

TABLE SWING POSITION ADJUSTMENT

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Rev 2

1. Preparation

1-1 Required Tools

Ruler(100cm)

1-2 Prerequisite

- Table is already placed on the rail.
- Table cover is removed.
- Table rear foot cover is removed.
- Table dollies are attached.
- System Power is ON.
- Head Coil
- DQA Phantom
- Phantom Holder
- Head Rest
- 300ml tube construction adhesive or flooring adhesive equivalent (Liquid Nails, PL400)
- Denatured alcohol

1-3 Overview

1. This manual describes how to adjust the 0degree, 25degree, and -25degree Table swing positions by aligning the table with laser light beam.
Once Table position is fixed, Table Brake Lock plate will be selected for wear plate.

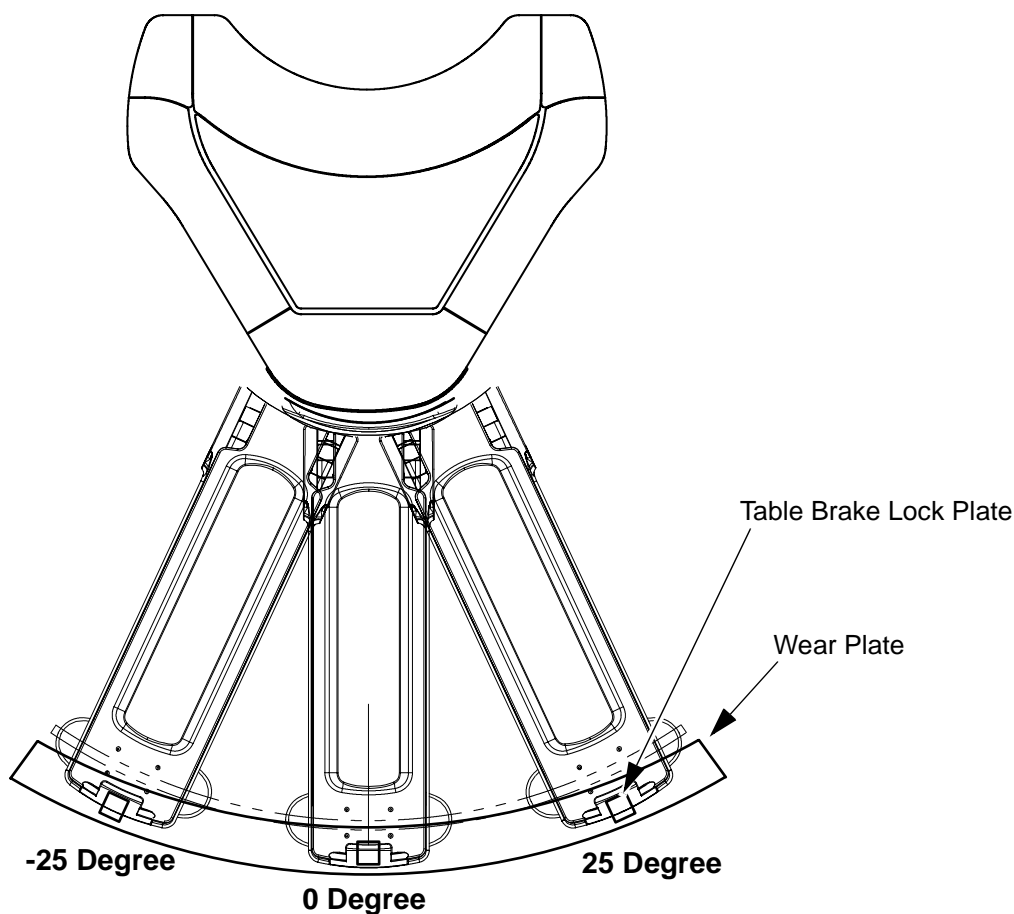
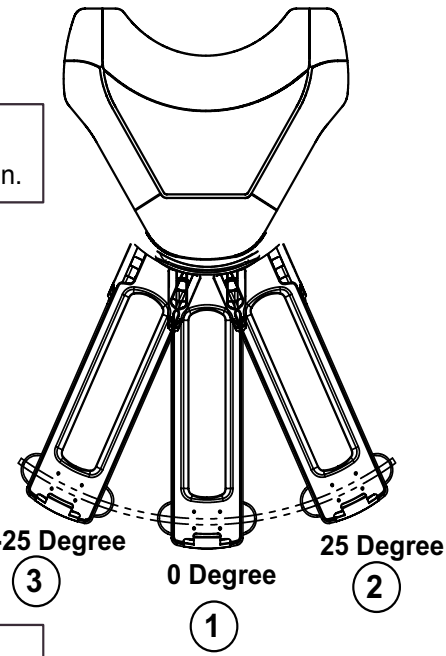
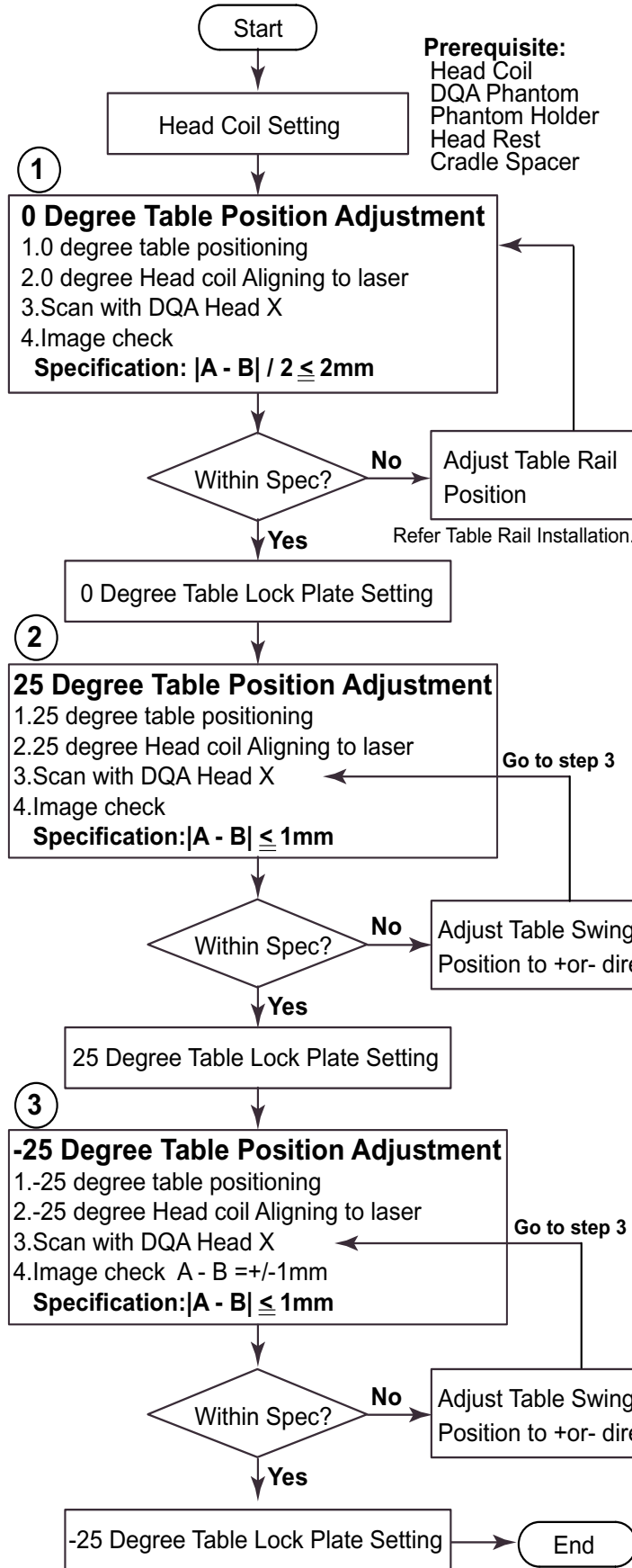


