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## **Foreword**

Lanstar is a leading electric fence manufacturer in China. Since foundation, our company developed steadily and expanded fast, becoming a famous brand in both domestic and foreign market.

Integrating the research and development, manufacture and sales service, we provide the excellent products, effective security solution and wide-range post-sale service to our customers. Our products are in accordance with GB/T 7946-2008 and approved by CE. And lx-2008 series are best seller in the past years and lx-2000 was appointed by china security department as the widely-promoted products in military bases. Now LX-M8 is ready for sale, which is designed to compete with global traditional electric fence supplier.

Now we are trying our best to explore the global market after setting solid foundation at domestic market. So we offer preferential policy and competitive price recently for our partner and solo agent in international market. Actually the price we offer now is nearly 50 percent discount, compared to the mainland quotation. It is also a great opportunity for global distributor to establish business relationship with us at this very moment. I am quite confident that both sides will benefit a lot if you catch this chance and hold our hands to step forward.

## **1. Introduction**

The LX-2008 (house and community electric fence) is popular at home and abroad and the market potential increased sharply. To meet the special need in the poultry, farm, vegetable and fruit, and flower industry, we design and unveil a new product: LX-polar.

This product performs stably, could be used to provide security service for long term and be applied to various areas. No matter whether you are the owner of poultry or forest, whether you are running vegetable, fruit garden or cultivating flower, the lx-polar is a perfect option.

In the future, we do believe our products will be the first choice when it comes to buying perimeter security products.

## **2. Features:**

1. Lcd shows the pulse voltage;
2. Led shows voltage and status of battery;
3. 1.5 s and 2.5 s interval pulse are available.
4. automatic switch between day mode and night mode;
5. powered by lead-acid battery, 12V DC and solar panel;

## **3. Principle of operation:**

Lx-polar is an electric fence energizer for farm industry-- a new perimeter security product designed by Lanstar. The energizer generates an electric pulse, which travels along the wire fixed on the bar. At the same time, the energizer links with earth. Therefore, when animal, inside or outside, touches the wire, an electric circuit forms and the animal will be shocked by the pulse and keep away with wire. As a result, the animal within zone is protected and the ones outside the zone will be kept away.

Lx-polar is easy to install and use, and could protect the animals or plants inside the zone effectively. Compared with traditional wood bar or fence, Lx-polar system could provide better and more stable protection service with much low cost.

#### 4. Applied areas:

Poultry;

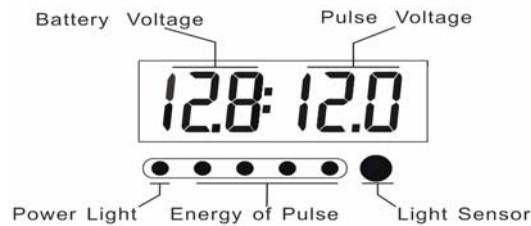
Forest;

Vegetable and fruit planting center;

Flower garden;

Others;

#### 5. Operation mode:









As shown in the graph, the left number displays the battery voltage and the right number pulse voltage.

Power light shows if the power is on;

The energy of pulse shows the pulse strength, when the energy of pulse decreases gradually, the light which is on will be out one by one accordingly.

The light sensor detects it is day or night and automatic judges and starts day or night mode.

Six operation mode:

-  **Hold-on mode:** the green led indicator is on and other, off; Lcd shows the battery voltage and right number is 00.0. Under hold-on mode, the energizer does not generate pulse.
-  **1.5 Second pulse mode:** energizer generates pulse periodically and the interval is 1.5 second. The green led indicator is on and all red led indicators are on; the right number shows the actual output voltage.
-  **2.5 Second pulse mode:** energizer generates pulse periodically and the interval is 2.5 second. The green led indicator is on and all red led indicators are on; the right number shows the actual output voltage.
-  **Battery mode:** the energizer generates pulse each 2.5 seconds. The green led indicator is on and red led indicators are on. The voltage of battery is not less than 11.8v. When the voltage decreases by 0.1v, one red indicator will be off from the right side. When battery is running out, all the indicators will be off and energizer will do not work.
-  **Day 1.5 seconds and night 2.5 seconds mode:** light sensor detects it is day or night and then switch to this mode. In the daytime, pulse will be generated each 1.5 seconds; while at night, pulse will be released by energizer each 2.5 seconds.
-  **Day 2.5 seconds and night 1.5 seconds mode:** light sensor detects it is day or night and then switch to this mode. In the daytime, pulse will be generated each 2.5 seconds; while at night, pulse will be released by energizer each 1.5 seconds.

