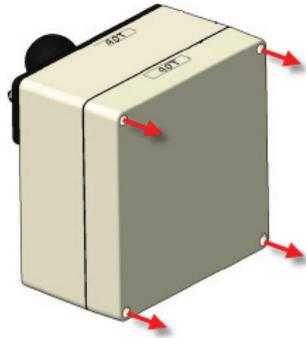
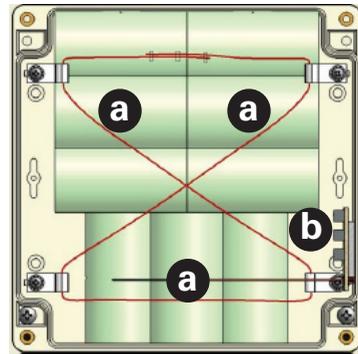


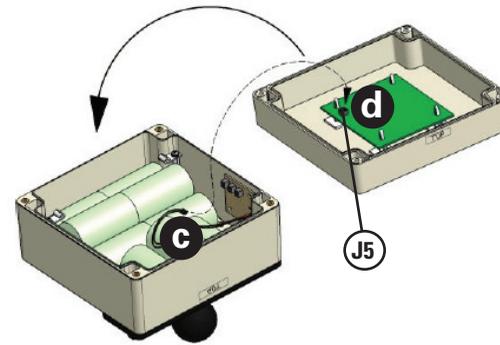
# 1 Connect Batteries



**Open Repeater**  
Unscrew (4) cap screws; remove Repeater cover. Remove and discard foam packaging material (if present).



**Connect Battery Packs to Small Board**  
Connect cables from each battery pack (a) to connectors on the small board (b). Make three connections in total; order is not important.  
**DO NOT PINCH OR STRESS CABLES.**



**Connect Small Board to Repeater Board**  
Connect cable (c) from small board to Repeater board (d) on the cover at J5. Reattach cover aligning "TOP" labels together. Snug down screws using an X-pattern.

## Warnings

### Lithium Thionyl Chloride Batteries

Sensys Networks uses Lithium Thionyl Chloride batteries in the following products:

- Sensors (VSN240-F, VSN240-T, VSN240-S)
- Repeaters (RP240-B, and RP240-B-LL)

Lithium batteries are widely used in electronic products because they contain more energy per unit -weight than conventional batteries. However, the same properties that deliver high energy density also contribute to potential hazards if the batteries are damaged. Improper use or handling of the batteries may result in leakage or release of battery contents, explosion or fire.

Following are the recommendations of the battery manufacturer for proper use and handling of batteries in the Sensys devices mentioned above:

- DO NOT charge or attempt to recharge the batteries (batteries are NOT rechargeable)
- DO NOT crush or puncture batteries
- DO NOT short-circuit the batteries
- DO NOT force over-discharge of the batteries
- DO NOT incinerate or expose batteries to excessive heating
- DO NOT expose battery contents to water
- DO dispose of batteries and devices containing batteries in accordance with local regulations

**Sensys Networks sensors contain no serviceable parts and should never be disassembled. Installation and removal of sensors from pavement should only be done by trained personnel and care should be taken to insure that the sensor casing is not punctured or crushed.**

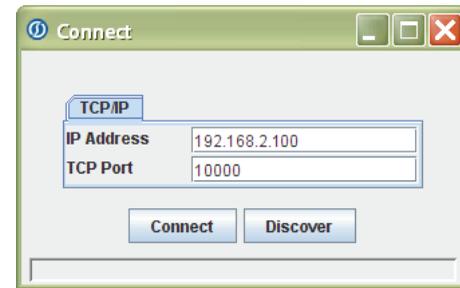
Additional safety information is available from the battery's manufacturer:

Sensor battery cell: [www.able-battery.com/msds/ABLE\\_MSDS\\_ER14505.pdf](http://www.able-battery.com/msds/ABLE_MSDS_ER14505.pdf)  
Repeater battery cell: [www.able-battery.com/msds/ABLE\\_MSDS\\_ER34615.pdf](http://www.able-battery.com/msds/ABLE_MSDS_ER34615.pdf)

# 2 Connect to AP



**Run TrafficDOT**  
Click the icon to start the Sensys configuration program.



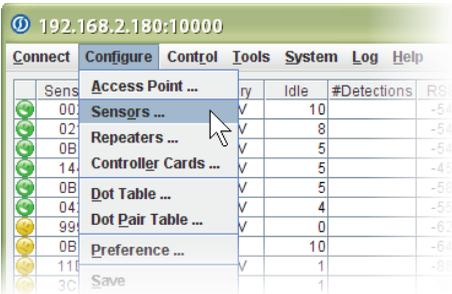
**Type in IP Address**  
Complete the form as shown above and click **Connect**.

