

# Lighting & Sound international

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# Classic Gear: Thorn Q-File

Rob Halliday takes a nostalgic but instructive look back at the tools that have shaped the industry . . .

What we learn from exploring the classics of our industry is perhaps this: much of what we think of as new or exciting or innovative has, in fact, been around for years, first seen in truly pioneering but now often-forgotten products.

As an example: motorised faders are very much in-vogue on lighting desks at the moment, touted for their ability to give a flexible control surface or to remove the need for banks and banks of manual faders. But flash back more than 45 years and you find a lighting console already equipped with a motor fader: Thorn's Q-File.

Thorn was egged into lighting control by the BBC, who had lost faith in Strand Electric's ability to deliver the kind of instant memory system the corporation wanted for the new generation of colour television studios they were creating at Television Centre and elsewhere.

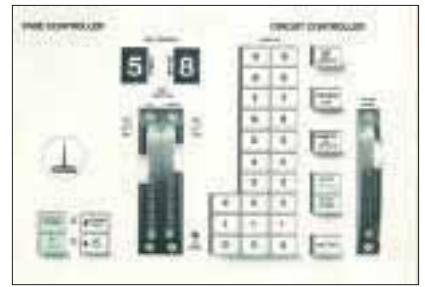
The single motor fader was actually the physical embodiment of a larger innovation introduced by the console's creator, Tony Isaacs. The challenge was how to replace the traditional banks of manual faders, one per channel, used to control lighting. They presented two problems: the fader bank got bigger (and more expensive) as the size of the rig grew, and the faders were static - fine with manual control, less useful when the console could change the level of the lights as cues were played back from memory.

Existing solutions included level-match lightbulbs on manual faders, or rocker switches with no absolute position; a complete bank of motorised faders was an ideal, but an expensive one. All still required one physical controller per channel.

Q-File took a different approach: you 'called up' the channel you wanted to control using a keypad. The motorised fader jumped to that channel's current level. Then you adjusted the level. Once you'd balanced a set of levels to give you the look you liked, you recorded those levels into a memory.

Sounds obvious now, but that's because it's what everyone does - the biggest change being the replacement of the Q-File's three numeric columns (for setting a channel number in hundreds/tens/units) with a calculator-style numeric keypad, and of the motor fader by the Strand-pioneered level wheel.

Back then, it gave the Q-File a jump on its competitors. Suddenly, you could control a big rig from a tiny control surface, easy to fit in a compact television control room. And you could instantly record lighting states and reliably bring them back, using manually set split up/down fade times to crossfade, add or subtract memories with the ability to over-ride playback times or channel levels at any point. A channel



mimic of tiny lightbulbs provided feedback as to which circuits were in use. The console's keys were even backlit - another sensible feature finally making a welcome return. The actual work was carried out in a separate rack of pre-microprocessor electronics and core memory; the whole system proved more reliable than many of its dimmer-memory contemporaries.

It wasn't cheap (the quarter-million dollar price tag of the Q-File installed at the University of Wisconsin is said to have been the inspiration to ETC's Fred Foster to create his first microprocessor-based control system), but such were its strengths that it became the standard choice for television and then, with some minor modifications, expanded into theatre and beyond the UK. The consoles continued in regular use long after Thorn retired from the business in 1981.

Specifications and brochure from Kliegl, the US Q-File distributor: > <http://plasa.me/kliegl>

The replacement designed by Q-File-loving BBC Engineers (begins page 12). > <http://plasa.me/classicls>

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