Contact information:

o3one clean
LIMITED

170 Fortis Green
London N10 3PA
Tel: +44 (0)20 8883 2756
Fax: +44(0)20 8815 2001
Email: sales@o3clean.co.uk

OC1500

NATURAL CLEANER

User Manual

Version 2.0 July 07

ozone clean
LIMITED

OC1500
NATURAL CLEANER

Table of Contents

1. Unpacking

Open top flaps of carton. Remove handle and extra items package and set to one side. Gently place carton on its side. Lift unit up slightly and then pull unit out by rolling on its wheels.

❷ Stand unit upright on its wheels.

❸ Place handle on top panel and securely fasten using the provided hex screws and hex tool (2 screws on each side of handle). Take care not to cross thread the screws.

CAUTION

READ THIS MANUAL BEFORE ATTEMPTING TO USE THIS MACHINE.

THE OC1500 NATURAL CLEANER MUST ONLY BE USED IN UNOCCUPIED AND FULLY ENCLOSED SPACES

2. General Information

Ozone Clean's OC1500 Natural Cleaner is a second-generation mobile and easy-to-use deodorising and sanitising system for indoor use. This robust, computer controlled and automatic system is characterized by high safety standards. The system incorporates Ozone Clean's proprietary e^2 end-to-end system, a two-stage operating cycle that creates ozone and subsequently removes it, allowing the immediate reoccupation of treated spaces.

In the first stage the room is enriched with ozone (generated from the air using Ozone Clean's non-thermal-discharge technology) at a controlled rate in order to reach a high homogenous concentration level within the shortest possible time. In the second stage, any after-treatment residual ozone is decomposed into oxygen, so as to leave the treated room well within the regulated levels.

3. Declaration of Conformity

Model No. OC1500 Natural Cleaner. This unit fully complies with CE rules of EMC regulations. EN 61000-61, EN 61000-62, EN 61010-1, EN 5501.
This unit is RoHS compliant (restriction of hazardous materials).

CE RoHS

4. Safety Precautions and Warnings

Read this manual carefully before operating the unit.

DO NOT expose this equipment to rain or moisture. Should any liquid come into contact with the system, unplug it and have it serviced by qualified personnel before operating it further.

DO NOT enter the treated room during the operation of the system, or before hearing the completion-of-cycle audio alert-signal.

This system is equipped with a ventilation inlet and a ventilation outlet.
DO NOT BLOCK inlet/outlet or place foreign objects in their vicinity which may block air flow. Place unit in the **CENTRE** of the room.

DO NOT disconnect the cable cord from mains socket before the operation of the system is completed.

Unplug the system power plug when it is not in use. When unplugging, never pull the plug by the cord itself.

AVOID ELECTRICAL SHOCK

This unit is supplied with an earthed cable. Attempting to bypass the earth or to connect the unit to an unearthed socket is strictly prohibited.

This unit is supplied with a circuit breaker which will automatically open under certain conditions. Interfering with the circuit breaker in any way as to prevent its automatic operation is unsafe and strictly prohibited.

Prior to opening the unit for maintenance,
always disconnect the unit from power.

There are no user serviceable parts inside the OC1500 Natural Cleaner. Removal of front or back panel by unauthorised personnel will void the warranty.

5. Technical Specifications

5.1 Description

The OC1500 system is a portable heavy-duty and rugged system. It features the most advanced technology in the field of odour control and air-treatment. The OC1500 employs Ozone Clean's state-of-the-art patented Dielectric Barrier non-thermal-plasma generating assembly which is characterized by its high ozone output rate and enhanced reliability.

5.2 Technical Specifications:

Input Voltage:	230V; 50Hz.
Airflow:	450 m3/h.
Ozone Output:	15g/hour (15,000 mg/h) @ worst case conditions.
Operation:	Automatic Activation & Deactivation Cycle timings.
Cycle Times:	Minimum 15 minutes, Maximum 48 hours. Longer cycle times password protected.
Control:	Digital Keyboard & Backlit LCD Display with operator prompts.
Safety:	Re-settable circuit breaker 10A. High Intensity Xenon Strobe Flashing Indicator (OC1500 in operation). Piezo Crystal Alarm Sounder at cycle start and cycle end. Differential Pressure Regulator with automatic system shutdown if air flow obstructed. Key-switch enables facility managers to restrict use to key holders. Onboard Diagnostics.
Service:	No consumable materials. 500 hour or Annual service inspection intervals.
Dimensions:	40 x 44 x 88 cm, with handle attached. Handle detached for shipping.
Ozone Outlet:	10.16cm (4 inch) diameter duct.
Weight:	26 kg.
Shipping weight:	33 kg.
Construction:	Lightweight Aluminium and Steel.
Wheels:	Non-marking Synthetic Rubber.
Certification:	CE, RoHS.

