Panoura 18S Pan Only
Panoramic X-Ray Calibration and Alignment

Summary

These instructions serve as supplemental assembly guidance of the Panoura. They are not meant to replace the installation manual, but rather serve to complement it.

If there are any questions, please do not hesitate to contact us

914-592-6100

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ImageWorks
Generations of Imaging

Contents

Complete the Panoura Assembly Quick Guide before starting this procedure.

1. Computer Set Up

Complete the Panoura Assembly Quick Guide before starting this procedure.

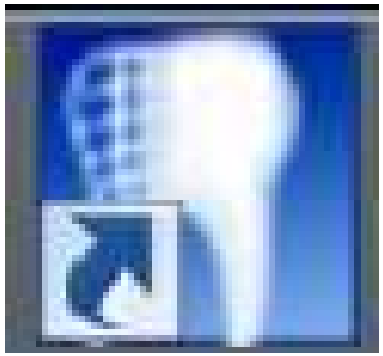
This procedure assumes the scanning PC was either provided or staged by ImageWorks.

- Connect the PC to Power, Monitor, Mouse and Keyboard.
- Connect the 2 cables from Panoura (ethernet and 9 pin serial type) to the 2 ports labeled on the back of the PC
- Connect the Office Ethernet LAN cable to port labeled on the back of the PC.
- Start PC and log into windows. If new scanner PC was supplied with the Pan the User/PW are supplied on a white index card taped to PC case.

1. Computer Set Up

Confirm that key programs are running by looking for the following icons in the system tray (usually bottom right of screen):

1. Control Manager

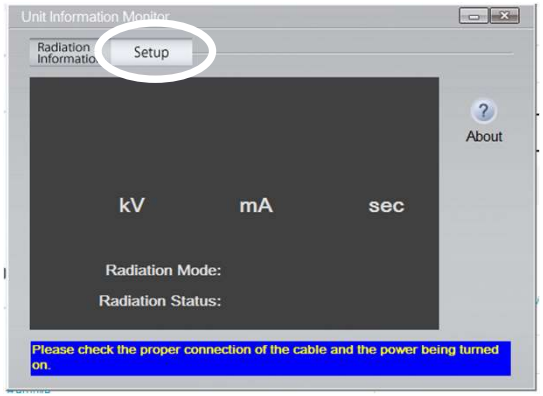


2. Image Creator

2. Tube Head Aging

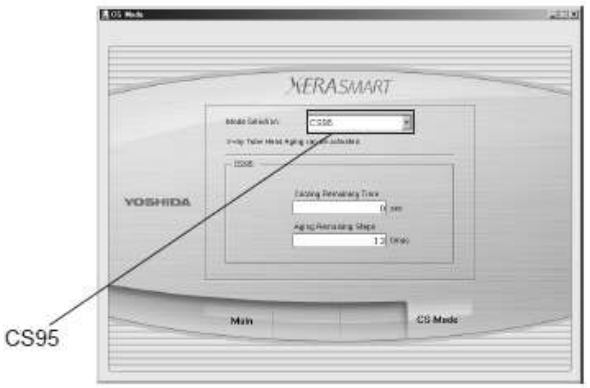
On the computer in the lower right hand corner of the screen, Double click the Control Manager icon (white tooth on light blue background). If prompted select a COM Port.

Hold down the shift key and click on the setup button to open the CS service menus.



It will ask for password, which is **p18p18**

Select CS95 to start the Tube Head Aging Routine



2. Tube Head Aging

Follow directions on screen. To initiate exposure, press hand switch and hold until beeping stops (x-ray cycle will be about 4 seconds).

Screen will show countdown during cool-down period countdown and will say when it's ready for next exposure(about 80 seconds).

Repeat this process 13 times. At the completion of the 13th cycle, the Unit Display should show "CS95 PASS". The exposure count will reset to 13 this is normal.

Click on "Main" tab to exit CS mode

Note:

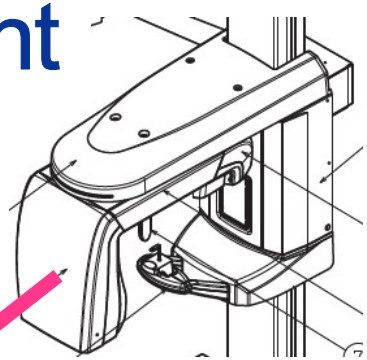
If exposure switch is pressed before cooling cycle is complete, an FL03 warning is displayed.

