

The Sanitary Solution

By: David Barbour

A global crisis generates new products

The ongoing COVID-19 pandemic may have brought the live entertainment industry to a halt but, if anything, it also has stimulated the imaginations of manufacturers. This article rounds up some of a new generation of products designed to protect audiences, backstage workers, and others from the effects of the coronavirus.

UV-C lighting

One key area of product development involves UV-C lighting. UV-C disinfection, or germicidal ultra-violet irradiation (UVGI), was first introduced in the 1900s; it is today widely used in hospitals as part of standard disinfection protocols. Compared to familiar disinfection methods using liquid and powder-based disinfectants, ultraviolet lamps are reportedly efficient and convenient to operate.

ACT Lighting (www.actlighting.com) is distributing the GSUV product range from Golden Sea (www.goldenseauv.eu/). The company notes that UV-C ultraviolet light is germicidal, breaking apart germ DNA and leaving it unable to function or reproduce. It can even neutralize “superbugs” that have developed a resistance to antibiotics.

Golden Sea’s ultraviolet disinfecting fixtures come in UVL72 and UVL150 models for medium and large commercial and residential environments; also available are the UVT72 ultraviolet disinfecting unit for large spaces and UVM216 and UVM900 disinfecting units for medium and large commercial spaces. Products feature quartz glass

tubes and Philips lamps; they are ozone-free, and their remotes can be operated through a wall. The UVP36 household lamps and UVS4 desktop units offer additional options.

Because ultraviolet light can cause damage to eyes and skin, safety precautions are very important. All Golden Sea products come with safety features that include a motion sensor, audio alarm, start delay, and remote control as well as visual indicators, making them safe to operate. All personnel, animals, and plants must leave/be moved from the site before the products are used. The company has a comprehensive training program to ensure safe use of its products.

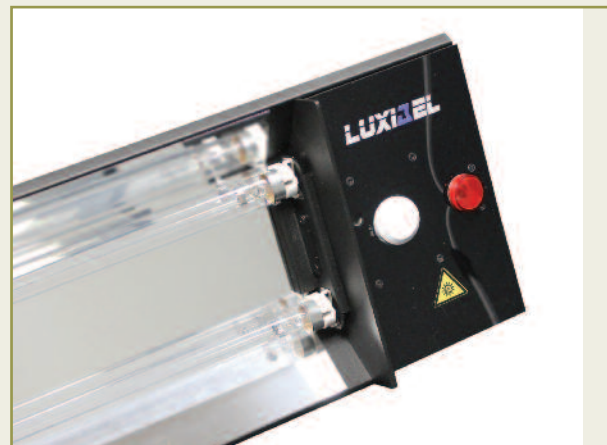
ACT Lighting also distributes products from Belgium-based Luxibel (www.luxibel.com/en). The professional AV lighting brand of AED group currently offers four UV-C products that can be wall-, ceiling-, or tripod-mounted. B HYBRID is a direct and indirect disinfection unit and B AIR is an indirect disinfection unit; the company says both take care of 24-hour air disinfection in the presence of people and animals and eliminate bacteria, viruses, and fungal and mold spores in the air.

B DIRECT is a single direct UVC radiator with reflector and B DIRECT II is a double direct UVC radiator with reflector. They disinfect air and surfaces, up to 22 and 38 sq. m. respectively, prevent secondary infections, and eliminate bacteria, viruses, and fungal and mold spores in the air.

Plano, Texas-based Nemesis (www.nemesisuvc.com) has a number of UV lighting products, distributed solely by



Golden Sea's UVL72.



Luxibel's B DIRECT II.

its parent company, Crossfade Design. The UV-C tower is a portable, high-output UV-C vertical disinfection unit. It has a metal structure in powder-coat white, with other colors available, and uses 12 Philips TUV 55W HO lamps; a user control interface is handled either via Wi-Fi or key fob. Both 110V and 220V models are available. The unit is 5' 10 1/2" high and 2' 5 1/2" wide. The company says the product is suitable for fast disinfection of locker rooms, dressing rooms, and workspaces. Features include 360° disinfection coverage, built-in occupancy sensors, an LED beacon warning light safety protocol, an 85dB warning alarm safety protocol, and coverage of up to 38 sq. m. per fixture. An ATA flight case option is available.

