HUMAN FACTORS ENGINEERING
IE 442
LABORATORY MANUAL

LAB - 4

EMG Measurement

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Objective:

The objective of this Experiment is to give you practical experience on measuring the Electromyogram (EMG).

Experiment description

This experiment measures the electrical potentials of activated muscles by attaching surface electrodes in the area of the muscles.

Safety notes

The values and diagrams obtained in this experiment have no medical significance and are not suitable for monitoring human health.

Use the ECG/EMG box only as described in the Instruction Sheet.

Equipment list

1	Sensor-CASSY	524 010
1	CASSY Lab	524 200
1	ECG/EMG box	524 049
1	Electrode gel	662 112
1	Disinfectant spray	662 113
1	PC with Windows 98/2000/XP/Vista	

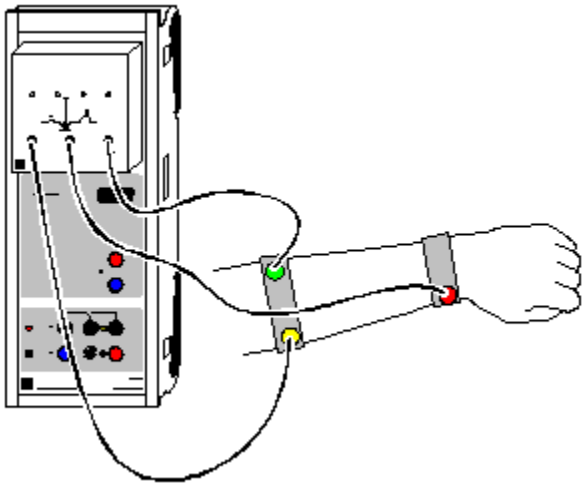

Figure 3.1 Experimental setup for measuring EMG

Experiment setup (see figure 3.1)

To record an EMG curve of the finger musculature, attach the electrodes at the beginning and end of the muscle on the underside of the forearm and the reference electrode on the opposite side of the muscle group, i.e. on the outside of the forearm. Connect the electrodes as follows:

red	start of muscle on underside of forearm
yellow	end of muscle on underside of forearm
green	reference electrode on outside of forearm

Carrying out the experiment

- Start Cassy Lab software and Load settings for EMG measurement.
- Start the measurement with **F9**.
- When recording the EMG curve, the test subject makes a fist and then opens it. This should be repeated several times.
- Stop the measurement with **F9**.