

# IRC5 Servo Tuning for Spot Welding (US492)

The goal of the course is to train the student to properly setup, commission, and tune servo controlled spot welding guns.

## Topics include:

- Safety precautions while working with Spot Welding guns
- Why Servo tuning is required
- Proper tool center point definition
- Servo Gun Commissioning
- Servo Gun Calibration
- Setup Servo Gun Deflection
- What is Tune Master
- Servo Gun Tuning
- Servo Gun Verification
- Motor Commutation
- Motor Wiring
- Resolver Wiring
- Complete configuration of unknown gun and motor
- Configuring Kv

## Course objectives:

After successfully completing the course, the participant should be able to:

- Practice safety as it pertains to the Robot and the spot welding system.
- Setup a Tool Center Point including Arm Load and Tool Load
- Reference Tool Center Point in program for procedures
- Commission a Servo Gun using a starter file.
- Calibrate a Servo Gun
- Install and use Tune Master to tune a Servo Gun
- Describe the 7 critical steps of complete tuning
- Identify and fix commutation problems
- Identify and fix motor wiring problems
- Setup an unknown gun and motor for the first time
- Setup KV for an unknown motor

## Student profile:

- Welding cell programmers and engineers
- Technicians
- Engineers

## Prerequisites:

- US 491
- Spot welding experience
- Microsoft PC operating experience for Windows

Duration: 4½ days

Customer Service – Robotics

1250 Brown Road

Auburn Hills, MI 48326, USA

Tel: 1 800 HELP 365 (1 800 435 7365) option 1, option 4

Outside USA/Canada: +1 440 585 7804

E-mail: [abbuniversity@us.abb.com](mailto:abbuniversity@us.abb.com)

[www.abb.us/abbuniversity](http://www.abb.us/abbuniversity)

[www.abb.us/roboticstraining](http://www.abb.us/roboticstraining)

© 2015 ABB Inc. 3BUS095092 SM2010-027

ABB reserves the right to change specifications without notice.

Power and productivity  
for a better world™

