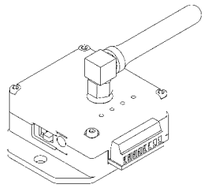
MicroStrain® Little Sensors, Big Ideas.®

Quick Start Guide

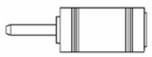
SG-Link®-LXRS™ Wireless Strain Node

Questions or problems during setup? Go to www.microstrain.com/support or call Technical Support: 1.800.449.3878 or 1.802.862.6629

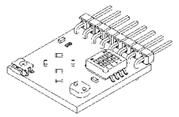
1 WHAT YOU NEED



P/N 6308-3000
SG-Link®-LXRS™



P/N 9008-0134
Connector, DC adapter, 1.3mm-2.1mm

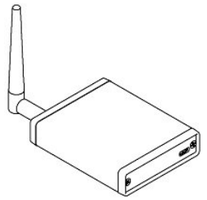


P/N 6309-7000
1000 Ω Tester Board

OR

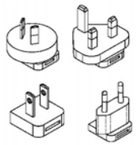
P/N 6309-6000
350 Ω Tester Board

P/N 9011-0009
Power Supply, 100-240VAC, 9V, SA



P/N 6307-1040
WSDA-BASE-104

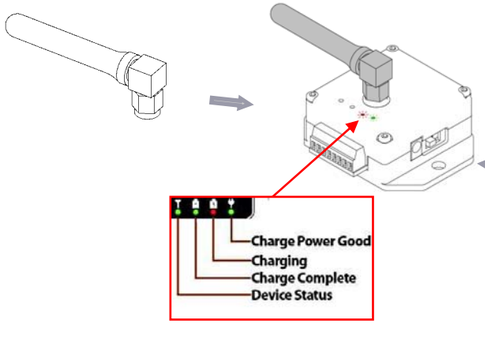
P/N 9022-0029
USB Cable



P/N 9011-0022
Power Supply Adapter Kit

2a ASSEMBLE AND CONNECT

NODE ASSEMBLY AND CHARGING



POWER OFF the SG-Link®-LXRS™ and charge for 3-4 hours before using

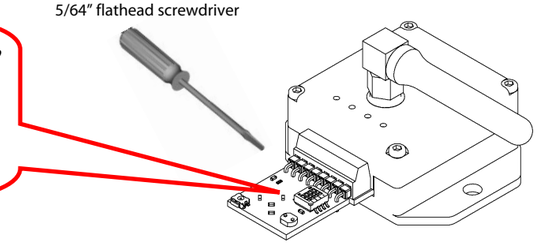
- ***While charging, both green and red LEDs are lit; if only green LED lit, unplug/re-plug***
- ***When charge complete, red LED turns off and battery charged LED turns green***
- ***Device Status LED flashes rapidly to indicate a successful boot-up. LED 'pulsing' indicates that the SG-Link®-LXRS™ is active and in an***

2b ASSEMBLE AND CONNECT

TESTER BOARD ASSEMBLY

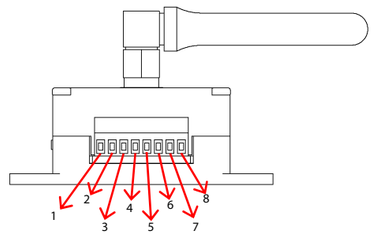
Set the tester board bridge completion configuration to match the node bridge configuration via the on-board dip switches :
Full: 1,2,3=ON; 4=OFF
Half : 3=ON; 1,2,4=OFF
Quarter: 4=ON; 1,2,3=OFF

5/64" flathead screwdriver



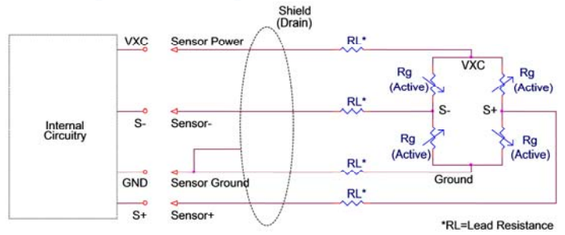
2c ASSEMBLE AND CONNECT

STRAIN GAUGE ASSEMBLY

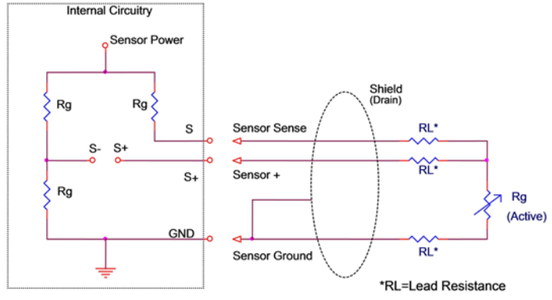


Pin Number	Pin Name	Pin Description
1	VXC	3.0 volt sensor excitation.
2	S+	Positive input to the differential amplifier.
3	S-	Negative input to the differential amplifier.
4	GND	Signal ground (common with pin 7).
5	S	Input for three wire mode on quarter bridge strain gauges. Leave unconnected for full and half bridge strain gauge applications.
6	Ain	Analog 0-3.0 volt input.
7	GND	Input power ground (common with pin 4).
8	V jck	Input power positive (3.1-12 volts DC). This circuit is common with the barrel connector on the enclosure sidewall. This circuit can be used in place of the external power supply.

