DECLARATION OF CONFORMITY

This is to certify that this equipment, supplied by Termite Detection Systems, Inc., PO Box 117, 333 N.E. 46th Street, Oak Island, NC 28465, meets the essential safety requirements of the European Union and is placed on the market accordingly. It has been constructed in accordance with good engineering practice in safety matters in force in the Community and does not endanger the safety of persons, domestic animals or property when properly installed and maintained and used in applications for which it was made.

Equipment Description . . . . . . . . . CO2 Termite Detection System
Applicable Directives . . . . . . . . . . 73/23/EEC as amended by 93/68/EEC
89/336/EEC as amended by 93/68/EEC
Applicable Standards . . . . . . . . . . EN61010-1: 2001;
EN61326-1 A2:2000 Industrial
CE Implementation Date . . . . . . . December 15, 2006
Authorized Representative . . . . . William T. Moyer
President / CEO
Termite Detection Systems, Inc.

Any questions relative to this declaration or to the safety of this product should be directed, in writing, to our Customer Service Department at the above address.

WARNING

This symbol is used to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying this instrument.

Thank you for buying the CO2 Termite Detection System!

With normal use, your CO2 Termite Detection System will give you years of trouble-free service.

To get the best performance from your CO2 Termite Detection System, please read this manual carefully before you start using the instrument.
Getting Started

The CO2 Termite Detection System is shipped with the infrared cell and power stick installed. The nickel/metal hydride batteries in the power stick are not yet charged. To charge them, connect the cord of the AC power adapter to the power jack at the rear of the instrument, and plug the adapter into the appropriate mains outlet. The battery charging light (rear left side) will flash when the detector is charging, changing to steady illumination when the power stick is charged. Allow 10 hours for the full charge.

**NOTE:** You should expect 5 hours of operation from a fully charged power stick. The CO2 Termite Detection System will operate off the AC power adapter. Connecting the supplied AC power adapter will allow operation while the power stick charges.
Using Your CO2 Termite Detection System

**WARNING**

Do not operate this instrument in the presence of gasoline, natural gas, propane, or in other combustive atmospheres.

Using the CO2 Termite Detection System is simple. Press the power switch once to turn the detector ON. The green ON indicator lamp will illuminate, and the yellow indicator lamps will illuminate from left to right in a running fashion while the infrared cell warms up (approximately 60 seconds). When the detector is warmed up and ready for use, the yellow lamps stop illuminating and you will hear an audible beeping.

The CO2 Termite Detection System is highly selective for CO₂ (carbon dioxide). The atmosphere has a natural background concentration of carbon dioxide of approximately 0.035%. To prevent false alarms, it may be necessary to take steps to limit changes in this background concentration from sources such as vehicle exhaust or your own breath.

Headphone sets may be used with the CO2 Termite Detection System. When the headphones are plugged into the detector, the audio signal will only be heard through the headset.

**WARNING**

Only use headphone sets supplied by TDS, part #032-404. Serious hearing damage may occur if other headphone sets are used.

**Finding Termites**

1. Press the right hand switch until the low sensitivity setting is indicated by the amber LED.
2. Make a small hole just above the baseboard and insert the probe.
3. We recommend checking the perimeter every five feet or less.

   **NOTE:** CO₂ is heavier than air and will settle and concentrate in the bottom of the wall cavity. Dry wood termites require more extensive investigation due to colony size and may require checking the second floor.

4. Watch for the yellow lamps to illuminate, and listen for a tone. When the instrument detects termites, its yellow lamps will illuminate and it will emit a different audible tone.
5. Before inserting the probe, make sure your breathing is not causing the instrument to react.

6. If termites are indicated in an area of the wall, the technician may pinpoint the infestation by taking additional readings in the area to determine where the infestation stops. Once the CO2 Termite Detection System locates a possible infestation, further investigation is advised.

7. The CO2 Termite Detection System will react instantly to termite presence and should always be set on the LOW sensitivity setting.

8. When you are finished detecting termites, turn the detector OFF.

**Recharging the Power Stick**

A fully charged power stick should provide power for greater than 5 hours of continuous operation. To recharge the power stick, use one of the instrument’s power cords.

**NOTE:** The CO2 Termite Detection System does not need to be fully charged to operate. Additionally, the power stick does not need to be fully discharged before recharging.

