



# PROLITEC

PERFECTLY SCENTED ENVIRONMENTS

## AirQ 1570



**AIRQ**  
BY PROLITEC

Updated: 2020-03-02

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# IMPORTANT SAFETY INSTRUCTIONS

## IMPORTANT SAFETY INSTRUCTIONS – SAVE THESE INSTRUCTIONS

### Appliance Precautions

- WARNING** – When using electric products, basic precautions should always be followed, including the following:
  - Read all the instructions before using the product.
  - Children should be supervised not to play with the appliance.
  - Do not put fingers or hands into the product.
  - The appliance must be operated in an upright or vertical position.
  - The appliance should not be used with the door in the open position. The door is opened only to perform a cartridge or program change.
  - Never put your nose to the output of the AQ1570. Within 12 inches of the output, the fragrance is highly concentrated. The improper inhalation of high concentrations of fragrance may cause irritation including watery eyes, headache, cough and upper respiratory discomfort.
  - This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS**
  - The appliance is built to be plugged into a 100-240 VAC power outlet. Must be used only with the approved and included power supply. The UL and CE compliant power supply converts power to 15V DC to power the appliance. The appliance must only be supplied at Safety Extra Low Voltage (SELV).
  - If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similarly qualified persons in order to avoid a hazard.
  - Unplug before cleaning.
  - To reduce the risk of electric shock, the appliance should only be plugged into a properly grounded outlet box. If there is any doubt as to whether an outlet box is properly grounded, a qualified electrician should be consulted.
  - It is recommended that the user unplug the appliance from the wall to test and reset the GFCI outlet on a regular basis.

## Fragrance Cartridge Precautions

- Use only AirQ by Prolitec fragrance cartridges.
- Read the Consumer Product Safety Information Sheet and the Material Safety Data Sheet provided with each shipment of Cartridges. Ensure that these information sheets are available for review by employees.
- Use latex gloves to handle a Cartridge to avoid the liquid getting on hands. The AirQ fragrances are formulated so as to not be harmful in contact with the skin, but the concentrated nature of the fragrances may make the scent difficult to remove from hands and skin.
- Wash your hands after all contact with Cartridges or fragrance.
- While AirQ Air Treatment Agents do not contain ingredients deemed harmful to the skin, if there is skin contact, wash with soap and water. If there is contact with the eyes, irrigate the eye with fresh water for 5 minutes. If there is any eye irritation, consult a physician immediately.

## About AQ1570

Welcome to a whole new world of air treatment from Prolitec, the technology leader in air care with scent. The AQ1570 is the most advanced commercial air-treatment system on the market today. It is the world's first fully adjustable commercial air-treatment system engineered to serve indoor spaces.

AQ1570 is a patented, computer-controlled, always-on system capable of maintaining a constant, uniform and controlled level of scent or odor neutralizer.

The AQ1570 converts fragrances and odor control formulations ("Agents") into ultra-fine droplets for controlled distribution as an aerosol or vapor directly into a room. It is designed for permanent installation on a wall in the area to be treated.

The AQ1570 is managed by an on-board computer that is fully adjustable, enabling intensity settings to match space sizes from 1,800 to 150,000 cubic feet (50-4,200 cubic meters) per cartridge head. The AQ1570 is programmable, capable of executing 21 distinct start and stop times, repeatable daily or weekly. Utilizing up to 21 programs and the full range of 50 intensity settings allows you to optimize the fragrance levels depending on peak and non-peak occupancy in the space. This new feature can save you money on fragrance AND service visits.

Typical AQ1570 applications include air treatment to enhance or improve indoor air quality including odor cancelling, and ambient scenting in public spaces such as casinos, malls, hotels, theaters, ballrooms, convention centers, hospitals, retirement and assisted living facilities, schools and restrooms. A single AQ1570 can do both odor control and ambient scenting at the same time.

The AQ1570 with Prolitec odor control formulations and fragrances will cancel a wide range of offensive odors and replace them with pleasant scents available from the Prolitec fragrance catalog or custom developed to meet client requirements.

The AQ1570 works by generating ultra fine, ultra-light droplets approximately 1 micrometer ( $\mu\text{m}$ ) in diameter. By comparison, a droplet from a typical pressurized aerosol spray can is 50 microns (50,000 nanometers) in diameter or 50 times larger than an AQ1570 droplet. In terms of weight and volume of liquid, the comparison is even more dramatic. A 50-micron aerosol droplet is 125,000 times heavier than a 1  $\mu\text{m}$  AirQ droplet.<sup>1</sup> (See also Table 1 below.) This tiny AirQ droplet offers many performance benefits over a conventional aerosol including: completely uniform distribution of the treatment agent; 50 times more exposed surface area; and the absence of any liquid deposits on surfaces.

AQ1570 is simple to install and program for specific room size, airflow conditions, and desired scent intensity. Minimal maintenance is required beyond the periodic change of the disposable fragrance cartridge, bi-annual replacement of one battery, and a simple wipe down or dusting of exterior surfaces. Once installed in the right location, AQ1570 will outperform any other system, providing completely uniform scent distribution.

The AQ1570 advanced technology creates a scent effect with a smaller quantity of fragrance ingredients than any other method. The chemicals employed in making AQ1570 fragrances are fully compliant with the most restrictive air-quality and inhalation standards. AQ1570 generates no harmful VOCs and uses no ethanol or propellants. Quite simply, used as directed, AQ1570 is the greenest, most eco-friendly way to introduce scent into an interior space with no negative impact on indoor air quality. This is not an accident. The scientists and engineers at Prolitec are committed to the highest ecological and human safety standards.

