Hotdog™ Plus

Temperature Monitoring/Alerting / Security System for Interior of Canine Vehicles

Installation & Operation Manual

Congratulations! You have purchased the renowned ***Criminalistics, Inc.*** temperature monitoring system that has been in service with K-9 units nationwide for nearly two decades. Strict adherence to the installation procedures will ensure optimum performance of your unit for many years to come.

K-9 Officers & Installers read the instructions carefully.
Familiarize yourself with this system, understand what it is capable of doing!

I. Overview / Operational Summary

The Hotdog™ system will provide an alert if the temperature inside your vehicle gets too hot. The Hotdog™ system comes in two parts: a control unit and (if purchased) an optional radio paging device. The Hotdog™ control unit evaluates data from a sensing probe then updates the display of the ambient temperature once every second. The backup temperature sensor (located on the rear of the control box) on your Hotdog™ reacts and resets quickly. The sensor is fixed to activate at 94° F - 99° F and reset at appoximately 92° F, plus or minus 2 percent. The control unit alone may be used to monitor the temperature, activate a horn, siren or lights and roll down 2 electric windows when the programmed temperature level is exceeded. The optional pager and a vehicle intrusion detector may be added to enhance the alerting functions of your Hotdog™ system.

PROPER INSTALLATION BY QUALIFIED ELECTRONIC TECHNICIAN IS RECOMMENDED, THIS IS A LIFE SAVING DEVICE, THE INSTRUCTIONS MUST BE STRICTLY ADHERED TO IN ORDER FOR SYSTEM TO FUNCTION PROPERLY. BATTERY CONNECTION VIA THE IN-LINE FUSE LINK IS REQUIRED, DO NOT ALTER THIS CONNECTION. Use of a 40 amp fuse is required, an extra fuse has been provided for your convenience.

II. List of Contents

- Hotdog™ Control Unit
- 6ft. Temperature Probe(Black)
- Power wire red 12 ga. w/fuse
- 2 Window wires (Clear & Blue)
- Ground wire black 14 Ga.
- Accessory wire Red 16 Ga.
- Mounting Screws 2
- Extra 40-amp Fuse
- If purchased as an **OPTION**
- Pager Transmitter & Receiver (beeper)
- Glass Mount Antenna for Pager
- 6ft. Back up Temperature probe (Grey)

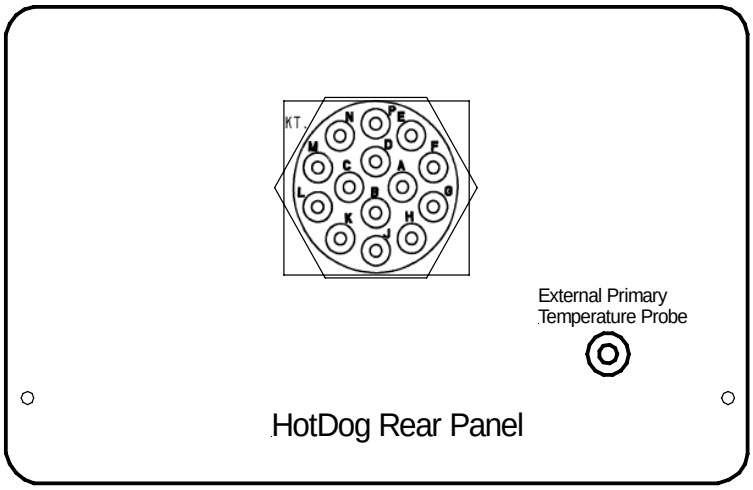
III. Installation

Please follow all instructions carefully. Your Hotdog™ system is warranted against defective components and faulty workmanship for 1 year. If you have any questions, do not hesitate to contact us. Our engineers and installers are standing by to assist you.

1) Hotdog™ Control Unit

Your Hotdog™ Control Unit is housed in a Black and Silver case with On/Off Switch and LED indicator light located on the front of the case. Find a convenient place to mount your Hotdog™ control unit. Most control units are mounted under the dash, on the cage screen between the driver and the canine area or on top of the cage. When determining the mounting position of the Hotdog™ control unit consider the following:

- Accessibility of your Hotdog™ control unit to the driver.
- An area of the vehicle that is dry at all times.
- Keep your Hotdog™ control unit away from any heat source, i.e. heater vents, transmission, floor, sunlight!
- Keep your Hotdog™ control unit away from direct sunlight.
- Do not install your Hotdog™ control unit under vehicle hood.
- Do not install your Hotdog™ control unit next to radio equipment.
- Place Temperature Probe wire near canine compartment but out of canine's reach.



