

**BESSELER**  
**23C ENLARGER**

## 23C INSTRUCTIONS

The "Safeguards" statement reproduced below is in accordance with Underwriters Laboratories "Standard for Safety, UL 122, Photographic Equipment."

### I. IMPORTANT SAFEGUARDS ©

When using your photographic equipment, basic safety precautions should always be followed, including the following:

1. Read and understand all instructions.
2. Close supervision is necessary when any appliance is used by or near children. Do not leave appliance unattended while in use.
3. Care must be taken as burns can occur from touching hot parts.
4. Do not operate appliance with a damaged cord or if the appliance has been dropped or damaged—until it has been examined by a qualified serviceman.
5. Do not let cord hang over edge of table or counter or touch hot surfaces.
6. If an extension cord is necessary, a cord with a suitable current rating should be used. Cords rated for less amperage than the appliance may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.
7. Always unplug appliance from electrical outlet when not in use. Never yank cord to pull plug from outlet. Grasp plug and pull to disconnect.
8. Let appliance cool completely before putting away. Loop cord loosely around appliance when storing.
9. To protect against electrical shock hazards, do not immerse this appliance in water or other liquids.
10. To avoid electric shock hazard, do not disassemble this appliance, but take it to a qualified serviceman when some service or repair work is required. Incorrect reassembly can cause electric shock hazard when the appliance is used subsequently.

### SAVE THESE INSTRUCTIONS

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## CONTENTS

I. Important Safeguards .....	1
II. Introduction .....	2
<b>ASSEMBLY AND OPERATING INSTRUCTIONS</b>	
III. Parts Illustrations .....	3
IV. Assembly Instructions .....	4
V. Operating Procedure .....	5
Enlarger .....	5
Lamp House .....	5
Color Filter Compartment .....	5
Condenser Assembly .....	5
Upper Bellows .....	5
Negative Stage .....	5
Positioning the Condenser Stage .....	6
Negative Carrier .....	6
Filter Drawer .....	7
Lens and the Lens Stage .....	7
Magnification .....	7
Negative Distortion Control .....	7
Horizontal Projection .....	8
Elevation Lock .....	8
VI. Adjustments	
Alignment of the Negative Stage .....	9
Alignment of the Lens Stage .....	10
Aligning Carriage in the Frame .....	10
Adjustment of the Counterbalance	
Spring .....	10
Adjustment for the Condenser	
Setting .....	11
VII. Accessories	
Negatrans® .....	11
Lens Boards .....	11
Lens Extension Cone .....	11
Heat Absorbing Filter .....	12
Resistrol® .....	12
Varigam, Polycontrast, Vee Cee	
Enlarging Papers .....	12
Bestrol Meter .....	12
Portrait Soft Focus Filter .....	12
Dichro 23 dga Colorhead .....	12
BP Pak .....	12
VIII. Warranty .....	13

## II. INTRODUCTION

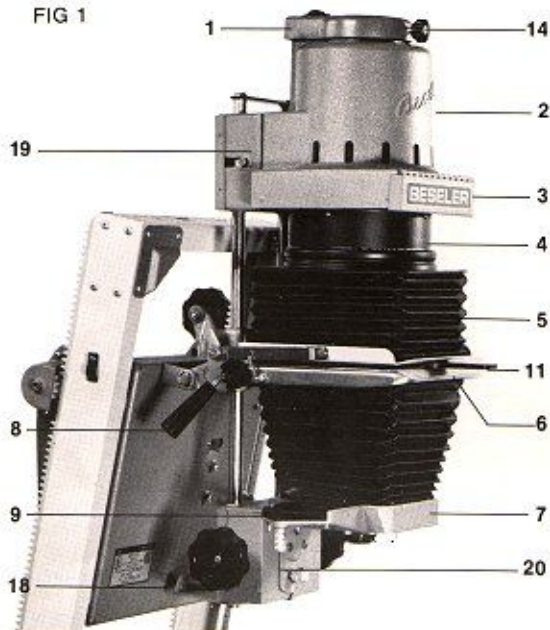
Your Beseler Model 23C Enlarger is the end result of over 100 years of experience in equipment design. It embodies principles of design and construction in enlargers that recognize basic requirements for efficient enlarger use where the range of negative sizes lies between 8mm (Minox) and 6x9cm. These principles, although new to enlarger design, are old and proven in scientific fields. Its construction assures the freedom from vibration that is so important in enlarging. Its ability to accommodate various sizes of negatives without the need for extra condensers recognizes the need for dark-room simplicity. Its mechanism is modern and its dependability is proven.

Optically, as well as mechanically and electrically, your Beseler 23C Enlarger is the proper companion to your fine photographic equipment and it is a complement to your photographic capabilities.

The Charles Beseler Company, manufacturers of your Beseler 23C Enlarger, was founded in 1869—over a century ago! Our work has always been engaged in precision apparatus, and your Beseler 23C Enlarger reflects the precision and painstaking production efforts that typify Beseler practice.

Like any other fine apparatus, your Beseler 23C Enlarger is built to give years of faithful and precise service. Its capabilities ask only your care and attention to its protection, so that it will remain steadfast in its brilliant performance, as it was designed and built to do.

