED F-NUMBERS WITH 50mm F/4 MACRO LENS

In addition to having a maximum aperture of f/4, the 50mm f/4 macro lenses are governed by the exposure factors given in Table 1 when used in conjunction with various close-up equipment. As less light reaches the film plane when close-up equipment is employed, even though the lens' physical aperture remains the same, an increase in exposure factor may be said to be in effect. For such cases, the physical reading given on the aperture ring is insufficient. Table 1 gives the exposure increase factor and the theoretical or "modified" f-number which is actually in effect when the close-up equipment listed below is used.

(The f-numbers were calculated with the distance scale set at infinity.)

Note: All tube nos. 1, 2 and 3 of Manual Extension Tube Set K, the S mount Auto Extension Tube Set and S mount Manual Extension Tube Set are the same thickness. While tube no. 2 from Auto Extension Tube Set K is the same thickness as all others, tubes 1 and 3 of Auto Extension Tube Set K differ from the others. Abbreviations are explained in the table's key. Table 2, following Table 1, gives the depth-of-field range with the 50mm f/4 macro lenses at magnifications from 0.2x to 3.1x.

TABLE 1

Key: FFA = Fine Focus Adjustor; ET = Extension Tube; RA = Reserve Adaptor

Accessory combination	Magnification	Exposure factor	Modified f-number
* FFA	0.50x	x2.3	f/6.1
* FFA + Auto ET K #1	0.73x	x3.2	f/7.2
* FFA + All #2 Auto ET	0.86x	x3.7	f/7.7
* FFA + Auto ET K #3	1.00x	x4.3	f/8.3
FFA + RA + Auto ET K and all other #2 ET	1.18x	x5.1	f/9
FFA + RA + Auto ET K #3	1.32x	x5.7	f/9.5
FFA + RA + Auto ET K #1 + #3	1.42x	x6.2	f/10
FFA + RA + Auto ET K or all other #1 + #3 ET	1.55x	x6.9	f/10.5
FFA + RA + Auto ET K #2 + #3	1.69x	x7.6	f/11
FFA + RA + Auto ET K or all other #1 + #2 + #3 ET	1.92x	x9.0	f/12
Auto Bellows (w/lens reversed)	2.26x	x11.1	f/13.3
Auto Bellows (w/lens reversed)	2.65x	x13.9	f/15
Auto Bellows (w/lens reversed)	3.04x	x16.9	f/16.4

* Combinations marked with an asterisk were computed with the distance scale of the 50mm f/4 macro lens set at 0.234 mm.

TABLE 2 Depth of Field with the 50mm f/4 Macro Lenses (lens aperture at f/11)

Magnification	Film-to-subject distance	Depth of field	Magnification	Film-to-subject distance	Depth of field
0.2x	372.6mm	361 ~ 384mm	1.7x	222.4mm	222.0 ~ 222.7mm
0.3x	291.8mm	286 ~ 297mm	1.8x	225.8mm	225.5 ~ 226.2mm
0.4x	253.9mm	250.6 ~ 257.4mm	1.9x	229.5mm	229.2 ~ 229.8mm
0.5x	233.3mm	229.3 ~ 237.5mm	2.0x	235.5mm	235.2 ~ 235.8mm
0.6x	221.3mm	219.6 ~ 223.0mm	2.1x	237.2mm	237.0 ~ 237.5mm
0.7x	214.1mm	212.8 ~ 215.5mm	2.2x	241.3mm	241.0 ~ 241.5mm
0.8x	210.0mm	209.0 ~ 211.2mm	2.3x	245.4mm	245.2 ~ 245.7mm
0.9x	208.1mm	207.2 ~ 209.0mm	2.4x	249.6mm	249.4 ~ 249.9mm
1.0x	207.5mm	206.7 ~ 208.3mm	2.5x	253.9mm	253.7 ~ 254.2mm
1.1x	208.0mm	207.3 ~ 208.6mm	2.6x	258.3mm	258.1 ~ 258.5mm
1.2x	209.2mm	208.6 ~ 209.8mm	2.7x	262.7mm	262.5 ~ 262.9mm
1.3x	211.1mm	210.6 ~ 211.6mm	2.8x	267.2mm	267.0 ~ 267.4mm
1.4x	213.4mm	212.9 ~ 213.8mm	2.9x	271.7mm	271.56~ 271.91mm
1.5x	216.1mm	215.9 ~ 216.7mm	3.0x	276.3mm	276.13~ 276.47mm
1.6x	219.1mm	218.7 ~ 219.5mm	3.1x	280.9mm	280.74~ 281.07mm

