AceK9.com™

Model HA-2510

Patent # 7,081,811

K9 Heat Alarm® Pro
Installation Manual

Introduction

K9 Heat Alarm® Pro includes our vehicle monitoring system and Alert Options: S.O.S. Sound Horn Activation, Dual Window Drop, Emergency Light Activation, and Siren Activation.

HP-2510B Standard Parts

1 - Intelabox
1 - Control Head Cable
1 – Owners & Install
1 - Vehicle Specific Instructions*
1 – Installation Hardware Kit

K9 Heat Alarm
2 - Temperature Sensor
1 - Options Cable
1 - Light Activation Module
1 - Window Drop Module

Standard Outputs

Standard Heat Alarm Outputs
1 – Horn Activation
1 – Siren Activation
1 – Light Activation
1 - Window Drop Activation

Optional Outputs for Accessories
(Purchased separately)
1 - Stall Sensor
1 – No K9 Left Behind
1 – Pager Activation
1 – Fan Activation
1 – Auto Starter Activation
 For Aftermarket Auto Starters

Accessory Connector
1 – 3 Pin "Daisy Chain Connector"
For additional Accessories

Contents

Safety Warnings and Installation Information

Read these instructions and the vehicle supplement.

It is the responsibility of the Installer to Read these instructions, warnings, and confirm that all safety features are installed, tested and working properly at the time of installation.

Refer to the vehicles service manual and modifiers guides during installation.
Do not install equipment in areas that interfere with vehicles safety systems.
Use Caution to avoid damage to wiring, fuel lines, or other equipment.

Never run wires through a drilled hole without a grommet, the wire can become chaffed cause malfunctions or vehicle fire.

Connectors exposed to moisture should be protected.

As the installer of emergency equipment, proper installation techniques are your responsibility!
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Important
Install Electronics <u>in dry locations</u> items such as intelabox, control head, relays, and optional modules.

NEVER install in the following locations
Locations frequently subject to wet conditions
➢ Floor boards
➢ Inside doors
➢ Under K9 transporter
➢ Engine compartment
➢ Against the Air conditioner housing/vents
➢ Under seats
➢ Under cup holders of equipment consoles.
➢ Under the floor mats; this area is subject to excessive heat and moisture and may cause the unit to malfunction as well as shorten the life of electronic components. Do not install window module/relays inside of vapor barrier in door.
_____

Ignition and Power Warnings

Careful Consideration should be made when connecting devices that could remove power to vehicle systems, alert features of this product or emergency warning systems that it activates.

<u>Alarms, Auto Starters, Antitheft Devices</u> or any systems that shut off ignition power, **The K9 Heat Alarm power MUST be set up as "on all the time" (or "auto on only")** manually shutting down when not in use.

Do not remove factory gender specific quick disconnects. These connectors are designed for serviceability, prevent accidental damage, and allow for future upgrades.

STEP 1
Overview
Review the K9 Heat Alarm® Pro Installation Diagram and **vehicle specific install supplement** to get an overview of the hardware placement, wiring and connections. Also review the Installation Diagram for each of the Heat Alarm Alert Options that you are installing. Make connections following the order outlined bellow. Consider where connections will be made in the vehicle and run wires in groups to areas that components are located. Prior planning will speed installation.

STEP 2
Control Head installation
Determine with the K9 Handler a suitable location for the Control Head to be mounted. The Head should be easily visible to the K9 handler. Mount securely in a dry location inside the vehicle. Choose a location approved by the vehicle manufacture, see modifiers guide. Plug the control head cable into the head. **"TIP"** *The mounting bracket can be rotated*. To change bracket direction remove the four nuts and lock washers rotate bracket to desired direction, reinstall hardware.

STEP 3
Intelabox installation
Find a Good location for the Intelabox choose a DRY location where it is easily accessed for future upgrades; Route the Control Head Cable to the Intelabox. Attach the cable, be sure that the cables (RJ45) connectors go in straight and the cable is not kinked. Attach the Intelabox Black Ground wire to a good ground.

When mounting behind trim panels, situate the box temporarily in a location that allows you to easily connect your wires. Remember control head cable and stall sensor cables are 14' long efficient routing of these cables should allow connection in many locations.