TABLE ADJUSTMENT OVERVIEW
ILLUSTRATION 1

Rev 2

1-4 Adjustment Flow



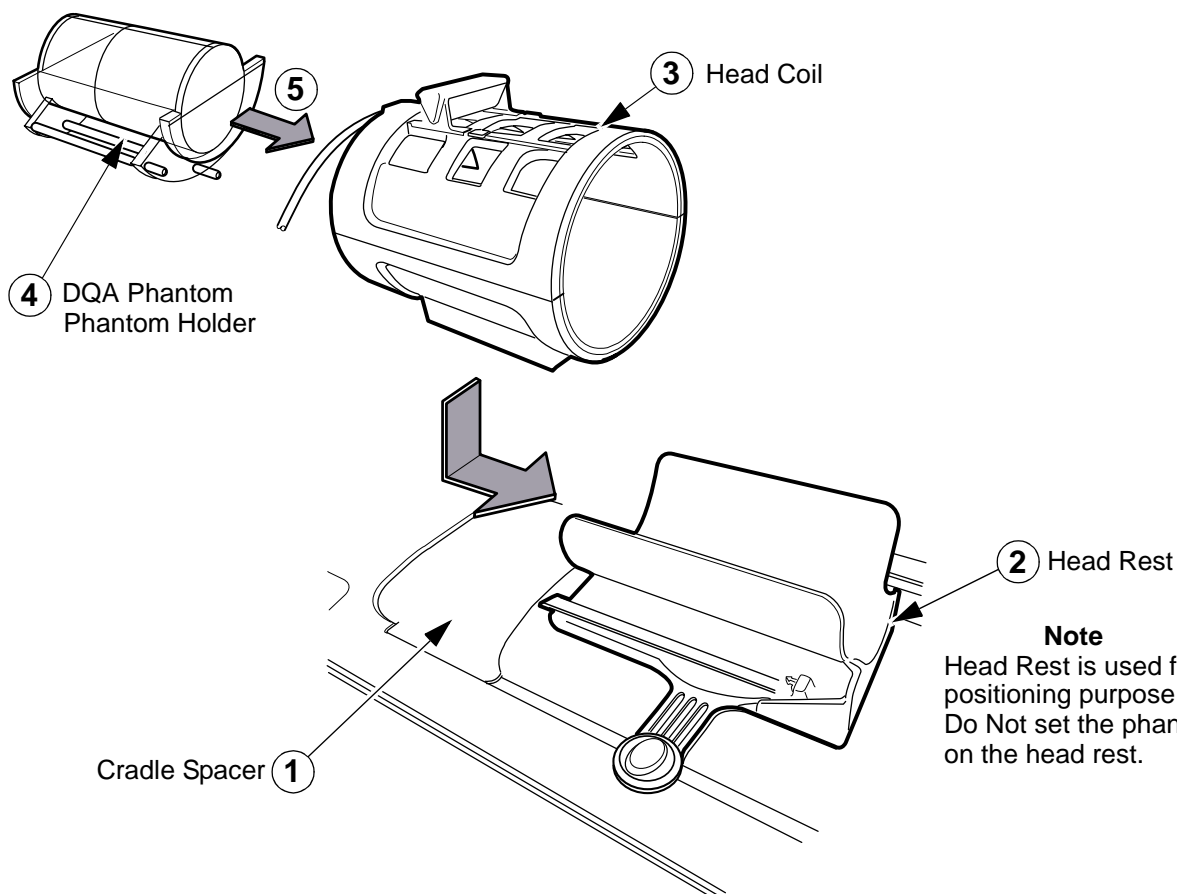
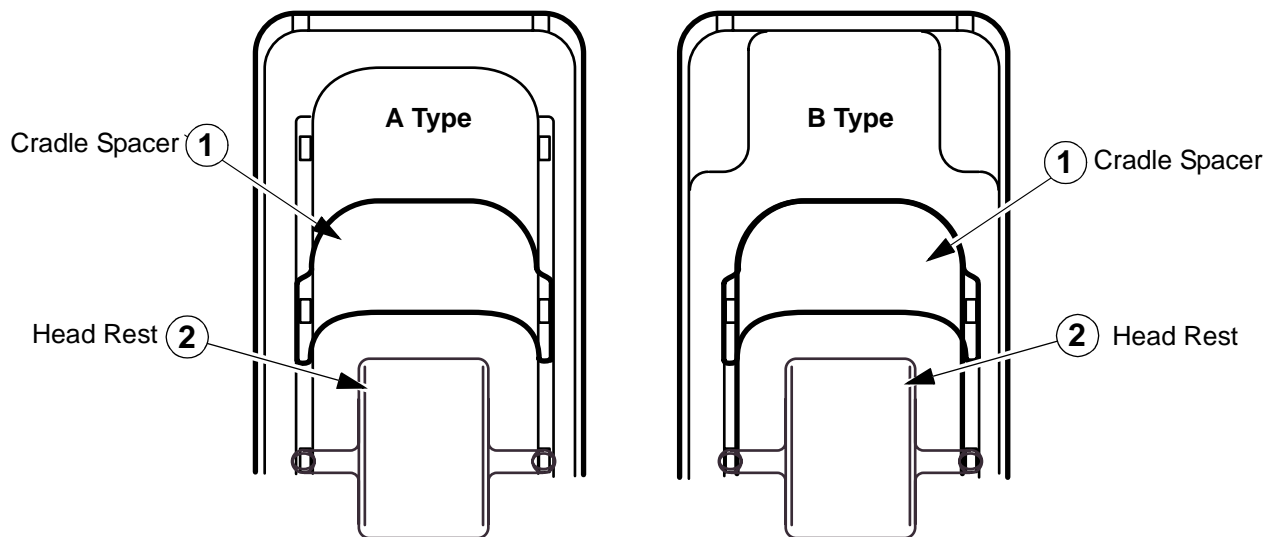
Remove the dollies from the table.

Rev 2

2. Head Coil Setting

1. Set cradle spacer to cradle as illustration 2.
2. Set head rest onto cradle.
3. Set head coil to head rest.
4. Set DQA phantom to phantom holder.
5. Insert DQA phantom and phantom holder into head coil.

NOTE:There are two type of table as following illustration.

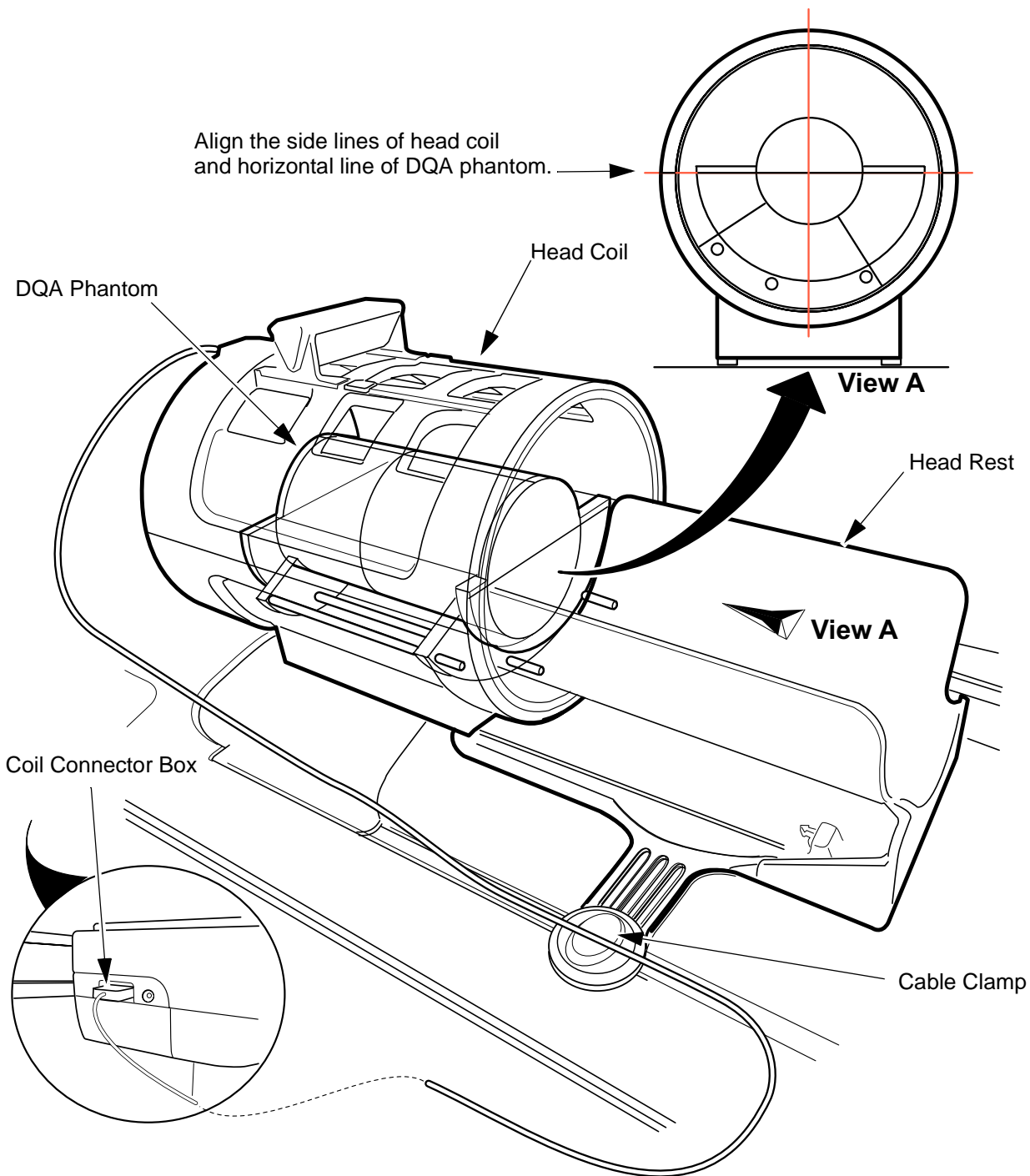


**HEAD COIL SETTING
ILLUSTRATION 2**

Rev 2

2. Head Coil Setting(Continued)

- 6. Align the side lines of head coil and horizontal line of DQA phantom.
- 7. Connect the coil connector box to table connector port.
- 8. Attach the coil cable to cable clamp of head rest.