FIG 1



### III. PARTS ILLUSTRATION

1. Lamp House Cap
2. Lamp House
3. Color Head Filter Compartment
4. Condenser Housing
5. Upper Bellows
6. Negative Stage
7. Lens Stage
8. Negative Stage Lever
9. Filter Drawer
10. Elevation Handle
11. Negative Carrier
12. Condenser Stage Adjustment Knob
13. Condenser Stage Guide
14. Lamp House Cap Locking Screw
15. Elevation Lock
16. Enlarging Lens
17. Horizontal Lock
18. Vertical Adjustment Screw
19. Upper Housing
20. Lower Housing

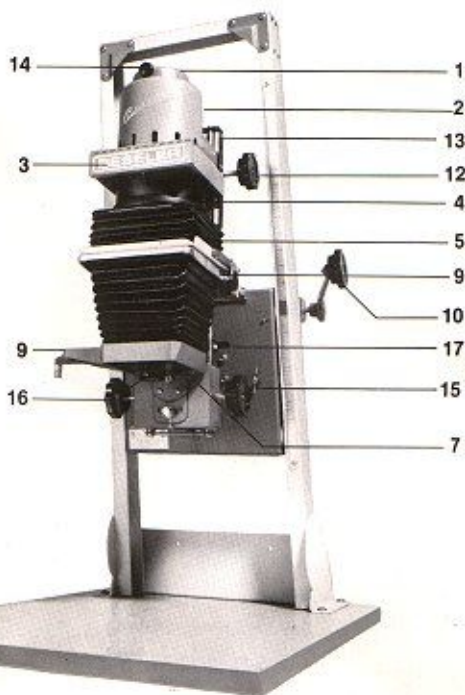


FIG 2

#### IV. ASSEMBLY INSTRUCTIONS

The Model 23C Enlarger is shipped disassembled into three principal parts:

- (a) The Enlarger Frame and Carriage Assembly
- (b) The Lamphouse Assembly
- (c) The Baseboard

To assemble the Enlarger:

- a. Remove the enlarger frame and carriage assembly and place it on a suitable table with the gear teeth pointing downward. Remove the lamphouse assembly and place it aside. Remove the baseboard from its liner.
- b. Six screws (1) which are required for attaching the baseboard to the enlarger frame and carriage assembly are located in the cloth bag. Place the baseboard against the bottom of the frame and attach the baseboard to the enlarger frame and carriage assembly with the six screws provided.
- c. Stand the enlarger up and retighten the six screws.
- d. Remove the pivot rod (2) from the yoke in the carriage by removing one of the retaining rings (3). To do this pry the ring off gently with a screwdriver. Pull the pivot rod out of the yoke. Hold the lamphouse assembly against the carriage assembly so that the flanges on the back of the lamphouse assembly match the holes in the yoke on the carriage, and reinsert the pivot rod. Then replace the retaining ring.
- e. Attach the elevating crank (4) with the Allen head wrench supplied in the cloth bag.
- f. Unscrew the screws holding the vertical stop (5), turn the stop around and then reassemble in accordance with the instructions on hang tag (590-80-14) attached to enlarger.

The enlarger is now completely assembled.

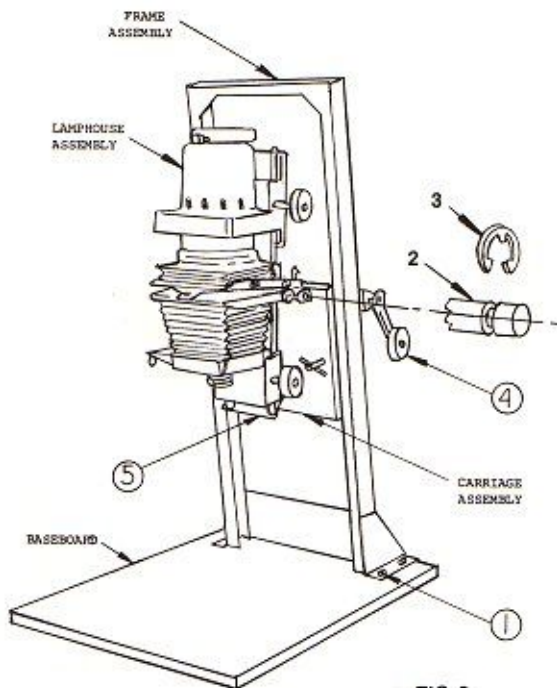


FIG 3

## V. OPERATING PROCEDURE

### Enlarger

The enlarger consists of a baseboard, a frame, a cross carriage assembly and an enlarger head assembly. The enlarger head assembly is made up of the lamphouse (2), a condenser assembly (4), negative stage assembly (6) and the lens stage assembly (7). The frame is attached to the baseboard; and the cross carriage assembly, with the enlarger head attached, rides up and down on the frame. The carriage is raised and lowered by turning the elevating crank (10) which is located on the right side of the enlarger. When the carriage has been moved to the correct elevation, it is locked in place by the elevation lock (15). The entire lamphouse carriage assembly is supported on two sturdy geared racks and it cannot move or change its position in any way until the elevation lock is released.

### Lamp House (2)

The Beseler 23C lamphouse may be opened for lamp replacement by loosening the screw at the top, and lifting the lamphouse cap up from its base. To remove, push in on the bulb and turn counter-clockwise. Always replace the standard lamp supplied with the enlarger with a PH111A lamp (75 watts), Beseler Catalog #8104.

### Color Filter Compartment (3)

Color printing requires the use of color printing filters, in order to obtain the proper color balance.



The lamp house contains a filter drawer (3) into which a filter holder (furnished with the 23C) is inserted.

Filters are to be cut to 5½ x5½" to fit into the drawer.

For color printing Beseler offers a complete set of filters, Catalog #8932, which will fit the 23C without cutting and cover a range of 2.5 to 157.5 in cyan, magenta and yellow.

This allows the filters to be placed between the lamp and negative, outside of the image forming rays of light.

