

University of Moratuwa
Department of Electronics and Telecommunications



EN2160 – Engineering Design Realization

Conceptual Design

200356A

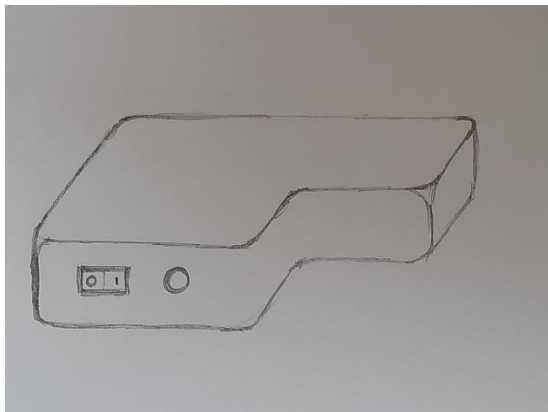
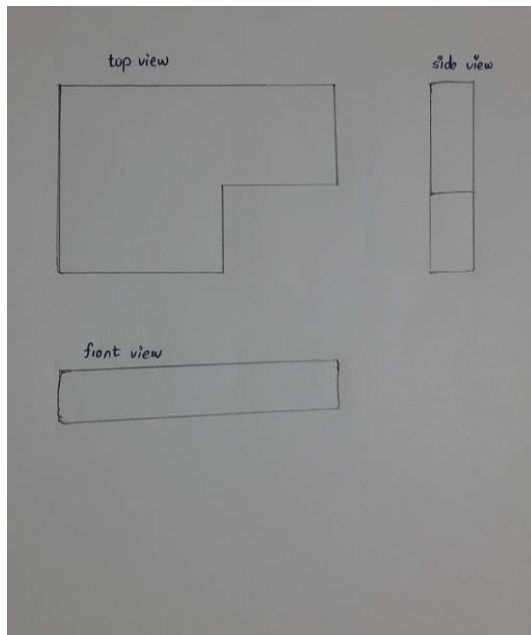
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Sketches Drawn by Group Members

Sketch 1

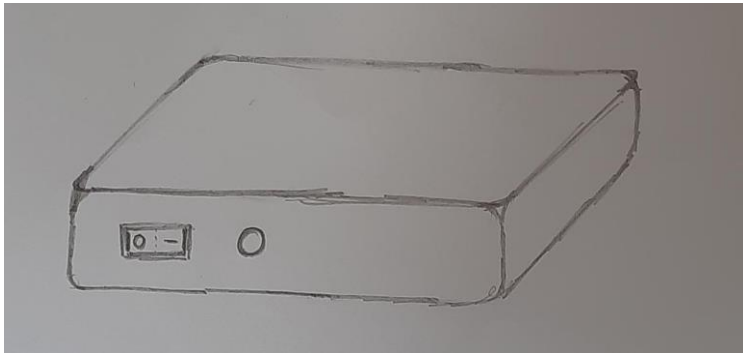
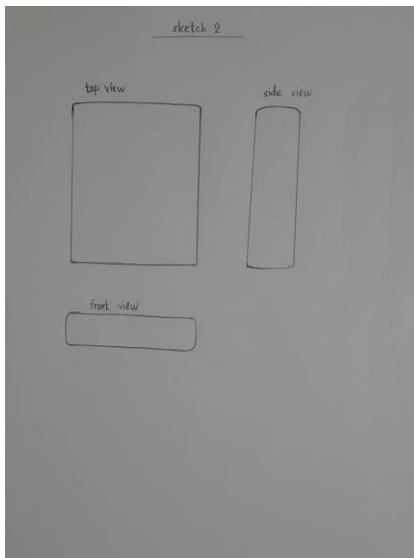
Drawn by Amarasinghe Y.E - 200029B



Block diagram is same as this is the only circuit for analog noise cancelling.

