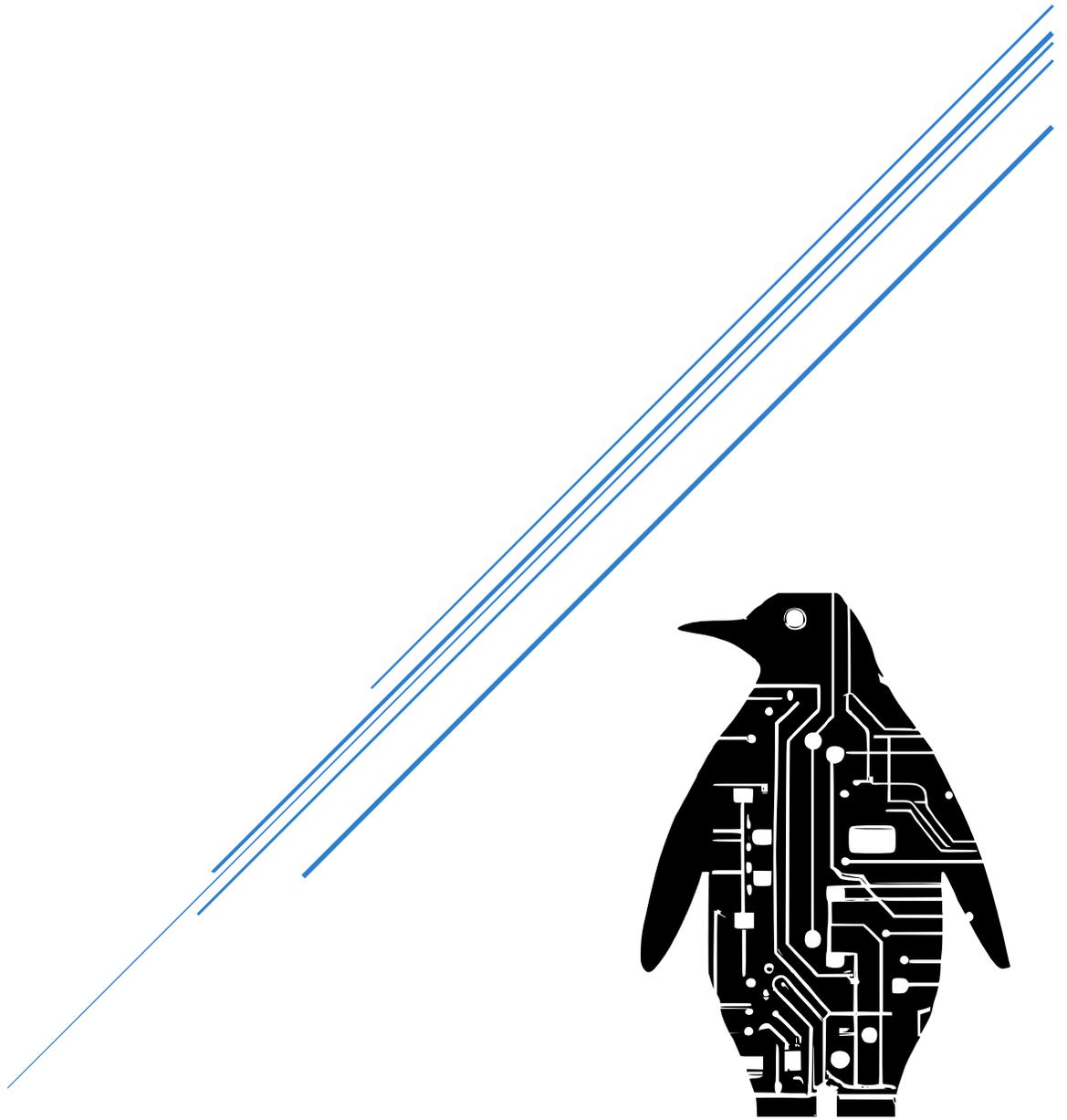


# REMOTE DISPLAY USER GUIDE

For Firmware Version 3.x



Brandco Connected  
February 2025

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## Basics

*Learn how to power on and charge Remote Display*

### Power on

Open the case by pulling up on the latch at front. Be sure to close it again securely before using it in a wet environment. You should here an audible click when it snaps shut.

