

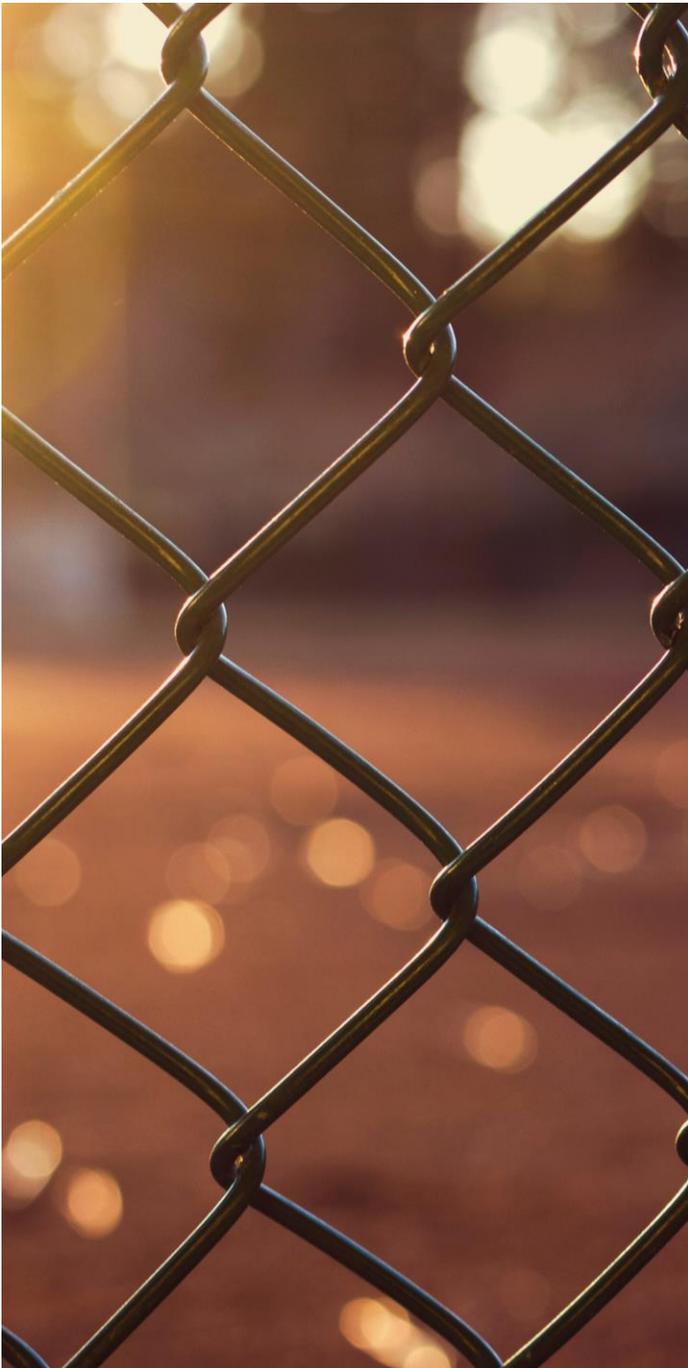


IRONCLAD / MICALERT Fence Alarm System Design Your Site

Determine Which Type Of Sensor Right for You

- Fence should be at least 1.8m /6ft tall. (A security fence is usually 2.4m/8ft)
- The type of the barrier will decide the right sensor for the job.

	Chain link	Wrought iron / Aluminum / Palisade	Welded mesh	Barb wires / Concertina coil	Wall (only Breaking through detection)
IRONCLAD	✓		✓	✓	
Micalert		✓			✓



What's in this guide

This guide is intended to help professionals design and quote an IRONCLAD/MICALERT System.

you should walk the site or receive photos of the site to verify the below.

Models

The IRONCLAD is sold in pre-cut spools

Sizes available:

- 75m/250ft
- 150m/500ft
- 300m/1000ft
- Custom length per large quantities

The MICALERT is sold in pre-cut spools

Sizes available:

- 150m/500ft
- 300m/1000ft
- Custom length per large quantities

A zone is a cable that starts at the processor and end at the end of line termination unit.

