

Technical Bulletin CS-19-09

Cleaning and Disinfecting Varsity Products

This document offers guidelines for the cleaning and disinfecting of Varsity products. The guidelines in this document do not replace manufacturer directions for using specific products that may be mentioned herein.

Use this information to develop a maintenance plan that will ensure your investment in Varsity will continue to produce a satisfactory return in terms of longevity and usefulness.

Given the variety of products available, the types of materials encountered and the range of procedures employed, use your best judgement to establish a routine that will clean, disinfect and maintain your Varsity smartphones to the standards required.



Caution: Do not disassemble

There are no serviceable parts in the Varsity smartphone, battery packs or chargers. You should not open the smartphone case nor disassemble the charger. Doing so will void your warranty.

Varsity Smartphones

Varsity is built for tough environments. It has an IP68 rating, meaning that when the battery is inserted it can withstand unintentional dust ingress and submersion in water. It is constructed out of the strongest and most resilient plastics available today. All components have been chosen for durability and reliability. It has been assembled by experts. Spectralink has extensively tested the device and confidently warranties it for normal use under rigorous conditions.

Although Varsity is ruggedly built, accidental or inadvertent exposure to various substances can cause the device to perform poorly or fail completely. For instance if Varsity is dropped into a bucket of paint, even the most careful cleaning may not bring it back to satisfactory functionality. Many substances just cannot be cleaned off without damaging the device beyond repair. Some commonly-used substances can simply accumulate into a sticky mess and impair functionality. These types of situations and conditions cannot be warranted but most can be prevented or remedied through alert use and proper care and maintenance.



Caution: Do not bend battery contacts

The battery contacts in the battery compartment can be bent if handled roughly during cleaning. If bent, Versity may not turn on or may display a battery error. See [Technical Bulletin CS-19-10 Versity Battery Contacts](#) for complete information.

Accidents Happen

It stands to reason that if Versity is inadvertently submerged, it must be removed from the water. If a cloud of sawdust falls on it, the dust must be blown off the surface and out of the orifices. Here are the specifics that will help you recover functionality after accidents or heavy use.

Obstructions

Loose, dry lint or dust or dirt can lodge in device orifices and impair performance. Orifices include microphone, earpiece, headphone jack, USB plug, reset pin hole, sim card holder (LTE models), and battery contacts.

The first thing to know is **DO NOT INSERT ANY OBJECT OR INSTRUMENT INTO THE ORIFICE**. Insertion of objects into an orifice can harm the delicate mechanisms within.

The second thing to know is **DO NOT ATTEMPT TO CLEAN OUT ORIFICES WITH WATER OR OTHER LIQUID**. If water is added, a sticky plug can form and block the opening, resulting in significant deterioration in performance.

USE CANNED AIR TO DISLODGE PARTICULATES FROM ORIFICES. Usually they just blow right out. Always point canned air orientation at glancing angles away from your face and eyes and always wear safety goggles/glasses when performing this procedure.



Troubleshooting

If this procedure does not remove particulates please contact Spectralink customer support for further troubleshooting.

Oil-based and other hard-to-clean substances

Perhaps the most difficult substance to remove from the Versity device is one that needs a solvent stronger than soap and water or one that has hardened into an impenetrable mass.

Despite Versity's industry-leading IP68 rating, like any piece of equipment, it is at risk of degraded performance if functionality is impaired by foreign objects.

Oil based products such as make-up or various hand and body lotions leave a sticky residue that can accumulate on the device and attract and bind particles that are commonly present in the workplace. As these substances and any associated particles build up on the surface of the

phone, they have the potential to degrade the function of the Versity smartphone by jamming key components such as the camera, microphone/speaker or earphone jack. Any such blockage or clog that results in degradation in performance is not covered by the Spectralink warranty, although it might be covered by one of Spectralink's extended maintenance programs.

To protect your investment, special care should be taken in preventing the accumulation of oil based products and their attracted particles. Routine maintenance as detailed below is required to maximize long term performance.

