

## RI Modification

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ProTek 24 Classic

Any version requiring the replacement of the DAA with current Xecomm XE0002

The current production of the Xecomm XE0002 has a Ring Indicate (RI) output of a sawtooth at the ring frequency. All prior versions of the DAAs, including the Cermatek CH1816, the older Xecomm XE002, and the Dallas 6112, had a steady low output upon an inbound ring. Since these parts are now longer available, repairs made using the only currently available replacement (the Xecomm XE0002 dated coded 9801 or later) may result in the ProTek exhibiting intermittent response to an inbound ring. Generally, the ProTek will miscount rings or not answer at all. The modification described below will restore the steady low required for consistent response and will be required on 24 classic Revs A, B, and C.

1. Remove the PCB from the cabinet.
2. On the bottom (solder-side) of the PCB, cut the PCB trace between U52 pin 3 and the via found less than 1/2 inch from U52-3.
3. Remove pins 1, 3, 4, and 13 from a 14-pin socket.
4. Install the 14-pin socket in the unused U51 position. This location will be available unless the auxiliary serial port has been installed. Since this option was rarely installed in the 24 classic, the U51 lands should be available. If it is not available, this modification cannot be performed.
5. Install a short jumper from U51-6 to U51-9.
6. Install a 22uf tantalum capacitor positive side to U51-5, negative side to U51-7.
7. Install a jumper from pin 8 to U23-11.
8. Install a jumper wire from U51-5 to the via mentioned in step 1 above.
9. Confirm that the jumper wires installed in steps 6 and 7 are separated at the DAA end by the cut made in step 1.
10. Install the 74HCT14 in the socket after cutting the IC pin 1, 3, 4, and 13 flush at the IC.

The modification procedure for the 24 Classic Rev D is different and is covered below.

1. Remove the PCB from the cabinet.
2. On the top (component-side) of the PCB, cut the PCB trace near the U52-4 pin. If the DAA is already in place, cut the trace at the DAA housing.
3. Remove pins 1, 3, 4, and 13 from a 14-pin socket.
4. Install the 14-pin socket in the unused U51 position. This location will be available unless the auxiliary serial port has been installed. Since this option was rarely installed in the 24 classic, the U51 lands should be available. If it is not available, this modification cannot be performed.
5. Install a short jumper from U51-6 to U51-9.
6. Install a 22uf tantalum capacitor positive side to U51-5, negative side to U51-7.
7. Install a jumper from pin 8 to U51-11.
8. Install a jumper wire from U51-5 to the via mentioned in step 1 above.
9. Confirm that the jumper wires installed in steps 6 and 7 are separated at the DAA end by the cut made in step 1.
10. Install the 74HCT14 in the socket after cutting the IC pin 1, 3, 4, and 13 flush at the IC.