

ACCESSORY LIST

CATALOG
NO.

Table 2

300 OMEGA B-6 ENLARGER

Includes:

- 1 Glassless Filmholder
- 1 Lensmount (without lens) for 3½" Lens
- Standard Double Condensers

Available Accessories

- 7229 Portrait Soft Focus Attachment
- 7222 Diffusion Glass
- 7213 Heat Absorbing Glass
- 5202 Glassless rapid shift Filmholder, for each negative size (Specify negative size accurately. If 2¼" x 3¼", state whether roll film, cut film or pack film)
- 5201 Glass type rapid shift Filmholder
- Lenses:
 - For 2¼ x 3¼" negatives:
 - 2002 90 mm (3½") Wollensak Raptar
 - For 2¼ x 2¼" negatives:
 - 2001 75 mm (3") Wollensak Raptar
 - 2011 75 mm (3") Eastman Kodak Ektar
 - For 35 mm negatives:
 - 2000 50 mm (2") Wollensak Raptar
 - 2010 50 mm (2") Eastman Kodak Ektar
 - Lensmounts:
 - 3302 For 3½" Lens—Cone 2" high
 - 3301 For 3" Lens—Cone 1½" high
(Including thin (⅝") Supplementary Condenser Lens)
 - 3300 For 2" Lens—Flatboard
(Including thick (13/16") Supplementary Condenser Lens)
 - 3308 Lensmount for 50 mm f/3.5 Leica Lens, (including thick Supplementary Condenser Lens)
 - 7200 Auxiliary Focusing Attachment
(For very small enlargements and reductions)
 - 7208 Varigam Filter Holder (for Gelatin Filters)
 - 7230 Varigam Filter Holder (for Plastic Filters)
 - 7204 Copy Attachment (accepting, but not including 2¼" x 3¼" Graphic type filmholder)
 - 6200 No. 111A Mazda Opal Lamp, 75 Watt, 115 Volt

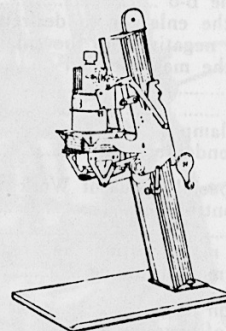
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INSTRUCTIONS

FOR SETTING-UP AND OPERATING THE

OMEGA B-6



You now own an Omega B-6, one of the finest, most versatile enlargers ever made. The brief and simple instructions that follow are sure to prove interesting and highly informative to a new Omega owner. They'll show you how easy it is and how little it costs to make truly outstanding enlargements on your Omega B-6.



SIMMON BROTHERS, Inc.

Manufacturers of Fine

American-made Photographic Equipment

30-28 Starr Avenue, Long Island City 1, N. Y.