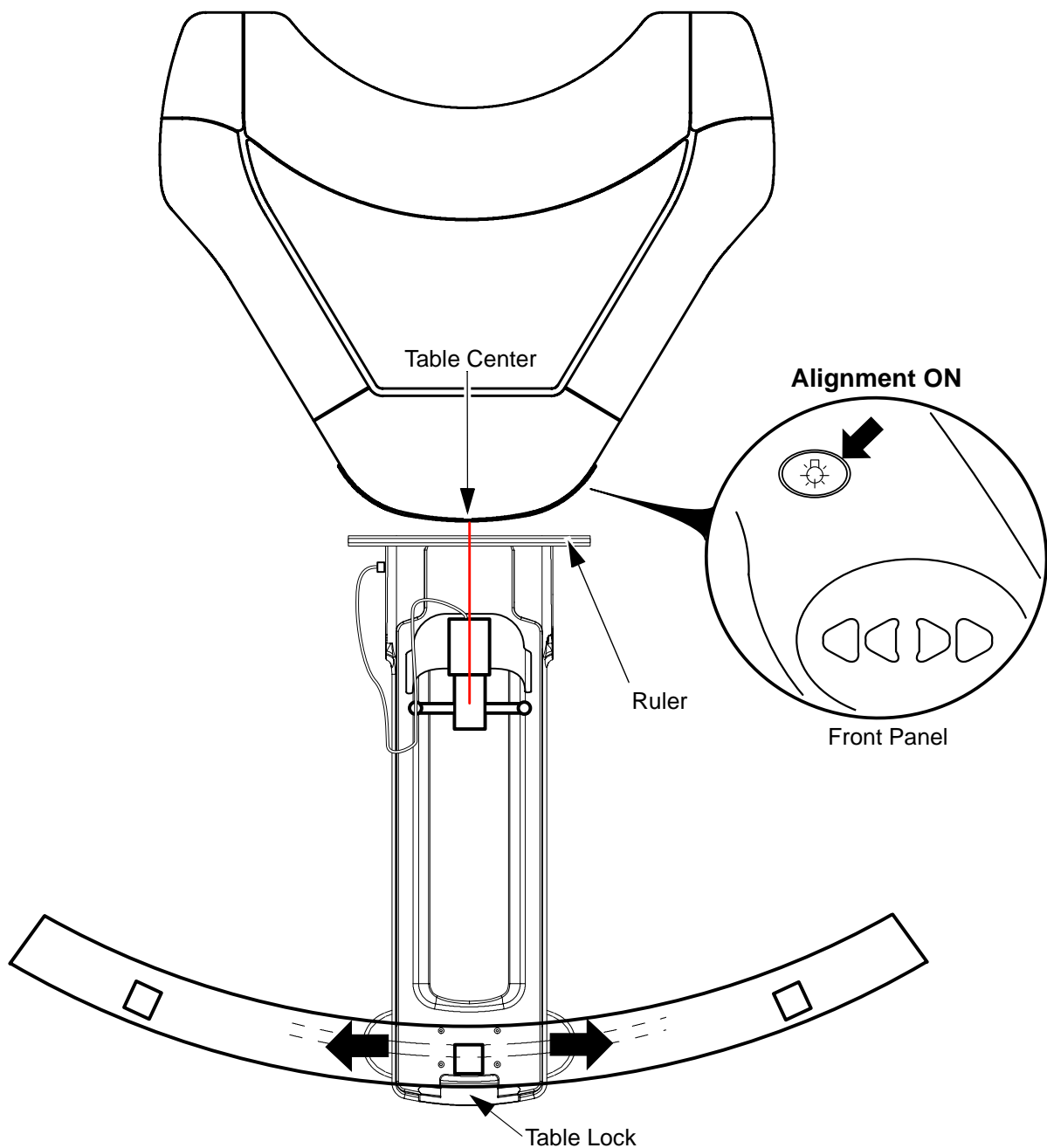
**HEAD COIL SETTING
ILLUSTRATION 3**

Rev 2

3. 0 degree Table Position Adjustment

3-1 0 degree Table Positioning

1. Move the table to center position.
2. Check for lateral 0 position.
3. Step onto the table lock located at rear of the Table.
4. Set the 100cm ruler to the table front side, and check the table center.
5. Press the Alignment On push button on the magnet display.
6. Align the center of swing table to 0 degree laser beam.

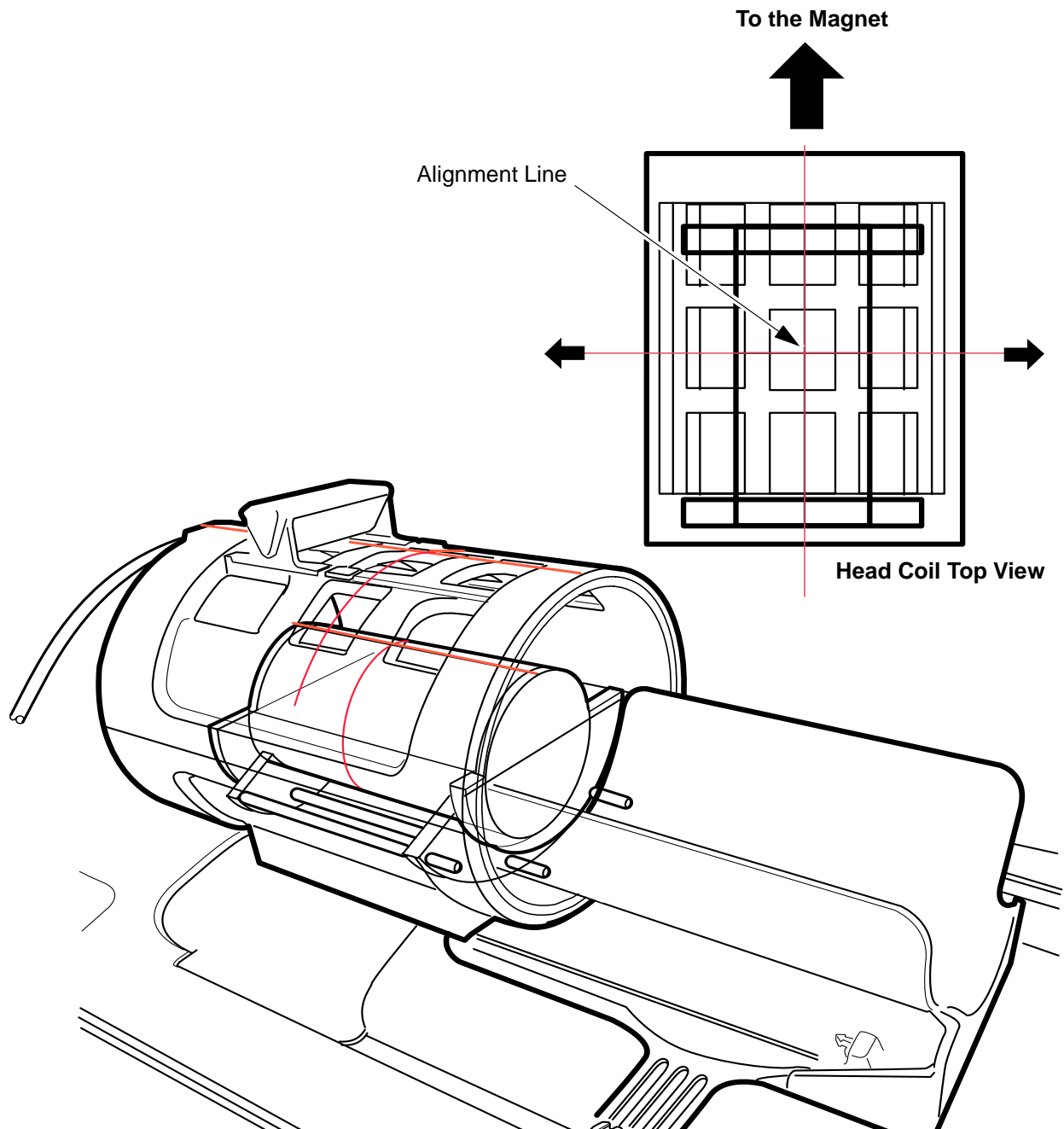


**0 DEGREE TABLE POSITIONING
ILLUSTRATION 4**

Rev 2

3-2 0 degree Head Coil Aligning to laser

1. Advance the cradle to the position where the A-light beam hits the center of coil.
2. Align the head coil and DQA phantom center position to laser center.
3. Landmark in the sagittal and axial planes.
4. Move the cradle to the scan center.



**0 DEGREE HEAD COIL ALIGNING TO LASER
ILLUSTRATION 5**

Rev 2

3-3 0 degree Scan

3-3-1.Parameter Setting

1. Click **[New Pt]**.
2. Input the following data in "patient information".
 - Patient Data: geservice
 - Weight: 50(Kg)

PATIENT INFORMATION

Accession Number

Patient ID

Patient Name

Birth Date Age Sex

Weight (Lb) (Kg)

Rad Refer

Req Number Stastus

Description

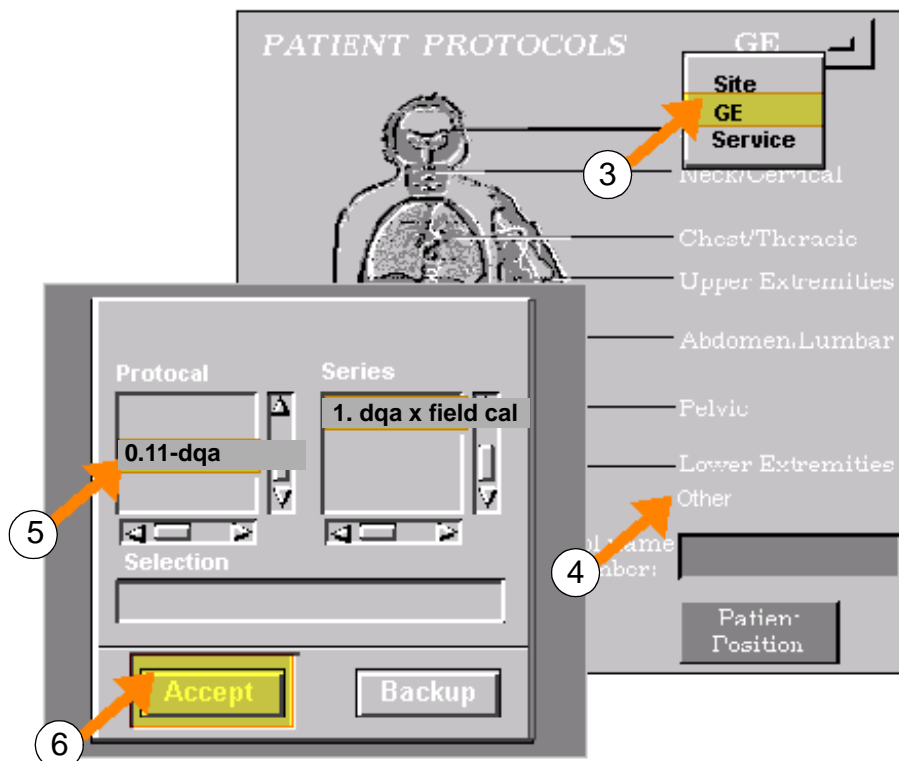
History

PATIENT INFORMATION
ILLUSTRATION 6

Rev 2

3-3-1. Parameter Setting (continued)

- 3. Choose GE.
- 4. Click **Other**. Protocol window comes Up.
- 5. Select [**0.11-dqa**] from protocol.
 Select [**1. dqa x field cal**] from series.
- 6. Select [**Accept**].)



PATIENT INFORMATION
ILLUSTRATION 7

- 7. Select Save Series.

