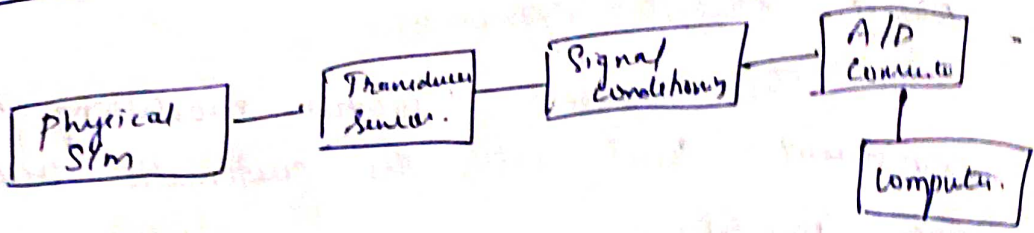


UNIT - 3

DAQ System - Data acquisition s/m.



DAQ system consists of

- * Sensor
- * DAQ measurement hardware.
- * Computer with programmable s/f.

DAQ s/m / process:

Data acquisition (DAQ) is the process of measuring an electrical or physical phenomenon, such as voltage, current, temperature, pressure or sound.

Type of data acquisition system:

- * Analog data acquisition s/m
- * Digital data acquisition s/m

Building blocks of DAQ:-

- * Transducer - It converts physical quantities into electrical signals.
- * Signal conditioner - It performs the functions like amplification and selection of desired portion of signal.

* Multiplexer - connects one of the multiple i/p @ o/p so, it act as parallel to serial converter.

* Analog to digital converter - It converts the analog i/p into its equivalent digital o/p

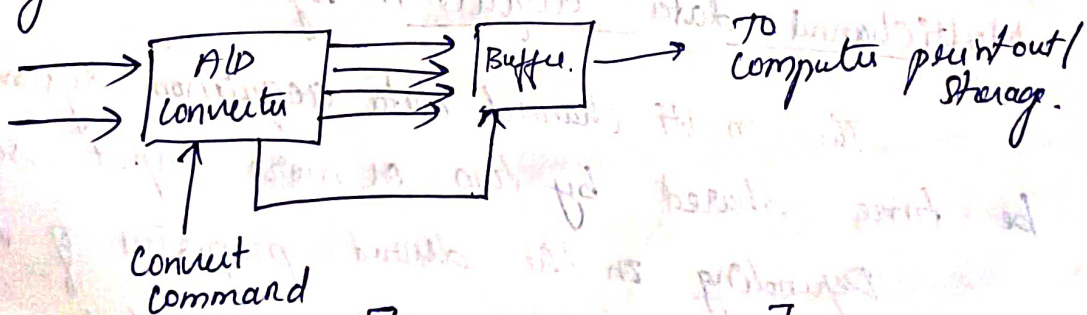
* Display device - It displays the data in digital format.

* Digital Recorder - It is used to record the data in digital format.

Single channel data acquisition system:

A single channel data acquisition system consists of a signal conditioner followed by an analog to digital (A/D) converter, performing sequential conversions at a free running, internally determined rate.

The outputs are in digital code words including over range indication, polarity information and a status output to indicate when output digits are valid.



[Single channel DAS]

The digital outputs are further fed to a