Intro to BroadWeigh Toolkit

Specific notes on:
-Zeroing Functions
- Very Noisy RF Environment

This is the home page view of the BroadWeigh Toolkit. You will use this program to access the internal parameters of your load cells. The home page also includes a spectrum analyzer to best choose your radio channels.

Channel monitor
View and log data provided by devices.
Monitor sleeping devices.
Move group channel.

Settings
Configure base station connection
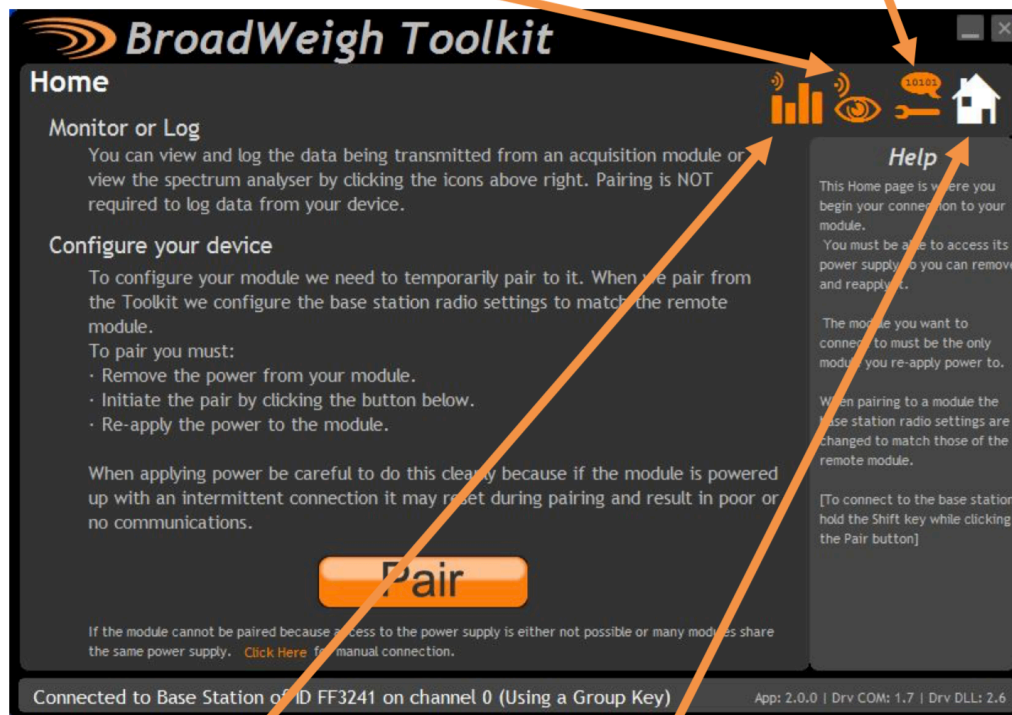
Spectrum analyser
Planar and spectral views of local radio traffic to check for possible congestion.

Home
Pair and configure your device. Follow the onscreen instructions. If power cycling is not available it is possible to pair using the device's ID and data tag but you need to be on the correct radio channel.

