



ALCHEMY

Installation & User Manual

Models: Alchemy ORB1000
with Remote Control

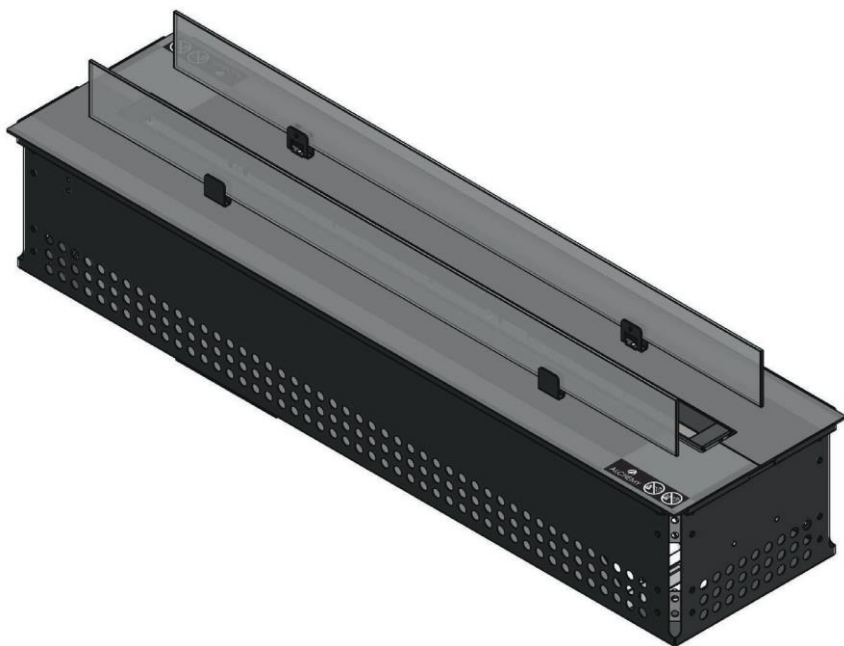
Outdoor Burner

Please read this manual carefully for correct installation, use and maintenance of the appliance and familiarise yourself with the proper use of the product.

Operate in accordance with the instructions provided.

The company reserves the right to make any product upgrades or improvement without prior notice.

**IMPORTANT SAFETY NOTICE: BIO-ETHANOL FUEL
MUST BE BETWEEN 85% - 95% ALCOHOL**

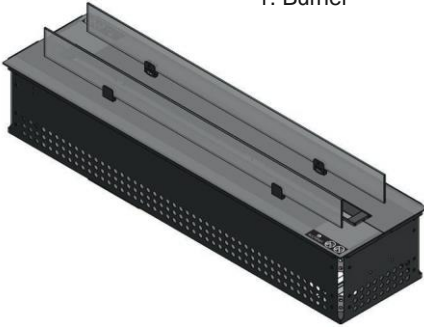


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1. Supplied Parts

1. Burner



2. Lid Cover



3. Remote Control



4. RC Handset 4 x AAA Batteries



• Lithium Battery Pack



6. Battery Charger



7. Fuel Filling Funnel



2. Safety Information

- To avoid injury do not touch the appliance while in operation or when it is hot.
- Keep children, animals and unauthorised persons away from the appliance. Never leave the appliance unattended or children unsupervised while in operation or when it is hot.
- No items are to be placed on the appliance.
- Keep appliance away from flames, ignition sources, and flammable materials.
- Do not attempt to move the appliance while in operation.
- Never pour bioethanol fuel over live flames.
- After turning off the appliance it will take a few minutes for the flames to extinguish.
- After turning off the appliance wait at least 5-10 minutes before attempting to re-ignite.
- Always ensure the flame is fully extinguished before refuelling as the flame may be difficult to see in different environments.
- The appliance uses bioethanol fuel only, which is a flammable liquid. Store in original container away from heat and sources of ignition. Follow container directions for use and safety.
- Bioethanol fuel is classified as a flammable liquid Class 1B (for flammability) and Class 3 PGII (for transportation) and is regulated by various standards around the world. You must familiarise yourself and comply with these regulations in order to safely and legally store, handle, decant and use this fuel.
- Use only approved bioethanol fuel that contains 85%-96.6% alcohol. Poor quality of fuel may lead to undesirable results, reduction in reliability, incomplete and inefficient combustion, smoke and odours, residues inside the burner.
- Alchemy Ltd is not liable for any damage caused by using the incorrect type of fuel.
- Do not refuel while the appliance is still hot. Allow at least 30 minutes before refuelling.
- Never smoke or have naked flames near the appliance while refuelling or starting the appliance.
- Clean bioethanol fuel spills immediately with a dry cloth followed by a cloth dampened with water. Avoid any naked flames and allow to dry completely before using the appliance.
- Store fuel only in original container. Store away from area where the appliance is located at minimum distance of 200cm. Transport and/or store fuel only in a plastic or metal container that is acceptable for use with the fuel and non-red in colour.
- Do not operate in the vicinity with oxygen tanks in use or if flammable vapours are present.
- Do not place in areas where there might be a potentially explosive atmosphere of paint vapours, industrial dusts, etc.
- For decorative purposes only. Not suitable for continuous operation. Do not use the appliance to heat or boil water or as a cooking appliance. Do not put wood, charcoal, paper or other combustible objects in the flames.
- Do not position the appliance near windows, doors, vents or fans that can create draughts as this may cause irregular operation.
- Bioethanol combustion releases carbon dioxide (CO₂) and water (H₂O). The combustion requires oxygen, therefore the area where the appliance is placed should have adequate ventilation to allow for fresh air circulation.
- No heat sensitive and flammable items can be placed in direct contact or within a radius of 1m / 3.28ft from or above the appliance.
- Do not obstruct the ventilation slots/air inlet grilles of the appliance.
- In case of uncontrolled flames, please use a fire blanket or carbon-dioxide (CO₂) or dry chemical extinguisher.
- Do not use water to extinguish the fire.
- Use only authorised accessories supplied by Alchemy Ltd.
- NON-COMBUSTIBLE pebbles, logs or other refractory decorative fire accessories should not be used.
- Do not use fittings or spare parts, other than those available from or recommended by Alchemy Ltd.

