

Proposed Club Project : Design and build a Class D Audio Power Amplifier

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Proposed Project Leader

- Propose David Harrison as project leader
 - Previous experience with audio in general and recent Class D amp. Experience, in particular, over last 9 years.
 - Has stocks of surface mount parts that could reduce cost to project members.
 - Propose to act as mentor and in supervisory role only, project members must learn to do the design and production themselves.
- All project costs to be borne by project members.
- Will require project members to document project progress as PowerPoint slides throughout.

Proposed Project Tasks

- Define Scope, Purpose and End goals of the project.
- Discuss tools and skills needed to complete assembly of amplifier.
- Select Teams to tackle individual tasks.
- Define performance specifications for amplifier.
- Specify and select candidate class D amplifier chips.
- Each team to present to the project members the advantages and disadvantage of their candidate chip selections.
- Research and select circuit schematic capture CAD/PCB layout tools.
- Circuit schematic design to proceed – either by each team or as a whole project team.

Proposed Project Tasks - Continued

- Teams to present their schematic and its advantages and disadvantages + any improvements that could be made. Teams to work out cost of parts for their schematic, and use the CAD tool to produce a BOM.
- Selection of final schematic proposal by all teams.
- Teams to collaborate on PCB layout design. Some part schematic symbols and footprints may have to be designed.
- Final PCB layout to be presented to project members.

Proposed Project Tasks - Continued

- Purchase of parts and PCBs.
- Assembly of PCB by all each project member.
- Test and verification.
- Lessons learned from the project.