

# Ignitor Box – Purdue Orbital

## Project Overview

The Ignitor Box was designed to safely and reliably ignite solid rocket motors while adhering to strict safety requirements. The system ensures proper current delivery to E-matches while preventing accidental ignition during transport and setup.

## Technical Details

Electrical calculations were performed to determine safe operating currents and component ratings. A complete schematic was designed and implemented with multiple safety features, including an arm switch and physical key. Components were selected to handle currents up to 1 amp and assembled on a perfboard within a protective enclosure. The system successfully ignited four rocket motors and is currently being upgraded to include a data acquisition system.

## Images

