Hotdog™ Plus

Temperature Monitoring/Alerting System for Canine Vehicles

Congratulations! You have purchased the most advanced temperature monitoring system available today. ***Criminalistics, Inc.*** is committed to providing the best in reliability, quality and support at an affordable value.

K-9 Officers & Installers: PLEASE take time to read the instructions carefully. This is a life saving system, proper installation and operating procedures must be taken seriously.

Familiarize yourself with all system functions and operational modes. TEST YOUR SYSTEM DAILY!

Overview / Operational Summary

If your programmed maximum temperature is exceeded and/or the back up sensor maximum temperature is exceeded (92° F - 94° F) your **Hotdog™ Plus** will lower **two** electric windows, activate the Accessory output (typically a horn or lights), summon you via a *optional* pager, from up to 1 mile away, and turn on the high volume fan. Your system will cycle/alert continuously until the interior temperature decreases below the programmed maximum temperature or below the back up sensor reset temperature of (91°) unless the unit is turned off by the user, or if the vehicle battery dies.

The optional pager can also function as a vehicle burglar alarm with the addition of *options* that include glass breakage detectors, motion sensors, key lock alarms and starter kill functions. Please feel free to contact Criminalistics, Inc. for additional information regarding these products.

Criminalistics, Inc. 7560 NW 82nd St., Miami, FL 33166, (305) 885 6444, Fax (305) 885 3330
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Hotdog™ Plus
Instruction/Installation Manual

Operation and Programming:

To turn the unit on, lift the "Lock/On" switch lever up (***this is a locking switch and the lever has a slide collar, lift the collar to change it's position***). The LED should illuminate steady "green". Place the switch lever to the center position to turn the unit off. With the "Lock/On" switch in the down position, only the ***optional pager*** system is turned on. (for optional vehicle alarm motion sensors, if installed)

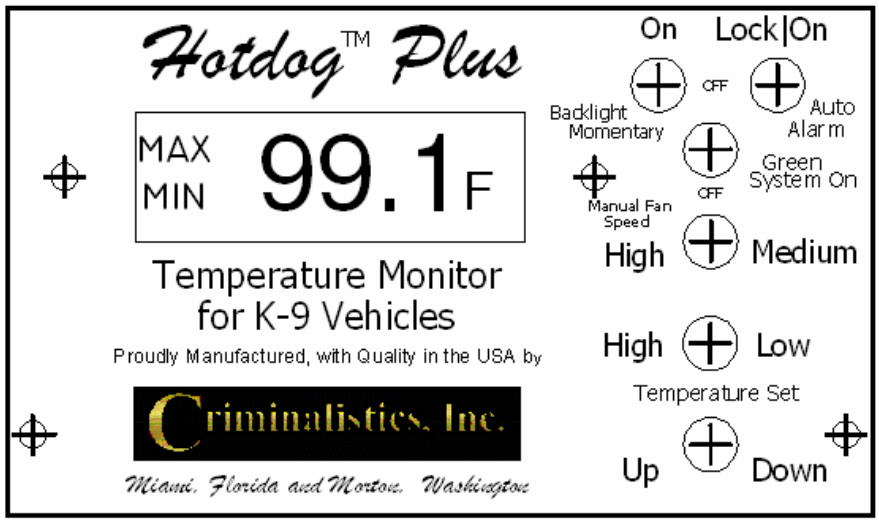
Placing the switch lever in the down (locked) or Center position will turn off the Hotdog Temperature Monitoring system The Hotdog will NOT be powered on.

To set "High" temperature alarm point:

A) With the system (Lock/On) switch set to the middle (off) position (LED off)
B) Select "high" temperature set. (switch is momentary, press and release) The temperature will blink the last programmed high alarm temperature.
C) Using the up/down switch, select the new desired "high" temperature alarm point. The up/down switch will increase or decrease in one degree steps, or if the switch is held over, the temperature will scroll up or down until released. Once the desired "high" temperature is reached, press the "high" temperature set switch one more time. High temperature alarm point is now set. (Blinking will stop).

Note: You can confirm the setting with the Lock/On switch centered. Press the "high" temperature set switch once, it will display the current setting, press the "high" temperature set switch one more time to return to ambient temperature. When a MAX or MIN temperature is recorded and the "Lock/On" switch is centered, MAX and/or MIN will be displayed on the LCD.

D) If desired, program the Low temperature, step B & C above, using "Low" temperature. It is recommended that the **low** temperature not be set unless it is ***specifically*** to be used.



Programmed temperature settings are maintained with a NiMh re-chargeable battery. In the un-likely condition the battery needs to be replaced. Please refer to instructions on page 18.

