Displaydata

Chroma 125 Battery Replacement Guide

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1. Changelog

Revision	Date	Author	Comments
1	26/2/2021	DJones	Created
2	28/9/2021	C Whitehouse	Converted to asciidoc

2. Introduction

This document contains instructions for replacing batteries in a Chroma 125 display.

Before attempting to replace the batteries in your Displaydata Chroma 125 displays, please ensure that you follow the battery change procedure, contained in this document, and also found at https://www.displaydata.com/resources

It is **IMPORTANT** that these instructions are followed correctly when removing batteries from Chroma 125 displays as Displaydata accept no liability for damage caused to Chroma 125 displays or any items or components associated with them during this process.

This document accompanies *The Aura and Chroma User Installation Guide 550-0020*, which should be referred to for additional information on battery replacement.

3. Warnings

Replacement of batteries should be carried out by an *Instructed Person*

This battery replacement process must be carried out at locations where children are **NOT** present.

#	Title	Explanation
1	**Never crush or disassemble the battery**	Do not disassemble the battery, because the separator or gasket could be damaged and a short circuit be created, leading to distortion, leakage, overheating, explosion, or fire.
2	**Never puncture the battery**	Puncturing the battery case could lead to leakage, overheating, explosion, or fire.
3	**Never subject the cells to rough handling or excessive shock or vibration**	Rough handling or excessive shock or vibration could increase the internal pressure, causing distortion, leakage, overheating, explosion, or fire.
4	**Never heat the battery**	Heating the battery could increase the internal pressure, causing distortion, leakage, overheating, explosion, or fire.
5	**Never incinerate the battery**	Exposing the battery to flames could cause the lithium metal within the battery to catch on fire and the battery to explode
6	**Never apply a reverse voltage or charge the battery**	This is a primary battery, it is not designed to be charged by any electrical source. Charging could generate gas and internal short-circuiting, leading to distortion, leakage, overheating, explosion, or fire.
7	**Never short-circuit the battery or induce the battery to discharge**	Do not allow the positive and negative terminals to short-circuit. This could lead to distortion, leakage, overheating, explosion, or fire.
8	**Never reverse the positive and negative terminals when mounting**	Improper mounting of the battery could lead to short-circuiting, or forced discharging. This could cause distortion, leakage, overheating, explosion, or fire.

#	Title	Explanation
9	**Never allow liquid leaking from a damaged battery to get in your eyes or mouth**	This liquid could cause serious damage. If it does come in contact with your eyes, flush them immediately with plenty of water and seek medical help. Likewise, if the liquid gets in your mouth, rinse immediately with plenty of water and seek medical advice.
10	**Keep leaking batteries away from fire**	If leakage is suspected or you detect a strong odour, keep the battery away from fire, because the leaked liquid could catch on fire.
11	**Never put batteries into water**	Putting batteries into water could lead to distortion, leakage, overheating, explosion, or fire.

4. Battery Handling Guidelines

This section contains a number of guidelines for battery or cell handling.

#	Guidelines
1	Avoid placing the batteries on a. conductive metal work surfaces, b. in conductive containers or c. next to conductive objects which could cause a short circuit for example paper clips, scissors, tools.
2	Be aware that jewelry items such as rings, watch straps, bracelets could short the batteries.
3	Avoid storing the batteries next to sharp objects which could damage or puncture the cell casing.
4	Be careful with loose batteries not fitted to a product. Where possible keep the batteries in their original packaging until they need to be fitted to the product. If the batteries are removed from their original packaging they should be neatly arranged to prevent shorting. Do not stack the batteries or scatter the batteries on top of each other.
5	Similarly do not stack the exhausted batteries or scatter the batteries on top of each other. Exhausted batteries should be disposed of according to local disposal rules and regulations
6	Any batteries that show signs of physical damage should be disposed of according to local disposal rules and regulations.
7	Do not store the batteries in areas receiving direct sunlight.
8	Do not store the batteries close to heaters, or radiators.