Durable plastic filters can be used for the filter pack. They are placed quickly and accurately into the color filter compartment on top of the clear plastic filter support. Be sure to remove the protective adhesive covering on the filter support before inserting it into the center channel of the filter compartment. (see Fig. 4)

### Condenser Assembly (4)

The condenser cell slides into place in the lower channel of the filter compartment (3). (see Fig. 4)

### Upper Bellows (5)

The upper bellows is held in place on the condenser assembly by means of the seal which slides over the lower bead on the cell. (see Fig. 5)

### The Negative Stage (6) (see Fig. 5)

The negative stage consists of a flat platform (6) that divides the upper and lower bellows. It is opened by pulling the negative stage lever (8) for-



ward. The negative stage will remain open as long as the lever is in the forward position. Push the lever back to allow the negative stage to close.

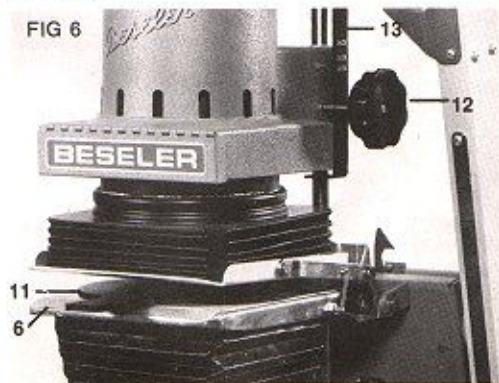
When the negative stage is open, insert the negative carrier into it, with the ring on the under side. This ring places the negative carrier into the proper optical position of the negative stage and serves to guide the carrier as it is rotated to the desired point.

#### Positioning The Condenser Stage (see Fig. 6)

Any size negative, from Minox (8mm) to 2 1/4" x 3 1/4" may be used in the Beseler 23C Enlarger without changing the condenser unit. This is accomplished by locating the condenser stage in its proper position for the size of the negative used.

Simply raise or lower the condenser stage so that it rests at the correct point. This point is one that provides complete light coverage of the negative area, with the proper flatness of field and the avoidance of "hot spots."

First insert the negative carrier into the negative stage. Raise or lower the condenser stage to its correct position by rotating the Condenser Stage Adjustment Knob (12). When the proper position is reached as indicated on the Condenser Stage Guide (13), the condenser is in its optically correct position for use. Five positions are indicated on guide 13, but any size negative may be used within its range:



2 1/4" x 3 1/4" position . . . .	2 1/4" x 3 1/4" negatives
	6 x 9 cm negatives
	6 x 7 cm negatives
2 1/4" x 2 1/4" position . . . .	2 1/4" x 2 1/4" negatives
	2"x2" negatives
	6 x 4.5 cm negatives
8-16-35mm position . . . .	35mm negatives
	Instamatic 110 & 126
	16mm negatives
	8 mm (Minox)
	negatives

#### The Negative Carrier (see Fig. 7)

Negative carriers are available for any size film from Minox (8mm) to 2 1/4" x 3 1/4". All standard negative carriers are of the glassless, dustless type, and may be rotated over 180° in the negative stage.

Each negative carrier consists of two flat metal discs, with an aperture that is correct for its negative. Two guide pins at each of the two sides of the aperture of one disc locate the negative precisely into its position. Four holes in the second disc accommodate these guide pins so that the combination of the two discs forms a flat, smooth assembly. The ring on the underside of the lower disc acts to retain the negative carrier assembly in the negative stage and to guide the carrier accurately as it is rotated.

A handle is conveniently placed on the negative carrier to facilitate its rotation.

Stripfilm is easily moved in the negative carrier by releasing the tension in the negative stage. This is done by pulling forward Negative Stage Lever (8).



All Beseler 23C negative carriers have specially designed handles notched to facilitate quick separation, and are hinged.

#### The Filter Drawer (9)(see Fig. 8)

A standard red safety filter is normally supplied with the Beseler 23C Enlarger. The filter will be found in the compartment of Filter Drawer (9). Its operation requires only the insertion of the drawer into the enlarger for use of the filter and opening the drawer when the enlargement is to be made.

The Filter Drawer will also accommodate other types of filters, such as Varigam, Polycontrast, Tricolor, Neutral Density, Soft Focus, Diffusion, etc. Its capacity is 2 1/4" x 2 1/4" to 2-3/8" x 2-3/8".



FIG 8

#### Lenses And The Lens Stage

Most lenses of focal length from 2" to 4" may be used in the Beseler 23C Enlarger without the need of negative spacers, or special lens boards. The standard 4" square lens board used in the Beseler 23C will accommodate any of these lenses and will operate perfectly with its corresponding negative. A special recessed lensboard for a 1" lens is available for use with Minox or Pocket Instamatic type negatives.

The lens, mounted on the lensboard, is inserted into the lens stage (7) by simply inserting the back edge of the board into the rear lens retainer. A soft, springy resistance will be felt, caused by a spring that holds the lens firmly in proper position when the lensboard is permitted to slide back into the forward retainer. Removal of the lensboard is accomplished by simply pressing it against the retainer spring and allowing the front edge to drop out of the forward retainer.

Standard lenses are available for every size negative. Recommended focal lengths and base-board magnifications are as follows:

Negative Size	RECOMMENDED LENS Focal Length	APPROXIMATE BASEBOARD MAGNIFICATION	
		Maximum	Minimum
2 1/4 x 3 1/4	105mm (4")	5.75X	1.1X* 1.6X
6 x 7 cm	90mm (3 1/2")	7.75X	.75X* 1.2X
2 1/4 x 2 1/4 6 x 4.5cm	80mm (3 1/4") 75mm (3")	9X	1X
35mm & 126	50mm (2")	14.5X	2.5X
8mm, 16mm & 110	25mm (1")	32X	8X

\*These magnifications are obtained by mounting these lenses in the extension cones available as accessories.

