

INSECT-O-CUTOR®



**FLYING INSECT
ELIMINATORS**



**SCATTERPROOF
GLUEBOARD
FLY TRAPS**

FOR INDUSTRIAL, COMMERCIAL, AND INSTITUTIONAL USE



C.S.A. APPROVED



APPROUVE PAR ACHOR

INSTRUCTION AND MAINTENANCE MANUAL

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SAFETY PRECAUTIONS — READ THIS SECTION FIRST

- CAUTION** HIGH VOLTAGE, DISCONNECT BEFORE SERVICING.
- CAUTION** TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, USE **INDOORS ONLY — SEE INSTRUCTIONS.** This product is intended for use indoors only. To avoid risk of fire or electric shock, do not use where it may be exposed to direct water or direct sunlight including roofed but open porches.
- CAUTION** **NEVER INSTALL INSECT-O-CUTOR® (IOC®) EQUIPMENT NEAR EXPLOSION HAZARDOUS AREAS.** (Areas defined as Class I, II or III — See the Code of Federal Regulations).
- CAUTION** TO PROVIDE CONTINUED PROTECTION AGAINST THE RISK OF ELECTRIC SHOCK CONNECT TO PROPERLY GROUNDED OUTLETS ONLY. For your safety, consult a qualified electrician or serviceman if the grounding instructions are not completely understood, or if doubt exists as to whether the unit has been properly grounded (*See Page 5*).
- CAUTION** TO REDUCE THE RISK OF FIRE, REMOVE THE DEAD INSECTS FREQUENTLY. See *“Preventative Maintenance Program”* on Page 8.
- CAUTION** Use extension cord marked SJW-A, SJEW-A, or SJTW-A only. Use only three-wire extension cords which have 3-prong plugs and 3-pole receptacles which accept the attachment plug. Replace or repair damaged cords.
- CAUTION** The electrical rating of the extension cord must be as great as the electrical rating of the product. **DO NOT ABUSE THE CORD.** Never carry an Insect-O-Cutor® by its cord or yank the cord to disconnect it from the receptacle. Keep the cord from heat, oil, and sharp edges. Any frayed or worn cord should be repaired or replaced at once.

Contains Mercury, Dispose According to Local, State or Federal Laws

DISCONNECT THE PRODUCT FROM THE POWER SUPPLY when not in use; before servicing; when changing black light lamps; cleaning; and the like. Do not insert foreign objects into an IOC® product.

GENERAL LOCATION RECOMMENDATIONS

PRIOR TO INSTALLING THE UNIT(S), PLEASE READ "ASSEMBLY AND INSTALLATION INSTRUCTIONS": PAGES 4 AND 5

An Insect-O-Cutor® (IOC®) system may consist of a single unit protecting a small area or many units protecting an entire facility. A single unit can be properly located/positioned by following our general positioning recommendations. A multi-unit system may require the assistance of an IOC® Systems Design Engineer or an authorized representative.

If an IOC® survey proposal has been provided, follow the instructions for exact positioning of the units. If a survey proposal with location instructions was not provided, adhere to the following general guidelines.

1. LOCATION — ALL MODELS

- a) Choose a location that will provide interception of flying insects between the point of entry into the building and critical contamination areas (use at least one unit for each entry point).
- b) Place the unit a minimum of 10 to 15 feet (3-5 meters) from any exterior opening to minimize the possibility of emitting insect attraction light out of any exterior opening.
- c) Install the unit a minimum of 10 feet (3 meters) from highly reflective surfaces.
- d) Avoid setting unit near air currents from fans, ducts, heat vents or other air movers.
- e) Avoid placing equipment near high intensity artificial light that might compete with the unit's black light attraction lamps.
- f) **REMEMBER:** The process of insect electrocution creates an electrical arc. Contact Insect-O-Cutor® or one of its representatives for assistance regarding location of units in questionable areas.

