The Need for Speed

Rahal Letterman Lanigan Racing's connected new facility revs up with Jupiter display, processing, and collaboration technologies to pass the competition.

RLL's State-of-the-Art Facility

Auto racing is an ever-changing sport. Innovations speed up and require race car drivers and the teams behind them to shift gears constantly. Race-day dramas play out in the pit areas, operations rooms and garages by small armies responsible for vital details and strategy. These teams help take drivers and their cars from the starting line to the checkered flag—and prepare them for the race long before.

Rahal Letterman Lanigan Racing (RLL), headlined by auto racing legend Bobby Rahal, and co-owners David Letterman and Mike Lanigan, has changed its course through the years as needed. Several years ago, the team partnered with BMW to boost the German automaker's racing titles. And recently, RLL has built a new facility with an operations center with a NASA-like operations room, training, conference and breakout rooms utilizing an array of state-of-the-art display systems from image processing and video wall company Jupiter Systems.

"We're pleased that Jupiter has joined us as the official Visualization Technology of RLL," says Bobby Rahal. "When guests enter our building, the first thing they will see is two large Jupiter screens that will showcase our team and it is a sight to behold."

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Bobby Rahal, co-owner of Rahal Letterman Lanigan Racing

"Racing isn't static. It's evolving every single day," says Todd Malloy, RLL race engineer who is assigned to IMSA BMW Car 25. "The more complex you make these race cars, the more people you need to operate them effectively. And all those people can't be at the racetrack. There's just no room."
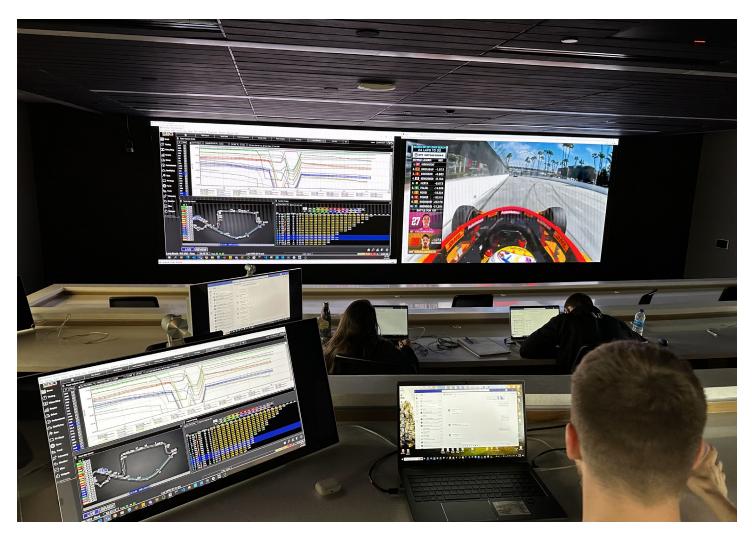
Thanks to sophisticated hardware, software and video displays from Jupiter Systems, some of those critical race team members can remain at RLL headquarters in Indiana while the drivers and mechanical crews compete at the track. There's also a contingent at BMW headquarters across the world in Germany who require remote connectivity to their race team.

"Having really good connectivity and being able to have effective video calls is priority one," says Malloy. "We do a lot of white-boarding, which now can be done digitally with our Jupiter panels."

RLL competes in both IndyCar and the IMSA GTP Class with BMW, so the facility provides for both teams with what they call a spine of shared conference and training spaces which runs down the middle of the building, separating the two teams.

Jupiter's Pana ultrawide 21:9 monitors deliver greater visual impact and provide a more natural and immersive videoconferencing with Microsoft Teams, white-boarding and shared content capabilities to connect teams worldwide. The panoramic 105-inch displays greet visitors in the lobby, conference, and training rooms, with 81-inch displays in the breakout rooms.

Jupiter

Mission Control

It's race day. The pit wafts with the scorch of fuel and rubber. Headsets are tuned to the proper channels. Everyone on the team must work as one synchronized unit, in real-time, whether they're changing tires or altering race strategy from a remote HQ.

The RLL ops room in Indiana has tiered seating with stations for laptops and 15, Pana 34-inch touch-enabled displays for the team to view images from the racetrack, the drivers and cars, and telemetry gathered from the track.

