Translation Imaging Research Facility
Centre for Translational Radiographic Imaging

Western
UNIVERSITY · CANADA

SOP Number :	320.03
Title :	RSA Start-Up, Restart, and Shutdown

Revision Chronology			
Version Number	**Effective Date**	**Review Date**	**Reason for Change**
320.01	August 3, 2021	January 21, 2022	Initial Version
320.02	January 24, 2022	July 8, 2022	Facility Name Change
320.03	July 11, 2022	January 10, 2023	DR detectors

_____   _____

Director Signature   Date

1. Scope

This SOP describes the steps to safely start-up, restart, or shutdown the GE Proteus XR/a within the radiostereometric analysis (RSA) suite.

2. Procedures

a. X-ray System Start-up Procedure

1. Ensure the power button is illuminated green on each x-ray control interface. If there is no illumination of the lights, the generator has been tripped. Follow the below procedure in **Section D**.

2. For each x-ray interface, press the "**ON**" button to start the x-ray control interface.
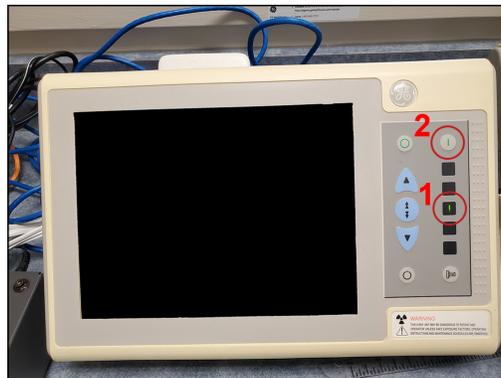
b. X-ray Generator Restart After Power Failure

3. If the generator has been tripped, pull the switch down to the "**OFF**" position, then back to the "**ON**" position to reset the breaker.

4. Repeat steps in **Section 1A**.

c.   X-Ray System Shutdown Procedure

5. For each x-ray interface, press the "**OFF**" button to turn off the x-ray systems.
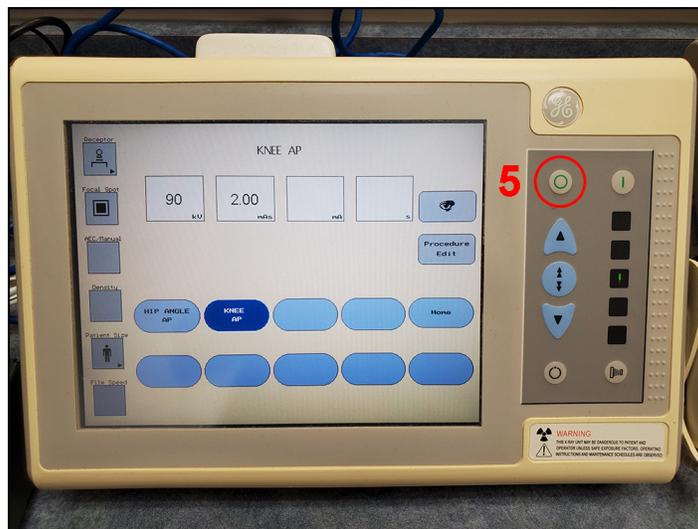
3. Carestream DRX Procedures

a. DRX Detector Software Start-up

1. Press the power buttons on the PCs, if they are powered off.

2. Connect tether cables to the DRX detectors. The tether cables are colour-coordinated with the PCs, detectors, x-ray tubes, and location in the calibration cage.

3. The detector on the **left** side of the calibration cage must be connected to the tethering cable with the matching purple tape, as shown below.
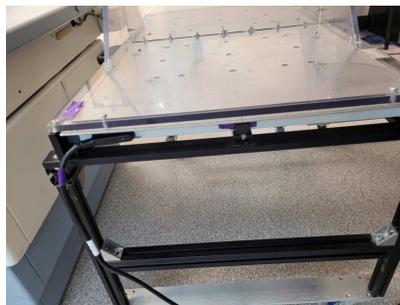
4. The detector on the **right** side of the calibration cage must be connected to the tethering cable with the matching blue tape, as shown below.

5. Open DRX Imaging software on both PCs, and ensure the numbers in the **active detector** section are different on each PC.