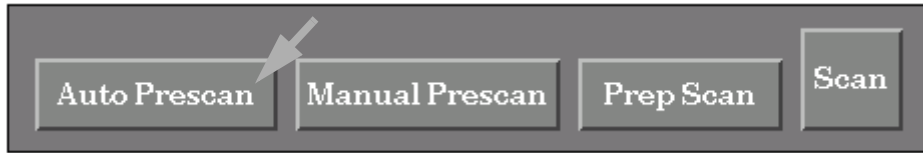


SAVE SERIES
ILLUSTRATION 8

Rev 2

3-3-2. 0 Degree Scan

1. Select [**Auto Prescan**].



AUTO PRESCAN
ILLUSTRATION 9

2. Select [**Manual Prescan**].



MANUAL PRESCAN
ILLUSTRATION 10

3. Click on "**SCAN TR**" and see that the projection comes out.
4. Click on "**Done**" Select [**Scan**].



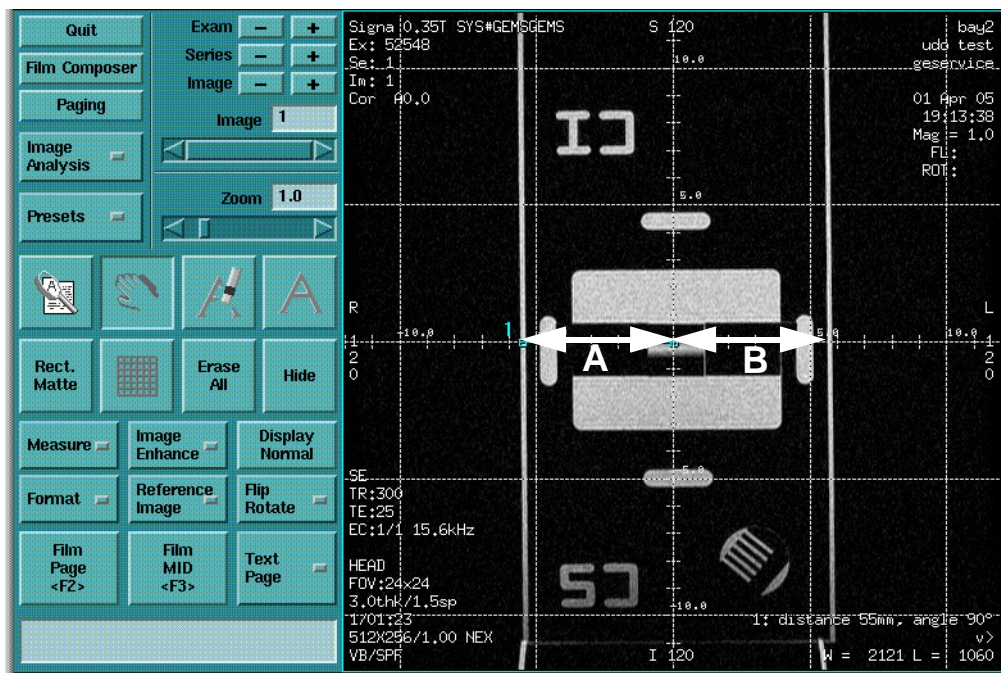
SCAN
ILLUSTRATION 11

5. Verify that scanning has been started.

Rev 2

3-4 0 degree Image Measurement

1. Open the scan image from the viewer.
2. Show the grid on the image.
3. Measure the distance from center line to the left edge of the phantom at S/I 0 point.
Record it as "A"
See illustration below.
4. Measure the distance from center line to the right edge of the phantom at S/I 0 point.
Record it as "B"
See illustration below.



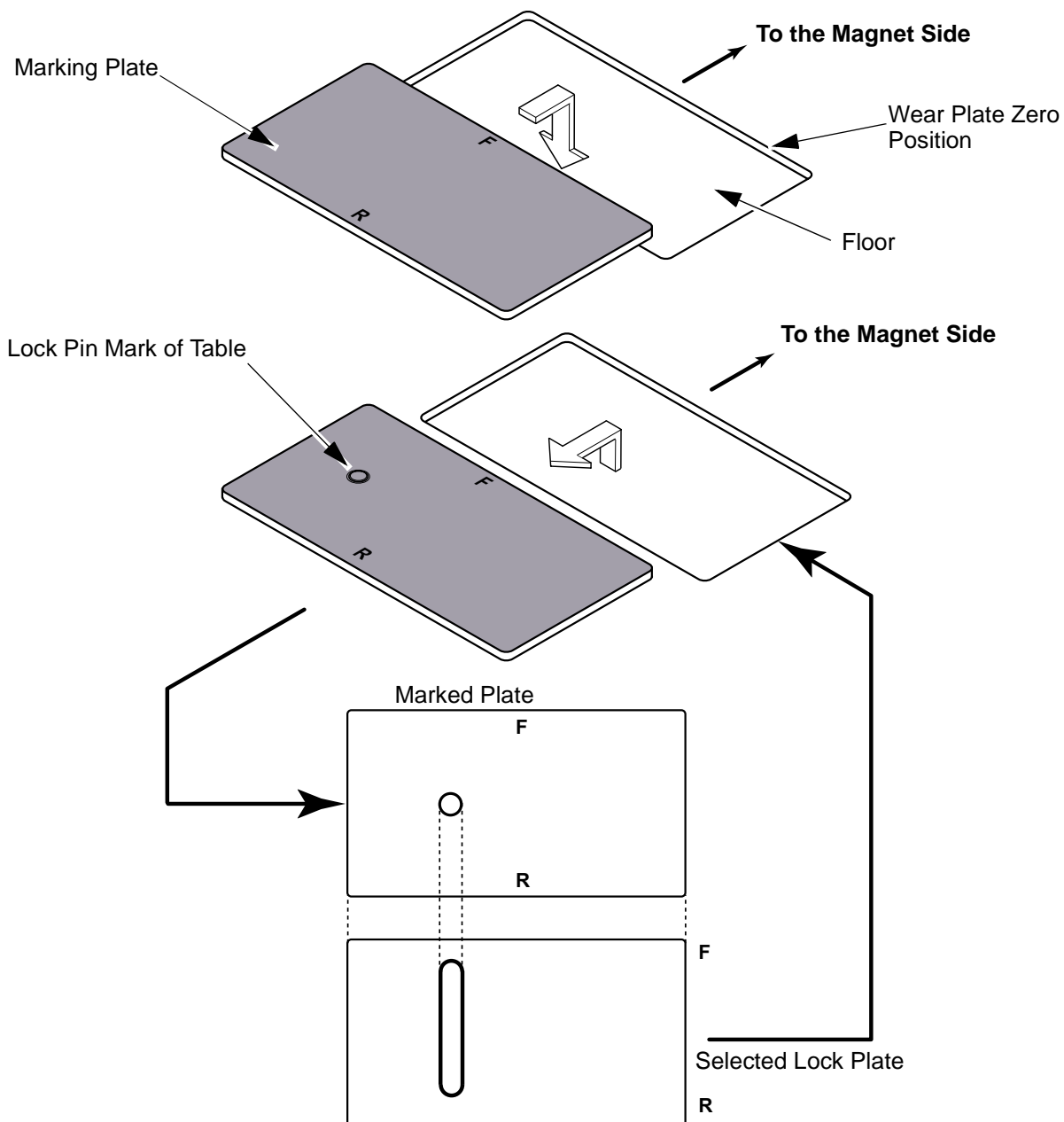
MEASUREMENT
ILLUSTRATION 12

5. Calculate the following formula and verify that the result satisfies the specification.
0 Degree Specification: $|A - B| / 2 \leq 2\text{mm}$
6. If measurement is out of specification, adjust the table rail position. Refer to table rail installation. If measurement is within specification, go to 0 degree table lock plate setting. Refer to next page.

Rev 2

3-5 0 Degree Table Lock Plate Setting

1. Carefully unlock the Table position Latch. Do not move the table and head coil.
2. Insert the marking plate at the wear plate zero position.
3. Step onto the Lock to mark the position of latch to the mark plate. Do not move the table and head coil.
4. Remove the mark plate.
5. Select the lock plate so that the hole position of the lock plate and marked position of the mark plate is identical.
6. Clean the lock plate and floor with denatured alcohol.
7. Glue the lock plate into position. Apply enough glue to spread out a thin layer over the entire wear plate 0 position area.
8. Insert the selected lock plate at the wear plate zero position.



