

## INNER RANGE. INCEPTION - SECURITY AND ACCESS CONTROLLER



### MANUFACTURER'S RECOMMENDED ROUTINE MAINTENANCE.

This document outlines the Manufacturer's recommended routine maintenance procedures for Inner Range Inception systems.

#### **Australian & New Zealand Standards.**

Routine maintenance on Intruder Alarm Systems installed in a client's premises should be performed in accordance with:

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| AS/NZS 2201.1:2007 | SECTION 5. MAINTENANCE AND SERVICE. |
| AS/NZS 2201.1:2007 | SECTION 6. RECORDS AND REPORTS.     |

**Note that this standard requires that routine maintenance be performed at least once per year.**

Copies of this standard can be purchased online from:

Standards Australia. SAI Global Website: <http://www.saiglobal.com/shop>  
Standards New Zealand. Online Shop: <https://www.standards.govt.nz/>

#### **Peripheral Devices.**

Specific routine maintenance procedures for individual items of peripheral equipment connected to the Inception system equipment are not included in this procedure. E.g. Movement Detectors, Smoke Detectors, Warning devices, Batteries, Access Readers, etc.

Note that operation of most peripheral devices will be performed as part of the test procedures required in this maintenance procedure; however, this may or may not meet the 3<sup>rd</sup> party manufacturers recommended routine maintenance procedures.

If required, routine maintenance procedures for peripheral equipment should be obtained from the suppliers or manufacturers of those devices.

As a minimum, follow the procedure described in AS2201.1:2007

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| Detection Devices.                             | Refer to Clause 5.2.1.2 (c)                     |
| Audible and Visible Alarm and Warning Devices. | Refer to Clause 5.2.1.2 (g) and Clause 3.16.2.9 |

#### **Automated Testing.**

Refer to the Inception Controller's embedded web interface for details of the following Inception system features that can be employed to provide some automated system testing:

-Time Report (Periodic Test Reports).

*Test Report options are provided for each of the Reporting paths.*

*These options are found in 'Configuration' -> 'General' -> 'Alarm Reporting'.*

*Select the reporting path (e.g. Skytunnel or T4000) then program the "Test Report Frequency" and "Test Report Time of Day" as required in consultation with the Central Monitoring Station.*

-Automatic Battery Testing.

*The 'Battery Test' options are found in 'Configuration' -> 'General' -> 'System'.*

*(Please read the details provided via the Info button next to the "Test Frequency" option.)*

*When Battery Testing is enabled in the system programming, each relevant module must then be enabled for battery testing and a "Battery Test Duration" programmed in the 'Configuration' -> 'Hardware' pages.*

These automated functions are not designed to replace any of the Routine maintenance procedures, but will further enhance the integrity of the system during normal day-to-day operation.

## Recommended Routine Maintenance Procedure.

The following information and devices will be required to perform the procedure:

- Telephone number for the Central Monitoring Station (If the system is monitored off-site).  
Note: To perform testing and/or maintenance work on monitored systems, you must be authorized to do so. Central Stations have procedures for identifying authorized personnel.
- System Installation records including location of all equipment and a list of all Zone Inputs.
- A PIN Code &/or an Inception web interface login with adequate permissions to perform the required operations.
- An access credential with appropriate permissions (e.g. Card or Fob), if the system includes access control readers.
- A Multi-meter.
- A battery powered lamp or torch may be necessary.
- Special testing devices or procedures may be required if testing of Smoke, Heat, Seismic and Glass-break detectors, etc. is required.

| TASK                              | FREQUENCY    | DESCRIPTION   |
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| Notify the monitoring company.    | As required. | If the system is monitored, the Central Station staff must be notified and asked to place the system on “test” before any tests are made. Clarify with the Central Station which alarm responses will be suspended while the system is on test.<br><br>To perform testing and/or maintenance work on monitored systems, you must be authorized to do so. Central Stations have procedures for identifying authorized personnel. |
| Notify personnel on the premises. | As required. | Prior to any test that will impact on any personnel, ensure that all affected personnel and appropriate supervisory and/or management staff are given any necessary notification, warning or instructions.<br>e.g. Testing of Zone Inputs, Sirens and other Warning Devices.  |

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| Equipment schedule.        | Once per year. | Check the installation, location and siting of all equipment and devices against the records supplied by the installation company.<br>Record and report any discrepancy.   |
| Wiring and conduits.       | Once per year. | Inspect all visible wiring and conduits.   |
| Dust, moisture and vermin. | Once per year. | Check for ingress of dust, moisture, condensation and vermin into all equipment enclosures.<br>If excessive moisture or foreign matter is present, check enclosure location, environment, mounting method and cable entry points for sources of entry and take steps to rectify. |