If Versity gets wet

If your smartphone interior gets wet, do not try to accelerate drying with the use of an oven or a dryer as this will damage the smartphone and void the warranty. Instead, do the following:

- 1** Immediately power off the smartphone and remove Battery Pack.
- 1** Shake excess liquid from the smartphone.
- 2** Place the smartphone and Battery Pack in an area that is at room temperature and has good airflow.
- 3** Let the smartphone and Battery Pack dry for 72 hours before reconnecting the Battery Pack and/or powering on the smartphone.

If the smartphone does not work after following the steps listed above, contact Spectralink customer support.

General Cleaning Guidelines

- Do not deliberately expose Versity to liquids, steam or corrosive environments at any time as it may result in permanent damage to the device.
- Never immerse the smartphone or battery, either separately or assembled, in liquid.
- Do not spray any solution directly onto the smartphone. Dampen a cloth and wipe instead. Do not allow liquid to pool on the plastic, glass or in any orifice.
- Pre-treated cloths and towelettes for glass products may be used to clean the glass screen and scanner window.
- For light to heavy soil: Wipe the smartphone surface with a water-dampened lint-free cloth or paper towel to remove most films or residues. If the soiling is too stubborn for plain water, a mild detergent solution, Lysol, isopropyl alcohol, or diluted bleach (10% or less) may be used on the plastic.
- There are battery contacts on the bottom of the phone and inside the battery compartment. Take care not to exert undue pressure on these contacts. Do not rub, scrub or use bleach. Wipe with a cotton swab dampened with alcohol ensuring any lint is removed.

- For disinfecting: Most standard medical-grade cleaning wipes using quaternary compound cleaning agents are acceptable. When applied according to manufacturer directions they will not degrade Versity plastics. See the list below.
- Versity has been approved for UV cleaning equipment when used according to manufacturer instructions.
- Should the headset connector become dirty, you may experience a scratchy or intermittent signal. If available, blow canned air into the connector to clear debris. Always point canned air orientation at glancing angles away from your face and eyes and always wear safety goggles/glasses when performing this procedure. Air compressors apply too much force and should not be used.
- Take care not to exert undue pressure on the glass screen or on the electrical contacts on the smartphone, Battery Pack or charger.
- Allow the smartphone to air dry after cleaning or disinfecting. It may be wiped with a soft, lint-free dry cloth to hasten dry time. Be sure electrical contacts are completely dry. When fully dry you may re-insert the battery, insert the smartphone into the charger or power it on.
- Do not mix cleaning agents. The combined effects of cleaning agents are unknown. Mixing chemical agents could seriously degrade the construction of the smartphone making it susceptible to damage, even with normal use.
- Do not use these products to clean your Versity smartphone:
 - Do not use furniture polishes, waxes, or plasticizer-based cleaners (ArmorAll®, etc.).
 - Do not use lanolin, aloe, glycerin, or other skin care products.
 - Do not use hand sanitizers to clean Versity or handle Versity when hands are wet with sanitizer solution.
 - Do not apply any solvent such as acetone, mineral spirits, etc.

Routine Maintenance

As rugged as it is, Versity, like all electronics, will last longer and work better with regular maintenance. How much maintenance is needed depends on the amount and type of exposure. Consider the following degrees of exposure and types of potentially-detrimental debris that are likely to be present in any given facility:

- **Light**—normal office settings with desks and chairs and moderately mobile workers. Substances include paper and fiber lint, light soil, dust, pet hair/dander, food residue, spills and human residue from coughs, sneezes, makeup, hair products, etc.
- **Medium**—interactive work settings with lots of human contact such as medical outpatient facilities, restaurants, hotels, light manufacturing, schools and retail. Substances include all the Light list just more of it and possibly some substances from the Heavy list.