- Always isolate the power to the appliance before moving, cleaning or servicing.
- Always use the cover when the appliance is not in use.
- Do not use in the rain.
- Do not let the remote control get wet.
- Keep the immediate area around the appliance clear and free of any combustible materials or flammable substances.



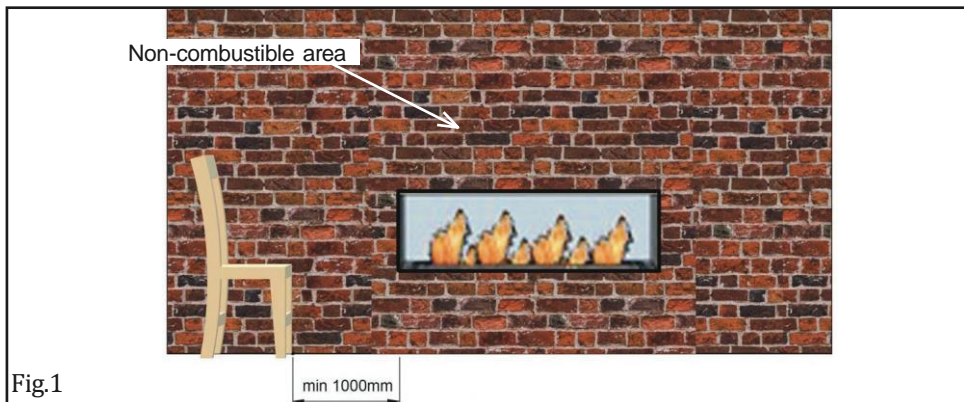
DO NOT POUR OVER LIVE FLAMES



DO NOT FILL WHILE HOT

3. Installation

- While installing the appliance according to the instruction manual ensure local and national guidelines are observed.
- The elements of construction within a 1m radius of the appliance must be A1 classified non-combustible materials.
- Do not design or install the fireplace which involves covering the burner plate. Access to fuel tank is required by removing the burner top plate.
- The appliance must be installed level within ± 1 mm.
- Installation must allow for easy removal of the appliance for servicing.
- Do not fill the fuel tank or use the appliance before the installation is complete.



Ensure combustible devices and materials are a minimum of 1000mm away from the fire.

IMPORTANT DEFINITION:

Non-Combustible material: A material that does not react to heat.

- Any material which when tested to BS 476-11:1982 (2007) does not flame nor cause any rise in temperature on the centre (specimen).
- Products classified as non-combustible in tests following the procedures in BS 476-4:1970 (2007).
- Any material classified as class A1 in accordance with BS EN 13501-1:2002 Fire classification of construction products and building elements. Classification using data from reaction to fire tests.

PLEASE NOTE THAT TIME RATED PLASTER BOARDS OF ANY TYPE ARE NOT SUITABLE FOR THIS CONTRUCTION, WE RECOMMEND ONLY CALCIUM SILILCATE & VERMICULITE BASED BOARDS RATED TO A1.

MINIMUM CHAMBER SIZE:

	ORB1000
Min. Opening Height:	500mm
Min. Opening Width:	1160mm
Min. Opening Depth:	320mm

APPLIANCE ENCLOSURE SIZE:

	ORB1000
Min. - Max. Opening Width	1025mm - 1030mm
Min. - Max. Opening Depth	255mm - 260mm
Min. Height	285mm

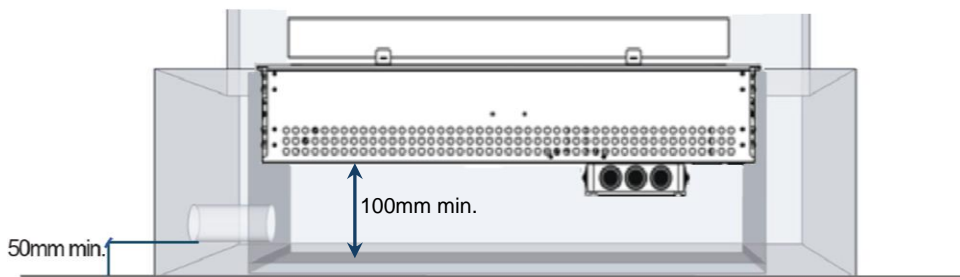
- **Please note** - If the appliance is to be installed with the flanges sited on the surface of the enclosure, the surface must be level and be able to support the weight of the appliance.
- Alternatively, it can be sited onto blocks fixed in position. The blocks must not restrict the free air flow required for Ventilation to the Appliance.

VENTILATION TO THE APPLIANCE

- Ventilation must be provided to the appliance enclosure to prevent heat build-up.
- Excessive heat build-up may cause damage to the appliance and will result in a safety shut off.
- The ventilation must allow for constant free flowing air to the appliance enclosure below the base of the appliance.
- The air inlet holes on the side of the appliance must not be obstructed.
- Ensure the ventilation is always open and accessible for regular maintenance and cleaning.
- The positioning of the ventilation grill will be to the installer's discretion.

