



Producing Wireless Amplified Speakers

Deodatus Kessy, David Kisoka and Edward Silayo

Introduction:

The project is under the category of technology, in the part of electronics as it shows better ways of using some electronics materials. The aim is to improve the functions of some electronics materials. Where by the functions of short wave transmitter, receiver and Bluetooth device.

The books says that when you connect the transmitter you will use the microphone, no any book which we have read it has explain the use of input of the source of music (except the concept of radio station) but the Bluetooth material it is not mentioned to be used in music system (public once) and the whole system uses batteries. This project can prove to Tanzanians, that people with scientific ideas may be practiced. After we had discussed in what to do on the project we practiced and it succeeded. Therefore we advise our fellow Tanzanians that they should try to share their scientific ideas and try to implement them for this brings technological advancement. The system is simple and can help to overcome the problem of power shortage where by the system is using batteries and it can be connected to a phone in which probably is already charged thus it will enable the user to enjoy it.

Also can reduce the use of many storing devices at homes, school, colleges or working areas. whereby many people especially the people with low standard of living; they possess more than one phone memory cards in order to easing the access to music with this project one will be able to enjoy music publically without the use of wires form the phone or computer through the music system without the use of bundles of wires.



Methods:

The following materials are used in our project; short waves transmitter, short wave receiver, Bluetooth Radio and an amplifier

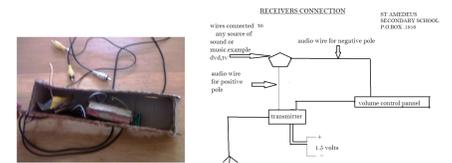
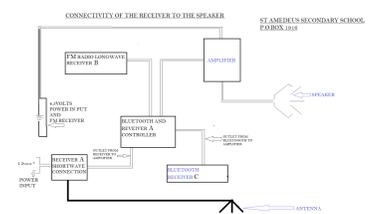
The **short wave transmitter** takes the electrical charges from source of music and then changes them into waves. The waves are transmitted wirelessly to the short wave receiver.

The **short wave receiver is** takes the waves and convert them into electric charges, and then they are sent to the radio which amplify them for the first time and then the amplified waves from the radio are sent to the amplifier.

Bluetooth receives the music information through connecting wirelessly from the phones, computers or iPods (with Bluetooth) and then turns them into electric charges and they are sent to the amplifier.

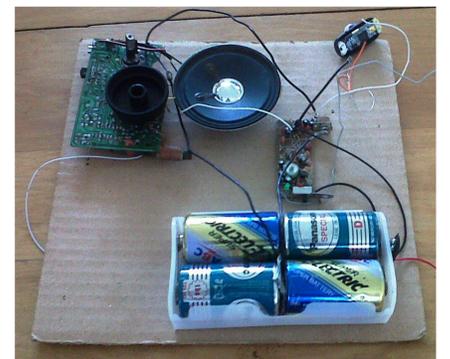
The **radio** contains two parts the receiver and the amplifier. The receiver helps to get the available radio station when needed. The amplifier of the radio takes the charges from the receiver of the radio and from the sort wave receive amplifier them and send them to the second amplifier

The **amplifier** is another device found in this system whereby it is the second amplifier mentioned. The amplifier receives the electrical charges from the radio and Bluetooth. Then make a great amplification leading to the audible sound which can be heard by several people.



Results:

Through testing constructed (assembled) materials the first experiment did not succeed. In this experiment we intended to assemble three components of the system one by one starting with the amplifier, but due to shortage of materials the aims were not reached. Instead we started second plan which we intended to assemble the manufactured goods. The available time contributed at greatly to the use of the second method. The second experiment succeeded. The short wave transmitter and receiver exchanged well the musical information for about 30 meters. Also the Bluetooth material exchanged information with different sources of music such as phones b some of the iPods (which contain Bluetooth) also some of the computers which are programed they were able to pair with the system and the system produced sound which were intended from the source of the music. Without these results we can conclude that, the project worked for almost 97%, for the aim was reached but we could not satisfy the first aim of assembling the materials ourselves (such as capacitors and resistors on the boards), but the ultimate aim was reached. Also the Bluetooth enabled us to listen the calls through the system



Conclusions:

Our hypothesis was to have the system which connects wirelessly with the Bluetooth the small shortwave transmitter and receiver plus the Bluetooth device and it worked for almost 97% as the small transmitter and receiver worked efficiently which was connected with the radio on the second part of it which it is the amplifier. The Bluetooth satisfied the hypothesis as it played music and connected during calling time, the short wave transmitter and receiver worked at the distance of 30 meters.

Our future plan is to introduce this system to the local industries so that the system can be enjoyed by the public. Also we are ready to explain how we planned and organized the system until we succeeded to the people or students who will need explanations for their own future plans. Also we will try to repeat the first experiment of assembling the internal materials of the devices by our own. Also think that by telling the ways we used to our fellow students it will encouraged them to practice their ideas which will lead to technological advancement.

References:

TIE physics form 3&4
GCSE physics by heather Kenneth (4th edition.)
A level practical physics
ABBOTT by sir John Cockcroft (3rd edition)
Physics for you by Keith and Ann Johnson
Physics for secondary school form 3 (oxford)
WED PAGES.
Www. Next . gr/uploads. Jpg
Www. Angelfire. Com/electronic / gif
Www electrochematics com/FM receiver circuit- diagram. Png
Www seekic com/ic-circuit. Jpg
Http: / usagar. Com/wp – content/uploads. Png
Www. Ask/ answer. Com
Www. howstuffworks.com.

Acknowledgements:

Mrs. Devotha Mangu, Mr. Laurence Macha, Mr.V.Mushi, School Administration for financial assistance.

Further information:

Download at: www.youngscientists.co.tz/posters