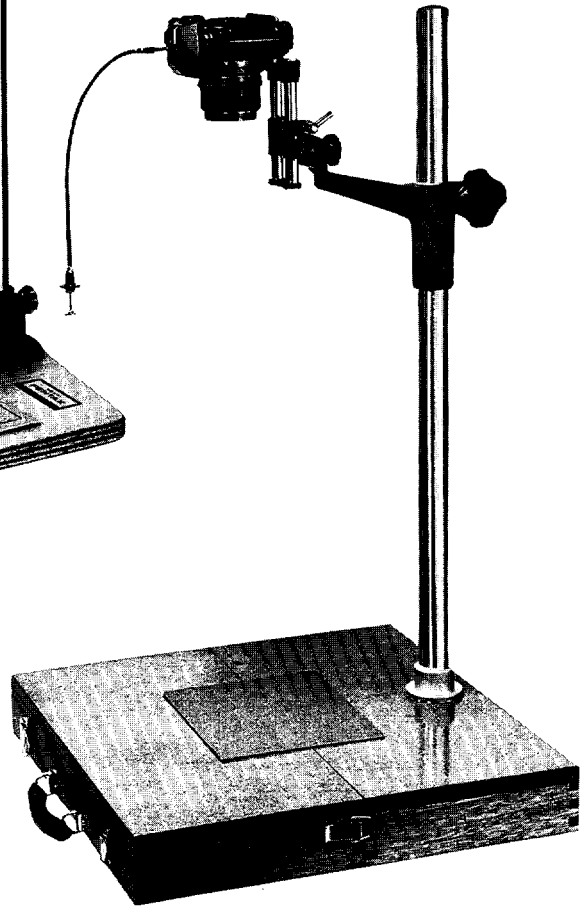
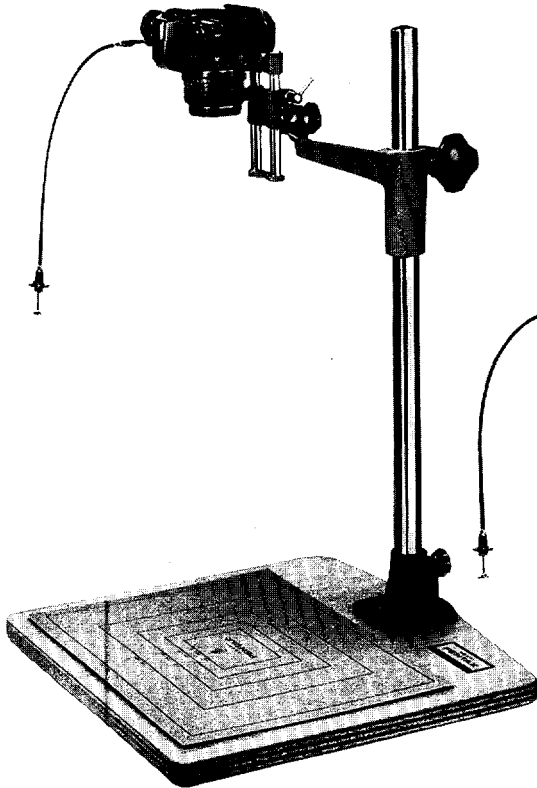


