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Mega Catch™

MOSQUITO TRAPS

Service / Repair Manual

Ultra MCU 400/600/800
Premier..... MCP 400/600/800

1562004

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Service Repair Introduction

This service/repair manual is to be read in conjunction with the instructions contained in the operation manual. Please ensure that you have familiarized yourself with the contents of the operation manual prior to attempting replacement of components.

MegaCatch™ Traps have been designed so that any malfunction or failure can be rectified by simply removing and replacing the defective component.

The trap pictured in this manual is an Ultra Trap. The Premier Trap differs only in respect of the following components:

1. The Premier Trap does not contain the CO₂ Gas Release Solenoid and Gas Release System.
2. The Premier Trap contains a different programmable Timer (Each Timer's connector's will fit only the specific Control Box for that Trap).
3. The Premier Trap contains a different Control Box (each Trap's Control Box is clearly marked "Ultra" or "Premier" and will accept only the Timer connector for that Trap model).

Replacement Parts

All components can be removed and replaced with new items. The Timer, Fan, Heater, Solenoid Valve and UV Bulb fitting all have connector cables attached which connect directly to the control box.

The Main Power Cable is connected directly to the Control Box and is screwed through the Trap body to provide an inlet connection for mains power. This is the only cable without a component connected at the factory.

Troubleshooting

1. Advice to Purchasers

(a) If their Mega-Catch™ Mosquito Trap fails to operate:

- Press reset button (Marked ® on left side of control panel)

Note: This button will reset the timer if it has been affected by a power surge or other unusual event eg. dropping trap, etc. The use of the reset button will cancel all programmed functions which will need to be reset.

- Check that the power cord from the Transformer is properly connected to both the Trap and the mains, and that the power is switched on.
- Check that the Programmable Timer is set to the "ON" position.
- Check that the Programmable Timer, if set to AUTO, is set to operate at the time you are checking its operation.

(b) If the lights in their Mega-Catch™ Mosquito Trap come on but the Fan fails to operate:

- Check whether there has been a build up of material in the Fan and/or Fan Safety Guard which is preventing the Fan blade from turning (Refer to Care of Your Trap section in the relevant user manual).

2. Advice to Service Technicians

(a) Connect trap to mains and turn on. Check all functions i.e. Timer, Fan, LED Lights, UV Bulb etc. Failure of any one function may indicate a loose connection to the Control Box or a damaged cable fitting . Failure of all functions may indicate a faulty Transformer. Use a new Transformer to confirm initial diagnosis.

(b) Following is a list of potential problems, their probable cause and the suggested remedy.

Troubleshooting

Problem	Possible Cause	Solutions
No display in timer. Timer showing random numbers	Power surge	Press reset button. (left side of display panel)
No display in timer	Flat battery	Connect to mains for up to 24 hrs
Moisture in timer	Trap exposed to severe weather	1. Allow 1-2 days for timer to dry out push reset button 2. Replace timer
Timer inoperable	Failed timer	Replace Timer
UV Bulb not working	1. Loose connection from Bulb 2. UV Bulb failure 3. Failure of Control Box	1. Check connections 2. Replace Bulb 3. Replace Control Box
LED lights not working	1. Failure of connections 2. Failure of Control Box	1. Check connections 2. Replace Control Box
Fan not turning	1. Build up of insect parts 2. Loose connection from fan 3. Fan failure 4. Failure of Control Box	1. Clean Fan unit 2. Check connection 3. Replace Fan 4. Replace Control Box
Heater not working	1. Loose connection 2. Heater failure 3. Failure of Control Box	1. Check connection 2. Replace Heater (Attached on fan plate) 3. Replace Control Box
Solenoid valve not operating (clicks approx. every 75 seconds)	1. Loose connection to Control Box 2. Failure of Solenoid Valve 3. Failure of Control Box	1. Check connection 2. Replace Solenoid Valve 3. Replace Control Box
Failure of all above remedies	Faulty Main Power Cable	Replace Main Power Cable

Opening the Trap

Opening the two halves of the Mega-Catch™ Mosquito Trap will be necessary for the following purposes:

- Replacement of internal components (e.g. Fan, Heater, U.V. Bulbs, Control Box) and checking for loose wiring connections.
- Annual service (At the end of each season, the internal plates, heated reflective surface and Fan should be cleaned using warm soapy water and allowed to dry thoroughly.)

