

BIRD|BUFFER®

Invisible Protection. Visible Results.®

BirdBuffer® Q4 / TD II Family

Operating Instructions



BirdBuffer® Q4 Model



BirdBuffer® TD II Model

| BirdBuffer® Machine | 120V AC Part Number | 230V AC Part Number |
|---|---------------------|---------------------|
| BirdBuffer® Q4 | 800027 | 800028 |
| BirdBuffer® Q4-A Autofill System | 800097 | 800098 |
| BirdBuffer® Q4-2 Double Output | 800037 | 800038 |
| BirdBuffer® Q4-2A Double Output Autofill System | 800087 | 800088 |
| BirdBuffer® T.D. II Compact Fogger | 800012 | 800013 |

**Thank you for purchasing a BirdBuffer® product for bird control.
Read this guide thoroughly before operating your BirdBuffer® product.
Keep this manual in a safe place for future reference.**

info@birdbuffer.com
www.birdbuffer.com

425-697-4274
425-290-3964 (fax)

BirdBuffer® is a patented and registered trademark of B.B. CITC, LLC
Avian Control® is a registered trademark of Avian Enterprises LLC

Specifications subject to change without notice.

Patent number 7334745

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Owner's Record

The model number and serial numbers are located at the back of the BirdBuffer®. Record them in the space below. Refer to these numbers in any correspondence with your retailer or with BirdBuffer®.

Model Number: _____

Serial Number: _____

We believe you will enjoy years of great service if you care for and maintain your BirdBuffer® products.

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Table of Contents

| | |
|---|----|
| 1 - Important Safety Information..... | 4 |
| 2 - Description of BirdBuffer® Q4/TD II..... | 5 |
| 3 - Equipment Supplied..... | 6 |
| 3.1 Fluid and Filters..... | 6 |
| 3.2 Mounting Hardware and Environmental Accessories | 7 |
| 3.3 Tools Required..... | 7 |
| 4 - Operating Your BirdBuffer® Product..... | 8 |
| 4.1 Vapor Applications:..... | 8 |
| 4.2 Preparation for Bird Control..... | 9 |
| 4.3 Selecting the location | 9 |
| 4.5 Electrical Power Requirements..... | 10 |
| 4.6 Operating your BirdBuffer® Product – The Main Panel..... | 11 |
| 4.7 Controlling Vapor using the 24-hour timer and the On/Off Cycle Dials | 12 |
| 4.8 Programming the 24-hour timer..... | 13 |
| 4.9 Adding Fluid to your BirdBuffer® | 15 |
| 4.10 Vapor Fluid Storage..... | 15 |
| 4.11 Use of additional Magnetic Heater when internal heater is insufficient | 15 |
| 4.12 Control Panel Cover for outdoor applications (sold separately #310505)..... | 15 |
| 4.13 Using Autofill System..... | 16 |
| 5 - Frequently Asked Questions | 17 |
| 6 - Service and Maintenance | 18 |
| 7 - Troubleshooting | 20 |
| 7.1 Minimum Operating Requirements:..... | 20 |
| 7.2 Quick System Checks | 20 |
| 7.3 Troubleshooting Steps..... | 22 |
| 8 - Specifications..... | 25 |
| 9 - Shipping Preparation | 26 |
| 10 - One Year Limited Warranty..... | 27 |

1 - Important Safety Information

WARNING!



Read and understand all labels and operating instructions before installing or operating your BirdBuffer® product using Avian Control® fluid.



WARNING: Risk of Fire or Electric Shock

- Never work on a BirdBuffer® product without first disconnecting the power cord.
- This product should only be operated from the type of power source indicated on the marking label (120 VAC or 230 VAC). If you have any doubts about the capacity or grounding of your existing circuits, consult a qualified electrician.
- This product is equipped with a three-wire grounding-type plug. This plug will only fit into a grounding-type power outlet. Do not defeat the safety purpose of the grounding-type plug.
- Make sure the area around the device is dry before turning power on.
- When locating and mounting the units, provide adequate space for ventilation and make sure the vapor output port is not obstructed.



CAUTION: Risk of personal injury or equipment damage.

- Avian Control® fluid will cause temporary irritation to eyes if touched while installing or pouring the fluid. Wear protective gloves and protective eyewear when filling a BirdBuffer® product. If fluid gets into the eyes, rinse thoroughly with water for 15-20 minutes.
- The fluid is very slippery. To avoid risk of injury, clean spills promptly.
- Use of fluids other than Avian Control® purchased from BirdBuffer will void your warranty.
- Do not operate the BirdBuffer® product in freezing conditions without a heater system installed. The unit will not start in temperatures below 50° F (10° C) without the installed heater system. Optional external heater (PN 820047) can be purchased for temperatures below 35° F (2° C).

2 - Description of BirdBuffer® Q4/TD II

- The BirdBuffer® product may be used indoors and outdoors (with outdoor control panel cover required to maintain warranty coverage) for control of starlings, pigeons, blackbirds, cowbirds, gulls, Canada geese, mallards, and other birds that have become a nuisance or health hazard in the target area.
- It is possible to cover large areas of open spaces. The vapor is invisible and nonobtrusive. It will give you “invisible protection, visible results®”.
- The BirdBuffer® product produces a fine vapor using Avian Control® bird repellent, which stays suspended for up to one hour. The vapor repels birds but does not harm humans, animals, or even the birds. After several exposures to the vapor, birds will be conditioned to leave the area.
- The repellent formulation is based on Methyl Anthranilate, a constituent of Concord grapes. Methyl Anthranilate, or MA, has been used by the food and drug industry for more than forty years to flavor candy, sodas, gums, and pharmaceuticals; and it is on the U.S. Food & Drug Administration’s “Generally Recognized as Safe” (GRAS) list. The fluid has a pleasant, grape-like fragrance.
- The motor and blower together are designed to throw the vapor away from the machine at approximately 60 MPH (40 MPH for the TD-II).
- The BirdBuffer® product can be configured to turn off and on at specified times (for example, to turn on at dawn and off at dusk – running the machine during daylight hours only when the birds are most active).
 - This machine on/off programming is done through the 24-hour timer.
 - In addition, when the machine is operating (on), it uses an on/off cycle controlled by the On/Off Cycle Dials just to the right of the 24-hour timer to produce vapor pulses with durations from 3 seconds to 5 minutes, at intervals of 3 seconds to 5 minutes, during the time of expected bird activity.
 - The vapor hangs in the air for up to 60 minutes. There is no need for the machine to continuously expel vapor over the target area.
 - The On/Off Cycle Dials should be set to one minute or greater between on and off intervals to avoid undue strain on the control panel electronics and because it is unnecessary to cycle the compressor more frequently than every minute for effective bird control.

