

AIR SCIENCE® UV-BOX™



USER OPERATION MANUAL

Air Science Manual Revision No. PURAIR-UV-BOX.V3.2012
Specifications subject to change without notice.



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Air Science™

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SAFETY WARNINGS

- This cabinet does not offer product and/or sample protection.
- Read all instructions before proceeding and observe the installation procedure and environmental/electrical requirements
- Anyone working with, on or around this equipment should read this manual. Failure to read, understand and follow the instructions given in this documentation may result in damage to the unit, injury to operating personnel, and / or poor equipment performance.
- Any internal adjustment, modification or maintenance to this equipment must be undertaken by qualified service personnel.
- The use of any hazardous material in the cabinet must be monitored by an industrial hygienist, safety officer or some other suitably qualified individual.
- Explosive or inflammable substances should never be used in the cabinet unless a qualified safety professional has evaluated the risk involved.
- If chemical, radiological or other non-microbiological hazards are being used in the cabinet, additional protective measures should be taken. Besides that, the operation should be monitored by a suitably trained individual.
- Before you proceed, you should thoroughly understand the installation procedures and take note of the environmental/electrical requirements of the cabinet.
- In this manual, important safety related points will be marked with this symbol.



- If the equipment is used in a manner not specified by this manual, the protection provided by this equipment may be impaired.

LIMITATION OF LIABILITY

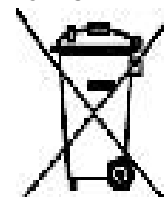
The disposal and / or emission of substances used in connection with this cabinet may be governed by various local regulations. Familiarization and compliance with any such regulation are the sole responsibility of the users of the cabinet. Air Sciences' liability is limited with respect to user compliance with such regulations.

EUROPEAN UNION DIRECTIVE ON WEEE AND RoHS

The European Union has issued two directives:

- **Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE)**

The objective of the WEEE directive is to promote "...the reuse, recycling and other forms of recovery of such wastes (WEEE) so as to reduce the disposal of waste besides improving the environmental performance of all operators involved in the life cycle of electrical and electronic equipment, e.g. producers, distributors and consumers..." and hence this directive refers to the disposal of this cabinet within the EU. A "wheelie bin" sticker (*shown alongside*) has to be pasted on all products covered by this directive, indicating that at the time of disposing of the product, it should not be grouped together with general unsorted municipal waste. Instead, distributors of electrical and electronic equipment should be responsible for the collection and scrapping of the products they have sold Please note that this cabinet has been classified as "fixed industrial equipment" and hence the WEEE directive is not applicable to its disposal.



- **Directive 2002/95/EC on Restriction on the use of Hazardous Substances (RoHS)**



With respect to the directive on RoHS, please note that this cabinet falls under category 9 (*monitoring and control instruments*) and is therefore exempted from requirement to comply with the provisions of this directive.

SYMBOLS



Warning of hazardous area or situation



Warning of dangerous electric voltage



Earth (ground) protective conductor

Local government may require proper lamp disposal



FREIGHT CLAIM INFORMATION

Air Science inspects each product for defects before shipment. Air Science products are then carefully packed in compliance with carrier regulations and thoroughly inspected before leaving our plant. Responsibility for their safe delivery is assumed by the carrier upon acceptance of the shipment. Occasionally damage occurs in transit. Claims for loss or damage sustained in transit must be made upon the carrier.

Please remember that you are responsible for all freight claims and the cost of all replacement pieces for each shipment you accept. Inspect each shipment very carefully before acceptance. Carefully inspect each pallet or crate upon arrival. If a shipment is found to be damaged upon delivery, be sure to have the driver/carrier note all damage details on the delivery receipt.

This is essential or your claim may be denied. Also if pallets are stacked, please note "Stacked Pallets" on the delivery receipt (pallets are not stacked when shipped, unless otherwise stated for certain products). Air Science is not responsible for pallets stacked at carrier terminal. Any unloading difficulties or damages due to stacked materials are carrier's responsibility.

