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MECP Advanced Certification Exam Contents

All MECP exams require a passing score of 70% or greater IN EACH SECTION of the exam to successfully pass the whole exam. One failed section will result in a failed exam. All MECP exams have a time limit of three hours.

ADVANCED INSTALLATION TECHNICIAN CERTIFICATION – Min. one year of work experience

The Advanced Installation Technician Certification exam contains 200 questions and is broken down into five sections. Each of the five sections contains questions specific to the corresponding chapter of the study guide in addition to other related “experienced based” questions in that topic. Each section contains various questions covering the general range of topics indicated below. There is an “on screen” calculator provided for any mathematical computation.

Advanced Electronics and Vehicle Electrical Systems (45 Questions)

- 1) Ohm’s Law** (21% of Section 1) – These questions require the actual knowledge and understanding of Ohm's Law, Watt's Law, electrical circuit elements (voltage, current, resistance, coulombs, electrons, etc.) and the math involved to solve a specific problem or determine an unknown value
- 2) Electronic Components** (33% of Section 1) – These questions deal with the physical electronic components such as resistors, capacitors, relays, diodes, transistors, batteries, fuses, power wire, etc. The section also covers related units of measure such as Ohms, Farads, Henries, CCA, Ah, power handling, etc. that are part of the component itself
- 3) Measurements and Applications** (46% of Section 1) – These questions relate to situations where knowledge of learned/applied vehicle electrical system principles is tested. The section can include units of measure such as volts, amperes, watts, ohms and how it applies to the given expectation or outcome such as audio system design, functioning alternators, adding batteries, connecting to a data bus, etc.

Advanced Installation Knowledge & Technique (45 Questions)

- 4) Components Applications and Usage** (11% of Section 2) – These questions pertain to the actual way that a component is applied or used in an installation. An example is the appropriate size/type of wire, the correct methods of installing both new and replacement speakers, the best practices of connections, wire runs, fusing, etc.
- 5) Troubleshooting, Measurements, and Analysis + DMM use** (36% of Section 2) – These questions deal with the diagnosis of common installation errors and components that do not operate properly. This section also includes the use of tools that aid in diagnosis such as the Digital Multimeter (DMM), Hall-Effect current clamp, Oscilloscope, etc and the ability to diagnose and resolve common installation errors through Identify-Isolate-Eliminate troubleshooting.

- 6) Tool Use and Shop Safety** (12% of Section 2) – These questions directly relate to shop safety, proper use of safety equipment, correct use of hand and specialty installation tools (such as crimping, soldering, panel removal, etc.)
- 7) Wiring Diagrams and Schematics** (27% of Section 2) – These questions relate to the ability to read and understand wiring and electronic component schematics (such as AllData, Mitchell, OEM schematics, etc.)
- 8) Interior Assembly and Fasteners** (14% of Section 2) – These questions relate to general knowledge and familiarity of various fasteners, clips, hardware, etc. for equipment mounting and those encountered during removal interior panels with regard to the original integrity of the vehicle and subsequent installation.

Advanced Mobile Audio/Video Systems (45 Questions)

- 9) Basic Audio Theory and Analysis** (22% of Section 3) – These questions deal with acoustic and electrical theory, as well as media source formats as related to mobile audio/video entertainment systems. Some questions may involve basic mathematical computation and knowledge of accepted terminology.
- 10) Mobile Audio Installation** (40% of Section 3) – These questions include all that pertain to the installation and configuration of equipment found in a mobile audio installation such as head units, subwoofers, component speakers, passive crossovers, power amplifiers, portable media adaptors and OEM interface devices. Both knowledge of application and the actual non-product specific installation knowledge apply to these questions.
- 11) Mobile Video Installation** (17% of Section 3) – These questions relate to installation knowledge of mobile video and rear seat entertainment system components and how they interconnect (including OEM video signals for in-dash screens). Also a general knowledge of how direct replacement headrest and overhead video screens install.
- 12) Troubleshooting** (21% of Section 3) – These questions are non-product specific, experience based troubleshooting related to mobile audio and video system installation.

Advanced Security and Convenience Systems (45 Questions)

- 13) Security Systems and Components** (30% of Section 4) – These questions identify knowledge of security system components and advanced functionality (including brain, siren, sensors, input/outputs, programmable features, etc.), including when relays, diodes, resistors, etc. are required.
- 14) Remote Starters** (21% of Section 4) – These questions identify knowledge of specific remote starter installation concerns (such as high and low current ignition wiring, vehicle transponder integration methodology, hood pin/brake/neutral safety switch safety, common programmable non-product specific features (tach, voltage, crank time, etc.) and the ability to install/connect these devices, including when relays, diodes, resistors, etc. are required.

15) Circuit Testing and Analysis (26% of Section 4) – These questions identify knowledge of testing and verifying the vehicle circuit itself, including high and low current 12 volt circuits, variable voltage/low voltage circuits and data bus circuits as they relate to determining proper security or remote starter installation, including when relays, diodes, resistors, etc. are required.

16) Troubleshooting (23% of Section 4) – These questions are non-product specific, experienced based troubleshooting questions related to security and remote starter installation.

Advanced In-Vehicle Information & Safety Systems (20 Questions)

17) Mobile Communication and Location Device Installation (50% of Section 5) – These questions relate to the installation of communication antennas for AM/FM/HD Radio, GPS, Satellite Radio, Telematics Systems and other mobile communication devices as well as any power, ground or other discrete connections necessary to install these devices that send/receive signals, as well as any power, ground or other discrete connections necessary to install these devices that send/receive signals. This also includes any related troubleshooting.

18) Bluetooth and Safety Devices (29% of Section 5) – These questions relate to the installation and configuration of safety devices such as reverse cameras, Bluetooth hands-free kits or telematics devices. Also includes any related troubleshooting.

19) Technology Knowledge (21% of Section 5) – These questions relate to a general knowledge of the technology involved (including terminology), such as GPS systems, Bluetooth profiles, wireless network types, satellite and terrestrial broadcasts, etc.

Requirements for MECP Advanced Installation Technician Certification



Taking the MECP Master exam **requires at least one year of hands-on industry experience**. Please fill out a [verification of experience form](#) and return to the MECP team.

Study resources for the MECP Advanced Installation technician exam are:

- [MECP Advanced Installation Technician study guide, Third Edition](#)
- [MECP Advanced Installation Technician practice exam](#)

The MECP Advanced Installation Technician certification is valid for four years, at which time the individual must recertify to maintain MECP Advanced Installation Technician status. Alternatively, the technician can move up to the MECP Master Installation Technician level if they have achieved the requisite professional work experience and do not allow their Advanced credential to expire before taking/passing the Master level exam.