DEPARTMENT OF ELECTRICAL ENGINEERING
UNIVERSITI TEKNOLOGI MARA
CAWANGAN PULAU PINANG

FINAL REPORT OF DIPLOMA PROJECT

INFRA-RED LEVEL DETECTOR

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FARAH DIYANA BT. ZOLKAFLI   2001431375
NURUL MAFIZAH BT. MOHAMAD   2001431430

TN. HAJI ABDUL RAHIM B. AHMAD

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ABSTRACT

This Infra – red Level Detector can be suitable device for liquid level or proximity detection. The main component of this system is infra – red. It operates by detecting the distance from the target by reflection of an Infra – red beam.

It is designed for detecting the level of the liquid in the safest way. The process of the detection is allowed even though there is no contact point with the liquid itself. We also can set the device\s range to any point that we want. It starts from a couple of cm to about 50cm by means of a trimmer.

Range can vary, and it is depending on infra – red transmitting and receiving LEDs used. It is mostly affected by the color of reflecting surface. In this condition, black surfaces will give a lower greatly device's sensitivity.

This system can be used effectively at home, hostel, or even at the river bank. It will detect the level of liquid depends on the range that we have set. When the liquid reach a certain level, the system will give its signal. So, we can take a proper action by looking for its condition. It is very helpful in our daily life. We can use the system at pool. By using this system we don't need to wait and see at the water level anymore when we want to fill our pool with a desired water level.

This is system is a must at the river bank. It is very important for us to avoid a great damage which is caused by a natural disaster such as flood. By this way we can predict what will happen and be more prepare to face the flood.

As I mentioned just now, infra – red is the most important element for this system. That is why we use Infra-red LED and Infra-ed Photo Diode in this circuit. Both are placed facing the target on the same line, a couple of centimeter apart, on a short breadboard strip. Infra-red photo diode used to picks-up the infra-red beam which is generated by Infra-red LED and reflected by the surface placed in front of it.

We must avoid sun or artificial light hitting directly to Infra-red LED and Infra-red Photo Diode just to make sure that the system will run effectively. The Infra-red photo diode should be of the type incorporating and optical sunlight filter. This component appears in black plastic cases.

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