Turning Unit On:

Lift the "Lock/On" switch up. The LED should illuminate steady "green" and MEM will appear on the Temperature LCD. If the temperature reaches the High set point, MAX will appear on the LCD just below MEM. If Low temperature point is set and the temperature drops below the set point, MIN will appear below MAX on the LCD. The LED will blink and MEM, MAX, or MIN will blink.

If the LED blinks, there is an alarm condition present. (Refer to alarm LED condition codes on the next page)

With the "Lock/On" switch up, press the High (or Low) temperature set switch once. This will display the Highest (or Lowest) recorded temperature. Pressing the High (or Low) switch one more time will return it to the ambient temperature. The Temperature unit has a NiMh rechargeable battery to retain settings for approximately 6 months of nonuse. With normal use the Hotdog™ Plus unit will recharge the battery automatically.

Alarm LED condition codes:

Steady Green: All's well, system on and active.

Blinking Green: ALARM, Temperature (High or Low), either the primary or backup sensor.
(The Primary sensor will also blink the MAX or MIN on the LCD)

Alternating Red/Orange: ALARM, Low Voltage, and possible Temperature sensor.

Switch Descriptions:

Backlighting: This switch is used to turn on and off the Temperature LCD back lighting. Up is constant On, Center is Off, and Down is Momentary On.

Lock/On: Used to turn on the Hotdog and for programming the temperature alarm points.

Manual Fan Speed: This switch turns on the fan, either High (full) speed or a lower (medium) speed. This switch will NOT override the Alarm function. In an Alarm condition the fan will run at high (full) speed until the temperature drops below the high temperature alarm point.

Temperature Set, High/Low: Selects either the High or Low temperature alarm set point.

Up/Down: Changes the display alarm temperature set either up or down. Momentary pushing the toggle changes the set temperature in single degree steps. Holding the toggle will scroll the temperature in the direction held. The temperature scroll will also "wrap around" and start from the minimum most limit.

Temperature Alarm Sequence of Events: When a Temperature Alarm situation occurs 3 things happen simultaneously: Audio/Visual indicators are activated (typically Horn Honk, Light bar, or Brake lights). Window A rolls down for 5 seconds and the Fan comes on at high speed. After Window A rolls down Window B will roll down for 5 seconds (if connected).

Note: The Green front panel LED must be on steady for the Hotdog™ Plus Alarm function to operate properly.

WARNING: If jump starting the vehicle the Hotdog™ is installed in or using the vehicle to jump start another vehicle, turn off the Hotdog™ Plus. Failure to do so could possibly damage your Hotdog™ Plus and will not be covered by warranty.

