



Real Flame Patio Heater - Natural Gas (NG) OWNER'S MANUAL

READ AND SAVE THESE INSTRUCTIONS

- · Read all instructions carefully before setting up and operating this unit.
- This manual is designed to provide you with the information needed to set up, operate, and maintain your heater.
- Failure to follow these instructions may damage and / or impair its operation.



WARNING



- This patio heater is for outdoor use only.
- Use only Natural Gas (NG)
- · Children should be carefully supervised when they are in the area of the heater.
- · Do not spray aerosols in the vicinity of this appliance.



WARNING



- Turn off the gas valve immediately if a smell of gas is detected.
- Extinguish any open flames.
- Close the valve of the gas or the regulator after use.
- The use of this appliance in enclosed areas can be dangerous and is PROHIBITED.



WARNING



The user assumes all risk in the assembly and operation of the gas heater. Failure to follow the warnings and instructions in this manual can result in severe personal injury, death or property damage. If you cannot read or fully understand the instruction manual, please contact your retailer.



WARNING



- Read the instructions before installation and use.
- This appliance must be installed and the gas cylinder stored in accordance with
- regulations in force.
- Shut off the valve at the gas connection or the regulator before moving the appliance.
- Use only the type of gas and the type of cylinder specified by the manufacturer.
- In case of violent wind particular attention must be taken against tilting of the appliance.
- Keep the instructions for future reference.

CAUTION

PLEASE READ THE FOLLOWING SAFETY GUIDELINES CAREFULLY BEFORE OPERATION.

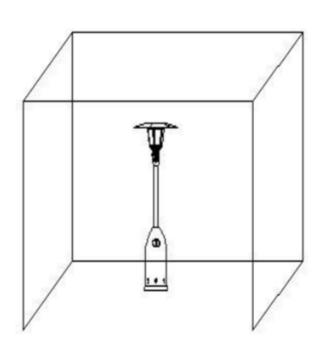
- This outdoor heater is not intended to be installed on recreational vehicles and/or boats.
- Improper installation, adjustment, alteration can cause personal injury and/or property damage.
- Do not attempt to alter the unit in any manner.
- Remove packing materials before use.
- Plumbing tape must be used for all threaded gas connections to prevent leakage.
- The whole gas system, hose, regulator, pilot and burner should be inspected for leaks or damage before use.
- All leak tests should be done with a soapy water solution. Never use an open flame to check for leaks.
- Do not use the heater until all connections have been leak tested.
- Turn off the gas valve immediately if a smell of gas is detected.
- Do not transport the heater while it's operating or still hot.
- Do not move the heater after it has been turned off until the temperature has cooled down.
- Keep the ventilation opening of the cylinder enclosure free and clear of debris.
- Do not paint the radiant screen, control panel or top canopy reflector.
- Control compartment, burner and circulation air passageways of the heater must be kept clean.
- Frequent cleaning may be required as necessary.
- The gas valve should be turned off when the heater is not in use.
- Check the heater immediately if any of the following occurs:
 - The heater does not reach temperature.
 - The burner makes popping noise during use (a slight noise is normal when the burner is extinguished).
 - Smell of gas in conjunction with extreme yellow tipping of the burner flames.
- Avoid inhaling fumes emitted from the heater's first use. Smoke and odour from the burning of oils used in manufacturing will appear. Both the smoke and odour will dissipate after approximately 30 minutes.
- The hose assembly must be located out of pathways where people may trip over it.
- Any guard or other protective device removed for servicing the heater must be replaced before operating the heater.
- Adults and children should stay away from high temperature surfaces to avoid burns.
- The minimum distances from non protected combustible materials should be 1 meter.
- Change the NG cylinder in an amply ventilated area, away from any ignition source (candle, cigarettes, other flame producing appliances).
- Check that the regulator seal is correctly fitted and able to fulfill its function.