ATTENTION: Always disconnect the power to your Mega-Catch™ Mosquito Trap before opening the Trap.

The two halves of the Trap are held together with 12 stainless-steel screws and nuts - six facing one way and six the other way.

Place the Trap on a table ensuring the Timer is on the side facing down.

Remove the six screws facing toward you using a hex-head screwdriver.

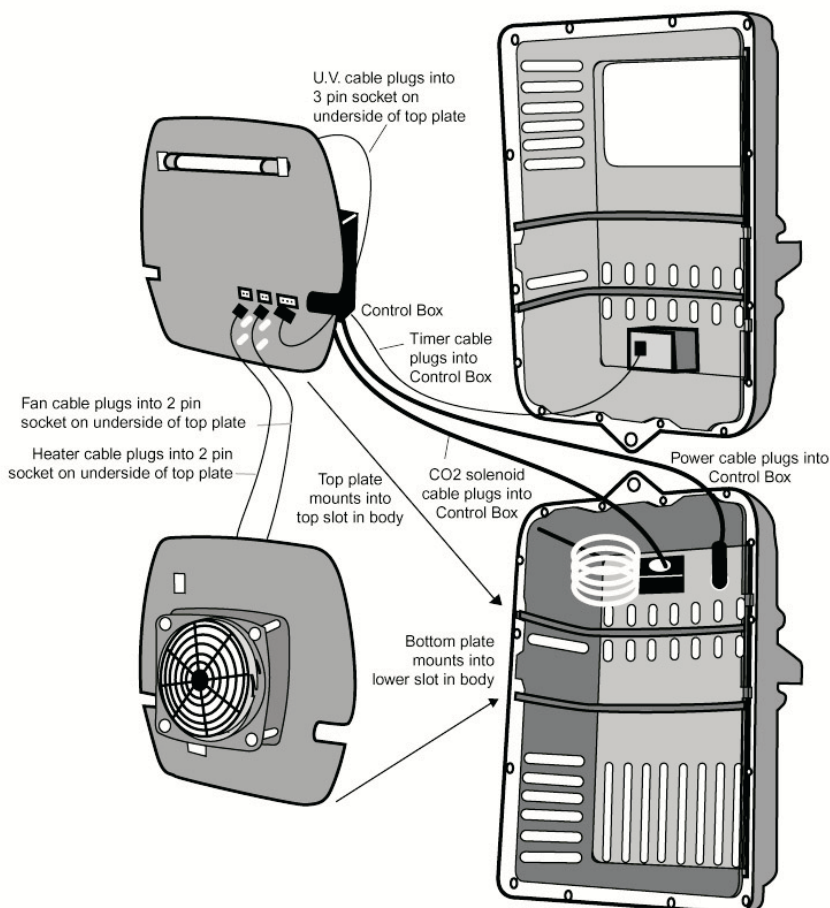


Then turn the Trap over (so that it is "timer-side" up) and remove the remaining six screws and nuts.

Then lift the top half of the Trap away from the bottom half as if it was hinged at the top. The top half should now be "Timer-side" down on the table and still connected to the bottom half by electrical cables.

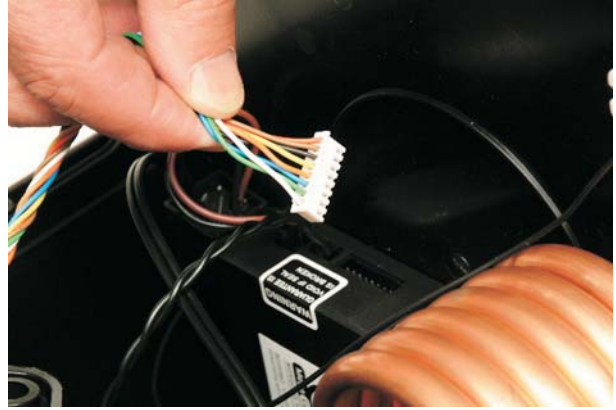
The Top Plate holds the Mega-Catch™ Control Box (upperside of Top Plate) and the U.V. Bulb and holders (underside of Top Plate). (NOTE: The Mega-Catch™ Control Box is a sealed unit and must not be opened.)