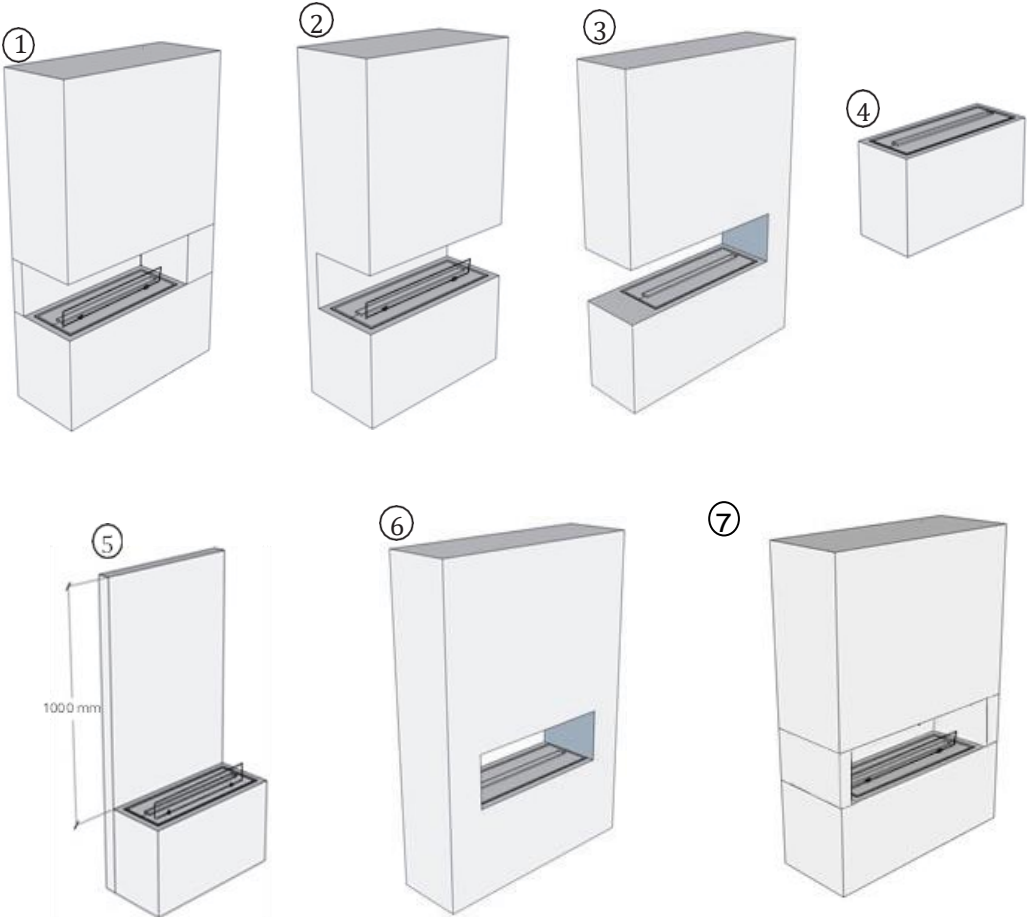
Model	Ventilation*
RB1000-MKIII	75cm ²

* **Please note** - this relates to the minimum amount of continuous free flowing air required and not the size of the ventilation duct. The size of the ventilation duct will depend on the chosen ventilation grill. The chosen ventilation grill must meet the minimum free air flow requirements.



METHODS OF INSTALLATION

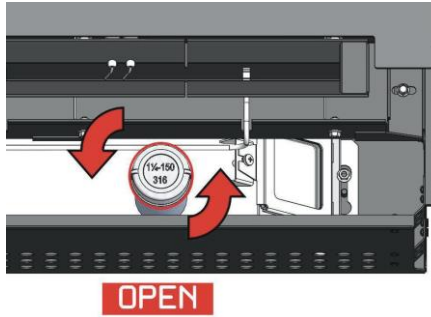
- The construction of the chamber, enclosure and any stud work introduced must be from non-combustible materials.
- Use only fasteners and adhesives that are resistant to high temperature.
- Any voids within a chimney breast are recommended to be ventilated to prevent heat build-up with continuous use.



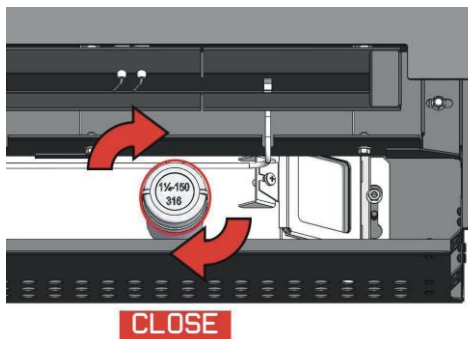
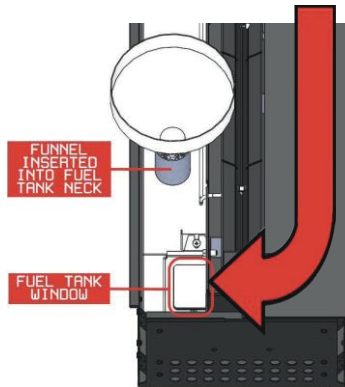
2. Operating the Appliance

IMPORTANT NOTE - BEFORE FIRST USE, CHARGE BATTERY 4 HOURS

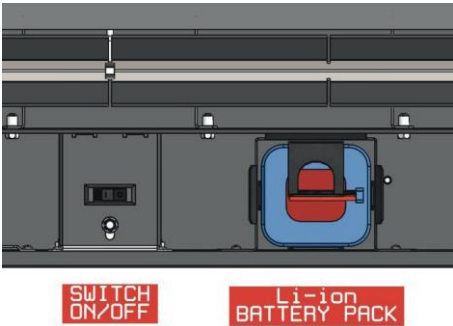
2.1 FUELLING THE TANK



Carefully pour the bioethanol fuel into the funnel until the level of fuel reaches the top of the tank window

