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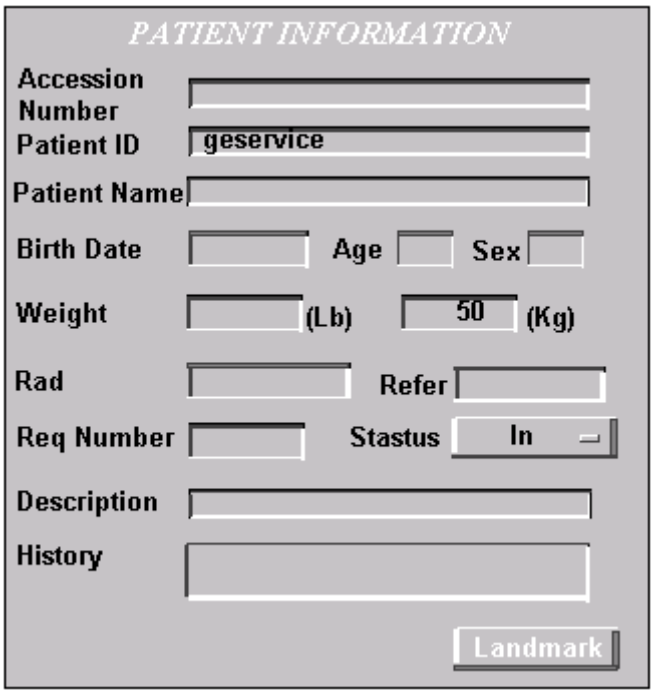
1. Scan Parameter Setting

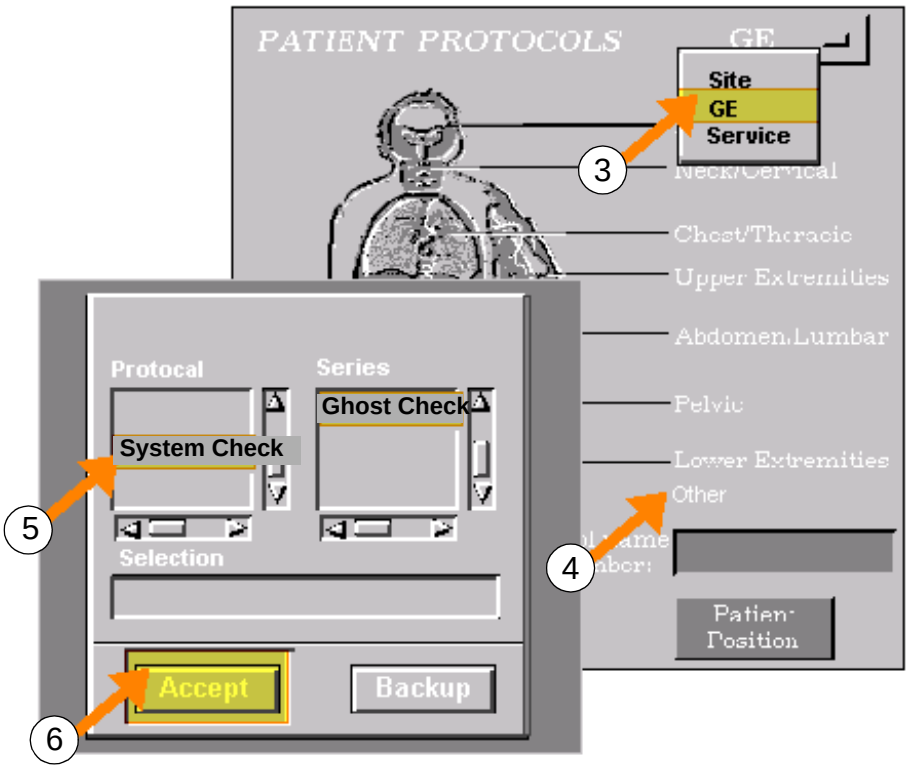
1. Click **[New Pt]**.
2. Input the following data in "patient information".
   - •Patient Data: geservice
   - •Weight: 50(Kg)



PATIENT INFORMATION
ILLUSTRATION 1

1. Scan Parameter Setting(continued)

3. Choose GE.
4. Click **Other**. Protocol window comes Up.
5. Select **[System Check Head]** from protocol.
   Select **[Ghost Check]** from series.
6. Select **[Accept]**.



