Hawk®
ALARM • IMMOBILISER

HA-EMS01

User/Installation Manual

Guide to Intelligent Parking

ISO 9001 QS 9000 FC CE

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HAWK Reversing Angel is strictly a driver assistance device, and should not be relied upon as a security device or a substitute for safe driving practices. Use common sense when reversing, and always follow recommended safe driving guidelines from your local, State or County Department of Motor Vehicles regarding engagement of reverse gear.

Dear Customer,

CONGRATULATIONS. The **HA-EMS01** Back-Up Alarm, when used as described, will give you years of dependable service in your car, truck, RV or mini-van. We have taken numerous measures in quality control to ensure that your product arrives in top condition, and will perform to your satisfaction.

WHAT IS THE HA-EMS01 SENSOR & HOW DOES IT WORKS?

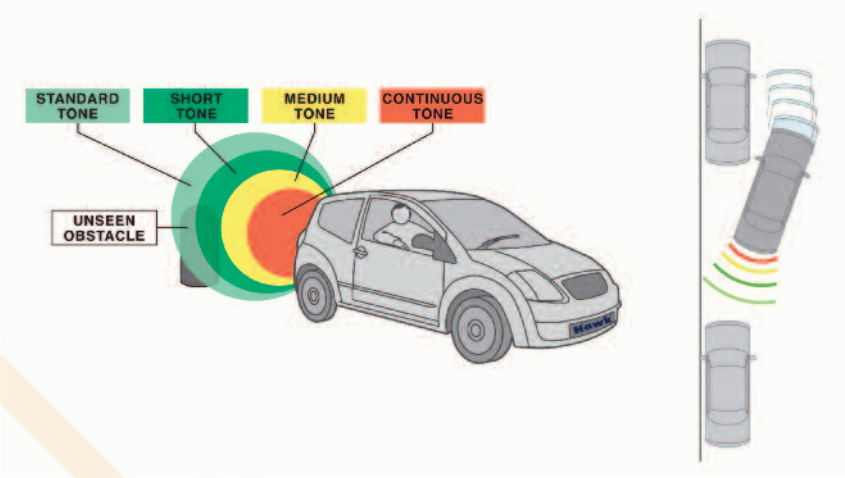
HAWK Reversing Angle **HA-EMS01** Rear is a parking sensor device that uses a low energy electromagnetic wave technology and is able to detect all objects within a set proximity of your vehicle. A unique design ensures No Holes need to be drilled in your bumper making the **HA-EMS01** totally invisible when fitted!

Once activated by selecting reverse gear the **HA-EMS01** generates a shielded area around the rear bumper allowing you to park and reverse in total safety with complete confidence. When an obstacle enters the zone of protection, a series of acoustic signals are given to alert the driver as to its proximity.

During the approach to an obstacle the ECU unit activates the acoustic alert starting from a distance between bumper and obstacle (measured in the central zone of the bumper) of around 60-70 cm, with 3 types of signal.

ALERT SEQUENCE

1) An increased in sequence of "BEEP" informs the driver that an obstacle is approaching (1st alert signal).
2) **A continuous sound** when the obstacle is in proximity of the bumper at a variable distance between (15 to 30 cm) according to the type of obstacle. These values correspond to the central zone of the bumper while on the side edges of the bumper the distance is slightly less.
3) **A continuous sound at a different lower frequency** when an obstacle is very close to the bumper (10-15 cm) in order to alert you of possible contact.



Technical Specification

- Operation voltage from 10.5 to 18 V
- Average current absorbed: 50mA
- Temperature of operation from - 20 to +90 °C
- Average distance of sensor activation: 60 cm

BEFORE YOU INSTALL

Automotive electronic equipment installations can be challenging at times, even to the most experienced of installation technicians. If you are not confident working with electrical wiring, removing and reinstalling interior panels, carpeting, dashboards or other components of your vehicle, contact the vehicle's manufacturer for vehicle specific instructions, or consider having the **HA-EMS01** installed by a qualified automotive electronics installation technician.

Temporarily unroll the tape until the entire inside of the bumper has been covered from side to side, do not wrap the Sensor Antenna around the sides of the bumper cover. **Do not remove the backing paper from the adhesive side at this time.**

Layout the Control Module and Alarm buzzer where you intend to install them, and then check the following;

Is the length of the wires sufficient to complete the installation on the vehicle?

Is there a clean, smooth surface behind the bumper that permits mounting with a 38.1cm clearance to attach the antenna Foil? Keep the Sensor Antenna away from any metal parts.

Always clean the inside of the bumper cover thoroughly with alcohol based cleaner before installing the antenna.

Is there a suitable, smooth surface to mount the Electronic unit (ECU) and Alarm buzzer?

See below for tools you might require for installation of parking sensor kit.

TOOLS

INSTALLATION

Mounting the Electronic Control Unit (ECU) & Electrical connections

After you have followed the guide lines in the “Before you install” section.

a) Pass the thick black wire of the ECU through from the boot (trunk) of the car. Look for any grommets or holes provided by the car manufacturer for the routing of this wire. If no hole is present, simply drill a small hole and use a grommet to protect the wire casing.

