iRay 10x12 Tethered Calibration Guide

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Version 1.01

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1 Special Note

Please read and review the iRay-Venu1012X User Manual before proceeding with this guide. By proceeding, you agree that you have read and understand all content within that User Manual. The iRay-Venu1012X User Manual is included with the unit and can also be found on the 20/20 Imaging website.

2 Pre-Preparation

1. Ensure all equipment is powered on.
2. Shut down Opal-RAD software.

3. In the System Tray, right-click on the Maven utility and click **Exit**.

3 Calibration

NOTE: For dual-panels configurations, follow the steps below for each panel. Connect only ONE 1012 iRay tethered panel to the network switch in which you will be calibrating (disconnect one if necessary)

3.1 Panel Alignment

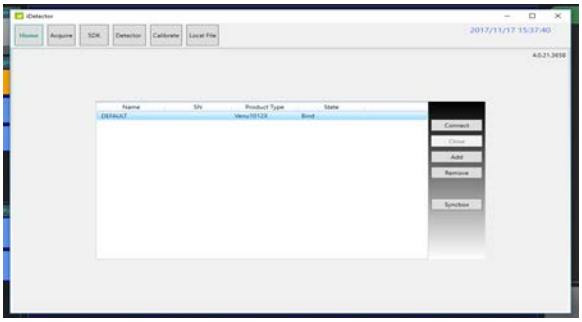
1. Align to the light field to ensure full coverage within the active area. Light field (radiation) should be directly facing DR panel, not on any angle. Panel should not be in any enclosure or blocked by anything including orthoposer, cables, phantoms, etc.

3.2 iDetector Preparation

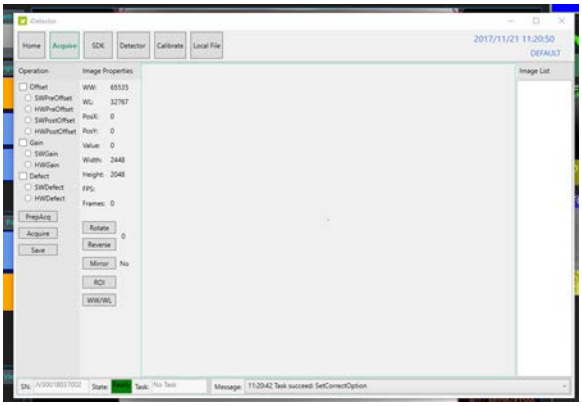
1. Open the iDetector shortcut from the desktop.

   If nothing occurs when opening, ensure Microsoft Visual C++ 2013 32-bit is installed on the PC.

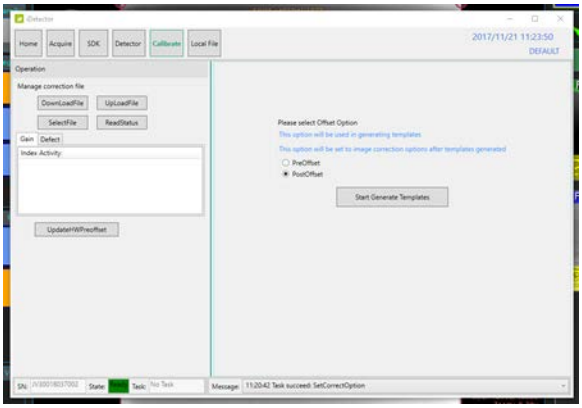
2. Highlight **DEFAULT** and click **Connect**.



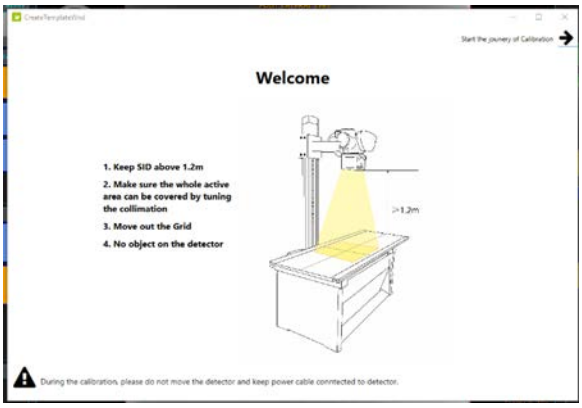
3. Select the Acquire tab and deselect the Defect, Gain, and Offset options (in that order).



