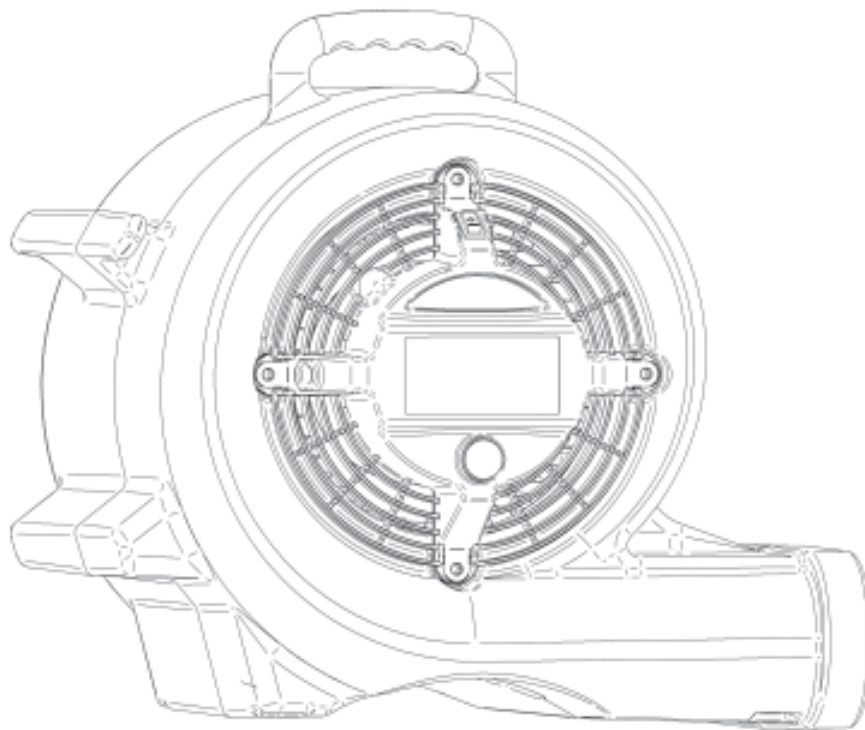




**RAPTOR® Air Mover
Model: RAM1000D**

INSTRUCTION MANUAL



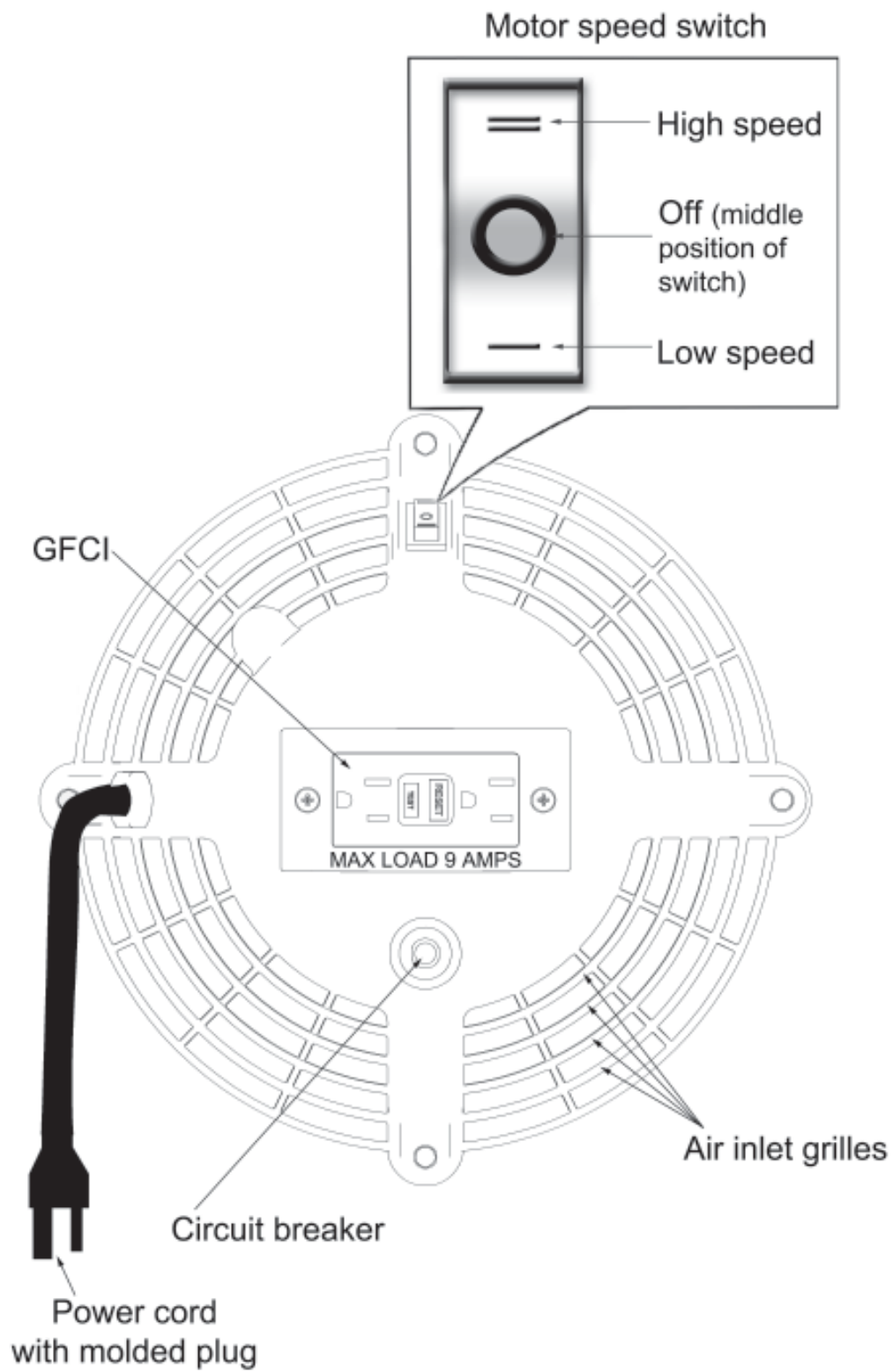
Abatement Technologies, Inc./Remediation Products Division

**Abatement Technologies, Inc.
Georgia, USA
800-634-9091**

**Abatement Technologies Ltd.
Ontario, Canada
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KEY COMPONENTS - Figure A



**RAPTOR® Air Mover
Model: RAM1000D**

Instruction Manual

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READ AND SAVE THESE INSTRUCTIONS!

- Note:** 1. Read and understand all operating instructions before using the RAM1000D RAPTOR Air Mover.
2. Save this manual for future reference.

This instruction manual provides important information on the use of the Abatement Technologies RAM1000D RAPTOR Air Mover. These instructions must be carefully followed in order to operate the unit safely and correctly. If there are any questions regarding the use of the unit, please contact Abatement Technologies immediately at 800-634-9091 U.S. or 905-871-4720 Canada.

Abatement Technologies strongly urges users of any industrial equipment to follow the most recent guidelines and/or standards published by the Occupational Safety and Health Administration, Environmental Protection Agency, and all other federal, state, provincial and local regulations.

