



The World leader in Security Fogging

Fault Analysis

The robustness and reliability of the **BANDIT** means that breakdowns or other failures are extremely rare.

However, in the event of a reported failure, the **BANDIT** will communicate a “trouble” signal to the Intruder Alarm Panel (when connected), together with flashing “OK” and “Failure” lights displayed on the **BANDIT**’s front panel.

To help identification of the kind of failure reported, the red “Failure” light will flash in a sequence in conjunction with the “OK” light, according to the exact failure. Each sequence lasts approx. 6 seconds, during which time the red “Failure” light will flash a pre-set number of times, which will indicate the nature of the failure, as per the table below.

Number of flashes per cycle	Reported Failure	Recommended Action
1 x	Fuse F2 and/or F3 blown	Check fuse(s) F2 and/or F3
2 x	Battery disconnected, or charge too low to read	Battery problem
3 x	Battery connected, but charge low	Battery or power supply problem
4 x	HY-3 Pack above 50°C	Environmental temperature too high or dusty textile front
5 x	MCU measures false values on Control Box pcb connector	Control Box connecting cable and/or check position DIP B3
6 x	Internal MCU failure	Push “Processor Reset” button. If no success, return to supplier.
7 x	Heat Exchanger incorrect temperature	Return to supplier
8 x	Internal cooling fan malfunction	Return to supplier
9 x	MCU measures false values	Return to supplier

With simultaneous failure reports (e.g., “F3 blown” and “Battery connected, but charge low”), the red “Failure” light will initially flash 1 x each cycle. When the first failure is resolved (in this case fuse replaced) the light will then flash 3 x each cycle to report the next failure, and so on in order of the above list.



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BANDIT 240 DB

(Version 3)

Security Fogging System

Service Guide

VERSION 3.4 2019



Another **BANDIT** product supplied by:

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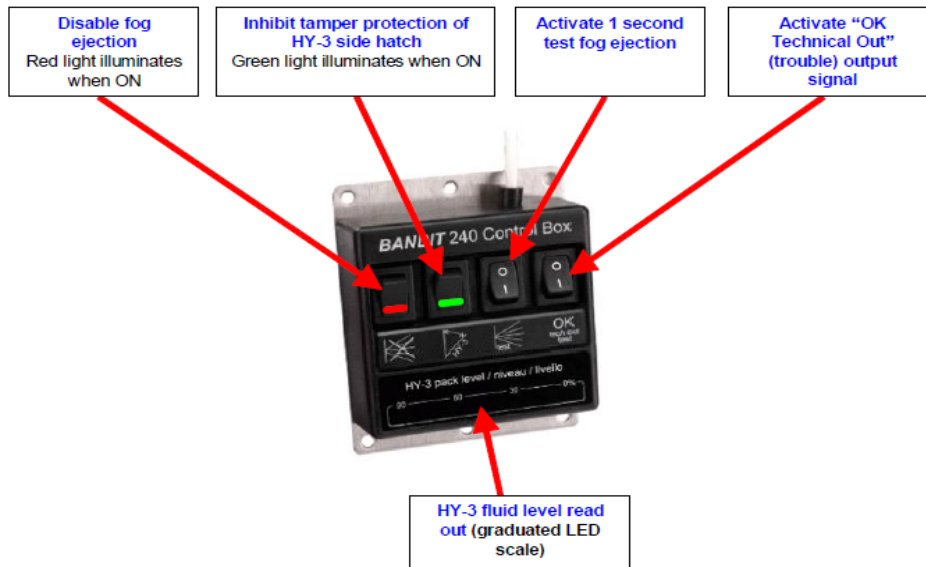
BANDIT

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Control Box

The **Control Box** is an essential servicing tool, which is why it is strongly recommended that one is fitted to all installations. From the **Control Box**, the **BANDIT 240 DB** can be interrogated and tested, and provides the following facilities:

BANDIT CONTROL BOX FUNCTIONS



- The **Control Box** should be located inside the Intruder Alarm Panel enclosure or, if space prohibits this, in a secure tamper protected enclosure near the Intruder Alarm Panel.
- Before conducting any service works on the Intruder Alarm System or the **BANDIT**, locate the **Control Box** and activate the appropriate control switch as shown above.
- When either the **"Disable Fog"** or **"Inhibit HY-3 Tamper"** switches are turned ON, the green **"OK"** and red **"failure"** lights will flash on the **BANDIT** front panel. When service works are completed, always remember to return the **Control Box** switches back to normal – the red **"failure"** light on the **BANDIT** front panel will extinguish.
- To service the **BANDIT**, carry out the procedures listed on the following pages, using the **Control Box** as indicated.

