



MEZZO

Hanging Patio Heater

APRIL 2007

OPERATIONS, MAINTENANCE &
WARRANTY INFORMATION

www.yunca.co.nz

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INTRODUCTION

Congratulations on purchasing your YUNCA MEZZO HANGING PATIO HEATER.

This unit is designed to be mounted to a ceiling and out of the rain. The operation is controlled by electronic 24 volt Microprocessor based direct spark ignition control. The heater is started by turning on a switch.

The Gas supply shall be fitted and commissioned by a registered Gas Fitter. The Electrical wiring shall be completed by an Qualified Electrician to applicable Local Body and/or National standards. **The controller uses voltages of shock hazard potential.**

Please fill out and return the warranty registration card promptly (back page).

This instruction booklet should stay with the appliance, and is for the reference of the user and service person.

Only authorised service technicians should undertake any repairs or maintenance on this product.

It is recommended that the Heater has an annual maintenance check to ensure its long term correct operation.

Do not store or use aerosols or other flammable materials near this appliance.

The Yunca MEZZO Hanging Patio Heater is an unflued gas appliance so adequate ventilation must always be provided to ensure safe and efficient use.

Each Yunca MEZZO Hanging Patio Heater is factory set to the appropriate operating pressure for the gas type. Operating pressure is adjusted at either the LPG or NG in line regulator.

NOTE: This unit must be installed so not be exposed to moisture.

