Motorcycle Stereo Amplifier

**Objective:** Design and manufacture a 2 channel Class D audio amplifier small enough to fit inside the front ferring of a motorcycle.

### 2 Channel Amplifier
- **Output:** 70 W/ channel x2
- **Channels:**
- **Input devices:** Radio/CD/iPod
- **Efficiency:** >90%
- **Size:** 2.5” x 5”
- **Supply Voltage:** 30 ± 10 V

### Pre-Amp
- **Gain:** 2.1

### Power Supply
- **Input:** 14 V
- **Output:** Bipolar 30 V
- **Power:** 150 W
- **Efficiency:** 80%

### Atmel Tiny461 Microcontroller
- Controls the overcurrent and overvoltage protection for the amplifier
- Handles pulse width modulation and soft start for the power supply

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