4. Select the Calibrate tab, select the PostOffset option and click **Start Generate Templates**.

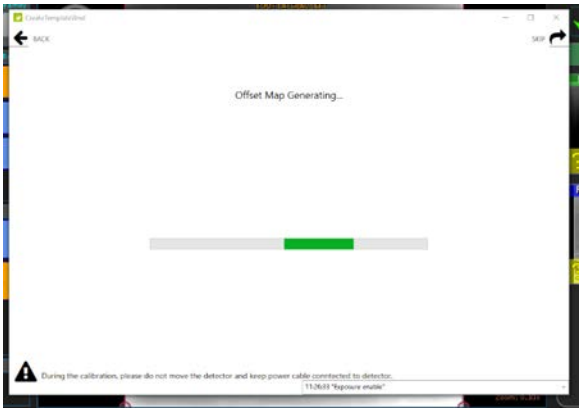


5. Click the arrow next to the ‘Start the journey of Calibration’ message.

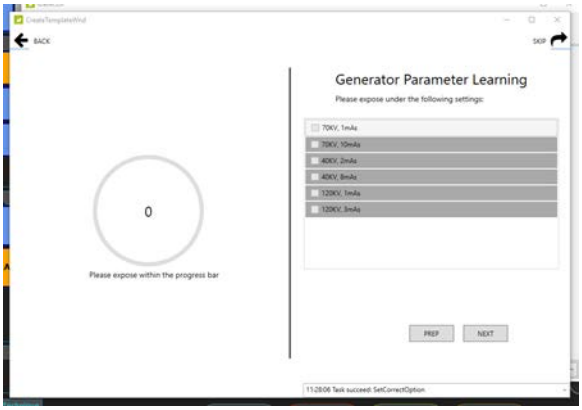


6. Immediately click **Skip** on the Offset Map Generating window.

   NOTE: If you do not click **Skip** within two seconds, you will have to wait for the Offset Map to be generated. The 1012x panel does not use the offset map.



7. Click **Skip** on the Generator Parameter Learning window.

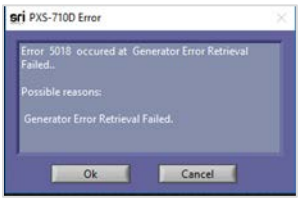


8. If the panel(s) are paired with a 2020 PXS710D, continue with the following sections. For all other configurations, including retrofit & X-Cel X-Ray pairings, skip to section 3.4

3.3 PXS710D (if applicable)

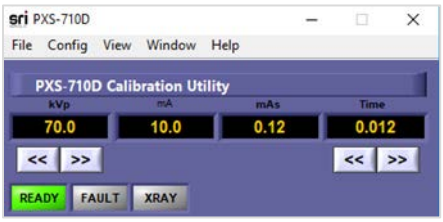
1. Open the PXS710D shortcut from the desktop.

   NOTE: If you receive an error; in the file menu, select **Config** > **Options**. Select the Serial tab and set the corresponding COM port (COM1 is default). Click **Save**.



   *If a straight serial cable is utilized, select COM1. If a USB-Serial Adapter is utilized, open device manager to check the COM port that is set for it

2. From the File menu, choose View, and change to **Cal Mode**.
3. Adjust the technique as needed during exposures.

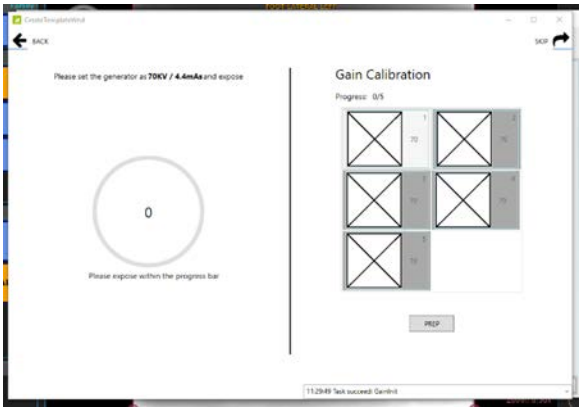


3.4 Gain Calibration

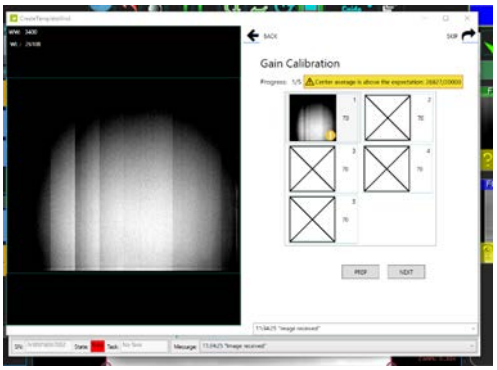
1. For a Podiatric SID, use the following chart as a reference during each exposure request.

