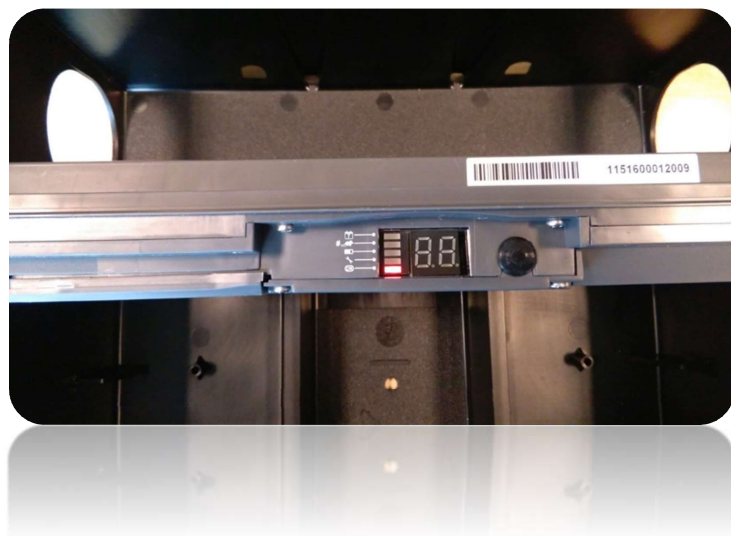


Connect AutoGate Instruction Manual



Relates to :
Connect AutoGate – 304765

This product has LongReach Technology Inside

This manual is based on the latest information and is provided subject to alteration.

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Safety Instructions

- This product is intended for indoor or outdoor use.
- Only use the battery packs part number 300076 supplied by Rentokil Initial for this product. NOTE: This battery pack is not rechargeable and should never be recharged.
- If the AutoGate is stored unused for a long period, the batteries should be removed.
- Do not use the device if it is damaged.
- Only trained personnel should open the device.
- Do not expose the device to corrosive liquids.
- This device contains Radio Emitting devices and should not be used near to life support systems.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- Children should be supervised to ensure that they do not play with the appliance.

Note: If the equipment is used in a manner not specified by the manufacturer then the protection provided by the equipment may be impaired.



Pest Connect Overview

Pest Connect is a system that enables remote monitoring of devices. Data from sensors is sent to a Connect Control Panel which establishes a secure connection to a central server where the data is passed to the Rentokil Systems.

Typical sensors that are used in the Pest Connect system are the Connect Radar mouse trap and the AutoGate Connect, shown below in Figure 1.

A typical installation will have many sensors communicating to the Connect Control Panel and a single control panel can manage up to 300 sensors. Where necessary multiple Control Panels could be deployed onto a site and up to 8 co-located control panels are permitted. In such a system if the sensors fail to connect to the Control Panel they will scan for alternative Control Panels to ensure high levels of connectivity.

NOTE: The control panels that are suitable for using with AutoGate Connect must also be equipped with LongReach technology.



Figure 1: Connect System Overview

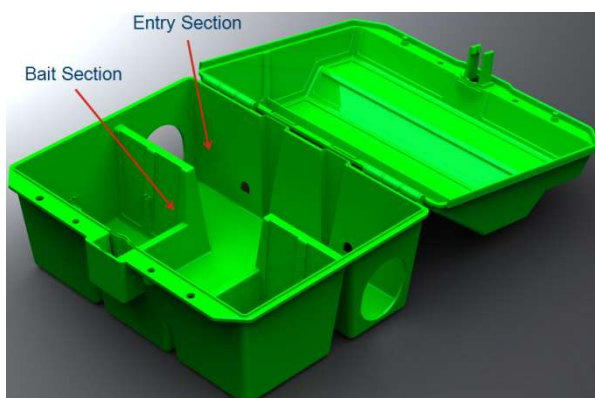


Product Description

AutoGate Connect is a battery powered unit that has been designed to detect rats and provides a barrier between the entry section of a bait box and the bait section. AutoGate Connect units have two infrared emitters which continuously pulse light, and are reflected off the rat's fur, bouncing back to the Infrared detectors. If the beams from both detectors are broken simultaneously then this counts as one activation. Once the sensor is triggered 3 times, with at least a five minute interval between each activation, the gate will open allowing the rats to access the bait in the bait section of the box.

Note: There is a five minute interval between each of the 3 required activations to ensure that the gate is not triggered three times by one visiting rat.

