

IMPORTANT BEFORE YOU TURN POWER ON!

Suggested Power Supply Connection for AC Supply in those Countries where Mains Power Earth and Neutral are connected

The CNS SMX Router operates with a Full Wave rectified power supply allowing input voltage operation between 10V and 40V AC/DC. The zero volts side of this rectified power supply is connected to the ground plane of the PCB.

When this unit is supplied as a PCB assembly it is important to take care that the external power supply source and Earthing strategies are such that you do not create inadvertent ground loops that under certain AC conditions which causes a short to be created on the secondary transformer side between Live and Neutral thus causing the input power supply circuit protection to operate rendering the unit in-operable.

Below is a recommended power supply layout to insure that this does not happen.

It shows that the Live/Active side of the secondary from the transformer is connected via a 1A fuse to the lefthand side screw terminal of the main SMX Router PCB power supply connector. This is the Lefthand side screw terminal as viewed from the back of the PCB. The Neutral is connected to the Righthand side screw terminal. It is then possible to connect the PCB Ground, any transceiver screen for example as maybe used for LonWireless or Lon PowerLine and the Mains Earth together without any problem.

If you are using the Boxed version of the CNS SMX Router as supplied by CNS we recommend the same overall strategy be followed but this time as your connection to the SMX power supply is through a Jack Plug connector fitted to the rear of the metal enclosure then you need to insure that the Live/Active connection is made to the outer side of the connector and the Neutral is connected to the Inner pin of the jack connector.

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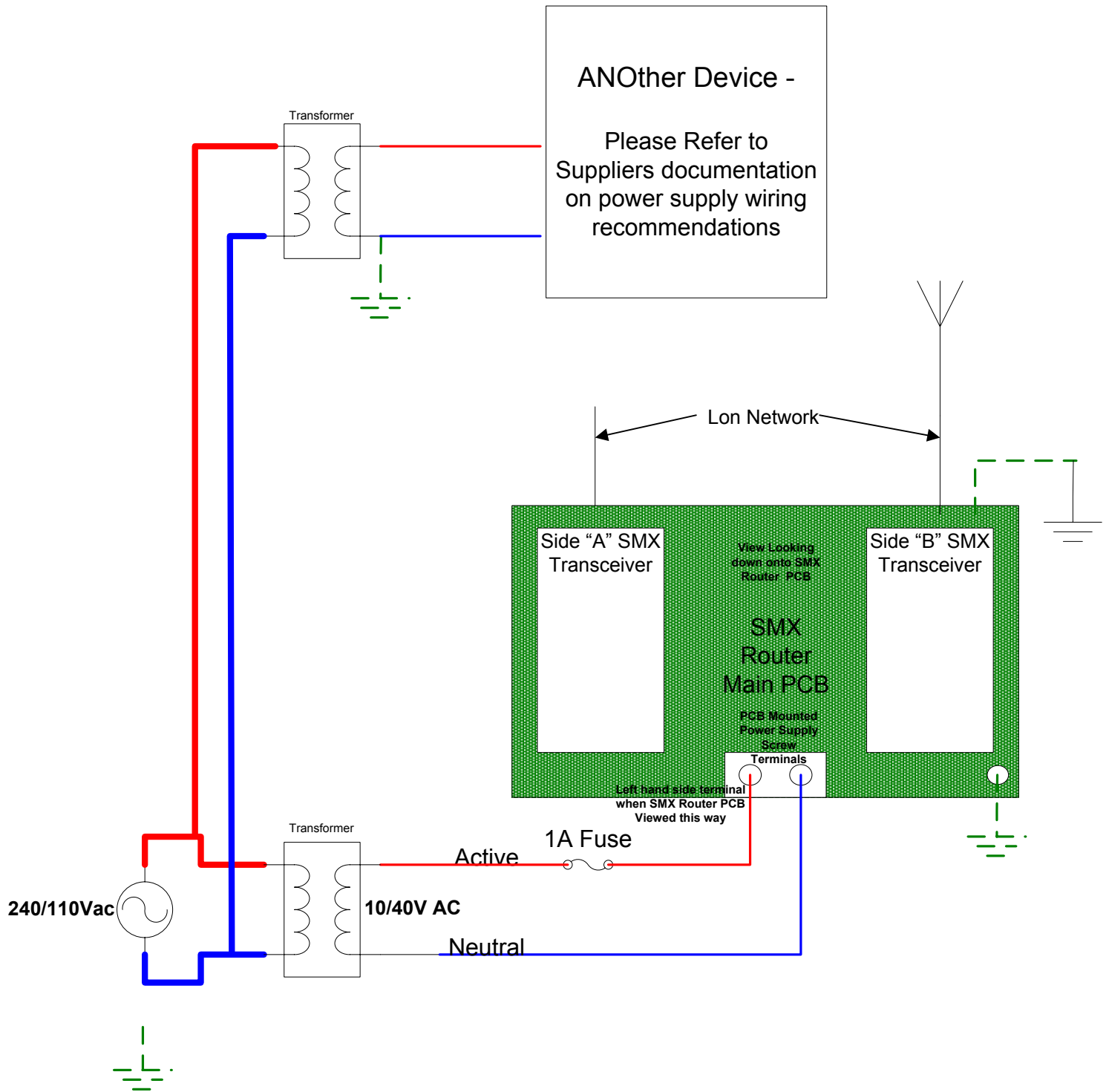
Project:

Engineering Note CNS SMX Router Suggested Power Supply Wiring Diagram



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