

## **Diamond Knowledge Base**

### **Power over serial to Cascade modem from UPP units.**

The Cascade modem has the option to be power over the serial input on the DB9 connector. This will allow the modem to receive power directly without the need for an external DC power source via the power input. This work with the UPP series units when the following modification are made:

What you need:

Cascade Modem

UPP counter

UPP modem cable

Changes needed:

#1 First the Cascade modem must have a jumper changed to direct power to be input from the DB9 connector. Open the cascade modem by unscrewing the case and unassembling it. Change the RNG jumper (third down) from the right position to the left position (see image below)

A recommend change to provide a better power trace is recommended to allow for larger power draws. This requires a wire jumper to be soldered on the bottom of the cascade modem circuit board to complete (see image below)

#2 The UPP modem cable will also need to allow for the power pin to be connected to the counter side connector. The cable can be ordered from Diamond Traffic as a UPP modem cable with optional power or a standard UPP modem cable can be modified to work to make this connection. To modify the cable the counter end (round 9 pin lock connector) housing must be disassembled and opened. Once open the grey wire that is currently unused must be soldered onto the unused pin 1 (upper right pin - From front view, upper left from rear view where connected). Once connected this will allow a power feed directly from the counter battery over the UPP modem cable to Pin 9 of the DB9 connector end.

Once these steps have been made you can connect a Cascade Modem directly to a UPP counter and the modem will power up and draw power directly from the counter battery.

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