To power on, slide the on/off switch at the lower left to the on position. If it is the first time use the display will show quick tips on the button and joystick controls. Once you enter the menu system and exit saving changes it will no longer show quick tips and go straight to real time pressure view.



If no Senders are connected, it will display a waiting message until it hears from a Sender unit.

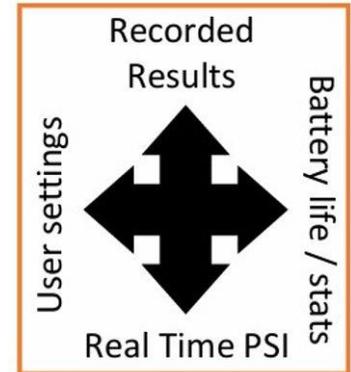
### Charging

To charge, open the lid and use the red USB charge cord supplied. The regular USB plug-in can go to any powered USB outlet. The other end is magnetic and when placed near the charge connector will attach itself and start charging.

## Display Modes

Explore the real time pressure, results, and session stats views

On startup the display will be in the real time pressure display mode. Switching modes is done using the joystick. The modes are labeled around the joystick. Just click in the direction of the mode you want.



## Real Time Pressure

The display will adjust accordingly to the number and type(s) of Senders you have in use to show the relevant information for that Sender. It can simultaneously display the following number of Senders:

- 1 to 3 Pressure Senders
- 1 Pump Sender
- 1 to 2 Stream Senders



*Real time view of 2 Pressure Senders - the 2nd with flow calc enabled*

Any Sender can be used by itself or in combination with other types such as:

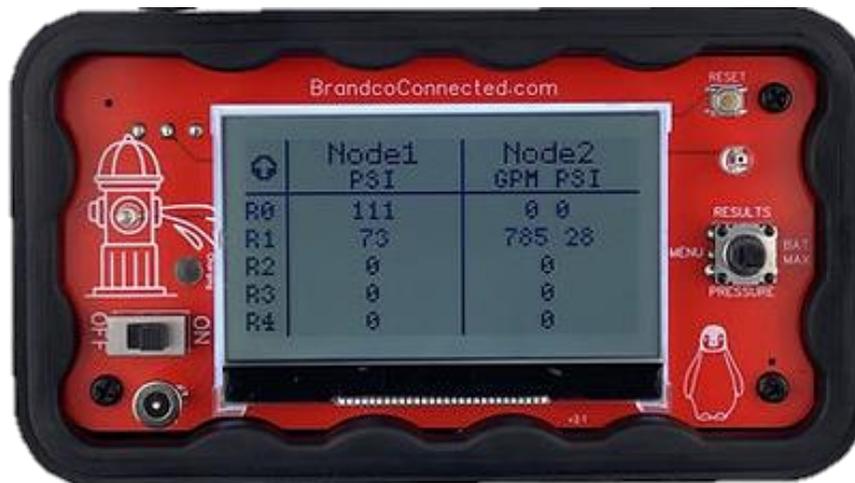
- A Pump Sender and 1 or 2 Stream Senders to get suction, discharge, rpm and flow data from up to 8 hose streams.
- A Pump Sender and 1, 2 or 3 Pressure Senders (with flow calc enabled) to get suction, discharge, rpm and flow data from 2 large diameter outlets.
- You cannot use Pressure Senders and Stream Senders at the same time.



*Real time view of Pump and Stream Sender*

## Results / records

The display will record relevant data from connected Senders for review later by a long press on the external button. It will only record when in the Real Time Pressure screen. What is recorded and shown is based on the number and type of Senders connected.



