

Course Syllabus RailNet AEI Maintenance Training Outline Basic Training Certification

Course Prerequisites

- Electronic Technician with good understanding of personal computers
- Course limited to 8 Students

Customer Supplied items required for training course

- Notebook Computer with serial port (or USB adapter), modem, and wired LAN or Wi-Fi for each student.
- DB 9F to DB 25M RS232 Cable with Null Modem Adapter
- CAT5 cross-over cable
- Communications Software (ProComm, TeraTerm, HyperTerminal, etc.)
- Conference/Class Room
- VGA Projector
- White Board
- APU 102 (s)
- 24 VDC Power Supply
- Student Transportation between Classroom and AEI Site Location.
- On-track safety protection as needed.
- Translator (as required)

Classroom

- Orientation
- Distribute Handouts
- Discuss class objectives
- Brief history of Automatic Equipment Identifications systems.

On – Site and Classroom

While on site students will learn about the Operation, Function, Setup, Mounting, Testing, Installation, Optimization and Maintenance of the following system components;

Antennas

- Explanation of different types used.
- Check Tag

Wheel Detectors

- Types used.

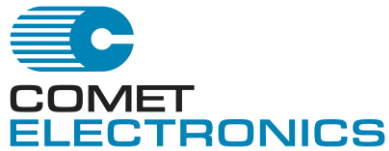
TDA-x05 Wheel detector interface

External Presence System

- Purpose.
- Types used

Lightning Protection Panel

- Types used



RFID

- Standard
- SmartPass
- MPRX

Batteries and Charger

DC Power Distribution

- LVD2000

AC Power Fail Transformer

APU-102 Auxiliary Processor Unit

Internal components;

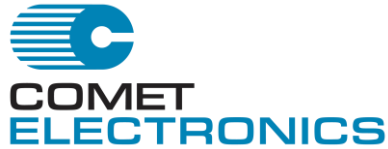
- Power supply
- Front panel board
- Motherboard
- AI1200 Reader Logic Board
- CPU
 - 486SLC CPU Board
 - Pentium
 - LX-800
- TDA-104 wheel detector interface
- TDA-204 wheel detector interface
- DT4070 Series Modems
- 4 port expansion
 - COM4 Board 4 Port Serial Board
 - COM4N (shared interrupt for network hardware)
 - LX-COM
- Solid State Disk
 - USSD Card
 - PSSD
 - DOC (Disk On Chip)
 - Compact Flash

Cellular Interface (if applicable)

- Antenna and Mast
- Wiring
- Setup and Test
- Programming

Solar Power System (if applicable)

- Solar Panels
- Low voltage cut-out Relay



Classroom

Overview of APU-102 Software

- 4.25 (DOS version)
- TC4.23, DOS/TCPIP version (CN only)
- 5.0+ (Embedded XP version)
- Acquisition
- Post Processing
- "Fixup"
- Reporting
- Overview of Self Diagnostics
- Overview of "Confidence" logic
- Parameters

Overview of Fail-safe recovery software

- MRS (Mini Remote Support) if applicable.
- ROMSHELL
- NetMRS
- Parameter backup/restore/recovery
- System image backup/restore/recovery

APU-102 Main and System Menus

Overview of key menu functions to aid in maintenance and diagnostics

Lab sessions:

- Laptop Connections and Setup
- Communications Software Setup
- Connecting Laptop to APU-102 via Local Port
- Connecting Remotely to APU-102 using dial-up modem
- Connecting to APU-102 using telnet