Servicing the GE Innova Digital Cath Lab Family: Innova 2100/3100/4100

RSTI

R A D I O L O G I C A L   S E R V I C E   T R A I N I N G   I N S T I T U T E

Introduction

The GE Innova 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 2100/3100/4100 system is built around the JEDI generator. The Innova 2100, Innova 3100, and Innova 4100 will be covered in this course.

Note: The Innova 2121 and 3131 are dual C-Arm (BiPlane) versions of the Innova 2100 and 3100.

Prerequisites

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

Objectives

- Describe the GE Innova cath lab system components
- Describe the function of the basic components of the GE Innova digital cath lab
- Demonstrate an understanding of the installation procedures associated with the GE Innova Cath lab
- 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 cath lab overview
- Digital imaging process overview
- Innova Family system overview
  o Compare & Contrast systems
- Major system components
  o LC Positioner
  o 21/31/41cm Detector
  o C1 Cabinet
  o C2 Cabinet
  o Table
    ▪ Omega table
    ▪ Elegance table
  o Smart box
  o TSSC
  o Chillers
    ▪ Tube chiller
    ▪ Detector chiller
  o User interface
- Innova System evolution
- System logins and passwords

DAY 2

- Documentation
- System terms & acronyms
- Required tools & test equipment
- System specifications
- Innova system operation
- Lab Activities
  o Basic system operation
  o DL system software
  o Image acquisition
  o Image viewer
  o Software navigation

DAY 3

- Operations
  o DL – Digital Leader
  o Revolution Detector
  o Innova system
  o Innova digital
  o Positioner
  o Alarm systems
  o QAP – Quality Assurance Procedure
  o Advantage Workstation
- Lab Activities:
  o DL operation
  o QAP
  o Advantage Workstation

DAY 4

- Removal of covers & panels
- Component Identification
- Lab Activities:
  o Covers & panels
    ▪ DL
    ▪ AW
    ▪ Table
    ▪ LC
    ▪ JEDI generator
  o Component Identification
  o Schematic location
  o Physical location
  o Connector locations
  o Fuse location/identification

DAY 5

- Site planning and installation
- Network configuration

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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

- o Ethernet config
- o ArcNet Bus
- o CAN Network
- o Troubleshooting Innova internal Networks
- Service
- Lab Activities
- o Mechanical alignments
- o Setups
- o Software configuration
- o Network Configuration
- o Configure and test output devices Output devices
  - PACS
  - Laser printer
  - RWS
  - Media
- o Configure and test input devices
  - Modality worklist

DAY 6
- Lab Activities:
- o Calibrations
  - DL
  - AW
  - Table
  - LC
  - JEDI generator
  - KVM
  - Monitors
  - Dosimeter
  - Detector
  - Collimator
- o Functional checks
- System backups
- System restore
- Lab Activities
- o Full system calibration
- o System backups

- o System restore

DAY 7
- Lab Activities
- o Full system calibration (Cont'd)
  - DL
  - AW
  - Table
  - LC
  - JEDI generator
- Functional Checks (Cont'd)
  - DL
  - AW
  - Table
  - LC
  - JEDI generator

DAY 8
- Preventive maintenance
- o Positioner
- o Table
- o Cabinet
- o Conditioners
  - Tube chiller
  - Detector chiller
- o Tube
- o Collimator
- o Dose
- o Power distribution
- o UPS
- System service procedures
- o Software reload
  - DL
  - RTAC
  - JEDI
- o Options
- o Networking
- Lab Activities
- o PM

- o Load from Cold (LFC)

DAY 9
- System schematics
- o AWS
- o Gantry
- o Generator
- Troubleshooting
- Error codes
- System diagnostics
- Lab Activities
- o Review system diagrams and communication
- o Troubleshooting
- o System diagnostics
- o Access Error logs
- o Central Listing
  - Test Points
  - LED's
- o Networking
- o Power Distribution/Supplies

DAY 10
- Course review
- Course evaluation
- Final exam