Installation

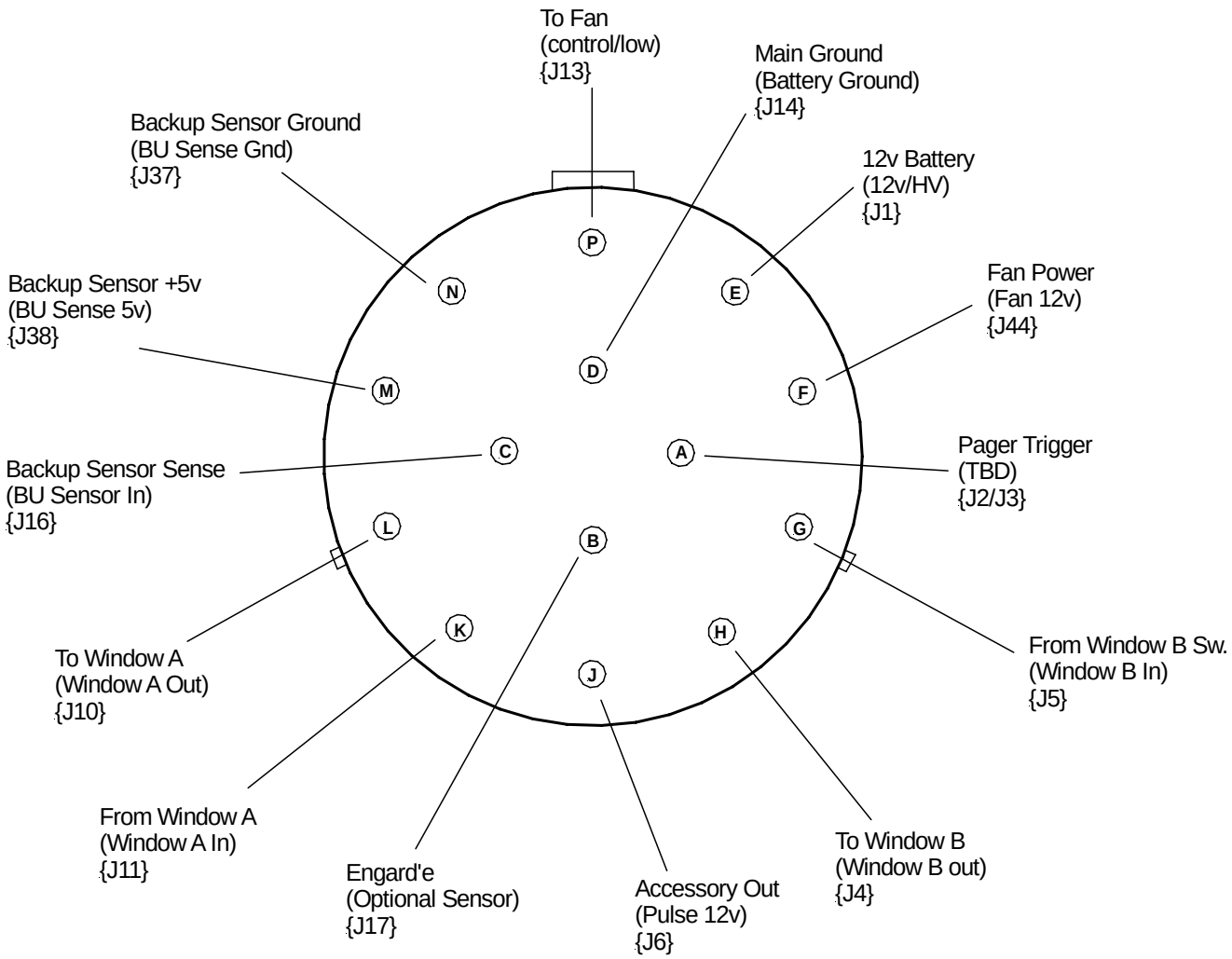
Below is the pin out of the rear panel connector

Note: Many Late model 2008 and newer vehicles are using dual action switches for Doors, Locks and Windows. For these Vehicles you will need to use a DPDT interface relay. *(Both the ground and power to the device are switched)*

Hotdog Plus Deutsch Connector Pinout

Base Description
(Schematic Description)
(PCB "J" Connection)

(Looking at connector fromthe outside of the box)



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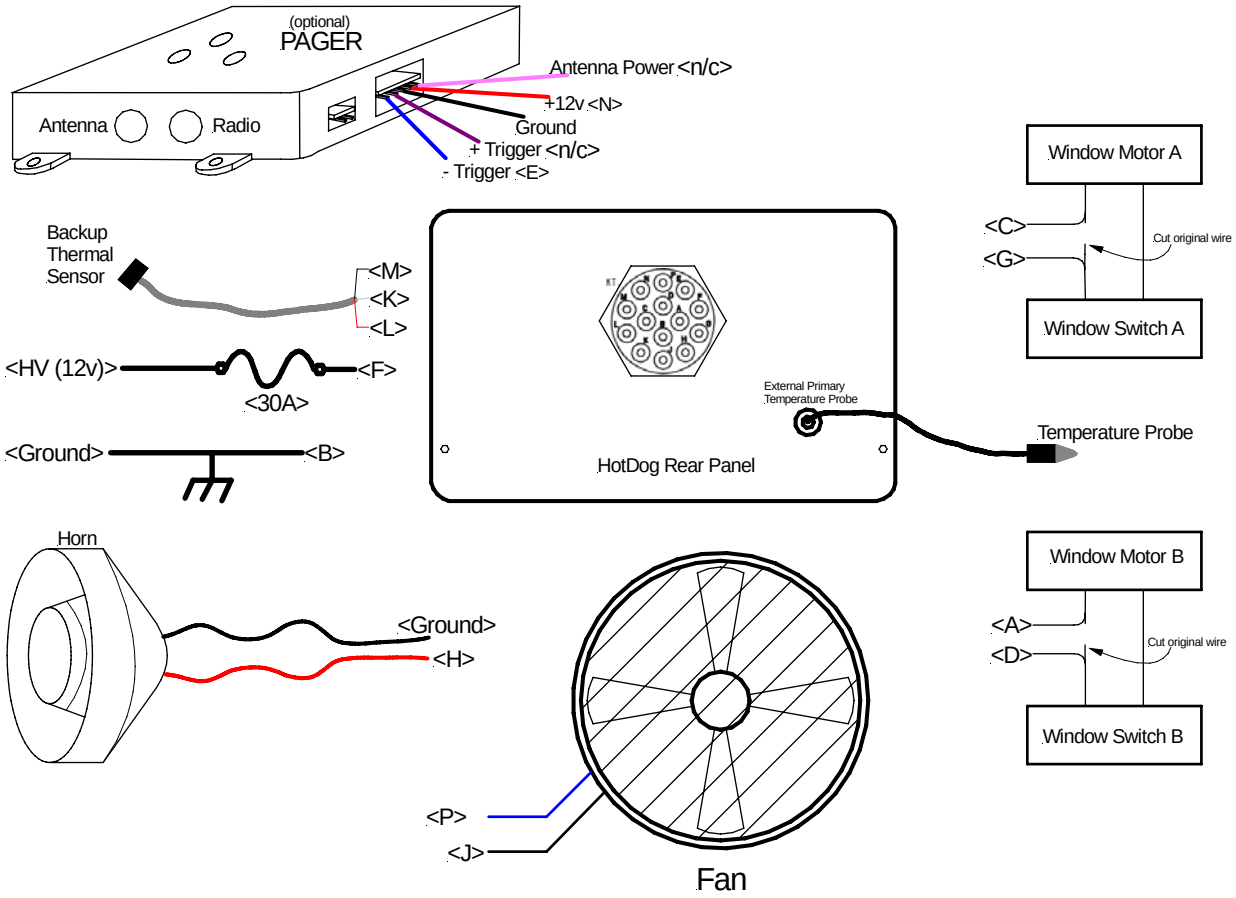
Connection Layout