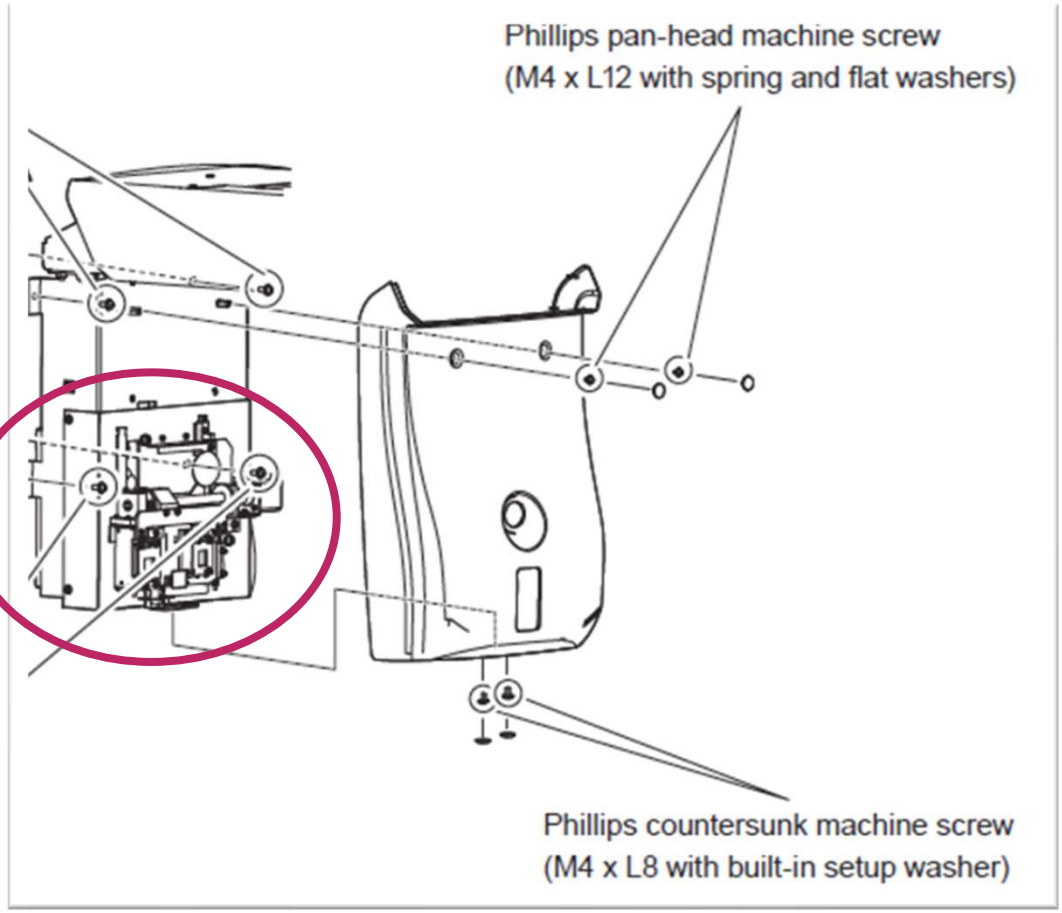
If switch is released before exposure is complete, an ER08 warning is displayed.

These error codes can be cleared by pressing RESET once on panel.

3. Panoramic Mechanical Alignment

If the inside cover on the tube head is in place, remove to access collimator assembly





Collimator assembly

3. Panoramic Mechanical Alignment

For the next steps the Panoura must be in SERVICE MODE (FL07).

Do this by pressing and holding down the MODE and FIX buttons on the operator panel simultaneously for about 2 seconds.

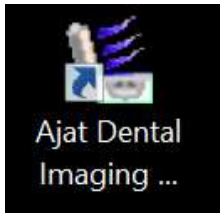
The unit will double beep and a small dot will appear on the display above the mA to indicate the unit is in service mode.

Make sure sensor is installed in Pan position and the knob is Locked.

3. Panoramic Mechanical Alignment

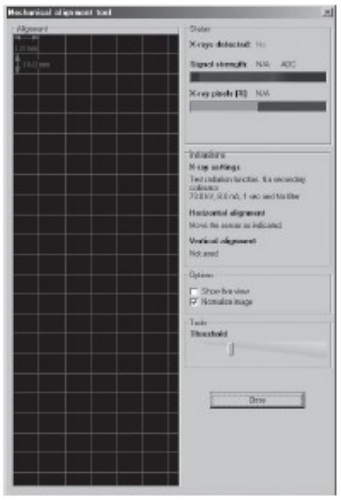
Make sure sensor is installed in Pan position