INSTALLATION

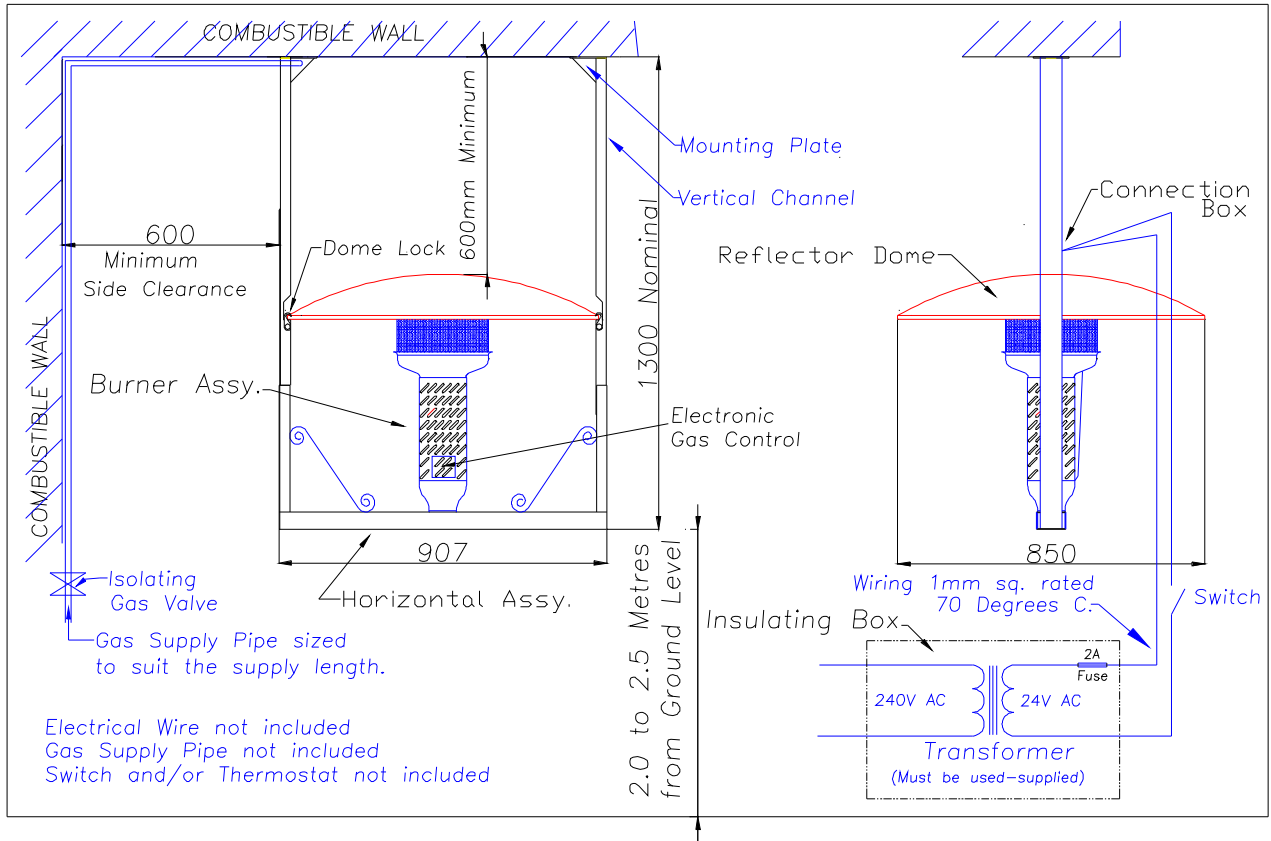


Fig 1

Features	Specifications
Electronic Ignition – Microprocessor Based Direct Spark Ignition Control	Large Aluminum Parabolic, 2mm Reflective Dome
	Gas Types: LPG and NG
Custom prepurge and interpurge timings	Pressures: 2.75Kpa LPG, 1.0Kpa NG
Multiple tries	Main Jet Sizes: 1.7mm(LPG); 2.8mm(NG)
Easily Assembled	Main Burner Worgas Stainless Steel, Atmospheric.
System Diagnostic LED	Input Power: 18-30 VAC
Flame sense test pins	Gas Valve: 2.0A @ 24VAC
Stainless Heater assembly	0.7µA Maximum
Powder coated Frame	Flame Failure Response Time: 0.8 sec.

Selection of Position

Yunca MEZZO Hanging Patio Heater is an unflued appliance, adequate ventilation must always be provided. The Hanging Patio Heater has to be securely mounted to a suitable beam or stand and be mounted away from the rain.

The heater should only be used when wind speeds are below 8km/h when heater is turned down, or 16km/h when heater is on full.

The heater will effectively heat a radius of around 3M so its position should be chosen to allow efficient use of heat without impeding peoples' movement.

UnPack and Check all parts are included. Refer to Table 1

Parts Not Supplied:

M8 Bolts (x8) for attaching Mounting Plates to support

M8 Washers (x8) for attaching Mounting Plates to support

M8 Nuts (x8) for attaching Mounting Plates to support
Gas Pipe and fittings

Wire and fittings for the 240 volt supply

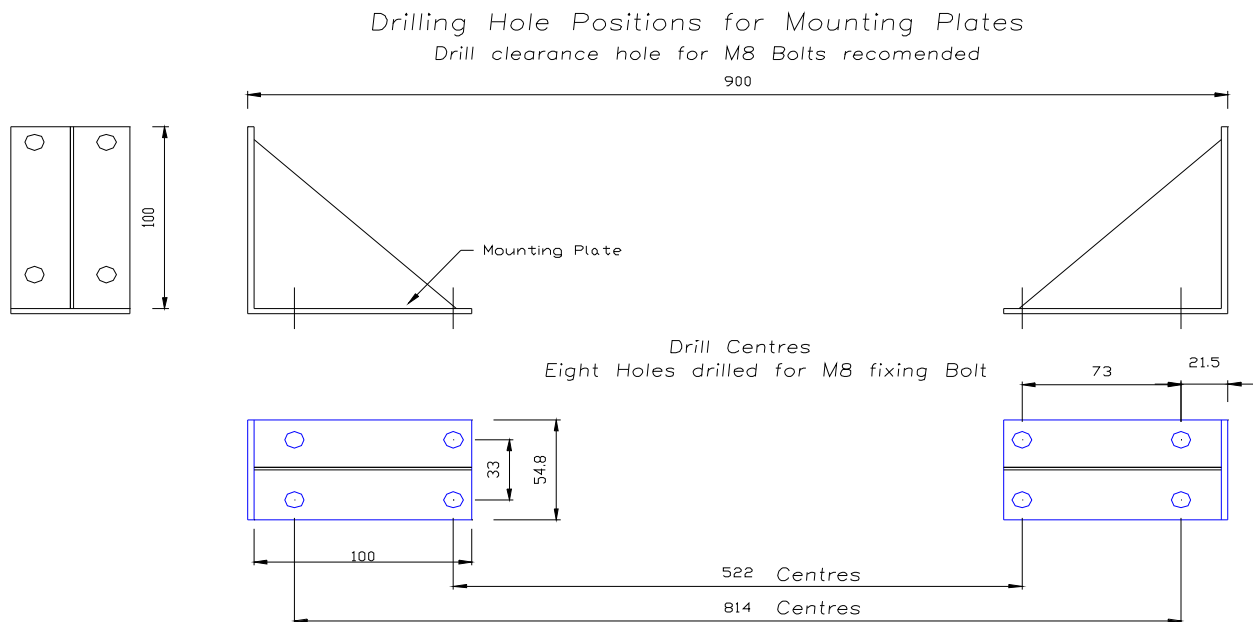
1mm Sq. wiring and fittings from the Transformer to the connection box at the vertical channel. (24 volt side). Maximum length of 50 metres.