It's possible to shorten, cut or splice the cable up to a maximum of 300m/1000ft per cable run (zone).

Each IRONCLAD/MICALERT processor can monitor up to 2 zones.

The information in this document is for guidance and information only.

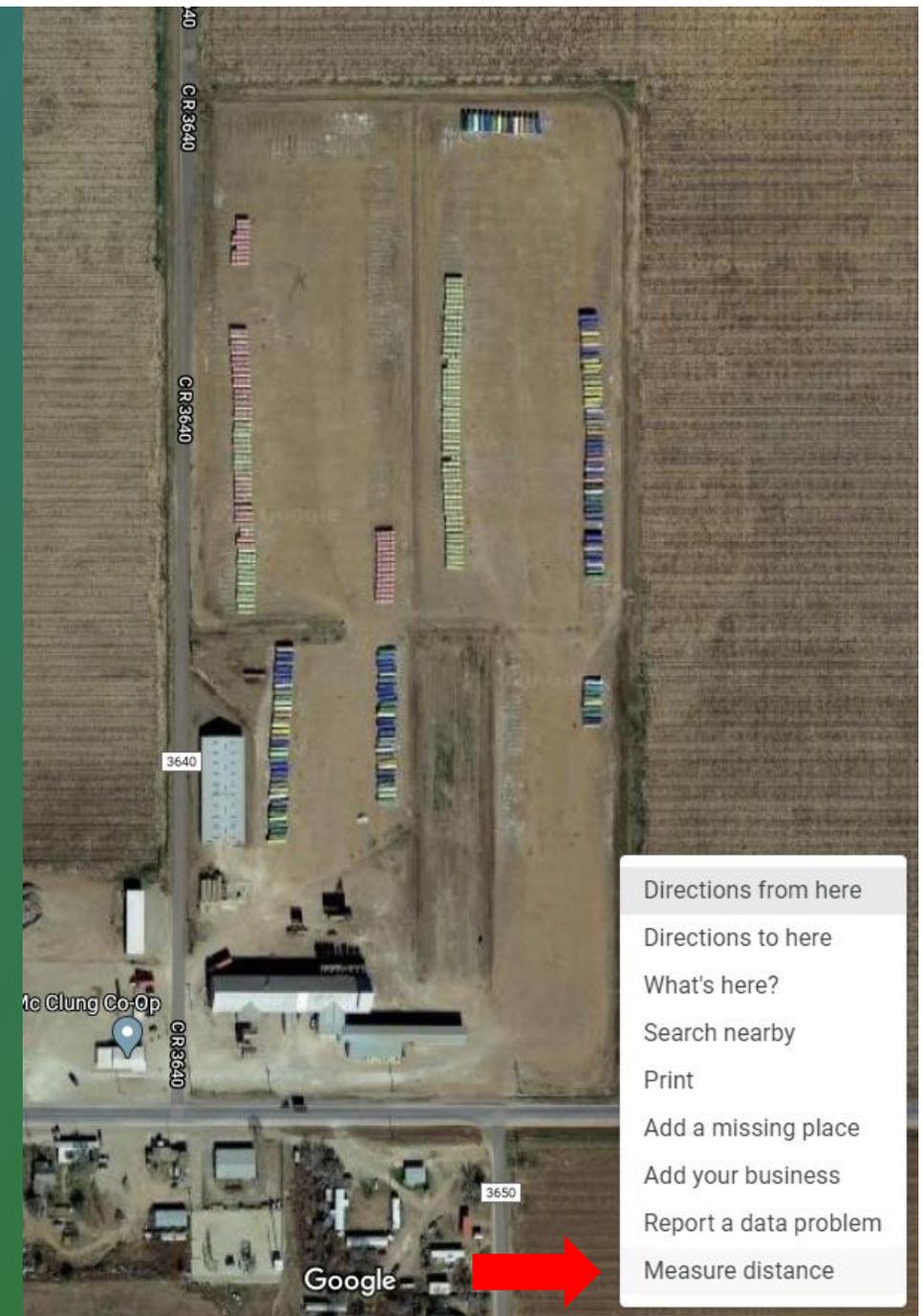
Find Perimeter Length

Measure how many meters or feet is the length of the perimeter fence. You can measure that by walking the site with a measuring wheel or using Google maps/Earth.