5.3 Normal Environmental Conditions:

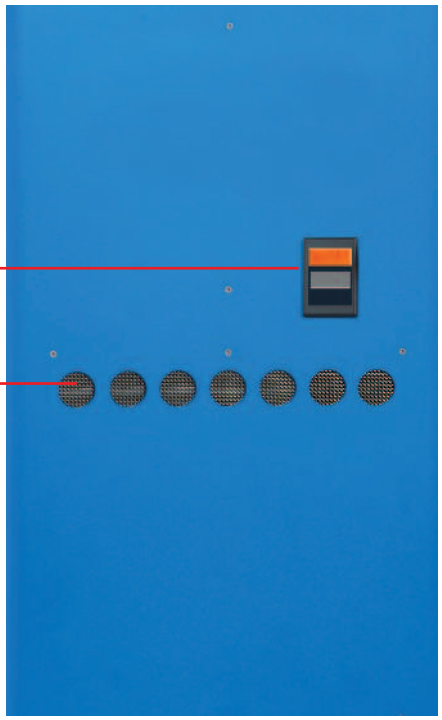
Environment:	Indoor Use Only.
Temperature:	-5°Cto 40°C.
Humidity:	Maximum relative humidity: 95% non-condensing.

Ozone Clean has a policy of continuous product improvement and reserves the right to modify or change this specification at any time without notice.

6. The OC1500 Power Switch, Control Panel, Key Switch and other Indicators

Ozone Outlet
DO NOT block or obstruct

BACK PANEL



On/ Off Switch & Circuit Breaker
230V/50Hz Power Socket

Air Inlets on Back and Front Panels
DO NOT block or obstruct

Catalyser Outlet
DO NOT block or obstruct

TOP PANEL

Control Panel

Ozone Output
DO NOT block or obstruct

Operator Keyswitch

Flashing Beacon

7. Operation

7.1 Preparation and Connections

Place the OC1500 in the centre of the room to be treated.

Ensure that the air inlets and outlets on the back, front, top and bottom of the machine are unobstructed.

7.1.1 Operator Security Key.

If necessary, using the supplied operator key, turn the operator switch on the top panel to the **'RUN'** position. The key may be removed either in the **RUN** position or the **OFF** position. Thus the user has the option to lock the machine after each use to prevent unauthorised operation.

Connect power cord to socket on the OC1500's rear panel and only then connect it to the power source socket.

7.2 Switching on the OC1500

Switch on the OC1500 using the combined circuit-breaker and switch at the rear of the machine by the power socket.

The OC1500 control panel will first display a **WELCOME** screen.

After a few seconds the display will then show **TOTAL ACCUMULATED TIME OF OPERATION** and **TIME REMAINING BEFORE SERVICE.**

After a few more seconds the start-up cycle will complete and the display will then show the **MAIN MENU** screen.

8. Controller settings

CAUTION

Before starting operation verify that the treated area has been vacated of people, animals, plants and items containing natural rubber.

Important!

When cycle is started, the system will begin generation of ozone after a **60 second delay** in order to allow the operator to leave the room.

Remaining in the treated area while unit is in operation or entering before completion of cycle may be hazardous to your health.

YOU MUST ensure that no other person can enter the room until the cycle is complete.

USE appropriate signage if necessary.

CAUTION

OZONE IS A POWERFUL OXIDISER. USE THIS EQUIPMENT WITH CARE AND IN **UNINHABITED AREAS ONLY.** READ ALL OPERATING INSTRUCTIONS BEFORE USING THIS MACHINE.

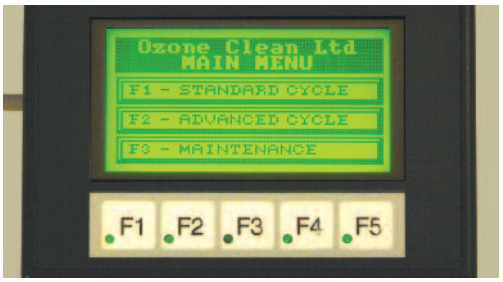
RE-OCCUPY TREATED ROOM ONLY AFTER PRESET OPERATING TIME HAS ELAPSED AND THE AMBER FLASHING LIGHT HAS STOPPED FLASHING, INDICATING THAT THE MACHINE IS NO LONGER IN OPERATION.

DO NOT ATTEMPT TO ENTER THE ROOM WHILE MACHINE IS IN OPERATION.

