Drafty

by Rob Halliday

It feels like for any given task, you can have a tool that's too complex, a tool that's too simple - or a tool that perfectly hits the sweetspot for what you need to get done. That sweetspot is hard to define: you somehow just know it when Figure 2: you find it. If you're building an enormous timber construction with thousands of nails, a nailgun is what you need; if you're just putting one nail into a wall, then a hammer is a better combination of simplicity, reliability, price and ease of use.

I think it's fair to say that many people producing technical drawings for theatre lighting plans, sound rack layouts - are using tools that are way beyond the sweetspot of what they need, complex CAD packages really designed for constructing buildings. If you've ever felt like you're creating a drawing that could tell someone how to build a Source Four rather than just where to rig one, you'll understand this. Plus, as anyone who's recently paid to renew their Vectorworks or WYSIWYG subscriptions will attest, you pay a lot for that power. If you're using all of it, great. If you're not, it's not just the expense - purchase price plus ongoing upgrades - that's the problem, but also the steep learning curve of finding the functions you need in amongst all those others you don't. Unfortunately, it's been hard to find anything simpler and cheaper, less powerful but powerful enough.

If this sounds like you, it's possible the hammer you are looking for lives online, and is called Drafty.

Two things immediately set Drafty out from the CAD crowd. First: there is nothing to download: it runs right in your web browser, always the most current version, which sounds crazy until you see just how well it works (see Figure 1).

Second: it is created by people working in entertainment for people working in entertainment, rather than being a generic CAD package that we try to bend to fit our crazy world. You can tell this as soon as you look at it and see buttons saying things like 'ERS' and 'Pipe' and 'Boom' and 'Color' and 'Position' and 'Audio' and 'Video' (see Figure 2).

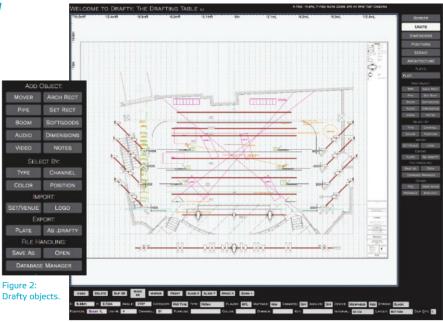


Figure 1: The Drafty environment.

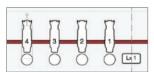


Figure 3a: Units on bar.



Figure 3b: Rotated.

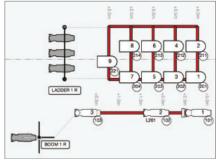


Figure 4: Booms and ladders.

If you do nothing else in Drafty, try the following: draw a bar, drag some lights onto it (noting how they lock to the bar with a satisfying <code>snap</code>), then select the lights and press shift-right-arrow to rotate them 45 degrees to the right. It will sound obvious to say each light is still lined up on the bar but now pointing 45 degrees to the right, because it's almost always what you'd want to have happen - but that's not the case with many other CAD packages (<code>see Figures 3a/b</code>).

Then try this: add a boom or ladder. Not only does the boom or ladder position appear but 'shadow lamps' also appear indicating the actual location of the lights on stage. You can move a boom and its shadow independently; a line connecting them automatically remains in place (see Figure 4). If you've spent years dealing with all this manually, it's almost enough to make you cry with delight. And that's before you notice the height marks Drafty has added automatically to the boom, and the unit numbers it has automatically put into lights - and automatically updates as you move them around. Or even the simple fact that it actually knows these lights are hanging in this position.

And we're not even close to being done with the delights. Draw half a bar of lights then select and mirror them - bar done. Draw the booms on one side of the stage, select them all and mirror them - other side done, with the names, 'Boom 1L' automatically adjusted to 'Boom 1R'. Turn 'angles' on and see a representation of the beam angle of the light: turn 'dimensions' on and see the spacing of each light shown, updated as you move a light. Select some lights in order, type the first channel number and add a '+' and they all get sequential channel numbers. Add a second number and the channel numbers increment by that amount. Pick one light in colour 201 and have Drafty find all the others in that colour; then change them all to 202. Switch to the database manager and lists about the rig you're drawing appear a sortable fixture list, fixture counts, colour call, a position list with the ability to define the order positions sort to (see Figures 5a/b). Make changes in those lists and they appear back in the drawing. I'm talking about this like it's just for lighting, and when I first started playing with Drafty a few months ago it was - but it's now gained tools for audio (including speaker beam

INST TYPE	TOTALS	FRAME SIZE	COLOR	FRAME SIZE	TOTAL CUTS	TOTAL SHEETS
SOURCE-4 19° 575W	4	159MM X 159MM	R33	190MM	5	2
SOURCE-4 36° 575W	18	159MM X 159MM	R371	190MM	5	2
S4 36 W/SEACHANGER	8	159MM X 159MM	R385	254MM	4	1
SOURCE-4 ZOOM 15-30 575W	10	190MM X	R57	159MM	4	1
		190MM				
10" FRESNEL 2KW	2	305MM X				
		305MM				
PAR64 MFL 1KW	12	254MM X				
		254MM				
VL-1100 1KW	3					
VL-550 1.2KW	1					
WYBRON COLOR RAM II	В					

Figure 5a and 5b: List (left) and colour calls (right).

angles) and video, with an easy-to-use way of

laying out equipment racks and cabling

equipment together (see Figure 6).

