CELLMASTER

by BROAD WEIGH

CELLMASTER

QUICK GUIDE SET-UP

chainmaster.de

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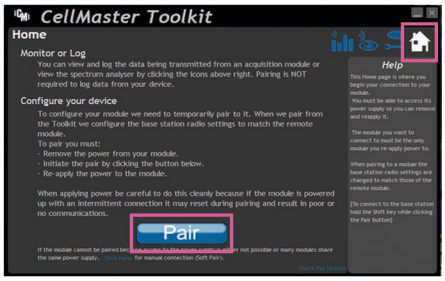
1. VISUAL CHECKS

- Shackles and TwistLinks should be inspected before and after every use, ensuring that all the components are present and correct (bow, pin, bobbin and TwistLink, nut and R-clip) and the serial ID's match between the shackle and the plastic casing.
- All load bearing components must be free from cuts, nicks, cracks, gouges or excessive wear and distortion.
- Any damaged shackles or components must be taken out of service and returned to your dealer to arrange refurbishment or scrapping. If you are in doubt about the damage, please contact your local CELLMASTER supplier.

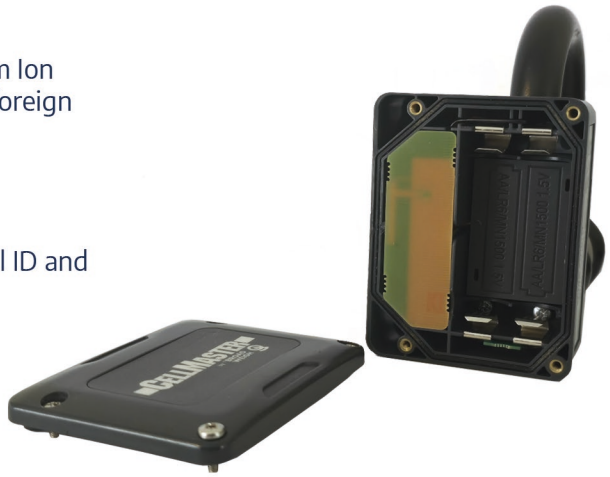
2. CELLMASTER TOOLKIT - PAIRING THE BASE STATION

- Open the CELLMASTER TOOLKIT software.
- Connect the USB base station to a port on the laptop.
- Hold down the shift button on your keyboard and click PAIR.
- This should pair the USB base station with the software. The below screen will open showing the details of the base station, here you can name the unit.



3. FIRST PAIRING LOAD CELLS IN CELLMASTER TOOLKIT

- Remove the 4 screws from the cover of the load cell and open the unit.
- Open the CELLMASTER TOOLKIT software.
- Click PAIR and within 10 seconds insert 2 x AA batteries (Lithium Ion recommended). Observe polarity and ensure that there are no foreign objects in the compartment.
- You should see a solid red LED on the side of the cell.
- Once paired the Information screen will appear, showing the cell ID and other related details.
- Replace lid and tighten all 4 screws.



3a. QUICK PAIR OF CELLMASTER CELLS

- If there are batteries already present, for Gen3 CELLMASTER devices click **PAIR** and **SLOWLY** swipe the magnetic fob along the underside of the electronics enclosure.

- You should see a solid red LED on the side of the cell.

> ! *NB: This can take a couple of attempts. Once the fob is swiped along the bottom, move it away from the cell, as it can cause a delay in pairing.*

Once paired, the **Information** screen will appear, showing the Cell ID and other related details, as seen on next point.

4. INFORMATION SCREEN

Information - Name: Here you can add a project reference name

4a. SAVE & RESTORE

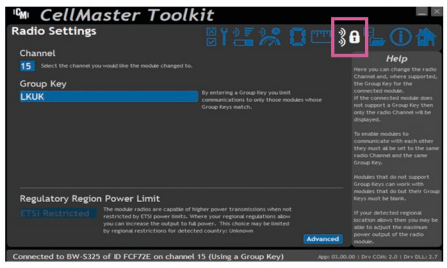
- **Save** – This gives you the option to save your devices parameters on a file locally on your computer or network location.

- **Restore** – Load a previously saved configuration file into the currently connected device.

4b. RADIO SETTINGS

- **Radio settings – Channel:** Set all loadcells to the same channel. Channel 1 is default, but this can be changed to the channel with the least traffic in the vicinity.

- **Group Key:** This can be left blank. Alternatively, it can be given a name to create a secure network, but please ensure all cells are given the same name.