STEP 4
Main Power
Connect the Battery wire to an **uninterrupted** Battery connection point. (Red wire from intelabox)

STEP 5
Connect options cable
Connect the options cable to the 12 pin connector of the intelabox, the connector is keyed to plug in only one direction. Review the following steps and run the individual wires to their respective accessories and options.

12 pin connector information

Pin	Color	Option / Feature	Function	Polarity
1	Not Used			
2	Not Used			
3	Red	Ignition Power	Power	Positive
4	Yellow	Autostart	Optional	Negative
4	Yellow	No K9 Left Behind	No K9 Left Behind	Negative
5	Not Used			
6	Blue	Window feature	Timed	Negative
7	White (option)	No K9 Left Behind	Door Sense	
8	Black/Green	Fan option	Module Required	Negative
8	Black/Green	Pager option	Module Required	Negative
9	Green	Light feature	Latched	Negative
10	Orange	Horn feature	SOS pulse	Negative
11	Orange	Siren feature	SOS pulse	Negative
12	Orange	Spare	SOS pulse	Negative

A three pin "daisy chain connector is also provided for add on options.

Installing K9 Heat Alarm® Pro alert features

⚠️ **Test current draw while installing alert features (Options) with an ammeter, by attaching between the appropriate trigger and ground. Note that blown fuse indicates problems; current draw may not exceed 300mA continues. Test all alert features prior to connecting options cable to intelabox. These Options and Alerts triggers are ground (negative) triggered.**

STEP 6
Horn Alert Feature
Horn ring connection
Connect an orange wire from your options cable to the vehicles horn ring wire. **TEST: The vehicles horn wire will show power (12+ volts) when not active, when the horn pad is pressed it grounds this circuit (0 volts).**

If horn ring is not available an interface module is available to safely connect to the vehicles horn.

## STEP 7
Siren Alert Feature
Connect an orange options cable to the siren controller's remote <u>negative</u> input or horn ring input. ***Most siren manufactures web sights offer on line copies of their installation instructions. <u>Never connect to siren speaker wire</u>.***

STEP 8
Lightbar / Strobe Alert Feature
<u>Programmed input method.</u> When the light controller has a programmable input connect Green K9 options cable wire. The programmable input should be configured for negative activation of lights.

<u>Traditional methods</u> Lights activated buy a toggle switch* or isolated outputs of a light controller are connected using the light activation module H-LAM-R by connecting as shown bellow. In this configuration the Red Wire of the activation module is connected to the power wire of the siren controller fuse appropriately to protect lights. The Brown wire connects to the output wire of the lights that are being activated. The Green options cable wire is connected to pin 85 of the H-LFX-R Module.
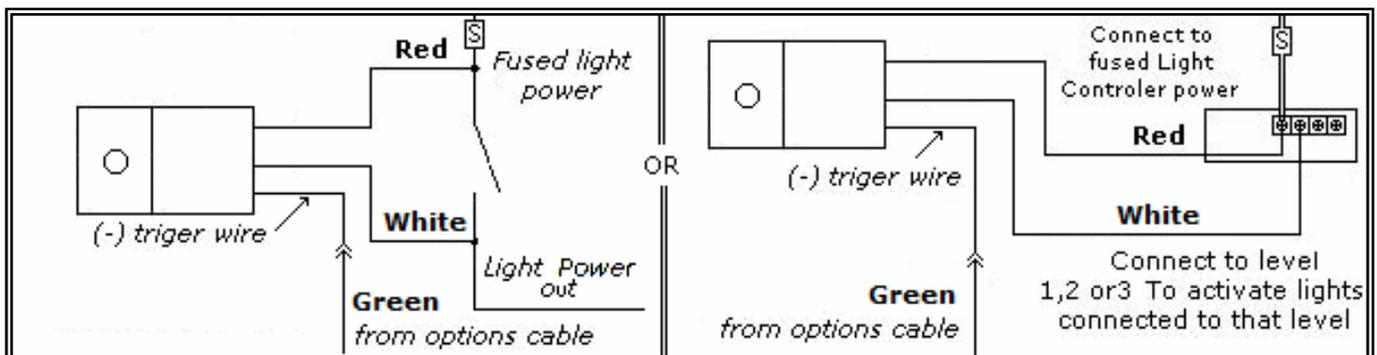
STEP 9
Window Drop Feature (HA-WDM-I)

NEVER Place module in Wet Location Do not place in locations subject to wetness including floor boards, inside of vapor barrier in door, under K9 transporter, in the engine compartment, under seats and in center consoles under cup holders.

