

## Development of Electromyography (EMG) Signal Acquisition System by Simple Electronic Circuits

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**Abstract :** Electromyography (EMG) sensors are generally used to record the electrical activity produced by skeletal muscles. The conventional EMG sensors available in the market are expensive. This research suggests a low cost EMG sensor design which can be built with simple devices within our reach. In this research, one instrumentation amplifier, two high pass filters, two low pass filters and an inverting amplifier is connected sequentially. The output from the circuit exhibits electrical potential generated by the muscle cells when they are neurologically activated. This electromyography signal is used to control prosthetic devices, identifying neuromuscular diseases and for various other purposes.

**Keywords :** EMG, high pass filter, instrumentation amplifier, inverting amplifier, low pass filter, neuromuscular

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