ACR Accreditation and Servicing the Lorad MIV Platinum™

RADIOLOGICAL SERVICE TRAINING INSTITUTE

Introduction

Mammography may be the most dynamic of all of today's imaging modalities. With the new regulatory and accreditation procedures, and advancements in technology, the service professional is becoming more involved in maintaining the quality of the mammographic images produced. This course is designed to give the service professional the insight to evaluate image quality problems, determine if the mammographic unit is the source of the image problem and take the appropriate steps to correct the deficiency. Given today's regulatory environment, maintaining the system at peak performance is of the utmost importance.

Prerequisites

To attend this course, the service professional must possess fundamental knowledge and understanding of the principles of X-ray and basic electronics.

Objectives

- Describe the basic components of the LORAD MIV Platinum™ mammographic units
- Perform the necessary mammographic performance monitoring and quality assurance procedures utilizing the LORAD MIV Platinum™
- Perform the necessary tests to reproduce the results of the physicist's report to confirm corrective action
- Perform all system calibrations and adjustments to maintain the highest quality images and compliance with MQSA requirements
- Evaluate circuit functions to facilitate troubleshooting

Course Outline

Day 1

- Introduction to the LORAD MIV Platinum™ system
- System specifications
- Operation
- System controls
- Physical layout
- Using LORAD documentation
- Turn-on circuits
- Power distribution
  - AC supplies/distribution
  - DC supplies/distribution
- System block diagrams
- Lab Activities
  - Component location
    - Schematic location
    - Physical location
    - Connector locations
    - Fuse location/identification
  - Cover removal procedures
  - Locating ID/compliance labels
  - Parts identification
  - Input AC voltage adaptation
  - Power supply verification
    - AC supplies
    - DC supplies

Day 2

- kV control
  - Manual kV
  - Auto kV
- HV secondary
  - Feedback circuits
  - Safety circuits
  - Overload detect
- mA control
  - Manual kV
  - Auto kV
- Filament drive circuits
  - Filament control
  - Filament protect
  - Grid bias
- Lab Activities
  - kV measurement
    - Invasive
    - Non-invasive
  - Safety/overload circuits
  - Waveform analysis
  - kV calibration
    - Manual kV
    - Auto kV
  - mA/mAS measurement
  - Filament drive waveform analysis
  - mA waveform analysis
  - mA calibration
    - Manual kV
    - Auto kV
    - Grid bias calibration

Day 3

- Rotor control
  - Inverter drive
  - Rotor status checks
- Exposure control
  - Manual

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

ACR Accreditation and Servicing the Lorad MIV Platinum™

RADIOLOGICAL SERVICE TRAINING INSTITUTE

- AEC
  - AEC detect
  - Auto time
  - Auto kV
  - Auto filter
- Monitor
- Lab Activities
  - AEC calibrations
    - Optical density
    - Thickness compensation
    - HTC™ compensation
    - Grid compensation
    - kV tracking
  - Rotor control programming
  - Rotor verification
  - Rotor waveform analysis

Day 4

- Electromechanical systems
  - Tube support area
  - Gantry drive area
  - Film support area
- Lab Activities
  - Auto-filter threshold
  - Compression force calibration
  - Filter calibration
  - Rotation zero calibration
  - Rotation velocity calibration
  - Vertical velocity calibration
  - Stereoloc rotation velocity calibration
  - HTC™ thickness threshold

Note: Due to copyright laws, students are required to purchase and bring to class the following manuals:

Operations : man-00223 rev 004
Service: man-00340 rev 005
Schematics 9-500-0277 rev 4

Day 5

- Tube replacement
- Mechanical adjustments
- Lab Activities
  - Tube type programming
  - Collimator calibration