5   Commissioning and Maintenance

5.1   Starting Up

After installing the detector, it is necessary to initiate Training Mode to allow the system to learn the locations of the Emitters and specific characteristics of the installation. Follow these steps to initiate Training Mode:

1. Ensure that all Emitters are activated. Battery-powered Emitters are activated automatically by locking the optical sphere in place, while externally powered Emitters activate after locking-in and powering the unit as described in Section 4.2.11.
2. Apply power to the Imager to initiate Training Mode.
3. After powering-up the Imager, the Imager automatically searches for Emitters in its field of view to record their position and timing. During this time the Trouble LED on the Imager will indicate that the detector is in Training Mode. Training Mode takes a maximum of 10 minutes before the detector either enters normal operation or reports a Trouble (Fault).
4. From Imager units with firmware version 4 or greater, after a successful system commissioning, the Imager will retain the location of the Emitter(s). From Imager units with firmware version 5 or greater, after a successful system commissioning, the Imager will retain the reference levels. A partial commission of power cycling will not clear the location of the Emitter(s) or the reference level. In order to clear the stored Emitter locations and the reference levels, DIP switches 3, 4 and 5 should be set to 0 for a period exceeding 10 seconds, while the Imager is powered. During this period, the Imager will flash the yellow Fault LED rapidly. To commence a new System commissioning, set DIP switches 3, 4 and 5 to a valid setting. After a period of 10 seconds, where the front cover can be re-attached, the Imager will commence commissioning.
5. If OSID is used in an environment where there may be substantial levels of background attenuation, the system should be commissioned when there is minimal attenuation, such as during night time or weekends where there is little activity at the site. This will ensure the system commissions the correct power levels and operates as intended.

Note: After a power failure to the system (lasting 10 seconds or more), the system will re-initiate Training Mode. During power-up, the Fire relay will be in the non-fire states; and the Fault relay will indicate fault until commissioning has successfully completed. For Imager units with firmware version 5 or greater, a power failure will not clear the reference levels. Instead, a full commissioning is required to clear the reference levels.

5.2   Acceptance Testing

After start up, the sensitivity of the detector should be tested using a calibrated method such as a smoke test, or inserting a special optical filter into the beam path(s). This filter can be ordered from Xtralis. Testing can be done by putting the filter in front of the imager or in front of the emitter(s).

Putting the filter in front of the imager is the fastest way and a double blink indicates that all Emitters are in Alarm.

Applying the filter in front of each emitter in a multi-emitter system will, particularly at initial start-up, guarantee that all emitters are aligned with their proper imager.

Prior to testing, ensure that the detector is isolated and the proper fire authorities and building maintenance personnel are notified.

Components that do not pass the sensitivity tests should be cleaned or replaced. Refer to Section 5.3 for preventative maintenance instructions.

Note: The OSID system will not respond to test smoke from aerosol cans nor to filters supplied with traditional third party beam detectors, as it recognizes that these are not real smoke.

5.3 Maintenance

Although the OSID detector is highly tolerant to dust and dirt, a regular schedule of maintenance should be implemented to ensure the best possible detector performance. Visual inspection and maintenance testing similar to the sensitivity test performed during the commissioning process should be performed yearly or in accordance to local codes and standards or as indicated by the Contamination fault in Table 2-1.

Preventative maintenance simply includes wiping optical surfaces using a damp lint-free cloth. Make sure that during the cleaning of the detector its alignment remains unchanged. If the alignment was changed, it is advised that Training Mode is re-initiated. Training Mode may be initiated by powering down the Imager for 10 seconds or more, then powering up to re-initiate system alignment.

The only serviceable part in the OSID detector is the alkaline battery, which can be replaced. Refer to Section 7.3 for instructions on replacing the alkaline battery.

5.4 Troubleshooting

Imagers with firmware version 4.00.03 or greater have an internal onboard event log. Connecting the OSID Diagnostic Tool, refer to Section 7.6, will allow this event log to be downloaded for further Alarm and Fault analysis and troubleshooting.

7.2   Changing Laser Alignment Tool Batteries

When the laser alignment tool is switched on to be used and no light source is emitted, the batteries need to be replaced. The OSID Laser Alignment Tool uses three LR44 button cell batteries.

To change the batteries, unscrew the front half of the tool (1) from the back part of the alignment tool. Take out the three existing batteries and insert the new batteries, with the positive (+) battery terminal facing out of the laser tube. When the new batteries have been inserted, screw the two halves of the tool back together.
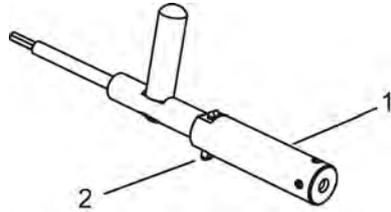
Legend	
1	Front part of alignment tool
2	Switch part of alignment tool

Figure 7-2: Laser Alignment Tool

Notes:

- Used batteries should be disposed of according to local codes and standards.
- Ensure that the laser alignment tool is left switched off when not in use. A piece of adhesive tape over the switch in the off position will ensure it does not switch on inadvertently.

7.3   Removing OSID Emitter Battery

The OSID Battery Emitter (OSE-SP-01, OSE-HP-01) contains an alkaline battery pack. When the battery has been drained and the Emitter is no longer functioning, the battery must be removed from the Emitter and disposed of according to local codes and standards.

To remove the batteries, first take the front cover off the Emitter using a flat blade screwdriver as shown in Figure 7-3.
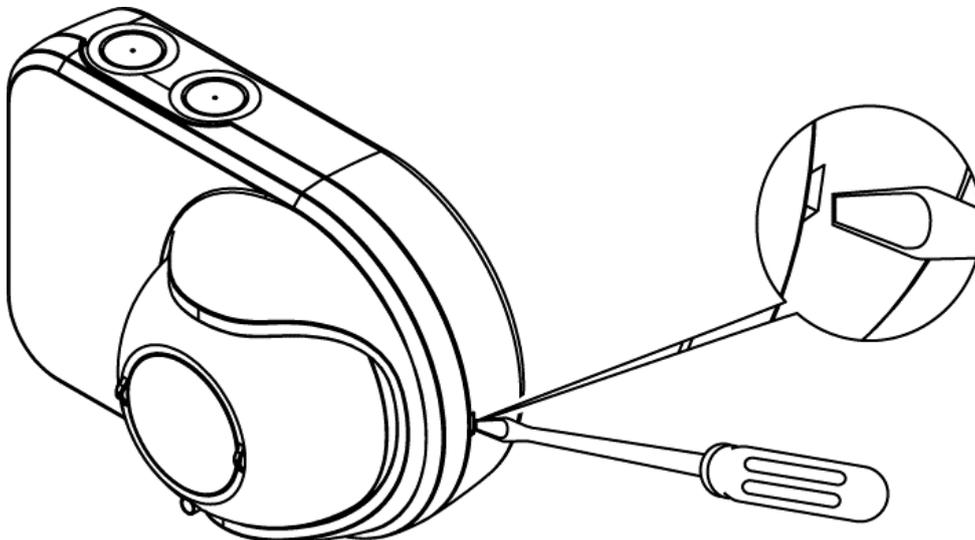

Figure 7-3: Remove front cover from Emitter

Unplug the battery from the power connector. Detach the Velcro retaining strap and remove the battery pack. Insert new battery pack (OSE-RBA), plug back into the power connector and reattach the Velcro retaining strap.

Notes:

- Do not attempt to open or service batteries.
- Do not dispose of the battery along with general waste. Contact your local waster disposal agency for the address of the nearest battery deposit site.