The Nemesis UV-C Rack uses the same Philips lamps for fast (five minutes or less) disinfection of equipment of any kind. Its features include a removable/configurable specialty shelf and rail system for housing items such as



Nemesis' UV-C Tower.

basketballs, helmets, surgical masks, and packages, with a spring clip rail system for attaching items. It, too, comes in powder-coated white, and features built-in occupancy sensors, an LED warning light and 85dB warning alarm. Again, models are available in 110V and 220V.

The Nemesis Kinetic Pod is a kinetic lift with UV-C lighting and optional LED house lighting units; it attaches to a ceiling, moving up and down as

needed. It features drop lengths of 15' – 100' and is controllable via DMX, Art-Net, and other options. Movement speeds vary according to the length of the life. The overall system includes the lift, six UVC-fixtures, data distribution, power and data cable, and cable reel.

Also, the Nemesis Fixed Pod mounts directly to the ceiling, and, similarly, offers fix UV-C fixtures, data distribution, and power and data cable, with optional house lighting available. Crossfade Design also offers UV-C disinfection

photometric studies, the implementation of an environmental disinfection study to reduce the incidences of infections, and design and creation of a strategy for venue-wide disinfection plan.

The company also offers products for disinfecting shopping carts and golf carts, as well as a hand-sanitizer station (See below.)

Xtreme Structures & Fabrication (www.xsftruss.com) has transitioned from manufacturing aluminum truss to stainless steel sanitization and disinfection cabinets. The XSF Sanitizer Cabinet is a portable unit equipped with UV-C lights that, in five minutes, kills up to 99.9% of bacteria and germs including the coronavirus, staph infection, the



XSF's Sanitizer Cabinet.

common flu, and pneumonia on any items placed in chamber. The cabinet includes hanger bars and hooks to suspend items for full 360° disinfection. Cabinets come in three sizes and can be used to disinfect a wide variety of items, including masks, cell phones, tablets, respiratory equipment, tools, utensils, toys, and handheld radios, among others.

MT Cases (www.OSAcorp.com) has also announced its patent-pending CK Case Series, which incorporates UV-C light technology to disinfect air and surfaces from a wide range of harmful microorganisms.

Each CK case will include STER-L-RAY germicidal lamps. These shortwave, low-pressure mercury tubes emit ultraviolet wavelengths in the region proven to be most lethal to viruses, bacteria, mold, and fungi. The first case in the series, the WB2724, utilizes a 30W preheat fixture and features a highly reflective interior, adjustable timer, and an exterior recessed electrical outlet for easy powering on the road. For protective measures, the workbox has a safety cut-off switch, which is triggered when the door opens. The workbox can be ordered with fixed, adjustable, and/or



One example of MT Cases' CK Case Series.

removable steel wire shelving.

"As part of the CK Case Series," says general manager Tom Heslin, "we are building several case models in different sizes and configurations, including both road cases and Pelican cases. The smaller Pelican cases will be great for touring artists. After sanitization, they can take their in-ear monitors, microphones, and any other accessories directly out of the case [without anyone else touching it] and head onstage. The larger road cases will benefit all industries. For example, audiovisual production companies will be able to sterilize many headsets and microphones in just a small handful of minutes in between corporate meeting sessions, while sporting tournaments can disinfect the balls and other gear, and schools can place keyboards and mice or even pencils in their CK cases between classes. We are excited to help our entertainment, local, and other communities fight COVID-19 and other germs in whatever way we can. We also started producing face shields with our laser cutter."

Structural products

Office Shields, a division of **Drape Kings** (www.drapekings.com) was created after the company was commissioned by local, state, and federal government agencies to help build over 1,500 hospital beds and five miles of drape in New York City in fewer than five days.

