

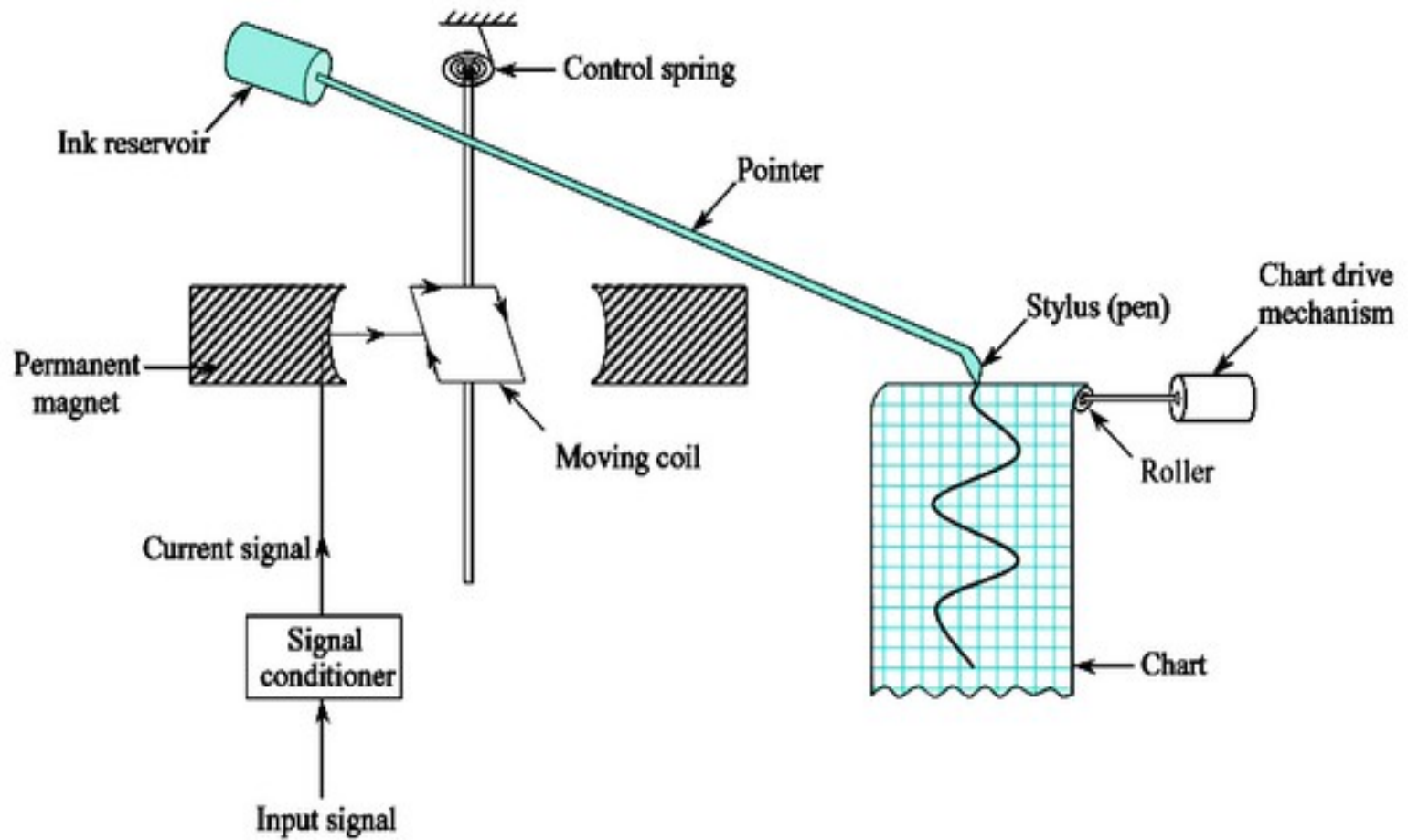


UNIT – 2

SIGNAL RECORDERS

Galvanometer Type Recorder

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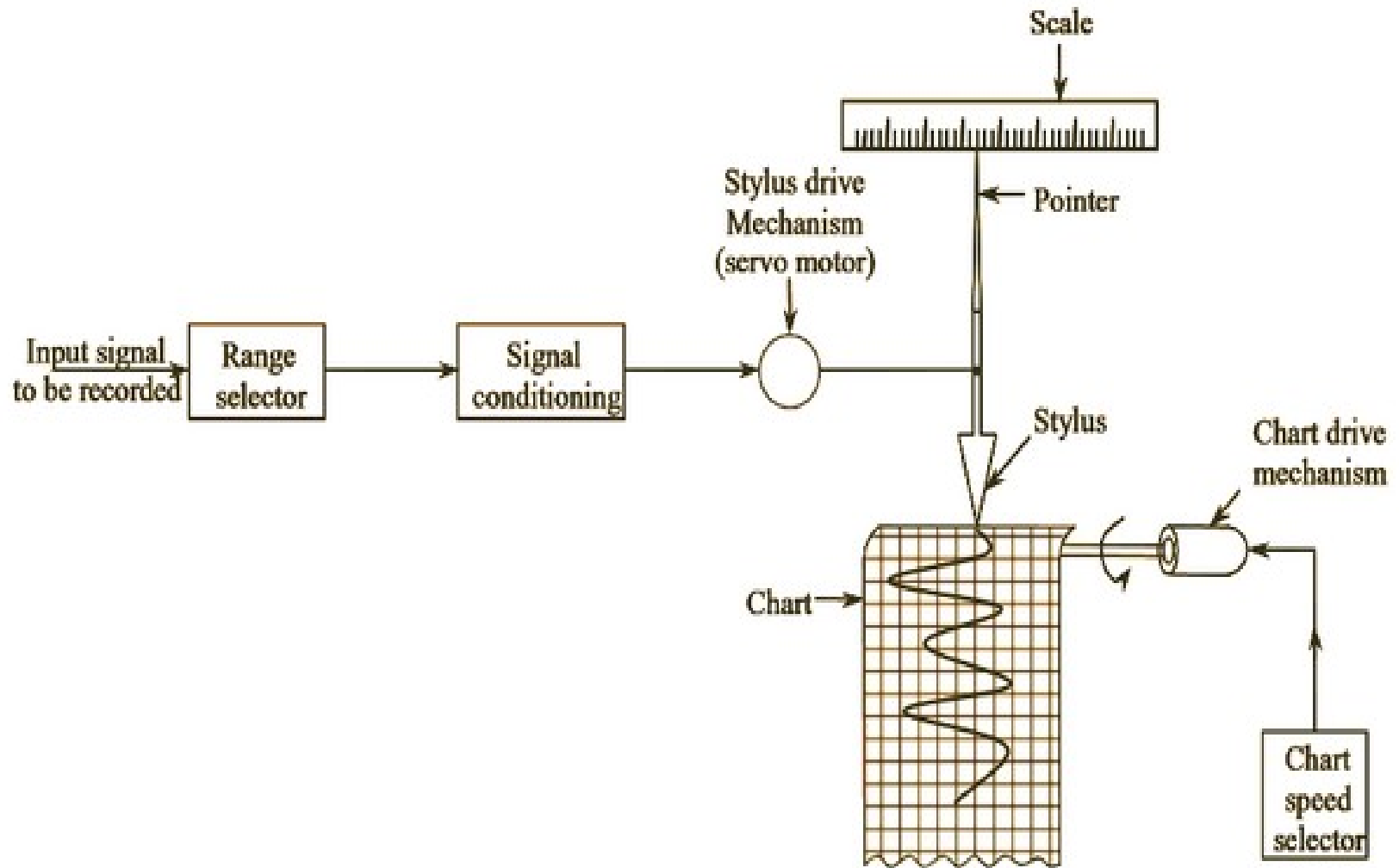
Galvanometer Type Recorder

- A galvanometer type recorder is a type of strip chart recorder and it is based on the principle of deflection i.e., the data is recorded due to deflection of pointer.
- The pointer deflects because of deflecting torque which is proportional to the magnitude of the variable being recorded.

Construction & Working

- The deflection of the pointer is directly proportional to the magnitude of the current flowing through the coil.
- The stylus is attached to the pointer of the galvanometer so that the stylus gets deflected by an equal amount and in the same direction as that of deflection of the pointer
- The ink flows from the reservoir through the tube into the pen by capillary and gravity action.
- The graph paper is moved vertically downwards from a roll of graph paper at a uniform speed with the help of a chart drive mechanism.
- Galvanometer recorders are used to record the signals of low frequency (usually, upto 100 Hz)

Strip Chart Recorder



- The speed of a movement of graph paper (chart) is selected through a speed selector which is connected to the chart drive mechanism.
- The strip chart recorder also consists of a range selector switch and a signal conditioning circuit at its input section so that the level of the input signal is within the limits acceptable by stylus drive system.
- The stylus drive mechanism is driven by a servo motor. The stylus drive mechanism moves the stylus horizontally by an amount proportional to the magnitude of the input signal.
- Simultaneously the chart driving mechanism moves the graph paper vertically at a certain speed selected through the chart speed selector.
- The graph paper is usually moved at speeds of 1-100 mm/s.

- The simultaneous movement of the stylus and chart in horizontal and vertical directions respectively traces (records) the input signal with respect to time on the graph paper.
- The strip chart recorder also uses a pointer connected to the stylus. This pointer moves over a uniformly marked scale thus displaying the instantaneous values of recorded quantity.