Important Note: Personnel responsible for operating, relocating or servicing this unit are urged to wear the proper personal protective equipment and follow safe work practices in accordance with federal, state, provincial, and employer regulations.

GENERAL INFORMATION

The RAM1000D is designed to move a large volume of air and is used to aid in various drying applications. Typically, it is used to dry materials such as carpeting, flooring and furniture that have been exposed to surface water.

RAM1000D TRANSPORT

The RAM1000D should be transported in its normal position; resting on its four rubber feet. If extremely poor road conditions exist, or excessive shock and vibration are expected, take precautionary measures by padding and securing the unit to prevent damage during transport.

ELECTRICAL REQUIREMENTS

1. The RAM1000D requires a minimum of 110 volts AC, 60 Hz to operate properly; however, maximum airflow performance requires 120 volts AC, 60 Hz.
2. Due to momentary start-up current surge, the unit requires a 10 ampere (amp) circuit that is free of other loads.
3. Check to ensure that any circuit to which the unit is connected is protected by a 15 amp circuit breaker. The unit itself is equipped with a 10 amp circuit breaker.
5. The RAM1000D should be connected to a three-prong, properly grounded electrical outlet equipped with a Ground Fault Circuit Interrupt (GFCI) device. A GFCI is an electrical safety device that will trip the circuit and stop the flow of electricity if leakage of current is detected.

