CLAIMS

What is claimed is:

1. An imaging system comprising:

a rotating unit that includes an imaging camera, wherein the rotating unit is rotatable between a home position and a finish position about a rotation axis such that the imaging camera can capture a first scan,

an alignment camera configured to capture a first alignment image of a subject positioned generally co-axially with the rotation axis, and

at least a first monitor on which the first alignment image is displayed, wherein the first monitor includes a plurality of alignment markings thereon, and wherein the plurality of alignment markings include at least a stationary alignment marking and a movable alignment marking, and wherein the rotating unit will not rotate from the home position to the finish position unless the stationary alignment marking and the movable alignment marking are aligned within a predetermined tolerance zone.

2. The imaging system of claim 1 further comprising a motor control system that rotates the rotating unit after the first alignment image is displayed on the first monitor.

3. The imaging system of claim 1 wherein the rotating unit includes a backdrop that rotates opposite of the imaging camera.

4. The imaging system of claim 1 wherein the at least one alignment marking includes a stationary alignment marking, and wherein the stationary alignment marking is created using a differential map.

5. The imaging system of claim 4 wherein the at least one alignment marking also includes a movable alignment marking that is a live image taken from the alignment camera.

6. The imaging system of claim 5 wherein at least one differential map is created to determine the location of the movable alignment marking in relation to the stationary alignment marking to produce a comparison percentage, and wherein the comparison percentage is displayed on the alignment monitor on a meter.

7. The imaging system of claim 3 further comprising a support assembly that includes a base and a vertically oriented support structure, and a horizontal boom extending outwardly from the vertically oriented support structure, wherein the rotating unit is positioned below the horizontal boom and is adapted to rotate with respect to the horizontal boom about the rotation axis.

8. The imaging system of claim 7 wherein the backdrop includes a curved backdrop portion and a hood portion.

9. The imaging system of claim 1 wherein the rotating unit includes a first portion and a second portion that are rotatable about the rotation axis, wherein the first portion and the second portion each have a proximal end through which the rotation axis extends and a distal end that is positioned away from the rotation axis, wherein the imaging camera is associated with the distal end of the first portion and a backdrop is associated with the distal end of the second portion, wherein the first portion and the second portion are rotatable from a stowed position where the first portion and the second portion are in substantial vertical alignment and the home position where the distal ends of the first portion and the second portion are approximately 180° from one another with respect to the rotation axis, and wherein the first portion and the second portion are rotatable together between the home position and the finish position such that the imaging camera can capture the first scan of a subject positioned generally co-axially with the rotation axis.

10. The imaging system of claim 9 wherein the first portion and the second portion are separately rotatable about the rotation axis.

11. The imaging system of claim 9 wherein the first portion and the second portion at least partially overlap in a vertical direction when in the stowed position.

12. The imaging system of claim 9 further comprising a horizontal boom having a first end that is adapted to be secured to a wall or other vertically oriented support structure and a second end to which the rotating unit is rotatably attached, and wherein in the stowed position the first portion and the second portion are in substantial vertical alignment with the horizontal boom.

13. The imaging system of claim 9 wherein distal ends of the first portion and the second portion remain approximately 180° from one another when the first portion and the second portion rotate from the home position to the finish position.

14. The imaging system of claim 9 wherein the first monitor includes at least one alignment marking thereon.

15. The imaging system of claim 14 wherein the at least one alignment marking includes a stationary alignment marking, and wherein the stationary alignment marking is created using a differential map.

16. The imaging system of claim 15 wherein the at least one alignment marking also includes a movable alignment marking that is a live image taken from the alignment camera.

17. The imaging system of claim 16 wherein at least one differential map is created to determine the location of the movable alignment marking in relation to the stationary alignment marking to produce a comparison percentage, and wherein the comparison percentage is displayed on the alignment monitor on a meter.

18. The imaging system of claim 9 further comprising a support assembly that includes a base and a vertically oriented support structure, and a horizontal boom extending outwardly from the vertically oriented support structure, wherein the rotating unit is positioned below the horizontal boom and is adapted to rotate with respect to the horizontal boom about the rotation axis.

19. The imaging system of claim 1 wherein the movable alignment marking is movable with respect to the first alignment image.