3 - Equipment Supplied

Carefully unpack your BirdBuffer® shipping container. Verify that you have received everything listed below. If something is missing or damaged, please call your retailer or sales representative or call BirdBuffer® support at 425-697-4274.

- BirdBuffer® **TD II** or **Q4 machine**
- Removable weather cover for electrical panel.
- 1X IEC power cord w/ 3 prong grounded outlet (must be grounded)
 - This cord powers the machine including the 24-hour timer and the heater.

3.1 Fluid and Filters

- Your BirdBuffer® machine requires either Avian Control® fluid to run properly.
 - **Warning!** Avian Control® fluids are not compatible with each other. **Do not mix** different fluids together. The tank must be emptied and thoroughly cleaned if switching from Avian Control® to other bird deterrent fluids or vice-versa.
 - **Warning!** Avian Control® fluid is designed to run in the machine as is. Do NOT dilute it; mixing with water may damage the equipment.
 - **Warning!** Avian Control® fluid has a one-year shelf life. Do not use if fluid is dated older than one year.

FLUIDS, MAINTENANCE KITS AND FILTERS:

| Part Number | Item |
|--------------|---|
| 840005-Av | Avian Control® Fluid – 1 Gallon |
| 840005-D | Avian Control® Fluid – 55 Gallon Drum |
| 310049-ASY | Avian Control® Fluid Monthly Maintenance Kit: Gloves, Clean-up Towel, and 30ppi replacement filters for inlet and exhaust ports. |
| 310049-ASY60 | Avian Control® Fluid Monthly Maintenance Kit for Dirtier Environments: Gloves, Clean-up Towel, and 60ppi replacement filters for inlet and exhaust ports. |
| 820072 | 4-Pack 30ppi Gray Foam Replacement Air Filters, includes 4 each inlet replacement filter and exhaust replacement filter. |
| 820075 | 4-Pack 60ppi Gray Foam Replacement Air Filters for Dirtier Environments, includes 4 each inlet replacement filter and exhaust replacement filter. |

3.2 Mounting Hardware and Environmental Accessories

- Your BirdBuffer® machine supports a variety of accessories for placement of the machine in different outdoor spaces and environments.

MOUNTING HARDWARE AND ACCESSORIES

| Part Number | Item |
|-------------|---|
| 310529 | BirdBuffer® All-Weather Control Panel Cover (included with machine) |
| 820047 | Thermostatically Controlled Magnetic-Mount Heater 120v |
| 820065 | Roof Stand, includes Hardware and Instructions |
| 820060 | Hanging Harness: 4 cables 38" to 12' in length |
| 820062 | Pole/Wall Mounting Bracket: Wall or max 8" diameter pole |

3.3 Tools Required

- Gloves (supplied with Maintenance Kits)
- Adjustable Wrench (1 ²³/₃₂ inch)

4 - Operating Your BirdBuffer® Product

4.1 Vapor Applications:

BirdBuffer® products deliver an invisible dry vapor which is released into the open atmosphere. The vapor, which may condense at opening of nozzle only, will stay suspended and not settle to the ground when air movement is available.

1. For the vapor to be effective, the birds must be exposed by flying through it. It is designed to irritate birds only, affecting their eyes, mucous membranes and trigeminal nerve without harm. Vapor works on most flying birds, depending on their flying activity.
2. When birds fly, they breathe faster and will absorb just enough of the vapor to cause them to want to leave the area. It may take several exposures for the birds to learn that an area is inhospitable / uncomfortable; therefore, it is important to use the built in 24-hour timer to ensure the machine is running when birds are flying in the vicinity.
3. If owls need to be deterred, adjust the machine to run during the night.
4. Some small birds like starlings and sparrows can become pests doing tremendous damage and are very difficult to dissuade. These and other smaller birds need more concentration and may require other stimulus such as a BB Thermal Fogger as part of a pre-treatment plan. Three to five thermal fog treatments per week may be necessary in the beginning of the project. Contact BirdBuffer® for further instructions.
5. Typical approaches to pest birds include running the machine(s) from dawn until dusk each day or possibly for shorter periods: 4 hours in the morning and 4 hours before sunset if the bird activity is confined to those times of day. It takes time for birds to locate a new home and new feeding grounds. After the initial vapor operation, most birds may return to see if the vapor has subsided. In subsequent vapor operations the number of birds returning will decrease, as they will be searching for new roosting areas or moving. Bird activity in the target zone (where vapor is regularly present) will be reduced by 90% if these instructions are followed.
6. Flocks of birds tend to behave as a group. Exposing the flock to the vapor will effectively teach them to relocate their nesting/feeding areas during the daylight hours. When a few birds begin to leave, it communicates to the other birds that it is not a good location to roost or feed.
7. Be sure the birds can find an exit. Have it well-lit or open for the birds to see clearly.
8. Avian Control® fluid bird repellent is used without any dilution. It is made from food-grade liquid formulation, which does not mix with water.
♦ **Warning: Avian Control® and other bird deterrent fluids are NOT compatible with each other.**
Do not mix the different fluids together. Tank must be emptied and thoroughly cleaned if switching from Avian Control® to other bird deterrent fluids or vice-versa.
9. Vaporizing the bird repellent fluid using BirdBuffer® machines requires very little fluid. With one gallon, you can vaporize for an entire month over up to an acre with favorable wind conditions. As birds leave, customers may choose to reduce “ON” time and use even less fluid. Of course, if the birds start to return, a more aggressive treatment schedule should be established.

