

NOISE CHECKLIST – Ideas for reducing electrical interference.

1. Replace all electrodes including the ground electrode. Electrode lead wires can break internally and can go un-noticed by the user.
2. Turn OFF possible sources of noise within the exam room.
 - fluorescent lights.
 - other equipment in the room.
 - if the exam table is motorized, un-plug it.
3. Move the Amplifier away from the machine, noise from the monitor and keyboard can be picked up by the electrode lead wires. Recommended moving it at least 2-3ft to the side of the machine.
4. Twist the active and reference lead wires together (i.e., braid them). By doing this both electrodes will pickup the same amount of noise which can then be eliminated by the differential amplifier. (Differential amplifier amplifies the voltage difference between the active and reference electrodes, if they both "see" the same amount of noise then it will not be amplified)
5. If the instrument is sitting on a metal cart, verify that the cart is grounded to the ground pin on the back of the instrument. (should be a wire going from a screw on the cart to the back of the instrument)
6. Make sure the instrument is plugged into a grounded outlet (three connector). If the instrument is plugged into a power strip, unplug it and try connecting it straight into the wall outlet.
7. In EMG mode, try using the 60Hz notch filter.
8. If the amplifier is mounted on an arm, remove it from the arm and try setting it next to the patient.
9. Try using shielded disk electrodes for NCV and shielded EMG needles (like a Concentric needle or shielded Monopolar).
10. If you have a two channel amplifier, turn off channel 1 and try using channel 2. This will rule out a problem with channel one in the amplifier.
11. Try moving the instrument into a different room in your facility.