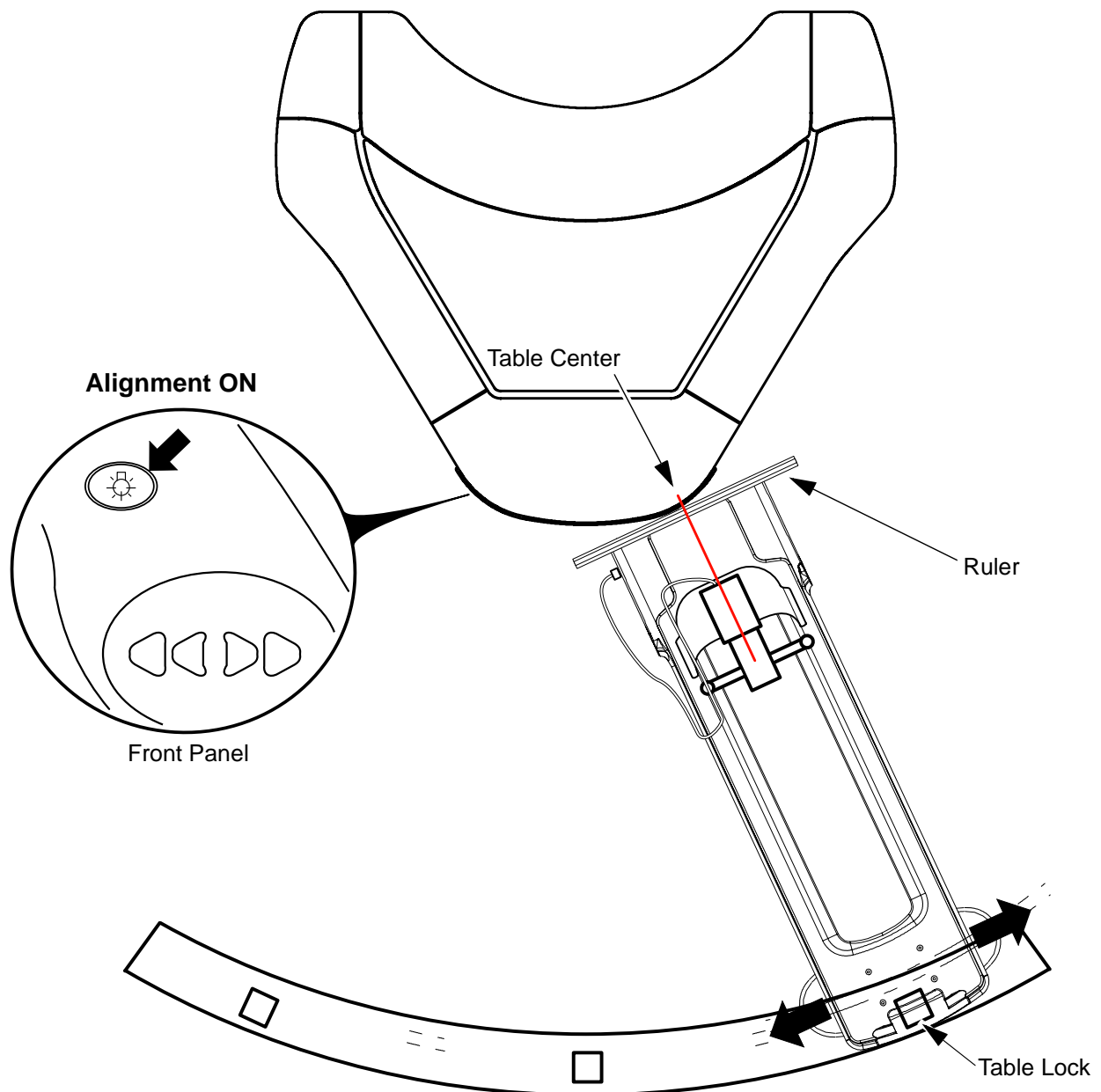
0 DEGREE TABLE LOCK PLATE SETTING
ILLUSTRATION 13

Rev 2

4. 25 degree Table Position Adjustment

4-1 25 degree Table Positioning

1. Move the table to 25 degree position.
2. Step onto the table lock located at rear of the Table.
3. Set the 100cm ruler to the table front side, and check the table center.
4. Press the Alignment On push button on the magnet display.
5. Align the center of swing table to 25 degree laser beam.



25 DEGREE TABLE POSITIONING
ILLUSTRATION 14

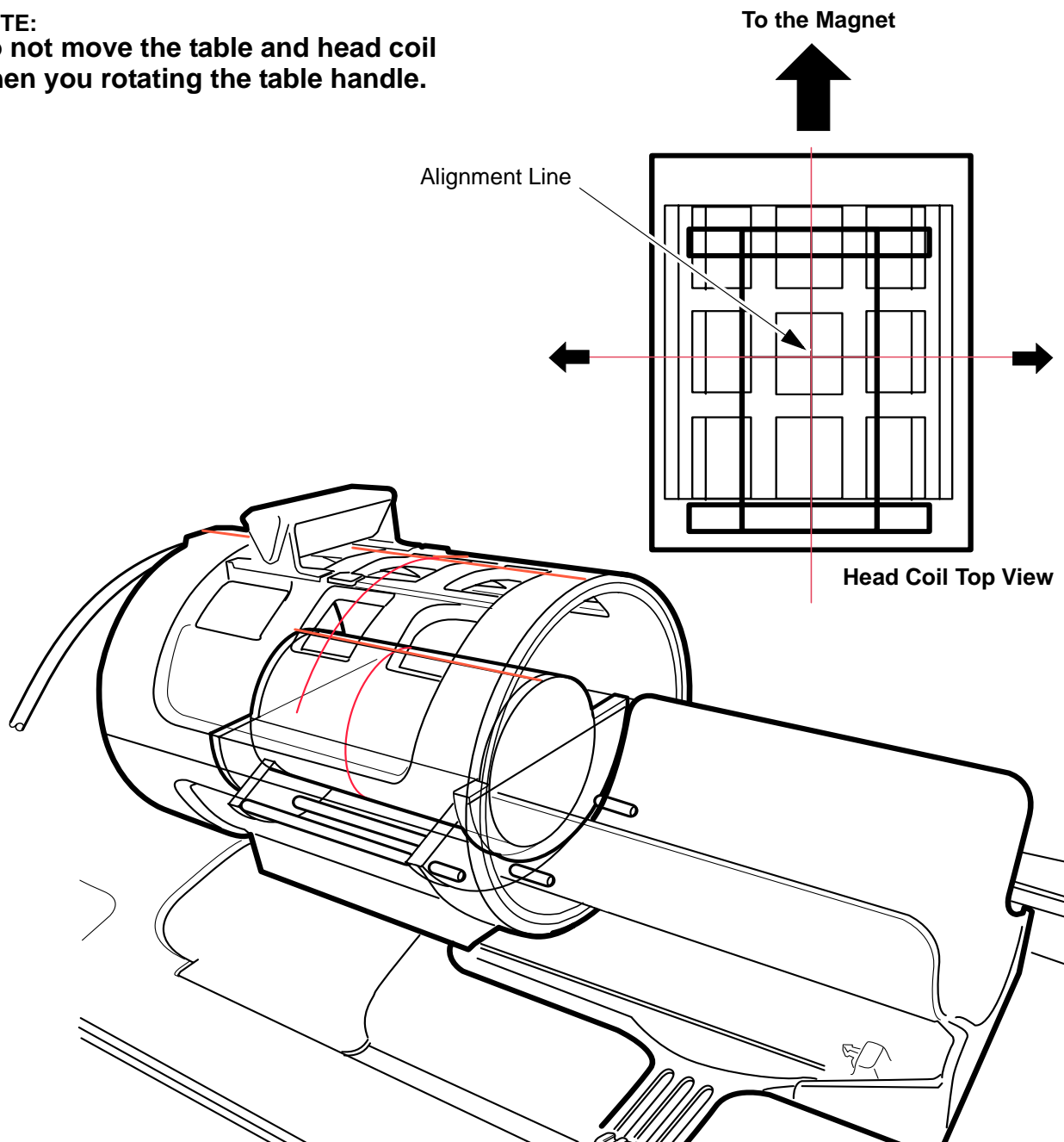
Rev 2

4-2 25 degree Head Coil Aligning to laser

1. Move the cradle to 120mm lateral direction with the handle to sending the cradle into the magnet. Do not move the table and head coil when you rotating the table handle.
2. Advance the cradle so that the alignment Axial light hit the DQA phantom axial center.
3. Return the cradle to -120mm lateral direction to aligning head coil with laser beams.
4. Align the head coil and DQA phantom axial center position to laser center as illustration 15.
5. Move the cradle to 120mm lateral direction with the handle.
6. Landmark and Move the cradle to the scan center.

NOTE:

Do not move the table and head coil when you rotating the table handle.



25 DEGREE HEAD COIL ALIGNING TO LASER
ILLUSTRATION 15

Rev 2

4-3 25 degree Scan

4-3-1. Parameter Setting

1. Select **[New Series]**.
2. Input the following data in "patient information".
 - Patient Data: geservice
 - Weight: 50(Kg)

PATIENT INFORMATION

Accession Number

Patient ID

Patient Name

Birth Date Age Sex

Weight (Lb) (Kg)

Rad Refer

Req Number Status

Description

History

PATIENT INFORMATION
ILLUSTRATION 16

3. Click Landmark.
4. Select **"Right"** from Table Entry

PATIENT INFORMATION

Accession Number

Patient ID

Patient Name

Landmark

Nasion

Table Entry

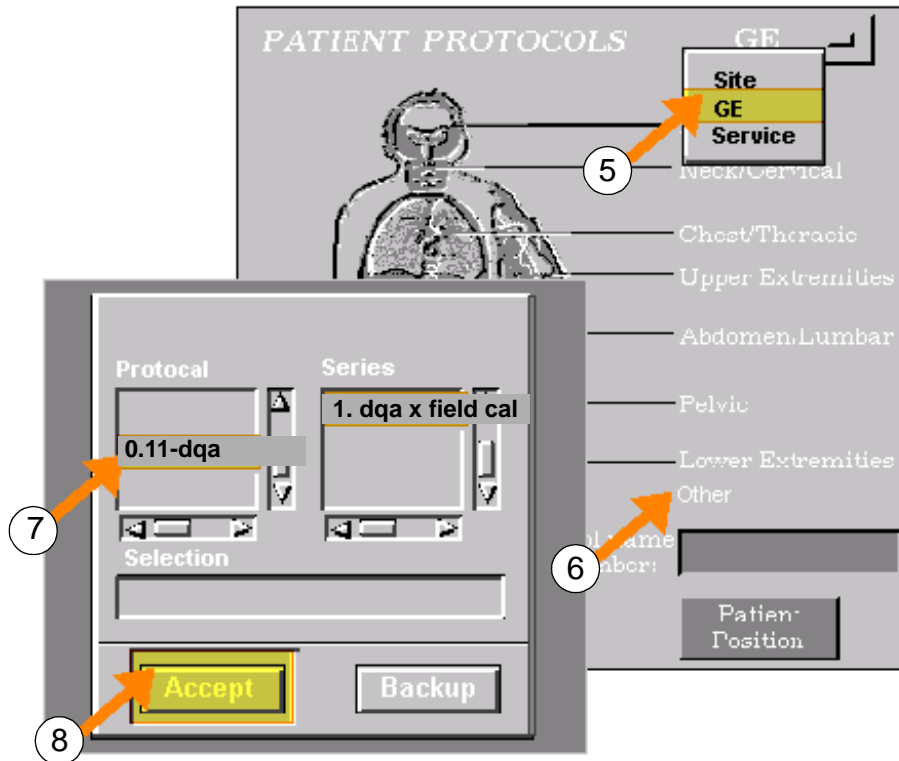
Right

TABLE ENTRY
ILLUSTRATION 17

Rev 2

4-3-1. Parameter Setting (continued)

5. Choose GE.
6. Click **Other**. Protocol window comes Up.
7. Select [**0.11-dqa**] from protocol.
Select [**1. dqa x field cal**] from series.
8. Select [**Accept**].)



