

## TECHNICAL TIPS

**PRODUCT:** BioLock+ Standalone

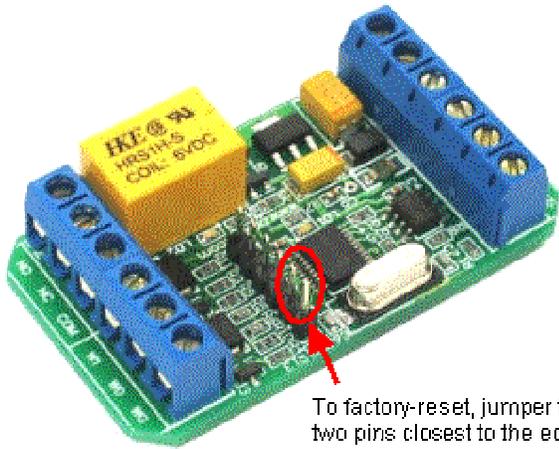
**Subject:** Secure Input Output Boards (SIOBs)

**Date:** 14<sup>th</sup> November 2007

**Revision:** 4

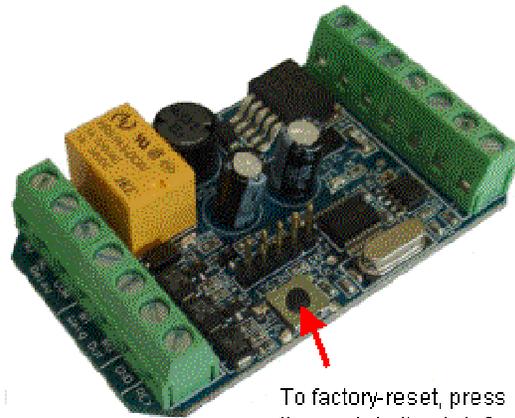
There are currently two hardware versions of the Secure Input Output Board (SIOB – often referred to as “the relay board”) in use.

They can be distinguished by their appearance. New SIOBs are wider (one more screw terminals at each end – seven instead of six), with the board coloured blue (old ones are green), yellow or green screw terminal blocks (old ones are blue), a reset push-button (old ones had no push-button), labelled underneath Ver. 1.04 or greater (old ones are labelled Ver. 1.02) and have increased capability.



To factory-reset, jumper the two pins closest to the edge turn on power then remove Jumper

**“Old” SIOB**



To factory-reset, press the push-button briefly with power on

**“New” SIOB**

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## Compatibility

	Network BioLock	Standalone BioLock	Standalone BioLock with several SIOBs
Old SIOB	OK	<b>Not compatible</b>	<b>Not compatible</b>
New SIOB	OK, added REX*	OK, added REX~	OK with version 2 firmware^

\* REX added in Network BioLock firmware version 12 or greater

~ REX added in Standalone BioLock firmware builds later than August 17<sup>th</sup> 2007

^ Multiple SIOB support added in Standalone BioLock firmware builds later than November 7<sup>th</sup> 2007 and in Version 2 SIOB builds later than November 7<sup>th</sup> 2007

Changes to SIOB operation include:

- REX connection available at marked terminals (refer to wiring diagram supplied in kit)
- A 5VDC regulated output (required for Standalone BioLocks)
- A shield connection for RS-485 shielded cables
- Factory-reset by means of a push button instead of jumpers and power cycle

The key difference in wiring installations between old and new SIOBs is that the new SIOBs have a 5VDC regulator able to supply power to the Standalone BioLocks.

Standalone BioLocks **must** be connected **only** to new SIOBs, and the +ve power connection **must** be **only** to the Vout screw terminal, **not** the +Vin (12VDC) screw terminal. Connecting a Standalone BioLock to the +Vin 12VDC power supply will irreparably damage the unit.

All SIOBs “pair” with their BioLocks over their encrypted RS485 link the first time they power up. This is a security feature so that one BioLock cannot be swapped with another and improper access gained. If the pairing is lost (perhaps because of a physical swap, or a factory reset of the BioLock), the SIOB will de-pair, go off-line and need a factory reset.

To factory reset a “new” SIOB, simply depress the push-button switch briefly whilst the BioLock unit/SIOB is powered up. To factory reset an “old” SIOB, locate

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the header-pin row close to the middle of the SIOB, jumper the two outside pins (closest to the edge of the SIOB) and power up the BioLock unit/SIOB.

Please refer to the above diagrams to locate the factory-reset points.

The units will then re-pair in a few seconds.

### **Multiple SIOB support**

Multiple-SIOB support is available for Standalone BioLocks only. Please see the Technical Tip titled "Multiple SIOBs".

Multiple SIOB support (for operating several separate operations depending on the finger verified) requires BioLock+ Standalone firmware builds dated November 7<sup>th</sup> 2007 or later (version 2.x.x or greater), **AND** SIOB firmware builds dated November 7<sup>th</sup> 2007 or later (version 2.02 or greater).

SIOBs with version 2.02 or greater firmware can be distinguished in three ways: The SIOB is labelled with the firmware version on the underneath of the SIOB. Version 2.02 builds have only 2 pins remaining of the 5 on the programming connector adjacent to the reset switch. And version 2.02 SIOBs flash their red LED twice on power-up (old SIOBs flash only once).

Note that SIOB firmware cannot be updated in the field. If you wish to add multiple SIOBs to an existing BioLock+ Standalone system, you will need to upgrade the BioLock+ firmware, AND the SIOB firmware if they are of a lesser firmware status than the above. SIOB firmware cannot be upgraded in the field – they must be returned to the manufacturer via the distributor you purchased the unit from in the first place.

### **FURTHER INFORMATION:**

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*Bio Recognition Systems Pty Ltd is a 100% Australian owned and operated hardware and software developer and manufacturer. Located in Lane Cove, Sydney, Bio Recognition Systems Pty Ltd began by offering its customers software and hardware solutions in 1999. Its leading edge BioMetric technology harnesses the power of the newest technology in fingerprint recognition.*

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