This user guide is easy to read. It is also important to read. AQ1570 is a high-performance appliance that, installed and used correctly, will meet the most demanding requirements.

**Table 1. Prolitec AirQ Technology vs. Aerosol Spray Can Technology**

Parameter	Prolitec AirQ Technology	Aerosol Spray Can
Droplet Diameter, $\mu\text{m}$	1	50
Volume per Droplet, $\mu\text{m}^3$	0.52	65,450
Surface Area per Droplet, $\mu\text{m}^2$	3	7,854
Relative Volume per Droplet	1	125,000
Relative Weight per Droplet	1	125,000
Number of Droplets per Equivalent Volume	125,000	1
Surface Area/Volume, $\mu\text{m}^1$	6.00	0.12
Relative Surface Area per Volume	50	1
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## Unpacking

Remove the AQ1570 Central Control Unit (CCU) from the container. The following items should be included:

1. AQ1570 CCU
2. Key
3. Mount Kit



Remove the AQ1570 cartridge head(s) from the container(s). The following items should be included:

1. Cartridge Enclosure
2. Air Line Tubing (50 ft)
3. Plume Kit
4. Mount Kit
5. Injector Tubing (6")



## MOVING AND STORAGE INSTRUCTIONS

### AQ1570 Central Control Unit (CCU)

1. Unplug the appliance.
2. Disconnect the airline tubing.
3. Unscrew and remove the long round-head screws in the upper and lower corners.
4. Remove the appliance from the wall.
5. Store at -4° F (-20°C) to 158° F (70°C), 5% to 95% humidity.

### AQ1570 cartridge head

1. Remove the cartridge and plume kit.
2. Disconnect the airline tubing.
3. Unscrew and remove the long round-head screws in the upper and lower corners.
4. Remove the enclosure from the wall.
5. Store at -4° F (-20°C) to 158° F (70°C), 5% to 95% humidity.



# Installation

## General

### Location

The AQ1570 CCU is designed for permanent installation on wall surfaces near a 100-240V outlet. The AQ1570 cartridge head is designed for permanent installation on a wall surface.

### Service Area

The service area range of each AQ1570 cartridge head is from 1,800-150,000 cubic feet (51-4245 cubic meters). Of course this can vary significantly depending on airflow, number of fresh air changes per hour, temperature, humidity and desired service interval. AQ1570 can be adjusted from 1 to 50 to accommodate these variations. The AQ1570 CCU must be within 100 feet (30.48 meters) of all associated cartridge heads.

### Configuration

The AQ1570 CCU must be wall mounted near a 100-240V power source. The CCU can control up to four cartridge heads, which must be wall mounted within a 100-foot (30.48-meter) distance from the CCU.

Each cartridge head package contains 50 feet (15.24 meters) of airline tubing, and additional 50-foot (15.24-meter) tubing segments are available for separate purchase. Extra tubing length can be cut or coiled during installation. Tubing lengths beyond 100 feet (30.48 meters) are not recommended.

## Estimating Cartridge Life

Estimating how long a cartridge will last and the number of days between services is critical to performing an installation that can be serviced efficiently. This includes determining the number of AQ1570 cartridge heads needed for a space. Please refer to AirQ's 'S3 (Sizing, Service & Success) Tool,' available at [ProlitecCSPTools.com](http://ProlitecCSPTools.com). The chart below can be used as a rough guideline for sizing.

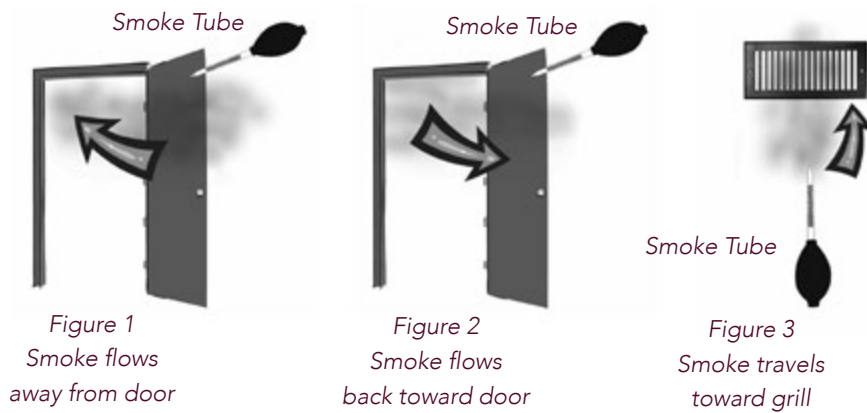
### Room-Size Table

	Normal Off-Cycle (NOC)		Short Off-Cycle (SOC)		Very Short Off-Cycle (VSOC)	
Output Level Range	Room Volume Range		Room Volume Range		Room Volume Range	
	CFT	CM	CFT	CM	CFT	CM
1-5	1800-8100	51-229	6000-25000	170-708	21400-66700	606-1888
6-10	10000-17400	283-492	30000-47100	849-1333	75000-97100	2123-2748
11-15	19300-27700	546-784	51100-66300	1446-1876	101100-114000	2861-3226
16-20	30000-39700	849-1124	70000-83600	1981-2366	116700-125100	3303-3540
21-25	42300-53400	1197-1511	86800-98900	2456-2799	126900-132800	3591-3758
26-30	56300-68600	1593-1941	101600-112700	2875-3170	134000-138300	3792-3914
31-35	71800-812700	2032-2425	114400-123500	3238-3495	139200-142400	3939-4030
36-40	89400-104800	2530-2966	125600-133600	3554-3781	143100-145500	4050-4118
41-45	108900-126200	3082-3571	135400-142300	3832-4027	146100-148000	4135-4188
46-50	130700-150000	3699-4245	143900-150000	4072-4245	148400-150000	4200-4245

These settings are suggested as a starting point. Start on the lower end of the range and adjust after one hour. Fragrance type, room size, number of fresh air changes per hour, temperature, humidity and user preference will determine the final setting. Best practice is to use AirQ's 'S3 Tool' at [ProlitecCSPTools.com](http://ProlitecCSPTools.com).