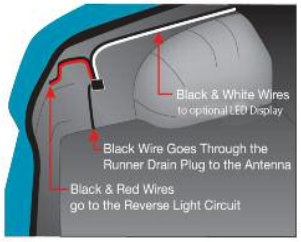
b) Connect the black wire from the control module ECU to the end of the Antenna Foil.

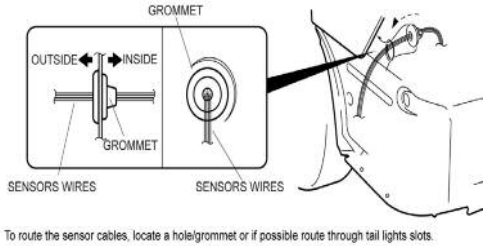
c) Clean the mounting area you’ve chosen for the ECU with rubbing alcohol, then peel the paper backing from the back side of the ECU and mount it. Insert the plug into the jack on the ECU. Leave a gap of at least 2cm to ensure no interface with the existing electrical components.

d) **How to identify reverse light wire -** Put on the hand (parking) brake, then turn the ignition on (do not start the vehicle) and place the gear in reverse. Using the Multi meter to identify the reverse wire, proceed with connections as shown below.

e) Connect the Red wire of the ECU to the 12 Volt (+) Positive wire of the Reverse lamp with the supplied red Scotch-Lok connector.

f) Connect the Black wire of the ECU to the (-) Negative wire of the Reverse lamp with the supplied red Scotch-Lok connector, or to chassis ground.





To route the sensor cables, locate a hole/grommet or if possible route through tail lights slots.

Mounting of the Sensor

After you have followed all the guide lines in the “Before you install” section. Do not wrap the Sensor Antenna around the sides of the bumper cover.

Remove the bumper and carefully clean the inner side surface using alcohol or other solvent (but NOT anti-adhesive detergent), where the antenna will be positioned.

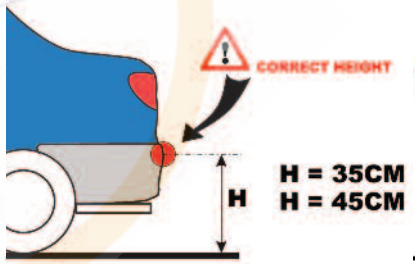
1. For maximum adhesion and optimum protection apply a piece of the included black adhesive material at either end of the antenna. It’s recommended (but not essential) to cover the antenna with a black anti-rust protection paint that is applied to the underneath of a car chassis to protect from the elements or use a similar plastic protection primer.

2. Take the end of the Antenna Foil with the spade connector and peel a few inches of the backing paper off.

3. Apply the end of the Antenna Foil with the spade connector near the area where the black wire will come through.

4. Adjust the Antenna Foil to line up across the inside of the bumper cover and then continue to pull the backing paper from the Antenna Foil as you press the Antenna Foil against the bumper cover.

Cutaway View to Show The Antenna’s Position Inside the Bumper Cover

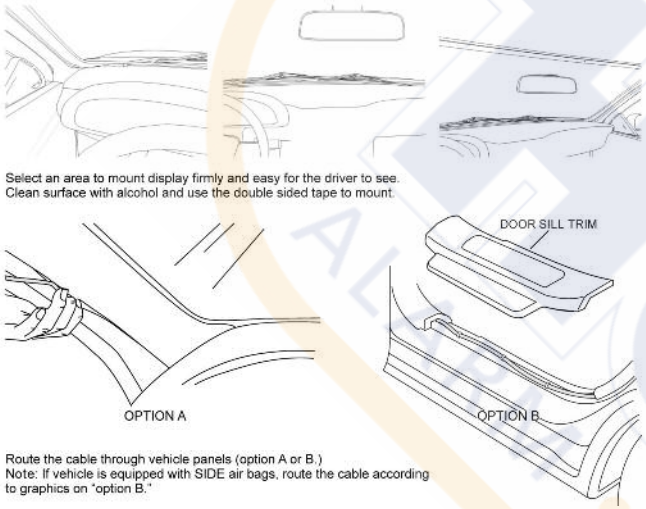


THE BACK OF THE BUMPER COVER MUST BE CLEAN AND DRY BEFORE MOUNTING THE FOIL. THE ADHESIVE BACKED FOIL WILL NOT STICK TO DIRT AND GRIME.

Mounting the speaker

Mount the speaker in an appropriate position so it can easily be heard, under the side trim in the boot / trunk and connect to the ECU. This wire can be extended if required and run to your desired location.

Display Installation (applies to HA-EMS01L)

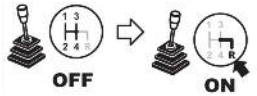


FINAL SET-UP & TEST PROCEDURE

To safely test the **HA-EMS01** the vehicle's engine MUST BE OFF and the parking brake must be engaged.

