

Developing Prototype for Easy and Low-Cost Walkie Talkie for Long Range Communication

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Abstract: *The basic idea behind this prototype system project is to enhance and elevate the opportunities present in the earlier and current communication methods. This includes many things like areas where mobile towers' range is unreachable, operators are illiterate or have less technical knowledge, unable to operate complex machines or mobiles due to ageing or dementia like diseases, at the construction site use, for public servants' use, security guard's usage, confidentiality and security of transferring message is needed.*

In this prototype walkie talkie system, audio communication takes place through the wireless transceiver, accessed by the external antenna. This whole system operates with the power source and takes decision of transmission or reception of audio, with the help of Push-To-Talk (PTT) button. Microphones and Speakers are used as input and output devices respectively. Simplified design and placement of components, low-cost and lightweight are some of the special things of this system.

Keywords: Walkie Talkie, Two Way Communication, Wireless Communication, Push-To-Talk Communication, PTT Communication, Radio Communication, Full Duplex, Half Duplex, ISM Band, nRF24L01+PA+LNA, Transceiver

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