Note: Many Late model 2008 and newer vehicles are using dual action switches for Doors, Locks and Windows. For these Vehicles you will need to use a DPDT interface relay. *(Both the ground and power to the device are switched)*



Connection List

Pin #	Description
A	To Window B Motor
B	Ground, Battery, Chassis
C	Window A, Out to Motor
D	From Window B Switch
E	Optional Pager Trigger
F	Primary DC In from Vehicle Battery
G	Window A, in from switch
H	Accessory Out (12v 1s on – 1s off)
J	Fan control out
K	Backup Sensor Sense in
L	Backup Sensor +5v
M	Backup Sensor ground
N	12v Out for pager
P	12v Out for Fan

List of Package Contents

Each Hotdog™ Plus includes the following hardware:
- Hotdog Control Unit
- 6ft Probe Cable (Black) (3.5mm jack Primary probe)
- 10" Maxi Thin Fan (15" fan option)
- Wire Harness composed of:
  - Power Wire (+ Battery, 12awg) w/in-line fuse link & 30A Fuse - Ground Wire Black 12awg.
  - 2 Window wires Clear & Blue zip wire 16 awg. - Accessory Wire Red 16 awg.
  - 8ft Back up Probe (Grey) with 1ft plug in backup sensor on the end (custom lengths available).
  - Fan twin lead 12awg power/control wire with reset able 15A fuse
- Mounting Screws for Control Unit

Installation Guideline

Please follow all instructions carefully. Your Hotdog™ Plus is warranted against defective components and faulty workmanship for 1 year. Do not hesitate to call if you have any questions. Our engineers and installers are ready to assist you. You will need a DVM (Digital Volt Meter) for this installation**. The 30 amp fuse is required.**

***INSTALLATION BY QUALIFIED ELECTRONIC TECHNICIAN IS HIGHLY RECOMMENDED*.**

Hotdog™ Plus Control Unit:

Your Hotdog™ Plus control unit is housed in a black and silver case with 2 switches and a LCD on the front panel. Find a functional place to mount your Hotdog™ Plus control unit. Most control units are mounted on top of the K-9 cage, center or over on passengers side top of cage angled toward driver. When determining the mounting position of the control unit, consider the following:

- Accessibility of your Hotdog™ Plus On/off switch for the operator.
- An area of the vehicle that is dry at all times.
- Keep your Hotdog™ Plus unit away from any heat source; i.e. heater vents, transmission, floor, sunlight!
  The **Backup Heat Sensor** must be **handled with care.** Do not crush, crimp or twist the Backup Sensor Black end piece.
- Do not install your Hotdog™ Plus control unit under the vehicle engine hood or in direct sunlight.
- Do not install your Hotdog™ Plus control unit near any **radio equipment**.
- Choose placement of your Hotdog™ Plus control unit near the selected door for ease of installation.
- Place Temperature Probe wire near canine compartment but out of canine's reach.

Electrical Connections:

It is strongly recommended to double check wire connections for proper termination, shorts, or pinched wires for clearances before connection to the battery and fuse insertion.