*Results for 2 Pressure Senders - the 2nd with flow calc enabled*

The following is the data that will be recorded for each Sender type and combination:

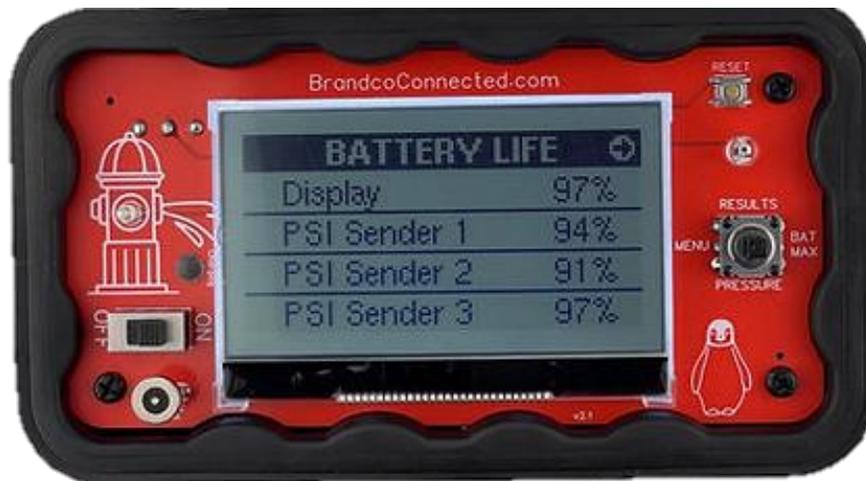
- Pressure Sender: PSI for each Sender; if flow calc is enabled GPM will also be recorded
- Pump Sender: suction PSI, discharge PSI & RPM
- Stream Sender: total GPM for all connected streams
- Pump / Stream Sender: suction, discharge, rpm & total GPM

- Pump / Pressure Sender: suction, discharge, rpm & total GPM

Press up on the joystick to view page 1 of your recorded results showing records 0 to 4. Press up again to view page 2 showing records 5 - 9. Each time you press up it will toggle between the pages.

## Battery life / Session stats

The display will show battery life for itself and all connected Senders. Press right on the joystick to view this screen.



*Battery life display screen*

Pressing right again will switch to the Session stats screen. Press right to toggle between the views.



*Session stats display screen*

Session stats are automatically tracked for each session. A session is from power on to power off or reset.

## Menu Settings

*Dive in to the menu settings for a custom experience.*



- Press left on the joystick to access the menu for settings.
- Use up/down or left/right to scroll between options or fields.
- Center press the joystick in to select an option or a field.
- Use up/down or left/right to change field values and center press when complete.

## User preferences



- Screen backlight: Default setting is auto and will turn on in dim conditions; off will prevent it from turning on and extend battery life; on to have it on at all times.
- Contrast: Increase to darken the black areas, decrease to lighten.

- Show 25% drop alert: When used with Pressure Senders the display can alert the user when the current pressure has dropped 25% below the last recorded pressure.

## Flow device config

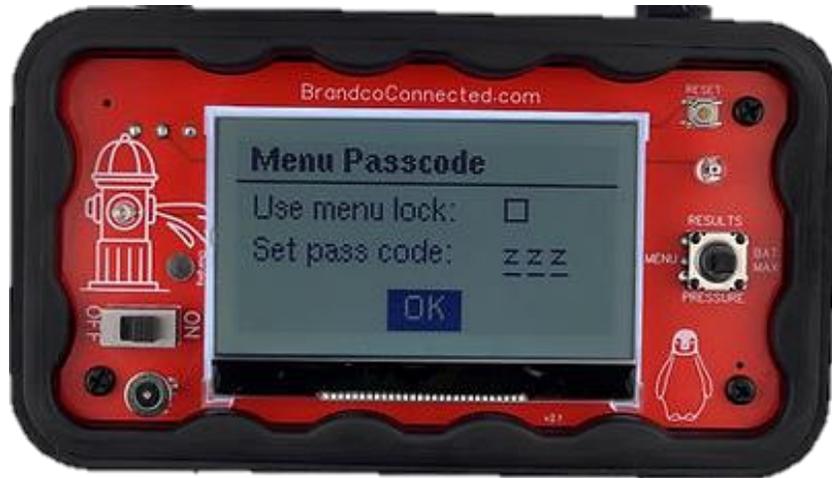
If you are using flow enabled Sender's, you must enter information about your flow device for the display to calculate GPM from the pressure. This information should be obtained from the data sheet for your specific device.