Important Note: The GFCI on the RAM1000D control panel only detects leakage of current from an electrical device(s) plugged into the GFCI. The RAM1000D should be plugged into a GFCI receptacle at the power source to protect the power cord and the unit. This GFCI will trip the circuit if it detects leakage of current from the power cord or unit.

6. To avoid personal injury, fire hazards and/or damage to the RAM1000D electrical system and power cord, do not connect or disconnect the power cord to an electrical outlet unless the motor is “OFF” (middle position of Motor Speed Switch).

REQUIREMENTS FOR SAFE OPERATION

1. Never allow unauthorized individuals or children to operate the unit at any time.
2. Abatement Technologies urges anyone operating the RAM1000D to wear the proper personal protective equipment, especially eye and hearing protection, and follow safe work practices in accordance with federal, state, provincial and employer regulations.
3. Check the condition of the power cord before using the unit. A damaged power cord can cause fatal electric shock and/or motor failure.
4. The power cord should never be exposed to water, heat, sharp, or abrasive objects; in addition, it should never be kinked or crushed. Avoid tightly wrapping the cord to prevent kinking of the internal wires.
5. Never pull the unit by the power cord.
6. Avoid running over power cords with utility equipment and vehicles.
7. Do not allow the air inlet grilles to become blocked while the unit is operating; otherwise, the motor will overheat, causing a potential fire hazard.
8. Turn the unit “OFF” before relocating the unit within the work area.

Important Safety Instructions

- a. Do not operate any unit with a damaged cord or plug. Discard unit or return it to an authorized service facility for examination and/or repair.
- b. Do not run cord under carpeting. Do not cover cord with throw rugs, runners, or similar coverings. Do not route cord under furniture or appliances. Arrange cord away from traffic area and where it will not be tripped over.

Caution: As with any piece of electrical equipment, always make sure that the unit is turned “OFF” prior to connecting the power cord to an electrical outlet or disconnecting it from an electrical outlet. Failure to do so will cause “arcing”, and could result in personal injury, fire hazards and/or damage to the unit. Do not disconnect the power cord from supply receptacle while the unit is operating.

Caution: Before operating the unit, make sure that both of the air inlet grilles are securely fastened to the unit’s housing. Keep clear of the openings in the inlet grilles at all times while the unit is operating; this includes fingers, hair, clothing and all other objects. Failure to do so could result in severe personal injury due to contact with the rotating motor and blower assembly, and/or damage to the unit.

Warning: Do not use an extension cord with this unit.

Warning: To reduce risk of electrical shock, do not expose this unit to water or rain. Do not touch the electrical outlet or power cord with wet hands or while standing on a wet or damp surface.

Warning: Risk of electrical shock! Can cause injury or death! Turn unit “OFF” and disconnect power cord from supply receptacle before cleaning or servicing the unit.

Warning: The RAM1000D is equipped with an automatic restart motor and blower assembly that will restart without warning after a temporary power interruption or recovery from a thermal overload (over-heating) condition. Keep clear of the motor and blower assembly at all times to reduce the risk of injury.

Warning: To reduce risk of fire or electrical shock, do not use the RAM1000D with any solid state speed control device. Do not use in a cooking area.

Caution: The RAM1000D is designed for indoor use only.

CAUTION: For General Ventilating Use Only. Do Not Use To Exhaust Hazardous Or Explosive Materials And Vapors.

Warning: Abatement Technologies air movers are not intrinsically safe for use in hazardous environments. Always consult a certified industrial hygienist before using them. Do NOT use this equipment in any atmosphere that is or may be immediately dangerous to life or health (IDLH), combustible, flammable, explosive, oxygen deficient, and/or contains odors, vapors, gases or particulates that exceed permissible exposure levels. Such atmospheres may require the use of intrinsically safe equipment, specific engineering controls, and personal protective equipment in accordance with Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA), Canadian Standards Association (CSA), and other federal, state, provincial and local regulations.

