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OWNER'S OPERATION MANUAL

for

**"SAFE-TEE" SERIES 2000
FUME CUPBOARD**

Manufactured by

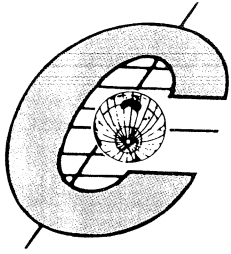
CONDITIONAIRE INTERNATIONAL PTY LIMITED

RELIABILITY - QUALITY - SERVICE

COMMONSENSE GUIDELINES

Following are helpful hints for the safe and efficient operation of your Series 2000 fume cupboard.

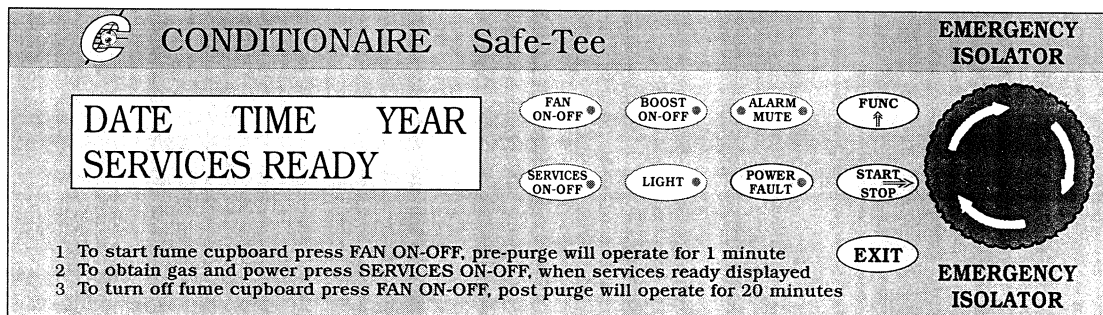
- Follow the operation instruction on the “SAFE-TEE” control panel.
- Ensure fume cupboard is clean and uncluttered.
- Larger apparatus should be placed centrally and to the rear of the fume cupboard.
- Do not use the fume cupboard without the extraction system operational.
- Sash should be lowered to the lowest practical position when fume cupboard is in use. This is especially so if “IVAC” is fitted in order that minimal air conditioned air is exhausted.
- Use minimum quantities of substances necessary for experiments.
- Spillage of chemicals should be cleaned up immediately.
- Hot plates should not be placed closer than 100mm to any wall surface.
- Do not use the fume cupboard as a chemical storage area.
- Always follow your companies O.H & S policy and policy for disposing of used substances



"SAFE-TEE" FUME CUPBOARD CONTROLLER

The Conditionaire "**SAFE-TEE**" fume cupboard controller is a user friendly, electronic touch panel with liquid crystal status display, which complies with AS2243.8-1992, AS2430.3.6-1997 and AS3000-1991. These standards were used as minimum requirements when designing the "**SAFE-TEE**" controller and additional user benefits have been incorporated.

The modular design of the system also makes it ideal for fitting to existing fume cupboards to upgrade them to current Australian Standards.



Note: Actual size of touch panel is 270 x 75mm.

USER BENEFITS

- * More accurate readings are obtained by using an air velocity sensor as opposed to an air pressure sensor.
- * LCD has large characters and shows mode of operation at all times or advises specific fault status.
- * The touch panel is angled towards the operator eye level for convenience of operation and status checking.
- * A count down timer and stop watch are incorporated and operated by separate function buttons.
- * Maintenance is eliminated by the use of super capacitor, as opposed to battery back-up, for power failure.
- * It can be fully integrated with multiple fume cupboards, building management systems, fume scrubbers and the "**IVAC**" system.
- * It is supplied pre-wired to marked terminal strips, inside the control box, ready for simple connection to site wiring.

OPERATION

The operation of your **Series 2000** fume cupboard is controlled by the "**SAFE-TEE**" controller with back-lit status display and LCD readouts, giving a clear indication of modes of operation. To use your fume cupboard follow these simple procedures.

Step 1 To **START** fume cupboard system press "**FAN ON-OFF**" touch button "**FAN ON-OFF**" green light will illuminate and flash.
"**PRE-PURGE**" will be displayed and timer will countdown.

Pre-purge cycle takes one minute to complete at the end of which the light will stop flashing and display will read **SERVICES READY**.

Step 2 To obtain **GAS & POWER**, press "**SERVICES ON-OFF**" touch button "**SERVICES ON-OFF**" green light will illuminate.
SERVICES ON will be displayed
Gas and power will now be available for use in the fume cupboard.

Step 3 To **TURN OFF** fume cupboard system press "**FAN ON-OFF**" touch button.
"**FAN ON-OFF**" green light will flash
Services will automatically turn off.
"**POST-PURGE**" will be displayed and timer will countdown.

