

Instruction manual for users



Equipments



*Installation
video*

www.naturnova.it



国家高新技术企业



河南省著名商标



职业健康安全管理体系认证



环境管理体系认证



质量管理体系认证



有机农业生产资料评估证明

1. Product overview

The role of this device is to:

1. Reduce insect population density and delay pest resistance;
2. Reduce the frequency of spraying, reduce environmental pollution, and agricultural management costs;
3. Improve the quality of agricultural products to increase production and income;
4. Promote human, fauna and flora health.
5. Best to match with organic agro practices.

Naturnova IPM solar devices are scientifically developed after testings, and use solar energy to convert electric energy into power supply. The electric energy is stored in a maintenance-free storage battery or lithium battery through its microcomputer control system. When it is dark, the sensor automatically activates the device IPM work. Naturnova IPM solar device is equipped with a protection system inside, which has functions such as lightning protection, rain protection, prevention of overcharge and over-discharge, and automatic turning on/off. The wind-suction biocidal light utilizes strongly effective phototactic rhythms, wave lengths, colors and mating signals typical of the pests, and avails of specific luring light sources that are highly attractive to the pests.

2. Scope of application

Naternova IPM solar device is widely used in agriculture, forestry, horticulture, orchards, grasslands, tea plantations, tobacco, cotton plantations, urban green areas, aquaculture sites, households and other environments affected by pests.

3. Pests subjected to trapping and killing

Target insects are roughly divided into: Lepidoptera, Coleoptera, Diptera, Homoptera, Orthoptera, Hemiptera, Hymenoptera, etc.;

Tea pests: tea caterpillars, tea stingers, Clania minuscula Butler, tea leafhopper, Euproctis pseudoconspersa, Stephanitis chinensis Drake;

Vegetable pests: Beet Spodoptera, Spodoptera litura, Plutella xylostella, Potato Tuber Moth;

Rice pests: rice borer, leaf cicadas, Chilo suppressalis, yellow rice borer, rice flying flea, Earias pudicana pupillana, Cnaphalocrocis medinalis, locusts

Cotton pests: cotton bollworm, tobacco budworm, scarab, red bollworm, Pyrausta nubilalis, stink bugs, Anomis flava Fabricius

Pests of fruit trees: borer, inchworm, fruit-sucking moth, peach borer;

Forest pests: American white moth, willow moth, pine caterpillar, pine beetle, stalked beetle, bald beetle, birch looper, leaf tortrix, spring looper, poplar white moth, and green leafhopper;

Urban green areas: Aedes mosquitoes, tropical house mosquitoes, flies;

Miscellaneous grain pests: sorghum bar borer, corn borer, soybean borer, bean hornworm, and rice leaf sucker. And similar pests.

4. Warranty

Naternova IPM solar device warranty certificate

User Contact:

Product Name: _____ Product model: RYFX-40

Factory Number: _____ Date of manufacture: ____ / ____ / ____

User Name: _____

Address: _____

(Dealer): _____

Sales Date & quantities: _____ units.

User signature: _____ Dealer stamp: _____

[Dear customer, in order to get better service for you, please to fill in the contents of the "Warranty certificate" and stamp it after purchasing Naternova IPM solar device. Once finished, send us a digital copy]

We extremely welcome ANY feedback, suggestions, problems and solutions faced during use of Naternova IPM solar device.

This is to allow us to keep improving and provide a better version of the product.

It translates into obtaining better production, improved service, and benefits for everyone involved in the use of this equipment.

When the biocidal device is not used for a long time, turn on the switch once a month to charge the battery to avoid power storage damage. When the battery is depleted, it will cause permanent damage. Same is for smart phones!

5. Long storage precautions

When the device is not used for a long time, turn it on once a month to avoid damages to the power storage system; in fact, should the battery be totally depleted, it will result in permanent damage.

6. Technical parameters and configurations

Item	Product	Naternova Solar IPM device
Operating Voltage		DC12V
Solar Panel Specifications		40-50W
Solar panel material		Mono and polysilicon
Battery specifications		12V/20,24AH
Luring pest light source		LED/4W-10W
Luring pest wavelength		320—680nm
Propeller / fan speed		≥2200 rpm/min
Propeller/fan power		6W or 7W
Battery		External or internal