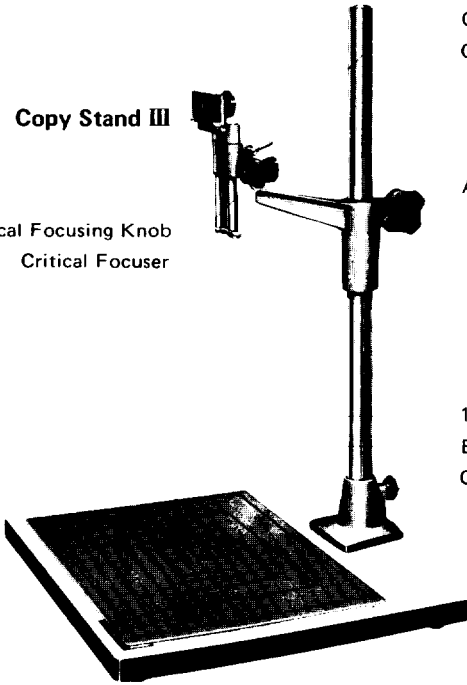
PENTAX

**COPY STAND III, TABLE CLAMP
COPY STAND III P**



1. Copy Stand III

Critical Focusing Knob
Critical Focuser

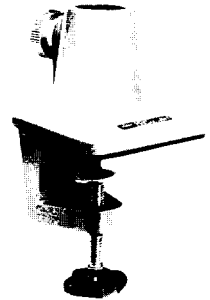


Camera Mount Support Column Arm
Camera Clamp Screw
Clamp Lever
Column Mount

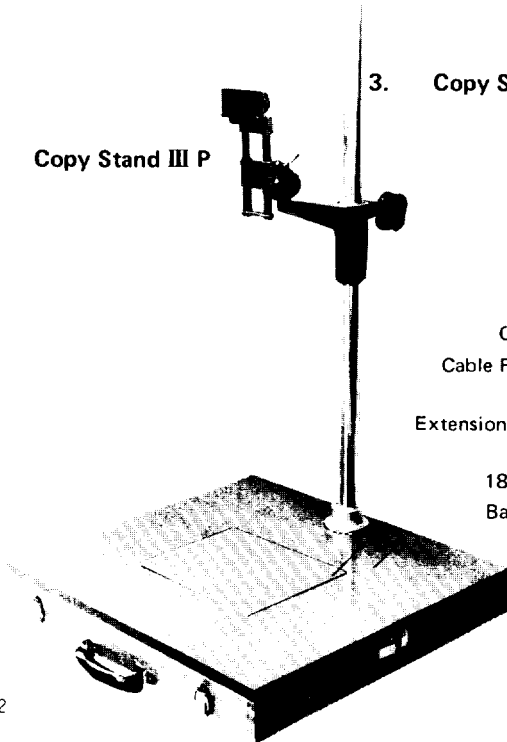
Arm Clamp Screw

18% Reflector Panel
Baseboard
Column Clamp Screw

4. Table Clamp



2. Copy Stand III P

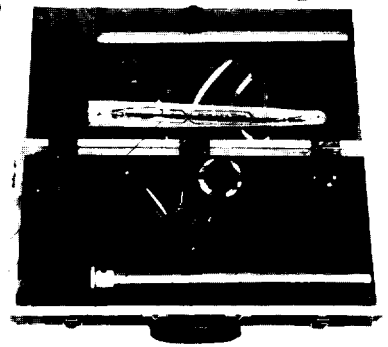


3. Copy Stand III P

Camera
Cable Release

Extension Tubes

18% Reflector Panel
Baseboard/Carrying Case



Features and Specifications

The Copy Stand III is a fixed copying stand of sturdy construction with a critical focuser for precise focusing adjustment (Fig. 1).

The Copy Stand III P is a portable copying stand which can be disassembled and fitted into a wooden carrying case as shown in Fig. 3. The copy stand can be assembled easily as shown in Fig. 2. As the support column has two long sections, the Copy Stand III P can take pictures of larger subjects than can the Copy Stand III.

The Copy Stand III P can be carried about easily as shown here.

In addition, the carrying case has enough space for a Pentax camera and a set of extension tubes.

The Table Clamp shown in Fig. 4 is designed to accept the support column of the Copy Stand III so it can be attached to any table, desk or stand without using the baseboard.