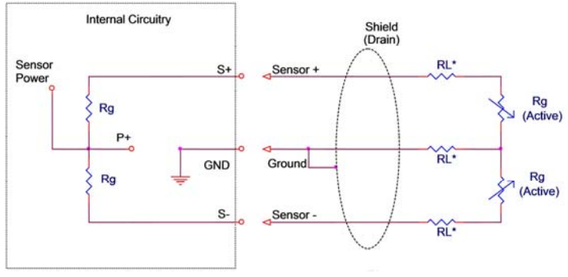
Full Bridge Strain Gauge



Quarter Bridge Strain Gauge

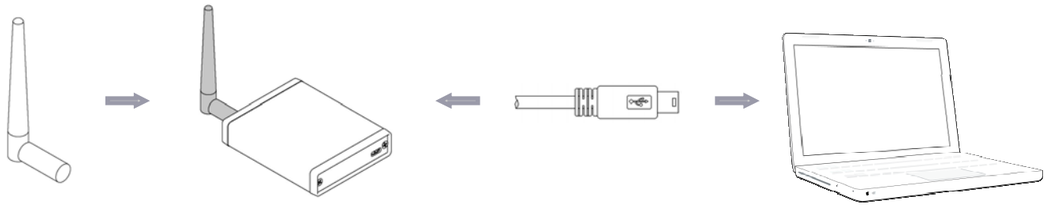


Half Bridge Strain Gauge



2d ASSEMBLE AND CONNECT

BASE UNIT ASSEMBLY

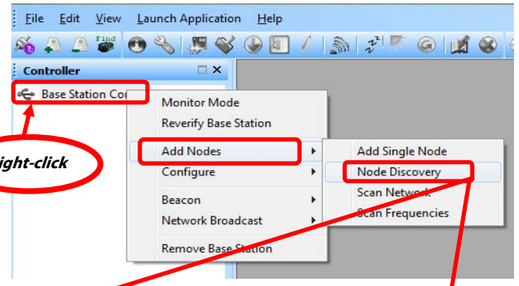


3a INSTALL AND CONFIGURE

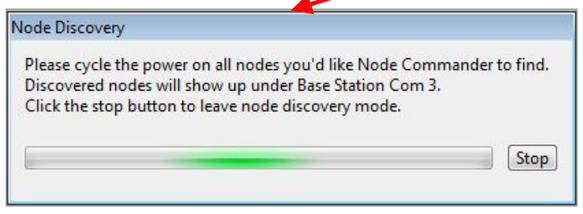
Follow on-screen installation instructions to install Node Commander software

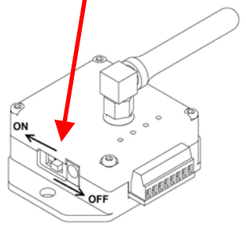
Double-click Node Commander icon on the Desktop