Pairing to a load cell

- Plug BSue or BSd USB receiver into your PC.
- Ensure you are on the same radio channel as your load cells looking to pair to. Either click the Channel Monitor (eyeball) icon and find the radio channel with your cells, or hold SHIFT while clicking on pair to directly connect to your USB device.
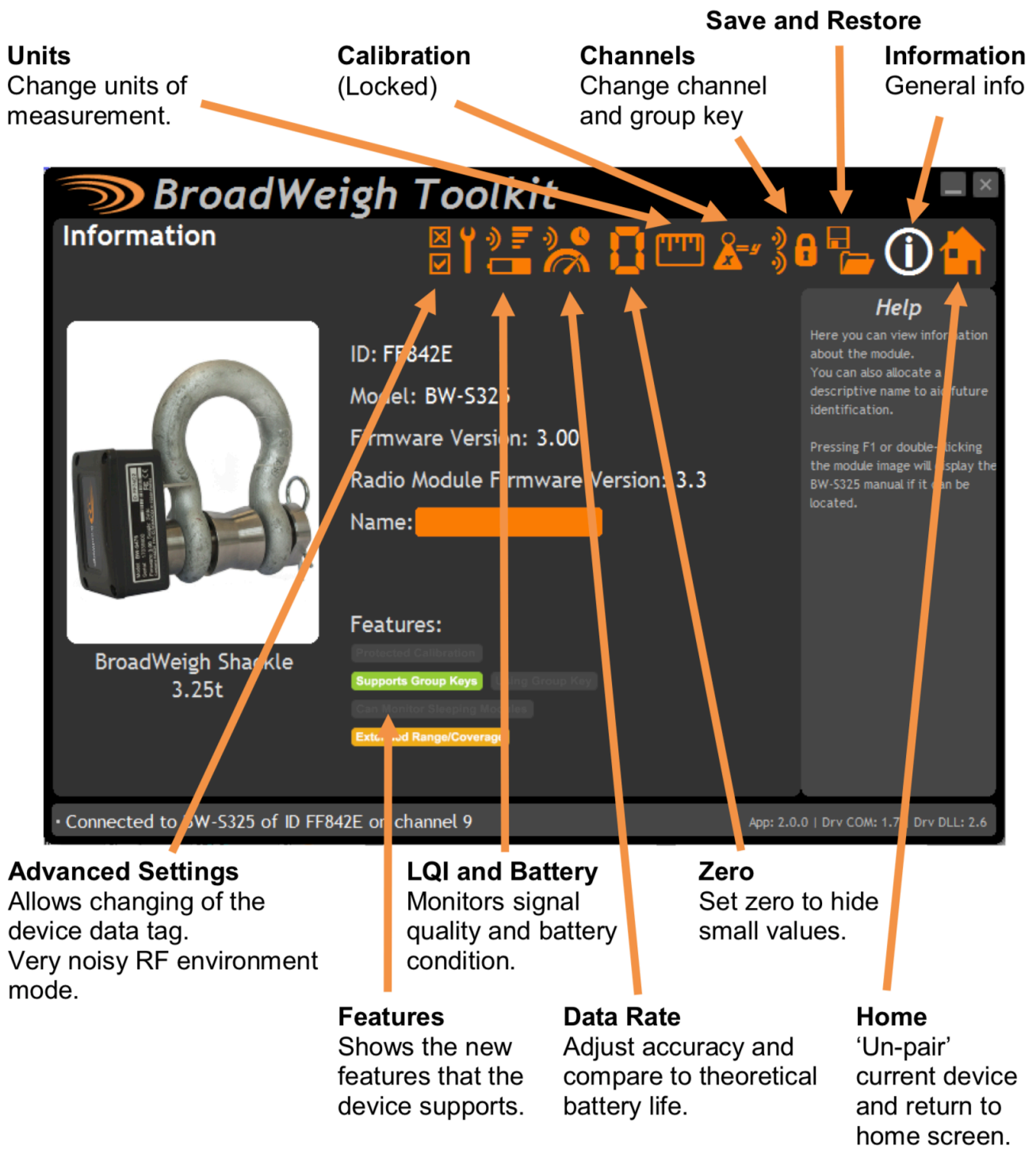- **Soft Pairing** - Click the small "Click Here" button shown below.

  (Note: The large "PAIR" button is to be used while hard power cycling. Remove batteries. Click PAIR. Insert batteries within 10 seconds to directly pair to your cell.

  Pro tip: Keep this pairing method in mind as a last case troubleshooting method should you not be able to soft pair.

BroadWeigh Toolkit

Manual Module Connection

Help
Advanced techniques for gaining control of modules for configuration.

If you cannot pair to a module because there is no access to the power supply then try the following manual method.

You must know the unique 6 character ID of the module.

The base station radio settings MUST be the same as the radio settings of the module you want to connect to.

WARNING: Accessing a module in this way is not ideal! The recommended method is to Pair as this will inhibit the module from sleeping, transmitting and most other usual tasks which may hinder configuration. Using this method may not gain a suitable connection to enable configuration of the device or some of the device settings may cause the device to sleep unexpectedly.

