Servicing the Siemens Ysio: (Digital FPD System)

RADIOLOGICAL SERVICE TRAINING INSTITUTE

Introduction

The Siemens Ysio training course covers Siemens latest DR (Digital Radiography) system.
The Ysio course is a skills development course designed to provide the experienced service professional with the skills necessary to fully service and calibrate these single & dual detector systems. The Ysio product is built on the Polydoros R80 generator platform. System components that will be covered in this course include:

- Multix (Height Adjustable Table)
- 3D (Ceiling Suspension)
- BWS (Bucky WallStand)
- Polydoros R80 (Generator, 80kW)
- Flourospot Compact (Image System = Host Computer)

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 similarities & difference between the Ysio products.
- Describe how factors are opti-mized to produce the highest quality digital images
- Describe the function of the basic components of each Ysio digital radiographic unit
- Demonstrate an understanding of the installation procedures associated with the Ysio
- Perform the necessary digital 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

- Digital imaging process overview
- Basic terminology
- Ysio system overview
  - SYNGO PC interface
  - FPD's
    - Fluoro: Pixium 5100
      - ☐ Trixell Pixium 4343R
    - Rad/Wireless: Pixium 5500 wi-D
      - ☐ Trixel Pixium 3543
- Ysio 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
  - Tube Adjustment
  - Inverter Adjustment
  - mAs Adjustment
  - Dose Adjustment (Iontomat)
  - FD Calibration

30745 Solon Road · Solon, OH 44139 · P440.349.4700 · F440.349.2053 · Toll-Free 1.833.229.7784
www.rsti-training.com · registration@rsti-training.com

Hands-On Training Course
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- kV (Voltage response)
- Functional checks
- System backups
- System restore
- Lab Activities
  - Component location
  - Schematic location
  - Physical location
  - Connector locations
  - Fuse location/identification

Day 3

- Preventive maintenance
- Error codes
- System diagnostics
- Lab Activities
  - PM
    - OEM Preventative Maintenance Procedures
  - Diagnostics
- Image Chain - Image Detection
- Detector Calibration
  - FD calibration
- System service procedures
  - Software reload
  - System ghosting
  - Troubleshooting
  - Options
  - Networking
  - Output devices
    - PACS
    - Workstations
    - Media
    - Printers
  - Input devices
    - Modality worklist
- Lab Activities
  - Software Load
    - OS
    - Applications
  - Configure and test output devices
  - Configure and test input devices
  - Backup/Restore
  - Ghosting/Cloning procedures

Day 4

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

Day 5

- System diagrams
  - AWS
  - Gantry
  - Generator
- Troubleshooting
- System diagnostics
  - Hardware Test
  - Stand Test
  - AXCS Test
- Lab Activities
  - Review system diagrams and communication
  - Troubleshooting
  - System diagnostics
  - Access Error logs
  - Networking
  - Power Distribution/Supplies
- Course review
- Course evaluation
- Final exam

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