5. Equipment Required

Battery Removal tool
30-05000000

Flat blade screwdriver with tip width of 1.5 mm or 1.8 mm

Replacement battery
30-04000000

This battery complies with:

IEC 60086-4 Primary Batteries – Safety of lithium batteries

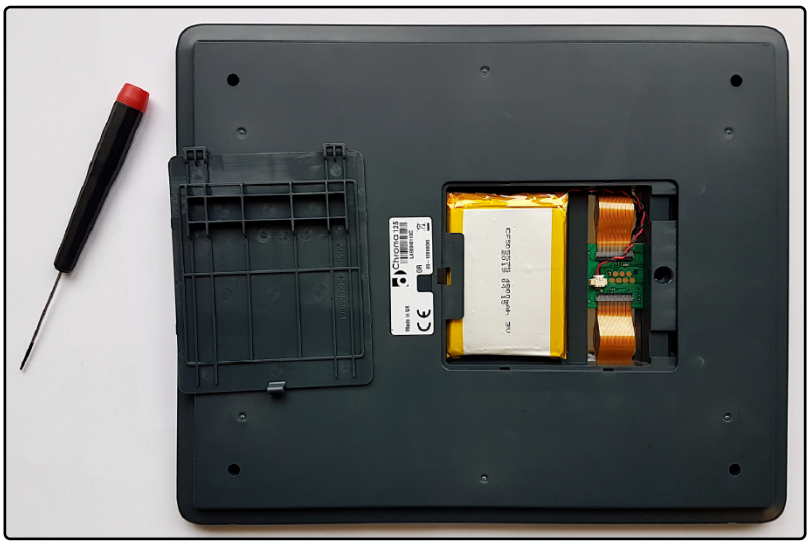
Only replacement batteries approved by Displaydata Ltd should be fitted to Chroma 125 displays.

6. Battery Replacement Instructions

1 Removal of Battery Cover

Place the Chroma 125 face down so that the battery cover at the rear is accessible. Use a flat bladed screwdriver to unlatch the battery cover.

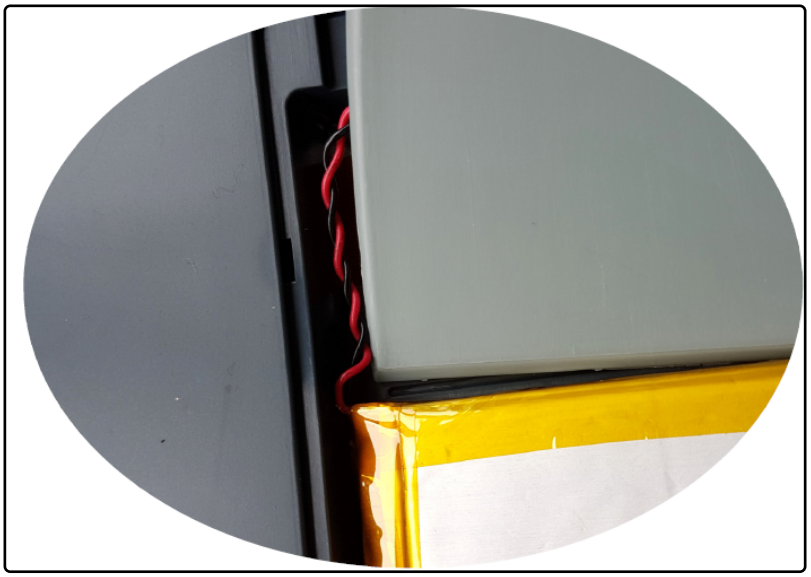
Note: Grit and debris can scratch and mark the display, ensure that the surface where the Chroma 125 is placed is clean and free of debris.



2 Position of Removal Tool

Place the battery removal tool at the base of the battery.

Ensure that the tool does not touch the battery cable.