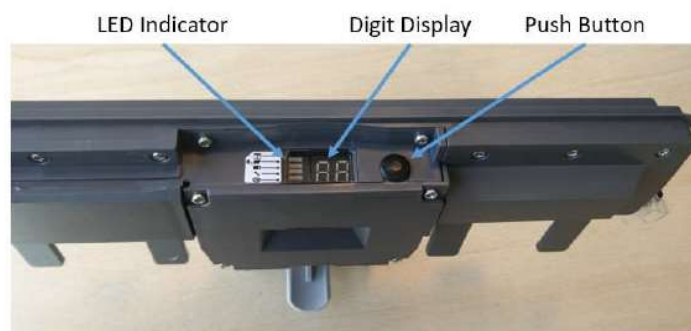
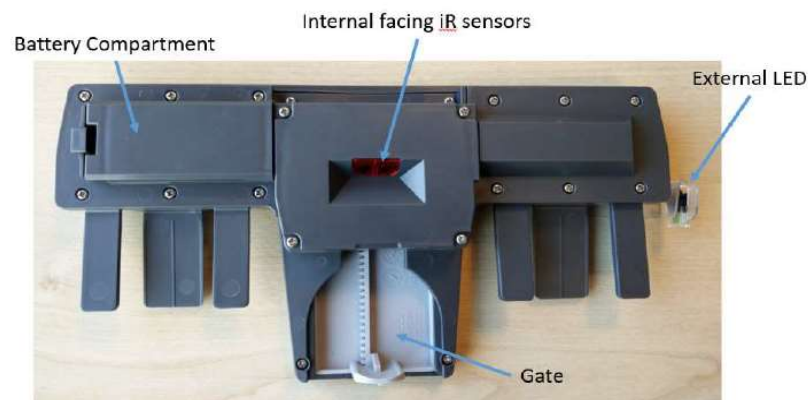
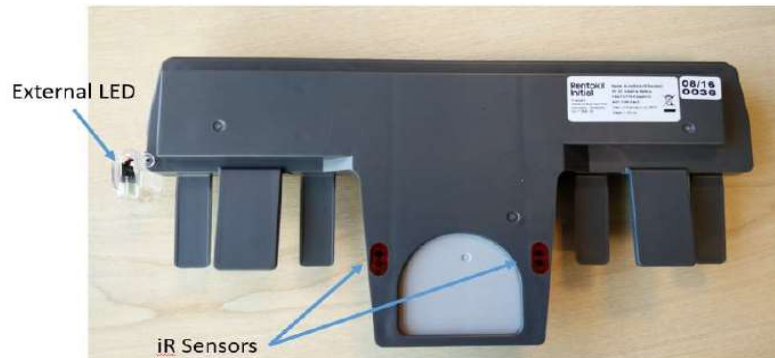
AutoGate Connect features a motorised door capable of opening and closing. This enables the bait to be isolated again after the baiting period by automatically closing again after, for example 5 days. There is also an enhanced display that enables the technician to view, for example, number of days since baiting started, number of activations and battery level.



The AutoGate Connect units will fit into FT150 and FT155 bait boxes (shown below).

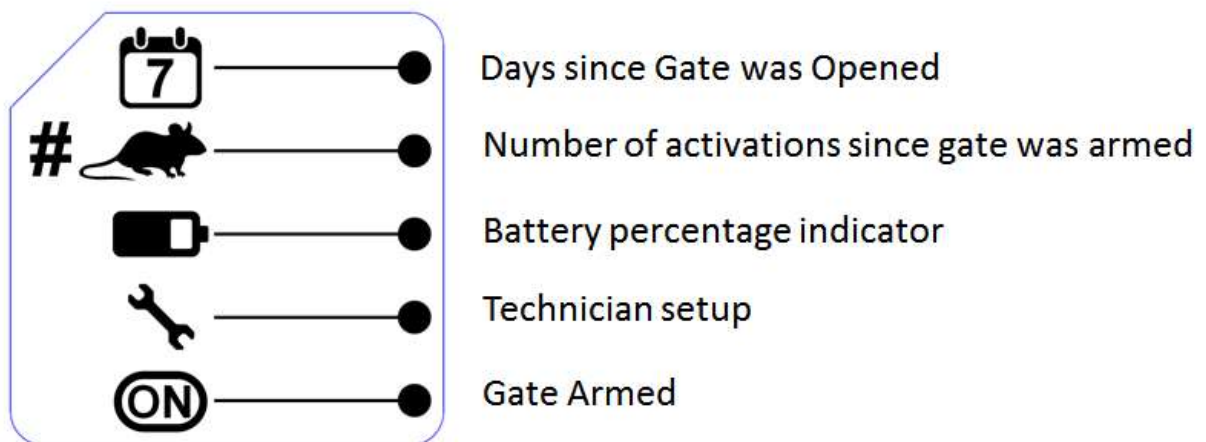


Hardware Overview



User Interface

Pressing the push button will activate the display and then successive presses will move the LED to the next position. The display items are shown below.