4.2 Preparation for Bird Control

Good bird control requires the need to *clean* the area of all droppings, feathers, nests or other signs that birds have been in the area. This may include washing difficult to reach areas. Signs of bird activity are a signal to other birds that birds live here and are welcome. Removing these “welcome signs” is a very important step.

1. Use proper cleaning material and PPE (personal protective equipment), as bacteria and other parasites are frequently contained in the bird droppings, feathers and nests.
2. Wearing proper personal protective clothing, such as gloves, goggles, breathing masks and boots, may be necessary. Airborne dust contains viruses and is not safe.
3. If painted surfaces have been deeply pitted and raw metal exposed due to the acidity of bird droppings, use proper care in repainting the area.
4. It is recommended to start running the BirdBuffer® machine(s) as soon as possible, while site cleaning begins. Depending on the site-specific layout features and infrastructure, some bird activity may continue and necessitate re-directing or increasing the application rates to strengthen the impact of the treatment. With proper oversight and management, bird activity is expected to reduce by 90% in 90 days.
5. Timing of the unit is critical. There is a battery backup for the built-in 24-hour timer. If the battery goes dead and the power goes out, the timer will no longer be set to the correct time and may not turn on at the designated time periods. Reset the time on the 24-hour timer if needed and replace the battery (see [Section 4.8](#)).
6. Proper daily operation of the unit will ensure that new flocks or migrating birds will stay away. They will fly in and leave if they are not established birds. Established birds (or local birds) are birds that have been there a long time, were born there, or feed there regularly every year. It always takes longer to remove locals and may require vaporizing more intensely and for longer periods of the day (and night).

4.3 Selecting the location

Look for a good location for the machine to rest solidly on the roof or optional stand or hang from trusses with the optional cables.

1. Place the BirdBuffer® some distance away from the location of the nuisance birds, keeping the output of the machine away from direct contact with electrical instruments and people, rubber equipment, electrical wires, painted surfaces or contact with close objects. A clear area of 25 ft. or more in front of the output is recommended.
2. Wind direction is essential to best coverage. Determine the prevailing direction of the wind and utilize the wind to direct the vapor to the target area.
3. Point the machine *with* the prevailing wind assisting. Use existing air currents to allow the vapor to expand and spread over a larger area. Use flags or internet wind databases to help guide you on orientation of the machine(s). Changing winds may help in covering more area. Normally 60% of the same wind direction is good. In the case of extreme wind conditions, please consult with our BirdBuffer® specialists at 425-697-4274.

4.4 Hang it or Mount it?

1. If trussing is under an overhang or an eave, it is easy to hang your BirdBuffer® product with hooks in the ceiling or around trussing and then hang it with cable hooks. Ceiling hooks (not included) may also be placed under the ceiling. Use with Hanging Harness (#820060). The cables simply snap/hook on to the feet of the machine for easy access. Hang the unit high enough to go over any other items, but low enough to easily access for service. Snap hooks easily hook on to extended feet. **Unit must hang in the upright orientation!**
2. If using optional wall mounting bracket (#820062), attach bracket to wall and mount unit on bracket as shown.



3. If using the optional roof/floor stand (#820065), it is recommended to bolt it to the surface, use sand bags to weight the bottom of the stand, or bolt the stand to extended 2x4 boards for additional stability.
4. The unit can be placed on a shelf or ledge if properly secured.

4.5 Electrical Power Requirements

Voltage/Current requirements depend on the machine and the AC power supplied to the machine. Refer to [Section 8 Specifications](#). The machine must be properly grounded.

1. Use a volt meter to verify full voltage is being supplied. For temporary power, use a grounded, minimum size 12 AWG 3 wire cord for 100' or less. If over 100', hard wire with proper electrical double outlet (quad box if in cold areas needing a heater connection). Only use NEMA approved molded plugs (no cube taps or octopus plugs). **Do not use 2 wire extension cords or lamp cords.**
2. If you have any doubts about the capacity or grounding of your existing circuits, consult a qualified electrician.
3. Do not add other equipment on this circuit.
4. Protect all electrical connections from the weather. Use a control panel cover for outdoor applications to keep all electronics out of water.
5. Once electrical requirements have been verified, plug in the unit.

4.6 Operating your BirdBuffer® Product – The Main Panel

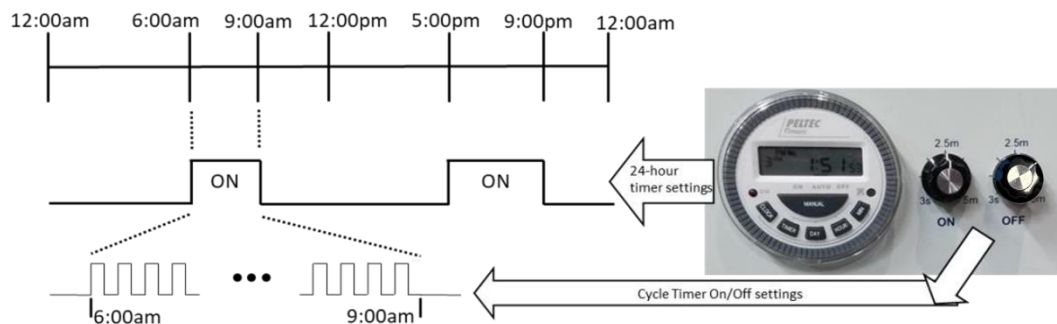


After hanging or mounting the BirdBuffer® and plugging it in, turn on the power switch, which will illuminate.