Note: Vehicle manufacturers typically will not provide complete data on the various switching systems for window lock and unlock functions. Certain vehicles will require a special ground (control) relay to supply ground for these functions. Our system supplies 12 volts. Many Late 08 and newer vehicles are using dual action switches for Doors, Locks and Windows. For these Vehicles you will need to use a DPDT interface relay. *(Both the ground and power to the device are switched)*
Chevrolet and Dodge owners/installers pay special attention to your circuits.

Electric Windows (A & B):

Use a Voltmeter at the electric window motor inside the door and locate the electric window motor input (**positive 12 volts when the window is rolling down**). The input to the electric window motor reverses polarity depending on the function. Verify that the input has a positive voltage during the window roll-down function. Cut the wire between the window motor and the window switch. Make your connection close to the motor. Route the **Clear twin lead** (Window A, Fan window) and **Blue twin lead** (Window B) zip wire provided. Connect the clear zip **Copper** colored wire to the wire that is attached to the door window motor. Connect the clear zip **Silver** colored wire to the switch side of the wire. Connect the blue zip **labeled (win B out)** wire to the wire that is attached to the door window motor. Connect the blue zip **labeled (win B in)** wire to the switch side of the wire.

NOTE: Proper connections will enable the vehicle window switch system to operate normally when your Hotdog™ Plus is not in the alert mode. When your Hotdog™ Plus system is activated in a heat alert mode, **12 volts will be present on the copper colored wire(s) for 5 seconds at the beginning of the alert cycle**, rolling down the windows one at a time.

Accessory:

Locate the positive wire of the desired accessory the Hotdog™ Plus has been designated to activate. The accessory must require a **positive voltage** for activation. Route the "Green" accessory wire to the alerting accessory (typically the horn). Tap into the wire that delivers +12 volts to the accessory. If the horn is used, attach the accessory wire directly to the horn wire (do not go through the horn relay). Solder and apply heat shrink as necessary.

In case of Horns with multiple positive wires: *Use a voltmeter to determine which wire is delivering the highest voltage. Remove wire clip from the horn. Attach positive lead of voltmeter to wire. Touch negative lead to the vehicle's ground, and activate the horn while you read the voltmeter. Repeat the test to the measure additional positive reading wires. Attach the green accessory wire to the input where the highest voltage measurement was recorded.*

NOTE: As shipped, your Hotdog™ Plus control units accessory output is capable of driving **ONE DEVICE ONLY**. For example, do not connect to both horn and lights. To activate more than one alerting device you must use independent switching relays.

Thermal Probes:

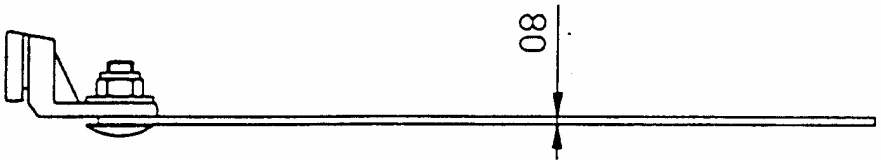
NOTE: The **Backup Heat Sensor** must be **handled with care**. Do **NOT** mount in a hot area. This sensor will trigger the heat alert functions of the Hotdog™ Plus at 92 to 94 degrees and reset at 91 degrees. **Do not mount** in an area that could exceed these temperatures during *normal operation* of the vehicle or in an enclosed console, dashboard, direct sunlight, or in front of an A/C heater vent.

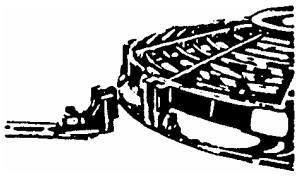
This is the most critical part of the installation for the K-9 protection system to work properly. The Hotdog™ Plus uses two temperature probes: the **Primary Probe**, which connects via the 3.5mm rear panel jack, and a **Backup Sensor Probe** (gray 8 foot cable) in the Hotdog™ Plus wire harness.

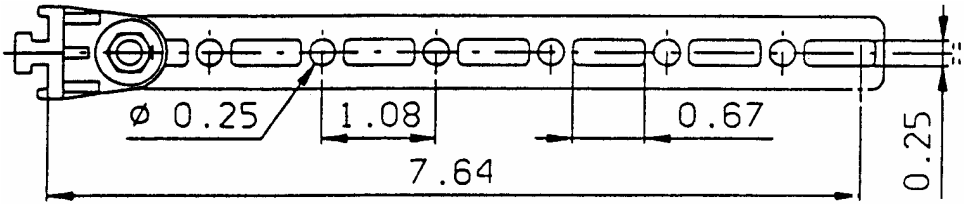
The Primary Probe drives the temperature LCD on the front panel of the Hotdog™ Plus and records the maximum and minimum temperatures. The probe should be located in a place that best measures the K-9 environment air temperature. ***Caution should be observed in keeping the probe away from the K-9's access to it and heat or air conditioning sources (vents).***

