STATE of the SPORT

by Don Stegall

A group photo from the May 2007 Tri-City Race in Seguin, Texas.

Pylon Racing for Everyone

CLUB 40 PYLON Racing is sweeping the nation. Even in places that call it something else, many modelers have discovered the formula that allows almost anyone with intermediate or better skills to enjoy the sport of racing RC models.

It's called "Spec" racing. It works in full-scale automobile and RC car racing. For almost any racing competition to be fun to watch or participate in, there has to be a level of parity.

NASCAR recently made the switch to the Car of Tomorrow. There were many reasons, and cost was one of them. Parity of competition was high on the list. Fans of road racing are familiar with the Daytona prototypes.

Club 40 is spec Pylon Racing. It uses essentially identical airframes with sport engines that produce nearly the same amount of power. This leads to close racing, and winning is more about pilot skill than technology and equipment.

Properly maintaining equipment is still important, but flying tight turns and staying on the course are more likely to put you in the winner's circle than a "killer" engine.

And it is fun for the spectators because of the suspense. With the models so evenly matched, they are often in close proximity. This leads to near misses and a lot of passing.

But the passing rarely consists of blowing someone's doors off. It usually takes time, patience, and turning at exactly the right time to pull it off. This is exciting and often leads to the spectators cheering. It's cool to have people clapping after a tight race.

Several years ago, some pilots discovered that the Sky Raider Mach II by The World Models, distributed in the US by AirBorne Models, made a fun design to race. It is neutral enough to groove well on a Pylon course with the control throws toned down.

With the control surfaces on high rates, the Sky Raider is a fun everyday airplane that can do basic aerobatics. It is a tail-dragger with a simple tail wheel, and it taxis in and out of the pits similar to how the sport airplanes fly at the clubs on a regular basis.

The Sky Raider's wing is symmetrical, and at 550 square inches with a 53.5-inch wingspan, it is slightly bigger than a Quickie 500 design. The fuselage is also a bit bigger than a Quickie's, and standard-size servos fit.

In 2006, The World Models introduced the sleeker LA Racer 40. At first glance, it looks as though it would be faster than the Sky Raider Mach II. It has a cowl on the engine and a rounded deck on top. The canopy is clear and looks streamlined.

On closer inspection, the LA Racer's wing has the same airfoil, wingspan, and chord as the Sky Raider. The stabilizer is the same size. The measurements on the fuselage from the engine to the wing and to the stabilizer are the same.

However, the fin and rudder are slightly smaller on the LA Racer 40. Another difference is that it has dual aileron servos mounted in the wing. They are a small amount of added drag that practically equalizes it and the Sky Raider. A great deal of racing with both airplanes in the past couple years has shown that they are effectively identical in both speed and performance.

The airframes' cost and color selection was another factor. ARFs are a wonderful time-saver for the modern modeler, but most manufacturers make them in one color scheme. The World Models produces several of its models in multiple color schemes.

When Club 40 was started, the Sky Raider Mach II was available in four schemes. It was also an amazing bargain, at $69.99 for the complete ARF with all hardware. The price has since increased to $89.99 because of the global economy and improvements that have been made to the airframe.

AirBorne Models was asked to produce the Sky Raider in solid colors with CA hinges. The company responded with all-white, -yellow, -orange, and -red. The solid colors were an immediate hit with the racers.

Going a step further, the Sky Raider Mach II is now available as an ARC (Almost Ready-to-Cover) for people who want a different base color or want to use MonoKote, UltraCote, or some other covering.

The LA Racer 40 was introduced in four color schemes for $99.99. It has since been increased to $109.99 and is now also offered in solid white and solid yellow. That's many color schemes to choose from before adding trim to personalize a model's look.

Because of AMA course specifications, it was determined that staying with .40 or smaller engines was important. Even though the .46 is a popular size with sport fliers, the AMA RC Pylon Racing courses possess bigger setbacks for engines exceeding a displacement of .40. AMA Sport Quickie (event 424) requires a sport .40 engine.

Even though the Club 40 rules have an engine specification, they also have an engine list; the only power plant currently on the list is the Thunder Tiger Pro .40. It was found to be the perfect match for Club 40 airframes.

Have the thrill of a lifetime with the average RC model

The Pro 40 has proved itself to be reliable and user-friendly in Sport Quickie.

