



Traptec

Radio Monitored Traps

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PRODUCT OVERVIEW

	<p>Wedge The Wedge™ is a battery-powered radio transmitter with a 12 volt battery, with a battery life of more than 5 years.</p>	
		<p>Smartraps The Wedge is designed to work with most professionally used mouse and rat traps turning them into Smartraps™.</p>
	<p>Pull Plate Wedge The use of the Pull Plate Wedge with a cage will enable the cage to become a SmartCage.</p>	
	<p>Smartrap with Mini Wedge Transmitter built into the base of the mouse box.</p>	
	<p>GSM Unit The GSM unit is designed to be connected to a Base Station and allow it to send SMS text messages to the pest control company.</p>	
		<p>Base Station Base Stations received Wedge signals, they are powered from the mains supply. There are two types of Base Station available, LED Base Station (orange) & ID Base Station (blue).</p>
	<p>Killgerm Rat Box Mini Wedge in the Killgerm AF or Atom Rat Box.</p>	
	<p>Speed-Break Tunnel Mini Wedge with two traps in a Killgerm Speed-Break Tunnel.</p>	

THE WEDGE SYSTEM

REMOTE MONITORING OF MOUSE AND RAT TRAPS

The Wedge system uses coded radio technology to remotely monitor both rat and mouse break-back traps, allowing pest controllers to provide 24/7 protection in any building.

Avoiding the expensive need to regularly visit empty traps.

How It Works

To install a Wedge system that monitors and identifies the ID numbers of the traps that have tripped (up to 100 Wedges) with NO programming, the pest controller only has to send one text message.

If more than 100 wedges are required then a second system must be set up with a different system code (see System Code – page 6).

To set up the Wedge system you simply set the trap and sit it on the Wedge, the weight of the trap is detected by the Wedge. The Wedge works with T/Rex, E/Snap mouse and rat traps.

When a rodent trips the trap the weight of the trap is removed from the Wedge and a coded radio signal is transmitted to a Base Station.

The Wedge

The Wedge is designed to work in places where it will not be disturbed by people like attics, suspended ceilings, lofts and behind kitchen kick boards.

In places where they may come into contact with people the Smartrap Mouse Box or the Kilgerm Speed-break tunnel are recommended because they are less susceptible to knocks when they are fixed to the ground, and will only transmit a signal if the trap is tripped.

The Wedge uses a 12 Volt battery with a life of 5 years. No power is drawn from the battery when the Wedge is in the warehouse, in the back of a van or even when the trap is set waiting for a rodent. Power is only drawn from the battery for less than 1 second when the trap trips.

The radio range of each Wedge is approximately 50 meters. The signal can reach 50 meters out in all directions, including up and down.



PULL PLATE WEDGE

The Pull Plate Wedge is identified by its green colour and is for use with internal or external cages.

The plastics of the external Wedges (brown and green) are UV (ultra violet light) stabilized making them suitable for long-term outdoor use.

The Pull Plate Wedge can be used with any trap which has a moving arm like the Kinia squirrel traps, Fenn or mole traps etc.

Pull Plate Wedge Installation

Step 1. Use cables ties to fix a Wedge to the top of the cage.

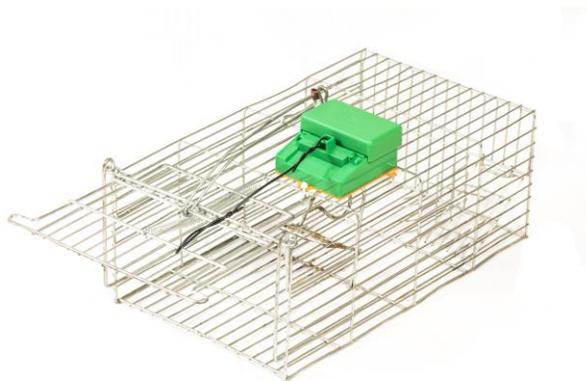
Step 2. Connect one end of a string to the eye of the pull plate.

Step 3. Set the cage (door open) ensuring that it is horizontal and level with the ground.