Refer to Vehicle specific instructions and/or Instructions included with your window drop module. If Additional wire is added it should be large enough to handle the current. Connect using the intermediate cable. Window drop options cable provides the Blue triggering wire.

STEP 10
Temperature Sensors Mounting (H-TS22-K)

Never place sensors where the K9 can damage the Sensors, behind trim, in direct sunlight, directly in front of air vent, near equipment that radiates heat, or within 8 inches of floor or headliner.

The sensors should be set up to monitor the area where the K9 is housed.

Sensor location may vary with vehicle setup and operation, The Temperature Sensor cables are 15 feet long so they can be adjusted to the most effective locations.

Following examples are based the K9 being in a vehicle with K9 transporter behind the front seats.

Sensor Mounting location

Sedans or Pick Up Trucks.
Mount one Temperature Sensor midway up each pillar trim (on each side) in front of the K9 transporter, or in the airflow at front of the K9 transporter on each side.
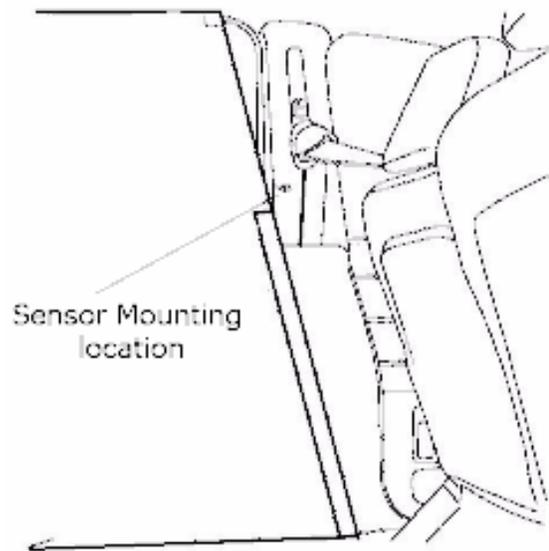
Sport Utility and Wagons. Instruction is based on vehicles with K9 transporter behind the front seats. Mount one temperature sensor midway up pillar trim in front of the K9 Transporter and one on the pillar trim in back of the K9 Transporter, in good air flow. If area behind transporter is isolated from airflow the Sedan method may be more appropriate.

Note: Averaging must be turned off if motioning 2 canines in separate climate controlled locations.

STEP 11
Heat Alarm ignition power
From the Pro Series Option cable connect the Red Ignition wire to switched Ignition Power point on the Vehicle's fuse panel or the police package ignition wire. Ignition must be connected for proper operation of K9 Heat Alarm® Pro

STEP 12
Stall Sensor Option (sold separately)

The Stall sensor makes it easy to detect an Engine Stall. The Sensor detects the energy emanating from the Alternator to determine that the Engine is running. Mount the Stall sensor against the metal alternator housing, over its internal coils Route the Stall sensor wire through the Firewall to the Intelabox. If you have to drill a hole, use the supplied grommet, seal with silicone (not supplied).Cover the stall sensor cable with wire loom, **Avoid contact with moving parts and hot exhaust parts.**

VERIFY that the stall sensor functions well after the vehicles battery is fully charged and under minimal load. **The LED on the Sensor is lighted red when the vehicle is stalled or not running.**
"Tip" If the light is red when the vehicle is running it may need to be repositioned

Step 13
Optional add on modules

Connect any add on accessories purchased with system. See instructions included with accessory. Do not attempt to connect items not approved for use with this system. Use only Acek9.com accessories.

Additional input/outputs are provided for AceK9 Options. See the Installation Manual provided with each Option for details about installing that Option.