The speed of a Club 40 airplane running a Thunder Tiger Pro .40 is 90-95 mph. The beauty of using this engine is that the pilot can advance to Sport Quickie and use the same power plants to go 120 mph or faster. Since Club 40 is more relaxed than Quickie racing, many groups allow a choice of comparable sport .40 engines.

Although the Club 40 three-pole course is the choice for AMA-class racing, many clubs cannot fit it on their sites. The goal of Club 40 was more racing for more people in more places.

The two-pole course works better for the majority of clubs. With the poles and the racing out in front of the pilots, course workers, and spectators, it has a more familiar feel as well. The pylons are set well back from the runway.

The AMA rule book specifies a distance of 330 feet from the Pylon course centerline to the pilots. This configuration was difficult to set up on many fields and difficult to fly with models traveling slower than 100 mph. The course size of 660 feet also yielded 10-lap heat times that were too high.

Testing resulted in a course with the poles roughly 400 feet apart and 200-250 feet from the pilots. If a course size of 396 feet is used, 10 laps equals 1.5 miles, and 10-lap heat times have a time of roughly a minute-and-a-half if the pilot flies a good course.

To use the smaller course, waivers were required to get AMA sanctions for the races. Through the hard work of Chuck Waller, a safety officer in Texas, and AMA officials, a course was approved for Club 40 that is shorter and has smaller setbacks. See Document 540-B, "Set-Back Distances for Sport Pylon Racing," on the AMA Web site.

Most clubs can host this course. It is even possible to have the two-pole course set up and intermingle racing activities with sport-flying. But make sure that the sport fliers are aware of the pylons and don't fly hot laps while sport-flying is taking place.

Texas has been one of the hotbeds of Club 40 racing. Ken Erickson started with six or seven pilots. Chuck Waller got involved and took it to a new level. He traveled across the state promoting Club 40 and organized quite a few races. His Texas Championship Club 40 race at the Austin Radio Control Association field on November 1, 2008, was a big success.

H.A. "Humpy" Wheeler started flying RC in 2007. As president and general manager of Lowe's Motor Speedway near Charlotte, North Carolina, at the time, he was able to help the Flying Aces Pilots Association, of the Charlotte area, when it temporarily lost its flying site.

I learned about the flying site at Lowe's and found that I could set up a two-pole course for Club 40 racing. After demonstrating the event, I got three of the club officers interested in racing; Evan Doughty, Terry Hickey, and Larry Moore got models for the class.

We held three races at Lowe's in 2008 and have four planned for 2009. See the Web site for RC flying at Lowe's Motor Speedway for more info.

Since Club 40 is not currently an AMA event, the rules are up to individual groups. Those that the Texas contingent developed, with input from people in other areas, can be found on the RCPRO Web site. They are accessible via the "Contents" tab and the "Club 40 Rules" link.

A complete list of allowed modifications specifies limits for the little things that modelers do to enhance their aircraft. The rules page also lists the engines that are allowed for RCPRO Club 40 racing.

Ken Erickson is the RCPRO Club 40 Racing Committee chairman. He is a great resource for clubs that are interested in getting started in this activity. If your group is racing Club 40 or Sky Raiders, please get in touch with Ken (his e-mail address is in the "Sources" list at the end of this article) so he can put you on the contact list.

Club 40 has attained enough popularity that a forum was created for it on RCUniverse. Choose "Airplanes" from the "Forums" menu, and then click on "Pylon Universe—RC Pylon Racing."

Most of the traffic there has been people in groups using the RCPRO Club 40 rules, but the section is open to all modelers involved in Club 40 racing and all are invited to use the forum. I hear about many groups across the country that do not use the forums. Please join us and spread the word about your racing activities.

Club 40 racing is easy in which to participate. A modeler can buy the ARF and

The most models that should fly in one race is four. The pilot starts the airplane, while the caller holds until the clock counts down the release time.

