



MOSQUITO SLAYER PRO

user manual

MODEL
MSP1A



M-Tech
international



Edition 6-190608

Please read the instructions in this manual carefully. They are intended to help you install and operate your Mosquito SlayerPRO safely and effectively.

Information in this document is subject to change without notice.

Intended use

The Mosquito SlayerPRO is designed to impact the breeding cycle and to reduce the local populations of a variety of mosquitoes and midges. M-Tech International Pty Ltd does not claim that use of this product will result in complete removal of mosquitoes or biting midge from a location. Factors including best placement of the trap, regular maintenance, upkeep of lures and prevailing environmental conditions will affect results.

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Patent

The Mosquito SlayerPRO trap technology has protection under US Patent No. 6,199,316 and foreign counterparts; Patent Pending #2007903624.

English Language Version, Printed in Australia 3-120308

M-Tech International Pty Ltd
Member of the Bantix Group of Companies
39 Taree Street, Burleigh Heads
Queensland, Australia 4220
ACN 117 021 959
Tel: +61 7 5593 5562
Fax: +61 7 5593 5587
Email: info@m-tech.net.au
Web: www.killthesuckers.com

SAFETY FIRST

Safety Precautions

The Mosquito SlayerPRO uses 12 V AC/DC extra low voltage power. The voltage label appears on the rear of the unit.

- CAUTION:** Keep out of reach of children.
- CAUTION:** Do not put fingers or hands inside the machine when it is operating.
- CAUTION:** To prevent fire or shock hazard, do not hose the unit or immerse in water.
- CAUTION:** To avoid malfunction, do not position the trap in range of automatic sprinklers.
- CAUTION:** The catch tray should be locked to avoid tampering.
- CAUTION:** Mount the trap in a cage when access by children or tampering in general is of concern.
- CAUTION:** Adhere to precautions and instructions for use on lure labels.
- IMPORTANT:** In the event the trap is switched off or power to the trap is interrupted the tray should immediately be emptied of its contents as standard operating procedure, if water catch method has been in use. If the trap is left installed with power off it should be inspected regularly to ensure it contains no rainwater. Empty the tray as necessary. These steps are to prevent the tray becoming a potential breeding site for mosquitoes.

Mosquito SlayerPRO

SPECIFICATION SHEET

| | | |
|---|--|---|
| MODEL NUMBER | | MSP1A |
| VARIANTS | 1. STANDARD PRO 2. SATELLITE PRO (Special Order – See ‘Installing a Trap Barrier’ Figure 4) | |
| PRODUCT DETAIL | | |
| Heat | ✓ | On-board heater |
| Moisture | ✓ | From solution in the tray |
| Ultraviolet Light | ✓ | LEDs and UV tube |
| Spectrum Light | ✓ | Pulsed light of varying wavelengths |
| Coloured Light | ✓ | LEDs randomly pulsing select colours of light |
| Movement | ✓ | Pattern of light action provides illusion of host movement |
| Sound | ✓ | Mimics a feeding female mosquito |
| Dark Colour | ✓ | Dark green casing |
| Contrast Colour | ✓ | White tray provides contrast to dark green and easier sighting of captured mosquitoes and midge |
| Power Requirement | 12V AC/DC 50-60Hz 1Amp | Can run off solar and battery power |
| Average Running Power Consumption | 12W | |
| Standard Transformer | 220-240 VAC to 12VAC/DC, 5 Amp, 50-60Hz | 120V AC 3 Amp transformer is also available. |
| Trap Dimensions | 603.4mm x 407mmx 405.3mm | |
| BareTrap Weight | 5kg | Minus the transformer etc |
| Weight of ‘Standard’ Unit Shipping Pack | Approx. 10kg | |
| Shipping Carton Dimensions | 650mm x 420mm x 460mm | For both the Standard and Satellite |
| System Configurations | 220-240 VAC to 12VAC/DC, 5 Amp, 50-60Hz | Power from a standard configured PRO can be extended to two Satellite PROs using low voltage extension leads to form multiple-unit barriers. More units can be linked together when the base PRO is powered by high output solar panels or larger transformers |
| Carbon Dioxide | ✓ | 1. The Mosquito SlayerPRO comes with a gas regulator hose which controls gas flow directly from a CO ₂ cylinder. <u>Cylinder is not included in the PRO standard packing list.</u> 2. Manifolds are available to provide multiple gas lines at low pressure to a series of traps from one gas cylinder. See Figure 4. |
| Lactic Acid | ✓ | Lactic Acid can be added as a constituent of an M-Tech supplied lure. Ask your distributor for details. |
| Octenol | ✓ | Any registered product can be used. Ask your distributor for details. |
| Other lures | ✓ | Other M-Tech supplied lures can be used to enhance trap performance. Ask your distributor for details. |