Bolting Holes:

Selection of the position to support the Yunca MEZZO Hanging Patio that offers a solid base to bolt the Mounting plates too and be ideally 3.3 to 3.8 metres from the ground.

It is recommended to bolt the mounting plate in to position.

Mark out and drill suitable clearance holes for M8 Bolts. See Fig 2



Attach Mounting Plate: Bolt Mounting plates in to place as shown in Fig 2

Attach Channels:

Attach Vertical Channels to the Horizontal Assembly with M6 Bolts ensuring the channel with the cable tie is bolted to the Arm with the cable tie.

Gas Piping.

Remove the two bolts from the holder clamp. Place the Burner assembly in to holder of Horizontal Assembly. Make and Bend up the gas pipe to neatly fit in to the channel.

Remove the Burner assembly and gas pipe.

Make the gas joint.

Bolt Assembly in to place:

Bolt Horizontal Assembly with Vertical Arms on to the Mounting Plates. Care is required to not damage the vertical arms with the assembly hanging from one side only during this process.

Electrical supply: The controller uses voltages of shock hazard potential.

Insulating box is supplied with Transformer mounted inside with a 2A fuse in a fuse carrier. The Insulating Box shall be positioned to allow future maintenance and access. Care is required in removing the cut outs for the wire

Install the electrical wiring for the 240V supply to transformer and 24Volt system from the 24 volt side of the transformer to were the Connect Box will be mounted, positioning the control switch and/or thermostat in required position.

24 Volt system, maximum length 50 metres (@ 1sq. mm).

Position Burner Assembly:

Position the burner assembly with Gas Pipe attached in to the Holder. Bolting tight with the two bolts ensuring it is vertically positioned.

Electrical Connection:

Make the 24 volt supply connection within the connection box, position the grommet into place. (Fig 3). Remove the Baffle from the vertical Channel where the cord will go. Position the Connection Box in to the vertical channel and screw in place.

Run the cable down from the connection box ensuring the cable is held close to the channel, using the cable ties to hold in place.

Replace the baffle and screw in place **ensuring the cable is not touching the baffle.**

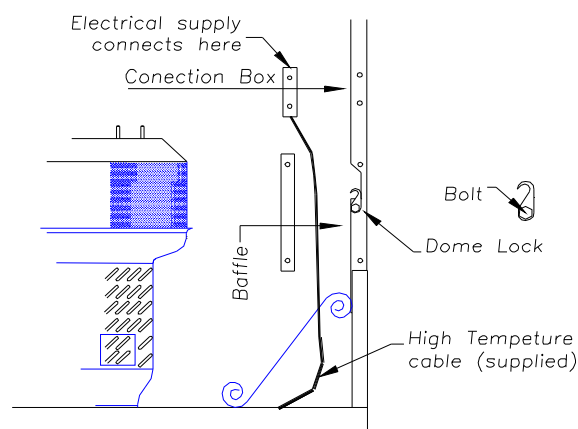


Fig 3

Gas Connection:

The gas line is connected. A Gas Isolating valve should be positioned so it can be readily operated in an emergency. All joints should be checked for leaks

Dome Fitting:

Remove the Dome Locks by unscrewing the bolts. Place one of the Aluminum washers on each of the studs. (Fig 4).

Position the Aluminium Reflective Dome between the vertical channels while aligning the studs with the holes. Putting the second washer on, followed by the wing nut tighten up firmly.