The above readings have been mathematically calculated on the basis of a lens aperture setting of f/11. If the aperture were f/22, the subject's depth of field would be nearly twice as deep. On the other hand, at f/5.6 it would be almost 1/2 as shallow. Subjects magnified to 1.3x have a depth of field of approximately 1mm. Those magnified between 2.1x to 2.5x register a depth of field of

0.5mm. At 3.9x the depth of field is reduced to 0.25mm.

Normally the subject's depth of field is determined on the basis of magnification. This should be kept in mind as the same applies not only to the 50mm macro f/4 lenses but to the 100mm f/4 macro lenses as well as others.

LIGHTING SOURCES FOR FOCUSING

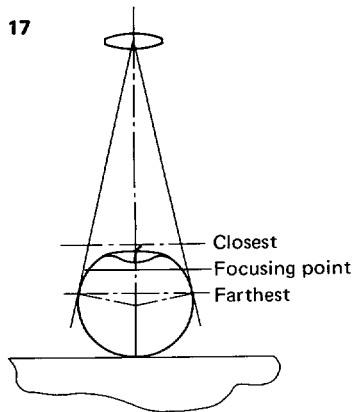
As described above, because a loss of light occurs when close-up equipment is used there is a need to increase the level of illuminance for work with the Macrophoto Stand. For indoor work, reflector lamps, slide projectors (without slide), microscope lighting equipment and various other sources can be used. Outdoors, direct or reflected sunlight (via mirrors, reflectors, etc.) is the optimum source. For copying 35mm transparencies, the 35mm slide carrier may be used in conjunction with the Lighting Table. The built-in tungsten lamp supplies permeable lighting for slide copying in the vicinity of 1x.

To obtain greater degrees of permeable lighting the various abovementioned sources should be employed in conjunction with the built-in reflector mirror.

FOCUSING HINTS

Table 2 shows that the subject's depth of field becomes shallower with larger magnifications. In close-ups, the depth of field in the foreground is identical to that of the background. Therefore, the secret of good focusing is to focus on a point just halfway between the closest and farthest position in the depth of field as shown in Illust. 17.

17



Illust. 18 To focus with the Fine Focus Adjustor loosen crank lever (15), shown in Illust. 14 and 15, and focus by turning extension knob (16). Be sure to retighten the crank lever when finished focusing.

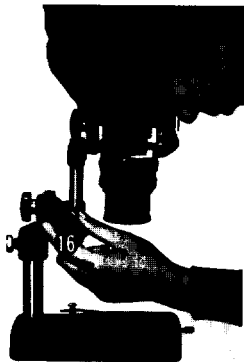
Note: Focusing with the focusing ring of the lens in the normal manner will not work properly when the Fine Focus Adjustor is employed and should be avoided.

Illust. 19. To focus with the auto bellows, turn the tripod mount shift knob (17).

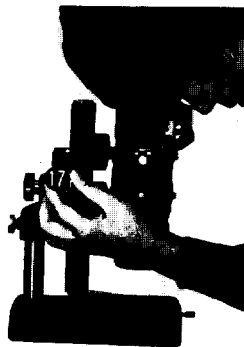
Illust. 20 Tighten clamp knob (18) after focusing.

Illust. 21 It is difficult to focus with the tripod mount shift knob alone with magnifications in excess of 1x. For more accurate focusing at this stage, first focus as closely as possible with the shift knob. Then, temporarily loosen the rear plate clamp knob (19) and focus with the rear plate extension knob (20).

