High End Systems SolaFrame 750

By: Richard Cadena

Next year will mark the 30th anniversary of the Intellabeam 400, the first automated light produced by High End Systems. The company has been through many changes in the last three decades, the latest and probably most significant of which was when it was purchased by ETC in 2017. Since then, High End's presence at trade shows has increased dramatically, the vibe at the company is a lot more buoyant, and its Facebook posts are much more entertaining. But what about the new products?

Last year, I wrote a review of the SolaFrame Theatre (see *Lighting&Sound America* October 2017) and the design, quality, and performance seemed to me to be very consistent with the products the company has been known for, going all the way back to the Intellabeam, considering the dramatic increase in technology. This time, I took a SolaFrame 750 for a short spin on my test bench.

Good things, small packages

The SolaFrame 750 extend the SolaFrame line in the direction of a smaller, more affordable unit that is very close in performance to the SolaFrame Theatre. At 63lb, it's almost half the weight and roughly 75% of the size at 26.2" tall with head pointing straight up, 17.5" wide, and 18.6" deep. The base is 16.7" wide by 12.6" deep. The output is about 75% of that of the Theatre version, and at a retail price of $8,250, it's also about 75% of the cost.

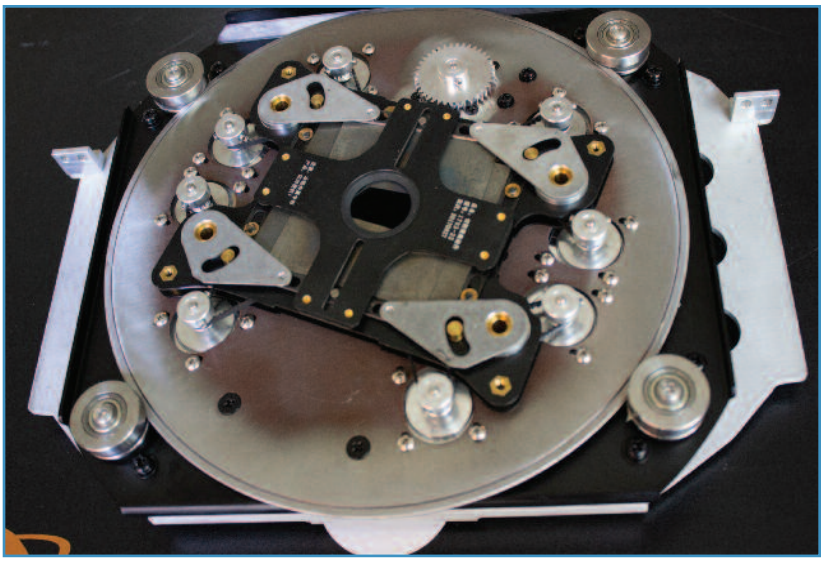
The light source is a 270W white light LED array, and it's a sealed unit with heat pipes to keep it running cool. I set it up with an 18' throw and zoomed it to a 5' diameter beam of white light. Using my Asensetek Lighting Passport spectrometer, I measured a beautifully uniform beam with an illuminance of 619fc (6,662

The High End Systems SolaFrame 750 is the smallest, lightest, and least expensive fixture in the SolaFrame line.

The photometric data at 18' throw and narrow zoom.

lux). It's not only bright, but the dimming looks good and uniform all the way to black.

I also measured the correlated color temperature at 6,310K with a CRI of 72, a CQS of 70, and a TLCI (Qa) of 49. The TM-30-15 fidelity index (Rf) was measured at 69 and the TM-30-15 gamut index was 94. All of this means that if you need to very accurately reproduce the colors of costumes or set pieces, you might want to consider using the SolaFrame Theatre or the SolaFrame 2000. The histogram shows the most deficiency in R9 and R10, which are the red and yellow areas respectively, and that corresponds with my observations.



The framing system includes four shutters, each with two control channels. The entire module can be rotated +/-45°.

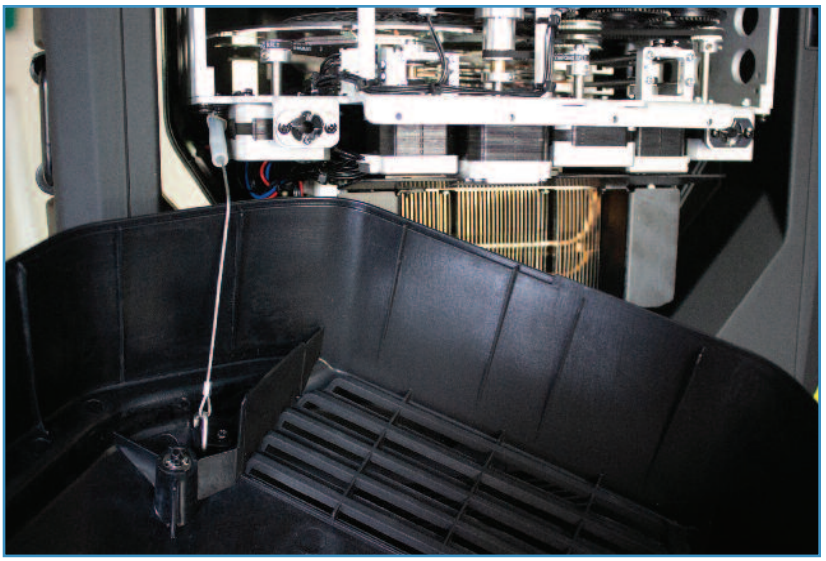
Features and effects

The 750 zoom ranges from 6° to an impressive 50°, which can cover a lot of area with a pretty short throw. It has seven rotating, indexable, replaceable glass or metal gobos plus an open position, and the center-to-edge focus is really very uniform. There is a nice mix of a couple of tunnel gobos and several breakup patterns, all of which make great aerial projections.