FEATURES

FRONT VIEW



Fig. 1

REAR VIEW

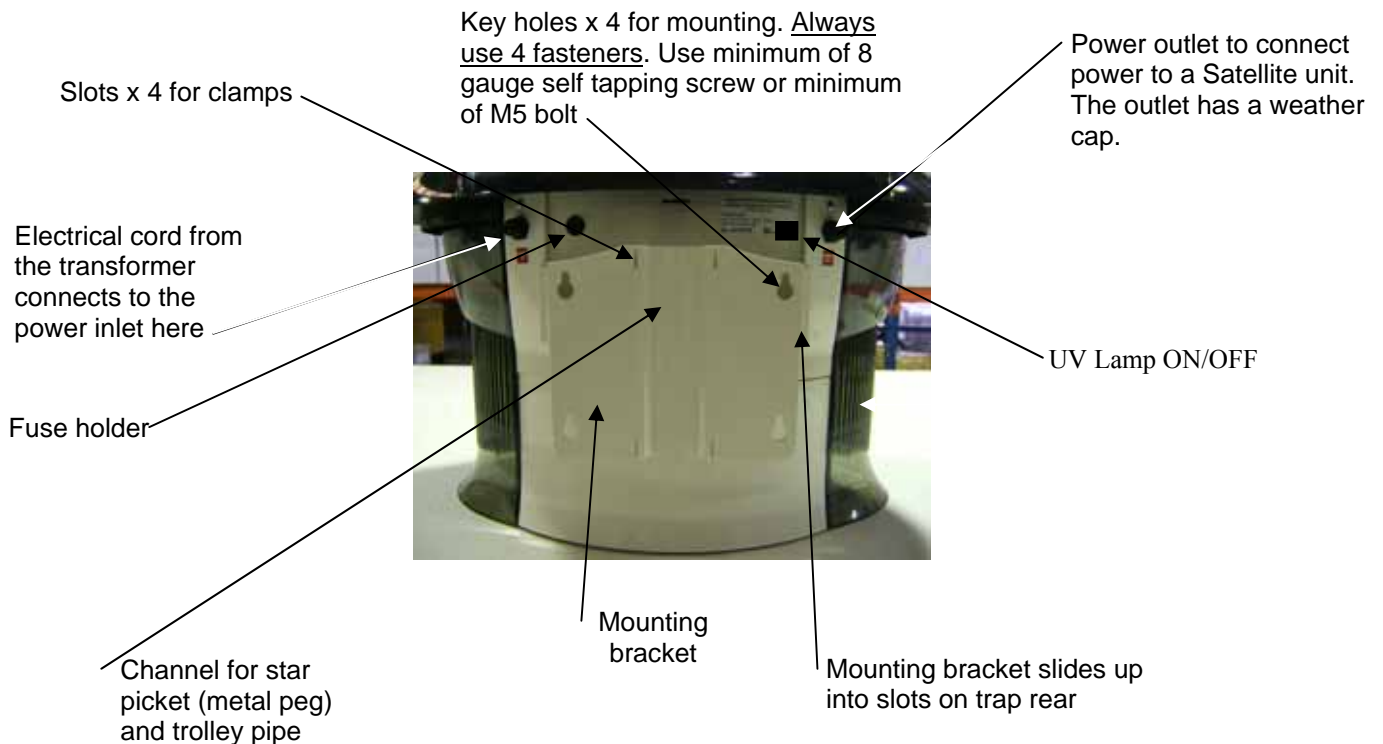


Fig. 2

PLACEMENT GUIDELINES

- Position the trap away from where people gather in order to draw the mosquitoes away.
- If possible, place the trap near where the mosquitoes are breeding (wetlands, creeks, standing water etc).
- Locate the trap near to where mosquitoes rest (trees, shrubs, tall grass, culverts and under high- set houses).
- Locate the trap to intercept the mosquitoes before they move to human gathering places. In other words, the trap should act as a barrier between the breeding or resting area and where people gather.
- Face the trap towards the mosquito breeding and resting areas.
- Don't place the trap in wide open cleared areas in full sun.
- The direction of prevailing winds should be considered when choosing a site as mosquitoes sense their prey from downwind and fly upwind to a host.
- Don't face the trap into the hot afternoon sun.
- Keep the trap out of reach of children.
- Generally mount the trap at waist to head high.
- When using carbon dioxide gas please note that the gas is heavier than air, therefore the gas will fall and drift downhill. Try to locate the trap on high ground, if placing it on an undulating site.
- It is best to place the gas cylinder in the shade and where it will not be knocked or tripped over. Secure it safely so it won't topple. Follow safety instructions provided on the gas cylinder.
- The standard gas regulator hose is 1.5m in length.
- The position of an external power point (sometimes located in the home meter box) will influence where you place the trap. The electrical cord from the power point to the outdoor transformer is 2m. The standard electrical cord from the transformer to the unit is 10m (longer lengths are available).
- The trap can be mounted to a wall, fence or other suitable structure. A star picket (metal peg) is an option. Ask your distributor about trolleys.
- Do not place the trap in range of automatic sprinklers.

INSTALLATION