Static photos and illustration by the author Flight photos by Lori Ann Kirby

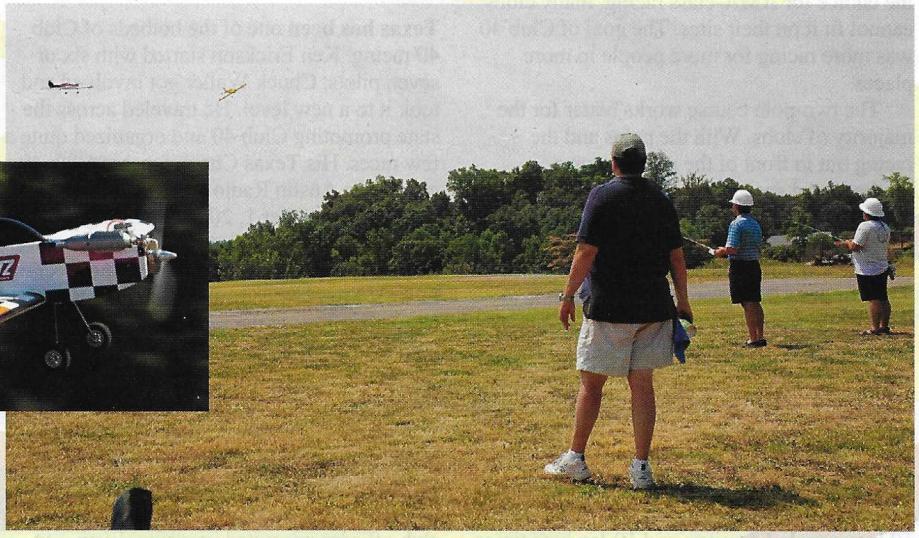
engine on a Wednesday and race on Saturday. Anyone who can assemble an ARF can handle the Club 40 models; no special equipment is needed. Any standard radio will do, but a modern type with dual rates and exponential makes it easier to tune an airplane for racing.

If there is Club 40 or Sky Raider Mach II racing in your area, jump in. If not, get yourself a Club 40 model and practice. When others see how much fun you are having with the airplane, they might want one too. A future article will focus on how to organize and promote races, so you have some competition.

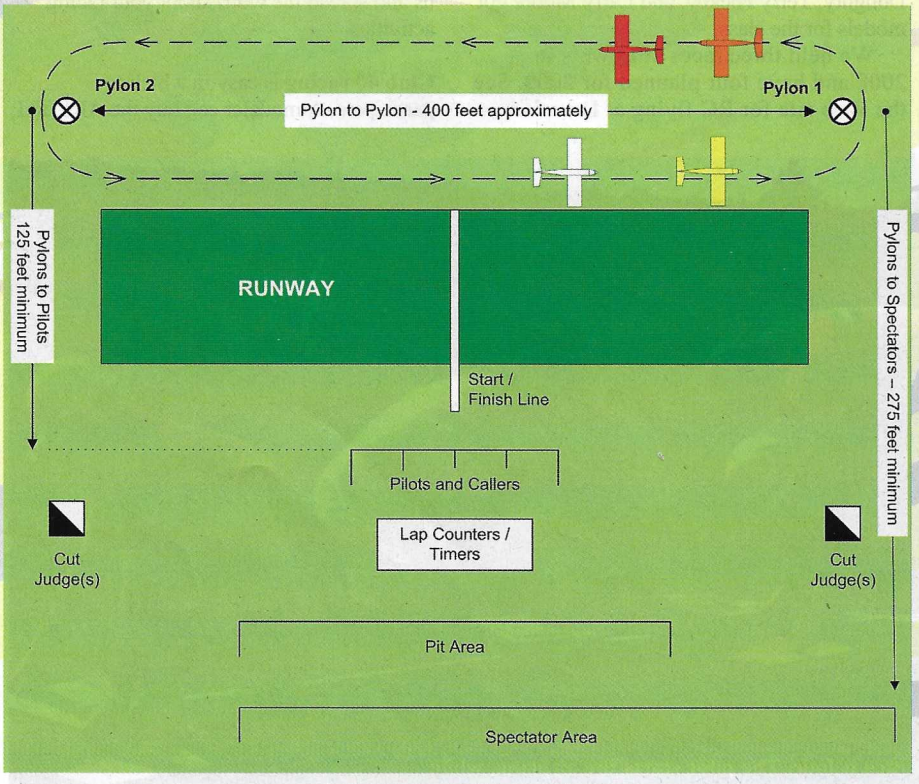
Many hobby shops have discovered that the Sky Raider Mach II and LA Racer 40 are good additions to their product lines. Since they are technically second airplanes and aerobatic trainers, they make great everyday sport models. If your hobby shop does not carry these designs, show this article to the staff.

AirBorne Models is the US distributor, but it also sells directly to consumers. Call the company if your local hobby shop doesn't have Club 40 ARFs in stock.