The Bottom Plate holds the heated reflective surface (upperside of Bottom Plate) and the Fan (underside of Bottom Plate).

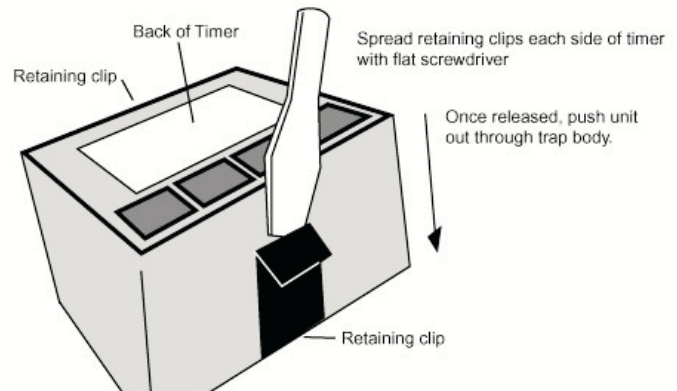


Replacement of Timer Unit

Step 1). Disconnect Timer from Control Box by pulling connector out.



Step 2). Spread retaining clips each side of timer with flat screwdriver or similar and push unit out through front of trap body.



Step 3). Check replacement Timer is undamaged and new neophene seal is fitted to back of Timer. Insert Timer from front of trap and push firmly into place being careful not to dislodge black seals(4) on side of Timer. Push connector firmly into Control Box.

Note: Timer will 'click' into the retaining clips. It requires very firm pressure on the front of the Timer to ensure the Timer is correctly fitted for a water tight seal.



Removal of Fan Plate

Step 1). Disconnect the Heater and Fan connector cables from the underneath of Top Plate: Heater (Pic 1) and Fan (Pic 2) and lift out Fan Plate.



Pic 1



Pic 2

Note: The Heater and Fan are the only connections with 2 pin connectors. It does not matter which of the two sockets these are connected to. The Trap will operate correctly with the Fan and Heater connected to either position.

Note: When the fan plate is reinstalled the reflective heater and the silver and black label on the fan should both be on top – facing towards the U.V. bulb.

Checking Heater Function

The Heater's function can only be checked when the Trap is open. Disconnect the Fan and UV Bulb and then reconnect the power. The reflective surface of the Heater (particularly in the area where the cable is fitted) will heat up very quickly and can be checked by feeling the heat through your fingers.

Replacement of Heater

Replacement Heaters come attached to a replacement Fan Plate. The replacement Fan Plate is supplied complete with nuts fitted under the heat surface to retain the fan. Insert replacement Fan Plate ensuring arrows molded into surface of Fan Plate are facing towards the Main Power Cable fitting ie. away from the Timer. Reconnect Heater and Fan connection to top plate and push in firmly.

Replacement of Fan

Remove the Fan Plate (see page 7) and place it on a flat surface (Pic 1).

Step 1). Remove Fan Guard, by twisting counter-clockwise.



Pic 1

Step 2). Remove four screws. Then remove fan guard holder from fan.



