Servicing the Siemens AXIOM Luminos Agile Digital R&F Systems

Introduction

The Siemens AXIOM Luminos Agile training course covers Siemens latest DRF (Digital Radiography/Fluoroscopy) system.

The AXIOM Luminos Agile course is a skills development course designed to provide the experienced service professional with the skills necessary to fully service and calibrate these digital flat panel R&F systems. The AXIOM Luminos Agile product utilizes the Polydoros F80 Generator. System components that will be covered in this course include:

- PHS (Stand/R&F Table)
- DIT (Digital Imaging Tower = Spotfilmer)
- 3D (Ceiling Suspension)
- BWS (Bucky WallStand)
- Polydoros F80 Generator

Prerequisites

To attend this course, the service professional must have a good understanding of the principles gained through attending Phase II or two years equivalent experience in servicing RAD equipment.

Objectives

- Understand the components of the AXIOM Luminos Agile system
- Describe how factors are optimized to produce the highest quality digital R&F images
- Describe the function of the basic components of each Luminos Agile unit
- Perform the necessary performance monitoring and quality assurance procedures
- Perform all system calibrations and adjustments to maintain the highest quality images
- Evaluate circuit functions to facilitate troubleshooting
- Perform a complete and thorough preventive maintenance inspection on the unit

Course Outline

Day 1

- Service Key access
- Digital imaging process overview
- Basic terminology
- Digital imaging process overview
- Basic terminology
- Luminos Agile system overview
  - SYNGO PC interface
  - FPD's
    - Fluoro: Pixium 5100
      - Trixell Pixium 4343R
    - Rad/Wireless: Pixium 5500 wi-D
      - Trixel Pixium 3543
- Luminos Agile system operation
- System specifications
- Lab Activities
  - Basic system operation
  - 3D coordinate system

- Syngo Workstation software
  - Image acquisition
  - Image viewer
  - Screen considerations
  - Technologist digital QC
- System documentation overview
- Operations
  - Syngo Workstation
- Service
- Schematics
- Lab Activities
  - Image quality
  - Signal to noise
  - Resolution
  - Contrast ratio
  - MTF
  - Flatfield/phantom IQ
  - AEC

Day 2

- System service
  - Service software
  - Service access
- Lab Activities:
  - Required tools and software Remove and replace covers and system panels
  - AWS
  - Operators console
  - Generator
- SYNGO basics
- AWS configuration
- Site planning and installation
- Network configuration
- Ethernet config
  - CAN Network
  - Troubleshooting internal networks
- System calibration

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Hands-On Training Course
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CEU's Awarded: 4 CEU's
State of Ohio Registration No. 93-09-1377T

- o Tube Adjustment
- o Inverter Adjustment
- o mAs Adjustment
- o Dose Adjustment (Iontomat)
- o FD Calibration
- o kV (Voltage response)
- o Control Fluoro
- o Collimation Adaptation
- Functional checks
- System backups
- System restore
- Lab Activities
- o Component location
- o Schematic location
- o Physical location
- o Connector locations
- o Fuse location/identification

Day 3
- Preventive maintenance
- Error codes
- System diagnostics
- Lab Activities
- o PM
  - OEM Preventative Maintenance Procedures
- o Diagnostics
- Image Chain - Image Detection
- Detector Calibration
  - FD calibration
- System service procedures
- o Software reload
- o System ghosting
- o Troubleshooting
- o Options
- o Networking
- o Output devices
  - PACS

- Workstations
- Media
- Printers
- o Input devices
  - Modality worklist
- Lab Activities
- o Software Load
  - OS
  - Applications
- o Configure and test output devices
- o Configure and test input devices
- o Backup/Restore
- o Ghosting/Cloning procedures

Day 4
- Generator calibration
- Position calibration
- Lab Activities
- o Iontomat Dose (AEC) calibration
- o QA
  - IQAP
  - X-Ray Field
- o Stand adjustment

Day 5
- System diagrams
- o AWS
- o Gantry
- o Generator
- Troubleshooting
- System diagnostics
- o Hardware Test
- o Stand Test
- o AXCS Test
- Lab Activities
- o Review system diagrams and communication

- o Troubleshooting
- o System diagnostics
- o Access Error logs
- o Networking
- o Power Distribution/Supplies
- Course review
- Course evaluation
- Final exam

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