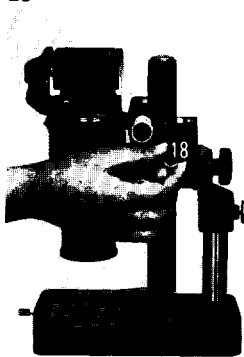
18



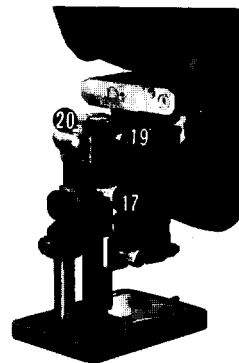
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21



ILLUMINATION FOR COLOR PHOTOGRAPHY

For close-up color photography with artificial lighting requiring little or no filtration, film manufacturers have recently introduced a new line of tungsten and photolamp films, while old standards such as Kodak High Speed Ektachrome (tungsten) and Kodachrome II Professional Film (Type A) are also available. When using artificial lighting with daylight film, however, provisions must be made to make the light source compatible with the film.

If you use a slide projector as a light source for close-up work, filtration should be employed. A filter the equivalent of the Pentax Flash filter should be screwed into the front of the 50mm f/4 macro lens. This is necessary to convert the color temperature to bring the light source into balance with the film. When using reflector lamps, a somewhat dark blue filter (the equivalent of the Pentax Flood filter) should be used. For lighting sources requiring only slight correction, the Pentax Cloudy or Morning & Evening filters should prove adequate. For even finer corrections, the lightest tint among Kodak or other LB and CC filters may be employed by inserting them into the Pentax Gelatine Filter Holder. (If you are using Kodak filters, refer to the Kodak publication, "Kodak Lighting Filters.")

The built-in 25W tungsten lamp can also be used when using the accessory Lighting Table as a source of illumination. However, as the light has a cast similar to the color of the tungsten bulb itself, filters equivalent to the Pentax Flash or Flood filters are called for when using daylight film. Regardless of the filter used, various color renditions will be given depending on the brand used, particularly with reversal color film. In the long run, experimentation with a roll or two of test film is often the best method of determining the optimum lighting and filter arrangements.

USING AN ELECTRONIC FLASH

An electronic flash such as the Autorobo also makes a fine source of illumination for close-up and macrophotography. There is no method of calculating the proper exposure for close-ups where the flash unit is held right next to the subject, however, and such units cannot be employed on "Auto." Experimentation is the best way of determining the proper exposure with this type of shooting as well.

The standard synch cord which comes with most electronic flash units is often too short for off-camera flash. Extension cords for various units are available commercially, while a 1-meter synch cord is available as an accessory for the Autorobo.

EXPOSURES

Almost all Pentax 35mm SLR cameras in use today are equipped with built-in TTL exposure meters. In making exposures with the Macrophoto Stand utilizing reflected light, first, place the subject on the stage plate, compose the picture and focus. Then, remove the subject momentarily and take an exposure reading with the neutral grey stage plate (if you are using the black side of the stage plate or a stage plate of another color, substitute the grey one).

Latitude for Kodak reversal color film is 1/2 stop either way, and adjustments from 1/2 to a full stop may be required depending upon the reflectivity of the subject. For subjects with high reflectivity, expose somewhat less than indicated by the reading with the grey stage plate; for subjects with low reflectivity, set the exposure a little higher.

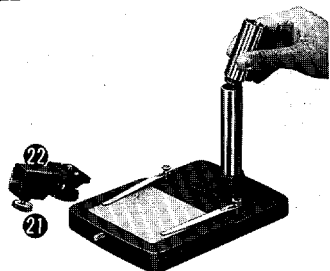
Latitude for Kodak negative color film varies from 1-1/2 stops over to 1/2 stop under the proper exposure. As it is quite strong against overexposure, additional protection against underexposure can be given by setting the film speed of 1/3 to 2/3 slower. With ASA 100 film, for example, a setting of 80 or even 64 may be used.

RECIPROCITY FAILURE WITH COLOR FILM

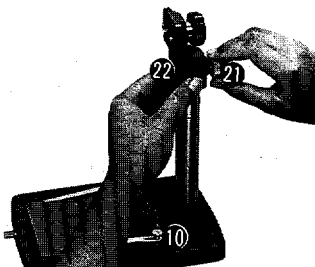
With color film, in cases of exposures in excess of one sec — and particularly in cases of more than 10 sec — underexposure often results from irregularities in the exposure responses of various color films for such long exposures (reciprocity failure). For such cases, exposure time must be increased. Moreover, with reversal color film, although there are exceptions, color compensation (CC) filters are required to improve color rendition even at shutter speeds of 1/10 sec, and especially for speeds of 1 sec or longer.