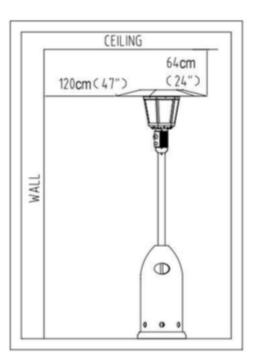
HEATER LOCATION

- The heater is for outdoor use only or in amply ventilated areas (see diagrammatical representations of outdoor areas below). Do not use it indoors or in an enclosed area. Always ensure that adequate ventilation is provided.
- Any enclosure in which the appliance is used shall comply with one of the following:
 - An enclosure with walls on all sides, but at least one permanent opening at ground level and no overhead cover.
 - Within a partial enclosure that includes an over head cover and no more than two walls.
 - Within a partial enclosure that includes an overhead cover and more than two walls, the following shall apply:
 - --- At least 25% of the total wall area is completely open, and
 - --- At least 30% of the remaining wall area is open and unrestricted.
- Heater must be placed on level firm ground.
- Never operate heater in areas where gasoline or other flammable liquids or vapors are stored.
- To protect heater from strong winds, anchor the base securely to the ground with screws, stakes, or other suitable fasteners.

Warning:

- 1) For use outdoors or in amply ventilated areas
- 2) An amply ventilated area must have a minimum of 25 % of the surface area open.
- 3) The surface area is the sum of the walls surface.





Always maintain clearance from combustible materials, from the top 64cm and sides 120cm.

GAS REQUIREMENTS

- Fuel Type: Natural Gas (NG)
- Pilot Injector: .20mm
- Burner Injector: 3.2mm
- Please check gas hose at least once per month and each time a hose/cylinder/valve is changed. If it shows any signs of cracking, splitting, or other deterioration exchange it for a new hose of the same length and of an equivalent quality.
- Avoid twisting the flexible tubes and hoses
- Disconnect gas when the heater is not in use.

LEAKAGE TEST

Gas connections on the heater are leak tested at the factory prior to shipment. However, a complete gas tightness check must also be performed at the installation site. The heater must be checked with a full gas cylinder.

- 1. Make sure the safety control valve is in the OFF position.
- 2. Make a soapy water solution of one part liquid dish detergent and one part water. The soapy water solution can be applied with a spray bottle, brush or rag to all gas connections.
- 3. Turn the gas supply ON at the cylinder.
- 4. Growing soap bubbles will appear in case of a leak.
- In case of a leak, turn off the gas supply at the cylinder. Tighten any leaking fittings, then turn the gas supply ON and recheck. Contact your gas supplier for assistance if bubbles continue to appear.



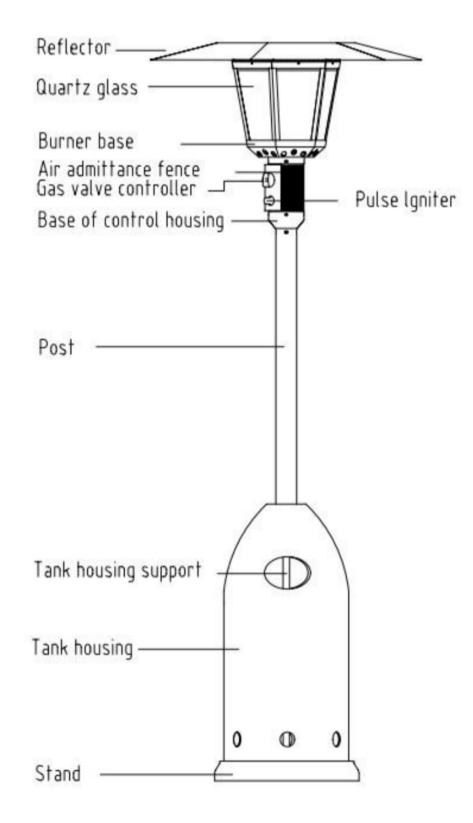
WARNING

Never leak test while smoking.

In the event of gas leakage, the appliance shall not be used or if alight, the gas supply shall be shut off and the appliance shall be investigated and rectified before it is used again.

Check all gas connections with bubbles, half water and half detergent, before every time use.

PARTS AND SPECIFICATIONS



ASSEMBLY PARTS

(Not Supplied)

- Adjustable opening wrench (2) 20 cm (8") long
- Long nosed pliers 23 cm (9") long
- Philips screwdriver w/ medium blade
- Spray bottle of soap solution for leakage test

Parts supplied:

- Tank housing
- Stand with tank housing support
- Assembly post with 3 pcs post brackets
- 1 pcs Reflector with 1 pcs M8 nuts
- 4 pcs bolts M6 x 10 mm for assembly post and burner
- 6 pcs bolts & nuts M6 x 35 mm for post and post brackets
- 3 pcs bolts M8 x 16 mm for post brackets and stand
- 3 pcs ground fixture kit
- 6 pcs M6 x 10 mm ground fixer bolts & nuts
- 2 pcs bolts M8 x 10 mm for wheel assembly
- 1 set bracket with wheels

ASSEMBLY PROCEDURES

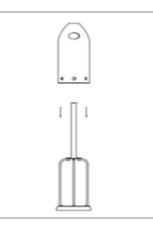
STEP 1

- 1-1.As shown, put three support bars respectively in position on chassis;
- 1-2.Connect the support bars to the chassis with three M8 x 15 mm screws.
- 1-3.Place the support bar with the gas cylinder strap at the rear, wheel side.