If freight damage is discovered, please refer to the following guidelines in order to process and effective freight claim:

ACCEPTED FREIGHT WITH NOTED/VISIBLE LOSS OR DAMAGE

- Any external evidence of loss or damage must be noted on the freight bill or delivery receipt and signed by the courier's agent or delivery driver

NOTE: Failure to properly describe evidence of loss or damage may result in the carrier refusing to honor a claim

- Contact delivering terminal to arrange for a claim form and inspection report to be faxed or mailed to you
- Notify Air Science regarding which items need replacement
- Keep all damaged items and packing material until claim is resolved between you and the carrier

ACCEPTED FREIGHT WITH CONCEALED LOSS OR DAMAGE

When a damage or loss is discovered during unpacking:

- Contact the carrier immediately upon discovery of damage and request for inspection by the carrier's agent.
- Carrier will determine inspection needs based on value and time elapsed
- Notify Air Science regarding which items require replacement
- Air Science will fax to you an order acknowledgment that includes value of items for claim (less freight amount)
- Air Science will invoice you for replacement materials
- Air Science standard payment terms will apply

UNACCEPTED FREIGHT

- If substantial damage is noted upon inspection you have the right to refuse part or all of a shipment. Do not unpack pallets or crates with damaged materials. Individual items cannot be refused. You must refuse the entire pallet or accept the freight with noted damage (see above)
- Air Science will handle all freight claim procedures and process a replacement order for your company for the damaged pieces at no charge. (if the original order was shipped under CIF terms i.e. Air Science had covered the insurance)

NOTE: Any correspondence with Air Science regarding loss or damage must be accompanied by a copy of the shipping carrier's report. Air Science will not accept returns that have not been authorized.

In the event of accepted freight with damage or loss, notification of loss or damage must be sent to the carrier within 10 days of receiving the freight. Notification outside the 10-day time frame may result in shipping damage claim being denied.



WARRANTY TERMS AND CONDITIONS

Air Science value your business, so your satisfaction is important to us, so please complete and return our customer satisfaction survey at the end of this manual.

Should you be unfortunate to receive product that appears to be damaged or defective or does not appear to be working satisfactorily, then please contact our experienced technicians for assistance at the address shown at the foot of this page.

The Air Science range of cabinets has been carefully designed to produce a system that will provide product safety in an easy to use system. However, basic safety precautions should always be followed when:

- Using an electrical product; and
- Handling hazardous substances.

Air Science products come with a 2-year limited warranty beginning on the date of shipment from the Air Science. Air Science's limited warranty covers defects in materials and workmanship. Air Science's liability under this limited warranty shall be, at our option, to repair or replace any defective parts of the equipment, provided if proven to the satisfaction of Air Science that these parts were defective at the time of being sold.

This limited warranty does not cover:

- Installation (inside delivery handling) damage.
- Products with missing or defaced serial numbers
- Consumables such as filters (HEPA, ULPA, carbon, pre-filters) and fluorescent / UV bulbs
- Problems that result from:
 - External causes such as accident, abuse, misuse, problems with electrical power, improper operating environmental conditions
 - Servicing that is not carried out by Air Science personnel or their appointed agents, or in the case of electrical work by a qualified electrician
 - Usage that is not in accordance with these product instructions
 - Failure to follow these product instructions
 - Failure to perform preventive maintenance
 - Problems caused by using accessories, parts, or components not supplied or approved by Air Science
 - Damage by fire, floods, or acts of God
 - Customer modifications to the product