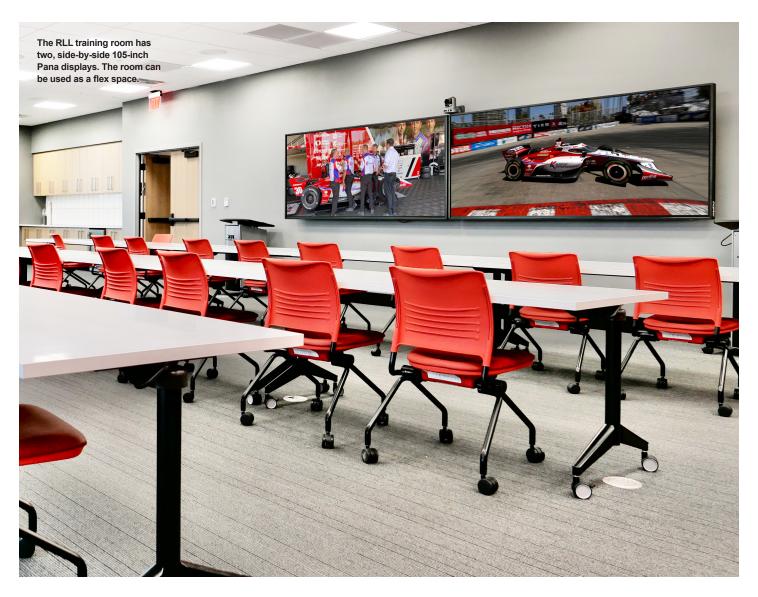"Each person can put video up there of just about anything we want. The beauty of it is we can take video from the track. We can have somebody seated in the room running a particular piece of software, say it's a strategy software that also displays on the video wall," Malloy explains. Using Jupiter's Canvas software, team members can send content to the massive video wall, driven by a Jupiter Catalyst XL video processor, at the front of the room to share with the group to provide valuable analysis to the race team at the track.

"Jupiter Systems technologies connect the RLL engineering team here in real-time to assist those at the racetrack on the pit stand with data that's coming from the car, and we're even able to look at other people's race strategies," says Rahal.

"People in the shop can be on the very same intercom system and it literally sounds like we're next to each other," says RLL's Malloy. "You wouldn't know who was on the timing stand and who was in the shop."

Canvas® software provides a great deal of flexibility. "One weekend, one car might have an onboard camera and another weekend the other might have one, and one weekend they both might. So pretty much every time we have a race event, we adapt the layout [of the video wall using Canvas software]. It always changes a little bit," adds Malloy.

"Each person can put video up there of just about anything we want."

Todd Malloy, RLL race engineer

![Jupiter logo] Jupiter

The RLL training room has two, side-by-side 105-inch Pana displays. The room can be used as a flex space.

Enterprise Collaboration

In the ops room team members are kitted out with at least one laptop, an intercom connection, and a Pana 34-inch touch-enabled display. But that's only one room of the RLL facility that benefits from state-of-the-art Jupiter Systems technologies.

The training room and its 105-inch Pana display can be used as a flex space. "We have partners that come in and do training sessions

> **"In the main conference room, we have Pana 105s, and we have our encoders underneath the table so people can come in and share content very easily through HDMI connections."**
>
> **Justin Shong, Jupiter's vice president of Global Sales and Marketing.**

at our facility. It is a showcase facility, and a professional auto racing team isn't something that people see on an everyday basis," says Malloy.

"It's built like a fishbowl. You've got glass on all three sides, so you can watch what's going on inside. And the space is just really cool," says Jupiter's director of Support and Services, Tim Yelvington, who has worked closely with the RLL team to set up and deploy the Jupiter technology.

If there is a meeting that requires the entire team, Malloy says, "We can use the lobby as well, with its video wall and projector. We have a lot of flexibility in how we utilize these different rooms, different displays and different systems."

"In the main conference room, we have Pana 105s, and we have our encoders underneath the table so people can come in and share content very easily through HDMI connections," explains Justin

Jupiter

Pana 105s are used in the main conference rooms.

Shong, Jupiter's vice president of Global Sales and Marketing. "As the rooms scale down, so does our technology. We have Pana 81s in the other rooms to help them collaborate"
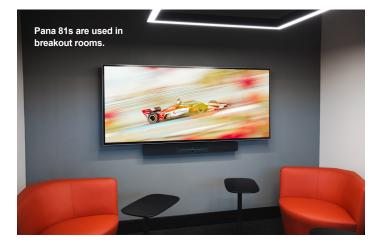
Meeting rooms can be reserved though Outlook, with meeting reminders and one-click Join Meeting buttons , utlizing Jupiter's SimpleShare software.

