

ABSTRACT

It is known that the bomb squad is the foremost person who carries out the bomb disposal and takes a crucial role in the action, it is important for the bomb squad to communicate with people/technicians at the headquarters who understand the characteristics of the bomb to determine the proper defuse technique to minimize the risk, as far as the communication tools are widely used by tamers is HT (Handie Talkie). Along with the development of the era, the bomb squad also seems to need an increase in its communication tools, such as a more compact size, various types of communication and integrated tools. To make the communication antenna used by the bomb squad comfortable to use, a wearable antenna is needed for use by the bomb squad.

In Wearable antenna is a type of antenna that can be installed and used on any part of the body. Wearable antennas can be applied in fields such as medicine to monitor health or detect disease and in the military to communicate either with fellow soldiers or with other combat equipment such as controlling a missile with the wearable antenna on the soldier.

In order for the antenna to be comfortable to wear on the body, the antenna must be flexible. Flexible means the antenna can follow the curves of the body when used. Flexible materials can be textile or non-textile. In this Final Project, a wearable antenna design is carried out using flexible materials. The antenna is designed with a pentagonal patch microstrip type at a frequency of 5.8 GHz.

Keywords: *Wearable, Antenna, Microstrip, Defusing Unit.*