→ **Connect**

Back

Connected to Base Station of ID FF346E on channel 1   App: 2.0.10 | Drv COM: 1.7 | Drv DLL: 2.7

BroadWeigh Toolkit

Manual Module Connection

Help
Advanced techniques for gaining control of modules for configuration.

If you cannot pair to a module because there is no access to the power supply then try the following manual method.

You must know the unique 6 character ID of the module.

The base statio
module you wan

Enter ID

Enter the hexadecimal ID of the module you want to wake.

FF56C7

OK   Cancel

WARNING: Access
this will inhibit the
hinder configuratio
configuration of th
unexpectedly.

Connect

Back

Connected to Base Station of ID FF346E on channel 1   App: 2.0.10 | Drv COM: 1.7 | Drv DLL: 2.7

Units
Change units of measurement.

Calibration
(Locked)

Channels
Change channel and group key

Save and Restore

Information
General info

BroadWeigh Toolkit

Information

ID: FF842E

Model: BW-S325

Firmware Version: 3.00

Radio Module Firmware Version: 3.3

Name:

BroadWeigh Shackle 3.25t

Features:

Protected Calibration

Supports Group Keys | Using Group Key

Can Monitor Sleeping Modules

Extended Range/Coverage

Help

Here you can view information about the module.
You can also allocate a descriptive name to aid future identification.

Pressing F1 or double-clicking the module image will display the BW-S325 manual if it can be located.

· Connected to BW-S325 of ID FF842E on channel 9

App: 2.0.0 | Drv COM: 1.7 | Drv DLL: 2.6

Advanced Settings
Allows changing of the device data tag.
Very noisy RF environment mode.

LQI and Battery
Monitors signal quality and battery condition.

Zero
Set zero to hide small values.

Features
Shows the new features that the device supports.

Data Rate
Adjust accuracy and compare to theoretical battery life.

Home
'Un-pair' current device and return to home screen.

- By default, your cells will come in KG.
- Click the orange box with units shown for a drop down of options to change to.

Units
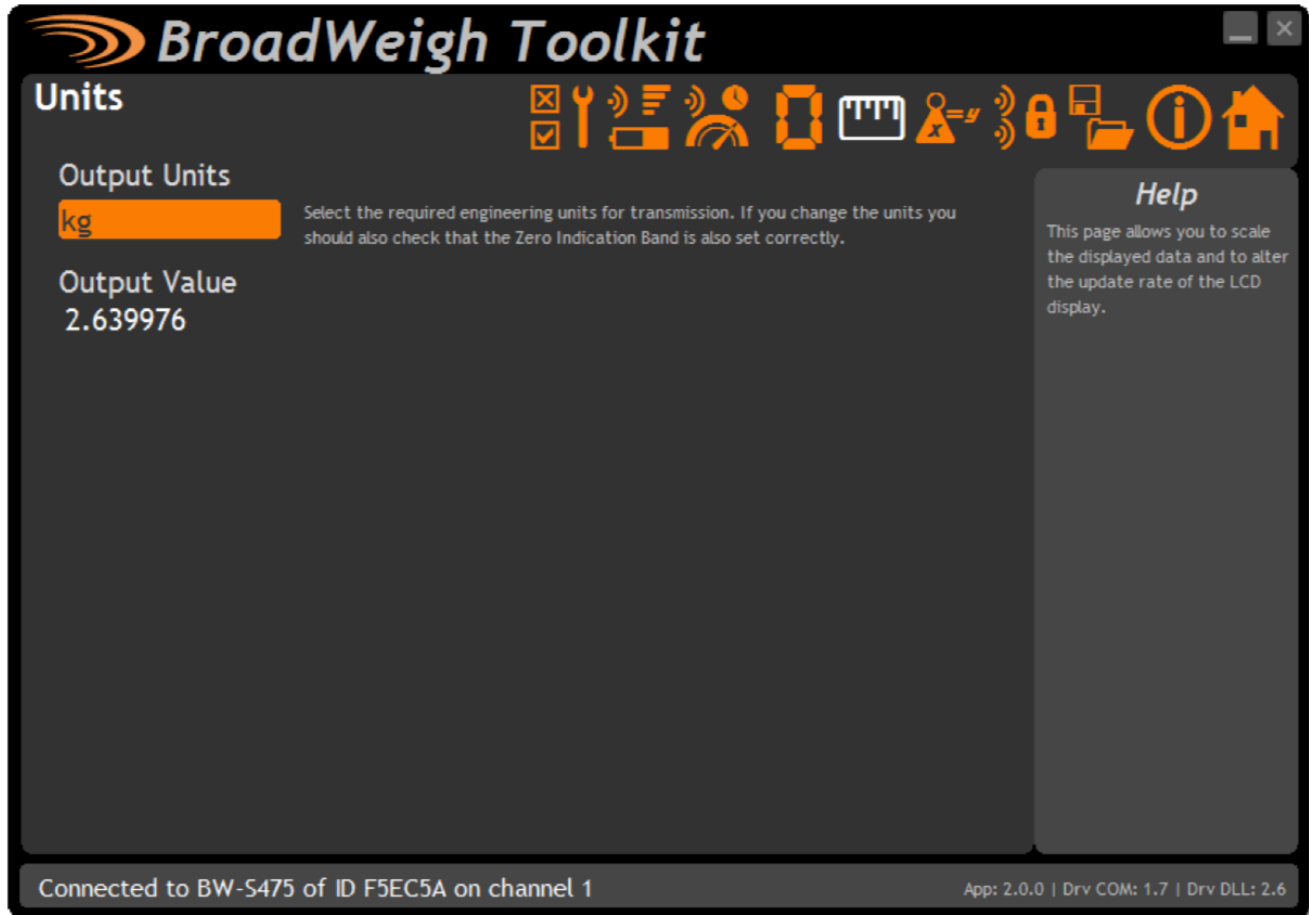
Use this page to select the Output units of the Paired BroadWeigh Shackle.