PATIENT INFORMATION
ILLUSTRATION 18

9. Select Save Series.

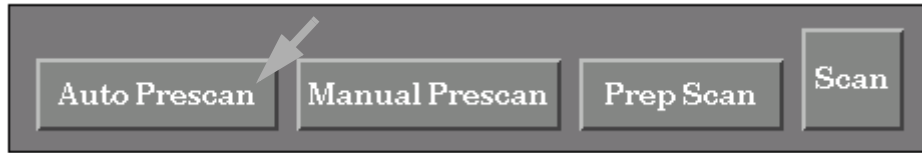


SAVE SERIES
ILLUSTRATION 19

Rev 2

4-3-2. 25 Degree Scan

1. Select [**Auto Prescan**].



AUTO PRESCAN
ILLUSTRATION 20

2. Select [**Manual Prescan**].



MANUAL PRESCAN
ILLUSTRATION 21

3. Click on "**SCAN TR**" and see that the projection comes out.
4. Click on "**Done**" Select [**Scan**].



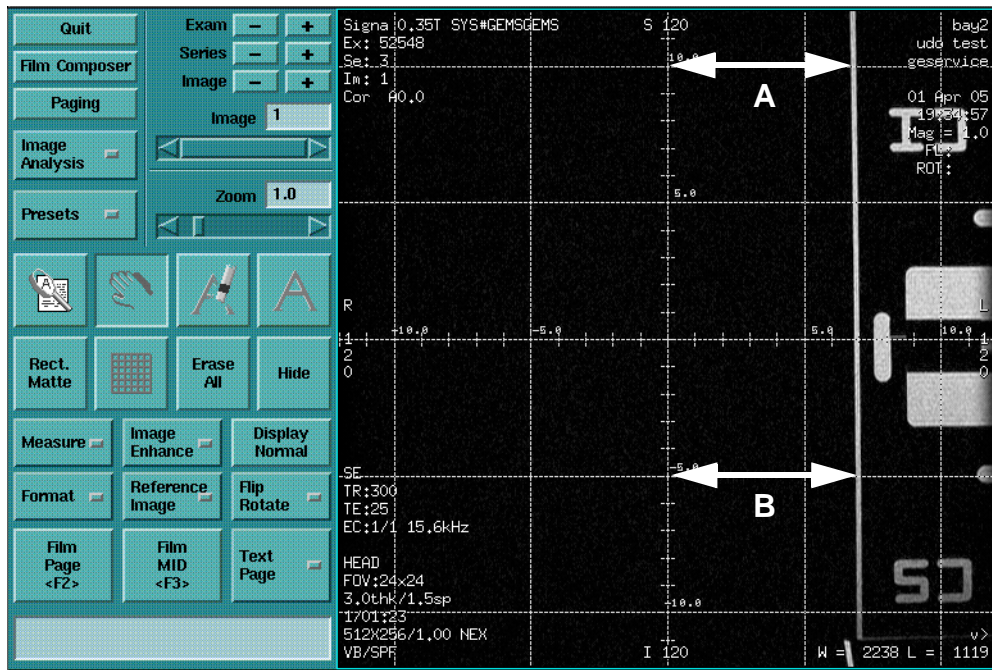
SCAN
ILLUSTRATION 22

5. Verify that scanning has been started.

Rev 2

4-4 25 degree Image Measurement

1. Open the scan image from the viewer.
2. Show the grid on the image.
3. Measure the distance from center grid line to the edge of the phantom at S/I 10.0cm point. Record it as "A". See illustration below.
4. Measure the distance from center grid line to the edge of the phantom at S/I -5.0cm point. Record it as "B". See illustration below.



**MEASUREMENT
ILLUSTRATION 23**

5. Calculate the following formula and verify that the result satisfies the specification.

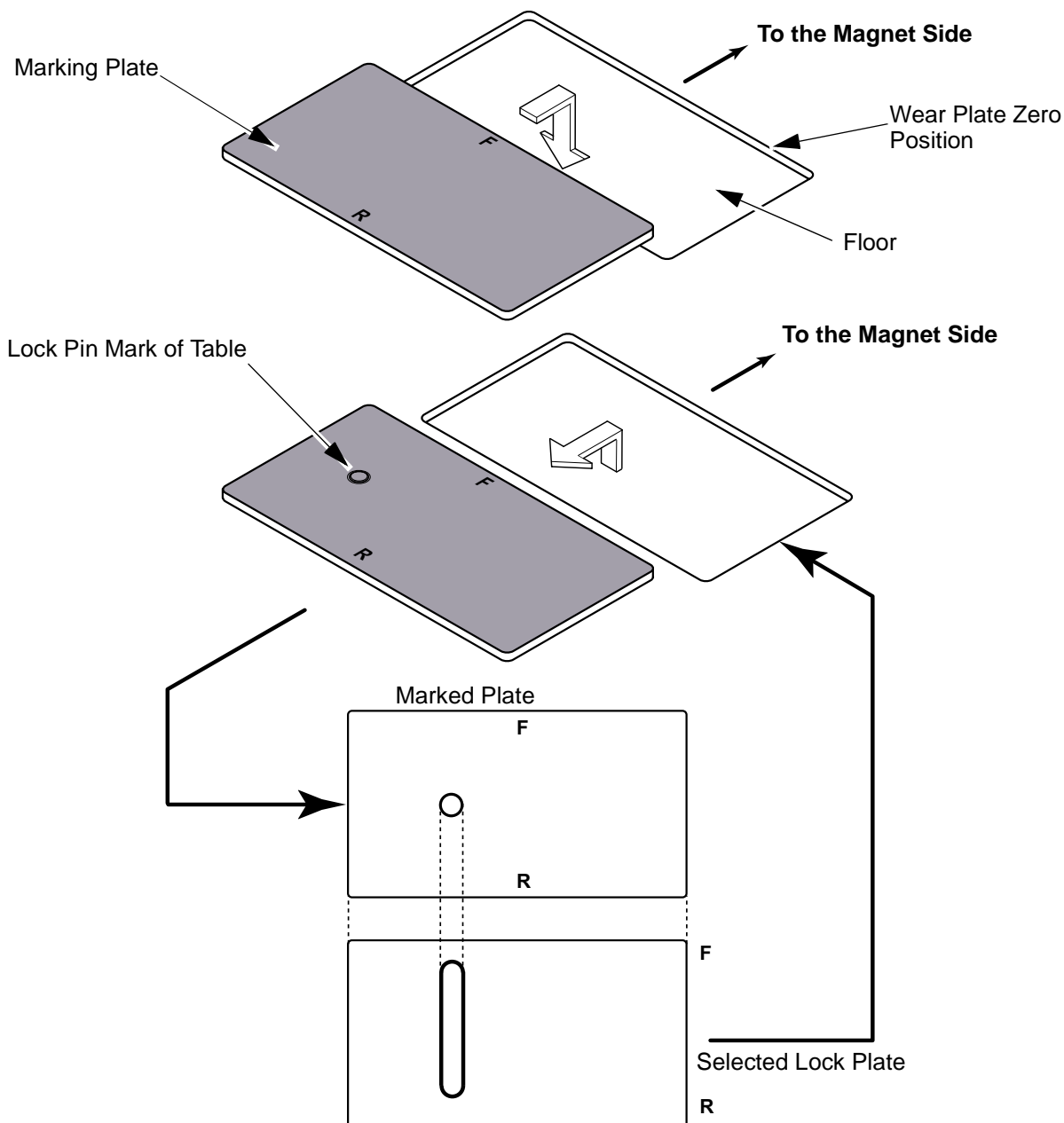
25 Degree Specification: $|A - B| \leq 1\text{mm}$

6. If measurement is out of specification, adjust the table swing position. If measurement is within specification, go to 25 degree table lock plate setting. Refer to next page.

Rev 2

4-5 25 Degree Table Lock Plate Setting

1. Carefully unlock the Table position Latch. Do not move the table and head coil.
2. Insert the marking plate at the wear plate zero position.
3. Step onto the Lock to mark the position of latch to the mark plate. Do not move the table and head coil.
4. Remove the mark plate.
5. Select the lock plate so that the hole position of the lock plate and marked position of the mark plate is identical.
6. Clean the lock plate and floor with denatured alcohol.
7. Glue the lock plate into position. Apply enough glue to spread out a thin layer over the entire wear plate 0 position area.
8. Insert the selected lock plate at the wear plate zero position.



