

GE AMX Portables Maintenance Course

Course length: 1 Week
CEU's Awarded: 4

COURSE INTRODUCTION

GE AMX Portable X-ray Units are found in most radiology diagnostic imaging departments and being portable they are exposed to higher abuse than stationary x-ray units. This course is designed to teach the service professional the skills necessary to properly maintain the AMX portables. Emphasis is placed on testing, calibration, and troubleshooting the AMX portables to provide maximum uptime with minimum patient dose.

COURSE OBJECTIVES

At the conclusion of this course, attendees will be able to:

- Use the proper test equipment and procedures to test the AMX portable.
- Verify and calibrate the AMX portable within CDRH compliance.
- Evaluate the AMX portable system overall performance.
- Perform complete AMX portable system calibration.
- Isolate malfunctions to circuit level.

PREREQUISITES FOR ADMISSION

Attendees must possess the knowledge of servicing diagnostic imaging systems as taught by the course Advanced Concepts of Radiographic Imaging Maintenance - Level II, or the equivalent electronics and service experience. A strong microprocessor background is recommended.

LAB ACTIVITIES

- I. Filament circuit analysis
- II. mA calibration
- III. mAs calibration
- IV. Filament circuit calibration

DAY 4

- I. Battery charger and meter circuits
 - A. AMX - 110, and II
 - B. AMX - 3
 - C. AMX - 4
- II. AMX drive circuits
 - A. AMX - 110, and II
 - B. AMX - 3
 - C. AMX - 4
- III. AMX - 4 display circuits

LAB ACTIVITIES

- I. Drive circuit calibration
- II. Battery charger calibration
- III. Final system calibration
- IV. System troubleshooting

DAY 5

- I. Overall system review
- II. Final exam
- III. Course evaluation
- IV. Parts sourcing

DAY 1

- I. Introduction
- II. Overview of AMX portable systems
- III. Basic system/unit differences
 - A. AMX 110 and II
 - B. AMX 3
 - C. AMX 4
- IV. Batteries
 - A. Types
 - B. Maintenance
- V. System chassis layout

LAB ACTIVITIES

- I. Operation of AMX portables
- II. Identification of major components
- III. System checkout
- IV. CDRH compliance testing

DAY 2

- I. AMX block diagrams
 - A. AMX - 110, and II
 - B. AMX - 3
 - C. AMX - 4
- II. KV control circuits
 - A. AMX - 110, and II
 - B. AMX - 3
 - C. AMX - 4

- III. Rotor control circuits
 - A. AMX - 110, and II
 - B. AMX - 3
 - C. AMX - 4
- IV. Collimator circuits
 - A. AMX - 110, and II
 - B. AMX - 3
 - C. AMX - 4

LAB ACTIVITIES

- I. KV calibration checks
- II. Rotor control checks
- III. Collimator light field checks
- IV. Waveforms and circuit analysis

DAY 3

- I. Filament control circuits
 - A. AMX - 110, and II
 - B. AMX - 3
 - C. AMX - 4
- II. mA control circuits
 - A. AMX - 110, and II
 - B. AMX - 3
 - C. AMX - 4
- III. Timer control circuits
 - A. AMX - 110, and II
 - B. AMX - 3
 - C. AMX - 4