CAUTION:

NEVER LOCATE A UNIT IN AN EXPLOSION HAZARDOUS AREA.

Examples: Near areas where bulk flour, sugar, grains, and other fine particles (including dust) are present and/or airborne in proximity to flammable gases, oils, chemicals, and other igneous liquids; near battery chargers; in surgical suites and other medical areas where explosive or flammable/combustible anaesthetic agents are used.

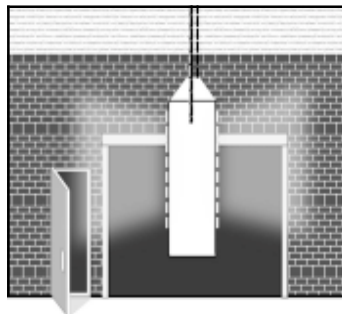
2. HANGING UNITS NEAR OUTSIDE ENTRY POINTS



FOR DAY-SHIFT OPERATIONS

**Locate Unit
Parallel to the Door**

Position units broadside to the area to be protected, or to the exterior doors so that black light attraction will face these insect entry points.



FOR MULTI-SHIFT OPERATIONS

**Locate Unit
Perpendicular to the Door**

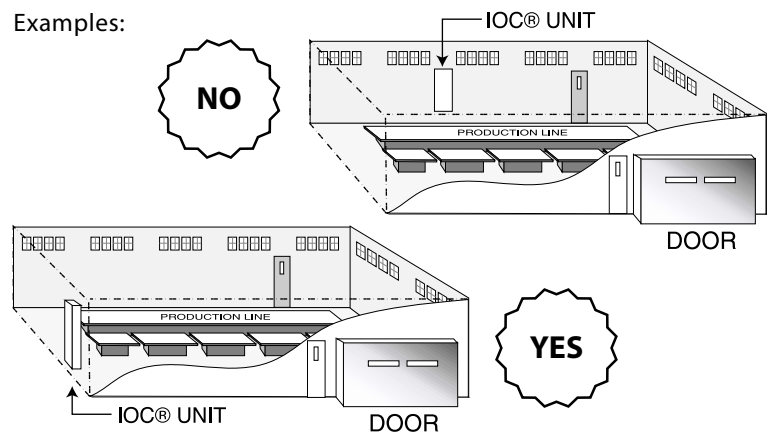
If the exterior doors will be open for prolonged periods during hours of darkness, units should be positioned at a 90° angle to the doors.

3. GENERAL INFORMATION

DO NOT PUT THE IOC® UNIT WHERE YOU "DO NOT WANT THE INSECTS". For instance, do not put an IOC® unit on the far side of a production line or other point of possible contamination, in relation to the point of entry.

Locate the unit between the product and the insect entry point to intercept insects or lure insects from critical areas.

Examples:



For maximum flying insect elimination, an IOC® System should consist of *Three Phases*. *Phase I* units intercept insects at immediate points of entry.

Phase II units, located between entry points and critical interior areas, intercept insects at such places as firewall breaks and along corridors.

Phase III units provide the final line of interception. In some situations, units may be located within the critical area. [Critical areas are those in which the least amount of flying insects should be found, if any.]

ASSEMBLY AND INSTALLATION

HANGING/OVERHEAD SUSPENDED MODELS

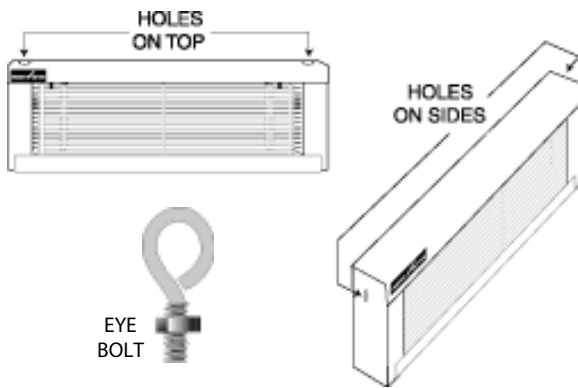
**SERIES 312, 372, 389, 399, 492,
494, 589, 599, 2489, 2499, 3692,
3694, 4889, 4899, AND 894**

A. Remove unit from carton; discard packing materials.

A.1 Series 372, 894, 2489, 2499, 3692, 3694, 4889, and 4899

These models may be either overhead suspended or wall mounted. To install as a hanging unit, remove the optional reflective backplate accessory. The backplate is required when wall mounting the unit.