Step 14 Test System and Finish Install

Test Procedure
System Test Procedure for K9 Heat Alarm® Pro   HA-2510

14-A Power. The Default Power Settings is Heat Alarm ON with Ignition. When Ignition is turned ON, the Heat Alarm unit should power up.
14-B System Status. Observe the Feature Settings during power up. Then observe the Temperatures and Vehicle's Battery Voltage. Confirm that the Displayed Temperatures are below the Heat Alarm Hot Set Point and the System in not in Snooze Mode.
　　　　* **STALL SENSOR Note**: Due to the popularity of the Engine stall sensor factory default is enabled, if a stall sensor was not purchased the feature needs to be disabled in the menu.
14-C System Output Test. Press the MENU key (for a second) to review or change the Feature Settings or Power Settings. Use the arrow keys to scroll menu. The last Menu choice is System Test, Press OK to activate all the installed Heat Alarm Alert options. Verify that ALL the installed Heat Alarm Alert Options worked.
14-D Test Temperature Sensors By Turning the Vehicle's Climate Control to the Heat position to manually raise the temperature inside the vehicle. Monitor the temperatures displayed on the heat alarm and confirm that the alarm activates when the Hot Set Point is reached. Return the Vehicles Climate Control to the Cool position.
14-E Engine Stall Sensor Option Test
Turn the Ignition to the ON position WITHOUT Starting the Engine
Note that after the system completes the startup messages it beeps and displays the Engine Stall Alarm and alarm activates.
14-F Test Heat Alarm Pro add on Accessories.
Refer to the Owner's Manual(s) for the Operation and Testing

If any tests fail please check the installation.
Recheck wiring placement, and connections. Secure cables and wires with cable ties. Install the intelabox in its appropriate location. Protect all connections, components that may be exposed to weather, Seal grommets. Completely test of the K9 Heat Alarm® Pro.

IMPORTANT: It is the responsibility of the Installer and the Handler to confirm that all safety features are installed and working properly at the time of installation. The handler is also responsible to make continuing periodic checks of all safety systems of this product.

Be sure K9 handler receives a copy of the Owners Manual.
The Owners manuals can be downloaded from **www.AceK9.com\manual**

Trouble Shooting

Communications Error
- Check Control head cable for damage
- Check that connectors are fully inserted
- Check for corrosion or foreign material.
- Check that cable is not running parallel to transmitting antennas

Heat Alarm Displays Snooze
Alarm is in snooze mode. Start up snooze mode allows the K9 Handler time to start the vehicle, allow the temperature in the vehicle to reach a safe level, and resolve any alarm conditions. When the vehicle is running and the temperature is at a safe level the status light will turn on indicating monitoring of temperature. (see owners manual)

Stall Sensor Alarm while driving or idling.
Stall sensors adjustment is needed, check location of sensor it needs to be located over coils in the alternator (see install manual)

Temperature Sensors Show Different Readings
Sensors reading will vary with location and conditions. If it is necessary to prove the accuracy of the sensors by placing in exact same location, they will be within less than one degree of another.

Sensor reading differences are caused by the following. (See install manual for placement)
- Sun heating the car body
- Air conditioning flow
- Open windows or air leaks
- Placement of sensors

For additional assistance contact
Acek9.com   service@acek9.com 561-746-0935 x2

Acek9.com Two (2) Year Limited Warranty
For details visit http://www.acek9.com/Warranty

Other Available Options

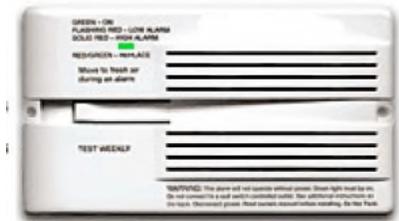K-9 Cellular Communicator   10" and 12" Fan Kits   Heavy duty Fan Guard

Smoke Detector   Carbon Monoxide Detector

No K9 Left Behind   Auto Start Option
Heavy Duty Fan Guard
Smoke Detector   Anti-theft System

Visit Acek9.com/store

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Model HA-2510
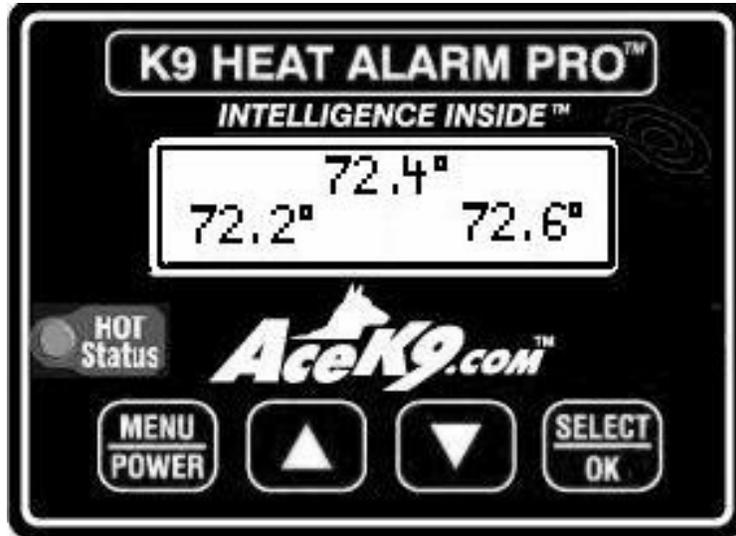
Owners Manual
Operating Instructions
Patent # 7,081,811

