International Journal of Computational Intelligence Research
ISSN 0973-1873 Volume 13, Number 5 (2017), pp. 1093-1095

http://www.ripublication.com

Water Quality Analysis Using Labview

Ankur Narare[1], Sneha Ghadge[2] and Mrs.V.V. Kale[3]

[1 2] Student of BE, Department of Instrumentation Engineering.
AISSMS IOIT, Pune, Maharashtra, India

[3] Assistant Professor, Department of Instrumentation Engineering,
AISSMS IOIT, Pune, Maharashtra, India

Abstract

Water pollution problems are increasing at an alarming rate all over the world. So, in order to ensure clean drinking water to the masses we have designed a system, with the help of which actions can be taken regarding cleansing of polluted water. In this system we have determined various parameters of a sample of water. The parameters include pH, temperature, colour and moisture. The data is sent to Arduino (Atmega 328). The processed values from the arduino are sent wirelessly through a Bluetooth module to a PC. This data is displayed on LabView installed on the PC.

Keywords: [Water Quality, pH Sensor, Temperature Sensor, Colour Sensor, Moisture Sensor, Arduino, Bluetooth, LabView]

INTRODUCTION

Water is very essential for survival all living organisms on our planet. In this century there were lots of inventions, developments, globalization, but in that time there were also pollutions, global warming, because of this there is very less safe drinking water for world's population. In many countries contaminated water is still being used for drinking purposes. This is due to lack of a proper water monitoring system. Water quality analysis is essential to control the physical, chemical and biological characteristics of water. It provides information about the current health of the water. Information gathered is used to show that the water requires cleansing.

WORKING

The above block diagram depicts the working to this system. In this project we are using four different sensors to analyse four parameters i.e. temperature, pH, moisture and colour of water. The data obtained from these sensors is then given to Arduino (Atmega 328). The Arduino displays this data on the LCD attached to it. Simultaneously, this same data is also transferred wirelessly through Bluetooth transmitter. At the other end the Bluetooth receiver receives the data and displays it on PC (LabView) via USB to Serial. All these sensors, LCD, Arduino and Bluetooth module are powered by a 5V DC power supply.

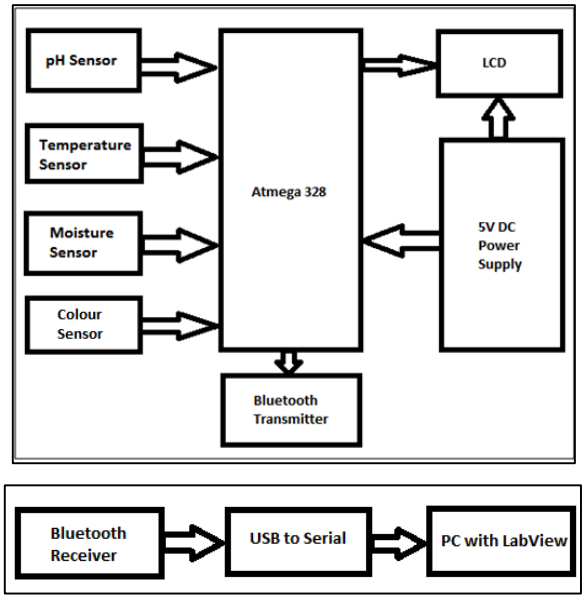

Figure 1: Block diagram of water quality monitoring system.

CONCLUSION

In this decade many inventions have been made. Due to these inventions requirement of water has increased sharply. Along with increase other problem that has showed up is pollution of water used in the industry. Therefore we have proposed a system for water quality monitoring. The main issue that has been addressed in this project is the water quality monitoring. Looking at present systems we can say that this proposed system is more efficient, accurate and easy to use.

ACKNOWLEDGEMENT

We have great pleasure in presenting our paper title, “Water quality analysis using LabView”. We would like to express our sincere and whole hearted thanks to our guide Prof. V.V. Kale, our project coordinator Prof. S.C. Rajgade and HOD Prof. H. P. Chaudhari. We are extremely obliged for his guidance received time to time during

this project. Mr. Subhash Suman who distributed with us his valuable time and knowledge and provided the guidance throughout the project work.

REFERENCES

[1] Shruti Sridharan "Water Quality Monitoring System Using Zigbee Based Wireless Sensor Network" JEST-M, Vol 3, Issue 2, July-2014, PP 51-57.

[2] 1JAYTI BHATT, 2JIGNESH PATOLIYA "IOT BASED WATER QUALITY MONITORING SYSTEM" Proceedings of 49th IRF International Conference, 21st February 2016, Pune, India, ISBN: 978-93-85973-46-8, PP 36-40.

[3] Bong-Hyun Kim1 and Sang-Young Oh2, "Implementation of Multifunction Integration Module for Water Quality Measurement" Indian Journal of Science and Technology, Vol9(41), DOI:10.17485/ijst/2016/v9i41/103951, November 2016, PP 1-8.

[4] Smita Suresh Gaulkar1, G. R. Gidveer2, "ZIGBEE BASED WATER QUALITY MONITORING SYSTEM USING SOLAR POWER" IJRET : International Journal of Research in Engineering and Technology eISSN: 2319-1163|pISSN: 2321-7308, PP 195-196.

[5] Anthony Faustine, Aloys N. Mvuma,"Ubiquitous Mobile Sensing for Water Quality Monitoring and Reporting within Lake Victoria Basin", Wireless Sensor Network, 2014, 6, 257-264, PP 258-264.