



Macsun Solar Energy Technology Co., Limited

Add: No. 1, Huaxing Road, Shanghenglang, Dalang, LongHua, Shenzhen, CN

T: 0086 755 8981 6120

E: sales@MacsunSolar.com

W: www.MacsunSolar.com

F: 0086 755 8170 8589

solarenergy86@gmail.com

Skype: macsunsolar

1, MS-SBR13 型超声波驱鸟器

1, MS-SBR13 Ultrasonic Solar Bird Repeller



【用于通讯塔台、输电线塔、变电站等地】

[for communication tower and transmission line towers, substation etc.]

MS-SBR13 型综合驱鸟器是目前电子驱鸟产品中功能最全的一种驱鸟器，该产品主要应用于输变电杆塔、变电所等重要场合，本驱鸟器具有以下几个特色：

MS-SBR13 Solar Bird Repeller the integrated device of driving birds is a bird driving device with the electronic drive bird product function most. The products are mainly used in transmission pole tower, substation and other important occasions. The Solar Bird Repeller has the following characteristics:

1. 配备了超强型超声波发声系统，较常规超声波驱鸟器的超声波声压提高了 40%以上，驱鸟能力更强劲，有更强的破坏鸟类定居生活环境的作用。

1, Equipped with super ultrasonic sound system, with more than 40% of the ultrasonic sound pressure of the normal bird ultrasonic device, its ability to drive birds is stronger. There is a stronger effect on the destruction of the living environment of birds.



Macsun Solar Energy Technology Co., Limited

Add: No. 1, Huaxing Road, Shanghenglang, Dalang, LongHua,
Shenzhen, CN

T: 0086 755 8981 6120

E: sales@MacsunSolar.com

W: www.MacsunSolar.com

F: 0086 755 8170 8589

solarenergy86@gmail.com

Skype: macsunsolar

2. 配置了主动探测器：使得 MS-SBR13 型驱鸟器具有的主动驱鸟功能，即能够探测驱鸟范围内鸟类的活动情况，从而达到有目的驱鸟的作用。

2, the active detector is configured active detective sensor: so that the MS-SBR13 type solar bird repeller has the active function of driving the birds, which is capable of detecting the activities situation of the birds in the range of the birds, to drive the birds purposefully.

3. 配备了由语音存储器、高效功率放大器和电容式扬声器等组成的语音播放驱鸟系统，在这个系统中集成有若干爆破性声响和鸟类天敌的声音等，在高效播放系统作用下，配合鸟类活动的探测分析，能够主动驱赶随机落在驱鸟范围内的鸟类。

3, Equipped with the voice memory, high efficiency power amplifier and the capacitor type loudspeaker and other components in the sound playing system, is better to drive the birds. In this system, there are a number of blasting sound and the sound of birds' natural enemies, and so on. In the efficient playing system, with the detection of bird activity analysis, it can take the initiative to drive the birds in the range of birds.

MS-BR15 型电子驱鸟炮基本参数

MS-BR Electron Bird Repeller





Macsun Solar Energy Technology Co., Limited

Add: No. 1, Huaxing Road, Shanghenglang, Dalang, LongHua,
Shenzhen, CN

T: 0086 755 8981 6120

E: sales@MacsunSolar.com

W: www.MacsunSolar.com

F: 0086 755 8170 8589

solarenergy86@gmail.com

Skype: macsunsolar

MS-SBR15 型电子驱鸟炮采用太阳能供电系统，利用高压爆鸣进行驱鸟的新型智能型驱鸟装置。本驱鸟产品具有如下特点：1、自动工作无需人工维护。2、自动光控系统识别控制设备工作休眠状态。3、采用太阳能和蓄电池结合的智能控制能源配给技术。4、光电结合爆鸣驱鸟威力大。5、全新抗干扰技术，适合输电线塔环境。6、耐腐蚀材料涂层经久耐用。

MS-SBR15 type electronic bird repeller adopts the solar power supply system, and the new intelligent bird driving device uses the high pressure blast to drive the birds.