Sensor ID	Version	Battery	Idle	#Detections	RSSI	LQI	PER	Present	Mode	Slot#	Repeater	Channel	Adv Settings
0B9F	49.3.3	3.63V	9		-40	96	--		B	9	Direct	7	Z&X
0429	49.1.7	3.63V	4		-72	95	--		RP	22/0	Direct	7 -> 5	Z&X
0215	49.1.7	3.22V	3		-54	97	--		RP	14/0	Direct	7 -> 6	Z&X
0C21	49.3.3	3.63V	3		-45	97	--		B	48	0429	5	Z&X
0C36	49.3.3	3.63V	2		-43	96	--		B	12	Direct	7	Z&X
0B79	49.3.3	3.59V	10		-56	97	--		B	10	Direct	7	Z&X

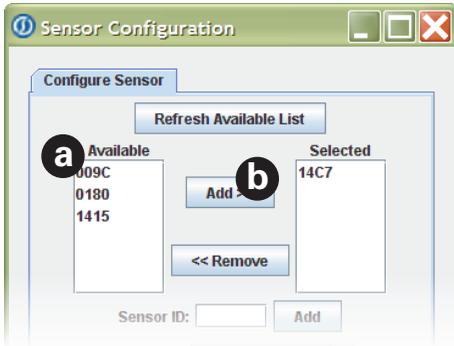
**Locate Repeater on Main Window**  
Ensure Repeater – "RP" in **Mode** column (e) – and Repeater channels – "# -> #" in **Channel** column (f) – appear in TrafficDOT's main window.



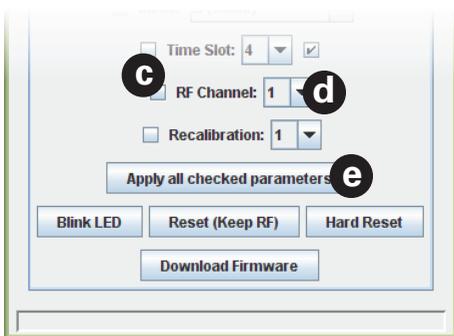
# 3 Configure Sensors



**Open Sensor Config Window**  
From **Configure** menu, click **Sensors**.



**Select Sensors**  
Click Sensor(s) from **Available** list (a), then click **Add >>** (b).



**Set Wireless Channel**  
Fill checkbox (c), select **RF channel** (d), click **Apply all checked parameters** (e).



**Save Configuration**  
From **Configure** menu, click **Save**.

# 4 Verify Configuration

Sensor ID	Version	Battery	Idle	#Detections	RSSI	LQI	PER	Present	Mode	Slot#	Repeater	Channel	Adv Settings
0B9F	49.3.3	3.63V	9		-40	96	--		B	9	Direct	7	Z&X
0429	49.1.7	3.63V	4		-72	95	--		RP	22/0	Direct	7 -> 5	Z&X
0215	49.1.7	3.22V	3		-54	97	--		RP	14/0	Direct	7 -> 6	Z&X
0C21	49.3.3	3.59V	3		-45	97	--		B	48	0429	5	Z&X
0C36	49.3.3	3.63V	2		-43	96	--		B	12	0429	5	Z&X
0B79	49.3.3	3.59V	10		-56	97	--		B	10	Direct	7	Z&X
28E9	49.3.3	3.67V	245		-55	97	--		B	18	0429	5	Z&X

**Verify Configuration on Main Window**  
Ensure Sensors report Repeater ID in **Repeater** column (f), and Repeater's Sensor Channel in **Channel** column (g).

**Channel Notes**

The default radio channel for **Access Point to Repeater** communications is 0 (zero).

The default radio channel for **Repeater to Sensor** communications is 1 (one).

Never use the same channel for both Access Point and Sensor communications.

Use the menu options to further configure the system.

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See the **Sensys Wireless Vehicle Detection System Reference Guide** for more information.