

Surge Protection Upgrade

01/14/98

Any ProTek jr or 24 exposed to excessive surge or transient impulses from the PSTN.

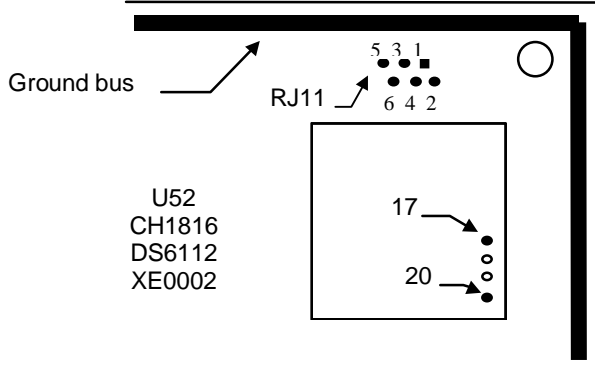
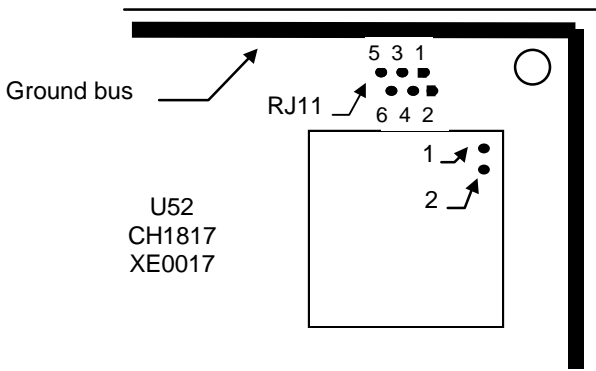
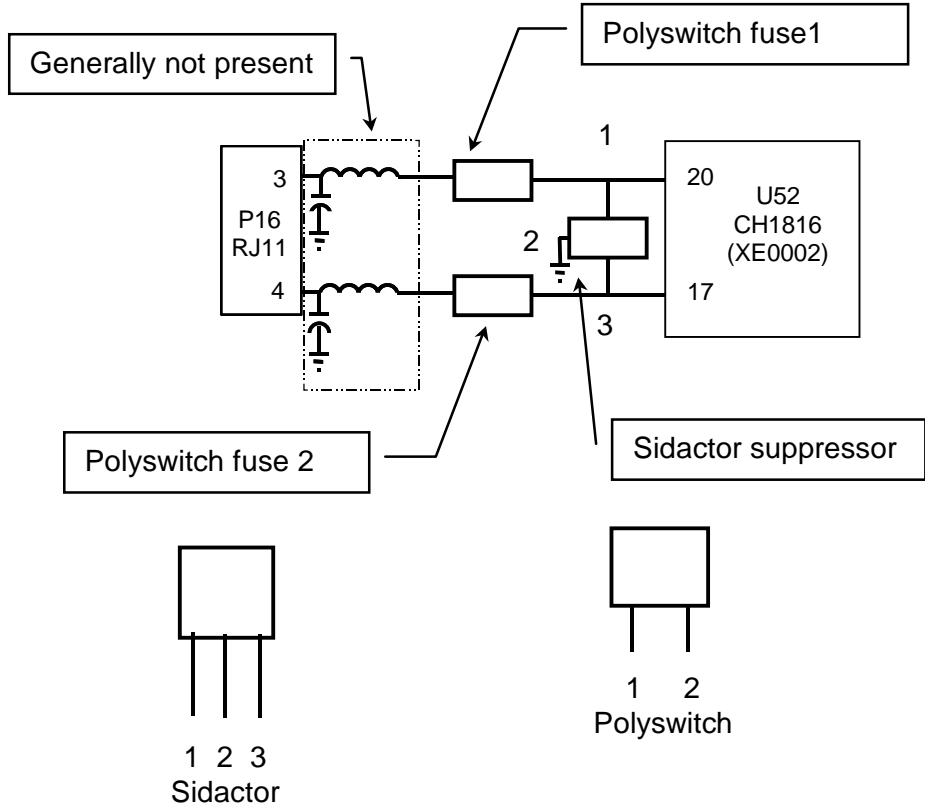
All firmware versions

Solutiuon:

The jr+ and 24+ have protection already installed and are exempt from this upgrade.

- 1 Install the sidactor across the DAA input with pin 2 (middle pin) soldered to the adjacent ground bus along the outside perimeter of the solder side of the PCB. Pins 1 & 3 of the sidactor are electrically equivalent and may be soldered to the input pins of the DAA as is mechanically most convenient. Refer to page two for diagram and schematic of changes.
- 2 Install one Polyswitch circuit protector from pin 3 of the RJ11 to pin 20 of the DAA and another from pin 4 of the RJ11 to pin 17 of the DAA. As the Polyswitch are symmetrical, no polarity need be observed at installation. If an RFI mod (see attached) has been performed, the ferrite inductors previously installed must be removed from their present termination at the DAA and wired in series with the polychromes now being installed. If the RFI mod has not been installed, the traces visible on the component side of the PCB must be cut as specified in step 2 of the RFI mod instructions. Unless noisy modem access is observed due to site RFI, there is no need to perform the RFI mod prior to this surge suppression modification.
- 3 It is suggested that any components installed be mechanically secured to the PCB with hot glue, potting material, or similar substance.

No change in operation should be noted as a result of this modification, other than improved resistance to telco transients.



RFI Mod

Affected equipment: Any ProTek unit experiencing RFI on-site.

Indications: Erratic phone connection at site though unit operates normally on the bench during initial check out and programming. Symptoms may include random erroneous characters upon connection, 300 baud only operation, or occasional unexplained disconnection.

- 1 Add .001uf capacitors rated at 1500V from P16 pin 3 to ground and from P16 pin 4 to ground. The most effective location for these capacitors will be on the bottom of the PCB from the RJ11C to the ground bus immediately adjacent to the connector.
- 2 Cut the two traces on the component side of the PCB between the RJ11 jack (P16) and the DAA (U52). Score the traces using the side of the U52 as a guide. The foil can be neatly cut with a razor knife and the foil peeled from the board.
- 3 Install the two coils on the bottom of the board as indicated below. For the CH1817 connect one coil between P16 pin 3 and U52 pin 1 and the other between P16 pin 4 and U52 pin 2. The added components are **bolded** on the diagrams below. *If you are modifying an older ProTek with the CH1816 or XE0002, please notice that the CH1816 pin outs are different from the CH1817 pin outs.*