The driving bird product has the following characteristics:

1, automatic work without manual maintenance. 2, The automatic light controlling and identification system controls the equipment working state of dormancy. 3, Using the combination of solar energy and storage battery intelligent control technology. 4, The bigger power of explosion with the combination of the electric and light. 5, The new anti-interference technology, suitable for transmission line tower environment. 6, The corrosion resistant material coating is durable.

项目名称 Item Name	参数及要求 Technical Specification & Requirement
设备壳体外观 Appearance of equipment shell	防锈漆层牢固可靠 The anti-rust paint layer is firm and reliable.
爆鸣声强 Strong Detonation	120db@1.0m
整机重量 Equipment Weight	12.2Kg
蓄电池使用年限 Battery Life	3年 3 years
持续工作时间 Continuous Working Period	蓄电池充满电在无光照条件下，连续工作>7天 In no light condition, continuous work >7 days when Battery is full of electricity
遥控器遥控距离 Remote Control Distance	10~30 米（与现场环境、障碍物及电池电量有关） 10~30 meters (related to the field environment, obstacles and battery power)



Macsun Solar Energy Technology Co., Limited

Add: No. 1, Huaxing Road, Shanghenglang, Dalang, LongHua,
Shenzhen, CN

T: 0086 755 8981 6120

E: sales@MacsunSolar.com

W: www.MacsunSolar.com

F: 0086 755 8170 8589

solarenergy86@gmail.com

Skype: macsunsolar

驱鸟作用半径 Bird Driving Radius	>30 米 >30 meters
最短爆鸣间隔 Shortest Burst Interval	>5 秒 >5 seconds
每次驱鸟爆鸣 Times of Driving Bird Burst	15 分钟, 每个爆鸣头各 2 次爆鸣 15 minutes, 2 explosion of every sound head per time.
雷达 Radar	可选 Optional

MS-BR16 型电子驱鸟炮

MS-BR16 Electron Solar Bird Repeller



一、概述

鸟与人类共存, 人类有责任保护鸟类。但是, 鸟类在给人类带来帮助和欢乐的同时, 也带来很多的麻烦。在工业、电力、农牧渔业生产、民航等场所, 鸟类常常给我们带来很大的经济损失和安全隐患。这是一个十分令人头痛的问题。为了保证农牧渔业的生产, 减少因此带来的经济损失, 保护飞机场的安全不受鸟类的威胁, 在驱赶鸟类的同时又不能伤害到鸟类。为此, 我公司经过多年研究, 开发出本机型超声波语音综合驱鸟器, 帮助农牧渔生产者和飞机场等解决以上问题。

One, Summary:



Macsun Solar Energy Technology Co., Limited

Add: No. 1, Huaxing Road, Shanghenglang, Dalang, LongHua,
Shenzhen, CN

T: 0086 755 8981 6120

E: sales@MacsunSolar.com

W: www.MacsunSolar.com

F: 0086 755 8170 8589

solarenergy86@gmail.com

Skype: macsunsolar

As the birds and human beings are survival and downfall together, human beings have the responsibility to protect the birds. However, at the same time the birds bring the help and joy to human beings, it also brings us a lot of trouble. In the industry, electricity, agriculture, animal husbandry and fishery production, civil aviation and other places, birds often bring us a lot of economic losses and security risks. This is a very troublesome problem. In order to ensure the production of agriculture and animal husbandry, reduce the economic losses, and protect the safety of the airport from the threat of birds, in the drive of birds and but not hurt the birds, therefore, our company after years of research and developed, we design this model the ultrasonic integrated voice drive bird repeller, to help the agriculture, animal husbandry and fishery producers and airport etc. to solve the above problems.