## 6. technical specification:

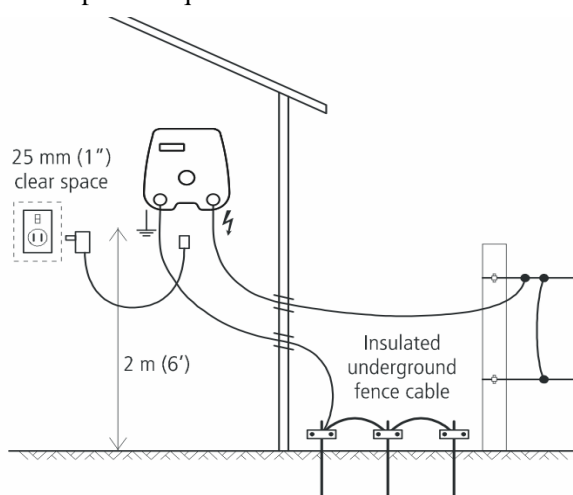
- 1) input voltage: 12 V DC;
- 2) output voltage: 12 kv;
- 3) pulse width: 100 us ( 1/10000 second)
- 4) switch to 1.5s or 2.5s mode freely
- 5) automatic switch between day mode and night mode:
- 6) transformer change the range of voltage: 110-240 v ac
- 7) powered by lead-acid battery and solar panel;
- 8) six operation mode;
- 9) water-proof and anti-dust;
- 10) working length: 200 m to 40,000 m;
- 11) stored energy: 2.7 joules
- 12) max output energy: 2.0 joules;
- 13) consumption: 3.5 waltz;

## 7. Installation:

### 7.1 indoor installation:

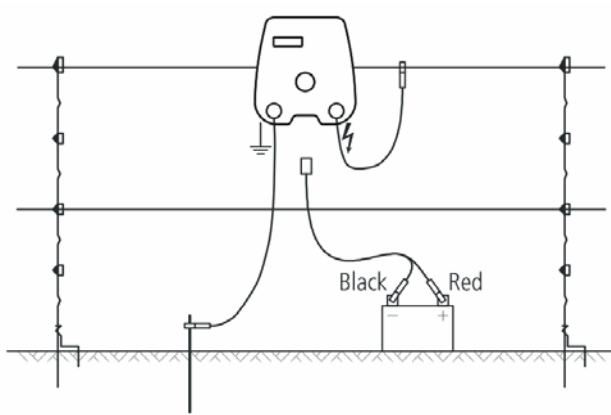
- 1) a appropriate place for fixing the energizer;
- 2) out of touch of children and animals
- 3) link the black grounding icon with clip to ground;
- 4) link the red pulse output icon with clip to wire;
- 5) connect with transformer and choose the mode;

Notice: the transformer could replace the battery to provide power to energizer, if the customer do not have special requirement.



### 7.2 outdoor installation:

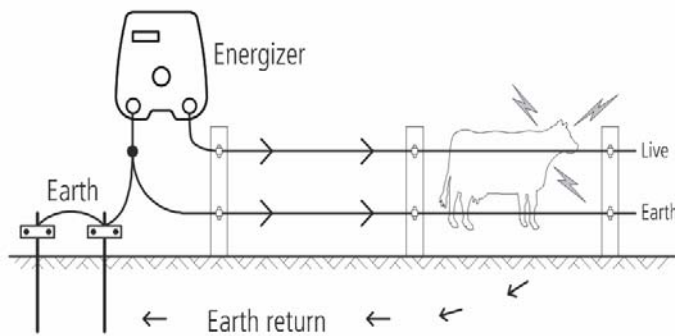
- 1) in most cases, the energizer should be fixed on the wooden bar
- 2) link the black grounding icon with clip to ground;
- 3) link the red pulse output icon with clip to wire;
- 4) connect with transformer and choose the mode;



Notice: the energizer could be powered by lead-acid, 12v DC or solar panel.

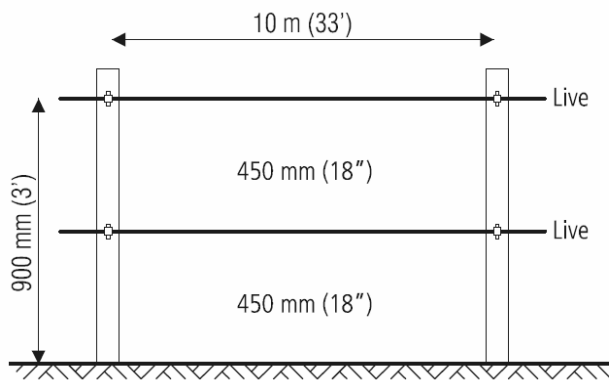
### 7.3 Typical solutions:

If the conductivity of ground is not good because of dry soil or sand, the pulse circuit will not form even when animal touches the wire. Then we make adjustment of fixing the earth wire to bars also. By doing so, the system could work as efficiently as it does in common cases.