Google to measure

Once you are in google maps right click the point where you want to start measuring and you will see the menu like on the right Image. Click it and click the first point where you start.

4



Perimeter Measurement

Click at each point along the perimeter where there is a change of direction in the fence line to find the total distance line seen on the right.

Gates

- Count how many gates does the site have?
- What type?
- If the site have gates verify there is a conduit under them to allow the cable to pass under.

5



Power Supply & Relay Outputs

- The IRONCLAD/Micalert processor requires: 12-24 DC @ 0.5 Amp
- Plan the power/relay cable route from the IRONCLAD/MICALERT processor(s) to the alarm panel.

There are 3 ways you can connect power/relay of the IRONCLAD/MICALERT processor on the fence with the alarm system:



A cable with 6 wires. The cable will carry the DC power and the 2x2 wired relay outputs.



In a case running a cable is not possible using a wireless relay transmitter is possible. Make sure a DC power is available next to the IRONCLAD/MICALERT processor.



For a complete standalone setup a wireless + solar power options is possible.



Fence Condition

Check the fence condition, make sure the fence is clean of any debris or trash. Items that are laying on or next to it might cause false alarms.

Best case scenario for the fence system to work is when the fence is taut, standing straight, have tension wires and have tension on the fence fabric.



Please take into consideration accessories you need

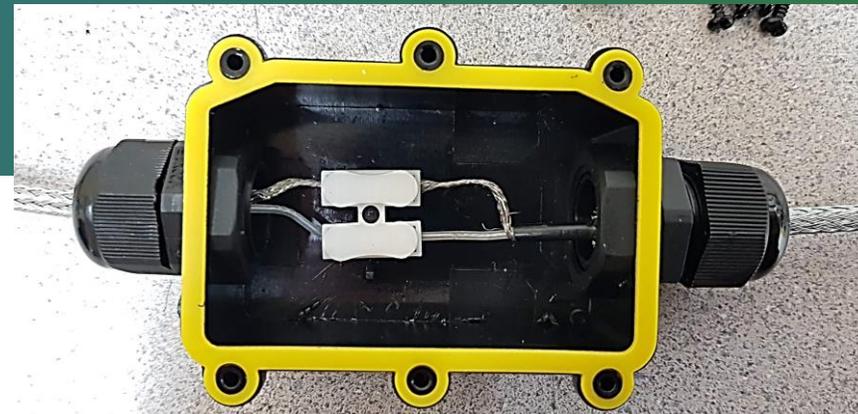
Required:

- Power supply – 12-24vDC 1amp per processor.
- Lead wire - 6 wires (2 for power and 2+2 for relays) for each processor to the alarm system. The amount of cable needed is the distance between the fence processor and the alarm system panel.



Accessories we offer:

- Swing gates - To go under the gate you need a standard direct burial RG6 to act as the non-sensitive and 2x - RB-RBMCTXT
- Sliding gates – RB-SLIDINGKIT a sliding kit is needed.
- Stainless twist ties – 1 bag per 150m/500ft of sensor cable.



Perimeter Zones

Based on the information you collected above, it's now time to divide the perimeter to zones. Here what you should consider



Security Plan

Divide the perimeter for zones to comply with the security planes. For example camera coverage

Multiple Shorter zones = Higher precision of detection resolution



Topography

Divide the site layout into zones that comply with the topography of the site such as North, South side or road vs back



Budget

Less zones, reduces the price.

Longer/max length zones –
Cheaper solution since less processors will monitor more cable/fence.

Site Design Samples

How to choose the correct system layout

The example site shown in the next slides is 450m/1500ft, it can be covered in a few different configurations. Each configuration has an effect on ease of installation, coverage and zone length. We will show you 3 different example how the same site can be protected in 3 different ways.