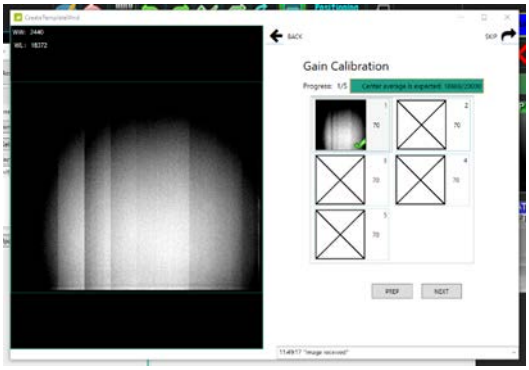
REQUESTED	USE
70KV, 12.4mAs	70kVp, 0.50mAs/Time

2. Click **PREP** and take an exposure for each progress step.

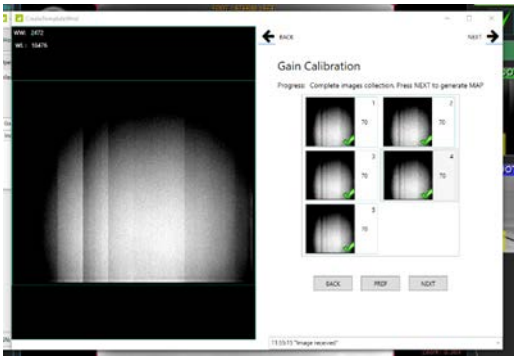


3. Adjust dose until the message states, Center Average is expected. After receiving the correct dose, click **NEXT** and then click **PREP** to continue with each exposure.





4. Once the gain calibration is, click **NEXT** and click **NEXT** again to complete the Gain Calibration.

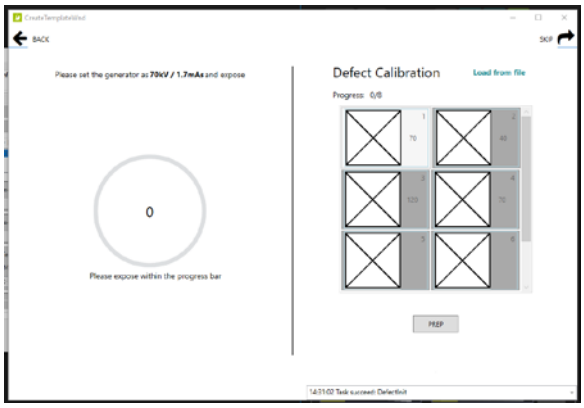


3.5 Defect Calibration

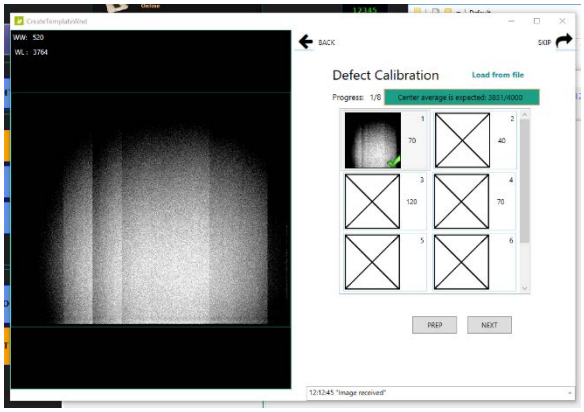
1. For a Podiatric SID, use the following chart as a reference during each exposure request.

	REQUESTED	USE
1	70KV, 3mAs	70kVp, 0.12mAs/Time
2	40KV, 10mAs	40kVp, 0.80mAs/Time
3	120KV, 3.2mAs	70kVp, 0.45mAs/Time
4-8	70KV, 12.4mAs	70kVp, 0.50mAs/Time

2. Click **PREP** and take an exposure for each progress step.



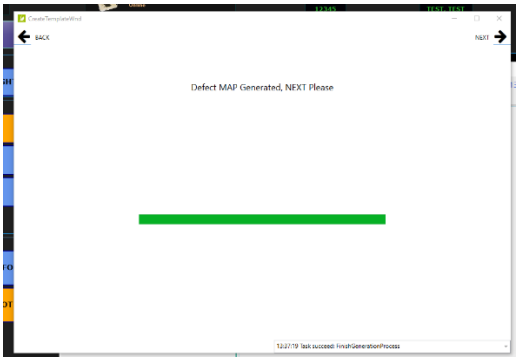
3. Adjust dose until the message states, Center Average is expected. After receiving the correct dose, click **NEXT** and then click **PREP** to continue with each exposure.



