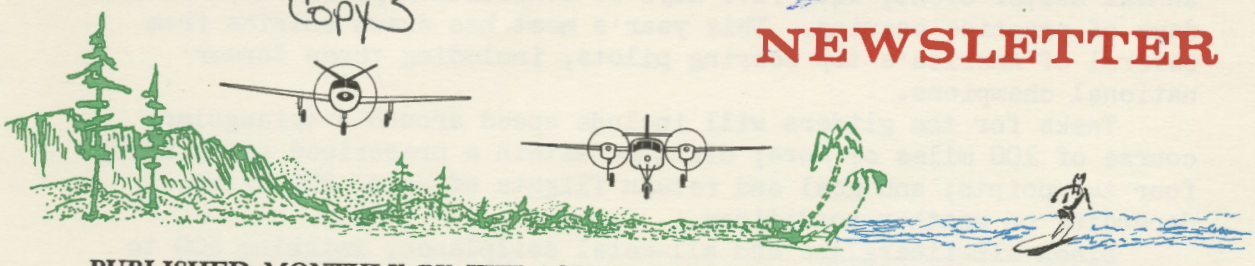
SOUTH CAROLINA

AVIATION NEWSLETTER



PUBLISHED MONTHLY BY THE SOUTH CAROLINA AERONAUTICS COMMISSION

G. C. MERCHANT, JR., DIRECTOR — J. F. BARRY, ASSISTANT DIRECTOR

No. 3 — March, 1970 — Vol. 21

SOARING CHAMPIONSHIPS

High Performance Sailplanes

During the week before Easter (March 22-29), the skies around

Chester will be dotted with graceful sailplanes as 30-odd soaring pilots converge from throughout the Eastern United States to compete in the regional championships.

Sanctioned by the Soaring Society of America, the contest is an annual Easter event, with five days of competition preceded by several days of practice soaring. This year's meet has drawn entries from several of America's top soaring pilots, including three former national champions.

Tasks for the gliders will include speed around a triangular course of 100 miles or more; distance within a prescribed area, using four turnpoints; and goal and return flights of up to 200 miles, depending on weather conditions.

Sleek all-fiberglass and all-metal sailplanes, weighing 400 to 600 pounds each, will be brought to the contest site in enclosed trailers. After assembly, they are launched by tow line behind Super Cub or Citabria towplanes. Release altitude is usually 2,000 feet AGL: from this point, the soaring pilot gains altitude by circling in thermals. Between thermals, high performance sailplanes achieve glide ratios of up to 48 to 1.

Chester Municipal Airport, site of the contest, is the home of Bermuda High Soaring School, where hundreds of Carolina and Georgia soaring enthusiasts have received their initial check-outs and glider ratings. The surrounding countryside is mostly flat with plenty of large, open fields where the soaring pilot can safely land when he runs out of thermals.

Instrumentation in a competition sailplane usually includes a sensitive altimeter, airspeed, compass, VHF transceiver, and two or more variometers (extremely sensitive rate-of-climb indicators) which tell the pilot whether he is flying in lift or sink.

Powered aircraft flying in the vicinity of Chester during the soaring meet should be on the lookout for slow-moving sailplanes at altitudes up to 9,000 feet AGL. Pilots wishing to visit the contest site should check with Chester Unicom (122.8 MHz) for sailplane traffic before entering the pattern. Peak launching period is generally between 11 A.M. and 2 P.M., during which visiting traffic is discouraged.

SOUTHEASTERN AVIATION TRADE MART

Southeastern Aviation Trade Mart scheduled for April 30- May 2 at the Greenville-Spartanburg Jetport has 85 exhibitors who have contracted for space. Also scheduled is the United Airlines Radar and Meteorology School and the AOPA Regional Rally. Don't miss this outstanding aviation show.

BREAKFAST CLUB NEWS

The March 1 meeting was held at Billy Cox's Airport at Kingstree. This was the first meeting to be held at Kingstree and the group was welcomed by the Mayor and local officials. Members of the County Delegation were also present at this outstanding meeting which was attended by approximately 120 members. 50 aircraft were counted on Mr. Cox's field which is one of the nicest private airports in the state and is a real asset to the community. John Mixon served as host for this meeting and the breakfast and service were excellent.

The March 15 meeting will be held at the Spartanburg Downtown Memorial Airport. An excellent program is being planned for this meeting with the breakfast to be served at Wofford College.

The meeting for March 29 has not been scheduled as yet. However, April 12 meeting will be held in Rock Hill in conjunction with the "Come See Me Week," and on April 26 the group will meet in Conway.

Harold Hall of Hall Aviation, Columbia Metropolitan Airport has invited the Breakfast Club to his operation on May 10 for a FREE breakfast.

A weekend meeting is being planned for Hilton Head on May 24. Plans are being coordinated with the North Carolina Aero Club and the Georgia Flyers to arrive on Friday afternoon. A golf tournment and beach activities are scheduled for Saturday with the breakfast meeting Sunday morning. More details on this meeting will be available in the April issue. Plan now to attend this weekend Fly-In.