1. The Mosquito Slayer PRO is for outdoor use only.
2. No licensed electrician is required. Easy to use 240 volt to 12 volt power provides for safe installation. Transformer and leads are for outdoor use.
3. The trap is water resistant and UV stabilized for outdoor use.
4. Automatic AC/DC input gives solar and battery options.
5. Survey the site for best placement using placement guidelines.
6. Female mosquitoes sense the CO₂ differential in the air from about 30-35m away. This equates to a 30m radius coverage approx. Mosquitoes will be drawn from further away when the trap is set up on a flat, open site with few obstacles.
7. Establish the number of units required. Recommend traps are placed at least 20m apart to prevent interference.
8. Two Satellite PROs can be linked to a standard PRO with low voltage electrical cords so only one transformer and one mains power access are required (USA is an exception. See 'Installing a Trap Barrier' Figure 4, page 6). Please note that gas cannot be transferred from the home PRO to the satellite PROs.
9. Determine if wall, fence or trolley/stand mounting.
10. **IMPORTANT**: Use the 4 keyholes when fixing the mounting bracket to a vertical surface. This is necessary to carry the weight of the PRO. The mounting surface should be a minimum of 150mm wide so the 4 keyholes can be utilized. Recommend minimum of 8 gauge self tapping screws or minimum of M5 bolts. See Figure 2.
11. Secure the bracket first then mount the trap to the bracket.
12. Use the template provided with this manual for easier mounting to a vertical surface.
13. When installing multiple units one cylinder of CO₂ can feed a number of traps using a proprietary gas manifold. Low pressure gas hoses can dispense gas to each of the traps spaced approx. 20m apart (See 'Installing a Trap Barrier' Figure 4).
14. Ensure extension power leads and extension gas hoses are kept out of harms way and can not be tripped over.
15. A protective cage to prevent tampering may be needed in public and hospitality areas (Check with your local installer).