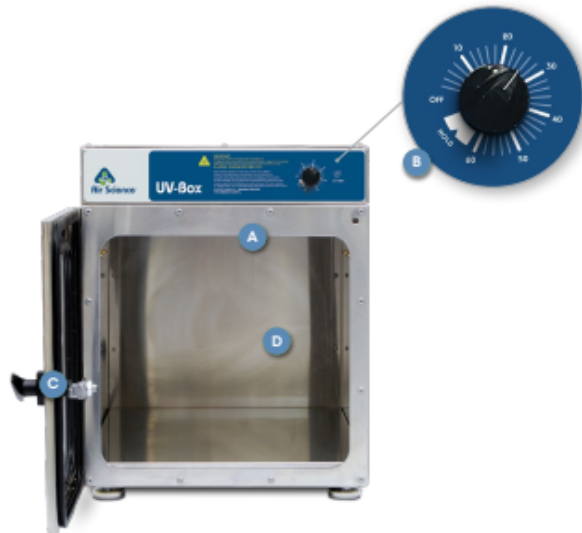
ALL EXPRESS AND IMPLIED WARRANTIES FOR THE PRODUCT, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES AND CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED IN TIME TO THE TERM OF THIS LIMITED WARRANTY. NO WARRANTIES, WHETHER EXPRESS OR IMPLIED, WILL APPLY AFTER THE LIMITED WARRANTY PERIOD HAS EXPIRED. AIR SCIENCE DOES NOT ACCEPT LIABILITY BEYOND THE REMEDIES PROVIDED FOR IN THIS LIMITED WARRANTY OR FOR SPECIAL, INDIRECT, CONSEQUENTIAL OR INCIDENTAL DAMAGES, INCLUDING, WITHOUT LIMITATION, ANY LIABILITY FOR THIRD-PARTY CLAIMS AGAINST YOU FOR DAMAGES, FOR PRODUCTS NOT BEING AVAILABLE FOR USE, OR FOR LOST WORK. AIR SCIENCE LIABILITY WILL BE NO MORE THAN THE AMOUNT YOU PAID FOR THE PRODUCT THAT IS THE SUBJECT OF A CLAIM. THIS IS THE MAXIMUM AMOUNT FOR WHICH AIR SCIENCE IS RESPONSIBLE. FLORIDA LAW GOVERNS THIS WARRANTY



CHAPTER I

PRODUCT INFORMATION

The Air Science® range of UV-Boxes is a series of high-efficiency chambers designed to safely decontaminate contents while providing for a safe work environment for the operator. High intensity UV lamps are positioned within the cabinet producing short wave ultraviolet light at 254nm to destroy exposed surface DNA and bacteria, leaving evidence free of contamination prior to other forensic tests, analysis or procedures.



DESIGN FEATURES

- A. 254 nm UV lamps will destroy all exposed DNA and bacteria on items within the chamber.
- B. UV timer allows user to set specific decontamination time and cycle.
- C. Key locked, UV absorbing, transparent window with safety interlock.
- D. Smooth internal stainless steel walls for easy cleaning and sterilization.

MODEL	DIMENSIONS			WEIGHT (LBS/KG)	
	Internal Height	External (W x D x H)	Shipping (W x D x H)	Net	Ship
UVB-15	12.5" / 318 mm	15.25" x 20.5" x 19" / 387 x 521 x 483 mm	20" x 22" x 22" / 508 x 559 x 559 mm	35 / 16	41 / 19



CHAPTER II

UNPACKING YOUR CABINET

This chapter aims to provide relevant information on how to handle the cabinet properly upon receipt. Failure to follow the following instructions may damage the cabinet. We strongly advise you to read this chapter carefully before proceeding further.

2.1 STEP-BY-STEP PROCEDURE

1. Inspecting the crate, pallet, boxes

Upon receipt of your new cabinet, inspect all cartons. If there is any visible damage to the exterior please refer to freight claim information.

2. Moving the Pallet

- The pallet is designed to protect our cabinet from any foreseeable circumstances. However, excessive impact onto the boxes or pallet may also damage the cabinet. Prevent any direct impact or hitting to the pallet when moving.
- b. When lifting the pallet, please always ensure that the floor jack or mechanical lift truck has always entered fully under the pallet in order to achieve stability. Failure to do so will increase the risk of the pallet falling off the floor jack or mechanical lift truck during handling. Please use a suitable extension bar when the situation arises.