## Appliance Location

1. Placement of an AQ1570 cartridge head is the KEY TO OPTIMAL PERFORMANCE. It is important to identify a location where the output of AQ1570 can use, rather than fight, the natural air currents in a room.
2. Air currents in a room are determined by using a SMOKE TEST KIT available from Prolitec or any source of smoke or vapor, such as a candle or match.
3. To conduct a smoke test, stand at the entrance of the room in front of the door and observe the direction of the smoke or vapor. If the smoke drifts into the room the AQ1570 cartridge head should be installed somewhere near the door.



See Figure 1. If the smoke drifts out of the room, the AQ1570 cartridge head should be placed on the wall furthest from the door. See Figure 2. If there is no clear direction that the smoke travels or it travels upward into the air-conditioning return grill, find a position near the air-conditioning supply grill. See Figure 3.

NOTE: The location of AQ1570 MUST NOT be near an HVAC return grill, exhaust fan or vent, or an open door or window through which air is leaving the space. Remember, you want to work with the natural air flow, not against it.

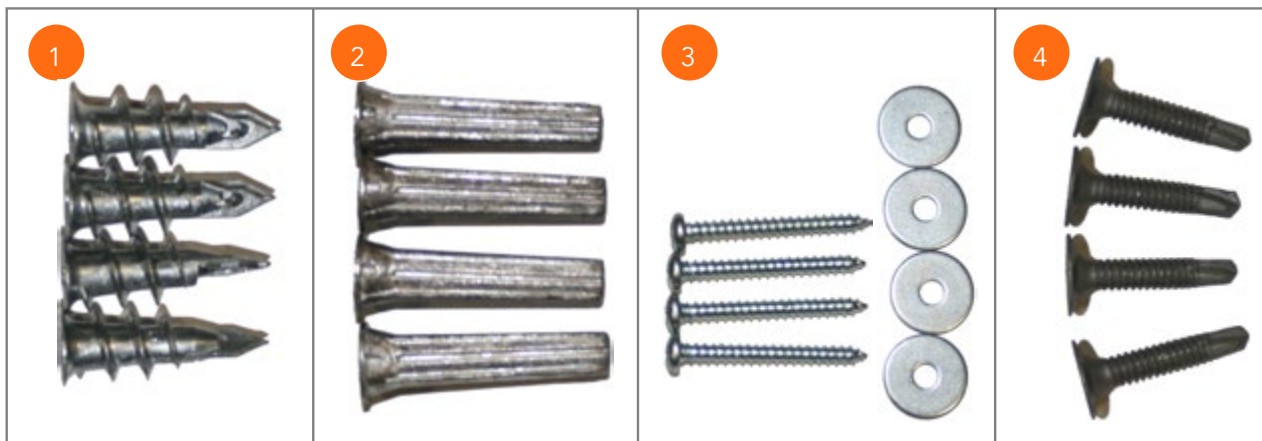
## Wall-Mounting AQ1570

### Installation Kits

One mounting kit is provided for each enclosure, and one plume kit is provided for each cartridge enclosure.

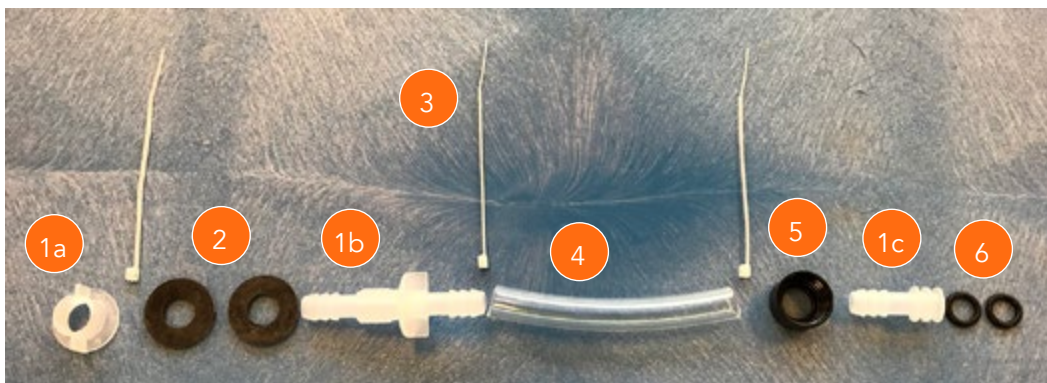
SUB1400MOUNT contains the following:

1. Four (4) drywall anchors for mounting in drywall
2. Four (4) lead anchors for mounting in concrete
3. Four (4) screws and four (4) washers for mounting in drywall and concrete
4. Four (4) #10 self-tapping sheet metal screws for mounting in sheet metal



KIT2500PLUME contains the following:

1. 2500 Plume Kit Parts (parts 1a, 1b, 1c are not available separately)
2. Two (2) washers
3. Three (3) cable ties
4. 3.75" injector tubing
5. One (1) cap
6. Two (2) o-rings



## CCU Installation

1. Place the CCU enclosure onto the desired location on the wall and ensure that it is level.
2. Fasten the CCU to the wall using the appropriate screws for the wall material.
3. Connect the power cord to a nearby outlet.