- Brand: Select the manufacture from the drop down list. Some manufacture's use a correction factor for large outlet diameters such as 4". The display will use this correction if required. If the manufacture is not listed, use the Generic selection.
- Outlet Diameter: Select the flow outlet diameter from the drop down list.
- Coefficient: Enter the coefficient for your specific device from the manufacture data sheet.

## Menu lock

If you do not want users to be able to access the menu and adjust settings you can apply a menu lock. This will require a passcode to be entered before the menu will be displayed.



Check the box for Use menu lock and enter a 3 digit passcode. You can use A - Z, a - z and 0 - 9 for your passcode. If you forget your passcode please contact support for assistance.

## Device group

Device Group ID's are used to limit communication between different sets of Sender/Display units. Devices will only communicate with other devices that have the same Group ID number. Senders and Displays have a default Group ID set to 1. If you have multiple sets and do not want them to talk to each other, set a different ID on each set. See the Device Group section for detailed information on how to set them.

## Radio range

For special cases where you have a very long distance or a lot of obstructions between the Sender and Display you can increase the radio range setting. Longer distances require more time to transmit so the longer the range the slower a Sender will send data. See the Radio Range section for detailed information on how to set them.

## Zero Pressure

If you need to re-zero the pressure on your Sender(s) you can use the Zero Pressure function. To use this you must ensure the following:

- Sender is powered on
- Sender is near the display and you can see it's status light
- Sender is not connected to any pressure source



Check the Set Zero box and scroll down to OK. When you select OK the display will send a command to the Sender(s) to set zero pressure. The Sender's status light will flash yellow 3 times indicating it received the command and re-zero. It will return to normal operation after it is complete.

## Exit

Scroll to the bottom of the menu and select Exit to leave the menu system. Center press the joystick to Save and Exit the menu system. If you do not want any changes made to be saved, press the reset button to restart the display.



## Record Tests

*How to record current data for review*

### How to record

To record the current live data, press and hold the top button for a second (long press). You will see the recorded data shown in the record header at the top of the screen.

To advance to the next record slot, click the top button. The record header at the top of the screen will show the # of the current record spot. The records are labeled from #0 to #9. When you reach #9 it will wrap around back to #0.



*Pressure Sender recorded data shown at top*

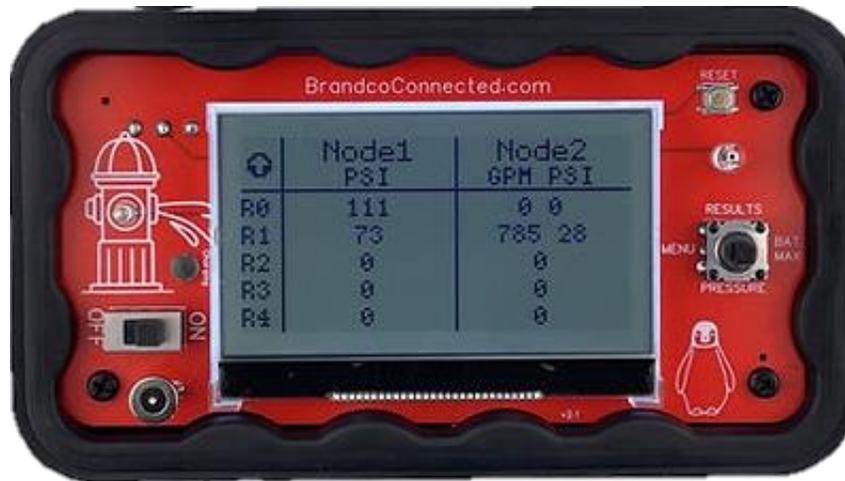


*Pump & Stream Sender recorded data shown at top*

The display will only record when in the Real Time Pressure screen.

## Reviewing results / records

Press up on the joystick to view page 1 of your recorded results showing records 0 to 4. Press up again to view page 2 showing records 5 - 9. Each time you press up it will toggle between the pages.



