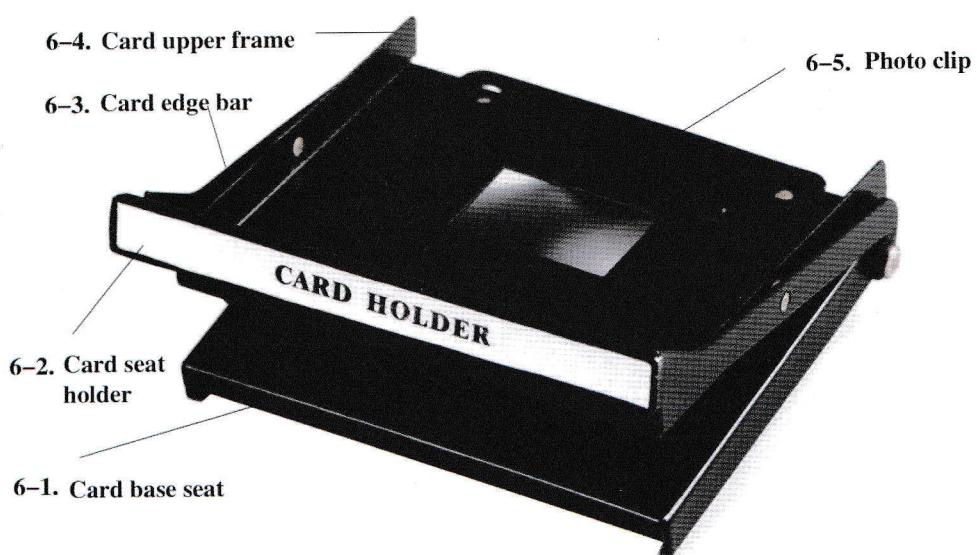


Enlarger user's manual



Installation method:

1. Installation of the vertical pillar and base plate

Disassembling the box, remove the base plate and the vertical pillar assemble, hold screw after the washer hitch up the vertical pillar, insert the hole at the back of the spanner in the direction of clockwise, which aim at screw hole on the base plate.

2. Elevator stand and body installation:

Remove the body, insert the both horizontal positioning groove behind the card base seat into the both positioning pins on the elevator stand and then tighten the body button.

3. Installation of the enlarging bulb:

Remove the upper lampshade, twist the enlarging bulb onto lamp seat and then insert the lampshade label forward into the lower lampshade.

4. Card position:

The base card is a universal card for 6×6 cm and 135 mm negative holders. If using 135 mm base card, slightly dial down the upper card, insert the 135 mm upper card into the card edge bar according to the original position, then align the both positioning holes on 135 mm lower frame to the both guide pins of the lower card, finally press it.

When changing the upper card, first dial the upper card down from one side and then remove the upper card. When assembling the upper card, first insert the positioning guide pin of one side into the edge bar hole, slightly pull another edge bar and align the positioning guide pin to the edge bar hole, then loosen the edge bar and let it reset. Do not use too much strength and avoid deforming the edge bar. If occurring to the edge bar deformed, the card frame positioning pin is loose, remove the frame and slightly press the both edge bars towards the center, then insert the frame and slightly press the both edge bars towards the center, then insert the frame positioning pin into the edge bar hole as the above requirement.

5. Installation of enlarging lens:

Select the proper enlarging lens and twist it into the lens seat counterclockwise and tighten it slightly.

Enlarging operation procedure:

1. Negative film set:

According to the negative film specification, select the proper negative holder. Align the film section of the negative film to the window of the negative holder and then clip it into the negative holder and assemble it into the film clip seat. When setting the negative film, do clip the emulsion face downwards. If upwards, the picture is reverse. To a whole coil negative film, align the guide pin of the negative holder to clip the negative film, Install it into the film clip seat and then hang the negative film on the negative film support, prevent the negative film from shielding the lens. When changing the frame, slightly tray the negative film handle let the negative film clip a certain interval and then slightly move the negative film along the guide pin. After finding the frame, loosen the negative film handle.

2. Focus adjustment:

Place the enlarger size plate onto the bottom plate and turn on the enlarger switch. Place the negative film projection onto the enlarger size plate, open the diaphragm of the magnifier, rotate the focus button and adjust to the clear position.

3. Adjustment of the enlarger multiplying factor:

Adjust the enlarging size. Only rotate the elevator stand button (the elevator stand is gear drive) and let the body move up and down and adjust till the enlarging size needed. Pay close attention to adjusting the focus while changing the enlarger-multiplying factor.

