

# Working Instructions for the Contax Enlarger



## « MAGNIPHOT »

### 1. Erection of apparatus

The nickel-plated column consists of two parts connected with each other by a bayonet fitting. The foot 1 of the column is bolted to the base-board by means of three screws which can be tightened by wing nuts. The sliding arm 2 which carries the lower parts of the enlarging apparatus is pushed over the column; it can be clamped in any desired position by means of a screw 3.

A special 60-watt opal glass lamp is screwed into the lamp house 4. Standard 60-watt opal lamps can also be used with the apparatus, but with the latter twice the exposure time of our special lamps will be necessary. After the lamp has been screwed into its mount, the lamp house is replaced in position and pushed in as far as the stop. When mounting the lamp house, care should be taken to see that the trade mark points to the front.

### 2. Fixing the enlarging lens

The standard Contax lens, i. e. the Tessar  $f/2.8$  or  $f/3.5$  both of 2" focal length, is fixed to the apparatus in exactly the same manner as with the Contax camera, that is, the two red dots provided must correspond with each other. (See also Contax instruction.) The lens is then turned to the left until an audible click is heard. Care must be taken to see that the operating knob 5 (fig. 3) which blocks the helicoidal motion of the focussing mount is tightened. The device provided for the fixing of the lens can be seen in fig. 3. In addition to the standard lenses the super-rapid Contax lenses and also the telephoto lenses can be employed. The last named lenses will, however, only be used exceptionally as the variation of the enlarging ratio of the apparatus is limited by the distance to which the enlarging apparatus can be drawn out.

The super-rapid Contax lenses should likewise only be used as an exception. On the other hand, the Sonnar  $f/2$ , focal length 2", can be used to advantage, if stopped down to  $f/5.6$  and smaller. The condenser 6 (fig. 4) suffices for the various lenses.

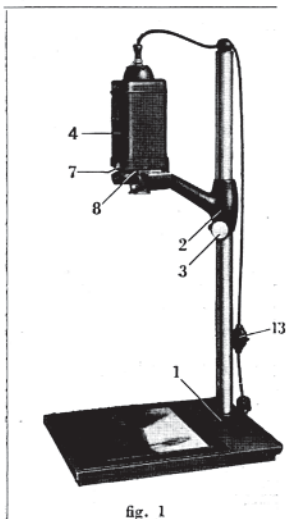


fig. 1

### 3. Inserting the negative

The Magniphot is designed for enlarging negatives  $15/16 \times 13/8''$  and  $15/8 \times 11/4''$ .

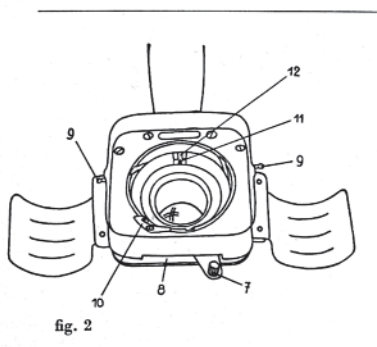


fig. 2

In order to insert the film, swing the lever 7 completely to the left, whereupon the diverging lens 6 together with the spring pressure plate will be raised from the metal mask. The negatives are then placed in the film guide 8. When enlarging Contax films the two levers 9, which serve as a stop for the film strips, must be brought to the front. With all other kinds of film the levers must be at rear (fig. 2).

The metal mask originally inserted in the apparatus is for the size  $15/16 \times 13/8''$ , but it can also be changed for a mask for  $13/4 \times 15/8''$ . To effect this, remove the lamp house and then the lens 6

which is secured by the lever 10. The mask can now be changed, care being taken to see that the small slit of the mask lies on the pin 11. Place the lens into position again. The pin of the lens must be introduced into the slit 12.

It is preferable to put single negatives between glass plates glued together in book form; special frames (No. 1455/23) are available for plates. For every change of picture it is advisable to lift up the pressure plate by swivelling the lever 7 to the right. This obviates all danger of the film being scratched.

### 4. Adjustment of enlarging ratio and focussing

The desired size of enlargement is obtained by sliding the arm 2 up and down the column. In order to avoid subsequent displacement, the large milled edge screw 3 must be tightened so as to clamp the apparatus in position. Focussing is effected by turning the worm focussing mount carrying the lens. For this purpose, the knob 5 must first of all be loosened. After sharp focus has been obtained, the lens is held in position by tightening the knob.