NEW GOVERNMENT PUBLICATIONS

A new publication, "Aeronautical Science Course of Study, " is now available from Washington, according to Federal Aviation Administration officials. Although it was published by the Government Printing Office, under the sponsorship of FAA, it is actually the product of California educators.

The course outline is divided into eleven units. These may be used singly or as the basis for an entire course, and may be organized into any order the instructor desires. The reference sources are by no means all-inclusive, but are intended to save the instructor a time-consuming search through the massive amount of material available on the many subjects presented.

The study is available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402, at $2.25 per copy. A 25% discount is offered in quantities of 100 or more. The GPO order number is TD 4.8: Ae 8 and checks should be made payable to the Superintendent of Documents.

THE INSTRUMENT APPROACH

During the past year, there have been several aircraft accidents involving aircraft striking the ground short of the runway during instrument approaches. In one case it was determined that the pilot continued the descent after encountering a thin layer of fog, lost sight of the runway lights and struck the runway threshold, causing extensive structural damage to the aircraft. There are several fatal accidents on record which appear to have occurred under similar conditions.

Instrument approaches and landings terminate the arrival phase of most IFR operations. Instrument approaches are also the most demanding of all IFR operations in terms of pilot skill and technique. Where, in the departure or enroute phase of IFR operations, pilot fatigue is normally at a minimum, it may well be its maximum during the approach. An accompanying lower level of coordination and response is also prevalent.

It is well recognized that pilots conducting instrument approaches utilize many different visual cues as they become available during the approach. It is equally well recognized that the pilot must transit from looking inside to looking outside sometime during the approach. What is seemingly not recognized or well understood is the manner in which the transition should be accomplished and when.

To begin with, the most effective way for the pilot to reduce this transition time is by thorough preflight preparation. This should include familiarization with the cockpit layout--the location and direction of movement of all controls and instruments. This preparation should also include gaining a mental picture of the general layout of the radio facilities expected to be used. Finally, the pilot must study his approach plate and fully understand the procedures, courses, minimum altitudes, time to pull up and missed approach. In addition, the appropriate maps and charts should be marked, folded and arranged for easy reference.

The pilot should also consider the advantage to be gained from a more efficient scanning pattern while his eyes are inside the cockpit. Instead of reading only one instrument at a time, he should try to read several instruments during the same visual sweep. When the pilot has developed a more efficient scan technique, his eyes will require less trips from inside to outside and back again. The transition time element will then be greatly reduced.

Another requirement which enters the picture is that the eyes must be focused for the outside distance involved. That is the eyes don't just naturally go to or focus on the proper distance without something to focus on. Picture the pilot sitting in the cockpit with the windshield yielding only the translucence of cloud, haze or smoke.

The remedy is simple, when he looks outside, he should run his eyes to the most distant object which can be seen (which in most cases would be the wing tip). This will activate the accommodation muscles and put the eyes on distant focus. This process should be repeated at frequent intervals. The most valid reason for a reduced transition time is to allow the pilot to make the right decision deliberately, rather than the wrong decision instantly.

The question now arises--when do we make the transition? The answer lies in an understanding of certain recent changes in FAR 91 concerning instrument approach procedure, specifically Sections of FAR 91.116 and 91.117 regarding MDA (minimum descent altitude) and DH (decision height). Here some definitions are in order--MDA or "Minimum Descent Altitude" means the lowest altitude expressed in feet above mean sea level to which descent is authorized on final approach, without electronic glide slope information or during circle to land maneuvering on a standard instrument approach. DH or "Decision Height" means the height expressed in feet above mean sea level, at which a decision must be made during an ILS or PAR instrument approach to either continue the approach or to execute a missed approach.

It may help the pilot to think of MDA in terms of Time since it involves approach procedures which require a time element flown at MDA except at VOR and H facilities located on the airport. The facility then becomes the MAP (missed approach point). MAP (missed approach point) is facility when facility is on airport. MAP for off-airport facility is usually Time from facility to runway threshold. MAP for ILS or PAR is point on final approach course where height of glide slope equals authorized DH.

Effective November 18, 1967 ceiling minimums are no longer prescribed in approach procedures as a landing limit. The published visibility in terms of either RVR (Runway Visual Range) or meteorological value is now the limiting factor. A pilot may now descend to the prescribed MDA or DH as appropriate to the procedure being executed without regard to the reported ceiling. FAR 91.117(b) states in part--"A pilot may not operate an aircraft below the prescribed MDA or continue an approach below the prescribed DH unless--

1. The aircraft is in a position from which a normal approach to the runway of intended landing can be made, and

2. The approach threshold of the runway, approach lights or other markings identificable with the approach end of that runway are clearly visible to him." Further, if upon arrival at the missed approach point or decision height, or at any time thereafter, these requirements are not met, the pilot shall immediately execute the appropriate missed approach procedure.

Pilots should be aware that terrain, highways or boulevards and construction projects or other such landmarks do not meet the criteria of "other such markings" in paragraph two above.