Warning: This equipment is not classified as “intrinsically safe” and should not be used in the following hazardous locations as defined by the Underwriters Laboratories: Class I Division 1, Class I Division 2, Class I Zone 0, Class I Zone 1, Class I Zone 2, Class II Division 1, Class II Division 2, Class III Division 1, Class III Division 2. Refer to the UL web site: <http://www.ul.com/hazloc/define.htm>.

Warning: Do not use this unit near sparks, open flames or other possible sources of ignition.

RAM1000D CONTROL PANEL - Refer to Figure A

1. **Power Cord** - Hardwired, 14/3 AWG SJTW power cord for connection to electrical outlet.
2. **Motor Speed Switch** - Three position switch, “HIGH” (position is labeled =), “OFF” (middle position of switch), and “LOW” (position is labeled -) that controls the speed of the motor and blower assembly.
3. **Circuit Breaker** - 10 amp circuit breaker that provides protection for electrical equipment plugged into the GFCI receptacle.
4. **GFCI Receptacle** - Electrical safety device that will trip and stop the flow of electricity if leakage of current is detected from an electrical device(s) plugged into the GFCI receptacle. The RAM1000D can supply a total of 9 amps of electrical power for additional equipment that is connected to the GFCI receptacle. Do not exceed this 9 amp limit.

Note: If the equipment connected to the GFCI receptacle draws more than a total of 9 amps, the circuit breaker on the control panel and/or the building breaker will trip. This condition can be remedied only by reducing the total amperage draw.

DAISY CHAINING

“Daisy Chaining” refers to the operation of multiple units on one circuit, with only one of the units plugged into a 120V/15A electrical power supply receptacle. Each subsequent unit is plugged into one of the GFCI receptacles on the prior unit, up to the maximum number allowed based on the amperage draw per unit. The National Electrical Code limits the total amperage draw of devices operating on one circuit to 80% of full load, which means that the total amperage draw on a 120V/15A circuit, including the unit plugged into the building electrical power supply receptacle, must not exceed 12 amps.

A total of four RAM1000D units can be “Daisy Chained” on a 15 amp circuit, including the unit plugged into the building electrical power supply receptacle.

Important Note: Inspect the unit and tighten any fasteners that may have loosened during transportation.

TO START UNIT

1. Check to make sure that the Motor Speed Switch is in the “OFF” position. Plug power cord into a 120 volt AC, 60Hz, 15 amp supply circuit.
2. Set the Motor Speed switch to the “HIGH” or “LOW” position.

Note: In the event of a power failure while the unit is running or loss of power due to any other cause, this unit's motor will re-start when power is restored.

Warning: Use only Abatement Technologies replacement parts. Use of non-Abatement Technologies parts voids the product warranty and all performance claims and jeopardizes worker safety.

Warning: To reduce the risk of fire, electrical shock or personal injury, always turn the RAM1000D "OFF" and disconnect the power cord from supply receptacle before cleaning or servicing the unit.

COMPONENT REPLACEMENT AND CARE OF THE UNIT

Warning: To reduce the risk of fire, electrical shock or personal injury, always turn the unit "OFF" and disconnect power cord from supply receptacle before removing the control panel, and before cleaning or servicing the unit. The RAM1000D is equipped with an automatic restart motor and blower assembly that will restart without warning after a temporary power interruption or recovery from a thermal overload (over-heating) condition. Keep clear of the motor and blower assembly at all times to reduce the risk of injury.

Occasionally a defective component will cause the unit to operate improperly or not at all. Any electrical component can fail. Refer to the Wiring Diagrams and Wiring Schematics to diagnose the failure of any component. Diagnostics should only be performed by a technician qualified to service electrical equipment.

The unit is plastic and should be cleaned with a damp cloth or a water-based cleaner/sanitizer. Do not use harsh chemicals, solvents or detergents to clean the unit.

Warning: Keep electrical components dry as their exposure to liquids poses a safety hazard and can damage components.

STORAGE

RAM1000D units can be stacked for storage purposes. The RAM1000D has curved notch molded into the base of the housing, allowing up to three units to be stacked on top of each another.