Office Shields Dividers, or hygiene barriers, are offered in standard and custom sizing, crafted from rigid materials, as well as double-sided, velour drape for open spaces in retail and hospitality. The company can provide delivery of core designs in three to five business days and custom



Drape Kings' Office Shields Dividers.

designs in 10 – 15 business days. It notes that the dividers provide sleek, architectural aesthetic, based on its access to Plexiglas and alternative materials.

Office Shields Temperature Stations allow one to guarantee the health of all staff prior to beginning the workday. The company also offers a range of stanchions, signage, and floor/wall decals to mark workspace areas, adhering to recommendations for social distancing. They remind employees and guests of protocols for wearing masks, maintaining social distancing of 6' apart, and washing hands frequently. The company's hand sanitizer stands can be placed alongside the temperature stations.

RATstands (www.ratstands.com), known for its music stands and sound projection screens, has come up with the Rshield BioScreen, designed to provide protection from the spread of bacteria in any workspace or social scene. The product comes in a range of sizes and materials. The desk flag version is designed to provide a separation between office workers. The height-adjustable stem allows it to fit into a variety of work situations. The full-height version is useful for creating safe spaces, dividing rooms, or otherwise keeping people socially distant; it comes in polycarbonate or "crystal clear" versions. The X base is designed to allow RShields to be nestled together in a neat line, taking up minimal space. The company is donating 10% of its profits to NHS Charities Together, a federation of 250 charitable organizations that support the National Health Service in the UK.

Air disinfection

For the UK market, **AED Group** has launched a Mid-Air Disinfection System (MADS) under its Luxibel brand. It is made up of UVC ventilation cylinders that disinfect the air using UVC light technology. It has been specifically designed to cater for larger spaces with an audience



Luxibel's Mid-Air Disinfection System.

where air circulation needs to be taken into account.

Glenn Roggeman, CEO of AED Group, used his knowledge of aerodynamics gained during his training as a helicopter pilot to drive the design forward. He comments: "This system sucks air breathed out by people into our aerodynamically-patented system. Micro-organisms such as bacteria and viruses are neutralized, meaning germ-free air is blown back into the room.

"When we are able to meet up again in enclosed spaces with groups of people, air disinfection will contribute to reducing infection rates. I personally would also feel more comfortable and secure visiting locations that have this kind of system installed."

The system has already been installed at AED's Studio 6 in Lint, Belgium, helping to disinfect indoor air. This, the company says, makes AED Studios the first event location in the world that disinfects the air in a room on a permanent basis using UVC light technology in the fight against COVID-19 and other viruses and bacteria.

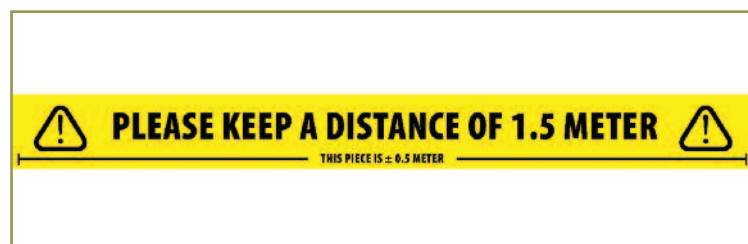
Accessories and miscellaneous

Seaco Industries' (www.seacorope.com) new pro-tape product targets equipment rental companies to show that their equipment has been cleaned before going back out on rental. The tape comes in fluorescent yellow with black writing. There are spaces for the rental staff to indicate the product was sanitized with the team member indicating their name or initials in the "certified by" spot. There is also a location for the date of the sanitization.

In another example of a tape solution, **Adam Hall** (adamhall.com) introduces its new Social Distancing Tape. The yellow-and-black PVC adhesive tape, measuring 216.54' in total length, is designed for temporarily marking distance markers in waiting areas—from public facilities to supermarkets and retail shops to takeout ice cream parlors.



Seaco Industries' new pro-tape.