EXTENSION COLUMNS

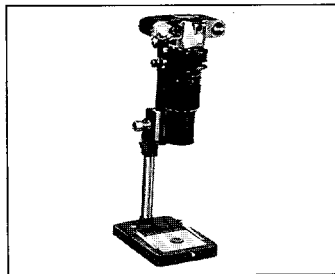
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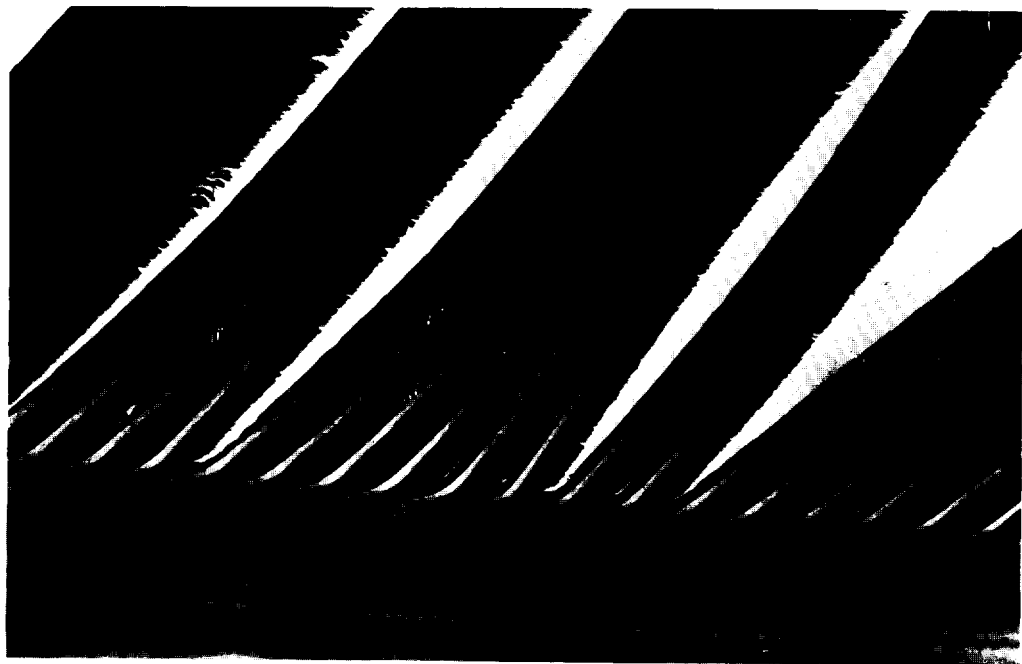


Illust. 22 Loosen the accessory mount clamp knob (21) and remove the accessory mount (22). Screw in one or both extension columns.

Illust. 23 Replace the accessory mount section and retighten the accessory mount clamp knob. When employing either Fine Focus Adjustor II or III in conjunction with the extension columns, magnifications greater and lesser than those indicated in the specification table (page 5) can be obtained. If you reduce the magnification while using both column sections, however, the subject coverage area will exceed the edges of the stage

plate and the stage area should be enlarged by covering it with colored paper or other materials. This also entails removing the specimen clips (10).

Illust. 24 The only occasion on which a 100mm f/4 macro lens is employed with the Macrophoto Stand is when it is used in conjunction with the Auto Bellows and both extension columns. In this arrangement the lens will produce magnifications from 0.45x to 1.7x. It is also particularly useful for making the perspective of three-dimensional subjects seem as undistorted and natural as possible.



MECHANICAL STAGE

The mechanical stage is an instrument which was originally designed for adjusting microscope slides and is very effective for macrophotography at high magnifications.

