MAXRAY DEMO GUIDE and INITIAL SET-UP

The MaxRay is a low dose hand-held dental X-ray system. Traditional wall mount X-Ray machines have the ability to produce significantly higher radiation, much more radiation than is necessary for most digital sensors, phosphor plates or high-speed dental X-ray film. When moving from a wall mount/high dose X-Ray to a hand-held or low dose X-ray some adjustments may be necessary to optimize the radiographic image.

- **Threshold:** The threshold level of a sensor is the level of sensitivity that a sensor is set at. The MaxRay is known for its low radiation dose. Set the threshold between 160 and 120. You should be able to adjust this on the IPS (Image Processing Software) or sensor software.

- **Gain:** The gain of a sensor controls the darkness level of the image. Set the gain between 5 and 7. Again this is adjusted on the IPS or sensor software.

If you do not know how to change the Gain or Threshold or if the system is password protected simply contact your software provider and they will walk you through the process to change the settings.

- **Exposure Time:** The exposure time is the time the MaxRay is emitting radiation. After adjusting the threshold and the gain on the IPS, the exposure time should range between 0.25 and 0.7 of a second, this is adjusted on the MaxRay unit.

  Note the new low dose sensors like our new Iridium Rex2 sensors will take a great image at a much lower radiation dose than even the 0.25 sec. You can switch the MaxRay to digital mode by lightly pressing the main power button and the time UP button simultaneously. This will take you to the mode adjustment screen where you can switch the unit to DIGITAL mode. In this mode you will be able to adjust the time setting to as low as 0.05 sec.

- **Proper Positioning:** Be sure to position the end of the cone as close to the patient's cheek as possible. The cone should ideally be touching the skin. This may cause a problem if you are using sensor or film holders or other positioning devices with an extended alignment bar. The easy solution to this problem is to simply cut the extension arm so that it is not in the way of the back scatter shield. Many manufactures have introduced sensor holders and positioning devices with these arms either shortened or removed all together.

WARNING! UNDER NO CIRCUMSTANCE ARE YOU TO REMOVE THE BACKSCATTER SHEILD.

If you are struggling to get a good image FIRST contact your IPS provider (sensor software) they have many diagnostic tools and adjustments at their disposal to adjust the quality of the image for lower dose radiation. The goal is to get the best quality image with the lowest dose of radiation to the patient. Try to resist simply increasing the exposure time to improve the image quality.

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