Specifications	Copy Stand III	Copy Stand III P
Cameras	All 35mm Pentax models	same
Lenses	SMC Pentax and Takumar standard lenses, SMC Pentax Macro or Macro Takumar lenses	same
Film-Plane-to-Subject Distance	Shorter than 790mm	Shorter than 828mm
Critical Focusing Range	58mm	same
Area to be Photographed	Smaller than 350 x 495mm with 50mm lens. Ultra-close-ups available with extension tubes or bellows unit. Distance can be extended to about one meter by turning the arm by 180°.	Smaller than 265 x 515mm (B3 Size) with 50mm lens. Otherwise same as for Copy Stand III
Size	56(w) x 44(h) x 14(d) cm when in case 40(w) x 73(h) x 42(d) cm when assembled	47(w) x 33 (h) x 13(d) cm when in case 47(w) x 78(h) x 45(d) cm when assembled
Weight	5.5 kgs	5.1kgs
Accessory	18% Reflector Panel with Size Scales for B4–B8 sizes	18% Reflector Panel (size 17 x 20cm)

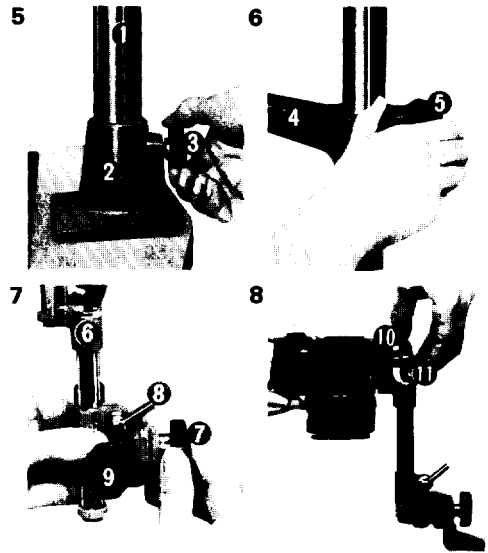
Table Clamp

Size	9.4(w) x 14.8(h) x 9.1(d) cm
Weight	620 grams

How to Assemble

Fig. 5, 6, 7, 8

As shown in Fig. 5, insert the bottom of the support column (1) into the column mount (2) and secure with the column clamp screw (3). As shown in Fig. 6, fit the arm (4) into the support column and secure it with the arm clamp screw (5) at whichever height is desired. As shown in Fig. 7, fit the critical focuser into the two pins at the tip of the arm and secure it with the critical focuser clamp screw (7). For raising or lowering the critical focuser, first loosen the clamp lever (8) and adjust the critical focusing knob (9). (After adjusting, don't forget to lock in the clamp lever again.) As shown in Fig. 8, set the Pentax camera on the camera mount (10) and secure it with the camera clamp screw (11). A cable release screwed into the shutter release button may be helpful.



Remove all items from the carrying case.

As shown in Fig. 9, turn the case upside down and secure the hook (12) to make it into a baseboard. Then, connect the two sections of the support column as shown in Fig. 10. Screw the bottom of the support column into the column mount as shown in Fig. 11. Attach the arm, critical focuser, camera and cable release as shown in connection with the Copy Stand III.

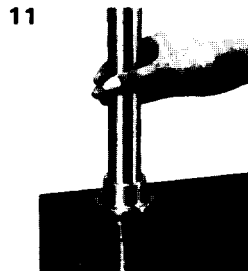
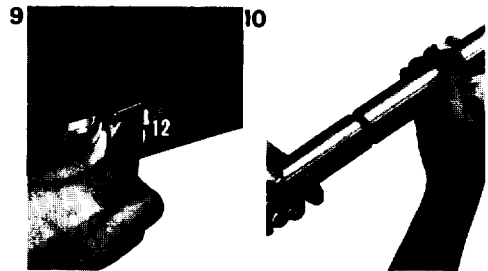
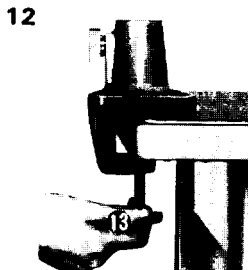


Fig. 12

As shown in Fig. 12, the table clamp can be attached to any desk or table top less than 6cm thick. If the desk top is too thin, try pulling out the top drawer and attaching the clamp to it as well.



How to Use

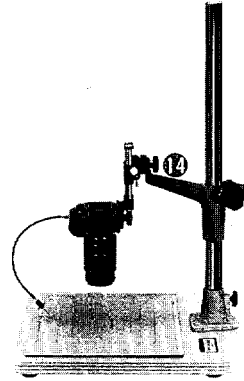
For Photographing Miniature Subjects

The closest film-plane-to-baseboard distance — presuming the arm is lowered to its lowest position and the critical focuser is also at its lowest — is 302mm with the Copy Stand III and 261mm with the Copy Stand III P.