Node Commander

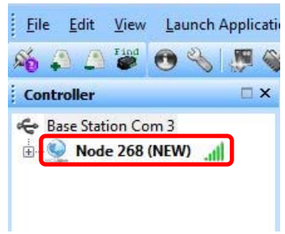


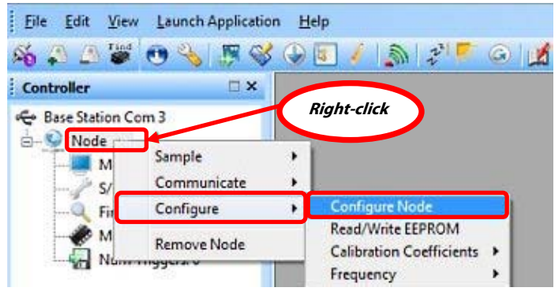
Right-click



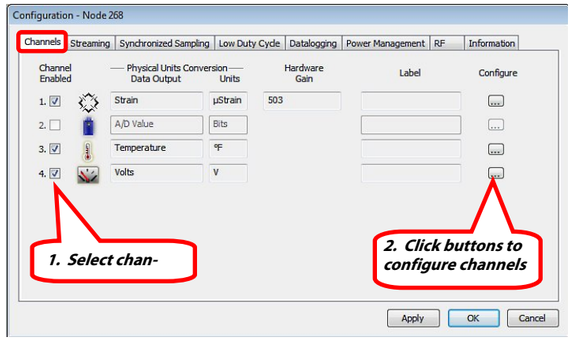


3b INSTALL AND CONFIGURE





Right-click

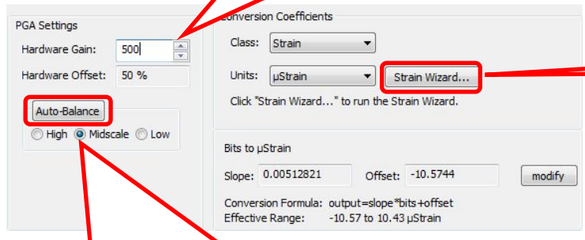


1. Select chan-

2. Click buttons to configure channels

STRAIN SETTINGS

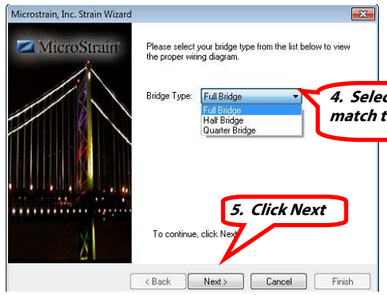
1. Set the gain to 500 initially; if sampled signal exceeds scale limits, lower this value. To improve signal-to-noise ratio, raise this value



3. Click Strain Wizard

2. Select Midscale, click Auto-Balance. The scale level determines the position of the zero level for the signal. For example:
- *Midscale is used for signals that are expected to run both positive and negative*
- *Low is used for signals that are expected to run mainly positive*
- *High is used for signals that are expected to run mainly negative*

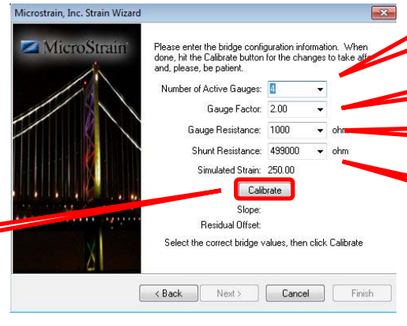
3c INSTALL AND CONFIGURE



4. Select correct Bridge Type to match the node factory setting

5. Click Next

6. Select the number of active gauges:
- *4=Full Bridge*
- *2=Half Bridge*
- *1=Quarter Bridge*

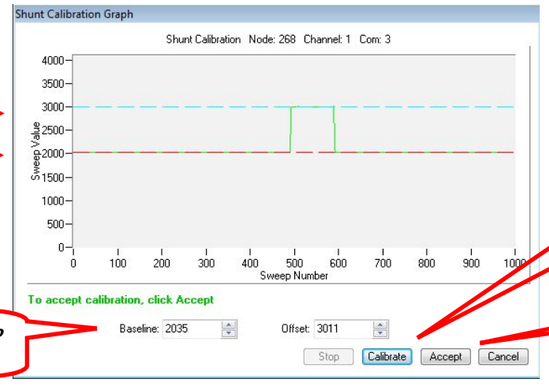


7. Enter strain gauge factor from strain gauge certificate

8. Set the gauge resistance to match the node

9. Set shunt resistance to 499000 Ω

10. Click Cali-



Offset

Baseline

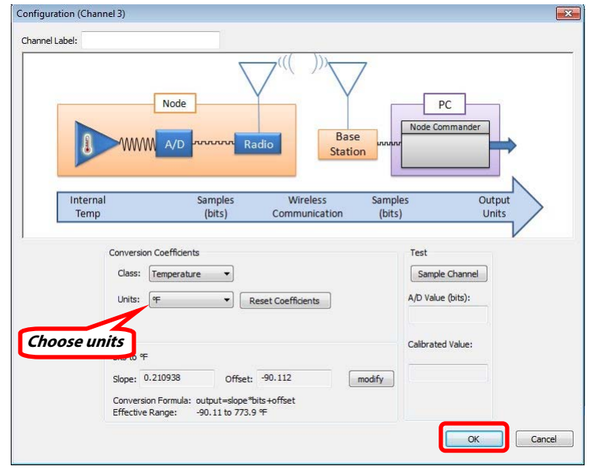
1. Window will be blank upon opening; click Calibrate twice to begin calibra-