1. To test the unit's operation, remove the 24-hour timer cover and press the "MANUAL" button until the display indicator line is above the "ON" position. The compressor should come on for as long as the "On" cycle dial is set for. See the detailed instructions in sections 4.7 and 4.8 on timer and dial settings to precisely control the timing and duration of Vapor produced from the unit.
2. This unit has a self-regulating thermostatically controlled heating unit to always keep the inside unit above 50°F. TURN ON HEATER SWITCH WHEN TEMPERATURES ARE BELOW 50°.

4.7 Controlling Vapor using the 24-hour timer and the On/Off Cycle Dials

1. Used in conjunction with the On/Off Cycle Dials, the 24-hour timer allows you to automate your BirdBuffer® unit's output. This timer can set up to 16 different periods during the 24-hour day to be on. This allows you to run the unit during times of high bird activity, such as daylight hours only, and remain off for times of inactivity. During the periods that the 24-hour timer is "ON", the On/Off Cycle Dials will determine when the machine(s) will generate vapor.
2. The two dials or knobs to the right of the 24-hour timer control the "on" and "off" vapor cycle settings. These two dials together are called the **On/Off Cycle Dials**. These dials allow you to control the interval that the BirdBuffer® is producing vapor while the machine is operating. You may adjust this setting while the machine is running to set longer or shorter "on" time.
 - a. The left knob ("ON") controls the length of time that the compressor and blower are on.
 - b. The right knob ("OFF") controls the length of time the compressor and blower are off.
 - c. Each of these knobs can be individually adjusted between 3 seconds to 5 minutes.
 - d. The On/Off Cycle Dials come preset to 2 ½ minutes on and 3 ⅓ minutes off, which is a good starting point for normal operation.
 - e. NOTE: Do not operate the machine with both On/Off Cycle Dials below 60 seconds. This puts unnecessary burden on the control panel electronics and compressor and is not required for effective bird control.
3. Once you are satisfied that the machine is operating properly and your On/Off Cycle Dials are set, you can program the 24-hour timer for specific times of the day to run the machine.
4. For example, if the 24-hour timer is set on "AUTO" between 6:00 AM and 9:00 AM, and the On/Off Cycle Dials are set for cycles of 2 ½ minutes "ON" and 3 ⅓ minutes "OFF", then vapor will be generated for 2 ½ minutes out of every 5 ⅚ minutes during that period. The figure below shows this example in detail (the 24-hour timer is set to Auto On from 6:00 AM – 9:00 AM).



Example:

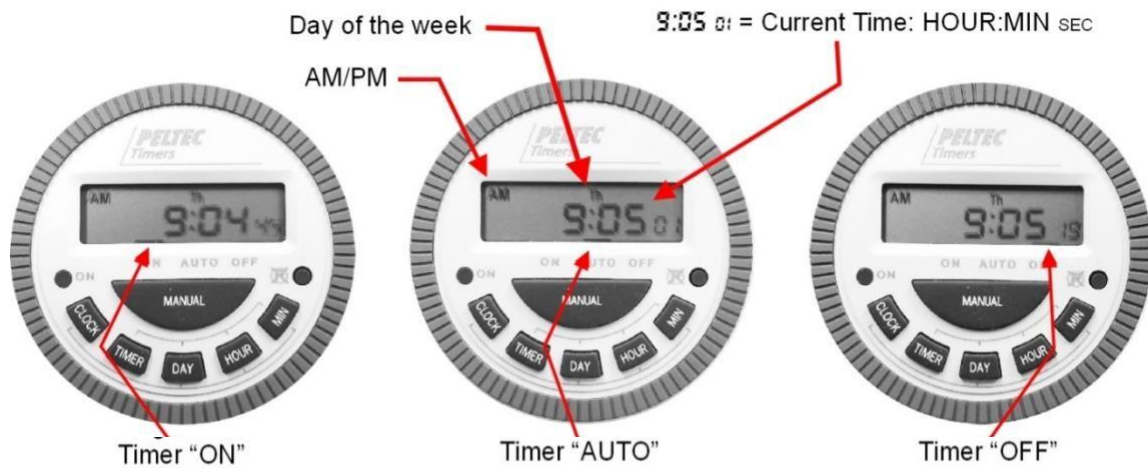
24-hour timer setting: Unit running from 6 am to 9 am and from 5 pm to 9 pm

Cycle timer setting: 2.5 min on, 3.33 min off (only between 6-9 am and 5-9 pm)

- a. If you need more vapor during these periods, then adjust the ON Cycle Dial to a larger value and/or reduce the OFF Cycle Dial to a smaller value.
- b. If you need to run the machine for larger time intervals, or more time intervals, then you can add/modify the 24-hour timer's program.
- c. This allows you to provide the most efficient amount of vapor when it is needed most.
- d. Factory settings: your BirdBuffer® machine comes with a pre-programmed 24-hour timer with the following schedule:
 - i. AUTO ON: 5:00 AM – 7:30 AM; AUTO OFF: 7:30 AM – 8:00 AM
 - ii. AUTO ON: 8:00 AM – 10:30 AM; AUTO OFF: 10:30 AM – 11:00 AM
 - iii. AUTO ON: 11:00 AM – 1:30 PM; AUTO OFF: 1:30 PM – 2:00 PM
 - iv. AUTO ON: 2:00 PM – 4:30 PM; AUTO OFF: 4:30 PM – 5:00 PM
 - v. AUTO ON: 5:00 PM – 7:30 PM; AUTO OFF: 7:30 PM – 8:00 PM
 - vi. AUTO ON: 8:00 PM – 10:30 PM; AUTO OFF: 10:30 PM – 5:00 AM
- e. It is recommended, to allow for a 15-30 minute “rest” period every 2-3 hours to avoid over saturation of the exhaust port filter in the machine, which can lead to fluid dripping out of the exhaust port. This does not affect the machine's efficacy, but it does waste fluid. Because the dry, invisible vapor is comprised of very small, light particles, they will linger in the air for up to one hour. In windy conditions, this rest period should be shorter.

