### Basic Operation

1. Attach a fully charged battery (see Battery Care).
2. Turn power on by pressing the **POWER** button.
3. To change exposure settings press the increase or decrease buttons. (Example, 08 LED display setting = 0.08 seconds; 35 LED display setting = 0.35 seconds.)
4. For more on adjusting the time settings see the User Manual contained on the CD.
5. Position the NOMAD relative to the receptor.
6. To begin the exposure, squeeze the handle trigger (or press and hold **START**) until the audible, signal ends, and green **START** and yellow X-RAYS ON indicators are off.
7. Turn off the power by pressing the **POWER** button.

### Battery Care

The following are important battery care notes:

- Each battery can go through the full (dis)charge cycle approximately 200 times. Routinely change out a discharged battery with fully charged one, as needed.
- A flashing, yellow **LOW BATTERY** indicator (control panel) and intermittent audible signal indicate the need for a freshly charged battery.
- Charge only between +4°C (+39°F) and +40°C (+104°F). Recommended charging temperature is +24°C (+75°F).
- A battery can be left indefinitely in the plugged-in charger without damaging batteries. When the charging indicator stops flashing, leaving the battery in the charger for 8 hours helps to maintain optimum battery capacity (equalization).
- Battery charge will diminish during extended inactivity – fully recharge batteries every 3 months during inactivity. Never leave a low charge battery into long-term storage.
- Do not store batteries in extreme conditions: below -20°C (-4°F) or above +40°C (+104°F), or beyond 95% relative humidity (non-condensing). The optimal storage location is cool, dry, and away from direct sunlight.
- Store or carry batteries so that battery terminals cannot be damaged or exposed to contact with conductive objects.
- Always unplug the charger from the power supply when it is not in use. For additional info, specifically about the charger, see the accompanying instruction manual for the battery charger.

### Limited Warranty

**Coverage.** Aribex, Inc. warrants its x-ray equipment to be free from any defects in material or workmanship for a period of one (1) year from the date of purchase. Aribex, Inc. also warrants any accessories purchased from Aribex to be free from any defects in material or workmanship for the period of one (1) year from the date of purchase.

The liability of Aribex, Inc. is limited to repair or replacement of any parts that Aribex or its authorized resellers determine to be defective. Contact Aribex for a Return Material Authorization (RMA) number and shipping instructions. Parts proving defective shall be repaired or replaced free of charge and workmanship is subject to the limitations of warranty stated above. Equipment replaced under warranty shall continue to be warranted for the balance of the original warranty period. All warranty claims must be made not later than ten (10) business days following the expiration of the applicable warranty period.

**Limitations of Coverage.** This warranty does not apply to equipment that is or has been abused, misused, or altered (including opening enclosure or tampering), improperly maintained, subjected to use beyond rated conditions, or damaged as a result of any carelessness or accidents. This warranty does not cover ordinary wear or tear or maintenance.

**Limitations of Liability.** Aribex, Inc. makes no other warranty, either expressed or implied, with respect to any equipment purchased from Aribex, including without limitation any implied warranties of merchantability or fitness for a particular purpose, whether or not Aribex may have been informed of the actual uses to which any of such equipment may be put. Aribex, Inc. shall not under any circumstance be liable for incidental, indirect, consequential, punitive or exemplary damages, including without limitation damages for delay or lost profits, and in no event shall liability of Aribex arising from the purchase, sale or use of the equipment, or breach of any warranty made above, exceed in the aggregate the purchase price paid therefor.

**Certification.** ISO 13485 / ISO 9001 CERTIFIED COMPANY

**Patents.** U.S. patents 7,224,769 and 7,496,178 United States and international patents pending

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English is the original draft language for this manual.

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**The NOMAD® Difference**

NOMAD is safe to be used as a handheld X-ray source. There is no need to leave the room during an exposure.

Aside from the direct beam, X-ray devices have two potential operator radiation sources: 1) leakage radiation and 2) backscatter radiation bouncing back off the subject.

1) **Leakage** – Unique internal shielding of NOMAD encases the X-ray tube eliminating leakage radiation. As demonstrated by the data below, this makes it safe to use NOMAD as a handheld device during exposures.

2) **Backscatter** – When properly oriented, the transparent shield on NOMAD collimator acts as a barrier against backscatter radiation, making it safe for the operator to stay in the room.

### Radiation Safety

- Operators must follow all guidelines dictated by applicable occupational safety regulations and in-house radiation protection program, especially in regard to operators who are pregnant or expect to become pregnant.
- Operators must be fully acquainted with industry safety recommendations and established maximum permissible doses.
- Do not enable NOMAD until subject is positioned and operator is ready for the exposure, diminishing the likelihood of interruption and preventing inadvertent exposure of anyone to X-rays.
- Do not attempt an exposure if anyone else is in the same room unless it is necessary. That person must then stay out of the direct beam and wear protective clothing.
- An exposure can be terminated for any reason by abruptly releasing the depressed trigger.
- Optimal operator radiation backscatter protection exists when:
  - a) The backscatter shield is positioned at the outer end of the collimator cone.
  - b) The backscatter shield is close to a subject when it is immediately in front of the cone.
  - c) The operator remains within the significant zone of occupancy immediately behind the device shield.
- As shown in graphic representations, maximum protection (green area) from backscatter radiation (red area) exists when the NOMAD is positioned near the subject, is perpendicular to the operator, and the backscatter shield is fully extended toward the subject.
- As a result of the internal and backscatter shielding, operator X-ray exposure is far below federal regulatory limits.

### Alarms and Alerts

<table>
<thead>
<tr>
<th>Alert</th>
<th>Function / Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green ENABLED indicator flashes <strong>START</strong></td>
<td>System Readiness: Activates when <strong>ENABLE</strong> is pressed/released; ends automatically after 30 seconds or when an exposure starts (trigger is depressed or <strong>START</strong> is pressed).</td>
</tr>
<tr>
<td>Slow series of short, double beeps</td>
<td>X-ray Exposure: At the end of the successful exposure, audible signal and indicators stop.</td>
</tr>
<tr>
<td>Green START and yellow X-RAYS ON indicators illuminate <strong>START</strong></td>
<td>Incomplete Exposure: Activates if trigger is released before the timed x-ray exposure finishes and ends automatically after 15 seconds or if power is manually turned off.</td>
</tr>
<tr>
<td>Continuous tone (for the duration of the timed exposure)</td>
<td></td>
</tr>
<tr>
<td>Series of long beeps</td>
<td></td>
</tr>
<tr>
<td>LED display turns off</td>
<td>System Alert, followed by a system shutdown: X-ray emissions are not detected during timed exposure but the battery is OK.</td>
</tr>
<tr>
<td>Two short beeps</td>
<td></td>
</tr>
<tr>
<td>Yellow LOW BATTERY indicator flashes <strong>LOW BATTERY</strong></td>
<td>Low Battery: Replace the battery and reset exposure time.</td>
</tr>
<tr>
<td>Slow series of short beeps</td>
<td></td>
</tr>
<tr>
<td>Alarm</td>
<td>Function / Resolution</td>
</tr>
<tr>
<td>LED display begins flashing</td>
<td>Overheating: Operation suspends if the device overheats; after cooling for approximately 5 minutes (or longer depending upon room temperature), power on.</td>
</tr>
<tr>
<td>Series of long beeps</td>
<td></td>
</tr>
</tbody>
</table>