Days since Gate was Opened – represents the number of days since the gate was first opened. This corresponds to the number of days that you have been baiting.

Number of Activations since gate was armed – represents the count of the number of times that a rat has been in the bait box. This includes when the gate is open and closed.

Battery Percentage Indicator – represents the battery level as a percentage.

Technician Setup – when this item is selected all of the sensors must be activated in order to arm the AutoGate Connect device.

Gate Armed – means that the AutoGate has been set up correctly. Note: If this LED is lit together with any of the first 3 then the gate will continue to function after the display goes out.



Indicating that there have been 4 activations

User Interface Example



System showing it is in Battery indicator mode and 99% of the battery power is remaining




Installing an AutoGate

Open the bait box that you wish to install the AutoGate in.
With the “External LED” on the AutoGate on the right hand side, insert the AutoGate into place such that the door is in the middle of the bait box and the support arms are either side of the walls as shown below.



Setting the AutoGate

Push the button to scroll through the menu in order to set the AutoGate. The AutoGate is only successfully set when the **ON** indicator is displayed.

When the "Technician Setup"  is selected then the door will move up/down/up to test the motor and door sensors. If there is an error then E4 will be displayed on the display.

After successfully testing the door the display will show 2 dots to indicate that it is ready to test the sensors as shown below.



Ready to test sensors.



Move hand in front of the Bait side sensor and the middle bars will be displayed as shown.



Move hand in front of the right hand Entry side sensor and right bar is displayed as shown.



Move hand in front of the left hand Entry side sensor and left bar is displayed as shown.



Once all 3 sensors have been tested (in any order) the radio will scan for connection to a Control Panel. If connected it will display "r" and a number. The number is the signal strength from 0-9. E.g. "r8" as shown. If there is no connection only the "r" will be displayed while scanning.



Once the Gate is tested and connected to the Control Panel the ON symbol is lit as shown.



Checking the AutoGate

When the AutoGate is visited there are two options to check the functions:


Checking without resetting the AutoGate:

If the AutoGate is open when visited then it is possible to verify the number of days that the gate has been open, the number of rodent visits, battery percentage by pressing the button. The **ON** LED will also be lit (see below) in the case that the AutoGate is armed and in that case the full technician test is not required.

If the technician test is not carried out then the #Days and #Rodents counts on the display will not be reset and the gate will close as expected after the programmed number of open days.




Checking with a Service Reset:

If the AutoGate is closed when visited then it is recommended to do a full technician test. In this case scroll down to the  position and carry out the technician test.

This will reset the #Days and #Rodents counts on the display to zero.

Signal Strength Test

When finding a good position to place the bait box and AutoGate it is possible to run a signal test where the signal strength is shown every 2.5 seconds on the display.

Scroll to the  position until the two dots are displayed (shown blow). Press the button and the AutoGate will start Signal Strength test mode. Press the button again to return to the technician test. Note: This mode will timeout after 2 minutes.



In signal strength test mode, a value between "r0" and "r9" will be displayed. AutoGates should not be deployed when the signal strength shows "r0" and installing another Control Panel would be advised.



Changing the Battery

Alkaline batteries should be disposed of in accordance with local, national or state regulations, or recycled where such facilities exist. It is recommended that battery packs are replaced every 12 months, irrespective of use, to ensure that they are fit for purpose. Exhausted batteries are to be removed from the AutoGate and disposed of as above.

- 1) Remove the battery cover by pushing the clip



- 2) Remove the old battery and recycle.



- 3) Push the button to ensure that any remaining charge on the board is discharged before plugging the new battery into the board.



Advanced Settings

Depending on customer or country requirements it may be necessary to turn on/off or reduce the intensity of the external LED to avoid unwanted attention or to adjust the number of days that the gate remains open before closing again.

NOTE: The external LED is set to OFF as default.