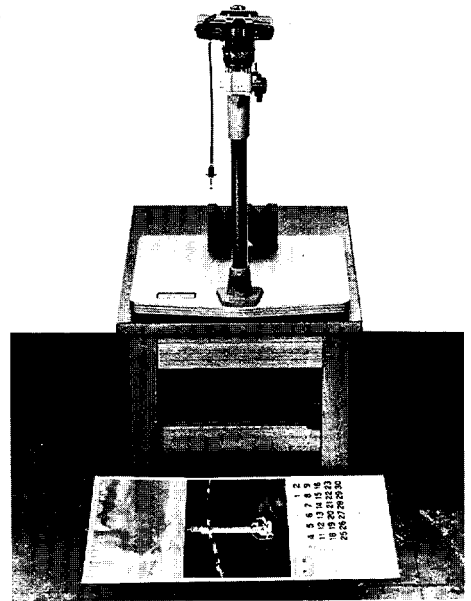
When using a 50mm f/1.4 or 50mm f/1.7 lens on the Copy Stand III, subjects smaller than 9.3 x 14cm — 1:3.9 magnification — cannot be photographed except by the following method. (The minimum subject size with the Copy Stand III P is 7 x 10.5cm — 1:2.9 magnification.).

For photographing subjects smaller than the above, attach the critical focuser upside down on the arm as shown in Fig. 13. In this case, the stopper projection (14) of the camera mount is above the camera; be sure to attach the rear of the camera onto the stopper projection. Also, be sure that the camera and baseboard are completely parallel.

13



14



For Photographing Extra-Large Subjects

If, using the Copy Stand III, you want to photograph subjects larger than the limitations indicated in the specification table on Page 3, put a weight on the baseboard, put the baseboard on a table, loosen the column clamp screw, turn the support column by 180°, and lock the clamp screw again, as shown in Fig. 14.

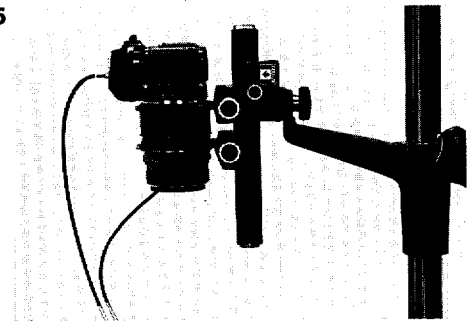
In the case of the Copy Stand III P, loosen the arm clamp screw, turn the arm by 180° and then again lock in the screw.

When using a 50mm lens, be careful not to raise the camera so high that you photograph the baseboard.

Use of Auto-Bellows or Bellows Unit

As shown in Fig. 15, detach the critical focuser and attach the Auto-Bellows Unit or Bellows Unit directly onto the arm.

15



How to Photograph

In photographing documents consisting of black type on pure white backgrounds, the use of Minicopy or Koni-Micro film is recommended for getting high contrast.

One thing to note concerning these films:

The nominal film speed of ASA 32 is appropriate only when the film is exposed under tungsten lighting and is developed in a high-contrast developer specially designated for the film. Thus, the film speed of ASA 32 has a somewhat different meaning than the ASA 100 of regular film.