Sketch 2

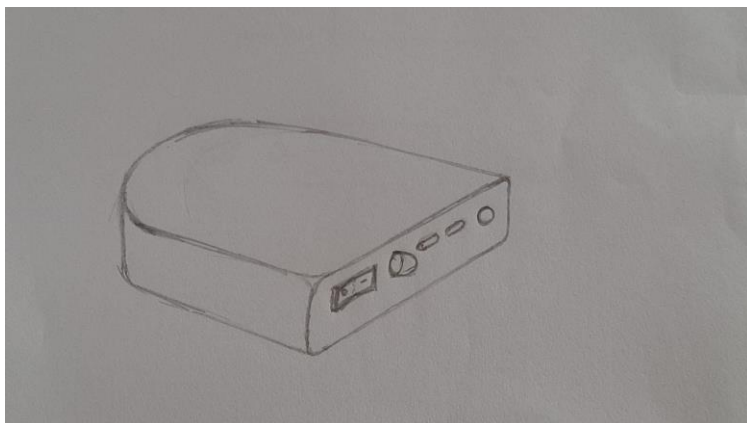
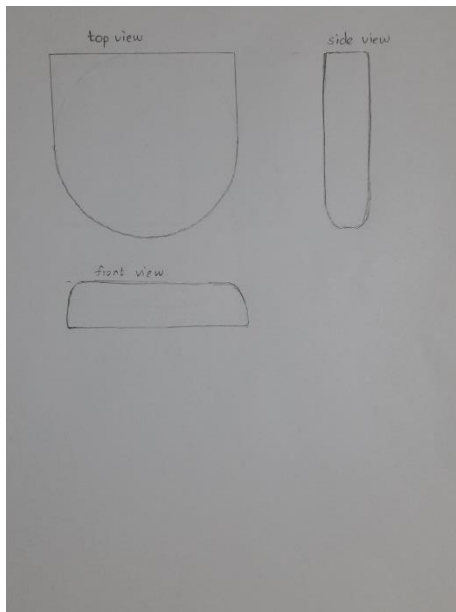
Drawn by Vishagar A - 200686J



Block diagram is same as this is the only circuit for analog noise cancelling.

