



Power Electronic Training Board has been designed specifically for the study of Electrical Characteristics of Uni- Junction Transistor. The UJTs are widely used for Relaxation Oscillator, waveform & pulse generators and firing circuits of SCR's and TRIAC's. This Training Board can also make use for designing firing circuits and control circuits for thyristors.

Practical experience on this board carries great educative value for Science and Engineering Students.

**Object:**

01. Study of Zener Diode as Voltage Regulator
02. Study of Static Emitter Characteristics of UJT- Unijunction Transistor on oscilloscope.
03. Study of effect of V on peak point and valley point voltage and valley point current. BB
04. Operation of UJT Relaxation Oscillator and its use as SCR trigger circuit.
05. Control of UJT trigger Pulses with shunt transistor.
06. Study of Variations in gate resistance & capacitance, resistance of source & drain and their effect on trigger pulse characteristics of UJT relaxation oscillator.
07. Various Configurations of UJT relaxation oscillator type 1(low output impedance), type 2 (moderate output impedance) and type 3 (high output impedance).

**Features:**

**The board consists of following built-in parts:**

01. An isolation transformer 230V A.C. at 100mA. This protects external instruments from damage if they are not isolated.
02. 20V D.C. at 100mA, IC Regulated Power Supply internally connected.
03. Bridge rectifier and zener regulator.
04. Potentiometer for frequency control.
05. Two band switches for selecting different value of resistance and capacitance.
06. Pulse transformer 1:1:1.
07. UJT 2N 2646 under experiment.
08. Adequate no. of other Electronic Components.
09. Mains ON/OFF switch, Fuse and Jewel light.
- \* The unit is operative on 230V  $\pm$ 10% at 50Hz A.C. Mains.
- \* Adequate no. of patch cords stackable 4 mm spring loaded plug length 1/2 metre.
- \* Good Quality, reliable terminal/sockets are provided at appropriate places on panel for connections/observation of waveforms.
- \* Strongly supported by detailed Operating Instructions, giving details of Object, Theory, Design procedures, Report Suggestions and Book References.

**Other Apparatus Required:**

- \* Digital Multimeter 3 3/4 digit - Order Code 16901
- \* 0-30V, 1Amp IC Regulated Power Supply
- \* Dual Trace Cathode Ray Oscilloscope 20 MHz (Unearthed)
- \* Variac, 0-230V A.C. @ 2Amp

Note: Specifications are subject to change.

**Tesca Technologies Pvt. Ltd.**

305, Taru Chhaya Nagar, Tonk Road, Jaipur-302029, India  
Tel: +91-141-2724326, Mob: +91-9413330765  
Email: info@tesca.in, tesca.technologies@gmail.com  
Website: www.tesca.in