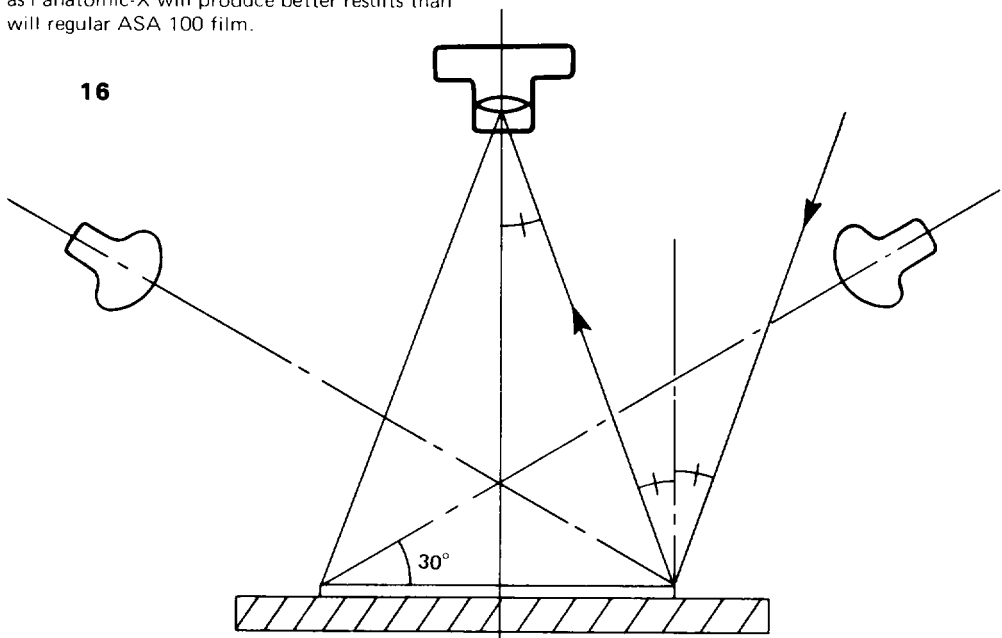
When you are exposing copying film with available light or fluorescent lighting, and developing it in a regular developer (such as the D-76 for 6 – 8 minutes at 20°C), set the film speed at ASA 12 – 20.

Copying film also has a narrower exposure latitude, just as color slide film does. Thus, once you have determined the exposure, bracket that exposure by a half-stop under and a half stop over. This is the surest and easiest way of getting the correct exposure.

If you want moderate, rather than high, contrast photographs, especially for pictures or paintings (or copies of them), Neopan F or Panatomic-X film is recommended. Of course, regular ASA 100 film can be used; but such a high speed film is not necessary for stationary subjects. The use of ultra-fine-grain films such as Panatomic-X will produce better results than will regular ASA 100 film.

For copying work, the entire area should be lit evenly and present no reflections.

The light source should be some distance away from the subject as shown in Fig. 16. When using glossy papers such as art papers, be careful of polarized reflections. The easiest way to eliminate reflection from black & white shots is to set two fluorescent lamps (15W or so) at the left and right sides of the subject. When using color film, use two 500W reflector lamps instead of the fluorescent lamps.



How to Frame and Focus

As the area to be photographed is not indicated on the support column of the copy stand, the camera height must be determined by experience.

Generally, the larger the subject, the greater the camera-to-subject distance must be. The smaller the subject, the less the distance must be, until the magnification is down to life-size. For ultra-close-ups (larger than life-size), the camera-to-subject distance tends to be greater. To focus, place the subject on the baseboard, adjust the arm, and focus by turning the focusing ring of the lens as shown in Fig. 17. If the subject image in the finder is too small for your requirements, lower the arm as shown in Fig. 18 or lower the camera by working the critical focuser as shown in Fig. 19 and 20.

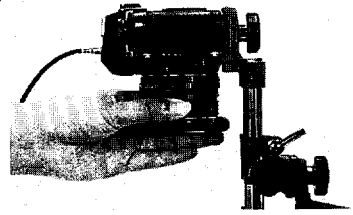
If the subject image is too large, raise the arm or elevate the camera by means of the critical focuser.

As the finder coverage of all 35mm Pentax cameras is 90 – 95 percent of the actual picture area, full framing of the subject is possible.

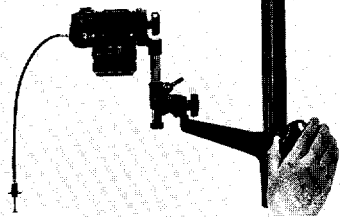
As the area to be photographed by means of the 50mm lens – when it is set at its closest focusing distance (0.45 meter) – is about 16 x 24cm, subjects smaller than this can be photographed by using extension tubes or close-up attachment lenses.