*Results for 2 Pressure Senders - the 2nd with flow calc enabled*

What is recorded and shown is based on the number and type of Senders connected.

The following is the data that will be recorded for each Sender type and combination:

- Pressure Sender: PSI for each Sender; if flow calc is enabled GPM will also be recorded
- Pump Sender: suction PSI, discharge PSI & RPM
- Stream Sender: total GPM for all connected streams
- Pump / Stream Sender: suction, discharge, rpm & total GPM
- Pump / Pressure Sender: suction, discharge, rpm & total GPM



*Results page2 for Pump & Stream Sender*

## Changing Radio Range

*Learn how to change radio range when you need more distance*

For special cases where you have a very long distance or a lot of obstructions between the Sender and Display you can increase the radio range setting. Longer distances require more time to transmit so the longer the range the slower a Sender will send data.

It is highly recommended to leave the range at the standard 800' setting unless you have a special scenario that requires it to be increased.

To access the user settings menu, click left with the joystick. Scroll down to the Radio Range option and center press the joystick to select it. To change the setting, scroll to the range you want and center press to select it.

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**IMPORTANT:** *Sender units must have the same radio range setting or they will not communicate. If you change the display setting you must change the sender unit setting as well.*

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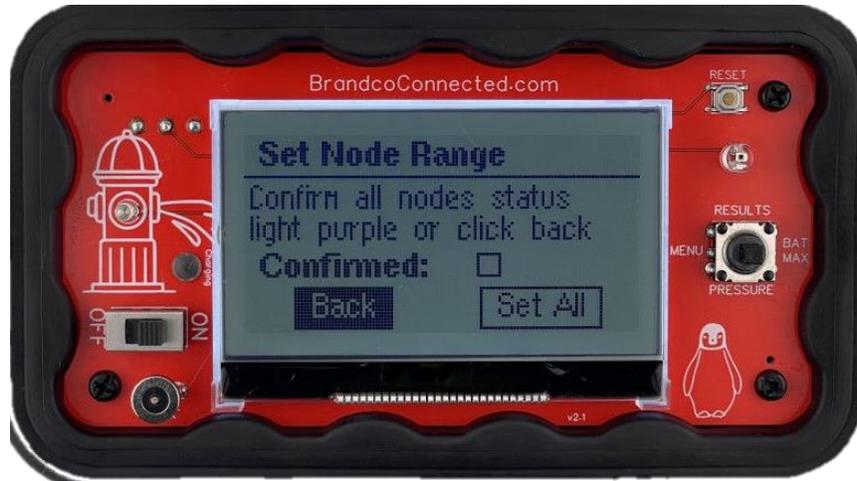


To set range only on the display scroll down to Set Display and select it.

The display can set the range on connected Senders at the same time. **To use this you must ensure the following before proceeding:**

- Sender(s) are powered on
- Sender(s) are near the display and you can see it's status light

When the above is complete, check the Set on nodes box, then scroll to Set All and select it. The Sender(s) status light should be solid purple color indicating it is ready. The display will now show the confirmation screen.



If all Senders have a purple status light:

1. Check the Confirmed box
2. Scroll to Set All and center press to select it

If any Senders **do not have** a purple status light:

1. select the Back button to return to the previous screen
2. Check the Set on nodes box again
3. Select the Set All button again
4. Repeat until all Senders have a purple status light shown

**Range distance and transmission rate chart:**

Range	Transmit rate	Notes
800'	3 times per second	
1400'	2 times per second	
2000'	Once every 2 seconds	Reset display after setting
3000'	Once every 3 seconds	Reset display after setting