1. Turn the vehicle's ignition key to the ON position, but do not start the engine.

2. Place the vehicle's transmission in reverse gear.



3. Stand about 1.8m away from the bumper and slowly approach the vehicle.

4. At distances from 70cm to 40cm, you will hear a fast beep. At distances from 40cm to 20cm. When you hear a continuous beep.

FREQUENTLY ASKED QUESTIONS

Q. Will the Back-up Sensor prevent me from hitting any object behind my car?
A. NO! The Back-up Sensor is only a warning device. If you back up too fast, or your reaction time is slow, you could still strike an object.

Q. Does weather affect the sensitivity of the Back-up Sensor?
A. YES! Rain can reduce the detection range slightly.

Q. Does the Back-up Sensor require any routine maintenance?
A. NO! Once properly installed, the Back-up Sensor should supply years of trouble free service.

PARTS ENCLOSED

1. HA-EMS01 Control Module: An Electromagnetic Parking Sensor.
2. Sensor Antenna: An adhesive backed aluminium Foil tape.
3. Alarm Buzzer: A loud piezo beeper.
4. LED display (applies to HA-EMS01L).
5. User / Install Manual.
6. Grommet.

CONSUMER WARRANTY

Commercial Electronics ("HAWK®") promises to the original purchaser to repair or replace with a comparable reconditioned model any HAWK unit (hereafter the "unit"), excluding without limitation the siren, the remote transmitters, the associated sensors and accessories, which proves to be defective in workmanship or material under reasonable use during one year from date of purchase. provided the following conditions are met: the unit was professionally installed and serviced by an authorized HAWK dealer; the unit will be professionally reinstalled in the vehicle in which it was originally installed by an authorized HAWK dealer; and the unit is returned to HAWK, shipping prepaid with a legible copy of the bill of sale or other dated proof of purchase bearing the following information: consumer's name, telephone number and address; the authorized dealers name, telephone number and address; complete product description, including accessories; the year, make and model of the vehicle; vehicle license number and vehicle identification number. All components other than the unit, including without limitation the siren, the remote transmitters and the associated sensors and accessories, carry a one-year warranty from the date of purchase of the same. This warranty is non-transferable altered, the unit has been modified or used in a manner contrary to its intended purpose; the unit has been damaged by accident, unreasonable use, neglect, improper service, installation or other causes not arising out of defects in materials or construction. The warranty does not cover damage to the unit caused by installation or removal of the unit. HAWK, in its sole discretion, will determine what constitutes excessive damage and may refuse the return of any unit with excessive damage. **TO THE MAXIMUM EXTENT ALLOWED BY LAW, ALL WARRANTIES, INCLUDING BUT NOT LIMITED TO EXPRESS WARRANTY, IMPLIED WARRANTY, WARRANTY OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF NON-INFRINGEMENT OF INTELLECTUAL PROPERTY, ARE EXPRESSLY EXCLUDED; AND HAWK NEITHER ASSUMES NOR AUTHORIZES ANY PERSON OR ENTITY TO ASSUME FOR IT ANY DUTY, OBLIGATION OR LIABILITY IN CONNECTION WITH ITS PRODUCTS. HAWK DISCLAIMS AND HAS ABSOLUTELY NO LIABILITY FOR ANY AND ALL ACTS OF THIRD PARTIES INCLUDING ITS AUTHORIZED DEALERS OR INSTALLERS. HAWK SECURITY SYSTEMS, INCLUDING THIS UNIT, ARE DETERRENTS AGAINST POSSIBLE THEFT. HAWK IS NOT OFFERING A GUARANTEE OR INSURANCE AGAINST VANDALISM, DAMAGE OR THEFT OF THE AUTOMOBILE, ITS PARTS OR CONTENTS; AND HEREBY EXPRESSLY DISCLAIMS ANY LIABILITY WHATSOEVER, INCLUDING WITHOUT LIMITATION, LIABILITY FOR THEFT, DAMAGE AND/OR VANDALISM. THIS WARRANTY DOES NOT COVER LABOUR COSTS FOR MAINTENANCE, REMOVAL OR REINSTALLATION OF THE UNIT OR ANY CONSEQUENTIAL DAMAGES OF ANY KIND. IN THE EVENT OF A CLAIM OR A DISPUTE INVOLVING HAWK OR ITS SUBSIDIARY, THE PROPER VENUE SHALL BE ENGLAND & WALES . THE MAXIMUM RECOVERY UNDER ANY CLAIM AGAINST HAWK SHALL BE STRICTLY LIMITED TO THE AUTHORIZED HAWK DEALER'S PURCHASE PRICE OF THE UNIT. HAWK SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES WHATSOEVER, INCLUDING BUT NOT LIMITED TO, ANY CONSEQUENTIAL DAMAGES, INCIDENTAL DAMAGES, DAMAGES FOR THE LOSS OF TIME, LOSS OF EARNINGS, COMMERCIAL LOSS, LOSS OF ECONOMIC OPPORTUNITY AND THE LIKE. NOT WITH STANDING THE ABOVE, THE MANUFACTURER DOES OFFER A LIMITED ONE YEAR WARRANTY TO REPLACE OR REPAIR THE CONTROL MODULE AS DESCRIBED ABOVE.**