## Cartridge Unit Installation

1. Place the cartridge unit enclosure onto the desired location on the wall and ensure that it is level.
2. Fasten the enclosure to the wall using the appropriate screws for the wall material.
3. Assemble the plume kit according to the included instructions.
4. Attach the additional 6-inch segment of injector tubing to the plume bulkhead on the exterior of the enclosure. The tubing should be directed away from the wall or other surfaces.

## Airline Tubing Installation

1. Connect the CCU enclosure to each cartridge unit enclosure by pushing the airline tubing firmly into the appropriate push-to-connect bulkhead fittings (Fig. 1). If you need to disconnect the tubing from the bulkhead fittings, depress the grey ring as shown in Fig 2.



Fig. 1



Fig. 2

2. Excess tubing length may be cut or coiled and secured with zip ties.
3. Airline tubing should be hung in a way that protects it from damage and secured to the walls or ceiling with cable loop clamps or cable raceway as necessary.

## Installing an Additional Module

To install an additional module in the CCU:

1. Connect one wire harness to the two inputs (one red and one white) on the back of the circuit board of the new module, as shown.



2. Place the connected module over the next four standoffs and use four screws to secure it in place.



3. Push to connect the airline stem fitting to the bulkhead.



# OPERATING INSTRUCTIONS

## Features and Controls

### CCU



### Cartridge Unit





## Setting Up the Cartridge

1. Use the key to unlock and open the door of the cartridge head.
2. Prepare the cartridge.

- Remove the big plug from the air-stem port (A) on the back side of the cartridge.
- Remove the black screw cap from the top outlet port (B) of the cartridge.




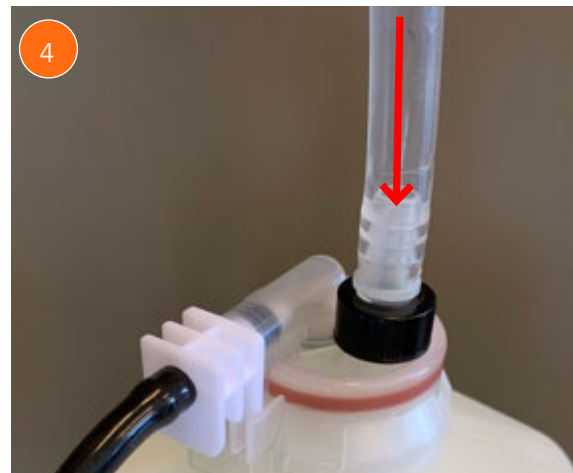
3. Insert the airstem into the air-stem port in the cartridge head. Rotate air stem to locked position.

































4. Place and tighten the plume kit tightly on the cartridge outlet port.

5. Place cartridge in the enclosure.

6. If the appliance has been previously programmed, activate preferred setting. If not (see [Programming the Appliance](#)), press  so the backlight turns on, close and lock the door.



## Programming the Appliance

1. Unlock and open the door of the CCU.
2. Turn on the power by pressing  on the control panel.
3. Set the Clock.
  - Press  to cycle through the modes to the options mode. The day of the week will blink.
  - Adjust the day forward or backward using  or .
  - Press  to set the day of the week and the hour will blink.
  - Adjust the hour forward or backward using  or .
  - Press  to set the hour and the minute will blink.
  - Adjust the minute forward or backward using  or .
  - Press  to set the minute and the hour and minute will both blink.
  - Change between 24-hour and 12-hour modes using  or .
  - Press  to set the time mode and the off-cycle will blink.
  - Change between normal (NOC, 7 minutes), short (SOC, 2 minutes), and very short (VSOC, 30 seconds) modes using  or .
  - Press  to set the off-cycle and the fan setting will blink.
  - Adjust the fan speed up or down using  or .
  - Press  to set the fan speed and the day of the week will blink.
4. 24/7 Mode.
  - If you want AQ1570 to run continuously — 7 days a week, 24 hours a day — press  until **24/7** is displayed above the time. If not, skip to Step 5.
5. Set Program Mode.
  - Press  until **Set Program** is displayed above the time. The program number will blink in the lower right corner of the display
  - Adjust the program number forward or backward using  or .
  - Press  to set the program number and the status will blink.
  - Adjust the status between on ("on") and "off" ("oF") using  or .
  - Press  to set the status and the intensity will blink.
  - Adjust the intensity up or down using  or .

- Press  $\checkmark$  to set the intensity and the day of the week will blink.
- Adjust the day of the week forward or backward using  $\oplus$  or  $\ominus$ .

HINT: In addition to individual days, you can also set "all days," "week days," or "weekend days."

- Press  $\checkmark$  to set the day of the week. **Start** will display on the far right side and the hour will blink.
- Adjust the start hour forward or backward using  $\oplus$  or  $\ominus$ .
- Press  $\checkmark$  to set the start hour and the minute will blink.
- Adjust the start minute forward or backward using  $\oplus$  or  $\ominus$ .
- Press  $\checkmark$  to set the start minute. **Stop** will display on the far right side and the hour will blink.
- Adjust the stop hour forward or backward using  $\oplus$  or  $\ominus$ .
- Press  $\checkmark$  to set the stop hour and the minute will blink.
- Adjust the stop minute forward or backward using  $\oplus$  or  $\ominus$ .
- Press  $\checkmark$  to set the step minute.