PATIENT INFORMATION
ILLUSTRATION 2

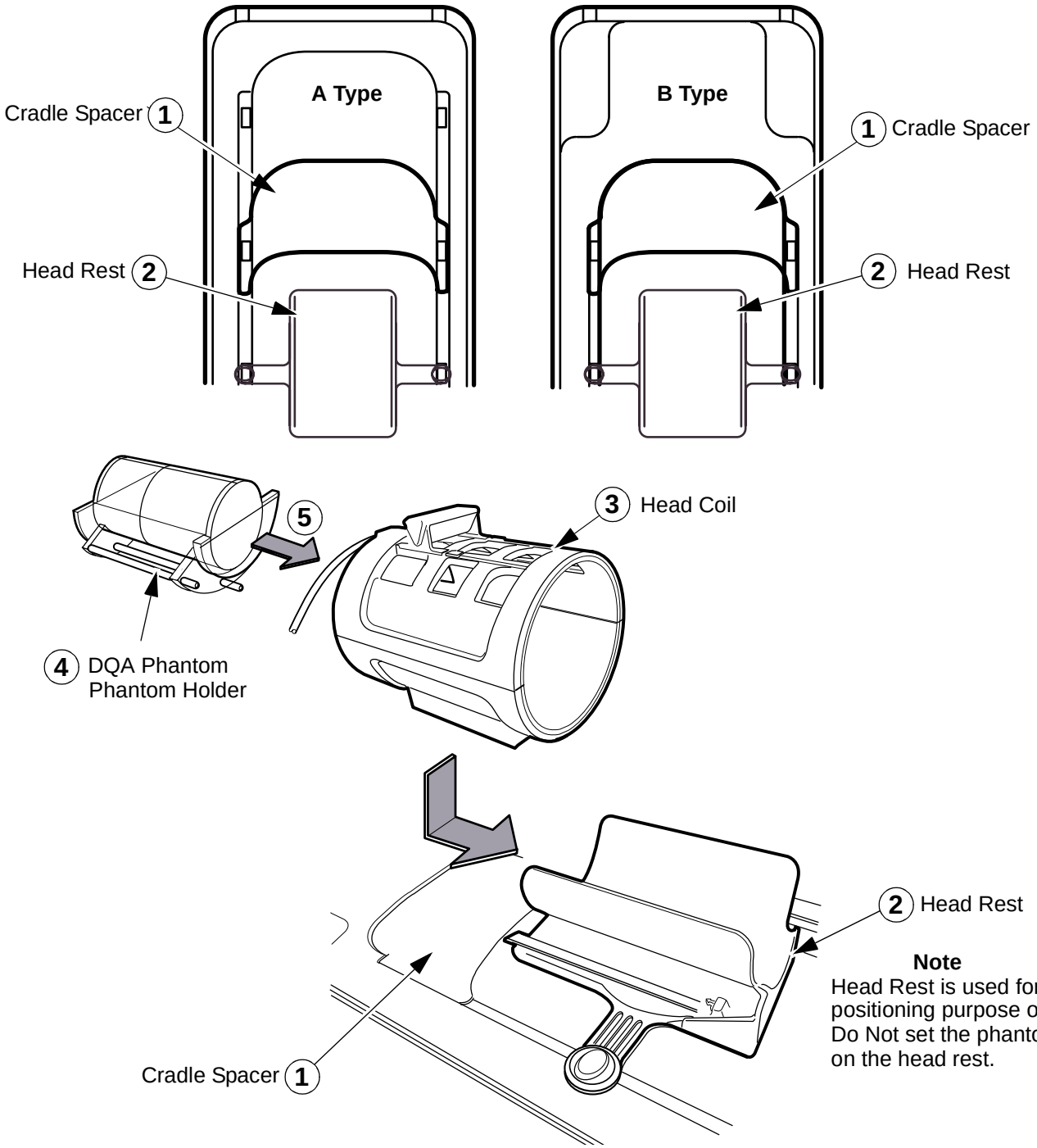
7. Select Save Series.