STEP 2

- 2-1. Place the main stand post above the three support bars;
- 2-1. Connect the main post and support bars together with six M6 x 35 mm screws and 6 mm diameter nuts and tighten.

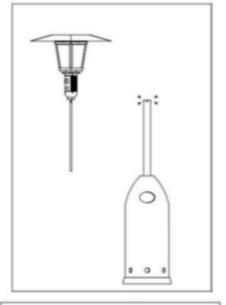




STEP 3 Place the tank housing on the stand.

STEP 4

Tighten the aluminum reflector with M8*50 screw



STEP 5

- 5-1.Connect the nut on gas feed tube from the heater head, and tighten;
- 5-2.Place the heating head on top of support tube and attach with four M6 x 10 screws.

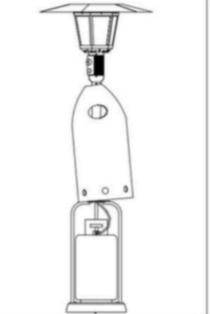
STEP 6

6-1.Lift the base cover;

6-2.Connect the rubber hose on the gas regulator valve and also the gas feed tube, and tighten the two jubilee clips;

6-3 Connect the regulator to an approved Natural Gas connection

6-4.Replace the cover.



Step 7

7-1 Unscrew plastic black ring around ignition switch to remove it and insert AAA battery as shown below 7-2 Screw ignition switch and battery back into heater





OPERATION

TO TURN ON THE HEATER

- 1. Turn on the valve on the gas supply
- Press and turn the control knob to PILOT position (counterclockwise 90°).
- Press down the control knob and hold for 30 seconds. While holding down the control knob, press the igniter button until the pilot flame ignites. Release the control knob 20~30 seconds after the ignition. Note:
 - If the hose has just been connected, please allow at least one minute or more for the air in the gas pipeline to purge out.
 - Pilot flame can be watched and checked from the peephole located on the base of burner.
 - If the pilot flame does not light or it goes out, repeat step 3.
- Turn the control knob to LO and leave it there for 5 minutes or more before turning the knob to desired temperature setting.
- If the burner flame goes out accidentally or it is blown out by wind, turn off the heater and wait at least 5 minutes or more to let the gas dissipate before re-lighting to avoid possible gas explosion. Repeat steps 2 to 4.

TO TURN OFF THE HEATER

- 1. Turn the control knob to PILOT position.
- 2. Press and turn the control knob to OFF position.
- 3. Turn off the valve on the NG connection and disconnect

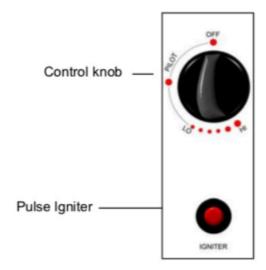


- The whole gas system, hose, regulator, pilot and burner should be inspected for leaks before use.
- Check the hose assembly for sign of abrasion, cuts or wear. Suspected areas should be leak tested. If the hose leaks, it must be replaced.
- Avoid twisting the flexible tubes and hoses.
- 4. Make sure the ventilation opening of the cylinder enclosure, control compartment, burner and circulation air passageways of the heater are free and clear of debris. If debris, spider or insect nests are found, clean the holes with a heavy- duty pipe cleaner or compressed air.
- Always keep a dry chemical fire extinguisher readily available.
- For safety, always allow a 5-minute complete shut off period before re-lighting a hot heater.

WARNING



Do not move the heater or cover it with protective cover right after it has been turned off, wait until the temperature has completely cooled down.



STORAGE

- Always close the valve of the gas supply after use or in case of a disturbance.
- Remove the pressure regulator and the hose attachment if the heater is not to be used for a period of time.
- Storage of the heater indoors is permissible only if the natural gas (NG) connection is disconnected and removed from the heater.
- Check the tightness of the gas valve and for damage. If you suspect damage, have it changed by your gas dealer.
- Never store liquid gas cylinder in a sub-terrain, or at places without adequate air ventilation.

