

Servicing the Philips Allura XPER FD Family

Digital Cath Labs: FD10/FD20



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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 which is common in other Philips X-ray rooms. Calibrations are accessed through the Field Service Framework platform.

Note: The class does not cover the 8.2 UNIQ release which is a completely redesigned platform with new detector, generator, etc....

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
 - o Compare & Contrast systems
- Major system components
 - o M cabinet
 - o R cabinet
 - o Generator
 - o Detector
 - FD10
 - FD20
 - o Table
 - AD5
 - AD5T
 - AD7
 - o Tube
 - MRC 0407
 - MRC 0508
 - o TSO's
 - o MPDU
 - o Chillers
 - Tube chiller
 - Detector chiller
 - o XPER modules
- Field Service Framework overview

DAY 2

- Service manual navigation
- Acronyms
- Required tools & test equipment
- System specifications

- Lab Activities
 - o Monitor configuration
 - Control Room
 - Operator Room
 - o User Interface
 - o Image acquisition
 - o Operator controls
 - o XPER module usage
 - o Software

DAY 3

- Power distribution
- System Architecture
 - o Component ID
 - M cabinet
 - R cabinet
 - Generator
 - Table
 - o Geometry subsystem
 - Can Bus
 - SAN
 - Geometry components
 - Logging
 - Overview of calibrations

- Lab Activities:
 - o Terminal Emulator
 - o Geometry signal path

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- o Geometry boot process
- o Movement control

- o Network Configuration
- o Generator backup
- o System Ghosting
- o Board Software download

- o PM overview
- o Image Quality testing

DAY 4

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

DAY 5

- System Interconnect diagrams
- Network configuration
 - o Ethernet config
 - o PACS
 - o Interventional tools
 - o HIS/RIS
- Lab Activities
 - o Table functions
 - o FSF navigation
 - o Software configuration

DAY 6

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

DAY 7

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

DAY 8

- Preventive maintenance
 - o Geometry
 - o Grounding checks
 - o Cabinet
 - o Conditioners
 - Tube chiller
 - Detector chiller
- System service procedures
- Lab Activities

DAY 9

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

DAY 10

- Course review
- Course evaluation
- Final exam