3. Opening the Boxes

- If you did not receive one or more of the parts listed on the packing checklist, or if any of the items are damaged, please contact your distributor or Air Science immediately for further instructions.

4. Removing the packaging material

- The cabinet is protected by Styrofoam, cardboard, and or and shrink-wrap.
- If you find any damage during this stage of unpacking please refer to freight claim information.
- It is the best practice to leave the cabinet secured with straps to the pallet until the cabinet is located in its approximate final position to facilitate ease and safety in handling.

Choosing the best location for your cabinet in order to achieve optimum operating performance of your cabinet is determined by a number of factors. Please refer to the next chapter for some guidelines.

5. Moving the cabinet

- When lifting the pallet with the cabinet, please always ensure that the floor jack or mechanical lift truck has always entered fully under the pallet. This is to increase the stability of the cabinet and reduce the risk of the cabinet falling down. Please use extension bar when necessary. During the moving of the cabinet, please ensure there is enough distance between the supports of pallet and the ground. Dragging the pallet against the ground (at one side or otherwise) will damage the pallet and possibly your new cabinet.

6. Removing the strapping

- Remove the strapping by cutting it at a safe position to prevent any scratch on the surface of your new cabinet.
- Do not discard the packaging material for your cabinet until you have checked all of the components, installed and tested the unit.

7. Lifting the cabinet

- The Cabinet can be lifted in two sections: The HEAD unit and ENCLOSURE.
- Install the cabinet on the existing work surface or Air Science support stand (if ordered)

NOTE:

- *When installing the cabinet onto an existing work surface, ensure that the structure can safely support the combined weight of the cabinet and any related equipment. Some modifications to the work surface may be necessary.*



- *The work surface should be smooth and nonporous and resistant to the disinfectants and chemicals used in conjunction with the cabinet.*

2.2 PACKAGING CONTENTS

The following items are included with the UVB-15

- Hanging rods and clips
- Door Key and USB thumb drive with test report and manual

In case this manual and/or test report is lost or misplaced, Air Science retains a copy in our files. A replacement copy can be obtained by contacting Air Science and stating the cabinet model, serial number and a brief description of the information desired.



CHAPTER III INSTALLING YOUR CABINET

3.1 CHOOSING A SUITABLE LOCATION

Location impacts the nature and extent of external airflow disturbances, which may affect performance of the cabinet when it is exposed to these disturbances.

When installing the cabinet, it should be located as far away as possible from sources of airflow disturbance and in an orientation which optimally shields the cabinet's airflow from all external airflow disturbances. Please note that the cabinet should not be placed close to another cabinet.

Please follow these guidelines when choosing a suitable location for your cabinet:

- The location must be far away from :
 - a. personnel traffic flows
 - b. air vents (in and out)
 - c. door and window
 - d. any other sources of disruptive air currents or air drafts

If drafts or other disruptive air currents exceed the face velocity of the filter, the potential exists for contaminated air to enter the work zone of the cabinet.

- A minimum distance of 50 cm to the top of the ceiling is recommended for blower changing purpose.
- A clearance of 183 cm (6ft) in front of cabinet is strongly advised in order to maintain proper airflow.
- Please permit adequate space for cleaning behind the cabinet.

3.2 ENVIRONMENTAL/ELECTRICAL CONDITIONS

The equipment is designed to be safe for at least the following conditions:

- Indoor use
- Altitude < 6,500 ft (2,000 m)
- 5°C to 40°C (41°F to 104°F) Ambient
- Relative Humidity <80% up to 31°C (88°F) decreasing to <50% at 40°C (104°F)
- UL Installation Category II
- UL Pollution Degree 2
- Continuous operation
- Mains supply tolerance of -10%/+10%
- 120 VAC, 60 Hz, 10A or 230VAC, 50Hz, 5A
- Fuse: 250V, 10A, Time Lag for 120VAC or Fuse: 250V, 5A, Time Lag for 230VAC
- Always ensure the unit is connected to a reliable and properly grounded receptacle
- The appliance inlet on this device is the disconnect device and the appliance should not be positioned so that it is difficult to operate it.