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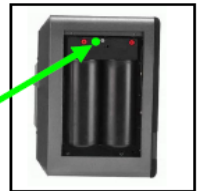
2. Insertion of new HY-3 Cylinder

Following the above procedure in reverse as follows:-

- Screw the M8 threaded rod end of the "T-Bar" handle fully into the casing of the replacement **HY-3** cylinder pack.
- Using the "T-Bar" handle, carefully and steadily push the replacement **HY-3** cylinder pack over the two guide pins, into the **BANDIT** housing, making sure that the connectors are aligned and slide into their respective receptacles on the inner wall.
- Using the "T-Bar" handle, screw in and tighten the two RED Allen Bolts.



Note – The **GREEN** HY-3 cylinder pack LED (next to the centrally located tamper pin) will illuminate according to the table below.



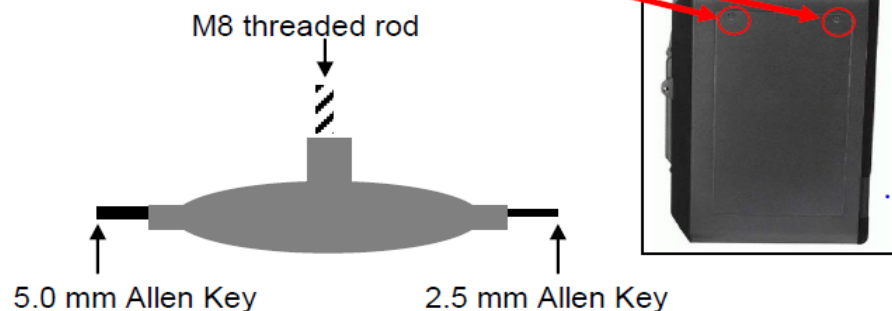
Functions of the HY-3 LED

- | | | |
|--|------------------|---|
| | - On permanently | - HY-3 pack installed correctly and accepted OK |
| | - Flashing | - HY-3 pack not accepted: i) Demo Pack fitted
ii) Illegally filled pack
iii) Wrong type of fluid |
| | - Flashing fast | - Low fluid level in HY-3 pack |
| | - Stays off | - Communication problem – check engagement of rear-mounted "D" plug connector, or unit may be faulty. |

- Replace the **BANDIT** side panel, using the "T-Bar" handle to tighten the 2 retaining screws.
- When completed, remember to turn off the "HY-3" button on the **Control Box** to ensure the side panel tamper circuit is activated again. The green light on the switch and the **BANDIT** front panel LED **"Failure"** will extinguish.
- Fully re-pack the old **HY-3** cylinder pack into the original box, and return it **within 14 days** to your **BANDIT** dealer for refilling.



- Remove the 2 screws retaining the side panel, using supplied "T Bar" handle which incorporates the required Allen Key (2.5 mm).



- Remove the side panel.
- Remove the two **RED** Allen Bolts using the other end of the "T Bar" handle (5.0 mm Allen Key).
- Screw the M8 threaded rod end of the handle fully into the **HY-3** casing and, using the handle, pull the cylinder firmly out horizontally
- The **HY-3** cylinder pack will slide out horizontally over the two guide pins and out of the **BANDIT** housing
- Remove the replacement **HY-3** cylinder pack from its packaging, ready for installation
- Remove the red protection cap from the replacement **HY-3** pack and place it on the old **HY-3** cylinder pack. This is in order to avoid damage during transportation
- Place the old **HY-3** cylinder pack into the packaging, in readiness for removal from site and subsequent transportation for refilling



Routine Service Checks

Routine service activities are the same for each installation option, consisting of the procedures shown below. The presence of the **Control Box** makes working on the **BANDIT 240 DB** very easy and safe, and allows all the main service activities to be carried out from a single location, remote from the **BANDIT** itself.

Note that due to a continued history of exceptional reliability for the **BANDIT 240 DB**, whilst a basic annual check is still recommended, service checks are now only necessary at **2 YEAR** intervals, as follows.

Basic checks recommended to be conducted annually and/or at each service interval

- Perform a test fog ejection. Ensure all persons in the immediate vicinity are informed, as well as the person responsible for fire safety procedures. Depending on the circumstances, this person may need to advise the local Fire Services that a test is being conducted (in order to avoid false alarm calls).



- Push and release the "TEST" button on the **Control Box** by pushing the "I" end of the switch. Being a momentary rocker switch type, it will automatically return to off "O".
- A one second fog ejection will take place.
- Following a successful test, open all available doors, windows, etc. in order to remove the fog as quickly as possible to avoid undue disruption for the customer.

