



Conversion of Sound To Electrical Energy

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Introduction:

In third world countries like Tanzania, electricity has been a problem and in our environment most of energy is lost in form of sound which can be converted to electricity so as to reduce the problem of electricity in our country. Our research shows how this lost energy which is always lost can be converted into electrical energy which can be useful in our domestic areas. Our project used microphone as a transducer and other materials like amplifier, transformer and inverter. This was to enable electrical energy we get from conversion to sustain both domestic and industrial needs of electricity.



Method:

Discussion: Under this method we discussed on how to conduct the whole project. Here we identified which materials are to be used in conducting our project so as to make it possible. Also discussions were held when we encountered challenges during conducting the project.

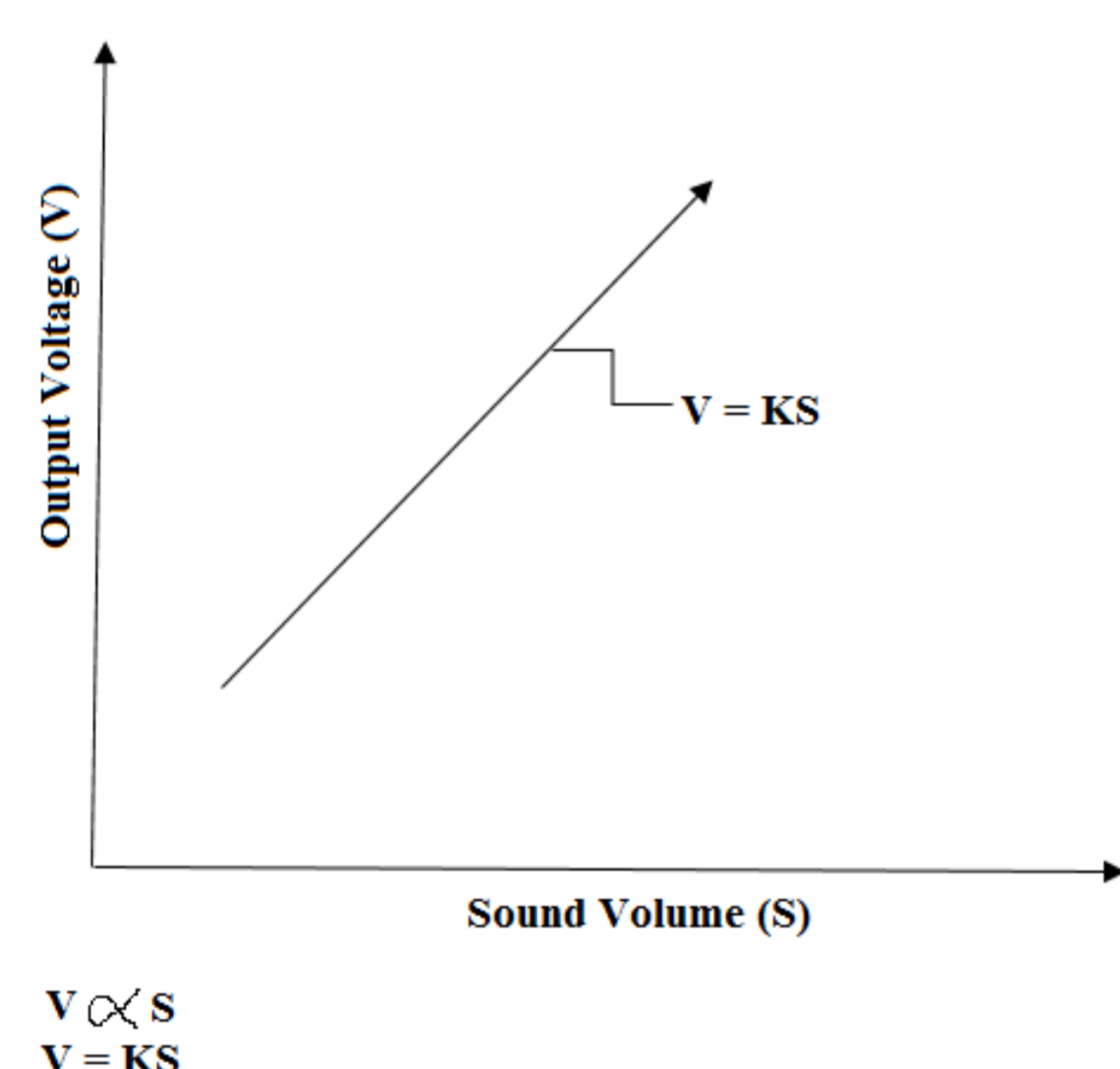
Experimentation: In our experiment we connected different materials like microphone as a transducer, amplifier, inverter and different appliances in a circuit. Also the microphone required a source of electricity for it to be able to convert sound energy to electrical energy whereby we used battery of 12 volts to produce 220 volts. Amplifier was connected so as to amplify electric current from the microphone for it to be raised by the inverter when it enters in it. Appliances were connected after the inverter so as to verify that sound energy has been converted to electricity which is useful. The appliances used were lighting bulbs, radio, television and phone chargers. In our experiment, speaking with a microphone and radio were used as a source of sound which is to be converted to electricity.



