

.....a total solution for Educational Lab Trainers

# KVT-10 UPS TRAINER



KVT-10 trainer is a very versatile training system, has been designed to explain a switching based Uninterrupted Power Supply. The product is designed keeping in mind that a student can understand each block of KUP-01 in a very easy way. Various test points have been provided so that one can check inputs and outputs of each block contained. Being different from a conventional block diagram internal structure of blocks is also shown. Automatic Voltage Regulator is presented in such a way that a student can readily understand its functioning and pin configuration. Test points allow the analysis and monitoring of the signals in different sections. By using the fault simulation method, it is possible to introduce the most common breakdown and their rectification.

## **Specifications**

AC Input: 190 to 260 V 10%, 50 Hz

Load Output: 230 V / 2.5A

Transformer Used
Input: 12-0-12 V

- Outputs: 0, 190, 220, 240, 260 V

- Battery charging: 0-18 V

 IC SG3524 PWM IC used for PWM Switching

- 4nos of IRF3205 MOSFET for Switching
- 12V DC Battery
- All interconnections are made using 2mm banana Patch cords.

- Test points are provided to analyze signals at various points.
- 5 no's of Fault Switches Provided
- All ICS are mounted on IC Sockets.
- Bare board Tested Glass Epoxy SMOBC PCB with Block Diagram.
- Attractive ABS Plastic Enclosure
- User Manual for Experiments

## **Experiments**

- Study of PWM Technology
- To understand the overall functioning of UPS Trainer
- Study of AVR transformer section of UPS
- To study the UPS circuit in load condition
- To identify different faults and to study the troubleshooting in UPS circuit.

Note: Specifications can be altered without notice in our constant efforts for improvement.



....a total solution for Educational Lab Trainers

# **KUP-02 INVERTER TRAINER BOARD**



KUP-02 trainer is a very versatile training system, has been designed to explain a switching based inverter Power Supply. The product is designed keeping in mind that a student can understand each block of KUP-02 in a very easy way. Various test points have been provided so that one can check inputs and outputs of each block contained. Being different from a conventional block diagram internal structure of blocks is also shown. Automatic Voltage Regulator is presented in such a way that a student can readily understand its functioning and pin configuration. Test points allow the analysis and monitoring of the signals in different sections. By using the fault simulation method, it is possible to introduce the most common breakdown and their rectification.

## **Specifications**

AC Input: 190 to 260 V 10%, 50 Hz

Load Output: 220 V / 2.5A

Transformer Used
Input: 12-0-12 V

- Outputs: 0, 190, 220, 240, 260 V

- Battery charging: 0-18 V

 IC SG3524 PWM IC used for PWM Switching

- 4nos of IRF3205 MOSFET for Switching
- 12V DC Battery
- All interconnections are made using 2mm banana Patch cords.

- Test points are provided to analyze signals at various points.
- 5 no's of Fault Switches Provided
- · All ICS are mounted on IC Sockets.
- Bare board Tested Glass Epoxy SMOBC PCB with Block Diagram.
- Attractive ABS Plastic Enclosure
- User Manual for Experiments

## **Experiments**

- Study of PWM Technology
- To understand the overall functioning of Inverter Trainer
- Study of AVR transformer section of Inverter.
- To study the Inverter circuit in load condition
- To identify different faults and to study the troubleshooting in Inverter circuit.

Note: Specifications can be altered without notice in our constant efforts for improvement.