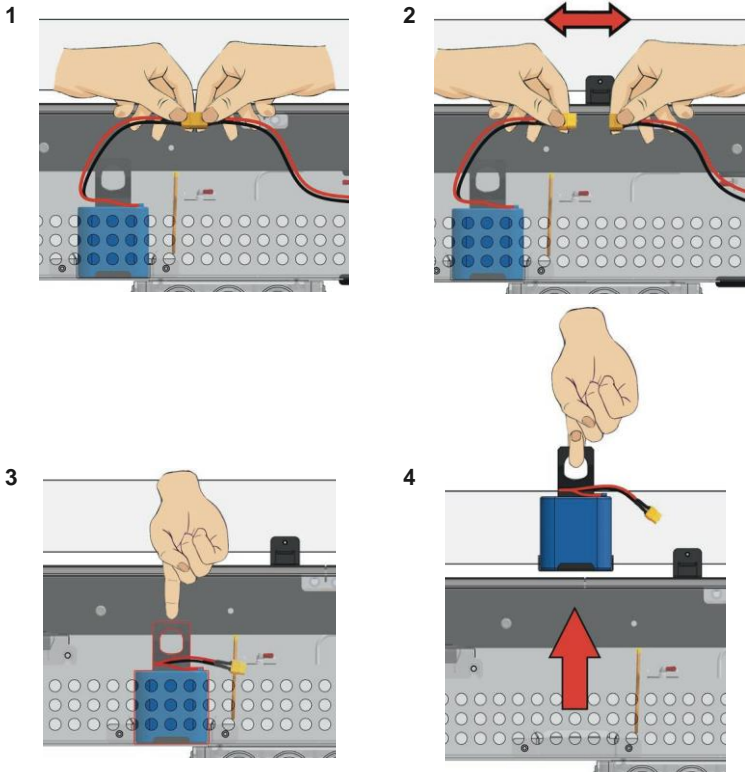


2.2 FITTING THE BATTERY

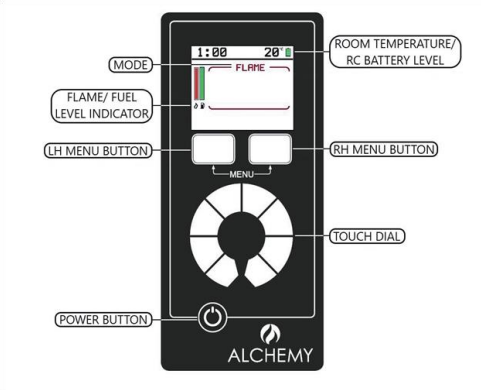


The image above shows ON/OFF switch for the battery in position. It is recommended the battery connection is switched off between uses and also when disconnecting the battery. The switch is also used when the PCB needs to be reset.

The images below shows the battery needs to be disconnected before being lifted out and removed for charging. Do steps in reverse once the battery is charged and needs reconnecting.



2.3 OPERATING REMOTE CONTROL AND TURNING ON BURNER



IMPORTANT NOTE - DO NOT LET REMOTE CONTROL GET WET

Make sure the remote is loaded with batteries. Normally the handset is already paired from the factory however; if it requires to be done again follow Pairing Device instructions (see page 26).

I. Touch power button to awaken handset.

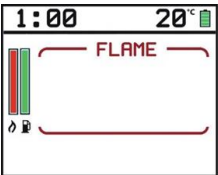
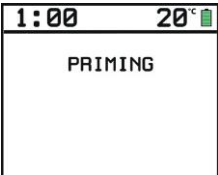
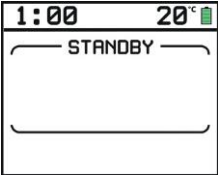
II. To TURN ON hold power button until bar fills. The screen will display PRIMING for about 60 seconds, followed by IGNITION.

III. When the flame has established the screen will display the level of heating.

To increase flame intensity touch power button to awaken handset and rotate touch dial clockwise.

To decrease flame intensity touch power button to awaken handset and rotate touch dial anti-clockwise.

IV. To turn off touch power button to awaken handset. Hold power button until bar fills. The appliance will take around 2 minutes to burn off any residual fuel.



Burner is priming when the glow plug is heating up and the fuel starts pumping out, as shown in the image.



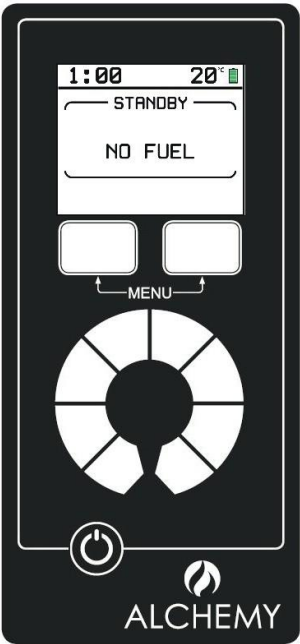
Once the glow plug reaches required temperature and reached by the fuel, the flame will ignite.



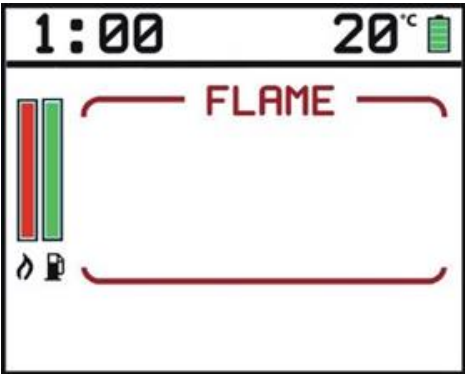
2.4 OUT OF FUEL NOTIFICATION AND REFUELLING

When the tank is empty or does not have sufficient amount of bioethanol, a beep and message will appear on the display screen.

In order to light the Bio Fire the top access panel must be replaced in its position covering the fuel tank side.



When there is sufficient fuel in the tank for the appliance to operate, the fuel indicator will show a green bar.

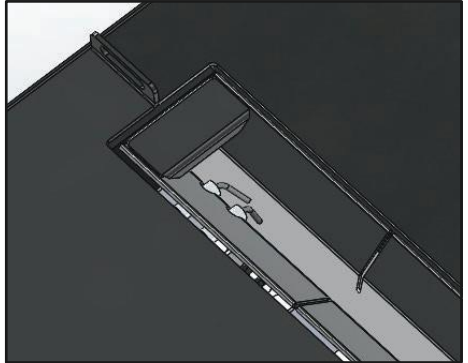


3. Safety Systems

The Alchemy Bioethanol range incorporates several safety systems to ensure a complete peace of mind.

