INSTRUCTION MANUAL

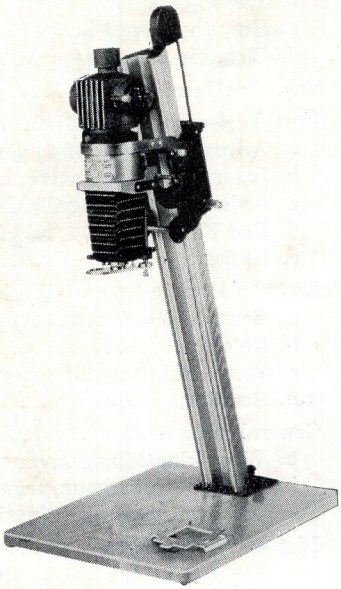
For Setting-Up and Operating the

SIMMON OMEGA®

B-22 & B-22XL

ENLARGER

Patents Pending



A
2¼ x 2¼
MANUAL
FOCUSING
ENLARGER

SIMMON
Omega

MANUFACTURED BY:
Berkey Technical Corp.
Woodside (New York City) N. Y. 11377 U.S.A.

DISTRIBUTED BY:
Simmon Omega, Inc.
A Berkey Photo Company
25-20 Brooklyn Queens Expressway, West
Woodside, (New York City) N. Y. 11377

BERKEY
PHOTO

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PLEASE NOTE: from time to time modifications are made for the sake of product improvement. Therefore, all specifications are subject to change without notice.

WELCOME TO THE SIMMON-OMEGA FAMILY

Thank you for having selected a Simmon Omega B-22. We are confident that you, like so many of our other friends, will become a satisfied Omega customer.

We have prepared this Instruction Manual to acquaint you with your new Omega B-22 Enlarger, to show you how to set it up, how to use it correctly, and to assist you in getting the most out of the advantages which we have built into it.

As a member of the Omega family, you are cordially invited to call or write to us for photographic advice or assistance, and to tell us about your particular problems, questions or suggestions. Our staff of photo experts will be pleased to supply you with any additional information you may require about your new Omega B-22 Enlarger.

Please fill out and mail the enclosed registration-guarantee card NOW. It will put your guarantee into effect.

Sincerely,

SIMMON OMEGA, INC.
CUSTOMER SERVICE DEPARTMENT
25-20 BROOKLYN QUEENS EXPRESSWAY WEST
WOODSIDE, (NEW YORK CITY) N. Y. 11377

IMPORTANT:

The instructions that follow are very simple. Please read them as soon as possible, even before you unpack the enlarger. This will get you started on the right foot, saving you valuable time and helping you obtain topnotch results without delay.

LIST OF PRINCIPAL PARTS

1. Lockscrews, fastening main column to baseboard.
2. Handwheel for focusing.
3. Combined handle and lock for carriage movement.
4. Removeable red safety filter.
5. Lamphouse lifting lever (for inserting filmholders).
6. Condenser housing.
7. Knurled screws for condenser removal.
8. Screw for fastening top lamphouse casting (loosen to insert supplementary condensers).
9. Lockscrews for lamp socket assembly.
10. Twist-lock lensmount.
11. Hinged type negative carrier.
12. Filter drawer.
13. Counterbalance spring.
14. Lamphousing.
15. Extra Long Extension Bellows.

HOW THE OMEGA B-22 IS PACKED

The Omega B-22 is packed in a corrugated cardboard carton. The carriage and girder assembly are packed assembled within the outer carton. The lamphouse, baseboard, filmholders and lensmounts are contained in the same carton, therefore, do not hastily discard any apparently empty part before looking inside it.