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| Power Supply.  | Once per year. | Check that all mains operated Modules and Power supplies are connected to a mains outlet and are operational.  |
| Inception Battery-backed Power Supply Output Voltage.<br>13.75V +/- 2%<br><br>13.75V +0 / -15% | Once per year. | Test DC Voltage across the “+” and “-” Output Terminals on all Power supplies.<br><br>a) Under normal non-alarm conditions with external power source (AC mains) connected.<br>b) Under alarm conditions with external power source (AC mains) disconnected. |

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| Detector supply voltage.<br><br>13.75V +/- 2%<br><br>13.75V +0 / -15% | Once per year. | Test DC Voltage across:<br>i) The two sets of “VOUT +/-0V” Terminals on the Inception Controller.<br>ii) The “DET+” and “DET-” Terminals on all Battery-backed Modules and Power Supplies:<br><br>a) Under normal non-alarm conditions with external power source (AC mains) connected.<br>b) Under alarm conditions with external power source (AC mains) disconnected. |
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| Batteries.   | Once per year.  | Check that all battery-backed Modules and Power Supplies have the battery fitted and connected to the “BATT+” and “BATT-” Terminals.<br>-Inception Security Controller.<br>-Integriti Power supplies. (Battery backed)<br>-3 <sup>rd</sup> Party Power supplies. (Battery backed)                       |
| Battery charge voltage.<br>13.75V +/- 2%<br><br>NOTE: When mains power is restored following an AC fail condition, the Battery charge voltage may range from 11V to 13.75V while the Battery is re-charging. | Once per year.  | Test DC Voltage on the “BATT+” and “BATT-” Terminals on the following Modules:<br>-Inception Security Controller.<br>-Integriti Power supplies. (Battery backed)<br>-3 <sup>rd</sup> Party Power supplies. (Battery backed)   |
| Battery replacement.   | As specified by the Battery manufacturer.<br>OR No more than 3 years. | Replace the existing Sealed Lead-acid battery with a battery of the same specifications.<br>Record the installation date of the new battery where it is clearly visible on the battery itself, or on a label clearly visible within the equipment enclosure and also in the system maintenance records. |

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| LCD Terminal keys.     | Once per year. | Check operation of every key on any LCD Terminal keypads installed in the system.<br>Observe that labeling on all keys is clearly visible.<br>Observe that keypad backlighting is operational on LCD Terminals.  |
| LCD Terminal displays. | Once per year. | Observe all LCD display characters are operational.<br>e.g. Logon and View the Review log. MENU, 1, 1.<br>Observe LCD backlight is operational.<br><br>If any LCD Terminal LEDs are configured to provide indications of Area status or other functions, test the operation of the LED/s by exercising the entity that the LED represents.<br>(Check the “LED State Display” settings for each LCD Terminal in ‘Configuration’ -> ‘Hardware’ -> ‘LCD Terminal x’ under the ‘Associations’ tab) |

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| Check Real Time Clock  | Once per year.   | <p>Check that the system real time clock is correct. This can be done by one of the following methods.</p> <p>a) Via an LCD Terminal.</p> <p>i) If an LCD Terminal includes the date and time in its default display, simply check that the correct date and time is displayed.</p> <p>ii) If the date and time is not displayed by default, perform the following operation:<br/> LCD Terminal: Logon to the LCD Terminal with your PIN code. Press &lt;MENU&gt;, 1, 1, and then check that the correct date and time is displayed. This is the time/date stamp on the most recent review log event which will be your logon operation. Press &lt;END&gt;.</p> <p>c) Via the Web Browser.<br/> The current date and time can be viewed via the web interface 'Configuration' -&gt; 'General' -&gt; 'Date and Time'.</p> |
| Test operation of Access Reader Inputs and Outputs.  | Once per year.   | <p>Test the operation of all Access Readers using appropriate User ID token/s (i.e. Card, Keyfob, etc)</p> <p>Results of Reader operation and response of Reader LED/s and Beeper will depend on system programming. The required operation and test method should be recorded in the system maintenance records.</p>  |
| Test the Secondary (Backup) Communications format. (If provided)   | As agreed between the Alarm Company and the Client, but not less than once per year. *See Notes. | <p>NOTE: Must be pre-arranged in consultation with the staff at the Central Monitoring Station/s.</p> <ul style="list-style-type: none"> <li>-Disconnect the Primary (Main) communications format.</li> <li>-Perform an operation that triggers reporting.</li> <li>-Check that, after attempting to communicate via the Primary format, the system reports successfully via the Secondary format.</li> <li>-Re-connect the Primary communications format.</li> </ul> <p>e.g. If reporting is via a T4000 that provides Ethernet as the primary path and GPRS as the secondary path, then you might temporarily disconnect the Ethernet cable from the T4000 for this test.</p>  |
| Test the Primary (Main) Communications format. (Note: May be performed in conjunction with Zone Input Testing) | As agreed between the Alarm Company and the Client, but not less than once per year. *See Notes. | <p>NOTE: Must be pre-arranged in consultation with the staff at the Central Monitoring Station/s.</p> <ul style="list-style-type: none"> <li>-Perform an operation that triggers reporting.</li> <li>-Check that the system reports successfully on the primary communications path.</li> </ul> <p>Note that this test may be conducted in conjunction with the following Zone Input Testing if reporting of the Zone Input alarms is also to be tested.</p>   |