SAVE SERIES
ILLUSTRATION 3

2. Phantom Setting

1. Set cradle spacer to cradle.
2. Set head rest onto cradle.
3. Set head coil to head rest.
   (Head Rest is used for positioning purpose only. Do Not set the phantom on the head coil.)
4. Set DQA phantom to phantom holder.
5. Insert DQA phantom and phantom holder into head coil.

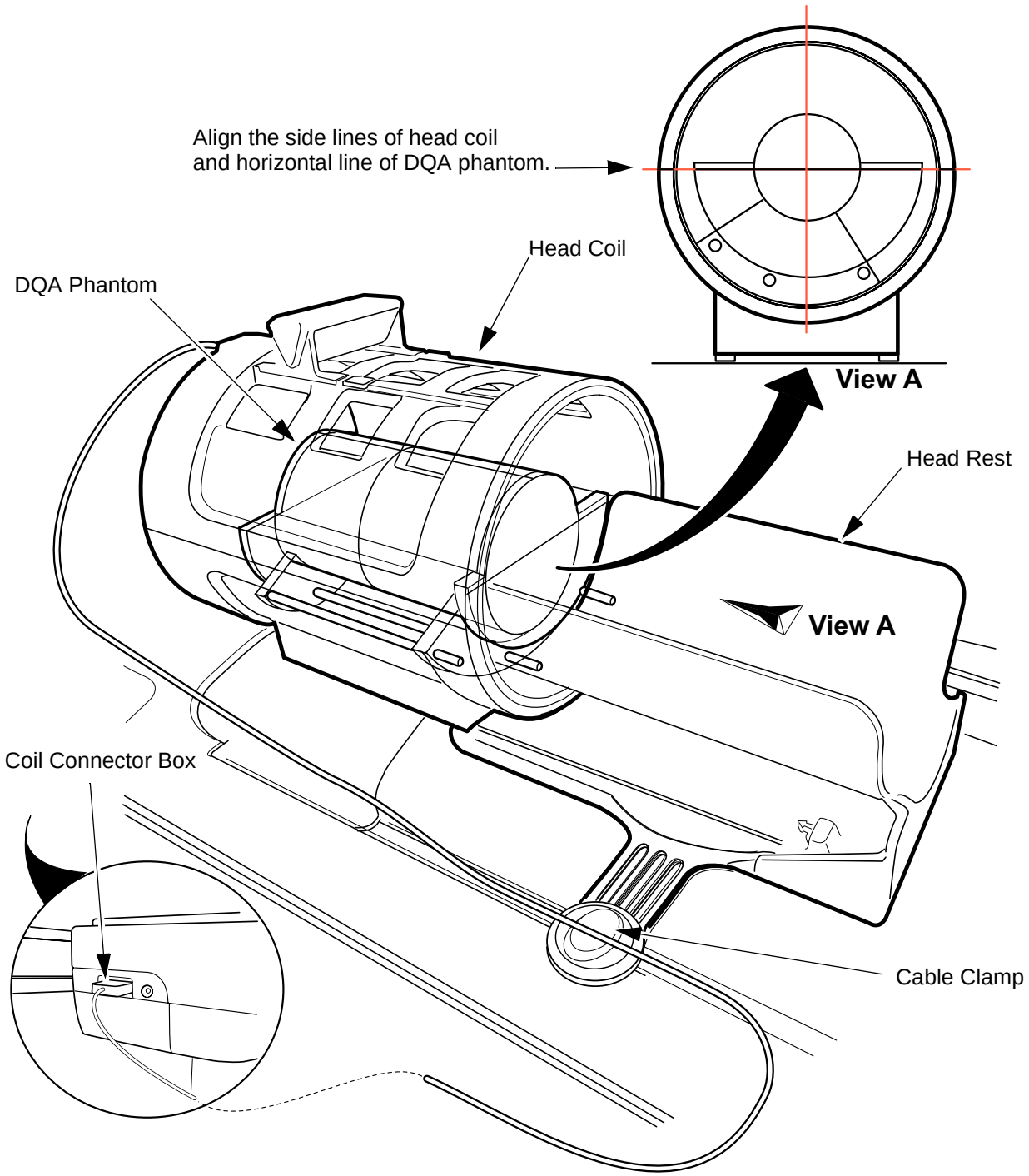
NOTE:There are two type of table as following illustration.