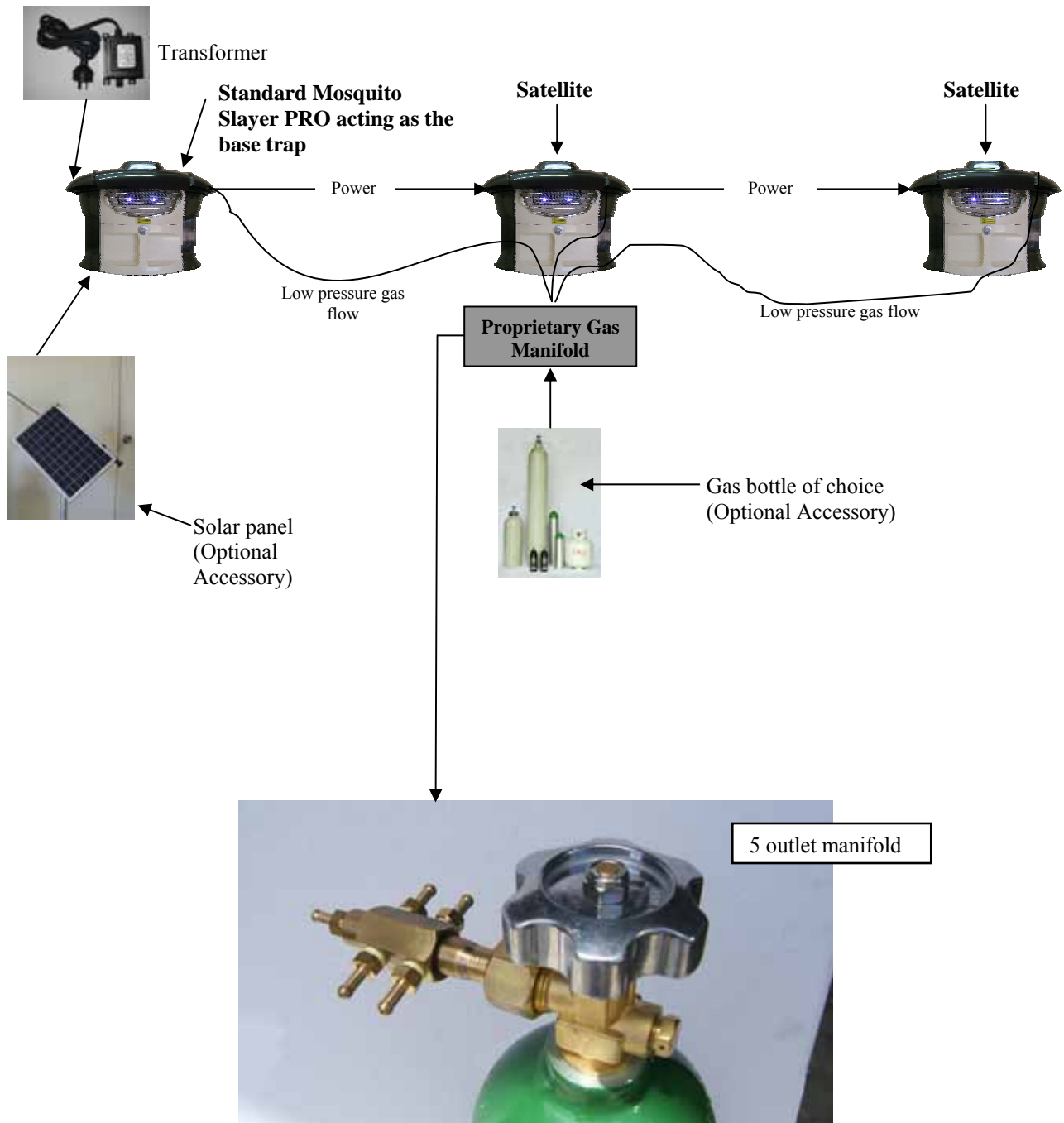
Fig. 3

The PRO mounted to a trolley centre pole using clamps

INSTALLING A TRAP BARRIER

Example of a standard Mosquito SlayerPRO linked to two Satellite PROs
(Note: For United States customers, please note that the US transformer will power one Satellite unit only).