4.8 Programming the 24-hour timer

1. The 24-hour timer can be operated in **manual** mode for continuous operation. With this setting, the On/Off Cycle Dials will control the vapor on and off intervals 24 hours a day. Press the “MANUAL” button until the small horizontal indicator line on the display is above the label “ON” as shown in the figure on Page 14.
2. Once programmed, press the “MANUAL” button until the small indicator line on the display is above the label “AUTO”. This allows the unit to work at pre-set intervals as set on the 24-hour timer as described above.
3. In order for the 24-hour timer to correctly work, it must be set to the correct time. Press and hold the “CLOCK” button. Press the “DAY” button until the correct day is displayed. Press the “HOUR” button until the correct hour is displayed. AM or PM is visible in the upper left. Press the “MIN” button until the correct minute is displayed. Release the “CLOCK” button. Clock is set.
NOTE: This timer does not automatically handle daylight savings time, so you must adjust the time twice a year if you are in a region that observes daylight savings time or set the timer to operate the machine in a wide enough window of time that the one-hour offset will not reduce effectiveness in deterring the birds.



4. To set a timer interval, press TIMER button. “1^{ON}” appears in the window. To select the first desired “ON” time, press “HOUR”, then “MIN”. Make sure that all the days of the week are shown in the display. If not, press “DAY” button until they are. **(Birds do not take the weekends off, so you will always want your timer to run the same timing 7 days a week.)** For example, the image below on the right shows the 1st timer set for 5:00 AM.

5. To select the first desired “OFF” time, press TIMER again. “1^{OFF}” appears in the window. Press “HOUR”, then “MIN”, to select the first “OFF” time. For example, the image below on the right shows the 1st timer set to turn off the machine at 6:30 AM.

6. Repeat steps 6 and 7 for each additional timing interval required.

7. Press the “CLOCK” button to return to the current time. Press the “MANUAL” button until the line is above the “AUTO” label, which indicates your unit is now in the timer mode and will be controlled by the program(s) you have set in steps 4-6 above.

8. The timer can be reset, if necessary, by using a pen tip or paper clip to press the reset button that is immediately next to the ☒ symbol.

9. Your timer’s battery will last for approximately 2 years. The battery can be changed by accessing the back side of the control panel of your BirdBuffer® Product:

- a. Unplug the machine. **Never open the machine while power is connected.**
- b. Using a Phillips-head screwdriver, remove the six screws holding the electrical panel in place. Remove the panel.
- c. Once you have access to the back of the timer, use a coin to rotate (clockwise) the slotted cover to open the battery compartment.
- d. Replace the dead battery with a new CR2032 3V coin-cell battery.
- e. Repeat the process in reverse to replace the panel.
- f. After changing the battery, you will need to re-enter settings on the 24-hour timer, following the above instructions.



4.9 Adding Fluid to your BirdBuffer®

1. Once the machine has been installed and verified to be in operation, add fluid.
2. Pour 1 gallon of **Avian Control® fluid** into the fill spout and tighten the cap with an adjustable wrench (1 23/32 inch).
 - a. **Do not mix Avian Control® fluid with other bird deterrent fluids – they are not compatible with each other.**
 - b. **Tank must be empty and thoroughly cleaned if changing from Avian Control® to other bird deterrent fluids or vice-versa.**
 - c. **Do not dilute Avian Control® fluid with water – water will damage the unit.**
 - d. **Use of any other fluid may damage the unit and will void any warranties.**
3. Check for any leaking from the tank plug. Tighten the plug with an adjustable wrench (1 23/32 inch).



CAUTION: Risk of eye irritation. Wear goggles when pouring fluid.

Bird Repellent Fluid causes acute but temporary irritation if it comes in direct contact with the eyes. Always use protective eyewear when in close contact with the unit. If fluid gets into the eyes, rinse thoroughly with water for 15-20 minutes.

4. Test the machine again to see the vapor coming from the machine. If unable to see vapor output, place a light source behind vapor and look into the light, through the vapor. You should also smell a grape scent.

4.10 Vapor Fluid Storage

1. Store vapor fluid only in the original container apart from pesticides, fertilizers, food or feed that may cause cross-contamination from odor.
2. Store out of reach of children and pets. Store at room temperature. Keep tightly closed when not in use. Do not store in direct sunlight.
3. Avian Control® fluid has a 12-month shelf life.

4.11 Use of additional Magnetic Heater when internal heater is insufficient

1. When the temperature drops below 35° F (2° C), the heater built in to the BirdBuffer® cannot maintain the warmth necessary for the fluid tank. Attach the Magnetic Heater #820047 (sold separately) to the left side of the front of the machine (if hanging or accessible) or the front fill hatch where the tank is exposed to the cold.

4.12 Control Panel Cover for outdoor applications (sold separately #310505)

1. Use of BirdBuffer® products outdoors requires a metal cover to protect the electrical panel from rain and snow (comes standard with every BirdBuffer® unit sold). After setting the timer and testing the unit, simply insert the cover so that the holes line up with the studs on the unit (on both sides of the panel) and slide down.
2. Using the BirdBuffer® without a cover outdoors will void the warranty and could possibly damage the electronics and the motor.