B. Screw the provided eyebolts through the threaded holes located on the body of the unit as shown below:



Make certain the eyebolts are threaded properly into the locknuts to ensure a secure hold.

C. Attach the required length of chain or cable to each eyebolt (using an "S" hook). **Caution:** Use a minimum 200 Lb. (90 to 100 Kg) test "S" hook, chain or cable.

D. Attach the "S" hooks and chain or cable to the ceiling, roof truss, beam or bracket which has adequate strength to support the weight. When the chain (or cable) has been attached, test it for supportability of the product weight before hanging the unit.

**PORTABLE SERIES 372, 2489, 2499,
1890, 1894, 2591, 2594 AND 2599**

These models, equipped with a carrying handle and protective footpegs, may be used to provide spot protection in temporary areas or as a monitor in specific problem areas. It is not necessary to remove the carrying handle should you elect to permanently install the unit. Simply install the unit according to the appropriate instructions.

WALL MOUNTED MODELS

**SERIES 372, 812, 994, 6192, 6199, 1192, 1199,
7194, 1890, 1894, 2489, 2499, 2591, 2594,
2599, 3692, 3694, 4889, 4899, AND 894**

A. Remove unit from carton; discard packing materials.

B.1 ASSEMBLY — Series 812, 994, 6192, 6199, 1192, 1199, 7194, 1890, 1894, 2591, 2594, and 2599

Units are shipped completely assembled. An insect collection drawer is packed inside each unit.

B.2 ASSEMBLY — Series 372, 894, 2489, 2499, 3692, 3694, 4889, and 4899

These series models may be wall mounted or overhead suspended. For wall mount installations, an optional backplate is provided with each unit. Do not remove this backplate; it is an essential part when the unit is wall mounted. An insect collection drawer is packed inside each unit.

C.1 INSTALLATION — Series 812, 994, 6192, 6199, 1192, 1199, and 7194

Recommended mounting is to secure the unit to a wall or pillar. Generally, the bottom of the unit should be no lower than 18 inches (47 centimeters) from the floor, and the center of the unit should not exceed five [5] feet (1.5 meters) above the floor. The unit should be attached to a vertical surface by inserting lag bolts or screws through the keyshaped mounting holes in the rear of the unit after properly inserting and securing the lag bolts or screws into the wall/pillar.

C.2 INSTALLATION — Series 372, 2489, 2499, 3692, 3694, 4889, 4899, 894, 1890, 1894, 2591, 2594 and 2599

These series models may be used as free standing units on or under counters, tables, benches or shelves that adequately support the unit's weight.

Note: For security purposes, it is recommended that the unit be permanently affixed to a wall, pillar, or other vertical surface.

The unit should be attached to a vertical surface by inserting lag bolts or screws through the keyshaped mounting holes in the rear of the unit after properly inserting and securing the lag bolts or screws into the wall.

Designated as "low headroom", these horizontally configured models are ideal for use in areas where ceiling heights are limited or where vertical wall space is at a premium. Units may be installed securely over doorways.

ASSEMBLY AND INSTALLATION — CONTINUED

ALL MODELS: HANGING/OVERHEAD SUSPENDED AND WALL MOUNTED

CONNECTING UNITS TO POWER SOURCE:

AFTER INSTALLING THE UNITS —

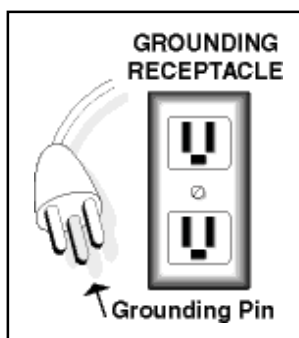
PLUG INTO A STANDARD 110/120V, 60 HZ POWER SUPPLY. UNITS MUST BE GROUNDED.

