Title : Longbow Intermediate (Level 2)

Code: L200/1/2/LC

Subject: Longbow Laser

Attendees: Maximum of 2

Duration: 5 days

Aims: The aim of the level 2 training is to provide the attendees with knowledge of how to use,maintain and troubleshoot the Longbow laser used within the *CAPRIS* wire marking systems.

Location: The course is delivered at our facilities in Fort Worth, TX, or Bridgend, UK.

Objectives The learner will be able to:	Assessment criteria The learner has achieved this objective because they can:
1. Demonstrate health and safety procedures associated with the system.	1. Understand Laser radiation and associated hazards. 2. Know the different types of laser classification associated with the system. 3. Understand the lasers potential biological effects (particularly on the skin and eyes). 4. Select the right laser safety goggles and protective equipment depending on the laser classification. 5. Perform interlock override and emergency stop procedures.
2. Maintain the longbow laser head.	1. Understand laser theory. 2. Use the longbow mini controller. 3. Analyse the heater LED's to assess laser condition. 4. Adjust the main laser head components in order to optimize laser output power. 5. Assess the laser optics for damage or dirt.
3. Adjust and troubleshoot the laser head.	1. Use the IR viewer and visualizer to see and check beam shape and location. 2. Use the IR tool.

Objectives The learner will be able to:	Assessment criteria The learner has achieved this objective because they can:
	3. Clean laser head optics. 4. Adjust 2W and 3W units to peak power. 5. Adjust Cavity mirror. 6. Adjust Feedback mirror. 7. Recover laser from misadjustment. 8. Go over schematics. 9. Go over laser theory. 10. How to troubleshoot the laser head using the start up algorithm.
4. Maintain, adjust and troubleshoot the longbow power supply unit.	1. Check the water level. 2. Change the water. 3. Check and clean particle filter. 4. Use the start-up algorithm to aid troubleshooting the PSU unit. 5. Troubleshoot the water cooling and heating system. 6. Identify PSU circuit boards and key PSU components. 7. Understand the Electrical Schematics.
5. Analyse power readings IR, 532 nm and 355 nm in order to troubleshoot the laser system .	1. Set up the power meter and position correctly. 2. Know the laser specifications.

Note[1]: We advise customers that personnel attending this course have successfully completed System Intermediate Training (Level 2) and have had a minimum of 6 months experience using the techniques acquired.

For further information please Email: training@spectrumtech.com