## Modified Film Holder For Endodontics

### Abstract
Proper film positioning and stabilization in spite of projecting instruments, rubber dam clamps, and frame have always been a challenge, particularly for students and assistants using the long cone, paralleling technique. Simple modifications to the new, Rinn Snap-A-Ray II film holder and positioner virtually eliminate the usual difficulties.

### Keywords
- SNAP-A-RAY II
- film holder
- modification.
MODIFIED FILM HOLDER FOR ENDODONTICS

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Properly angulated, well centered radiographs during biomechanical instrumentation are important for consistent quality results in endodontic therapy. Proper film positioning and stabilization in spite of projecting instruments, rubber dam clamps, and frame have always been a challenge, particularly for students and assistants using the long cone, paralleling technique. Simple modifications to the new, Rinn Snap-A-Ray II film holder* and positioner virtually eliminate the usual difficulties.

The radiolucent plastic, Snap-A-Ray II has an anterior, slip-in film holder at one end, and a posterior, hemostat-like film holder at the other, and is designed for use in taking bisecting, periapical exposures using either the short or long cone (Figure 1A). The posterior film holder, has a broad, thick jaw on which the patient bites to stabilize the film. The film holder positions and stabilizes the film packet, while a stainless steel rod connects the film holder with the ring-like aiming device which is placed flush with the end of the cone when the exposure is made. As supplied, this rod has a fixed, $15^\circ$ bend, standardizing the angle to be bisected. Two types of rod are provided; one with a right angle bend in addition to the $15^\circ$ bend, for use with posterior exposures, and the other, a straight rod having only the $15^\circ$ bend, for use in the anterior (Figure 2A).

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The broad jaws of the posterior film holder prevented correct film positioning when used with the rubber dam, and so they were modified. Excess plastic was ground away, the surfaces smoothed and then polished with pumice on the office lathe (Figure 1). To modify Snap-A-Ray for use with the paralleling technique, the $15^\circ$ bend in both the anterior and posterior rods were removed (Figure 2).

Using the modified Snap-A-Ray (Figures 3 & 4), the patient stabilizes the film packet parallel to the long axis of the tooth by holding the free end of the film holder. Mesially angled posterior exposures are easily managed by appropriately adjusting the film position in the holder distally. With this adjustment the long cone may be angled so that the rod does not interfere. With the modified Snap-A-Ray and a radiolucent, rubber dam frame, excellent radiographs are routinely obtained with no need to disturb placement of the rubber dam, a boon to experienced and student practitioner, alike.

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CAPTIONS

FIGURE 1. The Snap-A-Ray II film holder, (A) before and (B) after modification.

FIGURE 2. The anterior and posterior metal rods (A) before and (B) after modification. The upper rod in both groups is the anterior.

FIGURE 3. The Snap-A-Ray II fully assembled for posterior use, (A) before and (B) after modification. Note the straightened rod at (B) which has had the 15° bend seen in (A) removed.

FIGURE 4. The Snap-A-Ray fully assembled for anterior use, (A) before and (B) after modification.