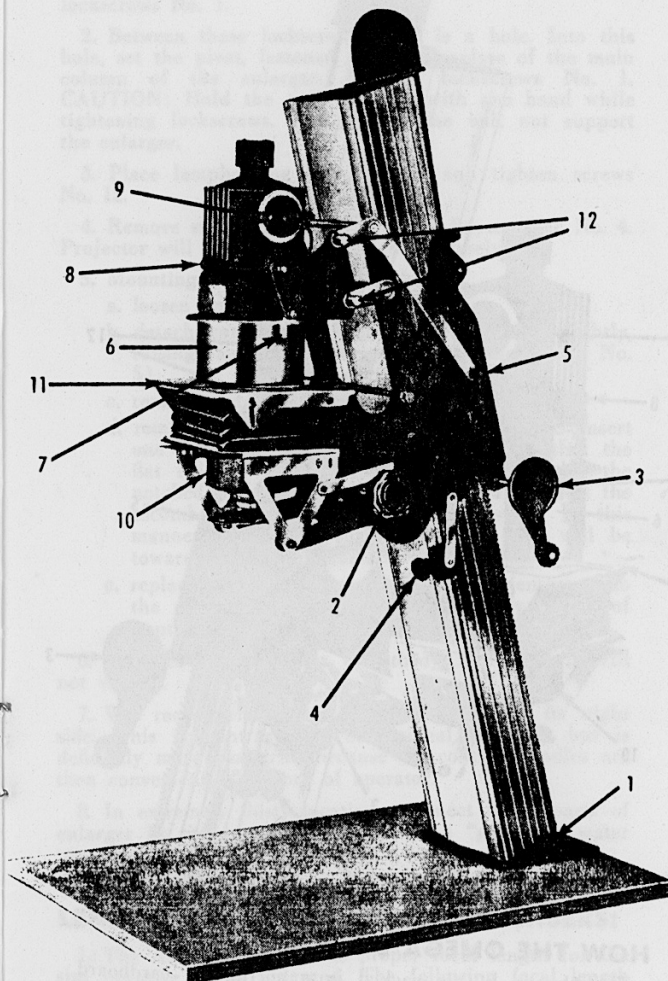
OMEGA B-6

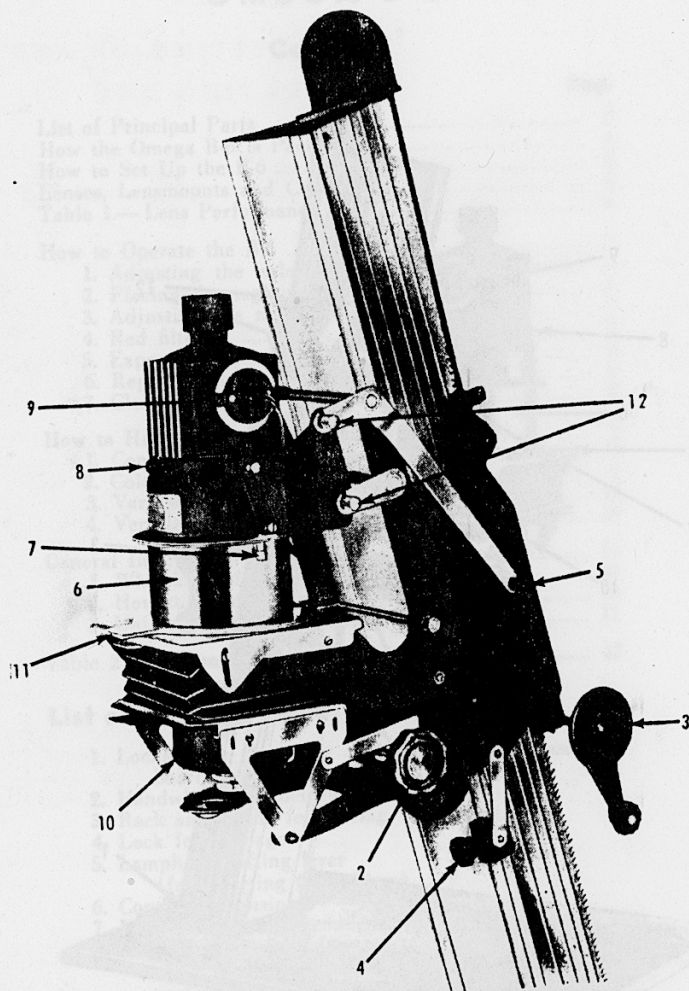
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List of Principal Parts

1. Lockscrews, fastening main column to base-board.
2. Handwheel for focusing.
3. Rack and pinion for carriage movement.
4. Lock for carriage.
5. Lamphouse lifting lever (for inserting filmholders).
6. Condenser housing.
7. Knurled screws for condenser housing.
8. Screw fastening top lamphouse casting (loosen to insert supplementary condensers and heat absorbing or diffusing glass).
9. Lockscrews for lamp socket assembly.
10. Lensmount.
11. Filmholder.
12. Knurled screws holding lamphousing to lifting levers and carriage.





HOW THE OMEGA B-6 IS PACKED:

The Omega B-6 is packed in a corrugated cardboard carton. The carriage and girder assembly, baseboard and lamphouse are packed separately within the outer carton. Accessories, such as filmholders and lensmounts are contained in the same carton, therefore, do not hastily discard any apparently empty part before looking inside it.

