

Virtual Reality Equipment Sanitation Guide for Location-Based Entertainment Businesses

Overview

Sanitation plays a crucial role in the success and sustainability of Virtual Reality (VR) attractions, especially in locations like family entertainment centers and arcades where hardware is shared among many users, and where large groups of people interact. It's vital to integrate sanitation practices into your overall floor routine of these attractions. This integration is not only about maintaining cleanliness but also about ensuring that these practices are visible and noticeable to the guests.

Reusable or shareable items worn on a face or head should be cleaned and disinfected between users. It's important for operators to take the lead in cleaning the VR equipment, as relying on guests for this task won't yield the desired level of hygiene. The way an operator handles the cleanliness of VR headsets and equipment can significantly impact the guest experience. If a guest notices that the equipment is visibly dirty, smells unpleasant, or seems to be in disrepair, it could deter them from repeating the experience – or even from trying it the first time. Just as important, providing a clean headset for every user helps protect the operator from liability associated with easily spread contagions.

You can watch our 3.5 minute video on how to create a good hygiene protocol here:

<https://www.youtube.com/watch?v=xtS4kjTLaTg>

Establishing a VR Hygiene Protocol: A How-To Guide

1. The Importance of Sanitation of VR Attractions

- **Building Trust:** VR and AR experiences require players to put equipment onto their face and touch controllers that all of your other visitors have used before them. Make cleanliness a hallmark of your venue to establish trust with your customers, ensuring they perceive your venue and its VR offerings as clean and safe.
- **Enhancing Customer Satisfaction:** A clean VR environment directly contributes to a more comfortable and enjoyable experience for your customers.
- **Reducing Liability and Extending Hardware Life:** Regular and thorough cleaning reduces the risk of spreading germs and extends the lifespan of your VR equipment.

2. Developing Your Standard Operating Procedure (SOP)

- **Assessment:** Start by assessing your current cleaning practices and identify areas for improvement.
- **Consult with Experts:** Consult with hygiene experts or refer to health guidelines to understand the best practices in sanitation.
- **Create or Adopt an Existing Hygiene SOP:** Draft a detailed SOP that outlines every step of the cleaning process. This should include:
 - Types of cleaning agents and materials to be used.
 - Specific instructions for cleaning different parts of the VR equipment.
 - Frequency of cleaning (e.g., between each user, end of the day).
 - Procedures for handling and storing equipment post-cleaning.
- **Training Staff:** Ensure all staff are thoroughly trained in the SOP. Regular training sessions can help maintain high standards.
- **Documentation:** Keep records of cleaning schedules and procedures for accountability and continuous improvement.
- **Make your SOP public:** Post your Hygiene Protocol where guests can see it, so they know you are taking the best care of them, and providing a premium experience.

3. Implementing the Protocol

- **Visible Cleaning Stations:** Set up visible cleaning stations where staff can clean equipment in view of clients, reinforcing the venue's commitment to hygiene.
- **Regular Monitoring:** Regularly monitor the cleaning process to ensure adherence to the SOP.
- **Feedback Mechanism:** Implement a feedback mechanism to gather insights from both staff and clients on the effectiveness of the hygiene protocol.

4. Regular Review and Updates

- **Stay Informed:** Stay updated with the latest hygiene practices and health guidelines.
- **Periodic Review:** Regularly review and update your SOP to ensure it meets the highest standards and incorporates any new best practices.

5. Communicating with Clients

- **Signage and Information:** Use signage and other forms of communication to inform clients about your hygiene practices.
- **Transparency:** Be transparent about your cleaning methods and frequency to build trust and reassure clients about their safety.

By following these steps, you can establish a VR hygiene protocol that ensures a clean, safe, and enjoyable experience for your clients, while also safeguarding your equipment and minimizing liability risks.

Cleaning and Disinfection Procedures

Good Procedure: Basic Cleaning and Disinfection Between Users

1. **Clean Contact Surfaces:** After each use, clean all surfaces of the headset that come into contact with the user's face and head. This includes the facemask, lenses and controllers.
2. **Use New Wipes Each Time:** Use brand new wipes for each headset. Ensure that the wipe is effective against germs commonly found on VR equipment while also being skin-safe. To be cleaned properly, each headset will require 2-3 wipes per clean, depending on the headset. Each portion of the headset, especially the parts of the headset in contact with skin or eyes, must be wiped and left wet for the duration of time required by the manufacturer.

IMPORTANT: Any kind of disinfectant wipe requires that the surface being cleaned be left WET for 2-10 minutes. If you are using wipes to clean, plan for appropriate time between cleanings.

