

Southern Tier Aero Radio Society Receives Prestigious AMA Award

Written by Gary Fitch with input from Jim Messer

Dave Mathewson, AMA District II Vice President, said it succinctly: **“Once in a while, some person or some organization has an idea which forever changes the direction of our hobby.”** On August 28, 2005 the Academy of Model Aeronautics recognized the Southern Tier Aero Radio Society (STARS), of Cuba, NY, for having a momentous impact in the world of Radio Control Aircraft. AMA members/pilots from Ithaca, Jamestown, Corning, Rochester, Buffalo, Honeoye, Franklinville, Wayland, Wellsville, and Olean – all NY state cities, came to witness and share in this historic event. In addition, there were AMA members from three cities in Pennsylvania; Eldred, Bradford, and Warren. Then there were those MAAC members from the Fort Erie and Kitchener, Ontario, Canada area that enjoyed the weekend with the STARS.

Don Koranda - AMA Executive Director, together with Dave Mathewson, presented to STARS the highest honor bestowed by the AMA, in the prestigious **“National Aeromodeling Historic Landmark Award”**. This is only the second occasion, in AMA history, that this award has been presented. The award consists of two heavy bronze plaques. The first is the newly designed AMA header plaque, which has become the “standard” for this and all future Historic Landmark Awards. It reads as follows:

“National Aeromodeling Historic Landmark, Recognized and Dedicated by the Academy of Model Aeronautics”.

The wording of the second plaque is unique to each recipient. This award reads:

“Clapp Field” – The Southern Tier Aero Radio Society, operating from Clapp Field in Olean, NY, is acknowledged as being a leader in the development of Giant Scale Radio Controlled Aircraft beginning in 1975. The STARS relocated from Clapp Field to Cuba, NY when the Society purchased this site in the late 1980’s. Established in 1935, STARS is one of the oldest AMA clubs in the United States.”

Today, in the era of 33%, 40%, and even 50% scale ARF’s, it is difficult for us to imagine what STARS members, Jim Messer, Bob Dunn, Bill Messer, Bob Brown (Long time AMA District 3 V.P.), Charlie Nellis, Lou Eltscher, and deceased members Ken Koepfel, Dr. George Privateer and Dr. George Clapp accomplished.

The story behind this award involved several years and many trials during the 1970’s, in the development of a flyable giant scale aircraft. This was a significant task, as there were no kits, engines, wheels, cowls, and propellers, for this size aircraft. STARS would have to design and build the large airframes as light as possible to overcome the challenges of providing adequate power for flight. The first requirement was to select an aircraft. Jim Messer and Bob Dunn had observed a 1/6 scale Bristol Scout fly at Rhinebeck, and they decided that scaling this model up to ¼ scale would be the right thing to do. The full scale Bristol Scout bi-planes were reported to be light, nimble, and moderately aerobatic, so this selection had merit.

To make the leap to ¼ scale would require the pooling of the resources and talents of everyone involved in the project. Bob Dunn and Jim Messer, both engineers, designed the aircraft. A total of six Bristol Scouts made up the very first squadron of ¼ scale

models shown anywhere. The project builders were, Jim Messer, Bob Dunn, Bill Messer, Ken Koeppel, George Privateer, and Lou Eltscher. Bob Brown, a High School Shop Teacher, had the machining resources and material knowledge that made the entire project feasible.

The structural engineering for such a large airframe was mostly done by guesstimation. Whereas balsa is the mainstay of .40 size aircraft, the STARS WW-I aircraft design called for the use of plywood, basswood, lite-ply, and spruce to handle the greater flight loads, much like their full scale brethren. Several factors needed to be considered, like which airfoil to use. Bob Dunn had previously used the RITZ 23012 airfoil on smaller models with good results, so this airfoil was selected. Wing ribs were made of balsa, and the spars were made of spruce, in an "I-beam" configuration, to gain strength and save weight. Due to the relatively short nose moment on WW-I aircraft, special attention had to be made to keep the tail end as light as possible. Normally square longerons for the fuselage were routed into an "L" shape, providing a larger gluing surface, while retaining adequate strength and offering considerable weight reduction.