4.13 Using Autofill System

- The Autofill System allows the unit to run continuously, without manually refilling the fluid tank. An internal pump and float switch mechanism pumps additional fluid from an external source, such as a 2 ½ gallon jug or 55 gallon drum, keeping the unit's tank full. **Fluid should be checked monthly to prevent the fluid tank from running dry.**



5 - Frequently Asked Questions

How does the vapor work?

Vapor works on all active birds, but they must breathe the vapor for it to be effective. The vapor particles irritate their eyes and mucous membranes and the trigeminal nerve that birds rely on for navigation. Though highly irritating, the vapor poses no risk to the birds. It may take several exposures to the vapor for the birds to learn to leave the area. Smaller birds respond slower and may need higher concentrations to activate them to fly more.

Do I have to dilute the vapor fluid?

No. Avian Control® bird repellent is made with a natural grape concentration formulation which does not mix with water. **USE FULL STRENGTH.** Check date to ensure that the product is not more than one (1) year old.

How much fluid do I need?

Generally, one (1) gallon lasts one (1) month when the On/Off Cycle Dials and 24-hour timer are set to the factory pre-sets. Longer vapor duration settings may use more fluid. Increase the frequency of your maintenance program to check fluid levels more often if this is the case.

Do I need to run the BirdBuffer® every day?

Your BirdBuffer® must be used every day for the best effect. It takes time for the birds to find a new home and new feeding grounds. Nesting birds will continue to nest until younglings are ready to fly. Birds do not take weekends or holidays off. New flocks will not join them while the BirdBuffer® is working.

What is the best time to vapor?

Apply vapor in the area of bird flight during their highest activity. Usually, operating the unit from just before dawn to just after dusk is sufficient to repel established birds from the treated area. If birds are present, be certain the birds have an exit and can leave the area. Flying birds are most effected by the vapor as this is when birds are using their respiratory system the most.

The birds are no longer responding, what should I do?

- Check the clock on the 24-hour timer to verify the time is correct.
- Check the opening on the output to see if anything is blocking it.
- Check the 24-hour timer is set to "AUTO."
- Check the "ON" and "OFF" interval dials to be certain intervals are configured correctly.
- Check the fluid: open the fill cap and inspect the inside tank with a flashlight.

6 - Service and Maintenance

Proper care of your BirdBuffer® machine(s) will give you years of reliable service.

1. Your BirdBuffer® product has two filters that should be inspected and replaced monthly when the fluid in the tank is refilled. Keep the vents clear and wash the filters with soap and water or replace them as needed. If you are in a high dust area, more frequent inspection may be necessary. A finer filter (60 ppi) is available if necessary.

To remove the intake filter, turn off the machine, and reach into the vent on the side of the machine. To replace, place it against the side of the machine, inside the vent, and make sure the bottom of the filter is caught by the small bracket underneath the vent.



To remove the exhaust filter, turn off the machine, and reach into the exhaust vent and pull out the filter. To replace, insert it into the exhaust horizontally; it simply rests on top of a screen inside the exhaust.



2. Check in the fluid tank for dirt or debris. Clear fluid should be visible.

3. Check the tank plug for leakage. If you notice any leaking from the tank plug, make sure the plug is tight (use adjustable wrench set to $1 \frac{23}{32}$ inch). After tightening, observe to make sure leaking has stopped.
4. Check the electrical connections to be certain they are not becoming brittle or weak. Push all connections in to be certain all are not loose.
5. Remember to change the clocks for daylight savings time and adjustment of daylight hours when the birds are active.
6. Do not transport the BirdBuffer® with fluid in the tank. This can void your warranty. To drain the tank, refer to the instructions in the section [9 Shipping Preparation](#).

7 - Troubleshooting

7.1 Minimum Operating Requirements:

1. Avian Control® fluid must be present in the machine.
2. The machine must have adequate power.
3. The compressor and blower must be functioning.
4. The vaporizer unit must be functioning, emitting vapor.

If any of the previous requirements are not met, the machine may not operate correctly. Please begin by performing the [7.2 Quick System Check](#) to verify that all systems are functioning as expected. If you encounter any issues during these checks, refer to [7.3 Troubleshooting Steps](#) for steps to help resolve the problem.

7.2 Quick System Checks

1. Check Fluid
 - a. With unit off, open the fill port and shine a light into the tank.
RESULT: Fluid should be present in the tank.
RESULT: Fluid should be clean and clear (yellow colored).
2. Check Power
 - a. Confirm the machine is plugged in and has power.
 - b. Set Power switch to Reset.
 - c. Set timer to ON using Manual button.
 - d. Turn On/Off Cycle Dials fully clockwise.
RESULT: Machine will power ON and power switch should illuminate, “On” timer light should illuminate.
3. Check Blower
 - a. Confirm the machine is plugged in and has power.
 - b. Set Power switch to Reset.
 - c. Set timer to ON using Manual button.
 - d. Turn On/Off Cycle Dials fully clockwise.
 - e. Hold hand in front of exhaust port (wear gloves if there is fluid in the tank).
RESULT: Machine will power ON and you should feel air coming out of the unit.
4. Check Compressor
 - a. Confirm the machine is plugged in and has power.
 - b. Set Power switch to Reset.
 - c. Set timer to ON using Manual button.
 - d. Turn On/Off Cycle Dials to approximately 30 seconds - 1 minute setting, ¼ turn up from 3 second (3s) setting.
RESULT #1: Machine will power ON and you can hear slight drumming sound from side of machine near power switch.

RESULT #2: You can hear slight hissing noise from air moving through tubes. The hissing sound is most easily heard while machine is cycling on and off every 30 seconds. The hissing sound will continue into the off cycle when other machine parts are silent. If you do not hear the hissing noise, repair is required. Contact info@birdbuffer.com.