Example site 1 – Site Divided Into 2 Zones

Using maximum length of pre-cut sensor cable 150m+300m/500ft+1000ft rolls.

Pros: Ease of installation, less labor and faster installation using the factory provided spools without cutting or splicing. Cheaper since there is no waste of cable.

Cons: Uneven zone coverage.

In this configuration we have one processor that controls 2 uneven zones. The advantage of this configuration is that the installation is the easiest with no splices to the cable since the cables that are being used are standard factory length. One zone is longer, 300m/1000ft while the yellow zone is a 150m/500ft cable.

Quantities	USA/Canada/Latin America Codes	Rest of the world	Description
1	RB-IROC1Z1000	RB-IROC1Z300	2 zones Processor with 1x300m/1000' roll and EOL (end of line) kit
1	RB-RBIROC500	RB-RBIROC150	1 spool/roll of cable only + EOL
3	RB-RBTIES610	RB-RBTIES610	Stainless steel twist ties and tool

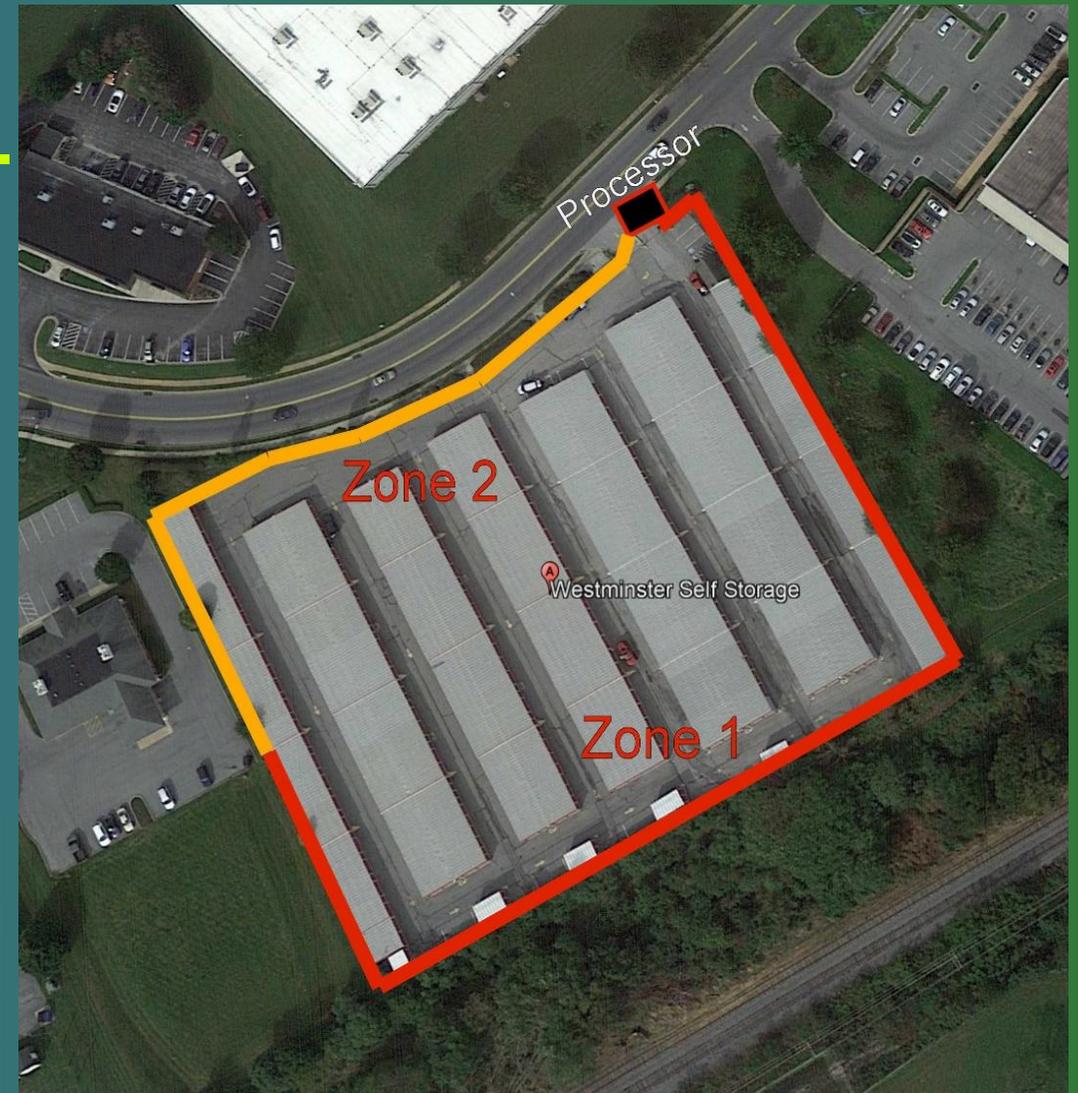


Image source: Google Maps

Example site 2 – Site Divided Into 2 Zones

Even length zones and cable length.
225m/750ft per zone sensor cable.

Pros: Zone coverage makes more sense, each zone covers 2 sides of the site.

Cons: Buying 600m/2000ft of cable to cover 450m/1500ft

In this configuration we have one processor that controls 2 even zones. Each zone covers 2 sides of the site which makes it easier to monitor. The 2 zones are not standard sizes, they need to be spliced from either 2 cables or a longer cable needs to be cut and the leftover spliced into the other shorter cable.

Quantities	USA/Canada/Latin America Codes	Rest of the world	Description
1	RB-IROC2Z1000	RB-IROC2Z300	2 zones Processor with 2x300m/1000' roll and EOL (end of line) kit
3	RB-RBTIES610	RB-RBTIES610	Stainless steel twist ties and tool
2	RB-RBMCTXT	RB-RBMCTXT	Extension junction box to splice RG6 coax under the gate