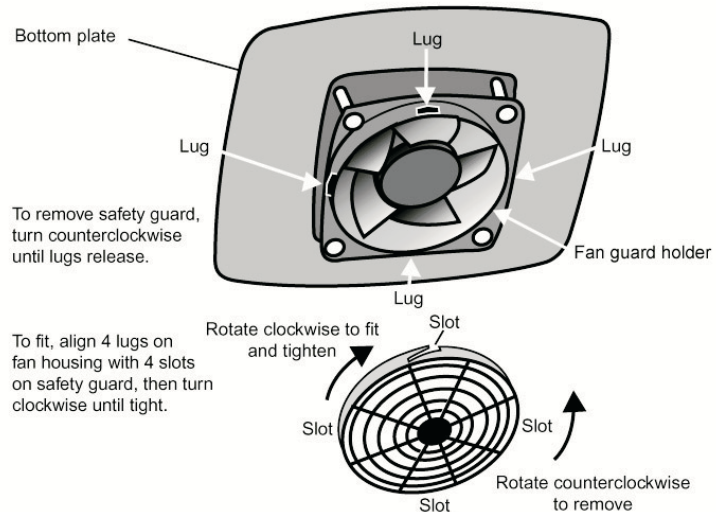
Pic 2

Step 3). Lift Fan clear for replacement.



Pic 3

Note: It is not necessary to remove the nuts located permanently beneath Heater surface on opposite side.



Note: When reinstalling Fan or new Fan ensure struts and label are facing into the Fan Plate and that the open side of Fan is facing you (Pic 3). i.e. the silver and black label on the fan should be on top of the fan plate on the same side as the reflective heater. Ensure that water is not allowed to enter the motor and that the unit is dry prior to reinstallation (dry with compressed air or blow dryer).

Replacement of UV Bulb and UV Bulb Fitting

Step 1). Disconnect UV Bulb cable from Top Plate



Pic 1

Step 2). Remove UV Bulb by turning and pulling.

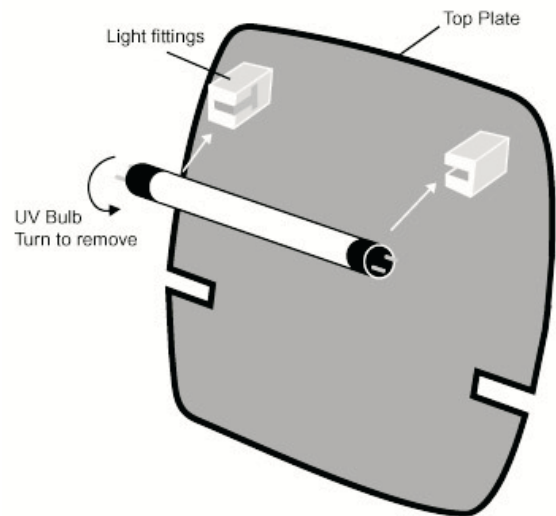


Pic 2

Step 3). UV Bulb holder can be removed by pushing in the retaining clip on the side of the white plastic lamp holder and pushing out Bulb holder.



Pic 3



Step 4). Reconnect UV Bulb cable to 3 pin connector underneath Top Plate (Pic 1) and push in firmly.

Replacement of Main Power Cable

Step 1). The Main Power Cable runs between the Trap body and Control Box. Disconnect the cable from the Control Box and using a small wrench, unscrew the cable from the body.



Pic 1



Pic 2

Step 2). The cable has a small black (rectifier) box attached near the connector for the Control Box. This box is located by pushing it's foot through the hole at the side of the Control Box.



Pic 3

Step 3). To replace the Main Power Cable, install new cable by inserting outlet through Trap body and fitting nut. Note the lock washer(silver) is positioned inside the trap body. The washer stops the Main Power Cable turning. Connect the other end of the cable (Pic 2) to the Control Box and push the plastic foot of the small black (rectifier) box (Pic 3) through the hole in the Top Plate. The two pin Main Power Cable will only fit the appropriate connector on the Control Box.

Replacement of CO₂ Gas Release System

Note: The CO₂ Gas Release System comprises a CO₂ Gas Release Solenoid connected to a Copper Coil Gas Expansion Chamber.

Step 1). Disconnect CO₂ Gas Release Solenoid Cable connector from Control Box (Pic 1) (2 pin connector). This will only fit one connection hole on the Control Box.



Pic 1

Step 2). Remove 4 screws from outside of trap body, holding gas system inside to support copper coil as screws are removed (Pic 2).