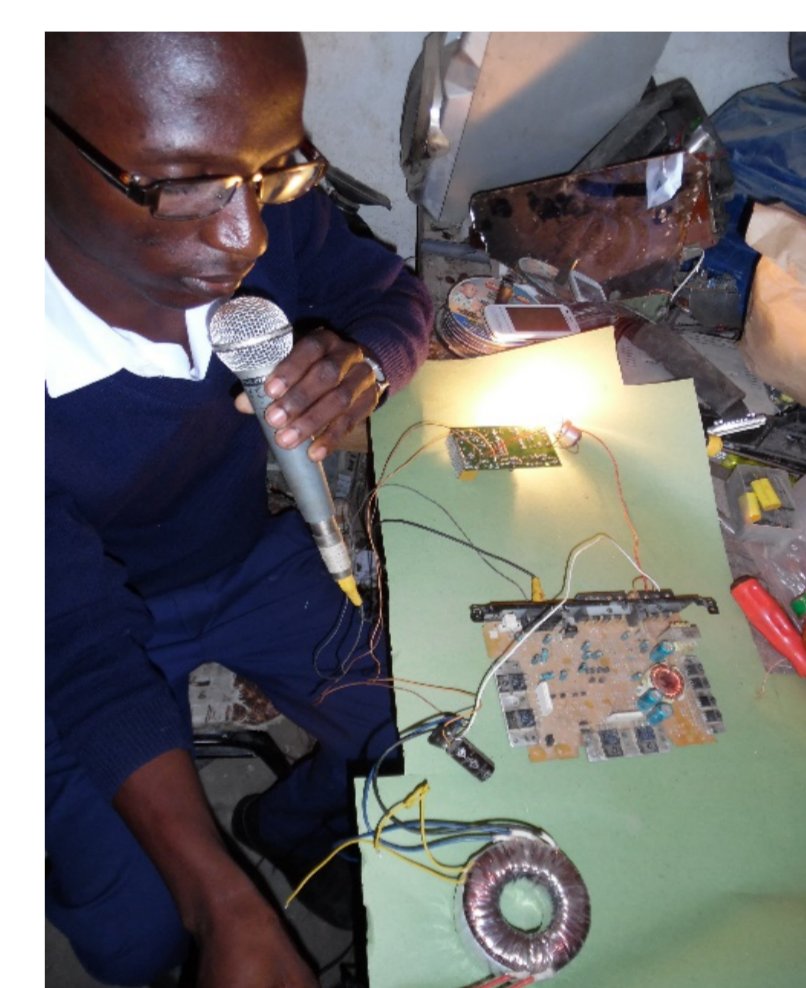
Results:

It was observed that, as volume of sound changes also affects the amount of electric current output which was measured in terms of Voltage as shown in Figure 1. The relationship between volume of sound and the output voltage is that they are directly proportional to each other. That is, when we increase the volume of sound from the radio also output voltage increase and the vice versa.

Also we observed that, the electric current obtained from the conversion can be stored for future uses and for being used in places where the project cannot be applied.



Where: V = Output voltage
S = Sound volume
K = Constant, which is a source of electricity (12V)



Conclusions

The society is going to benefit much from our project when it will be improved and applied in large scale. The electric energy obtained from this project is useful and can be used to run different appliances like electric bulbs, radio, television and other domestic appliances. Also it can be used in industries to run different machines hence can promote industrialization as one among the policies initiated by President John P. Magufuli.

References

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