The appliance will automatically switch from **Set Program** to **Run Program** after 30 seconds of inactivity, or you can press  $\ominus$  until **Set Program** is displayed above the time. You may review the programs by pressing  $\checkmark$  while the appliance is in **Run Program** mode.





## Using the online SD card programming tool

The online SD card programming tool can be found at <http://airqtools.com/sdcard/>

1. Multiple programs sets can be created, which are unique to the user, and stored in a list.
2. Create a program set using the **create program** button.
  - Each program set will require a name.
  - Each program set can contain 21 unique programs, which can be turned on or off within the set.
  - Programs, identified by number 1-21, include a day or days, on/off times, and intensity settings.
  - The tool will warn the user of overlapping programs.










- Programs sets need to be saved.
3. Edit an existing program set using the **edit** button to the right of the program name.
  4. Copy an existing program set using the **copy** button to the right of the program name. This can be especially useful for quickly duplicating a very similar set of programs.
  5. Delete an existing program set using the **delete** button to the right of the program name.
  6. Export an existing program set using the **export** button to the right of the program name.
    - A .zip file containing your program set (schedule.txt), the latest firmware (discover.hex), and the final instruction for use (readme.txt) will download to your computer.
    - Insert an SDHC card and format it FAT32.
    - Copy the files needed (schedule.txt for programs, discover.hex for firmware) to the top level directory of the card (not in a folder or .zip file).
  7. Insert the SD card into the appliance, with the label side down.

### Loading new firmware from an SD card





1. Copy discover.hex to a FAT32 formatted SD card.
2. Insert the SD card, with the label side down.
3. Press the reset button, and the five buttons will light in sequence from left to right.
4. The  and  buttons will light alternately.
5. Press and hold  for one second, and the display will show **LOAD** for about ten seconds.
6. The five buttons will light in sequence from left to right.
7. Remove the SD card; the display will show the currently loaded firmware version and the pump will run for one second.
8. Press  to turn on the power.
9. Be sure that the power is on and the appliance is in **Run Program** mode prior to closing and locking the door.

### Programming the Appliance from an SD card

1. Copy schedule.txt to a FAT32 formatted SD card.
2. Insert the SD card, with the label side down.

3. Press the reset button, and the five buttons will light in sequence from left to right.
4. The  and  buttons will light alternately.
5. Press and hold  for one second, and the display will show **LOAD** for about ten seconds.
6. The five buttons will light in sequence from left to right.
7. Remove the SD card; the display will show the currently loaded firmware version and the pump will run for one second.
8. Press  to turn on the power.
9. Press  to cycle through the modes to the **Run Program** mode.
10. Press  to view the start time for the first program.
11. Press  again to view the stop time for the first program.
12. Press  or  to view the second and third programs.
13. Be sure the power is on and the appliance is in **Run Program** mode prior to closing and locking the door.

### Copying programs to an SD card

1. Insert a FAT32 formatted SD card, with the label side down.
2. Press the reset button, and the five buttons will light in sequence from left to right.
3. The  and  buttons will light alternately.
4. Press and hold  for one second, and the display will show **SAVE** for about ten seconds.
5. The five buttons will light in sequence from left to right.
6. Remove the SD card; the display will show the currently loaded firmware version and the pump will run for one second.
7. Press  to turn on the power.
8. Be sure that the power is on and the appliance is in **Run Program** mode prior to closing and locking the door.
9. The new file created on the SD card will be called "outsche.txt." Changing it to "schedule.txt" allows the programs to be loaded on another appliance.

## Setting Scent Intensity

1. Determine the approximate size of the room in cubic feet or cubic meters by multiplying length x width x ceiling height.
2. Consult the Room-Size Table to give you a level (1 to 50) to set. THIS IS ONLY A STARTING POINT.

Hint: There are many variables to finding the scent level that works: size, airflow, number of fresh air changes per hour, number of people in the space and, most of all, user preferences. Experiment with different levels until you are satisfied. Utilize the S3 Tool.

## Scent Control

If you followed the Room-Size Chart or S3 Tool, you have set AQ1570 to the low end of the range for your room size. If after one hour you feel the scent is not detectable, increase the setting by about 10%. For example, if your start setting was 20, increase it by 10%, or to setting 22. Keep increasing until you and others in the space can detect a slight scent throughout the space.

## The Last Step

1. Set the appliance to either **24/7** or **Run Program**.
2. Make sure the power is on.
3. Close and lock the door, storing the key in a known place.

## USER MAINTENANCE

### Cartridge Change

When the reservoir is empty the cartridge needs to be changed. The change process is simple. Best practice is to wear gloves when manipulating the cartridge.

1. Unlock and open the doors of the CCU and cartridge enclosures.
2. Turn off the power by pressing the power button.
3. Grab the cartridge and disconnect air stem and plume kit.
4. Inspect the air stem seal for damage. Replace if damaged.
5. Remove plugs from new cartridge and use them to plug empty cartridge.
6. Deliver empty cartridge to recycling center at a later date.
7. Connect new cartridge to air stem and plume kit, and seat in appliance.

### Cartridge Change Maintenance Checklist Items

Cartridge plume: Use a high-intensity flashlight or your headlamp to confirm that a plume is streaming from the output port. If there is no plume:

- Check that the power is on and the appliance is running.
- Check that the wipers on the air stem are in place and not cracked or broken. Replace if necessary.
- If the appliance is set to **Run Program**, switch it to **24/7** and check for a plume.
- If no plume, set it back to **Run Program** and change the cartridge.
- If still no plume, try another cartridge just to make sure. If no plume, replace the appliance. (See [Changing an Appliance](#)).
- Wipe the unit clean inside and out.