PHANTOM SETTING 1
ILLUSTRATION 4

2. Phantom Setting(Continued)

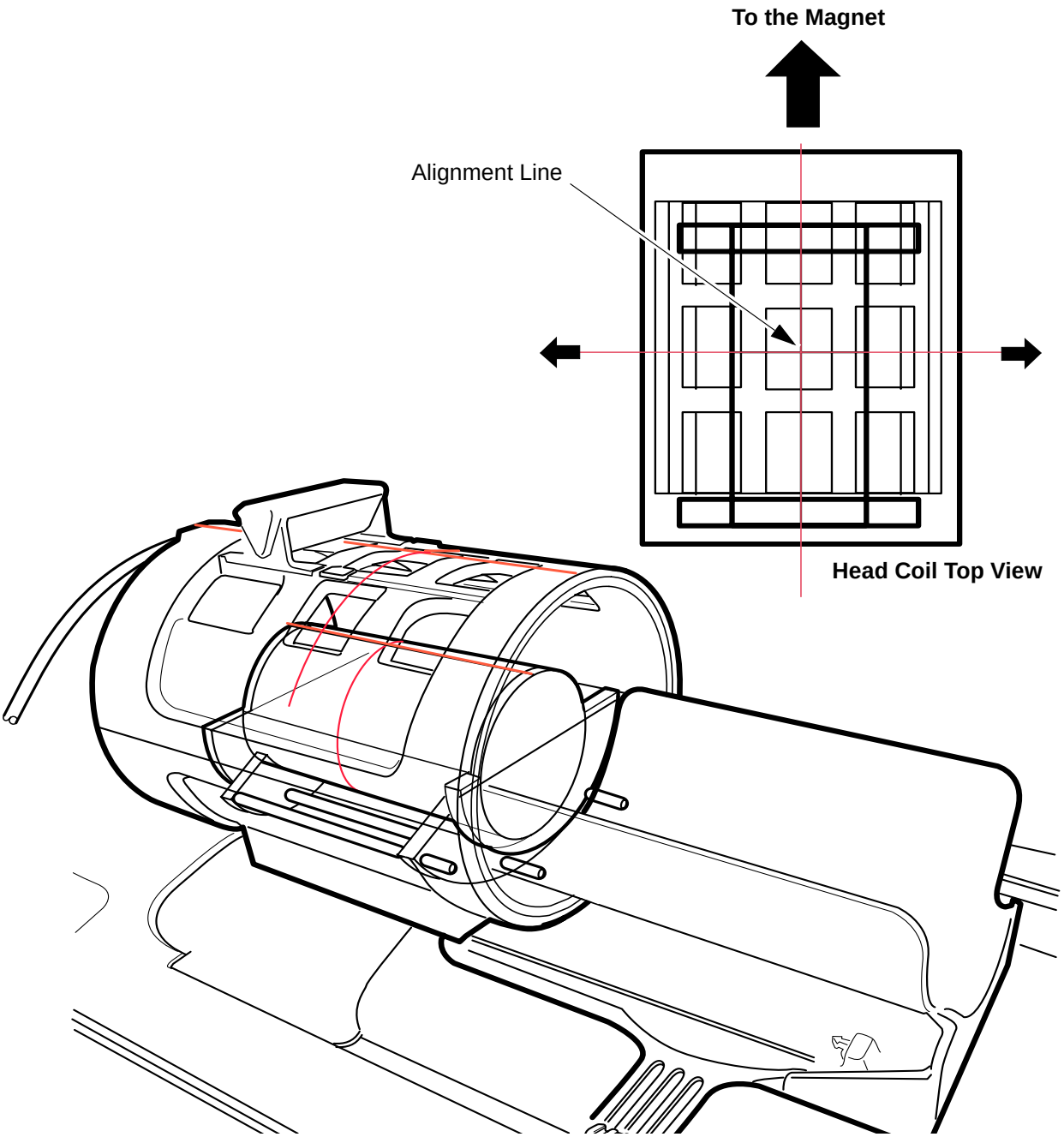
6. Align the side lines of head coil and horizontal line of DQA phantom.
7. Connect the coil connector box to table connector port.
8. Attach the coil cable to cable clamp of head rest.