There are seven fixed, replaceable dichroic colors as well as a CMY color-mixing system and linear CTO, which is capable of producing a very warm amber to a nice daylight. The

fixed colors include a nicely saturated red, two saturated blues, a medium purple, a medium orange, a less saturated green, and a yellow that borders on very light green. The split colors are well-placed, and they include red/white, blue/red, green/blue, yellow/green, orange/yellow, purple/red, and blue/purple. The color mixing system is superb; it's capable of producing some great-looking colors although the yellow appears to be a touch on the green side. Although there is not a lot of energy in the red end of the spectrum, the reds look spectacular on film, as do the blues and purples.

The four-blade framing system uses 10 control channels to control nine attributes (the rotation of the entire frame uses two DMX control channels, one for course adjustment and one for fine adjustment). Each of the four blades can be angled by setting the position or angle of each of the two sides of the blade, which gives you a lot of flexibility, and they can completely wipe across the beam. The entire framing system can rotate +/-45°.



Four quarter-turn fasteners retain the clamshell covers on the head, and they are tethered to the fixture to prevent accidental dropping. The light engine heat sink and heat pipes can be seen just below the stepper motors.

There is also an animation wheel with continuous rotation, which works well for adding dynamic looks to static or rotating gobos, a three-facet

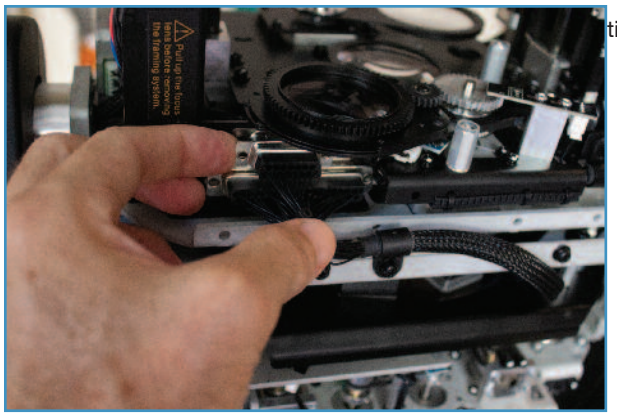
The connector panel includes two Ethernet connectors (input and output), DMX in and out, and etherCON True1 input and output. The current draw at 120V is about 3.6A, which means you could connect four fixtures on a 20A circuit and still have some overhead.

rotating prism, frost, iris, strobe, and remote focus. A unique and interesting effect s LED animation, which animates individual LEDs in the light engine and produces a kind of focus chase effect. There are a few different LED animation macros that can add some spice to your shows.

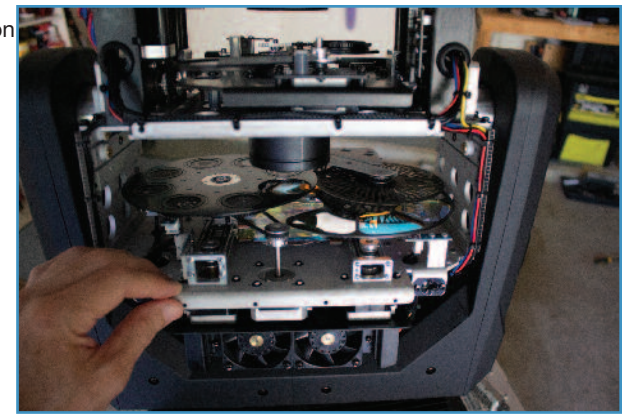
All the rest

I measured 3.6A at 120V, which explains why the connection panel has a Neutrik True1 PowerCon input and an output, so you can daisy-chain four fixtures on a single 20A circuit, saving both copper and weight. The electronic ballast can operate from 100V to 240V, 50Hz or 60Hz, and with all functions at full speed, it consumes about 560W.

The connector panel also has two Ethernet ports; one labeled Art-Net in and the other labeled Art-Net out, but it also works with sACN or DMX. (Yes, you still have to terminate the DMX



Each of the internal modules has wire harnesses with connectors for ease of servicing. This module includes the rotating prism, the frost, and iris.



The color, gobo, and animation wheel module.

link.) It also has RDM.

The fixture is fairly easy to service, and, like many fixtures these days, it has modules that can easily be disconnected, and slid out after loosening the quarter-turn captured fasteners. One module has the rotating gobo wheel, color wheel, and animation wheel, another has the framing shutters, and pretty much everything else is on a third module, except for the power supply, which is in the base.

It's truly amazing how far lighting technology has come in the 30 years since the Intellabeam was first launched, and the SolaFrame 750 is a prime example. I can't wait to see what the next 30 years will bring, especially now that High End Systems is part of the ETC family. The Facebook posts alone will be worth it.