Open the Ajat Dental Imaging Software by double clicking on the desktop icon



In the Ajat software menu bar

Tool->Maintenance->Mechanical Alignment

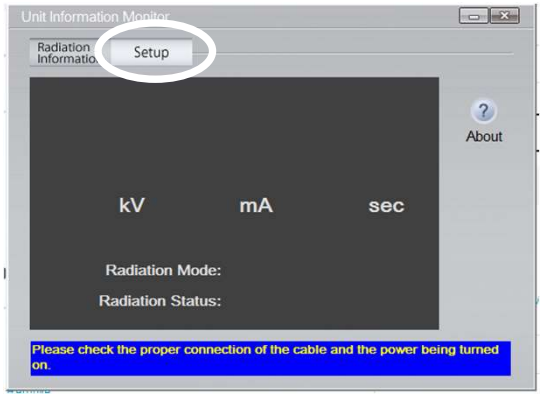


The mechanical alignment tools screen is displayed

3. Panoramic Mechanical Alignment

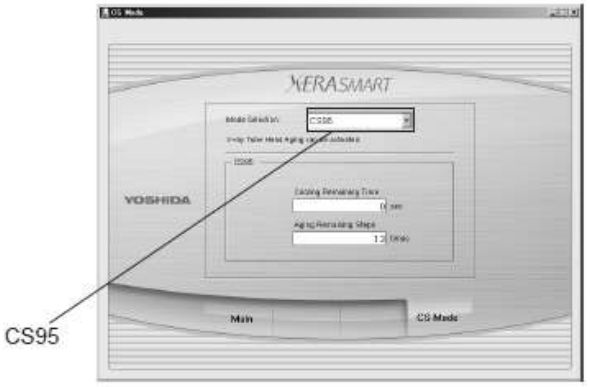
On the computer in the lower right hand corner of the screen, Double click the Control Manager icon (white tooth on light blue background).

Hold down the shift key and click on the setup button to open the CS service menus.

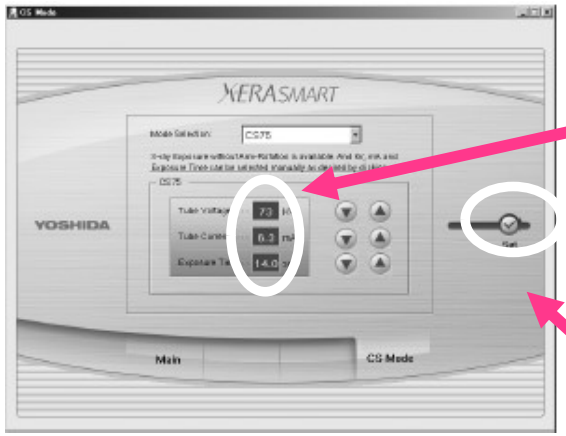


It will ask for password, which is **p18p18**

Select **CS75** to set parameters for the scan.



3. Panoramic Mechanical Alignment



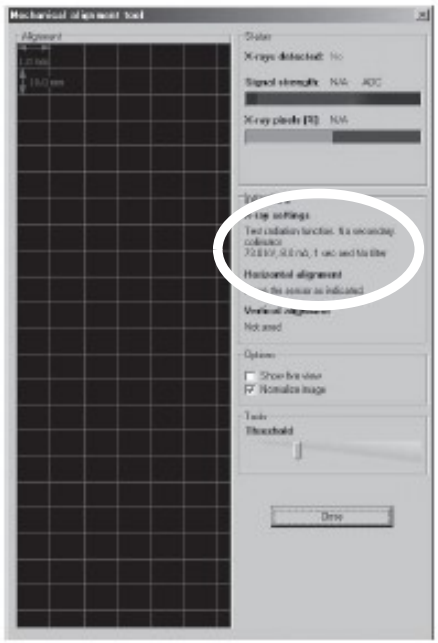
Adjust parameters (kv, ma and time)