5. Check for Vapor

- a. Confirm the machine is plugged in and has power.
- b. Set Power switch to Reset.
- c. Set timer to ON using Manual button.
- d. Turn On/Off Cycle Dials fully clockwise.

RESULT #1: Machine will power ON and you will smell a grape scent.

- e. Remove fluid cap.
- f. After 30 seconds, while wearing gloves, cover the exhaust nozzle with stiff cardboard or plastic.

RESULT #2: This will force the vapor to exit through the fill port, this will allow you to confirm vapor is being produced.

- g. Replace fluid cap and place light source behind the vapor and look into the light.

RESULT #3: You should see vapor exiting the machine.

- h. Hold a mirror less than 5" from the front of the exhaust port, for 5 minutes.

RESULT #4: Moisture will begin to condense on the mirror.

7.3 Troubleshooting Steps

FLUID

PROBLEM: Leaking fluid

CHECK: Is the fluid yellow colored?

- YES: Fluid is Avian Control® fluid, proceed to next check.
- NO: Fluid is NOT Avian Control® fluid. Some moisture condensation is typical of normal machine operations.

CHECK: Is fluid leaking from the fluid tank?

- YES: Fluid potentially spilled into the housing during tank fill. See if leak continues after a few days.
- YES: Fluid cap may not be tight. Remove the cap and replace snugly. Check for further leaks in a few days.
- NO: Proceed to next check.

CHECK: Is the unit mounted level? Use a level to confirm.

- YES: Proceed to next check.
- NO: Level the machine and monitor for leaking after a few days.

CHECK: Is fluid leaking near the drain plug?

- YES: Drain plug may not be tight. Tighten the drain plug with a 1 ²³/₃₂" wrench.
- NO: Proceed to next check.

CHECK: Is fluid leaking near the exhaust port?

- YES: Fluid is condensing at the opening of the exhaust nozzle.
- NO: If the fluid is not clear, this is not a fluid leak.

CHECK: Is the Exhaust Filter saturated?

- YES: Remove filter and replace with new, clean filter. Ensure the unit has appropriate off time in the run cycle.
- NO: Minimal condensation of fluid (dependent on environment) can be expected during normal operation. Proceed to next check.

CHECK: Is fluid leaking from the seams of unit. Remove the cover and look for evidence of fluid running down the tank from the tank/exhaust interface.

- YES: This is a result of a bad seal inside the exhaust port. Repair is required, contact info@birdbuffer.com.
- NO: Contact info@birdbuffer.com for additional troubleshooting advice regarding leaking fluid.

POWER

PROBLEM: No Power to the unit.

CHECK: Is the Power Light ON?

- YES: Proceed to next check.
- NO: Check power cord and power source.

CHECK: Is there a tripped breaker?

- YES: Possible loose electrical connection, confirm power cord is securely plugged into unit and power source. Confirm adequate power is being supplied. If using an extension cord, check the manual for proper cord gauge and length, replace if cord is inadequate.
- NO: Contact info@birdbuffer.com for additional troubleshooting advice regarding power issues.

PROBLEM: The unit starts and then shuts down.

CHECK: Is the timer set to OFF or improperly set?

- YES: Refer to the manual to reset the timer appropriately.
- NO: Proceed to next check.

CHECK: Is the outside temperature below 50°C?

- YES: Ensure the heater switch is turned on, let the unit warm up in a warmer environment and try again. (External heaters can be purchased for extreme low temperatures.)
- NO: Contact info@birdbuffer.com for additional troubleshooting advice regarding power issues.

VAPOR

PROBLEM: There appears to be low air flow and/or reduced grape scent.

CHECK: Is the exhaust filter properly installed, flat?

- YES: Proceed to next check.
- NO: Remove the filter and replace it, ensuring it is properly positioned and flat.

CHECK: Is the intake filter clean?

- YES: Proceed to next check.
- NO: Remove intake filter and replace with new, clean filter. In high dust areas, more frequent inspections may be necessary.

CHECK: Is air coming out of the exhaust port?

- YES: Proceed to next check.
- NO: This may be a blower failure. Contact info@birdbuffer.com for repair.

CHECK: Is fluid present in the tank?

- YES: Proceed to next check.
- NO: Add fluid and begin check process again.

CHECK: Is the fluid in the tank clean and clear (yellow colored)?

- YES: Proceed to next check
- NO: Dirty fluid, drain the tank and replace with clean fluid, begin check process again.

- NO: Fluid is clean but not yellow-colored, incorrect fluid has potentially been used. Contact info@birdbuffer.com for additional troubleshooting advice about incorrect fluid usage.

CHECK: Perform mirror test from Quick System Check, Vapor Test section. Is there an accumulation of moisture on the mirror?

- YES: Proceed to next check.
- NO: Potential clogged vaporizer, contact info@birdbuffer.com for additional troubleshooting advice about clogged vaporizer.

CHECK: Is the exhaust filter saturated?

- YES: Remove the filter and replace with a new, clean filter. Begin check process again, if problem persists.
- NO: Proceed to next check.

CHECK: Can you hear a slight hissing or drumming noise while the machine is turned on.

- YES: Contact info@birdbuffer.com for additional troubleshooting advice.
- NO: Potential compressor or blower failure, repair is required. Contact info@birdbuffer.com for repair.

