



# Mino Ovens Range User Guide



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# OPERATING INSTRUCTIONS

## UNPACKING

Remove all packing material from between the shelves and inner walls of the oven.

## MAINS SUPPLY

### 240 volts units:

Each unit comes supplied with a mains connection lead already fitted with a correctly rated fuse. The fuse rating and other details for each unit is shown on the voltage plate riveted on the back of the unit. It is important that, if the fuse needs to be replaced, it must only be replaced with one of the correct rating.

### 110 volts units:

These are supplied with a cable, but without a plug or fuse. These units should be wired in by a suitably qualified electrician to the following:-

BROWN WIRE:	`L' = Live pin
BLUE WIRE	`N' = Neutral pin
GREEN / YELLOW	`E' = Earth pin

## WARNING:

**DO NOT CONNECT THE OVEN TO A D.C. MAINS SUPPLY OR SERIOUS DAMAGE WILL OCCUR**

## OPERATION – THERMOSTATIC CONTROL

Position the shelves within the work chamber.

Place a suitable thermometer into the top tubular, so that the thermometer bulb is about two inches (50mm) into the chamber.

Switch 'ON' the mains switch, indicated by the green lamp.

Turn the overheat thermostat dial (RED CAP) to approximately 10°C above the desired working temperature (5°C above the desired working temperatures for incubators).

Set the control thermostat dial (GREY CAP) to the desired working temperature, and allow the unit to heat up and maintain a steady state before making any adjustments.

On units fitted with a HI- LO switch, set this to HI for oven temperatures above 100°C and incubation temperatures above 50°C.

If a closer overheat thermostat setting is required, at the working temperature turn the overheat downscale until its indicator lamp is ON. Advance the knob very slowly upscale to the point at which the indicator lamp is just extinguished.

**NOTE:** The dials may be locked using the Allen key provided. Do not remove the dial lock as this forms part of the scale end stop. For any units fitted with digital control, refer to Page 2 of this guide.

## **OPERATION – DIGITAL CONTROL**

Position the shelves within the work chamber

Switch 'ON' the mains (0 / 1) switch, indicated by the green lamp.

Turn the overheat thermostat to approximately 10°C above the desired working temperature (5°C above the desired working temperature for incubators).

On units fitted with a HI- LO switch, set this to HI for oven temperatures above 100°C and incubation temperatures above 50°C.

The operational parameters of the controller have been factory set to cover a wide range of temperature and load conditions. To change the temperature set point:-

Press \* to display the set point

Press and hold \* then use the up or down buttons to alter the set point.

## **TIMERS**

Units fitted with '**24 Hour Time Switch**'.

Set the clock by turning the dials to the right until the correct time is above the red arrow. Inset the pins into the holes in the dials for the ON/ OFF times required. The inner ring is the ON time the outer ring the OFF time. When the OFF time is reached, the unit's heaters will be turned OFF.

Units fitted with '**Run-Back Timer**'.

For a timed ON period:

Set the timer to the desired period

Set the MAN / TIM switch to the TIM position

Timing will start immediately. At zero time, the heater will be switched OFF.

On some (special) circuits, the timing will start on reaching the set temperatures. At ZERO time, the heaters will be switched OFF.

To over-ride the timer, set the MAN / TIM switch to the MAN (manual) position.

## **MAINTENANCE**

### **ROUTINE CHECKS ON EACH OCCASION OF USE.**

Check the condition of supply lead and plug top. These should be sound and undamaged.

Connect to mains supply and check:-

Supply switch operation

Supply indicators are working.

At working temperatures, the heat indicator functions correctly (shown by the amber lamp cycling ON and OFF without the overheat coming into operation).

## PREVENTATIVE MAINTENANCE

Ensures that the unit is maintained in a clean, dry condition and when not in use, stores in a normal warm atmosphere.

### Minimum recommendation every six months:-

Check the plug top connections are tight and the fuse rating is correct.

Check the operation of the overheat protection system by raising the desired temperature above the overheat temperature.

Carry out an electrical safety check (Portable Appliances) using an appropriate appliance tester operated by a competent person.

Check that the control temperature is maintained within limits.

## SAFETY

If liquids contained in partially sealed vessels are to be heated in the unit, then at all times the temperature setting must be such that no appreciable pressure build-up is allowed to occur within the vessel. The risk of explosion becomes high if the temperature setting is higher than that of the boiling point of the liquid. Therefore, any vessels that required heating SHOULD NOT be completely sealed. These units are not suitable for use when inflammable solvents are being used where the concentration can reach inflammable or explosive levels.

When the unit is in use, the thermostat / heating control should be locked where a dial lock is fitted and /or a notice warning against unauthorised tempering with either the temperature setting or the work in progress should be prominently displayed.

## GENERAL

- Mop up any spilled liquid from the floor of the unit.
- Do not place samples on the chamber floor.
- Take the normal precautions not to allow water to come into contact with the electrical components.
- The outer surfaces can be cleaned with a warm, damp, soapy cloth or any proprietary cleaner suitable for a painted surface (do not use solvent or harsh abrasives).
- The work chamber may also be cleaned as above.

## PLEASE NOTE

Before putting the unit to use, set the temperature to 100° C, switch on and leave for about 24 hours in order to expel any fumes from the thermal insulation used. At times, these fumes can be acrid. Ensure that the room is well ventilated during this period.