Sketch 3

Drawn by Liyanage P.H.S. – 200352H

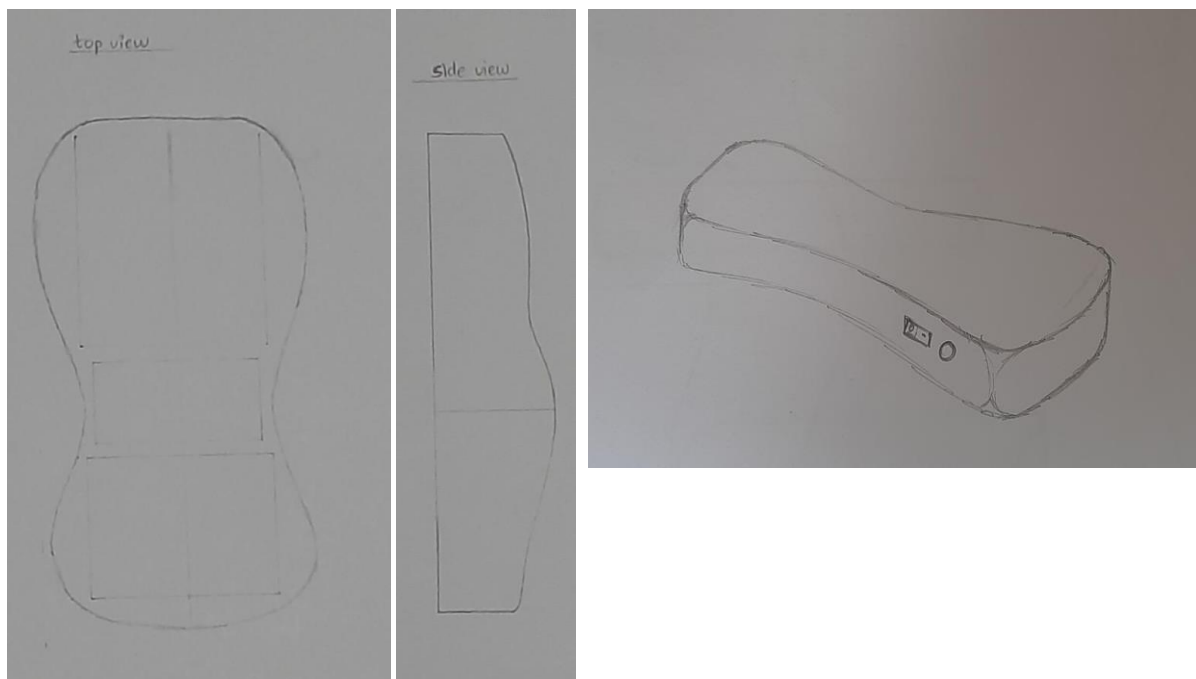


Block diagram is same as this is the only circuit for analog noise cancelling.

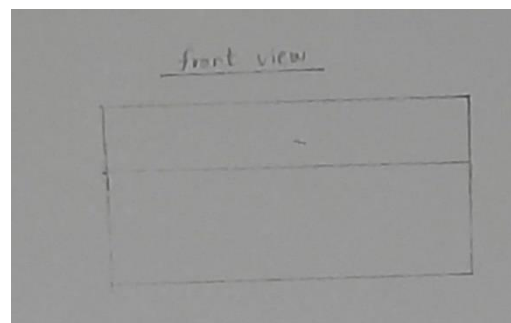
Summary of user feedback

1. The product is highly effective for users.
2. It should be little more affordable.
3. Minimum size.
4. Appearance and shape don't matter much but, it should be smaller as possible.
5. Extra feature Bluetooth.

User Feedback sketches



Sketches are drawn such that it will be more easy to use and with an attractive shape.



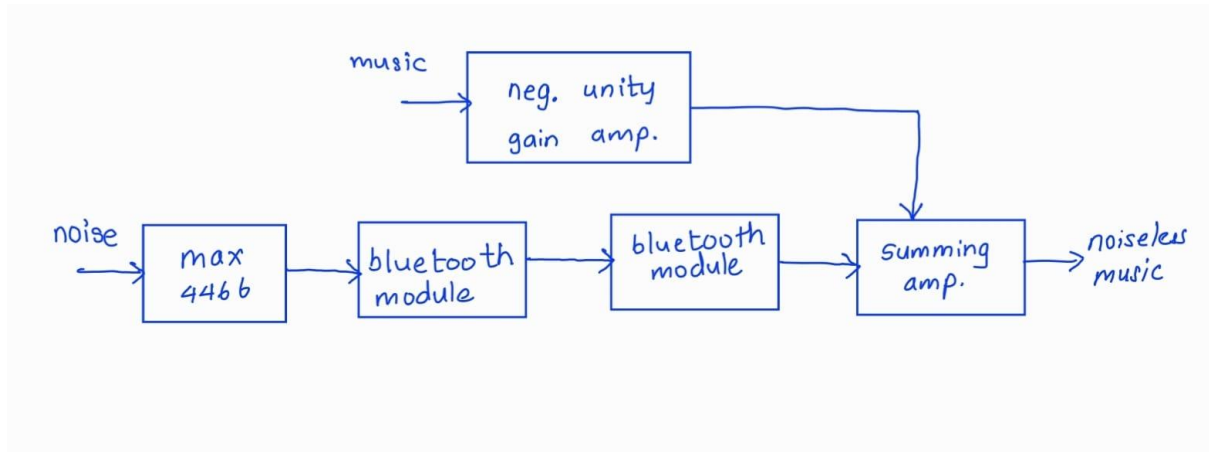
Evaluation for Sketches

Graded from 1-5, where 5 is the best.

