

Bodycord Troubleshooting:

Intermittent operation of weapon is most frequently due to a bodycord beginning to fail, most often wires starting to break.

To test on strip, short the near and center pins (the two that are closer together) against the guard. If it doesn't set off the box, short between the same two pins as they enter the reel socket. If the first fails and the second works, it is the body cord.

Indication	Action
No touch scored	 Check pin jackets Check that wires are attached to pins Check for broken wires
Intermittently scores touches	 Look for broken wires Check pin jackets
Fine on tester fails on strip	 Check reel Check floor cord Check pin jackets Check body cord wires



Weapon Troubleshooting:

Most electric epee's have trouble at some time in their life, due to putting a large amount of force on very small parts.

Indication	Action
Touch scored on guard	 Check body cord outside wire. Clean guard. Check reel and floor cord.
No touch scored	 Check body cord. Look for broken wire at socket. Dismantle tip and readjust contact spring. Look for broken wire at guard. Rewire weapon.
Ground light	 Unplug body cord. If ground light still on, look at cords and reel. Look for wires grounded against socket or guard. Check tip for broken springs. If none of the above, then rewire the weapon.
Intermittently scores touches	 Switch body cords. Switch floor cords then reels. Check springs in tip. If none of the above, then rewire the weapon.
Touches score on both guards	Make sure scoring box is on epee.



Epee Assembly:

The following is a checklist of steps, not a detailed description of how to perform each step.

- 1. If an existing epee is to be rewired, disassemble the epee, including removing and disassembling the tip.
- 2. If the old blade is to be rewired, gently remove the wire (if necessary soften glue).
- If rewiring blade, put fingernail polish remover in the groove to soften the glue and scrape glue out with a knife blade tip. This will have to be done several times.
- 4. Set the tang of the blade either in a vice or with jigs. A right handed fencer needs the bend down and to the left, a left handed fencer needs it down and to the right. In general, beginners want less set and more experienced fencers want more set.
- 5. For pistol grips, cut the tang of the blade the correct length for the grip.
- 6. Make sure the grip slides all the way on the tang. If not, grind down the tang with a Dremol tool.
- 7. Make sure the pommel or nut threads onto the end of the tang. If not, chase the threads with a 6 mm die.
- 8. Make sure the barrel threads onto the blade tip. If not, chase the threads with a 4 mm die.

- 9. Clean the blade with windex and a paper towel, then allow it to dry thoroughly.
- 10. Carefully unwind the wire.
- 11. Thread the wire through the barrel.
- 12. Glue the barrel onto the blade. Good glues are Loctite Stick-n-Seal, Gel Superglue, or Blue Loctite.
- 13. Tack glue the wires down near the tip and the tang with regular superglue.
- 14. Bend the blade, then glue the wire. Run superglue down 1/3 of the way from the top and let it run down to 2/3 of the length. Do four coats, top to bottom, bottom to top, top to bottom, bottom to top.
- 15. Put the spaghetti tubing on.
- 16. Strip the insulation from the wires and cut them to length.
- 17. Put the guard on.
- 18. Put the socket on. Keep the wires smooth so a loop of wire doesn't get between the socket and guard.
- 19. Cut the opening in the pad, so that it slides over the grip, but is snug against the grip.
- 20. Slide the pad onto the grip, and the grip onto the tang.
- 21. Put a lock washer onto the tang.
- 22. Put the nut on.
- 23. Adjust the contact spring.
- 24. Put in the tip screws.
- 25. Check weight and shims.

Recipe for a stronger superglue remover

75% acetone 15% methyl-ethyl ketone 10% isopropyl alcohol

Acetone and methyl-ethyl ketone (MEK) are sold at some hardware and building supply stores, as they are used as lacquer thinners and for cleaning certain materials. Purchase pure acetone and MEK, not a lacquer thinner that is a mixture of compounds, and not a paint thinner. Isopropyl alcohol is sold at pharmacies as a rubbing alcohol.

For More Information

Fencing Forum http://www.fencingforum.com/armoury/

Volkmann R. Electrical Fencing Equipment; How it Works What Goes Wrong How to Fix It. Rudy Volkmann 2003.

Copyright

This guide was originally written by David Young at the Huntsville Fencing Club. It has been released as public domain information, and thus may be distributed and copied freely.