7. Maintenance and troubleshooting

Symptoms	Possible cause of failure	Solving approach
Light doesn't turn on, propeller doesn't spin	- Examine battery cables - Too frequent rainy days or insufficient charging -The power supply voltage is too low and/or the power storage is insufficient (undervoltage)	Connect/Turn on the power; Charge the battery; Wait until the battery is fully charged;
The propeller works, the light doesn't	-Light socket and pin got loose during transportation; - Light has been used too much, too old	Gently rotate the light, replace the pin. Rub the extremities of the light
The light works, the propeller doesn't	-Propeller in short circuit, too many pests bodies creating blockage. -Propeller partially broken	Find out the short circuit part of the propeller, take away the pests Change propeller
Short light time	- Insufficient power storage, photo voltaic panels are covered - Battery overused or depleted	Reposition the solar panel Replace the battery

8. Basic structure diagram



9. Installation instructions

1. Selection of location

It is recommended to choose the center of each area to be affected, with relevant height, where there are no obstacles to sunlight, and the access is easy to execute management of the device;

Try to choose a relatively flat ground, avoiding the influence of slopes, soft soil and other factor that influence the stability of the supporting pole.

2. Pouring cement base

Excavate a pit at the selected location (select the depth of the base based on the geological softness), and smoothly bury the foundation screws and concrete into the ground to ensure that the foundation is horizontal and that a 3.5mm thread is sticking out (wrap the lower thread with adhesive tape before pouring to facilitate subsequent installation);

Note: Subsequent installation can only be carried out after the cement base has completely solidified.

3. Embedded parts

The embedded parts are foldable, and before installation, screws or wooden rods are used as positioning bolts to equalize the screw distances.

4. Installation steps

4.1 Place the bracket on the solar photovoltaic panel, align it with the four holes beside it, and tighten it with 6 * 15 screws.

4.2 Then place the battery (battery box) on the back of the photovoltaic panel, align it with the four adjacent holes, and tighten it with 6 * 15 screws.

4.3 Insert the screwed solar panel into the top of the lamp pole and fix it with screws. The front inclination angle of the solar panel is adjusted according to the local latitude plus 10 degrees to absorb more sufficiently all light source, generally facing south, slightly west;

4.4 Connect and tighten the hanging hook on the side of the luring light to the pole; then insert the output end of the solar panel into the corresponding socket and tighten the plug;

4.5 Place the assembled luring light on the solidified base, align the screw holes and insert it into the foundation, adjust the direction, and then place the gasket and tighten the ϕ 12mm nut; To prevent rust and corrosion, the installed base can be backfilled and reinforced with cement;

4.6 Check whether all parts are installed securely and correctly, and when it is getting dark, the Naturnova IPM solar device will automatically turn on and work.

5. Before installing accessories

Before installation, please confirm whether the accessories and components are all fine. The list includes: lamp pole, solar panel, insect luring light, battery (including battery box), I-frame, embedded parts, screws and nuts (solar panel fixing screws and nuts; anchor embedded parts nuts and gaskets), and instructions.

1. Warranty scope and period: a) The warranty period for the whole machine is one year from the date of purchase.

10. Warranty scope and duration:

a) The warranty period for the whole machine is one year from the date of purchase.

b) Lamps and batteries are consumables.

c) The battery warranty for the main components is one year, and the solar panel warranty is one year.

d) During the warranty period, due to defects and damages caused by design and production, our company provides warranty, replacement, and refund services to users.

e) The company will charge components fees for damage caused by improper use or operation during the warranty period. After the expiration of the warranty period, if maintenance is required, the company will reasonably charge for the parts according to the actual situation.

2. Warranty service is not implemented under the following circumstances

a) The warranty certificate does not match or is altered.

b) Failures caused by force majeure such as lightning strikes and natural disasters.

c) Damage caused by unauthorized modification or disassembly.

d) Damage caused by failure to follow instructions.

e) There is no purchase invoice, and thus no proof that the purchased device is within the validity period of the three guarantees.

11 Precautions and maintenance

1. Batteries should be stored in a dry, cool and ventilated location, and wetting from rain is strictly prohibited. The solar panel photovoltaic module is made of glass, so it should be handled with care and should not be knocked heavily.

2. Do not touch the propellers with your fingers nor held bare handed conductive objects during product operation to prevent shock. Don't play with the electrical components

3. If it is necessary to repair or replace the light, be sure to cut off the power supply to prevent electric shock. Replace the insect luring light with the one that has same specification.

4. When there are too many insect carcasses stuck to the lamp body, they should be promptly cleaned with a brush to improve Naturnova IPM device effect.

5. The insect luring light is automatically turned on and off, and the working time can be adjusted according to demand; The factory default working time is 4 hours. In the evening, when the light is dim, the pest control lamp automatically starts working, and it automatically turns off after about 4 hours (default).

6. After a fault occurs, be sure to turn off the power supply for maintenance, and consult the company's technical services.

7. It is recommended to clean the dust, bird droppings, and other dirt on the solar panel every two months to improve the lighting and charging efficiency.