Thank you for purchasing the Radii Plus LED curing light. The Radii Plus is a powerful, lightweight, air-cooled curing light using LED for the polymerization of composite restorative materials that contain the photo-initiator Camphorquinone. The Radii Plus produces a strong blue light in the wavelength range of 440 – 460 nm, the relevant range for Camphorquinone containing products. The Radii Plus features a ‘NO RAMP’ mode and ‘RAMP’ mode for automatic polymerization shrinking minimization of composite materials. In addition to this, the LED attachment is designed to prevent damage when applied on the clinical application.

PRODUCT CONTENTS LIST
- Handpiece (battery pack, control section and standard LED attachment)
- Plug pack
- 3 Radii Plus lens caps
- Radii Plus light shield (5 Pack)
- Radii Plus replacement lens caps (25 Pack)
- Radii Plus barrier sleeves (1000 pack)
- Radii Plus light shield (5 Pack)
- Plug pack

UNPACKING AND INITIAL CHARGING
The Radii Plus has been carefully packed to withstand any damage during transit. Ensure all parts contained within the box match the product contents list above.

1) Remove all parts from the box.
2) Place the plug pack cable into the charger.
3) Plug the plug pack into an available power outlet and turn power outlet on.
4) When the Radii Plus is off, the battery light should momentarily show red/yellow and the blue radiometer LEDs should turn on/off.
5) Place the curing light handpiece into the charger. The handpiece can be rotated 360º in the charger. Depending on the length of time from manufacture to package opening, the charge remaining in the battery can vary. The charge light will show below three conditions.

- **Green** charged
- **Flashing Green** charging (OK to use)
- **Red** charged too – Re-charge battery

General Surface Cleaning
- Ensure that the hands are clean and dry.
- Wipe the surface with an alkali-free wipes or alcohol or isopropyl.
- Allow to dry completely.
- Check the battery is fully charged.

To ensure the highest level of performance, allow the Radii Plus to fully charge prior to use. On average, it will take approximately 3-4 hours to initially charge the Radii Plus.

OPERATION
- **Assembly and off**
- Simply push the curing light handpiece, press the on/off button once to activate and de-activate the light. The LED attachment is designed to allow manual light power measurement when operating.
- **Switching between NO RAMP and RAMP mode**
- The Radii Plus has been set at the factory to be the NO RAMP mode. To switch between the NO RAMP and RAMP mode, press the on/off button and hold down the on/off button for 3 seconds. Two audible beeps will be heard. The unit will now be pre-programmed for NO RAMP mode. To switch back to the NO RAMP mode, hold down the on/off button for 3 seconds, a single audible beep will be heard indicating the change. The Radii Plus is now ready to use.
- **Curing light measurement**
- To perform a curing light measurement, the Radii Plus light button is fitted with a Lithium Ion battery pack. Dispose of battery pack in accordance with local legal regulations.

### Troubleshooting Problem

- **Light needs replacing**
  - **Cause**
    - Bulb is loose, corroded or damaged
    - **Solution**
    - Replace light bulb

- **Handpiece blue LED needs changing**
  - **Cause**
    - Battery charged too
  - **Solution**
    - Re-charge battery

- **Handpiece blue LED needs changing**
  - **Cause**
    - Battery charged too
  - **Solution**
    - Re-charge battery

### Audible beeps

<table>
<thead>
<tr>
<th>Time between beeps (seconds)</th>
<th>Total elapsed time (seconds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 short beep</td>
<td>10</td>
</tr>
<tr>
<td>2 short beeps</td>
<td>10</td>
</tr>
<tr>
<td>3 short beeps</td>
<td>20</td>
</tr>
<tr>
<td>4 short beeps</td>
<td>30</td>
</tr>
<tr>
<td>5 short beeps</td>
<td>40</td>
</tr>
<tr>
<td>6 short beeps</td>
<td>50</td>
</tr>
<tr>
<td>1 long beep</td>
<td>60</td>
</tr>
<tr>
<td>2 long beeps</td>
<td>70</td>
</tr>
<tr>
<td>3 long beeps</td>
<td>80</td>
</tr>
<tr>
<td>4 long beeps</td>
<td>90</td>
</tr>
<tr>
<td>5 long beeps</td>
<td>100</td>
</tr>
</tbody>
</table>

At the end of 50 seconds (or 65 seconds when ‘RAMP’ mode) a long beep will be heard before the blue LED is automatically switched off. NO RAMP mode switching will be indicated on the plug pack supplied in this kit. Other access types of LED attachments from SDI will have different cycles. Refer to manufacturer instructions for use.