kV = 73

mA = 6.3

s = 1.0

click “Set” …

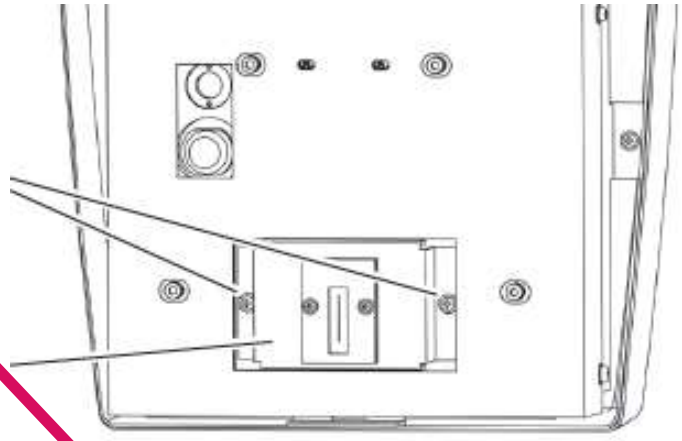


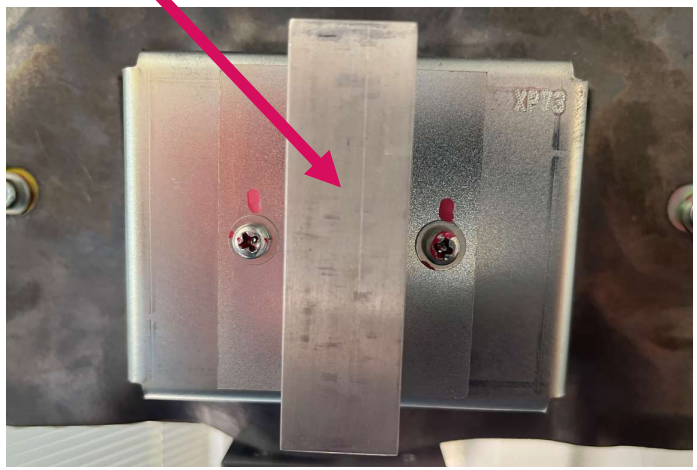
…to match those listed in the mechanical alignment tool

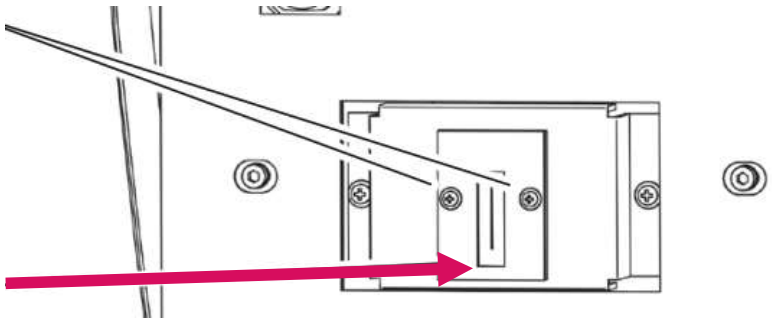
3. Panoramic Mechanical Alignment

Place 20 mm aluminum block over and completely covering the pan collimator slit.

Use tape to hold the block in place (a magnetized block does not require any tape).







3. Panoramic Mechanical Alignment

Press hand switch to initiate the 1 second x-ray exposure. The white column will appear on the screen with arrows above and below showing how far each end is out of alignment.

Number on top and bottom represent distance each side is out of alignment. If number is less than 0,20 mm, it will be in green, which is within the tolerance for alignment. The objective is to adjust collimator position such that both top and bottom are green (< 0,20 mm).

If either number is red (greater than 0,20), then the collimator must be adjusted.

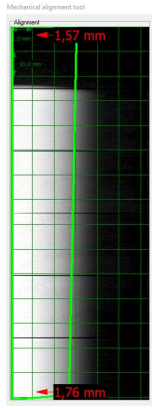
Note: These distances do NOT correlate with how far collimator is out of alignment.

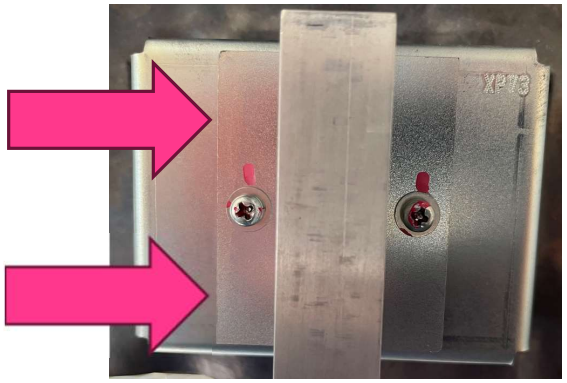
3. Panoramic Mechanical Alignment

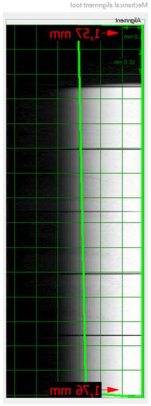
Adjustments

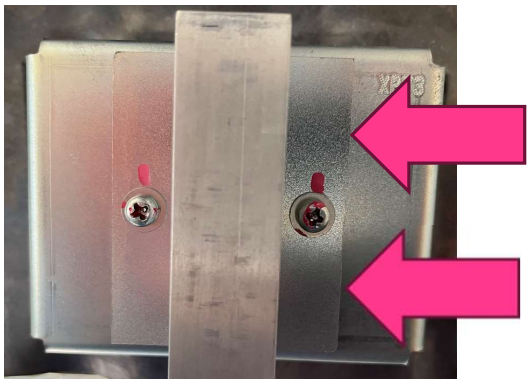
Slightly Loosen the 2 Philips screws pictured below.