Fig. 4



APPLYING LURES INCLUDING CO₂

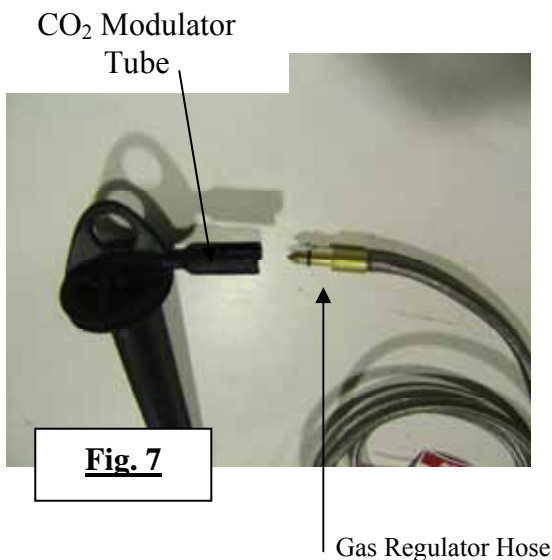
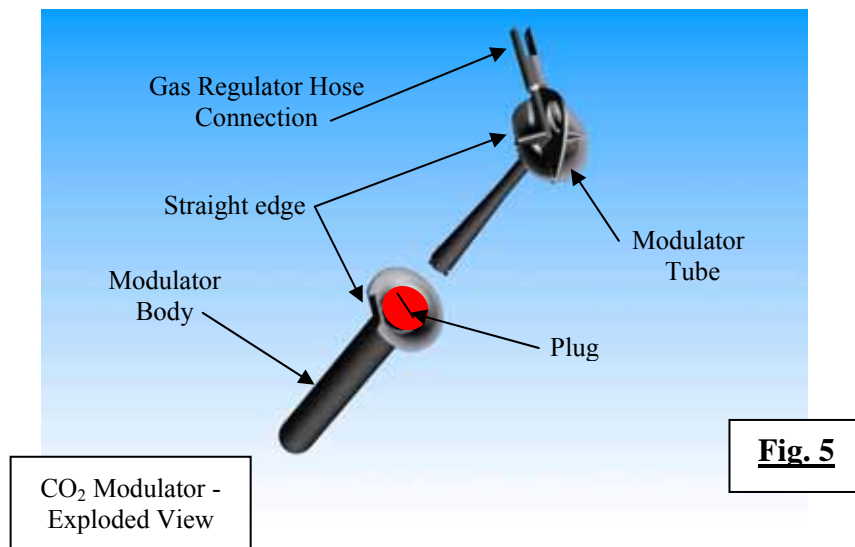
Various lures are available to enhance catches. Some lures are more specie-specific than others. Ask your distributor for further information.

General Guidelines

1. The catch tray holds 7 litres. The insects are drowned in the tray solution.
2. Liquid lures can be added to the water in the tray as per label instructions.
3. Dry – granular or powder lures can be applied to the water in the tray as per label instructions.
4. Approved cartridge lures can be attached to anywhere on front of casing using double sided tape.

Installing the CO₂ Modulator

1. Unscrew red plug from the CO₂ Modulator body (Figure 5). Keep the Modulator body upright to avoid spillage of contents (food grade sticky mix).
2. Insert the Modulator Tube into the Modulator Body. Align the straight edge on the Modulator Tube with the straight edge of the Modulator Body lip and push together. Figure 5.
3. Insert the assembled CO₂ Modulator into the hole in the trap lid (Figure 6).
4. Insert the Gas Regulator Hose into the CO₂ Modulator as shown in Figures 6 & 7.