PHANTOM SETTING 2
ILLUSTRATION 5

2. Phantom Setting(Continued)

9. Advance the cradle to the position where the A-light beam hits the center of coil.
10. Align the head coil and DQA phantom center position to laser center.
11. Landmark in the sagital and axial planes.
12. Move the cradle to the scan center.



ALIGNMENT
ILLUSTRATION 6

3. Scan

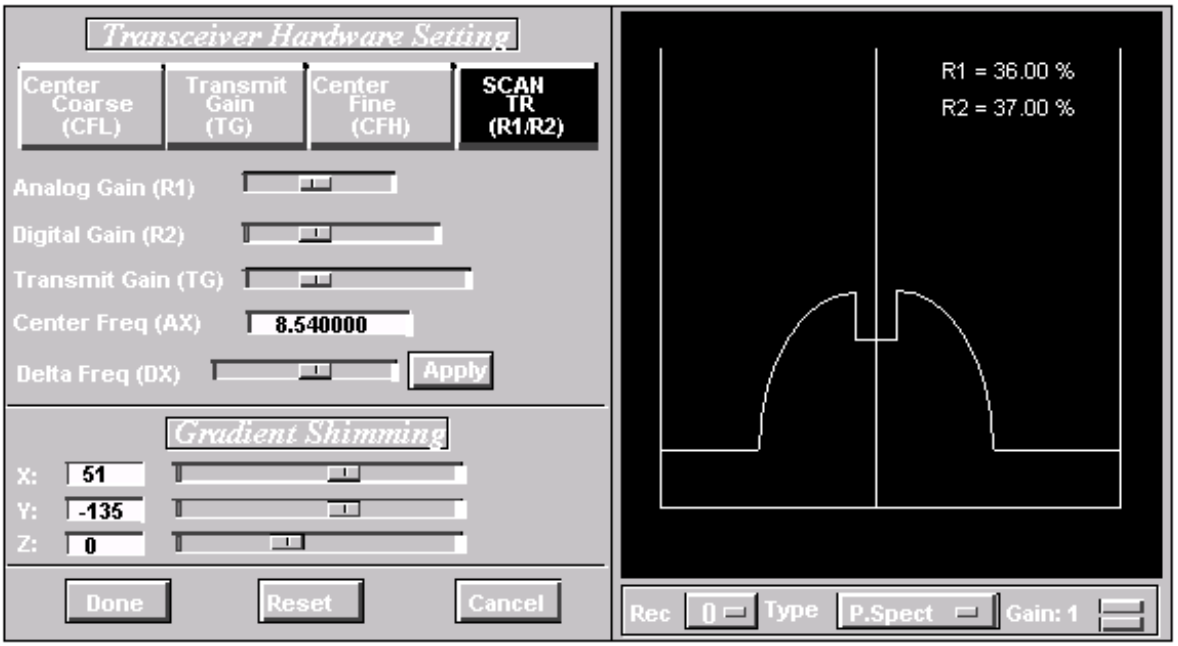
1. Move the Table 20mm by depressing the [Move to Scan] button of Keyboard.
2. Select **[Auto Prescan]**.