Step 4. Secure the other end of the string to the open door of the cage.

Step 5. Put the pull plate in position on top of the Wedge (button pushed down) and secure with the pull plate cover. Ensure that the cover is installed the right way around.

NOTE: The assembled pull plate unit is WATER RESISTANT not WATER PROOF. It must always be installed level with the ground. A good suggestion is to fit the cage into a plastic bin liner with the cage door protruding out the open end of the bag protecting the Wedge unit from the rain.



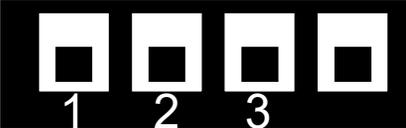
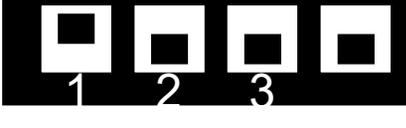
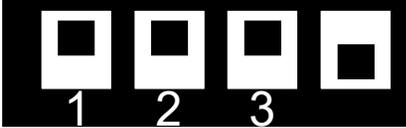
SYSTEM CODES

In each Wedge and Base Station there is a code selector switch. The first three switches (1, 2 & 3) are used to create a system code. All Wedges in an installation must have the same system code as the Base Station. Eight different system codes are possible.

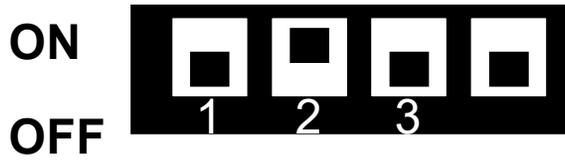
NOTE: All Wedges and Base Station are factory programmed with the default code with switches 1, 2 and 3 in the OFF position (see below – example 1).

In most installations the pest controller does not have to set a new system code and can use the equipment as it comes from the factory.

If, however, adjacent buildings are to be protected, then the Wedges and Base Stations in each must have unique system codes. Failing to do this will result in trap signals from one building being received by Base Stations in the other.

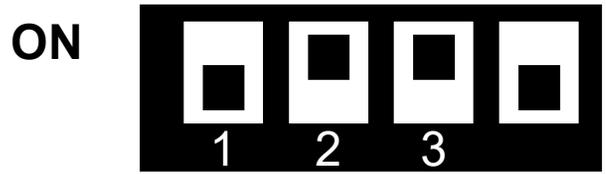
<p>System Code 1 (Factory Setting)</p> <p>ON </p> <p>OFF</p> <p>Switch 1, 2 & 3 OFF</p>	<p>System Code 2</p> <p>ON </p> <p>OFF</p> <p>Switch 1 ON Switch 2 & 3 OFF</p>
<p>System Code 3</p> <p>ON </p> <p>OFF</p> <p>Switch 1 & 2 ON Switch 3 OFF</p>	<p>System Code 4</p> <p>ON </p> <p>OFF</p> <p>Switch 1, 2 & 3 ON</p>

System Code 5



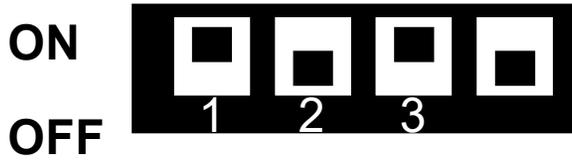
Switch 2 ON
Switch 1 & 3 OFF

System Code 6



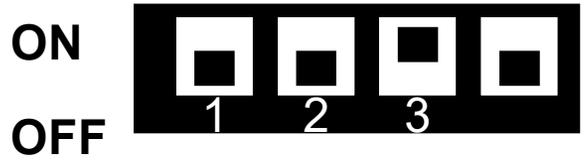
Switch 2 & 3 ON
Switch 1 OFF

System Code 7



Switch 1 & 3 ON
Switch 2 OFF

System Code 8



Switch 3 ON
Switch 1 & 2 OFF

BASE STATIONS

There are two types of Base Stations

LED Base Station have 3 LEDs, one remains on when the unit is plugged into the mains socket. When the Base Station detects a Wedge signal the two other LEDs start to flash to indicate a Pest Alert has been received.