6. Open communication to the detector by clicking on the box with the matching number. The box will change colour, text change from "**Closed**" to "**Open**", and the detector settings will be displayed in the console.

7. Below is an example of the DRX software showing the active detector being in a closed (left) or opened (right) state.
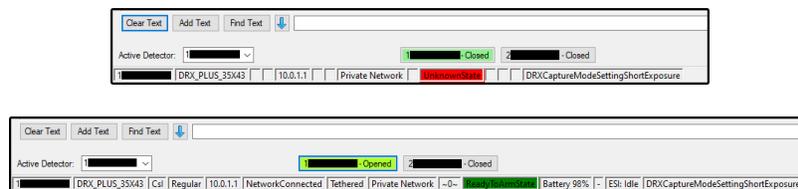
b. DRX Detector Software Shutdown

8. On each PC, close the DRX Imaging software to close communications to the detectors.

9. Remove batteries from detectors and place into charger. Align the arrows on the battery and the charger, then press down to start charging.

c.   Emergency Stop Button Locations
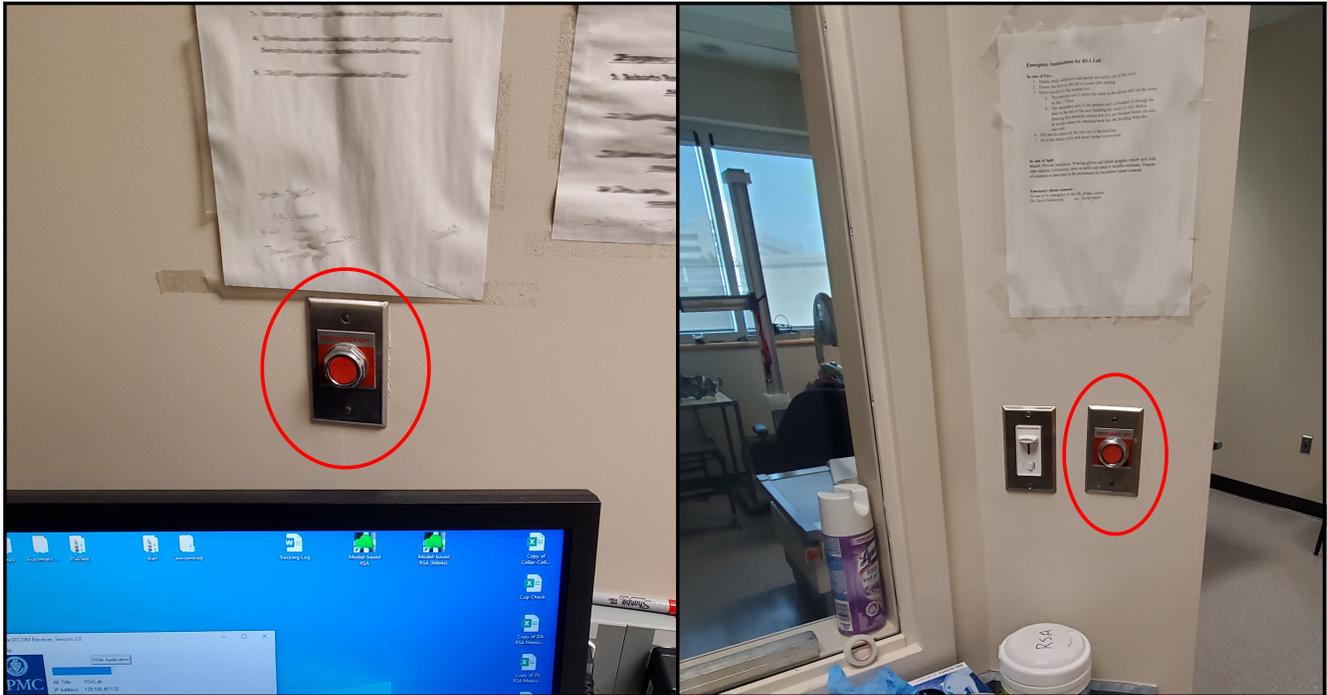
Figure 1: Emergency Stop Buttons located on the wall of the operators' console.