#### Magnification

The size of the enlargement is determined principally by the height of the Enlarger Lamp House from the easel. Increasing its height increases the size of the enlargement. Lowering it decreases the size of the enlargement.

Raising and lowering of the Beseler 23C lamphouse is accomplished by elevation handle (10).

#### Negative Distortion Control

The lens stage of the 23C may be tilted in either direction, in conjunction with tilting the easel, as a corrective means of altering perspective (i.e. architectural photography, special effects).

In order to correct for distortion, the lens stage and easel must be tilted in such a manner that their lens planes converge at a common point with the negative stage plane (see fig. 9).

Since the lens stage may only be tilted from left to right, the easel should only be tilted in the same direction. In other words, the easel should not be tilted from front to back to correct for distortion.

If the projected image on the easel is not oriented properly for distortion correction, the negative carrier may be rotated in the negative stage to the desired position. Of course, the image must be refocused after tilting the easel.





FIG 9

#### Horizontal Projection (Murals) (see fig. 10)

For enlargements of a size exceeding that possible on the baseboard, the Beseler 23C Enlarger may be quickly adjusted for wall projection. This is done by pushing the horizontal lock release to the right and swinging the entire lamphouse assembly on its axis slowly. The pointer arrow on the carriage should be *below* the red area on the calibrated strip to provide adequate clearance between the lamp house and frame. In its final position, a spring catch will engage itself to hold the lamphouse assembly firmly in a horizontal position. To return the lamphouse to its vertical position, disengage the catch (17) and slowly lower the lamphouse to its vertical position.

The design of the horizontal projection mechanism assures rigidity and the accurate return of the lamphouse assembly to a precise vertical position.

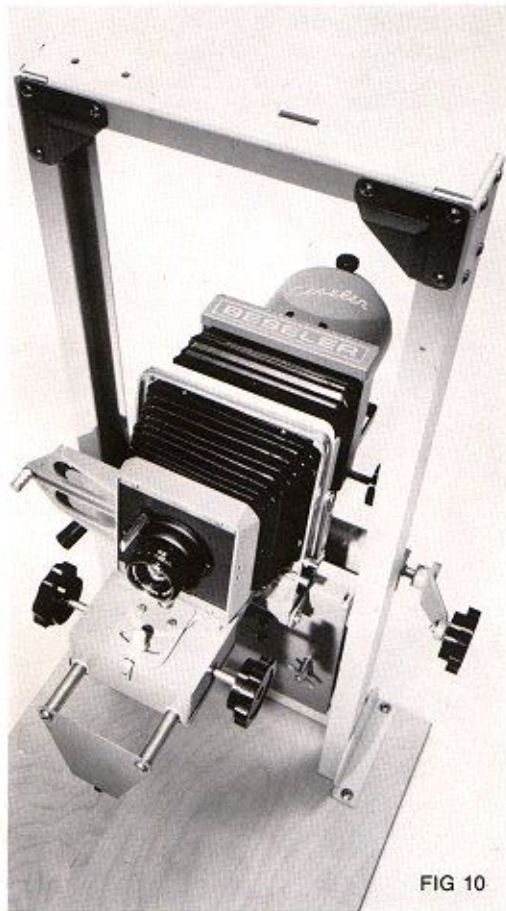


FIG 10

#### Elevation Lock

A special lock (15) is provided for securing the enlarger carriage in position when repetitive use makes this desirable. The lock is operated by rotating the knob clockwise. Turning it completely counter-clockwise releases its braking mechanism. Always release this knob before changing the carriage position. *If only partially released, the gears on the carriage will wear prematurely.*

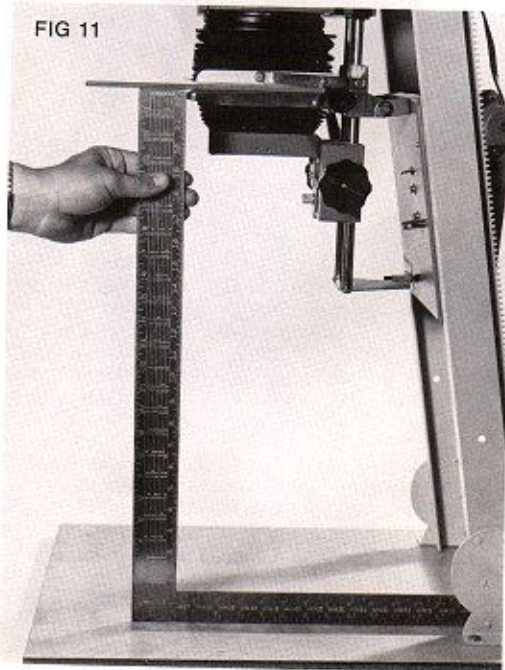
## VI. ADJUSTMENTS

Beseler Enlargers are engineered to provide accurate, smooth and dependable performance under even severe working conditions. Occasionally, adverse conditions or a need for moving the enlarger may disturb the alignment of one of its working parts. The following hints for their correction will help the owner to avoid loss of time.

