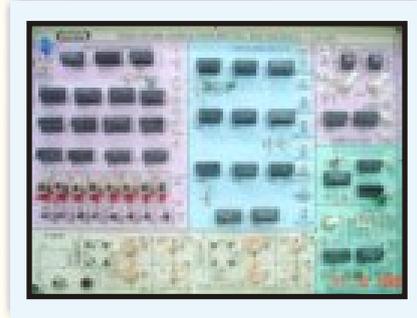# SIGMA

DIGITAL LINE CODING & DECODING TRAINER
MODEL - COM122

This trainer has been designed with a view to provide practical and experimental knowledge of the process of coding and decoding of digital data into different formats on single PCB.

SPECIFICATIONS

1. Power supply requirement : 230V AC, 50 Hz.
2. Built in IC based power supply.
3. On Board Modulating Digital Data signal generator to generate any binary input word with Bit clock & Word clock.
   Word Length : 8 Bits.
   Word Clock Frequency : 8 KHz
4. Data Format Generator :
   1. NRZ (Unipolar)
   2. NRZ M
   3. Bipolar NRZ
   4. RZ (Unipolar)
   5. Bipolar RZ
   6. Bi-Phase (Manchester)
   7. AMI (Alternate Mark Inversion)
5. Decoding Section : Comparator, Bit Clock Recovery and Bit Clock Decoder.
6. All parts are soldered on single PCB with complete circuit diagram Screen-printed in multicolor.
7. Standard Accessories :
   1. A Training Manual
   2. Connecting Patch cords.

EXPERIMENTS

1. To study theory of digital line coding and decoding.
2. To generate following different line codes and decode them.
   1. NRZ (Unipolar)
   2. NRZ-M
   3. Bipolar NRZ
   4. RZ (Unipolar)
   5. Bipolar RZ
   6. Bi-Phase (Manchester)
   7. AMI (Alternate Mark Inversion)