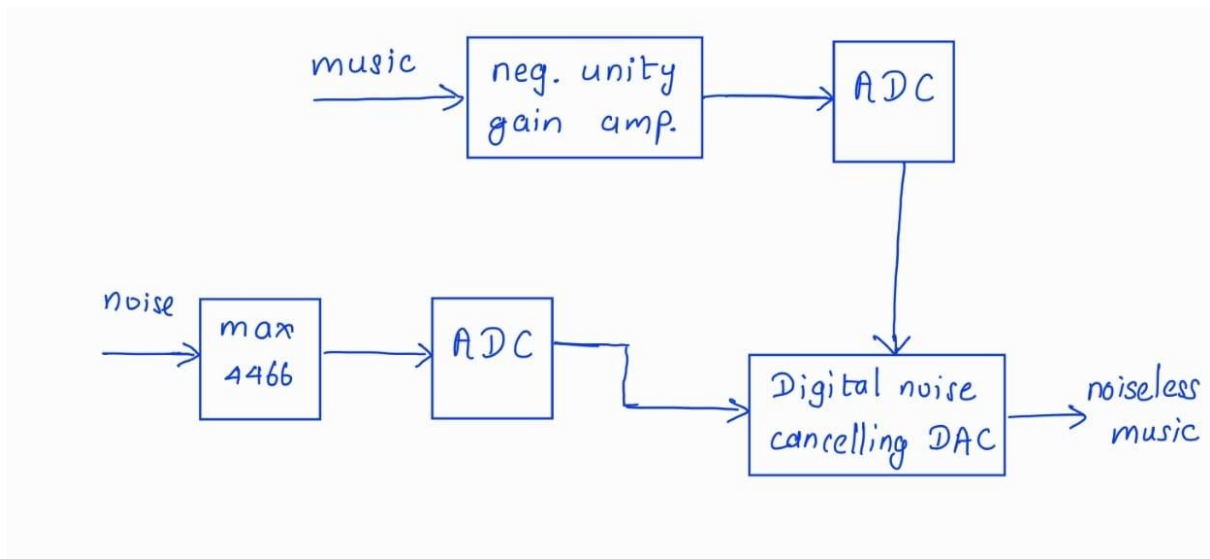
Criteria	Sketch 1	Sketch 2	Sketch 3	User
User Interface	4	4	4	5
Stability	5	5	4	5
Durability	4	5	4	5
Novelty	5	3	5	5
User friendliness	5	5	5	5
Mobility	5	5	4	5
Reliability	3	5	4	4
Cost	3	4	4	4
Maintainance	4	5	3	4
Simplicity	2	5	4	5
Weight	3	4	4	4
Attractiveness	4	2	4	5
Total	47	52	49	56