### Alignment of the Negative Stage

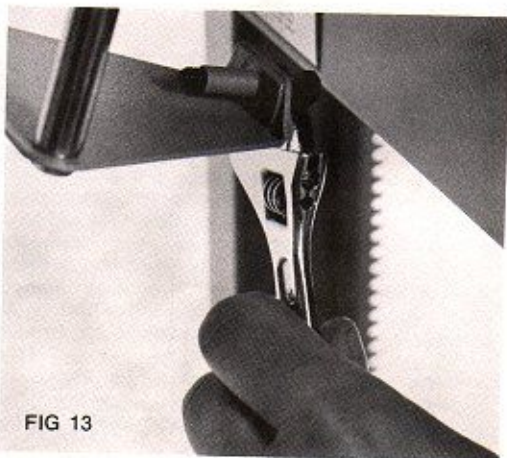
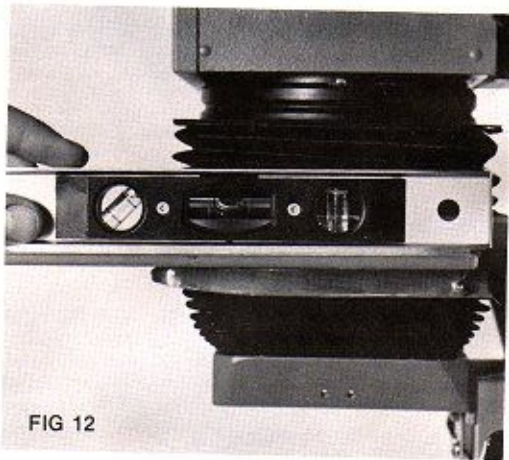
- a. Place a sheet of glass or a suitable absolutely flat surface on the lower negative stage so that it extends beyond the casting and close the negative stage.

**Technique #1** - Place one side of a carpenter's square on the baseboard and the opposite end in contact with the underside of the glass in the negative stage (see fig. 11).



**Technique #2** - Place a bubble level on the baseboard. Next, place the level on either side of the top surface of the glass (see fig. 12).

- b. Loosen the lock nut and turn the vertical adjustment screw (see fig. 13) until a level condition is achieved.
- c. Tighten lock nut while being careful not to turn the vertical adjustment screw.



### Alignment of Lens Stage

In normal operation, the lens stage in "zero" position should be parallel to the baseboard. To insure this condition proceed as follows:

- Loosen thumbscrew (see fig. 14)
- Place a bubble level or carpenters square in contact with the underside of the lens stage casting (see fig. 15). Level by moving the lens stage from side to side. The lens stage should be parallel to the baseboard.
- Tighten thumbscrew
- If necessary, re-adjust lower indicator by loosening the mounting screw and aligning with the upper indicator (see fig. 16).

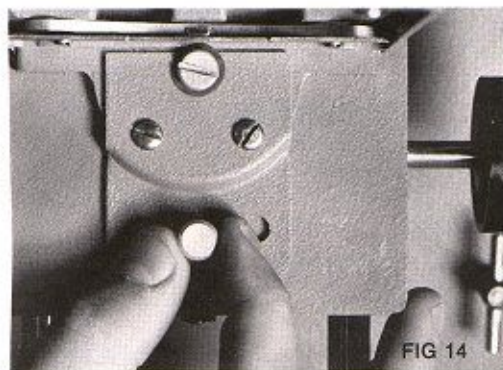


FIG 14

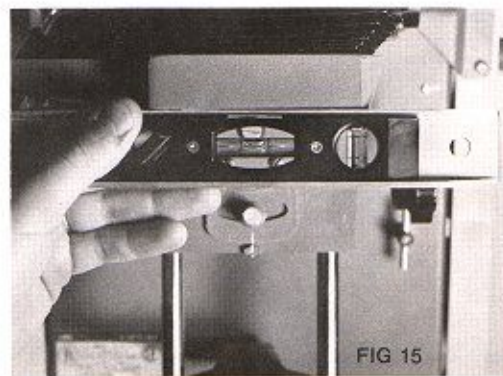


FIG 15

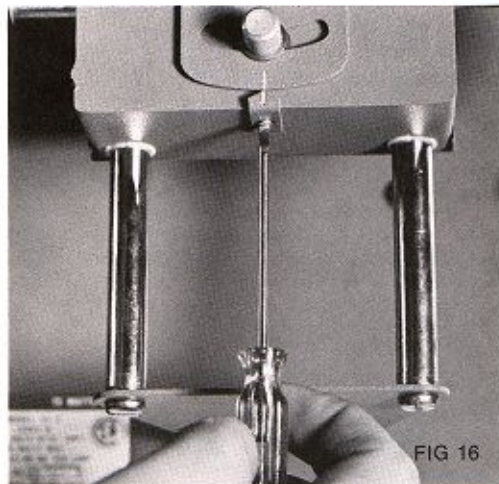


FIG 16

### Aligning Carriage in Frame

In order to restore the carriage of the 23C to proper alignment:

- Remove fasteners at top of cross rail on left and right side of frame in order to remove top cross rail.
- Remove top cross rail.
- Holding crank knob firmly, run carriage up near top carefully until near end of gear racks. Holding crank knob firmly to prevent its unwinding under the stored spring tension, continue raising machine until it leaves gear racks.
- While continuing to hold crank knob firmly, carefully re-engage gears uniformly on each side by running carriage downward, and then check for approximately equal space with  $1/16$ " between bottom of carriage and baseboard on left and right sides. Repeat if necessary.
- Replace top cross bar and fasteners.

### Adjustment of Counterbalance Spring

If the stored counterbalance spring tension should be lost (by letting the crank loose, etc.), it can be restored by turning the counterbalance assembly (refer to exploded drawing, part #84) three to four times clockwise from left side facing

machine, letting spring hook re-engage under washer. Test by raising carriage to top. If it drops, add another turn of tension. If carriage tends to move upward, reduce spring tension by one turn by unhooking spring enough to bypass washer for one turn. When adjustment is satisfactory, check that spring is well engaged under washer.