Adjusting the External LED



The LED can be set to Low, Medium, High or OFF. To select the required mode follow the steps below:

1. While there is nothing on the digit display press and hold the button
2. Counter begins to count upwards from Zero
3. Once the counter has passed '10' release the button
4. Counter now shows either 0,1,2,3 (Off, low, Medium High)
5. Press the button to scroll through and choose a setting
6. The external LED will show the current setting
7. Release the button and wait 5 seconds for the setting to be stored

Adjusting the Gate open time

Once the door has opened and the bait exposed the time to which the door is closed can be modified from the default setting of 5 days. This can be set by following these steps:

1. While there is nothing on the digit display press and hold the button
2. Counter begins to count upwards from Zero
3. Once the counter has passed '5' but not yet reached '10' release the button.
4. Counter now shows a number between '0 – 30' (Note: 0 means that the gate will stay open and 1 to 30 is the number of days that it will stay open.
5. Press the button to scroll through and choose the required setting
6. Release the button and wait 5 seconds for the setting to be stored.



Connect Status

The messages that are sent to the server are:

Technician Test Pass: When the AutoGate passes through the technician test and displays the ON indicator.

Technician test Fail: If any of the tests fail when the AutoGate is tested

Technician Visit: If the AutoGate is visited and the button is pressed in any of the first 3 selections but the Technician test is not carried out.

AutoGate Closed: This is the initial state of the AutoGate and indicates that this gate has not been opened since it was last visited.

AutoGate Open: If a particular gate sees the programmed number of activations then the gate will open and report this status

AutoGate Remotely Opened: If another AutoGate in the same zone has detected activity then the server will send a command to the gate to remotely open and this status will be reported.

AutoGate Re-Closed: After the programmed open time (default 5 days) the gate will close and report this status.

AutoGate Re-Opened: If another activation is detected then the gate will open immediately and report this status. Note: other gates in the zone are not opened in this case.

iR Sensors Blocked: If there is an issue with the internal sensors then this error status will be sent back.

Other data that is sent back from the AutoGates is: Battery Voltage, Signal Strength, number of activations since reset and active count (i.e. not timed out).



Troubleshooting

Issue	Possible Solution
Nothing on the display when the button is pressed	Insufficient battery voltage - replace the battery pack
External LED does not flash when the gate is opened	The default is for the LED to not flash in the case of opened gates. This can be configured by "adjusting the parameters"
Autogate displays E1 during technician test	The iR sensors on the bait side have not been activated. Ensure that these are clean and not blocked and then re-check.
Autogate displays E2 during technician test	The iR sensors on the entry side have not been activated. Ensure that these are clean and not blocked and then re-check.
Autogate displays E3 during technician test	None of the iR sensors were activated during technician testing. Ensure that these are clean and not blocked and then re-check
Autogate displays E4 during technician test	The door did not activate the high and low position sensors. Ensure that the gate is not jammed.
r displayed prior to technician test	No LongReach radio beacons were found. Ensure that the Control Panel is running and that the network symbol is displayed. The Autogate could be out of range, move the Autogate nearer to the Control Panel to test that it can connect. An additional Control Panel could be required.
r- displayed prior to technician test	Beacon detected but no join response has been received from the Control Panel. If this persists for a few minutes then unplug the battery, push the button (to discharge the capacitor) and replug the battery. If this persists another cause could be that there are more than 300 devices connected to the control panel already.



Technical Details

AutoGate Connect

Power Supply

Battery supply

Use only Rentokil-Initial battery pack 300076
6v output - 4 x AA cell Alkaline battery pack

Interfaces:

Local Area Network (LAN)

868-928MHz depending on local Approvals
Rentokil Initial Proprietary Application Layer Protocol

Connect Device connectivity

Maximum Number of AutoGate
units per Control Panel

300

Physical:

Dimensions

308mm x 196mm x 60mm

Material

Halycon Polypropylene PCS18E – HB rated polymer to UL94

Weight

415g (excluding battery)

Operating Temperature

-15°C to +50°C

Environmental rating

IP21

Mounting

Mounts in the Rentokil FT150 & FT155 bait boxes

The Autogate is intended for outdoor use but should not be located where more than 3cm of standing water is likely to occur.

In extremely cold environments it should be ensured that more than 40% battery capacity remains before leaving the trap. In temperatures lower than -15C the gate may freeze causing errors to be reported

This product contains the LongReach radio module :

FCC ID: 2AK3PGSD-500349

IC ID: 22407-GSD500349

These will be shown on the approval label attached to the product.

