

AHEAD OF THE CURVE

By Michael Burns

As the lighting arm of Panavision, Panalux needs little introduction to readers of *Cinematography World*. The company views itself as a creative partner with cinematographers, gaffers and lighting crews, closely watching how its customers are engaging with products and recognising real needs on-set.

That company ethos certainly seems to be true with the evolution of its flagship soft source, the Panalux Sonara 4:4. This variable-white LED soft light offers a high-CRI and high-TLCl to reproduce a broad spectrum of white light with full green/magenta control. Designed to an industry standard 4'x4' form factor, the fixture's LED-array technology enables properly-rendered skin tones and allows for fine adjustments across accurate white points, subtle pastel hues, plus dialled-in X/Y coordinates, as well as a built-in library of select LEE Filters gel emulations (LEE Filters being another Panavision company). Connectivity includes native wireless LumenRadio CRMX as standard, DMX512 and Neutrik etherCON connectors, together with a removable controller for easier on-set access.

Innovation creation

According to David Amphlett, technical director and senior manager of R&D and engineering at Panalux, the company was aiming to create a fixture that didn't currently exist in the market.

"We identified a general requirement for a large format soft light," says Amphlett. "Most of what was around at that time were either 2:1 panels or 1:1 panels. Historically, people would light through 4:4 frames, either with a single source or a multi-source Tungsten lamp behind it like a Dino. So, it was about producing something that would fit with a form factor that crews are comfortable with and repeatedly use."

Panalux had clear concepts, which came out of a requirement for this form factor with certain specifications.

"We never wanted the Panalux Sonara to be a Swiss Army Knife," Amphlett continues. "We wanted it specifically to solve certain problems. It's aimed at producing really high-quality whites. It's aimed at being a film light, not an entertainment light. So it doesn't have a pure red chip, it doesn't have a pure green chip. We haven't made compromises on the design intent. We decided the direction it was going in, the part of the market that it was aimed at and the problems it solves."

"The innovation for Panalux Sonara lies in the quality of the whites, the breadth of the spectrum, and two key differentiators: it will produce much warmer and much cooler whites on the BBL (blackbody locus) than most products in the market. We achieve that by using broad-spectrum phosphors, and proprietary chips rather than off-the-peg chips."

Light mood

"Light is such an emotive thing," continues Amphlett. "A lot of cinematographers want to work warmer than Tungsten, but the general approach in the market is to only go to 2700K or 2800K, which



is not much warmer than a Tungsten source." The warmest CCT Sonara is capable of is 1600K.

According to Amphlett, with this design Panalux was aiming to offer filmmakers a fixture as close as possible on the blackbody locus to candlelight, which he says most LED lights can't achieve. "Rather than trying to achieve that by adding a red, we do it by adding a phosphor amber," he adds. "That gives the light a very broad spectrum."

The coolest temperature that the Panalux Sonara offers is 20,000K. "It would be very unusual for someone to offer a cold white at that end," he says. "But as it's a large soft source, if you wanted to put some colour depth in a scene, you could use it as a top light."

Another facility is X/Y control. "This is for either targetting specific white points or colour points, or to be used when source-matching," says Amphlett. "That's becoming more and more important in the way that cinematographers are working these days. If you're matching against LED screens or backdrops, you want your light source to be putting out the same light as your screen."

The user interface is another key feature. "I'm passionate about having all the most important information very visible and not buried deep down in the menu," Amphlett says. "Wherever you are in the menu structure, the key pieces of information on Panalux Sonara are always visible."

"It's all about understanding the pressure on-set," he adds. "We've got that knowledge in house. I was

a DP for 20 years, and other people in the company are very experienced gaffers, so we have significant experience with large, varied productions in our working life."

From the start of the design phase to the rollout of the first beta units, Panalux Sonara 4:4 was in R&D for about 15 months. It was developed with constant feedback and evaluation, both from within and outside the company, and by keeping aware of scenarios being encountered by gaffers.

"It's all about providing flexibility and features that one would use, rather than gimmicks or effects," says Amphlett. "On *The Crown*, for example, the crew had a desire for a large soft fixture for pushing through windows. We saw that as a possible application for this kind of product."

The reaction has been very positive, "from some very critical people," according to Amphlett. "Gaffer John 'Biggles' Higgins took a number of Panalux Sonara 4:4s to use on *All The Old Knives* (DP Charlotte Bruus Christensen DFF ASC), and then almost straight away asked for even more."

The fixture has also seen a lot of recent use in commercials including Haribo, with gaffer Stefan Lissner and Alessandra Scherillo as DP; Nike, with Stephen Mathie as gaffer for DP George Richmond BSC; Ladbrokes with Julian White and Patrick Meller; Sky, with Sol Saihati and John Lynch; a National Ballet spot from gaffer Bill Rae Smith and DP Dan Landin; and NatWest, with gaffer Genki McClure and Rina Yang as DP.



Power-up

Innovation on the level of the Panalux Sonara isn't uncommon at the company. "Panalux has a track record of bringing new products and concepts to the market," says Amphlett, pointing to the company's Flex Lights, FloBanks and TekTiles as examples.

Another recent innovation is the Panalux Power h40 hybrid generator. Combining a diesel engine with an advanced lithium-ion battery, the h40 is capable of delivering constant 240V AC power up to 40KW.

"The hybrid generator was in design for about six or seven years," says Amphlett. "It was ahead of its time in terms of what the market wanted. That's changed fairly dramatically in the last couple of years.

"Historically, most diesel generators that are used in the film industry spend a very high proportion of their time running, but not doing any real work," he adds. "They're not running anywhere near their capability, which means they're very inefficient. It's not good for maintenance, it's not good for the environment. The benefit of a hybrid is that it switches-on instantly. It doesn't matter whether it's charging a phone or running out 40KW, the power that you need is there when you need it. And the hybrid can be matched with low-energy sources to reduce the overall impact on the environment.

"We're in a pretty conservative industry, but there are some gaffers and DPs who are pretty passionate about doing everything they can to make a positive contribution to reducing energy and reducing pollution," he adds. "LED lighting and low-power or hybrid generators go hand-in-hand, because you need less power, and then you produce less pollution."

The importance of being rental

Panalux is a rental house with its own R&D, engineering and manufacturing departments, a fact which impacts the bespoke approach it has to product design.

"Other manufacturers wouldn't consider making only two or three hundred of a product," says Amphlett. "They would need a larger volume to recoup development costs, but for Panalux, it's not a problem to make a relatively short run."

There will be another Panalux Sonara size. "The way Panalux Sonara is constructed is very modular. We can pretty much make any size we want that drops down into a 1:1 form factor, so we can make 3:3 or 10:10 and it wouldn't introduce complexity," he says. "As we took a modular approach, scaling



becomes a relatively simple mechanical exercise rather than a complete redesign."

Panalux also has a fully-staffed team of trained technicians to service and repair products damaged during filming.

"We can turn them around very quickly," says Amphlett. "When the Panalux Sonara comes home it runs its own test routine so that we don't have to manually check certain features are working. That's the experience of a rental company; we know what turning around 100 lamps that have to go out the next day requires in terms of labour. So we designed features into the light to make that easier for us operationally.

"But they never go wrong," he smiles.



Dave Amphlett

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