#### Adjustment for Condenser Setting

The upper housing is located directly behind the lamphouse and the lower housing directly behind the lens stage adjustment assembly (tilt plate). (see fig. 17).

- Pry off the sheet metal cover and expose the two tension springs.
- Tighten the screws (A) by turning them clockwise to increase tension.
- If friction wheel (B) is slipping on focus shaft, tighten the set screws on the wheel.
- Replace sheet metal cover.

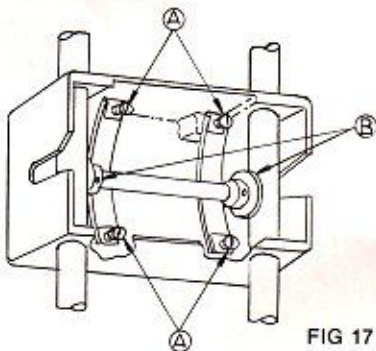


FIG 17

One Negatrans, Cat. #8078, is available for handling 35MM film and is a glassless carrier. The other, CAT. #8097, handles 2¼" x 2¼" and 2¼" x 2¾" film and contains a single pressure glass for flattening the film.



#### Lens Boards

Because of the wide variety of lenses in use, lens boards are available as accessories. These can be furnished unbored (with ¼" diameter center drill, for boring by customer) or bored to suit specified lenses. Boards are available flat and recessed, with and without pilot lights.

#### Lens Extension Cone

For use with lenses of 3½" and 4" focal length and negatives 2¼" x 3¼" to obtain minimum magnification.

These are available prebored to fit most standard lenses, or blank (for boring by customer). In ordering bored cones, specify lens which will be used.



## VII. ACCESSORIES

### Negatrans®

The Beseler Negatrans® is a patented carrier that transports film left in roll form, cut into strips or even single frames, into and out of your 23C enlarger without anything touching the picture area while the film is being transported. Once the negative is inserted into the negative stage, it need not be removed, nor the stage opened, to insert, advance or remove the negative.

### Heat Absorbing Filter

A Heat Absorbing Filter (Catalog #8042) is available for use in Beseler 23C Enlarger. It is made of a special glass with heat absorbing properties. For printing color it is recommended that a heat absorbing filter is placed above the condenser assembly and into the filter drawer (above the filters) in the top channel of the color filter compartment.

### Resistrol® (Catalog #8109)

RESISTROL® is a voltage control unit which when properly connected to the electrical cord of the 23C Enlarger provides a means for varying the voltage input to the lamp of the Beseler Enlarger, up to maximum line voltage.

It is used:

1. To help control lamp intensities in color printing.
2. To reduce voltage for increasing lamp life.
3. To reduce light intensity where it is either impractical or undesirable to reduce the enlarging lens diaphragm opening, i.e., to prolong enlarging time for "dodging" or "burning-in".

To utilize this feature, it is generally good practice to adjust the Resistrol knob to a point under maximum voltage so that sufficient margin for adequate increase will always be available where line voltage fluctuations exist. A quick and dependable means for such evaluation is available by inserting a Bestrol Voltmeter (catalog #8111) into the outlet located at the top of the control for this very purpose.

### Varigam, Polycontrast, Vee Cee Enlarging Papers

Plastic Filters for these papers are available for use in the filter drawer of Beseler Enlargers. They are furnished in a square format, which makes possible quick insertion and removal of them. Each of the filters bears an embossed number on the frame.

Varigam & Vee Cee - (Catalog #8043) A set of 5 filters, mounted in plastic frames.

Polycontrast - (Catalog #8045) A set of 7 filters, mounted in plastic frames.

### Bestrol Meter (Catalog #8111)

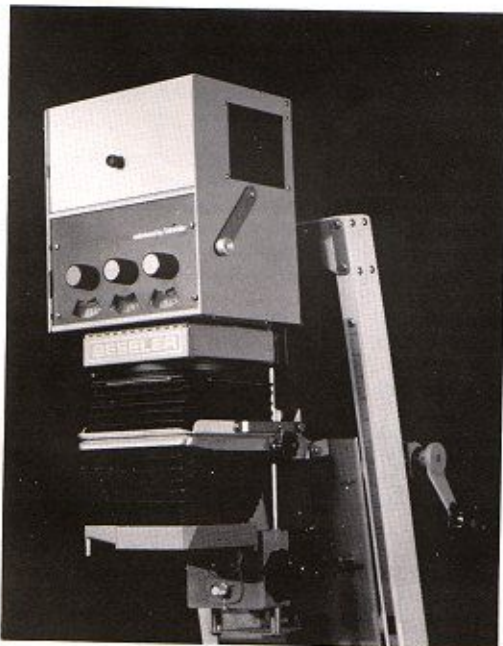
Plugs into the Resistrol and indicates voltage which will be applied to the lamp.

### Portrait Soft Focus Filter (Catalog #8041)

The Portrait Soft Focus Filter is available and may be placed into the filter drawer of Beseler Enlargers to achieve a pictorial and slightly diffused effect in enlargements. This filter consists of a fine wire mesh mounted in a plastic frame and, when placed in the filter drawer, affects the image only to the extent of its diffusion for portraiture and similar purposes.

### Dichro 23 dga (Catalog #8195)

Easily replaces lamp cap and condenser cell and converts 23C to a dichroic Diffusion Color Enlarger. Permanent, stepless filtration from 0 to 160 in magenta, cyan and yellow. 200 watt quartz lamp does not blacken with age.



### BP Pak (Catalog #8117)

Consists of extender base and oversized baseboard to allow over 16" x 20" prints on the baseboard.