CLEANING AND CARE

- Wipe off powder coated surfaces with soft, moist rag and soapy water. Do not clean heater with cleaners that are combustible or corrosive.
- Remove debris, spider and insect nests from ventilation opening of the cylinder enclosure, control compartment, burner and circulation air passageways of the heater with heavy-duty pipe cleaner or compressed air to keep appliance clean and safe for use. Never clear ports or other openings with toothpicks or other article that will break and block the ports.
- If carbon deposits develop, remove the reflector and flame screen and clean them with soap water. Do not paint the flame screen, control panel or reflector.
- Cover the burner unit with the supplied protective cover when the heater is not in use. Wait until the heater is completely cooled down before covering.
- In a salt-air environment, such as near an ocean, corrosion occurs more quickly than normal. Check frequently for corroded areas and repair them promptly.



- Do not perform maintenance right after the heater has been turned off, wait until the temperature has cooled down.
- Do not expose the pilot, controllers and parts underneath the burner to water. Do not use the heater if any of these parts are exposed to water until the appliance is inspected or repaired by a qualified service person.

PROBLEM CHECK LIST

PROBLEM

There is no spark at pilot when the • control knob is pressed in and turned counterclockwise to Pilot • position •

There is spark but no ignition when • the control knob is pressed in and • turned counterclockwise to Pilot position •

- PROBABLE CAUSE
 - Igniter electrode positioned wrong.
- Igniter electrode broken.
- Igniter cable pinched or broken.
- Gas supply turned off.
- Control knob not in pilot position.
- Control knob not pressed in while in pilot position.
- Pilot is clogged.
- Air in gas lines.
- Pilot lights but flame goes out when control knob is released
- Control knob not pressed long enough.
 - Pilot flame not touching the thermocouple. Problem could be result of one or both of the following:
 - Partially clogged pilot injector.
 - Low gas pressure.
 - Thermocouple damaged.
 - Thermocouple connection is
 loose at gas control valve.
 - Gas control valve damaged.

Burner injector clogged.

Low gas supply pressure.

Burner does not light after pilot is lit •

Burner flame goes off immediately • after ignition

Delayed ignition

 Main burner carry over ports clogged.

Low gas pressure

Low gas supply pressure

Inadequate combustion on burner •

Not enough air.

SOLUTION

- Replace igniter electrode.
- Replace electrode.
 - Free electrode cable. If damaged, replace it.
- Turn on the gas supply.
- Turn variable control knob to pilot position.
- Press in control knob while in pilot position.
- Call a qualified service person or your gas supplier.
- Purge air from lines by pressing the control knob continuously until there's a faint gas smell.
 - After pilot lights, keep control knob pressed in approx. 30 seconds.
- Contact a qualified service person or your gas supplier.
- Replace thermocouple by qualified service person.
- Hand tight until snug then tighten ¼ turn with a wrench.
- Replace gas control by qualified service person.
- Clean burner injector.
- Call your gas supplier.
- Let the pilot flame stay lit for 10 minutes before setting variable knob to LO.
- Clean main burner ports.
- Call your gas supplier.
- Check air passageways and burners for dirt and debris, and clean with compressed air.

PROBLEM	PROBABLE CAUSE	SOLUTION
Burner flame is low	Supply hose is bent or twisted	 Straighten hose and perform leak test on hose by a
	Blockage in burner injector	 qualified service man. Clean or replace burner Injector by qualified service person.
Emitter glows uneven	 Blockage in burner injector Base is not on a level surface Low gas pressure 	 Clean or replace burner injector by a qualified service man. Place heater on a level surface. Replace hose with a new
		hose
Slight smoke and odor during initial operation	 Residue from manufacturing processes. 	 Will stop after approx. 30 minutes of operation.
Thick black smoke	Blockage in burner	 Turn off the heater and let it cool. Remove blockage and clean burner inside and outside by a qualified service man.
Heater produces a whistling noise when burner is lit.	 Air passageways blocked. 	 Check minimum installation clearances and air passageways for debris.
	Air in the gas line.	 Operate burner until the air is completely purged.
Heater produces a clicking noise just after burner is lit or turned off.	 Metal expanding and contracting, respectively. 	 This is common with heaters. If noise is excessive, contact a qualified service person.
Gas odor even when control knob is in OFF position	Gas leaks.	 Locate and correct leaks immediately.
	Gas control defective.	 Replace gas control by a qualified service man.
Gas odor during combustion	 Foreign matter in gas or on burner ports. Heater burning vapors from paint, impurities in air. Gas leakage from: 	 Check gas passageway and burner. Stop storing and using odor- causing products near the heater. Locate and correct leaks, or
	 Regulator and hose connection. Valve and pipes connection. Pipes 	contact your gas supplier.
Carbon build-up	Dirt or film on reflector and flame screen	