This product is equipped with an NRTL approved three-conductor cord and three-prong grounding type plug to fit the proper grounding type receptacle.

To reduce the risk of an electric shock, the plug must be plugged into an appropriate outlet that is properly installed and grounded.

FOR YOUR SAFETY:

Consult a qualified electrician or serviceman if the grounding instructions are not completely understood ... or if doubt exists as to whether the unit has been properly grounded.



If necessary, use extension cords marked SJW-A, SJEW-A, or SJTW-A only. Use only 3-wire extension cords which have 3-prong grounding-type plugs and 3-pole receptacles which accept the Insect-O-Cutor® plug. Replace or repair damaged cords.

The electrical rating of the extension cord must be as great as the electrical rating of the product. Refer to the unit's electrical rating label.

DO NOT ABUSE CORD. Never carry an IOC® product by the cord or yank the cord to disconnect it from a receptacle. Keep the cord away from heat, oil, and sharp edges. Any frayed or worn cord should be repaired or replaced at once.

Disconnect the product from the power supply when not in use, before servicing, when changing lamps, cleaning, and the like.

INSECT-O-CUTOR® DESIGN FEATURES

SAFETY INTERRUPT SWITCH

Partial or complete removal of the guard will activate the safety interrupt switch; electrical current to the unit will be automatically shut off. Electrical current will remain off until the guard has been replaced in its original seated position on the unit's bodyframe.

PROTECTIVE GUARDS

The front guard on hanging/overhead suspended models and the entire guard panel of wall mount models must fit snugly to the unit's bodyframe in order for the unit to function. See "Safety Interrupt Switch" above.

Firm pressure should be applied to the guard when replacing it into an operating position so that the interlocking fasteners join.

SAFETY GUARD FLANGE

Series 3692, 3694, 4889, 4899, and 894 are equipped with a metal safety guard flange to act as a retainer which allows authorized personnel to prop the guard open for maintenance/service.

BLACK LIGHT LAMPS

IOC® units are shipped with the lamps in place. Certain models are shipped with cardboard lamp supports to prevent breakage in transit; remove and discard these lamp supports prior to use.

Note: Tape securing lamp ends to lampholders must be removed and discarded prior to use.

COLLECTION DRAWERS

Insect collection drawers are packed inside some units. These drawers should be periodically removed to inspect and discard collected insect carcasses.

TROUBLE SHOOTING TIPS

1. LAMP END DISCOLORATION

- a. Discoloration of the lamp ends is normal in most cases — and will not reduce lamp efficiency.

2. ONE OR BOTH LAMPS FAIL TO LIGHT

- a. Verify lamp pins are properly seated in the lampholders. Using a non-electrical conducting safety tool (insulated screwdriver, etc.), arc the grid by holding the tool briefly between two grid wires. This usually will start/light the lamps. If not, proceed with the steps below.
- b. Check for loose wiring after disconnecting or shutting off the electrical current to the unit.
- c. Replace inoperable lamp(s) with new IOC® insect attraction lamps. First review Step (d) below.
- d. When replacing a black light insect attraction lamp that is not lit, follow the steps below to help prevent burning out a new lamp unnecessarily:
 1. Ensure that the electrical current to the unit has been turned off.
 2. Remove the unlit lamp.
 3. Remove the other lamp in the unit that is lit.
 4. Place the unlit lamp in the position from which you have just removed the lit lamp.
 5. Turn the unit on by closing the safety guard to deactivate the interrupt switch and restore electrical current.

If the unlit lamp now lights, this indicates that the ballasts in the first lamp position have possibly failed.