## VIII. WARRANTY

BESELER PHOTO MARKETING COMPANY, INC.  
FLORHAM PARK, NEW JERSEY 07932

### LIMITED WARRANTY

The Beseler Photo Marketing Company, Inc., Florham Park, New Jersey warrants the 23C enlarger (with the exception of lamps), to the original purchaser only, to be free from defects in materials and workmanship for a period of one (1) year from the date of purchase from an authorized Beseler Dealer.

This warranty does not apply to equipment showing evidence of accidental damage, misuse or abuse, or which has been tampered with or repaired by persons other than authorized Beseler personnel.

Beseler's sole obligation under this warranty shall be to repair or replace (at Beseler's option) the defective part of the merchandise. If it is necessary to return the instrument, transportation expenses to Beseler must be prepaid by the purchaser and Beseler is not responsible for damage in shipment.

The purchaser must give immediate notice to Beseler in the event the product shall be found to be defective. The purchaser must allow at least four (4) weeks for the correction of the defect.

THIS WARRANTY IS IN LIEU OF ALL OTHERS EXPRESSED OR IMPLIED, INCLUDING WARRANTIES AS TO FITNESS FOR USE AND OF MERCHANTABILITY except as may be mandated

by statute or rule of law. Any implied warranties of fitness for use, or merchantability, that may be created by operation of law are limited to the one (1) year warranty period. NO LIABILITY IS ASSUMED FOR EXPENSES OR DAMAGES RESULTING FROM INTERRUPTION IN OPERATION OF EQUIPMENT, DAMAGE TO FILM OR PAPER, OR FOR INCIDENTAL, DIRECT OR CONSEQUENTIAL DAMAGES OF ANY NATURE. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. The purchaser may also have implied warranty rights. In the event of a problem with warranty service or performance, the purchaser may be able to go to a Small Claims Court, a State Court, or a Federal District Court.

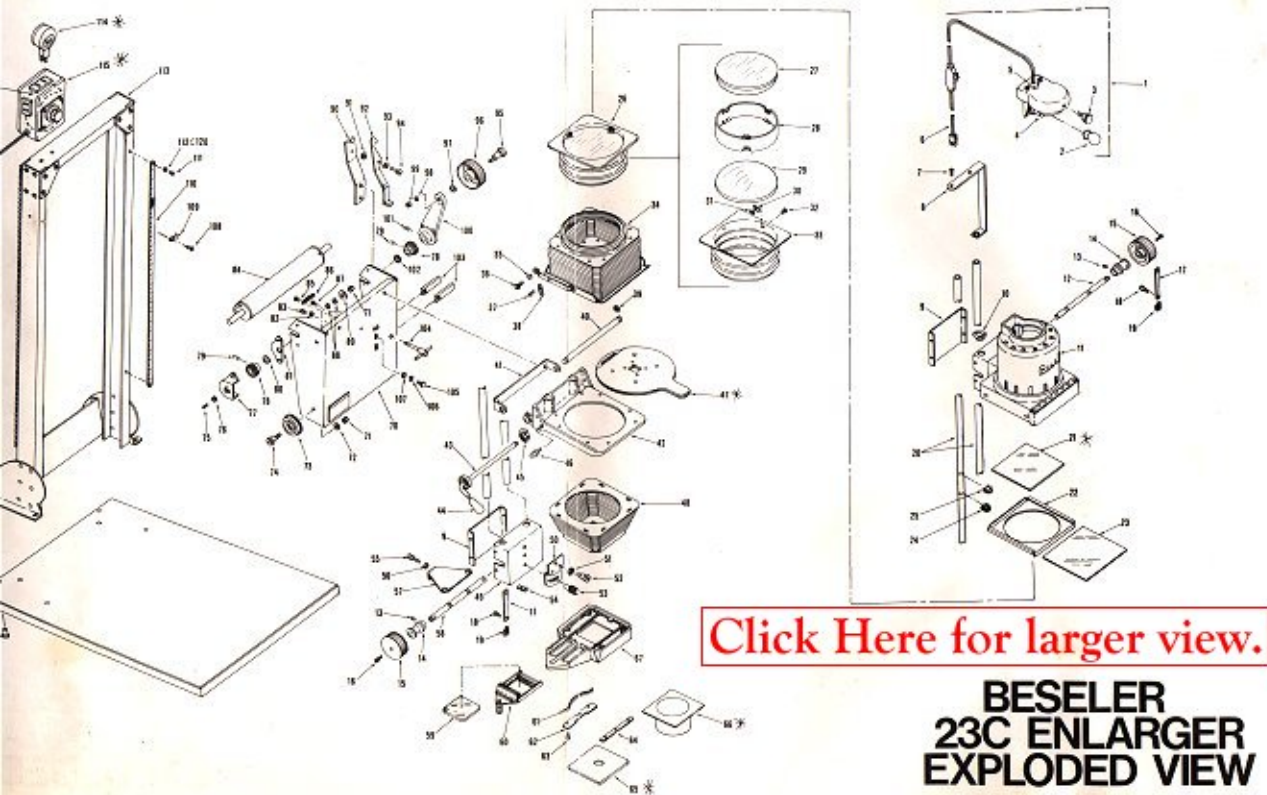
In the event the purchaser requires additional information or explanation of this warranty procedure, he should contact the Customer Service Department at Beseler Photo Marketing Company, 8 Fernwood Road, Florham Park, New Jersey 07932.

**IMPORTANT:** The above warranty shall be void if the purchaser fails to operate the product in accordance with Beseler's written instructions.

The purchaser may be required to prove the date of purchase by means of a sales slip from the authorized dealer or by other proof as may be required by Beseler.