3.3 INSTALLING YOUR CABINET

1. Please refer to the unpacking your cabinet on the previous chapter section on lifting the cabinet
2. Inspect your cabinet carefully, should you find any defect please refer to the freight claim information and our warranty terms and conditions
4. Peel off any protective masking that was left on the cabinet during manufacturing.
3. Wipe down the interior and exterior of the cabinet with water or a mild household detergent.
4. Connect cabinet to the main power supply and turn on the blower. Each cabinet requires its own dedicated 13A (230V) or 15A (115V) power outlet which should not be shared with other appliances.



3.4 Set-up

Your Air Science product is shipped in one piece. Please follow the following instructions and photos (shown is a standard UVB-15) that explain how to set up the main unit.

<p>1. Unpack the unit.</p> <p>a. Take unit out of box and set on table</p> <p>b. Turn 'T' Latch front door know to open/close (this lock is provided with a key)</p> <p>c. Install hanging rods in the workzone.</p> <p>d. Plug unit into suitable power supply</p>	 A photograph of the Air Science UV-Box unit. It is a rectangular, stainless steel cabinet with a large, rounded rectangular viewing window on the front door. The door has a black handle on the right side. On top of the unit, there is a blue control panel with the Air Science logo, the text 'UV-Box', and a warning symbol. The unit is shown from a three-quarter perspective.
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CHAPTER IV OPERATING YOUR CABINET



4.1 CONTROL SYSTEM

UV Timer

Unit is equipped with a simple dial timer switch. Dial desired time feature.

4.2 CABINET OPERATING PROCEDURE



- A. Open Door and load items. Do not overlap or layer items. Surfaces should be directly exposed to the bulbs.
- B. Close Door and turn the dial timer to desired setting.
- C. Once cycle is completed, UV light will turn off. Wait a minute or two before removing items as the bulbs generate heat and surfaces may be hot.

CHAPTER V MONITORING

5.1 GENERAL

The purpose of the monitoring program is to ensure consistent reliability from the system. This is achieved:

- a) Change UV lamp every 12 months.



CHAPTER VI MAINTENANCE

6.1 GENERAL

In some countries it is mandatory to maintain written records of checks, tests and repairs carried out on safety equipment. These records must be kept for 5 years. A full list of Occupational Exposure Limits should be obtained from your safety officer.

Regular preventative maintenance on the cabinet will reduce the possibility of hazard to the operator and ensure reliable performance from the cabinet.



WARNING! Before attempting inspection and repairs to the cabinet please ensure the power to the system has been removed and that the power lead has been removed. It should also be noted that fume cabinets are sometimes used to contain and protect users of the cabinet from hazardous or harmful substances. Before commencing this schedule it is important to ensure the cabinet is safe to work on.

6.2 GENERAL CLEANING

Wipe down the unit with only soapy water. Disinfectants like 70% alcohol and hydrogen peroxide are suitable for stainless steel surfaces. **DO NOT WIPE OR TOUCH THE BULB.**

6.3 LIGHTS

Check that the light is working.

6.4 CHANGE OUT OF UV



WARNING: Ensure persons removing UV Bulbs are made aware of any potential hazards and that they are provided with any necessary protective clothing and equipment.

CONSULT YOUR SAFETY OFFICER OR INDUSTRIAL HYGIENIST BEFORE REMOVING OR DISPOSING ANY UV LAMPS

- Disconnect unit from Power
- Remove UV lamp cover by undoing the four screws located on the left and right exterior sides near the corners.
- Release Bulb from retaining clip
- Disconnect bulb from socket and replace. Repeat with the other bulbs, then reattached the UV lamp cover.

6.5 FAULT FINDING



Warning: Before attempting any inspection or replacement of electrical components, always isolate the fume cabinet from the mains supply and remove the power supply cable.

FAULT

Lamp not working

CHECK

Check power to unit
Check door closed
Replace Bulb

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