二、主要特点

1. 以低功耗、高性能性的电脑芯片为核心，工作稳定可靠。
2. 采用大功率、高压爆响技术，爆响瞬间产生强闪光，对鸟类产生强声和强光双重刺激，驱鸟效果好。
3. 驱鸟过程程序自动控制，无需人工干预。
4. 驱鸟成本低，每次爆响耗电低于 0.01 度。
5. 操作方便、简单、明了，易学易用。

Two, the main features:

1. With the low power consumption, high performance computer chip as the core, it works stable and reliable.
2. Using of the technology of high power and high voltage blasting, and the blasting instantly generates strong flash, it drive the birds effective when it produces sound intensity and intensity.
3. It is with bird driving automatic control procedures, without manual intervention.
- 4 bird driving of low cost, and power consumption is less than 0.01 degrees every crack.
- 5 easy to operate, and simple, clear, easy to learn and use.

三、安装使用注意事项

1、驱鸟器正常工作期间无需维护，但应该保证 220V 电源的正确供给。驱鸟器自身具有防雨设计，但不应该将其置于水中浸泡。

2、驱鸟器应爆响口向下，悬挂在距离地面 2 米以上高度。使驱鸟器爆响口距离地面 2 米以上。即保证地面人员安全，又保证驱鸟效果。



Macsun Solar Energy Technology Co., Limited

Add: No. 1, Huaxing Road, Shanghenglang, Dalang, LongHua,
Shenzhen, CN

T: 0086 755 8981 6120

E: sales@MacsunSolar.com

W: www.MacsunSolar.com

F: 0086 755 8170 8589

solarenergy86@gmail.com

Skype: macsunsolar

3、请不要将耳朵靠近驱鸟器，听声音。不要私自打开驱鸟器机箱。遇到质量问题请与我公司联系。

4、**注意：**驱鸟器上电后，处于关机状态。人员应在安全距离外用遥控器打开驱鸟器。

5、**遥控器使用事宜：**A 键，开机，开机后驱鸟器会爆响一次。B 键，关机，驱鸟器没有动作。C 键，爆响，按下 C 键后，驱鸟器会在一定时间内做出响应，爆响一次。

6、驱鸟器平时工作会不定时地爆响(间隔几十~一百多秒)，用遥控器手控爆响的时候，应间隔 10 秒以上。否则会“哑炮”或响度降低。

7、**驱鸟器爆响头电极有高压电，严谨靠近或用手触摸。**

8、老人、儿童、孕妇、心脏病患者禁止使用。

Three, the installation & Operation attention matters:

1, the bird repeller does not to be maintained during the normal operation, but should ensure the correct 220V power supply. The bird repeller itself has rainproof design, but it should not be placed in the water to soak.

2, The blasting mouth of the bird repeller should be forward down, and hanging at a distance of 2 meters above ground height. With 2 meters above ground, it can ensure the safety of the ground personnel, and the effective of driving birds.

3. Please don't close your ears to the birds to listen to the sound. Don't open the bird drive case without our engineers there. Encountered quality problems, please contact with my company.

4, Attention: after turns on the bird repeller, it is still in a shutdown state. Personnel should be in a safe distance external remote control to open it.

5, the use of remote control issues: A key to boot, after boot it will crack once. B key, shut down, the bird repeller does not drive the birds. C key, crack, press the C button, the device of driving birds will respond in a certain period of time, a bang.

6, the bird repeller usually blasts not regularly (intervals of tens to hundreds seconds). It should be more than 10 seconds interval to make blasts when use the remote controller. Otherwise they will be "squib" or loudness reduction.

7, the blasting mouth electrode has a high voltage, rigorous near or touching

8, the elderly, children, pregnant women, heart disease patients is prohibited the use of it.