Parameters:

Output Units   Use the drop down box to select between kg, lbs, tonnes, ton, ton (US) & kN.

ℹ️ If these units are changed ensure the Zero Indication Band is also set correctly.

System Zero

- It is normal to notice weight output fluctuations when moving between different environments. Even a few degrees temperature change can affect the output of the transistors within the load pin.
- It is best practice to check system zero's before use and come to this page to perform this action. There is a limit of 100kg/220lbs in which you can perform a zero function. If you find a cell is reading out of this range, the cell will have to be sent back to your Distributor
- **<u>ENSURE NO WEIGHT IS ON CELL WHEN PERFORMING A ZERO.</u>**

Pro Tip: We like to use 10lbs (10) as the zero indication band. It allows you to see weights 10.1lbs and upward, but keeps your display screens cleaner when no loads are applied to your cells. It also make pre-use checks easier to spot any cells which need to be re-zero'd.

Visuals on following page

Use this page to perform system zero and to hide small values of weight (masking) for the paired BroadWeigh Shackle

Parameters:

|	
Zero Indication Band	This setting enables you to hide small values of weight so that any displays based on the output from this module will display zero until a certain weight has been reached. You can enter a value here that represents a ± band around zero so that if the value to be transmitted is within this band a zero will be transmitted. Once the weight exceeds this band the full weight will be transmitted.
	For example: A BroadWeigh Shackle with a 5.0 kg Zero Indication Band will only transmit a zero value until 5 kg of weight or more is applied when it will then transmit the applied weight value.
	If you change the module units you will need to adjust the zero indication band again.
System Zero	If the unloaded shackle is displaying a small weight you can re-zero the output value by applying a system zero.
	Remove the load from the shackle before clicking the 'Zero Now' button.
Output Value	This shows the weight value that will be transmitted and shows the effect of the system zero and the zero indication band.

Pro Tip: **Very Noisy RF Environment Mode**

- The cells come with default settings sampling 1x/second.
  With fresh batteries, you can expect roughly 6 month battery life at 10h/day usage.

- We typically recommend clicking the "Activate" button to turn on "Very Noisy RF Environment Mode". You'll find this will provide increased performance of your cells and more responsive readings which can be helpful when bumping motors to balance loads. In short- this settings changes samples to 3x/second, looks for a "Keep Awake" command more often, and increases the sleep delay to 1h (the time is takes for the cell to go to sleep after it stops seeing a "keep awake" command coming from a base station.
  With fresh batteries, you can expect roughly 2 month battery life at 10h/day usage.