![WARNING]

**WARNING**

Do not attach any other power cords to the CO2 Termite Detection System’s power jack except the AC power adapter and DC cords designed for this instrument.

The battery charging indicator (rear left side) will flash when the power stick is charging, changing to steady illumination when the power stick is fully charged. Allow 10 hours for a full charge.

The CO2 Termite Detection System will operate off the AC power adapter. Connecting the supplied AC power adapter will allow operation while the power stick charges.
Changing the Filter Cartridge
The CO2 Termite Detection System utilizes a specially designed filter cartridge that fits into a protective cap. The filter cartridge should be changed when it appears dirty or when substances trapped in the filter cartridge seem to be affecting the sensitivity of the CO2 Termite Detection System.

NOTE: Water or oil will not penetrate the filter material but will prevent airflow through the filter and affect sensitivity.

CAUTION
Turn off the CO2 Termite Detection System and hold the probe with the filter tip pointing down when removing the filter cap.

To change the filter cartridge, twist off the protective cap. Remove and dispose of the used filter cartridge. Do not allow any moisture or dust to get into the probe. Do not disassemble or attempt to clean the material inside the filter cartridge, as it can be damaged when handled.

Slide a new filter cartridge into the cap. Twist the cap with the new filter cartridge onto the probe base until it is tight.

NOTE: It is very important that you operate the CO2 Termite Detection System with a filter cartridge installed at all times. Failure to do so could damage the detector’s components.

Replacing the Needle Tip
The CO2 Termite Detection System has a needle tip. If damaged, this tip can be replaced with a standard ball inflation needle that can be purchased at any sporting good store.
Changing the Infrared Cell

**WARNING**

Components may be hot. Turn off detector and disconnect power adapter cord before removing the infrared cell door.

The CO2 Termite Detection System’s infrared cell (IR cell) is located in the body of the detector. The IR cell is a complete assembly consisting of a metal tube, connectors and electronic components. The IR cell is not designed to be taken apart. Doing so will destroy the cell. This specialized IR cell will operate for about 800 hours.

The CO2 Termite Detection System will flash all the indicators when the IR cell has reached the end of its useful life. To replace the IR cell:

1. Locate on the top cover (at the rear of the detector) the latch for the IR cell door.
2. Using a small screwdriver, pull the latch forward and remove the door.
3. Pull the IR cell straight out by grasping both edges of the label and pulling evenly.
4. Remove the replacement IR cell from the protective package.
5. Carefully align the male leads and air tubes on the IR cell with the connectors mounted on the circuit board. Insert the leads into the sockets and push the IR cell straight down.

**NOTE:** Ensure the lead connectors on the IR cell ends are not bent and the cell is seated tightly.

Removing/Replacing the Power Stick

The CO2 Termite Detection System uses a pre assembled power stick.

Remove the battery compartment door on the back of the CO2 Termite Detection System by pressing on both release buttons on the grip and pulling the door straight out. The power stick is connected to the PCB board via a miniature electrical connector. Disengage the connector and slide the power stick out of the CO2 Termite Detection System.

To install a fresh power stick, slide the new stick into the battery compartment and push the miniature connector on the power stick into the mating half on the PCB board. Once the power stick is in place, close the battery compartment by aligning the two tabs and sliding the door straight in until it latches. Ensure the wire leads on the power stick are not pinched in the door. Allow 10 hours to fully charge the new power stick.
Replacement Parts and Accessories

Replacement parts and accessories for your CO2 Termite Detection System are available through the same dealer from whom you bought the instrument.

Headphones ................................................................. 032-404
12-volt cord with cigarette-lighter plug, 12 ft. (3.7 m) ............... 703-055-P1
120-volt mains adapter and cord, 6 ft. (1.8 m) ....................... 033-0019
230-volt (Euro) mains adapter and cord, 6 ft. (1.8 m) .............. 033-0020
230-volt (UK) mains adapter and cord, 6 ft. (1.8 m) .............. 033-0022
Power Stick ................................................................. 712-700-G1
Replacement infrared cell ............................................... 716-701-G1
Filter Cartridges, package of 5 ...................................... 712-707-G1
Replacement Probe Cap ................................................. 712-705-G1

