

Innovative technique to transmit music through electrical wires in buildings³²

STUDENT AWARD THIRD

Trailokya Bora (23 years), an unemployed Arts graduate, has been tinkering with electronic parts, since childhood and wants to come up with something new. With his unique ideas he has often succeeded in developing various innovations which are cheap, efficient and simple. This attitude of his has also influenced his younger brother **Champak Bora**, (20 years) a first year student of Diploma in Civil Engineering. Champak helps his brother in the practical aspects of developing the products or prototypes. Over the years the Bora brothers have acquired the skills to try out any experiment that they set their mind to. Trailokya and Champak hail from Mazgaon, in North Guwahati, Assam. They belong to a middle class family comprising their parents and two sisters.

Genesis Trailokya and his brother wanted to hear the same song at the same time. But as they were in different rooms and the deck cable was short, they couldn't shift the speakers to the other room. At this juncture they thought about transferring signals to the other room and it struck them that they could use the existing electrical wiring system. After several attempts they succeeded in transferring audio signals from one room (with a tape recorder) to another (with a speaker) on 1st January 2002. Their mother was the first to be told and later all their friends came to know. They remember everyone appreciated their innovation. The system has been incorporated in two other houses apart from their own for transmitting audio signals.

Eventually with the assistance of GIAN-NE they got an opportunity to visit and discuss the innovation in IIT -Guwahati. They confide that initially they thought of their findings as small, but after the meeting in IIT, they understood the value of their work and felt at peace with themselves.

The Innovation

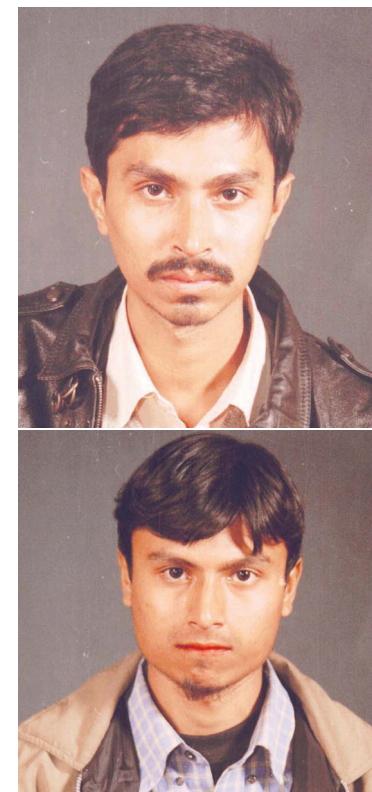
In general, the electrical wiring system in a house consists of an active, a neutral

and an earth line. Trailokya and Champak have developed an adapter through which the neutral line and earth line of a general electrical system are used to transmit audio signals within the house.

Using this technique, audio output from a tape recorder or radio is connected to a plug adapter in which the live point is disconnected. Now the audio signals are available in the neutral and earth wires. The output of the audio signals is collected through the adapter and connected to the audio output device like speakers at any other location within the house i.e., the output of the music system is inputted in the earth and neutral sockets. In whichever room one wants to hear the music, one can insert the two wires into the plug points and the speaker into the earth and neutral socket.

Advantages

The advantage of this technique is that the investment required for communication purposes will reduce drastically. The total cost for re-wiring of audio transmission is reduced and the cost of the adapter is only Rs. 15. This innovation has the potential to offer a new low cost solution to related issues in communication technology.



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