

An audio preamplifier**Part 2: Report****Due 11 October 5pm in the box****The Design Report.**

You must now hand in a short design report that describes your design, construction and testing. This report should be typed and be no more than 4 A4 pages in length (excluding Section 5). It should also contain the necessary circuit diagrams and other figures needed for illustration and communication of your design and your test results.

1. Introduction

A short introduction should describe the design specification that had to be met.

2. Design description

This section should include:

- A description of your design procedure and how you selected the different components (resistors and capacitors) that you used.
- Describe any trade-offs you have to make in the design process.
- A presentation of your circuit diagram and PCB layout and any comments on these as appropriate.

3. Prototyping, construction and testing.

- Describe any significant results from your breadboard prototyping.
- Describe the construction and testing of your circuit. Ensure that you clearly present all the data from tests to show how your amplifier functioned. Remember it was meant to be an audio amplifier – how well does it meet the design specifications?

4. Discussion and conclusions

Your discussion should include the following aspects:

- Any particular problems that you encountered during the design/construction/testing and how they were solved.
- Critically evaluate your design and state any way in which it can be improved or how you would do it differently next time.
- Discuss what were the aspects of the project that you most enjoyed and that you think provided the most benefit. Were there part that you least enjoyed or found difficult?

5. Additional question (Excellence).

(a) Explain the purpose of each of the capacitors you used in your circuit. How do you expect the frequency response of your amplifier to change when you change the value of each of these capacitors? Explain

(b) Discuss the difference observed between the designed Q point and the actual Q point of your circuit. What is this due to? Can you improve on your design process?

How am I going to mark your report?

Section	Total
Circuit layout	10
Construction	10
Testing Procedure	10
Report	10
Discussion	5
Questions	5
Total	50