AUTO PRESCAN
ILLUSTRATION 7

3. Select **[Manual Prescan]**.

MANUAL PRESCAN
ILLUSTRATION 8

4. Click on "**SCAN TR**" and see that the projection comes out.
5. Click on "**Done**".



SCAN TR
ILLUSTRATION 9

6. Select **[Scan]**..

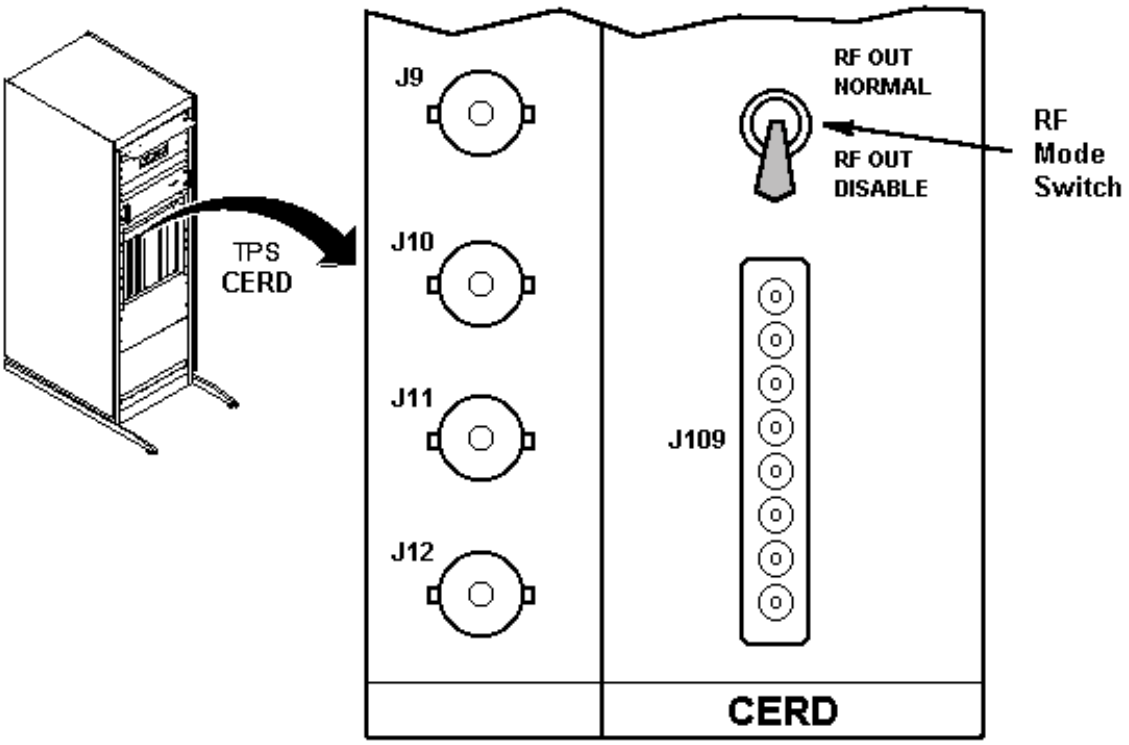
SCAN
ILLUSTRATION 10

7. Verify that scanning has been started.

8. Perform scan two more times by selecting [Scan] button.

3. Scan (continued)

9. Disable the CERD RF Output, by setting the RF Output mode toggle switch (located on the front panel of the CERD), to the RF Out Disable position.