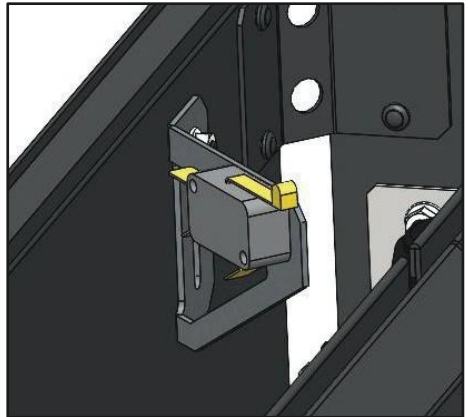
3.1 OVERFLOW DETECTION SENSOR

The Bio Fires are equipped with an overflow sensor which is designed to ensure user safety when an accidental damage occurs to the pump or electronics. In case of excess fuel being pumped into the burner, the sensor activates to turn OFF the fire. The appliance will not light until it is reset again by turning the main power source OFF and ON.



3.2 BIOETHANOL FUELLING DETECTION SWITCH

You will not be able to fill up the Fuel Tank while the flame is on due to the safety Micro-switch. Removing top access panel will trigger the switch and extinguish the flames. A message 'Lid Open' will appear on your handset. In order to light the Bio Fire you must replace the top access panel in its position covering the fuel tank side.



4. Servicing

Turn the appliance OFF and disconnect the battery. Ensure the appliance is fully cold before attempting to start servicing the appliance. No liability can be accepted by Alchemy Ltd for injury caused by burning or scolding by a hot appliance.

A suggested procedure for servicing is listed below.

- A. Lay out dust sheet on flooring, mask off any special fireplace materials.
- B. Use a Vacuum cleaner to clean the top of the burner and metal top plate.
- C. Remove metal top plate and wipe with a dust cloth.
- D. Check fuel system inside the firebox for any damage or leaks.
- E. Replace metal top plate or log plate.
- F. Check the safe operation of the appliance.

5. Technical Information

BIO-ETHANOL	ORB1000
GROSS INPUT on High (Hs) (kW)	9
Ethanol Consumption on High (L/Hr)	1.4
GROSS INPUT on Low (Hs) (kW)	3
Ethanol Consumption on Low (L/Hr)	0.7
Fuel Tank Volume Capacity (L)	8.5

These values are indicative only and may vary depending on the installation and denatured ethanol used.

Battery usage and charge time

1. Battery 12V 6Ah should last 3 to 4 weeks under normal use. The appliance must be switched OFF when not in use.
2. Four Hours to fully charge, must be fully charged before first use
Charger output 14V, red light means charging and green light means charge full or disconnect.

6. Troubleshooting

6.1 There is smoke or a foreign smell coming from the Burner when burning

- a. There may be waste burning that should not be in the Burner.
- b. You are using the wrong fuel (it is essential that you ONLY use Bioethanol).
- c. You have placed something around/above the flame that has not been approved or recommended.
- d. If the Burner is empty (the flame is dying) or you have just turned the fire OFF, this is normal. Like extinguishing candles.
- e. The quality of Bioethanol you are using is not good enough.

SOLUTION

Turn the Burner OFF and wait until it cools down. Clean/service the Burner and remove objects/waste. Contact your local distributor for fuel brand recommendation.

6.2 When I attempt to light the Burner, it does not start

- a. You have not put enough fuel in the Burner.
- b. You have not used the right fuel (it is imperative that you ONLY use Bioethanol).
- c. The Burner opening is obstructed, there needs to be adequate ventilation for the flame to start.
- d. The Bioethanol is cold and takes time to ignite.

SOLUTION

Check -Stop Code – in the DEVICE menu on the handset for further guidance. Check fuel level by inspection through the fuel tank window, check type of fuel used. Repeat starting procedure until the Burner warms up and remains ignited.

6.3 I have spilt some fuel, what do I do before lighting?

Use the isolation switch to prevent the fire turning ON. Keep people away from the area. Wipe up spilt liquid thoroughly using a dry cloth, wipe again with a cloth dampened with water. Avoid breathing vapours. Ventilate enclosed space by opening windows and doors. If fuel got spilled on hands, wash thoroughly. ONLY ignite when the area is completely dry and you are certain that all spilt fuel has been removed. Please refer to MSDS for Bioethanol.

6.4 The flame is unusually volatile and high

This is likely to be caused by a strong draught blowing on the flame. Locate and remove the source of the draught (it may be that you have a window/door open or fan operating that is directly pushing air towards the fire). If you cannot remove the source of the draught and the flame is too volatile, turn the fire OFF. You will need to rethink the positioning of your unit before operating again or install a fire screen to minimise the draught effect. Contact your distributor.

6.5 RC Handset Error Codes

The software installed will give an error/ stop coded if the bioethanol fire stopped or did not start from any reason. If the bio-fire stops a code is generated, and can be read on the RC handset.

The code number will help to see at which stage in the ignition process or operating the fault has happened.

The display will show the version number and the stop code as follow:

Display **"Rxxx.Dxxx.SCx"**

R = Receiver software version number.

D = Device software version number.

SC= stop code in hex format (as shown below).



1 Top plate not aligned – switch active

Reason: Top plate not sitting on the fire box properly after being removed or being knocked.

Solution: Align top plates, and make sure they are in correct position.

2 No fuel reaching tank sensor (IGNITION PROCESS)

Reason: Not enough fuel in tank.

Solution: Put more fuel into the tank.

3 Thermocouple hot – Hot Tray (IGNITION PROCESS)

Reason: Fire has recently been turned off or top plate safety switch activated.

Solution: Wait 5 minutes to try turning on flame again

4 Two minutes safety break (IGNITION PROCESS)

Reason: The thermocouple safety sequence (3 – Thermocouple hot) has not completed.

Solution: Wait another 2 mins to try turn on flame again.