Caution: Do not operate RAM1000D units when they are stacked and for safety purposes, do not stack units more than three high.

RAM1000D SPECIFICATIONS

Item	Specification
Dimensions:	17" wide x 20" deep x 18.5" high
Weight:	25 pounds
Housing material:	High density polyethylene.
Motor:	High efficiency 230 watt motor with thermal overload protection, auto reset, 60 Hz, single phase.
Power supply requirements:	120 volts AC, 60 Hz, 10 amp circuit
Normal operating amperage draw:	High speed: 2.8 amps @ 120 volts AC, 60 Hz Low speed: 2.4 amps @ 120 volts AC, 60 Hz
Airflow:	High speed: 1,125 cubic feet per minute = 2,850 ft per min velocity Low speed: 875 cubic feet per minute = 2,250 ft per min velocity
Power cord:	14/3 AWG SJTW with molded plug
Controls:	Motor speed and ON/OFF switch, 10 amp circuit breaker, GFCI
Noise level:	72 dBA on high speed, 67 dBA on low speed at a distance of 5 ft.

Note: Specifications subject to change without notice.

Note: Airflow ratings estimates are based on factory and independent testing @ 120 VAC with an air straightener and a traverse of readings taken with a computing vane-anemometer. Actual results may vary for various reasons, including motor and blower tolerances. Factors such as reduced voltage to the motor will reduce airflow. Use these ratings as a general guideline only.

TROUBLESHOOTING GUIDE

Problem	Possible Cause	Solution
No response when the unit is turned ON.	No electrical power to the unit.	Plug power cord firmly into the supply receptacle.
	Damaged power cord.	Check all connections and condition of cord. Never operate unit with damaged power cord.
	Tripped circuit breaker, possibly due to overloaded circuit.	Reduce circuit load. Reset circuit breaker for building.
	Tripped GFCI.	Reset GFCI on control panel and/or at power supply receptacle.
	Thermal overload on the motor has tripped.	Turn unit OFF, wait 30 minutes and restart unit.
Unit makes a rubbing or scraping noise when turned ON.	Unit has been dropped or jolted.	Call Abatement Technologies service department.

Note: If the unit does not start or malfunctions after carefully following the **Troubleshooting Guide**, call Abatement Technologies service department at 800-634-9091 (U.S.) or 905-871-4720 (Canada) for assistance.

CERTIFICATION OF UNIT

Abatement Technologies RAM1000D RAPTOR Air Mover has been tested by Intertek Testing Services (ITS) and is ETL and ETL (Canada) listed for electrical safety.