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| <p>Test Zone Inputs (Detection devices).</p> <p>Test Areas programmed to Report.</p> <p>Note: Special testing devices or procedures may be required if testing of Smoke, Heat, Seismic and Glass-break detectors, etc. is required.</p> | <p>As agreed between the Alarm Company and the Client, but not less than once per year.<br/>*See Notes.</p> | <p>-Obtain a list of all Zone Inputs to be tested.<br/>-Test each Zone Input by causing it to switch from the Sealed state to Un-sealed (Alarm) <u>and</u> back to Sealed.<br/>-The 'Review Events' log can be used to monitor the Zone Activity. It can be accessed via the web interface 'State/Control' -&gt; 'Review Events', the "Review Events" shortcut on the 'Dashboard' (depending on Operator profile), or via an LCD Terminal (MENU, 1, 1).<br/>-Check off each Zone on the list as it is successfully tested.<br/>-Record and Report any discrepancy.</p> <p><u>Many Alarm Companies recommend that Zone Input Testing includes reporting the Zone Input Alarms to the Central Station to fully test the alarm system operation. When this type of testing is required, the following points must be noted.</u></p> <p>-The testing must be pre-arranged in consultation with the staff at the Central Monitoring Station/s.<br/>-The relevant Area/s must be turned On.<br/>i.e. The Areas containing the Zones and any other Areas to be tested.<br/>-After testing turn the relevant Areas Off again.<br/>-Obtain the Central Station report of all Zone Input Alarms/Restores, and Area Opens/Closes reported during the Testing procedure.<br/>-Compare your Zone/Area list and Central Station report to ensure that all tested Zone Inputs reported Alarm <u>and</u> Restore, and all tested Areas reported Close <u>and</u> Open.<br/>-Record and Report any discrepancy.</p> |
| <p>Test Warning Device Outputs.</p> <p>(Note: May be performed in conjunction with Zone Input Testing)</p>  | <p>As agreed between the Alarm Company and the Client, but not less than once per year.<br/>*See Notes.</p> | <p>NOTE: The central station staff and on-site staff may need to be notified before these tests are made.</p> <p>Test the operation of each audible and visible warning device.<br/>-Turn On the appropriate Area<br/>-Activate a detection device or User operation that is programmed to trigger the warning device.<br/>-Check that the warning device operates as specified.<br/>-Record and Report any discrepancy.</p>   |
| <p>Modifications.</p>   | <p>As required.</p>   | <p>Any modifications to the system as a result of the maintenance procedure must be recorded and reported.</p>   |
| <p>Client approval.</p>   | <p>At the conclusion of every routine maintenance visit.</p>  | <p>Obtain the signature of the client or the client's representative on the maintenance record.</p>  |

**\*NOTES:**

The frequency for testing the operation of all Detection Devices, Audible and Visible Alarm Warning Devices and Remote signaling (Reporting) operations should be determined according to the needs of the particular installation.

The Australian Standard AS2201.1 specifies that these tests must be carried out at least once per year, however some Central Stations and Clients prefer more frequent testing to ensure the integrity of the system.

e.g.

- Sites requiring a higher level of security monitoring, or that are prone to interference or harsh environmental conditions may choose to have these tests carried out quarterly or even more frequently.
- Very large sites with hundreds of detection devices may choose to do testing every 6 months with 50% of the detection devices being tested on each visit.
- Sites where the automated testing functions in the product have been enabled and properly implemented may find that annual routine maintenance is adequate.