HOW TO SET UP THE B-6:

1. Carefully open the carton. Unpack the enlarger proper and baseboard. Set the baseboard on table and remove lockscrews No. 1.

2. Between these lockscrews there is a hole. Into this hole, set the pivot, fastened to the baseplate of the main column of the enlarger. Replace lockscrews No. 1. CAUTION: Hold the main column with one hand while tightening lockscrews. The pivot alone will not support the enlarger.

3. Place lamphousing on projector and tighten screws No. 12.

4. Remove straps fastening projector. Loosen lock No. 4. Projector will now move up and down freely.

5. Mounting of the standard condensers.

a. loosen knurled screws No. 7.

b. detach condenser housing by turning it slightly, raising lamphousing at the same time (lever No. 5).

c. remove metal spacer from condenser housing.

d. remove condenser lenses from packing and insert one lens into the condenser housing so that the flat side is down. Replace the spacer with the notched edge in the upper position and insert the second lens so that the flat side is up. In this manner the curved surface of each lens will be towards the curved surface of the other.

e. replace condenser housing with condensers onto the enlarger and lock into position by means of knurled screws No. 7.

6. Enlarger must be set on sturdy table which will not vibrate.

7. We recommend operating enlarger from its right side. This is contrary to conventional practice, but is definitely more practical, because all control handles are then conveniently in front of operator.

8. In extremely dusty locations, connect metal parts of enlarger by means of a bare wire to a "ground" (water pipe or radiator). Elsewhere, this is not necessary.

LENSES, LENS MOUNTS AND CONDENSERS:

1. The lens must be of the proper focal length for the size negative to be enlarged. The following focal length lenses are recommended: $3\frac{3}{8}$ " or $3\frac{1}{2}$ " for $2\frac{1}{4} \times 3\frac{1}{4}$ ", a 3" lens for $2\frac{1}{4} \times 2\frac{1}{4}$ " and a 2" lens for 35mm ($1 \times 1\frac{1}{2}$ ") and bantam.

LENS PERFORMANCE DATA
Table 1

Focal Length	Inch	Lensmount	Condensers	Largest Negative	Autofocus Magnification***		Approx. Autofocus Print Sizes***	
	MM				Smallest	Largest	Smallest Print	Largest Print
50	2"	Flatboard	Double Condensers plus thick (13/16") supplementary Condenser Lens	35MM* (1 x 1 1/2")	1.8	13	1 3/4 x 2-9/16"	12 3/8 x 18"
75	3"	Cone 1 1/2" high	Double Condensers plus thin (5/8") supplementary Condenser Lens	2 1/4 x 2 1/4"	1.3	8.5	2 7/8 x 2 7/8"	18 1/2 x 18 1/2"
90	3 1/2"	Cone 2" high	Double Condensers only	2 1/4 x 3 1/4"	1.65	6.5	3 5/8 x 5 1/4"	14 1/4 x 20 3/4"

*50 mm lenses can be used for Bantam negatives; print sizes are slightly larger.
***See paragraphs on very large and very small magnifications, page 10.

2. Lenses must be mounted in the proper lensmounts (see table 1).

3. Any lens will enlarge negatives smaller than the largest possible size, but the magnification ratio obtainable under these circumstances will be correspondingly smaller than if a shorter lens were used (see table 1).

4. Camera lenses of moderate f numbers (for example f/4.5) can be used. Camera lenses of very low f numbers (f/1.5 and f/2) are not recommended for enlarging.

5. Condensers must match the enlarging lens. For a 3 1/2" lens, the standard double condensers are used. Supplementary small condenser lenses are added for enlarging lenses of 3" and 2" focal lengths respectively. The supplementary lens for the 3" lens is relatively thin (5/8"), whereas the supplementary lens for the 2" lens is thick (13/16").

6. These supplementary lenses are inserted between the two parts of the lamphousing, i.e., the upper part of the lamphousing is detached after screw No. 8 has been loosened and the supplementary lens is then inserted, always with the flat side up.

