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MECP 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.

BASIC INSTALLATION TECHNICIAN CERTIFICATION – No Experience Prerequisite

The Basic Installation Technician certification exam contains 150 multiple choice questions and is divided into five sections. This exam is intended for entry level technicians with little to no professional experience. Use the MECP Basic Installation Technician study guide and online practice exam at MECP.com as study resources for this exam.

Basic Electronics and Automotive Electrical Section (40 Questions)

- 1) Ohm's Law** (25% of Section 1) – These questions require basic knowledge and understanding of Ohm's Law, the related components (voltage, current, resistance, power, series, parallel, etc.) as applied in a circuit and the math involved to solve specific problems. Since calculators are not allowed on the MECP Basic Installation Technician Exam, the actual math is considered to be at a basic grade school level.
- 2) Electronic Components** (52% of Section 1) – These questions deal with physical electronics components, such as resistors, capacitors, relays, diodes, batteries, power wire, fuses, etc. as well as how or where they apply. The section also covers related units of measure, such as Ohms, Farads, and Henries.
- 3) Automotive Electrical System Components and Applications** (23% of Section 1) – This section tests on the components and application of the automotive electrical system itself – what the parts do and why they are there as well as how aftermarket installations must consider various aspects of an automotive electrical system.

Entry Level Installation Technique & Shop Safety Section (40 Questions)

- 4) Components Applications and Usage** (20% of Section 2) – These questions pertain to the way that a component or installation accessory is applied or used in an installation. Also includes wiring diagrams, symbols, and terminology related to installation. Many MECP best practices for general installation are contained in this section.
- 5) Troubleshooting, Measurements, and Analysis + DMM use.** (62% of Section 2) – This section covers the identification and diagnosis of common installation errors and components that don't operate properly. This section also includes the use of tools that aid in diagnosis, most notably the Digital Multimeter (DMM).
- 6) Power and Hand Tools** (9% of Section 2) – These questions pertain to tools that are not considered to be measurement and troubleshooting tools.

7) Safety Issues (9% of Section 2) – This section includes questions directly related to shop safety and proper use of safety equipment.

Introduction to Mobile Audio/Video Systems Section (30 Questions)

8) Basic Audio Theory and Analysis (26% of Section 3) – These questions deal with basic acoustic and electrical theory as it relates to audio entertainment in the mobile environment. Some questions involve basic mathematical computation.

9) Components (31% of Section 3) – These questions include all that pertain to the equipment found in a mobile audio installation such as subwoofers, speakers, amplifiers, crossovers and OEM interface devices.

10) Installation Practices (43% of Section 3) – This section covers questions directly related to the installation of a mobile audio system including placement, connection, and configuration. The installation questions follow MECP recommended practices.

Introduction to Security and Convenience Systems Section (25 Questions)

11) Components (42% of Section 4) – These questions directly related to the components of mobile security and convenience products, such as sensors, sirens, switches, control units, and other primary components.

12) Installation and Troubleshooting Practices (58% of Section 4) – This section covers questions directly related to the installation of mobile security and convenience products and follows MECP recommended practices as well as common troubleshooting issues presented in the guide.

Introduction to In-Vehicle Information and Safety Systems Section (15 Questions)

13) Location, Safety and Navigation Components (20% of Section 5) – These questions include all that pertain to the equipment found in a navigation or safety system installation, including GPS based route guidance and reverse cameras/sensors.

14) Communication Components (40% of Section 5) – These questions include all that pertain to wireless communications equipment found in a mobile installation, including Bluetooth, satellite radio and HD Radio.

15) Installation Practices (40% of Section 5) – This section covers questions directly related to the installation of in-vehicle information and communication systems, such as antenna placement and wired connections, and follows MECP recommended practices.

Requirements for MECP Basic Installation Technician Certification

There are no prerequisites for taking the MECP Basic level certification exam. It's intended for entry level individuals with limited work experience. It's an "apprentice level" credential.



Study resources for the MECP Basic Installation technician exam are:

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

The MECP Basic Installation Technician certification is valid for two years, at which time the individual must recertify to maintain MECP Basic Installation Technician status. Alternatively, the technician can move up to the MECP Advanced Installation Technician level if they have achieved the requisite professional work experience.