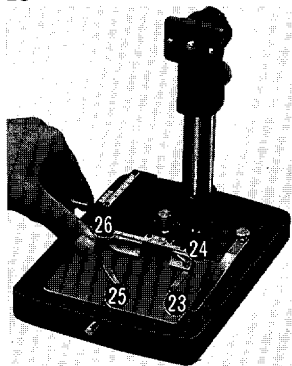
Illust. 25 The stage's straight clamp (23) can be made to move freely by loosening the crank lever (24). The curved clamp (25) may be moved back and forth freely on a horizontal axis. To move the clamp on its radius, push the short lever at its base (26).

Illust. 26 In this illustration a ten yen coin was

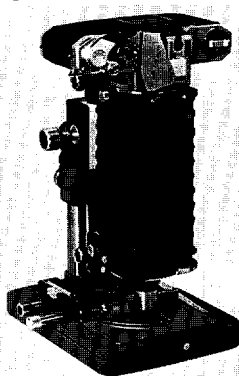
photographed at a magnification of 10x. Microscope Lens Adapter K was used in conjunction with the Auto Bellows and an Olympus M Plan 10x Lens. The mechanical stage has been used for centering the subject to produce an extremely effective photo.

Illust. 27 Edge of ten yen coin (shot at 1/4 sec with Neopan F film and one 500W photoflood at roughly 50cm). As depth of field of the subject is extremely shallow at this magnification it is inevitable that the relief is not entirely in focus.

25



26

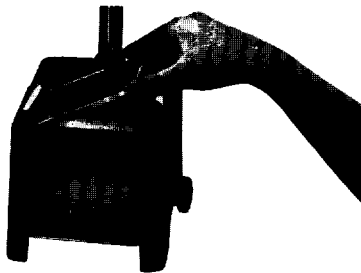


27



LIGHTING TABLE

28



TRANS-ILLUMINATION; TRANS-ILLUMINATION + REFLECTIVE LIGHTING

To produce permeable lighting via the Lighting Table with light sources other than the built-in tungsten lamp refer to "Lighting Sources for Focusing" (page 13) and "Illumination for Color Photography" (page 15).

Illust. 28 Remove the neutral grey/black stage plate from the Macrophoto Stand and replace it with the transparent glass stage plate supplied as a Lighting Table accessory.

EXPOSURE READINGS FOR TRANS-ILLUMINATION

When the subject is placed on the transparent glass stage and lighted via the Lighting Table situated beneath the Macrophoto Stand, the subject will be highlighted by permeable lighting. This process is reverse of the normal lighting procedure and, consequently, the readings given will tend to produce underexposure.

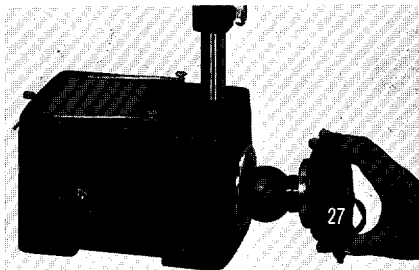
With Pentaxes employing an automatic exposure system compensate for this by setting the exposure compensation dial at 2x or above to allow more light to reach the film. For Pentaxes with built-in manual exposure meters, reduce the shutter speed one setting, or open the aperture an extra 1/2 stop in addition to lowering the shutter speed.

The tendency to underexpose may be greatly reduced by employing reflective lighting in conjunction with permeable lighting.

When either the 35mm slide carrier or the 6 x 7 slide carrier is employed, and bright lighting such as special color-use reflector lamps are used as the source of permeable light, the exposure readings given are generally reliable. (This is because the light is measured directly as it passes through the transparency.) It should be kept in mind, however, that exposure error can still arise under these circumstances due to reciprocity failure (see page 16).

USING THE 35mm AND 6 x 7 FORMAT SLIDE CARRIERS

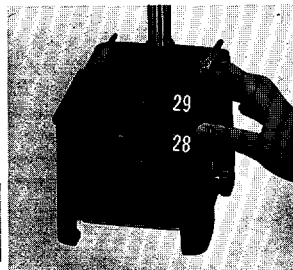
29



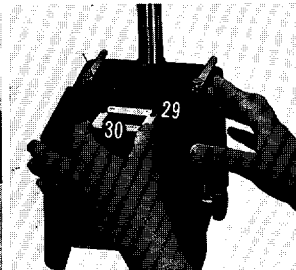
Illust. 29 When not using the built-in tungsten light, turn the cord reel (27) counter-clockwise and remove the lamp and fixture. The bulb aperture may be left open to serve as a passage for additional illumination. (This often comes in handy when preparing the subject and readying the camera).