Macsun Solar Energy Technology Co., Limited

Add: No. 1, Huaxing Road, Shanghenglang, Dalang, LongHua,
Shenzhen, CN

T: 0086 755 8981 6120

E: sales@MacsunSolar.com

W: www.MacsunSolar.com

F: 0086 755 8170 8589

solarenergy86@gmail.com

Skype: macsunsolar

MS-BRP1 型智能煤气驱鸟炮

MS-BRP1 type intelligent gas Bird Repeller

一、概述

鸟是人类的朋友，随着人们对环保的重视和环境的不断改善，鸟类的活动对人类的生产生活也带来了不少麻烦。MS-BRP1 型智能煤气驱鸟炮是针对农田、果园、水产养殖场、飞机场等场合推出的高效驱鸟器，通过电脑控制系统实现定时、定量、燃料配比、无人值守等功能，可获得高效、节能的驱鸟效果。

One, Summary

Birds are human's friends, with the people's more attention to the environmental protection and the continuous improvement of the environment, the activities of birds on the human production and life has also brought a lot of trouble. MS-BRP1 intelligent gas bird repeller is a high efficient bird driving device which is introduced in the field of farmland, orchard, aquaculture field, the airport and so on. Through the computer control system, it can achieve the functions of timing, quantity, the ratio of fuel, and no person on duty, and also it can obtain high efficiency and energy saving effect.

二、主要特点

MS-BRP1 型智能煤气驱鸟炮具有以下几个特色：

1. 整台驱鸟器将各个部件集成与拖车固定架上，结构紧凑移动方便，能适合各种应用场合，如机场、果园、养殖等。
2. 具有高亮度红色数码显示工作信息，一目了然。
3. 具有简单易用的按键设置工作状态。
4. 配备了太阳能电池板、免维护蓄电池，解决了电驱鸟器可以移动到任意没有外界电源的地方工作的问题，电源部分不需要专门的充电和维护。
5. 安装有遥控开关机功能，可以通过手持无线遥控器远距离控制驱鸟器的开机和关机；也可以通过遥控器远距离随时进行放炮驱鸟。
6. 具有经济、高效特点：采用氧气+液化气（或煤气）作为燃料，通过电脑控制燃气量，



Macsun Solar Energy Technology Co., Limited

Add: No. 1, Huaxing Road, Shanghenglang, Dalang, LongHua,
Shenzhen, CN

T: 0086 755 8981 6120

E: sales@MacsunSolar.com

W: www.MacsunSolar.com

F: 0086 755 8170 8589

solarenergy86@gmail.com

Skype: macsunsolar

实现最大升压驱鸟和最经济运行。平均每炮的成本在 0.055 元（2015 年价格）。

Two, the main features

MS-BRP1 type intelligent gas drive bird repeller has the following characteristics:

- The whole bird repeller will be integrated with the various components of the trailer fixed frame, compact and easy to move, can be suitable for a variety of applications, such as airports, orchards, farming, etc. With a high brightness red digital display, and the working information is clear at a glance.
- With a simple and easy keys to set the working state.
- Equipped with solar panels, maintenance free battery, to solve the problem of electric bird repeller can be moved to any place without outside power supply, and the power supply does not require specialized charging and maintenance.
- The function of remote control switch installed, can through handheld wireless remote controller to control the bird repeller startup and shutdown with long distance, and can also through the remote control distance at any time drive birds with blasts.
- With the economic and efficient characteristics: the use of oxygen + liquefied gas (or gas) as a fuel, through the computer to control the amount of gas, to achieve the maximum pressure to drive birds with the most economic operation. Average cost per shot is about 0.055 RMB (2015 price).

三、产品结构

- | | |
|----------|--------|
| 1、拖车式固定架 | 2、燃气炮管 |
| 3、太阳能电源 | 4、燃气罐 |
| 5、氧气罐 | 6、遥控器 |

Three, product structure

- | | |
|-----------------------------|-------------------|
| 1, trailer type fixed frame | 2, gas gun tube |
| 3, solar power | 4, gas tank |
| 5, oxygen tank | 6, remote control |