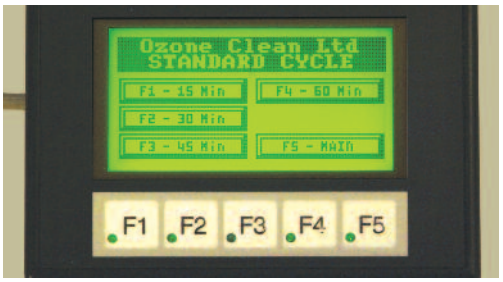
8.1 Main Menu – Standard Cycle

Note: Access to the Advanced Cycle and Maintainance Options are password protected. This is explained in the next chapter.

Press **F1** to access the **Standard Cycle Page**.



Use buttons **F1** through **F4** to select the appropriate cycle time.



F1 cycle time 15 minutes. For rooms of approximately 40 to 80 cubic metres with light odour.

F2 cycle time 30 minutes. For rooms of approximately 80 to 150 cubic metres with light odour, or for smaller rooms with stronger odour.

F3 cycle time 45 minutes. For rooms of 150 to 250 cubic metres with light odour or for smaller rooms with very strong odour.

F4 cycle time 60 minutes. For rooms of 250 to 500 cubic meteres. **DO NOT** use this cycle in rooms smaller than 250 cubic metres.

Button **F5** returns to the Main Menu page.

Selecting a cycle time takes you to the **CONFIRM** page where you may either confirm and start the cycle, or cancel and start over again.

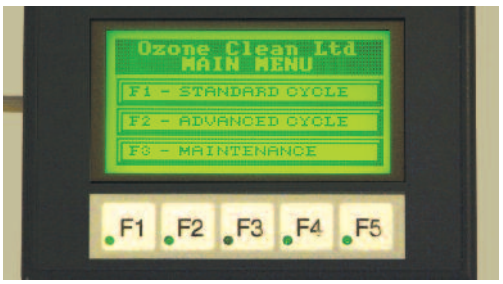
When cycle start is confirmed, the fan will begin, the beacon will flash, and the ozone generator will begin generating ozone after 60 seconds has elapsed in order to give you time to leave the room.

The screen now prompts **GET OUT OF ROOM NOW! PRESS. F5 TO STOP.** An alarm buzzer will sound at the start of ozone generation and also at the final completeion of the cycle.. You may press **F5 at any time to stop the cycle.**

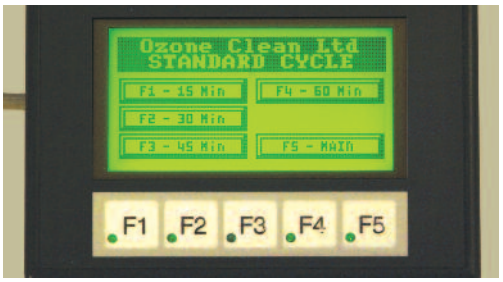
YOU MUST LEAVE THE ROOM WITHIN 60 SECONDS OF STARTING THE CYCLE.
DO NOT RE-ENTER THE ROOM UNTIL THE CYCLE IS COMPLETE.

8.2 Example of how to select 15 minute cycle time from power on.

1. Switch machine on and wait approx 20 seconds until main menu is displayed.



2. Press **F1** to access Standard cycle menu.



3. Press **F1** to select 15 minute cycle.

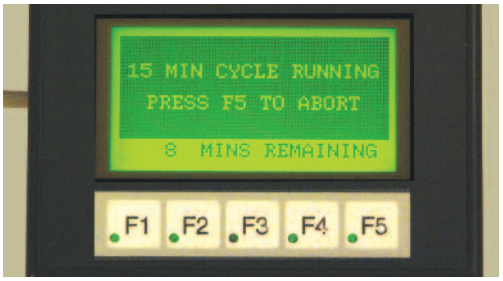
4. Press **F1** to confirm start of cycle.

The Fan Blower Starts

The Xenon Beacon Flashes.

The Control Panel Screeen displays **Get out of Room Now!**

This screen alternates with screen displaying remaining time left until end of cycle.



5. YOU MUST LEAVE THE ROOM WITHIN 60 seconds of Cycle Start!

6. The Buzzer sounds at start of ozone generation.

7. The Buzzer sounds at end of cycle and the Xenon Beacon stops flashing. It is now safe to re-enter and use room.

Open windows and ventilate room if so desired.

8.3 Main Menu – Advanced Cycle

The advanced cycle menu provides acces to cycle times ranging from 2 hours to 48 hours. These very long times are typically used for disaster recovery and specialist operations.

This machine is capable of generating very high levels of ozone over extended time periods. Thus the advanced cycle menus are protected from inadvertent operator selection by password access.