The following is a description of the terminals on rear of unit:

Terminal #A	To Window B Motor
Terminal #B	Ground for Hotdog™ system.
Terminal #C	To Window A Motor
Terminal #D	From Window B Switch.
Terminal #E	- Pager Trigger (option unit).
Terminal #F	HV (unswitched, Battery, 12v)
Terminal #G	From Window A Switch
Terminal #H	Alarm Horn / Light Control (12v lead)
Terminal #J	Fan Control (negitive lead)
Terminal #K	Backup Temperature Sensor In
Terminal #L	Backup Temperature Sensor +5v out
Terminal #M	Backup Temperature Sensor ground
Terminal #N	12v (out) to optional Pager
Terminal #P	Not Currently Used

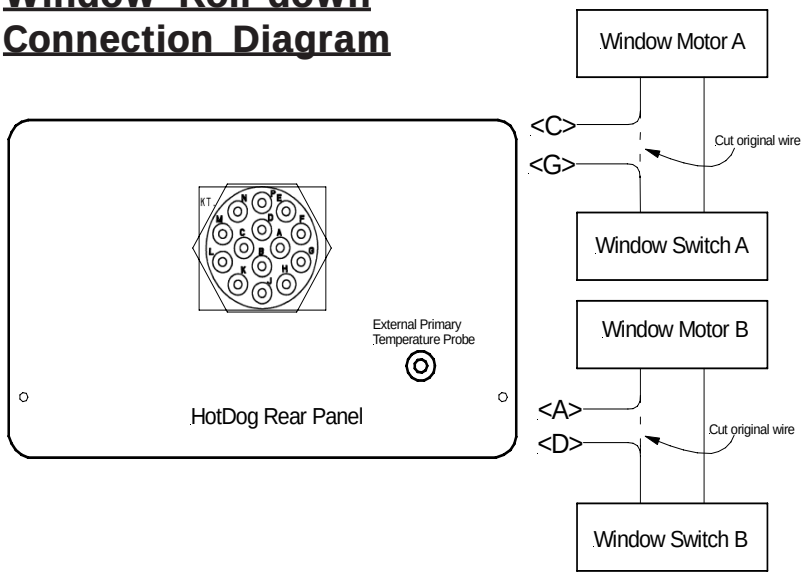
IV. Wiring

DO NOT CONNECT TO THE VEHICLE BATTERY UNTIL INSTALLATION IS COMPLETE.
Before completing the connection to the battery and inserting the fuse, make sure the unit is **OFF** by moving both switches on the control box faceplate down. Failure to follow this step may lock up the Hotdog™ control unit, rendering it unusable.

1) Electric Window (1-Clear and 1-Blue two-conductor zip wire) Windows A & B involving terminals C, G and A, D. Use a **Voltmeter at the electric window motor** inside the door to locate the positive 12 volt signal causing the window to roll down. The wire on the electric window motor reverses polarity depending on the function. Carefully consider the selected wire that has a positive voltage **during** the window roll-down function. Cut this wire between the window motor and the window switch and **NOT BEFORE the switch** and as close to the window motor (allow room for soldered connection) as possible. Use the **Clear** zip wire for **Window A**, connect the **Silver** wire to the **switch side** of the wire previously cut. Connect the **Copper** side of this wire to the **motor side** of the wire cut in the step above. Route back to control center and connect the **Silver** to **#G** and the **Copper** to **#C**. This same procedure and connection will be made in additional doors for **Window B**, using the **Blue** zip wire marked with **(-)** connected to the switch side and **Blue** zip wire marked **(+)** to motor side respectively. **(-)** to **#D** and **(+)** to **#A** for **Window B**.