"Catalyst is our hardware platform and Canvas is our software that sits on top of it that allows for a common operating environment. This enables you to have remote users both in the control room and outside the control room," says Shong. "It also enables you to distribute that video signal over any IP network. We take that video signal in the control room and distribute it throughout the building over RLL's existing IP network, without having to build a separate parallel AV network, and with very low impact on overhead."
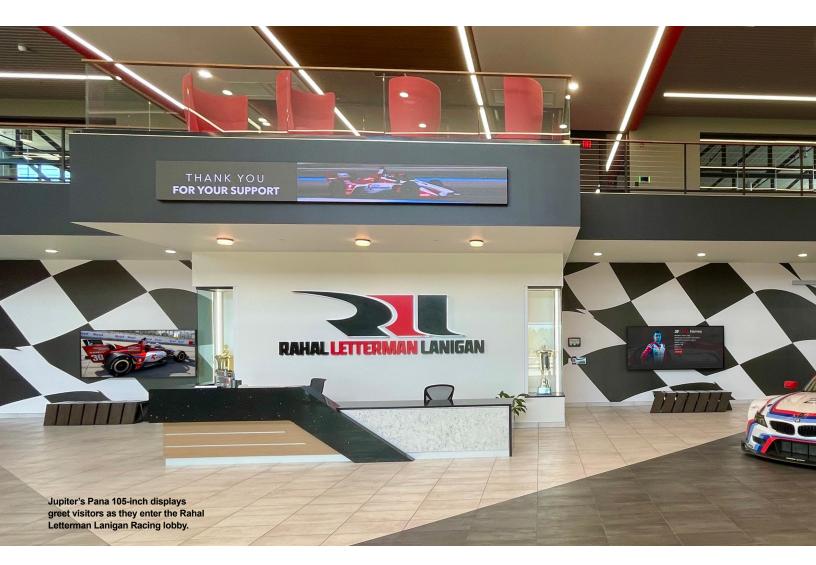
The Canvas software handles the dynamic layout control and video routing and transport over IP, and Jupiter's SimpleShare functions as an easy a gateway to current applications and collaboration. "Our touch monitors have our SimpleShare software that allows you to easily whiteboard or jump into your existing workflow or any other question with single touch functionality. We outfitted the training room, all the conference rooms, the lobbies, and then extended the video signals via Canvas to the projector, to the LED video wall

to remote users in Munich, at the track in Florida, or wherever they might be, both on race day and off-race days," says Shong.

The systems utilize Jupiter's technology to encode and decode the video. "And we're doing everything in real time," adds Jupiter's Yelvington. "The only real latency experienced is coming from the outside network itself."

The Pana displays throughout the facility are all connected to the Canvas software system, so RLL can display anything it wants anywhere in the facility, according Yelvington.

Pana 81s are used in breakout rooms.

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Jupiter's Pana 105-inch displays greet visitors as they enter the Rahal Letterman Lanigan Racing lobby.

Winning Teamwork

The Jupiter systems have completely changed the mindset of how RLL utilizes its people. Not only do fewer team members have to travel to the track, but they can now focus on certain aspects of the race with more clarity and purpose. The Jupiter hardware and software helps with that.

"A huge reason we partnered with Jupiter is that the Catalyst hardware and the Canvas software give us the flexibility in how we utilize these different rooms, these different displays and different systems," says Malloy. "We needed a flexible technology platform to be able to evolve. We're thrilled with the way it's all turned out. It's, it's a pretty spectacular building showcase, and the Jupiter technology is a centerpiece of it all," says Malloy.

Malloy also reports that RLL's internal IT resources have grown from one to three full-time people working directly with Jupiter's Yelvington. "They seem to really be getting a lot out of the technology, which makes me excited."

"The folks at Jupiter worked closely with the RLL team to understand our needs throughout the facility and make them a reality," Rahal concludes. "If you're going to build an IndyCar facility, this is a must have."

"RLL's internal IT resources have grown from one to three full-time people."

Tim Yelvington, Jupiter's director of Support and Services

Jupiter Equipment Snapshot

1. Catalyst™ XL Video wall processor
2. Canvas® software
3. SimpleShare® software
4. Pana 105 21:9 LCD
5. Pana 81 21:9 LCD
6. Pana 34 21:9 LCD

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ABOUT JUPITER

Jupiter is pioneering the future of visual experience with ultra-wide 21:9 displays as well as mission-critical video processing solutions worldwide. For more than 40 years, Jupiter has empowered federal agencies, public and private organizations, and large and small corporations with technology that drives decision-making. Companies that seek to deliver revolutionary ways to process multiple, simultaneous data from disparate sources and display them effectively with control come to Jupiter. Recognized as the innovation leader in collaborative visualization, Jupiter is dedicated to engineering and delivering cutting-edge technology that exceeds industry standards and redefines the user experience.