Adjust Left and Right









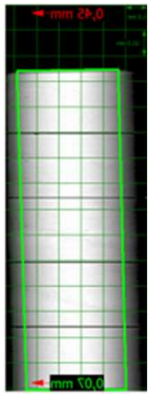
Tip: The mechanical alignment process is most efficient if each adjustment of the collimator is done with deliberation and care. Small adjustments to collimator can have large impact on alignment, so it's best to start with very small adjustments so that larger misalignments don't result.

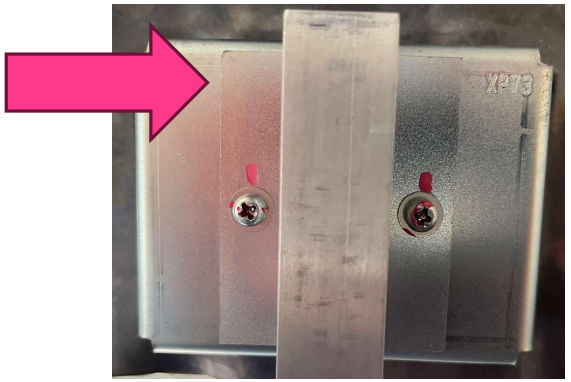
Note: vertical adjustments may be required. Please refer to installation manual.

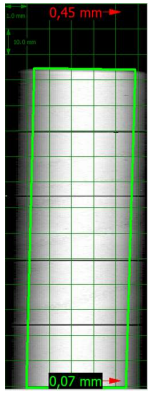
3. Panoramic Mechanical Alignment

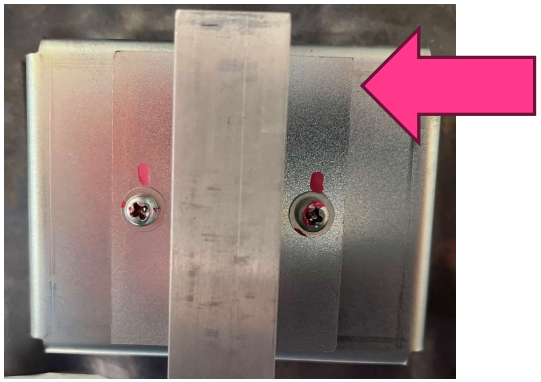
Adjustments

Adjust Rotated / Tilted



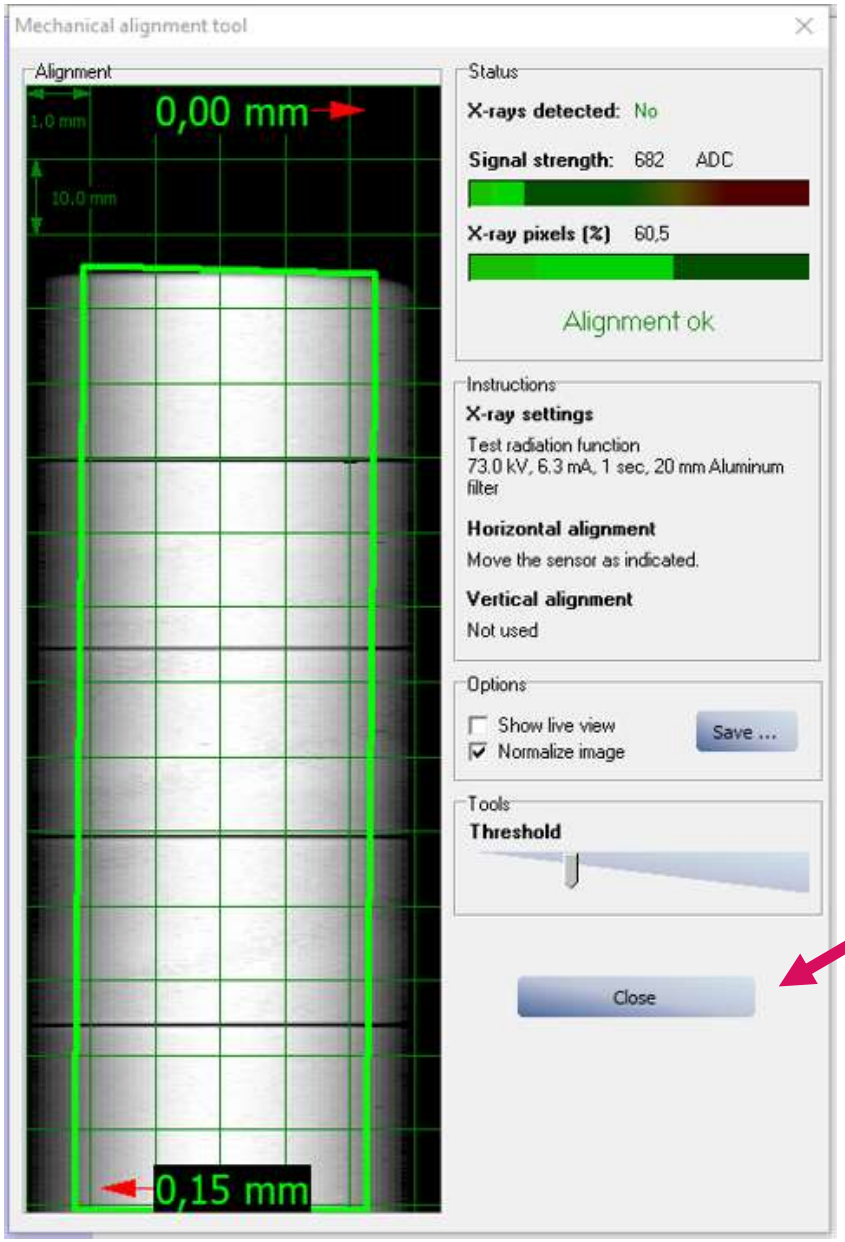






Tip: The mechanical alignment process is most efficient if each adjustment of the collimator is done with deliberation and care. Small adjustments to collimator can have large impact on alignment, so it's best to start with very small adjustments so that larger misalignments don't result.

3. Panoramic Mechanical Alignment