NOTE: Proper connections allow the vehicle window switch system to function normally when the Hotdog™ is **not** in the alert mode. When Hotdog™ activates and goes into alert mode 12 volts will appear at terminal #C and #A for **5 seconds only, at the beginning of the alert cycle**, thus rolling down the windows one at a time. **INCORRECT WIRE PLACEMENT AND/OR IMPROPER ROUTING WILL CAUSE DAMAGE TO THE CONTROL CENTER.**
Follow directions carefully and completely. **Do not** connect wire previous to window control switch! Make your connection as close to the window motor as possible or **damage to the control system and vehicle may occur!**

Window Roll-down Connection Diagram



2) Accessory (Red wire)

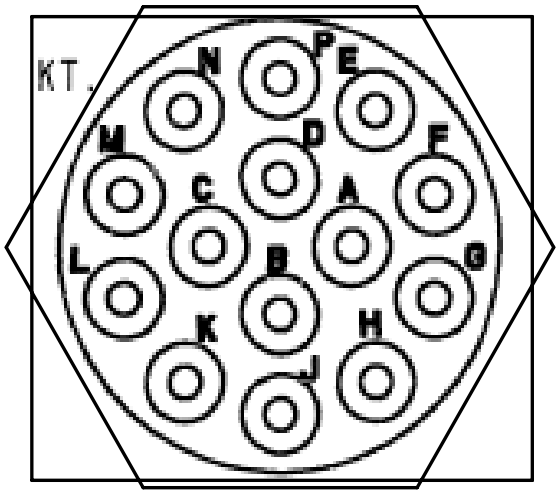
Locate the positive wire of the accessory you desire Hotdog™ to activate. (Be sure that the accessory requires a positive voltage for activation.) we recommend using the vehicle HORN as an alerting device, due to it's simplicity and accessibility. Splice into the wire that delivers +12 volts to the horn. Attach directly to the horn without going through the horn relay. Use solder and heat shrink for the best connection. Connect the opposing end to Hotdog™ Terminal #H.

Horns with multiple positive wires: Use a voltmeter to determine which wire is delivering the highest voltage reading. Remove wire clip from the horn. Attach positive lead of the voltmeter to the wire. Touch negative lead of voltmeter to the vehicle's metal surface. Activate the horn while reading the voltmeter. Repeat the test while measuring the remaining positive reading wires. Attach the Red accessory wire to whichever one of these wires that has the highest voltage. Route the opposite end to Hotdog™ Terminal #H.

NOTE: As shipped, your Hotdog™ control unit is capable of alerting with ONE DEVICE ONLY.
For example, do not patch into the horn and the lights. To activate more than one alerting device from Terminal #H you must use independant relays or a blocking diode for each device, while using Hotdog™ Terminal #H to trip the relays.

3) Hotdog™ Control Unit

Terminal #A To Window B Motor
Terminal #B Ground for Hotdog™ system.
Terminal #C To Window A Motor
Terminal #D From Window B Switch.
Terminal #E - Pager Trigger (option unit).
Terminal #F HV (unswitched, Battery, 12v)
Terminal #G From Window A Switch
Terminal #H Alarm Horn / Light Control (12v lead)
Terminal #J Fan Control (negitive lead)
Terminal #K Backup Temperature Sensor In
Terminal #L Backup Temperature Sensor +5v out
Terminal #M Backup Temperature Sensor ground
Terminal #N 12v (out) to optional Pager
Terminal #P Not Currently Used



4) Pager (wire placement for those who purchased this option)

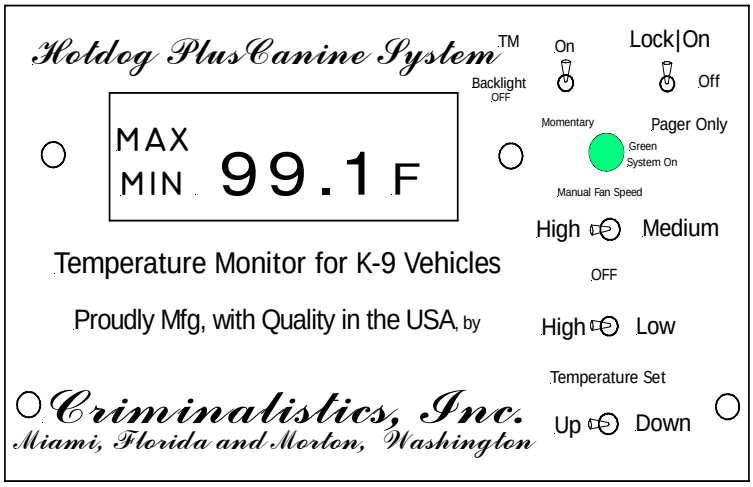
- **Terminal #B -** Ground wire for Pager operation. May also be connected to the negative terminal of the vehicle battery or to an acceptable chassis ground.
- **Terminal #E -** The Negative Trigger wire from the Pager. (Model DX: Gray Wire, Model EX: Pink Wire, Model 795T: Violet Wire, Model Enforcer: Blue). Upon notification of a temperature violation the Hotdog™ will trigger the Pager. **CAUTION:** Keep this connection away from any Positive 12 Volt power source. Damage can result to your Pager and Hotdog™ system.
- **Terminal #N -** 12 Volt power supply wire for Pager operation to Hotdog™.