- Ensure there is sufficient fluid remaining in the **HY-3** cylinder. If there is less than 25% (~ 12.5 seconds of fog ejection) of fluid remaining, it is recommended that the cylinder is refilled at the earliest opportunity. This is to ensure there is always enough fluid available to successfully create a full and efficient fog ejection if required.



- Examine the LED bar read out towards the bottom of the **Control Box** for confirmation of sufficient remaining fluid level.
- The LED bar read out is colour graduated for easy identification -

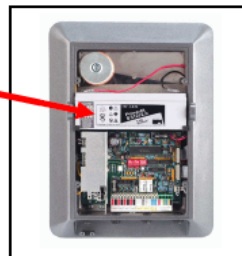


- Vacuum the textile front of the **BANDIT 240 DB**. Air intake for internal air circulation takes place through the front panel, so to maintain efficient cooling it is important that the textile is cleaned on a regular basis. *Note: on models manufactured after January 2005, the air intake takes place through slots positioned top and bottom of the HY-3 side compartment. Ensure these slots are clean and free from dust and debris.*

Checks required every TWO YEARS

- i) Carry out the "Basic" checks, as recommended.
- ii) In addition to the "Basic" checks, the **BANDIT 240 DB's** internal battery should be replaced every Two Years. It is a 2.3 Ah / 12 volt sealed lead acid type, and is located either:-

- In models manufactured before October 2004 – behind rear panel. This may require removal of the unit from its mounting bracket in order to gain access to the rear panel.



- Use the "Handy Boy" support aid for this purpose, which makes the whole procedure much easier.

- In models manufactured after October 2004 – behind side panel, below HY-3 cylinder. This panel can be removed with the unit still on its mounting support, by using the supplied "T Bar" handle which incorporates the required Allen Key and screw thread adaptors.



NB: It is recommended that, if a visit is made to replace the HY-3 Pack because it has been depleted, a service should be carried out at the same time. It is reasonable to assume that the unit must have operated a number of times in order for the HY-3 fluid to be depleted, and so it is appropriate to carry out a service without further delay!

Checks required Every FOUR YEARS

- In addition to the normal TWO YEARS checks, it is recommended that HY-3 Fluid Cylinders are returned to the manufacturer for a service check every 4 years from the time they are first installed, whether they are a New cylinder or a Refill.

Simply exchange the customer's HY-3 Cylinder Pack with a freshly serviced and filled unit and return the original to Bandit UK Ltd. Follow the procedures shown on Page 6 in this guide.

Replacing the HY-3 Cylinder Pack

If the **BANDIT 240 DB** and/or fitted **Control Box** indicate that the fluid level has depleted to **less than 30%** the HY-3 Cylinder Pack must be replaced. The "HY-3" LED on the front panel will flash to indicate when the fluid has depleted to this level.

Once this level is reached, the **BANDIT** will be able to eject approximately 15 seconds of fog before fully depleting the cylinder. To ensure the customer's premises will remain fully protected in all eventualities, the cylinder must be replaced at the earliest opportunity.

Because the **HY-3 Cylinder Pack** is hermetically sealed during manufacture, the fluid does not deteriorate under normal storage and usage conditions. However, because conditions of use can be unpredictable and maintaining reliability of operation is essential, it is recommended that the pack is replaced **every 4 years** as a precaution.

Procedure


1. Removal of old HY-3 Cylinder

- Ensure the **BANDIT** is **NOT** in "Guard" mode (indicated by the "Guard" LED on the front panel being extinguished). If this LED is illuminated, then "Guard" mode is ON.




Beware – opening the side access panel whilst the **BANDIT** is in "Guard" mode will interrupt the tamper protection circuit and cause a fog ejection to take place!

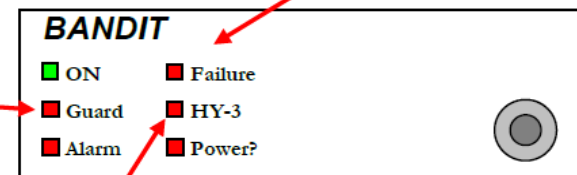
- The easiest way to ensure the unit is temporarily disabled is to use the **Control Box**.

- Operate the "HY-3" button  on the **Control Box** by pushing the switch.



- The green light on the switch  will illuminate and the **BANDIT** front panel LED "OK" and "Failure" lights will start flashing approx. twice per second (~2 Hz). This will ensure the side panel tamper circuit is temporarily disabled, allowing the panel to be opened safely.

Ensure "Guard" LED is extinguished



Flashes to indicate low HY-3 fluid level