Alignment Passing

Tighten the Philips screws firmly but do not over torque.

After tightening screws take 1 more exposure to verify the Collimator is still aligned.

If still “Alignment ok” then click close on the Mech Alignment tool.

Click Main on the Control Manager.

3. Panoramic Sensor Calibration

Verify unit is still in Service FL07 Mode (dot on operator panel above the mA).

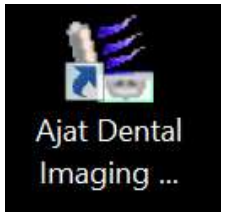
If necessary, press hold MODE and FIX simultaneously. Refer to page 9 if you need details engaging Service Mode.

Confirm Control Manager is closed

Confirm that all adapters (e.g. chin rest block) are removed from the irradiation path of the x-ray

4. Panoramic Sensor Calibration

Open the Ajat Dental Imaging Software



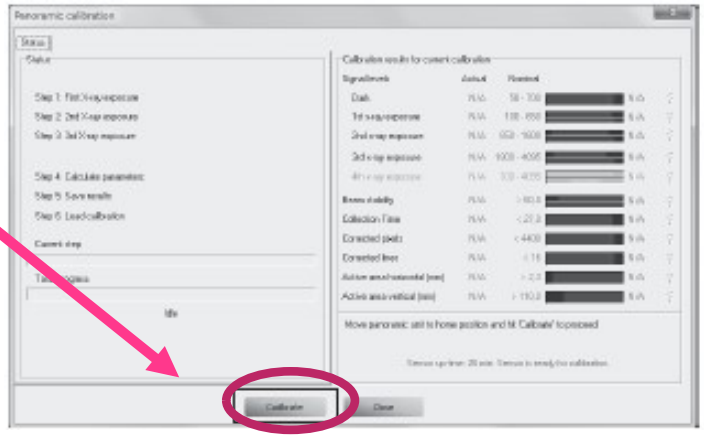
Select Tools → Maintenance → Calibration

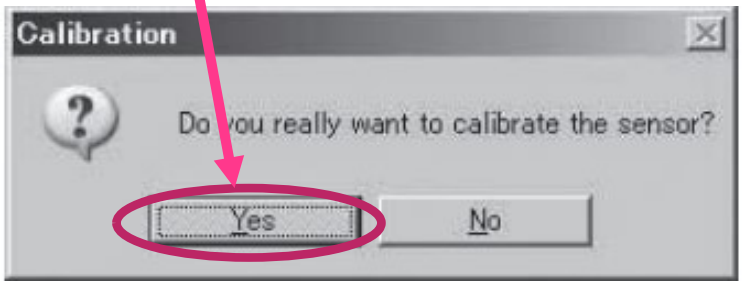
Calibration screen is displayed.

Click Calibrate

Then Click Yes

Note: unit needs to be powered on for about 5 min to start performing calibration

