



technology focus

Remote Device Management in 2019 | By Richard Cadena

"DMXcat is for the lighting industry what the iPhone was for smartphones when it arrived back in 2007..."



What do you do when a fixture has the wrong address and it's hanging in a location that you can't get to? That was the situation last week during a show I worked on where Murphy's law ruled the day: "Anything that can go wrong, will go wrong." Technology is the answer.

For this show, time was short and the rig was fairly large. We had a lot of gear to prep, and three days before load in, we spent two days in the shop where I supervised a crew of three people who tested the LEDs and moving lights, set the DMX addresses and modes, checked all the software versions, slapped labels on the fixtures and road cases, built hods and cut gels. Meanwhile, I manually made hang tapes by laying out yellow caution tape alongside a tape measure and slapping labels on the tape. If I had two more days of advance notice, I could have gotten a printer and it would have been much quicker and easier to print tapes (did I mention that time was short?) At the end of the second day, we loaded it all on the truck and I met it at the venue 300 miles away.

The local crew unloaded the truck and hung the rig, but before we flew it to trim, I pulled out my [City Theatrical] DMXcat to ring out each electric. For the uninitiated, DMXcat is a multifunction test tool with a small hardware interface that connects via Bluetooth to an iOS or Android device like a smart phone or tablet. It has an app that runs a suite of software tools, including a DMX controller, a fixture controller, a DMX tester, an RDM controller, and more.

Ordinarily, I would put the DMXcat in RDM mode, connect it to the DMX cable, and check the DMX address, mode, and software version before flying the electric to trim. That's all it takes to ensure that (A) the fixture is getting power (or else it won't respond), (B) the data cables are connected and working properly, and (C) the DMX address and mode are set correctly. But in this case, some of the LED fixtures were older and didn't have RDM. Instead, I put the DMXcat in DMX controller mode and flashed them by selecting every address from 1 to 512 and setting them to full. In retrospect, I should have used the fixture controller mode instead, but that would have forced me to download the DMX profile for each fixture and enter the starting DMX address for each one - one at a time - and turn them on individually. Since we were on a tight schedule, I opted instead to just set all the DMX addresses to full and watch them all turn on at once; if all the fixtures respond, that means that they have power and data, and that the data cables are working properly. It doesn't, however, ensure that the DMX addresses are set correctly.

In fact, we ended up with one electric where the DMX address was incorrectly set. When the LD went to flash that group of fixtures, one of them was the wrong colour. Oops.

By stepping through each DMX address and setting it to full, we figured out that we had two overlapping addresses. However, by the time we figured it out, the set was in place, which prevented us from using a personnel lift to get to the fixture, and the cable truss prevented us from flying in the electric. We were stuck.

For a tech, there's no feeling quite as bad as when you discover that you have a problem that can't be resolved. Had those fixtures had RDM, the issue could have been resolved in a matter of a couple of minutes. I would have simply disconnected the data link from the data distributor, connected my DMXcat, and fixed the problem. Fortunately, these fixtures were in a very inconspicuous location, so the only alternative was to turn off the circuit breaker feeding power to the errant fixture. Unfortunately, because LED fixtures draw so little power that we tend to daisy-chain the power, that brought down two fixtures, not one. But these were focused so high on a side cyc that they were not even visible to half the house, which was of some consolation.

I've been an advocate of RDM since it was ratified in 2006. For reasons I don't quite understand, it took a long time for it to get traction in our industry. In the early days, I used to go to tradeshow and make a point of asking every manufacturer when they were going to implement it in their consoles and fixtures. ETC, Martin, and Robe were behind it from the beginning, but Avolites and MA Lighting only implemented in the last couple of years, and High End Systems has yet to put it in its Hog consoles. But, since the advent of handheld RDM controllers, I learned from experience that it makes little difference whether or not any particular console has RDM, because it's more practical to use a standalone RDM controller, like the DMXcat, and it's a game-changer.

DMXcat is for the lighting industry what the iPhone was for smartphones when it arrived back in 2007. Before 2007, smartphones were primarily used for calls and messaging; the iPhone turned these devices into the Batman utility belt. That's what the DMXcat is doing in the lighting industry; suddenly, everyone is using RDM.

There are other RDM handhelds, including the Swisson XMT-350, the Chauvet RDM2Go, the Blizzard Buddha, the TMB ProPlex IQ Tester LV, and more, and I haven't met one that I didn't like. But, as I was so painfully reminded last week, the

For Richard Cadena, the road to authoring books and magazine articles ran through High End Systems and Martin, took a left turn at designer, tech, and electrician, and is still under construction.



↑ RDM is the quickest and easiest way to ring out a lighting rig

fixtures have to have RDM in order to take advantage of it. The vast majority of fixtures being manufactured today do have RDM, so its time has finally come.

The news of the day is that RDMnet was recently ratified, which means that, if you're using sACN, you will soon be able to use RDM with it. Both protocols work over Ethernet, which provides far more speed and bandwidth than straight DMX.

Art-Net has always supported RDM, as do most wireless DMX systems, but again, even if you're using a controller or a protocol that doesn't support RDM, you can still disconnect the link that's connected to the fixtures you want to use it with, plug in your RDM handheld tool, and go to town. And that means that you'll want to make sure your data splitters are accessible rather than mounted in the truss or on the electrics.

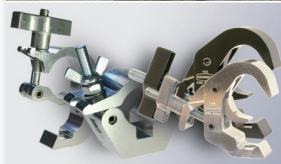
Rarely does a protocol come along that can save so much time and increase safety - and that's what RDM does. It allows you to reconfigure your gear remotely without having to climb a ladder, walk a truss, or fly in a truss or electric, thereby reducing the risk of falling. If you aren't yet using RDM, then you're not using technology to its full advantage. ✘



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UNUSUAL

*Unusual?
Yes.
Impossible?
No.*

consultancy
design
fabrication
installations
maintenance and inspection

See us at ABTT,
Alexandra Palace,
5 – 6 June,
Stand P1

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What a way to make
a stage show ...

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