Pic 2



Pic 3

Note: Pic 3 shows location of CO₂ gas release outlet. This is inserted through the opening in the Top Plate.



Pic 4

Replacement of CO₂ Gas Release System

Step 3). To reinstall the new CO₂ Gas Release System.

- (a) Line up 4 holes on Solenoid Valve inside trap body with 4 screw holes. Ensure black quick release fitting (attached to the side of Solenoid Valve for gas tubing to connect to) is turned to face through the hole adjacent to the 4 screw holes.
- (b) Insert and tighten 4 screws.
- (c) Reinstall Top Plate holding Control Box (ensure arrows on plate face down towards the Main Power Cable fitting ie. away from Timer). The Control Box will fit tight against the Main Power Cable inlet.
- (d) Ensure that the copper tube at end of CO₂ Gas Release System is inserted through the hole in the Top Plate. This end of the tube is flexible and can be bent to fit through the hole (Pic 1).
- (e) Once Top Plate is reinstalled you can reconnect the 2 pin connector from the Solenoid Valve to the end of the Control Box (it will fit only the appropriate connection point).



Pic 1

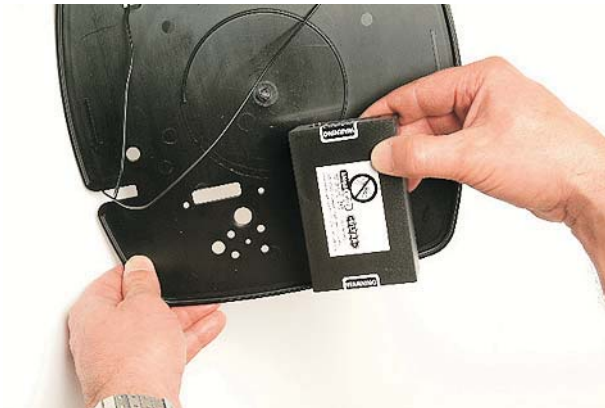
Replacement of Control Box

Step 1). Disconnect all the cables connections and remove Top Plate. Disconnect all the cables from the Control Box. The Control Box is held in place by two small screws. Remove these and the Control Box can be lifted off the Top Plate for replacement.



Pic 1

Step 2). The Control Box holds the LED lights and the connection holes for all other components. The Control Box will only fit by locating the LED lights and connections holes to the holes in the Top Plate.



Pic 2

Step 3). The Control Box has cable connection sockets on the top side for the following - Timer, Main Power Cable, and in the case of the Ultra only, the Solenoid Valve. Each connector will fit only the appropriate connection. The Control Box has three connection sockets on the underside. These are accessed through the hole in the underside of the Top Plate. There are 3 connection holes which fit, a three pin connection from the UV Bulb and two x 2 pin connections from the Heater and Fan. These last two can be connected to either connection hole.

Step 4). Re-insert Top Plate ensuring arrows molded into surface of Top Plate are facing towards Main Power Cable fitting (ie. away from Timer).

Removal / Reinstallation of Seal

Fitted to the groove around the top inner surface of the Trap is a rubber seal. This seal pushes into place for weather protection and should be reinstalled prior to final assembly of the Trap. The seal is formed to the shape of the trap. Check the seal is undamaged before it is reinstalled and the Trap is re-assembled