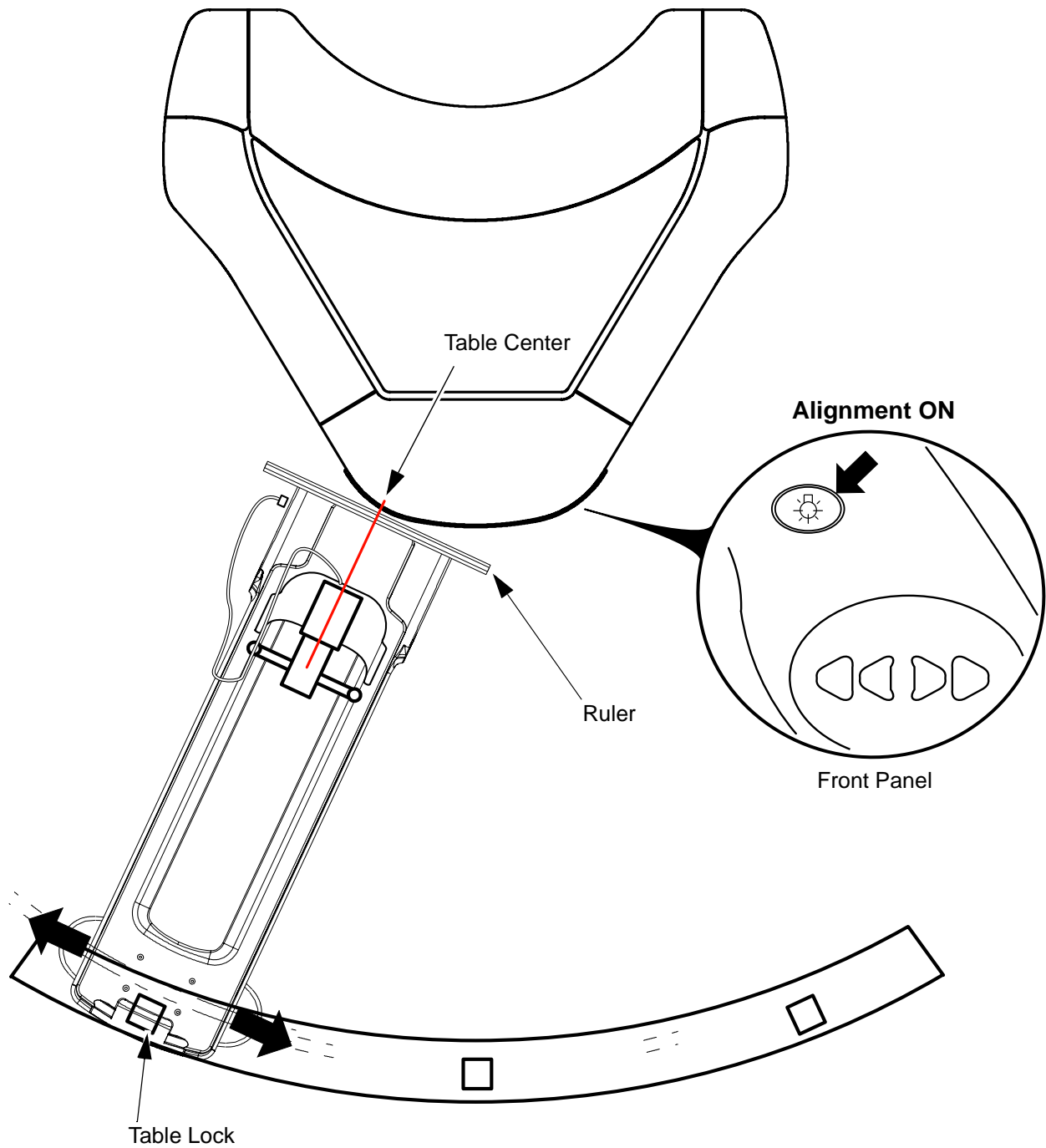
25 DEGREE TABLE LOCK PLATE SETTING
ILLUSTRATION 24

Rev 2

5. -25 degree Table Position Adjustment

5-1 -25 degree Table Positioning

1. Move the table to -25 degree position.
2. Step onto the table lock located at rear of the Table.
3. Set the 100cm ruler to the table front side, and check the table center.
4. Press the Alignment On push button on the magnet display.
5. Align the center of swing table to -25 degree laser beam.



-25 DEGREE TABLE POSITIONING
ILLUSTRATION 25

Rev 2

5-2 -25 degree Head Coil Aligning to laser

1. Move the cradle to -120mm lateral direction with the handle to sending the cradle into the magnet. Do not move the table and head coil when you rotating the table handle.
2. Advance the cradle so that the alignment Axial light hit the DQA phantom axial center.
3. Return the cradle to +120mm lateral direction to aligning head coil with laser beams.
4. Align the head coil and DQA phantom axial center position to laser center as illustration 26.
5. Move the cradle to -120mm lateral direction with the handle.
6. Landmark and Move the cradle to the scan center.

NOTE:

Do not move the table and head coil when you rotating the table handle.

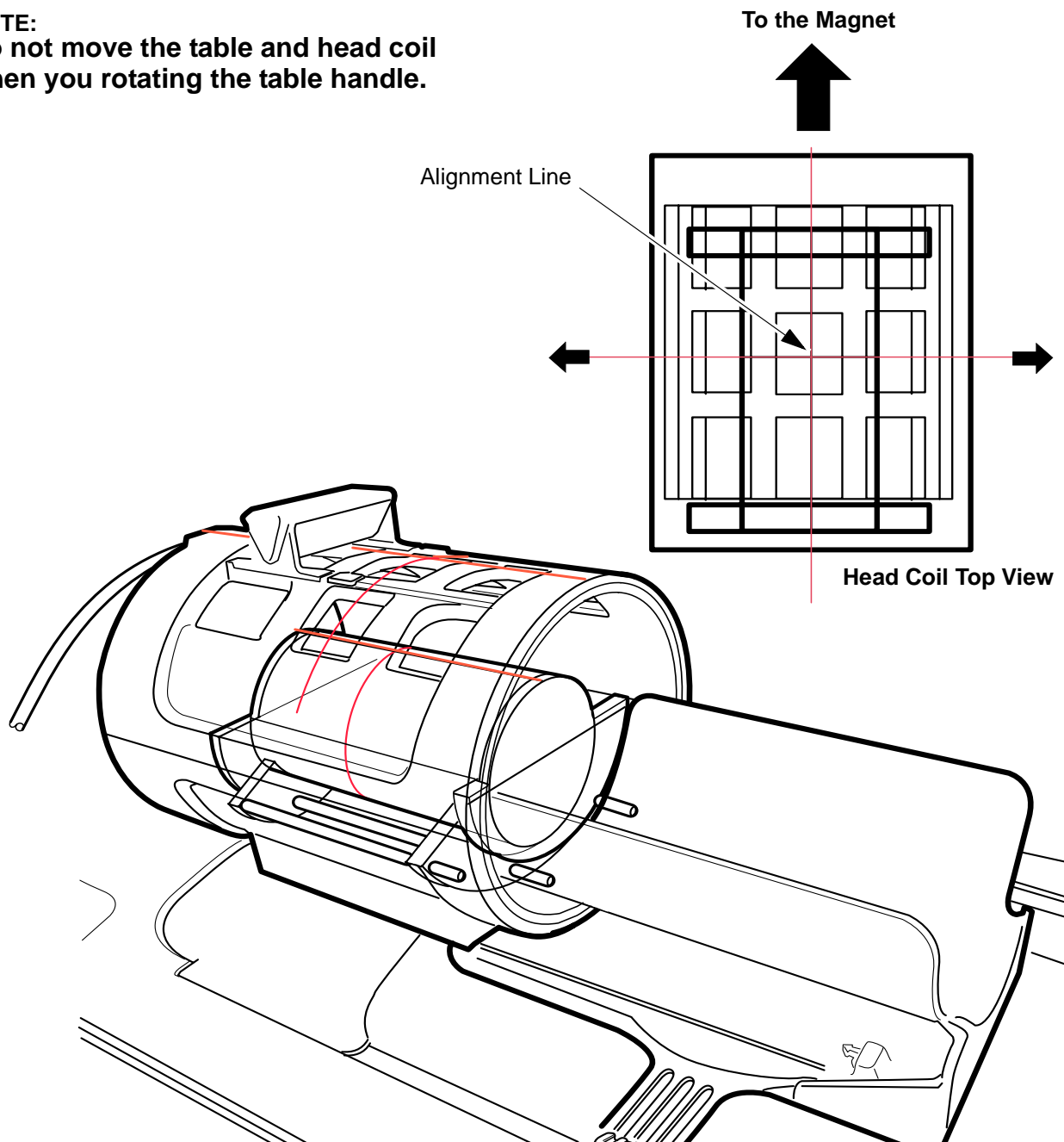
**-25 DEGREE HEAD COIL ALIGNING TO LASER**

ILLUSTRATION 26

Rev 2

5-3 -25 degree Scan

5-3-1.Parameter Setting

1. Select **[New Series]**.
2. Input the following data in "patient information".
 - Patient Data: geservice
 - Weight: 50(Kg)

PATIENT INFORMATION

Accession Number

Patient ID

Patient Name

Birth Date Age Sex

Weight (Lb) (Kg)

Rad Refer

Req Number Status

Description

History

PATIENT INFORMATION
ILLUSTRATION 27

3. Click Landmark.
4. Select **"Left"** from Table Entry

PATIENT INFORMATION

Accession Number

Patient ID

Patient Name

Landmark

Nasion

Table Entry

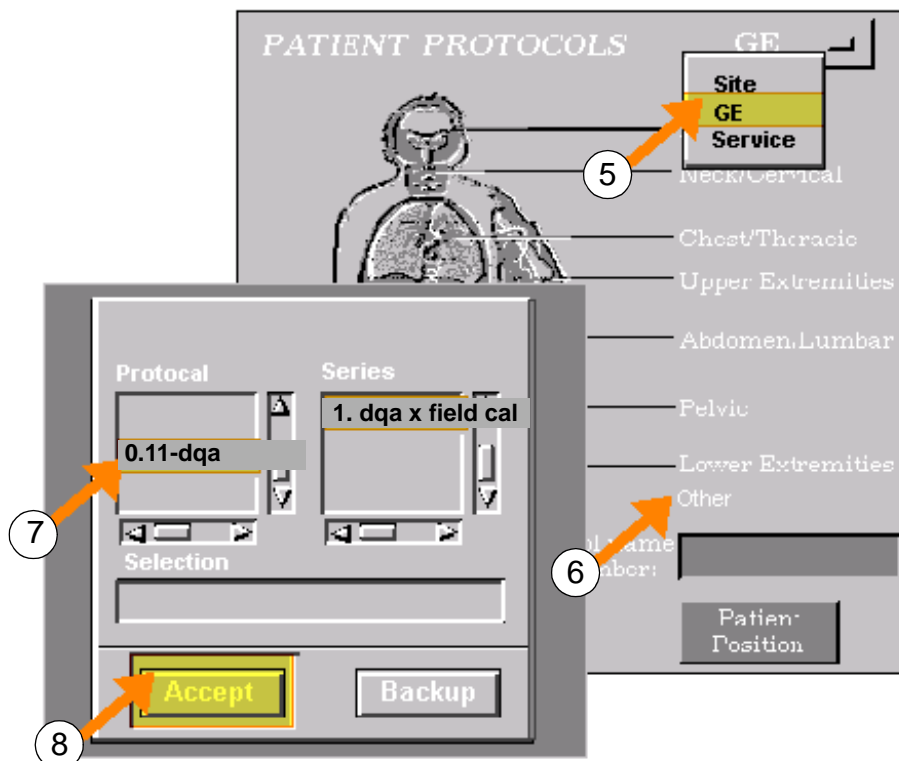
Left

TABLE ENTRY
ILLUSTRATION 28

Rev 2

5-3-1. Parameter Setting (continued)

- 5. Choose GE.
- 6. Click **Other**. Protocol window comes Up.
- 7. Select [**0.11-dqa**] from protocol.
 Select [**1. dqa x field cal**] from series.
- 8. Select [**Accept**].)



