L D. COLLEGE OF ENGINEERING

ELECTRONICS & COMMUNICATIONS DEPARTMENT

Position and Health Monitoring Of Soldiers

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Abstract

In this project the exact location and health status parameter of soldiers can be sent to the base station and between a squadron in real time so that the appropriate action can be taken in case of crisis. GPS is used to log the longitude and latitude so that direction can be known easily. Here to find the health status of the soldier we are using the body temperature sensor to measure the temperature of body as well as heart beat rate to measure heart beat rate of soldier. So, by using these equipment we are trying to implement the basic life guarding system for soldiers in low cost and high reliability. So, by using these equipment we are trying to implement the basic life guarding system for soldiers in low cost and high reliability.

Features

Tools Required:

- Microcontroller (Arduino Mega)
- GPS Receiver (SR100)
- Heart Beat Sensor (Photo Transistor)
- Temperature Sensor (LM35)
- NODE MCU
- WiFi Module
- LCD Display (16 x 2)
- USB programmer

Block Diagram

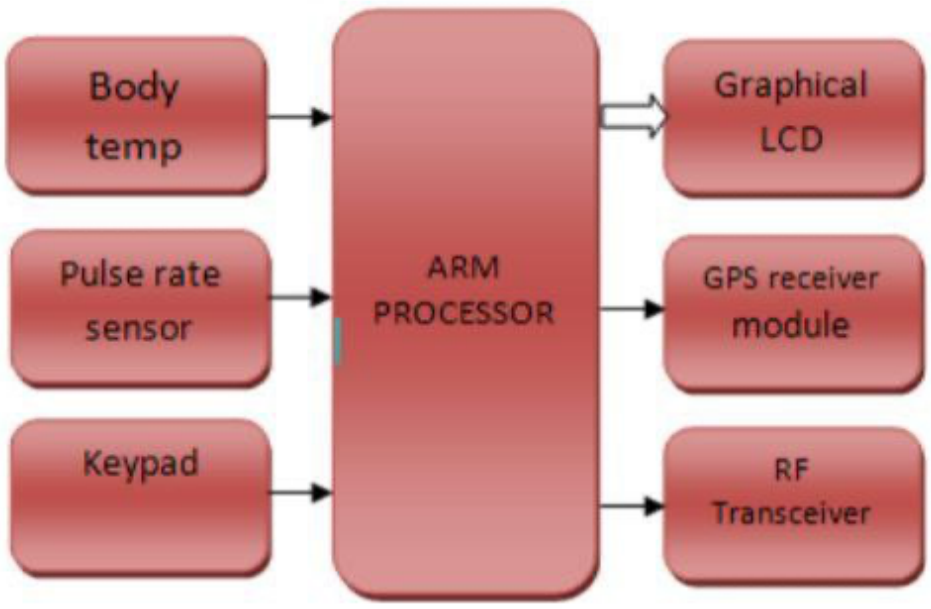


Fig (a) Soldier unit

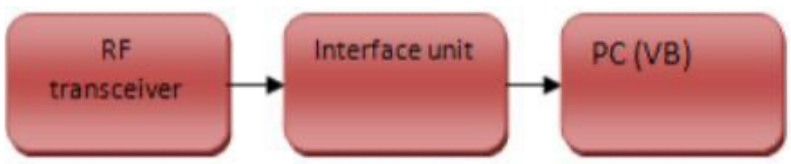
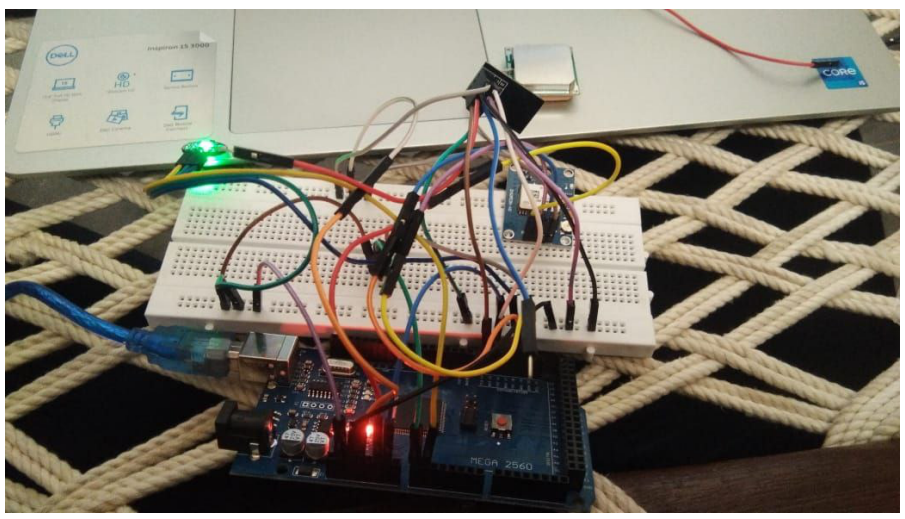


Fig (b) Base Unit

Implementation



Conclusion

Hence it can be concluded that we are able to transmit the data which is sensed from remote soldiers to the army base station by using wireless transmission technology GPS. It is completely integrated so that it is possible to track anytime from anywhere. It has real-time capability. The accuracy of the system is affected by some factors such as weather, environment around the mobile soldier unit, GPS receiver. The future works include optimizing the hardware system, choosing a suitable GPS receiver. Improving the routing algorithm can be improved by neural networks. This system has many advantages such as large capability, wide areas range, low operation costs, effective, strong expandability and easy to use.Upgrading this setup is very easy which makes it open to future requirements which also makes it more efficient.

References

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