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.

MASTER INSTALLATION TECHNICIAN CERTIFICATION – Min. three years of work experience

The MECP Master Installation Technician exam contains 200 questions divide between five sections. Each section contains various questions covering the general range of topics that correspond to the Master study guide chapters. The exam has a full 20% of its 200 questions as experience-based troubleshooting questions. There is an “on screen” calculator provided for any mathematical computation. The MECP Master study guide and exam assume the candidate has read and mastered the content presented in the MECP Advanced guide.

The candidate **MUST** possess a current MECP Advanced level certification (or be recertifying as an unexpired Master) to qualify for this exam.

Section 1 – Master Level Electronics and Vehicle Electrical Systems (40 Questions)

- 1) (19.6% of Section 1) -These questions require knowledge and understanding of Ohm's Law, Watt's Law, Kirchhoff's Laws, electrical circuit elements (voltage, current, resistance, coulombs, electrons, etc.) and the math involved to solve a specific problem or determine an unknown value.
- 2) (29.4% of Section 1) - These questions pertain to physical electronic components such as resistors, capacitors, relays, silicon & Zener diodes, bi-polar transistors, FETs, logic gates, ICs, 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) (29.4% of Section 1) – These questions require 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 effects on the vehicle electrical system from aftermarket electronics, functioning alternators, adding batteries, connecting to a data bus, OBD-II diagnostic information, installation of aftermarket electronics in hybrid and electric vehicles, etc.
- 4) (21.6% of Section 1) - These questions require the ability to read and understand wiring and electronic component schematics (such as AllData, Mitchell, OEM schematics, etc.).

Section 2 – Master Level Installation Knowledge and Technique (40 Questions)

- 5) (38.1% of Section 2) – These questions pertain to the method in which a component or process is applied in an installation, including specific MECP recommended practices. Examples include the appropriate size/type of wire, properly setting amplifier gains, properly conducting and summarizing a State of Health (SOH) test on the charging system, the correct methods of installing both new and replacement speakers, the recommended practices of connections, wire runs, fusing, etc.
- 6) (19.0% of Section 2) – These questions directly relate to applications, settings, features and uses of electrical measurement and diagnostic tools such as a DMM, oscilloscope,

EMR detector, polarity detector, OBD-II scan tools and more. These questions are about the tools themselves, not the process (which is covered in other objectives).

- 7) (31.0% of Section 2) – These questions directly relate to shop safety, proper use of safety equipment and power tools and fabrication-related topics including wood, plastics, fiberglass, upholstery and metals. This section also covers specific MECP recommended practices related to workshop safety, power tool use and fabrication process.
- 8) (11.9% 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. These questions also cover correct reassembly practices and considerations for factory-installed safety systems such as supplemental restraints and SRS airbags.

Section 3 – Master Level Mobile Audio/Video Systems (40 Questions)

- 9) (35.4% 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) (22.9% of Section 3) – These questions cover related units of measure in audio such as Ohms, Watts, ratios in decibels (both dB/SPL and dBv), milliseconds, distances (wavelength, time correction), volume (cubic feet, cubic inches, liters), etc. that relate specifically to mobile audio systems.
- 11) (41.7% of Section 3) – These questions include all that pertain to the system design, 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 and related vehicle circuits. Both knowledge of application and the actual non-product specific installation or configuration knowledge applies to these questions.

Section 4 – Vehicle Security, Convenience, and Communications (40 Questions)

- 12) (29.4% 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.
- 13) (17.6% 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.

- 14)** (27.5% 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.
- 15)** (9.8% of Section 4) – These questions relate to the installation of communication antennas for AM/FM/HD Radio, GPS, Satellite Radio, Telematic 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. Includes any related troubleshooting.
- 16)** (5.9% of Section 4) – These questions relate to the installation and configuration or safety devices such as reverse cameras, Bluetooth hands-free kits, telematic devices, LDW/FCW systems and related aftermarket devices/systems. Includes any MECP recommended practices on installation of these devices/systems.
- 17)** (9.8% of Section 4) – 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. as well as compliance regulations such as FMVSS, NHTSA, FCC, etc.