The Base Station is reset by powering it down and powering it up again. Note : when you power down a Base Station make sure that the Power LED has gone out before you power up the Base Station again.

When the LED Base Station is powered up the two Pest Alert LEDs flash for a few seconds to indicate it is ready and listening for Wedge signals.

The two flashing LEDs on the Base Station indicate that pest activity has been detected and that the pest control company should be contacted.



The LED Base Station is also a repeater and can be used to extend the area of protection. When Wedge signals are detected they are retransmitted with the ID of the Wedge that tripped to other Base Stations in the network (see page 14).

NOTE: The best radio range is achieved if the Base Stations are installed two or more meters above the ground in a warehouse environment. Try to install every Base Station within visual sight (no obstructions) of the nearest Base Station in the network.

In a warehouse environment where pallets are moved around continuously, make sure to only install Base Stations in locations where pallets won't be placed directly in front as this could deflect radio signals away from the Base Station and crash the network.

ID Base Station have a 2 digit display and have 2 LEDs, one to show that the unit is powered up and the other to flash when there is a Pest Alert.

Each Wedge comes from the factory with a programmed 2 digit ID code (no programming required by the pest controller). There is a water resistant label on each Wedge showing it's ID number. When a Wedge trips a signal with the ID number of the Wedge is sent to the Base Station.

When a Wedge trips the ID number of the Wedge is displayed on the Base Station for a few seconds.

The second LED then begins to flash, showing that a Pest Alert signal was detected and that the pest control company should be notified.

When the Base Station is powered down and powered up again the ID numbers of the Wedges that have tripped will be displayed again in sequence. This allows the pest controller to replay the stored Wedge ID numbers by power cycling the Base Station.



Sending Pest Alert Signals

The pest controller and/or the pest control company can receive a text message or email by installing a GSM unit into any of the Base Stations in an installation.

The pest controller must purchase a 2G mobile phone SIM card and the insert it into the GSM unit. Make sure that the SIM card does not have a security PIN enabled, ask for it to be disabled in the mobile phone shop.

To setup the system, the only programming required by the pest controller is to send one text message.

SMARTRAP INSTALLATION

Installation Without GSM Unit

Base Stations can be used without GSM units installed. The LEDs on the Base Station must be monitored in this case, flashing LEDs indicate a radio signal has been received from a Smartrap.

To setup a Smartrap first power up the Base Station.

When the two LEDs stop flashing go to the required trap location and place the Wedge on the ground. Press the orange button down then release the button. Go back to the Base Station and if the LEDs are flashing then the Wedge is within range.

Power down the Base Station (wait 5 seconds), then power it up again, now repeat the above for all Wedges to ensure that they are all within radio range of the Base Station.

Now set the traps and place them on the Wedges insuring that the button is pressed down creating Smartraps.

Once you have finished installing all the Smartraps go to the base station, the warning LED's will be flashing, power down the Base Station (wait 5 seconds), then power it up again, and when the LEDs stop flashing the system is set.

Inform the people in the building that when the lights on the Base Station start flashing they should contact the pest control company.

Programming the GSM unit

The pest controller can send a text message to the GSM Unit installed in a Base Station. Telling it where to send pest alert text messages to.

* Option 1 (To receive text messages to the pest controller's phone)

Send a text message to the SIM card number in the GSM Unit with the following text message:



GSM Unit

REPORT PHONE XXXXXXXXXXXX (Press Send)

(X = The pest controller's mobile phone number)

The response will be:

REPORT PHONE XXXXXXXX PROGRAMED

Now the system is setup to send all pest alert messages to the pest controller's phone.

The pest controller should save the SIM card number and location as a contact in his phone.

*** Option 2 (To receive emails)**

The pest controller sends a text message to the GSM Unit with the phone number of the Traptec servers. Now when the Base Station receives a wedge signal it will send a Pest Alert text to the Traptec server where the text will be changed to a Pest Alert email which can as many email addresses as you need.

