

NOMAD™ Portable X-ray Unit (Project 05-40) (8/06)



NOMAD™ Dental is a portable, handheld, battery-operated x-ray unit manufactured by Aribex. It comes with a battery charger (110V or 220V) and two 14.4V Nickel-Cadmium batteries that reportedly provide 100 to 700 exposures on a single charge. The NOMAD™ weighs eight pounds and comes in a ruggedized carrying case. Aribex states radiation exposure from leakage and backscatter radiation is far below federal and occupational limits due to the unit's internal shielding, external lead-acrylic backscatter shield, and overall low-level radiation. The NOMAD™ has an automatic shut-off and "Enable" feature to minimize the risk of inadvertent exposure. It received FDA 510(k) clearance in July 2005. The NOMAD™ Dental uses direct current, operates at a fixed 60 kV and 2.3 mA, has a 0.4 mm focal spot, and 20 cm source-to-skin distance. It has a one-year warranty.



Manufacturer:

Aribex, Inc.
754 South, 400 East
Orem, UT 84097
(866) 340-5522
(801) 226-5522
(801) 434-7233 FAX
www.aribex.com

Distributors:

Aseptico, Inc.
8333 216th St. S.E.
Woodinville, WA 98072
(800) 426-5913
(425) 487-3157
(360) 668-8722 FAX
www.aseptico.com

Mid Atlantic Teleradiology
45945 Trefoil Lane, Suite 175
Sterling, VA 20166
(800) 838-3111
(703) 796-1890
(703) 796-1893 FAX
www.teleradiology.com

Suggested Retail Price:

\$7,460.00 Aribex NOMAD x-ray unit (item #ARU-06) includes:
- Handheld x-ray unit
- 2 rechargeable batteries
- Battery charger
- Acrylic shield
- Carrying case

Government Price:

\$6,995.00 Aribex NOMAD x-ray unit (item number and contents as listed above)

ADVANTAGES:

- + Portable, handheld, battery-operated
- + Meets applicable radiation safety standards
- + Personal dosimetry not required
- + Easy to set up, learn, and use
- + Two rechargeable batteries and charger
- + Battery provides 150 or more exposures per charge
- + Ruggedized carrying/shipping case
- + “Automatic Shut-off” and “Enable” safety features
- + Useful for forensic identifications, field operations, humanitarian missions

DISADVANTAGES:

- Multiple, successive exposures with fully-extended arms may cause arm fatigue
- XCP instrument needs to be customized for use with the NOMAD unit
- Backscatter shield may not always provide complete shielding
- Manufacturer-recommended exposure times may need adjusting
- Duty-cycle dictates 15 to 60 second wait-time between exposures

SUMMARY AND CONCLUSIONS:

The Aribex NOMAD™ battery-operated handheld x-ray unit is the most portable x-ray unit ever evaluated by DECS. Radiation safety test results from the Air Force Institute of Occupational Health and DECS demonstrated that the NOMAD™ meets radiation safety standards and does not require personal dosimetry (click [here](#) for NOMAD™ Radiation Safety Fact Sheet and Guidelines For Use). Clinical evaluators were impressed with how easy the NOMAD™ was to set up and operate. They put it to immediate use in a forensic identification and in the endodontic, implant, and oral surgery clinics. Evaluators stated radiographic quality was acceptable, although manufacturer-recommended exposure times required some adjusting. They noted that with some patient-positions the backscatter shield could not provide the operator with maximum shielding. When using an XCP instrument the ring-positioner rod contacts the backscatter shield and so customization of the rod is necessary. Nonetheless, clinical users were very impressed with the NOMAD™ and cited its significant potential for use in forensic dentistry, on humanitarian missions, and in deployed locations. All evaluators rated the NOMAD™ excellent or outstanding and ten of eleven recommended it for purchase. The **Aribex NOMAD™ Dental X-ray Unit** is rated **Excellent** for use in US Air Force dental facilities.