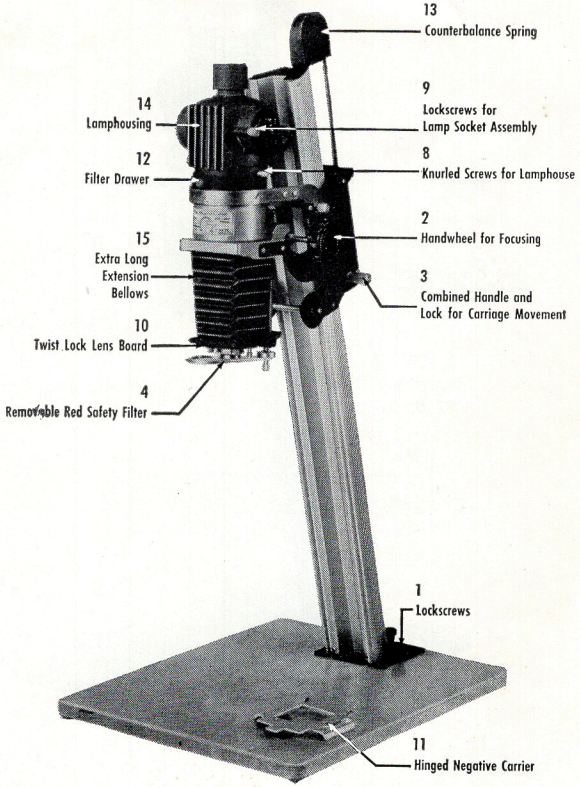


Fig. 1

HOW TO ASSEMBLE THE B-22

a. Carefully open the carton and remove the cardboard protector inserts. Remove the enlarger and accessories from the carton. *Check all items for completeness!*

b. Before handling the enlarger proper, be sure that the projector carriage is securely locked to the column by means of lock 3.

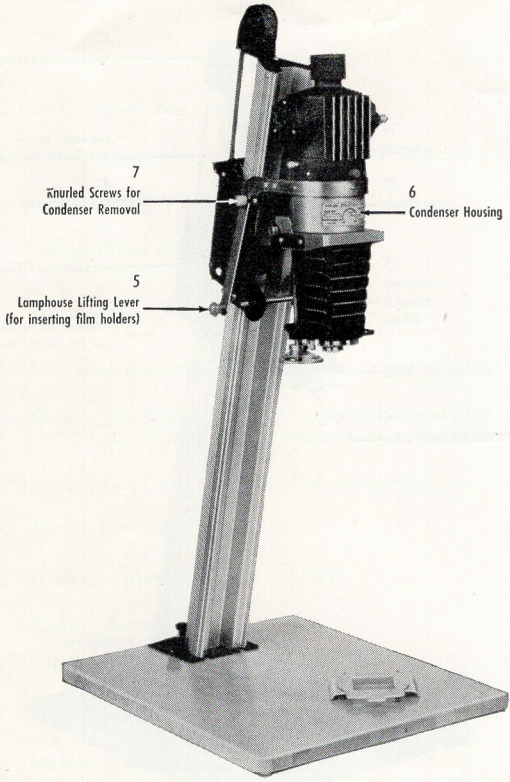


Fig. 2

c. Remove three screws from baseboard. Place the base of the girder assembly over the exposed holes. Replace the screws and tighten securely.

d. Remove aluminum spacer from inside condenser housing. Please clean condensers with lens tissue or a clean soft towel. Put one lens into condenser housing. Insert spacer (with indentations to the top) until it is a fraction below the surface of the housing. Gently drop the remaining lens, curved side down, on top of the spacer, and push down until it comes to rest in the normal horizontal position.

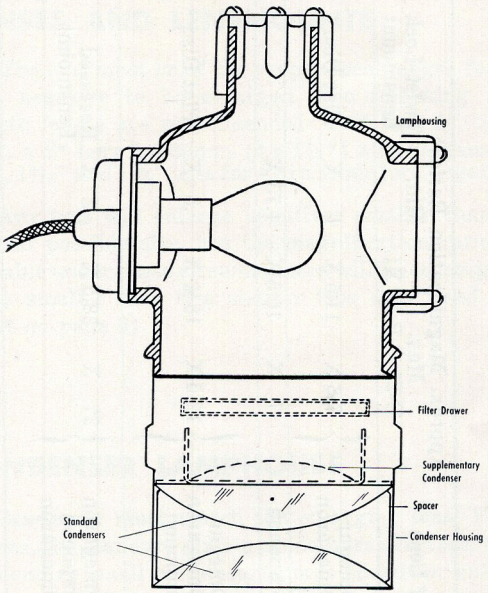


Fig. 3
Complete Lamphouse Showing Position of Condensers for Omega B-22

If you have an enlarging lens of 2″ (50mm) or less, a supplementary condenser must be placed on top of the condensers. Loosen screw 8 (Fig. 1), lift up lamphouse, remove filter holder, and insert condenser with flat side down as shown in Fig. 3.

e. Place the lamphouse on top of the condenser assembly of the enlarger and tighten two knurled screws (8).