Pic 1

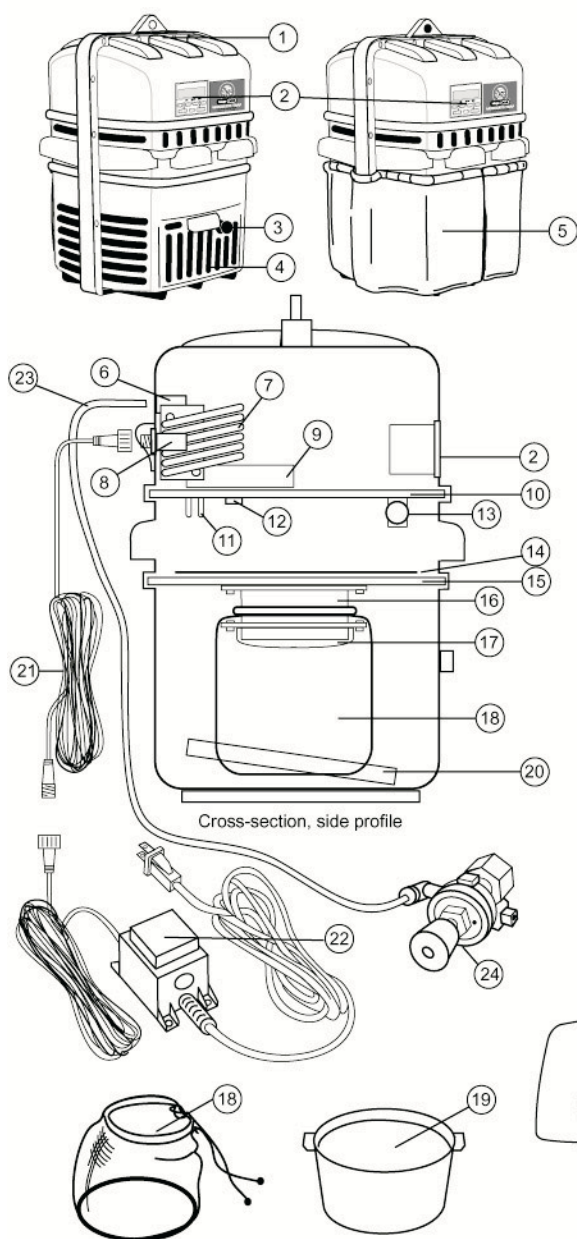
Re-assembly of Trap

With the Top and Bottom Plates in place replace the "timer-side" or top half of the Trap ensuring that each plate slots into the locating ribs. The 12 screw holes should now be aligned for replacement of the screws and nuts. Hold the nuts into the pre-formed hexagonal holes and carefully screw in the screws.

Note: Do not overtighten the screws. This could cause the nuts to rotate and damage the pre-formed hexagonal fittings in the plastic housing.

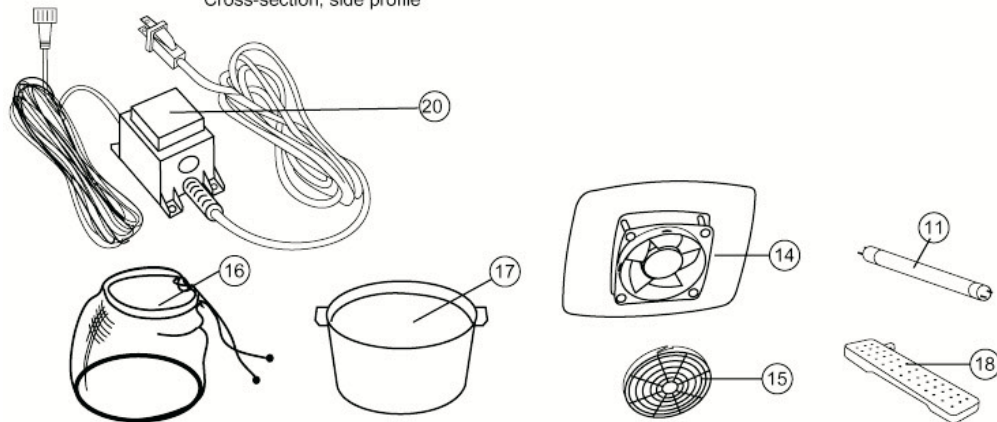
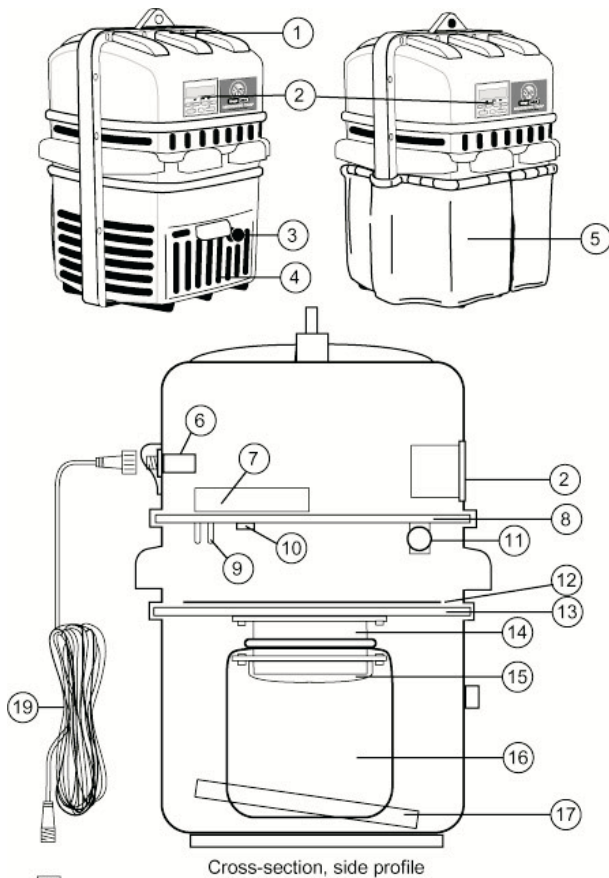