Read the antenna connection information in the Pager instructions **carefully**. Newer model vehicle's incorporate an AM/FM antenna will not accept the Pager signal. Glass laminated antennas (in the windsheild) will not accommodate the Pager's transmitter. The Pager operates at 27 MHz on the CB channels. You may attach it to a CB antenna or the supplied manufacturer's Glass Mount Antenna. Connection to the wrong antenna can damage your Pager and the Hotdog™. Examine your connections carefully. For optimum range we recommend the use of a separate Glass Mount Antenna.

NOTE: mis-matched antennas on your Pager can cause your Hotdog™ to lose memory and/or act erratically.

V. Front Switches and Programming Instructions

The following illustration shows the face plate of the **Hotdog™** control unit after proper programming.



The System LED indicates system status
Green > System On, Normal
Blinking Green > Temperature Alarm
Blinking Red / Orange > Low Voltage

1) Switches and setting the MAX Temperature

The switches on the front of your Hotdog™ have multiple functions.
Switches have three positions. Center is off for each switch function.

- **Back Light Sw.** (Temperature display)(Upper left) Up is ON, Center OFF, Down is momentary On
- **Lock / On**, Up, turns on the Hotdog™, switch has a locking detent, to unlock, pull up on the collar to select a different position. Center is OFF and Down is Pager Only ON, this position is also locking. Pager Only, turns on the Pager and monitors the motion detector sensors **ONLY!**
- **Manual Fan Speed**, Left selects high speed, center is OFF and Right is Medium (reduced) speed. In a Alarm condition (System LED Blinking) Fan will run at high speed, and this switch is disabled.
- **Temperature Set**, consists of two seperate switches, the upper switch selects between the High (Max) and Low (Min) Limits. The Lower switch scrolls the Temperature limit up. Center is OFF. Switch is Momentary. when you release it, it returns to center (OFF).

2) Programming

The maximum temperature measured by Hotdog™ is 122° F. Your Maximum set point should be between 85°F to 90° F for your canine's safety.

To Program, The Lock/ON switch needs to be centered. Select the high (or Low) Temperature Set, toggle to UP, and the temperature display will scroll up (from it's current setting), if you go past your desired setting, the temperature will wrap around, and single toggles of the switch will step in one degree increments. Once the desired temperature is reached, Lift the Lock/ON switch up, and return the High/Low switch to the center. The System LED should illuminate Green, and MAX should appear on the LCD. You can check your temperature setting at any time by selecting High or Low.

If the word 'MAX" does not appear on the display, your system is NOT programmed and will not alert!

Consider and observe the following when programming your Hotdog™ for the first time:

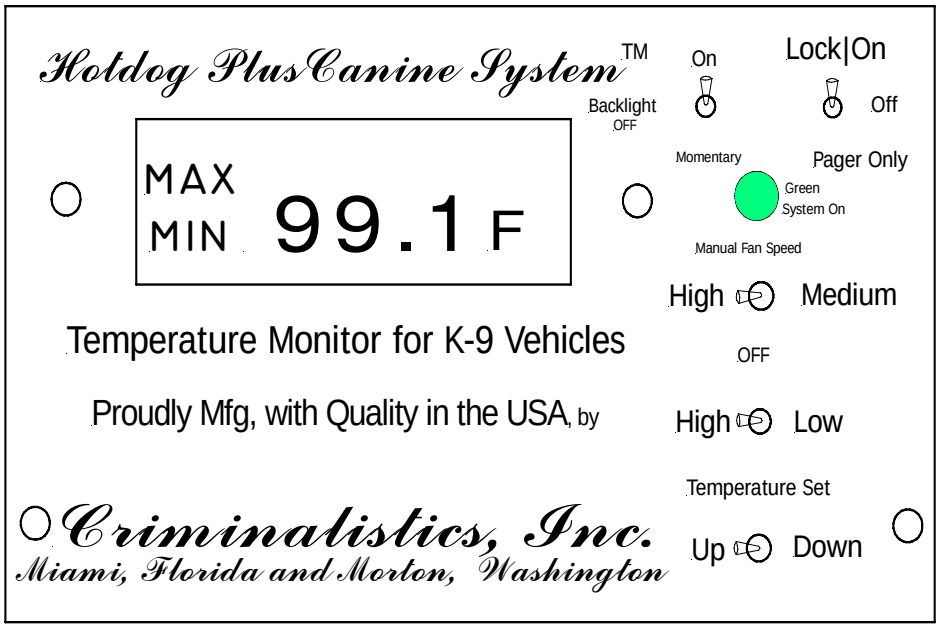
- What is the normal ambient temperature of your patrol vehicle?
- Note the ambient temperature reading on the Hotdog™ during normal patrol or operating hours.
- Note the temperature when you return to your vehicle after it has been idling with the K-9 inside. You may notice that the idling vehicle's interior temperature rises because an idling vehicle generates more heat than when it is moving.

After making the above considerations, you may decide to program the maximum about 7 to 10 degrees higher than the normal temperature reading during idling. This will assist in setting a reasonable maximum temperature.

If Your Hotdog™ system detects a high temperature, the following will occur: 1) The System LED will Blink, The Light/Horn Output will Cycle once a second, Fan will come on to High Speed, Window A will roll down for 5 Seconds, Followed by Window B. Deactivation occurs if the temperature returns to below the Maximum Temperature Set point or by switching the Hotdog™ control unit off. (***In case of a non-running engine, the system will run until the battery dies!***)

Programming your Hotdog™

Keep this Programming Guide with your unit



To set critical temperature: Center the **"Lock/On"** switch, Select the **high** (or Low) Temperature Set, toggle to **UP**, and the temperature display will scroll up (from it's current setting), if you go past your desired setting, the temperature will wrap around, and single toggles of the switch will step in one degree increments. Once the desired temperature is reached, Lift the Lock/ON switch up, and return the High/Low switch to the center. The System LED should illuminate Green, and **MAX** should appear on the LCD.

You can check your temperature setting at any time by selecting High (or Low) postion of the temperature set switch. *Be sure to return the High switch to center when done checking.*

NOTE: The **"MAX"** abbreviation must appear in the display or the Hotdog™ control unit or the system will not provide an alert at your desired maximum setting. (However, the back-up sensor will activate the system at 92° F.) **If "MAX" disappears from the display your programmed maximum temperature is lost. The unit must be reprogrammed.**

The Hotdog unit is equipped with a battery backup for maximum temperature setting. This feature eliminates the necessity of resetting the maximum temperature set point each time the fuse is removed or power is disconnected. A single AA rechargeable battery is installed behind your display.

In the unlikely event the AA NiMh needs to be changed, turn the unit off, Remove the 40 amp fuse located on the power supply wire next to the vehicle battery positive post. Next, remove the two small screws at the bottom of the unit face plate. This will expose the rear of the display where the AA battery is housed. Cut the securing Tie Wrap. Replace the battery with a AA NiMh cell and secure in place using small tie wrap(s). Slide the faceplate assembly back into the protective case, and fasten the assembly together using the faceplate screws. Re-install the 40 amp fuse on the power supply wire, and reset your maximum temperature using the instructions above. ***Note: If there is no Temperature display (symptom for a dead battery), turn the unit on, if the Display turns on, the battery may just need recharging, which takes about 8 hours of "ON" time.***

WARNING: If your vehicle is going to be serviced, jump started, battery charged, or if you use your battery to jump start another vehicle **turn your Hotdog™ System off and remove the fuse**. Failure to comply could cause damage to your system! REMEMBER TO CHECK YOUR MAXIMUM TEMPERATURE AFTER REMOVING AND REINSERTING THE FUSE.