This can also be setup to email the pest controller's client if required.

NOTE: This email and website service is FREE OF CHARGE.

To setup option 2, send a text message to the GSM Unit with the following message:

For Ireland: REPORT PHONE 00353861800054 *(Press Send)*

For UK: REPORT PHONE 00447520647716 *(Press Send)*

For Germany: REPORT PHONE 00491771784383 *(Press Send)*

For South Africa: REPORT PHONE 002787240508610051 *(Press Send)*

Now the system is setup to send all messages to the Traptec servers which will send emails to the pest controller. These emails can be received on the pest controller's smart phone or laptop.

The Traptec Website

If option 2 is chosen the pest control company must go to the Traptec website www.traptec.eu and setup their dashboard.

Once on the website the pest controller must register an account, login and set up each installation, during the setup the pest controller will enter the clients details along with the phone number of the GSM Unit's 2G SIM card number in the Base Station (it is this SIM card number that allows the Traptec server to identify the location of each incoming Pest Alert text).

All pest alerts are recorded with time and date on the pest control company's password protected dashboard, also the time and date of when each installation is reset and whether any Base Stations have lost power.

Installation With GSM Unit

Purchase a mobile phone 2G SIM card and ensure that the SIM Security PIN is disabled.

- Step 1. Insert the SIM card into the GSM Unit and record the SIM number on the GSM unit case.
- Step 2. Plug the GSM Unit into the Base Station.
- Step 3. Power up the Base Station.

The GSM Unit has two LEDs. When the GSM Unit is first powered up, the registration LED will flash rapidly (every half second) while it is looking for the GSM network. When it has found the network this LED will flash once every 3 seconds.

The GSM signal strength LED has 3 states:

- On constant = Good signal level.
- Flashing = Acceptable signal level.
- Off = Weak or unacceptable signal level.

When a Base Station with a GSM unit is powered up a system reset text message will be sent.

NOTE: The SIM card must be a 2G SIM card (some of the GSM providers only provide 3G and 4G SIM cards). We recommend using a Vodafone SIM card.



When inserting a SIM card into a GSM unit, ensure it is orientated correctly as in this picture.

INSTALLATION HELP

With remote traps the most difficult part is to be able to verify that a Wedge is within radio range of the Base Station. In a large warehouse, or any large building, with an installation spread over several floors, this can be a major problem. The Wedge system has a unique (patented) way to solve this problem.

Every Base Station has a buzzer that sounds for two seconds when it receives a Wedge signal. Inside the GSM Unit there is a microphone which can detect the buzzer sound making it a valuable tool for testing radio range.

Even in an installation without a permanent GSM Unit installed, the microphone in the GSM Unit can be used for the installation to test radio range, then removed when the system is fully setup.

Installing A Wedge System

- Step 1. Plug the GSM Unit into the Base Station, and power it up.
- Step 2. Go to the location where a trap is required.
- Step 3. Dial into the GSM Unit using a mobile phone (when the call is answered the microphone is switched on).
- Step 4. Place the Wedge on the ground, press and release the orange button. If the signal is detected by the Base Station the buzzer will sound, the pest controller will hear the buzzer over the phone verifying that the Wedge is within range of the Base Station.
- Step 5. Set the trap and place it on the Wedge.
- Step 6. Go to the next trap location and repeat step 2, 3, 4, and 5.

Note: When the GSM Unit answers an incoming call it generates a beep every five seconds this is to verify to the pest controller that they have dialed the right number.

When the GSM Unit answers the call it switches on the microphone, in this state the GSM Unit will not send texts messages. The microphone function is an installation tool and for privacy protection it is disabled three hours after power up.

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If the pest controller wants to verify what REPORT PHONE number is programmed it is possible to send the following text message to the SIM card number:

SEND REPORT PHONE *(Press Send)*

The reply will be:

REPORT PHONE XXXXXXXX PROGRAMMED

NETWORK

When it is necessary to cover a larger area additional Base Stations can be added to the system to create a network. When Base Stations (of either type) with the same system code are in radio range of each other they will form a network automatically.