If the unlit lamp does not light, insert an ordinary white fluorescent lamp (of the same wattage) in the position originally occupied by the unlit lamp. If this lamp glows red briefly and then goes out... or if this lamp does not light at all, the ballasts which power this lamp position are defective.

- e. If you have confirmed that one or more ballasts are defective, it will be necessary to replace them. Refer to the *IOC® Replacement Parts List* (separate sheet) for the correct re-order information.

3. THE GRID ARCS CONSTANTLY

- a. Inspect the electrical grid (please follow the procedure described in Problem 2). If arc'ing occurs at only one spot, shut off the electrical current and clean the grid, making sure the wires are not bent.
- b. Verify the line voltage. Line voltage above 120 Volts may cause arc'ing, particularly in the presence of high humidity/moisture.

Note: 100-Ohm Resistors with installation instructions are available from Insect-O-Cutor®. Resistors may resolve spontaneous arc'ing associated with environmental factors such as humidity, etc.

4. THE LAMPS LIGHT — BUT THE GRID DOES NOT ARC

- a. Turn off the electrical current to the unit.
- b. Inspect the grid carefully. Remove any foreign material (gum, paper clips, steel wool, etc.) adhering to the grid which can create a short circuit between two grid wires.
- c. Two or more grid wires may be touching each other and causing a short circuit in the grid (due to a special built-in safety shunt which turns off the electrical current). In this instance (unit already should have been turned off), separate and bend the grid wires apart with an insulated tool.
- d. Inspect the high-voltage lead-in wires and insulators. Make sure the wires are securely attached to the grid. Check the insulators for evidence of shorting.
- e. Turn on the unit to ascertain whether the problem has been corrected.
- f. If, after completing Steps (a) through (e) above, the grid still does not arc, it will be necessary to replace the transformer. Refer to the *IOC® Replacement Parts List* (separate sheet) for the correct re-order information.

DO NOT INSERT FOREIGN OBJECTS INTO AN IOC® PRODUCT.

CAUTION: Insect-O-Cutor® models are intended for use indoors only. To avoid risk of fire or electric shock, do not use where they may be exposed to direct water or to direct sunlight including roofed but open porches. Never install units near explosion hazardous areas. Refer to "Location Recommendations" on Page 3.

TROUBLE SHOOTING TIPS — CONTINUED

5. THE LAMPS DO NOT LIGHT — AND THE GRID DOES NOT ARC.

- a. Inspect the unit to ensure that the safety guard is firmly seated on the body/frame of the unit.

Note: Partial removal or improper positioning of the guard will activate the safety interrupt switch. Electrical current will remain off until the guard has been replaced.

- b. Make sure the mainswitch/circuit breaker is “on” or that the unit is, in fact, plugged in. Many times, a plug will be accidentally removed from its socket or a mainswitch/circuit breaker will be thrown into the “off” position.
- c. Once you have verified that electrical current is flowing to the unit and you note that the grid still fails to arc, it will be necessary to check for any loose wires.

Shut off the electrical current to the unit and inspect wiring. Reattach the grid lead-in wires if disconnected. Turn the unit back on to determine if the loose wiring has been located.

- d. Check the line circuit for fuse/circuit breaker failure.
- e. If, after completing Steps (a) through (d) above, the lamps still do not light and the grid still does not arc, it may be necessary to replace the transformer and lamp ballast(s). Refer to the *IOC® Replacement Parts List* (separate sheet) for the correct re-order information.

6. THE LAMPS OPERATE... THE GRID FUNCTIONS — BUT INSECTS ARE NOT ATTRACTED TO THE UNIT AS WELL AS EXPECTED.

- a. Changes in heating, lighting, cooling or air currents may have made the present unit location obsolete. Or, changes in lighting or door openings may have caused re-routing of insect flight paths.

In any of these situations, refer to the “Location Recommendations” on Page 3 of this manual.

- b. The lamps may be low in black light output.

