

Radiology Compliance Branch

RADIATION PROTECTION SECTION



Division of Health Service Regulation • N.C. Department of Health and Human Services

Hand-Held Dental X-ray Guide

The North Carolina Radiation Protection Section has determined that hand held dental X-ray units may be used under the following conditions:

- ❖ The unit must be a device that has been reviewed and accepted by the N.C. Radiation Protection Section. (The Aribex Nomad and Nomad Pro have been reviewed and accepted. Contact RPS for any other devices.)
- ❖ Hand-held dental X-ray units may be used only for dental intra-oral exams, veterinary dental, industrial and dental forensics.
- ❖ Hand-held use for dental intra-oral exams, veterinary dental, and dental forensics requires waivers from certain Section Rules. The conditions for operating with the waivers will be outlined in writing by the Section.
- ❖ Registrants (or potential registrants) that require Rule waivers must complete the Hand-Held X-ray Unit Waiver Request form and receive an approval from the Section prior to clinical use of the unit.
- ❖ All operators must receive training provided by the equipment manufacturer prior to use. Documentation of the training must be maintained by the facility and be available for review during inspections by the Section. The operator must also be authorized to operate X-ray equipment in North Carolina.
- ❖ A Written Radiation Safety Program must be developed that addresses the use of the hand-held unit. The Safety Program must also include procedures for security of the device. Guidance for creating programs ([Written Radiation Safety Program Guides](#)) is located on the Section's website.
- ❖ Security procedures must be used to prevent theft or operation by an unauthorized user. The registrant is responsible for ensuring the unit is stored in a secure location when not in use.
- ❖ If use requires angling the unit to a position that reduces the protection to the operator then the operator must be protected from the direct scatter radiation by protective aprons or whole body protective barriers of not less than 0.25 mm lead equivalent.
- ❖ All unnecessary individuals must be removed from the room or radiation area prior to exposures. All individuals who cannot be removed from the room during X-ray exposures should be positioned behind a protective barrier. Entrances to exam rooms must have radiation area warning signs posted. When the device is used in an open area, a controlled perimeter must be established and monitored by the operator.
- ❖ Operators must wear a radiation monitoring device during hand-held dental X-ray exposures. The registrant should select the most appropriate monitoring method based on manufacturer's or qualified expert's recommendations.
- ❖ Manufacturer recommendations for service and surveys should be followed. If the unit needs repair, is damaged or dropped, the performance of the device should be confirmed prior to use. The documentation of servicing and surveys shall be available for inspections.
- ❖ The unit can only be used at a single location (registered facility) unless the registrant obtains a mobile facility registration.
- ❖ If the unit is routinely used in one exam room, the room will require a Shielding Plan Review and Letter of Acknowledgement.
- ❖ At a minimum, E or F Speed Film or a digital sensor should be used for dental exams.