Perfect Syncro By K. Schipper

With help from its parent company's engineers, Hayes Brake Controller adds to its brake controllers with a next-generation sway control product.

hen a company is willing to change its name based on a new product, it's probably a safe bet that new product is a cut above average. Syncro Corp., the parent of what has been Hayes Brake Controller Co., is doing just that.

Syncro and the newly renamed Hayes Towing Electronics are betting that with the introduction of the new Sway Master Electronic Sway Control device, the new name will more accurately reflect Hayes' focus going forward. Hayes Vice President of Sales and Marketing Bill Smith says it's not every day a company can come up with something that's a brand-new technology and at the same time is easy enough to install that the average person with a drill can do the work.

21st Century Move

Given the history of Syncro and its longterm relationship with Hayes, the Sway Master is probably just the next step in its ongoing evolution – aided, of course, by Syncro's team of research-and-development engineers. Both Syncro and Hayes are natives of Detroit. Syncro, a privately held corporation, was established in 1938, and grew over the years to become a designer and manufacturer of electronic and electromechanical products and assemblies.

The old Kelsey-Hayes company started in Detroit in the 1950s, and beginning in the next decade Syncro took over manufacture of its electronic trailer brake controllers. In the 1990s, Syncro also assumed responsibility for designing and developing brake controllers for what was then Hayes Lemmerz.









Above: A worker on the assembly line at Hayes Towing Electronics solders leads onto a PC board that will become part of a brake controller.

Below: Donna Wright solders pendulum leads onto a PC board.

By that time, Syncro had relocated to Arab, Ala., a community of fewer than 10,000 people some 30 miles south of Huntsville, Ala. Syncro built an 110,000-square-foot manufacturing facility in Arab in 1974, and continues to operate from that building.

Finally, in 2005, Syncro bought the brake controller business from Hayes and created Hayes Brake Controller Co. Both companies are proud to stress that all Hayes products are made in the U.S.A. at Syncro's Alabama facility.

Meanwhile, he says it made sense to capitalize on Syncro's engineering expertise to develop some ancillary products that it would market to the RV industry and other markets.

The companies also had a recognition early in the development process that in terms of sway control, historically it's all been done mechanically, either steel-onsteel, steel on a friction material, or through the use of pistons.

"All this has predominantly been done through the weight distributing hitch," says Smith. "But, there are thousands and thousands of trailers that don't need a weight distributing hitch, but need something to control sway just because of their weight.

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Left: An overhead look at the brake controller assembly line at Hayes Towing Electronics' plant in Arab, Ala.

Right: A Hayes associate solders leads onto a PC board.



Hayes Head of Quality Management Larry **Heatherly trains** associates on PC board maintenance.



The Answer to 'Annoying Sway'

Probably the thing Smith says he's heard the most about the new Sway Master is that it's so simple. When he shows it to dealers, they often wonder why it took so long for someone to come up with the concept.

Just how simple?

It takes a combination of two independent technologies with which the public is familiar with separately.

"Inside, it has a solid-state gyroscope and a GPS," Smith says. "The GPS is what makes us a little bit different. What happens is that as you go down the road, the GPS is measuring speed and the gyroscope is measuring sway."

When the two devices - working together - determine there's too much sway, there's an algorithm in the board that determines how much brake pressure to apply and applies it.

Smith says it's particularly ideal for drivers experiencing what he calls "annoying sway" - sway that isn't necessarily dangerous but is annoying because the driver can feel sway going on behind him.



associates works to test brake controller leads.

The driver doing the towing will possibly notice different kinds of pressure on the brakes as the trailer is slowed and comes back to the centerline, Smith says, but it may be subtle enough that he may not even know what's going on behind him.

"He may feel the brakes going on, but for the most part, if there's no sway, it doesn't even activate," he says.

Smith adds that the demands on the vehicle doing the towing are also minimal.