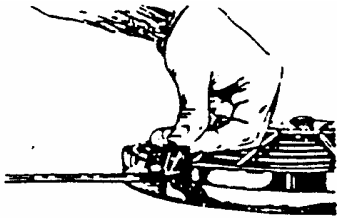
The Backup Sensor Probe is a safety device that is preset to activate the Hotdog™ Plus if the K-9 area reaches approximately 92 degrees F. Since this is a backup probe, it should not be placed in close proximity of the primary probe and ***caution should be observed in keeping the probe away from the K-9's access to it and heat or air conditioning sources (vents).*** The backup probe is part of a detachable one-foot pigtail, in case it is damaged, for easy and quick field replacement.

Fan Mounting Overview:



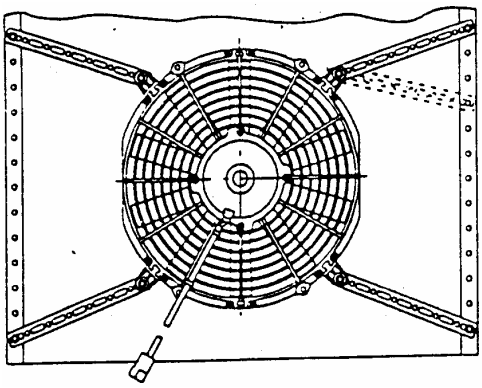




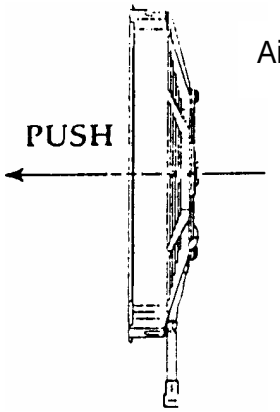


Mounting Bracket Kit
Consists of 4 brackets, 4 rods, and 4 fixing bolts.

Mounting brackets - slide into place on 4 locations around the fan.



The Brackets and rods are adjustable and facilitate the most convenient position for mounting.



Air Flow Direction

Fan Diameter that can be joined	Max. diameter
10”	25”
14”	30”

The chart above depicts the max diameter that can be connected with the mounting kit and size of fan selected. Example: a 10” fan with mounting brackets attached can span a maximum area of 25 inches.

General Operation:

When the system fan is turned on manually (not an alarm condition) it will run at either high or a lower preset speed. You must flip the toggle switch **left** for **high** and **right** for **lower**. Center is off.

If the fan is triggered by the Hotdog, it will run at “High Speed” only until the temperature falls below the high temperature set point or if Hotdog control box is switched off.

Note: If the Hotdog control unit is in an alarm condition, it is not possible to override fan speed control with the manual front panel switch.

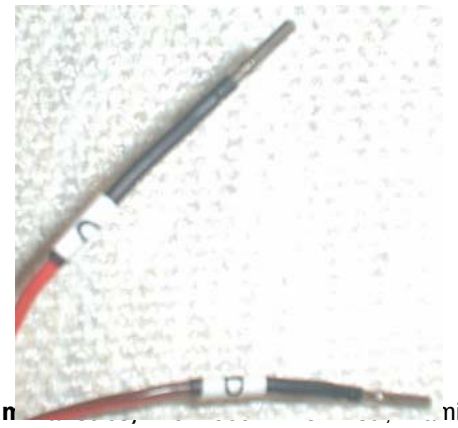
Mounting of the Maxi Thin Fan:

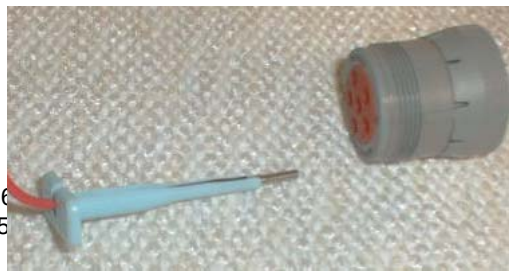
The Maxi Thin Fan can be surface mounted to the dog cage or window grill covers.