Focusing is usually done by rotating the focusing ring of the lens; but for ultra-close-ups, requiring magnifications larger than 1/2x, the use of the critical focuser provides more precision. For even greater magnification, use the optional accessory Magnifier.

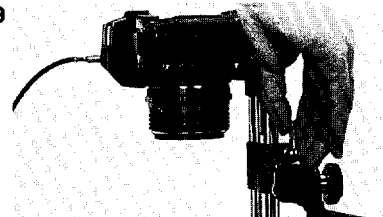
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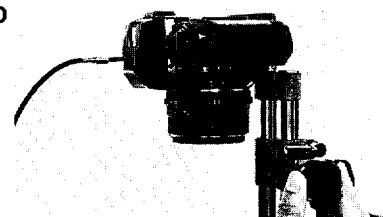
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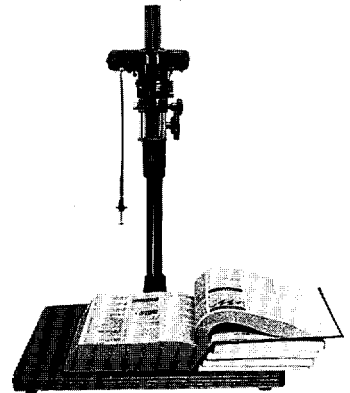
19



20



21



Lens Aperture

If the subject is on a flat plane, the 50mm f/4 Macro lens provides edge-to-edge sharpness even at the full aperture of f/4.

For copying books, supports which will make the subject area flat are necessary (as shown in Fig. 21). However, this method cannot guarantee absolute flatness, so stopping the aperture down to f/5.6 or f/8 is recommended to assure the required depth-of-field.

Of the standard 50mm lenses, the f/1.7 is most adequate for close-ups, the f/1.4 comes second and f/1.2 third. With any of these lenses, by stopping down the aperture to f/11, the edge focus will become sharper. Stopping down the aperture to f/16 or f/22, however, will reduce sharpness because of diffraction.



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2/81 Printed in Japan

Exposure and Use of Filter

Exposure

The Pentax cameras incorporating TTL exposure meters make exposure determination very easy. Exposure meters are designed to reproduce the original tones of a subject when the light reflected from it is directed to an 18% reflector panel for metering. For this purpose, the Copy Stand II has a B4 size 18% reflector panel and the Copy Stand III P a 17 x 20cm 18% reflector panel as illustrated in Fig. 2 on Page 2. Though the latter reflector panel is small, the surface of the carrying case can also work as a substitute for the reflector panel. By measuring the light with the reflector panel, the correct exposure can be achieved while copying photographs, paintings or documents. For light subjects, make the exposure time a little shorter. For dark subjects, make it a little longer. In any case, thanks to the 18% reflector panel, the adjustment is conveniently within a half-stop.

When using the Pentax cameras with fully-automatic electronic shutter, other than the LX, because stray light entering through the uncovered finder eyepiece may cause underexposure, take care to cover it with an eyepiece blind or set the exposure by the needle-matching system.

Use of Filters

B & W Film

You can partially adjust contrast by using filters.

1. If the objects to be photographed are old, yellowed documents, use a cloudy, yellow, orange or red filter to make the paper come out white for easier reading of the wording.
2. Red, green and blue come out as almost the same density when photographed on B & W film because the densities of red and blue are similar. For darkening a blue background, use a yellow, orange or red filter. For darkening red letters, use a yellow, orange or red filter. For darkening red letters, use a filter for clear flashbulbs. For lightening any object, use a filter of the same color.

Color Film

1. If you are shooting in daylight or are using a reflector lamp for color film, you need not use any filters with color negative film. Colors can be adjusted during printing by CC or CP filters for color compensation. If you must shoot with a regular reflector lamp not designed for color film, use a reflector lamp filter.
2. When shooting with color slide film, use a cloudy filter for warm tones and a morning/evening filter for cool tones. Because there is always a danger of over-compensating, two shots of the same scene — one with filter and one without — may be advisable. For fine color compensation, use a low-density CC filter.