"It's a parallel circuit," he says. "It taps the red wire for power and it taps the blue wire, which goes to the brakes. It's only active when it's needed. Regular braking isn't affected and the lights aren't affected. It only grabs the power and uses the brake wire when it's needed."

Even more attractive for many drivers, the Sway Master is a "plugand-play" device with easy installation.

"It mounts on the A-frame of the trailer," he says. "The trailer control goes into one side of the box and then it has a pigtail on the other side that connects via a seven-way into the tow vehicle. There's no calibrating and there's no leveling."

That compares with other units now on the market, which require a technician to install them, because they have to be hard-wired and the unit itself has to be parallel with the axles. Smith says once the Sway Master is mounted on the A-frame, the only requirement is that the top of the device have an unobstructed view of the sky for the GPS to work properly.

And, installation is as simple as drilling a couple holes. It even comes with self-tapping screws.

"It comes complete with the pigtail; it's all attached," Smith says. "It comes with a plug holder for the seven-way plug so that when it's not in use it's not hanging and dragging when not in use."

Although the Sway Master doesn't work on fifth wheels and goosenecks, which don't have that much sway, the product is definitely aimed at light- and medium-duty trailers such as travel trailers or toy haulers that don't need Jatha Binns completes the packaging process and packing out of brake controllers.

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weight distribution. It's also ideal for larger flatbed-type trailers in the agricultural and industrial markets.

"We also believe it's priced at a pricepoint where there's value for the consumer," Smith says. "We didn't want it priced at a level where a consumer might not see its value."

No-Brainer

Although it's easy enough to install that a technician isn't needed to do the



Hayes engineers and production managers discuss product developments. Pictured around the table from left are: Engineer John Meadow, Head of Engineers Roger Allcorn, Product Manager Lisa Clark, Vice President of Sales and Marketing Bill Smith, President Ed Childress, Plant Manager Jeff Huguley, Materials Manager Dave Hudson, Engineer Clay Kelley and Engineer Chad Giddings.

work, the response from distributors and dealers has been "tremendous," says Smith.

"We've had it at several distributor shows to date," he says. "The dealers who were at RVIA gave it a tremendous response there."

Smith says Hayes Towing also will be advertising the Sway Master in industry publications and RV consumer magazines, and will be doing a big push at mid-year as the towing season heats up.

"We also have manufacturer's reps who will be calling on jobbers to make sure they have our point-of-sale materials," Smith says. "We'll be doing several things to drum up excitement."

For now, he says, many of the dealers and distributors are most impressed with the fact that this truly is a brand-new technology.

"We want to get everybody comfortable with this because it is a new technology," he adds. "We have to establish some familiarity in the marketplace and some acceptance."

Once that's in place, Smith says Syncro and Hayes are looking at continuing in the same direction.

"Now that we have the actual box on a trailer, there are a lot of things we're contemplating adding to the system and making it more and more of a trailer command system rather than just handling sway control," he says.

One of those things is moving brake control to the box so it's not sitting on a vehicle's dash, as Hayes' current models do. Another area the company is interested in adding to its "box" is a tire pressure monitoring system that also wouldn't require dash mounting.

"What we're really looking at is developing products and applications where everything would be run through a smartphone," Smith says.

Thanks to Syncro's team of on-staff engineers, including electronic and electric

engineers, design engineers and mechanical engineers, Smith says he's confident their talent and expertise will make that happen.

That's not to say Hayes Towing Electronics is giving up on brake controllers, but, "The new name is more indicative of where we're headed; we're looking to expand our expertise into other product lines, all of which will be focused on towing," Smith says.

Of course, it doesn't hurt that the entire industry has recovered nicely from the Great Recession. Still, he says the bottom line with the Sway Master really comes down to safety, as much as it does its plug-and-play capabilities and its ease of installation.

"If you've ever been on the road behind a trailer and seen it passed by an 18-wheeler, you can see it going back-and-forth," Smith says. "Trailers can overturn because of sway. So, from a safety standpoint, we think this is a no-brainer."