HOW TO OPERATE THE B-6:

1. Adjusting the enlarger to desired negative size:

- insert a lens mounted on the proper lensmount. This lens must be of suitable focal length for the desired negative size (see table 1).
- be sure that the proper condensers are used for this lens; i.e., the standard double condensers only for a 3 1/2" lens, the double condensers with an additional supplementary, thin (5/8") lens for the 3" enlarging lens, and the standard condensers with an additional thick (13/16") supplementary lens for a 2" lens.

2. Placing the negative into the enlarger:

The negative is held in the filmholder by compressing the front lips of the upper and lower plate. Lift the lamphousing slightly (with the aid of lifting lever No. 5), then place the filmholder with negative upon the film stage of the enlarger. Lower the lamphousing which then by its weight keeps the filmholder in place. Negatives are always inserted in the filmholder with the emulsion (dull) side down.

3. Adjusting the magnification:

Loosen the knurled screw or lock No. 4, and move projector up and down by means of handwheel No. 3. After a satisfactory degree of magnification has been achieved, lock No. 4 may be tightened again and fine focusing achieved by rotating handwheel No. 2.

4. Red filter:

The red filter is fastened by a knurled screw to a small flag which is part of the lensmount. When lenses are changed, the filter is removed from one lensmount and fastened to the other by means of this knurled screw.

No red filter is perfectly "safe", and sensitized paper placed on the easel should not be exposed through the red filter for any appreciable time.

5. Exposures:

- a. insert negative into filmholder and place on film stage of enlarger as described above. Insert a white piece of paper into your paperholder and place this on the baseboard of the enlarger.
- b. adjust magnification by moving projector up and down as described above and focus by means of handwheel No. 2.
- c. compose picture by rotating filmholder upon the film stage. This may be facilitated by lifting lever No. 5 just enough to take the weight of the lamphousing off the filmholder.
- d. after a satisfactory composition has been achieved, the lens is usually stopped down. No lens performs as well at full opening as with a smaller stop, and the unusually high light output of the enlarger permits stopping down to $f/8$ or more.
- e. switch the light off, insert a piece of sensitized paper into your paperholder, and make an exposure. The use of a time switch is recommended.
- f. no definite exposure-time values can be given. They depend upon many factors, such as the density of the negative, the magnification ratio, the f number of the diaphragm stop, and the sensitivity of your paper.

6. Replacing lamp:

The lamp-socket assembly can be detached after loosening lock screws No. 9. A No. 111A enlarging lamp (General Electric or Westinghouse) is used. This lamp has a bayonet socket like an automobile lamp. Some lamps have markings on the glass. So that these do not face the condenser and cause dark spots on the easel, the entire assembly can be turned around in its seat before screws No. 9 are tightened.

7. Cleaning condensers:

The standard double condensers are removed by first loosening knurled screws No. 7, then turning the housing of the condensers slightly and lifting the lamphousing at

the same time by means of lifting lever No. 5. Place open palm of one hand on top of the condensers and tilt the entire condenser housing until top lens rests on palm of hand. Remove spacer. Bottom lens may be removed by again tilting condenser housing until lower lens rests in palm. After the lenses are cleaned, reassemble condensers and replace. When the enlarger is used with 2" and 3" lenses, a small supplementary condenser lens is used, which is placed between the two castings of the lamphousing. This small lens becomes accessible after the top part of the lamphousing has been removed (screw No. 8). The flat side of this supplementary condenser lens always faces upward.

HOW TO HANDLE SPECIAL KINDS OF WORK:

1. Contrast control:

- a. The contrast of prints may be controlled by using photographic paper of different contrast grades.
- b. Varigam paper: An improved method of contrast control is offered by the use of Varigam paper (Defender Division of duPont), which yields varying degrees of contrast depending upon the color of the light to which it is exposed. The B-6 enlarger is excellently suited to this type of work because of its unusually high light output. Exposure times will be short, even with the necessary color filters. Filter holders are available, by means of which Defender Varigam filters can be placed in front of the lens. These holders can be supplied for cardboard mounted gelatin filters or for the new plastic mounted filters.