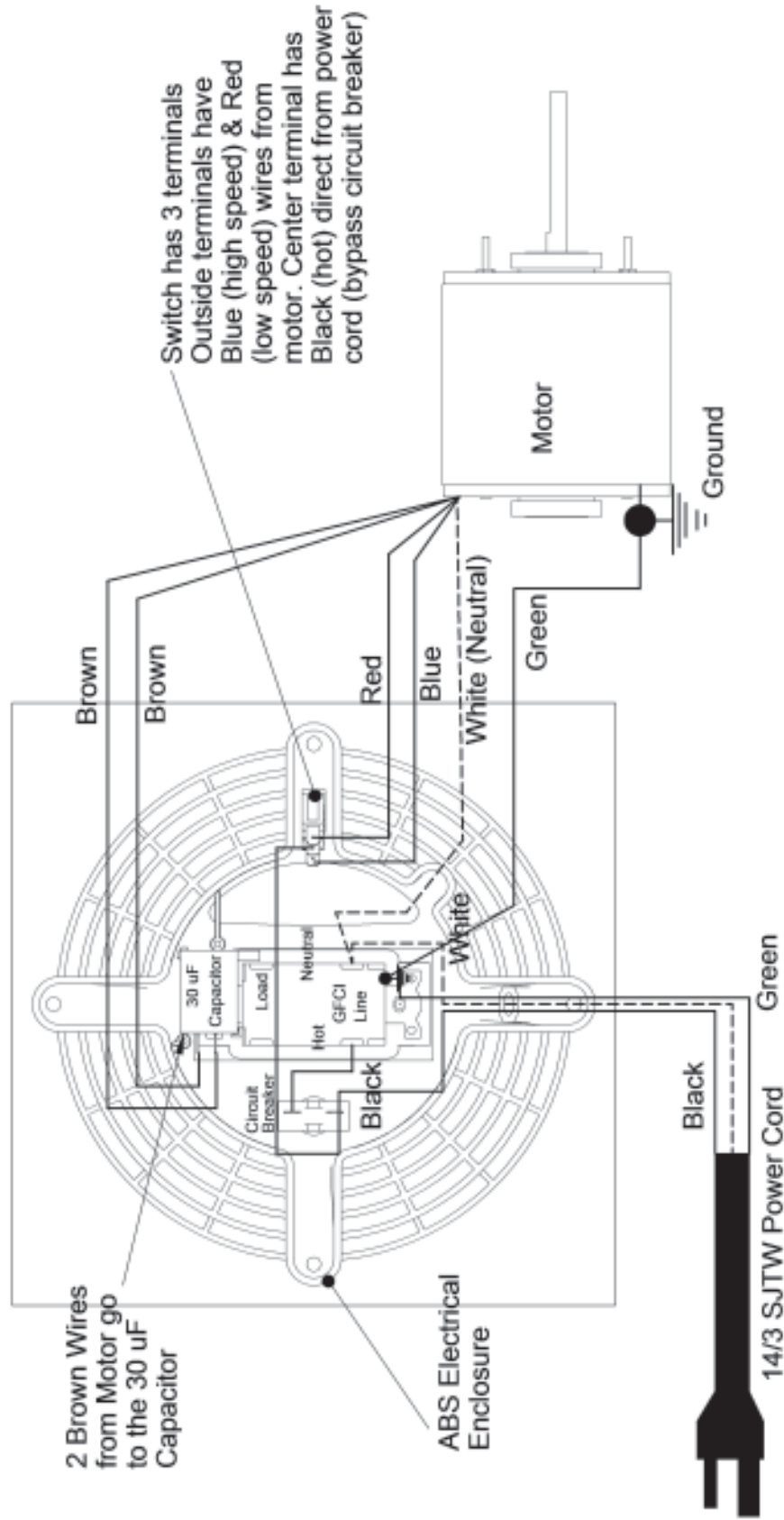
ITS is accredited by the U.S. Occupational Safety and Health Administration (OSHA) as a Nationally Recognized Testing Laboratory (NRTL).

LIMITED WARRANTY

Abatement Technologies, Inc (ATI) warrants that goods sold to the original user shall be free from defects in material and workmanship for a period of 1 year, except such as are commercially acceptable. The plastic cabinet has a lifetime warranty period for the original user. **ATI does not warrant that the goods sold are merchantable or fit for any particular purpose. ATI makes no warranties other than as stated in this paragraph. All other warranties, guaranties, or representations, express or implied, by operation of law or otherwise, are expressly disclaimed.** Goods found by ATI to be defective or not to conform to specification shall upon return be replaced or repaired by ATI without any additional charges, or, at ATI's option, ATI may refund the purchase price of such goods. ATI will pay return transportation charges on returned goods not exceeding the transportation charges applicable to shipment from original destination unless the returned goods are free from defect and conform to specifications. Returned goods which are found by ATI to be free from defect and to conform to specifications shall be held for Purchaser's shipping instructions, which instructions Purchaser shall furnish promptly upon request. **ATI's liability shall in no event extend beyond replacement, repair or refund of the purchase price and ATI shall not be liable under any circumstances for special, contingent or consequential damages, nor for loss, damages, or expenses directly or indirectly arising from the use of the goods, including without limitation, warehousing, labor, handling and service charges, die, equipment, or machine breakage, nor for costs, lost profits or loss of good will. The use of substitute, non-ATI parts and/or filters, in any ATI product, voids all warranties and performance claims. The remedies set forth herein are exclusive.**

For warranty information and assistance contact Abatement Technologies' Customer Service Department at 800-634-9091 (U.S.) or 905-871-4720 (Canada.)

RAM1000D Wiring Diagram



RAM1000D Wiring Schematic