8.3.1 Entering a Password

Selecting the Advanced cycle menus from the main page will bring up a screen requesting a 4 digit password. The password will be supplied by Ozone Clean Limited on request.

To enter the password:

1. use the **UP** key to select the correct 1st digit of the password

2. Use the **SHIFT** key to move the cursor to the 2nd digit of the password

3. Use the **UP** key to enter the 2nd digit of the password

4. Use the **SHIFT** key and **UP** key to enter the 3rd and 4th digits of the password

5. Press **ENTER** to access the menus

8.4 Use of 4" Ducting to treat a remote space

If treating a crawl space or other remotely accessible space, you may attach a 4 inch diameter hose to the OC1500 Outlet.

CAUTION

When using the machine in this manner, the OC1500 will be unable to deactivate the ozone for obvious reasons. However ozone in the crawl space will naturally decompose, typically within **3-6 hours after completion of the standard cycle times.** Please contact Ozone Clean Limited for additional information if you wish to use the OC1500 in this manner.

8.5 Activation, Deactivation and Total Operating Times

Total Cycle Time	Ozone Generation Time	Pause Time	Ozone Destruction Time	Appropriate Room Size
Standard Menu Cycle Times				
15 mins	105 seconds	2 mins	11 mins 15 secs	40 to 80 cubic metres
30 mins	5 minutes 30 secs	2 mins	22 minutes 30 secs	80 to 150 cubic metres
45 mins	14 minutes	2 mins	29 minutes	150 to 250 cubic metres
60 mins	20 minutes	2 mins	38 minutes	250 to 500+ cubic metres
Advanced Menu Cycle Times				
2 hours	60 mins	4 mins	56 minutes	These timings are typically used for disaster recovery operations. Consult Ozone Clean Ltd before using any of the Advanced Cycle Options.
5 hours	3 hours	2 mins	1 hours 58 mins	
12 hours	9 hours	1 min	2 hours 59 mins	
48 hours	44 hours	1 min	3 hours 59 mins	

9. Examples of use of items containing natural rubber

Items made of natural rubber (gum) are many and differ in their rubber content; the more rubber content, the greater their susceptibility to degradation by ozone.

Among the common items that may contain natural rubber are computer keyboards (rubber under the keys), floor squeegees, tubes (for bicycles), crepe soles (for shoes), rubber bands (various), gloves ('Latex'), smoked sheets, underlay, and more.

The common sense rule: when in doubt about whether the item contains natural rubber remove the item before treating the space. Alternatively, coat the item's surface with Silicone Spray before exposing it to ozone.

- Latex Gloves
- Some floor squeegees
- Some computer keyboards
- Crepe Soled Shoes
- Rubber Bands
- Latex Underlay.

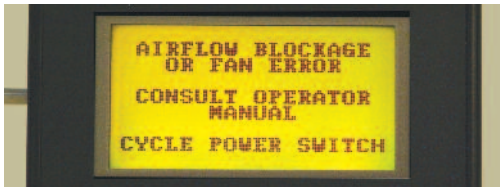
10. Maintenance and Service

Preventative maintenance and inspection of your OC1500 is required every 500 hours or once per year in order to insure trouble-free performance. The OC1500 panel will display a message indicating that 500 hours of operation have been reached by displaying **'Service Required'**. Please call Ozone Clean Limited to schedule a service visit. There are no user serviceable parts within the OC1500.

10.1 Caring for and cleaning your OC1500

The OC1500 has been designed to be reliable and maintenance free in-between service intervals. If you desire to clean the surfaces of your OC1500, please only use a soft cloth lightly dampened with clean water. **DO NOT** use solvents or detergents as these may harm the control panel. Use of any cleaning materials other than water and a soft cloth may void your warranty.

11. Troubleshooting

Problem	Possible Solution
Display is blank and keypad does not function.	Check power cord connections and fuse in plug. Reset Circuit Breaker on rear panel of machine by Power Socket. If circuit breaker trips a second time after it has been reset, **STOP** and call **Ozone Clean** for assistance.
Display shows **'Airflow blockage or Fan Error'** 	Ensure that nothing is obstructing air inlets and outlets. Turn power off and on again to reset machine. If fault persists contact Ozone Clean for service
Display shows **'Error, Key not in run position'** 	Insert Operator Key and turn to **ON** position to continue.
Display shows: **"Service Required"**	This notification will appear every 500 hours of use. Contact **Ozone Clean** to schedule service visit. You may continue to use system while awaiting service by pressing **F4.**
Unusual and objectionable odour (not Ozone) on completion of cycle	System Catalyst may have become corrupt and need replacement. Contact **Ozone Clean** for service.
Other	Call local **Ozone Clean** for technical support.