1) Remove the front metal grill cover from the Maxi Thin Fan.
2) Remove the mounting bracket kit (if attached to the fan).
3) Find the desired location on the metal window grill (on the glass side) so that it will leave enough room for the window to freely move up and down without hitting the fan.
4) Place one flat washer between the fan and the grill for each of the four mounting bracket holes.
5) Place one flat washer on the top of the fan-mounting hole to protect the mounting bracket holes from damage.
6) Use four nuts and bolts to secure the fan to the window grill.
7) Utilize a flat washer on the mounting bolt to prevent it from going through the grill.
8) It may be necessary to notch the top of the door cover in order to run the Maxi Thin Fan power wires to the control unit through the door cavity and boot. Be sure to route the fan wires so that they are out of the K-9's reach.
9) Secure the wiring to the grill with tie wraps as needed to prevent them from being damaged.
10) Connect the Deutsch 2 pin connector to the fan power cable connector. A de-pinning tool is provided, in case the connector is too large for routing. If the pins are removed, reinsert the pins in the correct positions (red to blue, black to black).

Maxi Thin Fan
(Mounted directly to window grill)

The Maxi Thin Fan comes equipped with a wire harness Deutsch connector plug and insertion tool, as a separate item, to facilitate ease of installation. Should the need arise to remove the pins after they are inserted, remove the green locking plug and simply insert the tool through the back of the plug until it locks into place and slowly pull the wire and pin through the back of the connector.





Final assembly and test:

When everything is complete, connect the system to the battery terminals as mentioned previously to power up your Hotdog™ Plus. Follow the directions enclosed with your antenna carefully. This antenna is cut specifically for your Hotdog™ Plus. Poor range can be directly attributed to faulty antenna installation practices. Be sure the grounding sheath is in no way connected to the signal wire, either at the plug or at the antenna (we recommend verifying this with an ohm meter). You may now program your Maximum alerting temperature and test the unit.

Continuous pressure on the remote button is not necessary; a single firm press and release will do the job. Failure to heed these simple instructions will cause damage to the unlatch solenoid.

NOTE: Failure to follow the installation guide; i.e. **drilling into or opening the control unit**, removal of any screws, improper mounting of the solenoid, or the abusive use of the Hotdog™ Plus **voids the warranty**. Please do not remove mounting brackets and/or reinsert the screws. This can pierce the circuit board causing permanent damage to your system.

Troubleshooting Guide

Warning: If the unit has been engaged with a temperature reading above 94^{O} F, the backup sensor must be cooled below 91^{O} F before it will reset. Failure to do so will result in the unit deploying continuously until it can be reset.

To disarm or turn off the Hotdog™ Plus: Toggle the upper Right hand switch to the **center** position.

Testing the Hotdog™ Plus: If you set the High alarm temperature to around 85^{O} F, you should be able to activate the system with the body heat generated in the palm of your hand. Hold the primary probe in your hand and observe the temperature increase on the front panel LCD. When the temperature reaches your high programmed temperature, your alerting system will be triggered, displaying MAX on the LCD screen accompanied by a blinking green LED. You can manually deactivate the system by toggling the upper right-hand switch to the center (OFF) position.

Symptom or Issue	Possible Causes / Solutions
Display is jumpy, reads erratically	Unit has engaged without reaching maximum Temperature
Programming set point changes.	Improper grounding of the unit. Check your ground wire. Make sure system is grounded to the car battery!
Alarm does not sound	Control Unit and/or probe are too close to radio transmitter. Battery has lost power or has been disconnected. Loose battery connection.
Digital display is locked up. Stuck on one temperature or will not program to desired setting.	Set point is programmed improperly. Go through programming instructions again. If "MAX" is flashing and your horn, lights or siren are not activated, improper connections could be the culprit.
Alarm remains on	The unit has received a power surge. Turn the unit off and remove the fuse (at vehicle battery). Let the system discharge for about 30 minutes or more. Replace the fuse and reset the system. Set point is programmed improperly. Make sure setting is 75^{O} F or higher (must be higher than ambient room temperature in your current location). Back up probe may have been activated, If the temperature has exceeded 94^{O}, cool physical body of back up sensor below 91^{O} F for it to reset. You may use a freeze spray to accomplish this quickly.
Display reading is LLL	If your display reads LLL and will not return to any numbered reading, the primary probe wire may be broken or disconnected. You may want to consider ordering a spare probe to avoid this situation.
Display reading is HHH	The temperature has exceeded 200^{O} F. This can be observed when you are both out of the vehicle and the system is not enabled. Cool the vehicle off and the reading will return. Check for proper installation of the probe.
No Displayed Temperature	Internal rechargeable NiMh battery is discharged; Turn on the premier for approximately 8 hours to recharge the battery.
Fuse is blown or blows upon alerting.	Short in output control wires, windows or latch solenoid

Please contact us with any questions. We are here to assist you.