Resetting/Reprogramming Maximum Temperature: First, clear the "MAX" setting by toggling "High" SET switch, turn the Hotdog™ "Lock/On" switch on, if already on, cycle the switch off then back on. MAX should be cleared from the display, then follow the programming instructions (top of the page) to reset it.

Warning: If the unit has been engaged with a temperature above 92° F the backup sensor located in the Grey probe wire must be cooled below 92° F before it can be reset. Failure to comply will result in the unit being deployed continuously until it is reset.
To disarm or turn off the Hotdog™: Toggle the Right-hand switch to the **down** position.

Testing the Hotdog™ system: If you set the High alarm temperature to around 90° F you should be able to activate the system with the body heat generated in the palm of your hand. Hold the probe(Black) in your hand, and observe the temperature climb. When the temperature reaches your High programmed temperature, your alerting system will be activated (You can manually deactivate the system by toggling the Right-hand switch to the down or OFF position.)

Trouble Shooting Guide

Problem	Possible Causes
Display is jumpy, reads erratically	Control Unit and/or probe is too close to radio transmitter. Improper grounding of unit. Check your ground wire, locate a proper grounding source.
Programming set point changes or MAX disappears from display.	Battery has lost power or has been disconnected. Loose battery terminal connection.
Alarm does not sound	Set point is improperly programmed. Go through programming instructions again. If "MAX" is flashing and your horn, lights, or siren are not activated, improper connections are a likely result.
Digital display is locked up. Stuck on one temperature or will not program to desired setting.	The unit has received a power surge. Turn the unit off and remove the fuse. Let the system discharge for about 30 minutes or more. Replace the fuse and reset the system.
Alarm remains on	Set point is improperly programmed. Make sure setting is 80° F or higher or at least higher than the ambient temperature in the installation area. The grey Back up sensor probe may have activated. If temperature has exceeded 92° F , you must cool the physical body of back up sensor below 92° F to reset. You may use a freeze spray to accomplish this quickly, do not allow the 3 legs on sensor to touch each other.
Display reading is LLL	If your display reads **LLL** and will not return to any numbered reading, the Black primary probe wire may be broken or disconnected. You may want to consider a spare probe to minimize down time if this event ever occurs.
Display reading is HHH	The temperature has exceeded 122° F. This most noticeable when you are outside the vehicle and the system is not on. Cool the vehicle down and the reading will return. Ensure probe is installed correctly.
No reading on display at all	Internal AA NiMh battery is discharged, turn on unit, and display should return, if not, the battery may need replacing, or the unit may need servicing. Check Main Fuse.
Fuse is blown or blows upon alerting.	Check the devices connected to Terminals # A,C,J,H,L & N.
Unit has engaged without reaching maximum temperature.	Ensure that the unit is not located near a heat source or placed in direct sunlight. Back up sensor probe may have engaged unit. Cool back up sensor below 92° F.

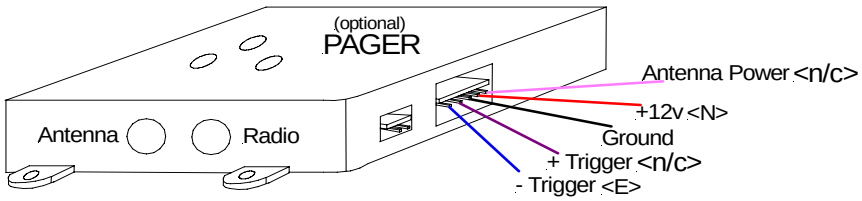
Please call us if you have any questions. We will be happy to assist you.

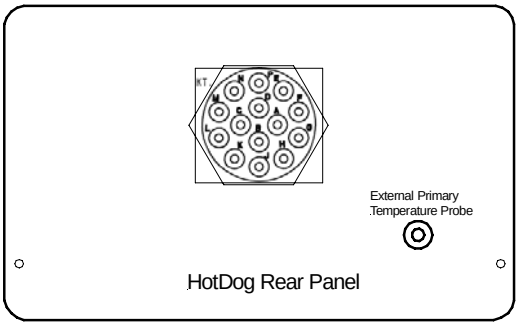
VI. Hookup of Hotdog™ with Optional Pager and Vehicle Alarm Function Sensor

Vehicle Alarm Installation Note: To prevent false alarms caused by the canine moving inside the car, hook up the sensor and the pager according to this diagram with the diodes provided.