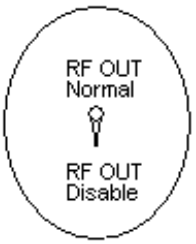


RF DISABLED FOR NOISE SCAN
ILLUSTRATION 11

10. Select **[Scan]**..

SCAN
ILLUSTRATION 12

11. Verify that scanning has been started.
12. After Noise Scan is finished, set the RF Mode Switch is to Normal side.

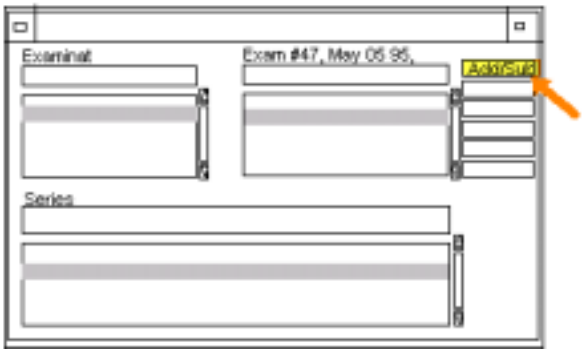


RF NORMAL
ILLUSTRATION 13

4. Data Analysis

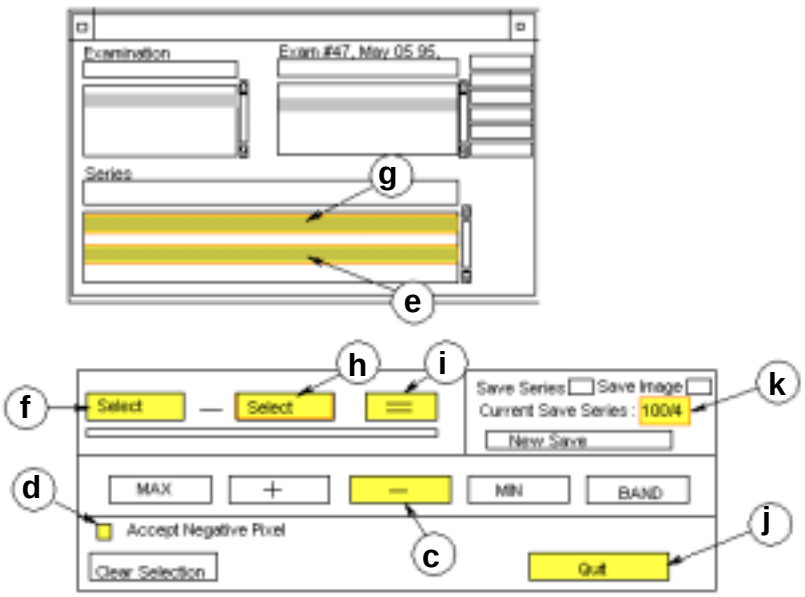
1. Subtract noise Image from Scan Image (first slice).
   - Scan Image #1 - Noise Image #1
   - Scan Image #3 - Noise Image #1
   - Scan Image #5 - Noise Image #1

a. Select [**Advantage Windows**] Icon.
b.Click [**Add/Sub**] button.



RF NORMAL
ILLUSTRATION 14

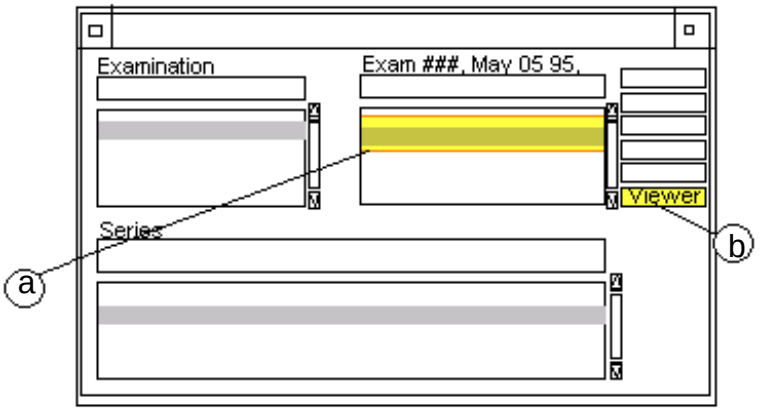
c.Click " **-** ".
d.Click "**Accept Negative Pixel**".
e.Select the Scan Image **#1**(**#3,#5**).
f.Click "**Select Set**".(Left side)
g.Select the Noise Scan Image.
h.Select the Noise Scan Image.
i.Click " **=** ".Click " **Quit** ".
j.TThe subtracted Image is now in Series 100/**
k. Repeat 1 thru 9 for Scan Image **#3** and **#5**