With the above information in mind and a CURRENT ALTIMETER SETTING, let us now start our approach--

We report initial, slow to gear speed and get the wheels down early in the procedure turn or well out from the approach fix. Check the fuel selector, mixture full rich, boost pump on, set up approach flaps and trim the aircraft. It is a good idea to tap the altimeter frequently during the approach to minimize the inherent fractional drag of the instrument--an altimeter error at minimums can be fatal. If we have extra radios, we should tune them to the facilities needed in case we have to pull up. Now we just hold our heading, maintain the desired descent rate and fly and wait--nothing can be gained by looking out the window. The airport will appear on schedule if we have done our planning well. At DH we look out momentarily and back to the panel or at MDA, we fly out our time, looking out momentarily and back to the panel. If the airport refuses to show itself clearly and permanently, at DH or time at MDA WE PULL UP AND GO TO OUR ALTERNATE.

Somewhere in this chain of events, preferably long before the decision became necessary, we should have faced the issue of what to do next--in case of a missed approach. Each of us faced with this decision might do well to realize that we have done our best on this day at this airport. If we have done our best on the first try, we are very unlikely to do better on a second. Most important of all, we have only ourselves and that personal ego to sway our decision with which we could very well con ourselves into becoming a statistic.

By Lauren D. Basham
Accident Prevention Specialist
GADO #9, Helena

GENERAL MAINTENANCE SEMINAR

The Fourth Annual Tennessee-Mid-South General Aviation Maintenance Seminar will be held at Metropolitan Airport, Nashville, Tennessee, from March 24 to 26.

ADMA members participating will be the Energy Controls Division and Electrical Components Division of Bendix Corporation: Airborne Manufacturing Company; A.C. Spark Plug Division of G.M.; Avco Lycoming; Airwork Corporation; Champion Spark Plug Company; Don Horn Company; Continental Motors Corporation; Alcor Aviation Corporation and Prestolite Company.

DALLAS-FT. WORTH AIRPORT

That $\frac{1}{2}$-billion dream airport for Dallas-Ft. Worth is becoming more than a dream. Airlines have signed letter agreements to use it and finance its development. Plan now is to have it ready for first stage operation in early 1973, only 36 months away. But it will be a fantastic accomplishment even in that time scale. Its area will be 18,000 acres. There will be 11 runways of from 2,000 to 20,000 feet in length. It will handle 178 IFR operations per hour, equal to that of New York's three airports today. It will have gates for 260 jets like the 747 and for 120 cargo jets. By 1975 its daily population will be 100,000 people. Eventually, it will park 192,000 cars. It will really give the airline world something to crow about for a long time.

1970 FLIGHT INSTRUCTOR'S CLINIC

The 1970 Flight Instructor's Clinic is scheduled for November 10, 11, and 12 at Midlands Tec in Columbia. This program will be the Instrument Flight Instructor Clinic and will be conducted by the personal from the FAA Aeronautical Center, Oklahoma City. The clinic will be jointly sponsored by the South Carolina Aeronautics Commission and the AOPA. Students will be housed at the Host of America Motel.

GROUND SCHOOL

George Welch, Chief Flight Instructor of Walterboro Air Service, Inc., is conducting a ground school for private and commercial ratings at the Walterboro Airport. Classes will be held on Monday and Wednesday nights at 7:30 P.M. Walterboro Air Service is a VA approved flight school for commercial and flight instructor ratings.

INSPECTION REMINDER

The Federal Aviation Administration has devised a visual inspection reminder. Its application on all general aviation aircraft is recommended but its use is not mandatory.

Normally an inspection reminder is issued at the time of airworthiness certification. To assist owners and operators who do not have an inspection reminder, the FAA asked the cooperation of authorized inspectors, repair stations and aircraft manufacturers who perform annual inspections to issue these reminders on request.

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FAA NOTES

The Aerospace Medical Association of Washington, D.C. advises that on Saturday, 2 May 1970, every US Air Force altitude chamber in the country will be available to general aviation pilots for physiological training. This will not only include an altitude chamber flight to experience and observe hypoxia and rapid decompression, but also to learn about spatial disorientation, decompression sickness, and other human factor problems of flight. As pilots fly higher and faster with more exotic equipment, it is most urgent that they have an opportunity to learn of some of the medical problems of flight. For details, see the March issue of Flying Magazine.

If you would like to attend this training in South Carolina, you may contact Major Hunt, physiological training officer, Shaw Air Force Base, telephone 775-1111, extension 7238.

The following persons have been appointed as pilot examiners increasing the total number to 18: John F. Saverance, 1819 Winthrop Drive, Florence, S.C.; Robert L. Godwin, Jr., 1209 West Evans Street, Florence, S.C.; Warren E. Guinn, Thermal Belt Air Service, Inc., Box 5681, Greenville, S.C. Mr. Saverance and Mr. Godwin are pilot examiners for private and commercial single engine land. Mr. Guinn is pilot examiner for private and commercial single and multi engine land.