ONLY FOR PAGER AS A VEHICLE ALARM SYSTEM

This Pager system is actually the heart of a ***full-blown burglar alarm system*** for your vehicle. Many options are available to you at this point such as glass breakage detectors, motion sensors, key lock alarm and starter kill functions. Please feel free to contact our support staff for additional information regarding these products.





By installing the unit as depicted in the illustration above the alarm sensor is switched On when the **Hotdog™** is armed (Lock/On, Upper Right hand switch is up). The vehicle alarm (Pager Only) is activated when the switch (Lock/ON) in the Down position. Both are off when the (Lock/On, Upper Right hand switch) is in the center position.

VII. FINAL NOTES

Ensure that the system ground is a true **BATTERY OR CHASSIS GROUND**. Improper ground connections will adversely affect the unit. GROUNDING DIRECTLY TO THE NEGATIVE BATTERY POST IS RECOMMENDED!

This is very important. BE SURE THE LOCATIONS CHOSEN FOR BOTH THE SYSTEM'S PRIMARY TEMPERATURE PROBE AND THE BACK UP TEMPERATURE PROBE ARE NOT IN DIRECT SUNLIGHT OR OVER / UNDER THE VEHICLE'S HEATER VENTS. Chewed, eaten, snatched, cut, or damaged probes are not covered by the warranty.

Test your system daily. When you enter the vehicle at the beginning of a shift and the vehicle is still hot, flip the **Hotdog™** System on and make sure it alerts. Do not assume that the vehicle or system has not been altered during your time away, the resulting consequences could prove deadly. Please test your system daily just as you would check your service revolver for bullets. When you enter the vehicle and the temperature is hot, just turn the Hotdog™ control unit on and let it alert. This will confirm your maximum setting is still programmed and no one has serviced the vehicle or disconnected the battery.

You will lose your high setting if the car battery dies or has been disconnected. Should this occur, simply reprogram the unit by following the programming instructions. Ensure the unit is connected directly to the battery so the system has power even when the car is not running.

Should the need arise to jump start your vehicle, provide a jump, charge the vehicle battery, you must first remove the inline fuse to the Hotdog™ control unit. Failure to remove the fuse, may send a power surge to the unit and cause the system display to lock up. If your display is locked up turn the unit off and remove the fuse. Let the system discharge for about 30 minutes or more. Replace the fuse and reprogram the system.

Carefully follow all directions enclosed with your antenna. The antenna is designed and specifically cut for your Hotdog™ system. Degradation of range can usuallly be attributed to faulty antenna installation practices. Ensure that the grounding sheath does not come in contact with the signal wire, at either the plug or at the antenna base. A continuity tester can verify this. Poor antenna installation practices can decrease normal range for your Pager transmitterto approximately 60 - 70 feet.

X. Limited Warranty

Criminalistics, Inc. warrants your Hotdog™ system to be free from defects in material and workmanship for a period of 1 year from date of sale to the original purchaser. Criminalistics, Inc. will repair this product free of charge, when product is returned at customer expense to Criminalistics, Inc. and if in the judgment of our staff said product has proven to be defective within the warranty period. This warranty does not cover damage due to installation errors, any expenses incurred in the removal and reinstallation of this product.

This warranty does not apply to any product damaged by improper installation, accident, misuse, abuse, improper line voltage, fire, flood, lightning or other acts of God, or if the product was altered or repaired by anyone other than Criminalistics, Inc.

PLEASE NOTE: failure to follow installation guide, drilling into or opening control center, removal of any screws, and abusive use of the Hotdog™ system voids the warranty. **DO NOT INSERT ANY SCREWS INTO THE CONTROL BOX!**

Criminalistics, Inc. shall have no liability for any death, personal and/or bodily injury and/or damage to property or other loss whether direct, indirect, incidental, consequential or otherwise, based on a claim that the product malfunctioned. However if we are held liable, whether directly or indirectly, for any loss or damage arising under this limited warranty or otherwise, regardless of cause or origin, our maximum liability shall not in any case exceed the purchase price of the product.

IMPORTANT

KEEP YOUR INVOICE WITH THIS WARRANTY STATEMENT!!!