Wireless Sensor Networks Technical Note LORD Corporation, MicroStrain Sensing Systems

# TC-Link®-6CH-LXRS<sup>™</sup> Internal Dip Switches

#### **Overview**

The <u>TC-Link</u><sup>®</sup>-6CH-LXRS<sup>™</sup> has two internal dip switches on its circuit board which allow the user to select the power mode. By default the TC-Link<sup>®</sup>-6CH-LXRS<sup>™</sup> is powered by its internal rechargeable 3.7 volt 650 mAh Lithium Ion battery. The TC-Link<sup>®</sup>-6CH-LXRS<sup>™</sup> may also be configured to operate with either 1) an internal non-rechargeable 3.6 volt AA 2.4 Ah Lithium Ion battery or 2) external batteries or other power source. The dip switches must be configured properly in order for the particular power mode to function. This technical note assumes some familiarity with the TC-Link<sup>®</sup>-6CH-LXRS<sup>™</sup>.

## **Access to Dip Switches**

The dip switches may be accessed by removing the 4 screws holding the TC-Link®-6CH-LXRS top cover in place. Figure 1 indicates where the SW1 and S1 dip switches are located and what each position signifies. When reinstalling the cover, insure that the slots on the underside of the cover line up with the 6 thermocouple quick connects.

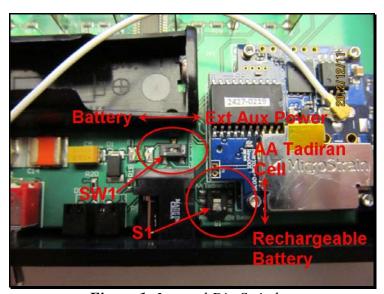


Figure 1: Internal Dip Switches

#### **Configuring Switches**

The dip switches are 2-position switches. It may be possible to position the switch half-way in between which would cause the node to become inoperable. To rectify, just push the switch fully to either side. Figure 4 describes the position of each switch in order to service the particular power mode. For example, if we were to externally power the TC-Link®-6CH-LXRS<sup>TM</sup> with a Tadiran TL-5930 3.6 volt 19 Ah D size Lithium Ion battery (Figure 2) and connect it via the power jack on the TC-Link®-6CH-LXRS<sup>TM</sup> enclosure sidewall (Figure 3), we would configure the dip switches as shown in the grayed row in Figure 4. SW1 would be set to the *Ext Aux Power* position and S1 would be set to the *AA Tadiran Cell* position.



Figure 2: D-cell, battery holder and barrel connector



Figure 3: Installing external power barrel connector into power jack

Power Range	Power Mode	SW1 switch position	S1 switch position
+3.6 VDC	Supply from internal	Battery	AA Tadiran Cell
	AA socket		
DO NOT USE	DO NOT USE	Battery	Rechargeable Battery
+3.2 to +9.0 VDC	Supply from external power jack	Ext Aux Power	AA Tadiran Cell
+5.0 to +9.0 VDC	Supply from internal rechargeable battery (Factory Default)	Ext Aux Power	Rechargeable Battery

Figure 4: Configuring Dip Switches

#### **Default**

When operating the TC-Link<sup>®</sup>-6CH-LXRS<sup>TM</sup> with its internal rechargeable battery as well as when recharging the internal rechargeable battery, set SW1 to  $Ext\ Aux\ Power$  and S1 to  $Rechargeable\ Battery$ .

## **Support**

MicroStrain support engineers are always available to expand on this subject and support you in any way we can.

## **LORD Corporation**

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