



electronic rebuilders

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trouble shooting tips

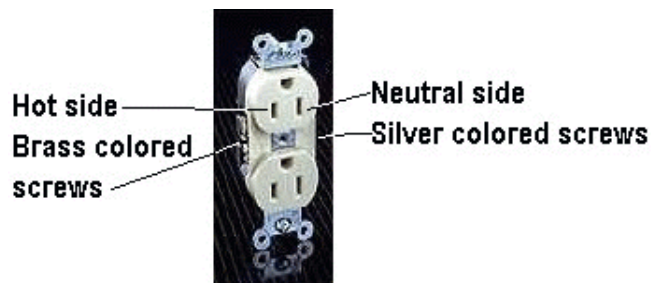
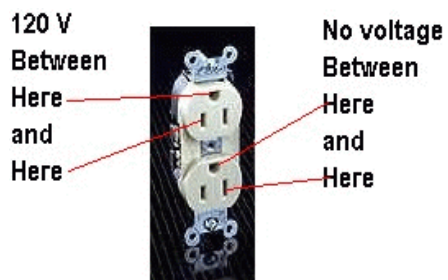
TST No 22 - Checking and Correcting Receptacle Reversed Polarity before connecting a Console, Printer or other Electronic Device.

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What does reversed polarity mean? How can you tell, and what can you do about it.

An outlet should be wired such that the HOT lead is connected to a specific side of the outlet, and the neutral lead to the other. This is done for safety reasons. Also in most systems the Ground and the Neutral are connected together at the Breaker Panel. Most consoles and Printers also reference their Ground to Neutral. Switches on the things you plug into the outlet will open and close the HOT side, so when the switch is off, there will be no voltage inside the device. The HOT side, should be the smaller of the two openings on the outlet. The neutral will be the wider of the two. Cords where it matters will have one of the prongs wider so the neutral side and hot side line up correctly. They will also in most cases have a Ground Pin located correctly.

How can you tell? Use a voltmeter, and check the voltage between the narrow opening and the ground opening. It should measure about 110-125V. Measure the voltage between the wider opening and the ground. It should be zero. If your readings are reversed, your polarity is reversed.



How do you correct this if your polarity is reversed? Turn the power off to the outlet by opening the breaker or pulling the fuse. Check the outlet again to be sure it is dead. Remove the outlet, the hot wire, (should be the black wire) probably is connected to the silver colored screw. It **SHOULD** be connected to the brass colored screw. If you look at the

outlet, the brass screws are on the same side of the outlet as the shorter plug opening. Swap the wires that feed the outlet Black (hot) wire to the brass colored screw, and white (neutral) wire to the silver colored screw. Tighten the screws securely. (By the way, wrap the wire around the screw in the clockwise direction, it prevents it from twisting off as you tighten the screw.) Re-install the outlet.

Turn the power back on, and check your work. Normal voltage should be read from the shorter opening to ground, and zero voltage from the wider opening to ground.