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Interview with Stagehand-Inventor Ivan van Perre Jr.

Ivan may not think of himself as an inventor but he represents exactly what it means to be an inventor in our industry. He saw a need and worked out the means to achieve it. I hope you enjoy hearing his story as much as I have.

City Theatrical started the same way. When I was a stagehand working on Broadway I would often see gear that I thought could be improved and designers were always asking for modifications to gear. I started my business to build the gear that other manufacturers weren't building. Ivan (known as I.J.) did the same thing. In fact, in this case he improved a follow spot yoke that I designed! I asked to interview him to learn how he came up with his idea and how he built it.

Do you have a widget or a gadget that you have developed and use? It could be hardware or software, but if it helps you run your show or makes your show look better, or if it makes it easier to hang your show, let me know about it and maybe we can print it in this newsletter.

Here is our interview with I.J.:

CTI: What's it like to be an inventor?

Ivan van Perre Jr.: Until this question, I never saw myself as an inventor. I started running spots at the Ice Follies, the circus, and rock shows back in 1975. After building in production shops around San Francisco, I did a 25 year run working movies in construction and special effects. In the early 2000's, I decided to get back to my roots in theatre and rock shows. Since 2002, I've been mainly working as a stage electrician, at the Orpheum Theatre in San Francisco. Jim (J.W.) Wright, is the House Electrician. I'm a member of IATSE Locals 16 and 488. Inventor? That's a new one!

CTI: What did you invent and why?

Ivan van Perre Jr.: What I've come up with is a device that turns a Source Four leko into a rear operated follow spot. For now it's called the "Sniper Spot". It involves mounting a "buck and boost" variac or powerstat to the leko. From it, a linkage goes to a twist handle on the left rear side of the lamp. A stock drop in iris is deployed in the leko and a linkage from it goes to a twist handle on the right rear side. There is also a black out switch and power indicator lights. I'm just finishing working out the dimmer level indicator and iris position indicator. What you end up with is a rear operated short throw follow spot, that can pan, tilt, dim, and iris all at the same time.

Why? Back in January 2009, we were dragging in a show at the Orpheum. A project I was asked to undertake was to go up on the set pieces in front of the proscenium and mount up these two follow spots. One stage left and one stage right. Once up there, on a cramped little perch, I found a Source Four leko with a 10 degree lens, a color scroller, and a variac. The leko was modified by City Theatrical. These little tracks were added on each side of the barrel to accommodate a custom yoke. The yoke attaches to the tracks and is able to slide on them for balance. Nice! For further balance, and as a handle, a 2 5/16" trailer ball was mounted to the lamp cap at the rear.

The yoke also mounted to a short, angled forward, floor base bolted to the deck. The variac mounted to a side arm that clamped to this base. After setting up the first one, I sat in the provided chair and checked out it's operation. Two things were apparent. One, you can't dim and iris at the same time. Two, this spot is physically uncomfortable and awkward to operate. To operate, you need to keep a hand on the handle or trailer ball. Dimming required your other hand down at your shin on the variac. Irising meant giving up the variac, leaning forward and reaching over the top and across the leko. Now "follow iris" your pickup without burning your wrist on the heat being generated.

Then, three more things came to mind. One, this show will be here for at least a year. Two, I was on the show call as a swing or fill in. Three, more likely than not, I would be operating one of these side spots. I couldn't help thinking that controls could be configured, in a way that both the operator's comfort, and quality of operation could be improved. The platform's size and the range of operation made a side operated spotlight impossible.

CTI: How did you start working on it?

Ivan van Perre Jr.: Well, my first thought was, is this really so bad that something should be done to improve it? After some more thought, the answer was, why not? If not, just for myself when called to operate it. Next involves almost obsessive thought. This process develops my commitment towards actually starting and completing successfully any project. I start by coming up with questions to myself. Why do this? When finished, will it get a chance to be used? At what point and who should it be discussed with? How much will this cost? Should time and money be solicited from the show? How will this attach to the leko without modifying it in any way, (i.e., cutting, drilling, etc.)? There are no spare lekos configured like this. Where can a leko be borrowed? Is there a time frame to do this? And so on. I also try and recall past experiences with similar equipment.

Then set priorities. If only the iris control is addressed, you could dim and iris at the same time. Deal with the dimming separately if time permits. After getting an iris from the show, the work started on an approach towards actuating it's movement. Push rods? Pull rods? Twist rods? Aircraft cable and pulleys? The space on the perch is so tight, that the rig must stay as compact as possible. With the iris on the bench, mock ups using rods and cable systems developed. The determination was to go with aircraft cable and pulleys, mounted on some type of hood. Why? It seemed the most compact, lightweight, controllable way to go. Also, I had a pile of 1/16" aircraft cable pulleys left over from a job 10 or 15 years ago.

Next, with some poster board, a pattern was made of a hood. This hood would enable the mounting of the pulleys and operating handles. With the pattern made, sheet metal was used to create the hood. A circular band of 1 1/2" x 1/8" flat bar, made into a clamp, was fitted around the back body of the lamp. This bolted to the hood. An axle with handles were mounted to the band clamp. An idea to mount a 1500w Lutron dimmer on the other side crossed my mind. Pulleys and cable to another handle would actuate it.

Because of the yoke set up, it was easy to mount the hood into the stock yoke holes not in use. Also, a sheet metal flap, inserted into the slot for a pattern holder, seemed to locate and hold the hood securely.

CTI: Where did you build it?