- **Heavy**—highly interactive work with much more human contact and/or exposure to different types of substances. Substances include all the above two lists but additionally may include manufacturing materials such as metal lint and other particulates, various types of fluids, glues and solutions, waste products and so on. In-patient medical exposures include body fluids and waste, medical chemicals, drugs and various residues from medical processes.

Any of these materials can result in unsatisfactory performance if allowed to build up on the device. Some, like glue or paint, could instantly destroy the device. Due to the amount of exposure and types of materials, no one set of instructions suits all installations or all work environments even within any given facility. The main variant, however, is frequency of exposure which in turn dictates the frequency of maintenance. Here are some general guidelines for daily, weekly or monthly maintenance. Remember:

NEVER insert any instrument into any orifice including the microphone, earpiece, headphone jack, USB plug, reset pin hole, sim card holder (LTE models), or battery contacts.

NEVER bend battery contacts.

NEVER submerge Versity into any cleaning solution.

NEVER allow a cleaning solution to pool on the phone or in an orifice.

ALWAYS ensure the phone is thoroughly dry before remounting the battery and replacing the case or clip.

- 1 Turn the phone off and remove any case and battery. (these should be cleaned separately)
- 2 Apply canned air to crevices and orifices to blow out any lint or dirt. Always point canned air orientation at glancing angles away from your face and eyes and always wear safety goggles/glasses when performing this procedure.
- 3 Surface dirt should be cleaned with soap (if needed) and water using lint-free cloths. Wash by wiping with a damp cloth (using a soap solution if needed). You may scrub stubborn spots but DO NOT scrub or bend battery contacts. DO NOT squeeze liquid into orifices. Wipe off soap film with a different clean damp cloth. Dry with yet another clean dry cloth.
- 4 Wipe battery contacts with a cotton swab dampened with alcohol ensuring any lint is removed.
- 5 Polish the glass screen, photo lenses, flashlight, fingerprint scanner and barcode reader (if present) with glass cleaner towelettes.
- 6 Ensure Versity is fully and completely dry before remounting the battery and replacing any clip or case (which have been washed and dried separately).
- 7 Now is a good time to sanitize the device.

With such care, your Versity will last a very long time.



Troubleshooting

If the above procedure does not remove resistant residue please contact Spectralink customer support for further troubleshooting.

Versity battery packs and clips

Clean these items separately from the smartphone by following the same steps as above for Versity. Ensure all components are thoroughly dry before assembly.

Caring for Versity Chargers

Although Versity chargers do not take the beating the smartphones do, they can get quite dirty and will benefit from periodic cleaning. Follow the same steps as for Versity but pay special attention to the bullets below.



Caution: Care in cleaning and disinfecting chargers

Plastics used in charger manufacturing process are different than those used for the Versity smartphone and are not designed to withstand rigorous disinfection. That said, here are guidelines for cleaning chargers:

- Remove the smartphone and battery from the charger. Unplug the charger.
- Never immerse the charger in liquid.
- Do not spray any solution directly onto the charger. Dampen a cloth and wipe instead. Do not allow liquid to pool on or in the plastic.
- Do not use a bleach solution on battery contacts.
- Take care not to exert undue pressure on electrical contacts inside the charger compartment. Avoid bending the contacts.
- For light to heavy soil: Wipe the charger surface with a water-dampened cloth or paper towel to remove most films or residues. If the soiling is too stubborn for plain water, a mild detergent solution, Lysol, isopropyl alcohol, or diluted bleach (10% or less) may be used on the plastic.
- Wipe battery contacts with a cotton swab dampened with alcohol ensuring any lint is removed.
- Never use these products to clean your Versity charger:
 - Do not use furniture polishes, waxes, or plasticizer-based cleaners (ArmorAll®, etc.).
 - Do not use lanolin, aloe, glycerin, or other skin care products.