RECOMMENDED LENSES, LENSMOUNTS AND CONDENSERS FOR OMEGA B-22, B-22 SPECIAL

Max. Neg. Size Lens Will Cover	f:	Focal Length	Name of Lens	Approx. Magnification Ratios† Max. B-22	Max. B-22 XL	Min.	Twist-Lock Lensmount	Condensers
2¼"x2¼"	4.5	3"	Rodenstock Omegar	7.6 X	11.5 X	1 X	Flat Disc	Standard double condensers
	4.5	3"	Rodenstock Omegaron					
	5.6	3.2"	Schneider Componon	7 X	10.5 X	1.75 X		
35mm	4.5	2"	Rodenstock Omegar	12.5 X	18¼ X	.5 X	Flat Disc	Double condensers with supplementary condenser
	3.5	2"	Rodenstock Omegaron					
	4.0	2"	Schneider Componon					
Ultra Miniature	4.0	1"	Rodenstock Omegaron	27 X	38.5 X	.2 X	Recessed Lensmount	Double condensers with supplementary condenser
	4.0	1 3/16"	Schneider Componon					
	4.0	1⅜"	Rodenstock Omegaron					

* Larger magnifications may be made by projecting on floor.

† All figures have been computed for an easel 1" high.

f. You may now loosen lock 3 whereupon the entire projector assembly can be moved up and down.

LENSES AND LENSMOUNTS

a. The lens must be of the proper focal length for the size negative to be enlarged. The following focal length lenses are recommended: a 3" lens for 2¼ x 2¼", a 2" lens for 35mm (1 x 1½") and bantam and a 1", 1$\frac{3}{16}$" and 1⅜" lens for ultra miniature negatives.

b. 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 chart on page 8).

CONDENSER LAMPHOUSE

a. **Condenser must match the enlarging lens.** For a 3" lens, the standard double condensers are used. Supplementary small condenser lens is added for enlarging lenses of 2" focal length and less.

b. **The supplementary lens is inserted** on top of the condenser, i.e., the lamphouse is detached after screws No. 8 has been loosened and filter drawer removed and the supplementary lens is then inserted, always with the flat side down.

c. **Replacing Lamp:** The lamp-socket assembly can be detached after loosening lockscrews 9. A No. 111A enlarging lamp (General Electric or Westinghouse) is used. This lamp has a bayonet socket like an automobile lamp.

d. **Cleaning Condensers:** Remove lamphouse by loosening knurled screws 8. The standard double condensers are removed by loosening the knurled screws

7, then grasp the condenser housing and lift slightly, pushing backwards at the same time, until slots are clear of the screws.

Holding the condenser housing in the palm of one hand, turn it over to one side and the top lens will slide into your other hand. Then remove the circular spacer that separates both lenses, tilt again and slide out the bottom lens. After the lenses are cleaned, reverse the procedure as follows: Put one lens into condenser housing, flat side down; insert spacer until it is a fraction below the surface of the housing. Gently drop the remaining lens (curved side down) on top of the spacer and push down until it comes to rest in the normal horizontal position. Replace lamphouse and tighten knurled screws.

NEGATIVE CARRIERS

The type supplied is of the newest design and will enable you to use single frame or film strips. The insertion works quickly since the top plate is hinged and spring loaded, and with a flick of your finger, is closed down for perfect pin register.

