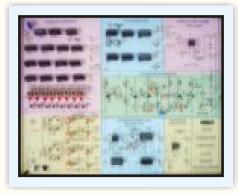# SIGMA

DETECTION OF BASEBAND SIGNAL USING MATCHED FILTER WITH NOISE

MODEL-COM120N

This trainer has been designed with a view to provide practical & experimental knowledge of detection of Baseband signal in the presence of noise.

SPECIFICATIONS

1. Power supply requirement   : 230V AC, 50 Hz.
2. Built in IC based power supply.
2. On Board Digital Data generator to generate any binary word of

    Word Length   : 8 Bits.
    Word Clock Frequency   : 10 KHz
    Data Format   : NRZ.
3. Baseband data Format   : NRZ, Bipolar NRZ, RZ, Bipolar RZ.
4. Gaussian Noise   : 0 to 1V rms variable amplitude.
5. Matched Filter   : Integrate and Dump Filter
6. Decision Threshold   : Comparator
7. Standard Accessories   : 1. A Training Manual.
                                 2. Connecting Patch cords.

EXPERIMENTS

1. To study theory of Baseband Transmission .
2. To generate NRZ, Bipolar NRZ, RZ and Bipolar NRZ signals using pulse generator.
3. To generate Gaussian and add it to baseband signal.
4. To detect baseband signal in the presence of Noise using Integrate and Dump filter and comparator.
5. To measure Signal to Noise Ratio of Baseband signal using Selective level meter or Spectrum analyser.

In keeping view of SIGMA policy of continuous development and improvement, the Specifications may be changed without prior notice or obligation.