spectralink

Technical Bulletin CS-19-10

Versity Battery Contacts

This technical bulletin explains how to avoid damaging battery contacts in the Versity product, troubleshooting a device that won't power on, and remediating bent contacts.

System Affected

All Spectralink Versity products

Description

Although Versity is a rugged smartphone platform, when the battery is removed from the handset, the battery contacts within the handset can be damaged. Take special care to not touch, compress or come into contact with the battery contacts in any way or damage may occur.

Figure 1 - Battery contact location in battery compartment
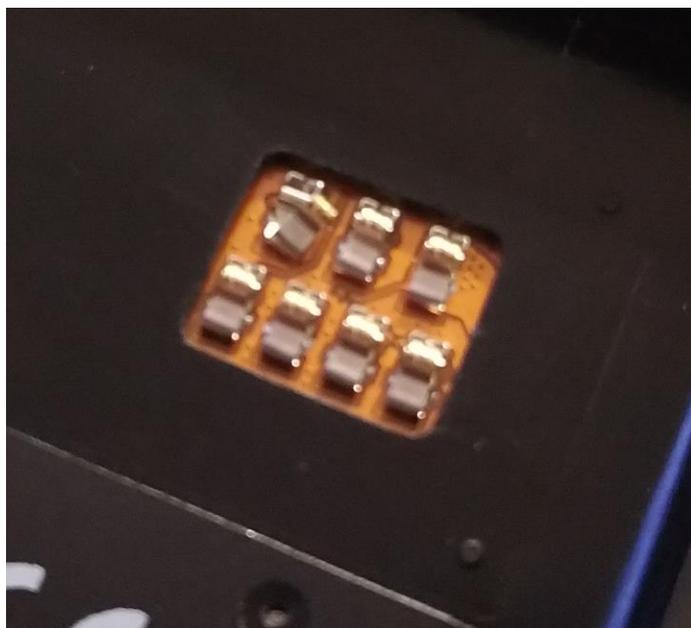
Symptoms of Damaged Battery Contacts

It is very important the Versity battery contact "fingers" make proper contact with the battery contacts. Deformation of the fingers can result in several operational issues, these may include:

- Versity will not power-on

- Versity seemingly randomly shuts down

- Versity presents "Invalid Battery Shutdown" Toast just prior to device shutting down.

In these failure scenarios, it is recommended to remove the battery from the device, examine the device's battery contact fingers, and also the battery's contact pads. The battery contact pads should not be dirty or covered with any substance that may prevent a solid electrical connection with the Versity contacts.

The Versity contact fingers should all remain oriented straight relative to the finger's contact base, with all fingers at the same height. Contact height can be visually assessed by holding the device in an approximately horizontal plane infront of your face. In the photograph below the finger on the top left has been deformed as a result of incorrect battery insertion.

Figure 2 – Damage Example: Top left Contact is twisted

Causes of Damaged Battery Contacts

Battery contacts are commonly damaged or deformed as a result of a user sliding or dragging part of the battery over the contact fingers either during insertion or removal. If contact damage occurs frequently it may be necessary to advise users how to correctly insert or remove the battery.

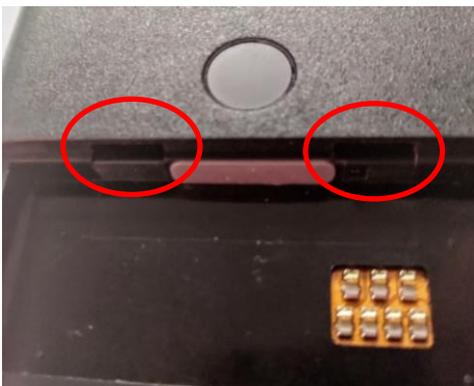# *Correct Procedure*

Correct Battery Insertion Procedure

The recommended insertion method:

1   Locate the two battery tabs on the top edge of the battery; locate the two cavities in the battery compartment wall closest to the top of the device.

Figure 3 Battery Tabs

Figure 4 Battery Compartment Cavities

2 Orient the battery at an angle approximately 45-60 degrees to the Versity battery compartment, i.e. the battery edge with the two plastic tabs should point towards the two cavities in the battery compartment wall closest to the top of the device.

Figure 5 Insert battery at an angle

3 Insert the battery tabs directly into the into the battery compartment cavities, aligning the two plastic extrusions with the two cavities located in the battery compartment.

Figure 6 Place battery tabs into compartment wall cavity

4 Lower the battery into the compartment using the tab/cavity contact point as a pivot.

Figure 7 - Pivot battery into compartment

5 Apply downward pressure using your finger over the battery clip until you feel (and hear) the battery clip snap into place.

Figure 8 - Apply gentle pressure to activate battery clip

Correct Battery Removal Procedure

Battery removal follows a reversed but similar procedure to battery insertion.

1 To disengage the battery clip, gently use a fingernail to slide the clip towards the fingerprint sensor. Do not pull up on or twist the clip.

Do not use a tool, e.g. letter opener or screwdriver to pry the clip open. Using an incorrect prying action with a tool can break the battery clip.

Figure 9 - Use a fingernail to slide clip towards battery

2   With the clip depressed gently lift the battery out of the battery compartment using your fingernail.

3   Once the battery is elevated a few millimeters, release the battery clip and grab the battery using your fingers.

4   Raise the battery edge out the battery compartment using a pivoting action. Do not slide the battery across the cavity as this action may cause damage to the contacts.

Figure 10 - When removing battery do not allow battery to touch contacts.

1.   Finally, gently withdraw the battery tabs from the battery compartment cavities and lift the battery out of the battery compartment. <u>Make sure that no part of the battery drags across the Versity battery contacts</u>.

Considerations when using Belt Clips

If a Versity device has a Spectralink belt clip installed then the user should actuate the clip, i.e. depress the clip lever, during battery removal or insertion. This action moves the clip away from the battery compartment, creating more room for insertion or removal, and makes it less likely

that a user accidentally impacts the Versity device contacts.The same above installation and removal procedures apply just with the clip lever activated.

Figure 11 - Activate the belt clip lever before inserting or removing a battery.

Figure 12 - Insert or Remove a battery with the clip lever activated trying not to impact the Versity battery contacts.

Remediating Damaged Battery Contacts

If the Versity battery contacts are visibly damaged, the official recommendation is to return the device using your RMA process to Spectralink for a repair. This repair likely will not be covered under warranty. Depending on how you purchased the devices, the RMA process may be via your reseller.

Minor deformation may be remediated by carefully bending the fingers back to the correct position using appropriate tools (tweezers or small needle nose pliers). Severaly damaged contact fingers (e.g. crushed) may not be repairable.

> **Note: Damaged pins are not covered under the Spectralink warranty**
>
> Spectralink is not responsible for any damage caused during or subsequently as a result of this action. Although mentioned here, correcting damaged pins through any such attempted procedure cannot be guaranteed.
>
> If, after the pins are reoriented and the device fails to operate, the device should be returned (following the RMA process) to Spectralink for repair/replacement. This likely will not be covered under warranty.

Product Support

Spectralink wants you to have a successful installation. If you have questions please contact the Customer Support Hotline at 1-800-775-5330.

The hotline is open Monday through Friday, 6 a.m. to 6 p.m. Mountain time.

For Technical Support: mailto:technicalsupport@spectralink.com

For Knowledge Base: http://support.spectralink.com

For Return Material Authorization: mailto:nalarma@spectralink.com

Document Status Sheet

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Warranty

The *Product Warranty and Software License and Warranty* and other support documents are available at http://support.spectralink.com.

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