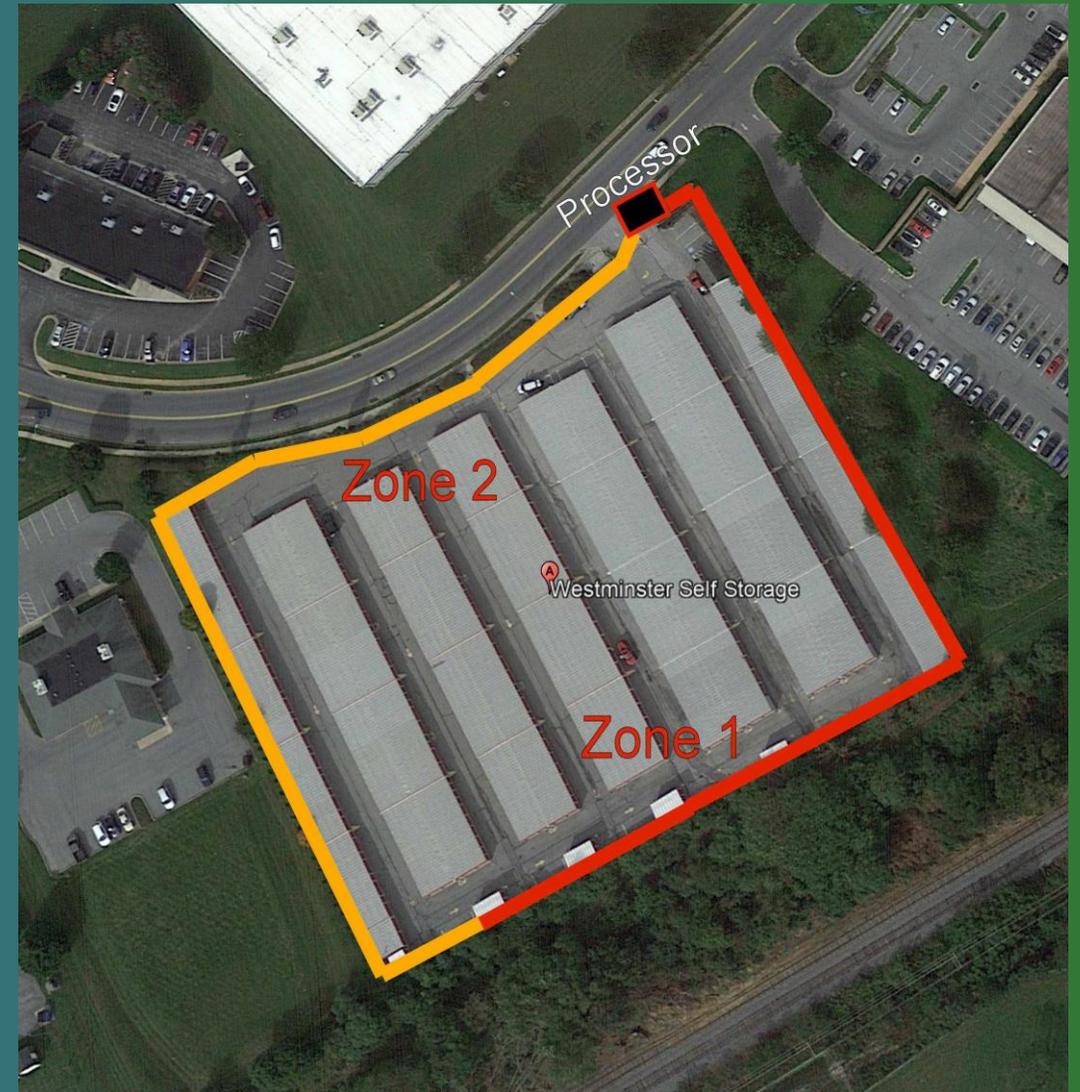


Image source: Google Maps

Example site 3 – Site Divided Into 3+ Zones

Multi zone configuration of 3 zones or more.

Pros: Better resolution of detection, 1 zone per side.
Ability to adjust sensitivity per side

Cons: More complicated installation with more systems.

In the below configuration there are 2 or more processors that controls 3+ zones.

The reason for going with this configuration is that the fence line is either over 600m/2000ft which is the maximum coverage per one processor OR the need for shorter zones OR zones by layout such in this example of a zone per side.

Zones 1&4 are monitored by processor 1 and zones 2&3 are monitored by processor 2.

Quantities	USA/Canada/Latin America Codes	Rest of the world	Description
2	RB-IROC2Z500	RB-IROC2Z150	2 zones Processor with 2x150m/500' roll and EOL (end of line) kit
4	RB-RBTIES610	RB-RBTIES610	Stainless steel twist ties and tool
2	RB-RBMCTXT	RB-RBMCTXT	Extension junction box to splice RG6 coax under the gate



Image source: Google Maps

Protecting different types of gates

Sliding gate – For sliding gates we have what we call a sliding gate kit, the kit includes a spring loaded roller that is mounted next to gate and rolls in and out a non-sensitive cable to bridge the gap between the moving gate and the fixed fence.



Swing gate – For swing gates there is no need for special equipment since the sensor cable is flexible. From the fence continue over the gate and do a U turn back to the fence. In order to bypass the gate the cable needs to be spliced with RG6 into a conduit and then spliced back on the other side. Splicing with RB-RBMCTXT Box



Emergency gate / No Conduit – For swing gates where there is no conduit or the gate rarely opens there is an option to splice the cable and install a pull out quick connector which allows to open the cable and as a result open the gate the cable is going over.



THANK YOU!

RBtec Perimeter Security Systems

We hope this guide helped, but if you have any question please feel free to Email us

This document has been written and produced by RBtec to provide the reader with as much technical and other information as possible about RBtec its products and its services.

Copying any of its contents without prior permission from RBtec is strictly prohibited.

This information is provided for the purpose of initial evaluation of RBtec's products and services.

In keeping with RBtec's policy of continuous development, RBtec Ltd. reserves the right to alter these specifications without notice.

info@rbtec.com

www.rbtec.com