

## !!!!PLEASE READ!!!!

You have purchased an XPin Power Supply product or a product that provides power to another circuit board. As with any system, and a pinball machine is a system, there is always a root cause for why a failure has occurred.

If you are replacing a board with this XPin product, and the reason is that power has been lost, or a fuse continues to blow, the XPin product will most likely do the same until the reason for the fuse blowing or power being lost is discovered and repaired.

A fuse is a device that prevents too much current from flowing through the electronic devices. If the circuit board that you are replacing was over fused, i.e. 5A used instead of a 0.5A, damage to the electronic components will occur. It is important to only use the rated fuses.

In cases involving High Voltage sections, like those circuits used to power Plasma displays, if the circuit board you are replacing has a failed HV circuit, there is a high probability that the Plasma display is the culprit and the HV circuit failed before a fuse could blow. A known design flaw exists in the circuit design of the WPC HV section for plasma displays. The circuit will fail before the fuse will blow.

XPin Power Supplies are load tested to spec + 25%. For example, if a game is designed for a 5V 3A supply, XPin tests to 5V 3.75A minimum. Also, all supplies provided, (+5V, -12V, +12V, +90V, -90V, etc) are tested simultaneously to insure full function and interaction.

All XPin Power Supplies that provide +5V utilize a switching supply topology, which is more efficient and reduces heat, so no large heatsink is needed. The tradeoff is that it is more sensitive of issues in other areas of the system, i.e. the +12V and -12V rails. If the system has a problem in either of the +/-12V rails, it will impact the +5V supply, possibly keeping the game from starting up or going through continuous resets. If this occurs, to start the debug process, unplugging the sound system isolates the +/-12V from the rest of the game. It has been my experience that in doing this the resets stop, the game will boot, and more troubleshooting can begin with the sound system. The +/-12V system is a linear system so it is more tolerant of faults but if either rail is requiring more than the designed power output, the +5V will fail.

The warranty associated with XPin Supplies is designed to provide replacements for products with manufacturing defects. Please consider doing all due diligence in troubleshooting to the root cause of the failure. If you contact XPin tech support, [tech@xpinpinball.com](mailto:tech@xpinpinball.com), with a description of why you think the power supply needs to be replaced, we can give you a reasonable path for troubleshooting to root cause, and still provide you with a power supply, but if it fails in the same manner as the previous and it is determined that the failure is not manufacturing related, a charge will be incurred to fix the damaged board.