Servicing the Philips Allura XPER FD Family Digital Cath Labs: FD10/FD20

RADIOLOGICAL SERVICE TRAINING INSTITUTE

Introduction

The Philips Allura FD Digital Cath Lab Family course is a skills development course designed to provide the experienced service professional with the skills necessary to fully service and calibrate this single/dual detector cath lab system. The FD20 and FD10 utilize the Velara Generator R7.X & R8.1) which is common in other Philips R&F rooms and the CertaRay Generator (R8.2). Calibrations are accessed through the Field Service Framework platform.

Prerequisites

To attend this course, the service professional must have completed RSTI's Phases I-III or equivalent experience is required.

Student must bring a service PC (with admin privileges) to the class.

Objectives

- Identify all major components of the FD system and understand their function
- Demonstrate an understanding of the installation procedures associated with the Philips Allura FD family
- Perform the necessary digital performance monitoring and quality assurance procedures
- Perform all system calibrations and adjustments to maintain the highest quality images
- Replace and calibrate certified components
- Perform a complete and thorough preventive maintenance inspection on the unit

Course Outline

DAY 1

- Introduction to Philips CV
- AIAT registration
- Philips CV timeline for system releases and upgrades
  - Compare & Contrast systems
- Release Overview
  - R7.X
  - R8.1
  - R8.2
- Major system components
  - M cabinet
  - R cabinet
  - Generator
    - Velera
    - CertaRay
  - Detector
    - FD10
    - FD20
  - Table
    - AD5
    - AD5T
    - AD7
  - Tube
    - MRC 0407
    - MRC 0508
  - TSO's
  - MPDU
  - Chillers
    - Tube chiller
    - Detector chiller
  - XPER modules
- Field Service Framework overview

DAY 2

- Service manual navigation
- Acronyms
- Required tools & test equipment
- System specifications
- Lab Activities
  - Monitor configuration
    - Control Room
    - Operator Room
  - User Interface
  - Image acquisition
  - Operator controls
  - XPER module usage
  - Software

DAY 3

- Power distribution
- System Architecture
  - Component ID
    - M cabinet
    - R cabinet
    - Generator
    - Table
  - Geometry subsystem
    - Can Bus
    - SAN
    - Geometry components
    - Logging
    - Overview of calibrations
  - B-Cabinet & K-Cabinet
    - Flexvision
  - CertaRay
    - XSC
    - HiVO

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Hands-On Training Course
Course Length: 2 Weeks
CEU's Awarded: 8 CEU's
State of Ohio Registration No. 93-09-1377T

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- ADU
- POINT
- MIU

- Lab Activities:
  - Terminal Emulator
  - Geometry signal path
  - Geometry boot process
  - Movement control

DAY 4

- Velara Generator
  - Chiller
  - configuration
  - Tube startup
  - Grid switch
  - Grid switch supervisor
  - KV and MA generation
  - Rotor circuit
  - component replacement tables
- Lab Activities:
  - Grid switch supervisor software
  - Collimator functions
    - bootup
    - blade axis
    - wedge filters
    - alignment

DAY 5

- System Interconnect diagrams
- Network configuration
  - Ethernet config
  - PACS
  - HIS/RIS
- Lab Activities
  - Table functions
  - FSF navigation
  - Software configuration
  - Network Configuration
  - Generator backup
  - System Ghosting
  - Board Software download

DAY 6

- Lab Activities:
  - Geometry calibrations
    - Potentiometer adjustments
    - Positioning calibrations
    - Motor Current adjustments
    - Mechanical Limit Adjustments

DAY 7

- Lab Activities
  - Tube Change
    - Physical Change
    - De-aeration
    - Tube calibrations
  - Grid Switch calibration
  - Detector Change
    - Physical Change
    - Detector calibrations

DAY 8

- Preventive maintenance
  - Geometry
  - Grounding checks
  - Cabinet
  - Conditioners
    - Tube chiller
    - Detector chiller
- System service procedures
- Lab Activities
  - PM overview
  - Image Quality testing

DAY 9

- System schematics
  - Geometry
  - System Interface
  - Generator
- Troubleshooting
  - Error viewing
  - System Diagnostics overview
  - Troubleshooting flowcharts
- Lab Activities
  - Performing diagnostics
  - Bugs

DAY 10

- Course review
- Course evaluation
- Final exam

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