3 Loosen and lift the battery out of the battery bay

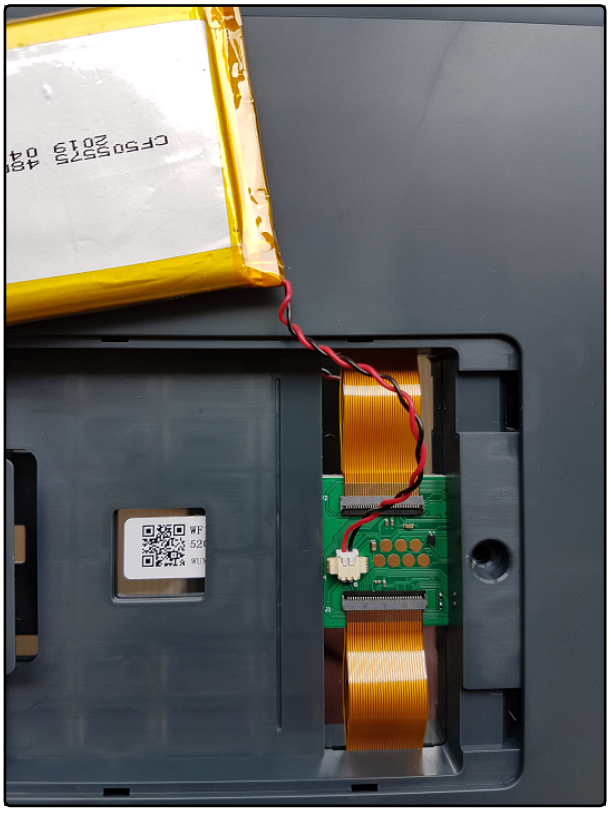
Loosen the battery by sliding the battery removal tool underneath it.

ALWAYS USE the battery removal tool to slide under and release the battery.

DO NOT try to pull the battery out by hand.

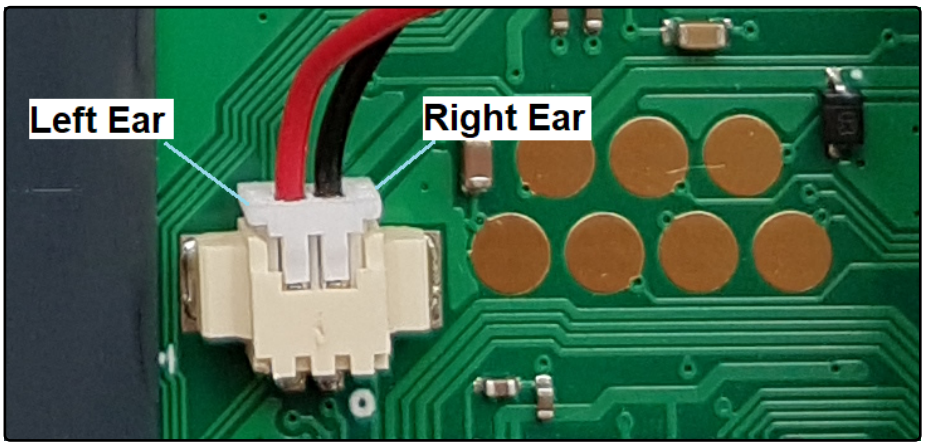
Pulling out the battery by hand could bend and distort the battery causing it to overheat or catch fire.

Lift the battery out of the battery bay and place it adjacent to the battery bay ready for the next step which is to disconnect the battery cable.



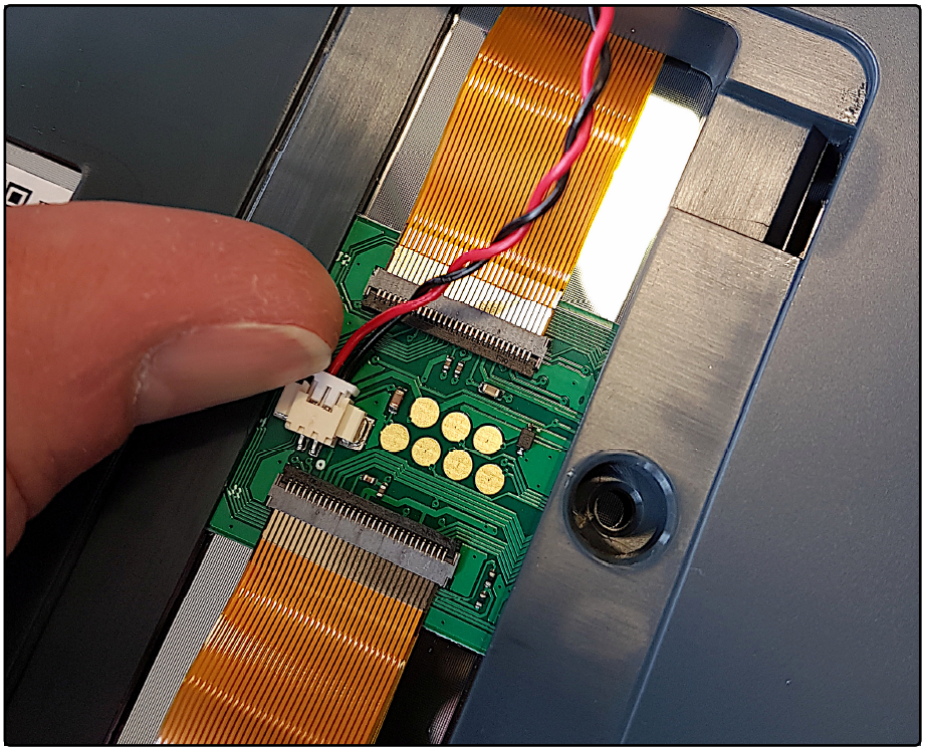
4 Disconnect and dispose of the exhausted battery