HOW TO OPERATE THE B-22

a. Adjusting the enlarger to the desired negative size:

1. Insert a lens mounted on the lensmount. This lens must be of suitable focal length for the desired negative size (see chart on page 8).
2. Be sure that the proper condensers are used for this lens; i.e., the standard double condensers only for a 3″ lens, the double condensers with an additional supplementary lens for the 2″ or smaller enlarging lens.

b. Inserting the negative: After the negative has been inserted, lift the lamphousing slightly (with the aid of lifting lever 5), then place the negative carrier all

the way back until it is stopped by the retaining pins on the negative stage of the enlarger. Lower the lamphouse, which then by its weight, keeps the filmholder in place. Negatives are always inserted in the negative carrier with the emulsion (dull) side down.

c. Adjusting the magnification: Loosen the knurled screw or lock 3, and holding same, move projector up and down. After a satisfactory degree of magnification has been achieved, lock 3 may be tightened again and fine focusing achieved by rotating handwheel 2.

d. Red Filter: The red filter is fastened by a knurled screw to a rod which is part of the lens stage.

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.

e. Exposures:

1. 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.

2. Adjust magnification by moving projector up and down as described above and fine focus by means of handwheel 2.

3. 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.

4. 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.

5. 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.

HOW TO HANDLE SPECIAL WORK

a. Contrast Control:

1. The simplest way to control the contrast of prints is by using photographic paper of different contrast grades.
2. Variable Contrast paper: An improved method of contrast control is offered by the use of Variable Contrast paper which yields any degree of contrast depending upon the color of the light to which it is exposed. The B-22 Enlarger is excellently suited to this type of work because, due to its high light output, exposure times will be short, even with the necessary color filters. If filters are to be used below lens, a special filter holder is available as an optional accessory.

b. Color: Practically all color print processes require color correcting filters. These filters can be placed in front of the enlarging lens. In this case use gelatin color correcting filters only. If the filter drawer is used for the insertion of color filters, imperfections of the filters do not affect the sharpness of the print. We recommend CP filters made of colored acetate. In this enlarger, a square filter of 2¾" diameter with corners slightly clipped should be placed in the filter drawer of the lamphousing. A heat absorbing glass is recommended for color work.

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.

c. Very large magnifications: Projecting on the floor: Fasten the baseboard of the enlarger to the table by means of C-clamps or the like. Loosen lockscrews 1, rotate the enlarger on its pivot 180° and replace and tighten the lockscrews. The enlarger will then project onto the floor and naturally yield much larger prints.

d. Small Magnifications: As the light output of the B-22 is quite high, we recommend placing a ground or opal glass on top of the upper 3½" condenser for magnifications of about 1:1. This will improve the light distribution and, at the same time, reduce the printing speed.

Cat. No. 473-012—3½" Ground Glass (2x exposure increase)

Cat. No. 473-002—3½" Opal Glass (6x exposure increase)

GENERAL INFORMATION

a. What kind of negatives to use: 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 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.

b. How to store your negatives: Small negatives are best stored in short strips usually of six frames of 35mm film, two frames of 2¼" x 2¼" etc. Very practical paper or cellophane envelopes are carried by all dealers for this purpose.

Never store roll 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.

c. 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 3" lenses, but also with 2" lenses and smaller.

OMEGA VERSATILE ACCESSORIES

Catalog No.

472-001 **MOUNTED SUPPLEMENTARY CONDENSER**—for use with 1″ and 2″ lenses.

421-005 **TWIST LOCK LENS MOUNT** (Standard with enlarger), Omegar.

421-006 **RECESSED LENS MOUNT** for 25/28 mm focal length lenses.

421-007 **RECESSED LENS MOUNT** for 35mm lens.

429-090 **HEAVY DUTY WALL ENLARGER MOUNT.**

473-101 **HEAT ABSORBING GLASS,** 3½″ dia.

473-002 **OPAL GLASS,** 3½″ dia.

473-012 **GROUND GLASS,** 3½″ dia.

429-028 **VARIABLE CONTRAST FILTERHOLDER**—For mounted plastic 2½″ x 2½″ filters between lens and image.

479-011 **TRANSPARENT DUSTCOVER** — Prevents harmful dust and dirt from settling on enlarger.

