

Picker R&F Imaging (Vector/Elite) 1720/1721 Spotfilmer, Beta TV Camera, and Vector/Elite 9000/4500 Table Course

Course length: 1 Week
CEU's Awarded: 4

<p>COURSE INTRODUCTION The Picker R&F Imaging course is designed to teach the service professional those skills necessary to fully service the imaging chain. This includes all calibration procedures, functional checks, and troubleshooting techniques. The course includes integrated lectures, labs, and documentation which complement each other ensuring the maximum learning environment.</p>	<p>COURSE OBJECTIVES At the conclusion of this course, attendees will be able to:</p> <ul style="list-style-type: none"> ● Troubleshoot to the component or board level. ● Calibrate all circuitry to the manufacturer's specification. ● Perform all related CDRH compliance testing. ● Perform image evaluation. ● Verify the system performance. 	<p>PREREQUISITES FOR ADMISSION Attendees must possess the knowledge acquired through attendance at our Advanced Concepts of Fluoroscopic Imaging Maintenance-Level III or the equivalent electronics and service experience. A strong microprocessor background is recommended.</p>
<p>DAY 1</p> <ol style="list-style-type: none"> I. Introduction II. System basic operation <ol style="list-style-type: none"> A. Front panel controls B. System specifications III. Spotfilmer mechanical operation IV. Basic electrical block diagram operation V. Detailed electrical operation <ol style="list-style-type: none"> A. Longitudinal carriage drive B. Lateral carriage drive <p>LAB ACTIVITIES</p> <ol style="list-style-type: none"> I. System operation II. Component location III. Carriage drive calibration <p>DAY 2</p> <ol style="list-style-type: none"> I. Spotfilmer detailed electrical operation <ol style="list-style-type: none"> A. Mask drive B. Grid and cone drive C. UT shutter drive II. Automatic Brightness Stabilization block diagram operation III. Automatic Brightness Stabilization detailed operation <ol style="list-style-type: none"> A. UFRC brightness stabilizer <ol style="list-style-type: none"> 1. Phase shifting 2. Sample window B. Vector 100 brightness stabilizer <ol style="list-style-type: none"> 1. Fluoro KV control 2. Anti-isowatt 	<p>LAB ACTIVITIES</p> <ol style="list-style-type: none"> I. Patient entrance exposure rate adjustment II. ABS adjustment <p>DAY 3</p> <ol style="list-style-type: none"> I. TV camera block diagram operation <ol style="list-style-type: none"> A. Circuit layout and operation B. Camera specifications II. TV camera detailed electrical operation <ol style="list-style-type: none"> A. Timing generation B. Sweeps <ol style="list-style-type: none"> 1. Horizontal 2. Vertical C. Camera tube element supplies <p>LAB ACTIVITIES</p> <ol style="list-style-type: none"> I. TV camera <ol style="list-style-type: none"> A. Component location B. TV camera tube replacement <ol style="list-style-type: none"> 1. Target voltage 2. Grid voltages 3. Alignment C. Focus adjustment <ol style="list-style-type: none"> 1. Optical 2. Electromagnetic 3. Electrostatic II. Sweep calibration 	<p>DAY 4</p> <ol style="list-style-type: none"> I. Video preamp <ol style="list-style-type: none"> A. Aperture opening B. Gain II. Video processor <ol style="list-style-type: none"> A. Composite video B. Sync C. Blanking D. Pedestal III. TV camera detailed electrical operation <ol style="list-style-type: none"> A. Circular blanking B. Shading correction <p>LAB ACTIVITIES</p> <ol style="list-style-type: none"> I. Preamp level adjustment II. Video level adjustment III. Waveform analysis IV. Circular blanking calibration V. Shading correction calibration VI. System evaluation <p>DAY 5</p> <ol style="list-style-type: none"> I. Table block diagram operation II. Table detailed operation <ol style="list-style-type: none"> A. Tilt drive B. Power assist drive C. Table top drive III. System review IV. Final exam and course critique V. Parts sourcing