## Changing an Appliance

Appliance malfunctions are not intended to be serviced in the field, however the inner module is field replaceable. If there is no plume after following the procedure outlined above, contact Customer Care.

## General Care

- AQ1570 is an electronic appliance. Treat it like a laptop.
- Do not place or store AQ1570 or its cartridges in extreme heat (more than 130° F) or in freezing temperatures.
- Do not drop AQ1570 on the floor. Do not drop it in or position it near water.
- Do not paint or otherwise try to alter the color of the outer cover.
- When shipping, pack in the original box and place it in an outer cardboard box.
- Always keep the plugs in cartridges when not in use.

Always remove the cartridge from the appliance before moving it anywhere. Otherwise leakage can occur, destroy the unit and the warranty is voided.



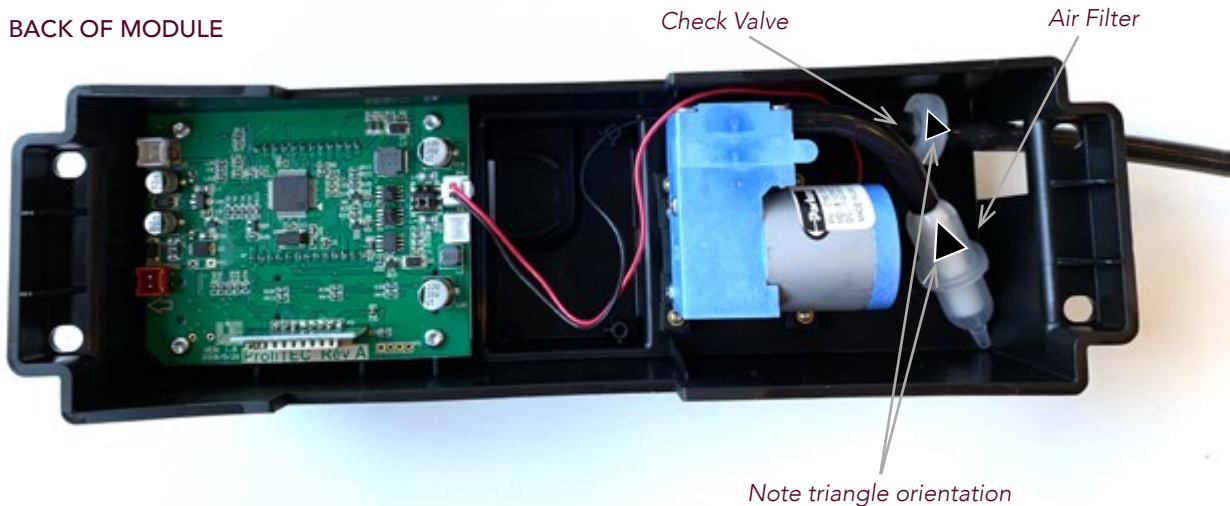
## Air Filter and Check Valve (every year)

AQ1570 is equipped with air filtration and a check valve system.

The filter (PN 5251) collects fine dust. Replace every year. It is accessible behind the module housing. A layer of black dust on top of the filtering media is a sign that the filter should be replaced. To replace it, unscrew the 4 screws to remove the module and exchange the filter after pulling off the rubber tubing from both sides of the filter. Note the small triangle showing the normal air flow direction and position filter accordingly as shown below.

The check valve (PN 10200) should be replaced every year. It is also located behind the module housing. Note the position of the check valve. Replace check valve accordingly as shown below.

Reinstall the module and screw the 4 screws back in place being careful not to strip the threads. The screws should align and go in easily.



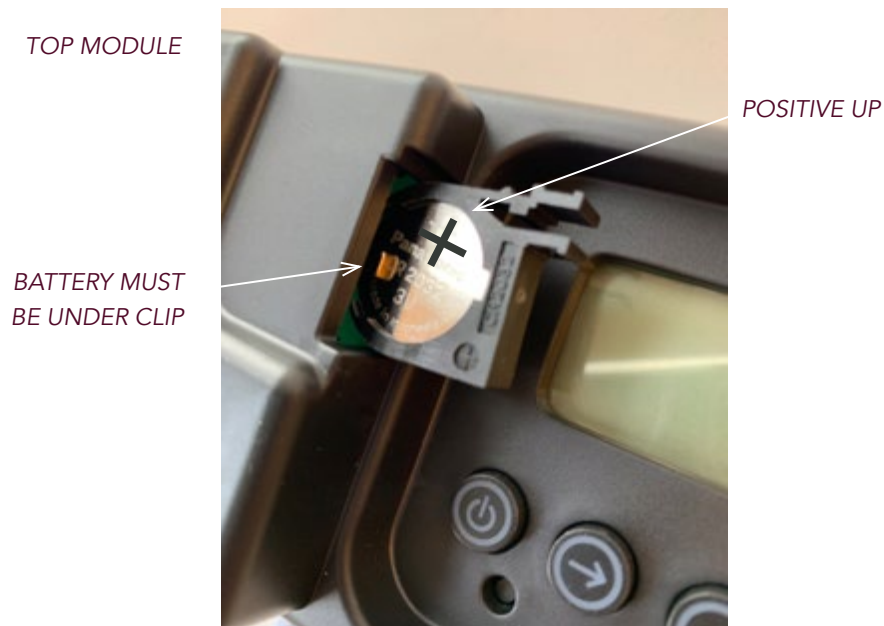
## Battery Replacement (approximately every two years)

(Requires 3 Volt CR2032 Lithium Battery, PN 7115)

Unlock and open the door to access the enclosure.