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Introduction

The K9 Heat Alarm® Pro is a state of the art product designed and developed by the AceK9.com™ division of Radiotronics, Inc. It is a unique blend of positive features taken from actual field use of our K9 Heat Alarm® plus the incorporation of a microprocessor control system.

Monitoring features: The K9 Heat Alarm® Pro monitors the vehicle's interior Temperature and Battery Voltage. The Handler will be alerted by honking the Horn, rolling down both rear Windows*, activating Emergency Lights, and Siren. Additional options are Available

- ✓ Temperature Sensor Averaging – to reduce false alarms.
- ✓ Exclusive S.O.S Horn Honk™.
- ✓ Non-Volatile Memory – Temperature and other settings are maintained in memory when power is disconnected.
- ✓ Dual Window Drop. *Rear windows do not drop in cold alarm*
- ✓ Menu allows you to adjust settings to your needs.
- ✓ Temperature Sensors Monitor – Warns of damaged sensor and sets off Alarm if both Temperature Sensors are damaged.

Optional Monitoring features:
- o E.S.M. Engine Stall Monitor™ – Alerts of Engine Stall BEFORE the vehicle's interior gets too hot or cold.
- o No K9 Left Behind - K9 removal reminder system
- o Smoke Detector
- o Carbon monoxide detector

Overview

Factory Default settings are based on the most commonly requested settings selected by k9 handlers. You can customize them to your needs. See menu choices section.

Power: On/Off with vehicle.
Hot Set Point: 90°
Cold Set Point: Disabled
Engine Stall Monitor: Enabled (Disable if not purchased).
Auto Snooze Mode: Enabled
USA or Metric   Fahrenheit
Temperature Averaging   Enabled

Dual Temperature Sensor Averaging™: The individual Temperature Sensor readings are displayed along with the average temperature. This enables the K9 Heat Alarm® Pro to obtain more accurate reading of the interior temperature of the vehicle. With averaging enabled, unnecessary

false alarms are avoided in marginal temperature conditions or when one of the Temperature Sensors is in a warmer/cooler location. (Example: direct sunlight or open window). In order to activate the alarm, the AVERAGED (center) Temperature Sensor readings must reach the alarm threshold setting (90° Hot Default). As an additional safety measure the heat alarm is activated if either Temperature Sensors reading goes 10 degrees above the threshold setting.
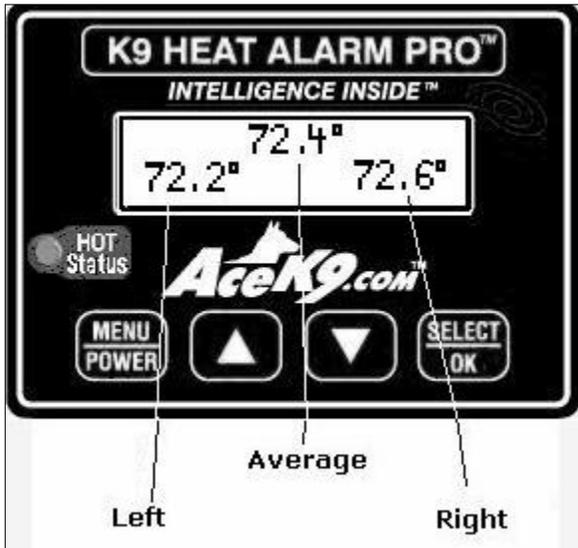
Disable Temperature averaging if monitoring two separated locations. To change see the Menu choices section.
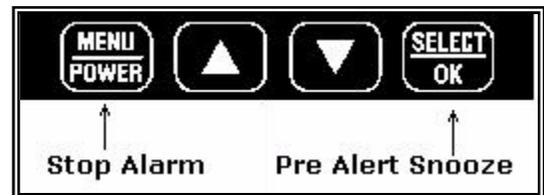
Operation

IMPORTANT safety reminder: It is the responsibility of the Installer and the Handler to confirm that all safety features are installed and working properly at the time of installation.