Check the Burner is vertical, Position the four dome locks over the Dome and using the Bolts firmly attach the Dome to the vertical channel. (Fig 4)

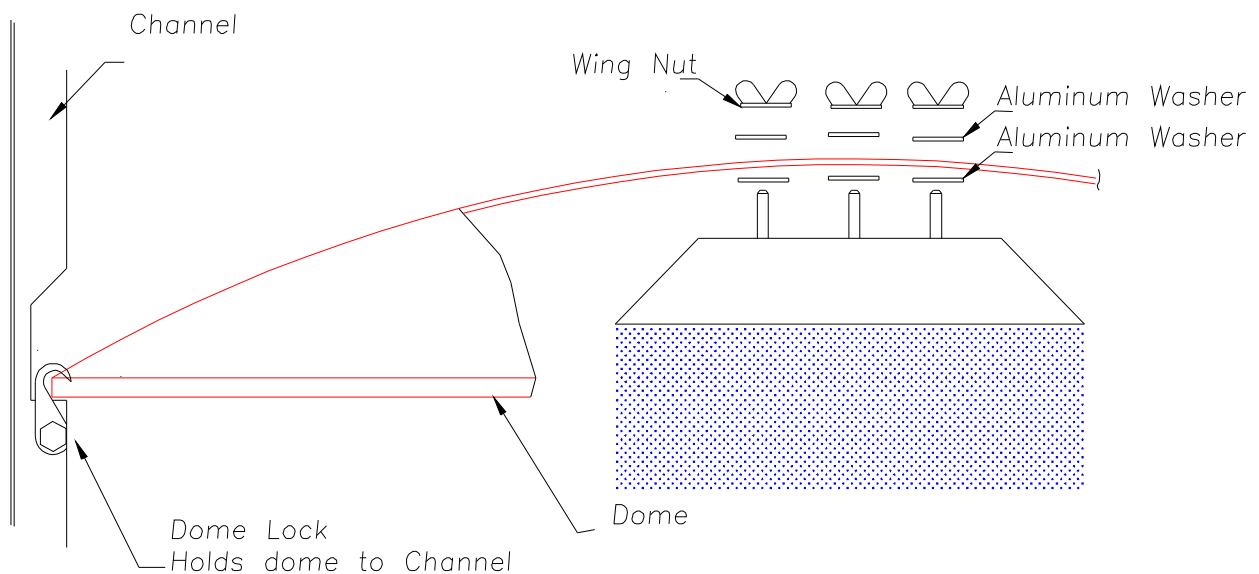


Fig 4

Testing:

Initial operation must be done by a qualified Gas fitter or service technician.

Gas supply pressure is tested from a test point on the solenoid valve, this is found inside the square cover on the Burner Assembly.

All Gas joints to be checked.

All electrical wiring shall be checked by an Electrician.

OPERATING

Lighting instructions

Beware: Do not operate if any covers are removed.

1. Ensure that Gas Supply is connected and supply valve open.
2. Ensure the Mains supply is connected and switched on.
3. Turn on, the on/off switch, the micro-processor starts its pre purge lighting sequence. Spark is initiated after about 8 seconds and continue to spark for 4 seconds to ignite the gas.

Turning off instructions

1. Turn off the on/off switch, the valve will de-energised so stopping the gas supply.

Abnormal performance.

If at any time the Patio Heater exhibits any problem or abnormal noise it should be immediately turned off. The MEZZO Hanging Patio heater should be checked and tested by authorised service technician before being used.

SERVICING

Only **authorised service technicians** should undertake any repairs or Maintenance on this product.

To access components there are covers that can be removed from the perforated stainless steel cylinder that surrounds the control. This is done by removing the screws on these covers.

As with all gas appliances, regular servicing will improve the trouble free operation of this appliance. This service should cover the following

- Leak test all joints
- Check operating pressures
- Clean main gas orifices
- Clean main burner venturi as insects and dirt may gather there.
- Brush any soot etc. that may have gathered on stainless steel mesh.