- Do not use hand sanitizers to clean chargers or handle the charger when hands are wet with sanitizer solution.
- Do not apply any solvent such as acetone, mineral spirits, etc.
- Allow the charger to air dry. It may be wiped with a soft dry cloth to hasten dry time. Be sure electrical contacts are completely dry and lint-free. When fully dry you may plug it in and re-insert the battery and/or smartphone.

Disinfectants

Products listed here are standardly used in medical environments for cleaning and disinfecting. They are considered safe when used according to solution strength and manufacturer instructions. New products are being introduced constantly and generally have similar ingredients. Always follow manufacturer guidelines when using a cleaning/disinfecting product.

Liquid products and wipes

Generic products

Product	Solution strength
Hydrogen peroxide	Use a 3% solution
Bleach	Use a 10% solution (Sodium Hypochlorite 0.55%) Not for use on metal charging contacts.
Isopropyl alcohol	Up to 91% solution
DO NOT EXCEED SOLUTION PERCENTAGES	

Brand name products

- AZOWIPE™
- Brulin BruTab 6S® Tablets
- Clinell® Universal Wipes
- Clorox® Dispatch Hospital Cleaner Disinfectant Towels with Bleach *
- Clorox® Formula 409® Glass and Surface Cleaner
- Clorox® Healthcare Bleach Germicidal Wipes *
- Clorox® Healthcare Hydrogen Peroxide Wipes
- Clorox® Healthcare Multi-Surface Quat Alcohol Wipes Dispatch® Hospital Cleaner with Bleach
- Diversey® D10® Concentrate Detergent Sanitizer
- Diversey® Dimension 256 Neutral Disinfectant Cleaner
- Diversey® Oxivir® Tb Wipes
- Diversey® Virex II® 256 One-Step Disinfectant Cleaner
- Medipal® Alcohol Wipes
- Metrex® CaviCide®
- Metrex® CaviCide1®
- Metrex® CaviWipes™
- Metrex® CaviWipes1®
- Oxivir®
- PDI® Easy Screen® Cleaning Wipe
- PDI® Sani-Cloth AF3® Germicidal Disposable Wipe
- PDI® Sani-Cloth® Bleach Germicidal Disposable Wipe *
- PDI® Sani-Cloth® HB Sani-Germicidal Disposable Wipe
- PDI® Sani-Cloth® Plus Germicidal Disposable Cloth
- PDI® Super Sani-Cloth® Germicidal Wipe
- Progressive® Products Wipes Plus

- Sani© Professional Disinfecting Multi-Surface Wipes
- Sani-Hands® Instant Hand Sanitizing Wipes
- SC Johnson© Windex® Original Glass Cleaner with Ammonia-D
- Spartan© Hepacide® Quat II
- Sterets© Alcowipe®
- Steris© Coverage Plus Germicidal Surface Wipes
- Veridien© Viraguard
- Windex© Glass Cleaner

UV disinfection technology for mobile devices

Ultraviolet light from the “C” spectrum has germicidal properties and is used within specially-built chambers to disinfect devices. UV-C chambers are best utilized after the device is cleaned.

In a medical environment, germicidal UV-C is employed as an additional safeguard against Healthcare-Associated Infections/Hospital Acquired Infections (HAIs). Although ultraviolet light destroys viruses, bacteria and spores it also may damage plastics. Spectralink labs conducted extensive testing to determine the durability of Versity when exposed to UV-C.

Versity was tested against a UV-C chamber—the AUVS KR615—specifically designed for disinfecting mobile devices under hospital disinfection protocols. Commonly known as The UV Box, the KR615 was developed and is manufactured by Advanced Ultra-Violet Systems and is available through Safety Net.

Due to its superior plastic enclosure and precision manufacturing, Versity exceeded performance expectations and retained full functionality and integrity throughout the tests. Spectralink therefore approves germicidal UV-C for disinfecting Versity when used according to both Spectralink and UV-C device manufacturer guidelines.

For more information about The UV Box, please visit Safety Net at <http://www.safetynetamerica.com/products/hand-hygiene-plus/>.

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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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