- **Curing times**
  - **RAMP mode**
    - NO RAMP: 60 seconds
    - RAMP mode: 65 seconds
  - **NO RAMP mode**
    - to full intensity: 5 seconds
    - NO RAMP: 60 seconds
    - to full intensity: 5 seconds

- **Check the orange barrier sleeve is securely placed on the end of the handpiece before placing the orange barrier sleeve into the charger.**
- **Check the battery is correctly inserted in the Radii Plus battery pack.**
- **Check terminals on the battery are clean.**
- **Check light remains steady (not flashing).**
- **Check plug pack is correctly connected to the charger.**
- **Check 3 short beeps after checking 1, 1, 2, 3 and 4 above the charger may be faulty. Return the unit to the supplier for service.**

When returning faulty units please make sure that the original packaging is returned to your authorized SDI dealer.

### SAFETY AND PRECAUTIONS
- The element’s safety and performance depends on strictly following the operating instructions in this manual. The manufacturer accepts no liability for any damage and/or malfunction of dental composite material.

### Warranty
- **Manufacturer’s Warranty**
  - **Duration**: 2 years
  - **Conditions**: The manufacturer or its agents will repair or replace any defective or damaged parts not caused by misuse including but not limited to damage from liquids and autoclaving.
  - **Exclusions**: Repairs or replacement of consumable parts including bulbs, batteries, and shields.
  - **Procedure for Claim**: To make a warranty claim, please return the Radii Plus with proof of purchase. Failure to do so may void your warranty.

### TECHNICAL DATA
- **Handpiece (control section and standard LED attachment)**
  - **wavelength range**: 440 nm – 480 nm
  - **Maximum Intensity**: 1200 mW/cm²
  - **RAMP mode**: 65 seconds
    - **0 – 255 mW/cm²**: 60 seconds
    - **256 – 511 mW/cm²**: 60 seconds
    - **512 – 1023 mW/cm²**: 60 seconds
    - **1024 – 2047 mW/cm²**: 60 seconds
    - **2048 – 4095 mW/cm²**: 60 seconds
  - **No RAMP mode**: 60 seconds
    - **0 – 255 mW/cm²**: 60 seconds
    - **256 – 511 mW/cm²**: 60 seconds
    - **512 – 1023 mW/cm²**: 60 seconds
    - **1024 – 2047 mW/cm²**: 60 seconds
    - **2048 – 4095 mW/cm²**: 60 seconds

### REPLACEMENT PARTS AND ACCESSORIES
- Replacement parts and accessories which can be installed without special training or tools, and are supplied from your authorized SDI dealer.

### SUPPORT
- **SDI North America**
  - Re-order Code
  - Radii Plus light shield (25 Pack) 5600555
  - Radii Plus barrier sleeves (1000 pack) 5600556
  - Radii Plus Standard LED attachment 5600560
  - Radii Plus Barrier Battery Pack 5600626
  - Radii Plus Charger 5600628
  - Radii Plus Charger (includes plug pack) 5600642
  - Radii Plus Barrier sleeves (1000 pack) 5600555
  - Radii Plus Standard LED attachment 5600560
  - Radii Plus Barrier Battery Pack 5600626
  - Radii Plus Charger 5600628
  - Radii Plus Charger (includes plug pack) 5600642
  - Radii Plus barrier sleeves (1000 pack) 5600555
  - Radii Plus Standard LED attachment 5600560
  - Radii Plus Barrier Battery Pack 5600626
  - Radii Plus Charger 5600628
  - Radii Plus Charger (includes plug pack) 5600642

### Transport and storage environment:
- **Ambient temperature**: 0°C – 40°C (32°F – 104°F)
- **Relative humidity**: 0% – 85%
- **Storage temperature**: 0°C – 40°C (32°F – 104°F)
- **Atmospheric pressure**: 0.5 atm. - 1.0 atm (500 hPa to 1060 hPa)

### CLASS II EQUIPMENT
- **Type B Applied Part**