Visuals on following page
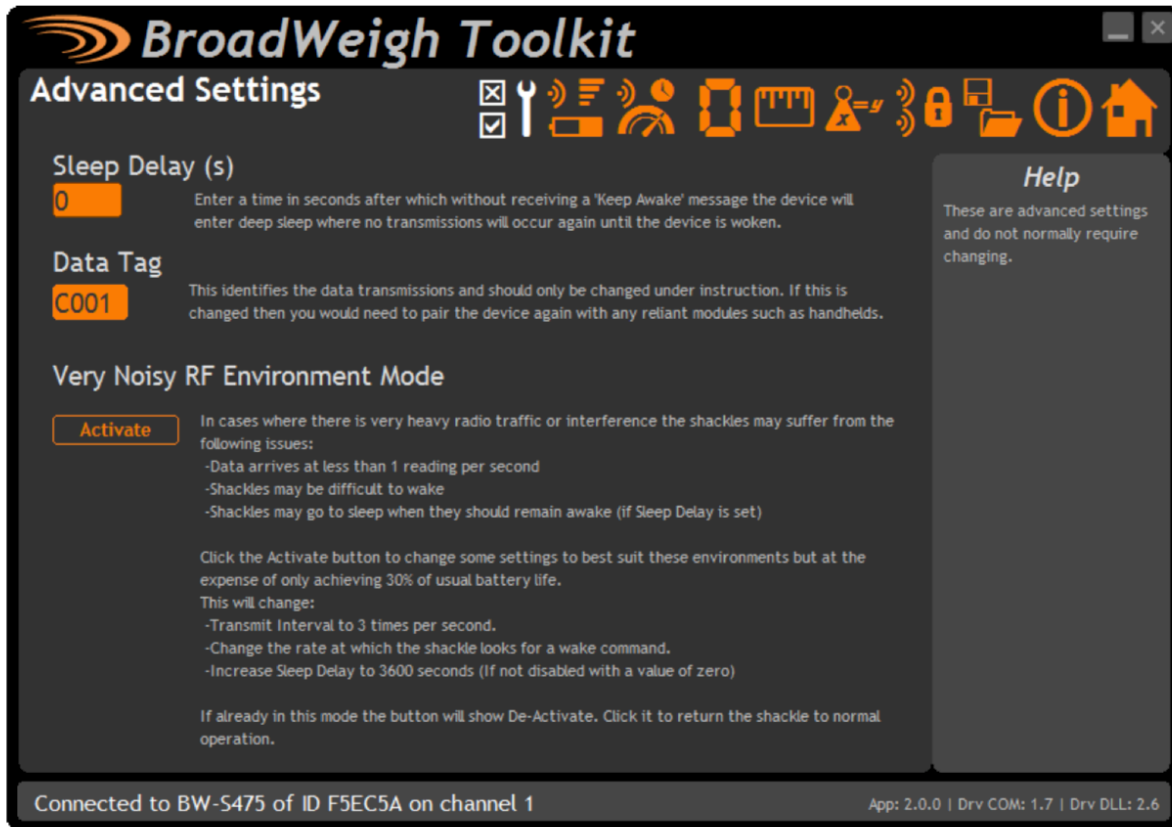
It should not normally be necessary to change these settings.

Parameters:

Sleep Delay

Enter a delay in seconds after which the BroadWeigh Device will return to deep sleep if no Keep Awake message is heard from the handheld or base station. The default is 60 seconds.

> ℹ️ If a value of 0 is used the shackle will not enter into low power state and battery life could be compromised if no other device sends the shackle to sleep.

Data Tag

The data transmitted by the BroadWeigh Shackle is marked with a Data Tag. By default this is set to the last 4 characters of the device ID. The BroadWeigh Shackle Data Tag can be changed to an easily remembered 4 digit code to reflect its position within your system. For example '00A1'.

Very Noisy RF Environment Mode

For use in extreme radio environments where there is a lot of radio traffic and simply changing the radio channel does not allow you to avoid conflict with other radio systems.
Activating this feature makes the shackle more 'aggressive' in its radio transmissions and makes it easier to wake up.