The caller can push an aircraft at the launch. It's an intense moment at which the pilot needs to stay focused on heading the model straight for the first pylon.

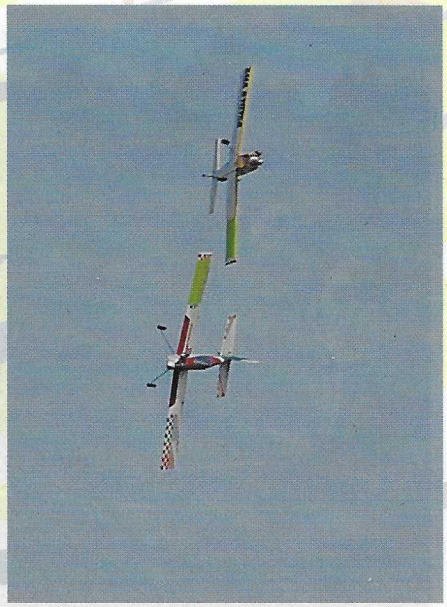


Aircraft identification and recognition are crucial, and they are an opportunity to have fun with graphics. AirBorne Models' Sky Raider is ideal for sport racing.



As on USRA and Reno-style course layouts, Club Racing has pilots outside the course rounding just two pylons. Keeping it fun is the goal.

The spectators sit a good 250 feet away from the racecourse. Safety is paramount, so don't hesitate if your club wants to position the audience farther away.



When pilots are well matched, races are exciting to watch but even better in which to participate.

AirBorne Models' Sky Raider Mach II is available in an Almost-Ready-to-Cover version and in three solid colors.

As with the white, yellow, or red version, you can add decoration to identify the Sky Raider and make it more distinctive. Don't forget the AMA identification tag for the inside of the model.

HouseOfPylon.com specializes in all kinds of Pylon Racing products and carries all of the solid-color Club 40 ARFs and ARCs. Custom color schemes as well as RTFs are available. *MA*

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Sources:

AirBorne Models
(925) 371-0922
www.airborne-models.com

AMA Documents:
www.modelaircraft.org/documents.aspx

RC flying at Lowe's Motor Speedway:
www.lowesrc.com

RCPRO
(704) 968-2881
www.rcpro.org

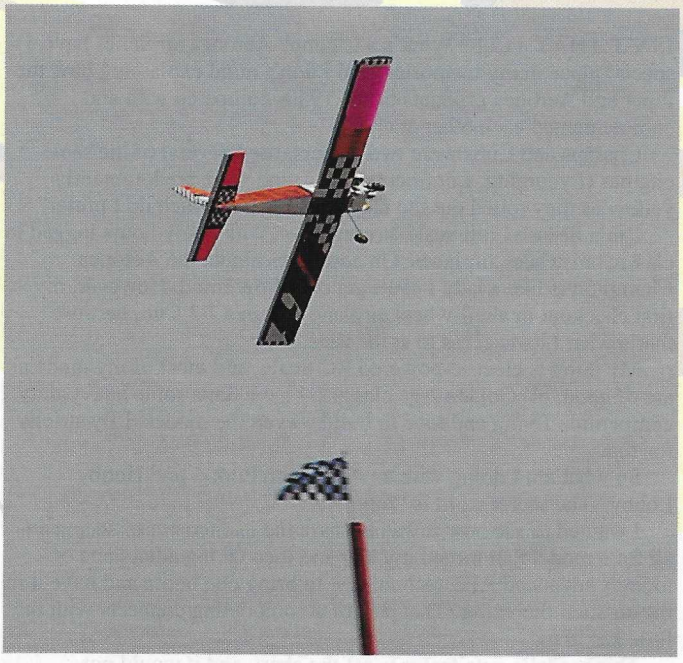
Ken Erickson
ken_erickson@comcast.net

RC Universe
www.rcuniverse.com

HouseOfPylon.com
(704) 225-3718
www.houseofpylon.com

Decisions, decisions. The full cowling is a nice upgrade from the original Sky Raider. Making the bottom a dark color is a great idea.

The pylon is typically made from PVC pipe. As shown, the pole is considerately covered with Ethafoam padding (pool noodles).



Jason Duda turns tight on Pylon One at the Texas Championship; he's going for the win. Maybe next time it will be your turn on the podium.