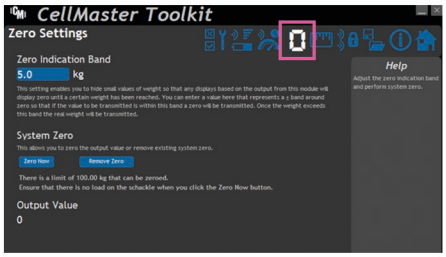
> ! *NB: If you have two systems, with two separate base station in the same vicinity, giving each system a different group key will ensure they run independently of each other without interference.*

4c. UNITS

- **Units – Output Unit:** can be set to your preferred value, kg, Lbs etc.
- **Output Value:** 0

4d. ZERO SETTINGS

- **Zero Indication Band:** This defaults to 5kg
- **System Zero:** No change required
- **Output Value:** 0

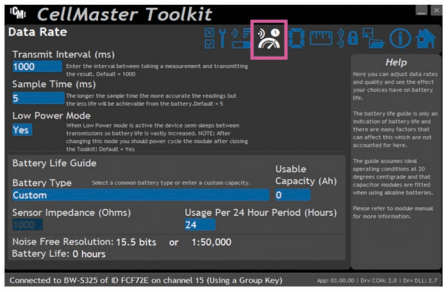


4e. DATA RATE

- **Transmit interval:** Defaults to 1000ms , which his 1 packet per second. This can be changed according to your needs. 500ms is twice per second for example. Faster transmission rates will reduce battery life.
- **Sample time:** Defaults to 5ms. No need to change.
- **Low power mode:** Defaults to yes. No need to change.
- **Battery Life:** Select appropriate batteries from the list, if brand is not in the list select Custom.

Set the expected usage per 24 hours. For example, for a standard show, 4 hours might be sufficient. Less hours in use will result in longer battery life.

! NB: re-chargeable batteries should never be used!



4f. LQI & BATTERY

- **LQI and battery** – Monitors signal level and battery condition.
- **Low Battery Level:** set to receive a warning at around 2.3. Any reading below 2.0 it is advised to change the batteries.

As you can see below, this will appear red as a warning, once the level is below your suggested figure.

4g. ADVANCED SETTINGS

- **Sleep delay** 900 seconds (15 minutes).
- **NEVER CHANGE DATA TAG!** – This is the ID of the cell.
- **Transmit Power:** the power of the radio transmission. Leave at 100%.

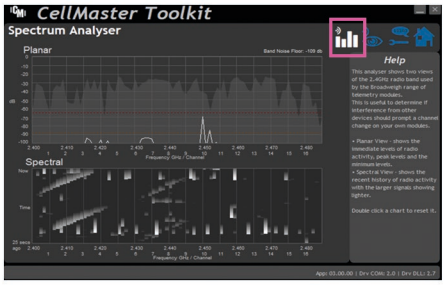
! NB: You can convert to **Simple Mode** where most options are pre-set from the factory, if you set this, you can convert it back to **Advanced Mode** at any time.

See further training guide for an in depth understanding of Smart Sleep.

4h. COMPLETED

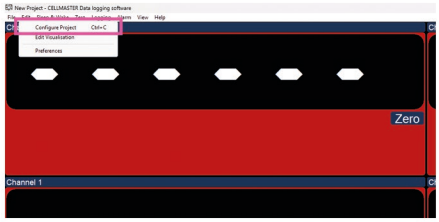
- Click 'HOME' Icon. Repeat from step 3 or 3a for pairing and configuring all cells.

5. SPECTRUM ANALYSER



- Return to Toolkit home screen and select the bar chart symbol, to access Spectrum Analyser.
- This shows 2 views of the 2.4GHz radio band used by CELLMASTER. This is useful to monitor interference from other devices in your vicinity. If your chosen channel appears busy you can switch to an alternative quieter channel. Channel 15 is often the quietest and therefor the best option to use.

6. SETTING UP YOUR PROJECT IN LOG 100



- Open the **CELLMASTER LOG 100** software.
- Click Edit, then scroll down to **Configure Project**.

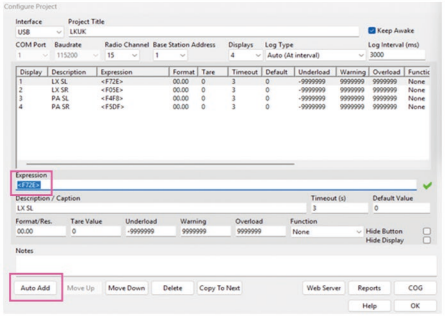
This section allows you to add cells to your project and set the desired parameters:

- **Interface:** leave as USB.
- Enter **Project Title** (this will be the reference to the job name or customer name).
- **Keep Awake.** Selecting this will set all sensors to be constantly on.
- **Radio Channel.** Check this is set the same as the load cells you have configured in Toolkit.

6. SETTING UP YOUR PROJECT IN LOG 100

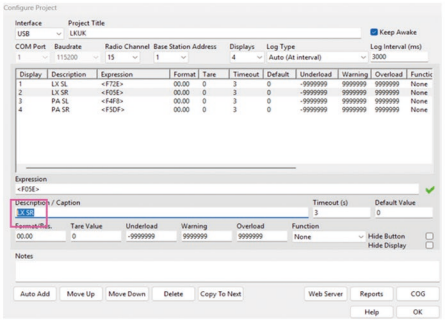
- **Base Station Address.** Leave this set as number (1). If you were running 2 separate systems in one venue it should be set to (2).
- **Displays**. Set this to the number of cells you are using for this project. Extra displays can be added for things like groups of cells.
- **Log Type.** Set to Auto (At interval).
- **Log Interval (ms):** Defaults to 1000. 3000ms is a good option