## Setting a Group ID

*Understand Group ID's for multiple sets in proximity*

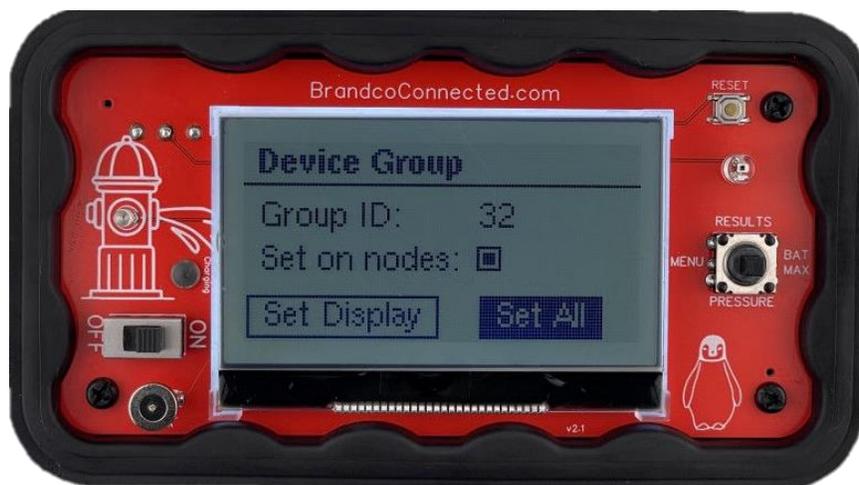
Group ID's are the way to limit communication between multiple sets of Sender/Display sets. Devices will only communicate with other devices that have the same Group ID number. Senders and Displays have a default Group ID set to 1. If you have multiple sets and do not want them to talk to each other, set a different ID on each set.

To access the user settings menu, click left with the joystick. Scroll down to the Device Group option and center press the joystick to select it. To change the setting, scroll to the Group ID field and center press to select it. Use up/down to change the number and center press when complete.

---

**IMPORTANT:** *Sender units must have the same Group ID setting or they will not communicate. If you change the display Group ID you must change the Sender Group ID setting as well.*

---



To set Group ID only on the display scroll down to Set Display and select it.

The display can set the Group ID on connected Senders at the same time. **To use this you must ensure the following before proceeding:**

- Sender(s) are powered on
- Sender(s) are near the display and you can see it's status light

When the above is complete, check the Set on nodes box, then scroll to Set All and select it. The Sender(s) status light should be solid purple color indicating it is ready. The display will now show the confirmation screen.



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If any Senders **do not have** a purple status light:

1. select the Back button to return to the previous screen
2. Check the Set on nodes box again
3. Select the Set All button again
4. Repeat until all Senders have a purple status light shown

To cancel without setting, hit the reset button on the display. Power off Senders and restart.

## Troubleshooting

*Learn more about diagnostics*

### No Communication

The most common cause of no communication between a Remote Display and a Sender unit is a mismatch between the radio range settings or the group ID.

#### Steps to resolve a radio range mismatch:

1. Confirm the Sender device is powered on and the status light is flashing blue about 1 per second. This means that it is transmitting.
2. Go into the Display menu settings, scroll to the Radio Range option and center press to select it.



3. Check the box for 800 ft and scroll to Set Display. Center press to select it and you will return to the main menu.
4. Scroll down to Exit and center press to select Save & Exit.
5. If the display does not connect, then you will repeat the process with the next higher range setting.
6. Go back to the Radio Range settings, select 1400 ft, click on Set Display, then Save & Exit. Check for connectivity.
7. Continue until all possible range settings are tried.

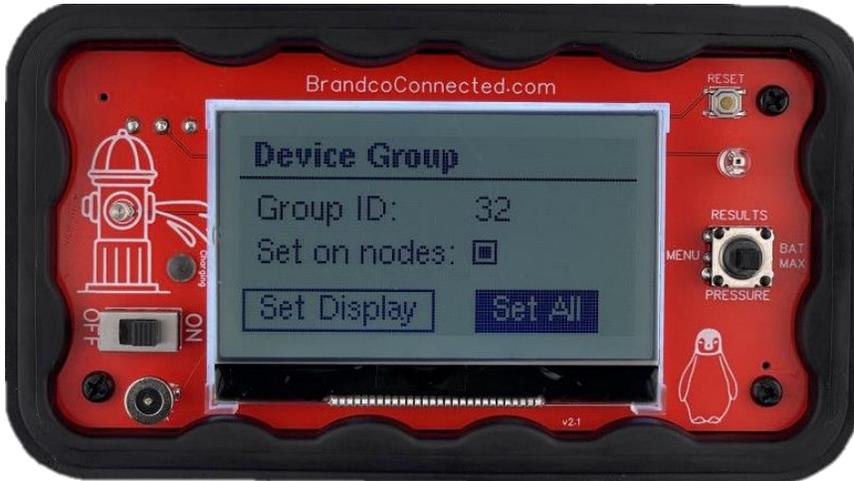
If the Sender unit connects, you can now follow the guide to change the Radio range on both units simultaneously.

