

MOBILE ELECTRONICS TECHNICIAN/1 (180 Hours)

Course No.: 79-35-80

COMPETENCY CHECKLIST

Student Name _____

Teacher Name _____ School Site _____

Start Date _____ Completion Date _____ Certificate Date _____

Teacher Signature _____ Student Signature _____

(Signatures verify completion of course competencies)

A. **ORIENTATION** (2 hrs)

- _____ 1. Describe class procedures
- _____ 2. Describe class policies

B. **SAFETY** (10 hrs)

- _____ 1. Describe safety procedures
- _____ 2. Pass safety test with 100% accuracy
- _____ 3. Proper safety techniques for power tools
- _____ 4. Proper safety techniques for hand tools
- _____ 5. Proper safety techniques for equipment
- _____ 6. Demonstrate care in handling of vehicles
- _____ 7. Explain the danger of wet cell batteries
- _____ 8. Demo working in an engine compartment

C. **TOOLS** (10 hrs)

- _____ 1. Identify various hand tools
- _____ 2. Identify various power tools
- _____ 3. Describe use of hand tools
- _____ 4. Describe use of power tools
- _____ 5. Discuss student's responsibility for tools

D. **ELECTRONIC PRINCIPLES** (55 hrs)

- _____ 1. Define Ohm's Law
- _____ 2. Calculate Ohm's Law equations
- _____ 3. Describe series circuit
- _____ 4. Describe parallel circuit
- _____ 5. Describe series/parallel circuit
- _____ 6. Identify electronic components and symbols
- _____ 7. Describe resistors, capacitors, & inductors
- _____ 8. Demo use of schematics
- _____ 9. Describe direct current (DC)
- _____ 10. Describe alternating current (AC)
- _____ 11. Describe application for alternating current
- _____ 12. Describe applications for direct current
- _____ 13. Identify power supplies

- _____ 14. Analyze problems in basic electronics

E. **TEST EQUIPMENT** (20 hrs)

- _____ 1. Determine proper equipment for specific jobs
- _____ 2. Identify multimeter's function & range of use
- _____ 3. Measure unknown voltages with a multimeter
- _____ 4. Measure resistance with a multimeter
- _____ 5. Measure current with a multimeter
- _____ 6. Demo proper data recording
- _____ 7. Demo ability to use oscilloscope properly
- _____ 8. Demo ability to use signal generator properly
- _____ 9. Demo proper use of battery load tester
- _____ 10. Diagnose and solve problems as listed

F. **BASIC AUTO MECHANICS** (30 hrs)

- _____ 1. Basic mechanics related to installation/repair
- _____ 2. Modify mechanical components for application
- _____ 3. Design special plans for installation
- _____ 4. Describe safety procedures
- _____ 5. Complete check-out sheet for auto at intake
- _____ 6. Locate proper installation locations
- _____ 7. Demo use of various types of equipment
- _____ 8. Perform correct procedures for re-installation
- _____ 9. Install a component
- _____ 10. Check for proper installation of component
- _____ 11. Use check-out sheet for review/ID damage

G. **CAR AUDIO AND VIDEO** (40 hrs)

- _____ 1. Theory of car audio and video systems
- _____ 2. Terminology of car audio and video systems
- _____ 3. Principles of amplitude modulation (AM)
- _____ 4. Principles of frequency modulations (FM)
- _____ 5. How to design audio and video systems
- _____ 6. Describe vehicle tear-down/reassembly
- _____ 7. Determine location of equipment

- _____ 8. Determine dimensions of components
- _____ 9. Proper application of components
- _____ 10. Install various audio/video components
- _____ 11. Describe engine interference
- _____ 12. Correct use of noise suppression devices
- _____ 13. Describe audio amplifiers and equalizers
- _____ 14. Evaluate types of amplifiers and equalizers
- _____ 15. Proper audio components for installation
- _____ 16. Describe car audio specifications

H. ANTENNAS (10 hrs)

- _____ 1. Various types of mobile antennas
- _____ 2. Differentiate among types of antennas
- _____ 3. Application of listed types of antennas
- _____ 4. Describe antenna installations
- _____ 5. Determine proper antenna locations
- _____ 6. Install an antenna
- _____ 7. Calibrate special application antennas

I. EMPLOYABILITY SKILLS (3 hrs)

- _____ 1. Describe employment requirements
- _____ 2. Apply learned skills when seeking job
- _____ 3. Design a resume
- _____ 4. Explain job specifics
- _____ 5. Discuss qualifications
- _____ 6. Formulate plan for seeking employment
- _____ 7. Identify potential employers
- _____ 8. Customer service to build business