Ivan van Perre Jr.: Pretty much split between the electrical shop at the Orpheum, and my home shop in the basement. I've got to thank J.W. for the use of the electric shop and all of his encouragement. No company time or money was allocated or spent.

CTI: What is your workshop like?

Ivan van Perre Jr.: It's smallest! However, it's well equipped and nicely set up. In it is a Unisaw, arm saw, drill press, band saw, chop saw, metal cutting chop saw, mig welder, and just about every kind of electric hand tool. Also, an air compressor and just about every kind of staple, brad, and nail gun. An air impact wrench, air chisel, die grinder, and just about every kind of hand tool. There's a fine assortment of hardware and expendables as



Ivan (I.J.) van Perre Jr. and his Sniper Spot



well. Also, up in Oregon, there is a 27' semi trailer loaded with more of the same gear. It's a location trailer left over from my construction coordinator and special effects days.

CTI: Have you used the Sniper Spot? Where and how?

Ivan van Perre Jr.: Yes. I ended up on the stage right side spot position. While still bench testing the Sniper Spot, I spent two weeks operating the side spot as it came with the show. Others swings had run it before me. We all agreed it sucked! On the third week, permission was given to mount the Sniper Spot rig on the spotlight. What a difference! After two more weeks of operation, my time on the spot was up. It was removed and taken back to the shop for it's first revision.

CTI: How many revisions did you do?

Ivan van Perre Jr.: The pictures Rodger Desmond (head electrician on *Phantom of the Opera*) showed you were the first prototype and first prototype with revisions. Since then, it went through three more. The most significant revision was removing the Lutron dimmer and mounting the variac to the leko and developing a drive from the twist handle to it. After four revisions, it looks like it had been drug behind a truck. But hey, it still works! During it's use, the first prototype has had four or five different operators and maybe 200 shows under its belt. Most of the revisions were the result of input from the other operators. Their feedback has been very helpful. All seemed pleased to use it. Built out of aluminum, the second prototype is almost complete. It's already had two revisions.

CTI: Do you think there is a commercial application for your product? What would you pay for it?

Ivan van Perre Jr.: Yes. Although this project was never approached with this in mind. During bench testing, the road guys, spot operators, and other crew members checked out the Sniper Spot. Their input and advice was encouraging. What wasn't expected was an overwhelming call to patent it and go commercial with it. Some insisted steps be taken to protect it's copyright asap. I was blown away! I feel there is a niche for a short throw follow spot like this. It takes up little left and right space because it's rear operated. The size makes it very nimble and easy to see over and around. It's also able to afford extreme left and right, 180 degree panning. It can tilt beyond straight down as well. With the assortment of lens available, you can dial in the beam size based on the spotlight position. A buck and a boost variac gives the 750 watt bulb more punch. This show's full up level is 130 volts while being fed only 120 volts.

Adding it to any Source Four leko takes only 20 to 30 minutes. No modifications are necessary, except for removing the shutters. Excluding the yoke package and color changer, the prototype weighs in around 50 lbs. This includes variac and leko with lens.

In terms of applications, AV companies doing meeting room size presentations, small venues, like bars and clubs, auditoriums, small theatres, high schools and colleges. Rock shows playing smaller venues might use it as a truss spot, side spot, or pit spot. It should mount nicely on the basket of a man lift, like the ones used to focus lights from. And, of course Broadway back, side, and specialty spots. A board operated color scroller works great.

At this time I've just located a DMX controller. My hope is the spot op can use it to select one out of 10 colors in a color scroller. A follow spot with a self contained DMX512 color boomerang. A rear operated linkage to the City Theatrical drop in boomerang may also be in the offing.

What would I pay for a Sniper Spot? Honestly, there isn't yet a number for labor or materials to build the Sniper Spot. Nothing has been tracked or totaled so far. Because of my level of interest and how it's evolved, the project to date has been approached with a blank check. I'm just about to round this corner. There are a couple of production electricians I'd like to consult with, along with other industry insiders. This will help me figure out the money side of things. A decision to manufacture it, market it, or just sell the whole project off to someone or some company remains to be made.

It's possible nothing more than it's use on the run of this show, and your interest, is all that will become of the Sniper Spot. I'm cautiously optimistic about it's future.

CTI: Have you invented other products?

Ivan van Perre Jr.: Invented? Well, around 2000, I designed and built a temporary power system for powering up motion picture location base camps. R.V. rigs and trailers have that bastard 50 amp 120/250 volt and 30 amp 120 volt plugs. At the time, nobody really had designed an outdoor, wet location system around these connectors, voltages, and amperages.

A tool I developed around four or five years ago is a two-ended ratcheting box wrench with three permanent sizes on each end. A six in one focus wrench. It was designed around the fasteners on Source Four par, leko and the standard pipe clamp found on most instruments. The wrench will fit the tilt bolts on the par and leko, which are different sizes and rarely need tightening. It also fits the pan bolt on the yoke to the clamp. There is a size for the 1/2" square head bolt on the clamp. Also, it fits two out of the four sizes of little square head bolts on the clamp as well. Plus, a 9/16" size just because. The lens knob and leko barrel rotation knob can be tightened or loosened too. I had a couple of guys field test it for me on the road and the response has been very positive. The hurdle is trying to shorten the amount of time it currently takes me to make them. For now, it's on the back burner because of the Sniper Spot. I will return to the wrench soon.

CTI: What other ideas do you have?

Ivan van Perre Jr.: As a result of this project, I've been developing ideas on two very unconventional truss spots for rock and roll. At this point they are on the drawing board. It's just some more unexpected fallout from the Sniper Spot adventure