To remove the battery connector, apply pressure to the "ears" of the connector as shown. By alternating pressure to the left and right ears of the connector, ease the battery connector out.



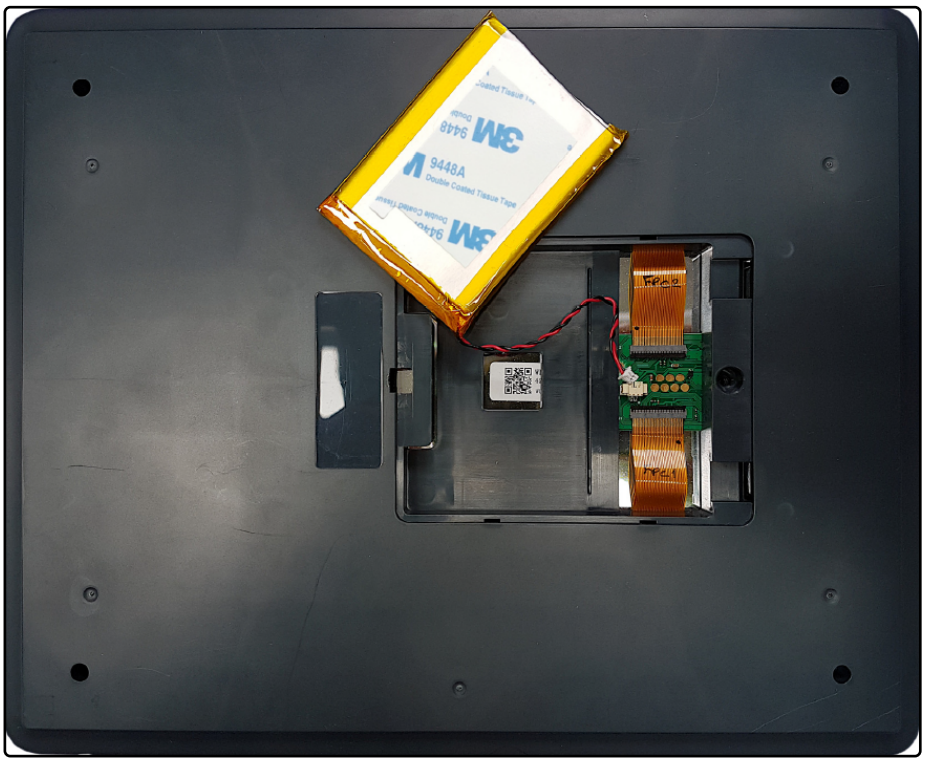
DO NOT try to remove the connector by pulling on the battery cable. Once the battery cable has been disconnected the exhausted battery can be disposed of.

The battery must be disposed of according to local battery disposal regulations.



5 Replacement Battery - position battery ready for fitting

Place the battery close to the battery bay, so the underside of the battery which has the double sided tape attached is face upwards, and the battery connector is close to mating with the battery connector on the PCB.