Limited Warranty

RADtec provides a 30-Day Return Window (see refund and return policy page) and the following limited warranty. This limited warranty extends only to the original purchaser.

Please note that any warranty services or questions must be accompanied by order number from the transaction through which the warranted product was purchased and the ID number located on the unit. The order number and ID# serve as your warranty numbers and must be retained. RADtec will offer no warranty service without these numbers. RADtec warrants this product and its parts against defects in materials or workmanship for (1) year parts and labor (residential use) and (1) year parts and labor (commercial use) from the original ship date. During this period, RADtec will repair or replace defective parts with new or reconditioned parts at RADtec's option, without charge to you.

Shipping fees incurred from returns for under-warranty service in the first 30-days will be paid by RADtec. All shipping fees both to and from RADtec following this 30-day period must be paid by the customer. All returns, both during and following the 30-day period, must be affected via the Procedures for Obtaining Warranty Service described below. All original parts (parts installed by RADtec at the original build) replaced by RADtec or its authorized service center, become the property of RADtec. Any after-market additions or modifications will not be warranted. The heater owner is responsible for the payment, at current rates, for any service or repair outside the scope of this limited warranty.

RADtecmakesno other warranty, either expressof implied, including but not limited to implied warranties or merchantability, fitness for a particular purpose, or conformity to any representation or description, with respect to this heater other than asset forth below. RADtecmakesno warranty or representation, either expressor implied, with respect to any other manufacturer's product or documentation, its quality, performance, merchantability, fitness for a particular purpose, or conformity to any representation or description.

Except as provided below, RAD tecis not liable for any loss, cost, expense, inconvenience or damage that may result from use or inability to use the heater. Under no circumstances shall RAD teche liable for any loss, cost, expense, inconvenience or damage exceeding the purchase price of the heater.

The warranty and remedies set forth below are exclusive and in lieu of all others, oral or written, expressed or implied. No reseller, agent or employee is authorized to make any modification, extension or addition to this warranty.

Warranty Conditions

The above Limited Warranty is subject to the following conditions:

- 1. This warranty extends only to products distributed and/or sold by RADtec. It is effective only if the products are purchased and operated in the USA. (Within the USA including US 48 States, Alaska, and Hawaii.)
- 2. This warranty covers only normal use of the heater. RADtec shall not be liable under this warranty if any damage or defect results from (i) misuse, abuse, neglect, improper shipping or installation; (ii) disasters such as fire, flood, lightning or improper electric current; or (iii) service or alteration by anyone other than an authorized RADtec representative; (iv) damages incurred through irresponsible use, including those resulting from mounting the heater above a body of water, mounting the heater vertically and or other non-recommended practices.
- 3. You must retain your bill of sale or other proof of purchase to receive warranty service.
- 4. No warranty extension will be granted for any replacement part(s) furnished to the purchaser in fulfillment of this warranty.
- 5. RADtec makes no warranty either expressed or implied regarding third-party (non-RADtec) parts.
- 6. You must have filled out and filed your Warranty Card with RADtec to activate this warranty.

Return of Non-Defective Products

A non-defective product may be returned to RADtecwithin thirty (30) days of the invoice date for a refund of the original purchase price with the following amendments/fees:

- 1. RADtec will refund neither the original shipping cost nor the shipping and handling fees incurred from the products return. If the original purchase was made under a "Free Shipping" promotion, then a standard \$50 fee will be deducted from any return in counter to that offer.
- 2. No refund will be granted for the heater which has been used or tampered with in any way which jeopardized RADtec's ability to remarket or resell the product. RADtec maintains full discretion in decisions regarding a product's fitness for return.
- 3. No refund will be granted if the product has been installed OR more than 30 days has elapsed since the product was purchased.
- 4. Any non-defective returns are subject to a 15% restocking fee; which percentage is taken from the final purchase price less any shipping or handling charges.
- 5. Quantity purchases of five heaters or more are not eligible for return.