Locate the CR2032 battery tray in the top module of the CCU. Pinch and pull the grip of the battery tray to remove the battery.

Insert the new CR2032 battery. The positive side of the battery should face you while looking at the front of the appliance. The battery will have a + or – marking on a side. Insert the battery tray with the new battery into the top module. Ensure the battery is inserted under the battery clip visible through the battery access opening in the module housing.



NOTE: The battery is necessary to safeguard your program and to ensure operation will resume automatically even after several days of a power interruption. The battery should be replaced at least every 2 years for proper reliable system operation.

## Applications

AQ1570 is used to enhance indoor air quality by neutralizing odors or introducing and maintaining a scent in the air or both at the same time. This is accomplished by blending ultra-low concentrations of odor neutralizers and fragrance ingredients (“Air-Treatment Agents”) into the air. In fact, AQ1570 is fully effective with air concentrations of Air-Treatment Agents less than 1 part per million (ppm). This means that for every 1,000,000 molecules of air there is only one molecule of Air-Treatment Agent.

There are four basic applications for AQ1570: ambient scenting, product marketing, odor control and aromatherapy. These applications are different in terms of their objectives, but they all employ the same combination of Prolitec’s proprietary air-treatment chemistry and AQ1570 computer-controlled delivery system.

### Ambient Scenting

Ambient Scenting is the use of a scent alongside other design elements in a space to help create or enhance its ambience. In this application, scent is comparable to visual elements such as graphics, colors, materials, textures and shapes as well as auditory elements like music. With ambient scenting, a carefully selected fragrance is used to enhance themes, animate visuals, make a tree or a flower smell like a tree or a flower, and many other uses. Major brands are using scent to extend and animate their brand by associating a scent experience with a brand, like a hotel chain using ambient scenting to make all their lobbies smell like the same scent.

Indoor air quality and the overall ambience of a space can be substantially improved with the introduction of a pleasant scent. Scent can cause humans to recall a brand with positive feelings and communicate brand values. Scent can create inviting environments that attract retail customers and cause them to stay longer and shop more, improve employee productivity, and make all the occupants feel positive about their experience in the space.

Of all the senses, the sense of smell is the most powerful trigger of memory. Hotels, casinos, retail establishments and other businesses seeking to provide a positive experience that clients will recall and repeat should use scents to enhance indoor air quality. The use of a signature scent to extend the brand image is a powerful tool for the sophisticated marketer.

Typical areas where Ambient Scenting is used:

- Retail Stores
- Hotel Lobbies
- Malls
- Showrooms
- Clubs and Bars

## Product Marketing

Product Marketing is the use of scent as a medium of communication in advertising and promotion of certain products for which scent is a primary element or feature. Presenting the scent of a scented product to customers at the point of sale is the most powerful way to sell any product with a scent including fine fragrances; soaps, detergents and fabric softeners; lotions and potions; scented health and beauty aids; food products like coffee, fruits, and baked goods; and other fresh and aromatic products.

AQ1570 is used as an automated presentation and product-sampling system to deliver the exact aroma of a scented product throughout a store or at the point of sale. For example, enabling the client to experience a fine fragrance, personal care or home fragrance is the most effective way to sell it. Scent is the main feature of these products. Using AQ1570 to present that scent to a customer is the best way to present and sell the product. In this way, AQ1570 delivers a true and complete experience of the scent to clients and passersby without intrusion or sales associate intervention.

Billboards and advertising panels can be equipped with AQ1570 to treat the surrounding air space with the scent that is being advertised on the billboard. This is particularly effective in high-traffic areas such as malls, airports and train and subway stations. This is a multi-sensorial approach that draws customers to the display while simultaneously enhancing the visuals and allowing the prospective customer to experience or “sample” the scent of the product.

## Odor Control

One of the most challenging problems in indoor air quality is bad odors. Bad-smelling places have a negative emotional impact on all the occupants of the space. This means both employees and customers.

AQ1570 and Prolitec’s proprietary odor-remediation chemistry are capable of blocking the human ability to detect most malodors and replacing these odors with pleasant scents. Prolitec’s proprietary air-treatment chemistry and the accompanying computer-controlled delivery system are rapidly becoming the standard solution for difficult odor issues in several industry sectors.

Typical problem areas that can be addressed by AQ1570 include:

- Restrooms
- Garbage-compaction areas
- Areas adjacent to cooking and food preparation
- Swimming pools and adjacent areas
- Workout facilities
- Elevator shafts
- Hotel hallways

The Prolitec approach to odor remediation uses a proprietary and patented neutralizer that inhibits the human olfactory system from detecting the odor and then injecting a small amount of scent to create an ultra-low concentration in the air of less than 1 ppm. This approach is unique and much more effective than traditional approaches that simply douse the odor with a high concentration of scent.

## Aromatherapy and Performance Scenting

It is well known that scent has a powerful impact on human emotion and behavior. The use of scent to influence human emotion is just like Ambient Scenting but with a specific objective for the occupants of the treated space. The use of scent and the essential oils of flowers, herbs and trees to promote health and well being is the well-established branch of alternative medicine known as aromatherapy. It is also recognized that scent can be used to optimize performance in the workplace. The benefits include reduced errors in routine functions, increased employee sense of well being, higher morale, improved customer service and overall improved productivity.