Tying all of this together is the clever way Drafty deals with layers, a staple of CAD packages but which often get mis-used, usually by accident. Drafty has six fundamental layers: architecture (the building), scenic (the set), positions (where you hang the lights or other gear), dimensions, units (the lights) and border (which includes the title block and key), see Figure 7. It does much of the management of them for you - lights automatically get put in the 'units' layer, for example, which floats above the scenic layer. But it then lets you manipulate things sensibly: be in the units layer and you can only select and move lights. But if you're in the position layer and move a bar, all of the lights on that bar

move with it. Again, it sounds obvious .

All of this in a web browser? Yes, really (as long as it's a sensible modern one like Safari or Chrome). Drafty stores your files on-line: they live in Google Drive, which means they're also protected by all of the facilities Google offers here, including the ability to roll back to previous versions. And because it's a web app. whenever the Drafty team produces a new version - which they do guite often - you get it straight away. When your work is ready to share you can give other Drafty users access via Google Drive (the Drafty team have a dream of allowing simultaneous multi-user collaboration on a document, but it's not there yet); for those needing other formats, including the low-tech paper that is still a great medium for a fit-up, Drafty will create to-scale drawing PDFs or hookup for you.

The alarm bell here is about those theatres with lousy internet connections, but as long as you open a file while online you can continue to do most things with it (except importing PDFs or exporting the plot or paperwork) even if you drop off-line; things seem to pick-up as they should when you re-connect.

Limitations? Yes, there are some. The key one is perhaps that you can only import other drawings (such as the set plan) in PDF format, rather than the common DWG/DXF formats. That's fine as long as you can persuade the set people to do a decent (and to scale) PDF export, or you're prepared to use the free viewer software AutoCad or Vectorworks offer to do it yourself, but there will still be no way to turn bits of the set on and off within Drafty.

Drafty's internal layers can also only be turned on or off, with no ability just to grey some out. Drafty is openly 2D-only; you can draw plan, section and elevation documents, but they're not related to each other (ie. in plan view you can't specify a height for Lx1 and see it appear in section), see Figure 8. It imposes quite a lot of how your drawing will look - channel

numbers in circles, unit numbers inside a light. colour outside, positions in just red, grey or invisible, the layout of the title block and key and doesn't let you absolutely control some details you might want to: those boom shadows are always profile spots regardless of the lamps on the boom. Overall, your plot will have a very 'American-Broadway' look - though



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Figure 7: Layers.



Figure 8: Beam section.

more customisation options seem to be appearing as new versions are rolled out.

But consider two things. First, the practical question of price: for everything, \$29.99 a month or \$299.99 a year, less if you want just A/V or lighting without the database manager. The monthly pricing is interesting since, presumably, you could only pay for it when you actually needed it, or others involved with a show could just get it as required, helping overcome the 'lock in' of those big packages that you end up using just because everyone else is using them. The yearly price is a steal compared to, say, Vectorworks (\$1895 for the basic version, \$2695 for Spotlight, \$2991 plus an annual fee for the subscription Service Select programme), or WYSIWYG (\$899 for the basic Report version, \$2999 for the Design edition).

Now, you can argue that a direct comparison with either of those two is not fair, since they can do much more, and some of that extra power you would need on big, complex shows or shows where there's a lot of fiddly detail the drawing needs to indicate. But you shouldn't think of Drafty as 'cheap but limited'. For many of the tasks you need to do every day when generating lighting plans or audio or video schematics, Drafty offers incredibly elegant, powerful solutions - elegant because they have been so well thought out by people who do the same things you do, powerful because they almost always just do the thing you would expect (or, at least, hope!) they would do. Amongst much else, it's telling that a 13-page manual tells you just about everything you need to know to use Drafty; the last four pages (the

keyboard shortcuts for common tasks) the only ones you really need to keep to hand when using the software. It's also refreshingly open about the things Drafty can't do, often suggesting practical workarounds. In many cases the speed with which Drafty will handle the tasks you actually do need to do will compellingly outweigh the limitations of the things it can't do.

That balance may not be right for everyone, but guess what? Like so much on the web, you can just try it for yourself, for free, to see if it works for you. And you should, you really should. In many cases, it will hit that sweetspot, the perfect hammer for many shows.

www.drafty-app.com