Heat Alarm Power: The Heat alarm will turn on with the ignition. When the ignition is powered off the heat alarm will power down. This requires you to leave the vehicle running with the air conditioner ON to maintain a safe environment for the canine, and remove the K9 if the vehicle is off.
If your environment allows for the canine to be left in the vehicle with the ignition off, The setting should be changed to ON/Off manually, On with Car and OFF manually, or No K9 Left Behind (optional hardware required).

Standard Operation: The Left, average, and right Temperatures are displayed in the primary screen; the Vehicle's Battery Voltage is displayed periodically. When the K9 Heat Alarm ® Pro has detected safe conditions the HOT status light will illuminate, indicating that temperature is being monitored.

Snooze Mode: At start up, Snooze Mode will automatically appear if there is an over temperature or another condition that requires attention. A Snooze period of approximately 10 minutes allows time to get the vehicle running and cooled down for the safety of your K9. When the K9 Heat Alarm ® Pro does not detect a safe condition at the end of the snooze period the Pre Alert alarm will activate. Snooze can be manually reactivated (By pressing OK). Only 3 snooze periods are allowed.

Note: **During Snooze, the Handler is responsible to monitor the conditions of the canine.**

Alarm Modes

Pre-Alert Mode. During Pre-Alert a description of the unsafe condition will Display, along with flashing light and warning tone for 40 seconds. This allows the K9 Handler to put the unit into Snooze Mode or turn Off the K9 Heat Alarm® Feature before the Full Alarm is activated.

"FULL ALARM" Mode During full alarm all installed Alert Features are activated. The K9 Heat Alarm ® Pro will continue the Full Alert Alarm Mode until the temperature or other condition in the vehicle returns to a safe condition or until the [MENU] key is pressed. If a safe condition is detected by the system; the Full Alert Alarm Stops and the Display shows a Reminder Note to advise the K9 Handler that an alarm has occurred.

Clearing reminder: To clear the Alarm Reminder, Press [OK] while the Note is being displayed.

Temperature Alarm: When a temperature that is above the (averaged) Hot Set Point or below the Cold Set Point is sensed K9 Heat Alarm ® Pro goes into Pre Alert. If it remains hot the unit will go into full alarm.

Engine Stall Monitor™ Option (Purchased separately): With the stall sensor option installed and enabled in software, the Hot-N-Pop® Pro will monitor the engine. When the engine stalls "Engine Stalled/Pre-Alert Mode" is displayed allowing the K9 Handler to Restart the Engine or Snooze. If no action is taken the Full Alarm is activated.

Vehicle Battery Sentinel™: The vehicle's Battery is monitored and the Voltage is displayed. If Battery Voltage stays below 11.5 Volts a warning is displayed and the unit enters Low Voltage mode. The Full Alarm is activated for a short period of time lowering rear Windows providing ventilation for the K9. The Alarm will activate again every few minutes as long as there is enough battery power.

Temperature Sensors Diagnostics: The Temperature Sensors are continuously monitored; if one of the Sensors is damaged or a connection is lost, the K9 Heat Alarm Pro will automatically disable Averaging and operate off of the working sensor. Periodically a warning message and beep will occur to notify the handler. If both Temperature Sensors are damaged, the warning message is Displayed, Pre alert starts, followed by Full Alarm activating.

Self Diagnostics: The K9 Heat Alarm Pro continuously monitors its internal systems. If a detectable problem exists that would prevent the system from operating properly the system will go into Full Alarm mode.

*** *It is important to remember that, while every effort to monitor the system is taken, there is no substitute for doing the Weekly tests outlined in this manual.* ***

Changing Settings

Light Intensity adjustment.
The light intensity is controlled by using the [Up] & [Down] arrow keys. The lights automatically dim, when the vehicle's ignition is turned OFF (press the OK key to return it to the original intensity).

Menu Mode: To enter menu mode, power up the K9 Heat Alarm® Pro, then press the [MENU/POWER] key. To view Menu items Press the [Down] key for the next item or the [Up] key for the previous item. To change a Menu item press the [OK] key. The [Up] and [Down] keys let you scroll through the available settings. To choose a setting, press the [OK] key. To exit without making changes press the [MENU] key. Additional changes can be made or press the [MENU] key to exit the Menu Mode. When returning from the Menu Mode, you will see a review of all the settings.