Wiring Diagram

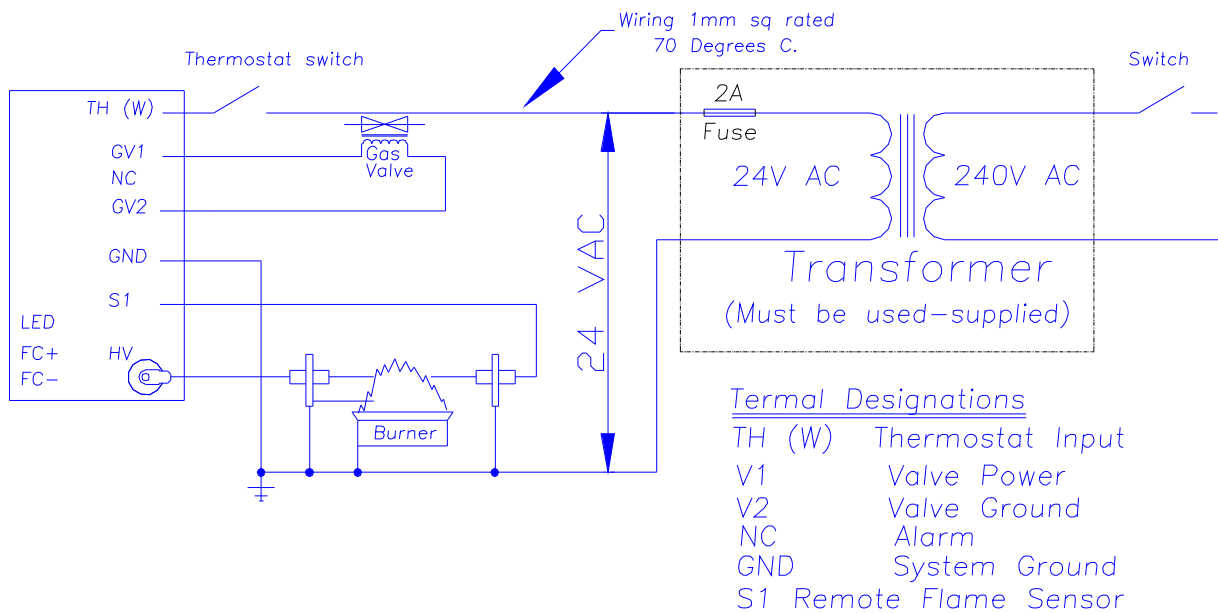


Fig 5

Flame Sensor Current Check

Flame current is the current which passes through the flame from the sensor to ground. The minimum flame current necessary to keep the system from lockout is 0.7 microamps. To measure flame current, connect an analog DC microammeter to the FC- and FC+ terminals. Meter should read 0.7 μ A or Higher. If the meter reads "0" on scale meter leads are reversed. Disconnect power and reconnect meter leads for proper polarity.

CONTROLLER OPERATION

Heat Mode

When a call for heat is received from the Switch or Thermostat supplying 24 volts to TH/W, the control will reset, perform a self check routine, flash the diagnostic LED for up to four seconds, and a prepurge delay begins. Following the pre-purge period the gas valve is energised and sparks commence for the trial for ignition period.

When flame is detected during the trial for ignition, sparks are shutoff immediately and the gas valve remains energised. The thermostat and main burner flame are constantly monitored to assure the system continues to operate properly. When the thermostat is satisfied and the demand for heat ends, the main valve de-energised immediately.

Failure to light - Lockout

Should the main burner fail to light, or flame is not detected during the trial for ignition period, the control will go into lockout and the valve will be turned off immediately.

Recovery from lockout requires a manual reset by either resetting the thermostat or removing 24 volts for a period of 5 seconds.

If the thermostat is still calling for heat after one hour the control will automatically reset the attempt to ignite the burner again.

Flame Failure – Re-ignition

If the established flame signal is lost while the burner is operating, the control will respond within 0.8 seconds. The HV spark will be energized for a trial for ignition period in an attempt to relight the burner. If the burner does not light the control will de-energize the gas valve. If the burner does not relight the control will go into lockout as noted above in “Failure to light”. If flame is re-established, normal operation resumes.

TROUBLE SHOOTING

Fault Conditions

<i>ERROR MODE</i>	<i>LED indication</i>
Internal Control Failure	Steady on
Flame Sense Fault	2 flashes
Ignition Lockout	3 Flashes

The LED will flash on for ¼ second, then off for ¼ second during a fault condition. The pause between fault codes is 3 seconds.

Proper Electrode Location

Proper location of the electrode assembly is important for optimum system performance. The electrode assembly be located so that the tips are inside the flame envelope and about ½ inch (1cm) above the base of the flame (Fig 6).

CAUTIONS

1. Ceramic insulators should not be in or close to the flame
2. Electrode assemblies should not be adjusted or disassembled. Electrodes should have a gap spacing of 3.1 +/- 0.8mm. If this spacing is not correct, the assembly must be replaced. Electrodes are NOT field adjustable.
3. Exceeding the temperature limits can cause nuisance lockouts and premature electrode failure.