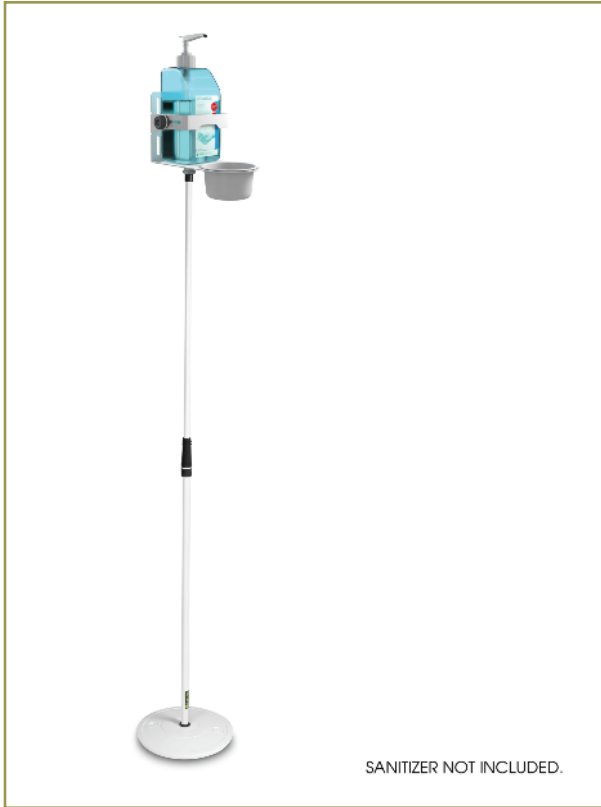
Adam Hall's Social Distancing Tape.

The 1.65' reference marking lets users quickly and safely determine the required distances. The tape is currently available in four languages: German, English, French, and Dutch. A special tape with a safety distance of 6.56' is also available for use in Great Britain and its applicable safety requirements.

In addition, Adam Hall has released the Gravity GMS23DIS01B (W) height-adjustable disinfectant stand, which combines the round-base GMS23 microphone stand and GMADIS01B (W) universal disinfectant holder (also available separately). As a universal solution, the product is designed for mobile and fixed installations in entrance and waiting areas with a lot of foot traffic, such as in stores, doctor's offices, restaurants, hotels, schools, event halls, commercial spaces, and offices. It can be installed on scaffolding, railings, or trusses, using the universal SCP710B Super Clamp, and protected against theft with the practical mounting slots.

The previously mentioned Nemesis also has a hand sanitizer stand. The metal structure comes in power-coat grey, with other colors available, with one gallon of sanitiz-

SPECIAL REPORT: THE INDUSTRY AND THE PANDEMIC



SANITIZER NOT INCLUDED.

Adam Hall's Gravity GMS23DIS01B (W) disinfectant stand.



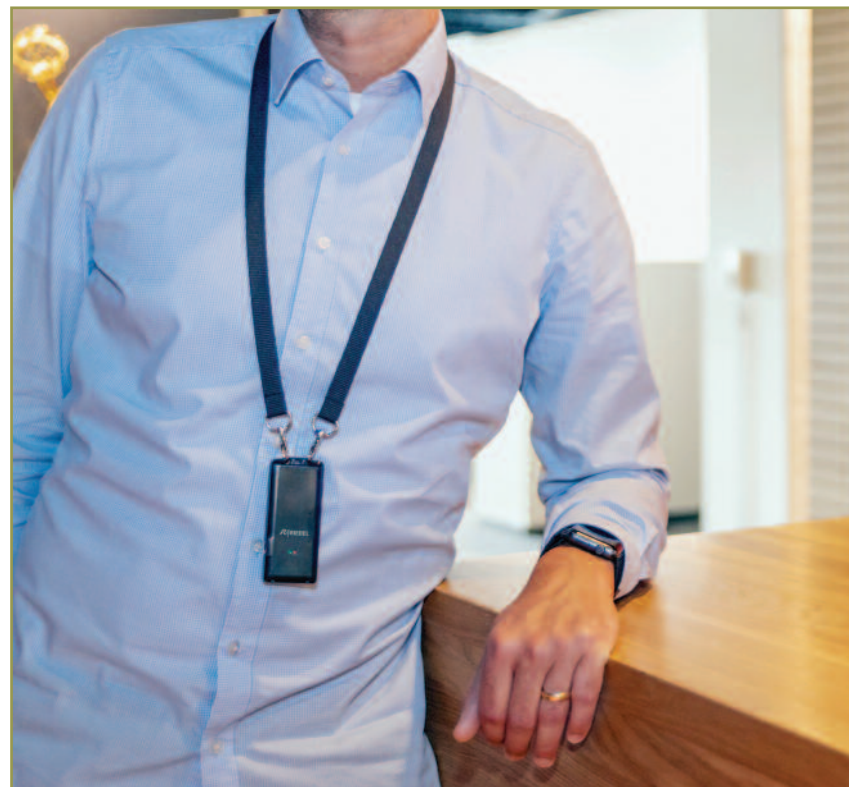
PRG's SmartXcan.

