How to do the Calibration

Issues

1. How to do the Calibration

Calibration Preparation

For the calibration of the CR, it is important to note the difference between dental and medical use.

1. For FireCR Dental reader: Size 4C imaging plate and X-ray device

2. For FireCR Spark (Flash) reader: Large cassette (35cm x43cm) and X-ray device

Calibration Steps

1. For FireCR Dental reader

Note) Calibration is not required in general usage. But offset and PMT gain values are required to calibrated if acquired image is too bright or dark. In the system menu, select IP Calibration to open a window as shown. Process calibration as instructed in the window.

Step 1: ADC Offset Calibration

1) Turn on the scanner and connect the software to.

2) Place a size 4C imaging plate in the tray and set the resolution to HD.

3) Start scan.

4) Mean pixel value will be displayed automatically after image is acquired

5) Click "Automatic Adjustment" button for offset calibration
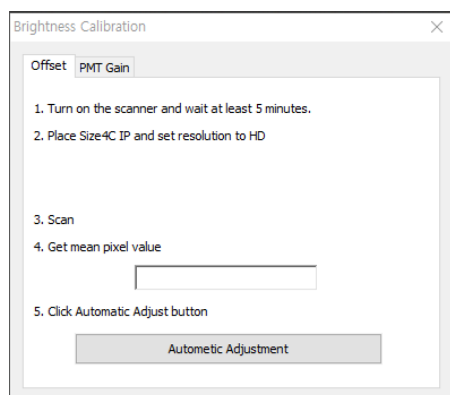
Step 2: PMT Gain Calibration

1) Turn on the scanner and connect the software to.

2) Place Size 4C IP on the scanner's tray and set resolution to HD

3) Adjust X-Ray tube to cover the entire IP

4) Set X-Ray condition to 70kVp, 0.84mAs, SID 300mm (480uGy) and exposure

5) Start scan

6) Mean pixel value will be displayed automatically after image is acquired

7) Click "Automatic Adjustment" button for PMT gain calibration
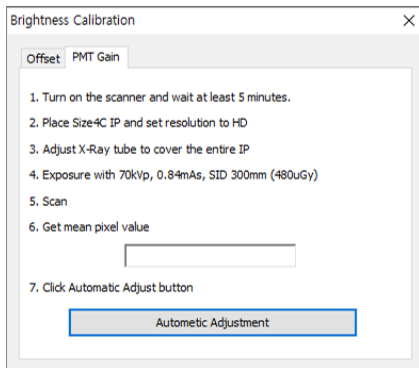
2. For FireCR Spark(Flash) reader

Note) The Spark scanner has two sets of calibrations (tabletop, wall mount) installed and must be updated when the laser optical assembly is replaced. We recommend Calibration when moving and installing the scanner. During the Calibration X-ray radiation field must cover the whole area of the cassette.
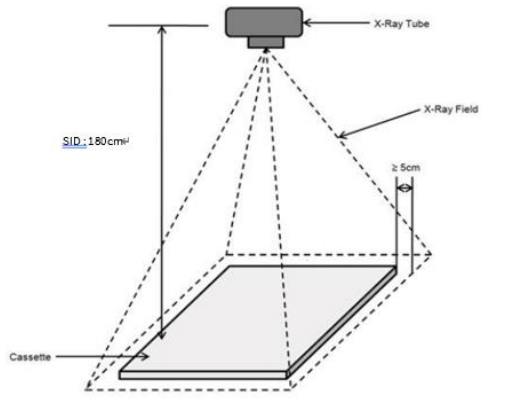
Note) SID may vary depending on site conditions. If you want to change the position of the reader, select different reader position and follow steps 1-7. If you calibrate in a different position, the image may not be good. Therefore, after selecting the correct position, perform "Calibration".

Step 1: Auto Alignment

1) Prepare an X-ray device and Cassette 35cm x 43cm.

2) After selecting the Reader Position, insert the Cassette into the Spark reader.

3) Click the "AutoAlignment"

Step 2: Erase

4) When AutoAlignment is completed, the "Erase" button is activated. Click the "Erase"
When Erase is complete, take out the Cassette.

Step 3: ScanBlank

5) Insert the Cassette. When the "ScanBlank" button is active, click the "ScanBlank".

6) When ScanBlank is completed, a green mark is generated, and take out the Cassette.