Section 5 – Troubleshooting (40 Questions)

Every technician with many years of experience will agree that their ability to troubleshoot effectively enhances their abilities even while planning to install something for the first time, let alone the unexpected events where something does not function correctly. This section is dedicated entirely to troubleshooting and utilizes many visual images as well as some questions with the same “Technician A, Technician B” type questions found on the ASE A6 electrical exams. If you are a great troubleshooter, you will enjoy this section of the exam.

- 18)** (31.8% of Section 5) – These questions deal with the experience-based diagnosis of installation errors causing issues with the vehicle's electronics and other systems, or that cause side-effects like noise, OBD-II-related fault codes, battery drain, and/or intermittent electronic systems operations. The diagnosis of such problems includes the use of tools such as the Digital Multimeter (DMM), Hall-Effect current clamp, Oscilloscope, etc and the ability to effectively identify and resolve these vehicle electrical system issues through Identify-Isolate-Eliminate troubleshooting. These questions are specifically intended to be the type of scenarios in which a car dealership may point a finger at the aftermarket electronics when the problem is installation OR vehicle electronic system-related.

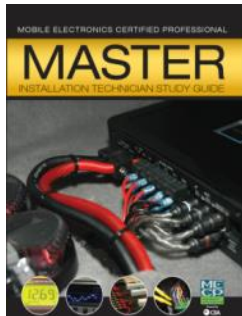
19) (36.4% of Section 5) – These questions are non-product specific, experience-based troubleshooting related to mobile audio and video system installation. All questions relating to the troubleshooting, calibration and de-bugging of an audio system installation (related to integration with, but unrelated to interference/side-effects with other vehicle electrical systems) apply to this sub-section.

20) (27.3% of Section 5) – These questions are non-product specific, experienced-based troubleshooting questions related to security and remote starter installation. All questions relating to the troubleshooting, programming, configuration and de-bugging of a security and/or remote starter system installation (related to integration with, but unrelated to interference/side-effects with other vehicle electrical systems) apply to this sub-section.

21) (4.5% of Section 5) – These questions are non-product specific, experienced-based troubleshooting questions related to in-vehicle information systems including Bluetooth, GPS navigation, driver safety devices/systems, telematics, etc. All questions relating to the troubleshooting, programming, configuration, compatibility and de-bugging of an installation in these areas apply to this sub-section.

Requirements for MECP Master Certification

Achieving MECP Master certification requires either an **existing Advanced level certification** or (if you are already a Master) it requires that your **current Master certification does not expire before taking the exam to recertify**. It also requires **three years of hands-on industry experience**. Please fill out a [verification of experience form](#) and return to the MECP team.



Study resources for the MECP Master Installation technician exam are:

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

The MECP Master Installation Technician certification is valid for four years, at which time the individual must recertify BEFORE expiration to maintain MECP Master Installation Technician status.

MOBILE PRODUCT SPECIALIST CERTIFICATION – No experience prerequisite

The Mobile Product Specialist (MPS) certification examination is MECP's certification for mobile electronics sales people. The 150 questions over four sections are designed to test daily working knowledge of mobile products, terminology, audio system design principles and details of installations relevant to a sales professional, rather than to test knowledge of hands-on applications of physically installing the equipment.

Requirements for MECP Mobile Product Specialist Certification

There are no prerequisites for taking the MECP MPS level certification exam. It's intended for sales professionals with moderate knowledge of the 12v aftermarket electronics business.



Study resources for the MECP Mobile Product Specialist exam are:

- [MECP Mobile Product Specialist study guide, Third Edition](#)
- [MECP Basic Installation Technician study guide, Third Edition](#)

The MECP Mobile Product Specialist certification is currently valid for four years, at which time the individual must recertify to maintain MECP Mobile Product Specialist status. Alternatively, the individual can move to an MECP Basic or Advanced technician certification if they are seeking a more technical credential and can satisfy the work experience prerequisite (for Advanced level).