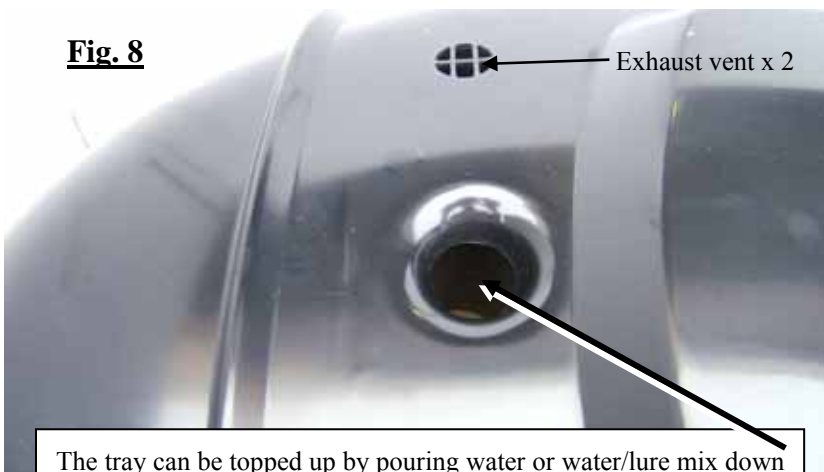


MAINTENANCE & SERVICING

After installation the Mosquito SlayerPRO will require maintenance at regular intervals to ensure maximum catch performance. Use the following checklist:

1. Check to ensure the trap has power by observing whether the lights are on.
2. Place a hand over an exhaust vent to check if the fan is operating. You should feel air being exhausted through the exhaust vents. See Figure 8
3. Check the catch by pulling out tray (Figure 9), dispose of contents, clean and refill with water and lure. Or add water/lure mix through lid access hole after tray is closed after removing the Modulator.
4. Replace the CO₂ Modulator every 30 days approx..
5. Check gas is operational and replace gas cylinder, if needed. To determine if the cylinder still contains gas, remove the outlet of the gas hose from the CO₂ Modulator (Figure 10) and place hose tip in a container of water to observe bubbling of CO₂. If bubbling, the system is working and the bottle still contains gas. If there are no bubbles, refill or replace the gas bottle.
6. Clean the tray.

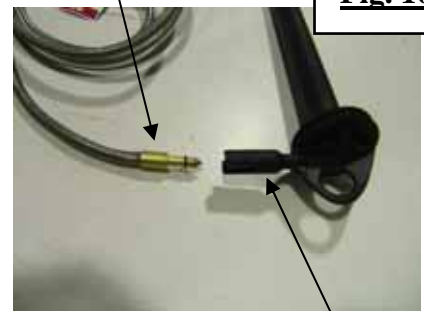
Fig. 8



The tray can be topped up by pouring water or water/lure mix down through the refill hole in the lid. Remove the CO₂ Modulator to expose the refill hole. It is best to clean the tray each time maintenance is performed.

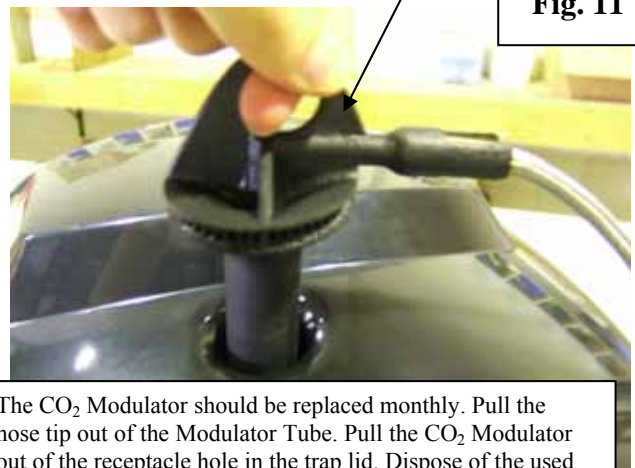
Gas Regulator Hose

Fig. 10



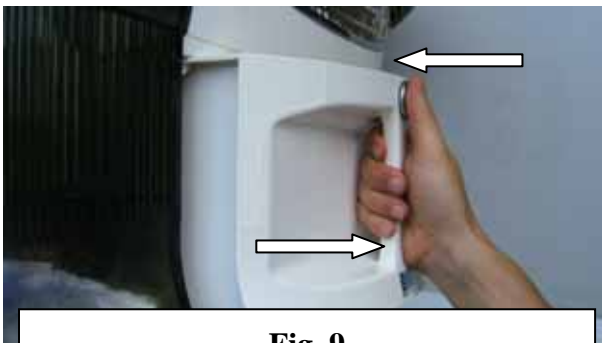
CO₂ Modulator

Fig. 11



The CO₂ Modulator should be replaced monthly. Pull the hose tip out of the Modulator Tube. Pull the CO₂ Modulator out of the receptacle hole in the trap lid. Dispose of the used CO₂ Modulator responsibly. Insert the assembled new CO₂ Modulator into the trap lid hole and push the gas hose tip into the Modulator.