6a. ADDING YOU CELLS



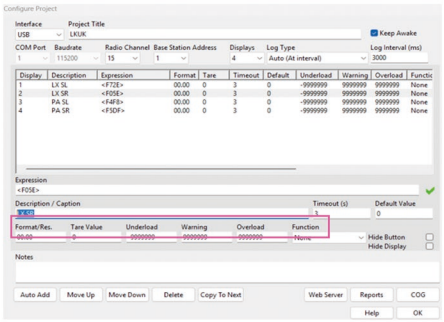
- You can click on Auto add on the bottom left of the configure project window. This should add all cells in the vicinity that have the same radio channel setting.
- Alternatively, you can add the cells manually.
- Click on display 1.
- In the **Expression** field, type in the last 4 difits of the cell ID. Do this in angle brackets <>.
- Continue to do this for each cell until they are all added to the project.
- When the expression field is completed correctly you should see a **green tick**.

6b. DISCRIPTION | CAPTION



- **Description | Caption**. Here you can give a description for each cell. For example, the location or the rigging point, (LX SR, PA SL, V1).
- You may want to add a physical label on the shackle, matching the display number, or description you have used in Log 100. This will make it easy locating the cells and positioning correctly when on site.

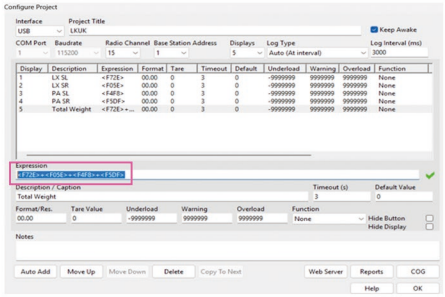
6c. FORMAT, TARE AND WARNINGS



- **Format:** How many decimal places will be displayed, set accordingly (00.00).
- **Tare value:** Can be used to clear any weight already applied to the cell that you may not want to include in your calculations. For example. You may want to remove the weight of the hoist hung below the cell, before adding your equipment.
- **Underload, Warning and Overload** figures are set for each cell accordingly. For example, you might set a warning of 900kg and an overload of 1000kg, depending on your project needs.
- If a cell reaches a weight for a preset warning level, the display of that cell will turn orange.
- An overload will result in that cells display flashing red.
- Underload and underlad warning work in exactly the same way.

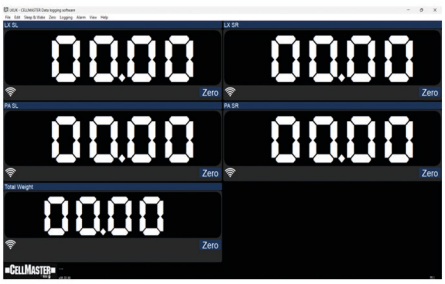
! NB: if you hit one of these overload warnings, you should click **Alarm** on the tool bar and click **Reset alarms and indicators.**

6d. GROUP WEIGHT EXPRESSION



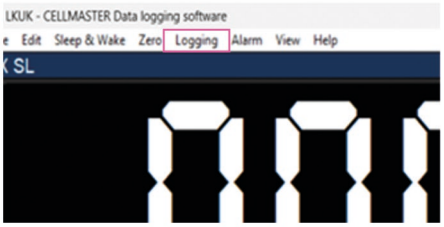
- Add an extra display with the **Displays** dropdown.
- You can add a group weight that will show the chosen cells added together. Using same expression format but with + in between: (<4digits>+<4digits>+<4digits>+<4digits>), repeat for as many cells you require.
- Alternatively, you can add the display number in the same format, for example <1>+<2>+<3>+<4>.

7. LOG 100 Data LOGGING DISPLAY SCREEN



- Once all cells are configured click OK and it will automatically take you into the Display Screen:
- You can check the cell is working by pulling on the bow of shackle. The display should show a live reading when applying force. If this does not happen click **'Sleep & Wake'** and select **'Wake'** to activate load cells. Alternatively, **Ctrl+W'.**

7. LOG 100 Data LOGGING DISPLAY SCREEN



- At any time, you want to begin logging data, click **Logging** and **Start Logging** or **CTRL + L**.
- The moment you wish to stop, simply press **Logging** and **Stop Logging** or **CTRL + T**.
- To view your last log either click **Logging** and **View Last Log** or **CTRL + V**.
- This will now begin to log all load information applied to your active cells, via CSV to an application such as Microsoft Excel and saved as you wish.

8. CONCLUSION - TOOLKIT & LOG 100 SOFTWARE

- For every job it is essential to set up and test all components of a system before planned use. This means all software is pre-loaded, data tags and radio channels are set, and components are labelled with markings related to on-site use.
- Once you are happy that every cell has been thoroughly checked and tested, be sure to save a job file on the desktop, naming it by the correct job name. This allows for easy set-up when you arrive on-site.
- NOTE: when working in either TOOLKIT or LOG100, please ensure that you only have one software open at a time. For example, when working in TOOLKIT while LOG100 is open can result in settings not been properly applied or saved.
- The visualization part of the software is explained in a different set of instructions.