If a red mark is generated, contact the DIGIRAY service team

7) Expose X-ray to Cassette and insert the Cassette on Spark reader. When the "ScanLowDose" button is active, click "ScanLowDose"

8) Take out the cassette when "ScanLowDose" is complete. If a red mark is generated, click the "Reject" button. Adjust the X-ray dose and expose to the cassette.

* If it is lower than the recommended range, a red mark appears. Adjust the x-ray dose higher and expose.

9) Expose X-ray to Cassette and insert the Cassette on Spark reader. When "ScanLowDose" is activated, click ScanLowDose".

10) Take out the cassette when "ScanLowDose" is complete.

Step 5: ScanMidDose

11) Expose X- ray stronger than "ScanLowDose" to the cassette and insert the Cassette on Spark reader. When the "ScanMidDose" button is active, click "ScanMidDose".

12) Take out the cassette when "ScanMidDose" is complete.

Step 6: ScanHighDose

13) Expose X- ray stronger than "ScanMidDose" to the cassette and insert the Cassette on Spark reader. When the "ScanHighDose" button is active, click "ScanHighDose".

* If it is lower than the recommended range, a red mark appears. Adjust the x-ray dose higher and expose.

Step 7: Upload

14) Take out the cassette when "ScanHighDose" is complete. If a green mark is generated, click the "Calibration".
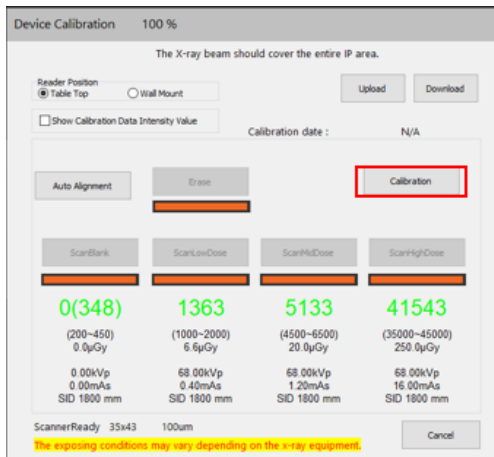
15) When calibration is complete, click "확인" (it is means OK) on the pop-up window.
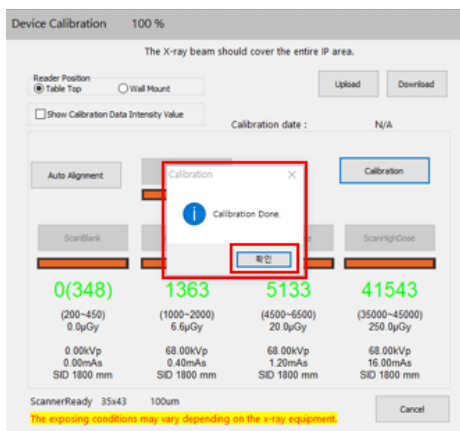
16) If a pop-up window to upload calibration data appears, click "취소" (it's means cancel).

And click the "Cancel". Then Calibration is complete.

The reason we do not recommend uploading is to avoid uploading data of malfunctioning X-ray devices or incorrectly performed calibrations.

◆ Contact Digiray's Technical Team

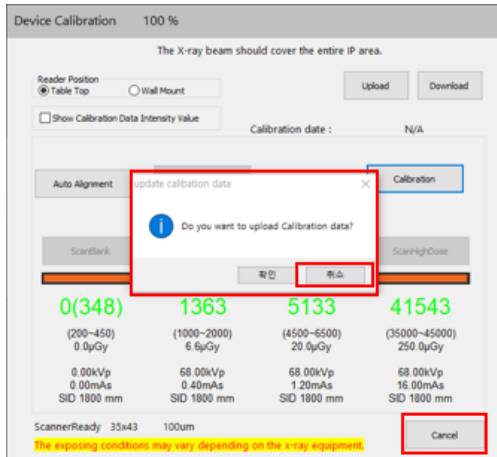*__Submit a Ticket__*

For further assistance, email **service1@digiray.co.kr** with the following information:

1. **Last Name**
2. **First Name**
3. **Company**
4. **Email**
5. **Country**
6. **Phone**
7. **Serial Number** (attach a photo of the product label)
8. **Message**

Attachments:
1. A photo of the product label on the back of the equipment
2. A photo or video of the equipment's initial symptoms
3. Actions taken and current equipment status
4. Screenshot of the 'Scanner Control' window

✧ Providing detailed information will ensure you receive prompt and efficient service assistance.