Menu Choices

Heat Alarm Power
Default setting* is *"On/Off with Car" This will turn the Heat Alarm ON & OFF with vehicles ignition, most commonly the Engine and A/C are usually left ON to maintain the vehicle's interior temperature. Remove the K9 if the vehicle is off.
*Alternative Setting **"Car on Manual off"*** The Heat Alarm will turn ON with ignition and OFF by Keypad. This is the safest method. The unit will automatically turn ON with the vehicle but will only turn OFF when you depress and hold the menu key.
*Alternative Setting **"On/Off Manually"*** The Heat Alarm will only turn ON or OFF with Keypad.
*Alternative Setting **"Off all the Time"*** The Heat Alarm feature is disabled requires re-enabling through the Heat Alarm Power Menu.
*Alternative Setting **"No K9 left behind"*** the Heat alarm will turn on with ignition and off when ignition power is off and the Door is opened to remove the K9. See user supplement sent with this option
(Sold separately)

"Heat Alarm Temp" Hot Set Point
Default setting is 90° to activate the Heat Alarm but can be adjusted from 77° to 95° as your needs require.

"Cold Alarm Temp" Cold Set Point
Default setting *"disabled".* The cold Alarm but can be set as your needs require.

Menu Choices Continued

Stall Monitor *Default setting is "Enabled".* When an optional stall sensor is not purchased this feature should be disabled.
Alternative Setting: Disabled

Temperature Averaging *Default setting is "Enabled"* so the Temperatures of the Dual Temperature Sensors are AVERAGED thus reducing false alarms.
Alternative Setting: Disabled

Auto Snooze Mode *Default setting is "Enabled"* so Auto Snooze Mode temporally disables the Heat Alarm to allow time for the vehicle to cool down during start up.
Alternative Setting: Disabled

USA or Metric *Default setting is "Fahrenheit"*
Alternative Setting is "Celsius"

Test & Diagnostic features

Previous Alarms Displays the five previous causes of the Alarms.

Serial Numbers Displays the Serial Numbers of the Control Head and the IntelaBox.

Reset to Default Resets all features to their respective Factory Default settings.

System Test Pressing [OK] will begin a System Full Alert Test activating the window drop, SOS Horn, Lights, Siren and Pager. Other Add on options such as K9 Cellular Communicator™, fan, and Radio Voice Module will also activate. Followed by a Pixel test, that will fill all the pixels in the display, both top and bottom. Ending with a Push button test will allow testing of each of the Menu Keys. If any of these tests fail contact you installer or acek9.com for further assistance.

K9 Heat Alarm® Pro
Weekly System Test Procedure
K-9 should not be in the vehicle during these Tests.

Turn the system on, Observe the Feature Settings during power up, Check the Temperatures and Vehicle's Battery Voltage.

K9 Heat Alarm Output Tests
Confirm that the Displayed Temperatures are below the Heat Alarm Hot Set Point and the System is not in Snooze Mode. Press the MENU key to enter menu mode. Move down to the menu choice "System Test", Press OK to activate all the installed Heat Alarm Alert options. Verify that ALL the installed Heat Alarm Alert accessories and options worked.

Temperature Sensors Test
Turn the Vehicle's Climate Control to the Heat position to manually raise the temperature inside the vehicle. Monitor the temperatures displayed on the heat alarm and confirm that the alarm activates when the Hot Set Point is reached. Visually inspect the wiring and electronic components and confirm that the location of the Temperature Sensors is just outside the K9 container and not in direct sunlight.

Testing of Add on Options
The following procedures are for items added on to the original K9 Heat Alarm Pro. If not purchased with the original unit, they may be added on in the future. Visit www.acek9.com for more information.

Engine Stall Sensor Test
Turn the Ignition to the ON position WITHOUT Starting the Engine. Note that after the system completes the startup messages it beeps and displays the "Engine Stall Alarm". If snooze mode is enabled the "Hot Status" light will turn off for 10 minutes. After 10 minutes the alarm will sound. If snooze mode is deactivated the unit will go into full alarm with out delay.

Fan Kit: During the weekly Heat Alarm test the fan will turn on during system and over temperature tests. In addition the fan should turn on manually from the toggle switch. The fan should always blow in toward the K9.

For Other Options see instruction manual that was provided

If any tests fail contact you installer or AceK9.com for assistance.