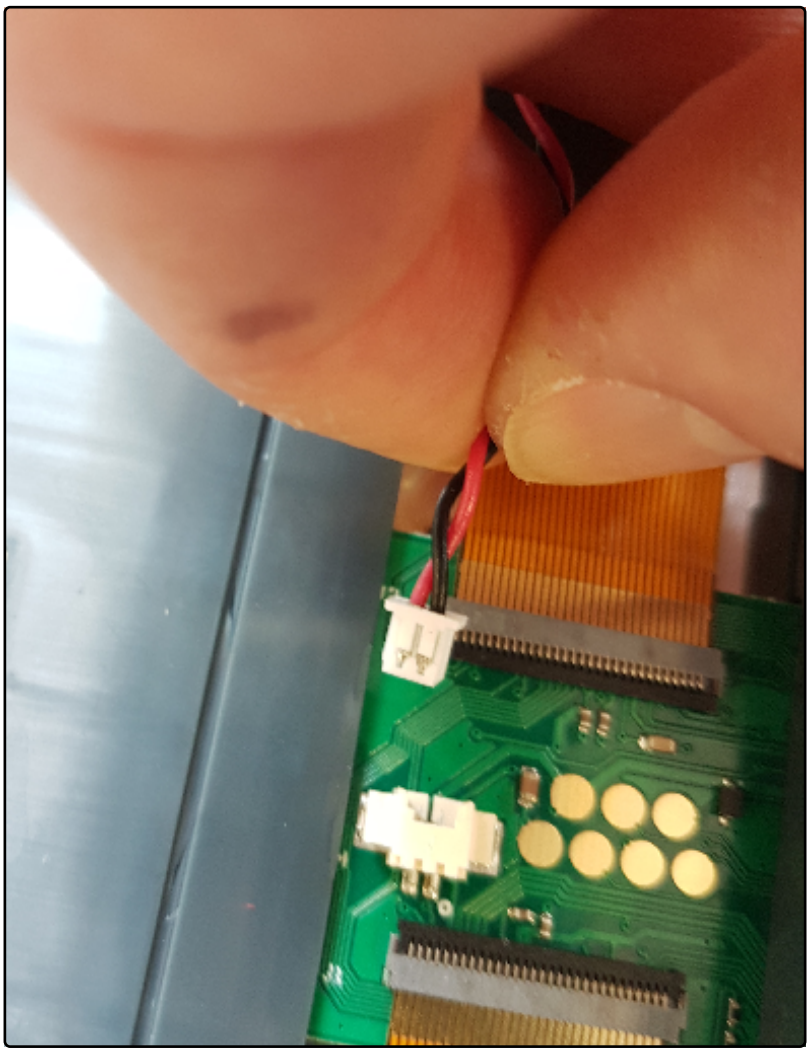
For now, do not remove the protective liner from the double sided tape.

6 Electrical Connection of the Replacement Battery

Align the battery connector with the socket mounted on the PCB.

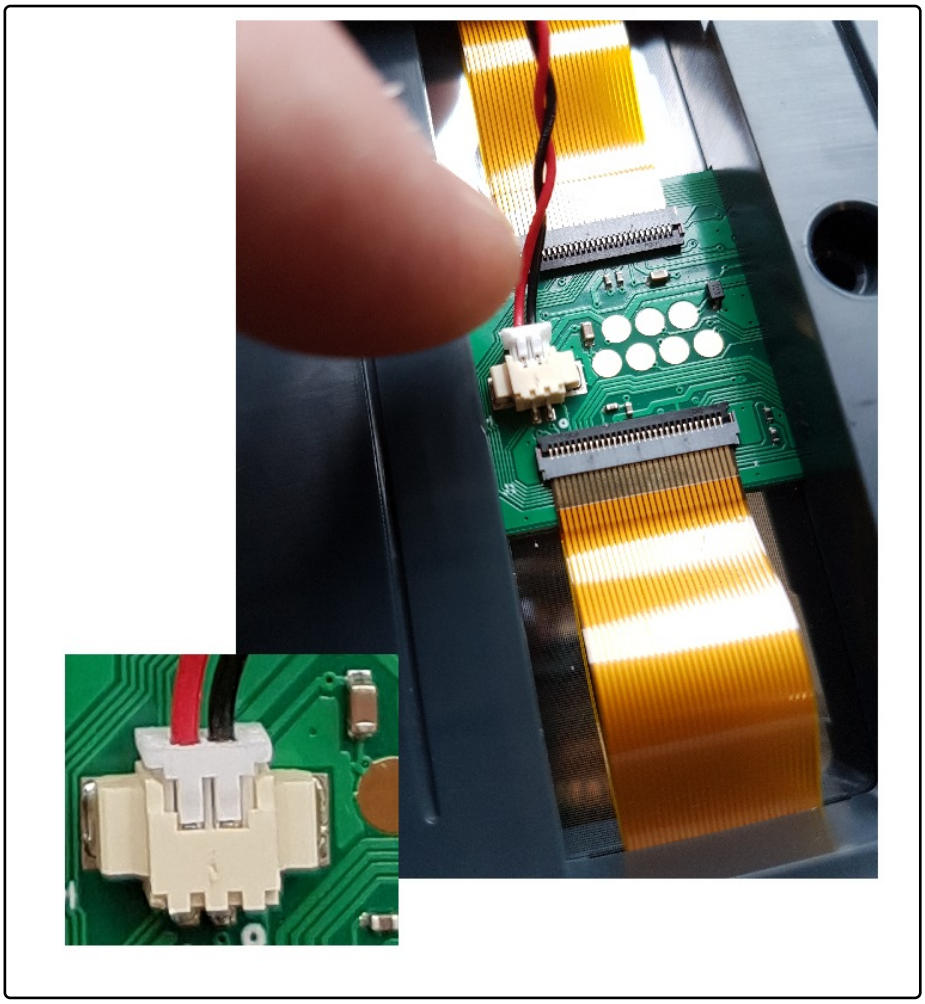
The battery connector is polarized to prevent incorrect polarization.