AQ1570™ and Prolitec aromatherapy chemistry can help make a workspace a more comfortable and appealing place to be. As examples of the positive effect of aromatherapy on the workplace, below are results of several relevant studies:

- A 1991 study demonstrated that “sustained attention tasks” were performed with greater accuracy by the participants in scented rooms compared to those in the non-scented control rooms.<sup>1</sup>
- Another study found that fragrance had a dramatic and positive effect on a proofreader’s efficiency.<sup>2</sup>
- It is commonly known that the Tokyo Stock Exchange diffuses peppermint into the air in the afternoons to make the brokers feel invigorated.

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<sup>1</sup> Dr. Joel Warm and Dr. William Dembar. “Olfactory Stimulation and Sustained Attention.” *Compendium of Olfactory Research*, (Dubuque, Iowa: Kendall/Hunt Publishing Co., 1995) p. 47.

<sup>2</sup> Mark Kilauga et al. “Consumer Panel Study on the Effect of Peppermint and Lavender Fragrances on Proofreading.” *Compendium of Olfactory Research*, (Dubuque, Iowa: Kendall/Hunt Publishing Co., 1995) p. 131

## Frequently Asked Questions (FAQs)

### How does AQ1570 work?

AQ1570 uses a patented technology to convert liquid fragrance compounds into tiny droplets less than 1/100th the diameter of a human hair. By comparison, an aerosol droplet is 100 times bigger and 1,000,000 times heavier. AQ1570 droplets present 100 times more surface area to the air being treated, which means much less fragrance is used to create the scent effect. AQ1570's tiny droplets are extremely light so they float easily into the air and disperse throughout a space to create an even scent effect.

### What size room will AQ1570 handle?

AQ1570 is fully adjustable for different size rooms. AQ1570 is effective in spaces from 1800 to 150,000 cubic feet (50 to 4245 cubic meters per cartridge head). The cubic measure is width x length x ceiling height.

### Where can I place AQ1570?

AQ1570 should be placed on a wall where it can take full advantage of the natural air currents in the space as determined by a smoke test or as known by you.

### Do I need to adjust AQ1570?

Yes! AQ1570 is a powerful machine. AQ1570 can handle small and very large rooms. If it is set too high for the room size, it can cause discomfort for some people. Adjusting is simple. Take the time to do it right.

### How do I adjust AQ1570?

With the power cord plugged in you can adjust AQ1570 up and down using the ⊕ and ⊖ buttons just to the right of the LCD screen. You can see the setting levels (1 to 50) on the right side of the LCD. ALWAYS START WITH THE RECOMMENDED SETTING and adjust upward in small steps.

### How strong should I make the scent?

Less is more. AQ1570 allows you to erase odors and use only a small amount of scent. Unlike most other air fresheners, AQ1570 is adjustable. Use this important feature. Always start on the lowest settings for the size of the space then adjust upward in small steps.

#### IMPORTANT

ALLOW ONE HOUR TO ASSESS the scent strength after starting or adjusting. It is best to assess strength when you first enter the room from another room.

### How about safety? Is AQ1570 safe to use with children and pets?

When used as directed, AQ1570 is the safest air freshener available. Of course, it is important to read the Material Safety Data Sheets enclosed with each cartridge, which should be stored in a secure, visible location.

## How does AQ1570 differ from aerosol room fresheners?

The more expensive aerosols can produce a very pleasant scent, but only for a few minutes and in very high concentrations just in the area they were sprayed. AQ1570 is what is known as a “continuous action” air freshener. AQ1570 is programmed to deliver an evenly distributed scent throughout the room.

## Is AQ1570 eco-friendly?

Yes, AQ1570 is the most eco-friendly air freshener on the market. Unlike aerosols, AQ1570 uses no propellants and produces no harmful volatile organic compounds, or VOCs. Unlike many air fresheners, AQ1570 uses no ethanol or similar solvents to enhance the evaporation of fragrance chemicals.

## I only want to scent the room at certain times. Do I have to turn it on and off every time?

AQ1570 has a tiny on-board computer for fully automatic operations. You can set set up to 21 separate start and stop times. (See [Programming the Appliance](#))

## If I want a different scent, can I switch cartridges?

Yes, simply remove the cartridge and replace it with another.

### IMPORTANT

Always keep plugs in cartridges when not in use. If you have misplaced the plugs from the cartridge being removed from AQ1570, you can use the plugs from the new cartridge being inserted.

## Will AQ1570 fragrances stain surfaces or fabric?

Yes, all air-care fragrances will stain wood and stone and all fabrics if spilled. The best solution is avoidance by replacing the plugs on cartridges after removing them and keeping the plugs on all cartridges when not in use.

## How do I clean up a drip?

If there is a drip, blot it as quickly as possible and then clean with soap and water.

## Specifications

### Dimensions

AQ1570 CCU: 36cm x 35cm x 17.2cm

AQ1570 cartridge head: 35.6cm x 18cm x 17.2cm

### Weight

AQ1570 CCU: 12 lbs (5.1 kg) with 4 modules

AQ1570 cartridge head: 5 lbs (2.5 kg) empty

### Power Supply

Input — 100 – 240V AC at 1.5A max

Frequency — 50/60 Hz

Protection — Switching power supply

Internal Power — 15VDC at 4 A

Battery — Lithium 3V, #CR2032

### Approvals

FCC part 15, CE, RoHS Compliant, UL Power Supply

### Working Temperature

0° to 40° C

### Working Humidity

85% or less

### Liquid Capacity

2500mL cartridges

### Service Area

Up to 150,000 cu. ft. (4245 m<sup>3</sup>) served per cartridge head

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