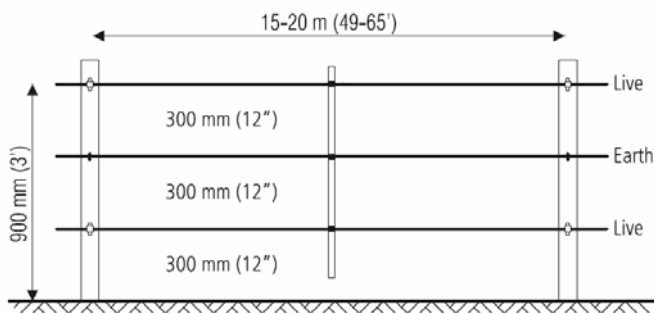


Besides, the line design will vary greatly due to animal height, weight, and trait difference, please check below typical line design for different animals;

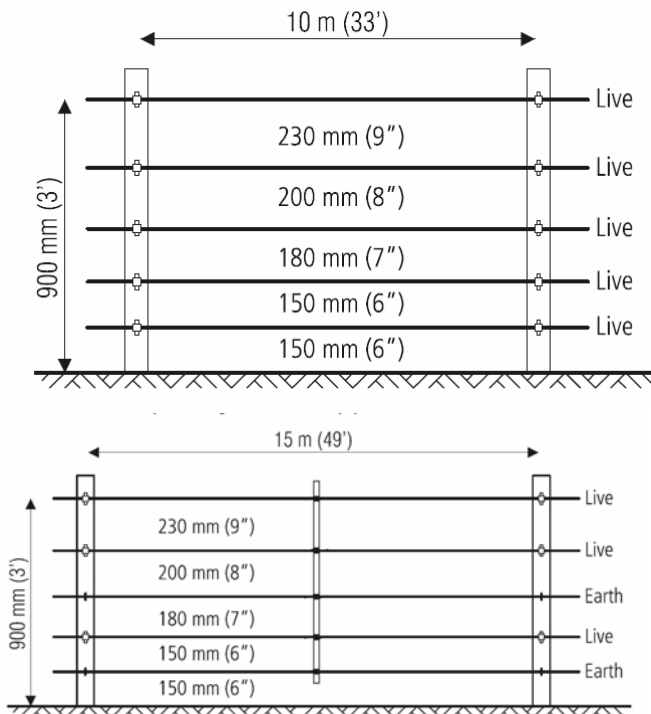
**Solution for horse and cow:**



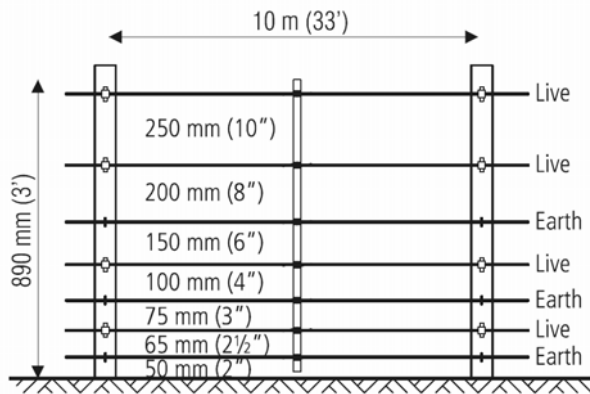
Sticker bar is necessary if the length between two adjacent bar is around 15- 20 ms.



**Solution for goat, poultry animals**



**Solution for fierce animals:**



**8. Ground connection**

Stick two steel bars into ground, make sure the length between two bars is more than 30 cm, then connect the black ground icon with one bar and connect the red pulse icon with the other. Put on the power and choose the 1.5 second mode. If the right number is less than 4 kv, the ground connection is good.

**9. Accessory**

item	number
energizer	1
Wire clip	1
Grounding clip	1
adapter	1
Manual book	1

Profiles:

	LX-Polar I	LX-Polar II	LX-Polar III
power	12V DC,110-240 AC,50-60 HZ		
Consumption	2.0W	3.5W	5.0W
Input current	95mA	180mA	300mA
Output voltage	≅ 11.0kV	≅ 12.0kV	≅ 13.kV
Stored energy	1.4J	2.7J	4.8J
Max output energy	1J	2J	3J
Max length	10km	20km	30km