Fig. 9



To open the tray – apply pressure in direction of arrows to release internal tray latches. Maintain that pressure and pull out tray. When the tray is inserted it locks into place so it won't inadvertently open, if the trap is tilted.

REPLACING THE UV TUBE

For best attraction the ultraviolet (UV) tube should be replaced every four months or before, if it malfunctions. The tube may still show some colour after the four months, but the effectiveness of the UV will be greatly reduced or be lost totally.

The UV tube is fitted under the front brim of the lid. Simply reach up and turn the tube as per a conventional fluorescent tube. See Figure 12 below.



Fig. 12

TROUBLESHOOTING

To determine if the PRO has power

1. Are the lights functioning? See Figure 12 for UV light.
2. If not, check to ensure the transformer is plugged into the power point and switched on.
3. Ensure the transformer-to-trap electrical lead is properly plugged into both the transformer and the trap.
4. Check the fuse. The fuse holder is at rear of the trap. Replace if blown.
5. If the problem persists, call your distributor or installer.

What should you do if the PRO is not catching or is catching too few mosquitoes and biting midge?

1. If the trap has power, but there is no catch, check whether the fan is operating. While the trap is switched on place your hand over one of the exhaust vents (Figure 8). You will feel escaping air when the fan is operating.
2. Review the placement guidelines to confirm that the trap is in the best position.
3. Sometimes moving the trap a few meters will change results.
4. Depending on the species how high the trap is off the ground could influence results (e.g. *Aedes aegypti* often come in low to attack a host)
5. Are you using CO₂? Is the bottle empty? Put the gas regulator hose outlet end (separate it from the CO₂ Modulator) into a container of water to observe bubbling. No bubbles, no gas!
Note: CO₂ is a primary attractant to mosquitoes and biting midge and can have a big influence on catch rates. CO₂ also enhances the attractiveness of attractants such as lactic acid and octenol.
6. Does the other M-Tech supplied lure need refreshing or exchanging? If you are using a CO₂ Modulator it should be exchanged approx. every 30 days.
7. Remember that prevailing conditions such as wind speed, humidity, moon phases etc will influence catches. High winds or lots of rain will decrease catch rates. A good minimum testing period is an entire moon phase (30+ days).
8. Use two indicators to determine outcome:
 - 8.1 Are you regularly catching mosquitoes and/or biting midge each night or day? Please note that catch rates will vary quite considerably due to environmental conditions so don't expect to catch the same number each night.
 - 8.2 Is the bite pressure diminishing? Are your clients being bitten less as time goes on?

WARRANTY

The Mosquito SlayerPRO is guaranteed against defects in materials and/or workmanship under normal conditions of use for 12 months from the date of purchase or the date the trap was commissioned under a service contract.

If any part of this product, excepting consumables, becomes defective within the warranty period, M-Tech International will replace the unit or, at its discretion, repair or replace the defective part or parts.

Except as otherwise provided by law, this guarantee becomes invalid if, in the opinion of the Company the product has been misused, abused, damaged in transit, incorrectly installed, incorrectly maintained or connected to an electrical supply not corresponding with the product specification.

Please note this warranty is limited to and conditional upon:

- The defective parts or unit being securely packed in a carton for return to M-Tech International or its approved agent.
- The owner/user of the unit assuming the cost of returning the unit or any part claimed to be defective.

Note: Please retain your receipt or invoice with serial number noted to show proof of purchase or commencement of service contract in the event that you need to make a claim on the warranty.

MORE INFORMATION

Further information on the Mosquito SlayerPRO can be found at www.killthesuckers.com (au)
Information on this site is updated and added to on a regular basis.

Or contact your local installer or distributor.