Specifications

Usage ................................................................. Indoor or Outdoor
Minimum sensitivity to CO₂ ........................................... 6 g/yr (0.2 oz/yr)
Input voltage range ................................................... 12 to 16 V(dc)
Input current ............................................................. 500 mA Max.
Operating and charging temperature range* ......................... +32 °F to 122 °F
(0 °C to +50 °C)

*May be operated for a limited time in lower temperature environments

Storage temperature range ........................................... +14 °F to +140 °F
(-10 °C to +60 °C)
Humidity ................................................................. 95% RH NC Max.
Altitude ................................................................. 6500' (2000 m)
Pollution degree ....................................................... 2
Overvoltage category .................................................... 2
Weight (with power cells) ............................................. 1.28 lb. (0.58 kg)
## Troubleshooting Guide

<table>
<thead>
<tr>
<th>Problem</th>
<th>Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) All yellow lights flashing together.</td>
<td>1a) IR sensor cell has become unseated.</td>
<td>1a) Remove sensor access door and push both ends of sensor down. (Do not remove/reinsert sensor cell.) Restart unit and examine.</td>
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<tr>
<td></td>
<td>1b) IR sensor cell has failed, perhaps legitimately or perhaps prematurely.</td>
<td>1b) If used ~800 hours+, sensor cell has reached the end of its useful life. Replace with new sensor.</td>
</tr>
<tr>
<td>2) Will not detect CO₂.</td>
<td>2a) Unit may not be warmed up and ready to use.</td>
<td>2a) Verify unit is beeping and no yellow lights are flashing. (Single green light flashing while unit is beeping is OK.) If yellow lights are scrolling across, wait 90 seconds and see if the unit starts to beep.</td>
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<td></td>
<td>2b) Pump may have failed.</td>
<td>2b) You should hear the pump running after the CO₂ Termite Detection System has completed its warm up sequence and is held up to your ear. VERIFY it is not a low battery condition (see #3).</td>
</tr>
<tr>
<td></td>
<td>2c) Battery may be dead.</td>
<td>2c) See #3 below.</td>
</tr>
<tr>
<td>3) After warm up sequence the green, the last yellow and the amber charging LEDs flash.</td>
<td>3a) Battery needs recharging.</td>
<td>3a) Charge battery for 10-12 hours.</td>
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<tr>
<td></td>
<td>3b) Power stick has failed.</td>
<td>3b) Replace power stick with part #712-700-G1.</td>
</tr>
<tr>
<td>Problem</td>
<td>Cause</td>
<td>Remedy</td>
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<td>-------------------------------------------</td>
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<tr>
<td>4) Very erratic, goes off when bumped</td>
<td>4a) CO₂ in background may be high or changing quickly</td>
<td>4a) Take steps to reduce concentration or to limit changes in background (e.g., operator wearing a mask).</td>
</tr>
<tr>
<td>slightly.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5) Pump is not working.</td>
<td>5a) Pump has failed.</td>
<td>5a) You should hear the pump running after the CO₂ Termite Detection System has completed its warm up sequence and is held up to your ear. VERIFY it is not a low battery condition (see #3).</td>
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</table>
Warranty and Liability-Limitation

Termite Detection Systems, Inc., warrants your CO2 Termite Detection System to be free from defects of materials or workmanship for two years from the date of purchase. Termite Detection Systems, Inc., does not warrant items that deteriorate under normal use, including power stick, infrared absorption element and filters. In addition, Termite Detection Systems, Inc., does not warrant any instrument that has been subjected to misuse, negligence, or accident, or has been repaired or altered by anyone other than Termite Detection Systems, Inc.

Termite Detection Systems, Inc., liability is limited to instruments returned to Termite Detection Systems, Inc., transportation prepaid, not later than thirty (30) days after the warranty period expires, and which Termite Detection Systems, Inc., judges to have malfunctioned because of defective materials or workmanship. Termite Detection Systems, Inc., liability is limited to, at its option, repairing or replacing the defective instrument or part.

This warranty is in lieu of all other warranties, express or implied, whether of MERCHANTABILITY or of FITNESS FOR A PARTICULAR PURPOSE or otherwise. All such other warranties are expressly disclaimed. Termite Detection Systems, Inc., shall have no liability in excess of the price paid to Termite Detection Systems, Inc., for the instrument plus return transportation charges prepaid. Termite Detection Systems, Inc., shall have no liability for any incidental or consequential damages. All such liabilities are EXCLUDED.