Macsun Solar Energy Technology Co., Limited

Add: No. 1, Huaxing Road, Shanghenglang, Dalang, LongHua, Shenzhen, CN

T: 0086 755 8981 6120

E: sales@MacsunSolar.com

W: www.MacsunSolar.com

F: 0086 755 8170 8589

solarenergy86@gmail.com

Skype: macsunsolar





Macsun Solar Energy Technology Co.,Limited

Add: No. 1, Huaxing Road, Shanghenglang, Dalang, LongHua,
Shenzhen, CN

T: 0086 755 8981 6120

E: sales@MacsunSolar.com

W: www.MacsunSolar.com

F: 0086 755 8170 8589

solarenergy86@gmail.com

Skype: macsunsolar

四、技术参数

供电方式: 12V4AH 免维护蓄电池+5w 太阳能电池板

功耗: 静态(非放炮时) 0.015W

无日光情况下连续工作时间: 7 天

遥控距离 20-4000 米

使用环境温度: -40℃- 65℃

煤气炮重量: 49KG (充满气)

炮管尺寸: $\Phi 102\text{mm} \times 850\text{mm}$

气源: 氧气+标准罐装液化石油气

外观: 喷塑处理(颜色根据用户要求定)

声音: 大于 150dB@10m

作用范围: 约 200m

放炮成功率: >98%

Four, technical parameters

Power supply: 12V4AH maintenance free battery +5w solar panels

Power consumption: static (non-blasting) 0.015W

Working hours without daylight: 7 days

Remote control distance: 20-4000 meters

Using ambient temperature: -40 °C - 65°C

Gas gun weight: 49KG (full of gas)

Barrel size: $\Phi 102\text{mm} \times 850\text{mm}$

Gas source: oxygen + standard canned liquefied petroleum gas

Appearance: spray treatment (color according to user requirements)

Voice: more than 150dB@10m



Macsun Solar Energy Technology Co., Limited

Add: No. 1, Huaxing Road, Shanghenglang, Dalang, LongHua,
Shenzhen, CN

T: 0086 755 8981 6120

E: sales@MacsunSolar.com

W: www.MacsunSolar.com

F: 0086 755 8170 8589

solarenergy86@gmail.com

Skype: macsunsolar

Scope of action: about 200m

Blasting success rate: >98%

五、使用方法

开始使用煤气炮驱鸟器时，先要电源开关打开至‘-’的位置，使驱鸟器进入工作状态。使用完毕要关闭电源开关。

Five, the using methods

When we start to use the gas gun bird repeller, the power switch is first opened to the '-' position, so that the bird can enter the working state. We need to turn off the power switch after we finish using.

1. 移动、运输:

需要移动时，将炮管收起固定好即可人工拖动到需要的地方。移动时注意保护氧气瓶、液化气罐不要碰撞其它物体，保持拖车平稳。

运输时，要注意保持拖车平稳，切记不要将气瓶躺倒或倒置！

需要驱鸟时，要选取地势较为平坦的地方，放好炮管支架，保持整体平稳后方可准备放炮驱鸟。

1, move and transportation:

When you need to move, the gun tube can be fastened and move to the need place. When moving, pay attention to the protection of oxygen cylinders, liquefied gas tank not to collide with other objects, maintain trailer stable.

Please keep the trailers stable when transport, and do not place the cylinder lying or inverted!

When you need to drive the birds, please set on relatively flat terrain of place selection, place the gun barrel well, remain stable overall before ready to repel bird.

2. 放炮气路的调整:

松开氧气瓶和燃气瓶上部的禁锢旋钮（阀门），氧气压力表指针应在 0.25，丙烷压力表指针应在 0.15 左右（调压阀在出厂时已调整好）。工作时的充气时间，在驱鸟器出厂时已调



Macsun Solar Energy Technology Co., Limited

Add: No. 1, Huaxing Road, Shanghenglang, Dalang, LongHua,
Shenzhen, CN

T: 0086 755 8981 6120

E: sales@MacsunSolar.com

W: www.MacsunSolar.com

F: 0086 755 8170 8589

solarenergy86@gmail.com

Skype: macsunsolar

整为最佳状态，一般情况下用户不必经常调整。

驱鸟结束要关闭各个气路的阀门，用户需注意：此时管道仍留有少量余气。

2 blasting gas path adjustment:

Loosen the oxygen bottle and the upper part of the gas bottle knob (valve), oxygen pressure gauge pointer should be in the 0.25, the propane pressure gauge pointer should be around 0.15 (pressure regulator valve in the factory has been adjusted well). When the work of inflation time, the bird repeller in the factory has been adjusted to the best state, in general, users often do not have to adjust.