When an LED Base Station (orange) has joined a network the LED on the right hand side will switch on steady, and when an ID Base Station (blue) has joined a network the top LED will switch on steady. Fully joining a network can take up to 4/5 minutes after powering up.

When a Smarttrap is tripped it transmits it's ID which will then be relayed by all the Base Stations in the network. All of the Base Stations will start to flash their LED to indicate that a pest alert was received and that the pest control company should be notified.

If the network has an ID Base Station then when the pest controller powers down the ID Base Station and powers it back up the ID numbers of the Wedges that have tripped will be displayed.

In a network with a GSM Unit, it can be installed in any of the Base Stations which are in an area with good GSM signal strength.

Note: With one Base Station the area of coverage is 7500 square meters, each additional Base Station in the network extends the area of coverage by 5000 square meters. The maximum number of Base Stations per network is 10. In a very large building addition networks can be created using different system codes.

In a network only one ID Base Station (blue) is required to display the ID numbers of Wedges that have tripped, the rest of the Base Stations can be the LED Base Stations (orange).

New base stations can be added to an existing network, they will join automatically. To remove base stations from a network all the remaining Base Stations must be powered down first and then powered up again to create a new network.



HEARTBEAT SIGNALS

A Heartbeat signal is a message from the Base Station (with a GSM Unit installed) to allow the pest controller to know that the system is still up and running.

The system can be set up to send a heartbeat text message every day, or at any daily schedule that is required from every 1 day to every 7 days. The default setting is to send a heartbeat text message once every 7 days.

How to change the Heartbeat Signal

The pest controller can send a text message to the SIM card number with the heartbeat setting that is required.

To set up a heartbeat text message every day, send the following text message:

HEARTBEAT 1 *(Press Send)*

The response will be:

HEARTBEAT FREQUENCY SET AT 1

Now the system is set up to send a heartbeat text message every day. Changing the number changes the frequency in days that heartbeat texts will be sent (for example send a HEARTBEAT 2 text if the heartbeat is required every 2 days).

Every time a Base Station with GSM Unit is powered up the heartbeat clock starts.

If the GSM Unit has been setup to report to the Traptec servers then when heartbeat messages are sent they will be recorded with date and time in the pest control company's dashboard. If a heartbeat does not arrive at the expected time a HEARTBEAT MISSING email will be sent.

When a GSM Unit is used in a network if one of the Base Stations is removed from the network (is powered down not the Base Station with the GSM Unit) and is not restored to the network within one hour a NETWORK HEARTBEAT MISSING email will be sent to the pest control company.

When all Base Stations are returned to the network a NETWORK HEARTBEAT RESTORED email will be sent.

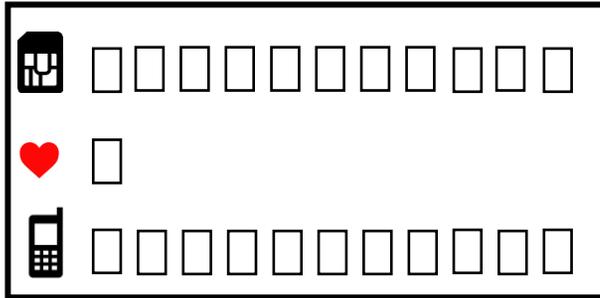
THE ONLY PROGRAMMING REQUIRED TO SETUP A SYSTEM IS TO SEND ONE TEXT.

Appendix

GSM Labeling

You will find two labels on the GSM Unit

Label One



Number of SIM card installed in the GSM Unit

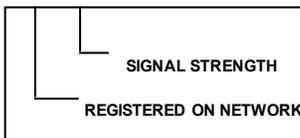


Heartbeat Frequency



Report Phone Number

Label Two



SIGNAL STRENGTH

- On constant = Good signal level
- Flashing = Acceptable signal level
- Off = Weak or unacceptable signal level

REGISTERED ON NETWORK

Once the GSM unit is registered on the network the registration LED will flash every 3 seconds.