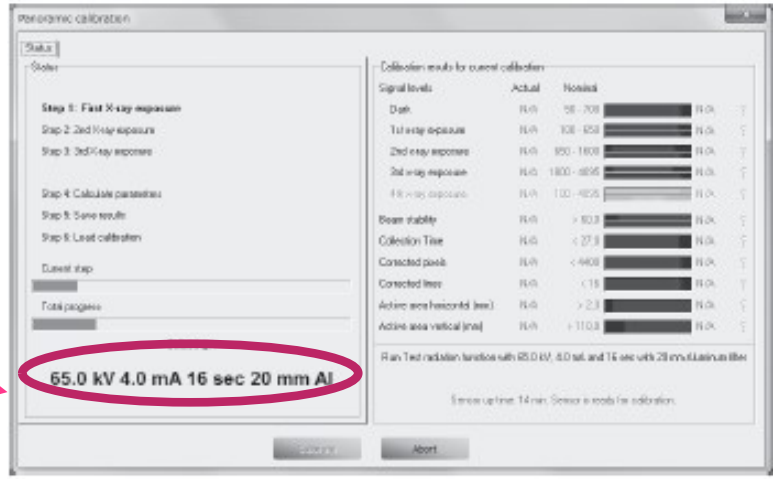




4. Panoramic Sensor Calibration

The calibration includes a series of 3 x-ray scans.

The display details the parameters needed for each exposure. Set the console panel on the side of the unit to reflect these parameters.



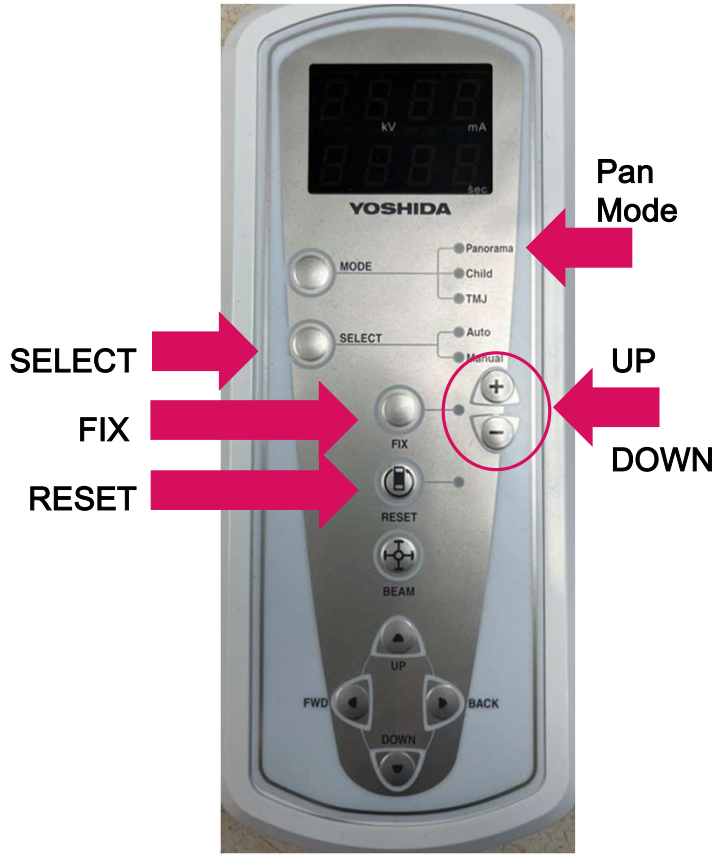
Note: for calibration process, parameters can NOT be set in software, and must be set from the column console

Note: when 20 mm Al is displayed, then the aluminum block must be attached over the panoramic slit. When "No Filter" is displayed, then remove the block

4. Panoramic Sensor Calibration

To change the parameters on console on the column:

- Confirm you are in Pan mode (this is default).
- Press “Select” button until kV is flashing.
- Press up or down to set value.
- Press “Fix” to set.
- Repeat for mA
- Repeat for sec
- Press “Reset” to prep unit for next scan.
- Confirm Ready Light is solid GREEN.
- Press and hold trigger switch for complete scan (full 16 seconds).



4. Panoramic Sensor Calibration

Repeat above steps for each scan updating parameters requested for each exposures