er included. Other features include automatic dispenser and drip tray. The product, which is made of heavy-duty aluminum, is 5' tall on a 16" x 16" base. A rear graphic plate is optional and custom graphics are available.

Production Resource Group (www.prg.com) has designed a temperature scanner that can easily be installed in entertainment venues, convention centers, and workplaces. The SmartXcan (read "smart scan") is a portable thermal scanner that provides instantaneous feedback on up to 700 people per hour.

The SmartXcan leverages advanced fever scanning technology developed by Kentix, a German company that develops smart building security. The product meets FDA requirements for the safety and performance for human temperature screening (IEC 80601-2-59:2017) and HIPAA standards. Additionally, SmartXcan's temperature data is anonymized and not connected to identifying technology, meeting DSGVO privacy laws.

PRG offers the SmartXcan in various designs that can be used anywhere. Portable options include wheeled pedestal, kiosk, countertop, or with built-in turnstiles for automated entry control. Power is provided via standard 120VAC or an onboard battery that provides up to 24 hours of continuous use. Permanently installed versions can be floor-, wall-, or countertop-mounted and can be



Riedel Communications' DisTag.

The New Reality of Post-Pandemic Staging and Seating Design

COVID-19 has led to a new norm of social distancing that will undoubtedly play a major role in how people gather at events in the coming months and years. As sporting games, live theatre productions, conventions, and other events slowly return, it's likely that many of these venues will make efforts to adapt their settings to accommodate new social spacing requirements and requests.

"When it comes to staging and seating, in many cases it's no longer business as usual," says Cindy Albrecht, director of sales and marketing for Staging Concepts, a leading provider of portable staging solutions. "Our clients are coming to us with requests for solutions that allow for additional social distancing, and we are continuing to take steps to plan for future changes and accommodations that venues will seek for the comfort and safety of their guests."

According to Staging Concepts, examples of potential future design and staging requirements will likely include:

The addition of more VIP sections at stadiums and arenas. Because these VIP areas tend to allow more space for fans to socialize and enjoy the game, it's probable that more stadiums will install these sections. Also, sports facilities are likely to consider adding more luxurious seating options as fans require new incentives to leave the comfort of home to visit a ballpark or stadium.

The use of temporary platforms, ramps, or stairs in stadiums and arenas. Such platforms are used to help separate merchandise tables, food kiosks, and guest services from the concourse floor.

Increased demand for camera platforms/media risers. As the sports world begins to come back online with adapted seasons and spectatorless events, media crews will need to be adequately spaced out and accommodated in a whole new way.

The addition of inserts or tables at theaters and other venues. Future design considerations may require a small table or insert between seats to help space out guest seating.

The installation of more barricades and guardrails. These barriers can be used to form lines and to help facilitate the number of people entering or exiting a building at one time.