5 Low level sensor not reached, pump timed out

Reason: The fuel has not reached the low level sensor in the burner during operation due to fuel running out, blockage in the fuel lines or faulty pump.

Solution: Check for leaks, around fuel tank. Check fuel, refuel if no fuel. If leak found or still doesn't turn on after refuelling, call engineer/dealer to check fuel lines and pump.

6 High level sensor not reached, pump timed out

Reason: The fuel has not reached the high level sensor in the burner during operation due to fuel running out, blockage in the fuel lines or faulty pump.

Solution: Check for leaks, around fuel tank. Check fuel, refuel if no fuel. If leak found or still doesn't turn on after refuelling, call engineer/dealer to check fuel lines and pump.

7 Timed out wait for fuel low level (IGNITION PROCESS)

Reason: The fuel has not reached the low level sensor in the burner during ignition process due to shortage of fuel, blockage in the fuel lines or faulty pump.

Solution: Check for leaks, around fuel tank. Check fuel, refuel if no fuel. If leak found or still doesn't turn on after refuelling, call engineer/dealer to check fuel lines and pump.

8 Timed out wait for fuel high level (IGNITION PROCESS)

Reason: The fuel has not reached the high level sensor in the burner during ignition process due to shortage of fuel, blockage in the fuel lines or faulty pump.

Solution: Check for leaks, around fuel tank. Check fuel, refuel if no fuel. If leak found or still doesn't turn on after refuelling, call engineer/dealer to check fuel lines and pump.

9 Timed out waiting for flame (IGNITION PROCESS)

Reason: Thermocouple did not get hot enough in required period as flame did not reach it during ignition process, due to fuel running out, blockage in fuel lines or faulty pump.

Solution: Check for leaks, around fuel tank. Check fuel, refuel if no fuel. If leak found or still doesn't turn on after refuelling, call engineer/dealer to check fuel lines and pump.

A Timed out wait for high level after flame (IGNITION PROCESS)

Reason: Fuel did not reach high sensor in the burner after flame on during the ignition process, due to fuel running out, blockage in fuel lines or faulty pump.

Solution: Check fuel, refuel if no fuel. If still doesn't turn on after refuelling, call engineer/dealer to check fuel lines and pump.

B Flame out (THERMOCOUPLE TEMP. DROP)

Reason: Strong draught could have put the flame out or the thermocouple could be faulty.

Solution: Remove source of draught and try relighting fire (after waiting for the safety sequence to finish). If fire still does not light, contact engineer/ dealer to check thermocouple.

C Dropout from ignition program (IGNITION PROCESS)

Reason: Software issue, program is corrupted.

Solution: Contact dealer to get re-programmed.

D Stop code received from RF RECEIVER

Reason: The user has switched off the appliance.

Solution: If the user requires for the appliance to be back just normal quick start procedure.

E No fuel reaching tank level sensor (FIRE OPERATING).

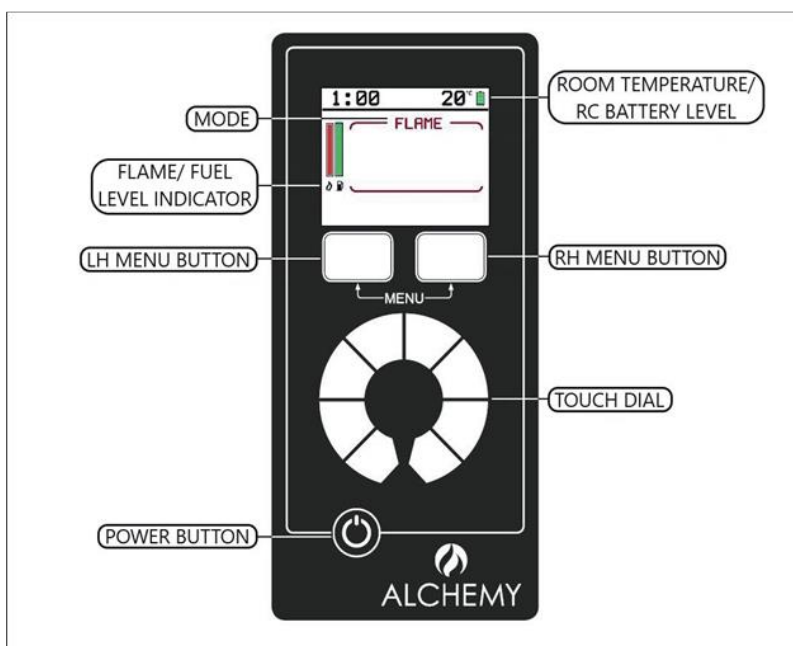
Reason: Fuel ran out and there is not enough fuel in the tank to keep burner operating.

Solution: Put more fuel into the tank.

Appendix 1 - Remote Control (Optional Features)

The appliance is in Standby mode when the power is switched on. You must have the power supply ON (—) before using the handset. The remote control works by radio signal which is configured at the factory with a unique signal code. When carrying out any operations using the remote handset it is likely that it will go into power save mode. Press the power button to reactivate.

IMPORTANT: If your handset loses signal or needs to be replaced then the frequency will need to be reprogrammed.



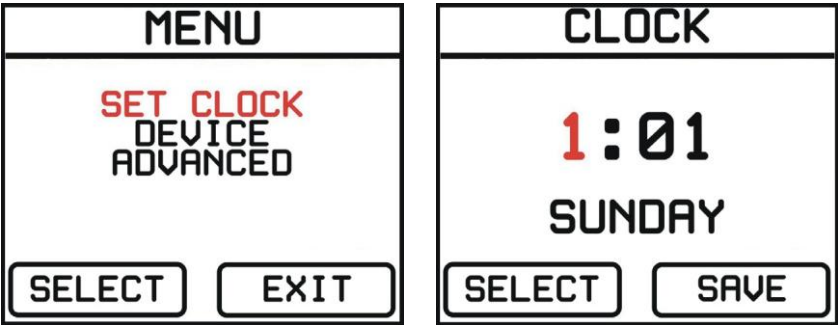
1. Remote Control Functions

Press both Menu buttons until a menu appears at top of screen. Three screen options will appear. To select options rotate dial until highlighted in RED and press select.

