

1. Remove the batteries and place the batteries on the ground in an area clear of debris or flammable content
2. Using one of the short leads connect the positive (+) of battery #1 to the negative (-) of battery #2 and tighten battery terminals.
3. Measure voltage on the positive terminal (+) of battery #1 and the negative terminal (-) of battery #2 and verify 24v is achieved.
4. If only using two batteries and 24v is achieved go to step # 7.
5. Using the second short lead connect the positive (+) of battery #2 to the negative (-) of battery #3 and tighten terminals.
6. Measure the voltage on the positive (+) terminal of battery #3 to the negative (-) terminal of battery #1 and verify 36v is achieved.
7. Connect the electrode clamp lead to the **Negative** (-) terminal of battery # 1 and extend to its full length
8. Connect the ground clamp lead to the **Positive** (+) terminal remaining (on battery #2 for 24v system and battery #3 for 36v system) and extend cable to its full length.
9. Measure voltage at the ground clamp (+) and electrode holder (-) and verify 24v for two batteries and 36v for three batteries is achieved
10. Cover batteries with heavy fabric or rubber mat to shield batteries from any sparks or potential short.
11. Clean the metal surface you wish to connect the ground clamp and the surface that needs to be welded
12. Place the ground clamp on the material in cleaned area to insure good connection
13. Place none flammable/ flame retardant clothing on, welding gloves, welding shield, and protection for any exposed skin including face and head.
14. Place the welding rod in the electrode holder
15. Strike electrode on surface to start arc and move over the surface slowly
16. Adjust speed of hand motion to accommodate the welding rod getting shorter and covering the surface to me welded
17. Measure the voltage on the system regularly to verify voltage and recharge batteries when voltage drops below 23v for two battery system or 34v for a three battery system.\*\*
18. Using eye protection and a slag hammer remove the slag from the top of the weld and verify good penetration and solid weld surface to the materials being welded. Use a wire brush if needed to fully clean the top of the weld from flux and slag.
19. Remove cover over batteries, remove cables from batteries and pack system up.