2. Color:

Practically all color print processes require the use of filters made of gelatin. These filters may either be placed in front of the enlarging lens, like the red filter, or preferably between the source of light and the transparency. The latter has the advantage that small imperfections of the filters have no effect upon the sharpness of the print. In this enlarger, a round filter of $3\frac{1}{2}$ " diameter can be placed between the two halves of the lamphousing (loosen screw No. 8).

Color filters for Ansco Printon are usually specified under the assumption that a heat absorbing glass will be placed into the optical system. This glass ($3\frac{1}{2}$ " in diameter) can also be placed between the two halves of the lamphousing (loosen screw No. 8).

For full information regarding any one of the various color processes, please contact the manufacturer of the materials required for the process that you intend using.

3. Very small magnifications and reductions:

- a. Auxiliary focusing attachment: (Available as optional equipment). Take the lensmount off the enlarger, remove the lens by loosening the two small knurled screws and fasten it to the front of the auxiliary focusing attachment. Then place the entire auxiliary focusing attachment into the enlarger in place of the standard lensmount. Focus manually by turning the handwheel on the attachment. For small enlargements, and particularly for reductions the distance between paper and lens becomes quite short, and the distance between negative and paper very large. The correct distance can easily be found by holding a piece of white paper at varying distances below the lens. For very small reductions, always use the shortest focal length lens you have available. Whenever the auxiliary focusing attachment is used, a piece of opal glass should be placed between the two halves of the lamphousing (loosen screw No. 8).

4. Very large magnifications:

- a. Projecting on the floor: Fasten the baseboard of the enlarger to the table by means of C-clamps or the like. Loosen lock screws No. 1, rotate the enlarger on its pivot 180° and replace and tighten the lock screws. The enlarger will then project onto the floor and naturally yield much larger prints.

GENERAL INFORMATION:

1. What kind of negative to make:

No enlarger can yield really good results unless the negatives to be enlarged fall at least approximately within a certain range of contrast. This is because of the fundamental inability of photographic papers to reproduce the full range of tones included in a "snappy" negative.

The deepest shadow areas of such a negative may transmit 500 or 1000 times as much light as distinguishable details of the densest areas. Against this, unexposed white paper reflects only about 50 or 60 times as much light as completely exposed, fully developed, black areas.

Therefore, excessively brilliant negatives not only are useless but harmful. The best negatives for enlarging have a soft gradation and are rather thin. This is not the place for detailed instructions on processing, but there are numerous fine grain developers available, and suitable negatives are easily obtainable by being careful not to develop too long.

2. How to store your negatives:

Small negatives are best stored in short strips usually of 6 frames of 35mm film, 2 frames of 2¼ x 2¼" and single negatives of 2¼ x 3¼". Very practical paper or cellophane envelopes are carried by all dealers for this purpose.

Never store film in entire rolls. Film loses its moisture content, becomes brittle, and any attempt to manipulate it then results in severe scratches and other damage. No filmholder can keep such film flat.

3. Uniformity of illumination:

Great care has been taken to render the illumination of this enlarger as uniform as possible over the area of the easel. By means of a very carefully designed optical system, we have achieved a better performance than that given by other instruments available not only with 3½" lenses, but also with 3" and 2" lenses.

When using a lens of relatively long focal length, 3½", for relatively small magnifications (2 times or less), the light distribution can be improved by inserting a round piece of diffusing glass, 3½" in diameter, between the two halves of the lamphousing (loosen screw No. 8).

SIMMON BROTHERS, INC. IS READY TO ASSIST YOU NOW OR AT ANY TIME.

You now own an Omega B-6, one of the finest enlargers ever made. It can easily help you achieve far superior prize-winning enlargements. Simmon Brothers, Inc., is interested in seeing that you obtain these outstanding results. Therefore, if you have any questions regarding dark-room techniques, what accessories to purchase for your enlarger, or if we may be of any service, either now or at any time in the future, please contact our Technical Expert, Mr. Walter Archinal. He will be glad to give you prompt and individual attention.

Remember, your picture is only a snapshot until enlarged with an Omega.

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