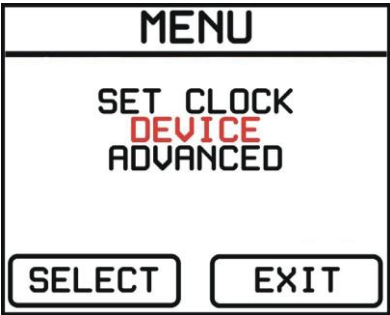
- SET CLOCK
- DEVICE
- ADVANCED

1.1 SET CLOCK

- I. Select CLOCK in the option menu and rotate touch dial until desired time is displayed.
- II. By pressing select it changes from Hours, Minutes and Days.
- III. When correct time has been set, press the RH Menu button to save.



1.2 DEVICE



1.2.1 DELETING DEVICE

- I. Scroll to DEVICE menu and press select.
- II. This gives details of the appliance and also gives the option to delete the appliance from the remote handset. Press and hold the delete option to remove appliance.
- III. Once the deletion process completes, the handset will show NO PAIRED DEVICE. By selecting EXIT options to the main screen, the PAIRING selection will appear.

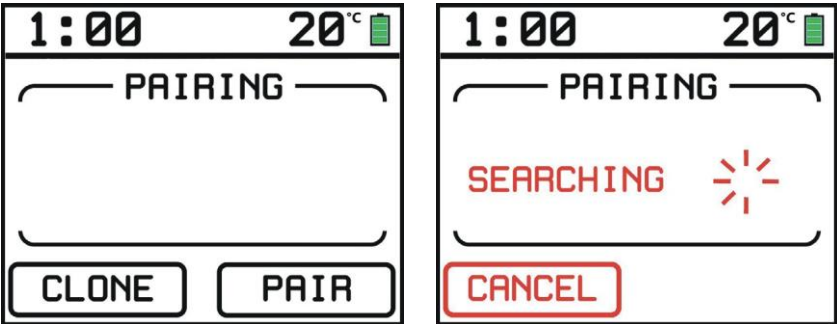


1.2.2 PAIRING DEVICE

To pair a handset (existing or new) to the appliance the current pairing program must be deleted (as shown previously).

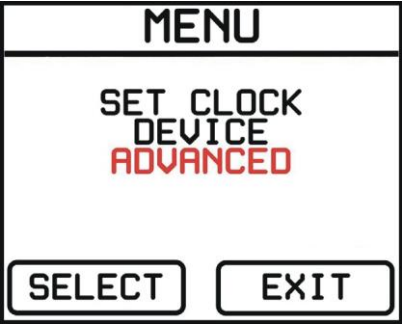
- I. Ensure appliance is switched OFF and isolated from mains power.
- II. Touch power button on the remote panel.
- III. Select PAIR option on remote.
- IV. Switch ON appliance by connecting to main 230V.
- V. The remote screen will show STANDBY when successful.

NOTE: The handset screen will show SEARCHING if the appliance is not plugged in and switched ON.



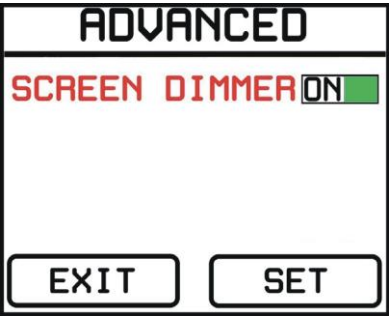
NOTE: The 'CLONE' button is not used.