We need to close the valves of every gas path, and the user should pay attention to: at this time the pipeline still left with less than gas.

3. 参数设置:

在煤气驱鸟炮的控制箱内装有控制电脑，在控制面板上有参数显示的数码管和设置参数用的按键。

数码管在关机状态和夜间是不显示的，在白天并且是自动放炮开机状态时显示左边两位数码管，显示的数值为距离放炮所需时间的倒计时。单位是“分钟”，当时间小于 1 分钟时，显示单位是“秒”。

后面的三位数码管只有在有按键按下和放炮状态才显示，有按键时显示已设置的参数值，放炮状态下显示的是剩余的放炮数量和充气结束倒计时。

需要显示完整的参数时，只需短按一下任意按键，即可显示 5 秒钟。

需要设置参数时，只需按住需要设置参数对应的“+”或“-”键不放，3 秒钟后数值开始改变，当到达需要的数值时，松开按键即可。

3 parameter setting:

The control computer is provided within the control box of the bird repeller, and the control panel is provided with keys for setting the parameter, and a digital tube which is showed with a parameter display.



Macsun Solar Energy Technology Co., Limited

Add: No. 1, Huaxing Road, Shanghenglang, Dalang, LongHua,
Shenzhen, CN

T: 0086 755 8981 6120

E: sales@MacsunSolar.com

W: www.MacsunSolar.com

F: 0086 755 8170 8589

solarenergy86@gmail.com

Skype: macsunsolar

Digital tube is not displayed in the shutdown state and night, in the daytime and blasting automatic boot state display left two digital tubes, numerical display distance blasting time required for the countdown. Unit is "minutes", but when the time is less than 1 minute, the display unit is "seconds".

The behind three digital tubes is shown only in key presses and shooting state, and they display the set parameter values when press the buttons, display the remaining number of blasting and inflatable end of the countdown the blasting state.

Need to display the full parameters, just press any button, you can display 5 seconds.

When you need to set parameters, just press and hold the setting parameters correspondent "+" or "-" buttons and do not move. After 3 seconds, the value will change. When you reach the required value, loosen the button.

4、手动遥控放炮驱鸟：

在任意时刻，只要按下无线遥控器的“C”键或者“3”键（不同遥控器略有不同）一次，系统就进入放炮程序：充气→点火放炮。

手动遥控放炮不受白天夜间影响，也不受是否是自动放炮开关机影响，只要电源和气源都满足就可以遥控按键放炮驱鸟。

4, Manual Remote repelling bird:

At any time, just press the wireless remote control "C" key or "3" key (different remote slightly different) one time, the system enters the blasting program: inflatable, ignition blasting.

Manual remote control blasting, is not affected by day and night, or automatic blasting switch on or off, with the power supply and air supply can meet requirement well, with remote control button can blast and repel the birds.

5、自动放炮驱鸟：

当自动放炮条件符合要求时，系统自动执行放炮程序。自动放炮驱鸟条件是：电池不欠压、白天、自动放炮遥控开机。

自动放炮工作时，显示面板上的参数决定了工作情况，其中：

“自动放炮间隔”是两次自动放炮之间的间歇时间长度，可设置范围为 1-99 分钟；



Macsun Solar Energy Technology Co., Limited

Add: No. 1, Huaxing Road, Shanghenglang, Dalang, LongHua,
Shenzhen, CN

T: 0086 755 8981 6120

E: sales@MacsunSolar.com

W: www.MacsunSolar.com

F: 0086 755 8170 8589

solarenergy86@gmail.com

Skype: macsunsolar

“每次放炮数量”是自动放炮时间到后，连续放炮的数量；

“充气时间”是控制气体燃料冲入炮管的时间长度，决定了充气的量，时间越长，充其量越大。数值范围 0.3-9.9 秒。

5, Automatic Blasting and Repelling birds:

When the automatic blasting conditions meet the requirements, the system automatically performs the blasting program. Automatic blasting bird driving condition is: the battery does not owe voltages, daytime, automatic shooting boot.