Block Diagram

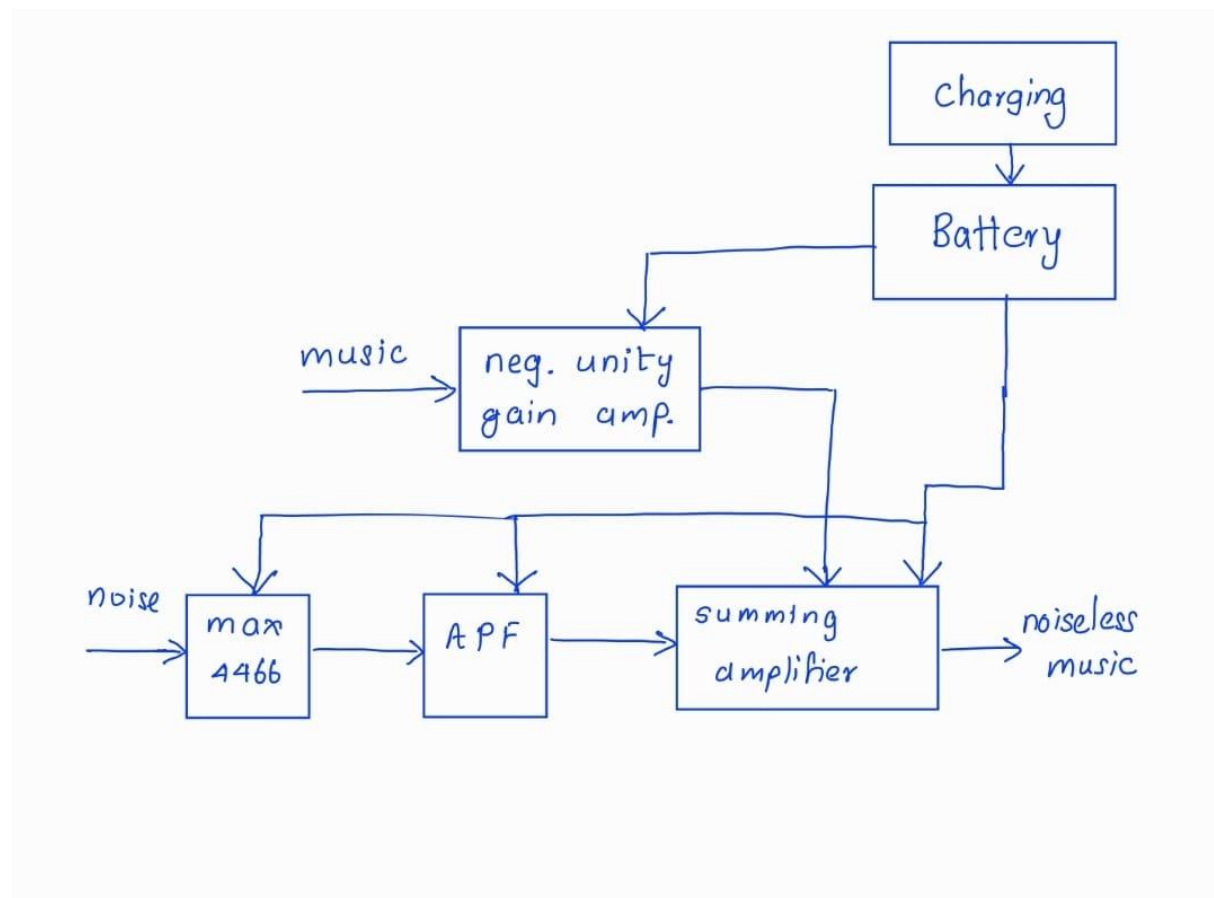
Block 1



Block 2

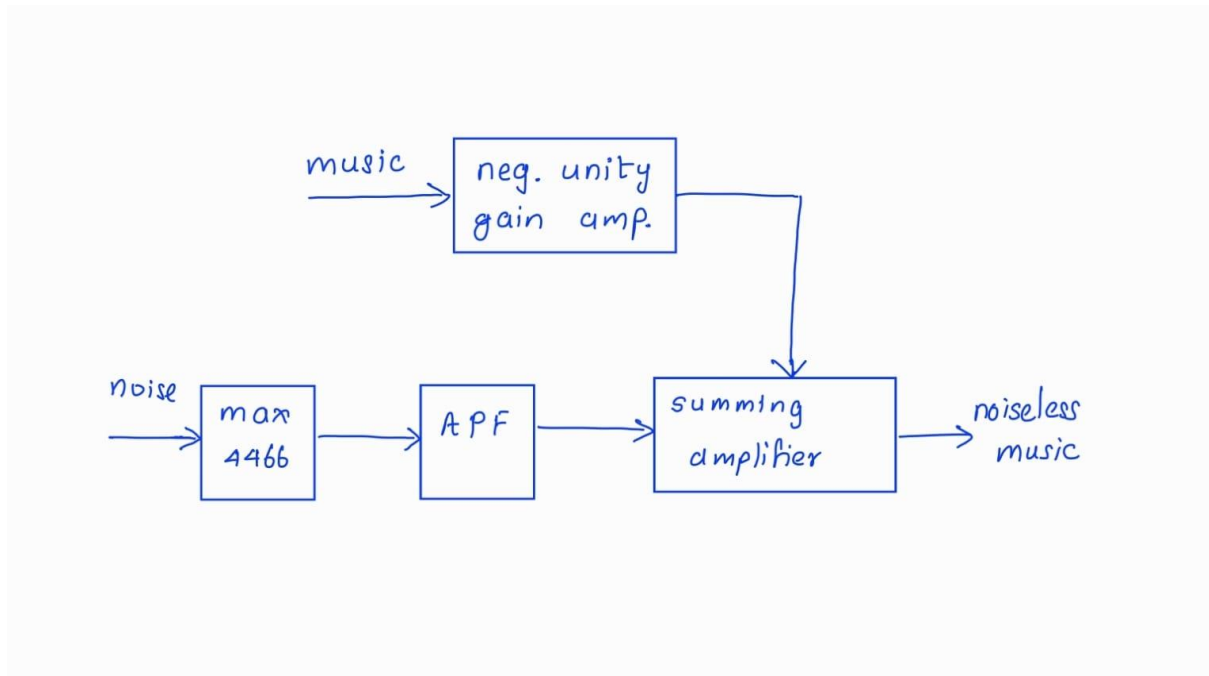


Block 3



User Feedback Block Diagram

Block diagram is same as this is the only circuit for analog noise cancelling. Therefore this is chosen.



The above block diagram is selected for the Preliminary Design.

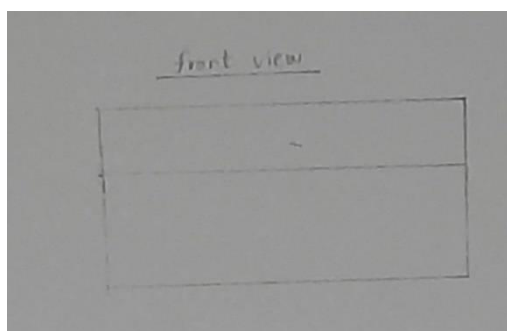
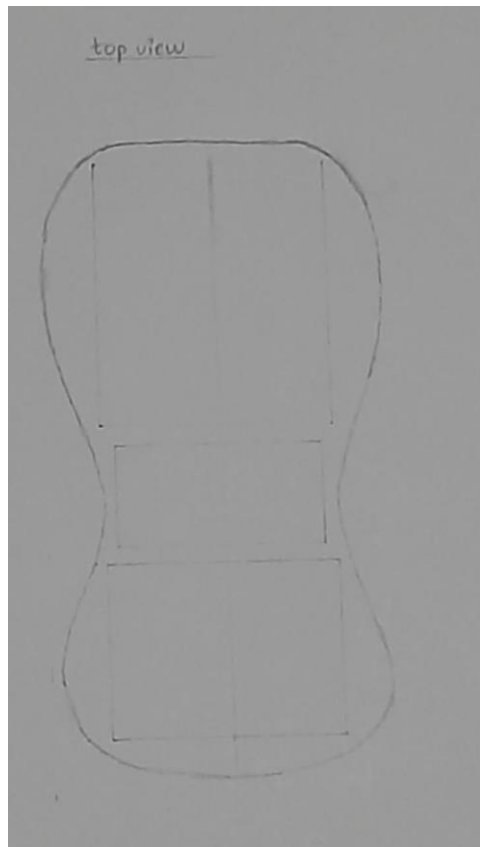
Bluetooth addition feature is discarded as this will be an analogue circuit.

Evaluation for block diagram

Graded form 1-5, where 5 is the best

Criteria	User Block Diagram	Block Diagram 1	Block Diagram 2	Block Diagram 3
Simplicity	5	3	3	4
Accuracy	2	4	3	2
User friendly	3	3	3	3
Updatability	4	1	3	4
Troubleshooting	5	2	2	5
Feasibility	5	3	1	5
Durability	5	3	3	5
Total	29	19	18	28

Selected Sketches



Selected Schematic