PATIENT INFORMATION
ILLUSTRATION 29

- 9. Select Save Series.

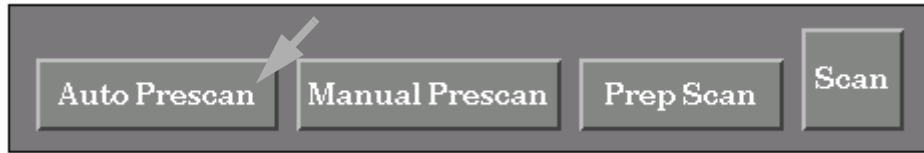


SAVE SERIES
ILLUSTRATION 30

Rev 2

5-3-2. -25 Degree Scan

1. Select [**Auto Prescan**].



AUTO PRESCAN
ILLUSTRATION 31

2. Select [**Manual Prescan**].



MANUAL PRESCAN
ILLUSTRATION 32

3. Click on "**SCAN TR**" and see that the projection comes out.
4. Click on "**Done**" Select [**Scan**].



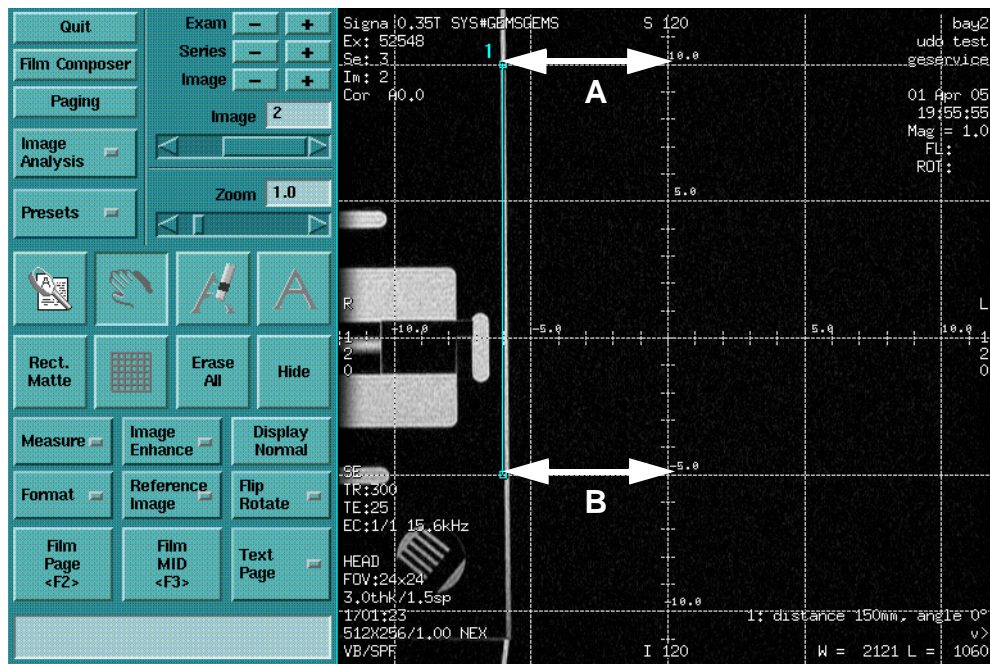
SCAN
ILLUSTRATION 33

5. Verify that scanning has been started.

Rev 2

5-4 -25 degree Image Measurement

1. Open the scan image from the viewer.
2. Show the grid on the image.
3. Measure the distance from center grid line to the edge of the phantom at S/I 10.0cm point. Record it as "A". See illustration below.
4. Measure the distance from center grid line to the edge of the phantom at S/I -5.0cm point. Record it as "B". See illustration below.



**MEASUREMENT
ILLUSTRATION 34**

5. Calculate the following formula and verify that the result satisfies the specification.

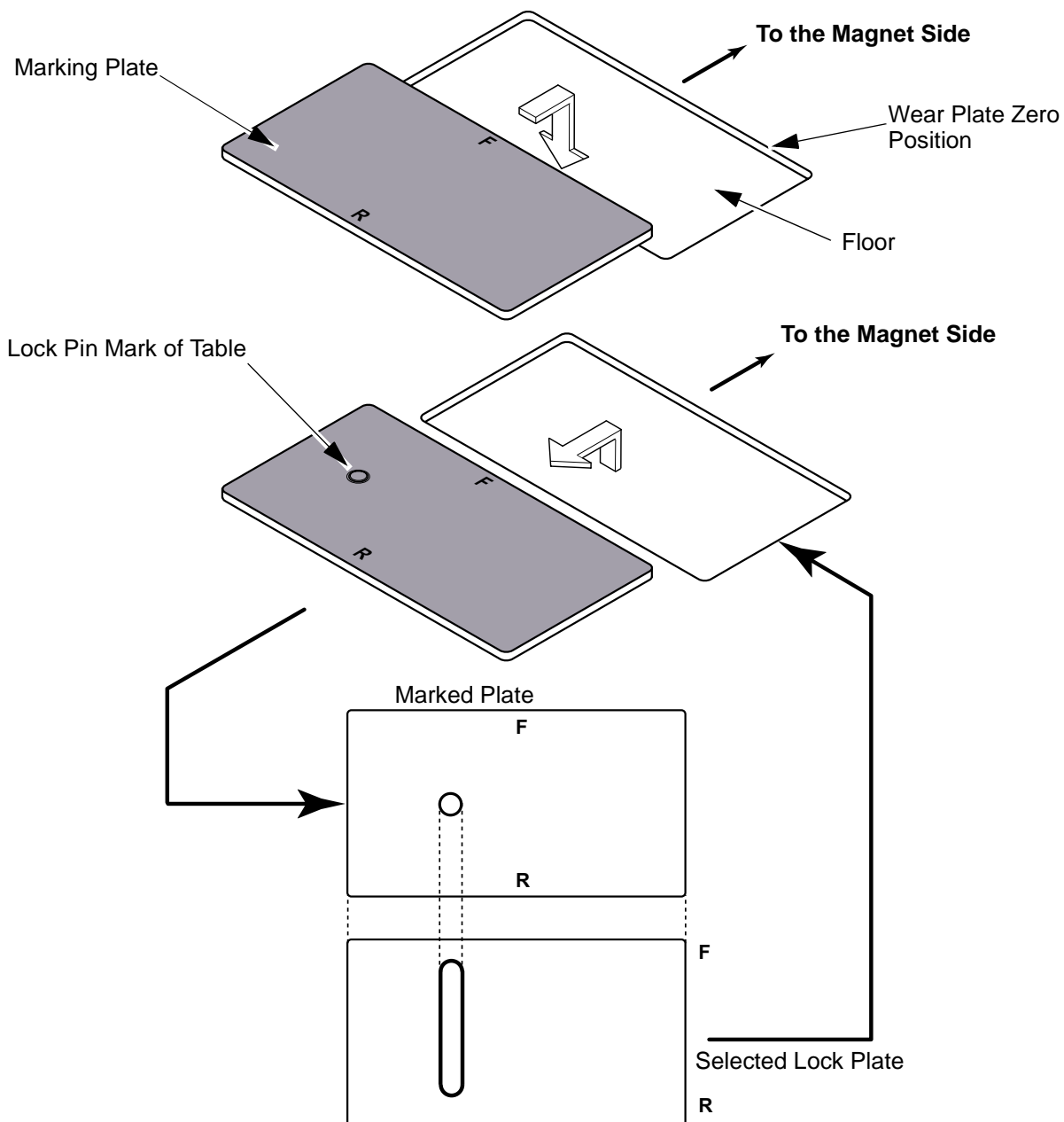
-25 Degree Specification: $|A - B| \leq 1\text{mm}$

6. If measurement is out of specification, adjust the table swing position. If measurement is within specification, go to -25 degree table lock plate setting. Refer to next page.

Rev 2

5-5 -25 Degree Table Lock Plate Setting

1. Carefully unlock the Table position Latch. Do not move the table and head coil.
2. Insert the marking plate at the wear plate zero position.
3. Step onto the Lock to mark the position of latch to the mark plate. Do not move the table and head coil.
4. Remove the mark plate.
5. Select the lock plate so that the hole position of the lock plate and marked position of the mark plate is identical.
6. Clean the lock plate and floor with denatured alcohol.
7. Glue the lock plate into position. Apply enough glue to spread out a thin layer over the entire wear plate 0 position area.
8. Insert the selected lock plate at the wear plate zero position.



-25 DEGREE TABLE LOCK PLATE SETTING
ILLUSTRATION 35

Rev 2

Revision History

Rev	Date	Author	Primary Reasons For Change
0	Feb 7, 2001	Y. Masumo	Initial Version
1	Apr 03, 2001	T.Tsumagari	Updated overall document
2	Oct 22, 2001	Y. Masumo	Page 5: Added the purpose of Head Rest.