Post-purge cycle takes a period of twenty minutes during which time the exhaust system will continue to operate. At the completion of the post-purge cycle all touch panel lights will extinguish, date and time will be displayed with system mode **OFF**.

EMERGENCY - In an emergency situation such as a fire, chemical spill, push "**EMERGENCY ISOLATOR**" fan will continue to run. Power and flammable gases will be disabled.

Operation of FUNCTIONS on “Safe-Tee”

Count Down Timer.

Press the \uparrow *FUNC* button once, *Count Down Timer* will appear,
Hold down \uparrow *FUNC* button till the number is Underscored,
Press the \uparrow *FUNC* button to edit the value
Press the \Rightarrow *START/STOP* button to move the cursor
Once count down time is set, press the *EXIT* button
Press the \Rightarrow *START/STOP* button to start the function.
(Audible alarm will sound when time has finished counting down)

Stop Watch Timer.

Press the \uparrow *FUNC* button twice, *Stop Watch* will appear,
Press the \Rightarrow *START/STOP* button to start the function.
Press the \Rightarrow *START/STOP* button to stop the function.
Press *EXIT* to clear the function.

Clock.

To edit **TIME & DATE**.
Press the \uparrow *FUNC* button three times, *Clock* will appear,
Hold down \uparrow *FUNC* button till the number is Underscored,
Press the \uparrow *FUNC* button to edit the value
Press the \Rightarrow *START/STOP* button to move the cursor
Press *EXIT* when **TIME & DATE** are correct.

TROUBLE SHOOTING

The Conditionaire "SAFE-TEE" controller has been designed with LCD readout and back-lit status display to give a clear indication of mode of operation or fault type.

Fault Indication	Possible Cause	Remedy
"AIR FLOW FAULT" Red light Flashing Audible Alarm	Fan not operating Required airflow not being achieved	Have a qualified tradesperson inspect motor and/or drive <i>(where fitted)</i> Have a qualified tradesperson check fan rotation, and inspect impeller and duct.
"AIR FLOW SENSOR" Red light Flashing Audible Alarm	Faulty sensor	Have a qualified tradesperson check sensor operation.
"LOW WATER FLOW" Red light Flashing Audible Alarm	Low water level in recirculating tank Faulty float switch	Have a qualified tradesperson inspect tank for water level Have a qualified tradesperson repair or replace switch
"LOW GAS PRESSURE" Red light Flashing Audible Alarm	No gas pressure at safety switch	Have a qualified tradesperson restore gas pressure or repair leak.
"EMERGENCY STOP" Red light Flashing Audible Alarm	"Emergency Stop" button pushed in	Release "Emergency Stop" push button only when emergency has passed
"HIGH TEMP" Red light Flashing Audible Alarm	Temperature in duct has risen to 50° C	Reduce source of heat
GPO's Not Operating <i>(Normal Display) No Alarm.</i>	Internal circuit breaker tripped behind control panel.	Have a qualified tradesperson clear fault and reset breaker.
"Power Fault" <i>(No Display)</i> Red light Flashing Audible Alarm	Mains power turned off	Have a qualified tradesperson restore mains power to fume cupboard

If problems occur after commissioning has been completed call Conditionaire International and consult one of our qualified engineers. Phone: (02) 9774-3355.

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CLEANING

Your **Series 2000** fume cupboard is an enclosed, ventilated work area designed to protect the operator and other personnel from the dangers of toxic fumes and to reduce the dangers of fire and explosion. It should be maintained accordingly.

Normal house keeping practices should be carried out on your **Series 2000** fume cupboard as with other valuable equipment in your laboratory.

Ease of cleaning was an important design criteria in the development of this unit.

The internal "**ASAH**" surface is smooth, fully sealed and has radiused corners. The three (3) piece "**ASAH**" baffle system is easily removed from the holding blocks, without the use of any tools,

Clean your **Series 2000** fume cupboard to ensure it is free from contaminants, using a detergent solution and water.

Conditionaire is able to offer this service, refer to **Service Information and NATA Certification** section.

MAINTENANCE

Recommended Maintenance Programme

<u>Operation</u>	<u>Period</u>
Clean visible internal surfaces	Daily
Clean glass sash front	Daily
Check scrubber operation (<i>if fitted</i>)	Daily
Clean baffles and all internal surfaces	6 Monthly
Inspect and maintain fans, their motors, drives and bearings	6 Monthly
Check electrical connections and full function test of "SAFE-TEE" controller	6 Monthly
Check that air cleaning device (<i>if fitted</i>) is fully functional	6 Monthly
Check condition of ductwork for stability and damage and ensure all drains are clear	6 Monthly
Check condition of sash cables and rollers	6 Monthly
Carry out abbreviated face velocity test	6 Monthly
Carry out full NATA certification for smoke containment and face velocity	12 Monthly

Conditionaire is able to offer this service, refer to **Service Information and NATA Certification** section.