## 23C PARTS LIST

Ref. No.	Description	Pt./Cat. No.	Ref. No.	Description	Pt./Cat. No.	Ref. No.	Description	Pt./Cat. No.
1	Lamp Cap Assembly	10-07674	58	Focus Shaft	10-07652	117	Screw - 1/4-20 x 7/8	527-28-32-01
2	Lamp - PH111	625-30-05	59	Filter - Safety	680-92-54	118	Base Board	10-07602
3	Knob	568-20-05	60	Filter Drawer	10-04519	119	Tee Nut - 1/4-20	546-40-14
4	Lamp Socket	625-76-06	61	Spring	10-04543	120	Washer - #10	548-22-02
5	Strain Relief	600-82-04	62	Rear Retainer	10-04542	*Items so marked are accessories and are not supplied with the enlarger.		
6	Cord Set w/Switch	605-80-01	63	Screw - 4B x 1/4	538-13-08-06	**See Catalog or specify negative size.		
7	Screw - 1/4-20 x 3/8	527-12-01-01	64	Forward Retainer	10-04541	***See Catalog or specify lens.		
8	Indicator - Negative Size	10-07684	65	*Lensboard	***	When Ordering Parts Always Give:		
9	Cover	10-07686	66	*Lens Extension	***	1. The Part Number or Catalog Number.		
10	Bushing	570-50-33	67	Lens Stage	10-04677-02	2. The Part Name.		
11	Lamp Housing Assembly	10-07666	70	Cross Carriage	10-07626	3. The Model Number.		
12	Shaft	10-07690	71	Stop Nut - 10-32	546-57-13	4. The Serial Number of Enlarger.		
13	Set Screw - 8-32 x 3/8	540-20-60	72	Washer - #10	548-24-09			
14	Friction Wheel	10-07651	73	Roller	10-07606			
15	Knob	568-05-07	74	Shoulder Screw	540-30-28			
16	Screw - 6-32 x 1/2	519-16-02-01	75	Set Screw - 10-32 x 1/2	540-22-67			
17	Tension Spring	10-07650	76	Nut - 10-32	545-24-20-01			
18	Screw - 6-32 x 3/8	519-24-11-01	77	Guard - Left or Right	10-07680			
19	Speed Nut - U Type	555-05-03	78	Gear	10-07622			
20	Guide Rods	10-07643	79	Roll Pin	553-09-28			
21	*Heat Absorber Glass	8042	80	Washer - 3/8	548-48-13			
22	Filter Holder	10-07685	81	Bearing Plate	10-07689			
23	Filter Support	680-87-20	82	Lockwasher #10	549-40-15			
24	Retaining Ring	555-26-24	83	Screw - 10-32 x 3/8	524-12-11-01			
25	Retaining Ring	555-26-17	84	Counterbalance Assembly	10-07636			
26	Condenser Assembly	10-07662	85	Screw - 6-32 x 1/8	519-04-01-01			
27	Condenser - Upper	680-14-45	86	Spring	562-70-14			
28	Spacer	10-07664	87	Screw - 6B x 3/8	538-19-06-08			
29	Condenser - Lower	680-22-07	88	Lockwasher #10	549-40-15			
30	Pad	10-07665	89	Washer #10 x 3/8 OD	548-24-29			
31	Speed Nut	555-01-14	90	Stop	10-07609			
32	Screw - 4A x 3/8	538-13-12-21	91	Washer #10	548-24-09			
33	Condenser Housing	10-07663	92	Latch	10-07612			
34	Upper Bellows Assembly	10-07659	93	Bow Washer	549-20-18			
35	Bow Washer	549-20-15	94	Shoulder Screw	540-30-12			
36	Shoulder Screw	540-30-46	95	Shoulder Screw	540-35-04			
37	Screw - 4-40 x 1/2	515-04-01-01	96	Knob	568-05-06			
38	Spring	562-70-09	97	Bow Washer	549-20-17			
39	Retaining Ring	555-26-14	98	Lockwasher #10	549-40-15			
40	Shaft	10-07679	99	Nut - 10-32	545-24-20-01			
41	Bracket	10-07678	100	Elevating Crank	10-07614			
42	Lower Negative Stage	10-07642	101	Set Screw - 8-32 x 1/4	540-20-39			
43	Stage Opening Lever	10-07630	102	Bow Washer	549-20-29			
44	Knob	568-40-06	103	Clamping Bars (Pair)	10-07623			
45	Cam	10-07647-01	104	Clamp Screw	10-07742			
46	Stud	10-04613-01	105	Screw - 10-24 x 3/8	523-12-60-02			
47	*Negative Carrier	**	106	Lockwasher #10	549-40-15			
48	Lower Bellows	10-07653	107	Washer - #10 x 1/2 OD	548-24-09			
49	Lower Housing	10-07649-01	108	Screw - 4B x 3/8	538-13-06-06			
50	Tilt Plate	10-07627	109	Arrow - Pointer	660-52-07			
51	Bow Washer	549-20-25	110	Elevation Scale	10-04630			
52	Shoulder Screw	540-30-32	111	Screw - 10B x 1/4	538-23-08-04			
53	Thumb Screw	540-43-25	112	Spacer	557-20-53			
54	Indicator	10-07628	113	Frame Assembly	10-07631			
55	Screw	527-48-40-45	114	*Bristol Voltmeter	8111			
56	Nut - 1/4-20	545-27-20-01	115	*Resistor	8109			
57	Vertical Stop	10-07645	116	*Rheostat w/Knob	631-10-02			



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**BESELER  
23C ENLARGER  
EXPLODED VIEW**