RF NORMAL
ILLUSTRATION 15

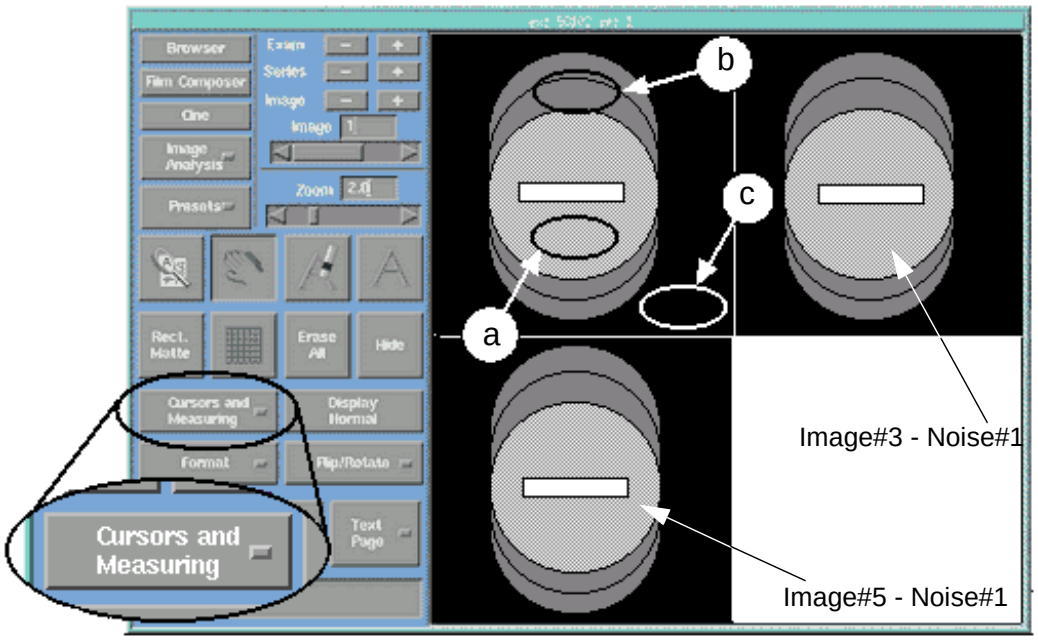
4. Data Analysis (continued)

2. Open the three Subtracted Images.
   a. Select Series 100
   b.Click on **[Viewer]**.



RF NORMAL
ILLUSTRATION 16

3. Measure the Mean of (a)Phantom Image, (b)Ghost and (c)Noise.
   Measure the Mean of Phantom Image, Ghost and Noise.([Area= 570 ± 10 mm^2])
4. Repeat the previous procedure for (**Image #3 - Noise#1**) and(**Image #5 - Noise#1**).



5. Click [**Quit**] when completed.

4. Data Analysis (continued)

1. Verify if the following relation is safisfied:

$$\frac{\text{Mean of Noise}}{\text{Mean of Phantom Image}} \leq \frac{1}{100}$$

2. Calculate the following relation:

$$\text{Specification} = 20\log_{10} \frac{\text{Mean value of the Ghost}}{\text{Mean value of the Phantom Image}} \leq -30\text{dB}$$

	Mean of Ghost	Mean of Phantom	calculate	Cal Value
Image 1			calculate	
Image 2			calculate	
Image 3			calculate	

Revision History

Rev	Date	Auther	Primary Reasons For Change
0	Jan 26, 2001	Y. Masumo	Initial Release
1	May 15, 2001	Y. Masumo	Phantom setting is updated
2	Oct 22, 2001	Y. Masumo	Page 5: Added the purpose of Head Rest. Page 7: Added to move the table by depressing [Move to Scan] button.