8 - Specifications

| | BirdBuffer® Q4 | | BirdBuffer® T.D. II | |
|---------------------------|---|---------------------|---|---------------------|
| | 120VAC | 230VAC | 120VAC | 230VAC |
| Part Number(s) | 800027 | 800028 | 800012 | 800013 |
| w/ Autofill | 800097 | 800098 | - | - |
| Double Output | 800037 | 800038 | - | - |
| Double Output w/ Autofill | 800087 | 800088 | - | - |
| Output speed | 60mph velocity | | 40mph velocity | |
| Warm Up Time | None; with heater 3 mins. | | None; with heater 3 mins. | |
| Operating Temperature | 35°F – 104°F | | 35°F – 104°F | |
| Outlet size | 2" x 2" | | 2.25" x 2.25" | |
| Electrical Supply | 120VAC, 60Hz, 8A | 230VAC, 50/60Hz, 5A | 120 VAC, 60Hz, 5A | 230VAC, 50/60Hz, 5A |
| Main Power Breaker | 5A | 3A | 3A | 3A |
| Heater Breaker | 2A | 1A | 2A | 1A |
| Weight | 73 lbs / 33 kg | | 53 lbs / 24 kg | |
| Shipping Weight | 93 lbs / 43 kg | | 68 lbs / 31 kg | |
| Size | 20.5" x 12.25" x 22.25" (52cm x 31cm x 56.5cm) | | 23.25" x 16" x 12.25" (59.1cm x 40.1cm x 31.1cm) | |
| Shipping Box Size | 25" x 25" x 25" (63.5 cm x 63.5 cm x 63.5 cm) | | 25" x 19" x 19" (63.5 cm x 48.3 cm x 48.3 cm) | |

9 - Shipping Preparation

1. Several steps are required to ensure that your BirdBuffer® product does not get damaged while being transported. If you need to ship the unit, follow the following steps. Any incorrect shipping procedures may result in non-warranty costs.
2. **Empty all fluid from the unit** by draining. Place a container under the tank plug, then remove plug to allow fluid to drain out. Gently tilt the machine upward. This will allow all of the fluid to drain from the unit. Do not tip backwards when full of fluid. This will cause fluid to fill the vaporization head and causes damage.

It is not recommended to reuse this fluid, however, if you filter it through a nylon filter and once it is clear and clean, you can return it to the fluid container for future use. Fluid does have a 12-month shelf life. Otherwise discard the fluid according to local disposal regulations for materials of this type.

3. Return unit upright and wipe up all spills or drips.
4. Put unit in a plastic bag to prevent other dripping in box while being shipped. Standard carriers may decide not to deliver the box if a leak is detected.
5. Always send a Material Safety Data Sheet (MSDS or SDS) with the fluid or machine. This reduces the low risk of the carrier not shipping the unit due to concerns about fluid. The SDS for Avian Control® fluid can be downloaded from <https://birdbuffer.com>.
6. Mount unit on a plywood base and attach using bolts or screws. Surround the unit with heavy duty cardboard boxes with at least 2" space. Set the machine inside the box in the upright position. Never ship the unit on its back.
7. If you are returning the unit for repair, follow the steps on the RMA authorization from BirdBuffer®.

10 - One Year Limited Warranty

BirdBuffer® LIMITED WARRANTY

BirdBuffer® warrants that our products will be free of defects in workmanship and materials for a period of one (1) year for mechanical and electronics.¹ This limited warranty is not transferrable or assignable to any subsequent party and is only applicable in the original country in which the product was purchased.

In the event of a defective product BIRDBUFFER®, at our discretion, will repair or replace with new or refurbished equipment or a model of like kind or quality. Repaired or replaced products assume the remaining warranty period of the original purchase and will not extend any additional warranty.

BirdBuffer® machines requires Avian Control® fluid to run properly. Use of other fluids, or diluting these fluids, or mixing these fluids will void all warranties. BirdBuffer® is not obligated to provide warranty service if the product should fail because of lack of maintenance, misuse, abuse, improper installation, neglect, damage caused by excessive electrical current or connection, by flood, fire, wind, earthquake, lightning. Additionally, any attempt to repair, alteration, adjustment or modifications will void the warranty.

To Submit a Warranty Claim or Receive Technical Support:

Please contact our Technical Support Department at 425 697-4274 or by email at info@birdbuffer.com. Business hours are Monday through Friday 8:00am – 4:00pm PST. Please have the product model name and serial number available, along with the purchase date and invoice number, if applicable. Our service technicians will work with you to diagnose your technical issue and recommend a suitable course of action to solve your problems swiftly and to your satisfaction.

If it is determined that your product is defective and under warranty, BirdBuffer® will repair or replace, at our discretion, any faulty parts or equipment. A Return Merchandise Authorization (RMA) will be issued for the defective product. RMA number should appear in bold, clear markings on box and shipping label. BirdBuffer® has the right to refuse any returns made without prior approval.

Customers are responsible for shipping costs to and from BIRDBUFFER®. In the event that the product is found to be under warranty BirdBuffer® will cover the cost of return shipping. Customers are responsible for securely packaging any return products and returning it to BirdBuffer® per provided instructions. BirdBuffer® is not responsible for any damages that occur during shipping. The customer is responsible for filing any claim for reimbursement and will be responsible for any associated repairs. In the case that product is returned in improper packaging BirdBuffer® has the right to charge for replacement packaging to ensure a safe return.

DO NOT RETURN BIRDBUFFER® EQUIPMENT WITH FLUID

Under no circumstances shall BirdBuffer® or any supplier of BirdBuffer® be liable for any loss, damage or expense, including, but not limited to, loss or damage arising out of the failure of the products to operate for any period of time, inconvenience, the use of rental or replacement equipment, loss of profits or other economic loss, or general, direct, special, indirect, incidental or consequential damages or property damages.

Many states and localities have their own varied codes and regulations governing sales, construction, installation, and/or use of Equipment for certain purposes. While BirdBuffer® attempts to assure that its Equipment comply with such codes, it cannot guarantee compliance, and cannot be responsible for how Equipment is installed or used. BirdBuffer® recommends that, before purchasing and using Equipment, purchasers review the Equipment application, and federal, state and local regulations, to be sure that the Equipment, installation and use will comply with them.

¹ Consumable products (Fluids and Filters) carry no warranty other than to be free of defects upon arrival. Nonconsumable accessories warranty period is ninety (90) days.



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