2. Adjust Baseline and Offset to achieve best fit for the lines

3. Click Accept when finished

3d INSTALL AND CONFIGURE

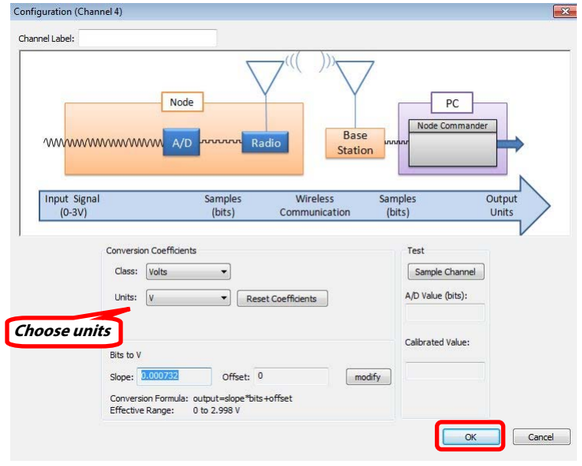
TEMPERATURE SETTINGS



Choose units

NOTE: Analog input 0-3V maximum (no negative voltage)

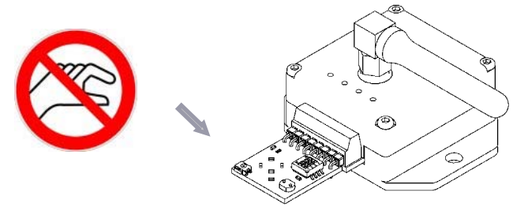
VOLTAGE SETTINGS



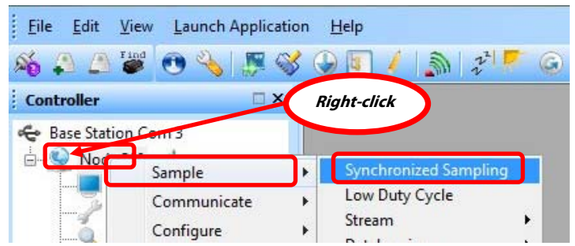
Choose units

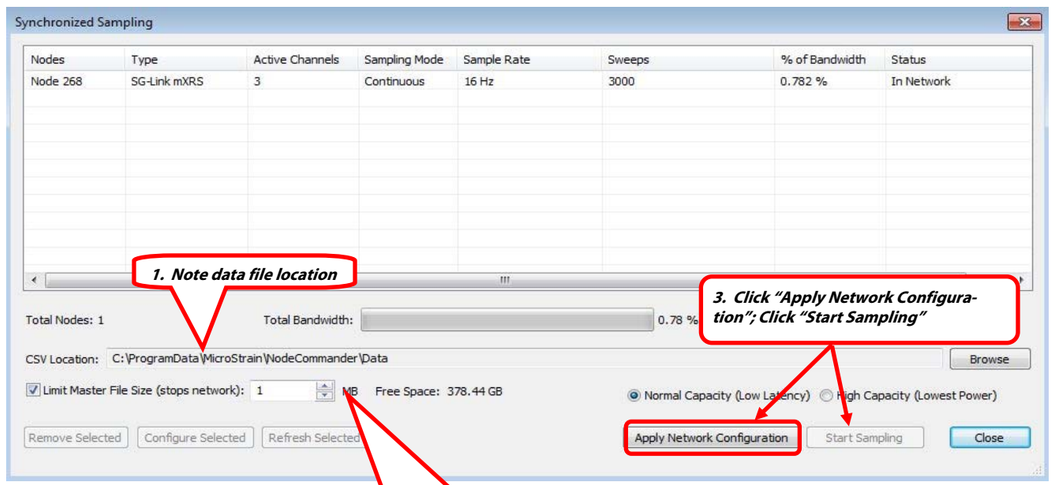
4a ACQUIRE DATA

Do not touch the tester board while acquiring data as this will introduce noise to the data signal



REMOVE POWER ADAPTER!
Do not acquire data while node is plugged into AC power as this will introduce noise to the data signal

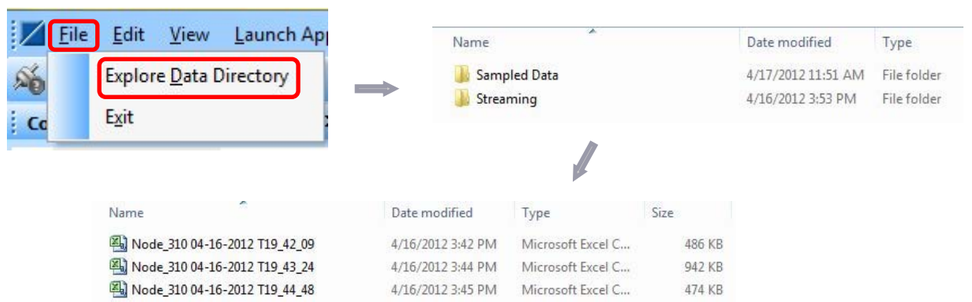




4b ACQUIRE DATA

NOTE: Adjust the Hardware Gain and Auto-Balance settings (see Page 2) if data is being clipped (railing) on either the high or low ends of the signal

5 VIEW STORED DATA



CONTACT MICROSTRAIN, INC.

SG-Link®-LXRS™ Wireless Strain Node
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