

## Non-Contact Ultrasonic Water Level Recorder

The common method of measuring flow through an open channel is to measure the height or head of the liquid as it passes over an obstruction (a flume or weir) in the channel.



Since the water level in the channel is usually measured without accuracy and the equipments used in Iran are not precise, in this study an automatic water level recorder with high accuracy was designed and constructed. The equipment is simple, light, small and inexpensive. After installing the equipment in place the water level is measured automatically by the operator decision. The ultrasonic waves are transmitted from the device to the water level and the reflected waves from the water surface are used to compute the depth, which the results are shown in the monitor placed on the device. The device is designed to show and store the data including water level depth and its fluctuations for a given period of time.

This instrument is not in contact with the surface of the liquid and is easily installed and maintained. The range of its applications can be summarized as the following:

- Non-contact discrete or continues measurement of the level, for all liquids
- Measuring the water level of drainage channels or drainage pumping pools
- Water level measurement of open channels
- Movement detecting
- Food, Chemical and pharmaceutical industry

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