NEGATIVE CARRIERS

(Standard Size Openings)

GLASSLESS RAPID SHIFT WITH TROUGHS

423-102 Minox

423-103 35mm single frame

423-104 35mm

423-105 Instamatic

423-106 4 x 4 cm

423-107 2¼″ x 2¼″

423-110 **MOUNTED 35mm TRANSPARENCY.**

423-111 **UNMOUNTED 35mm TRANSPARENCY.**

429-012 **PORTRAIT DIFFUSION GRID ATTACHMENT**—Mounted screen for diffusing projected image.

OMEGA HEAVY DUTY FOOTSWITCH

Frees the Hands. . . . Speeds the Work!

Features solid metal casting with cork-lined anti-slip base.

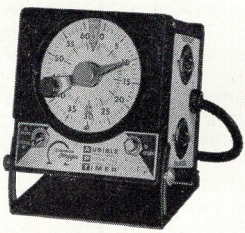
Can be screwed to floor or side of table (as a knee switch).

Treadle lies within cast frame, permits foot to rest on side of switch. Luminous disc on treadle for easy locating in dark. Complete with 6′ heavy duty line cord.

110/125V, 10 Amps. Cat. No. 461-051

OMEGA AUDIBLE REPEATING TIMER

WITH SILENT OR AUDIBLE TIMING
1-60 Second Intervals



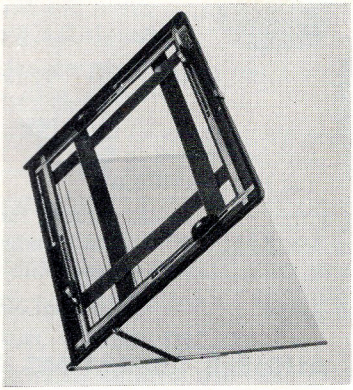
Ticks while you dodge or burn in—synchronous motor resets itself after each cycle—dial a setting—press a button—extremely accurate—focus and print switch. Safelight and enlarger outlets. Table or wall mounting. Tilting base. 110V, 60 c/s, 750W capacity.
Cat. No. 461-001

464-001
OMEGA COMPLETE DARKROOM OUTFIT

3 Yankee 8x10 Developing Trays
1 Yankee Developing Tank, with Thermometer/Agitator
1 Yankee Safe-Lite with brown filter
1 Yankee Film Squeegee
2 Yankee Print Tongs and 1 Paddle
2 Yankee Film Clips
1 Yankee 16 oz. Graduated Beaker
1 Premier 4-way Printing Easel
1 Premier 10x14″ Stainless Steel Ferrotype Plate
1 Testrite 6″ Print Roller
1 Alpha Blotter Press
1 Kodak Darkroom Manual

PART NO. 9-183-0037

SAUNDERS-OMEGA
14" x 17" Adjustable Universal Easels



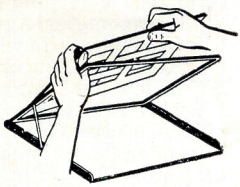
Saunders-Omega 14" x 17" Adjustable Universal Easels accommodate all paper sizes to full 14" x 17". Four overlapping, individually-adjustable stainless steel masking bands give borders from a hairline to 1¼" width on all papers up to 11" x 14". All bands have precise scale calibrations, allowing individual border adjustments. Lock-tite paper slots conveniently and snugly grip the paper along the entire length of one of its dimensions. The masking bands securely hold the paper flat on the easel surface. When the border adjustments are set for printing, they cannot be accidentally upset. An automatic click-stop holds the easel open while inserting paper. The easel is extra-heavy, all-metal, rust-proofed, handsomely finished and has a non-skid base.

FOCAL YELLOW focusing surface.

Model U1417, with standard base. Cat. No. 465-021

Model UA1417 has a 1" high surface for use with all AUTOMEGA and other autofocus enlargers. Its base features a threaded socket that permits distortion control with a standard tripod head. Cat. No. 465-022

For 14" x 17" papers, the entire masking assembly instantly and easily snaps out of the easel frame which automatically provides a 3/16" border.



Ask for New Folder on the Complete Line of SAUNDERS-OMEGA Enlarging Easels

Specifications Subject To Change Without Notice

223BT-371-TP

Printed in U.S.A.