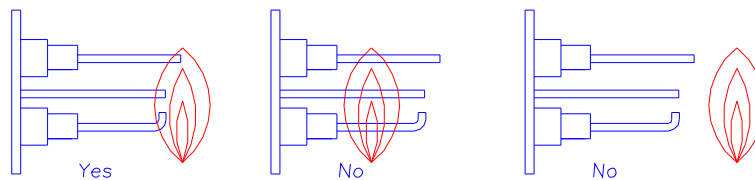


Fig 6

Service Checks

Symptom	Cause/Cure
<i>Electrically Dead</i>	<ol style="list-style-type: none"> Miswired Transformer bad Fuse/Circuit breaker bad Bad control (check LED for steady on)
<i>Thermostat on – no spark</i>	<ol style="list-style-type: none"> Miswired Bad thermostat no voltage @ Terminal TH.
<i>Valve on, no spark</i>	<ol style="list-style-type: none"> Shorted electrode Open HV cable Miswired Bad Control
<i>Spark on, no valve</i>	<ol style="list-style-type: none"> Valve coil open Open valve wire Bad control (check Voltage between V1 and V2)
<i>Spark on, gas supplied, no ignition of the gas</i>	<ol style="list-style-type: none"> Position of the spark is not in line with the gas holes in the burner. Rotate the burner to align the Flame to engulf the electrodes see Fig 6 Adjust the Burner to bring the electrode to within 3 to 5mm of the burner.
<i>Flame okay during TF, no flame sense (after TFI)</i>	<ol style="list-style-type: none"> Bad Electrode Bad S1 or HV wire Poor ground at burner Poor flame (check flame current)

Injector Sizes:

GAS TYPE	MAIN JET	PILOT JET
NATURAL	2.80mm diameter	0.35mm diameter
L.P.G.	1.60mm diameter	0.23mm diameter

Warranty:

The Yunca MEZZO Hanging Patio Heater is covered by a limited two-year Warranty against defects in materials and workmanship.

All gas components including control, burner, pilot assembly, tubing, regulator and hose, are warranted for a period of one year from date of purchase.

Damage caused by neglect, improper use, acts of God, theft, or any other indirect, incidental cause are not covered by this warranty.

This warranty is void if the recommended service schedule is not implemented as suggested in this manual, and not carried out by a suitably qualified person.

Limitation of Liabilities

Yunca Heating hereby waives any liability for incidental and consequential damage directly or indirectly sustained, or for any loss caused by the application of this product not in accordance with the current printed instructions.

Our liability is expressly limited to replacement of defective goods as per above warranty. Any claim shall be deemed waived unless made in writing to us within 30 days from the date that it was or reasonably should have been discovered.

Table 1

PACKING PARTS HANGING PATIO HEATER

	TICK
Aluminium Reflective Dome	<input type="checkbox"/>
Horizontal Assy.	<input type="checkbox"/>
Vertical Cannel x2 (one with Cable Ties)	<input type="checkbox"/>
Mounting Plate x2	<input type="checkbox"/>
Burner Assembly	<input type="checkbox"/>
Insulating Box with Transformer and fuse Carrier	<input type="checkbox"/>
M6 x 20mm Bolts x12	<input type="checkbox"/>
6mm Washers x12	<input type="checkbox"/>
M6 Nuts x12	<input type="checkbox"/>
Aluminum Washers X 6	<input type="checkbox"/>
Stainless Wing Nuts X 3	<input type="checkbox"/>
Installation Instructions	<input type="checkbox"/>

DATE: _____ SIGNED: _____

CUSTOMER COPY

YUNCA Mezzo Hanging Patio Heater WARRANTY REGISTRATION:

Serial No. _____ Gas type. _____ Purchase Date _____

Purchaser's Name: _____

Purchaser's Address: _____

City: _____ Post Code: _____ Telephone: _____

Where Purchased: _____

Installed By: _____ Date: _____

Electrician: _____ Phone: _____

Yunca Gas
PO Box 500, Dunedin 9054
Ph (03) 488 4342
Email yuncagas@southnet.co.nz
Web Site www.yunca.co.nz

Cut along this line

This section must be returned within 10 days of purchase.

YUNCA Mezzo Hanging Patio Heater WARRANTY REGISTRATION:

Serial No. _____ Gas type. _____ Purchase Date _____

Purchaser's Name: _____

Purchaser's Address: _____

City: _____ Post Code: _____ Telephone: _____

Where Purchased: _____

Installed By: _____ Date: _____

Electrician: _____ Phone: _____

Return to : Yunca Heating
PO Box 932
Invercargill 9840