To return a defective product, please contact our Customer ServiceDepartment for a Return Merchandise Authorization (RMA) number and follow the Return of Products Instructions below. The RMA is valid for 10 days from the date of issuance. Returns will not be accepted without an RMA. Manufacturer restrictions do apply.

Procedures for Obtaining Warranty Service

RMA(Returning Merchandise Authorization) Policy:

If repairs are required, the customer must obtain an RMAnumber and provide proof of purchase. RMA and services are rendered by RADteconly. Any shipping costs after 30 days (starting from the original date of purchase) on any item returned for repair is the customers' responsibility. All returned parts must have an RMAnumber written clearly on the shipping label of the packagealong with a copy of the original proof of purchase. No CODpackageswill be accepted. No packagewill be accepted without an RMA number written on the shipping label. RMAnumbers are only valid for 30 days from the date of issue.

Should you have any problems with your heater, please follow these procedures to obtain the service:

- 1. Please contact RADtec's Customer Service at 214-295-6889 or email at info@radtec.net.
- 2. If the heater must be repaired, an RMA number (Return Merchandise Authorization Number) will be issued for shipment to our repair department. Please follow the instructions given by RADtec's technical support staff to ship your heater. RADtec will not accept any shipments without an RMA number.
- 3. Pack the heater in its original box or a well-protected box, as outlined in the Return Shipping Instructions. RADtec will not be responsible for shipping damage/loss of any product outside the original 30-day eRADusa-paid service period. It is very important that you include the RMA number clearly on the shipping label of the package. Ship the heater with a copy of your bill of sale or other proof of purchase, your name, address, phone number, description of the problem(s), and the RMA number you have obtained to:

RADtec Service Center RMA#_____ 10500 Metric Drive, Suite 112 Dallas, TX 75243

- 4. Upon receiving the heater, RADtec will repair or replace your heater (at RADtec's discretion) and will ship it back to you within 2 weeks (dependent on parts availability) via UPS.
- 5. RADtec will pay for shipping to the customer only within the first thirty days following the original product ship date. Following this 30-day period, all shipping fees both for under warranty and post-warranty repairs are the sole responsibility of the customer. The customer also assumes full liability for losses or damages resulting from shipping as well as all responsibility to pursue remuneration for such issues with their selected carrier.

After Two-Year Warranty – Post-Warranty Repair

For post-warranty repair, the procedure is the same as outlined above for RMA and shipping. However, you are responsible for shipping chargesboth ways, current labor (\$75 per hour if not under warranty), and the current price of part(s) used in the repair.

WARRANTY EXCLUSIONS:

RADtecacceptsno liability for problems causedby after-market parts and hardware modifications or additions. RADtecis not responsible for giving any technical support concerning the installation or integration of any component the customer did not pay RADtecto install. Thiswarranty is null and void if the defect or malfunction was due to damageresulting from operation not within manufacturer specifications. It will also be null and void if there are indications of misuse and/or abuse. RADtechasthe option of voiding the warranty if anyone other than an RADtectechnician attempts to service the product. RADtecwill not warrant any problems arising from an act of God (lightning, flooding, tornado, etc.), electrical spikesor surges, or problems arising out of hardware, software, or additional devices added to complement any system/component bought at RADtec.Under no circumstances will RADtecbe responsible for any refund or remuneration exceeding the original purchase price of the product less any shipping fees. RADtecwill not be held responsible for typographical errors on sales receipts, repair tickets, or on our website. RADtecmakes every effort to make sure all information on our website is correct.

Warranty Form

Cut and fill out warranty card and mail to RADtec.



WARRANTY FORM

Please fill out this warranty card and mail it with PROOF OF PURCHASE (RECEIPT) within 30 days of purchase to: RADtec Group, LLC. **10500 Metric Drive, Suite 112. Dallas, TX 75243** Or email to info@radtec.net

Item:	ID:
Customer Name:	E-mail:
Address:	Phone No:
Where Purchased:	Date of Purchase:

My signature below acknowledges that I have read, fully understand, and accept the limited warranty agreement.

The limited warranty agreement can be found on www.radtec.net.

Signature:	Date:

Important: Our company does not provide email or personal information to any third party entity for any reason. All information provided

is kept secure and private and is used solely for the purpose of warranty administration and informational purposes.

RADtec Group, LLC. |Phone: 214-295-6889 www.RADtec.net