If the Sender does not connect at any range setting, it is likely a group ID mismatch. Set the display back to the default 800 ft range before proceeding.

#### Resolve a group ID mismatch:

1. Confirm the Sender device is powered on and the status light is flashing blue about 1 per second. This means that it is transmitting.

- Go into the Display menu settings, scroll to the Device Group option and center press to select it.



- Scroll to the Group ID number setting and center press to select it. Set the group ID to the default value of 1.
- Scroll to Set Display. Center press to select it and you will return to the main menu.
- Scroll down to Exit and center press to select Save & Exit.
- If the display does not connect, then it will be quickest to manually set the device group on the Sender unit.
- Instructions on manual setting of Sender group ID's can be found in the device manual.

## Lost Communications

Once communication starts with a Sender the display keeps track of it. In case you get out of range, forgot to charge the battery, or any other reason it quits hearing the Sender, it will switch to a LOST COMM display so you know you aren't getting real time pressure readings anymore. If it was momentary interference it will switch back to real time view as soon as it hears from the Sender again.

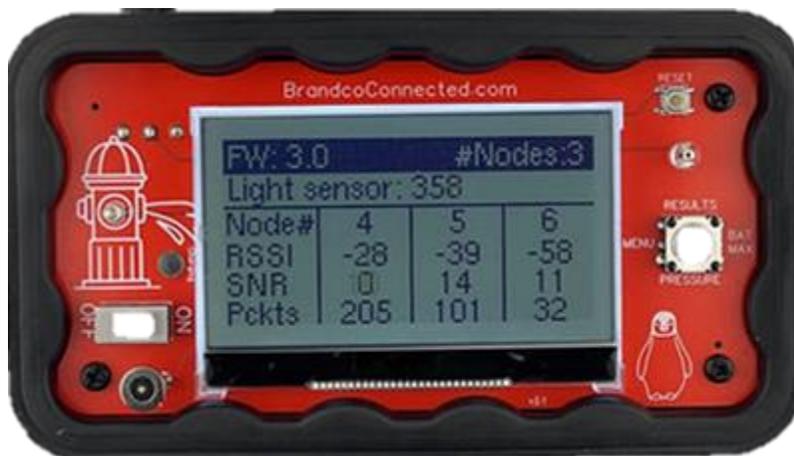


*Lost Comm shown for Node 1*

## Diagnostics

The diagnostic screen will show the firmware version, light level reading and data for each Sender's radio signal strength (SNR & RSSI) and packet count received. You can access the diagnostics screen by center pressing the joystick.

If the screen backlight is not functioning automatically, check to see if the light sensor is showing different levels by covering it with a finger. The light sensor is located directly above the joystick. You may have the backlight turned on or off. Use the menu to verify the backlight display setting.



*Diagnostics view of 3 Senders*

If you aren't receiving readings on the display, check to see if packets are being received. You may have different range or group ID settings on the Sender and display. Use the menu to verify they are set the same.

### SNR and RSSI explained:

**Signal Noise Ratio (SNR):** ratio between the received power signal and the surrounding signal sources. Values range from -10 to +13. Below 0 some packets will be missed possibly resulting in temporary LOST COMM displays.

**Received Signal Strength Indicator (RSSI):** is a measurement of how well your device can hear a signal. Values range from -20 to -130, -50 to -90 is very good. At values from -120 to -130 some packets will be missed possibly resulting in temporary LOST COMM displays.