

Just Talking 'bout the Weather

YOUR GEAR VS. MOTHER NATURE: AND THE WINNER IS...

By Stu Chisholm

Back in 2000 when I was working at Advanced Lighting & Sound in Troy, Michigan, I was asked to submit an article on the effects of heat and cold on DJ equipment. This turned out to be the first assignment I'd ever had requiring actual research! Lucky for me, ALS had a resident team of crack electronic wizards in the form Nick and Chris Auger. If your high-end piece of electronic gear ever needed to be sent in for warranty work, there's a good chance it landed on their bench, since they've merited a ton of service contracts for many national and global brands. Naturally, I disrupted their day to pick their brains, and much of the information here I owe to them.



Now, we all know that moisture, especially in the form of rain and snow, means death to electronics. So does direct sunlight because, for some reason, some genius decided that all DJ gear be the same color as solar panels. Plus, today we have a variety of display screens that weren't common pre-2001, and these screens will crash faster than Lindsay Lohan after a night of clubbing if exposed to sunlight for any length of time. So instead, my focus is on the conditions in which many of us store our DJ equipment, such as garages, trailers, unheated warehouses and storage sheds.

HOW LOW CAN YOU GO?

First off, the good news is that today's electronics are surprisingly hearty! And they have to be. Consider this: A lot of our electronics come from overseas. During shipping, they might spend days in the frigid cargo hold of a ship plying the ocean, only to be transferred to an unheated or overheated warehouse. Not only do they survive the often extreme tem-

perature variations, but also the shocks, bumps n' bashes of being moved around, often with little protection beyond a cardboard box and some Styrofoam. This means that by comparison, a DJ who has invested in good quality road cases and equipment racks are babying their gear! I live in Michigan where we're now in the subzero grasp of the "polar vortex." DJs here successfully store their equipment in such trailers, garages and trucks without any problems.

But...that doesn't mean they ignore the freeze! As stated above, moisture is the enemy of electronics. And moisture becomes a problem when moving the gear from cold to hot. If a DJ wheels his frozen rig from a trailer into a nice, toasty banquet hall, then condensation can accumulate like it does on a cold drink on a hot summer day. The solution, then, is to arrive early, pop the covers off of any road cases and allow about a half an hour to let the equipment come up to room temperature before switching it on. This is especially important for speakers, as the voice coil shrinks when frozen. This can cause friction, which is disaster for a speaker. For this reason, even after the half-hour warm-up, I suggest another 20 to 30 minutes of low power operation to bring the speakers up to snuff.

FIRE N' ICE

The keyword in the summer months or western states is "cooling." As long as trailers are shaded, storing equipment even in places like Phoenix, AZ, isn't problematic. What we need to pay attention to is the operating temperature specs in the back of the equipment manual. They're often quite generous, but when a DJ rack mounts his/her gear into a box, airflow is restricted. Things like heat sinks don't work and a component's internal cooling fans may just be circulating hot exhaust air from the next component in the rack. What is needed, then, are cooling fans mounted either in the case walls or rack (panel) mounted. Also, it's not good enough just to toss in a fan or two, but airflow must be taken into consideration. Rack mounts dictate a bottom-to-top cooling plan. Since hot air rises, this means that the coolest air will be at floor level. Having intake fans, then, at the bottom of the rack and exhaust fans at the top is the way to go. Opinions on the next step vary: Most experts say to have all the fans on the equipment side, so that the air flows up and around every component in the rack, which is fine if you're an amplifier. If you're a DJ working in Arizona, or during a summer "dog day" in Maine, having hot air blowing at you is no fun. My preferred option is to mount the small intake fans below the equipment, but then have two bigger exhaust fans case-mounted at the sides. It's more work, but worth the trouble if you don't want to give your sweat glands a workout.

ABOUT FACE!

This covers amps, speakers and other processors. When it comes to your computers and hard drives, just forget everything I said. Except for the water = death thing, none of it applies.



*Stu Chisholm, a mobile DJ in the Detroit area since 1979, has also been a nightclub DJ, done some radio, some commercial voice-over work and has even worked a roller skating rink! Stu attended the famous Specs Howard School of Broadcasting and has been a music collector since the age of seven. Stu's guide to the profession, **The Complete DJ**, is available from ProDJ Publishing.*

Computer hard drives don't mind being cold, but will NOT tolerate a hard freeze. This is true for a couple of reasons, the most important being the natural contraction of the disc itself, which can cause problems reading the data and even cause physical damage. As I hinted at above, computers and tablets also have screens, and screens were not intended to be frozen either. If the screen works at all, freezing can lead to "pixel death" in LCD and LED screens.

Conversely, the summer before last when the Midwest had a record number of 90+ degree days, my air conditioner was broken and I lost no fewer than four hard drives while waiting for a replacement. Two were external and two internal. Short of deliberately taking a hammer and smashing it to bits, nothing kills a hard drive faster than heat. A rule of thumb for hard drives: if you feel uncom-

GIMME SHELTER

Nature provides more than heat, cold and wet; it also provides critters. When looking for some replacement speakers in a nightclub storage room one day, I surprised a bunch of mice that had decided to make one of the cabinets their nest. They had chewed up the speaker cone, wiring and basically ruined the speaker. I couldn't help but wonder how many other clubs or DJs had similar storage rooms and what they might find if they don't visit very often. Take inventory, be vigilant for signs of pests or seeping water and keep gear up off of the floor whenever possible.

In the end, then, I wouldn't leave my computer or external hard drives anywhere I wouldn't leave my kids. (Well, that's if I HAD kids.

A discussion on this topic wouldn't be complete without a quick comment on a couple of specific situations. A number of enterprising DJs have gone the extra mile to install electric baseboard or ceramic heaters inside their trailers, and this works out most of the time. Aside from being unnecessary, though, I suggest proceeding with caution given that the downside could be a garage fire that could cost a whole lot more than your equipment. At the very least, consult a professional.

Until next time, safe spinnin'! **MB**

CLICK HERE FOR 3 FREE ISSUES OF
Mobile Beat

fortable, which the majority of people do when the mercury climbs past 90 degrees or so, then it is "uncomfortable" too. Cooling fans used well will usually get you smooth sailing between 90 and 105 degrees, but you're going to need something a bit more exotic if temps climb much higher for any length of time. The techs at your local computer palace can show you some solutions if escaping the high temps isn't an option.



**We Provide The Gear.
You Provide The Energy.**

Top Brands Including: **XONE** **ADJ** **DENON** **INT** **Vestax** **Pioneer** **RANE** **stanton**



Call a
Sales Pro
Today!

FULL COMPASS
PRO AUDIO | VIDEO | AV | LIGHTING
MUSICAL INSTRUMENTS

**Call 800-356-5844
or visit fullcompass.com**

Leading The Industry For Over 35 Years

Follow Us
   



Request your **FREE**
540-page catalog