1.3 ADVANCED

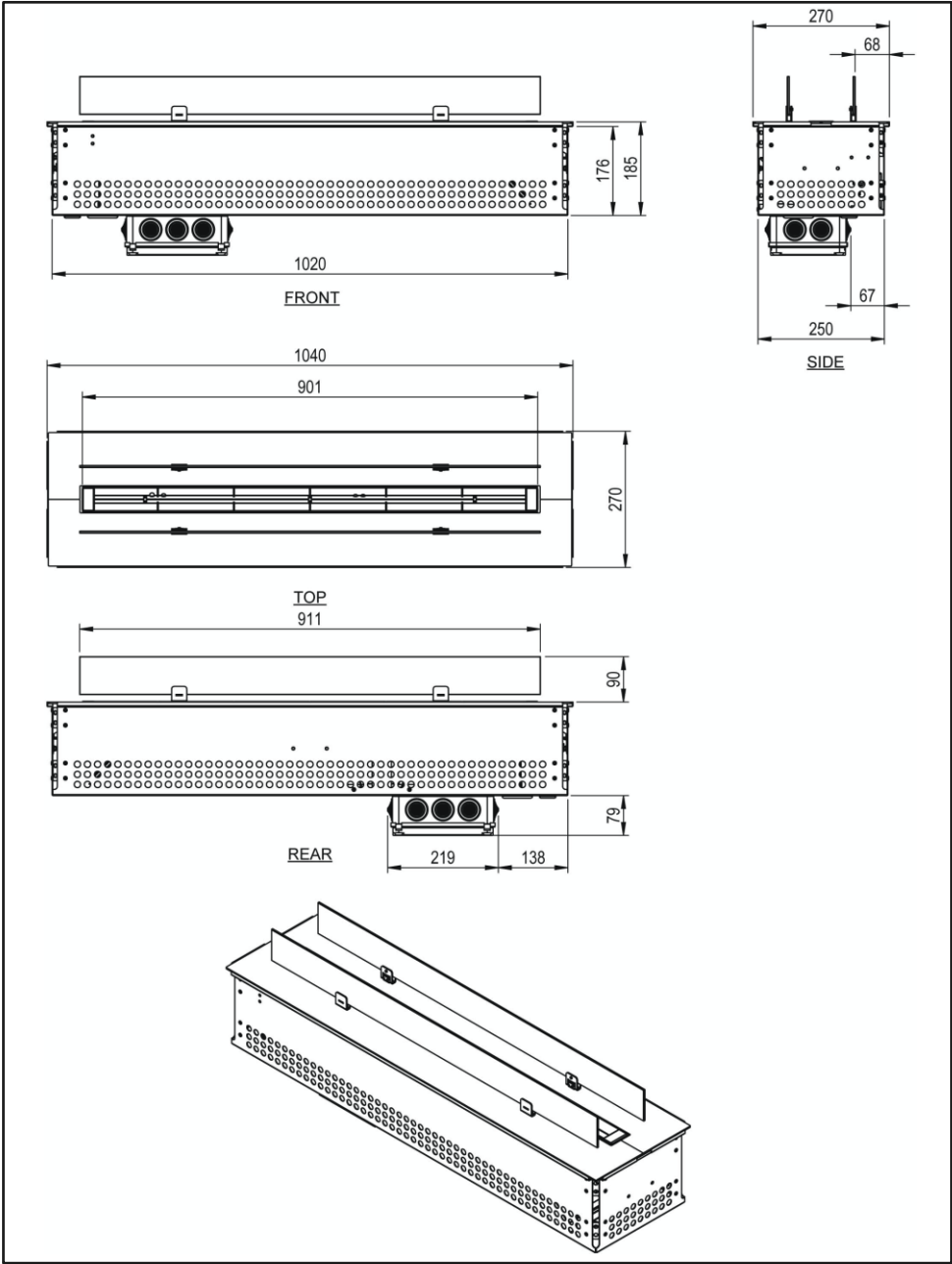


1.3.1 SCREEN DIMMER

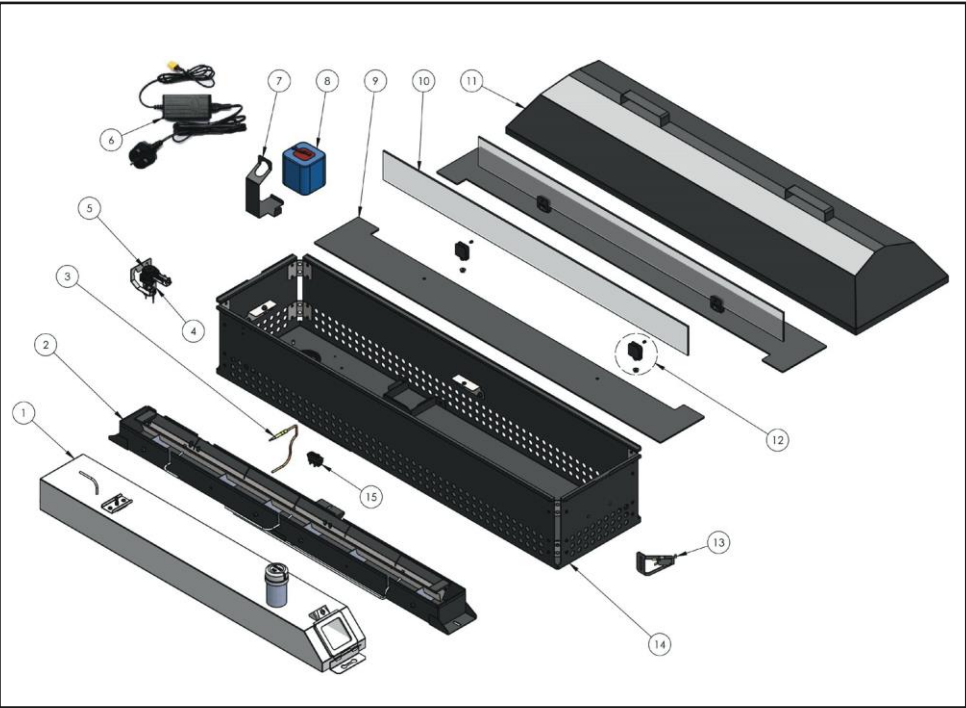
- I. Scroll to ADVANCE menu and press select.
- II. This function dims the screen of the remote. To switch dimmer on or off press SET option to toggle between ON and OFF.



Appendix 2 - Dimensions and Spare Parts ORB1000



ORB1000 SPARE PARTS



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	RB1000-001	FUEL TANK	1
2	ORB1000-002	BURNER ASSEMBLY	1
3	RBIO-001	BURNER THERMOCOUPLE	1
4	RBIO-002	FUEL PUMP COMPLETE	1
5	RBIO-003	FUEL PUMP TOP	1
6	ORBIO-004	BATTERY RECHARGE LEAD	1
7	ORB1000-005	BATTERY HOLDER	1
8	ORBIO-005	BATTERY	1
9	RB1000-003	TOP PLATE WITH HOLES	2
10	RB1000-004	GLASS VISOR PANEL	2
11	ORB1000-00	BURNER LID	1
12	RBIO-007	GLASS BRACKET ASSEMBLY	4
13	RBIO-008	SAFETY SWITCH	1
14	ORB1000-006	ENCLOSURE BOX ASSEMBLY	1
15	ORBIO-006	POWER SWITCH	1

NOTES

This image shows a full page of white paper with horizontal dotted lines, typical of primary school writing paper. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

7. Warranty Registration

To validate and start your warranty please log on to:

<https://chesneys.co.uk/warranty-registration>

and complete the online form. In the event of a breakdown or claim you are required to contact the installer/dealer. They will need to investigate the matter and process the claim on your behalf if required.

The warranty must be registered within 28 days of installing the appliance. Failure to register within this time period will result in the warranty reverting to void from date of installation.

Please also be advised that your appliance should be serviced annually to honour your warranty.

The cost of annual servicing is not included in the guarantee.

Alchemy Fires Ltd
194-196 Battersea Park Road, London, SW11 4ND.