The large diameter cowls presented a problem. First thoughts were to scour the retail houseware departments for an aluminum pan that could be utilized, but none were found. The decision was then made to turn six cowls from wood blocks glued together, using the wood lathes in Bob Brown's woodshop.

Wheels presented another problem, as none were available commercially. This problem was solved by turning plywood discs to the required 7" diameter, and gluing side ribs to a main hub which were then covered with lite ply. Balsa blocks were glued to the wheel O.D. and turned to the shape of a tire.

The completed airframe was then covered with "nylon", doped with nitrate dope, and painted with SIG Diana Cream dope, giving the Bristol's a tint that closely matched the full scale aircraft. Red, white, and blue roundels were painted on with spray cans.

The biggest challenge was yet to come. How do you power a 1/4 scale aircraft in the mid 1970's, when the biggest glo engine available was the Webra Speed .61? With all of the drag generated by two wings, flying wires, and a large landing gear, the design crew knew that this would be a tough nut to crack. Jim Messer geared two Webra .61 glo engines together, which flew his model, but high gear wear quickly ruled out this choice. Ken Koeppel and George Privateer, opted for the O&R 1.4 industrial engine converted to glo, but inadequate carburetion and low power output killed this selection.

The STARS then purchased six Cox-Roper 1.4 C.I. industrial engines and converted them to glo fuel for additional power. These flew the models, but not with authority, yet the Bristol Squadron was flown for the first time with those engines "en masse" at Rhinebeck in 1977.

Along with the engine selections, the propeller problem had to be addressed, as none were available in the sizes required. Bob Dunn and George Privateer researched and developed the math and formula for making props from a block of maple wood, which was no easy task. First, the crew had no idea what diameter/pitch combination would be required to fly the airplanes, let alone if the engine would swing it. So a lot of different diameter and pitch combinations were tried, some successful, some not. However, Bob Dunn's thin blade 21/10 and 22/9 props gave the Bristol's the scale look needed and the thrust required for flight.

Right after having some success with the Cox-Roper engines, the STARS heard about Ron Schettler, in Edmunton, Canada, flying a model with a Quadra 35 engine. Phone calls were made, and two engines were purchased from him for evaluation. This engine proved to be the perfect engine for the Bristol's, so all six planes were converted, and once again the planes were flown "en masse" at Rhinebeck in 1978 using Q-35 engines.

It was then that the Bristol Scout Squadron really came to life. The STARS members with their Scouts, traveled to numerous flying events in the US and Canada, showing off their "huge" aircraft and flying in formation. National fame came when they flew in formation at the Rhinebeck Jamboree, both in 1977 and again in 1978, where they were voted "best of show". Their Scouts were featured on the front cover of Radio Control Speed & Sport magazine, and a nice construction article (with plans) was published in Model Airplane News. All the R/C magazines featured the STARS and their Scouts in one way or another and the idea of building BIG rapidly became a worldwide craze.

Cause and effect: What is most interesting is the impact that the development of Giant Scale Aircraft had on STARS themselves. In 1977 STARS began hosting their own Scale Rally at the Olean Municipal Airport each year in July. The goal was to earn enough money and secure their future by purchasing their own flying field. The STARS club, now with National recognition, drew large crowds and modeling icons to their event. It was common to see and talk with persons like Hal deBolt, Nick Ziroli, Don Godfrey, Wendell Hostettler, and Frank Noll when they attended, flew, and promoted their products.

Within ten years, STARS had accumulated the necessary funds to purchase property from STARS member, Clifford "Kip" Karn and develop their permanent flying field which is now located just off the West Lake Rd., in Cuba, NY.

Jim Messer started and grew a worldwide business where he designed and manufactured giant scale kits, and became the first Quadra dealer in the US, selling over 400 Q-35 engines in the first year alone.

Whereas, the Giant Scale idea had significant influence on the development of the Southern Tier Aero Radio Society, it had a tremendous impact on the world of model aviation. STARS is very proud to be part of that history, and to be honored with the AMA National Aeromodeling Historic Landmark Award.

STARS would like to extend our sincere appreciation to Don Koranda, and Dave Mathewson, for their time and effort in making this award possible. We would also like to thank our friends and family members who came to be with us and share in the presentation. Of course, we are all indebted to those nine individuals who made the Giant Scale Dream come true.