4. Exposure:

Adjust the multiplying factor and the focus. Adjust the diaphragm of the enlarging lens to the suitable position(In general, about F8) and let the lamp of the enlarger turn off. Clip the emulsion face of the enlarging photo paper into the enlarger size plate upwards and carry out the exposure as a certain time.

1. Selection of the enlarging lens:

F450 enlarger can amplify the half amplitude size to 6×6 cm negative film. When selecting the enlarging negative film, use the proper enlarging lens.

1	6×6 cm negative film	75-80 mm lens
2	6×4.5 cm negative film	75-80 mm lens
3	135 mm negative film	50-75 mm lens
4	Half amplitude size negative film	38-50 mm lens

Enlarger function:

1. Color or changeable contrast photo enlarging

If needing to amplify the color or changeable contrast photo or remove the color filter drawer, put the match color filter piece, then insert the color filter drawer into the enlarger and carry out the color or changeable contrast photo enlarging.

2. Enlarging operation to the wall:

If needing to amplify the extra-size, carry out the enlarging operation to the wall. Only loosen the fixed button of the body, rotate the body 90° and insert the both positioning pins on the elevator frame into the vertical positioning groove on the card base, the tighten the fixed button.

3. Enlarging operation to the ground:

Loosen the vertical pillar and base plate tight screws, rotate the body 180° with the vertical pillar, tighten the screws and the carry out the enlarging. Do put the anti-balance objective on the base plate and avoid the body falling down.

4. Re-taking frame use:

If needing to retake the photo, remove the enlarger body, pad into the re-taking spacer, align the camera bottom hole to the body fixed button and then tighten the button.

Performance and parameter:

Negative film size: 6×6 cm 6×4.5cm 135mm half breadth 110

Enlarging lens: 80 mm 75 mm 50 mm 38 mm

(Lens thread: M 39×1)

Multiplying factor change: This unit adopts the gear and gear bar drive, with convenient rotary and accurate positioning. Only rotating the elevator frame button to move up and down to carry out the change.

Light resource: Thus unit adopts 220V – 100W opal bulb.

Light resource system: Double-collector lens direct-radiation type.

Focus adjustment: Double-track friction roll bearing type.

Multiplying factor: (on the bottom plate)

38mm lens-4.0 to 14 multiple

50mm lens-2.2 to 13 multiple

75mm lens-1.0 to 7.8 multiple

80mm lens-1.5 to 6.3 multiple

Max multiplying factor: Projecting to the wall and ground. When projecting to the ground, raise the place flatly the whole unit as the requirement.

Re-taking support: Add the re-taking spacer and camera

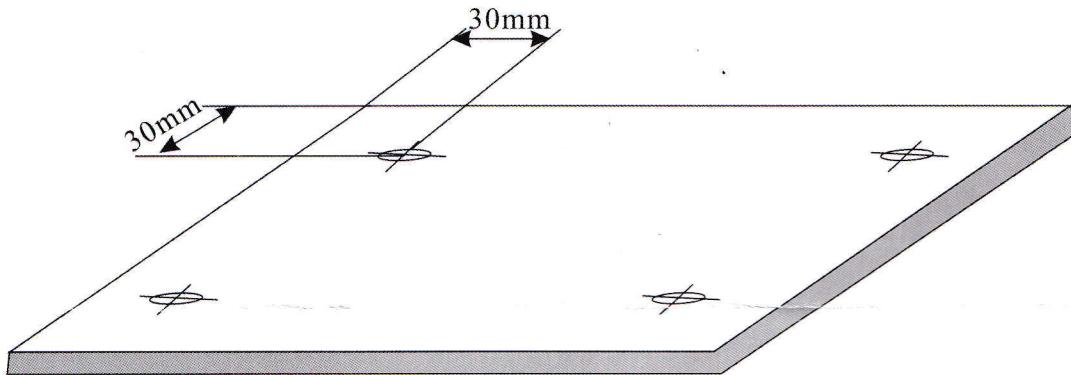
Weight: 5.5 kg

Support: 720×32×32 mm square alloy slope type

Bottom plate: 480×400×18 mm

Supplement instruction:

1. We equipped four rubber-feet for the base plate, and four wood-screws (washers). The user may select fixing and unfixing. If fixing, first prepare a cross-screwdriver, twist the wood-screw into the base plate, the rubber-feet is fastened as the dimension of drawing.



2. Both the upper lampshade and the lower lampshade are together by the concavo-convex groove. There are two "F" grooves on both sides of the upper lampshade. There are two convex points inside of the lower lampshade. When fixing, insert grooves the upper lampshade into convex points the lower lampshade, then twist it clockwise. When inserting and rotating, please notice to support the lower lampshade with your left hand, and rotate about 5 mm. If retake the upper lampshade, rotate it in the direction of counterclockwise.