Illust. 30 With the pointed edges of the slide clips (29) facing toward you, insert either the 35mm or the 6 x 7 slide carrier into the slide carrier slot (28) in the side of the Macrophoto Stand.

30

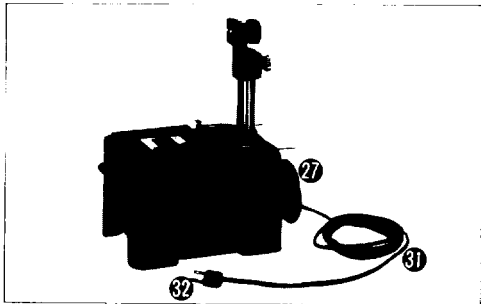


31



Illust. 31 Place a color slide (30) under the slide clips. (Always use mounted transparencies with the 6 x 7 carrier to avoid damage.)

Illust. 32 In order to use the built-in tungsten lamp for focusing, wind the AC cord off of the cord reel (27) and plug it into a household outlet. Use the built-in mirror to reflect the light from below. (Make sure that the frosted filter is removed from the filter holder of the Lighting Table beforehand.)



Copy work with the 35mm slide carrier is ordinarily done at 1x magnification using either the No. 3 Auto Extension Tube or No. 3 Manual Extension Tube. Work with the 6 x 7 slide carrier is done in the vicinity of 1x.

It is impossible to obtain a magnification less than 0.73x when the Auto Bellows is employed in conjunction with a 50mm lens. Although this presents no problem with the 35mm slide carrier, the 6 x 7 slide carrier may not be used for this reason.

LIGHTING SOURCES TO USE WITH THE SLIDE CARRIERS

A flash or flood filter must be employed when the 25W built-in tungsten lamp is used as a lighting source with daylight reversal color film. As reciprocity failure is apt to occur with exposures in excess of one sec, however, this arrangement is rather difficult.

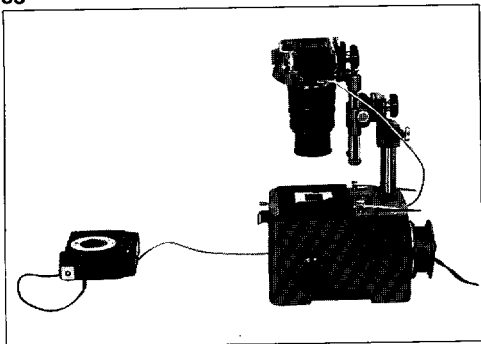
Illust. 33 Use of an electronic flash such as the Pentax Autorobo is perhaps the most convenient lighting source for slide work.

Set the optical axis of the strobe unit on a horizontal plane in line with the mirror of the Lighting Table. (If you turn the mirror to focus with the 25W lamp, do not neglect to set it back at a 90° angle in line with the flash unit.)

In Illust. 33 the Autorobo (guide number 24) is placed 18cm in front of the Lighting Table. With ASA 100 film, correct exposure at this distance is in the vicinity of $f/11$. Use a light amber filter equivalent to the Pentax Cloudy filter to correct the color temperature difference between the film and the light source.

CAUTION Do not leave the built-in tungsten lamp burn for long periods of time when not in use.

33



USES FOR THE 35mm SLIDE CARRIER ARE:

1. Duplicating reversal color film transparencies on reversal color film.
2. Copying color transparencies on color negative film in order to make prints from the negatives.
3. Copying color transparencies on black and white film to make black and white prints.
4. For making black and white positives from black and white negatives.

USES FOR THE 6 x 7 SLIDE CARRIER ARE:

1. Copying 6 x 7 color transparencies on 35mm reversal color film to make 35mm transparencies for projection on 35mm slide projectors.
2. Copying 6 x 7 color transparencies on 35mm black and white film in order to make black and white prints.



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