

Just Call Me “Sparky”

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A shipmate and I were taking advantage of a unique opportunity to turn some refresher training on the high-frequency transmitter system into a successful technical repair. We also were having a change-of-command ceremony that day.

The shipmate and I arrived in the radio-transmitter room shortly before the ceremony was to begin. We turned on the faulty URT-23 transmitter to troubleshoot and waited for it to warm up. Once we saw the fault indications, we decided to check the low-voltage power supply (located in the underside of the URT-23).

We turned off the faulty URT-23 and then extended it on its slide rails, making sure the interlock was engaged. Our next step was to remove all conductive items we were wearing. Finally, we gathered our tools and rotated the URT-23 so we could access the low-voltage power supply.

As I was about to turn on the faulty URT-23 again, I realized the connector from the low-voltage power supply to the rest of the transmitter wasn't seated properly. I rechecked the interlock to make sure it still was engaged, verified the power was off, and gently began removing the improperly seated connector. Suddenly, I felt electricity in both arms and across my chest, signaling that I had touched one of the capacitors on the low-voltage power supply.

I cried out in surprise and quickly yanked my fingers from the connector. With my shipmate's help, I immediately reported to medical to get checked for any further injury.

The new commanding officer was informed of my little misadventure, and it wasn't long thereafter that I met him for a one-on-one conversation. I hadn't made the most promising first impression. Shipmates in my division soon christened me “Sparky”; I couldn't argue with them because I had earned the new nickname.

Has anyone figured out yet what important safety precaution I missed? The correct answer is that I forgot to use a shorting probe to ensure the capacitors had been discharged. Here are all the steps to follow anytime you're deenergizing equipment:

- Secure power (check for multiple power sources).
- Locate a shorting probe and inspect it for damage. Report any damage to your work-center supervisor.
- Connect the shorting probe to a ground not located on the equipment itself (such as a grounding strap).
- Use the shorting probe to discharge any residual electricity that may be contained within the capacitors or other voltage-holding components.
- Return the shorting probe to its designated location.
- Use a multimeter to check for stray voltages.

Once you've followed these steps, it is safe to work on the equipment. ➤

For more info, find a copy of NSTM 300, Chapter 4. You also can find general- and electrical-safety instructions in OpNavInst 5100.19D, Chapters C1 and C9, and D1 and D5.