Water Quality and Biological Monitoring: Biosensor

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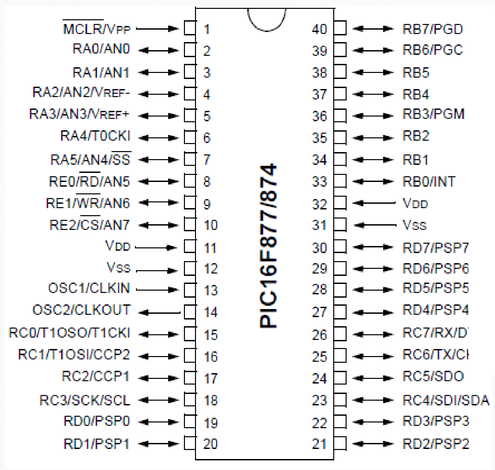
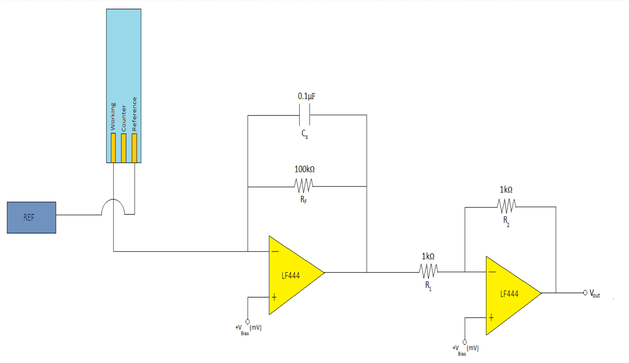
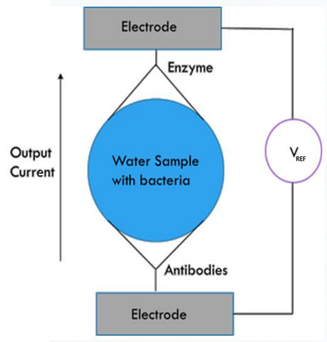


- 16x2 Serial Enabled LCD Screen w/ an embedded circuit based around a PIC16f88 microcontroller.
- Takes in an ASCII input and displays it on the screen.
- Programmed PIC 16f877 microcontroller to provide the ASCII input, depending on the voltage from the biosensor circuit
- 8-bit ADC; 255 different voltage levels
- Displays the concentration of bacteria on the screen given the voltage from the circuit.



- Converts the current signal from the biosensor strip to a voltage that varies with the bacteria concentration
- Reference IC powers the strip, thus inducing the reaction.
- Current-to-voltage converter converts biosensor current to voltage, amplifies it, and filters the signal



- How the biosensor strips work
- Output current varies with concentration

- Silicone gasket
- Waterproof battery compartment sized for two AA batteries
- Electrode changing mechanism allows for seamless transitions