The use of more temporary and custom staging equipment, such as rolling staging platforms, risers, and portable seating. Temporary equipment can be used to quickly redesign a space as needed for events or during a health crisis. For example, Staging Concepts offers portable platforms, ADA ramps, railings, and stair units that can be used to construct temporary medical facilities at hospitals or alternative care sites, such as unused convention center show floors or ballrooms.

According to Albrecht, key factors for staging and designing seating areas at venues will be flexibility and modularity. "These non-permanent solutions will give architects, designers, building operators, and facility managers the ability to install and test solutions at their venues and then adjust or change them if needed," she says. "Flexible options also are less costly than permanent solutions that require pouring concrete."

integrated with many existing access control systems. The SmartXcan comes in an ADA compliant-design and is easily used by children. Each design offers hands-free scanning that quickly notifies individuals via a green or red light that they are okay to proceed.

Riedel Communications (www.riedel.net) has introduced DisTag, an all-new distance monitoring device. Worn around the neck or carried in a pocket, it is billed as being a reliable and precise instrument that immediately alerts its wearer via haptic, visual, and acoustic signals whenever the mandatory minimum distance to other people is about to be breached.

Featuring a compact and minimalist design, DisTag is suitable for media and event production, industrial operations, retailers, medical facilities, public and cultural institutions, and schools and universities. The device offers three

signal levels: a two-stage vibration alarm (haptic), a two-stage LED signal (visual), and a two-stage sound signal (acoustic). The proximity limits of the warning signals can be individually defined and adjusted in accordance with local regulations for social distance.

Jacky Voss, corporate business development manager at Riedel, adds, "With its small size (93mm by 41mm) and low weight (61 grams), the device is compact, comfortable, and hardly even noticeable to users. DisTag can be used virtually anywhere, whether indoors or out, and its integrated battery provides power for up to 12 hours. And, as it requires no additional infrastructure, it is easy to expand the system at any time—all that is needed are more DisTags."

Theatre Effects (theatrefx.com) is now distributing Quartenary sanitizer and disinfectant, which sanitizes, dis-

SPECIAL REPORT: THE INDUSTRY AND THE PANDEMIC

infects, and deodorizes most surfaces, including food contact surfaces. This product, which is registered with the EPA for use against the coronavirus, is suitable for large venues, theatres, lockers rooms, bathrooms, bleachers, and elsewhere. It is safe for use on all fabrics. It features no dyes, pigments, or additives. One can treat surfaces using handheld or large garden sprayers, using Theatre Effects' one-button automatic fluid dispenser, billed as an accurate, convenient, and efficient method for measuring and dispensing concentrate disinfects and sanitizers. It connects with a regular garden hose or appliance water line; it also mounts to a wall for easy access. An optional wall-mount bracket is available for safe (and, usually, required) storage of the jug of concentrate.

Douglas W. Weber, owner of Theatre Effects, says, "Not only are we also selling an affordable dispensing system, but we are also using it here. I think it took us all of 10 minutes to hook it up. Once installed, all you need to do is simply push one button and fill up whatever containers you need with ready-to-use disinfectant and sanitizer that has been accurately and automatically measured and mixed. The other cool thing is that the dispenser requires no electricity, just water. We installed ours over a sanitary wash tub in our warehouse. We simply ran a 6' piece of garden hose up to the dispenser (obviously, we had a water spigot right there). It couldn't have been easier."

He adds, "As with any disinfectant's directions, even Lysol disinfectant wipes or Clorox disinfecting wipes, if food surfaces are cleaned, after the product has dried, the surface should be rinsed and wiped with a potable water source before food is sat on the surface." The product is on the EPA's "List N" of appropriate disinfectants.

The company also haas XForce COVID-19 disinfectant, which is billed as killing 99.9% of bacteria in five seconds



Theatre Effects' Quaternary sanitizer and disinfectant.

and most viruses in two minutes. (COVID-19 takes five minutes.) It is bleach-free, solvent-free, and alcohol-free. It is marked, the company says, by a clean, fresh, and non-chemical lemon scent. 🍋