Ultra Trap – Parts List



1. Megacatch Ultra Mosquito Trap.....MCU-400
2. Programmable Timer – UltraMCU-01
3. Key.....MCPU-208
4. Lockable DoorMC-PU 203
5. External Skirt.....MC-PU 112
6. CO₂ Gas SolenoidMC-U303
7. CO₂ Gas Release System.....MC-U 306
8. Power Connection Cable.....MCPU300
9. Control Box – UltraMC-U 05
10. Top PlateMC-PU 205
11. Light Emitting Diodes (Part of control box).....N/A
12. Internal Power Connectors (Part of control box).....N/A
13. UV Tube & FittingsMCPU2
14. Reflective Surface.....MCPU211
15. Bottom PlateMCPU206
16. Fan Unit.....MCPU210
17. Fan Safety Guard.....MCPU209
18. Catch BagMCPU111
19. Liquid Catch Container.....MCPU204
20. Fragrance Strip.....MCPU224
21. 60' Extension CordMCPU7
22. Transformer – Ultra.....MCU20
23. CO₂ TubingMCU305
24. CO₂ Gas RegulatorMCU-301
25. Fan Fixing Screws + nuts (4).....MCPU410/411
26. External Fastening Screws & Nuts (12).....MCPU412/413
27. Programmable Timer Seal.....MCPU414
28. Body SealMCPU422
29. Main Power Cable Connector.....MCPU500
30. CO₂ Gas Solenoid Fixing Screws (4).....MCU415
31. Control Box fixing screws (2).....MCPU904

Premier Trap – Parts List



1. Megacatch Premier Mosquito Trap.....MCP-400
2. Programmable Timer – PremierMCP-01
3. Key.....MCPU-208
4. Lockable DoorMC-PU 203
5. External Skirt.....MC-PU 112
6. Power Connection Cable.....MCPU300
7. Control Box – PremierMC-P 05
8. Top Plate.....MC-PU 205
9. Light Emitting Diodes (Part of control box).....N/A
10. Internal Power Connectors (Part of control box).....N/A
11. UV Tube & FittingsMCPU2
12. Reflective Surface.....MCPU211
13. Bottom PlateMCPU206
14. Fan Unit.....MCPU210
15. Fan Safety Guard.....MCPU209
16. Catch BagMCPU111
17. Liquid Catch Container.....MCPU204
18. Fragrance Strip.....MCPU224
19. 60' Extension CordMCPU7
20. Transformer - Premier.....MCP20
21. Fan Fixing Screws + nuts (4).....MCPU410/411
22. External Fastening Screws & Nuts (12).....MCPU412/413
23. Programmable Timer Seal.....MCPU414
24. Body SealMCPU422
25. Main Power Cable Connector.....MCPU500
26. Control box fixing screws (2)MCPU904