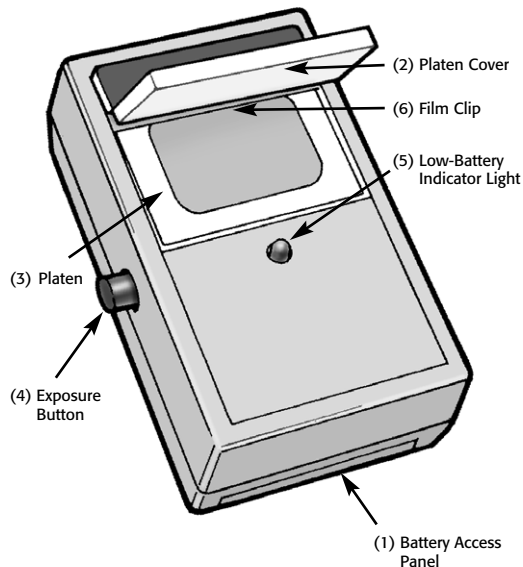


Mini-Ray Duplicator
Part No. 72-1220

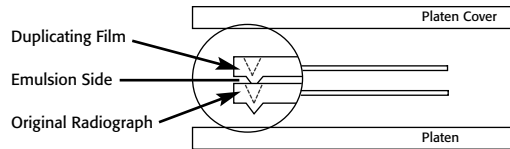


To prepare your Mini-Ray Film Duplicator for operation, remove the battery access panel (1) on the bottom and connect the 9V alkaline battery (included) to the polarized connector. Secure bottom by sliding the access panel back in until it clicks into place.

Your Mini-Ray Film Duplicator is now ready for use.

1. Your Mini-Ray Film Duplicator may only be used under the following light-safe conditions:
 - In the daylight loader of an automatic processor
 - In a Chairside Darkroom
 - Under normal darkroom conditions
2. To load, using Kodak X-OMAT 2 Duplicating Film, Catalog No. 158 6460:
 - A. Remove protective light-proof cover from the duplicating film.
 - B. Place the original radiograph and duplicating film together, with the duplicating film on top of the original, embossed dots matching and facing away as you view them.
 - C. Hold open platen cover (2).
 - D. Place combination of original and duplicating film on the white platen (3) of duplicator, making certain that the embossed dots of the films protrude toward the platen. The original radiograph should be in contact with the platen, the duplicating film on top of the original, and both films with their embossed dots protruding toward the platen.

Under darkroom conditions, the emulsion side of the duplicating film will appear lighter (pinkish) and glossier

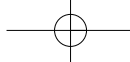


Embossed Dots Down

than the non-emulsion side.

NOTE: If using duplicating film cut from larger sheet film stock, you will not have the embossed dot to guide you. In such case, be sure that the emulsion side of the duplicating film is down, in contact with the original radiograph. The original should be in contact with the platen, with its embossed dot down.

- E. Use film clip (6) to secure combined films to the platen.
- F. Close platen cover and hold firmly.
3. Expose the film by pressing the exposure button (4) on the side of the duplicator. The exposure time has been pre-set at the factory and should result in a satisfactory facsimile of your original radiograph (approximately 6-8 seconds exposure time).
4. After the exposure button has been pressed, the exposure light can be observed by looking at the edge of the platen cover, or the holes in the platen cover. When the light goes out, immediately process the duplicate in the same manner as you normally develop your x-ray film (by automatic processor, Chairside Darkroom or manual tank).

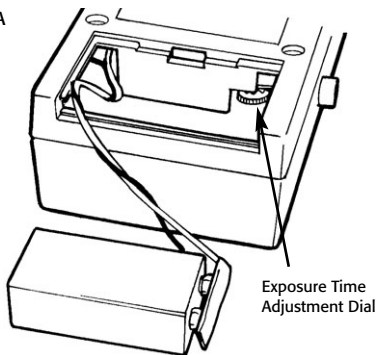


5. Should you require any adjustments to the exposure time, use dial located in the battery compartment (see Figure A). Turn dial to the right to increase exposure time; turn dial to the left to decrease.

The battery will eventually deplete in normal use. The low battery indicator light (5) in the center of the duplicator will light when the battery no longer delivers enough power for a proper exposure. When the light goes on, it is time to replace the battery. **Always use a 9V alkaline battery.** How often you'll need to replace the battery will depend on your usage.

With proper care, your Mini-Ray Film Duplicator will give you good results for a long time. The case is chemical resistant, but should be wiped clean if it becomes soiled. The platen should be kept spotless, using a soft, clean, moist cloth.

Figure A



TROUBLE SHOOTING

After processing, duplicate is black (no image):

- a. Did not press exposure button
- b. Battery needs to be replaced
- c. Increase exposure time by turning exposure dial to the right (see step 5)

After processing, duplicate is too dark:

- a. Increase exposure time by adjusting exposure dial
- b. Battery is weak; replace battery
- c. Wrong side of duplicating film to original radiograph

After processing, duplicate is too light:

- a. Decrease exposure time by turning the exposure dial to the left.

After processing, duplicate is clear:

- a. Film exposed to unsafe light conditions
- b. Duplicating film was placed next to platen

Duplicate has a green tint:

- a. Film was not fixed long enough
- b. Chemical fixer too cold or depleted

Fuzzy or weak image on duplicate:

- a. Wrong side of duplicating film to original radiograph. Refer to steps 2B and 2D.

CAUTION: Never leave your Mini-Ray Film Duplicator in the daylight loader section of the automatic processor or in the Chairside Darkroom. Chemicals in the developer and fixer solutions will corrode the printed circuit board in the duplicator.

WARRANTY

DENTSPLY Rinn warrants this product to be free from defective materials and workmanship for a period of one (1) year from date of purchase when used in accordance with the operation instructions furnished herewith. This applies only to the original purchaser.

Any component which our examination reveals to be defective shall be either repaired or replaced at our option.

There are no warranties, expressed or implied, which extend beyond the description on the face hereof. Damages are limited to repair or replacement of products. DENTSPLY Rinn expressly disclaims liability for incidental and consequential damages resulting from the use of its products. DENTSPLY Rinn neither assumes, nor authorizes any person to assume for it, any other liability in connection with the sale or use of the product.

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