OCCLUSAL EXPOSURE TECHNIQUES

4-31. GENERAL

At times, more extensive radiographic views of oral tissues are desired than are obtainable with periapical or bite-wing film. These views are made by using occlusal film (refer to paragraph 4-3c). The occlusal film will always be exposed through the unbroken side. Periapical film is used at times to obtain occlusal views in children and views of small areas in adults. Follow the manufacturer's instructions for exposure times.

a. **Maxillary Head Positioning.** In all maxillary occlusal techniques, the patient's head is first adjusted so that the median plane (sagittal plane) of the face is in a vertical position and the occlusal surfaces of the maxillary teeth are in a horizontal plane (parallel to the floor). The x-ray is taken through the facial bones. The film is held in place by the patient's teeth, closed gently but firmly against the film packet.

b. **Mandibular Head Positioning.** In the mandibular full and posterior occlusal techniques, the patient is tilted back so that the x-ray is taken through the body of the mandible. In the anterior occlusal technique, the x-ray is taken through the chin. The patient holds the film in place by closing his teeth gently but firmly against the film.

4-32. MAXILLARY FULL OCCLUSAL

Position the film packet carefully in the mouth with its short axis in line with the median plane and the film placed far enough distally to include all the teeth. Adjust the tube so that the point of the cone is at the hairline of the forehead, in the median line, and directed downward and perpendicular to the plane of the packet (see figure 4-30).
Figure 4-30. Maxillary full occlusal view technique.

4-33. MAXILLARY ANTERIOR OCCLUSAL

Place the film packet in the mouth with its short axis in line with the median plane. Adjust the tube so that the central ray is directed along the median line and at an angulation of +65° to pass through the bridge of the nose to the film packet (see figure 4-31).
4-34. MAXILLARY POSTERIOR OCCLUSAL

- Place the film packet in the mouth on the side to be radiographed with its long axis parallel to the median plane. Adjust the tube to a vertical angulation of +60°.
- Direct the central ray to pass through the ala of the nose and apical region of the cuspid and first bicuspid to the plane of the film packet (see figure 4-32).
4-35. MANDIBULAR FULL OCCLUSAL

Tilt the head back so that the occlusal plane of the mandibular teeth is at right angles to the horizontal plane with the median plane (sagittal plane) of the face in a vertical position. Place the film packet in the mouth with its short axis in line with the median plane and its posterior border in contact with the mandibular rami. Adjust the tube to direct the central ray along the median plane so as to be perpendicular to the film packet. The ray should pass through the floor of the mouth and the body of the mandible to the center of the film (see figure 4-33).
4-36. MANDIBULAR ANTERIOR OCCLUSAL

Tilt the head backward so that the occlusal plane of the mandibular teeth is at a $+55^\circ$ angle to the horizontal and median plane. Position the film in the mouth with its short axis in line with the median plane. Adjust the tube to direct the central rays through the point of the chin at a $+55^\circ$ angle to the plane of the packet (see figure 4-34).
4-37. MANDIBULAR POSTERIOR OCCLUSAL

Position the head so that the occlusal plane of the mandibular teeth is perpendicular to the horizontal plane and the median plane of the face is vertical. Place the film packet in the mouth so that it is centered over the teeth on the side to be radiographed. Adjust the tube so that the central ray will pass from below the mandible and through the second molar at a perpendicular angle to the plane of the film packet (see figure 4-35).
Figure 4-35. Mandibular posterior occlusal view technique.