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Final Notes:

Make sure that the system ground is connected to ground terminal of vehicle battery. Improper grounding will adversely affect the unit. After everything is complete and the final battery connection has been made, power up your Hotdog™ Plus. Make sure a maximum temperature is programmed into the Hotdog™ Plus.

Ensure that the locations designated for both of the system's primary and back up temperature probes are not in direct sunlight or over/under the vehicle's heater vents causing false alerts. Be mindful that chewed, eaten, cut, or otherwise damaged probes are not covered by the warranty.

Please test your system daily. When you enter the vehicle at the beginning of a shift and the vehicle is still hot, flip the Hotdog™ Plus on and check to make sure it alerts. Do not assume that the vehicle or system has not been altered during your time away. This could result in deadly consequences.

You will lose your high setting maximum temperature set point if the LCD does not display ambient temperature. Should this occur, simply reprogram the unit by following the programming instructions. Also, ensure that the control system is connected directly to the battery enabling power at all times, even when the car is not running. Some vehicles will shut down the accessory fuse block if they are overheating. Always connect to vehicle battery with the supplied fuse link. **A minimum 30 amp fuse is required, but 40 amps is recommended.**

Should you should ever have to **jump start your vehicle**, provide someone with a jump, or need to charge the vehicle battery you must **turn the Hotdog™ Plus control unit off prior.** Failure to turn the unit off may send a power surge to the unit and cause the system damage.

Carefully follow the instructions enclosed with your antenna. This antenna is designed and cut specifically for your Hotdog™ Plus. Degradation of range can usually 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 can decrease normal range for your remote door opener.

Limited Warranty

Criminalistics, Inc. warrants your Hotdog™ Plus system to be free from defects in materials and workmanship for a period of one 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 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.

NOTE: Failure to follow installation guide, such as, drilling into, opening the control unit, removal of any screws, improper mounting of the solenoid or abusive use of the Hotdog™ Plus voids the warranty. It is not necessary to hold down the button on the remote; a single firm press and release will do the job. Failure to comply with these instructions can damage the unlatch solenoid.

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.

Thank you for purchasing Criminalistics, Inc. Products
Please keep this Warranty Statement with your Invoice

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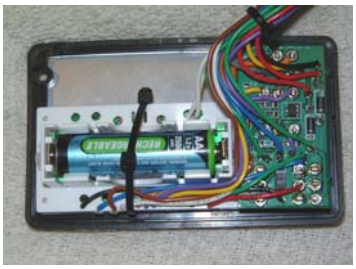
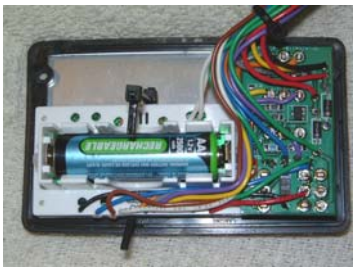
Rechargeable memory battery replacement

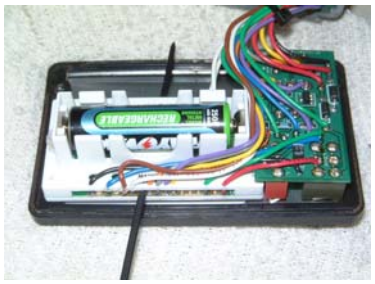
The internal battery has been found to have a shelf life of over 6 months. With normal use, the internal battery should not need to be replaced.

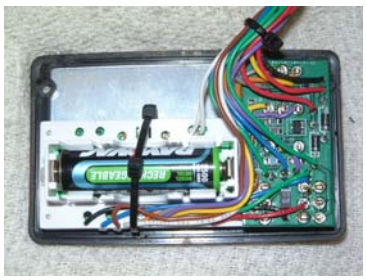
The symptom for a dead battery is no temperature display, when the Premier unit is turned off. If the temperature display comes on when the Premier is turned on, the battery may simply need re-charging, which takes about 8 hours of normal use. If after the re-charging time has elapsed and the temperature display is off when the Premier is turned off, please follow these instructions for it's replacement or return the unit to Criminalistics, Inc. and we can replace the battery for you, for a nominal service charge.

1) Remove the 2 securing screws for the front panel.
2) Gently tilt the front panel forward, the AA NiMh battery will be visible with a securing tie wrap.

3) Cut the tie wrap, remove the AA battery and replace with either a NiCd or NiMh AA cell. Do not use an alkaline cell, except for emergency situations. Alkaline cells are not rechargeable.



4) Replace the cut tie wrap (using 2 small tie wraps recommended) to secure the AA cell in place.
5) Carefully reseat and resecure the front panel to the unit.