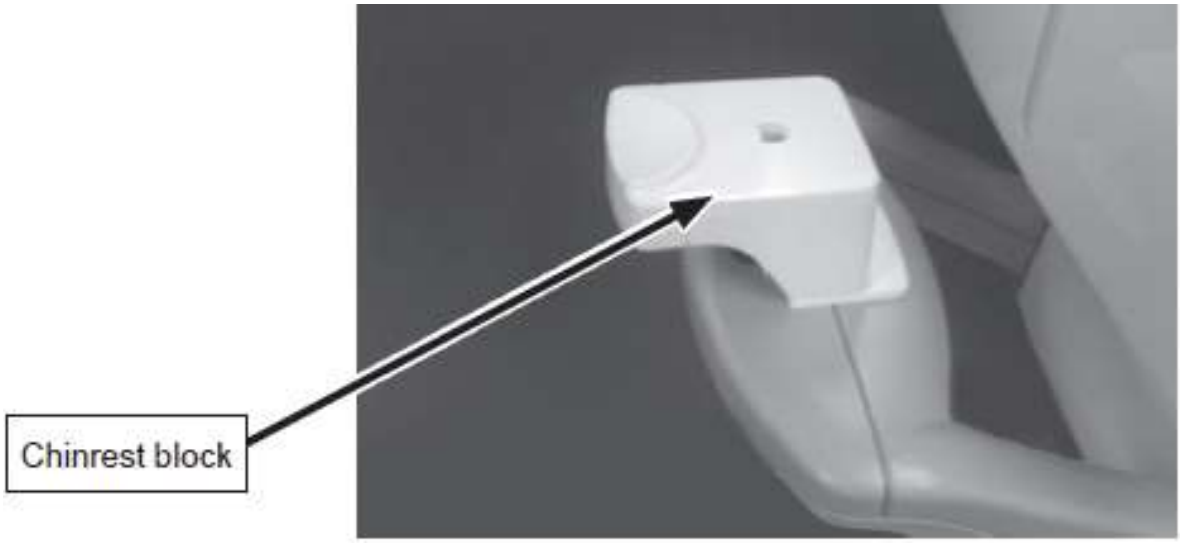
When the calibration is finished, press Ok

To finish up calibration:

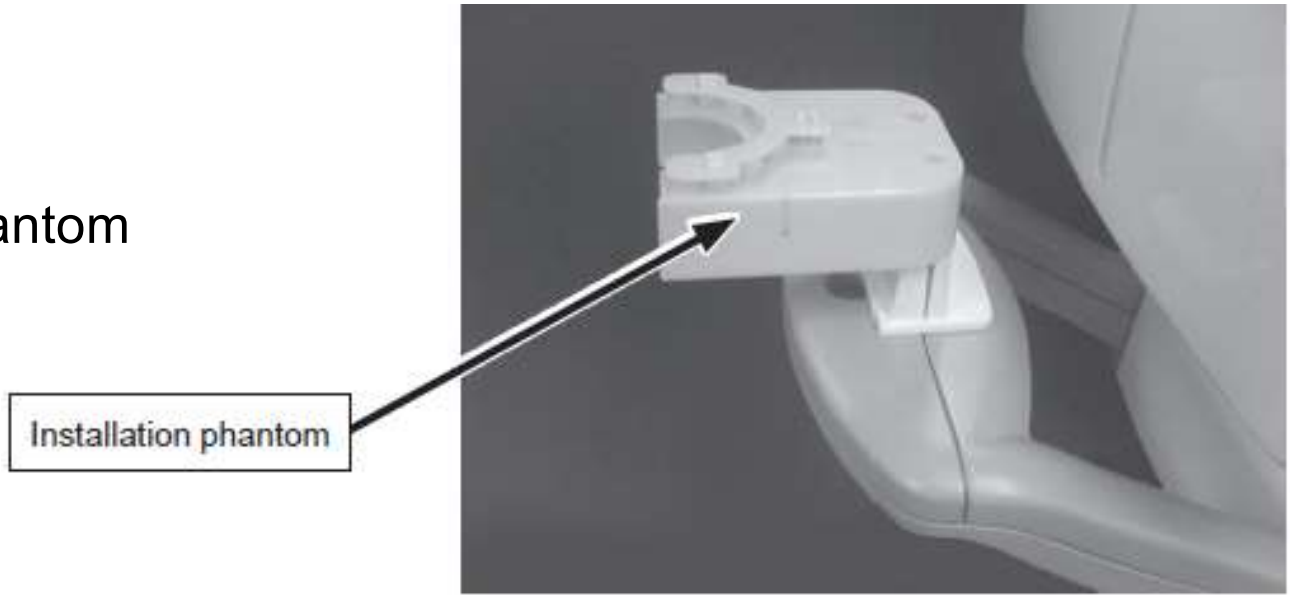
- Close the Ajat software
- Remove the Aluminum Block
- Replace all covers.
- On the Unit Console Exit Service Mode by pressing MODE and SELECT simultaneously for about 2 seconds (unit double beeps and dot above mA turns off).

5. Final Test Exposure

Remove chinrest block



Mount installation phantom



5. Final Test Exposure

In the imaging software (e.g. Evasoft or 3rd party imaging software), click to acquire a panoramic image.

Initiate scan (recommended setting 60kV, 2mA, 16s) and evaluate image.

Note:

Because the test scan does not have patient anatomy, it is possible that lines or artifacts may be seen in other parts of the test image. This will not affect quality of actual dental images taken.

Seven ball bearings should be checked to see that:

1. Each ball appears circular
2. Distance between balls is symmetrical to left and right of center ball
3. No large white boarders on either left or right side of the Image.

Summary

These instructions serve as supplemental assembly guidance of the Panoura. They are not meant to replace the installation manual, but rather serve to complement it.

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