自动放炮工作时，显示面板上的参数决定了工作情况，其中：

At automatic blasting work time, the display parameters on the panel determine the working conditions, such as:

Automatic shooting interval is two times the length of time between the intermittent automatic shooting range can be set for 1-99 minutes;

“每次放炮数量” "Every time the number of blasting" is the number of continuous blasting at the automatic blasting time;

“充气时间” "Inflation time" is to control the length of time of gas fuel into the gun barrel, determines the amount of inflation, and more with longer time. Numeric range is 0.3-9.9 seconds.

六、维护保养

1. 每天使用煤气驱鸟炮前要检测各个气阀、气路是否完整，不能有开裂、漏气现象。检测燃料气体的压力是否满足放炮要求。
2. 经常清洁太阳能板上的积尘，以便可以在阳光下更好地给蓄电池充电。
3. 在雨天或不使用煤气驱鸟炮时要将炮管防尘套套好。当炮管内有积水时，不要使用驱鸟器，将炮管底部螺栓取下，放净水后才可以使使用。

Six, Maintenance



Macsun Solar Energy Technology Co., Limited

Add: No. 1, Huaxing Road, Shanghenglang, Dalang, LongHua,
Shenzhen, CN

T: 0086 755 8981 6120

E: sales@MacsunSolar.com

W: www.MacsunSolar.com

F: 0086 755 8170 8589

solarenergy86@gmail.com

Skype: macsunsolar

1, every day before the use of gas gun we need to detect various gas valve, gas path is complete or not, and cannot have the cracking, leakage phenomenon. Check whether the fuel gas pressure can meet the requirements of blasting or not.

2, Regularly clean the dust on the solar panels so that it can charge the battery better under the sunlight.

3, in the rainy day or do not use gas bird repeller, please make sure the dust cover of barrel is good. When there is water in the gun tube, do not use the bird repeller, take off the barrel bottom bolts, and clean the water before use it.

七、注意事项

1. 禁止未成年人接触操作煤气炮。
2. 驱鸟器工作时，在炮口设置提示牌：“工作中，禁止靠近”。
3. 禁止炮口对着任何人、动物、障碍物使用煤气驱鸟炮。
4. 打开电源前要警示附近人员，防止过于靠近造成人身伤害。
5. 使用煤气驱鸟炮时，炮口前必须是开阔地，并无可燃物。
6. 禁止在狭小空间（如棚舍、坑道等）内使用煤气驱鸟炮。
7. 使用完煤气驱鸟炮后，要确保关闭电源、关闭气阀。

Seven, attention matters

1, prohibit the juveniles close and operates the coal gas gun.

2, when bird work, please set the prompt card at the muzzle: "working, no close please".

3 prohibit the gun tube toward any person, animal, and the muzzle of obstacles when using bird repeller.

4, warning to the vicinity of personnel before turn on it, to prevent too close distance to cause personal injury.

5, before use this bird repeller, please make sure the muzzle must be toward to open area, there is no combustible.



Macsun Solar Energy Technology Co.,Limited

Add: No. 1, Huaxing Road, Shanghenglang, Dalang, LongHua,
Shenzhen, CN

T: 0086 755 8981 6120

E: sales@MacsunSolar.com

W: www.MacsunSolar.com

F: 0086 755 8170 8589

solarenergy86@gmail.com

Skype: macsunsolar

6, it is prohibited in the narrow space (such as tunnel, shed, etc.) to use this bird repeller.

7, please turn off the power and valve after the use of bird repeller.

八、质量保证

1 年内年免费维修。

1 年以后，仅收取元件费。

Eight, Warranty

1, Maintenance free in one year without mankind damage.

2, only charge the components cost for maintenance after the first year.