Insect-attracting ultraviolet (UV) energy is produced within a lamp by its phosphor, a dust-like coating. Virtually all ultraviolet producing phosphors have an effective life of only 7000 hours (or 9.5 months of continuous use).

Insect attraction lamps should be replaced on an annual basis — with genuine Insect-O-Cutor® insect attraction lamps. After 7000 hours of operation, visible light (detectable to the human eye) will continue to be emitted. However, the lamp’s UV emissions are 50% below original emission levels.

To maintain insect-attracting effectiveness in light traps, it is essential to replace insect attraction lamps at least annually.

Contact Insect-O-Cutor® in Stone Mountain, Georgia, USA or an authorized representative if any of the solutions outlined in these Trouble shooting Tips fail to solve the problem(s).

NOTE: SHOULD YOU NOTICE INCREASED FLYING INSECT KILL IN PHASE III UNITS

Phase III units are positioned as the final line of flying insect interception. Units in these areas act as monitors to help gauge the efficiency of your IOC® system. Of all the units operating in the system, Phase III equipment should collect the least amount of insects.

We recommend that weekly catches be recorded, noting the amount of insects collected as well as the type of flying insects attracted and killed. Severe changes in these recordings will warrant a closer inspection of your facility’s integrated pest control programs.

For instance, a lower than normal insect kill denotes that an insect electrocuting system is operating as expected. A higher than normal insect kill warns that one or more problems may exist in the insect elimination network. Examples:

- An exterior entry door (without benefit of an IOC® unit), normally closed, now remains open for prolonged periods.
- One or more IOC® units have been unplugged or turned off at the mainswitch for maintenance or cleaning, and have not been returned to service.
- Transformers, ballasts, or lamps have failed in one or more units, rendering them inoperable.
- An addition or expansion has been made to the facility that requires additional IOC® units to complete the system.

PREVENTATIVE MAINTENANCE PROGRAM

To obtain the highest possible level of flying insect elimination and to ensure continued operational efficiency, it is imperative that your Insect-O-Cutors® be properly maintained. Please read this entire manual before exercising any of the Preventative Maintenance Procedures. Remember: disconnect the electrical current to Insect-O-Cutor® units before beginning repairs, maintenance or lamp replacement, etc.

WEEKLY

- Visually inspect units to determine that the black light lamps are functioning.
- Using appropriate tools/devices, test unit electrical grids for arc'ing activity.
- Replace any lamps that are burned out. If necessary, replace any defective ballasts.
- Inspect, empty and clean the insect collection drawers in all Insect-O-cutor® units at any time as safety may dictate (i.e., when flying insect carcasses have accumulated to an amount in excess of one inch [or approximately 25 mm]).

MONTHLY

- Inspect, empty and clean the insect collection drawers in all units. Never permit insect carcasses to accumulate to a depth of more than one inch (or approximately 25 mm).
- Clean the electrical grid with a non-metallic brush or broom. Dust and dirt build-up insulates the grid wires, allowing tiny insects to escape. Excessive dust build-up may also create a fire hazard.
- Wipe the lamps with a dampened cloth. Any film or dust on the attraction lamps will reduce black light emission (flying insect attraction is directly proportional to the amount of black light emission).
- Test the electrical grid to ensure that voltage is being attained by arc'ing the grid with an appropriately insulated tool.
- Wipe the surface of the unit with a dampened cloth whenever dust and other particles detract from its appearance. An Insect-O-Cutor® is an appliance that should receive the same care and cleaning as other permanent fixtures.

ANNUALLY

- Replace all the lamps with genuine Insect-O-Cutor® Insect Attraction Lamps. Each IOC® unit is equipped with pretested black light lamps that will provide the highest level of flying insect attraction. All lamps in original IOC® equipment are year-dated... exclusive with the Insect-O-Cutor® product.

Insect-O-Cutor® units should operate 24 hours a day, seven days a week... year round.



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