The smallest enlargement obtainable is 2.1 times the original size. The base-board is of sufficient size to enable a tenfold enlargement of  $15/16 \times 13/8$  negatives to be obtained. For greater enlargement, the size of the picture will exceed that of the base-board. When the apparatus is moved right to the top of the column a sixteen-fold enlargement will be obtained on the base-board. If a still greater enlargement is desired, the sliding arm must be swivelled about an angle of  $180^\circ$  and enlargements up to 25 times the original can now be obtained. In such cases the

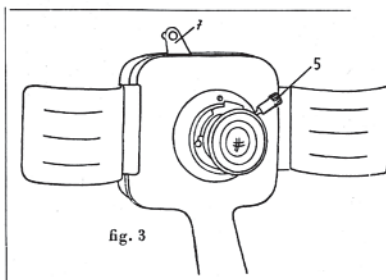
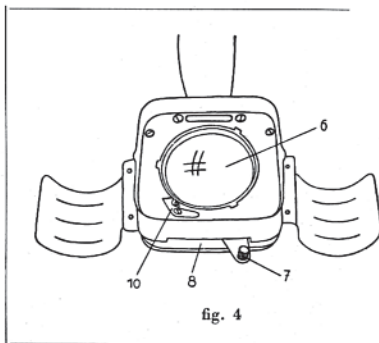


fig. 3

paper is best fixed to the floor (fig. 6). (As shown in this illustration a counter-weight should be placed on the base-board.)

## 5. Fixing of enlarging paper

For making enlargements special contrasty and normal silver bromide-paper as also highly sensitive gas-light paper should be chosen. The employment of the Zeiss Ikon hinged paper frames (fig. 5) which are available for all paper sizes, greatly facilitate enlarging. With the aid of these frames, the desired section of the pictures to be enlarged can be chosen with great ease; moreover, this frame ensures an absolute flat surface of the paper and also gives the enlargement an even white margin. If these frames are not used, the paper should be pinned to the base-board by means of drawing-pins. The holding frame can also be fixed to the board by means of drawing-pins, if it is desired to make a serie of enlargements of the same picture. When using a Zeiss Ikon paper frame, the section of the picture to be enlarged can best be chosen by placing an ordinary piece of paper in the frame, with the lamp of the projection apparatus turned on. The lamp is then switched off and the piece of trial paper replaced by the sensitive enlarging paper; exposure is then effected by turning on the switch 13.



## 6. Time of exposure

As the intensity of illumination of the apparatus is very considerable, the Contax lenses must be stopped down. In order to obtain good definition and light distribution, it is advisable to use the stop  $f/5.6$ . For average negatives the times of exposure with this stop will vary from 3 to 10 secs., according to the density of the negative. No useful purpose is served by stopping down the lens beyond  $f/8$ , since this would only necessitate an increase in the time of exposure without improving the quality of the picture. The lamp is switched on and off by means of the switch 13.

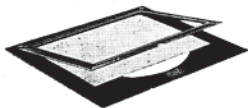


fig. 5

## 7. Enlargement of $1\frac{1}{4} \times 1\frac{5}{8}$ miniature snap shot negatives

The Contax Tessars will also give clear definition right up to the edges with  $1\frac{1}{4} \times 1\frac{5}{8}$ '' negatives, when employing stops  $f/5.6$  and smaller. If no Contax lenses are available, the apparatus should

be used in connection with a special 2'' anastigmat. (Order No. 1454/21.) Similarly to the telephoto-lenses of the Contax, the mount of this anastigmat should be fixed to the bayonet fitting of the apparatus (see also Contax instruction). When fixing this lens, the red dots should be superimposed. The lens then must be turned to the left until a click of the catch is heard. The range of magnification is from 2 to  $9\frac{1}{2}$  times the original.

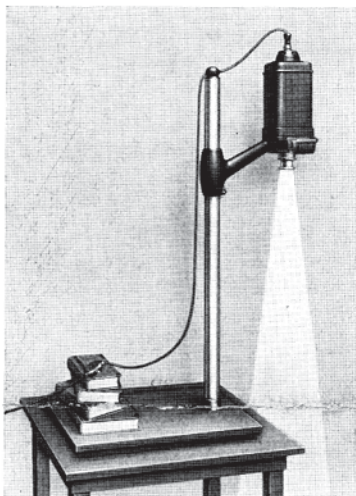


fig. 6

### 8. Various

The Magniphot enlarging apparatus also permits wet film-strips to be enlarged. After the film has been watered, it should be hardened in a 2% solution of formalin and then laid between two glass plates in order to avoid the formation of air bubbles below water. These glass plates are then placed in the apparatus instead of the film guide. Glass plates for this purpose can be supplied separately. (Order No. 1454/22.) In the case of enlargements of considerable dimensions, where the total size of the pictures exceeds that of the base-board, it is advisable to wrap black paper around the lower parts of the column, so as to avoid reflexes caused by the nickel plating of the column falling on the base-board. The condenser is firmly built in and cannot be interchanged. ~~In order to obtain a larger magnification, the lens can be replaced by a lens with a longer focal length. The glass plate may be replaced by a larger one.~~



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