4. Adjust dose during the Defect calibration steps. Monitor the progress status messages and adjust dose accordingly.

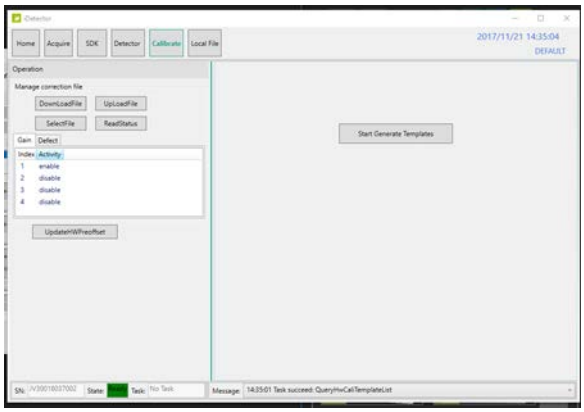
   NOTE: After exposure #6, scroll down to complete exposures 7 and 8. After completing exposure 8, click **NEXT** .

5. Once the defect calibration is, click **NEXT** and click **NEXT** again to complete the Gain Calibration. Close the window once the Calibration Finished message is displayed.



3.6 Final Configurations

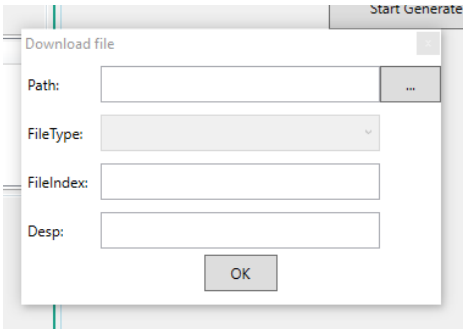
1. Return to the Calibration tab. Select the Gain tab and then click **ReadStatus**. Highlight option 1 and click **SelectFile**. This will change the option 1 status to enable. Click **DownloadFile**.

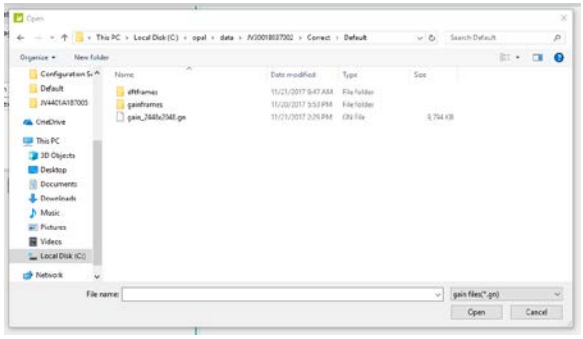


2. Click on the Path button and browse to `C:\Opal\data\Panel Serial\Correct\Default.`

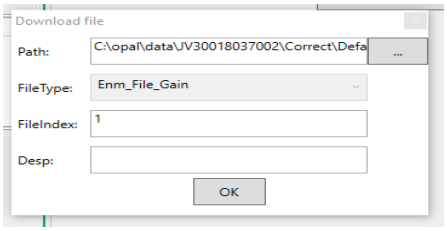
3. Select the *gain_2448_2048.gn* fileand click **Open**.

   NOTE: If the gain file does not display, verify the file type drop down in the lower right corner is set to gain files(*.gn).

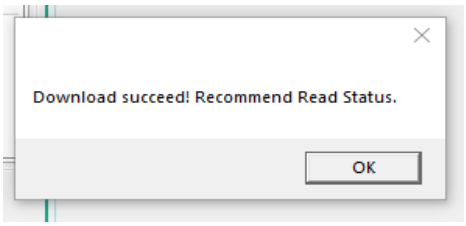




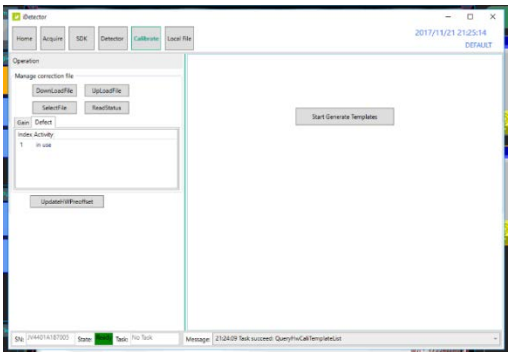
4. Type 1 in the FileIndex filed and click **OK**.