Ensure the battery connector is orientated as shown.



Once the battery connector aligned with the PCB socket, push the connector home so that it is fully seated.

Here is the battery connector fully seated.



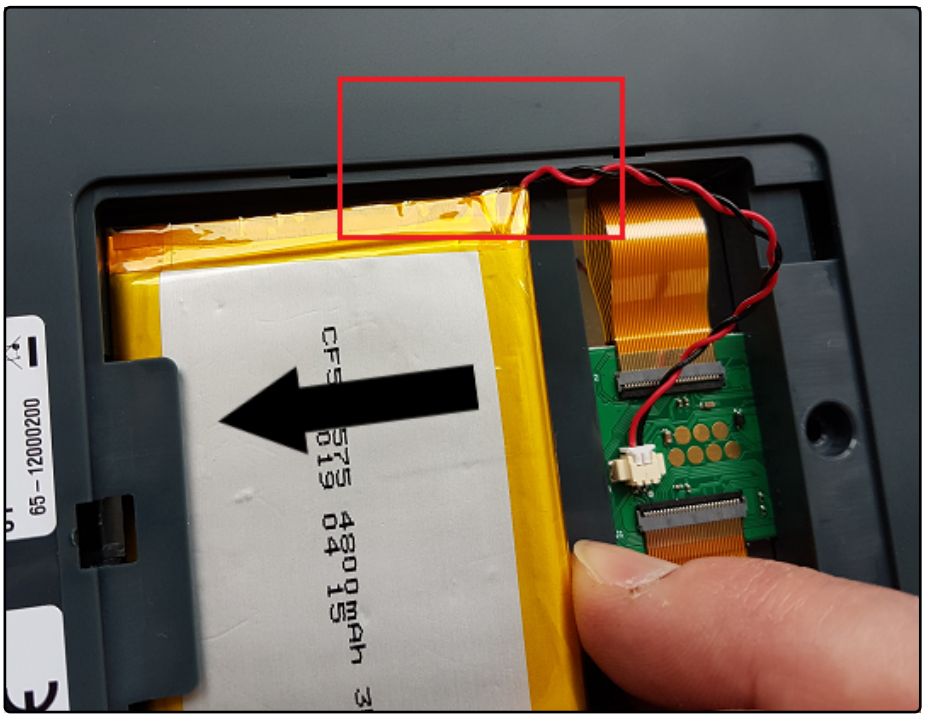
7 Remove Protective backing from double sided tape

The electrical connection of the battery is now complete. The next stage is to insert the battery into the battery compartment.

Pull the tab to remove the protective backing from the double sided tape ready for the assembly of the battery into the battery bay.

8 Assembly of the battery into the battery bay

Insert the battery, ensuring the face of the battery fitted with the double sided tape is face down as shown.



Keeping the battery at a angle (so that the double sided tape does not come into contact with the battery bay floor), slide the battery to the left so that the left edge of the battery is gently butted against the left face of the battery bay.

Ensure there is enough clearance between the top of the battery and the top of the battery bay, so that the battery cable is not pinched between the top of the battery and the battery bay walls.

Once you are satisfied with the position of the battery, press it down gently but firmly so the double sided tape adheres the battery to the battery bay floor, holding the battery in place.

9 Finish the assembly

Ensure the battery cable is dressed as shown.

Replace the battery cover.

Verify the operation of the display.