1. **Follow Manufacturer's Instructions:** Adhere to the wet duration as specified by the wipe's manufacturer to ensure effective sanitation.
2. **Provide a Dry Headset:** Before handing the headset to a new user, make sure it is completely dry to provide a comfortable experience. Note that if a microfiber cloth is used to dry a headset, you need to use a clean cloth each time.
3. **Use a UVC Decontamination System:** If throughput time and labor costs are important to your venue, a UVC system can be used to replace the use of wipes. Be sure to use a UVC product that has appropriate certifications (do not build your own system), and make sure the UVC system is designed for safe use on electronics. As with wipes, UVC systems must be used to manufacturers' specifications. See Appendix for more information on different types and applications of UV (UVA, UVB and UVC, bulbs, xenon pulse, LEDs).

Better Procedure: Enhanced Cleaning for Each User

1. **Extensive Cleaning of All Surfaces:** Increase the thoroughness of cleaning by wiping down every surface of the headset, not just the contact areas. Particularly if you've witnessed a player coughing or sneezing while in the equipment, take the extra time to completely wipe down the hardware exterior.
2. **Use Additional Wipes:** Employ additional wipes if necessary to ensure that all areas are adequately covered and sanitized. This may be especially necessary if a player was wearing makeup or had excessive product in their hair.
3. **Use a UVC Decontamination System:** If throughput time and labor costs are important to your venue, a UVC system can be used to replace the use of wipes for rapid decontamination that removes the need for extra wipes and dry time. Be sure to use a UVC product that has appropriate certifications (do not build your own system), and make sure the UVC system is designed for safe use on electronics. As with wipes, UVC systems must be used to manufacturers' specifications.

4. **Disinfect Hands:** Operators should disinfect their hands before and after cleaning headsets.
5. **Prepare Backup Equipment:** Have backup headsets or disposable or cleanable facemasks available, especially during high-volume periods, to maintain the flow of guests without compromising on hygiene.

Best Procedure: Comprehensive Sanitation and Storage

1. **Thorough Cleaning and Drying:** Employ all steps from the 'Better Procedure' outlined above and implement a rigorous cleaning routine for all headset surfaces after each use, followed by a complete drying process.
2. **Store in Sterile Conditions:** Once cleaned and dried, store the headsets in sealed or sterile containers to maintain cleanliness until their next use.

Recommended Cleaning Materials

- Skin-safe disinfectant wipes. Avoid traditional cleaning wipes that use bleach or chemicals as these can cause skin irritation, especially if used to clean face masks that go near customers' eyes and face, and can damage the headsets, and refer to manufacturer's guidance on use of alcohol wipes to prevent voiding headset warranties.
 - **Note:** Follow your headset manufacturer's guidelines to determine if disinfectant wipes are safe for your equipment's lenses as some lenses can be damaged by wipes. Dry microfiber cloths are recommended for most lenses.
- Dry microfiber cloths for lenses and smudge removal.
 - **Note:** These do not sanitize or disinfect; they just remove detritus if the cloths themselves are clean.
- UVC devices for rapid and consistent sanitization. UVC is a more effective and consistent method for disinfecting shared devices, and is safe for these devices if used properly.
- Adherence to manufacturer's instructions for headsets, wipes and UVC devices.

Liability and Compliance

Compliance with these guidelines is not just a matter of maintaining cleanliness; it is also a significant legal consideration. Without a proper VR hygiene program, you could be more at risk for legal complaints or negative reviews from visitors that can damage your facility's reputation as a whole.

By following these structured steps, you can ensure that your VR attraction is not only clean and safe for each user but also maintained in a way that extends their lifespan and enhances your customers' overall experience!

Cleaning and Disinfection References

Reusable or shareable items worn on a face or head should be cleaned and disinfected between users.

Liability

<https://www.twisdalelaw.com/part-3-critical-importance-of-proper-equipment-cleaning-series-vr-industry/>

https://egrove.olemiss.edu/cgi/viewcontent.cgi?article=2394&context=hon_thesis

<https://dl.acm.org/doi/10.1145/3385956.3418958>

<https://www.twisdalelaw.com/part-6-critical-importance-of-proper-equipment-cleaning-series-concluding-thoughts-on-ensuring-safety-through-proper-equipment-cleaning/>

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Methods of disinfection

1. UV: Types of UV (UVA, UVB, UVC), How to use UV, Form factors and safety

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<https://www.boselec.com/wp-content/uploads/Linear/Violumas/ViolumasLiterature/UV-101-Overview-of-Ultraviolet-Disinfection-White-Paper.pdf>

2. Wipes: Types of materials, leave-wet time, material and other impact

<https://multimedia.3m.com/mws/media/1679462O/hard-surface-vs-soft-surface-disinfection-tech-talk.pdf>

<https://business.oculus.com/support/665720147270975/>

[https://www.journalofhospitalinfection.com/article/S0195-6701\(24\)00169-5/pdf](https://www.journalofhospitalinfection.com/article/S0195-6701(24)00169-5/pdf)

<https://pmc.ncbi.nlm.nih.gov/articles/PMC8014262/>

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