5. The following message will display after the gain file has been downloaded to the panel. Click **OK.**



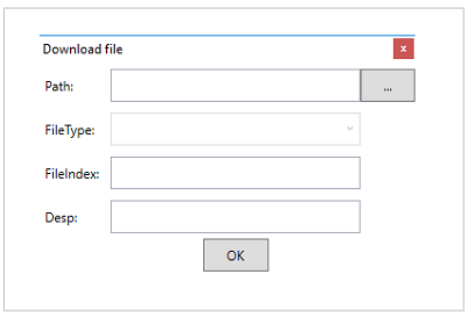
6. Select the Defect tab, then click **ReadStatus** and highlight option 1. Click **SelectFile**. This will change the option one status to enable. Click **Download**.

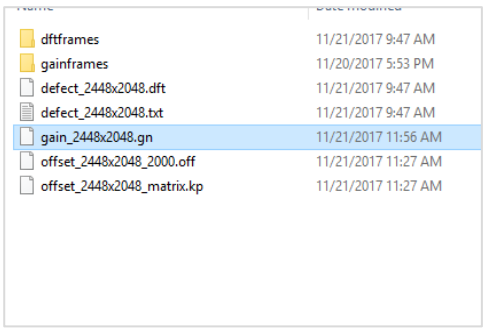


7. Click the button to the right of the Path field and browse to `C:\Opal\data\Panel Serial\Correct\Default.`

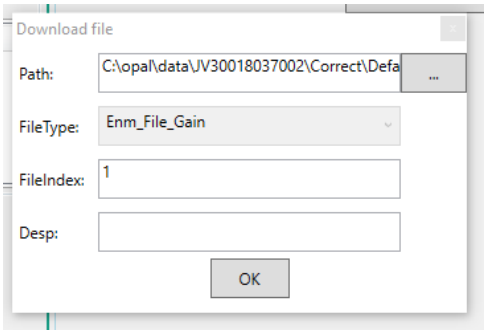
8. Select the *defect_2448x2048.dft* file.

   Note: If the gain file does not display, verify the file type drop down in the lower right corner is set to defect files(*.dft).

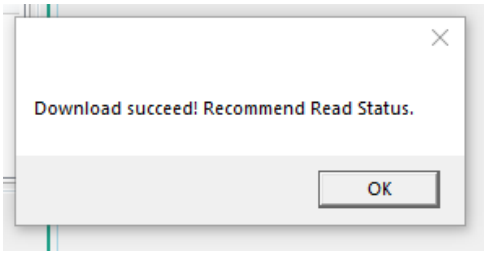




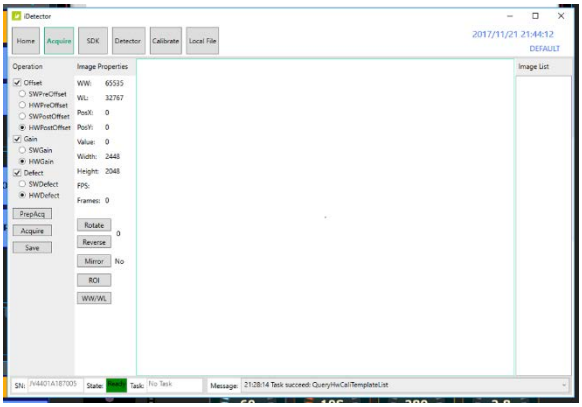
9. Type 1 in the FileIndex filed and click **OK**.



10. The following message will display after the gain file has been downloaded to the panel. Click **OK**.



11. Enable **the** Offset, Gain, and Defect options (in that order). Select the **HWDefect**, **HWGain**, and HWPostOffset options.



12. Close iDetector software

4 General Information, Operation, Maintenance

If you encounter issues not addressed by this user guide, please refer to the current revision iRay-Venu1012X User Manual, or contact technical support for additional assistance.