

2 DAYS
Program

**REGISTER 3 PAX,
FREE 1 SEAT**

Electronic Equipment Problems Identification Testing And Faulty Board Verification

Date : 23 & 24 Nov 2026 (Mon & Tue)

**Venue : Dorsett Grand Subang Hotel,
Selangor**

Learning Outcomes

By the end of this training, participants will be able to:

- Illustrate the basic block diagram, operation principles, and circuit functions of electronic equipment
- Construct and apply troubleshooting, testing, and verification techniques for faulty electronic boards
- Test and verify electronic components and parts assemblies effectively
- Measure and compare signal characteristics (voltage, frequency, waveform) using digital multi-meters and scope meters
- Summarize common problems and symptoms in the Power Section, Control Section, and Output Section of electronic equipment

Module Coverage

- **Basic block diagrams and circuit functions** of electronic equipment
- **Identification of common problems and symptoms** across equipment sections
- **Safety protocols and best practices** during troubleshooting and testing
- **Application of digital multi-meters and scope meters** for measurement and verification
- **Testing and verification of power supply boards and controller boards**
- **Testing and verification of parts assemblies** (heater, motor, relay, etc.)
- **PCB Repair and Fault Verification – DC Motor Controller**
- **Electronic component and IC testing techniques**



**100% HRDC
CLAIMABLE**

CONTACT US



brenda@otc.com.my



017-588 9135

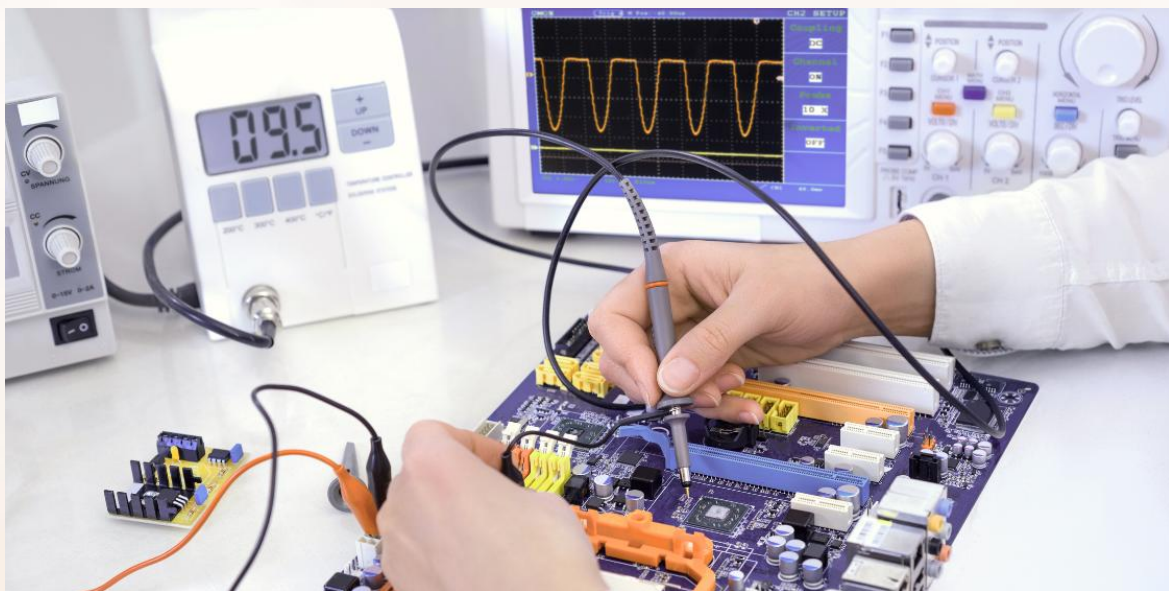


www.otc.com.my

COURSE OVERVIEW

Most modern equipment relies on electronic components and circuit board assemblies essential for system operation. After 2–5 years of usage, these systems commonly experience performance issues caused by faulty parts on boards such as power supply boards, charger boards, main boards, controller boards, and display boards. To ensure reliable maintenance, engineers and technicians must be equipped with the knowledge and hands-on skills required for troubleshooting, identifying, testing, and verifying faulty electronic boards.

In line with our vision to develop strong local expertise in electronic equipment troubleshooting and verification, this 2 days training module - **Electronic Equipment Problems Identification, Testing and Faulty Board Verification** is designed to enhance participants' knowledge, diagnostic capability, and technical proficiency in board-level fault identification and verification.



COURSE CONTENT

1. Introduction to Electronic Equipment Problems , Identification Testing and Faulty board verification.

2. Theory

Electronic Equipment basic block diagram & common assembly parts

- a) Equipment Basic Components
- b) Equipment Basic Block Diagram
- c) Circuit / Assembly Function

3. Practical Session 1

Generates Electronic Equipment Block Diagram

4. Practical /Quiz Session 2

Common problems and symptoms-Input Section

- a) Power Section
 - Switch mode Power Supply
 - Battery Assembly / Charging Circuit

5. Safety Info

Protocols and safety guide for PCB/Equipment Testing

6. Practical Session 3

PCB Testing and Verification Technique

- a) Switching Mode Power Supply

7. Practical / Quiz Session 4

Common problems and symptoms- Control Section

- a) Main Controller
 - Basic Microcontroller Unit

8. Practical Session 5

PCB Testing and Verification Technique

- a) Basic Microcontroller using PIC Software
 - Good software data

9. Practical / Quiz Session 6

Common problems and symptoms- Control Section

- a) Interface Controller / Driver
 - Display Controller / LCD Inverter
 - DC Motor Controller / Driver Unit
 - Heater Controller / Driver

COURSE CONTENT

10. Practical / Quiz Session 7

Common problems and symptoms- Output Section

- a) Output Device
 - Heater Assembly
 - AC Motor Assembly
 - Display Unit
 - DC Motor Assembly

11. Practical Session 8

Assembly part Testing and Verification Technique

- a) AC Filter / Solid State Relay
- b) AC Motor / DC Motor
- c) Heater Assembly

12. Practical Session 9

PCB Repair Technique - DC Motor Driver

- a) PCB Assembly Layout
- b) Part Pin Configuration
- c) Short Open Test
- d) Voltage Bias Test

13. Practical Session 10

Electronic Component Testing & Verification Technique

- a) Fusible parts / Passive Component
- b) Diode Family / Transistor

14. Practical Session 11

IC Digital & Analog Testing & Verification Technique

- a) 74 Family
- b) CD Family
- c) IC Processor
- d) IC PWM
- e) IC Comparator

15. Practical Session 12

Summary of electronic equipment problems and faulty board verification.

16. References